



**Municipalities in Transition: a governance system for navigating
transformative change in tipping point times**

“ Documento Definitivo ”

**Doutoramento em Alterações Climáticas e
Políticas de Desenvolvimento Sustentável**
Especialidade em Ciências do Ambiente

Pedro Adélio Costa Macedo

Tese orientada por:
Doutor Gil Pessanha Penha-Lopes
Doutora Julia Wittmayer

Documento especialmente elaborado para a obtenção do grau de doutor



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MUNICIPALITIES IN TRANSITION: A GOVERNANCE SYSTEM FOR NAVIGATING TRANSFORMATIVE CHANGE IN TIPPING POINT TIMES

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“Could our current life or death predicament be the ideal moment for us to collectively and clearly look at what we really want and need, and what we’re willing to do in order to be able to stay on as part of this beautiful planet? Maybe it was always going to be like this — only when the alternative is so clearly so much worse — only then could we gather the collective motivation to do this difficult work. Even this late in the day, can we decide to do this whole ‘being human’ another way, whatever the outcome?”

Eva Schonveld & Justin Kenrick (2020)

DEDICATION

To my brother Paulo, born before his time. May he rest in peace.

To all the dreamers, with an awakening call: Heaven is now and here.

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Despite being the only accountable for the scientific research, the *Municipalities in Transition* is a collective effort and learning process. To be concise, the dozens of people involved, namely in the pilots, are not mentioned here (some of them are listed in Appendix B), but surely all the possible merits of this work should be attributed to them, the ones that dared to fully welcome this experiment in their lives and communities. Similarly, I wish to acknowledge the full gratitude to the *Dive Deep & Dream Big* participants and facilitators (listed in Appendix C).

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ABSTRACT

This research wants to explore the diversity of (trans)local transformative initiatives and how they can synergistically generate broad societal change towards sustainability and democracy. I want to seize doable alternatives to deal with existing institutional barriers and social impasses and explore possible approaches and instruments for ‘governing’ transition.

I want to address the research gap related to sensible ways of governing the later phase of transitions in a context of rapid and profound change. The research question is therefore: “What would be an applicable and comprehensive governance instrument to support the development of (trans)local transitions, facing the challenge of tipping point times?”.

I adopted transdisciplinary participatory action research and focused on developing spaces where renewal can be nurtured in the context of reorganization (in the resilience sense). This approach is expected to lead to new agreements and actions. Still, it is primarily designed to facilitate multi-stakeholder learning processes and open the floor for the emergence of new shared meanings.

I assumed that the complexity of the sustainability challenge demands for collaboration between different actors, namely local governments and community-led initiatives. Existing research revealed that many tensions and obstacles to partnership still persist, and results are far from meaningful, while providing insights on how to overcome these challenges. I summarized the state of the art in a Compass for Transformative Collaborations.

The research process was based in two projects nested in the Transition movement, namely the *Municipalities in Transition* and the *Dive Deep & Dream Big*. The Transition movement is one of the most significant examples of local communities leading the way to a post-carbon society. The movement is spread world-wide and demonstrates a distinctive openness for collaborations, providing therefore, an experimental space with transformational ambition.

Both these action research projects were supported by the University of Lisbon, anchored by its role within ECOLISE (European Network for Community-Led Initiatives on Climate Change and Sustainability), with the broad participation of other organizations. I played the role of an embedded researcher, fully partaking as an observer and participant, contributing actively and reflectively to the codesign and facilitation.

The *Municipalities in Transition* project started in 2017 and aimed at exploring how municipalities and civil society could work better together. The research included codesigning a systemic and operational instrument that could boost the transformative reach of cooperation between local actors of sustainability and testing in six pilots in five countries. Local actors can use this instrument together to capture the governance imprint of transformational efforts and are challenged to reorganize and expand it, improving the stock of change actions and related experiences.

Quite drastic changes occurred in all the six communities that tested the governance instrument. These changes were the product of the reflexive experimentation, the new social relations, the empowerment process, the changing tensions, the translocal connectivity, the discourse formation, the new (or reinforced) institutional homes and the strategic actions. New ways of doing, organising, framing and/or knowing, as expressed in the theory of Transformative Social Innovation, used as analytical framework.

The *Dive Deep & Dream Big* project started in 2019 and was set as a collaborative inquiry to support break-through change at the municipal scale. Individuals and organizations working in different contexts got together to share knowledge and develop new transition pathways. Creating a social learning environment gave visibility to barriers that prevented effective action by fractally reproducing patterns of polarization. There was an agreement on the building blocks of a new integral governance framework based on reconciliation and imagination.

These two action research projects provided complementary information, opening the floor to a holistic approach to transition. As an answer to my research question, I present a structured and replicable transformative governance approach that involves connecting the support of change makers, the welcoming of trauma, and the exercise of creativity, together with the acceleration of systemic collaboration. It can be used as a heuristic in the design of (trans)local regenerative interventions, able to catalyse and support ambitious and inclusive systemic change at the local scale and act as a leverage point for wider societal transformation.

Keywords

Local sustainability, Transition, Governance, Collaboration, Transdisciplinary Action Research

Municípios em Transição: um sistema de governança para navegar a transformação em contexto de mudanças abruptas e irreversíveis

RESUMO

De dia para dia, o objetivo da sustentabilidade torna-se mais longínquo, apesar dos esforços significativos de transformação, empreendidos por comunidades locais e outros atores a todos os níveis. Vivemos na fronteira do caos. Possibilidades de transformação surgem de novas práticas, de compromissos políticos renovados e de um crescente sentimento de urgência, impulsionado pelos movimentos climáticos. Mas para que uma nova fase de transição ocorra, torna-se necessário lidar com a fragmentação de esforços e renovar estratégias para navegar as novas oportunidades.

Com esta investigação, estávamos interessados em explorar instrumentos e abordagens eficazes para apoiar a governança da transição ao nível local. O nosso plano foi recorrer a investigação-ação para cocriar e testar um novo modelo de governança transformativa.

O primeiro passo, em junho de 2017, foi identificar as dimensões que deveríamos considerar na análise dos esforços existente de ações colaborativas de transição, direcionadas para a sustentabilidade. Com base na revisão crítica da literatura disponível, propusemos uma Bússola para Colaborações Transformativas. A bússola inclui as dimensões de cocriação (potenciando a inteligência coletiva), o cuidar das relações (promovendo o apoio mútuo), a produção conjunta de bens e serviços direcionados para a resiliência local e a geração de inovações disruptivas.

O segundo passo foi mapear e estudar 71 casos de transições colaborativas em comunidades localizadas em 16 países da Europa e América, recorrendo a observações, inquéritos e entrevistas, iniciados em julho de 2017. Foi possível confirmar a nossa hipótese de que sinergias significativas surgem na interface de governos locais e iniciativas de base comunitária. Avaliamos as ações desenvolvidas em detalhe, com enfoque nos modelos de governança.

Qual seria um instrumento de governança eficaz para potenciar estas iniciativas, promovendo sinergias? O terceiro passo na nossa investigação foi estabelecer um conjunto de dez requisitos, relacionados com a flexibilidade e adaptabilidade a diferentes contextos; a

capacidade para lidar com graus elevados de complexidade e incerteza; e o potencial para usar a melhor informação disponível, facilitar colaborações e gerar efeitos tangíveis.

Entre dezembro de 2017 e fevereiro de 2018, concretizamos o quarto passo, através de um intenso processo de cocriação de um novo sistema de governança da transição. Optamos por escolher como base de trabalho um dos 71 casos estudados, surgido em Itália. Este modelo de governança assenta na capacidade de avaliar as iniciativas de transformação que ocorrem numa comunidade, apoiando as melhores táticas de como as reforçar. O sistema que desenhamos (anexo F) inclui:

- Uma matriz onde as iniciativas transformativas são mapeadas (e planeadas) de acordo com os atores e ações implicados, definindo-se a sua ‘impressão de governança’.
- Um conjunto de ciclos de avaliação, que permitem determinar o grau de inclusão e abrangência das iniciativas.
- Uma base de dados de ferramentas, capaz de apoiar e guiar o reforço das iniciativas.
- Um esquema de experimentação, que inclui uma proposta de governança, de diagnóstico, planeamento, implementação e avaliação.
- Tutores e uma comunidade de prática para apoiar o processo de aprendizagem social.

O quinto passo na investigação foi seleccionar de forma criteriosa um conjunto de pilotos, capaz de testar e desenvolver o instrumento de governança criado. Foram escolhidas comunidades em São Paulo (Brasil), La Garrotxa (Espanha), Budapeste (Hungria), Santorso e Valsamoggia (Itália) e Lisboa (Portugal). Estes locais apresentam uma diversidade contextual interessante, incluindo uma vasta região rural, áreas de elevada densidade inseridas em cidades, uma pequena vila nos Pré-Alpes e um município recém-criado de características suburbanas.

O sexto passo, de experimentação, decorreu de março de 2018 a abril de 2019. Após formação intensa, foi definido em cada comunidade um modelo de governança envolvendo as autoridades locais e representantes da sociedade civil. O instrumento permitiu identificar e avaliar 189 iniciativas transformativas locais, e ainda desenhar, implementar e avaliar 14 novas iniciativas de grande impacto. As iniciativas coproduzidas incluíram a sensibilização e capacitação de atores, ações ‘no terreno’ (plantações de árvores e hortas nas escolas, energias renováveis, circularidade), dois novos centros comunitários, um observatório de resiliência, e o desenho de um ‘perfil’ para candidatos a eleições locais.

As experiências foram avaliadas de forma profunda, recorrendo ao modelo de Inovação Social Transformativa. Este sétimo passo na investigação, que decorreu até julho de 2019, foi fundamental para determinar os padrões evolutivos emergentes e os aspetos críticos de design associados. Mesmo no curto espaço de tempo disponível, ocorreram mudanças dramáticas na forma de fazer, organizar, enquadrar ou conhecer. Estas mudanças foram produto da experimentação reflexiva, das novas relações sociais, do processo de empoderamento, da resolução de tensões, da conectividade translocal, da formação de novos discursos e contextos institucionais.

O oitavo passo na investigação traduziu-se na incorporação das aprendizagens numa versão atualizada do instrumento de governança da transição. O instrumento encontra-se agora numa nova fase de investigação-ação, fora do contexto direto da presente tese. As alterações introduzidas incluíram o recurso à sociocracia, novos ciclos de avaliação relacionados com adaptação profunda, resiliência e replicação cultural, e o contemplar de atores em escalas superiores.

O nono passo na investigação permitiu confrontar o instrumento criado com o conhecimento científico e prático existente. Desenhamos um inquérito colaborativo, iniciado em julho de 2019, dinamizado em contexto de cocriação envolvendo diversas organizações. O clímax do processo foi um encontro internacional de 5 dias que ocorreu em março de 2020 em Bruxelas, com a participação ativa de cerca de uma centena de investigadores, ativistas, especialistas e agentes de transição. O encontro baseou-se na Teoria U, uma metodologia para a transformação social profunda, e permitiu reproduzir de forma fractal questões emergentes e iluminar ‘pontos cegos’ da transição.

O décimo passo da investigação consistiu na avaliação detalhada do inquérito colaborativo, com base na dinâmica de sistemas adaptativos, complexos e auto-organizados, tendo decorrido até maio de 2020. Foi possível destilar os contributos dos participantes numa nova narrativa de mudança, produzindo uma estratégia integral que conecta processos de transição interior e coletivos, evoluindo de contextos de dominação para imaginação. A abordagem inclui o apoio a agentes de mudança, o acolher de traumas, a intensificação de processo colaborativos e o exercitar da criatividade.

Considera-se que, junto com o instrumento sistémico anteriormente criado, esta abordagem integral permite definir um modelo de governança regenerativa. Este modelo deverá ser capaz

de acelerar a transição no contexto atual de mudanças abruptas e irreversíveis, permitindo desenhar intervenções (trans)locais evolutivas.

O modelo regenerativo apresenta essencialmente dois aspetos distintivos. Primeiro, o instrumento de governança permite navegar coletivamente os processos de transição existentes, gerando mudanças no sistema socioinstitucional. A matriz criada permite armazenar e estruturar as aprendizagens sobre os processos de transição que decorrem na comunidade, aumentando a resiliência do sistema ao estimular a renovação e facilitar a reorganização. A ‘arena de aprendizagem’ permite aos agentes de transição identificar o potencial sistémico e coevoluir na sua agência.

Ao contrário de outros instrumentos, não são definidos objetivos, metas ou caminhos específicos para a transição. Apenas é fornecido um instrumento de navegação capaz de lidar com os altos níveis de complexidade e incerteza ao nível dos desafios e soluções disponíveis. São identificados ‘pontos nodais’ e possíveis sinergias entre ações e atores disponíveis, desbloqueando o potencial criativo. O recurso a princípios de transição inclusivos e integradores permite gerar uma mudança cultural.

O segundo aspeto diferenciador do modelo de governança regenerativo proposto, prende-se com o potencial de promover a reconciliação. Ao ‘fazer a ponte’ entre diferentes agentes, o inquérito colaborativo promovido permitiu dar visibilidade a polarizações profundamente enraizadas e, na maioria das vezes, invisíveis. O inquérito mostrou como é fundamental lidar com tópicos como a injustiça intergeracional, o patriarcado ou o colonialismo.

As atuais crises podem ser consideradas, acima de tudo, um desafio ético proveniente de uma ‘tempestade perfeita’ que nos torna extremamente vulneráveis à corrupção moral. Sem abordar as grandes questões da desigualdade, podemos não ser capazes de resolver os bloqueios políticos e sociais existentes e garantir ‘transições justas’. Antes de olhar para o futuro, somos solicitados a olhar para trás. Simultaneamente, o inquérito demonstrou a necessidade de invocar o poder da imaginação, permitindo a experimentação coletiva de futuros possíveis. A reconciliação entre polos deverá permitir transcender paradigmas.

A investigação-ação baseou-se em dois projetos nascidos no Movimento de Transição, nomeadamente o projeto ‘Municípios em Transição’ e o inquérito ‘Mergulhe Fundo & Sonhe Alto’. O Movimento de Transição, nascido em Inglaterra em 2006, é um dos exemplos mais significativos de comunidades locais liderando o caminho para uma sociedade pós-carbono. O

Movimento está espalhado pelo Mundo e demonstra uma abertura reconhecida para colaborações, proporcionando, portanto, um espaço experimental adequado.

O processo de investigação foi complementado por dois passos adicionais. As consequências da pandemia da COVID-19 para os processos de transição para a sustentabilidade foram avaliadas recorrendo à Perspetiva Multinível. Este estudo permitiu identificar implicações para a agência de ativistas, investigadores e inovadores sociais.

Finalmente, o mergulho numa comunidade espiritual em agosto de 2020, permitiu identificar abordagens de ‘transição interior’, baseadas em experiências de não-dualidade, capazes de enfrentar as causas profundas da nossa insustentabilidade. Esta abordagem, juntamente com o modelo de governança regenerativa, foi explorada num encontro imersivo de dois dias em outubro de 2020, em Lisboa, funcionando como culminar de todo o processo de investigação. Consideram-se os resultados promissores.

Palavras-chave

Sustentabilidade local, Transição, Governança, Colaboração, Investigação-Ação Transdisciplinar

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Acronyms and abbreviations

AG: Adaptive governance

CLIs: Community-led initiatives

CoP: Community of Practice

Dive Deep: Dive Deep & Dream Big

ECOLISE: European Network for Community-Led Initiatives on Sustainability and Climate Change

HHH: Head, Heart and Hands (transition principles)

LGs: local governments

MiT: Municipalities in Transition

NGO: Non-Governmental Organization

SDG: Sustainability Development Goals

SNM: Strategic Niche Management

TM: Transition Management

Part I

Setup

INTRODUCTION

The research presented in this thesis focuses on which kind of glocal governance is needed to enhance (trans)local sustainability transitions in a context of rapid change. In this introduction, I start by briefly exploring the existing sustainability challenges and some of the ongoing initiatives to address them, discussing possible structural causes for the current failure and existing windows of opportunity. I will then give clarity to the research starting point, the research question, and the general plan to answer it. Finally, I will share my personal context and the thesis structure.

1) Tipping point times

THE GLOBAL CHALLENGE

Satisfying basic needs without compromising the supporting environment is a crude but simultaneously universal and critical preliminary criteria for any species survival. Recent studies show that no country has yet found the formula to meet its citizens' basic needs within the planetary limits on resources' use (O'Neill, Fanning, Lamb, & Steinberger, 2018). The 'safe and just space for humanity' (Raworth, 2012) remains as no more than a dreamland and there is a call for a regenerative approach focused on the ability of living systems to co-evolve and express their potential for diversity, complexity, and creativity (Lyle, 1996; Mang & Haggard, 2016).

The 2030 Agenda for Sustainable Development was approved in 2015 by the United Nations Member States. After four years, the first official report acknowledges that we are not on track to achieve most of the goals (Independent Group of Scientists appointed by the Secretary-General, 2019). Of all the negative trends, four are considered particularly worrying: rising inequality, climate change, biodiversity loss and waste generation. The COVID-19 pandemic is expected to worsen the situation (UN News, 2020).

In fact, the new coronavirus outbreak is bringing new challenges, and we are now inevitably leaving the transformation path where evolution was slow – the pressure for change is no longer moderate and it demands profound shifts in our regimes (Macedo, Santos, Tristan Pedersen, & Penha-Lopes, 2021). COVID-19 might force us to redefine our concept of sustainability (Hakovirta & Denuwara, 2020), making visible the connection between the health of the planet and our own.

The accelerating climate change is the most paradigmatic symptom of our unsustainability. It is a consequence of nearly every human activity and produces negative impacts in most of human and natural systems (some extending for millennia). Many now advocate that it is already impossible to avoid a near term social collapse (Bendell, 2018). The Intergovernmental Panel on Climate Change (IPCC, 2018, p. 15) suggests that it is still possible to prevent the most catastrophic impacts, but only if we produce a wide, immediate, fast and unprecedented societal transformation. Scientists all over the world repeat warnings on climate emergency (Ripple, Wolf, Newsome, Barnard, & Moomaw, 2019).

Some promising responses to the climate challenge are already visible, coming from governments at all levels, grassroots initiatives, the legal system or businesses (*ibid.*). These efforts are expected to thrive in a context of eroded trust in institutions and democracy (Foa, Klassen, Slade, Rand, & Collins, 2020), severe polarization (Carothers & O’Donohue, 2019) and mainstreamed extremism (Davey & Ebner, 2019), pervasive injustices and inequalities (Agyeman, Bullard, & Evans, 2002; Terry, 2009), environmental melancholia (Lertzman, 2015), social unrest (Johnstone & Mazo, 2011) and information disorder (Lazer et al., 2018).

Besides ecological collapse (together with the scarcity of resources), other mutually reinforcing risks contribute to our unprecedented existential crisis, namely the threat of nuclear war and technological disruption (Harari, 2018, p. 150). Still, the myth of a Noah’s Ark persists, precluding transformative action from political and business elites (Harari, 2016, p. 196). There is the need to navigate between dystopian visions of environmental and societal collapse and overly optimistic utopias that support ‘business-as usual’ (Bennett et al., 2016).

THE LOCAL CALL

All around the world, local communities decided to face the global challenge. Through transition initiatives, permaculture, ecovillages, energy or food cooperatives, alternative currencies, alongside many other forms of activism, communities are now “envisioning, creating and living within alternatives that are rooted in fundamental ethical commitments to sustainability, equality and social justice” (Penha-Lopes & Henfrey, 2019, p. 107). These initiatives thrive in messy and fertile social contexts (Sekulova, Anguelovski, Argüelles, & Conill, 2017).

Local governments equally promote policy innovations towards sustainability. Following Local Agenda 21 initiatives (Pinto, Macedo, Macedo, Almeida, & Silva, 2015), they now put effort in localising the United Nations’ Sustainable Development Goals and in promoting low

carbon communities (Valencia et al., 2019). Often, they also organize in networks, like ICLEI, Covenant of Mayors, C40 or Resilient Cities (Climate Chance, 2019, pp. 56–57). A new municipalism movement is also rising, namely since the Fearless Cities Summit in Barcelona in 2017 (Russell, 2019) – the municipal scale (from small villages to metropolitan boroughs or city-regions) is considered strategic for transformative politics.

These local efforts, while significant in numbers (e.g. Reckien et al., 2018), are apparently getting fragmented (Hodson & Marvin, 2017) and face difficulties in materializing transformation due to issues like the rebound effect (Binswanger, 2001). Many tensions and obstacles to collaboration still persist and results are far from meaningful (Macedo, Huertas, et al., 2020). Transformation arising from local action is believed to benefit from long-term agendas and networks (Amundsen, Hovelsrud, Aall, Karlsson, & Westskog, 2018).

GOING GLOCAL

The local answer to the global challenge is “far from realising their potential as catalysts for society-wide transformation” (Penha-Lopes & Henfrey, 2019, p. 108). This might be a consequence of powerful lock-ins and path-dependencies only potentially overcome by bold institutional change, which, in democratic societies, require often a previous strong political mandate supported in social change (Unruh, 2002). Social movements can therefore drive policy action on sustainability issues (*ibid.*).

New opportunities for transformation arise therefore from the recent strengthening of climate movements (e.g. Extinction Rebellion, 2020; Fridays For Future, 2020). Also urged by the visible, rising and dramatic disruption in natural and social systems (Harvey, 2019), the wide necessary consensus for bold policy action seems closer (United Nations, 2019). Meanwhile, at local, national and global level, multiple initiatives create ‘democratic surplus’ with instruments like citizens’ assemblies (Carson, 2008; Dryzek, Bächtiger, & Milewicz, 2011).

With a growing threat of abrupt and irreversible climate changes (Lenton et al., 2019), hope lies in positive social tipping dynamics and a rapid global transformation to carbon-neutral societies (Hopkins, 2019b; Otto et al., 2020). A quantum social leap might be in the hands of people (O’Brien, 2016). The current coronavirus pandemic might also be opening new windows of opportunity by destabilizing existing regimes (Macedo et al., 2021) and making us ask ourselves “What world shall we live in?” (Eisenstein, 2020, p. 11).

Local sustainability action now faces the opportunity to finally become mainstream and expand globally, exploring the potential of translocality (Greiner & Sakdapolrak, 2013; Loorbach, Wittmayer, Avelino, von Wirth, & Frantzeskaki, 2020). ‘Going glocal’, as I call it.

Fuelled by social movements like feminism, cooperativism or degrowth, a democratic transformation of the local state and economy might be emerging (Thompson, 2020). But, even with an optimistic perspective like this, the question remains: how to scale this work with the speed necessary to face the immense global challenge in a meaningful way?

2) The vision

Agenda 21 was approved in the United Nations Conference on Environment and Development in 1992 as a global program aiming at sustainable development. It included a call for local action, and in the following years thousands of municipalities worldwide developed their own Local Agenda 21 in a participatory way. As any voluntary policy innovation, it had its dawn and zenith (Pinto et al., 2015).

Local Agenda 21 is considered a good example of (a tool to support) local governance for sustainable development (Barrett & Usui, 2002; Fidélis & Pires, 2009). It made its case as an illustration of a necessary feature of successful regime transformation (Göpel, 2016, p. 48): “niche alternatives start to develop and gain momentum, coalitions start forming and coalesce around the principles of a new approach”.

Since then, other global agendas were approved but none reached this level of local appropriation. In 2015 the “2030 Agenda for Sustainable Development” was adopted, namely the Sustainable Development Goals (United Nations, 2015). It has been stated that science should contribute by facilitating the “local ownership” and the development of “partnerships between academia, business, civil society and governments in order to find innovative sustainable development solutions through networks” (Schmalzbauer & Martin, 2016, p. 12).

My vision for this research was to contribute to the emergence of a follower to Local Agenda 21, helping to localize the Sustainable Development Goals. The expected results were to find an instrument that could promote not only a common agenda but mainly meaningful local action towards sustainability; an instrument that could be operational and institutional, being simultaneously inspiring and supportive; one that would be assumed equally and jointly by local governments and community-led initiatives; one that could be flexible enough to be

adapted to different geographies; one that would create synergies between democratic legitimacy, regulatory power and peoples' energy, using crisis as a catalyser.

3) The research

Besides all the accumulated scientific knowledge about the imperative need of transformation to sustainability and possible pathways and approaches, the challenge remains without adequate societal responses, as discussed earlier. Patterson et al. (2017, p. 2) cites several studies to conclude that there is the need to “place governance and politics at the centre of research on transformations towards sustainability”, mostly because “governance is inherently implicated in any intentional effort to shape ‘transformations towards sustainability’ and “remain under-developed in academic literature”.

I base myself in the growing research field of **sustainability transitions**, namely on the topic of **governing transitions** (Köhler et al., 2019). This expresses a socio-institutional approach with a focus on agency and governance and a perspective of “institutionalized cultures, structures, and practices as regimes in which transitional change takes place” (Loorbach, Frantzeskaki, & Avelino, 2017, p. 610). Nevertheless, I hold the existing plurality of conceptual approaches to complement my work (Feola, 2015), including work on social-ecological systems, sustainability pathways, and transformative adaptation (Patterson et al., 2017)¹.

Furthermore, I adopt **translocality** as my research perspective, paying attention to simultaneous and interconnected processes of socio-spatial dynamics occurring in different and spread locations (Greiner & Sakdapolrak, 2013). The translocal feature of transition is considered to hold a significant potential for sustainability transitions (Loorbach et al., 2020), namely to inspire new transition governance approaches.

I base the research in **experimentation** and learning-by-doing as a way to unpack complexity and support theory development (alongside social learning) in the governance of transitions (Bos & Brown, 2012; Loorbach et al., 2017; Patterson et al., 2017). The research emphasizes practice and involvement in real-world processes, combining practical and epistemic knowledge, in a phronesis approach. The intention is to respond to the urgent need to move from examining transformation to accelerating learning about facilitating it (Fazey, Moug, et

¹ These distinct research perspectives will be compared in chapter C, alongside an analyses of research needs.

al., 2018). I therefore face the challenge of effectively governing transitions at (trans)local level, looking for adequate instruments.

Surely many solutions have already been explored and there is not one single answer (nor a ‘silver bullet’). What (possibly) makes this research distinct is the starting point: I assume that a great potential for transformation rests in the joint reflection (and subsequent action) from local authorities and civil society². The research object is therefore **local transformative collaboration**. The first step was to conceptualize and empirically explore the dynamic interactions between these local actors in the contexts they are embedded (Frantzeskaki et al., 2017).

QUESTION AND PLAN

In this thesis I use the following research question as my guide:

What would be an applicable and comprehensive governance instrument to support the development of (trans)local transitions, facing the challenge of tipping point times?

To answer this question, efforts were made to learn from on-going local transformative collaborations, as well as design, and testing with a new governance instrument (named ‘Municipalities in Transition’) (Figure In.0.1). Research focused on the (trans)local level, with the expectation of generating positive systemic repercussions. Empirical findings allowed to improve the proposed instrument and support learnings on the topic of governance of transitions.

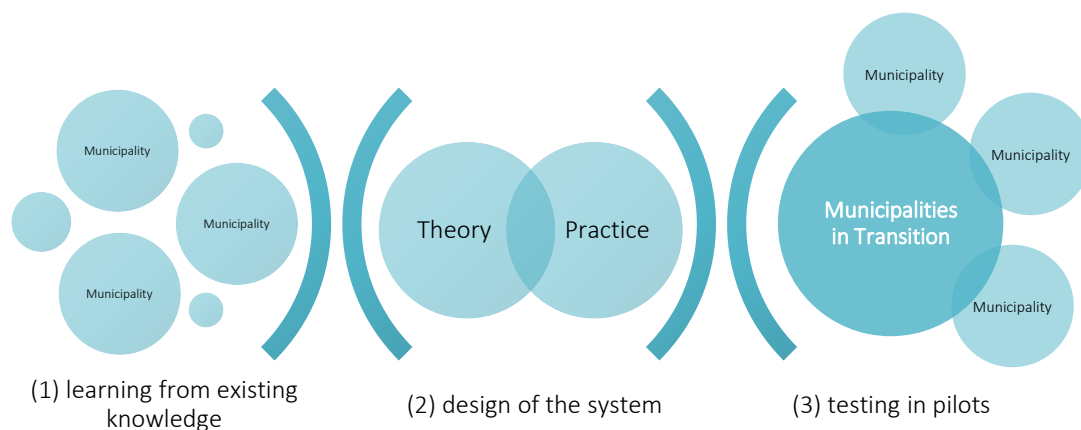


Figure In.0.1 – Core research activities including the steps of (1) learning from existing cases and studies of local transformative collaborations, (2) designing of the Municipalities in Transition instrument, with the purpose of supporting transition governance, (3) developing a translocal piloting process, allowing to test and refine the instrument.

² This intention is backed up by several studies – see e.g. the European report entitled Transforming cities in a changing climate that calls for “new ways of collaboration” and “innovative partnerships” between different stakeholders at local level (EEA, 2016, p. 48 and 60).

Methodology was based in **transdisciplinary action research** and will be detailed in chapter D.

CONCEPTS

Within the present research I work with the overarching concept of *governance of transitions towards sustainability*. I refer to a system of structures and practices that determine how people take decisions and exercise responsibility relating processes of fundamental changes in human society involved in moving towards more sustainable and equitable futures (Patterson et al., 2017). These changes are inherently complex and contested and can relate to structural, functional, relational, and cognitive aspects of socio-technical-ecological systems (*ibid.*).

Still citing from Patterson et al. (2017, pp. 11–12), the research is centred around *governance of transitions* i.e., “governance to actively trigger and steer a transformation process”. I do not focus primarily on transitions *in* governance i.e., “transformative change in governance regimes”, and not even in *governance for* transitions i.e., “governance that creates the conditions for transformation to emerge from complex dynamics in socio-technical-ecological systems”. Nevertheless, these viewpoints obviously overlap, and they will all be discussed in the thesis.

I use transition and transformation with similar meanings but an important distinction. I consider that *transition* refers to the developmental and co-evolutionary process (‘the path’) aiming at *transformation* (‘the goal’), as an emergent manifestation of desirable, significant, and enduring change towards sustainability. This approach allows us to unify the various significances of transition and transformation that are used in research, merging the deliberate/emergent conceptualizations (Feola, 2015)³.

Sustainability is considered here as the process of co-evolution wherein humans contribute to develop the capability of living systems, social as well as natural, to express their potential for diversity, complexity, and creativity (Mang & Haggard, 2016, p. XXVII).

A Municipality usually refers to an administrative division having the power of self-government and a local government would be the governing body of a municipality. In the context of the research, *municipality* refers to the experimental setting where local authorities and civil society (namely community-led initiatives) work together (or collaborate) for a shared transformational purpose.

³ We therefore avoid expressions like ‘governance of transformations’, since we consider that only processes with transformative potential (transitions) might be steered.

I try to keep a systemic thinking, accounting for all the interrelated sustainability questions, institutions and actions, at different scales. I avoid the binary and antagonist categorization of local governments versus community-led initiatives. They are not separated units, and many interconnections occur (even the same individuals keep significant roles on both spheres). We can also argue that local governments are an intrinsic part of the local community and cannot be labelled as external counterparts.

Even though separate analyses from the actors' perspective can be useful (for instance to understand tensions), this research focuses on the transformative power of local collaborations, namely of the systemic influence these joint endeavours can have. In other words, the research tries to maintain a double perspective on partnerships, both institutional (as new arrangements on governance regimes) and from the actors' viewpoint (as a tool to improve own performance) (Van Huijstee, Francken, & Leroy, 2007), with the first one prevailing.

LIMITATIONS

The research is centred on (trans)local transformative efforts, exploring how they are generated and steered, focusing on processes, and not so much on concrete actions or their direct impacts. Quite often, I use the lenses of community-led initiatives. The topic of regional, national or global sustainability action is only briefly explored. I am mostly interested in defining sensible instruments and not so much in developing analytical or theoretical frameworks to understand transitions. Even though part of the work was developed in South America, we should consider that this research is mostly European centred.

I have an engineering/governance mindset (see Box In.0.1), so the contributions of my supervisors, from the ecology and sociology fields, were indeed valuable. My participation in multiple scientific meetings, in the context of research institutions (University of Lisbon and Erasmus University Rotterdam) and international conferences, also allowed me to collect extraordinary contributions and acted as a 'control' feature, preventing inflated bias. Further limitations are expressed in the end of each chapter related to results (E, F and G), and discussed in the conclusion.

Box In.0.1 – Disclaimer

(obs.: should all scientific works have one to make visible possible biases?)

I am Consciousness itself, manifested in a white, middle age, middle class man, born and living in Portugal, with a catholic education, facing the environmental destruction with radical acceptance while fully committed in Humanity's evolution, sometimes still with a saviour complex, with an engineering mindset that makes me look for tools and ways to make things better, believing that ego transcendence is the Holy Grail, focused in community and integration, with a tendency to avoid conflict, dedicated to transdisciplinary action research and doing a PhD thesis on transition governance, with a governmental scholarship, mostly reading papers written in English from western researchers, European centred, working with the Transition movement, spending too much time on my computer, writing the thesis during the coronavirus epidemic, not fully aware of all my bias.

In the thesis I use the personal pronoun 'I' even though 'we' would be more appropriate because, despite being the only accountable for the scientific research, this was truly a collective endeavour.

In the next section I share the personal context of the research.

4) Personal motivation

As a community catalyst and networker with a predominant focus on environmental issues, I see climate change as an opportunity for transformation, creating a post-carbon society that respects the planetary boundaries and leads to more meaningful and happier lives for humans. I feel inspired by what communities are already doing all around the globe and want to be part of this social change. For over a quarter century, I have been working with local governments and community-led initiatives on sustainability issues in more than fifty places, using the Local Agenda 21 framework in most of the cases. It was always clear to me that much more could be achieved if a better collaboration were established.

Therefore, my starting question was: how can we promote synergies at local level that use climate change as a catalyst and lead to a transformation for sustainability? (Figure In.0.2). Specifically, I wanted to research the collaboration between community-led initiatives and local governments and the objective was to find the frameworks and tools that could be used to improve this relationship.

During the research it became clear that it was not only about transformative collaborations *per se*, but more broadly about creating safe spaces for interdisciplinary multi-stakeholder learning processes that could enhance people's ability to respond ('responsibility') to the global and urgent challenges previously mentioned. The architecture of these spaces is expected to be supportive of new joint decisions and actions leading to the emergence of transformations: that is the reason why I adopted the concept of transition governance.

I personally hope to potentiate the knowledge and skills I have gained through this research in future work as an action researcher, consultant, and facilitator.



Figure In.0.2 – The initial vision for the research, based in the Sustainable Development Goals.
Climate action as the impulse, partnerships as the instrument, sustainable communities as the aspiration.

5) Thesis structure

This thesis is divided in 3 main parts: setup, confrontation, and resolution. They correspond to the traditional format of an academic thesis, namely one part theory, one part empiricism and one part evaluation. Naming of the parts is inspired by the *three-act structure* traditionally used in screenplay (Brütsch, 2015):

- Setup – in a drama, the setup is where the main characters, their relationships, and the world they live in are presented; an inciting incident confronts the main characters, whose reaction leads to a dramatic situation that raises fundamental questions and calls for action.
 - in this chapter (*Introduction*), I already presented the current challenges and the tipping point context, and how local actors and transition researchers are dealing with the situation; I also introduced myself in this ‘drama’, including the PhD research and personal motivation.
 - in chapters A-C, I develop the literature review, focusing on local transformative collaborations; I start from a more conceptual approach to develop the ‘compass’ for the research (A), and then explore the existing knowledge on the reality of these efforts, including the description of the ‘dark’ side of collaboration (B); finally, I summarize the on-going research on transformation and how I expect to contribute to its evolution (C).
- Confrontation – in this part in dramas, we see protagonist's attempt to resolve the problem, learning new skills and arriving at a higher sense of awareness of what they are capable of; dealing with their dilemma then starts changing who they are.
 - In chapter D, I share the strategy of transdisciplinary participatory action research, including the methods used.
 - In chapter E, I share how the *Municipalities in Transition* instrument was developed and the changes it is expected to bring, namely a new awareness of occurring transitions and their transformative potential.
 - In chapter F, I share the parallel unfolding of the pilots’ stories on dealing with their local predicaments.
 - And finally, in chapter G, I share how the confrontation of the *Municipalities in Transition* instrument with the ‘ecosystem’ of science and practice led to a turnaround, in the context of the *Dive Deep & Dream Big* inquiry.

- Resolution – here, the dramatic questions are answered, leaving the protagonists and other characters with a new sense of who they really are.
 - In the discussion, I explore the contributions of the thesis to change the landscape of sustainability transition research, revisit the research process with critical lenses, and discuss how the research changed my personal perspective and impacted society.
 - In the conclusion, I answer the research questions and present my thesis statement.

The three chapters on results (E-G) have the same structure:

- *Research unfolding*, including an introduction to contextualize the topic, presenting specific objectives, methods used and main results (it works as an extended abstract).
- Several sections presenting, evaluating, and interpreting results.
- *Discussion*, seeing how the unfolding work contribute to answer the research question, also including limitations and open questions.
- *Synthesis*, to summarize learnings and bridge to the following chapter.

Boxes are used occasionally to present complementary information.

“Society’s most challenging issues are complex and multifaceted beyond the reach of any single organization to tackle effectively on its own. Regardless of problem domain – be it poverty, health, education, terrorism, migration, or climate change – the boundaries between states, markets, and civil society in addressing challenging social issues are increasingly blurred. Collaborations, in the shape of formalized joint working arrangements between independent public, private, and non-profit organizations, are thus seen as necessary means of addressing major issues facing society today.”

Vangen (2017)

A. LOCAL TRANSFORMATIVE COLLABORATIONS

This first chapter opens the **literature review** on the main topics of the research, which include governance, (trans)localism, transitions, transformation, sustainability, and collaboration. This is a vast repertoire of broad subjects, so I start by revisiting the research framework, bringing clarity to implicit nuances and the scopes of the review.

1) On the literature review

The topic of this thesis is the *governance of (trans)local transitions towards sustainability*. The purpose is to empirically develop a governance instrument starting from the ground of *local transformative collaborations*. The idea (assumption) behind this option is that existing collaborations between local actors can lead to synergies and could/should be the basis and inspiration for the governance instrument.

The nuance here is that I intentionally refer to *transformative collaborations* and not *collaborative transitions*, as the starting point of the research and the basis for the governance instrument design. This means that the initial focus is not on how transitions are performed (if they are, or not, collaborative) but on the joint work of different actors (collaborations) that can have transformative potential.

This leads us to the first and main **scope** for the literature review: theory on *local transformative collaborations*. Starting on the topic of collaboration, I used an exploratory approach⁴ to investigate related topics with a concrete and pragmatic goal: to identify dimensions to assess collaborations between local actors that meet the needs for transformation towards sustainability. In other words, I wanted to define a *compass for transformative collaborations* (presented in section 2) that could guide me through the entire research.

I then explored existing literature on on-going collaborative efforts towards sustainability (chapter B). The last and final scope of the literature review outlines an analyses of

⁴ I searched by topic and not by (top) journal or author, to include ‘all’ published articles, as suggested by Webster & Watson (2002). I have used google scholar, evaluated as the most comprehensive academic search engine (Gusenbauer, 2019). I performed a multidisciplinary study, not restricted on sustainability related themes. It was exploratory in the sense that the full spectrum of topics was not previously defined but investigated starting from the ‘general’ idea of local transformative collaborations.

transdisciplinary transformation research, with emphasis on the topic of governance of transitions (chapter C).

2) A Compass for the research

Collaboration is at the heart of natural evolution (Kropotkin, 2012), including that of humans, and is considered a positive feature in cultures across the world without known exception (Curry, Mullins, & Whitehouse, 2019). Collaboration has an ubiquitous presence in our lives (Patel, Pettitt, & Wilson, 2012) and is critical to any community, translating into the capacity of its members to collectively set and pursue shared goals.

Consequently, collaboration captures the attention of many research fields, from game theory (Lozano, 2007) to strategic management (Niesten, Jolink, Lopes de Sousa Jabbour, Chappin, & Lozano, 2017), and is well studied under public administration (Bryson, Crosby, & Stone, 2015). Policy studies showed that collaboration can mitigate conflict, therefore enabling collective action (Weible & Sabatier, 2009). Partnerships, as collaborative arrangements, can also produce and catalyse synergies by way of pooling resources and skills (Frantzeskaki, Wittmayer, & Loorbach, 2014). Probably due to its intrinsic complexity, currently there exists no unified theory of collaboration.

However, we should also mention that collaboration is no *panacea* to advance governance (Forsyth, 2010). As research showed extensively, collaborations are not easy tasks, they take time, effort and resources, require working with complex human interactions around power relations and do not necessarily lead to synergies and advantages (Vangen, 2017; Westman & Broto, 2018). They are inherently paradoxical (Vangen, 2017) and their contributions to sustainability still needs to be investigated (Govindan, Seuring, Zhu, & Azevedo, 2016; Van Huijstee et al., 2007).

Several factors can influence the results of collaborations and have been reported in literature. To systematize these factors, I have proposed a **compass for transformative collaborations** (Figure A.1 and Table A.1).

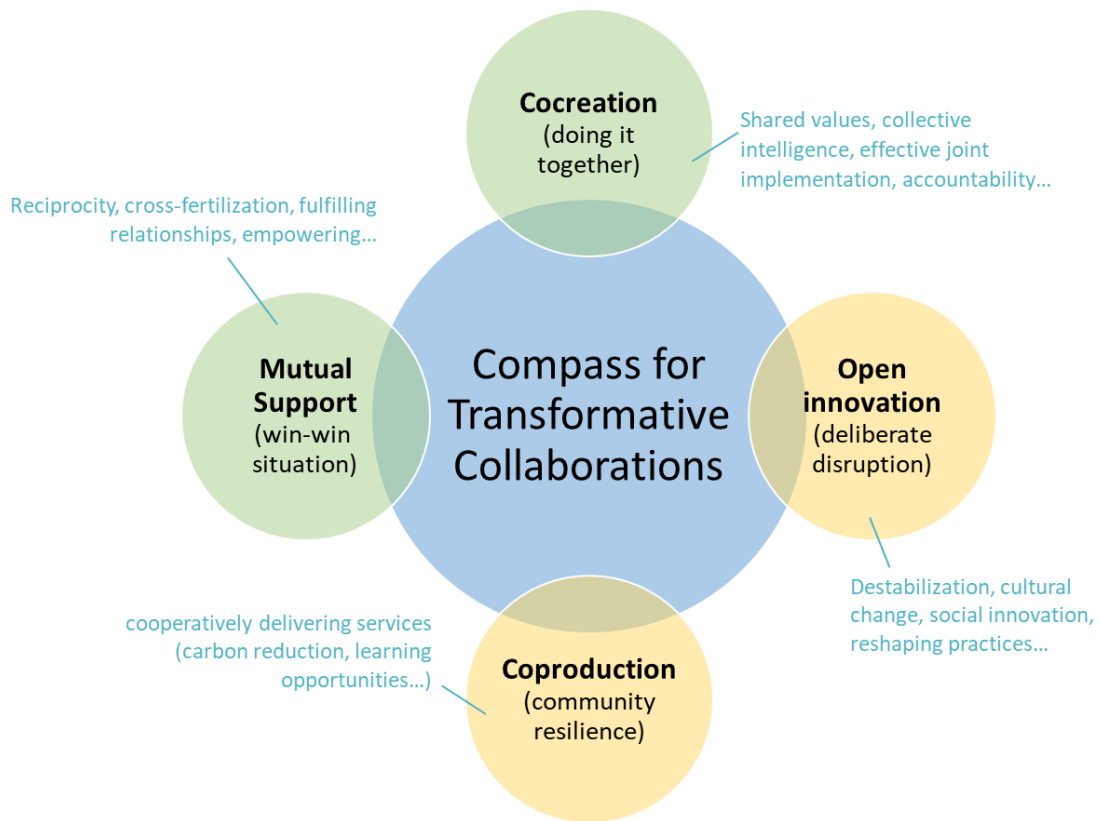


Figure A.1 – What makes a successful transformative collaboration?

The *Compass for Transformative Collaborations* proposed here collects factors found in literature and allows a multidimensional assessment of collaborations between local actors, in terms of transformation towards sustainability. The green circles relate primarily to the quality of the process (cocreation) and relationships established (mutual support) and the yellows to outcomes, including concrete outputs (coproduction) and more intangible impacts (open innovation).

Table A.1 – Dimensions to assess collaborations between local actors that meet the needs for transformation towards sustainability (found in literature).

<p>Cocreation (<i>doing it together</i>), by using collective intelligence in addressing the following features:</p>	<p>Mutual support (<i>win-win situation</i>) with reciprocity in mind, leading to cross-fertilization, fulfilling relationships and empowerment, including:</p>	<p>Coproduction, especially cooperatively delivering goods and services aiming at caring for people and the planet (<i>community resilience</i>):</p>	<p>Open innovation (<i>deliberate disruption</i>), making transparent and explicit what is to be transformed and for whom and promoting the destabilisation of existing regimes by way of:</p>
<ul style="list-style-type: none"> • Shared understanding and analyses of the problem • Clear purpose, common shared values/narratives and long-term commitments • Strategy development and effective joint implementation • Monitoring and evaluation • Clearly defined and complementary roles • Taking joint decisions • Suitable level of bureaucracy and formality • Legitimacy (internal and external) • Inclusion and representativeness • Transparency and accountability 	<ul style="list-style-type: none"> • Permanent, enduring, structured and interpersonal dialogue • Handling conflict • Sharing goods and services • Help to get access to assets and space • Mutual fundraise (e.g., grants, joint applications, crowdfunding) • Cross marketing (promoting and participating in each other's activities) • Information and knowledge sharing (e.g., two-way training) • Suitable regulations (e.g., avoiding coercive isomorphism) • Equally shared risks, efforts, and benefits (fairness) • Mutual trust • Commitment 	<ul style="list-style-type: none"> • Well-being and personal growth (e.g., learning opportunities, community engagement) • 'Green' economy (e.g., entrepreneurship, localization, circularity) • Vibrant culture (e.g., local heritage, creativity) • Social Capital (e.g., extent of networks, density of relationships) • Justice and equity (e.g., deliberate redistributive efforts, inclusion) • Ecological restoration • Climate mitigation and adaptation 	<ul style="list-style-type: none"> • Cultural change (changing of paradigms and thinking patterns) • Social innovation • Technological disruption • Reshaping practices • Networked governance • Institutional change • Social learning

COCREATION

The first proposition advocates that local institutions should promote the cocreation of initiatives (*‘doing it together’*), by making use of their collective intelligence. This can involve processes of collaborative envisioning, analysing scenarios and setting pathways (Eisenhauer, 2016; Vergragt & Quist, 2011; Wiek & Iwaniec, 2014). Discussing and agreeing on a shared understanding and analyses of the problem, as well as long-term commitments, are considered critical (M. Leach et al., 2012).

Transition Management, for instance, focuses on the role of a team of leaders in collaborative envisioning and steering of experiments, combined with a reflexive approach that includes monitoring, evaluating and learning (Loorbach, 2007, 2010; Loorbach & Rotmans, 2010; Nevens, Frantzeskaki, Gorissen, & Loorbach, 2013).

Clearly defining complementary roles and taking joint decisions are also factors present in effective joint implementation processes. These efforts are expected to reinforce legitimacy (Rydin & Pennington, 2000), especially if aspects of inclusion, representativeness, transparency and accountability are considered.

MUTUAL SUPPORT

The second proposition highlights the need for mutual support with reciprocity in mind (*‘win-win situation’*), leading to cross-fertilization, fulfilling relationships and empowerment. Key conditions for fruitful collaborations are the commitment to work together and the development of trust (Hassink, Salverda, Vaandrager, van Dam, & Wentink, 2016).

Studies also show that funding can be important but not as much as creating spaces for permanent, enduring, structured and interpersonal dialogue (BASE, 2016; TESS, 2017). A suitable level of bureaucracy and formality is also critical to reduce the risk of phenomena like *‘coercive isomorphism’* (Henfrey & Penha-Lopes, 2018), in which community-based initiatives are pressured to conform to requirements and expectations of incumbent regimes (e.g. to adopt a legal structure or fit within the parameters of the political agenda).

In general, sharing goods and services or information and knowledge (e.g., two-way training), and cross marketing (promoting and participating in each other’s activities), are factors that can contribute positively. Fairness and equity should be promoted by sharing risks, efforts and benefits.

COPRODUCTION

The third proposition focuses on coproduction, namely the joint delivery of goods and services aiming at caring for people and the planet, thus promoting ‘*community resilience*’ (Revell & Henderson, 2019).

The coproduction of (hopefully transformative) public services may be the decisive step in a collaboration between local governments and grassroots movements. Bovaird (2007) concluded that supporting coproduction should be the new public service ethos. In particular, the coproduction of goods and services by different actors organized into polycentric systems can be “crucial for achieving higher levels of welfare in developing countries, particularly for those who are poor” (Ostrom, 1996, p. 1083).

Some advances have occurred, especially in ‘community energy’ (Avelino et al., 2014) and ‘ecosystem stewardship’ (Chapin et al., 2010). Coproduction might include the provision of well-being and personal growth (e.g., learning opportunities, community engagement); ‘green’ economy (e.g., entrepreneurship, localization, circularity); vibrant culture (e.g., local heritage, creativity); social capital (e.g., extent of networks, density of relationships); justice and equity (e.g., deliberate redistributive efforts, inclusion); ecological restoration; other sorts of climate change mitigation and adaptation responses.

OPEN INNOVATION

Finally, the fourth proposition addresses the need for open innovation, making transparent and explicit what is to be transformed and for whom and promoting the destabilisation of existing regimes. The idea of ‘*deliberate disruption*’ is a reaction to the urgency of tackling sustainability issues and the need for radical and ‘deep’ change (e.g. Amundsen et al., 2018; Bendell, 2018; Fazey, Carmen, et al., 2018).

Several theories have been proposed to frame the more intangible outcomes, ranging from transformative social innovation (Avelino et al., 2019), social learning (Beers, Sol, & Wals, 2010), practices theory (Shove & Walker, 2010), technological innovation systems (Markard & Truffer, 2008), narratives of change (Hendriks, 2009; Ruijsink et al., 2017), institutionalization (Fuenfschilling & Truffer, 2014), cultural change (Geels & Verhees, 2011) with new paradigms (Gibbons, 2020), networked governance (Tosun & Schoenefeld, 2017); etc. These follow from (sometimes) opposing ontologies (Geels, 2010). Here the concept of ‘open innovation’ is used to emphasize the importance of using internal and external ideas in these collaborations (Bogers, Chesbrough, & Moedas, 2018).

B. ONGOING EFFORTS TOWARDS SUSTAINABILITY

I now turn to a review of the literature on transformative efforts, predominately at local level (the empirical setting). The main purpose is to explore the current knowledge on the existing transition efforts, to be able to start a suitable design process.

1) The quest for transformation

Transformation is a buzzword in sustainability research and policy (Feola, 2015; Hölscher, Wittmayer, & Loorbach, 2018; Patterson et al., 2017). It can be defined as a “change in the fundamental attributes of natural and human systems” (IPCC, 2014, p. 1122) and is usually used with a positive connotation (EEA, 2018, p. 28). Transformations have a wide spectrum and may occur in any place, dimension, scale or sector, involving “energy and agricultural systems, financial systems, governance regimes, development paradigms, power and gender relations, production and consumption patterns, lifestyles, knowledge production systems, or values and world-views” (O’Brien, 2012, p. 671).

Transformation is generally used as a metaphor for disruptive change and a way to distinguish from more incremental processes that are considered insufficient. Its growing use is probably a consequence for a more generalized sense of urgency in tackling sustainability issues, as previously mentioned.

The world might be changing faster than at any time in human history. It is not my intention here to discuss this argument, that some consider just a cliché (Frederik, 2016) and others call the “the great acceleration” (Steffen, Broadgate, Deutsch, Gaffney, & Ludwig, 2015). Nor the inequalities ‘hidden’ in this narrative (Malm & Hornborg, 2014). I am mostly interested in the obvious corollary to this statement which is that we must also adapt faster than ever.

Faster or not, literature reveals a wide societal consensus on the fact that “many households, communities, organizations, countries, and regions are confronting a confluence of economic, political, demographic, social, cultural, and environmental changes” (IPCC, 2014, p. 1121). Adding climate change to the equation, there is the conclusion that sustainable development is clearly being put in jeopardy (*ibid.*).

These changes are considered by many, including scientists, activists, and politicians, as the necessary impulse to improve society. Maja Göpel claims that we are facing a “renewed window of opportunity for the radical changes that in essence the sustainable development

agenda always held” (2016, p. 2). Naomi Klein, in the documentary ‘This Changes Everything’ (inspired by her bestselling book), asks “What if global warming isn’t only a crisis? What if it’s the best chance we are ever going to get to build a better world?” (Lewis, 2015). The former United Nations Secretary-General Ban Ki-moon, in the road to the Sustainable Development Goals, went further by calling us to embrace change and adopt transformation as our collective watchword (Ki-moon, 2014).

Risks concerning the trivialization of transformation in the contemporary sustainability discourse have been pointed out, and Blythe *et al.* (2018) suggest that scientists, policymakers, and practitioners should consider change in a more inherently plural and political way.

The coronavirus pandemic is currently bringing new challenges and opportunities. Abruptly, the 2019 coronavirus outbreak silenced ongoing efforts to protect climate, while also partly bringing carbon emissions to a halt. A global tragedy is still unfolding with vast social impacts, and we are reaching a roundabout with several distinct exits (Macedo *et al.*, 2021).

2) Developing the ‘local globe’

Localism is a political concept that promotes a place-based approach on issues like economy (e.g., supporting local food production and creating complementary currencies), democracy (e.g., promoting self-government and participatory decision-making) or culture (e.g., appreciation for identity and distinctiveness). It has been defended by a wide range of actors and can be promoted at any level of government (Pugalis & Bentley, 2014).

Localism can also be seen as a social discourse and somehow a reaction to the process of globalization, associated with popular images of growing homogeneity and loss of control in our individual lives (O’Riordan, 2001). These fears are supported, for example, by warnings on the rate of languages’ extinction – one every two weeks (Wilford, 2007) – and dystopian books like ‘Globalia’ (Rufin, 2003).

The most relevant ideas behind localism are that problems at local level can be more easily definable and solutions created (therefore relating to the concept of subsidiarity) and that it can be an effective way of engaging citizens and organizations since they are directly affected by decisions and the impact of (in)action. It has been considered a new economic paradigm contributing to increase sustainability (Curtis, 2003) and a way to preserve heritage and activate endogenous potential (a fact highlighted by European policies).

In the case of climate change, local organizations are considered key actors in adaptation, which is always “place- and context-specific” (IPCC, 2014, p. 85). However, localism does not come without critiques (DuPuis & Goodman, 2005; Marvin & Guy, 1997; Newig & Fritsch, 2009; North, 2010), namely of being a sort of reactionary politics leading to protectionism (Hinrichs, 2003), not being inclusive (Chaffin, Gosnell, & Cosens, 2014) and lacking the necessary capacity for a wider transformation.

Using systems thinking we might conclude that dualities of global-local (or top-down and bottom-up) are easily disputed. As Tim O’Riordan concludes, “we are all global beings, acting out our consumerism and citizenship at a local level” (2001, p. 237) and we should expect the ‘local globe’ - the localization of globalization - to develop (*ibid.* p. XIX).

Maybe the spatial differentiation of global and local does not make sense anymore in a hyperconnected world where governance is no longer hierarchical (*ibid.* p. 22). In any case we might guess that the emancipatory motto ‘think global, act local’ will keep its romantic and appealing figure for some time to come.

I will now look at studies on transformative efforts coming from civil society and local governments.

CIVIL SOCIETY DRIVING SUSTAINABILITY

An increasing number of groups of citizens are proactively and voluntarily joining together in their local communities to give rise to positive change within their places of living, becoming drivers of sustainability transformations (e.g. O’Hara, 2013). The sometimes called bottom-up civil society organizations, citizen-led/community-based initiatives or grassroots movements have a reported multitude of aims (Celata & Sanna, 2014).

Researchers from several projects went together to systematically examine recent publications based on worldwide case studies (Frantzeskaki et al., 2017) and concluded that there are three main roles played by civil society. First these initiatives advocate for and give rise to radical innovations and find ways to empower communities, contributing to challenge values and beliefs. Second, they co-provide alternative services that support and make feasible more sustainable practices. And finally, they might focus on promoting their autonomy through integral approaches, acting as ‘disconnected innovators’ (disconnected from other social, cultural, and ecological systems and cross-scale dynamics).

These different roles played by civil society are not mutually exclusive and often priorities change during the initiatives’ life cycle or between individual projects and their networks.

However, as a reasonable generalization, we could say that permaculture or degrowth initiatives are more focused on cultural change; energy cooperatives and community-supported agriculture try to support sustainable lifestyles; ecovillages and transition initiatives are typical examples of ‘niche’ innovations.

How is the impact of these community-led initiatives (CLIs) being evaluated? Some studies start from a climate change perspective, highlighting a significant potential to reduce carbon emissions, specially from initiatives providing electricity and heat from renewable sources, sustainable transport and vegetarian/vegan meals – up to a quarter of the carbon footprint of the CLIs’ beneficiaries (TESS, 2017). Moreover, literature reveals that civil society “already have significant and positive roles in support of adaptation planning and decisions” and provide solutions ready to be mainstreamed (IPCC, 2014, p. 580 and 849).

Besides more tangible and direct environmental and economic benefits (like creating local livelihoods and regenerating ecosystems), it is argued that CLIs are contributing to community resilience by promoting healthy engaged lifestyles, a creative inclusive culture and cross-community links (Revell & Henderson, 2019) – these dimensions are considered crucial from a systems-thinking perspective concerning the community’s ‘transformability’ capacity. Using the multi-level perspective, it is argued that CLIs act as innovation ‘niches’ with the capacity of destabilizing the lock-in of regimes and transform cultural values (Celata & Sanna, 2014; Loorbach & Lijnis Huffenreuter, 2013; Seyfang & Smith, 2007).

In any case, we must consider that CLIs do not promote sustainability transitions in isolation. A connection to global efforts is considered needed (M. Leach et al., 2012), namely to adequately consider the planetary boundaries. There are also unintended results that might arise from CLIs work, namely in terms of increasing inequality between communities (Frantzeskaki et al., 2017). In fact, many initiatives benefit most areas with already high social capital and attract extra national and international funds to already economically privileged neighbourhoods.

LOCAL GOVERNMENTS ARE COMING BACK

In this research I consider as ‘local government’ any formal institution created for decentralized decision-making and delivery of services to a relatively small geographical area (could be a village, a city or one of its subdivisions). The size and power of local governments differ according to countries and have changed throughout history – they emerged before

nation-states, declined their importance with wars and conquests, and are said to be regaining importance with globalization (Shan & Shah, 2006).

There is some consensus that local governments (LGs) play a crucial role, through what they “do, encourage, allow, support, and control” (IPCC, 2014, p. 575). In fact, it has been reported that LGs are in charge of 70% of public investment and half of public spending on the environment (OECD, 2010). They are usually valued for the proximity with people and the efficiency in resources used. In past decades LGs have proactively faced the sustainability challenge by adopting policy innovations (Pinto et al., 2015).

LGs are subjected to several factors that can act as barriers or enablers for their work on sustainability. Besides the obvious access to resources (financial; human) and information, there is a great dependence on issues like leadership, institutional context and competing agendas (Aguiar et al., 2018; Measham et al., 2011). These factors include the political environment and turnover or the skills to work collaboratively.

The leading action of LGs concerning sustainability has been facilitated by transnational nongovernmental organizations and initiatives like *ICLEI - Local Governments for Sustainability* and *100 Resilient Cities*, that provide tools, networking and services and promote advocacy (Spaans & Waterhout, 2017; Yi, Krause, & Feiock, 2017). Joint efforts with academia also promote significant researcher-practitioner collaboration for knowledge exchange, thus supporting LGs in their action (Schmidt et al., 2015).

A new vision of local governance can be centred around citizens, with LGs assuming leadership in a polycentric system – possibly the biggest role could be to act as a catalyst, looking for synergies that may reveal the energies of the entire community (Amundsen et al., 2018; Shan & Shah, 2006). Additionally, transnational municipal networks (Fünfgeld, 2015) – along with similar networks of non-governmental organizations – might put cities in a position to redefine the rules of the game in terms of global sustainability governance (Toly, 2008).

3) Collaboration on the way

Collaborations between LGs and CLIs is expected to lead to significant synergies (Krishna, 2003), but are these local actors collaborating in a meaningful way towards sustainability? How? What are the outcomes? A recent review of 147 local climate adaptation strategies in Europe showed that around half of them were involving interest groups, including

nongovernmental organizations (NGOs) and industries (Aguiar et al., 2018), while a research on community energy in UK showed that around 60% of the initiatives were partnering with local authorities (Seyfang, Park, & Smith, 2013).

The BASE research project also studied 23 European cases of climate change adaptation, trying to address integration of top-down policies and bottom-up initiatives (Ng, Campos, & Penha-Lopes, 2016). They found that key solutions used to overcome barriers were participatory approaches or stakeholder engagement, institutional changes, networks or cooperations (Rendon et al., 2016).

Namely, dedicating efforts to promote forums for dialogues between groups was considered critical, having return in terms of “enhancing common understanding of the challenges and by improving public acceptance and implementation” of the necessary actions (BASE, 2016, p. 4). Innovative participatory methods like scenario workshops and adaptation pathways were experimented in the context of action groups involving both LGs and CLIs (Campos, Vizinho, et al., 2016).

Partnerships between LGs and CLIs to promote local resilience and climate protection were also identified outside the ‘western’ context and in cities around the world (Castán Broto & Bulkeley, 2013) – when LGs lead they usually partner with private actors but also civil society, while CLIs mostly partner with LGs.

In some case studies (World Bank, 2015), CLIs gained the opportunity to access public resources and participate in decision-making processes that could help them to sustain their practices and scale up. Their legitimacy also increased. LGs benefited because they could ground their policies and actions in local realities (increasing efficiency and responsiveness) and use communities’ knowledge and capacity, including field-tested solutions. These collaborations showed the potential to transform relationships and promote the recognition of communities’ capacity to deliver positive change.

The business sector is likewise aware for a long time of the value of collaborations, especially in the context of sustainability and with increasing demands from society. Collaborations can have positive impacts on environmental, economic and social performances, by way of sharing knowledge and resources or improving legitimacy of new technologies (Niesten et al., 2017). Special attention to collaborations has been given in the context of sustainable supply chain management (Govindan et al., 2016). The studies include inter-firm relationships (e.g.,

alliances, joint ventures, or cooperatives) and between companies, governments (namely public-private partnerships), research institutions and non-governmental organizations.

Recently, research has also been focusing on the role of intermediaries that can act as key catalysts that speed up change, namely by promoting collaboration (Kivimaa, Boon, Hyysalo, & Klerkx, 2019).

As mentioned, the coronavirus outbreak is bringing new challenges and opportunities for change makers, by challenging regimes profoundly and bringing the destabilisation that was considered necessary to overcome path-dependencies and lock-ins. For a deep transformation towards a better collective future to happen, not only climate activists, social innovators, action researchers, and networkers, but all society, including regime actors, are called to explore the new possibilities and collectively create a new culture of caring and regeneration (Macedo et al., 2021).

DARK SIDE

Recent studies coming from several European research projects also demonstrate that interactions between civil society and governments can have negative impacts (Avelino et al., 2019; Frantzeskaki et al., 2017) (Box B.1). CLIs can suffer from over-exposure and compromise their limiting resources, being moved away from their primary missions. They can also be ‘captured’ by political agendas.

Henfrey & Penha-Lopes (2018) mention several risks including co-optation, resources-dependency and ‘coercive isomorphism’ (as already mentioned). On the other hand, governments complain of a lack of effort to engage from civil society and that these processes often lead to the capture by special interests and bureaucratization (Rydin & Pennington, 2000).

Box B.1 – Collaboration as a wicked problem.

We might consider that institutional synergies at local level have not yet shown their potential due to the simplistic, and somewhat patronizing view, with which they are sometimes studied and often implemented. I propose that, to start with, the collaboration between LGs and CLIs need to be recognized as having features of a wicked problem. I will now discuss this argument.

As previously argued, assessing these local collaborations is not as clear and straightforward as it might look. Having any kind of collaboration might even be considered undesirable. To start with, we can reason that being institutionally and politically independent is, in fact, the main strength

of CLIs – they “have the potential to be less constrained by structural processes than top-down policies for transitions and can spur large-scale changes” (TESS, 2017, p. 2). We also empirically see that some CLIs grow out of conflict with authorities, with positive results (Aylett, 2010). On the other hand, “when citizens start putting their ideas and ideals into practice, they organize things in their own way, which may conflict with policy” (van Dam, Salverda, & During, 2014, p. 323).

Differences between LGs and CLIs (e.g., know-how, values, goals or assets) are, therefore, simultaneously obstacles for collaborations (creating tensions) and the main reason to foster them (since they can complement each other, delivering synergies). Similarities work in the same paradoxical way – they can help collaboration to happen more smoothly, but also lead to competition for resources. Siv Vangen called this the goals paradox (2017).

Experience shows that these interactions can even completely obstruct the process of emergence and persistence of community-led initiatives... or act as powerful enablers. But despite this overall frequent and intense relationships, these interactions are in general perceived by community-led initiatives as their least important aim (TESS, 2017). The reverse is most frequently also true – regardless all the *apologia* of the merits of public participation, it has long been recognized that these processes quite often are mere objects of rhetoric and “empty rituals” (Arnstein, 1969, p. 216).

The difficulties in rising collaboration towards sustainability are deeply connected to our decision-making processes. Since they demand for extra efforts and the results are non-excludable and indivisible, it might be rational to free-ride – the problem of collective action (Rydin & Pennington, 2000). This can lead to the capture by special-interest groups compromising inclusion (Few, Brown, & Tompkins, 2007) – public-private partnerships are probably much more common between governments and profit organizations than between governments and community initiatives. We also saw that in some cases the collaborations between LGs and CLIs can bring unintended results (e.g., disempowerment), which might increase the collaboration costs even more.

We can therefore conclude that transformative collaborations between CLIs and LGs demonstrate some of the characteristics of a wicked problem (Rittel & Webber, 1973) – nothing unexpected since they are embedded in social and political contexts. In fact, according to the arguments above and due to complex interdependencies, these collaborations are hard to define, demonstrate several contradictory features and have no obvious or definitive ‘solution’. Since barriers are linked to intrinsic characteristics of the systems, efforts will probably lead to other difficulties. In sum, they are inherently ‘wicked’, and therefore demand for a system innovation that might identify and unravel persistent negative aspects (Schuitmaker, 2012).

C. TRANSFORMATION RESEARCH

In the third chapter I close the literature review, with a brief analysis of the on-going research efforts relating transformation, and specifically on models for governing transitions (the specific research topic). This is expected to complement information presented earlier and illuminate the research gap.

1) Main fields of research

A growing field of **transformation research** is dedicating its efforts to sustainability challenges (EEA, 2018; Köhler et al., 2019; Loorbach et al., 2017; Markard, Raven, & Truffer, 2012). Researchers try to understand the dynamics of change (focusing on patterns) and explore possible ways of influencing it, looking for answers that might be useful for decision-makers and practitioners. Taking the risk of oversimplifying, we can identify (at least) three main perspectives of research: the socio-technical, the socio-institutional and the socio-ecological.

The *socio-technical* approach is grounded in evolutionary economics and technology studies and focus on innovation processes. Narrative explanations describe change as pathways relating emerging niches, regimes and external landscapes – the so-called multi-level perspective (Geels & Schot, 2007). The co-evolution of technologies, institutions and practices is underlined. The socio-technical approach includes strategic niche management research (Schot & Geels, 2008) and the related perspective on technological innovation systems (Markard & Truffer, 2008).

A related field of research can be named as *socio-institutional* (Loorbach et al., 2017) and brings significant inputs from social sciences and governance studies. The focus is on roles, power struggles and agency. Research is often action-oriented and relates to specific geographical areas. Several frameworks for intentional governance of change were designed and tested, namely transition management (Loorbach, 2007), including transition arenas and experiments as tools (Frantzeskaki, Loorbach, & Meadowcroft, 2012).

Other significant contributions to the socio-institutional field come from practice theory (Shove & Walker, 2010), geography of innovation (Hansen & Coenen, 2015), institutional theory (Fuenfschilling & Truffer, 2014), policy studies (Hendriks, 2009) and social

innovation (Avelino et al., 2019). These follow from (sometimes) opposing ontologies (Geels, 2010).

Finally, a distinctive field of transformation research comes from ecology and environmental studies and is based in resilience theory (Holling, 1973), focusing on *socio-ecological* systems. The concept of panarchy (Gunderson & Holling, 2002) is used to describe dynamic equilibriums through nested adaptive cycles of growth, accumulation, collapse and renewal.

The focus of the *socio-ecological* approach is in keeping systems in a ‘safe operating space’ related to planetary boundaries (Rockström et al., 2009), avoiding thresholds and tipping points in face of disruptive change. Adaptive governance (Folke, Hahn, Olsson, & Norberg, 2005), stewardship (Chapin et al., 2010; Kuenkel, 2019) and several pathways approaches (Eisenhauer, 2016) were developed as transformative frameworks.

CHALLENGES

Transformation research applied to sustainability faces several challenges, namely its normative (therefore controversial) goal and the amplitude, interconnectedness and diversity of problems and possible solutions (Geels, 2010). Regardless of useful insights relating to governance issues (presented next), these different perspectives agree on the serious limitations in planning or managing the transformation to sustainability, due to complexity and intrinsic uncertainty, integrating concepts like nonlinearity and emergence (Göpel, 2016; Loorbach et al., 2017; Turnheim et al., 2015). We are challenged to learn from living systems and see transformation as the result of relational and patterned occurrences (Kuenkel, 2019).

Theories have been refined through criticism, interdisciplinarity and insights from practitioners (Geels, 2011; Olsson, Galaz, & Boonstra, 2014). Several efforts have been done in order to compare (EEA, 2018) and integrate different theories (Olsson et al., 2014), including the creation of a shared analytical approach on governance (Turnheim et al., 2015). The ‘spheres of transformation’ (O’Brien & Sygna, 2013) – practical, political, and personal – have been proposed as an “heuristic device” that could be considered transversal to the several approaches previously mentioned (O’Brien, 2018).

2) Approaches to governance

Are there significant differences between the several research perspectives mentioned before in what concerns governance of sustainability transitions, and in particular the role of local entities and the importance of collaborations? Did they generate distinctive frameworks or tools or provide any kind of differentiated prescription?

To answer these questions, I analysed and compared three well-known models for governing transitions, relating the three research perspectives mentioned earlier – socio-technical, socio-institutional and socio-ecological. The results are summarized in Table C.1.

Adaptive governance (AG) has a determining systemic approach, focusing on changing interactions that might lead to emergent properties, contributing to maintaining system functions. *Strategic Niche Management* (SNM) has greater directionality in the transformation process and focuses on experimentation and steering long-term changes, while *Transition Management* (TM) has agency as the central role, giving emphasis to collective efforts. Accordingly, TM advocates for concrete and solid structures to steer transformation (therefore more instrumental) while AG has a less linear approach relating transformative efforts. They are often used in distinctive domains, with SNM studying the development of new technologies and AG focusing on environmental topics.

Table C.1 – Different approaches to governance of sustainability transitions and their characteristics.

Governance model and research field	Transition processes and agency	Key elements	Considerations on collaboration
<p>Adaptive governance (AG) – Socio-ecological approach (Chaffin et al., 2014; Folke et al., 2005; Olsson et al., 2006; Radywyl & Bigg, 2013)</p>	<p>AG is a range of dynamic cross-scale interactions between individuals, organizations, agencies, and institutions possibly leading to an emergent state with new feedback mechanisms and controls.</p> <p>Three phases are prescribed: (1) preparing the system for change (building knowledge and networking; exploring alternative approaches for governance); (2) navigating (establishing new social structures and processes) and (3) increasing the resilience of the new governance regime.</p>	<p>Leadership and shadow networks (operating outside conventional decision-making spaces) are able to prepare a system for change by using and creating ‘windows of opportunity’ – they are critical to change phases. They explore alternative system configurations and possible futures.</p> <p>Providing leadership includes trust, vision, meaning and a learning environment.</p> <p>Nature-society interaction is also a key element, especially in the context of governing the commons.</p>	<p>A collaborative management is critical. Participation can be promoted by devolution of management rights and power sharing. Necessary to change attitudes towards a shared vision.</p> <p>Differences are not bad, but polarization should be avoided. Conflict needs to be accepted but transformed, keeping open channels and communication face to face.</p> <p>Flexible processes of collaboration are preferable to the creation of fixed structures.</p>
<p>Transitions management (TM) – Socio-institutional approach (Loorbach, 2007, 2010; Loorbach & Rotmans, 2010; Nevens et al., 2013)</p>	<p>TM focuses on the role of a team of leaders in collaborative visioning and steering of experiments.</p> <p>TM prescribes four sequential steps or activities in a cyclical and iterative process: (1) strategic (creating a multi-actor network, structuring the problem and envisioning); (2) tactical (developing coalitions and a concrete transition agenda with possible paths); (3) operational (mobilizing actors and executing experiments to scale-up promising options) and (4) reflexive (monitoring, evaluating and learning).</p>	<p>A key issue is the selection of frontrunners for the ‘transition arena’. Several competencies are considered crucial, e.g., being open for innovation.</p> <p>Methods used in the selection to compose a balanced group include in-depth interviews, setting concrete criteria and psychological tests.</p> <p>The network should be relatively small (10–15 actors).</p>	<p>Within the ‘transition arena’, frontrunners and innovative individuals come together.</p> <p>Participants should have a diversity of backgrounds (government, social movements, business, science and consultants) and perceptions of problems and possible directions (to be deliberately confronted and integrated).</p> <p>They participate on a personal basis and not as representatives (able to operate autonomously) and should be opinion leaders.</p> <p>Emphasis on consensus.</p>

Governance model and research field	Transition processes and agency	Key elements	Considerations on collaboration
<p>Strategic niche management (SNM) – Socio-technical approach (Geels & Raven, 2006; Kemp, Schot, & Hoogma, 1998; Raven, Bosch, & Weterings, 2010; Schot & Geels, 2008)</p>	<p>SNM encompasses creating and experimenting promising technologies in ‘protected spaces’ (e.g., research and development laboratories), followed by niche proliferation processes.</p> <p>These radical innovations will eventually influence incumbent regimes and replace dominant practices.</p> <p>Five steps are considered: (1) choosing the technology; (2) selecting the experiment; (3) setting-up of the experiment; (4) scaling up and (5) the breakdown of protection (using policy tools).</p>	<p>Three elements are considered crucial.</p> <p>First, the articulation and adjustment of expectations or visions.</p> <p>Secondly, the building of social networks by way of enrolling new actors, which expands the resource base.</p> <p>Finally, the learning process about social challenges and the desirability of the new technology.</p>	<p>Different actors (private organizations, policymakers, entrepreneurs or users), embedded in networks, can join resources in experiments when sharing ambitious visions. Articulating expectations can also provide direction to development, together with shared rules and institutions.</p> <p>Powerful actors can add legitimacy and bring significant resources.</p> <p>Municipalities are well placed to manage local networks, providing space for local activities. Regional and national levels can assure that a broad learning process happens.</p>

It has been argued that these models can learn from each other (Foxon, Reed, & Stringer, 2009; Pereira, Karpouzoglou, Doshi, & Frantzeskaki, 2015) and surely none of them holds the ‘silver bullet’. In fact, studies on the comparison of different frameworks for governing sustainability concluded that practice usually does not meet the expectations of transformative change and that potential lays on the ‘cross-pollination’ between approaches (Wittmayer, van Steenberg, Rok, & Roorda, 2016).

Keeping with the risk of over-generalization, we can conclude that, despite their differences, the governance models share essential insights, namely:

- Appraisal for (local) social innovation – in the socio-technical approach, technological and social innovations co-evolve through the work of communities acting as emerging niches with the potential to disrupt regimes and transform cultural values (Raven et al., 2010); scholars from socio-ecological approach also highlight the role of social innovation (Patterson et al., 2017), being one of the focus of socio-institutional research (Haxeltine et al., 2016); the possibility of this innovation to emerge in local settings is transversal to the different approaches (EEA, 2018, p. 26).
- The crucial role of complex connections, interdependencies, networks and collaboration – ‘transition arenas’ are described as societal networks of innovation (Loorbach, 2010); niches are considered “platforms for interaction” (Kemp et al., 1998); in AG, social networks can provide “arenas for novelty”, bringing flexibility and increasing social capital (Folke et al., 2005).
- The need for polycentricity and multi-scalar processes – polycentric governance favours multiple governing authorities at differing scales instead of a centralised unit (Ostrom, 2010b) and translates the potential of polycentric systems of communities to deal with global issues; it is the bases for AG, which relies on “polycentric institutional arrangements” (Folke et al., 2005); similarly, SNM is seen as a “collective endeavour” and the outcome of interactions at different levels (Kemp et al., 1998); “multiple systems and multiple actors at various governance levels” are also considered in TM studies (Nevens et al., 2013); in fact, many similarities exist between models like the multi-level perspective (Geels & Schot, 2007) and the panarchical connections between levels (Gunderson & Holling, 2002, p. 75), for instance.

The critical role of leadership is also common in socio-institutional and socio-ecological perspectives (R. R. Brown, Farrelly, & Loorbach, 2013). Summing up with the fact that SNM,

TM and AG all have a systemic approach and appraisal for visioning, experimenting, learning and other participatory processes, we might conclude that, overall, similarities are greater than differences.

3) Moving Beyond

Extensive and useful research has been produced regarding deliberative attempts towards transformation (O'Brien, 2012). However, it is argued that pathways explored so far, to be 'actionable' and catalyse the necessary change, need to fully integrate political concerns and processes, moving away from 'politics-as-usual' approaches (Eisenhauer, 2016). Co-learning and co-production of solutions are advocated as a necessary explorative method (*ibid.*).

Research also needs to incorporate recent developments, as previously argued, including the accelerating and unpredictable global challenges and social responses. In these tipping point times, as I call it, there is the need to deal with a great complexity and uncertainty, and an increasing risk of social and ecological collapse. However, the "edge of chaos" has a strong potential for sustainability by favouring deep learnings (individually and collectively) and accommodating the necessary order (for self-perpetuation) and flexibility (to allow sensible evolution) (Kuenkel, 2019, pp. 74, 274).

Previous research points out that "the challenging question remains how in contexts where the alternative practices, a sense of urgency, and policy commitment are present, a next phase of transitions can take place" (Hof et al., 2016, p. 9). Therefore, a distinctive feature of this research is the focus on (needed) institutional change, including issues of power and agency. It represents a contribution to face the 'governance challenge' and design processes for governing (the later phase of) transitions – this goal is considered a "real challenge for current transition scholars" (Köhler et al., 2019, p. 16).

As suggested by Patterson *et al.* (2017, p. 3), I want to explore how "can governance contribute to shaping or steering transformations, particularly within the real-world constraints of actual governance contexts (e.g., fragmented institutional arrangements, contested policy processes, and tightly constrained or poorly delineated roles and capabilities of policymakers and administrators), and given the complex, contested and coevolutionary nature of societal change?".

As discussed in chapter A, collaboration between local actors can be an effective way to deal with fragmentation, contestation, and insufficient resources. But we also saw that this

collaboration remains similar to a ‘wicked problem’, also bringing negative side effects (Box B.1). This situation demands for a system innovation that identifies and unravels patterns in actors’ agency that might be responsible simultaneously for the successes and negative side effects (Schuitmaker, 2012).

Therefore, this research wants to explore the transformative potential of synergies between local actors, in a translocal setting, looking for a systemic governance instrument that can bring the necessary innovation in actors’ agency. I want to look ‘down’, engaging with the root causes of unsustainability, while looking ‘up’ to identify solution-oriented approaches to transformational change, as mentioned in the introduction.

In synthesis, with this thesis I want to address the research gap related to functional ways of governing the later phase of transitions in a context of rapid and profound change.

Recognizing that “societies need to transform now, and at a rate and scale that is hard to imagine, let alone implement”, I want to explore the ‘how’ of transformation and hopefully go beyond the ‘blah blah blah’ (Bentz, O’Brien, & Scoville-Simonds, 2022).

Part II

Confrontation

D. ON THE RESEARCH STRATEGY AND METHODOLOGY

This chapter initiates the empirical part of the thesis. As previously shared (page 6), the main aims of the research are to (1) learn from on-going local transformative collaborations, (2) design, and (3) experiment with a new governance instrument to boost these collaborations.

Here I want to explore why a **transdisciplinary participatory action research** strategy was chosen, what that implies and how it was performed, including methods and techniques used.

1) Beyond science and practice

As Andr n (2010) puts it, a transdisciplinary, participatory and action-oriented research approach “sounds nice but what do you mean?”. *Transdisciplinary* means to be open to knowledge coming from different disciplines and sources, both academia and practice - it is more about having a pluralistic or holistic perspective than just integrating different knowledges. *Participatory* is about doing research together with the actors that have a stake on the matters that are being studied. *Action* is about learning-by-doing and doing-by-learning, performing research oriented at societal solutions that may benefit simultaneously science and knowledge building, but also practice and social change.

This kind of reflexive, participatory and transdisciplinary approach allows to adequately face the complexity, emergency and scale of the sustainability challenge by pooling knowledge from different disciplines and actors (Cundill et al., 2019). Simultaneously it allows to move from problem analysis to solutions, with an increase of legitimacy, ownership, and accountability (Lang et al., 2012).

The strategy of critical participatory action research is addressed at creating the conditions for participants, at individual and collective levels, to transform the conducts and consequences of their practice to meet the needs of changing times and circumstances (Kemmis, McTaggart, & Nixon, 2014). The participatory action research approach has proven to be valuable in supporting sustainability and transformative efforts at local level by mixing the production of knowledge and societal action (Campos, Alves, et al., 2016; K hler et al., 2019; Ng et al., 2016, p. 133; Page et al., 2016; Wilding, 2011, p. 15).

To be part of the necessary social transformation, and simultaneously allowing communities to take ownership of the research, can also be considered somewhat of a moral imperative to researchers in current tipping point times (Chatterton, Fuller, & Routledge, 2007).

Transdisciplinary participatory action research does not come without critiques and it needs to face possible limitations related to reliability, validity and credibility (Lang et al., 2012; Mielke, Vermaßen, Ellenbeck, Fernandez Milan, & Jaeger, 2016). A review of transdisciplinary research in sustainability science also revealed the lack of a common terminology and a suite of appropriate methods, alongside a real empowerment of practitioners (Brandt et al., 2013).

Researchers performing this kind of transformation research are expected to (Fazey, Schöpke, et al., 2018):

- Focus on transformations, clarifying what is to be transformed and for whom.
- Focus on solution processes, and not only on understanding problems.
- Focus on ‘how to’ practical knowledge, with a phronesis approach.
- Approach research as occurring from within, with researchers inevitably embedded in the systems they seek to observe.
- Work with normative aspects, acknowledging values and ethics that shape research.
- Seek to transcend current thinking and approaches, exploring previously unimagined possibilities.
- Take a multi-faceted approach to understand and shape change, holding a diversity of ontological and epistemological lenses.
- Acknowledge the value of alternative roles of researchers, as well as of practitioners, exploring the borders.
- Encourage embedded experimentation and change, learning by doing.
- Be reflexive, systematically challenging assumptions.

In synthesis, transdisciplinary participatory action research establishes a third epistemic way (named as Mode 3 in Carayannis, Campbell, & Rehman, 2016) going beyond the primacy of science as well as the primacy of practice (Lang et al., 2012), exploring current knowledge and historic circumstances to find avenues to change (Flyvbjerg, 2004). In the case of this thesis, with the ambition to explore and underpin a new governance approach, with a strong theoretical foundation and simultaneously operational (looking for an instrument), a research strategy like this is almost by definition impossible to avoid (Loorbach, 2007, p. 31).

2) Research stages

Lang *et al.* (2012) formulated a set of principles for guiding transdisciplinary research in sustainability science, based on literature and empirical research experience. My work was inspired by this ideal research process, following the proposed **three stages** (Figure D.1), namely:

- Problem framing and building a collaborative research team.
- Co-creation of solution-oriented and transferable knowledge through collaborative research.
- (Re-)integrating and applying the co-created knowledge in both scientific and societal practice.

These 3 stages of the research evolve at the interface between science and society, in a joint learning process sustained in two simultaneous pathways: one committed to the exploration of new solutions for societal problems, and another one committed to the development of interdisciplinary approaches, methods, and general insights related to the research field. The latter is the focus of this thesis.

Figure D.1 allows to visualize the research core activities already presented (Figure In.0.1) in the wider context of the transdisciplinary research developed.

In the rest of the section, I will detail the work done in each of the 3 research stages.

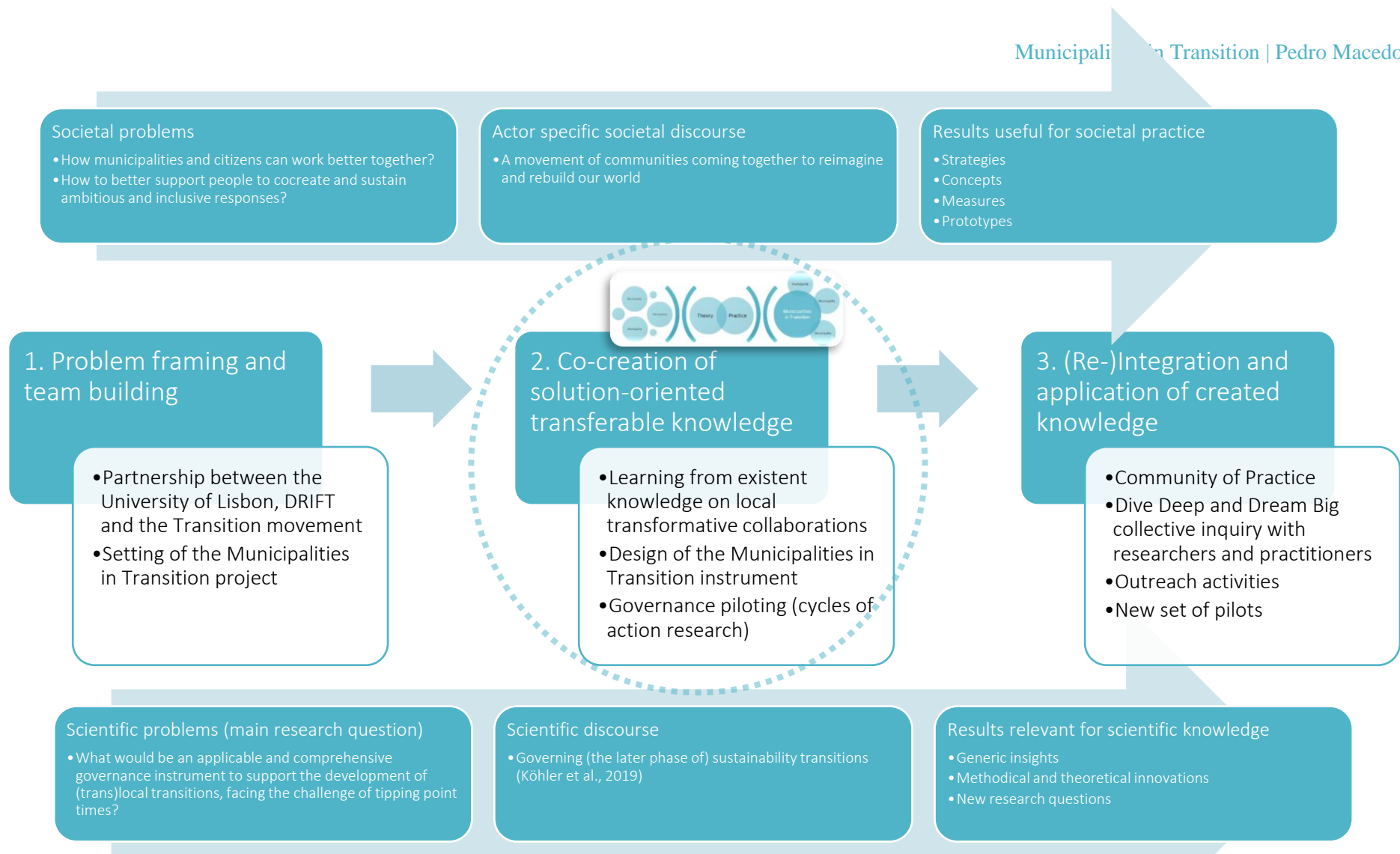


Figure D.1 – The three stages of transdisciplinary participatory action research happening in the interface of joint and mutually reinforcing pathways of problem solution (arrow on the top) and scientific innovation (arrow on the bottom), in a model proposed by Lang *et al.* (2012) and applied to the empirical part of this thesis. The dashed circle points to the core research activities related to the codesign and experimentation of the Municipalities in Transition instrument.

PARTNERING WITH THE TRANSITION MOVEMENT

In the first empirical stage of this research, a collaborative research team was formed involving myself (embedded in the University of Lisbon and having support from the DRIFT institute) and a group of active members of the Transition movement (Figure D.2), responsible for the outset of the *Municipalities in Transition* project⁵. This partnership was anchored in the role of the three organizations within ECOLISE (European Network for Community-Led Initiatives on Sustainability and Climate Change).



Figure D.2 – The Municipalities in Transition initial research team
From left to right, Juan del Río (Spanish Hub), myself, Cristiano Bottone (Italian Hub), Ana Huertas (Spanish Hub) and Josué Dusoulier (Belgium Hub).

The *Municipalities in Transition* project was established around the question “How municipalities & citizens can work better together” (MiT, 2018), with a clear goal of setting an instrument to create synergies.

⁵ The Transition movement applied for funding from the KR Foundation. KR is a philanthropic foundation with the mission of addressing “the root causes of climate change and environmental degradation”, investing primarily in two programs related to sustainable finance (“Keeping Fossil Fuels in the Ground”) and sustainable behaviours (“Mainstreaming low-impact living”) (KR, 2020).

The **Transition movement**, sometimes named Transition Towns, was founded in Totnes, Devon (United Kingdom), and presents itself as "a movement of communities coming together to reimagine and rebuild our world" (Transition Network, 2016). They now have more than 10 years' experience of making Transition happen in 1,400 communities in 50 countries (Hopkins & Thomas, 2016) and have followed an exponential growth (O'Hara, 2013). It has been considered a successful social movement (Fernandes-Jesus, Carvalho, Fernandes, & Bento, 2017) and a good example of transformational social innovation (Longhurst & Pataki, 2015, pp. 6, 67).

The movement comprises the local Transition Initiatives, regional or national-level Hubs (with some degree of self-coordination), and Transition Network (an international charity based in the original location) with a supportive role. The reasons people present for joining range from 'get to know their neighbours' to 'making a difference in the world' (Hopkins & Thomas, 2016). Besides contributing to climate change and community resilience, initiatives internally (and predominantly) focus on social connectivity and empowerment (Feola & Nunes, 2014). Through their actions, they promote self-sufficiency (e.g., locally grown food, complementary currencies) and optimism (John-Paul Flintoff, 2013) and advocate "the power of just doing stuff" (Hopkins, 2013). The movement has deliberately chosen a non-confrontational, non-partisan, and constructive approach, which sometimes leads to tensions and critiques from members concerned with the risks of co-optation (Biddau, Armenti, & Cottone, 2016).

Looking at the interactions between LGs and CLIs in the context of the Transition movement we find examples that range from groups of citizens 'taking over' the municipality administration by supporting independent candidates standing for elections to town councils that deliberately appropriate the transition concept (MiT, 2018). Creating networks and partnerships and collaborating with others is considered one of the seven essential ingredients in a transition initiative (Hopkins & Thomas, 2016)⁶ but this strategy can be considered "somewhat of an oxymoron" (Smith, 2011, p. 102) for a social movement that wants to promote self-organization and a community-led approach. Research shows that a majority of Transition Initiatives do establish some sort of cooperation with local authorities, which has proven to be an essential factor of success (Feola & Nunes, 2014).

⁶ Specifically, to "build a bridge to local government" used to be advocated as a necessary step (Hopkins, 2011, p. 78).

The Transition movement is therefore a pertinent and suitable partner for this transdisciplinary research (that does not restrict itself to the Transition movement), providing an “experimental space for other forms of social innovation to be tested” and “diffuse in their own right, both within and beyond the Transition movement” (Longhurst & Pataki, 2015, p. 6). In other words, the movement provides a real-life context within which to answer and explore the research question.

As previously argued, the Transition movement is considered one of the most significant examples of local communities leading the way to a post-carbon society, at least in Europe (Grossmann & Creamer, 2017; O’Hara, 2013). These initiatives are spread world-wide and demonstrate a distinctive openness for collaborations and partnerships. Nevertheless, a bias toward Western countries might be expected. It should also be considered that these initiatives do not always reflect the diversity of the communities in which they thrive (Feola & Nunes, 2014; Smith, 2011), despite their efforts on inclusivity (Grossmann & Creamer, 2017).

COLLABORATIVE RESEARCH

In the second stage of the research, a set of steps were taken by the research team (Figure In.0.1 and Figure D.1), allowing the development of a new instrument to support the governance of (trans)local transitions, thus answering the research question.

The principles and design of this governance instrument were based on a multi-method approach including a literature review, an explorative analysis of 71 surveyed cases of local or regional collaborations ongoing in 16 countries in America and Europe, and transdisciplinary codesign sessions (this work will be presented in the next chapter).

The cocreated governance instrument was then tested in six communities (across five countries, namely Brazil, Hungary, Italy, Portugal, and Spain), between March 2018 and April 2019. This piloting process was designed to catalyse the formation of place-based action groups as vehicles for social learning and experimentation – chosen pilots were instigated to bring together LGs and CLIs to jointly address the transformation challenge by experimenting with this instrument in a reflexive way.

The piloting consisted of nested cycles of participatory action research (this work will be presented in chapter F).

INTEGRATING KNOWLEDGE

In the third stage of the transdisciplinary research the co-created knowledge was ‘translated’ to the societal and scientific realms. This happened alongside and after the second phase, and included:

- Supporting the emergence of a Community of Practice.
- A collective inquiry with researchers and practitioners (*Dive Deep & Dream Big* project).
- Several outreach activities.
- The preparation of a new set of pilots.

These research actions will now be presented briefly.

COMMUNITY OF PRACTICE

The Municipalities in Transition *Community of Practice* (CoP) was primarily an instrument for facilitating the sharing of experiences in using the new instrument (challenges, insights...) during the testing period, between the pilots themselves and with the research team. Main components were an open diary, and regular online and in person meetings. A WhatsApp® group was created after the final meeting.

Besides the pilots’ CoP, a wider network was facilitated for “people around the world working on, or with an interest in, collaboration between civil society and local government to promote systemic change for sustainability, social justice and a better world” (MiT, 2018).

Main target group was initially the 71 cases mapped.

To give a boost to the wider CoP, an initial online meeting was promoted in different languages (English, Portuguese and Spanish, Figure D.3) and a series of 8 cocreated webinars (*Hot Topics Discussions*⁷) were organized. Topics included:

1. Working systemically, identifying leverage points and different theories of change.
2. How to resource the work of collaboration between communities and municipalities: the need for funding for processes.
3. Training facilitators and valuing the skills of facilitators.
4. Strategies to bring communities and municipalities together.
5. Inclusive community engagement.
6. The Pilots of the *Municipalities in Transition* project – What’s been happening?

⁷ <http://municipalitiesintransition.org/hot-topics/>

7. Helping communities understand how to work with elected politicians.
8. Practical sources of inspiration, tools and resources.

The wider CoP also participated in a closed Facebook® group (177 members, on 3rd July 2019).



Figure D.3 – Community of Practice meeting in Portuguese.

It is expected that “the community of practice is a collective learning process and an evolving self-regulated community, that aims to improve and continue in the future” (MiT, 2018). Moreover, it is expected that it might contribute to cross the boundaries of the experiments and foster cultural change.

DIVE DEEP & DREAM BIG

The *Dive Deep & Dream Big* project, initiated within the Transition movement, was set up as a collaborative inquiry with the question: “How can we better support people to co-create and sustain ambitious and inclusive responses to the climate and ecological crisis at a municipal scale?” (*Dive Deep & Dream Big*, 2019). In a similar way to the process developed around the Municipalities in Transition project, a research team was set with me and a group of practitioners.

The central piece of the process was a 5-days meeting event in Brussels (5th-9th March 2020). Forty-seven people participated, all demonstrating firm commitments with sustainability transitions, acting as practitioners, researchers, experts, networkers, and activists.

The meeting was an opportunity to share and discuss the governance instrument created in the context of the *Municipalities in Transition* project, alongside other instruments for systemic transformation, confronting the instrument with existing knowledge. Moreover, it allowed to illuminate the root causes of our unsustainability, providing an integral governance approach for transitions (learnings will be presented in chapter G).

RESEARCH OUTREACH

I shared the learnings from this PhD research in scientific publications (including parts of this thesis), namely through:

- Research reports (Macedo, 2019c, 2019a, 2020b).
- A paper in the Sustainability journal (Macedo, Huertas, et al., 2020).
- A chapter on the Handbook of Climate Change Management (in press) (Macedo, 2021).
- A full paper presented at the IST2020 - 11th International Sustainability Transition conference (Macedo, 2020a).
- Two additional papers under preparation.

I also presented the research at several other scientific conferences:

- GEOINNO2018 – 4th Geography of Innovation Conference in Barcelona, Spain (extended abstract and presentation in the special session on Geography of Sustainability Transitions) (Macedo, 2018).
- Leverage Points 2019 – International Conference on Sustainability Research and Transformation in Lüneburg, Germany (abstract, presentation and session chair) (Macedo, 2019d).
- ECCA2019 – 4th European Climate Change Adaptation Conference in Lisbon, Portugal (poster) (Macedo, 2019b).
- Climate 2020 – 7th Climate Change Online Conference (paper) (Macedo, 2020c).

All these research outputs were shared via the *zenodo* platform⁸.

I have prepared an additional paper to explore the implications of the COVID pandemic relating sustainability transitions (Macedo et al., 2021).

⁸ <http://zenodo.org/communities/mits/> (Zenodo is a free and open data repository for researchers).

Additionally, I presented the research in meetings within related research teams, namely:

- Climate Change Impacts, Adaptation and Modelling - CCIAM (December 2017, in Lisbon, Portugal).
- PhD in Climate Change and Sustainable Development Policies (December 2018, in Lisbon, Portugal).
- Dutch Research Institute of Transitions – DRIFT (January 2019, in Rotterdam, Netherlands).
- Urbanlab / Centre for Ecology, Evolution and Environmental Changes – cE3c (May 2021, online).

Other outreach activities included media appearances (in TV, radio, and newspaper), the participation in several meetings, conferences, debates, trainings and events, including⁹:

- Advanced training *Cities Resilient to Climate Change* (April 2018, in Braga, Portugal).
- Radio interview, program *Education and Transition* (June 2018, in Rádio Movimento PT Online)¹⁰.
- Speakers' corner at URBACT City Festival 2018 (September 2018, in Lisbon, Portugal).
- Workshop *Participate in a world in transition* (February 2019, in Lisbon, Portugal).
- TV interview, program *Jornal 2* (March 2019, in RTP2)¹¹.
- Newspaper report (March 2019, in *Público*)¹².
- Online debate *Talking Climate – Fostering Transition!* (April 2019).
- 3rd Seminar on Local Adaptation to Climate Change - adapt.local (November 2019, in Seia, Portugal).
- Online debate *What is the role of local activists and initiatives in the transition to sustainability?* (May 2020).
- Webinars on the *Municipalities in Transition* instrument (June 2018, December 2019 and July 2020).

⁹ Outreach activities performed directly by the author of the thesis. Many others were developed by other participants in the research.

¹⁰ <https://www.facebook.com/watch/live/?v=640495086285462>

¹¹ <https://www.rtp.pt/play/p5343/e398074/pagina-2>

¹² <https://www.publico.pt/2019/03/03/local/noticia/municipio-transicao-comunidade-ate-escolher-perfil-autarca-1863976>

I have submitted contributions to the ECOLISE wiki¹³ and *2019 Status Report on Community-led Action on Sustainability and Climate Change in Europe* (Penha-Lopes & Henfrey, 2019).

I have also participated in ICCA 2019 – International Conference on Climate Action (Heidelberg, Germany, May 21-23rd, 2019), where the Municipalities in Transition was included in a short list of exemplary “initiatives for collaborative climate action”.

Finally, I have organized a ‘last’ workshop in Lisbon in October 2020: *Communities in Transition | From Dream to Action - A Workshop on how individuals, organizations and local governments can transform the world together* (see page 203 and Appendix E).

Many other outreach activities were performed in the context of the Municipalities in Transition project, including in the communities where pilots took place. For the sake of brevity, I will only share the joint meeting organized in Brussels. The pretext was the celebration of the second European Day of Sustainable Communities, an event started by ECOLISE.

On September 20th, 2018, the Municipalities in Transition was the main focus of a conference co-hosted by ECOLISE and the European Economic and Social Committee, in collaboration with Transition Network and the Committee of the Regions. The adopted theme was “Civil Society and municipalities: building sustainability through collaboration”. The project’s core team and representatives of the pilots, alongside other organizations, used the opportunity to share their insights with a variety of stakeholders.

Finally, it should be mentioned that the Municipalities in Transition project was shared through online tools (web site¹⁴ and social networks¹⁵).

NEW PILOTS

After testing, the governance instrument was improved, and a first training of tutors was organized in February 2020 in the Village of Jerica (Valencia, Spain). The training also kick-started a set of new pilots, and action research is once more taking place (outside the scope of this thesis). The tutors are meeting regularly since then to share experiences and knowledge.

In November 2020, a new tutors’ training started on-line.

¹³ <http://wiki.ecolise.eu>

¹⁴ <https://municipalitiesintransition.org>

¹⁵ <https://www.facebook.com/municipalitiesintransition> | <https://twitter.com/MunicipalitiesT>

3) Methods and techniques

In its essence, this qualitative research was based on the development of an intricate set of self-constituted, voluntary, and autonomous public spheres (Kemmis et al., 2014) to address the climate and ecological crisis at the municipal scale. The shared intention was to jointly explore the related questions of “how municipalities & citizens can work better together” (MiT, 2018) and how to “better support people to cocreate and sustain ambitious and inclusive responses” (*Dive Deep & Dream Big*, 2019). A public sphere is ‘simply’ a communicative space opened by discussions in which participants “explore whether things are going the way they hope, or whether things would be better if they acted otherwise” (Kemmis et al., 2014, p. 33).

The methods used in the research process were transdisciplinary and participative in nature, in a co-productive collaboration between participants and myself, as embedded researcher (Nevens et al., 2013). I had active participation in the initiatives’ coordination meetings and arrangements, including workshops and the community of practice. I performed virtual and *in-loco* participant observation of activities (around 1 000 hours of ethnographic observations) and established multiple interactions with participants.

Participant observation is a “unique method for investigating the enormously rich, complex, conflictual, problematic, and diverse experiences, thoughts, feelings, and activities of human beings and the meanings of their existence” (Jorgensen, 2015, p. 1). The researcher participates in activities and interacts with people, while collecting information, allowing access to data that is unavailable to a nonparticipating external observer. This data relates “realities of human existence in their totality as they exhibit external, physical characteristics and internal, subjective, and personal features as well as intersubjectively and socially meaningful properties” (*ibid.*, p.2) (see Box D.1).

Box D.1 – A full immersion in (trans)local transformative efforts.

Besides the participation in the two main projects already mentioned, *Municipalities in Transition* and *Dive Deep & Dream Big*, I participated actively in other processes and initiatives, allowing a full immersion in the realms of transition efforts. These included both top-down and bottom-up initiatives, namely the development of local and regional strategies on climate adaptation, climate advocacy, climate activism, translocal and global action, and grassroots initiatives (corresponding to an additional 600 hours of ethnographic observations).

This diverse and wide participant observation allowed to collect valuable insights from the reality of (trans)local transformative efforts, the research object. These insights were also collected in a researcher's diary. While it was not possible, for feasibility constraints, to systematically collect, analyse and present detailed data on all these initiatives, some of the mentioned insights are presented in Appendix A.

As embedded researcher, I was simultaneously playing several roles (Wittmayer & Schöpke, 2014), namely change agent and process facilitator (developing the practice), knowledge broker (bringing expertise), and (self)reflective scientist (generating and sharing actionable scientific knowledge). More information on this is included in the final discussion (page 220).

I collected ethnographic data in a researcher's diary, also supporting the gathering of information in meeting notes, tutor's diaries and pilots' reports, and also several outputs from workshops and other activities (pictures, posters, canvas, post-its, videos, presentations, minutes of meetings and group work ...). Besides active participation and observation of the process (Jorgensen, 2015; Spradley, 1980), research methods included semi-structured interviews with participants and questionnaires conducted before, during and after the interventions (see Table D.1 for detailed information).

Informed consent was generally supported by fully exposing the initiatives as action research, including live presentations to participants, both in the beginning of the Municipalities in Transition and Dive Deep processes, including the research aim, methodology and expected outcomes. Information on this was also shared through all the media used.

I examined the collected data using qualitative content analysis (Hsieh & Shannon, 2005) and grounded theory techniques (Strauss & Corbin, 1994), in an inductive approach to note patterns, singularities, and connections and formulate possible answers to the inquiries.

Further understanding and insight of context were supported by a review of policy, organization, and media documentation, as well as existing scientific literature.

I presented interim research findings to participants for critique and reflection. Feedback was used to refine the synthesis of the results. As previously mentioned, my participation in multiple scientific meetings, in the context of research institutions (University of Lisbon and DRIFT) and international scientific conferences, allowed to collect extraordinary contributions and acted as a ‘control’ feature (preventing inflated bias).

A list of main research activities is presented in Table D.1, with references to dates, methods and techniques. I also share a list of the most important events of participant observation (Table D.2). This information will be detailed and contextualized in the following chapters.

Table D.1 – Research activities that supported this thesis and related methods.
Only the activities related to the second stage of research (co-creation of solution-oriented transferable knowledge) are mentioned, namely the codesign and piloting of the Municipalities in Transition instrument.

Research activities	Dates	Methods and techniques
Mapping 71 exemplary cases of local transformative collaborations	July-December 2017	Exploratory case study research (Yin, 2014) with surveys spread through a wide network of practitioners (Annex A), collecting information from indirect observation and semi-structured interviews with main stakeholders. An innovative method for qualitative analyses allowed to visualize the governance imprint of the case studies. The Compass for Transformative Collaborations (chapter A) was used for a deeper comparative analysis of eight cases.
Setting the preconditions for a transition governance instrument	December 2017 - February 2018	Transdisciplinary co-design sessions within the Municipalities in Transition research team.
Designing the Municipalities in Transition instrument		The new instrument was confronted with existing knowledge on transitions governance.
Setting the 6 pilots		Pilots selected from the 71 case studies, with a preselection process and interviews. Formal commitments signed.
Real-world piloting with the Municipalities in Transition instrument	March 2018- April 2019	Nested cycles of participatory action research, with formation of place-based action groups as vehicles for social learning and experimentation. Evaluation was performed <i>ex-ante</i> , through and <i>ex-post</i> the experiments: <ul style="list-style-type: none"> • Prior to testing, information came from the case studies (mostly an-online questionnaire, Annex A) and interviews with some of the facilitators of the experiments (Appendix C). • During the piloting, research methods included initial and final participatory workshops for joint planning and reflection, the permanent backing of a Community of Practice (where periodic discussions took place and questionnaires were conducted – see Annex B), virtual and <i>in loco</i> participant observation (see next table), and regular meetings with pilots. • After the piloting, a questionnaire was conducted (Annex C), complementing the information from the cocreative sessions at the joint reflecting meeting.
Assessing results and improving the instrument	May – July 2019	Use of grounded theory methods with transformative social innovation as an analytical framework, to take stock of learnings from testing and translate them to a new version of the instrument.

Table D.2 – Main events of participant observation related to the Municipalities in Transition and Dive Deep projects, excluding the diverse meetings of the community of practice.

Events	Dates	Location	Participants
Codesign sessions	4-6 December 2017	Cardedeu, Spain	MiT research team
Visit to pilot	9-12 March 2018	Santorso, Italy	Local participants and community
MiT planning meeting	13-16 March 2018	Santorso, Italy	MiT research team + pilots' representatives
Visit to pilot	26 March 2018	Telheiras, Portugal	Local participants and community
Intermediate reflection	15-17 June 2018	Florence, Italy	MiT research team
Action group meeting	29 June 2018	Telheiras, Portugal	Local participants
Action group meeting	17 July 2018	La Garrotxa, Spain*	Local participants
Action group meeting	18 July 2018	Telheiras, Portugal*	Local participants
Action group meeting	19 July 2018	Valsamoggia, Italy*	Local participants
European Day of Sustainable Communities	20 September, 2018	Brussels, Belgium*	European Union, ECOLISE, MiT participants
Intermediate reflection	2-4 December 2018	Cardedeu, Spain	MiT research team
Visit to pilot and activity (conference)	24-26 January 2019	La Garrotxa, Spain	Local participants and community
MiT reflecting meeting	21-24 February 2019	Telheiras, Portugal	MiT research team + pilots' representatives
Visit to pilot	6-8 August 2019	Kispest, Hungary	Local participants and community
Action group meeting	7 November 2019	Vila Mariana, Brazil	Mayor, Local participants
Dive Deep & Dream Big preparation, visit to transition initiatives	21-27 November 2019	Brussels, Belgium	Dive Deep research team, Belgium Transition Hub, transitioners and local governments officials
Dive Deep & Dream Big event	5-9 March 2020	Brussels, Belgium	Practitioners, researchers, experts, networkers, and activists

*participation on-line

E. CASE STUDIES AND CODESIGN OF A NEW INSTRUMENT FOR REFLEXIVE GOVERNANCE

“Designing institutional arrangements that help induce successful coproductive strategies is far more daunting than demonstrating their theoretical existence”

Elinor Ostrom (1996)

1) Research unfolding

Facing limits, such as planetary boundaries, is an opportunity to reimagine society. I want to explore collaborations between local governments (LGs) and community-led initiatives (CLIs) that meet the needs for transformation towards sustainability. The research looks for solutions that move beyond the dichotomy of governmental versus non-governmental and avoid the ephemeral nature of experiments (focusing on improving permanent processes and not transitory projects). It is an empirical study looking for an instrument that can be used locally to promote a governance instrument supportive of transitions, allowing to answer the research question:

What would be an applicable and comprehensive governance instrument to support the development of (trans)local transitions, facing the challenge of tipping point times?

I started the research by exploring existing knowledge and experience in terms of local transformative collaborations, the basis for the design.

In this chapter I explore the following topics:

- Thriving cases of local transformative collaborations, their context and collaborative features.
- Preconditions for an instrument to catalyse these collaborations and support transition.
- The codesign of a new governance instrument that can potentially answer the research question.

In section 2) of the present chapter, I will share the learning from 71 cases of local or regional collaborations happening in 16 countries in America and Europe. Case study research (Yin, 2014) will be based in an explorative approach. The Compass for Transformative Collaborations (chapter A) will be used for a deeper comparative analysis of 8 case studies.

In section 3), after setting the preconditions for an instrument to support transition, I will share the codesign process to develop a new instrument – the Municipalities in Transition instrument – that can foster (trans)local transition processes for sustainable development.

Finally, in sections 4) and 5) I include the first discussion in this thesis, relating the potential and limitations of the Municipalities in Transition instrument in supporting the governance of transitions.

2) Mapping exemplary cases

With the aim of learning from existing cases of transformative collaboration at local level, a two-phase research was developed: (1) general harvesting by observation and questionnaires (to increase reach and get quantitative data); and (2) in-depth study of eight selected cases using indirect observation and semi-structured interviews with main stakeholders (to get detailed information and different points of view).

For **phase 1**, an on-line survey was prepared and shared at the beginning of July 2017 (Annex A). Questions related primarily to the dynamics between actors involved, including governance models and tools used to foster collaboration. A snowball sampling was used starting from the Transition Hubs (national or regional networks within the Transition movement) and spreading to Transition initiatives and correspondent networks of practitioners. Questionnaires were filled in mainly by people connected with the Hubs (63%) and/or Transition Initiatives (48%). Most of them state that they could be perceived as neutral to the cases, but some degree of bias is expected.

The two main criteria to select the cases to be analysed were the enrolment of local governments and civil society (not necessarily Transition Initiatives) in a transformative process and additionally to be part of a “wider systemic design”. To comply to the latter premise, cases were expected to demonstrate (1) systemic approach in the design and management, (2) *Head, Heart, Hands* approach and (3) long-term vision. These criteria were shared in the questionnaires.

The *Head, Heart, Hands* principles (HHH) were adopted by the Transition movement (Hopkins & Thomas, 2016, p. 9; Rusman, 2012, p. 36) and respectively correspond to the ideas of acting on the basis of the best information available, taking care of relationships and emotions and looking for tangible results. There are similarities with the dimensions included in the *Compass for Transformative Collaborations* (Head/Cocreation, Heart/Mutual Support, Hands/Coproduction).

Until the beginning of October 2017, 71 cases were collected (and surveys filled out), active in 16 countries (Figure E.1 and Table Ap.B.1, Appendix B): Belgium, Brazil, Chile, Colombia, Denmark, France, Germany, Hungary, Italy, Mexico, Netherlands, Portugal, Spain, Sweden, United Kingdom and United States. Most of the cases were “well established and running” (40), while some were still in the design stage (10) or just had started (21).



Figure E.1 – Geographic location of the 71 cases harvested in the research (some overlap).

The 71 cases were mostly located in urban context (around three-quarters) with population ranging from 200 to 12 000 000 (frequently between 1 000 and 40 000). The main area of activity (multiple choice possible) was raising awareness (77%). Cases also mostly dedicated themselves (>50%) to food and agriculture; education; participatory democracy and planning

and community work (Figure E.2). Other topics mentioned included inner transition; aboriginal culture assessment; empowerment of women with a vision of peace; social innovation; ethnography; volunteer nature conservation; cooperativism and solidarity economy; tourism; commons (like optic fibre); international relations; air quality; sustainability pollinators; adaptation to climate disruption.

Relating to beneficiaries, the cases were mostly aimed at a general public (65%), followed by (44%-32%) adults, families, elders, young adults, teenagers and children. Other publics mentioned included ethnic or social minorities; people with disabilities; LGBTQ+; mothers heads of household; peasant families and cooperatives; people with respiratory problems; nonhuman beneficiaries.

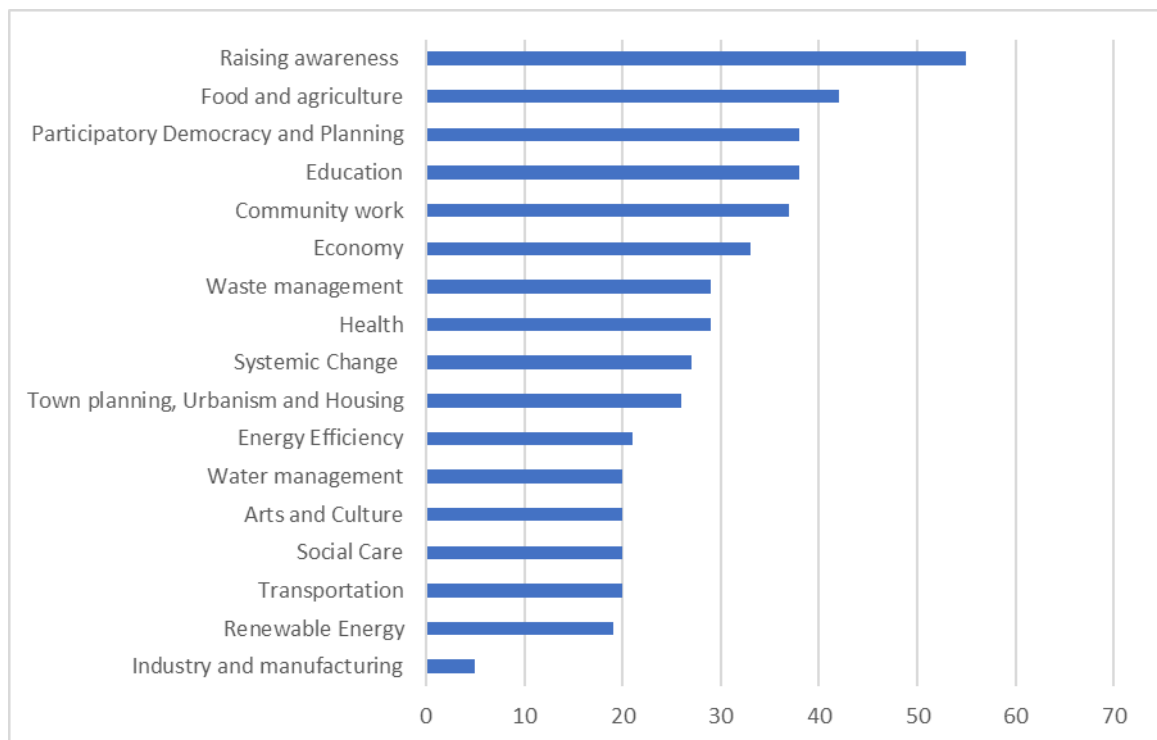


Figure E.2 – Results from the survey: main domains that the case studies focus on (n=71).

Questions were included to assess the main domains of the Compass, namely the degree of (1) cooperation between actors; (2) disruption (providing new products, services, ideas or social processes that radically change ‘business-as-usual’); (3) improvement of local economy (creating significant locally-based livelihoods and entrepreneurship that stewards the local environment and resources); (4) people support in leading a healthy and engaged lifestyle (including physical and psychological well-being, strong relationships, connection to nature,

learning and sharing new skills, political mobilization, activism, etc.); (5) promotion of equity and social justice (including social inclusion and deliberate redistributive efforts). Results are presented in Figure E.3.

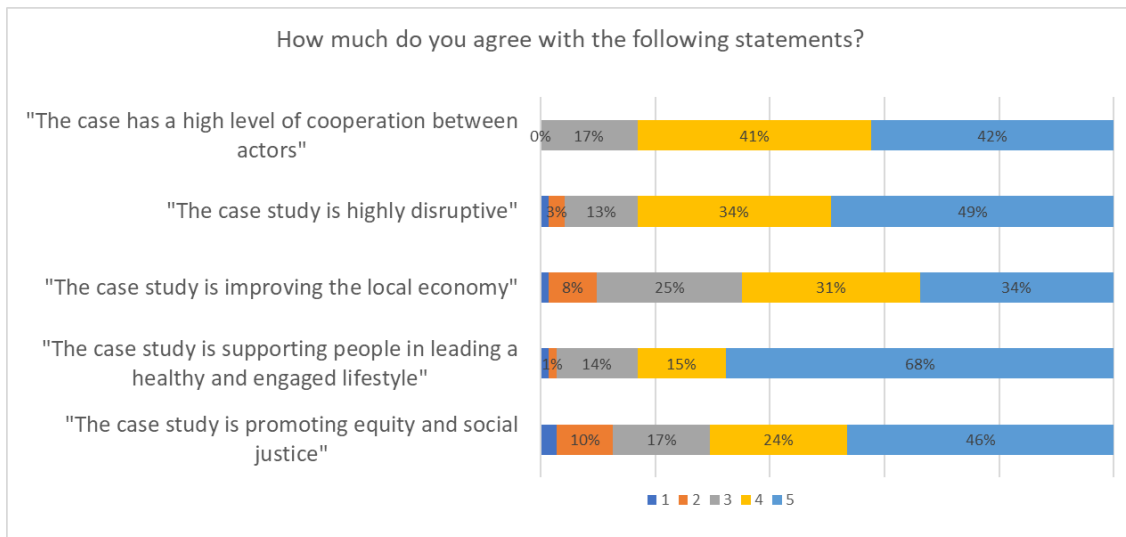


Figure E.3 – Results from the survey: answers to the question “How much do you agree with the following statements?”
(1 = Fully disagree; 5 = Fully agree).

In terms of climate change mitigation and adaptation the initiatives stated that their contributions were mainly institutional and behavioural change or reinforcement, followed by producing local and/or organic food and promoting healthy and sustainable diets, preventing waste and recycling (circular economy), promoting sustainable mobility (cycling, public transport, electric and shared cars...), creating green infrastructures, and generating heat and electricity from renewable sources (Figure E.4). Other ways mentioned include supporting local actions (e.g., funding, benchmarking, tracking impacts, inspiring, developing community capacity, promoting partnerships and support networks between social entrepreneurs and actors of change, offering tangible and paradigm shift solutions, gathering people, and celebrating) and local economy (e.g., local trade networks, support to ‘green’ entrepreneurs). Other topics included personal health, regeneration of river basins, relationship with other movements from the global South, reducing the use of petrol lawn mowers, increasing pollinator resources, and honouring aboriginal heritage.

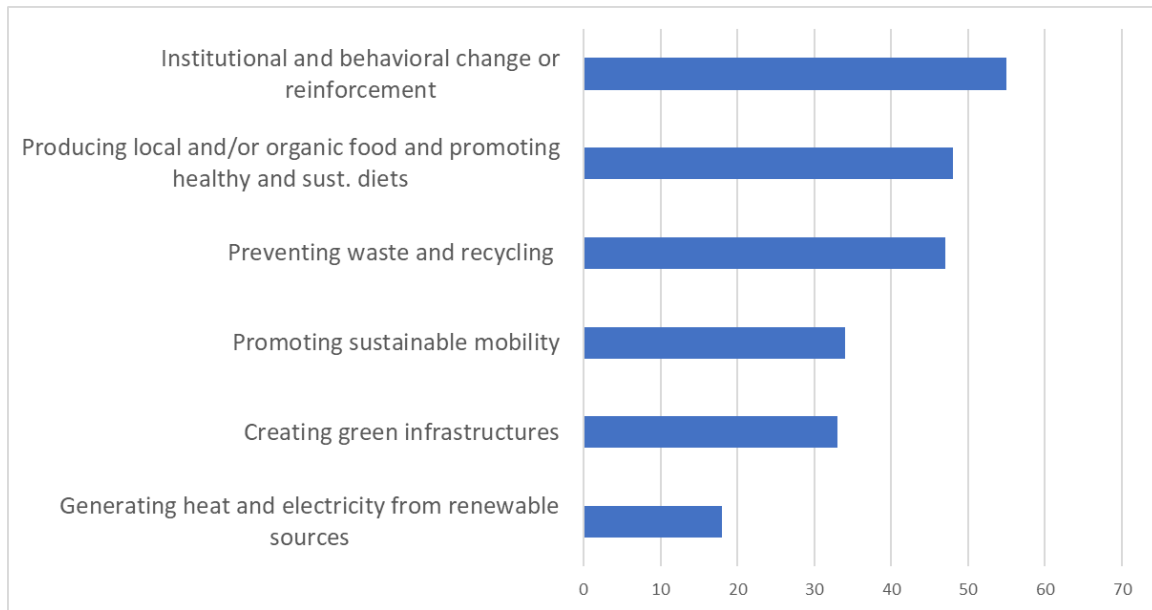


Figure E.4 – Results from the survey: contributions to climate change mitigation and adaptation (n=71).

GOVERNANCE ANALYSES

Cases analysed are quite diverse, including in their governance approach. They span from grassroots eco-neighbourhoods in S. Paulo to a well-structured transformation initiative at city level in Dresden with governmental support, an ecovillage in Colombia managed by women or cooperatives to produce energy and promote local food. Some cases focus on the collaborative promotion of concrete activities or topics (e.g., cycling, circular economy, urban agriculture) or more spiritual experiences (e.g., inner transition). In most of the cases it was possible to identify some novelty in the way that local governments and civil society work together with a transformative aim. Besides partnerships, spaces for dialogue and learning, action groups are quite common (*local innovation committee, neighbourhood environmental committee, neighbourhood assemblies, schools of life, living classrooms, future city team...*) as well as the creation of networks connecting change agents. Alliances uniting municipalities, Transition Initiatives, ecovillages, and indigenous groups are also referred. Some of the tools used to promote transformative collaboration include sharing land and other resources, demonstrative centres, coworking spaces, convergence events, social currencies, distribution of small grants, shared social media platforms, ethnography approaches, communitarian management of public spaces, etc. Tools like Dragon Dreaming, Sociocracy, Theory U and Nonviolent Communication are also used.

Most of the cases (73%) have some connection to the Transition movement (e.g., partnership with Transition Initiatives or Hub) and several active collaborations with municipalities are presented. Most of the cases also declare to belong to some local, regional, national or international network (e.g., Covenant of Mayors), while a few created their own networks. Funding comes from municipalities, private sector, cooperatives, non-governmental organizations, crowdfunding and users, besides other national and international levels (e.g., European Union).

In order to further examine the governance imprint of these collaborations, I used a tool created by an Italian experiment on energy transition, the so-called *Funzione energia*¹⁶ (Rossi, Pinca, Cavalletti, Bartolomei, & Bottone, 2014). According to this experiment, the occurring transition processes can be mapped matching the actors involved and transformative actions developed (or planned) in each initiative (Table E.1).

Table E.1 – Design grid of the *Funzione energia* for the development of targeted transition initiatives. Adapted from Rossi *et al.* (2014). The empirical observation of the Italian experiment shows that the crucial factors leading to real changes in the way a community organizes itself are new visions developed at the political level, planning occurring at the municipalities' organization level and a cultural change at the public level. In the grid those cells have a 'higher' value (++). A second group of 'key' cells are marked (+) and considered as other activation areas with a high potential for change. For example, it is assumed that when organizations develop a new vision, change their culture and plan accordingly, we can observe an evolution in the community.

	Actors Categories						
Actions Categories	Municipality Political	Municipality Organization	Controlled Entities	Suppliers	Organizations	Public	Networks
Vision	++				+		
Organization		+					
Planning	+	++			+	+	
Technical aspects							
Relations							
Cultural change					+	++	
Networking							

¹⁶ This was simultaneously one of the 71 cases studied.

The Actors' categories are:

- Municipality, political level: who institutionally contributes to defining policies, e.g., council, commissions, parties).
- Municipality, organizational structure: technicians and other civil servants responsible for performing municipal functions).
- Controlled Entities: entities that are in some way controlled by the municipality.
- Suppliers: public and private suppliers of the municipality.
- Organizations: economic, social and cultural organizations, profit and non-profit (e.g., business, schools, environmental organizations).
- Public: families and citizens.
- Networks: other municipalities and actors outside the territory (e.g., other municipalities, levels of government, partners in international networks).

And the Actions' categories:

- Vision: actions and processes that tend to create a vision.
- Organization: actions and processes that tend to create or modify the governance (e.g., creating a new office or procedures).
- Planning: actions and processes that tend to create a plan (e.g., setting goals, drafting of documents).
- Technical aspects: actions that modify the system through technology.
- Relations: actions and processes that want to create or improve relationships, namely acting on human and social aspects.
- Cultural change: actions and processes that tend to lead to a “paradigm shift” (including communication and educational activities).
- Networking: actions and processes that tend to create stable connections and comparisons (e.g., benchmarking).

In order to fill the grid for each case, I used the qualitative data collected with the survey, namely the case description (including governance) and the perspective on the HHH approach (“Where do you see the “head/heart/hands” part in this case?”). I performed a content analysis by assigning a code for each cell in the grid. The frequency of occurrence of each code in the total number of cases (71) is presented in the Table E.2.

Table E.2 – Mapping of the collected cases (n=71) according to actors and actions involved.
Cells with double borders and bold font correspond to values one standard deviation above mean. Strikethrough numbers correspond to values one standard deviation below mean. Coloured cells are considered ‘leverage points’.

		Actors Categories						
Actions Categories	Municipality Political	Municipality Organization	Controlled Entities	Suppliers	Organizations	Public	Networks	total
Vision	24	18	2	4	35	24	6	110
Organization	46	46	6	2	55	46	4	205
Planning	26	22	2	4	32	22	6	111
Technical aspects	15	19	4	2	34	25	3	102
Relations	12	12	4	0	33	33	0	91
Cultural change	35	36	5	4	62	63	8	210
Networking	31	26	4	4	39	28	32	161
total	189	179	24	8	290	241	59	

We can conclude that apparently the actors that are more actively involved in the cases are organizations and the public, followed by local governments (Figure E.5). Controlled entities and suppliers are not usually mentioned which can demonstrate that initiatives like green procurement or life-cycle assessments are rare. Often these controlled entities manage critical sectors relating sustainability, like water, waste, or energy.

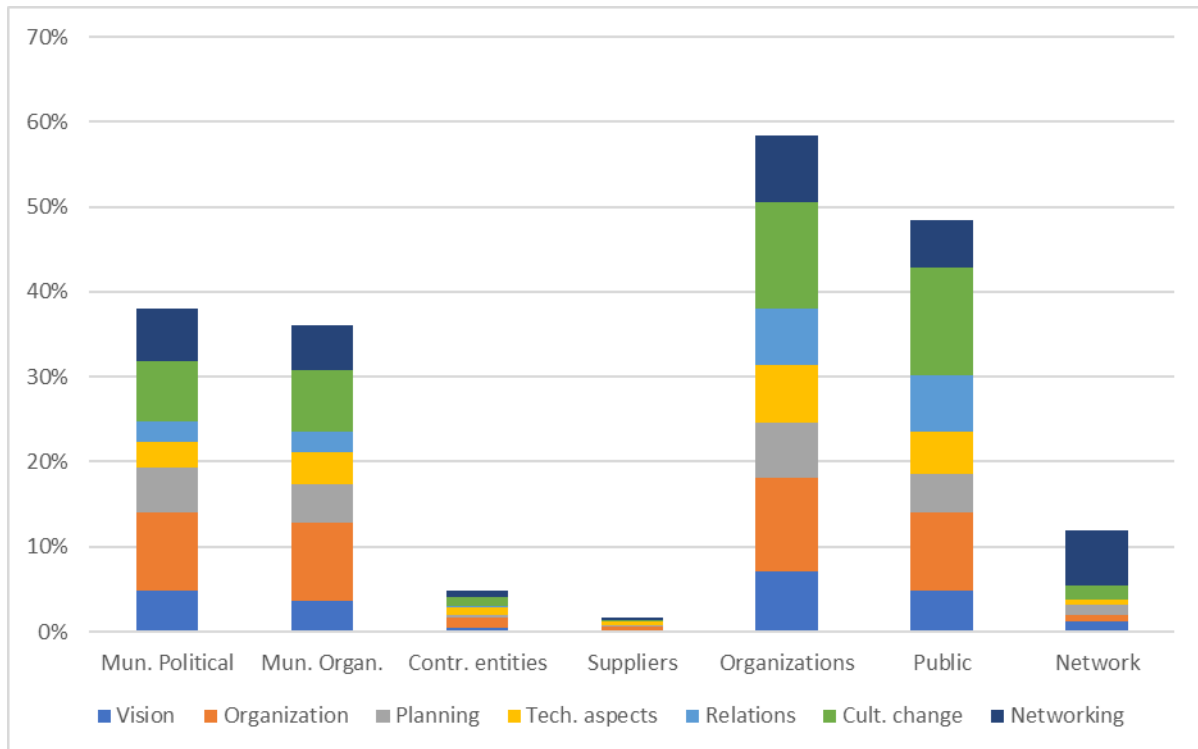


Figure E.5 – Frequency of actors' involvement in case studies, by actions' category.

Cultural change and new governance schemes (involving many actors) are the kind of goals most often pursued, followed by networking activities (Figure E.6). Caring for relations looks like a less developed area of work. Visioning and planning can also be considered in relative deficit considering the leverage power attributed to these activities.

Finally, I produced a grid score for each case by counting the number of filled cells (Table Ap.B.1, Appendix B). A factor of 3 was applied to cells marked with “+” and 5 with “++” (Table E.1). The score (or *cases' range of impact*) varies between 6 and 59 (average=26), for a maximum value of 73. This score, we could argue, can be considered a proxy of the wideness of the transition governance in place in each case, by capturing the full spectrum of actors and management actions involved in transition efforts.

A multivariate analysis was performed but it did not allow to provide clear conclusions about possible case clusters. I should not forget to mention that lower values can correspond to cases where insufficient information is available and not necessarily cases with smaller impact.

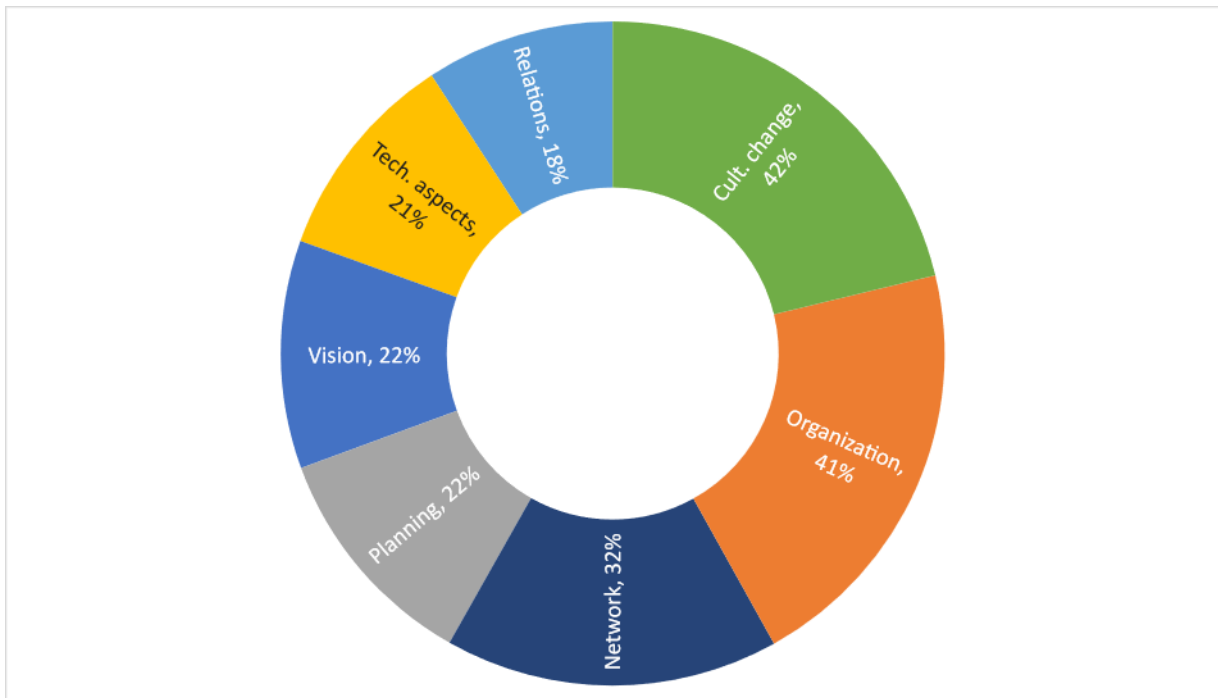


Figure E.6 – Relative frequency of actions in case studies.

COLLABORATIVE FEATURES

In order to select the cases for an in-depth study (**phase 2** of the mapping process), the following quantitative data was used¹⁷:

- *Cases' range of impact* (provided by the grid), as a proxy of the wideness of the transition governance in place in each case (what I call *governance imprint*).
- *Cases' self-evaluation* (Figure E.3), with differentiated weights (integrated score = *cooperation between actors* x 3 + *disruption* + *improvement of local economy* + *support of people in leading a healthy and engaged lifestyle* x 2 + *promotion of equity and social justice* x 2).

The final decision was based on the research team's subjective and consensual analyses of novelty and interest for research (this included a free discursive evaluation with a proposal on 'how to proceed' prepared by each member, a voting process and debate). Cases with sectoral approaches or too context-specific ones were avoided. Location and population were also used as criteria in order to maximize the contextual diversity. Some cases were considered

¹⁷ According to the research approach, we were trying to learn from the transition governance in successful cases of local transformative collaborations. Accordingly, we favoured cases where collaboration between actors was stronger, and the governance imprint was higher.

interesting as a *tool* and not as a *framework*, so a third phase on the research was decided in order to learn also from these cases¹⁸.

Finally, 8 cases were selected (Table Ap.B.2).

All cases are “well established and running”, are located in six geographical regions (Northern, Central and South America; Northern, Western and Southern Europe). Half of them have concrete connections to the Transition movement. Overall, the range of impact is comparatively high in the context of all the 71 cases.

The objective of phase 2 was to look deeper into existing frameworks of transformative collaboration and tools between civil society and local governments in order to (1) inform the design of the instrument to be tested in pilots and (2) share with all interested parties detailed descriptions of interesting and effective practices. Detailed information collected included (1) how and when the cases emerged; (2) methodologies and tools used; (3) activities developed and their impact; (4) governance approach.

A specific ‘research pack’ was prepared for each case – including background and contextualization information; interview’s guides and templates; consent forms and contract. This pack was delivered to the Transition Hubs which operated the data collection, directly or through contracted members. The interviews and other data collection were performed in November and December 2017. Data collected was analyzed and discussed by the research team in order to identify patterns (e.g., challenges, power relationships, processes, values). The comparative analysis is presented in (Table Ap.B.2, Appendix B).

We were interested in knowing how different actors perceive the ongoing transformative collaborative processes, so semi-structured interviews were conducted with people active in the project (one from the LG and one from the CLI) and a third person from ‘outside’ (not having a coordination role; could be a beneficiary or participant in the activities). Questions in interviews included topics as benefits, challenges, support between actors and potential for replication.

COCREATION

Using the *Compass for Transformative Collaborations* as a framework analysis and focusing on the collaboration between LGs and CLIs, we can conclude that cases provide various

¹⁸ In 24 cases we did not identified a structured process to promote transformative collaboration (*framework*) but instead concrete and valuable solutions to solve specific problems (*tool*). A survey was used to collect information, including an on-line questionnaire with guidance and interviews. It was only possible to collect information from 4 cases.

illustrating data. For example, and looking at *cocreation*, the Ecobairro case in São Paulo started in civil society, bringing inputs from international networks and sustainability educators and designers from all over the world (through the Gaia Education training). But meanwhile a structured collaboration with the municipality was established based on a consultative and deliberative body, the Municipal Council for Environment and Sustainable Development (CADES). The Ecobairro had the opportunity to draft the CADES regulations and to participate in the strategy development (e.g. Strategic Master Plan, Zoning and Regional Plan linked to the Sustainable Development Objectives) and effective joint implementation (e.g. green corridor for pollinators).

In Jungapeo, Mexico, it was the local mayor that invited an NGO to cocreate a common initiative to establish the first official ‘transition town’ in Mexico. Efforts to share understanding and analyses of the problem are evident in cases like the Italian *Funzione energia* (it might be considered the main goal) and MARES, Spain. The latter case is a good example of clearly defined and complementary roles, with collaboration happening between the municipality and consultants (previous experience of working together) and also collaborative platforms and citizens. It is also a case where formal monitoring and evaluation plays a key role. The same happens in Växjö, Sweden, and probably it is the main factor leading to success, also because the monitoring and evaluation comes from a clear purpose, common shared vision and long-term commitments (although restricted to the political context). A similar clear visioning and pragmatic monitoring process occurs in Rubí, Spain, with collaborations between the municipality, schools, industries and other agents. Here transparency and accountability are also clear key factors.

MUTUAL SUPPORT

Focusing on the dimension of *mutual support*, we can highlight the case of Dresden, Germany. The Municipality is putting their efforts in raising funds for civil society initiatives, and to support and train groups in using them. In Sonoma, United States of America, the Daily Acts NGO and Municipalities are supporting each other, sharing educational skills and funds, and jointly resourcing civil society. In MARES the aim is also on providing access to assets and space (e.g. disused buildings) and sharing knowledge. Rubí uses a very clear approach to further equally shared risks, efforts and benefits, namely with the 50:50 partnerships between the Municipality and schools (savings from energy use collaboratively achieved, are divided equally and reinvested with joint decisions).

Cross marketing is a strategy used in Mexico to consolidate the collaboration: members of the municipality are regularly invited and participate in workshops about Transition and related activities. The previously mentioned CADES, in Brazil, is a good example of a permanent space for dialogue, even though it faces the contingencies of political turnovers.

COPRODUCTION

Coproduction efforts are significant in several cases. Daily Acts emphasises social capital, putting great effort in developing networks. They also put emphasis on providing learning opportunities, like Jungapeo. Ecobairro also considers that the most significant contributions are on education, along with the generation of transformative public policies. MARES is equally generating social capital and learning opportunities, with a focus on equity. Rubí and the *Funzione energia* focus on decarbonization, while Växjö looks mainly for environmental improvements. Collaboration between LGs and CLIs is expected to grow based on trust and confidence arriving from joint successful activities, as stressed in Jungapeo's case.

OPEN INNOVATION

The transformative potential is connected with reshaping practices (e.g. Rubí, Daily Acts or MARES) or mainly institutional change (e.g. *Funzione energia* and Vaxjo). *Funzione energia* also aims at cultural change, as well as Ecobairro (“culture of peace”), Jungapeo (autonomy) or others. Transformation through the creation of a networked governance is the underlying goal in Dresden's Future City. Daily Acts (and MARES) similarly account for the power of working with the entire ecosystems of actors and fostering networks of social innovation. They highlight how “large-scale social change happens through more collaborative approaches to scaling impact” and use tools like a Community Resilience Challenge. These efforts are expected to bring the emergence of widespread change. In Jungapeo they explicitly report the “outbreaks of spontaneous and orderly teamwork among the local population, as if the Transition Effect were contagious”. Social learning can be, in fact, the main outcome of this cases.

Several cases have already manifested capacity for replicating. This is the case of Ecobairro, Daily Acts and more significantly Rubí. In the latter, a political turnover in 2015 became a window of opportunity – the person in charge of the project left the Municipality and joined a cooperative that spread the model to around 30 municipalities in Spain. The Rubí's bet on 100% renewable sources of energy was also replicated by Catalan Municipalities and others.

3) Designing the Municipalities in Transition instrument

This research looks for an effective governance instrument to improve the existing local transition processes. What can we learn from the existing collaborative transitions at the local level?

From the empirical mapping study, we concluded that there is great diversity of contexts and transformative local collaborations in place. In many of them the resources are quite scarce.

This led to the first **preconditions to the governance instrument** to be:

- (1) Easily adaptable to a wide variety of very different contexts.
- (2) Simple enough to be relatively easy to learn and to use in real life.
- (3) Low level of preconditions for implementation (low resources, low technology).

We also concluded that in the cases studied, power is distributed between local authorities and civil society in a similarly diverse and complex way. The power to take decisions and influence processes can concentrate in each one of the ‘sides’ or be ‘equally’ distributed.

Also, many times this power balance is not evident or explicit, and often changes in time.

Therefore, the following preconditions were added:

- (4) Suitable for use in a context of shared/diffused governance.
- (5) Implementable both in a top-down and a bottom-up approaches¹⁹.
- (6) Powerful enough to cope with high levels of complexity and uncertainty.

Finally, we aim for the instrument to improve collaborations, bring concrete transformations and be able to adapt and change in time. We then add the following necessary conditions:

- (7) Capable of improving the quality of the cooperation between the involved actors.
- (8) Effective in transformation.
- (9) Designed to be iteratively evolved by the users.
- (10) Closely linked to the HHH principles (use best information available, take care of relationships, look for tangible results).

Looking back to the cases mapped and the in-depth analyses, the research team concluded that the *Funzione energia* was the case providing the most valuable insights. In fact, this experiment has been developed deductively and inductively in Italy, aiming at designing a model to provide guidance to municipalities in their transition efforts, assuring great flexibility and organized tools regardless of the starting situation of the municipality. It takes

¹⁹ In other words, a system that can be initiated by a local government or a community-led initiative.

into consideration that Municipalities have similar structures but very different sizes and local context.

By using the analytical tool of *Funzione energia* in the cases analysis, we could also conclude that it is easy to use, still providing a useful overall picture of the spectrum of transition governance in place. Additionally, as referenced in Table Ap.B.2, the *Funzione energia* envisage a database of operational tools that can be used in daily activities. We can therefore conclude that the *Funzione energia* case, seen as a governance instrument, meets the first set of preconditions (1-3).

The central element of the *Funzione energia* experiment is a grid or matrix based on actors and types of management actions, the building elements of governance. This grid is used to map ongoing transformative initiatives happening in the community, and also as a planning instrument of new or improved initiatives. Actors are organized according to their relational proximity, from the Municipality point of view (Rossi et al., 2014). Gradually moving from left to right (Municipality-Political > Municipality-Organization > Controlled Entities > Suppliers > Organizations > Public > Networks), the various subjects have, hypothetically, a smaller proximity and a less formalized relationship with the Municipality – this concept of relational proximity is expected to eliminate the hierarchical model.

As developed later, the *Funzione energia* case has a systemic design, capable of leading with the complexity of transformative processes happening in a community. When mapping processes, it is not significant their starting point (can be a political visioning process, the introduction of a new technology from a company or a campaign from an NGO). What matters is the range of actors and actions that are involved – in other words, the systemic impact. We can consequently argue that it also meets the second set of preconditions (4-6).

Besides a quantitative assessment of transformative governance in place, the *Funzione energia* case also integrates a qualitative evaluation mechanism, not yet mentioned. This is accomplished by a set of two proposed evaluation cycles (Rossi et al., 2014) considered critical for the effectiveness of processes. In the first cycle, users are challenged to ask: “Who is there? Who should be there? Who is missing?” – maximizing inclusiveness is considered to be a way to bring diversity and guarantee legitimacy.

In the second evaluation cycle it is used the HHH approach described earlier to emphasize the need to bring to the process the best data available, the emotional variable and the focus on tangible outcomes – hopefully this will help to avoid preconceptions and imposed ideologies,

marginalization or manipulation, or unfruitful initiatives. We can prudently suggest that this instrument also fulfil the last set of preconditions (7-10).

In December 2017 (Figure E.7), after an intense **codesign process**, the research team decided that the tools developed in the *Funzione energia* case would be used as basic elements for the Municipalities in Transition instrument, to be tested in pilots. In fact, one of *Funzione energia*'s limitations was that it had not yet been significantly tested, although it was built on the experience of multiple municipalities (Rossi et al., 2014).

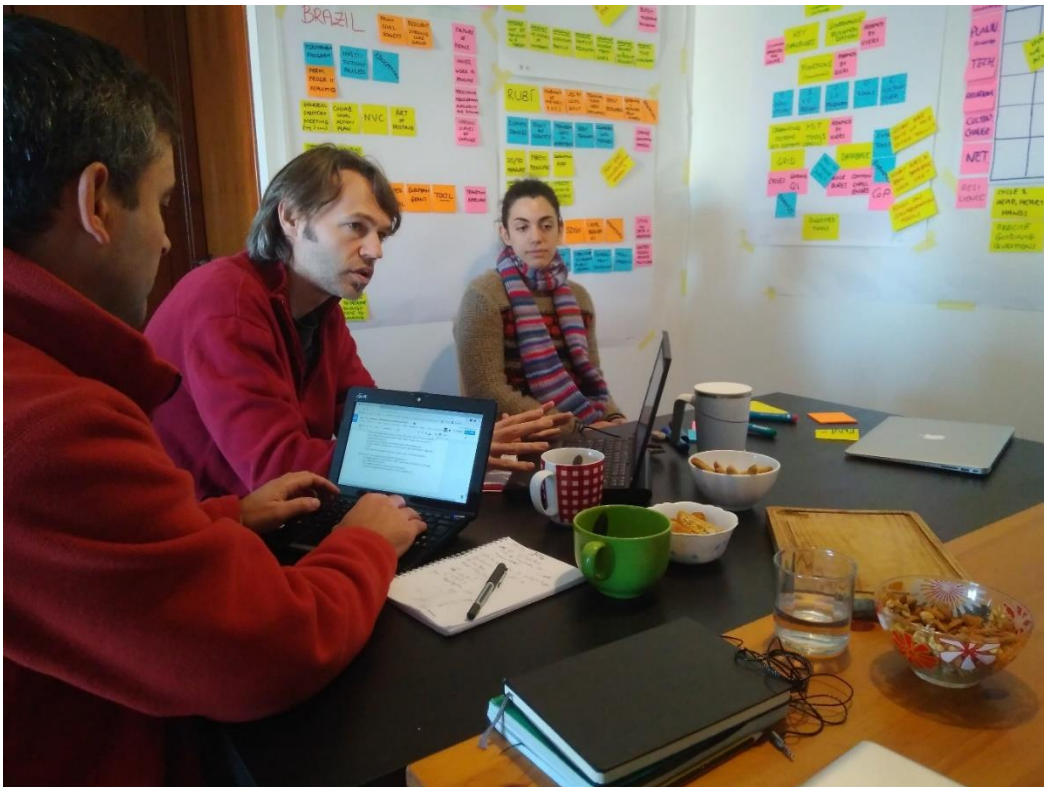


Figure E.7 – Codesign session in Cardedeu, Barcelona (December 2017).

The work included analysing the 8 case studies looking for patterns on collaborative processes, implicit values, etc., brainstorming about the vision for a transformative collaboration shared between municipalities and transition initiatives, agreeing on the prepositions for the design, cocreating the instrument and ‘playing’ with it, and setting the criteria for the pilots and the testing structure.

The Municipalities in Transition instrument was under development until February 2018 with the main goal of creating a process that could facilitate a necessary learning space. In fact, the *Funzione energia*'s creators recognized that there was “the need to configure a place, a group, a system ... something able to follow the process, measure its effectiveness, understand its state of maturation, decide how (and if) to continue” and that “partial answer will be found only by observing and supporting the experiences of the Municipalities that will be able to interpret, with regard to the territory and their community, the role of facilitators” (Rossi et al., 2014, p. 59)²⁰.

The beta version of the **Municipalities in Transition instrument** included:

- A ‘transition’ grid (similar to the one presented in Table E.1²¹), where transformative initiatives can be mapped, planned and evaluated.
- An online structure for a database of tools that can be used to facilitate transition, using pattern language.
- A guide for experiments (see Annex B) comprising a governance proposal for a joint work between LGs and CLIs and an implementation methodology, including the cycles of diagnosis (baseline), planning, acting and evaluation using the grid.
- Tutors for supporting pilots’ experiments.
- An intended Community of Practice.

According to the sociocratic pattern of consent decision making (Bockelbrink, Priest, & David, 2018, p. 29), this instrument was considered by the research team “good enough for now and safe enough to try” (Box E.1).

²⁰ free translation

²¹ A new column for *Businesses* was created, separating them from *Organizations*.

Box E.1 – A simplified simulation of the use of the MiT instrument in a community.

Let's imagine that in a community a group of people decide to use the Municipalities in Transition instrument with the purpose of reinforcing climate action. They can start by listing the actions that they are aware of that contribute to this. Twenty actions are identified, including a climate adaptation plan, an energy cooperative, a project on green roofs and a campaign for using public transports. They take a blank paper, design the grid and find the place for each action (relating the actors and actions involved). To complement the information, they might decide to do some informal contacts, an online survey, interviews with key stakeholders or a workshop, ending with fifty actions. With a relatively low effort, they have a first clear and 'big picture' of what's happening. Maybe it is not totally accurate and surely not complete, but probably it is an image reflecting the larger reality.

With no great efforts, they spot that 'controlled entities' are not really participating, so they might decide on a new action to evolve the public water distribution company (which holds significant resources and where the Municipality has a place in the administration) or to connect it to an existing action that already exhibits great impact (e.g., a local conservation area). They use the evaluation cycles for the latter and reach the conclusion that relations, namely with people living inside the area, are not being looked after (maybe they heard about complains relating marginalization) and that information coming from the adaptation plan, namely climate projections, were not adequately integrated in the strategy for the local area, which is vulnerable to flooding.

In the end a new action emerges based on river margin restoration, with the active participation of citizens (using a participatory tool from the database) and the financial support of the Water Company - they now proudly announce that they deliver services on the full water cycle! This is accounted in the grid as bringing cultural change. They then share their learnings with groups in other communities also using the same instrument, inspiring them to have a more integral approach to water issues.

This example can be summarized in simple terms: connecting what was not previously connected, finding gaps and opportunities, and promoting synergies.

4) Discussion

In this first discussion, I start by clarifying the MiT intrinsic purpose and expected impacts, and then explore the potential of the instrument in supporting transition governance by analysing it with the lens of several conceptual resources from sustainability transitions theory. My intention is to illuminate if the MiT instrument can be a proper answer to the research question²².

EXPECTED IMPACTS

Cultural change²³ has been assumed as the purpose of the MiT project: “we seek to support systemic change, by fostering values, and frames that encourage a cultural shift from separation to collaboration” (MiT, 2018). Alongside a culture of collaboration, the structures, and practices, that the codesigned MiT instrument expects to develop can be divided into three groups:

- Systemic thinking – the integrated grid brings the possibility of grasping the complex interconnections between actors and their actions in the arena of transition. The focus moves from the set of individual organizations (and their isolated activities) to the dynamics coming from collaborative interventions.
- Inclusive culture – the first evaluation cycle brings the idea that everyone affected by the interventions should participate in their development.
- Head/Heart/Hands – these set of principles included in the second evaluation cycle bring in the values of rationality in taking decisions (using the best information available), a culture of caring for people and being productive (generating tangible results).

With this shared understanding, a new vision on transformative collaboration is expected to emerge and inform the way public policies and social innovations are crafted, framing processes and dynamics²⁴. The above list of intentions is very much aligned with the pragmatic pedagogy of the Transition movement, avoiding a ‘political’ standpoint that could

²² “What would be an applicable and comprehensive governance instrument to support the development of (trans)local transitions, facing the challenge of tipping point times?”

²³ Here, I adopt the definition and framing of ‘cultural change’ proposed by Geels & Verhees (2011, p. 910): “cultural change is a contested process, in which various groups perform on public stages to influence the attitudes and opinions of relevant audiences who provide financial resources, protection or support relevant for innovation journeys”.

²⁴ Similar sets of action-oriented beliefs and meanings promoted by social movements have been called by scholars as ‘collective action frames’ (Benford & Snow, 2000).

render the antagonisms, exclusions and power relations intrinsic to community building (McGregor & Crowther, 2016).

The uncertain and complex times in which we live (Davoudi et al., 2012) require people and communities to become comfortable with change (Revell & Henderson, 2019). The MiT instrument can use this ‘political opportunity’ (Benford & Snow, 2000) to bring a necessary sense of agency and empowerment that “can come through working together to bring about change” (TESS, 2017, p. 3). With this perspective, cultural change can be understood as the product of the social learning processes grounded on experimentation.

Cultural change is not easy to accomplish but it can be highly powerful in triggering large-scale transformations (Köhler, Geels, Kern, Onsongo, & Wieczorek, 2017, p. 24), particularly when it relates to creating new behavioural patterns (Nyborg et al., 2016). This is why cultural change is also included in the grid as a critical type of action, especially when related to wide audiences.

THEORIES OF CHANGE

The MiT instrument is inspired by an ontology of relationism expressed in the actor-network theory, assuming that “interaction is all that there is” (Law, 1992, p. 380). Transformation (towards sustainability) is seen as the possible outcome of local processes of patterning, social orchestration, ordering, and resistance (named as translation) involving a vast set of elements including individuals, organizations, visions, technologies, practices and the natural elements (e.g., climate).

In this sense, the grid used can be seen as a material representation of the ‘development arena’, a “cognitive space that can contain these processes analytically as well as enable change management” (Jørgensen & Sørensen, 1999, pp. 409–410). In this context ‘transformation’ relates to the concept of ‘adaptive governance’, a “range of interactions between actors, networks, organizations, and institutions emerging in pursuit of a desired state for social-ecological systems” (Chaffin et al., 2014, p. 1).

The MiT instrument is expected to increase the resilience of the community by reinforcing the ‘local transition system’, providing an instrument to monitor, evaluate and adapt local interventions through collective action. This also relates to the concepts of transformability (Walker, Holling, Carpenter, & Kinzig, 2004) and also the notion of institutional thickness coming from economic geography and innovation studies (Coenen, Benneworth, & Truffer,

2012). The kind of dynamics that the instrument potentiates can be described as a “self-organized process of learning by doing” also named as ‘social learning’ (Folke et al., 2005).

SYSTEMIC CHANGE

It can be argued that the MiT approach is *systemic* in the sense that it rests on the assumption that altering the nature of interrelationships between elements (in this case, organizations and activities acting on the territory) is a keyway for a system change. Therefore, it is not primarily targeted at altering the way LGs, CLIs and other actors perform their own specific functions, but in changing quantitatively and qualitatively the interconnections between transformative efforts.

Resilience can be considered the capacity to deal with the uncertainty and complexity of tipping point times, and derives from the redundancy and diversity within the governance system (Low, Ostrom, Simon, & Wilson, 2003). By using the transition grid in a learning space, as previously discussed, the focus becomes the creation of processes that include a diversity of actions and the greatest number possible of actors – therefore, in a resilient community, the grid would exhibit activities happening in all the cells, and especially across cells (as a result of collaboration and synergies).

Additionally, the quantity and the quality of relations between actors is enabled to evolve by bringing in the already mentioned evaluation cycles and networking is also included as a key action to foster new connections. Summing up, the MiT instrument considers relations, or the social capital of that community, the ones that must be modified so that change can occur (Rossi et al., 2014). The MiT instrument helps to stimulate networks of inter-dependent actors exhibiting system-like properties and acting in a synergistic way – consequently it helps these networks of actors to effectively become a (change) system, as suggested by van Mierlo *et al* (2010).

By helping to organize the activities happening in the community, the instrument is expected to bring an ordered structure to the transition process, therefore reducing entropy and promoting efficiency (organizations agree on the same model of reality and share a methodology to identify desirable options for change). New properties are created in interventions/connections (e.g., inclusivity) expectantly leading to synchronization between the work of LGs and CLIs, reinforcing synergies and leading to emergent patterns of networked governance. These properties are expected to diffuse to other actors in the transition ‘playground’.

This institutionalisation and routinisation approach can support ‘embedding’ (alignment of old and new ways of thinking, doing and organising in order to integrate them into governance patterns) and is considered the most effective mechanism in accelerating the sustainability transformation (taking into account the pace and scale of systemic change) (Gorissen, Spira, Meynaerts, Valkering, & Frantzeskaki, 2018).

LEARNING ARENA

The MiT grid can be seen as an instrumental representation of the *Arena of Development*, concept proposed by Jørgensen (2012), based on actor-network theory, actor constellations and collective sense-making. In this sense, the ‘arena’ made visible by the grid, it is the place and space in which strategic interventions aiming at transformation towards sustainability happen. Here the term ‘actor’ has a broader meaning than the one used until now and included in the grid (actors as individuals and organizations). As Jørgensen states (p. 1001), “actors on an arena comprise a heterogeneous set of entities, which include humans, technologies, institutions, visions and practices”. In the grid these entities are referenced not only in the actors’ categories but mainly in actions’ categories. All these elements are interconnected in the networks that the instrument intends to reinforce.

The ‘arena’ metaphor can positively bring the idea of a place where actors (broader sense) interact and perform, but also connects to the attributes of ‘sand’ (related to the word’s etymology). This metaphor is particularly useful to highlight the fluidity of the phenomena happening in this field characterized by spatial and relational temporality (Jørgensen, 2012). The MiT instrument is therefore a navigational instrument (or heuristic) that can help the local organizations to “navigate in a field in flux” (*ibid.*, p. 996). This instrument is useful not to ‘get lost’ (it brings a clear picture of ‘where’ the organizations are in the complex ‘map of transition’) and to decide where to go (supporting the design of strategic interventions intended to fill the gaps in the grid).

But, as previously noted, it is not only a question of doing more things involving more organizations. It is also a question of doing things differently. By actively and jointly using the evaluation cycles in baselines, plans and actions, LGs and CLIs bring emergent changes to the arena’s boundaries and configurations through alignment and mediation. The MiT instrument is therefore a process of social ordering, stabilisation and restructuring of the arenas of transition, helping to maximize their performance (as previously noted).

This ‘navigational’ metaphor is also used in the context of adaptive governance (Olsson et al., 2006). Here, new system configurations linking organizations and agencies are considered necessary to support transformation and arise from building knowledge and networking around sorted alternatives. We can then argue that the MiT instrument can be used to allow adaptive governance to emerge, generating what Olsson et al. refers to as a ‘shadow network’. These informal networks provide a platform/arena for collaboration (*ibid.*) that can be made operational by the MiT instrument.

LGs and CLIs use this instrument to represent and construct the existing social capital related to transformation and are challenged to reorganize and expand it, building the stock of change actions and related experiences. The grid stores the collective learning that can be mobilized in turbulent times, increasing the resilience of the overall system by nurturing renewal and facilitating reorganization (Folke et al., 2005).

The process of confrontation between different knowledges shared by collaborating actors to produce solutions is what scholars call ‘social learning’ (Beers et al., 2010) and it has been considered a critical precondition for tackling sustainability (Sol, Beers, & Wals, 2013). The social learning process, through using the MiT instrument, is expected to expand outside the boundaries of the experiments by way of the community of practice – these communities have proven to be crucial in the processes of scaling and challenging of dominant system configurations (Radywyl & Bigg, 2013).

REFLEXIVE GOVERNANCE

Finally, the MiT instrument can be regarded as a meta-collaboration – different organizations work together focusing on transformative collaborations happening in the community. In this sense, it is essentially an exercise of ‘reflexive governance’ (Feindt & Weiland, 2018). By making sense and exploring how different organizations are jointly putting in place their decisions on sustainability, the instrument is a practical way of operationalizing the reflexivity of steering strategies. In other words, it centres the attention of transition governance in the governance system already in place to promote transition, questioning it and adapting it, and hopefully affecting the community and its capacity to steer. In that sense, it should lead to a new institutional arrangement and new design rules.

LIMITATIONS AND OPEN QUESTIONS

In this section I want to discuss the limitations of the MiT instrument and related open questions. To start with, and putting it simple, we should not forget that the transition grid and

other navigational tools included in the instrument can be useful in guiding change, but that “maps are never the territory, especially when navigating uncharted waters” (Wilding, 2011, p. 29).

Nevertheless, we can ask if it is possible to further develop the algorithms to provide more integrated indicators of transition and prescriptive results that can lead to radical structural change. Can the grid be used in a local system of governance supported by ‘artificial’ intelligence? Can this process of capturing change be used in modelling the societal response to global change, allowing, for instance, the construction of scenarios from agent-based models (e.g. De Cian et al., 2018; Köhler et al., 2009)?

We can also question the feasibility of collectively gathering ‘all’ the transition happening in the community, not being overwhelmed by the objective, or lost in considerations and ‘infinite’ discussions around what to include (not to mention, how to evaluate). Do our communities have the necessary resources and skills (transformation concepts, systems thinking...) for this challenge? Will they show the commitment to work together and develop trust that are key conditions in developing good collaborations (Hassink et al., 2016)? It is also an open question on how to make this gathered information, namely the transition grid, visible and usable for many concurrent users in the community.

We should also emphasize that the main idea of the MiT instrument is to allow familiarity with a new set of principles and methodologies, arriving from the opportunity to fully experiment and embrace a new culture. The ‘bureaucratic’ component (using the grid and the evaluation cycles) is seen as an instrument to facilitate this process but the MiT instrument does not necessarily advocate for continued use. In fact, the instrument should become ‘obsolete’ when its principles are fully embedded in the governance system.

Experimenting can bring clarity about the institutional designs that can amplify (or block) concrete results, transforming these collaborations in effective partnerships that go beyond rhetoric and enhance local deliberation (Forsyth, 2010). Can power struggles affect the use of the instrument? Can the MiT instrument lead to a more equitable distribution of power? What are the other contextual factors that can influence (and be influenced), positively or negatively, (by) the use of this instrument? How to articulate the initiative’s informal world and the formal world of local authorities?

These questions will be explored in the next chapter.

5) Synthesis

This thesis presents an exploratory research looking for knowledge on how to promote synergies between local governments and community-led initiatives in their pursuits of (local) sustainability. A key feature is that it is not looking for a new ‘recipe’ for promoting local collaborations but instead a governance instrument that can help existing transition efforts to foster their transformative impact.

Using a literature review, I have proposed a *Compass for Transformative Collaborations* (chapter A). The compass includes the dimensions that we consider as critical for assessing and developing effective partnerships, namely for these to be cocreated (using collective intelligence), taking care of relations (by mutual support), delivering goods and services that foster local resilience and proving disruption related to incumbent regimes. This heuristic is the research’s ‘guiding’ instrument and was used to assess cases of local transformative collaborations.

We collected and studied 71 cases of local transformative collaborations happening in 16 countries using observation, surveys, and interviews. The cases ranged from grassroots eco-neighbourhoods in S. Paulo to a well-structured transformation initiative at city level in Dresden with governmental support. This research on exemplary cases confirmed that collaboration delivers significant advantages and that a great potential for transformation rests in the joint action between local authorities and civil society.

After formulating the preconditions for an instrument that could enhance synergies, a codesign process was developed using sociocratic techniques within the research team and information from the case studies and literature. We have found an experiment in Italy, the *Funzione energia* (Rossi et al., 2014), that met the preconditions so it was used as a basis to design the new instrument.

In the core of the *Municipalities in Transition* instrument we have a grid that accommodates the transformative efforts that can be recognized as happening in the community. These actions occupy different cells in the grid corresponding to their categories (e.g., using new technologies or fostering relations) and the actors involved. We can therefore use the grid to get an overall perspective of the ‘governance imprint’ of transition efforts. Additionally, evaluation cycles are included to assess the quality of the initiatives in terms of inclusiveness and how much they are educated, care for participants needs and bring tangible results.

The instrument is comparable to a transformative and collaborative board game (Figure E.8). The grid acts as the board, and the first step is to set out the main transformative initiatives already happening in the community, providing a baseline. The game unfolds by using joint efforts to occupy new ‘squares’, some of which are considered to be leverage points²⁵ (therefore providing extra ‘points’). From each house, players can get access to ‘cards’ presenting a diversity of tools and guidelines on how to use them (organized in a database). The rules of the game also include how to ‘team up’: the governance model and facilitation reinforce the social learning process and lead to a new culture of collaboration.

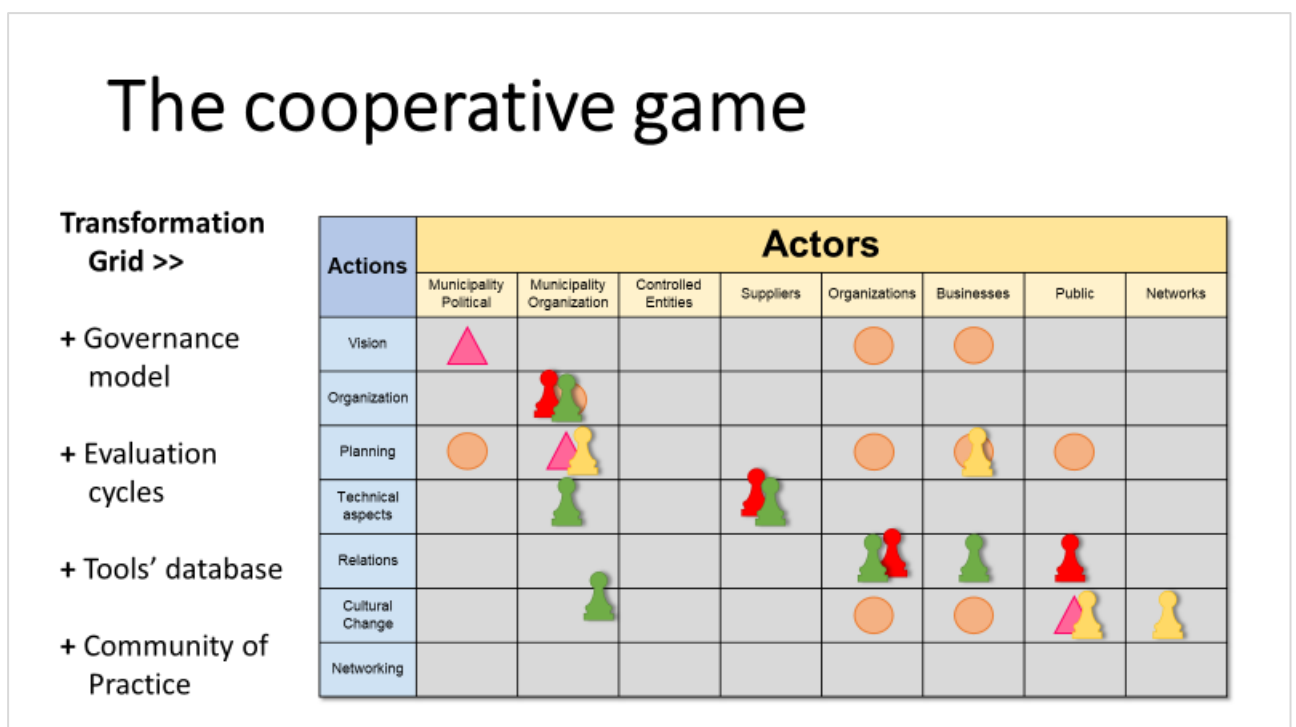


Figure E.8 – Using a metaphor, the *Municipalities in Transition* instrument is comparable to a transformative game. A grid is used, with columns corresponding to different local actors and rows to categories of actions. The first step in this ‘board game’ is to set out the main transformative initiatives already happening in the community (represented in the figure by the pawns), providing a ‘big picture’ of the change system. Some cells in the transition grid are considered to be ‘leverage points’ with higher activation potential and are marked with circles and triangles. Together with ‘leverage points’, evaluation cycles allow to identify the best ‘moves’, that can resource to a database of tools. The governance model explains how to ‘team up’ and social learning occurs in the context of a community of practice.

²⁵ For example, it is assumed that when organizations develop a new vision, change their culture and plan accordingly, we can observe a significant evolution in the community.

So, what exactly 'is' the MiT instrument? Several possible answers were explored connecting it to existent theories and can relate to the functions it performs in the 'transition system':

- Make sense of (and measure) transition efforts – an instrument for the community to (1) capture the governance dynamics of the local transformative initiatives, making sense of the change efforts; (2) easily evaluate interventions on a gross but sensible way; (3) keep track of the progresses and changes over time; (4) spot the places where more energy is converging, resources available and gaps where more action is needed.
- Support systemic change – The principles and the database of tools provide guidance to reshape change efforts and to design new interventions that are aligned with the existing work, reinforcing complementarity, interdependencies and bringing collaborative efforts that are synchronous and optimized to create wide transformation.
- Leverage institutional and cultural change – by using the instrument, transition principles are embedded in the collective performance of local organizations, increasing the capacity of self-organization and eventually leading to emergent transformations towards sustainability.

Additionally, the governance model and the facilitation included in the MiT instrument are expected to reinforce the social learning process and lead to a new culture of collaboration. This is expected to cross the boundaries of the experiments by way of the community of practice.

We can then argue that the MiT instrument can both be used as a transformation instrument (making sense of how transformation processes happen) and a transformative instrument (developing strategies for enhancing transition processes), being fit for tipping point times (Box E.2). It is therefore a systemic instrument for governing transition at local level toward sustainability and is able to answer our research question:

What would be an applicable and comprehensive governance instrument to support the development of (trans)local transitions, facing the challenge of tipping point times?

The MiT instrument is itself still in development. The beta version (Annex B) was applied in pilots, results were assessed, and the instrument was refined, in a process presented in the next chapter. We will address the critical design principles associated with nurturing these local collaborations in practice and explore the range of background conditions and institutional

arrangements that could influence them. Similarly, we will identify the evolutionary patterns that might emerge from the experiments (e.g., power dynamics).

Box E.2 – Facing tipping point times: from apathy to creativity.

Ecopsychology brings us the notion that many people are overwhelmed with the complexity and enormity of crises like climate change, leading to anxiety, despair and apathy. This feeling of powerlessness and ‘environmental melancholia’ blocks vast resources of creative potential for engaging in change actions (Lertzman, 2015; Macy & Brown, 2014). But even when we find ways to deal with these paralysing concerns, we still must face the complexity of solutions out here, including all the planning, technology innovations, changing lifestyles or new social configurations.

The MiT instrument is expected to be powerful enough to cope with these high levels of complexity and uncertainty and simultaneously simple and flexible enough to be relatively easy to learn and to use in ‘real life’. It should bring us hope and optimism by allowing to ‘watch’ the build-up of momentum for systemic change (Loorbach et al., 2017) and the unfolding patterns of transformation towards sustainability. Additionally, it should motivate us to ‘step in’ into the process with self-reliance based in the previous knowledge of how we can ‘make a difference’. In synthesis, probably the major value of this new instrument rests in the possibility of bringing order to the chaotic transformation we see in our world, connecting what was not connected and unleashing the creativity and power that lies in our communities.

F. EXPERIMENTING WITH THE *MUNICIPALITIES IN TRANSITION* INSTRUMENT: TRANSFORMATIVE SOCIAL INNOVATION ON THE RUNWAY

“Sustainable development is more about the organisation of processes than about particular outcomes. It is about the modes of problem treatment and the types of strategies that are applied to search for solutions and bring about more robust paths of social and technological development”

Jan-Peter Voß and Rene Kemp (2006)

1) Research unfolding

In this thesis I use the following research question as my guide:

What would be an applicable and comprehensive governance instrument to support the development of (trans)local transitions, facing the challenge of tipping point times?

In the previous chapter I shared the codesign process of the *Municipalities in Transition* (MiT) instrument. I confronted the new instrument with the existing theories of transformation, and I theorized around the potential support of local collaborative transitions.

Could the instrument make its “proof of living” in the real world and fulfil the aspiration of helping local governments (LGs) and community-led initiatives (CLIs) to create change together?

From March 2018 to April 2019 six communities, with very different contexts, experimented with using the MiT instrument (presented in pages 71 and 80). After having received a training, they decided and implemented a mode to take joint decisions, used the instrument to prepare a baseline collecting 189 existing local transformative initiatives, planned, and implemented 14 impactful actions. This work will be presented in this chapter.

Namely, I want to answer the following empirical research questions:

- What were the impacts and outcomes in terms of transformative collaborations at the local level of using the MiT instrument?
- What were the contexts where the potential changes occurred and the related critical design features in the instrument? What lessons can be learned to improve the governance instrument?

Governance experiments have received increasing attention (Kivimaa, Hildén, Huitema, Jordan, & Newig, 2017). However, little is still known about the social learning processes involved in such governance innovations, and what they contribute to transformation (Wolfram, van der Heijden, Juhola, & Patterson, 2019). In this research, I contribute to fill the gap. Evaluation was performed *ex-ante*, through and *ex-post* the experiments. In the final meeting I used the lenses of *narratives of change* and *critical turning points* to harvest learnings about doing transformative change in this “journey on a bumpy road” (Ruijsink et al., 2017, p. 10).

As we will see in this chapter, even in a short time, quite drastic changes occurred. These changes were the product of the reflexive experimentation, the new social relations, the empowerment process, the changing tensions, the translocal connectivity, the discourse formation, the new (or reinforced) institutional homes and the strategic actions (adapted to each context). New ways of doing, organising, framing and/or knowing, as expressed in the theory of Transformative Social Innovation (Haxeltine et al., 2016).

This chapter has three main sections: firstly, governance experimentation (in which I detail what happened in the pilots), secondly, evaluation (where I assess results), and thirdly, discussion (where I explore the learnings from the piloting, answering the empirical research questions above).

2) Governance experimentation

Experimenting has a central role in the field of transformation research, and is intended to “promote system innovation through social learning under conditions of uncertainty and ambiguity” (Sengers, Wieczorek, & Raven, 2016). In these processes, different agents engage with a new and ‘alternative’ practice or approach that is expected to lead to some kind of positive (system) change. Transformation can be expressed in terms of changing procedures,

goals, norms, values or actors involved in decision-making, and it is facilitated by the social learning process (Bos & Brown, 2012).

I should also mention that experimentation, besides bringing the possibility of facing the challenges of climate change and sustainable development, is subjected to critiques and could possibly be considered a way to perpetuate the *status quo* by delaying urgent changes (Hildén, Jordan, & Huitema, 2017; Sengers et al., 2016). Deliberate disruption was included in our research guidance to account for this risk (page 19).

The MiT pilots can be considered as governance experiments, since they are focused on how actors interact and jointly promote (or not) change. Governance experimentation usually captures relatively low attention in transformation research (comparing other areas), something that started to change in past years (Bos & Brown, 2012; Kivimaa et al., 2017; Wolfram et al., 2019). The focus on governance is characteristic to research related to sustainability and climate issues (Hildén et al., 2017).

Experiments in sustainability science can be organized in different typologies according to type of control over interventions and subjects of experimentation (G. Caniglia et al., 2017). Here we explore experiments with participatory control over an intervention focused on a ‘sustainability solution’, meaning that both researchers and other social actors take active part in inducing and controlling the intervention.

I will start by presenting the process of selecting the pilots and their main characteristics.

THE PILOTS

Since previous research on Transition Initiatives (Feola & Nunes, 2013) shows that local context can deeply influence the outcomes of such initiatives, at least three pilots were planned, in different countries and with diverse settings, to be able to determine possible cross-cutting issues.

Pilots were selected from the 71 case studies of local transformations collected in the earlier phases of this research (see previous chapter), in order to make the most of information already gathered related to the cases and connections established. In the preselection process, only impactful on-going cases with the willingness to improve and good prospects of continuity were considered suitable to be a pilot²⁶. Initiatives that were too narrowly focused on specific interventions were avoided.

²⁶ The proposed instrument is not directed to beginners but front-runners.

During the preselection process, the following criteria were also used:

- Strong relationship between the LG and a CLI (not necessarily connected to the transition movement).
- Diversity of contextual factors (geographical location, cultural aspects, population size, urban/rural).
- Commitment, readiness, and capacity for action (including previous experience in using frameworks).
- No linguistic barriers to communication with the research team.
- A personal relation of trust involving one of the members in the research team and local actors, in order to pragmatically increase the probability of getting results in such a short-term period (criteria to be met by 1 or 2 of the pilots).

Cases preselected and interested in becoming pilots were interviewed to discuss mutual expectations, readiness, planned activities and capacities required. They were also provided with full documentation on the experimentation process.

Design of pilots' selection criteria and preselection happened at the end of 2017. Interviews and final selection happened in the beginning of 2018. The final decision was taken by the core team.

It was decided to have 4 fully supported pilots, in Italy (two municipalities), Portugal and Spain, and 2 partially supported pilots²⁷ (in Brazil and Hungary) (Appendix C and Figure F.1).

²⁷ The 71 cases were located in six geographical regions (Northern, Central and South America; Northern, Western and Southern Europe). The inclusion of partially supported pilots was meant mainly to preserve contextual diversity and the differentiation will be explained later.



Figure F.1 – Pilots' location.

Most of the cases are located in the Mediterranean region and Brazil is the only country not belonging to the European Union and the Organisation for Economic Co-operation and Development (OECD). All countries face sustainability challenges, with indexes related to the Sustainability Development Goals (SDG) varying from 70.6 to 77.8 (Sachs, Schmidt-Traub, Kroll, Lafortune, & Fuller, 2019). Apparently, some of the worst performances relate to *Zero Hunger, Industry, Innovation, and Infrastructure, Responsible Consumption and Production* and *Climate Action* (Table F.1).

Table F.1 – Countries' performances in terms of Sustainable Development Goals.

2019 Global Index Score (0-100), 2019 Global Index Rank and Dashboard (green-SDG achievement; yellow-challenges remain; orange-significant challenges remain; red-major challenges remain; grey-data not available) - SDG: 1. No Poverty; 2. Zero Hunger; 3. Good Health and Well-being; 4. Quality Education; 5. Gender Equality; 6. Clean Water and Sanitation; 7. Affordable and Clean Energy; 8. Decent Work and Economic Growth; 9. Industry, Innovation, and Infrastructure; 10. Reducing Inequality; 11. Sustainable Cities and Communities; 12. Responsible Consumption and Production; 13. Climate Action; 14. Life Below Water; 15. Life On Land; 16. Peace, Justice, and Strong Institutions; 17. Partnerships for the Goals (Sachs et al., 2019).

Country	Global Index Score	Rank	Goal Dashboard																
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Brazil	70.6	57	Orange	Orange	Red	Orange	Orange	Orange	Green	Red	Yellow	Red	Orange	Orange	Orange	Orange	Red	Yellow	
Hungary	76.9	25	Yellow	Orange	Orange	Red	Orange	Orange	Orange	Yellow	Red	Yellow	Yellow	Orange	Red	Grey	Green	Orange	Orange
Italy	75.8	30	Yellow	Orange	Green	Orange	Orange	Yellow	Yellow	Orange	Red	Orange	Orange	Red	Red	Red	Yellow	Yellow	Orange
Portugal	76.4	26	Yellow	Red	Yellow	Yellow	Orange	Orange	Green	Yellow	Orange	Orange	Orange	Red	Red	Red	Yellow	Yellow	Orange
Spain	77.8	21	Yellow	Red	Yellow	Yellow	Orange	Yellow	Yellow	Orange	Red	Orange	Orange	Orange	Red	Orange	Yellow	Yellow	Orange

All pilots correspond to relatively privileged communities, in terms of social, economic and environmental factors. There is a vast rural region (La Garrotxa, with the lowest population density), three cases located in compacted central city areas (Kispest, Telheiras and notably Vila Mariana), a small town (Santorso, with the lowest population) and a new municipality in the suburbs of a metropolitan region (Valsamoggia).

In all the cases there is an active CLI with some connection to the Transition movement and already engaging in collaboration with the LG (not to an extent considered desirable, according to survey). In the case of Telheiras and Vila Mariana, there was already an institutional setting for collaborations between the LG and CLI.

A formal commitment was requested from pilots, conforming to several conditions related to the use of the MiT instrument:

- Create a diverse and dynamic *activation circle* with members of both civil society and the local public administration, taking decisions together about the pilot in a horizontal and transparent way.
- Implement the planned activities, including to attend the training event.
- Collaborate with the tutor, facilitate visits and participate in project meetings.
- Actively participate in the research process, reporting activities, and in the Community of Practice.

Pilots were provided with:

- Financial support of 45 000 euros (15 000 for partially supported pilots; funds for Italian pilots were divided by the 2 municipalities) for pilot-related activities.
- Access to all documentation and support from tutor, core team and researcher (less intense in the case of partially supported pilots).
- Possibility of participating in training events.

EXPERIMENTATION PROCESS

The MiT experimentation consisted of a learning agenda supported through a complex research structure (Figure F.2) and a set of activities developed in pilots (Table F.2), in **nested and concentric cycles of action research**.

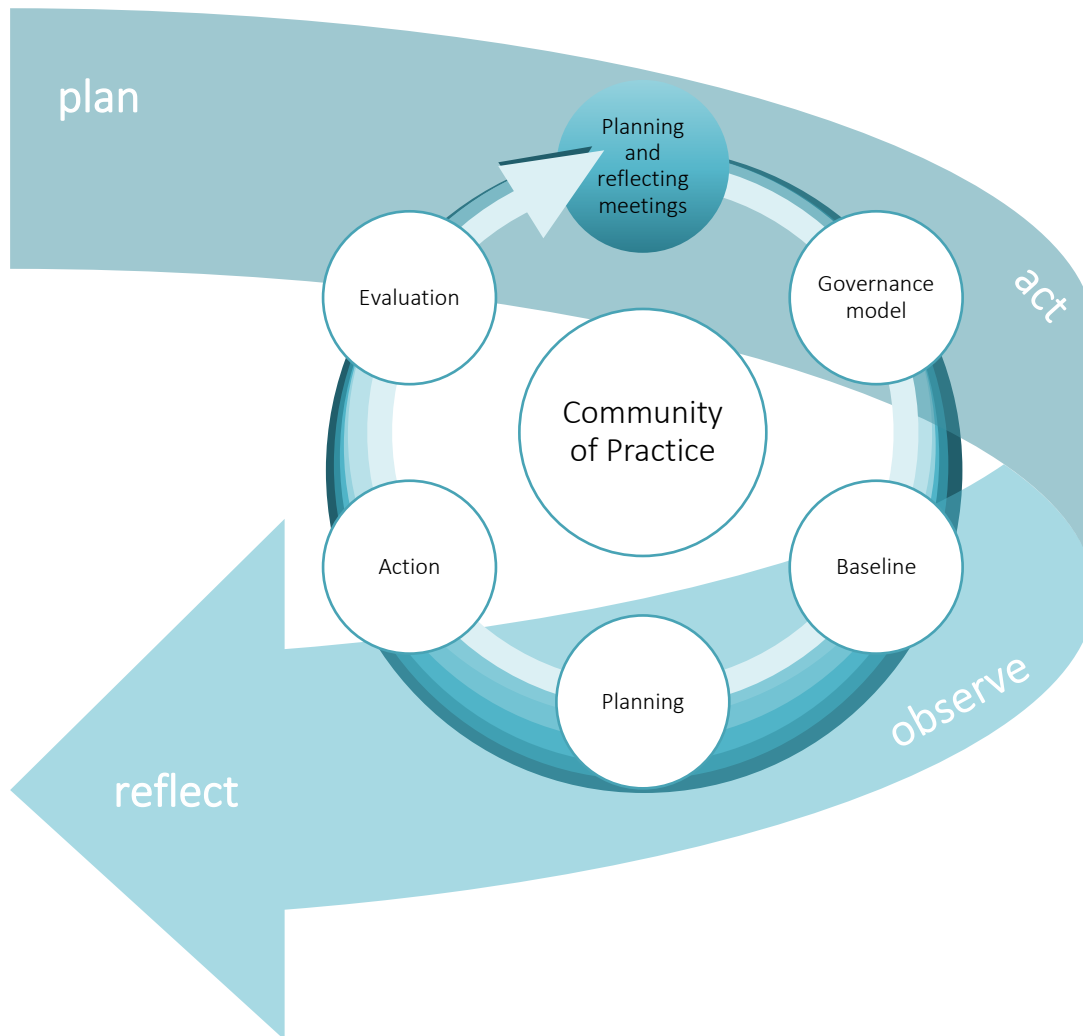


Figure F.2 – The structure of the governance experimentation with the *Municipalities in Transition* instrument through nested and concentric cycles of action research, centred around a Community of Practice.

Table F.2 – Activities developed to pilot with the *Municipalities in Transition* instrument.

Activities	Description	Participants
Meeting (planning)	An in-person training to learn about the MiT instrument and plan its use	Representatives from all pilots (LGs and CLIs), named as ‘facilitators’
Governance model	Agreeing in each pilot on the process of steering the piloting	Local action groups of each pilot, with support from the local facilitators
Baseline	Collecting data on local transformative actions already happening	Local action groups with the participation of the community
Planning	Setting a basic initial systemic plan for the community	Local action groups
Action	Implementation of planned actions	Pilots’ communities
Evaluation	Assessing impacts	Local action groups
Meeting (reflecting)	An in-person gathering to debate on learnings	Representatives from all pilots (‘facilitators’)
Community of Practice	Creating a space for sharing experiences	Practitioners on local transformative collaborations

Participatory action research happens in intricate **cycles** of *planning* a change, *acting*, *observing* and *reflecting* on the outcomes, followed by *(re)planning*, and so on (Kemmis et al., 2014, p. 18). In this research, we can identify three ‘layers’ of participatory action research cycles.

First, there is an underlying process of action research steered with the purpose of codesigning and testing the MiT instrument (translated into this thesis). In Figure F.2 this is represented by the bigger arrow. In this context, the experiments were the way we (research team) acted in order to observe the MiT instrument ‘coming to life’. My reflection will be presented in the next section. As previously mentioned (*New*, page 48), there is a *(re)planning* process now unfolding with a new set of pilots (outside the scope of this thesis).

Secondly, pilots are themselves interconnected cycles of participatory action research, unfolding simultaneously in different places in a synchronized way (represented by the concentric rings in Figure F.2). The process started with a planning (and training) meeting where a group of people from CLIs and LGs (named as ‘facilitators’), coming from different places, met to learn about the instrument and plan its use in each location. This implementation is performed in a coordinated way and with support from a tutor from the research team. In the end of the piloting, they once again met in person to jointly reflect on the learnings, and *(re)plan* next steps.

Finally, the Municipalities in Transition instrument is itself (similar to) an action research process. In each place, an action group is formed (with people coming from diverse grounds), they define their governance model, prepare a baseline, plan an intervention, act and reflect on what evolved. They are then called to stay in this loop of (re)planning, acting, observing, and reflecting. These activities are represented in Figure F.2 by the white circles.

Of fundamental importance, we have the *Community of Practice* (page 44) connecting all these layers and even operating beyond the borders of the research.

I will now present and discuss the **results** obtained in each moment of the piloting process, focusing on the interconnected cycles of participatory action research I have just mentioned. This presentation is based on an analysis of the data that I collected throughout the process. As mentioned in chapter D, I performed virtual and *in-loco* participant observation of activities (around 1 000 hours of ethnographic observations) and established multiple interactions with participants. I collected ethnographic data in a researcher's diary, also supporting the gathering of information in meeting notes, tutor's diaries and pilots' reports, and also several outputs from workshops and other activities (pictures, posters, canvas, post-its, videos, presentations, minutes of meetings and group work ...). Research methods included semi-structured interviews with participants and questionnaires conducted before, during and after the piloting.

PLANNING MEETING

The experiment starting point was an in-person meeting that happened between 13 and 16 March 2018, in Santorso²⁸. Representatives from all the pilots were invited, both from the LGs and CLIs (Appendix C). They were expected to facilitate the use of the MiT instrument in their local settings.

Main goals set were to train on the use of the MiT instrument and to codesign a basic local plan for the use of the instrument in each pilot²⁹. The meeting was facilitated by the research team, using a great variety of codesign methods and tools (Figure F.3). Other activities included ice-breaking and team building techniques.

²⁸ One of the pilots. Contact with community was promoted through visits and meetings. Participants also stayed in locals' houses.

²⁹ A complete guide on how to use the MiT instrument was distributed to all the participants before joining the training: version Beta 1.0, February 2018, with updated versions in April (Annex B).

Day 1 - Creating a common ground



Welcoming and introduction

- Sharings, project presentation, logistics, group agreements, sociometry



Socioecological context and root causes

- Presentations and group dynamics (group discussions and theater game)



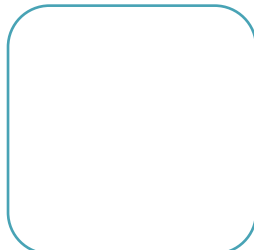
Pilots' presentation

- Pechakucha presentations (sharing stories, 20 slides 20 seconds each) and group discussion



The collaboration for transition

- Marshmallow Challenge and group discussion



Inner transition

- Open Sentences (Joanna Macy)

Day 2 - Diving in the MiT instrument



Systems thinking and systemic activism

- Systems thinking game (patterns), presentation (Re.imagining Activism) and group work (systemic design)



MiT instrument

- Presentation (background, functions, elements...) and group exercises on 'playing' with the grid



Tools

- Presentation of the MiT database of tools and on 'pattern language'



Troubleshooting

- Brainstorming and Q&A session

Day 3- Codesigning the pilot plans



Pilot planning work

- Explanation of experimentation plan and discussion



Codesign I: dreaming/visioning

- Meditation and prototyping exercise



Codesign II: plan

- Group work (in pilots' teams and with tutors' support) using canvas and timeline



Codesign III: feedback

- peer-to-peer support, integrating feedback, preparation of presentations



Research

- Presentation and group discussion on monitoring and evaluation

Day 4- Looking to the future



Pilot plans

- Presentation by pilots' teams, with feedback and discussion



Community of Practice

- Presentation and world café, key questions on learning together



Next steps

- Group discussion



Evaluation

- Individual exercise

Figure F.3 – MiT training scheme for the facilitators of the pilots, with daily goals, topics, methods, and activities develop.

Results achieved include³⁰:

- Creation of interpersonal relationships and positive group bonding (Figure F.4).
- Overview on the MiT's process (Figure F.5).
- Shared view of the socioecological context (planetary boundaries, root causes, systemic crises...) and transition principles.
- Learning about collaboration challenges and successes in all pilots.
- Experiencing and practicing on facilitation techniques and collaborative exercises.
- Personal development.
- Integration of a systems thinking mindset and practicing on tools for systemic change.
- Understanding of the MiT instrument's background, structure and functions.
- Practice on using the grid, including the evaluation cycles.
- Codesign of the pilots' plans, through a process of divergence and convergence.
- Sharing of research related topics: the 'big picture' of the experimentation process and the interconnected cycles of participatory action research, including the roles, the needs and the outputs from research related activities.
- Discussion of how to support, learn and practice together (Community of Practice).
- Meeting's evaluation and creation of a collective story of the workshop (Figure F.6).

³⁰ Data coming from participant observation.



Figure F.4 – Participants in the MiT training and planning meeting.

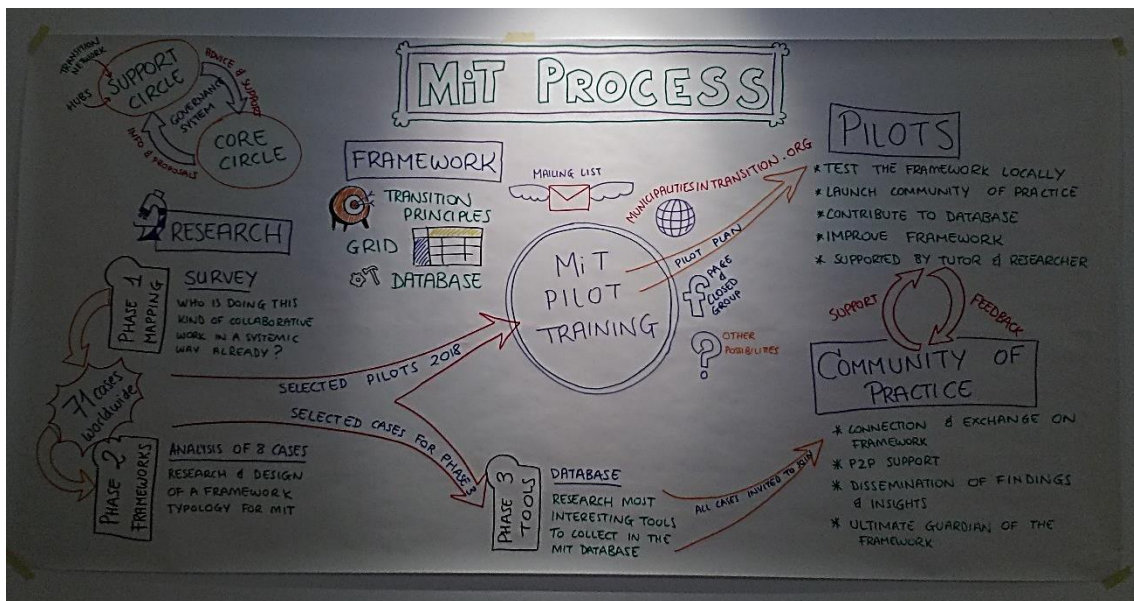


Figure F.5 – Overview of the MiT process.

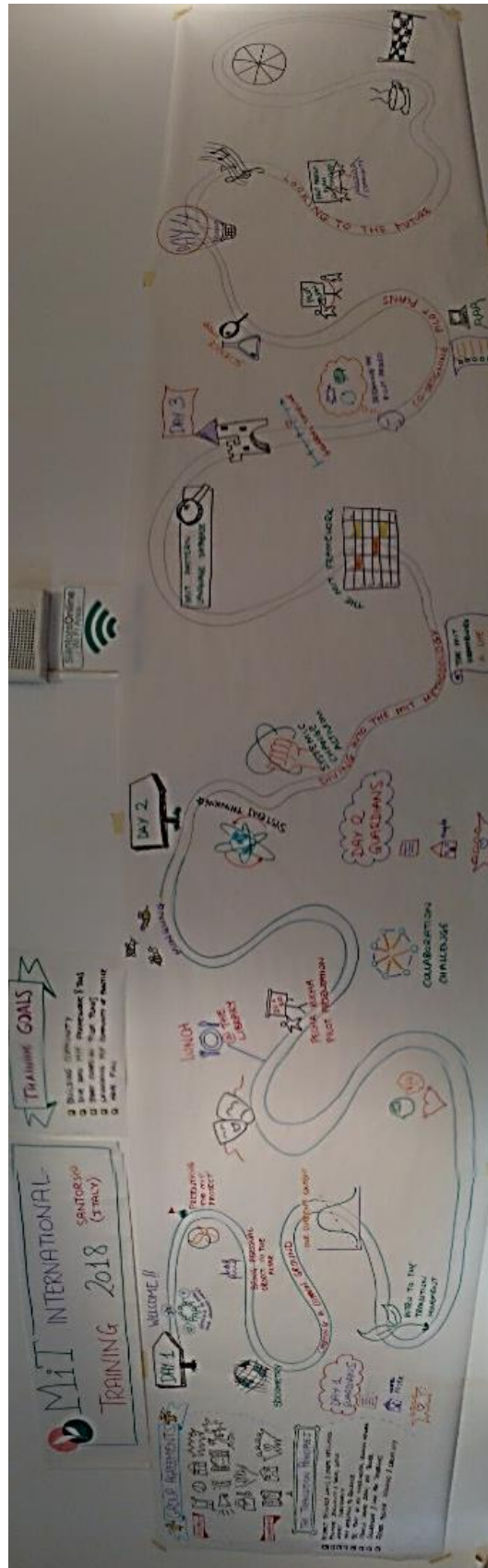


Figure F.6 – Co-created flow of the MiT international training.

GOVERNANCE MODEL

The MiT instrument is intended to be useful for processes driven by civil society organizations, local governments or both acting together, the last being the ideal circumstance. Different starting conditions will imply different needs and strategies – in this experimentation phase we selected pilots (at least) both LGs and CLIs collaborate from the start.

We decided not to force a fixed governance model, because of contextual diversity, time restrictions and in the interest of testing different approaches. Some of the possibilities suggested were creating a steering group with members of the different actors, agreeing on a process for decision-taking, or to hire and put in place a project team supported by consultants. If conditions were available, a sociocracy approach was recommended, in order to promote innovation and increase the potential for cultural change.

Sociocracy (also named dynamic governance), is a self-organizing governance model that supports organizational learning by providing a non-hierarchical structure that favors critical reflection and critical dialogue (R. L. Owen & Buck, 2020). In the MiT project, Sociocracy 3.0 (S3) was used, providing a structure of patterns to make collaborations more effective (Bockelbrink et al., 2018).

The governance models set into place in the pilots are presented in Table F.3, including observations on the dynamics established. For every pilot, a tutor from the research team was assigned.

Table F.3 – Governance in the Municipalities in Transition pilots.

Pilot	Governance model	Observations
Kispest	An action group was created, with transitioners (from the Wekerle initiative and the national hub) and representatives of the city council (often the Mayor's communication director and his chief of staff, a member of the environmental committee, and a city councillor that previously was working at the transition initiative). Consensus was used.	Action group met regularly. Several power issues had to be faced, also differences relating to working habits and mutual expectations. There were difficulties to fulfil some of the tasks. Previous conflicts, related to contested political options, were somehow overcome. Synergies, some already existing, were reinforced. There is the fear of creating dependencies (from the transitioners' side).

Pilot	Governance model	Observations
La Garrotxa	<p>Action group included representatives from regional administration (ADRINOC) and Resilience.Earth (CLI). Decisions were taken through deliberation and largely through consensus.</p> <p>A ‘ring team’ was created involving regional thematic consortiums (Social Services; Economy and Innovation; Environment and Public Health), general secretary and other members (youth and education, communication...) and called to participate in critical decisions (e.g., deciding on pilot actions).</p>	<p>The ‘ring team’ had a strategic role and set the stage for improving systemic thinking and action at administrative level (mostly influenced by the CLI). Initial expected number of meetings doubled, also to include trainings.</p> <p>There was a high level of cooperation. Power equilibrium between administration and civil society was recognized. Some divergence was faced relating to financial issues and leading roles (at moments). ADRINOC acted as bridging organization, connecting the CLI with higher levels of administration.</p>
Santorso	<p>An action group was created with representatives from the Municipality and the transition initiative and several citizens (educator, young students, businessman). The Mayor participated in some meetings and sociocracy was adopted.</p>	<p>During the piloting, the action group lost their initial ‘energy’ and meetings became scarce.</p> <p>Process was then held by the representative from the transition initiative, with the support from other stakeholders and volunteers (in action implementation), with a sociocratic approach.</p>
Telheiras	<p>A local inclusive partnership was already established, and a working group had been recently created for sustainability action (<i>grupo pegada</i>). This group acted as an extended action group, with members from the Municipality and several Civil Society Organizations. Informal consensus was adopted.</p>	<p>The <i>grupo pegada</i> adopted the MiT instrument to structure and initiate its action. Core work was assumed by the two civil society organizations (Santa Casa and Centro de Convergência), with support from the Municipality.</p> <p>Some divergence was faced relating financial issues, due to the existing of double roles, and it was overcome by mediation efforts.</p>
Valsamoggia	<p>An action group was set including a political representative of the municipal council, three people from local associations, an independent citizen, a public employee, a member of the local cultural foundation and the tutor. Sociocracy was adopted.</p>	<p>Sociocracy was considered crucial to deal with social diversity in the group, providing an effective tool for governance.</p> <p>The tutor, as member of the core team and the community (also active member of transition in Italy) acted as facilitator as well (imbedded in the action group).</p>
Vila Mariana	<p>An action group was created with representatives from Ecobairro, CADES (Municipal Council for Environment and Sustainable Development), Municipality, Community garden and Transition Hub.</p> <p>CADES acted as a steering group. A partners group was created with CADES from other municipalities, Biological Institute, Agenda 2030 Forum and others.</p> <p>Sociocracy was adopted.</p>	<p>A training on sociocracy was organized.</p> <p>It is believed that the process also impacted the governance at the Municipality level.</p>

By analysing the results, we can conclude that all pilots were able to put an effective governance model in place, even if in two pilots initial expectations were not met and

demanded for changes. In all the pilots, the CLIs had a leading role, compared to LGs. All pilots reported that using the MiT instrument contributed to improve relationships and conditions for local transformative collaborations (this will be discussed in more detail later).

In most of the pilots (5), the decision process was open to participation beyond the action group. National Transition Hubs were involved in most, if not all, the pilots. Additionally, sociocracy was used in half the pilots.

Some conflicts occurred but were effectively handled. Tensions can be related to some lack of clarity at the governance model, attributed to the short period to put it in motion.

BASELINE

In this second step in the piloting (Figure F.2), the proposed challenge was to map local transformative initiatives (actions, plans, processes...) already happening in the community, in a participative process as synchronous as possible³¹. Some examples were shared in the MiT guide (Annex B): “trainings on sustainable waste management, low emissions mobility plans, local food productions schemes, information campaigns on energy efficiency, climate change adaptation trainings, circular and sharing economy activities, etc.”.

It was explained that “the scope of the baseline is not to provide a precise ‘scientific’ measurement methodology but a way to more clearly see ‘the big picture’ of the community” (*ibid*).

A specific guide on how to prepare the baseline (also Annex B) and an on-line training session were provided to the pilots. A *grid calculator* (Microsoft® Excel® file) was shared to support the calculation efforts.

To support the collection of data from local transformative initiatives, a form was prepared, including the following fields:

- Initiative title.
- Short description.
- Contact person.
- Grid position (to map actors and actions involved in the initiative, using the MiT grid – see Table F.4 and Figure F.7).

³¹ At least involving one representative from the LG and other from the CBI.

- Evaluation cycles to see how much the initiatives are educated, caring, tangible and inclusive (Table F.4).

Table F.4 – MiT baseline methodology to collect data from local transformative initiatives.

Step 1 – Grid position	Step 2 – Evaluation cycles
Mapping the actors and actions involved in local transformative initiatives using the grid (Figure F.7)	Using a scale 0-2 to answer two set of questions, 1 (HHH) and 2 (WWW)
<p>Actors' categories:</p> <p>A. Municipality: Political level</p> <p>B. Municipality: Organizational level</p> <p>C. Controlled Entities: controlled in some way by the municipality</p> <p>D. Suppliers: public and private suppliers</p> <p>E. Organizations: associations, economic, social, cultural</p> <p>F. Businesses: companies, cooperatives, freelancers, businesses-oriented</p> <p>G. Public: families, citizens</p> <p>H. Networks: other municipalities, unions, regions, other actors outside the community</p> <p>Action's categories:</p> <p>1. Vision: actions and processes that tend to create a vision</p> <p>2. Organization: actions and processes that tend to create or modify the governance</p> <p>3. Planning: actions and processes that tend to create a plan</p> <p>4. Technical aspects: actions that modify the system through technology</p> <p>5. Relations: actions and processes that want to create or improve relationships</p> <p>6. Cultural change: actions and processes that tend to lead to a “paradigm shift”</p> <p>7. Networking: actions and processes that tend to create stable connections and comparisons</p>	<p>Cycle 1:</p> <p>Head step: Is it based on the best available data? (Would you classify the data as very solid and true? Would you classify the data as good but with some doubts? Would you classify the data as quite uncertain?)</p> <p>Heart step: Is it considering and taking care of emotional/relational consequences on everyone involved? (Is this producing fear or conflict? Is this highlighting positivity, happiness, joy...? Is there “space” and “time” to take care for emotions? Are participants feeling empowered?)</p> <p>Hands step: Does it produce practical effects? (Can this produce change? Can the change last? Can the change foster further change?)</p> <p>Cycle 2:</p> <p>Are all the key actors involved? (Who is there? Who is missing? Who should be there?)</p>

Actions Categories	Actors Categories							
	A. Municipality Political	B. Municipality Organization	C. Controlled Entities	D. Suppliers	E. Organizations	F. Businesses	G. Public	H. Networks
1. Vision								
2. Organization								
3. Planning								
4. Technical aspects								
5. Relations								
6. Cultural change								
7. Networking								

Figure F.7 – The *Municipalities in Transition* grid, used to capture the governance imprint of local transformative initiatives (mapping actions and actors involved).

See categories' description in Table F.4. Some cells in the grid are considered to be 'leverage points' with higher activation capacity and are marked in orange and red.

The baseline exercise (Table F.4) provides both a quantitative and qualitative assessment of transition governance in place (see previous chapter for a detailed discussion of this topic), namely:

- Baseline Quantitative score, corresponding to the number of filled cells (or records) for each initiative (*range of impact*) and for the overall community efforts (*grid score*).
- Baseline Qualitative score, corresponding to the result of the evaluation cycles (*evaluation score*), for each initiative and for the overall community efforts.

The normative goal is therefore that “a community strongly committed to change toward sustainability should produce a grid with every cell seeing many bold actions going on” (Annex B). By expecting initiatives to involve as many actors and as many actions as possible, there is a call for a more collaborative and comprehensive approach, favouring resilience (this argument was discussed in page 75).

Yet another normative dimension was introduced in the calculation of the *grid score*, by attributing differentiated ‘values’ to some cells that could be considered as ‘leverage points’ (Figure F.7), producing “bigger, longer lasting results” (*ibid.*). The number of records in orange cells was multiplied by 3 and the number of records in red cells multiplied by a factor of 5³².

In the pilots’ baseline exercises, a total of 189 local transformative initiatives were mapped and evaluated (average 32 per pilot). Examples of initiatives provided in Table F.5 correspond to the ones with higher baseline qualitative scores.

Table F.5 – Results from the baseline exercise (initiatives, methods, insights and other observations).

Pilot	Baseline	Observations
Kispest	20 initiatives were collected through interviews with different actors performed by transitioners and at times municipal officials. Examples: integration of people with mental disability; environmental education programs; local market development; community gardens.	Collection through online questionnaire and handouts did not work. Interviews allowed reinforcement of mutual knowledge and identification of duplication of efforts but were demanding in terms of resources. Data needed consolidation due to uncertainties.
La Garrotxa	35 regional initiatives were collected through 37 in-depth interviews with local actors and 4 in-depth research meetings with local experts. Examples: shared educational resources; urban centre observatory; commercial campaigns; participatory plan for the old neighbourhood; trails network; socio-economic regional observatory.	Actions were categorized in social, ecologic, educational, economic or transversal typologies, and thematic analyses was conducted. Besides the current state, the potential for each initiative was also mapped.
Santorso	37 initiatives were identified by the action group in several meetings. Example: association that helps new mothers before and after pregnancies with courses and meetings with experts and other mothers.	Reported insights include few connections and synergy between different initiatives and a contrast between the perceived and the actual richer ‘environment’ (many initiatives happening).
Telheiras	25 initiatives were collected through an online questionnaire, filtered and analysed by the action group (responsible to fill the action forms). Baseline was validated by the extended action group (Figure F.8). Examples: introduction of reusable cups for events; exhibition on pollution caused by plastics.	Survey allowed also to identify potential initiatives. There were some initial difficulties in filling the action forms (namely evaluation) and in obtaining information from the municipality. Mapping included the identification of the initiatives’ starting point and cells with negative impacts. An extensive list of doubts and suggestions on the methodology was produced and shared.

³² The maximum value of the range of impact for each initiative is therefore 86 (44*1+9*3+3*5).

Pilot	Baseline	Observations
Valsamoggia	29 initiatives were identified and analysed by a small team, a few coming from an open survey. The action group also participated in some of the evaluation. Examples: environmental education program; high energy efficient codesigned school.	Shared insights: the exercise allowed to identify possible connections between initiatives; awareness of citizens about initiatives was low and disappointing; vision of the political personnel and the administration staff was misaligned. Initiatives conducted by businesses were excluded by the action group.
Vila Mariana	43 initiatives were mapped based on the knowledge of the action group and through an online form. Some local initiatives were contacted for extra detail. Examples: Open University on Environment and Culture of Peace; organic fair; community garden; ecovillage institute; sidewalk planting.	Initially the baseline was done for the initiatives related to a specific project (sidewalk planting). Baseline was considered crucial to create a shared vision and convergence of efforts. Intensive efforts are being promoted to update and share the global baseline with local actors and politicians, in order to raise awareness and create interactions between initiatives.

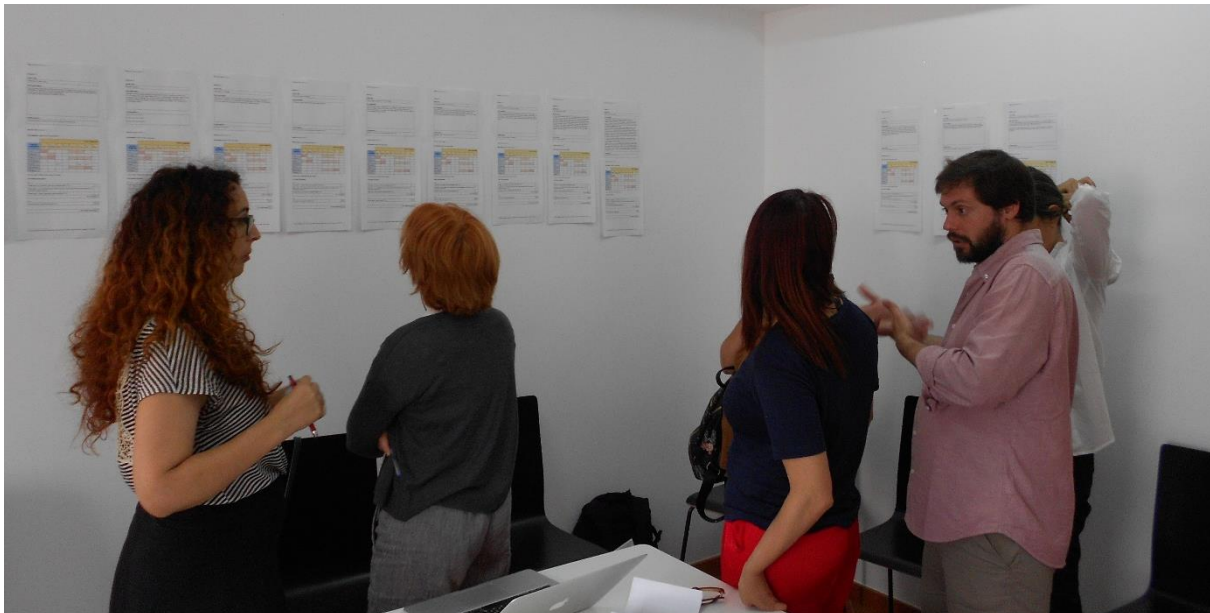


Figure F.8 – Action group from Telheiras working in the baseline.

The grid and evaluation scores for the total of the initiatives are shown in Table F.6, and also the average range of impact of each initiative (on average, each initiative was mapped in 9 cells, out of 56).

Note that the scores are not (easily) comparable between pilots, due to contextual discrepancy and since they are influenced by the methods, resources and knowledge involved in each case³³. For instance, the greatest value of the average range of impact in Valsamoggia, might

³³ Methods used vary and include interviews, surveys and brainstorming sessions in action groups, as well as different criteria for the selection of initiatives. Some pilots also decided to contract specific people for the task (which can be associated with higher scores).

be linked to the skills, knowledge and effort involved in the assessment (the tutor, also active member in the community, participated directly in the exercise). On the contrary, it could in fact reflect a relatively higher effort to be inclusive in transformative efforts or just a greater number and diversity of actors existent in Valsamoggia (possibly related to the recent aggregation of 5 municipalities).

Nevertheless, it can be argued that these scores represent a proxy for the broadness of the transition governance in place, which is similar to say a proxy for the full spectrum of transformative efforts happening in each community. In fact, the grid captures the governance imprint of transition by mapping the actors and ongoing management actions (the building elements of governance) while the evaluation cycles provide a qualitative assessment of transition.

Table F.6 – Results from the baseline exercise (scores per pilot).

Total grid score is the number of filled cells for the overall community efforts (the sum of all initiatives).

The total evaluation score corresponds to the sum of results from the evaluation cycles.

The average range of impact corresponds to the number of cells ‘occupied’ in the grid, in average, by each initiative (in this case, shown in percentage); note that it does not differentiate ‘leverage cells’, as in the calculation of the grid score.

Pilot	Total grid score	Total evaluation score	Average range of impact (%)
Kispest	311	123	15.1
La Garrotxa	703	192	20.4
Santorso	501	198	12.0
Telheiras	333	148	11.2
Valsamoggia	894	163	27.6
Vila Mariana	595	196	12.7

Grid patterns exhibit great variability between pilots (Figure F.9).

In most of the pilots, the cell with the most records was cultural change involving the public, probably due to the largest number of initiatives involving general awareness raising. More involved actors (independently of the kind of action) vary between pilots, and were organizations, businesses or public (Table F.7 and Figure F.10). More frequent actions are vision, organization or cultural change.

Kispest

	A	B	C	D	E	F	G	H
1	20	10	5	5	20	5	⇒40	5
2	⇒30	⇒25	⇒25	15	⇒35	15	10	5
3	15	20	15	15	15	10	10	0
4	5	⇒25	⇒30	20	10	5	⇒30	0
5	15	5	⇒25	10	15	15	⇒40	5
6	5	10	20	0	⇒30	15	↑65	5
7	0	15	10	10	15	10	10	0

Telheiras

	A	B	C	D	E	F	G	H
1	16	0	0	0	12	4	20	0
2	4	20	8	0	20	8	⇒24	8
3	⇒32	16	0	0	12	4	0	8
4	16	12	4	0	16	0	16	8
5	8	12	4	4	⇒24	4	⇒36	8
6	16	8	0	0	↑52	8	↑72	0
7	4	8	4	4	⇒28	12	0	⇒24

Garrotxa

	A	B	C	D	E	F	G	H
1	⇒37	⇒20	↑57	6	↑57	14	⇒31	9
2	11	⇒31	↑43	3	⇒31	17	⇒20	11
3	⇒23	⇒29	↑49	0	⇒37	11	9	11
4	6	⇒26	⇒31	3	9	11	6	6
5	11	⇒20	⇒29	6	↑51	⇒29	↑46	9
6	14	11	14	0	⇒34	11	⇒37	9
7	9	17	⇒29	3	↑43	⇒20	14	9

Valsamoggia

	A	B	C	D	E	F	G	H
1	↑66	3	10	3	⇒55	⇒48	↑69	⇒34
2	14	⇒34	10	10	17	24	17	7
3	⇒38	⇒38	24	14	⇒52	⇒45	24	3
4	⇒34	⇒38	24	10	⇒41	⇒31	21	28
5	28	7	7	3	⇒31	⇒34	⇒41	28
6	⇒52	7	21	14	⇒45	⇒48	↑86	↑62
7	⇒31	0	3	7	24	28	⇒31	17

Santorso

	A	B	C	D	E	F	G	H
1	11	5	3	3	19	11	⇒38	8
2	0	0	0	0	3	0	0	3
3	0	14	0	5	3	0	16	5
4	0	14	0	19	14	⇒32	⇒32	19
5	5	8	3	3	30	11	⇒32	19
6	19	16	3	5	30	30	↑92	24
7	11	11	3	3	11	3	8	19

Vila Mariana

	A	B	C	D	E	F	G	H
1	7	0	0	2	⇒26	19	⇒30	5
2	7	9	0	0	19	↑51	2	2
3	5	14	2	0	14	⇒35	0	2
4	5	16	5	9	⇒26	↑56	5	0
5	7	9	0	0	⇒33	⇒28	⇒35	19
6	5	5	0	2	21	⇒30	↑67	9
7	5	9	0	0	⇒23	7	16	12

Figure F.9 – Results from the baseline exercise (transformation grids in each pilot, with number of records for each cell, in %). See Figure F.7 for categories. Filled colour correspond to gradient between 0 – white and 100 – black; up green arrows correspond to values above 67% of highest record for each pilot; horizontal yellow arrows correspond to values between 33 and 66%.

Table F.7 – Results from the baseline exercise, per actor and per pilot
(average frequency of records, in %).

Pilot	Mun. Political	Mun. Organiz.	Controlled Entities	Suppliers	Organizations	Businesses	Public	Networks
Kispest	13	16	19	11	20	11	29	3
La Garrotxa	16	22	36	3	38	16	23	9
Santorso	7	10	2	5	15	12	31	14
Telheiras	14	11	3	1	23	6	24	8
Valsamoggia	37	18	14	9	38	37	41	26
Vila Mariana	6	9	1	2	23	32	22	7
All pilots	14	14	12	5	26	20	28	11

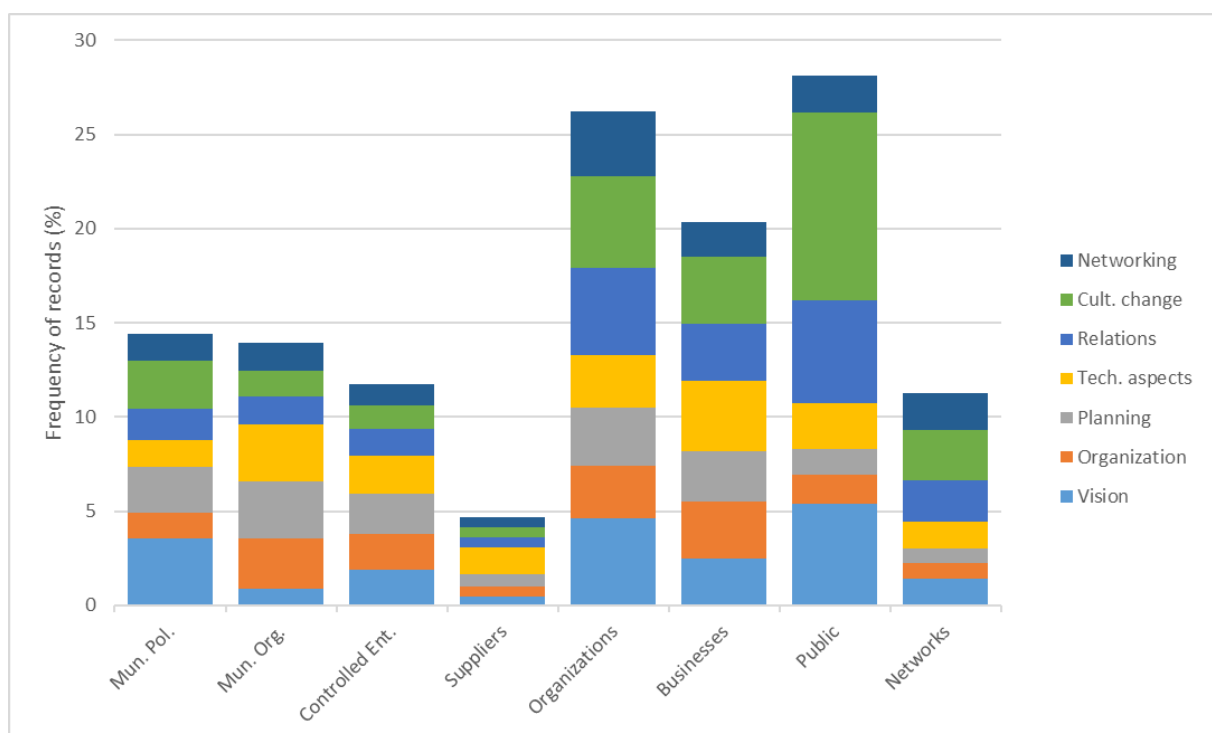


Figure F.10 – Results from the baseline exercise, per actor/action, all pilots
(frequency of records, in %).

The pattern for actors' involvement in initiatives (Figure F.10) is quite similar to the one obtained from the analyses of the 71 cases mapped (Figure E.5, page 63). Again, controlled entities and suppliers are not usually participating, which can demonstrate that initiatives like green procurement or life-cycle assessments are rare. Often these controlled entities manage critical sectors relating sustainability, like water, waste or energy.

The comparison between baseline results for municipalities’ actors and their sphere of direct influence (grid columns A-D) and other organizations (columns E-G) reveal different patterns between pilots (Figure F.11). Only in Kispest and La Garrotxa is there a balance³⁴.

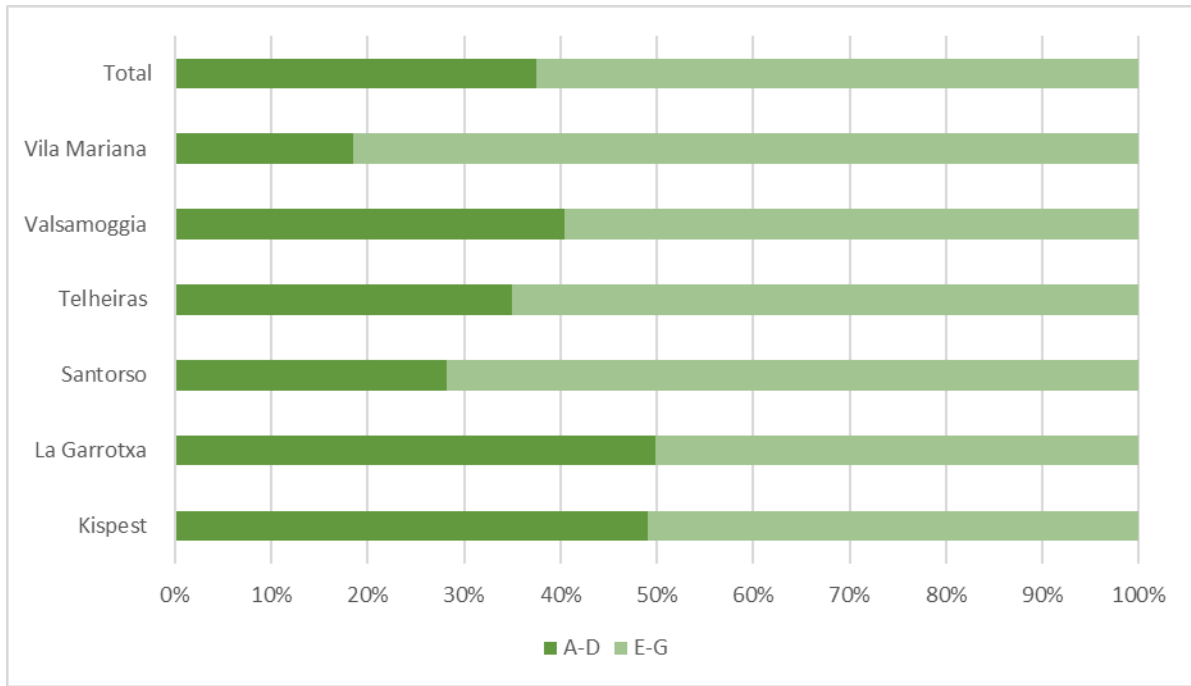


Figure F.11 – Relation between baseline results for municipalities ‘sphere’ (A-D actors) and non-administration actors (E-G).

Cells with the highest numbers of records do not correspond, in general, with the assumed ‘leverage cells’ (Figure F.12).

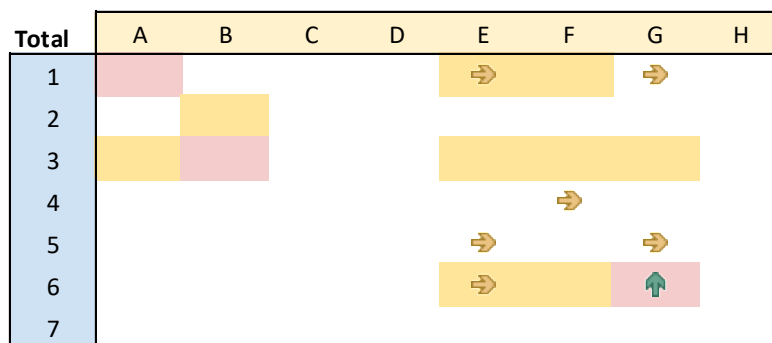


Figure F.12 – Assumed ‘leverage cells’ versus cells with more records registered in all pilots (up green arrow correspond to values above 67% of highest record while horizontal yellow arrows correspond to values between 33 and 66%).

³⁴ Again, we can detect an influence of the methods used for the baseline, not preventing the data usefulness.

We can calculate an indicator of ‘leverage intensity’ by dividing the total grid score by the overall number of records (results will be between 1 and 5) (Table F.8). This shows us which communities are relatively putting more effort in leverage cells.

Table F.8 – Leverage intensity.

Pilot	Grid score/ total records
Kispest	1.84
La Garrotxa	1.76
Santorso	2.01
Telheiras	2.12
Valsamoggia	2.00
Vila Mariana	1.94
Total	1.93

Apparently, no direct relation exists between the quantitative and the qualitative scores, as we can infer from Figure F.13 and Figure F.14 (correlations are weak). This means that a greater diversity in actors/actions involved in transition does not imply that actions are necessarily more educated, caring, tangible or inclusive.

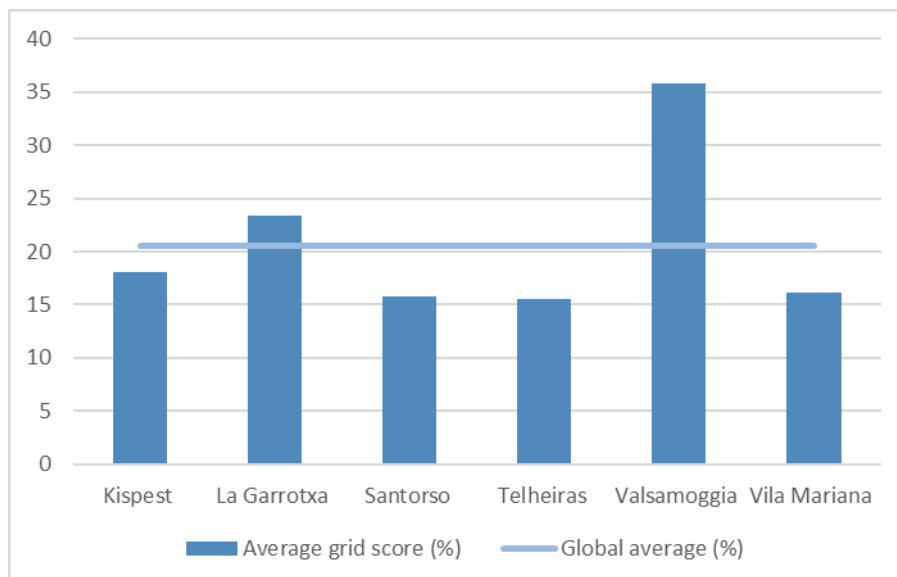


Figure F.13 – Baseline results
(average grid score for the initiatives in each pilot, in % of maximum value; global average for all pilots).

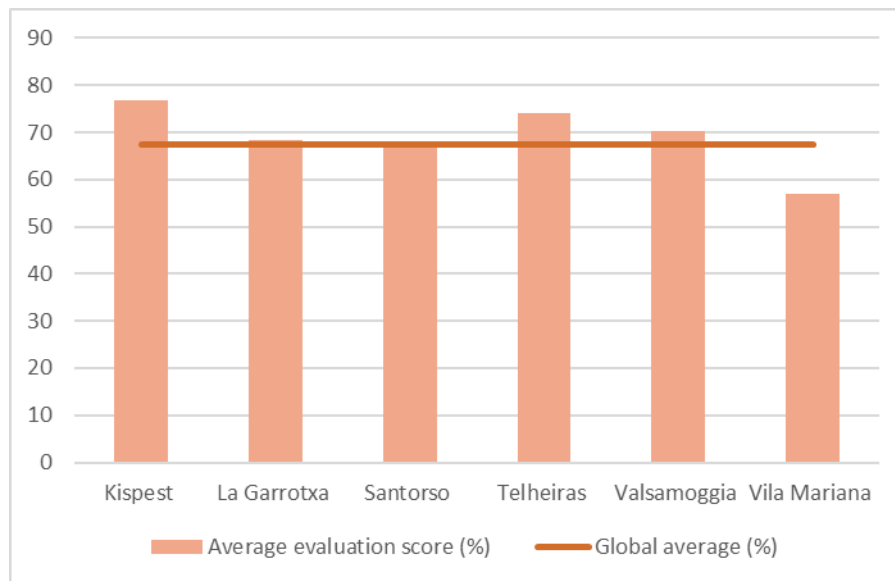


Figure F.14 – Baseline results

(average evaluation score for the initiatives in each pilot, in % of maximum value; global average for all pilots).

Several adaptations were introduced in the baseline process by the pilots (as presented in Table F.5), something that was encouraged. In La Garrotxa, the potential impact for the initiatives was also marked³⁵. In Telheiras, the cell where the initiative was believed to have started was flagged, and negative impacts of initiatives were also registered. In La Garrotxa, the grid was adapted for the regional scale³⁶. Categories were open to different interpretations across the pilots. In Santorso, the connections between initiatives were also mapped.

In Telheiras, one of the initiatives mapped was actually the implementation of the local MiT project (Figure F.37, page 158).

PLANNING

This stage of the experimentation involved setting a basic initial systemic plan for the community. The baseline “helps to spot energy, resources, weak points of the community systems and actions” (Annex B) and should be the starting point.

Pilots were asked to design two actions, namely:

1. Identify an initiative having already high scores, in order to be used as an impulse for the action (would it be possible to increase the initiatives’ impact even more, for

³⁵ This means the identification of the actors/actions that could/should be involved in a cost-effective way to improve the impact.

³⁶ In this case, the first columns were assigned to the regional administration, while local administration was considered under controlled entities.

instance by connecting new actors or integrating new categories of activities, or by creating interconnections to other initiatives?).

2. Create a new initiative that might ‘fill in the blanks’ in the grid or contribute to increase the evaluation scores.

This stage was expected to be supported by the database of tools³⁷.

Planning activities and observations are summarized in Table F.9.

Table F.9 – Results from the MiT planning activity.

Pilot	Planning activities	Observations
Kispest	<p>Actions were selected by the action group (consensus), looking at already existing dynamics and concerns.</p> <p>To scale initiatives happening only in the Wekerle district was proposed as a priority, namely by the Municipality (to reduce inequalities), and led to the action on reusable plastic cups to be used in events in Kispest. A working group on local food followed motivation from the transitioners and previous efforts. A third and new action related to the creation of a community space at the Wekerle Market (opportunity).</p>	<p>Participants reported not having the necessary resources to explore new territories for action.</p> <p>The baseline was not finished before the planning process.</p>
La Garrotxa	<p>After analyzing the baseline, 3 priorities were set: shifting the political vision towards resilience; empowering civil society to lead regional initiatives; bridging the three regional consortiums so that they can become a “hive of transformation”.</p> <p>Decision was taken by ‘ring team’ (consensus, see Figure F.15) on strengthening the Observatory of La Garrotxa, and, as new actions, to promote a conference and trainings in resilience (for politicians, technicians and civil society).</p>	<p>The difference between potential and actual impact (grid score) was a criterion used.</p> <p>Trainings on request (complementary action).</p>
Santorso	<p>After analyzing the baseline, 2 actions were spotted. One already being implemented and having a lot of energy and potential to involve more people (promotion of renewable energy) and one that needed to start and be aligned and strengthened (European project on local democracy).</p> <p>Decision by the action group, on consensus.</p>	<p>At this stage relations between transitioner and Municipality were getting stronger, and transitioner was even working at Municipalities’ premises.</p> <p>One of the strategic goals was to revitalize the Mayors Adapt plan.</p>

³⁷ During this experimentation we did not have the necessary resources for a full database development, therefore we developed a working mock-up of the database to provide pilots with a chance to understand the potential.

Pilot	Planning activities	Observations
Telheiras	Actors with low grid scores (municipality, business, controlled entities...) were considered to demand investment of resources (namely time) not available, so were discarded. Likewise, actions not already involved in the local partnership. Decision taken by extended action group (with new member from schools) to create a new 'horizontal' action to support transformation ("Resource Centre") and to reinforce initiative related to "Horticulture in Educational Context"). New action passed a voting process.	Initial decision was taken to jointly reinforce a group of existing actions that were considered 'representative' of global efforts. A codesign session was organized. Some conflicts happened because global perspective was lost when discussing particular needs of people participating in the process. Decision for "Resource Centre" was 'way out'.
Valsamoggia	The baseline revealed that a lot of initiatives were happening, with a deficit on visibility. Decision was taken to create Valsa TV (online short videos on interesting cases) to overcome this. A new bold action was decided to integrate the coming local elections, namely, to jointly define a 'Local Elections Candidates Profile'.	Sociocracy (S3) was extensively used in the actions planning. The 'Local Elections Candidates Profile' was seen as a 'leap in the dark', surely provocative and needed, but quite "risky". Both actions are somehow a tentative to weaken the actual polarized social scenario.
Vila Mariana	Decision was taken by CADES and other actors. Criteria for existing action to be reinforced included replicability, wide range of action and contribute to climate protection.	Both actions (Sidewalk planting and Sustainability working group) had been decided as priorities prior to the start of the experiment. Nevertheless, they fitted the project's goals and the baseline meanwhile produced.



Figure F.15 – Action group and 'ring team' from La Garrotxa working in the planning.

This stage (planning), in general, was perceived as easier than the previous one (baseline). In most of the cases (4/6) the baseline analyses brought the insights needed to identify strategic initiatives that could be reinforced or created in order to boost transformation. In the other two cases, actions were decided before finishing the baseline, but in a similar process. Interesting methods were used, like codesign sessions and comparison between actual and potential impacts.

A pattern could be identified in the chosen actions (from participants' feedback): one action that could be considered 'low hanging fruit' (to reach results in a short-term period) and another one that could be more strategic and having longer-term impacts.

The kind of actions selected can also be related to contextual factors, including available skills and norms in the action group. For example, the two actions in Italy related to political issues might reflect the intense debate going on in that country.

ACTION

This phase corresponded to the implementation of planned actions in pilots' communities.

Main activities developed and observations are presented in Table F.10 (see also Figure F.17).

Table F.10 – Actions implemented in the MiT experiments.

Pilot	Actions	Observations
Kispest	<p>Kispest Reusable cups - 1000 reusable plastic cups in 2 sizes with local design were made available for local events and used at least 4 times.</p> <p>Community space at Wekerle Market – providing workshops and plan-based local-sourced meals (Figure F.16).</p> <p>Local Food strategy – a working group and plan were established, and a conference was organized on the possible greening and localization of public catering services of the municipality.</p>	<p>Still working on how to best involve and motivate catering service companies serving on municipality events.</p> <p>Creating the community space has brought the need for the transition movement to become formal, in order to be able to sign a contract with the Municipality (this was seen as an opportunity).</p> <p>Local food strategy did not enter the political agenda (yet) but significant steps were taken³⁸.</p>
La Garrotxa	<p>Observatory of La Garrotxa - reformulating indicators through intense strategic, technical and research meetings; trainings; long-term strategy.</p> <p>Conference on Bioregional Transition towards Resilience - reaching a total of 281 different individuals (Figure F.17).</p> <p>Capacity Building Trainings – main training on Transition & Resilience to public workers from various regional departments (40 participants).</p>	<p>Reformulation of indicators focused on leverage points, bringing in systemic analyses and connecting to Sustainability Development Goals. The 'new' observatory was presented publicly on June 2019.</p> <p>This was a process with 'high-level' influence, involving in-depth work with the regional departments of, and Directors of, social, environmental and economy affairs in La Garrotxa (see governance model).</p> <p>At the request of the administration, conference was divided in 3 moments dedicated to specific publics (general civil society, professionals, politicians).</p>

³⁸ The MiT process has prompted the Municipality and Transition Initiative in Kispest, to become more ambitious together than they initially planned, including now engaging in long-term planning around the growing and provision of local food. They are negotiating towards the municipality taking the catering contract for schools and care homes in-house, to switch it to local, sustainable food in 10 schools and care homes, totalling 4,000 meals per day. It will promote and strengthen local, low-impact farming practices and reactivate the economy in the Kispest district by developing new small-scale local processing facilities. The Municipality and the Transition initiative will work together to fundraise for this project, while liaising with other local initiatives related to organic, local food, and providing a good example to other urban municipalities.

Pilot	Actions	Observations
Santorso	<p>RECOV (REthinking COllaborative Values for public services) – organized a workshop on local democracy, named “The future of democracy” (30 participants) (see also Figure F.32, page 138). Shared results in project’s international meeting.</p> <p>Salta la Corrente – organized ‘world café’ sessions and other activities like energy ambassadors, to support the transition to renewable energy providers. More than 30 families joined, local businesses and the Municipality. Created a system for permanent support for future interested people.</p>	<p>In the workshop, they explored the pattern of the ‘tragedy of the commons’ and how democracy might not help in times of danger, and also sociocratic tools. Participants’ reaction was synthetized like: “now we understand the need of MiT!”</p> <p>A celebration with all the people involved in the Salta la Corrente was organized, and also produced a video with support from Valsamoggia pilot.</p>
Telheiras	<p>Horticulture in Educational Context (Figure F.18) – teachers and other school staff from 5 schools (from kindergarten to 9th grade) participated in a training and the implementation of a vegetable garden and the creation (and training) of a ‘vegetable garden group’ also with students and parents, and had weekly support for a year.</p> <p>Shared Resource Centre – it has a communication component (sharing online information about sustainability initiatives) and material (sharing resources for citizens and organizations, like reusable materials for events, sewing machines, smart electricity meters, multimedia projector, bike repair station, etc.).</p>	<p>Previous version of the horticulture initiative was just promoting single trainings to teachers outside school. Besides improvements refereed, also other topics were included (circularity, healthy eating and food waste) and organizations involved (seniors from Community Center, made a vegetable ‘nursery’ to provide the schools with new plants).</p> <p>Shared Resource Centre was prepared during the experimentation period and opened for organizations and for public later on.</p>
Valsamoggia	<p>Valsa TV – This was a YouTube and Facebook channel featuring good examples of sustainability initiatives; 14 short videos, with 1230 visualizations and 29 subscribers (as of 1st July 2019).</p> <p>Local Elections Candidates Profile – this profile was prepared and made public before the elections by the action group; S3 was used and the document had external revision to increase diversity and reduce controversy; candidates to local elections were asked to comment on the profile, participate in an interview on Valsa TV and offered training.</p>	<p>Valsa TV exhibited a video on one of the Santorso’s actions (Figure F.19). The one with the most ‘views’ was about the meeting with local candidates.</p> <p>Political parties refused to be officially part of the ‘Local Elections Candidates Profile’ action.</p> <p>Example included in the profile: to have a basic understanding of the study of the Planetary Boundaries, overview and long-term vision for the territory, solid administrative experience.</p>
Vila Mariana	<p>Sidewalk planting – The MiT instrument was used to evaluate the 2 initial phases of the project and codesign the 3rd that included community planting and policy advice. Possibility to grow to city level.</p> <p>Sustainability Working Group – mapped 43 local initiatives committed to sustainability in the territory, involving meetings, visits and trainings.</p>	<p>An ‘extra’ institutional action was promoted to assure continuity of the process initiated with MiT, namely institutional meetings to share the MiT main results.</p> <p>A public meeting was organized to present the mapping and promote partnerships (June 2019).</p>

Most of the actions (8/14) were equally divided between some kind of awareness-raising and capacity-building goals (workshops, trainings, and an online TV) or ‘hands on’ (planting and caring, renewable energy, reusable cups). Some had notable ‘physical manifestations’ (two centres for community development) while others were more intangible (two working groups and one observatory). A new audacious and creative action appeared, namely, to develop a profile for candidates for local elections (could possibly be included in the first category).

In most of the cases (5/6) the action groups were directly involved in developing the actions, and in several pilots new people and organizations were directly involved in specific teams (Santorso, Telheiras, Valsamoggia...). Support circles (like the ‘ring team’ in La Garrotxa) also participated.

Besides the planned actions, many other smaller activities were developed and supported, responding to emergent opportunities.



Figure F.16 – The “Commons” is a community center embedded in the local market in Kispeszt. It was agreed and planned within the Municipalities in Transition process and finally opened in 2020, far increasing the reach of the transition activities.



Figure F.17 – The “Jornades Territori Resilient” organized in La Garrotxa in 24-25 January 2019 were an impressive event that reinforced the creation of a regional community of practice.



Figure F.18 – The project “Alfacinha Saudável” was reinforced by the Municipalities in Transition instrument, integrating new partners and activities.



Figure F.19 – ‘Cross-pollination’ happened between pilots’ action in Italy “Salta la Corrente” (supporting energy transition in Santorso) was featured in Valsa TV (local broadcasting channel created in Valsamoggia).

EVALUATION (IN THE PILOTS' CONTEXT)

The MiT instrument has a built-in evaluation method, provided by the grid and the evaluation cycles. To evaluate the experiments, pilots were asked to review the baseline and compare the final and starting points, overall and specifically for the chosen actions (Table F.11).

Complementing this, pilots were challenged to evaluate specific impacts in terms of technological, social or institutional change and community resilience (e.g., climate adaptation, equity, cross-community links...), using appropriate indicators. Tools for this are expected to be included in the database. A *monitoring guide* was prepared and delivered to pilots (Annex B).

Pilots were asked to pay attention to aspects like new actors involved, their experience in using the instrument, the quality of the relations between the actors or the effectiveness of the model of governance in place.

Table F.11 – Self-evaluation implemented in the MiT experiments.

Pilot	Evaluation activities	Observations
Kispest	The grid and evaluation cycles were used to evaluate the initial, potential/planned and final status of adopted actions. Grid score improved 11 points (41% of potential). Evaluation score declined 4 points (new difficulties arose from bigger scale and implementation).	Results were analyzed in detail, including needed corrective actions. A permanent system for evaluating the 'heart' was used in the action group's meetings.
La Garrotxa	Regular activities included meetings and interviews, and surveys to participants. Indicators assessed: degree of learning amongst and between public administration workers, civil society members and core team researchers; number of indirect beneficiaries reached through media presence and pilot actions; number of mentions in public media; additional unplanned outputs. Grid score improved 38 points (19% potential for observatory). Evaluation scored improved 5 points.	The actual results of the selected pilot actions far exceeded pilot's expectations. At a personal level, most of the participant members have expressed a sense of hope and empowerment through their participation in the pilot.
Santorso	Only measurement for success was to see if the actions managed to achieve their goals (accomplished), and if people involved maintained their enthusiasm and commitment (accomplished in case of technicians and Mayor, not so much other politicians).	Tried to keep an action-learning attitude from the beginning. Realized that "nobody wants to really put their mind on it to understand how the thing really works; nobody really wants to do the dirty job".

Pilot	Evaluation activities	Observations
Telheiras	<p>For the first half of the pilot (until planning) a detailed external evaluation was prepared.</p> <p>Organized a final meeting of the action group to do the evaluation based on the questions suggested by the MiT core team.</p> <p>Grid score improved 66 points (3x increase for horticulture). Evaluation scored improved 8 points.</p>	<p>Did not define particular indicators for the actions due to time constraints.</p> <p>In general, it was considered that all proposed activities were implemented with the involvement of the planned actors.</p>
Valsamoggia	<p>Evaluation was focused on the evolution of relationships and social dynamics.</p> <p>The grid and evaluation cycles were also used to evaluate actions: grid score improved 65 points (81% of potential; 131% Valsa TV e 42% Profile).</p>	<p>Due the type of actions and timing, “measurable indicators” were not integrated.</p> <p>Main insight was that actors are now aware of possibilities (namely on governance of transition processes), eager to change and to enter dialogue.</p>
Vila Mariana	<p>Several indicators were monitored, including number of people and organizations involved and media impact. Around 300 people participated at the community planting.</p> <p>Grid score for the planting improved 13 points (48% increase).</p>	<p>Although considering all indicators useful and important, pilot emphasized the importance and significance of the involvement of the municipality in the process.</p>

Telheiras was by far the pilot with a greater relative increase in the total grid score (20%).

Pilots used diverse methods for monitoring and evaluation, due to adaptation to different resources and sorts of actions implemented, and also lack of clear instructions.

The built-in evaluation scheme provided valued information and means to collect it. New cells that were ‘occupied’ by activities implemented (not all were mapped) had a diverse range of actions and actors (Figure F.20). Most frequent included actions to promote vision, followed by relational actions and networking. Actors that were little involved were suppliers, businesses and controlled entities (other were approximately equally involved).

In sum, new activities helped to ‘correct’ the relatively lower participation of municipalities but kept ‘discriminating’ suppliers. They increased vision, organization and planning.

Additionally, networks and networking were favored. Leverage intensity was lower than in the baseline.

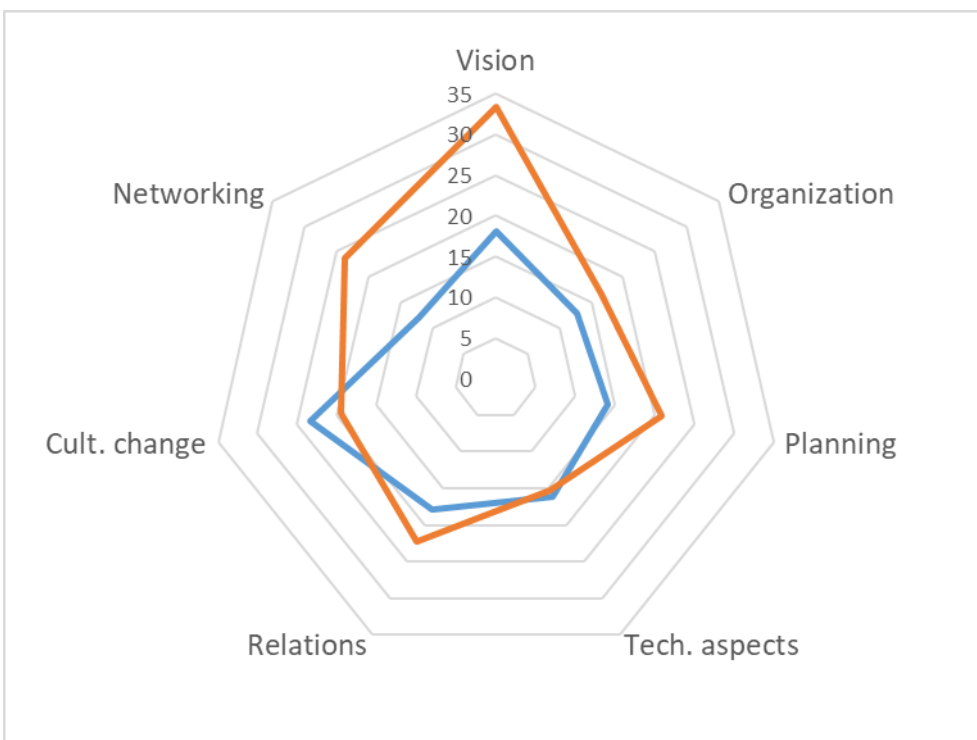
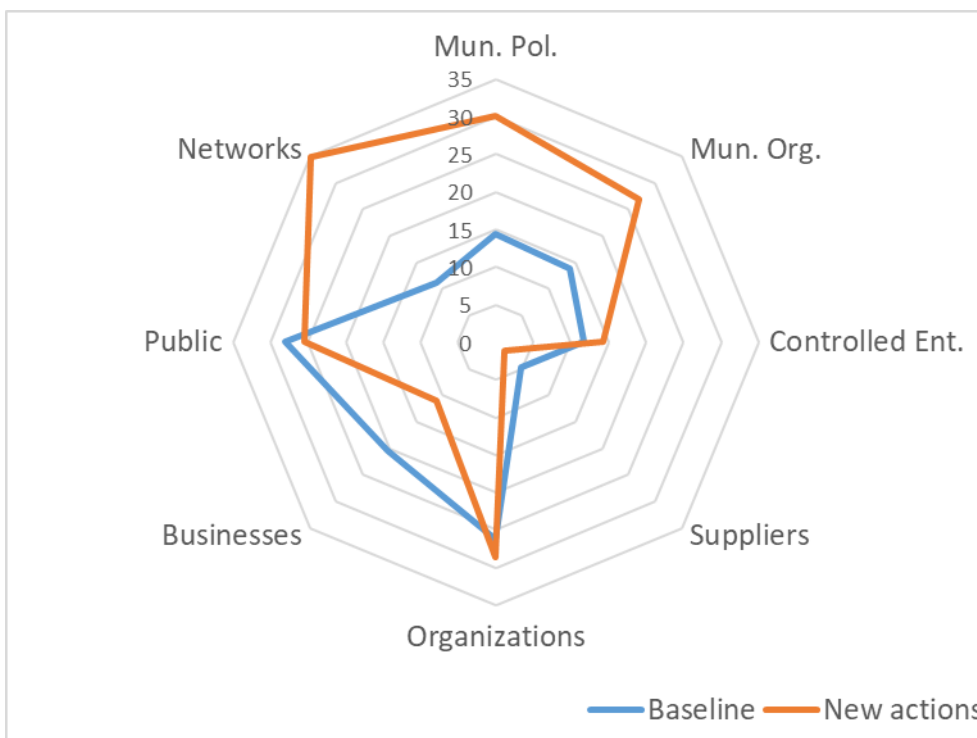


Figure F.20 – Comparison of baseline and new actions developed in the experimentation, relatively to actors & actions involved (average frequency of records, in %)

REFLECTING MEETING

The MiT ‘final’ gathering was organized between 21 and 24 February 2019, in Telheiras³⁹.

This happened with the participation of all pilots and not within the pilots. Main goals were to share learnings and experiences (also for evaluation purposes), to celebrate joint achievements and to set next steps (for the project and for each pilot).

Like in the initial training, representatives from LGs and CLIs from each pilot were asked to attend (Appendix C), namely the ones that acted as facilitators of the experiments. The meeting was designed to enable co-production of knowledge, being facilitated by the research team. The flow, methods and tools used, some quite exploratory, are presented in Figure F.21 and Figure F.22 (excluding the ice-breaking and team building techniques).

³⁹ One of the pilots. Connection to the community was favoured by field visits, an open event (where a simplified version of the system was used), a dinner and celebration with the community.

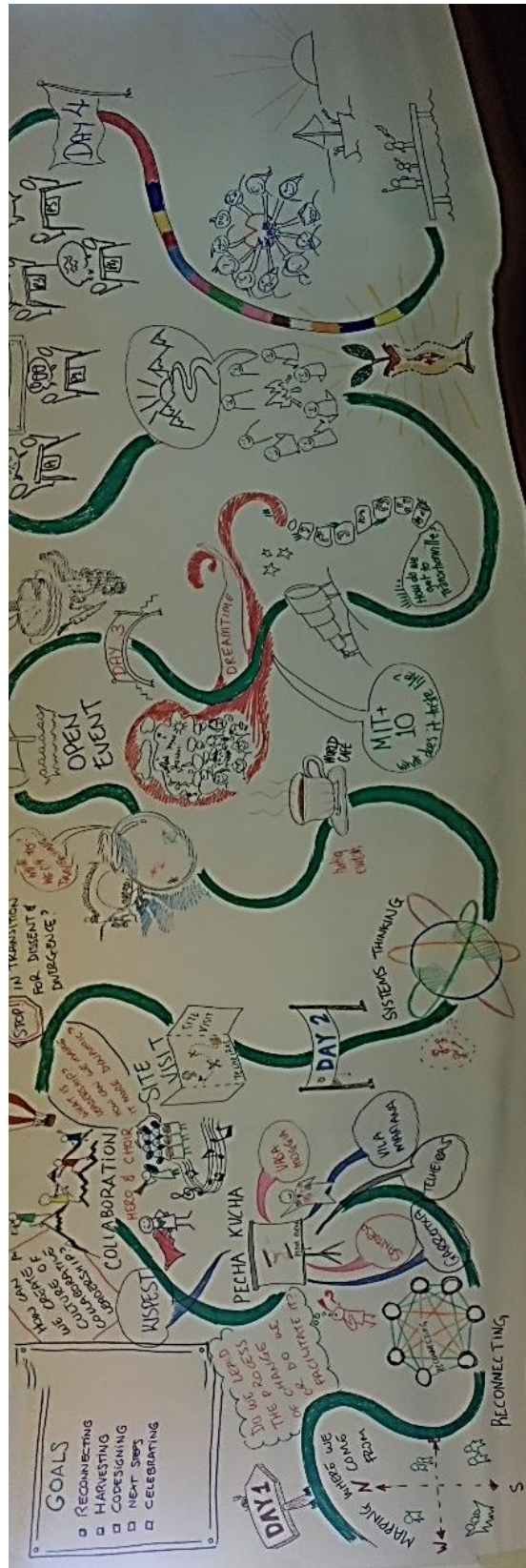


Figure F.21 – A glimpse of the cocreated flow of the international MiT pilots meeting.

Day 1- Reconnecting



Welcoming and introduction

- Sharings, logistics, planned flow, 'angel cards', group agreements



Collaborating in the risk of extinction

- Sociometry exercises, discussing roles and personal visions on eminent collapse



Presentations (pilots and core team)

- Pechakucha 20x20 format, collecting, clustering and debating insights



Working with emergent collaboration

- Heroic to collective leadership (murmuration exercise and debate)

Day 2- Collective feedback



Systems thinking

- Exercises (patterns, 'bomb and shield'), presentation and debate



The MiT instrument I

- Group work: identify MiT elements and their relations (causal loop diagram)



The MiT instrument II

- Presentation, 'world café' with canvas to collect structured feedback



The MiT instrument III

- 'Fishbowl conversation': what were we trying to transform? what brought us closer to that?

Day 3- Codesigning



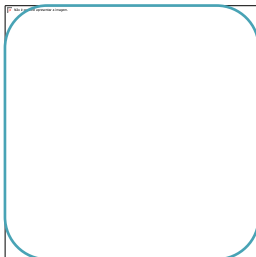
The MiT Story

- Guided meditation; creating the story of MiT in our communities, in 10 years (group work)



The future of MiT I

- 'Open space' and '6 hats' combined: MiT sustainability; trainings and conferences; bridges and convergence; deepening a pilot



The future of MiT II

- Second round of discussions: scaling up; funding opportunities; skills of tutors; top-down and bottom-up, sexy?



Sharing circle

- Including 'free' time for emergent issues

Day 4- Codesigning



Next Steps

- Discussion in groups and sharing, about short and long-term planning and offers to the process



MiT Clinic

- Emergent space for convergence



Evaluation

- What worked? what could have been done better? Ideas for next time?



Final closing circle

Figure F.22 – MiT learning meeting: scheme, with daily goals, topics, methods and activities develop.

The workshop followed the structure of a social innovation evaluation tool, namely Critical Turning Points and Narratives of Change (Ruijsink et al., 2017). The related reflection cycle is represented in Figure F.23, mentioning the dynamic methods that were used to achieve each phase.

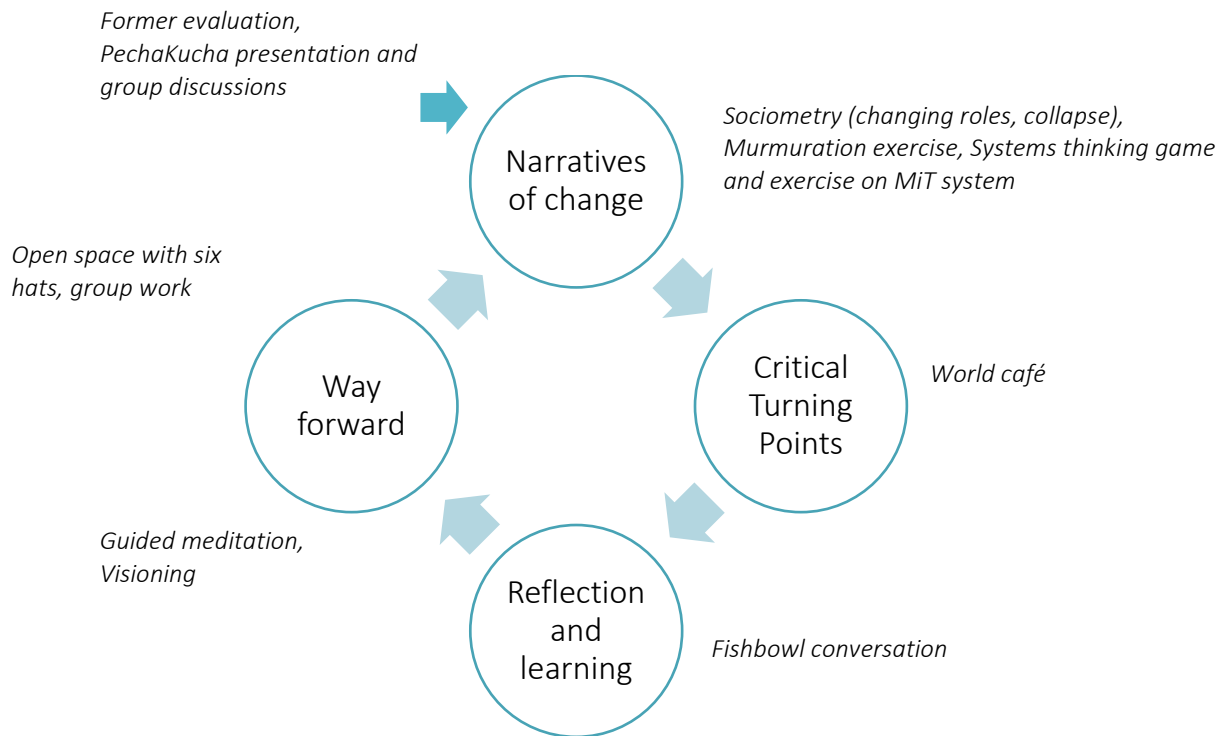


Figure F.23 – Reflection cycle of the MiT pilots and methods used to explore it in the final workshop.

Before coming to the meeting, pilots were asked to jointly reflect on several research questions (Figure F.23):

1. Use the grid to evaluate the actions. Compare what was planned with what was actually achieved, also relating to the data obtained through the baseline. What are your results?
2. Have you used any indicators to measure your progress? Which were the most useful and why? What results did you get? Could you outline what the evolution was like?
3. Has collaboration improved in your municipality thanks to MiT? How can you tell? What were the Critical Turning Points/emergent dynamics that you saw?
4. What was it like to work with leverage cells (3 or 5 points)? Where did the most action happen? What were the most useful leverage points?
5. How can we improve the MiT instrument? Please feel free to suggest improvements and developments for the grid, leverage cells, cell cycles, database, Community of Practice, Tutoring, Core Team, Research...
6. How can we make the grid visible and usable for concurrent users in the community?
7. What was hardest to do (difficulties/barriers)?
8. What was most satisfying/useful?

9. What governance model did you use for the MiT pilot? How did it work? Please evaluate how the governance affected the dynamics of the work and the basis for collaboration. How did it affect the power relationships? Would you do anything differently?
10. How do you imagine the continuation of the pilot work? Do you have a strategy for activities, collaborations, funding, etc.? What support can you foresee you could need?

Pilots presentations used the *PechaKucha* model (Klein Dytham Architecture, 2003) to share the results of this first step on the evaluation (Figure F.23), preceding the meeting. On the presentations, pilots were asked to answer the questions: “Where did it all start? What was going on there already? What actions were undertaken? Who wasn’t there (but should have been)? Main challenges faced? Main successes achieved? Main learnings during the process? What did MiT allow pilots to do that would not otherwise have happened? Future developments for the project (plans or what pilots would like to see happen)”.

Participants’ insights were collected and clustered around the topics of *successes*, *challenges*, *learnings* and *surprises* (Figure F.24). Group discussions focused on: “What would we change if going back? The role of the grid versus the dynamics and ‘Aha! moments’”. Results will be presented in the next section.

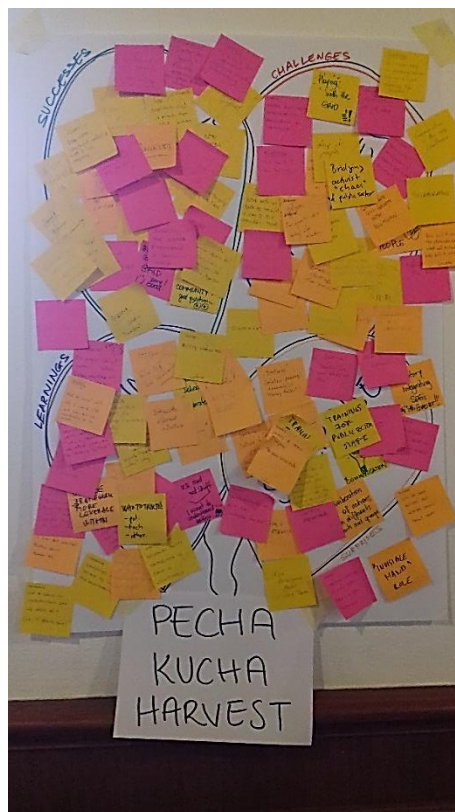


Figure F.24 – Harvest from PechaKucha presentations.

Entering the evaluation cycle (Figure F.23), the MiT's *Narrative of Change* was recalled through several exercises and debates (Figure F.23). The MiT instrument was then explored in depth, including all elements that make up the instrument and their interrelationships, including exercises like drawing causal loop diagrams (Figure F.25).

World café (J. Brown, 2010) was then used to discuss in depth the main critical aspects – support team; pilots experience; instruments; learning and sharing (Figure F.26).

A *fishbowl conversation* was used to promote an open discussion on the transformation process, reflecting on the discussed Narratives of Change and Critical Turning Points: “What were we trying to transform with MiT? What brought us closer to that?”

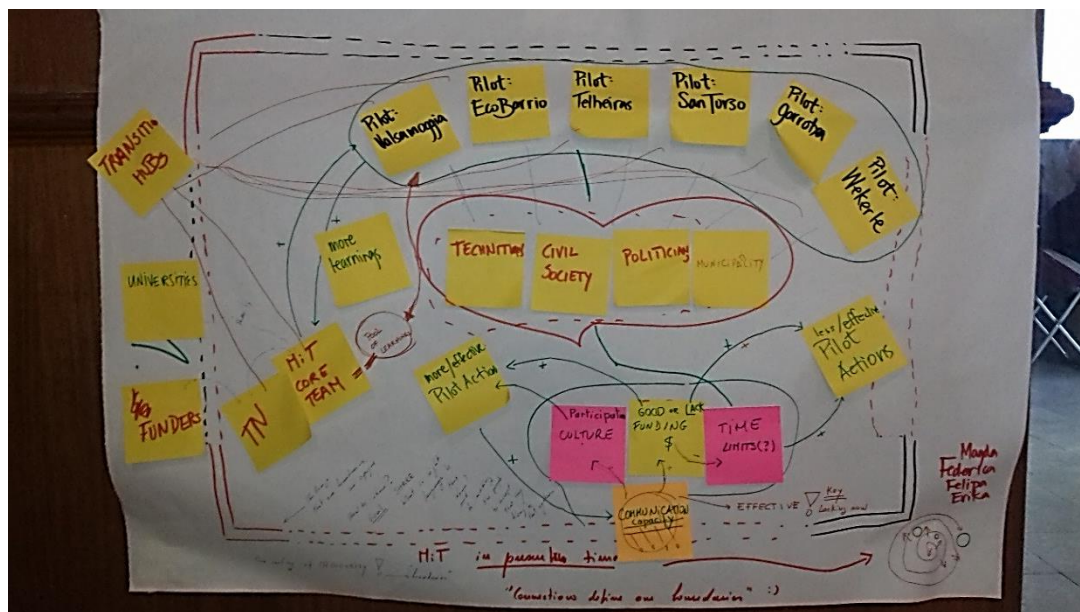


Figure F.25 – MiT causal loop diagram (coming from group work).

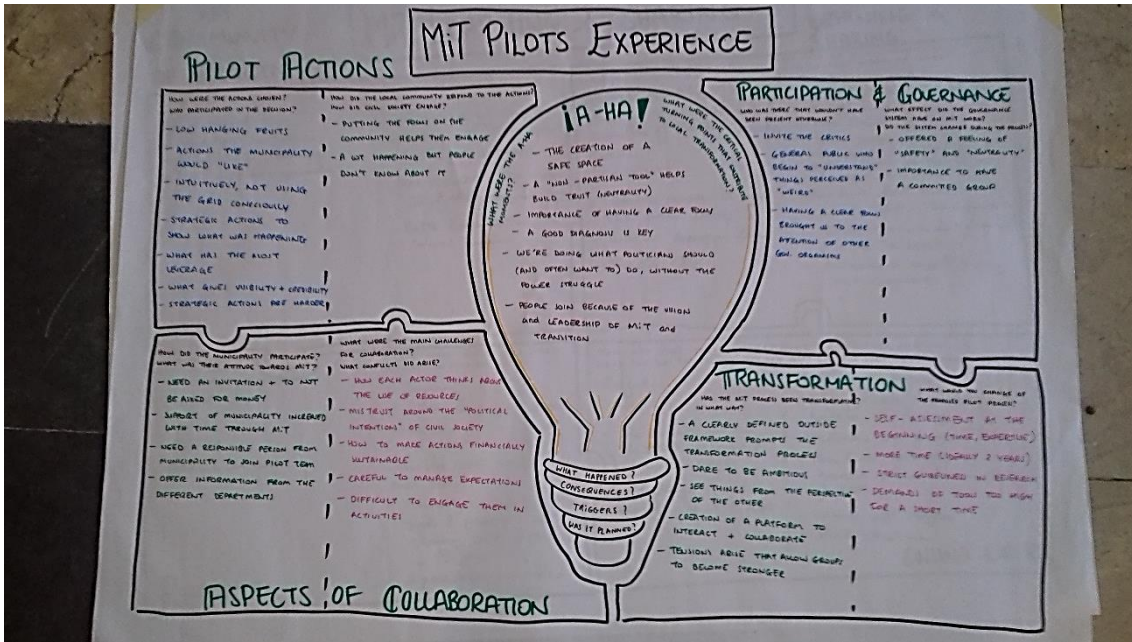


Figure F.26 – World café on Pilots experience (harvest).

A second part of the meeting was focused on codesigning the future of the MiT (*way forward*, Figure F.23). It started with a *visioning* exercise, supported by a guided *meditation*, on the story of MiT in our communities, in 10 years. The group tried to answer questions like: “What where we hoping to achieve? What changed? What made it possible? What were the moments to celebrate? What is the next big change being prepared?”

Dreams were discussed in pairs and groups, and posters were prepared (Figure F.27).

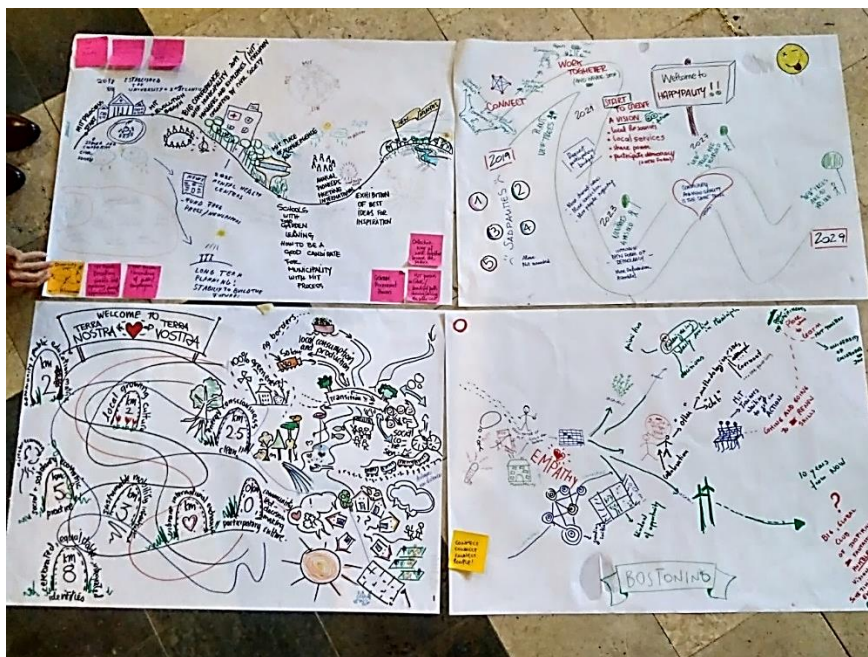


Figure F.27 – Story of MiT in our communities, in 10 years (visioning exercise).

Then an *open space* session (H. Owen, 2008) was prepared (Figure F.28), using *six hats* (De Bono, 2005) in order to help to structure conversations around concrete ways on how to move forward (Figure F.29). Critical topics discussed were mainly related to the interrelations between LGs and CLIs and the role of MiT, and included how to deepen MiT within a municipality, bridges and convergence, top-down versus bottom-up. Also, more ‘pragmatic’ topics were discussed, including funding opportunities, MiT sustainability and scaling up. Operational issues like trainings and conferences and skills of tutors were additionally debated.

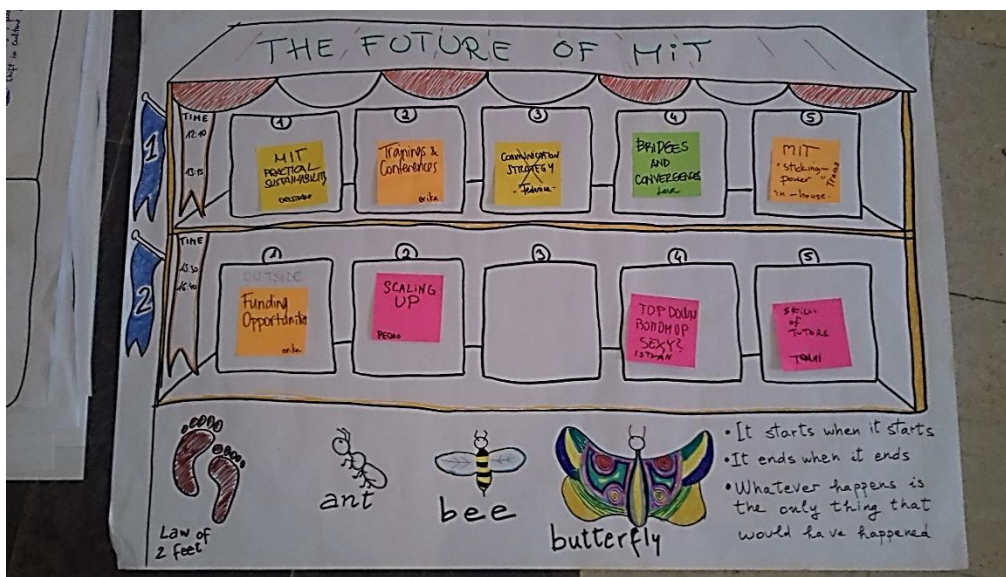


Figure F.28 – Open space technology – the ‘marketplace’ with emergent topics.

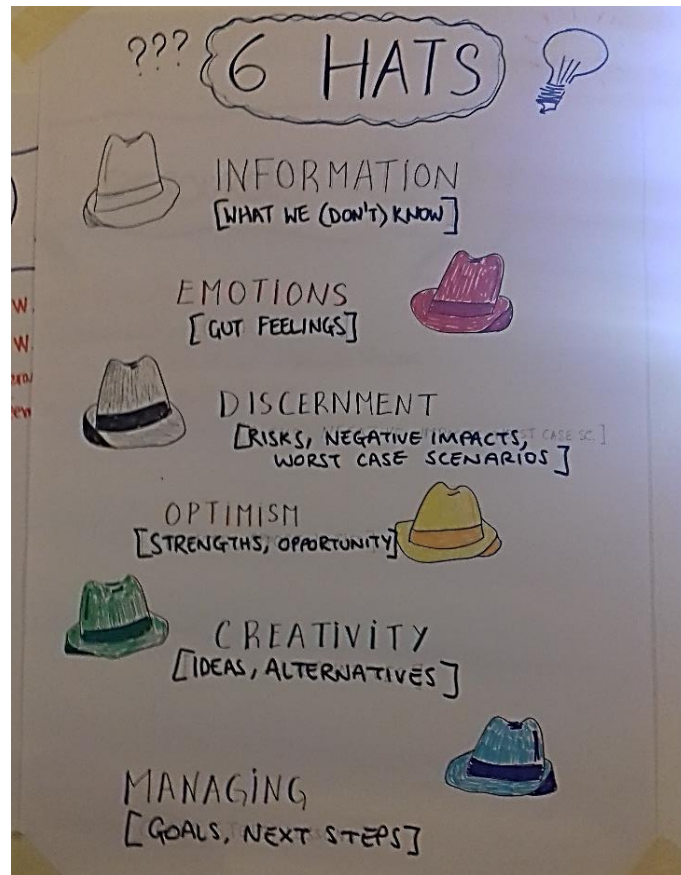


Figure F.29 – ‘Six thinking hats’.

Before closing, there was *group work* to explore next steps and long-term planning for each pilot, core team and Transition Network (*way forward*, Figure F.23). It was also given time for emergent issues and evaluation.

3) Evaluation

In this section, I want to analyse the impacts and outcomes that the MiT pilots had in terms of transformative collaborations at local level, and to understand the contexts where they occurred. For the sake of the research goal, I am interested in understanding how effective the MiT instrument was in terms of the proposed socio-institutional impact, *i.e.*, to create a clear framework for how CLIs and LGs can create sustainable change together, advancing transition governance.

General speaking, evaluation is considered a key step in governance experimentation and a necessary one for societal learning. Several evaluative schemes have been proposed (eg, Luederitz et al., 2017).

Overall evaluation of the MiT piloting was designed with a focus on effectiveness of the MiT instrument, namely constant attention on the “intended use by intended users” (Ramírez & Brodhead, 2013). Learning, according to Patton (as cited in Davies & Dart, 2003), was targeted at “rendering judgments, facilitating improvements and/or generating knowledge”.

I am not only interested in evaluating to which extent the MiT instrument enabled the intended results, but also on understanding how this was undertaken. Namely I want to understand which interventions or design features might have played a role as barriers or enabling factors. I embrace the complexity of the process by rejecting a linear model of evaluation and identification of clear cause-effect links. Rather, for the sake of improvement, I look for the critical design features that contributed (or not) to the assumed goal and possible ways to make the initiative reach more.

Following Luederitz et al (2017), evaluation (by myself, as the embedded researcher) was performed *ex-ante* (prior to experimentation, to inform the design, using interviews and questionnaires⁴⁰), during the piloting (formative evaluation, mainly through active observation and reporting within the community of practice⁴¹) and *ex-post* (to appraise the contribution of experiments to the process of transformation, mostly based in the cocreative sessions at the joint reflecting meeting, and a ‘final’ survey⁴²).

I mostly want to ‘give voice’ to the participants, so extensive *quotations* are used, structured with the inductive approach mentioned in the methodology (page 49).

In fact, evaluation frameworks can be based on the collection of ‘stories’ related to events that participants consider the most significant or critical in their path towards intended and shared directions (e.g. Davies & Dart, 2003; Sharp & Salter, 2017). This process of inquiry is expected to happen in a participatory and transparent way, generating dialogue that can reveal ways to improve experiments. This approach can be labelled as reflexive or dynamic evaluation and focus on how the participants can realize transformation together (Ruijsink et al., 2017).

⁴⁰ Collaborations happening in 71 communities were studied (previous chapter), which included the pilots that participated in the experiments that we are now focusing on. This allowed a starting point to be set for the research. Additional interviews were performed with some of the participants before the experimentation (see Appendix C).

⁴¹ See template in Annex B.

⁴² See Annex C.

Transformative social innovation was used as an analytical framework, including *critical turning points* and *narratives of change* (Ruijsink et al., 2017). Accordingly, the evaluation performed is organized in four phases (see page 128) that I will now go through:

- Narratives of change (clarifying the MiT theory of change and how it was translated).
- Critical turning points (looking at the decisive moments in the pilots' journey).
- Reflection and learning (analysing the main changes produced and enabling factors).
- Way forward (discussing strategies on improving the process).

NARRATIVES OF CHANGE

Narratives of change can be defined as “sets of ideas, concepts, metaphors, discourses or story-lines about change and innovation” (Wittmayer et al., 2019, p. 2). They have a critical and instrumental role in any social transformation process and unravelling them allows us to understand the efforts put in place to change the current state of affairs (*ibid*).

I am interested in recognizing how (and if) participants expressed and cocreated the MiT narrative of change. How they used it to (re)tell their experiences and explore new possibilities.

As stated by participants in one of the open space discussions, “*MiT is cooperation between bottom & top*”. This was accompanied by the image in Figure F.30, expressing that it is in the intersection (joint work) of LGs and CLIs that “*magic happens*”.

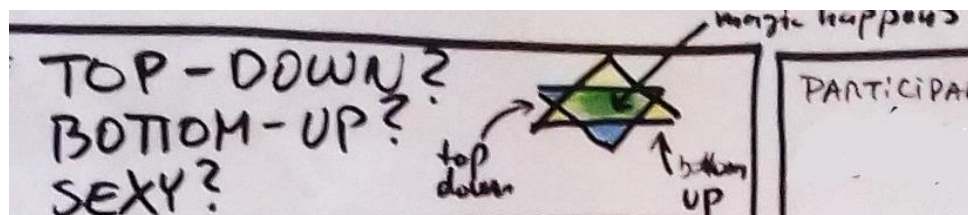


Figure F.30 – Top-down or Bottom-up? How the MiT narrative of change is seen by participants.

Limitations of each ‘level’ of action are recognized: “*staying only bottom-up means no scaling up*” and “*playing by the rules only means no changing the rules, which means no system change*”. MiT is about “*finding the power we have together*” and collaboration is seen at the core of the process and “*as a basis for a new narrative*”.

In one of the pilots, “*the main objective was to create a ‘precedent’ and an inspiring example for individuals and politicians, to show how many potential opportunities lie between civil*

society and municipalities. And, also, that the necessary tools already exist and can be easily put in place.”

Talking about bridges was even considered counterproductive because it was assuming that LGs and CLIs were standing in opposite grounds. The future in a dreamed community named Happypality involves that Municipality and Community are no longer separate things (Figure F.31). *“Two bubbles suddenly merging”*.



Figure F.31 – A dreamed MiT, as expressed by one of the participants.

MiT provided *“a safe space, for deeper conversations”* and a feeling of getting out of the *“zoo cage”* or *“working with the other side of the moon”*. Building the necessary trust was considered demanding, asking participants to accept their own vulnerabilities and lose their fear of crossing boundaries.

These *quotes* indicate that participants embraced the MiT narrative of change, emphasizing the idea of *“creating change together”*.

In next section I will explore some of the critical moments in this journey and the learnings they provide.

CRITICAL TURNING POINTS

Critical turning points are “events, encounters and actions, which are decisive for achieving transformation” (Ruijsink et al., 2017, p. 10). They can be planned or spontaneous. In this section I am interested in understanding which were the decisive moments in the pilots’ journey and what enabled them. I do not focus so much on concrete events for specific pilots, but rather put effort in identifying cross-pilot enabling factors.

FIRST IMPRESSIONS

Pilots were provided with a relatively significant amount of money for their work, particularly in the case of the fully supported pilots. This was considered as a ‘door opener’ in some cases, also increasing the “*responsibility*”.

Since the MiT mapping was done through the network of the Transition movement, initial contacts were with CLIs. In their approach to the Municipality, having an already funded (also structured and credible) process was considered critical – “*usually we were asking or fighting something... now we were offering help*”. Presenting an “*invitation to work together*”. Or like other pilot expressed: “*we went to Mayor to say: you are busy, we can help... therefore quite different from the usual asking*”.

However, funds were also the main cause for some conflicts (e.g., La Garrotxa and Telheiras), as already mentioned. Something that possibly could be avoided by some preliminary negotiation and separation of roles.

SYSTEMS THINKING

Systems thinking is considered critical to deal with the complexity of modern world (Arnold & Wade, 2015), especially if you are trying to change it. Recognizing interconnections and understanding dynamic behaviors, like emergence, are essential capacities. In La Garrotxa an intensive training on systems thinking was promoted and results were visible: “*there was eager uptake of concepts*”.

One of the regional administration directors stated that the experience “*has profoundly changed the way I see and act not only at work, but in my personal life*”, mainly referring to the systemic approach. Systems thinking was included in the pilots’ initial training and reinforced in the final meeting.

Training in *local democracy* (Santorso) exhibited a similar effect: “*now we understand the need for MiT!*” (Figure F.32).



Figure F.32 – A two-day interactive workshop was organized in Santorso around the topic of local democracy (“Exploring the future of democracy”) and attracted around thirty people from the region.

In some cases, it was considered that the ‘overflow’ was not enough: *“the importance of thinking systemically and see the overall picture, it was personally changing... but it was not growing [outside the action group]!”*.

GETTING CLOSER

Working together generated synergies – all respondents to the final survey agree that “by using the MiT instrument, local governments and civil society created an enhanced combined effect that promoted sustainability”.

Synergies were the result of changes in social relations, involving new ways of organising and doing transition, with a coproduction approach. It was reflected that the MiT initiative *“brought the members more closely together also in personal terms; since people met more often, information about other activities was exchanged a lot faster than when people just met*

in meetings (...) there was more information being exchanged, which led to new ideas and projects being created” (Telheiras).

The same phenomena was reported in Santorso – *“relationships with people of the municipality organisation are becoming stronger and stronger”*, which in turn make *“everything very productive, fast and concrete”*.

The transitioner in Santorso even worked in the Municipality building for some time, acting as an internal consultant. He reported the impact of ‘getting closer’ – *“(…) direct access to short and long term projects that are already in place. From there it’s much easier to dream, design and implement actions in concert with municipality employees and in a very fluid way”*.

Still, another statement reveals the synergistic effect of the news ways of doing and organizing: *“Municipalities have little resources (human & financial) to support participatory actions with civil society. MiT framework helped to close these gaps and to keep open a constant flow of feedback and information between these two levels”*.

THE OVERVIEW EFFECT

“A good diagnosis is key” (from the world café on pilot experience). Setting the baseline was, in general, a critical turning point for the pilots. In Vila Mariana it was stated that when using the grid *“we felt at the same page”*, with a shared vision on the territory. When a new political leader arrived in a late stage of the process, the grid acted as a ‘magnet’ with immediate results: *“I want this tool for me!”*⁴³. Sharing the tool was a door for new possibilities in the collaboration between the CLI and the LG, but also with other actors.

Valsamoggia reported that *“the simple work done on the creation of the baseline list of actions produced the awareness of many new possibilities of connections between available actions”*. It was considered that *“the vision of the political personnel and the administration staff was misaligned”*. In Santorso *“they didn’t know that many of those actions were in place”* and a few connections and synergies existed between different initiatives. *“The grid provided public managers a macro view of the actions and the role of each actor in the process”*.

⁴³ In Kispest it was reported that *“politicians were captured by the visibility of the connections, they never saw this in previous works”*.

Even in the case of Kispeszt, where it was considered “*challenging*”, “*muddy*” and a “*straitjacket*” to use the grid⁴⁴ and the baseline was only partially finished, there was a sense that they had “*not explored the potential*” and it was “*useful to bring global and not too focused discussions*”. Also, the method to collect information about initiatives (interviews) was considered a highlight, allowing the possibility to “*get to know each other*” and “*get in touch with other actors*”⁴⁵. Similar experience was reported in La Garrotxa, for instance.

BRINGING IN

The grid showed to be a tool for inclusion: “*the first perception we got from the baseline was to understand more clearly some things that were already emerging, especially about the actors who should have been involved and were not yet present in the action*”.

Also, conflicts can become opportunities: in Telheiras the action group was demanding a greater involvement from the Municipality. The answer was positive, and in all the following meetings the Municipality was present, and a new member was involved, working on education. In turn, this allowed a greater involvement of the project with school activities.

But still, “*there's some risk now that some people want to involve everybody in everything they do, without taking in consideration roles and other groups identity*”.

DOING STUFF... HOLISTICALLY

“*We need to push everything and not only one action*” – this was a shared ‘Aha! moment’. “*When putting all the projects together, the group got aware that many things were happening... felt empowered for now putting effort together into was already there, reinforcing*” (another pilot).

To develop actions that could support the overall ‘change system’ was a major priority assumed by the pilots. This was accomplished by working groups, resource centers, observatories, trainings or broadcasts. This was a result from the previous points (systems thinking and mainly overview effect).

Also, “*sustainability was prioritized with a shared and more integrated approach to the solutions*”.

⁴⁴ they considered themselves as “*survivors of the grid*”

⁴⁵ “*a pretext for improving connections*”

REFLECTION AND LEARNING

In this section I want to explore if the MiT process was ‘walking the talk’, as suggested by Ruijsink *et al.* (2017). Once more, I am mostly looking for barriers and enabling factors.

SOCIOCRACY

Sociocracy 3.0 (S3) provides a structure of patterns to make collaborations more effective (Bockelbrink *et al.*, 2018). It was used in 3 pilots, namely Santorso, Valsamoggia and Vila Mariana, where trainings were organized (Figure F.33). Novelty played a role – “*the core team easily accepted to use sociocracy as a governance model, not because they knew it, but because they were curious*” (Santorso).

In Valsamoggia it was believed that “*the choice to use S3 as governance methodology combined with the HHH approach seems quite effective in fostering collaboration and providing an effective governance system*”. We can argue that it improved the groups’ identity and cohesion, by providing clarity on purposes, roles and decision-making processes.





Figure F.33 – Trainings in Sociocracy happening in Vila Mariana and Valsamoggia.

POLITICAL NEUTRALITY

It was considered (*world café* on pilots' experience) that “*neutrality*” was a critical issue. To be a “*non-partisan tool helps to build trust*”. Nevertheless, the connection to the Municipality also brought an implicit relation to the party in power, something that could have reduced the potential impact of some actions (like the Valsamoggia's political profile). This is also considered a risk in the process of deepening the pilot inside the municipality.

Efforts to involve politicians in the opposition were made in some pilots, with some good (Valsamoggia) and disappointing results (Santorso). A “*mistrust around the 'political intentions' of civil society*” was reported.

Another statement mentioned that “*in a community that is constantly eroding thanks to political polarisation, MiT probably helped to regain trust and hope among people and groups, directing their energy toward concrete actions and projects*”.

CREDIBILITY

Being an international initiative, funded by a recognized Foundation, helped to support MiT's credit (as already mentioned). This was vital to *"increase the visibility and credibility"* of local involved actors. In its turn, it was a way to *"facilitating access to municipal managers"*. In Vila Mariana, for example, involving the Mayor *"was essential to find the route to bring the MiT into the municipal structure"* (Figure F.34).



Figure F.34 – The sub-mayor of Vila Mariana, working with the Municipalities in Transition action group.

Having a researcher working on the initiative also increased the perception of professionalism (bringing *status*). In general, MiT brought *"seriousness [to CLI initiatives]"* and *"was transformed into official brand"*.

ROLES AND LEADERSHIP

Perceived roles changed. The sociometric group mapping was quite elucidating. When asking to stand in a line, with LGs and CLIs in the opposite sides, quite a few people chose the middle. Some choices were obvious (e.g., researcher) but there were a few members from

CLIs now assuming a ‘bridging’ position. MiT helped to “*see things from the perspective of the other*” – “*we thought we were the good guys*”.

Some organizations also played a critical role as ‘process intermediaries’, as defined by Kivimaa *et al.* (2019). There were exemplary cases in La Garrotxa (ADRINOC), Telheiras (Santa Casa) or Vila Mariana (CADES). In Santorso, the ‘intermediary’ role was assumed by the Transition initiative and in Valsamoggia the tutor clearly had that position. In Kispest, the transitioner and now elected member of the Council represented this interface. “*We are good at managing multiple hats*”.

Leading or facilitating? This was also mapped. LGs were mainly assuming a facilitation role or a middle position – “*need to help citizens in their change efforts*”. CLIs divided between the middle and a leading role – “*Leading by facilitating*” was a used expression (CLI) and “*collective leadership*” was recognized as something already happening. “*Changing rules, changes leaders*”.

(DIS)EMPOWERMENT

It was stated that “*traditional power dynamics, in which public administration has more voice than civil society, shifted noticeably during governance processes*”. Also, in La Garrotxa, it was considered that “*public administration demonstrated an openness to sharing decision-making with Resilience.Earth, and as such, the latter participated actively*”.

In Kispest, some participants shared the fear of co-optation (CLI). In some occasions, outside the MiT process, contestation and conflict related to specific policies happened. It was considered that, in reality, it was not an obstacle for collaboration. Nevertheless, it was stated (CLI) that “*now they feel more empathy for many people in administration (...) is that good?! Because we fight for disruption and now is harder*”.

In other words, “*as ‘civil outrage’ is also a key motivator for getting things done, it [MiT] has the danger of pulling powerful civil actors into a ‘dependency’ relationship, which, while manageable, is only defensible if there are really measurable positive outcomes from the more powerful players side*”. This kind of paradoxes, in which attempts to empower others have the effect of disempowering them, have already been described (Avelino *et al.*, 2019). “*Gentle disruption*” and nonviolent communication were advocated by related participants. One of the actions in Kispest involved a sensitive topic: public catering. Results were “*surprisingly successful*” so far. Also, a new attitude from the Municipality was registered, sharing new resources with the CLI.

In Kispest there was additionally the need to the CLI to become formal and legalized to proceed with actions. This could be considered a sort of ‘coercive isomorphism’ (Penha-Lopes & Henfrey, 2019).

The fear of CLI losing wide-angle thinking was expressed – *“co-option is not only physical but mental, aspirational”*. CLI *“losing sexiness and becoming boringly institutional”* was seen as a risk.

In Santorso, mistrust was considered a barrier for greater results. Bad reputation of politicians amongst some activists prevented them for wanting to participate, due to questions around *“power structures, roles and rank”*. Conclusion was that *“supporting mutual comprehension and understanding of how these power structures work is one of the key leverage point to create a future sustainable local governance”*.

Globally, the MiT instrument was seen as a good way to balance power and avoid unproductive polarization: *“we’re doing what politicians should (and often want to) do, without the power struggle”*.

MEASURING

The Valsamoggia group used the following keywords to describe the process of *“playing with the grid”*: *“intense, useful, revealing, strangely effective, not nice... nice scores, pride, unbalance, needs”*.

We could say that most of the pilots reported having some kind of difficulties⁴⁶ in using the grid (besides *“not nice”*, also words like boredom and satiety were used). But in the end, they all managed quite well to do the baseline and all saw great value in the exercise (*“helped to focus, going beyond brainstorming”*).

Again, Valsamoggia was keen in summarizing the grid concept: *“measure badly and get a good analysis”*. The idea is not to collect everything, but enough to allow the mentioned ‘overview effect’.

Should the grid be improved? Needs coming from discussions included: to clarify categories (where do schools stand?), create new ones (e.g., separating the non-local actors from networks), to create new evaluative cycles (e.g., to consider deep adaptation), to refine the impact measurement (refining the scale, including negative impacts; introducing comments;

⁴⁶ Collecting the information was sometimes seen as quite demanding (e.g. Kispest), specially from the Municipality (e.g. Telheiras). *“There is a learning curve”*.

georeferencing...), to assess the potential and evolution in time (making results visible).

These changes were introduced in an updated version of the MiT instrument (Box F.1, page 155, and Annex D).

Bringing more clarity on what is being measured, might improve the user experience. Should we keep using neutral terms like ‘grid’, ‘quantitative’ and ‘qualitative’ score? Or prefer to name the indicators (e.g., impact, inclusiveness...)? Should we aggregate scores and create a ‘transition index’?

WAY FORWARD

In this section I gather inputs from participants and my own reflection on the possible strategies to improve the process of coproduction in the MiT instrument, as suggested by Ruijsink *et al.* (2017), namely on how to scale up, out and deep (Figure F.35) (Moore, Riddell, & Vocisano, 2015). This was intensively discussed, namely in the *open space* discussions - perceived barriers to scaling were rules, culture (narratives⁴⁷) and political environment (polarization).

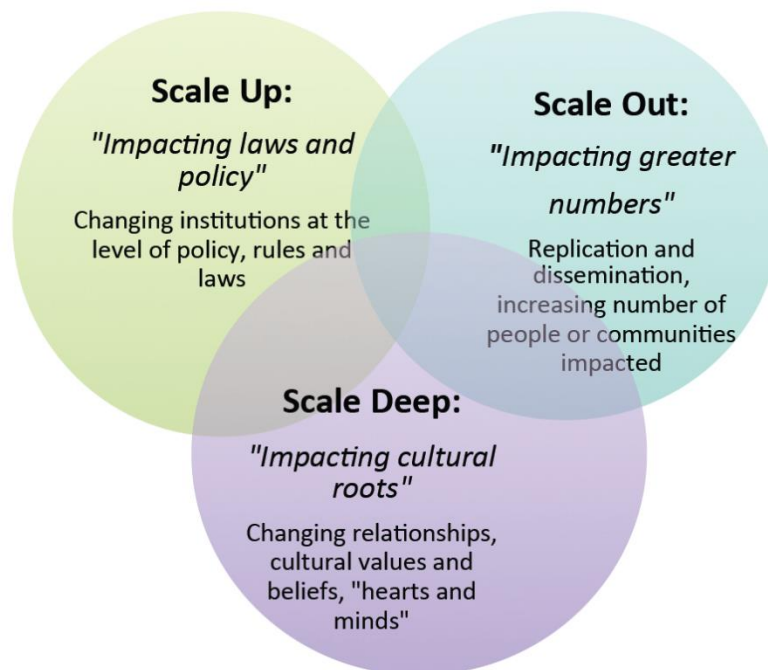


Figure F.35 – Scaling social innovation (in Moore et al., 2015).

⁴⁷ "Teasing with the silos thinking" was considered an opportunity.

SCALING DEEP

An *open space* discussion was organized in the learning meeting to debate how do we deepen the MiT within a municipality for a greater impact. Key factors identified included to “*create supportive relationships*”⁴⁸, promote “*appreciation*” and get “*external feedback*”⁴⁹. There is the need to “*repackage and identify clear possible benefits from ‘stream-lining’ MiT*”. One of the risks is that the “*project is now seen as finished*”, and participation will cease.

The governance model for continuing MiT processes is still an open question and needs clarification in order to support long-term impacts. How to “*institutionalize MiT*” and “*find funding for process (not project)*”?

Partnering has been proven to be a requisite for institutionalisation and embedding (Gorissen et al., 2018). In Vila Mariana the priority for continuity was to capitalize on the results of the baseline by “*connecting the various initiatives and promoting more interactions*” – “*the idea is for everyone to know who is working in the territory, knowing and recognizing the value of individual efforts, to find ways to strengthen them*”. This is to be accomplished by meetings and trainings (neighbourhood associations, public authorities...). It already started and there is good possibilities to replicate to other districts in São Paulo.

In Santorso, a proposal was developed to create a kind of “*sustainable centre*” integrating MiT, the regional Energy Agency and an ongoing Life-funded project. A shared co-working space was tried. In Valsamoggia, the barrier identified (thinking about the future of MiT with the Mayor) was the potential overlap with other municipality’s obligations (e.g., reporting). The possibility to have an office taking care of something like MiT was discarded within current conditions. In Kispest there is hope that the new community center dedicated to local food issues might play a critical role in the pilot’s continuity (also assuring some needed funds).

In La Garrotxa, the intention is to move from MiT to a regional strategy on territorial resilience. Efforts are being done to explore new funding opportunities. As like in Vila Mariana⁵⁰, a great effort was done to create a wide network of people and organizations with the same ‘hearts and minds’. Creating the necessary ‘critical mass’ looks as the best path to secure continuity.

⁴⁸ Scaling deep assumes that “durable change has been achieved only when people’s hearts and minds, their values and cultural practices, and the quality of relationships they have, are transformed” (Moore et al., 2015, p. 74).

⁴⁹ “*Needed more feedback from research as a sort of reflection (Action Learning)*”.

⁵⁰ Also Santorso.

Finally, in Telheiras there was already a structured local partnership in place, and there is the expectation that it will keep using the instrument, namely as a monitoring and planning tool. A strategy for local elections was also advocated for all pilots in order to deepen the initiative.

Besides these local Communities of Practice, a wider CoP might persist and grow deeper. According to participants, the CoP is expected to preserve the MiT ‘DNA’ – this is the “*place to share values and narratives of change*”. Should the MiT narrative of change – “Exploring how municipalities & citizens can work better together” (MiT, 2018) – be updated to include the new stories that grew in pilots about systemic change and renovating democracy⁵¹?

One thing was consensual: there is the need to improve the process of sharing stories between pilots, with more visuals (e.g., short videos, animations, diagrams), “*better communication and social media*”. It should be understandable even from outside. “*Communication is the big challenge*” and publishable contents that materialize the narrative of change should be prepared. There is the need to “*explain the full story of MiT*”, otherwise “*it might be understood only partially*”.

Culture can be a powerful tool for this goal (scaling deep) and it is believed that a “*shift in culture is happening*”. There is “*pressure from artists*” and “*people are listening*”. “*Culture bringing participatory places*” is part of the dreams created in the final meeting. As previously argued, the instrument mainly aims at creating a cultural change, so scaling deep is necessarily the underlying choice.

SCALING OUT

Scaling out refers to replication, with a greater number of communities adopting the instrument, supporting translocality. The strategy to scale out was also discussed strongly in research team’s meetings and at the final reflecting event. There is the will to keep updating the MiT instrument, test it in new communities, make it ‘creative commons’ and establish an ‘academia’ to train tutors and facilitators. Ongoing efforts will be presented later.

The role of tutors is considered essential, namely to “*guide the pilot through the process*” and also to “*avoid the pilot ‘getting back’ to the system*”. Tutors’ “*experience really influences*” and they have “*different roles, mentor, contact person*”. They should offer the greatest “*proximity*” possible and to “*facilitate separately with the administration and civil society,*

⁵¹ In the workshop promoted in Santorso, they explored the pattern of the ‘tragedy of the commons’ and how [traditional] democracy is not going to help in times of danger. Feedback was: “*now we understand the need of MiT!*”. “*Democracy is being transformed*” was part of one of the visions for the MiT future.

supporting each side to engage with the process” (“*tutors’ neutrality is critical*”). Tutors need to be “*prepared for systemic thinking*”, have “*training in governance models*” and “*practice in actual pilots*” – something that calls for further research.

Facilitators, besides trainings and the support of tutors, should also be able to rely in “*online support quickly ready to recall basics*”. There is the “*need to build a self-assessment tool for practitioners, and self-training tutorials*”. And a system is needed to “*audit to check if conditions [for using the system] are there*”. The existence of bridging organizations could (should) be one of the criteria. Also, it was stated that “*we need a responsible person from municipality to join the pilot team*”.

Besides replicating the MiT initiative’s experience, one possibility is to also to “disseminate principles, with adaptation to new contexts via co-generation of knowledge” (Moore et al., 2015). This can be done in partnership with other frameworks, sustainability projects and networks (e.g., Climate-KIC, Energy cities, One Planet Living). Still, it was expressed that there is the risk of “*losing our values because we look for the minimum common denominator*”.

Could the MiT instrument be adapted to be used at different levels (regional, national...)? It is a generally accepted notion that smaller sub-systems have faster adaptive cycles, so we can argue that the local scale is the more effective one for applying the instrument, and that through “higher level infrastructures” (aiming at “mutual inspiration and learning and evolution”) it can provide change across nested systems, reaching a global scale (Revell & Henderson, 2019, p. 969).

SCALING UP

Scaling up would imply a change in policies, laws and/or regulations. The MiT instrument can be adopted by communities as the central strategy on sustainability. Or its principles and tools can be incorporated into existing municipal initiatives. It might be adopted as a standard on networks of local action, like Transition Initiatives or Global Covenant of Mayors.

Transnational networks like ECOLISE can help in scaling efforts. The grid’s last column makes sure that the importance of external actors, namely networks, is not forgotten.

The MiT instrument might also become part of a local declaration of climate emergency, for instance (something that already happened in one of the pilots – see Figure F.36). The name of the inspiring case used to develop the MiT instrument (“funzione energia”) was in fact a

reflection of efforts to make ‘energy management’ a legal function in Italian Municipalities (Rossi et al., 2014), a process that was interrupted by political turnover.



Figure F.36 – In September 2019, the Valsamoggia Municipality approved a Climate and Environmental Emergency declaration and created a transversal working group embedded in the Municipalities in Transition process. Bologna, centre of the Metropolitan area, followed.

What kind of policies are needed to create a ‘fertile ground’ for MiT initiatives (and similar)? A way to explore, that came from discussions, was “*connecting people from the ground talking from the open heart and technicals to ‘translate’ these needs to policy recommendations*”. Also, a “*good strategy on lobbying/creating a pressure group with good communication skills*”. There is a potential role for cocreation and advocacy laying on the European Union and organizations like DRIFT, Covenant of Mayors, ECOLISE and national municipalities organizations (e.g., Italian ANCI). The connection with climate issues can be strategic.

More broadly, could we integrate MiT in a ‘glocal governance’ model (Loorbach & Lijnis Huffenreuter, 2013) that could merge global and local systemic change?

In any case, we should not be “*losing the overall perspective (...) so much is already happening*”. “*Plenty of people waiting to do something good*”. Maybe we are “*already mainstream*” and should question “*our frustration for not creating bigger impact*”. There is the conviction that “*there is already a (new) culture in place*”.

4) Discussion

In the previous chapter, the MiT instrument was introduced as an innovative way to govern transformative change and act as a systemic instrument for local reflexive governance.

Therefore, the proliferation of experiments making use of this instrument is envisioned to primarily lead to a change in the socio-institutional system. In accordance to Woodhill (2010), institutional innovation is an emergent property of the interaction between the different actors in the system. The MiT instrument is expected to provide the capacities considered crucial, namely “navigating complexity, learning collaboratively, engaging politically and being self-reflective” (*ibid.*, p. 47).

To evaluate the potential of the instrument to create a systemic change, I looked (previous section) at how these capacities were enhanced (or otherwise), during the experimentation. I am now in position to answer the empirical research questions presented in the beginning of the chapter, supporting that the MiT instrument was indeed effective in terms of the proposed socio-institutional impact.

IMPACTS AND OUTCOMES

What were the impacts and outcomes in terms of transformative collaborations at the local level of using the MiT instrument?

Generally speaking, social innovation can be conceptualized as “changes in social relations, involving new ways of doing, organising, framing and/or knowing” (Haxeltine et al., 2016, p. 20). Every time processes “challenge, alter and/or replace established (and/or dominant) institutions in the social- material context” we can refer to these as “transformative social innovation” (*ibid.*, p.21).

For understanding changes induced by the *Municipalities in Transition* instrument, in the pilots context, I used the concepts of narratives of change and critical turning points related to transformative social innovation (Ruijsink et al., 2017). These changes can be distinguished against the underlying concepts of ‘institutional logics’ and ‘strategic actions fields’, related to the process of ‘institutional patterning’ (Haxeltine et al., 2016).

Accordingly, and summing up insights expressed in the previous section, transformations in the MiT pilots corresponded to:

- New ways of framing and knowing about transformative initiatives happening in the community, by diffusing systems thinking, altering values (based in the transition

principles) and providing an ‘overview effect’; this allowed a new holistic approach that changed the logics structuring the transformative efforts performed by both LGs and CLIs;

- New ways of organising and doing transformation, within the sociocratic frame and with a coproduction approach, forming a ‘web’ of socio-material relations (‘action field’); this field is visible in how the (larger) action groups were able to cooperate and develop new transforming actions and processes, forming local and wider communities of practice.

Further impacts and outcomes can be analysed and illustrated using the *Compass for Transformative Collaborations* (page 16)⁵², including the dimensions of cocreation, mutual support, coproduction and open innovation.

I will start by the cocreative dimension (*making it together*). It was stated by participants that MiT allowed them to “*create a common glue or purpose / interest that creates convergence of vision / viewpoints / efforts in the territory*”. MiT was described as the “*creation of a platform to interact + collaborate*”. This was accomplished at ‘high-level’ in La Garrotxa, connecting regional directors with practitioners.

Previously, I mentioned critical factors present, like the shared understanding, the complementary roles, joint monitoring and evaluation, long-term commitments (in some of the pilots), the effective joint decisions and implementation, the suitable level of bureaucracy and formality or inclusiveness – the “*bigger transformation was moving closer to the community*”, as a participant stated.

Transparency and accountability were also promoted, especially with the involvement of a great number of partners with complete access to information (nevertheless it might be a topic to be reinforced).

The dimension of *mutual support* corresponds to reciprocal and fulfilling relationships (‘win-win’). Previously (*Getting closer*) I showed that setting a governance model and working together, led to strengthening relations and several synergies.

Several situations of resource sharing were identified. Spaces were provided to CLI (e.g., community centre in Kispest) and CLI shared knowledge through trainings (e.g., La

⁵² In a similar way as I did with the 71 cases initially harvested.

Garrotxa). CLI participated in and supported projects developed by the LG (e.g., a Life project in Santorso or an Urbact proposal in Kispest).

Conflicts were handled and mutual trust and commitment was deeply appreciated. Some fear of co-optation still persists. *“MiT brought mainly hope”*, was something that was shared, and created the space to *“dare to be ambitious”*.

The dimension of *coproduction* relates to cooperatively delivering goods and services aiming at caring for people and the planet. The joint actions provided information on best practices (e.g., Valsa TV), learning opportunities (e.g., La Garrotxa), climate mitigation (e.g., Santorso) and adaptation (e.g., Vila Mariana), circularity (e.g., Kispest) or sharing opportunities (e.g., Telheiras).

Finally, also *open innovation* is believed to have occurred. Cultural change, in line with the expected impacts (page 73), was considered to be a valuable outcome, for instance in Telheiras, recognizing shifts into more collaborative culture in the Municipality. In Valsamoggia *“the most meaningful indicator is now the number of suggestions of “And if we do this...?” that you get from every actor in every discussion you do about the present and the future. That’s a strong signal that they are aware of the need of a change and that they don’t know how to change but are ready to dialogue about that”*.

A social innovation feature was also evident in actions like the profile for candidates for local elections or the ‘new’ observatory in La Garrotxa. New practices were put forward, for instance in terms of energy production (Santorso) or urbanization of public space (Vila Mariana). Institutional change and social learning are probably the most significant outcomes and have been previously discussed.

LESSONS LEARNED

What were the contexts where the potential changes occurred and the related critical design features in the instrument? What lessons can be learned to improve the governance instrument?

This new way of organizing and doing transition, facilitated by the use of the MiT instrument, emerged by dramatically changing ‘first impressions’, supporting partners to ‘get closer’ and ‘bring in’ excluded actors, as discussed.

In sum, as suggested (Haxeltine et al., 2017), transformative social innovation was the product of the reflexive experimentation, the new social relations, the empowerment process,

the changing tensions, the translocal connectivity, the discourse formation, the new (or reinforced) institutional homes and the strategic actions (adapted to each context).

The future of the MiT, in every pilot and as a global initiative, will be the result of the capacity to respond to the remaining propositions suggested by Haxeltine et al. (*ibid.*). Namely, the ability to ‘travel’ across different logics (e.g., the ‘market’, in its fight for sustainability, and in deepening processes inside municipalities and other organizations), avoid path dependencies, connect to the (fast) evolving socio-material context (e.g., exploring synergies with other frameworks) and integrate even more diversity of people (e.g., ‘the man of the street’).

Several options were discussed in the previous section, that can allow the system to move forward, by scaling deep, out and up. A new revised version of the MiT instrument was already prepared, using the learnings from the piloting (Box F.1).

Box F.1 – MiT updates: a new version, tutors' trainings and pioneers.

After the pilot phase, a new version of the MiT instrument was prepared. The new version (Annex D) was updated taking into consideration learnings from the pilots and the most significant changes included:

- A clarification of the purpose and intended use.
- The integration of a governance model based in sociocracy (Bockelbrink et al., 2018).
- A new column in the grid, namely *Upper Institutional Levels* (regional, national, international or transnational governments and related authorities), facilitating cross-scalar links.
- A new set of values for each cell and a new scaling – assessments include (1) the initial impact or ‘presence’ of an initiative (baseline), (2) the potential or expected impact, and (3) the state in a certain moment (evaluation); a scale from -10 to 10 is used⁵³ (considering the possibility of having a negative impact).
- A new scale also for the evaluation cycles (0-10).
- New evaluation cycles related to the concepts of deep adaptation (Bendell, 2018), resilience (Folke, 2006), and cultural reproduction (Dawkins, 1976).
- A more structured and detailed experimentation process.
- An operational database of tools.
- A digital platform to support the process, including algorithms to make necessary changes more visible and support planning.
- The *Cynefin* framework (Kurtz & Snowden, 2003) to make sense of complexity and therefore support the planning process.
- A Community of Practice for the tutors.

A first training of tutors was organized in February 2020 in the Village of Jerica (Valencia, Spain) and the tutor's CoP is meeting regularly since then to share experiences and knowledge.

The training also kick-started a set of new pilots, named as *pioneers*, and action research is once more taking place. This group includes 4 of the initial 6 pilots (Santorso, Telheiras, Valsamoggia and Vila Mariana, with some participants becoming tutors), plus the 5th District of Rome.

In November 2020 a new tutors' training started on-line.

⁵³ We should consider that measuring ‘better’ could lead to a worse analysis. Or in other words, forcing a greater precision might compromise accuracy or usability. One solution is to have different scales according to the knowledge and skills of users.

LIMITATIONS AND OPEN QUESTIONS

Will the changes induced by the MiT instrument endure and produce long lasting results?

Will the process show the ability to ‘travel’ across different logics, avoid path dependencies, connect to the (fast) evolving socio-material context and fully integrate diversity? These and other (still) open questions will be discussed.

NOT ENOUGH TIME

One of the major limitations in the experimentation process was the short available period for testing. Pilots were initially expected to go through the entire process of setting governance, doing the baseline, planning, implementing and evaluating actions (moreover actively participating in the learning process, including trainings and the CoP) from March to December 2018. Experimentation was extended until April 2019, but nevertheless time was considered quite short. Partnerships are expected to need around 48 months to reach significant changes, according to a study on collaborative policymaking in the United States (W. D. Leach, Pelkey, & Sabatier, 2002).

Probably having funds available to use was a necessary condition to have results in such a short time frame. Being in a ‘rush’ probably also influenced heavily the planning phase – “low hanging fruits” was assumingly one of the criteria to choose actions. Moving to identified strategic cells (e.g., involving businesses in Telheiras) was postponed due to time constrains.

Clearly, also a longitudinal analysis is needed, to research on medium and long-term developments.

UNIVERSAL USABILITY?

Before codesigning the MiT instrument, a set of preconditions was specified (page 68), namely:

1. Easily adaptable to a wide variety of very different contexts.
2. Simple enough to be relatively easy to learn and to use in real life.
3. Low level of preconditions for implementation (low resources, low technology).
4. Suitable for use in a context of shared/diffused governance.
5. Implementable both in a top-down and a bottom-up approaches.
6. Powerful enough to cope with high levels of complexity and uncertainty.
7. Capable of improving the quality of the cooperation between the involved actors.
8. Effective in transformation.

9. Designed to be iteratively evolved by the users.
10. Closely linked to the HHH principles (use best information available, take care of relationships, look for tangible results).

It was then theorized that the MiT instrument could match these preconditions. Did it prove in real life?

I consider that precondition (1) is somehow still to be tested. Besides contextual differences already mentioned between pilots, they all corresponded to relatively privileged neighbourhoods, municipalities or regions. In fact, it could be argued that the project even contributed to raise inequalities relatively to surrounding communities.

This concern was clear in the Kispest pilot, brought by the Municipality. In fact, in the beginning, the pilot only included Wekerle, a privileged neighbourhood in Kispest – the pilot's 'border' was enlarged in order to reduce inequalities between communities.

The shared understanding in the research team is that the MiT instrument would be usable and impactful also in deprived areas, including economically poorer communities in the 'global south'. In fact, we guess that we would have much to learn from such testing/communities.

Also, precondition (5) might need further testing. In fact, in all pilots, the process was started and mainly driven by CLIs. LGs did participate and were mostly deep involved, but would it be implementable in a top-down approach?

I consider that all other preconditions were met, as previously explored. Some in quite a remarkable way (namely 4, 6, 7 and 8). In fact, the MiT instrument exhibited the capacity of dealing with the complexity and uncertainty of tipping point times, supporting collaboration as a leverage for transformation.

EVERYONE ON BOARD?

If we 'pass' the MiT project through the grid, what would be the results (Figure F.37)?

Namely in the evaluation cycle that asks: are all the key actors involved? (Who is there? Who is missing? Who should be there?). We could argue that involving controlled entities, business or citizens directly (namely in action groups) should be a possibility to explore.

In fact, in La Garrotxa, controlled entities (e.g., regional thematic consortiums created by regional and local municipalities) participated deeply in the process with good results.

Citizens in Valsamoggia likewise, for example.

Baseline Actions Form 1.0

Action ID: 9

Action Title
Municípios em Transição

Short description
Municípios em Transição, que pretende estudar a implementação abordagens de ligação do poder local à sociedade civil na promoção da sustentabilidade e na criação de mudança para um mundo mais justo, responsável e feliz, baseadas em relações positivas.

Contact person
pmacedo@ivertelboas.pt

Baseline Actions Form 1.0

Grid position (select all the appropriate)

Ações Categorias	Actors Categories							
	A Municipality Policies	B Municipality Dynamics	C External Entities	D Citizens	E Organisations	F Businesses	G Public	H Networks
1 Vision	X				X			
2 Organisation	X				X			
3 Planning	X				X			
4 Technical aspects	X				X			
5 Research	X(O)	X			X		X	
6 Cultural change	X				X			
7 Monitoring		X			X			X

Total number of filled cells (range of impact):

Cell Cycles Evaluation

CC1
Head step - Is it based on the best available data? (0-2) 2
Heart step - Is it considering and taking care of emotional/relational consequences on everyone involved? (0-2) 2
Hands step - Does it produce practical effects? (0-2) 2
CC1 Tot 6

CC2
Are all the key actors involved? (0-2) 1
CC2 Tot 1

CCs Total Score 7

Baseline Actions Form 1.0

Action ID: 10

Action Title
Parque Hortícola

Short description
Telheiras da Hort.

Contact person
Maria João, km@

Baseline Actions F

Grid position (se

Ações Categorias

1 Vision X

2 Organisation X

3 Planning X

4 Technical aspects X

5 Research X

6 Cultural change X

7 Monitoring X

Total number of filled cells (range of impact):

Cell Cycles Evaluation

CC1
Head step - Is it based on the best available data? (0-2) 2
Heart step - Is it considering and taking care of emotional/relational consequences on everyone involved? (0-2) 2
Hands step - Does it produce practical effects? (0-2) 2
CC1 Tot 6

CC2
Are all the key actors involved? (0-2) 1
CC2 Tot 1

CCs Total Score 7

Figure F.37 – Self-reflecting: The MiT initiative evaluating itself (pilot in Telheiras).

SCALE?

What would be the best territorial scale to use the MiT instrument? In this experimentation process it was tested from the size of a neighbourhood (in Telheiras) to a region (in La Garrotxa, involving 21 municipalities). In communities of 5 700 inhabitants or more than 345 000. This reveals the ‘flexibility’ of the tool and no conclusions was (so far) taken relating the best scale. A necessary precondition is, we could argue, to use it in a community with a clear identity/boundary.

CONTINUITY?

As previously argued (*Scaling deep*), continuity of MiT in pilots is still an open question. What is the desirable connection between the MiT instrument and formal governance structures? This and other questions remain unanswered.

Also, the most appropriate (sustainable) model to make the MiT grow in terms of numbers still need to be further researched, including communication strategies.

5) Synthesis

The main research goal is to look for ways to catalyse innovative collaboration between civil society and municipalities in the pursuit of systemic sustainable change. In the previous chapter, I presented how a governance instrument was developed using explorative analysis of exemplary cases and transdisciplinary co-design sessions. The instrument was tested in six pilots and, in this chapter, I presented key findings and implications. In short, the instrument made its “proof of living” in the real world.

Previously, I have compared the MiT instrument to a ‘transition board game’ (page 80). In this first round, the game was played simultaneously in six communities, namely Kispest (Hungary), La Garrotxa (Spain), Santorso (Italy), Telheiras (Portugal), Valsamoggia (Italy) and Vila Mariana (Brazil). In the beginning of 2018, teams’ facilitators were mobilized, with players from local governments and community-led initiatives.

Games were organized under the *auspices* of mayors, Transition Network, KR Foundation, University of Lisbon and DRIFT, providing status and high-level organizational support. Grant funding, training and tutoring was provided.

First facilitators’ task was to form teams to play transition. Quite different ‘constellations’ emerged. In Kispest, the team opted for the minimum size, mostly based in facilitators from the Municipality and the Transition movement. In Santorso and Valsamoggia, quite diverse and punctuated teams were formed, including individuals and several organizations. In La Garrotxa, a strong backup team was based in the regional administration. Finally, Telheiras and Vila Mariana opted for complex structures with several layers and a multitude of organizations involved, increasing the potential of already existing partnerships. No lack of cheerleaders, thus.

Teams were then asked to collect as much transformative actions they could find going on in the community. Several tactics were set, some more passive (lying mainly in online questionnaires) and active ones (doing systematic interviews with stakeholders). Apparently, diverse teams opted for using mainly their own accumulated knowledge, while more complex teams also used extensive information from other agents. An average of 32 transformative initiatives in each pilot were mapped and evaluated. The ‘playing field’ becomes clearer.

Scenarios of transition efforts have great diversity and are hard to compare. Not surprisingly, higher grid and evaluation scores come with greater efforts put in the collection. They might also be associated with communities with larger ‘critical mass’ and more diverse contexts

(urban and rural). The ‘house’ with the most ‘piled up’ initiatives is the one involving the public and cultural change (probably due to a large number of awareness raising activities). Less ‘populated’ houses are related to suppliers and controlled entities, also organization and planning actions. Networks and networking are also relatively disfavoured.

Governance patterns also seem to be influenced by the collection method (namely personal experience of people involved) but nevertheless provide useful insights relating spots where ‘energy’ is concentrated and others that are lacking transformative efforts. Conformation to ‘leverage cells’ is weak.

Teams then had to choose actions to jointly implement. Several motivational drivers were in place. Pragmatism (due to short available time frame and limited resources) led to actions that could easily guarantee results in short term. ‘Windows of opportunity’ were explored. Other actions more strategic and ambitious were also chosen to have a deeper impact. All actions were a reflex of contexts.

Most of the 14 actions had awareness and capacitation goals (workshops, trainings and an online TV) or tried to create ‘concrete’ changes (related to nature protection, energy and circularity). Two centres for community support and two working groups were also put in place. Audacious recreation of a sustainability observatory and definition of a profile for candidates to local elections were also achieved.

Impact was evaluated. Overall, actions supported the shift from a change system mainly focusing on civil society and private sector to one where municipalities are also involved in an equivalent way. Actions also brought more vision, organization and planning activities and helped to balance networks and networking.

So, in the end, everyone wins. Well, not quite. Suppliers almost did not play, staying as ‘substitute players’. Businesses and Controlled entities were also ‘under-used’.

This was just the first round, and the learning/playing keep on-going.

G. DIVING DEEP & DREAMING BIG: AN INTEGRAL APPROACH TO TRANSITION GOVERNANCE

“To find a path that can lead us out of the sustainability crisis is to do the impossible, and I love everyone who is crazy enough to try”

Malena Ernman

(Greta Thunberg, Ernman, Thunberg, & Ernman, 2018, p. 205)

1) Research unfolding

The *Municipalities in Transition* (MiT) prototype is a systemic instrument for supporting (trans)local transition through reflexive governance. It is the response to the research drive, namely, to look for effective instruments to support transition governance. As a prototype, and besides testing it (something shared in the previous chapter), the MiT instrument needs to be confronted with existing practical and theoretical knowledge. This confrontation is part of the third stage of this transdisciplinary research (page 39), and it aims at (re)integrating the cocreated knowledge.

To promote this confrontation/(re)integration of knowledge (page 44), I resorted to the *Dive Deep & Dream Big* project (or *Dive Deep*, to shorten). The Dive Deep was set as a collaborative inquiry and started in July 2019. Individuals and organizations working in different contexts were invited to get together to share knowledge and explore new pathways leading to translocal empowerment. The MiT instrument was actively brought into the discussion.

The Dive Deep inquiry process was expected to play a bridging role (Macedo, 2020a), acting as a small think-tank or forum that could provide some agreement and new ideas and catalyze “communication across the panarchy of institutions and ecosystems”, as advocated by Garmestani *et al* (2008, p. 1053).

The process was mainly funded by KR Foundation and facilitated by the Transition Network. Several organizations came on board, including Anthropocene Actions, Bioregional, C40, cE3c/University of Lisbon, CTRLShift, ECOLISE, Forum for the Future, Happy Museum project, Hum, Municipalities in Transition project, New Weather Institute, Permacultura

Íbera, Permaculture Association, Rapid Transition Alliance, Red de Transición, Resilience Earth, Transition Scotland and Université du Nous.

The central piece of the Dive Deep inquiry process was a 5-days meeting event in Brussels (5th-9th March 2020). Forty-seven people participated, ages 20-78. Participants' expressed motivations were related to learning and exchanging knowledge, networking and the opportunity to set new joint forces towards transformation. The facilitation of the event was inspired by Theory U and will be presented in detail.

A rich mix of catalysts, intermediaries, frontrunners, drivers and visionaries was gathered and expressed satisfaction with the networking and socializing process. Social and political capital were enhanced. Also, the learning process was supportive, allowing strong emotions to emerge through in-depth discussions, psychodrama and multi-sensory experiences. Time and space for the unexpected was allowed.

In the Dive Deep inquiry process there was a lack of content, debates were not always properly informed with existing knowledge nor systems practice, and there was limited time to work on possible pathways. This led to an intense polarization, allowing to illuminate the 'blind spot' of transition efforts, namely the stretch between action and acknowledging trauma. Only partial catharsis and limited conciliation occurred, and no significant effort has been made to find creative responses to differences.

A new narrative of change is emerging from the Dive Deep process, in the border of inner and outer transition, integrating self-care, community care and global care, with cultural change as a leverage point. There is an understanding that by balancing power and addressing privilege, it might be possible to curate places of inclusion and connection that take advantage of edges, safe zones for expression, bringing in memories from the elders and longings for the desired futures.

A proposal for an integral approach to transition governance is presented in this chapter by translating this new narrative of change into action. The governance framework is centred around renewal and connects polarities, integrates head, heart, and hands, and it is expected to allow us to move from domination to imagination.

In short, and from the perspective of this thesis, the Dive Deep fulfilled two main objectives:

- It allowed to confront the cocreated MiT instrument with existing knowledge in scientific and societal practice (the MiT instrument was presented and discussed in the event), thus contributing to the third stage of the transdisciplinary research, namely the (re)integration of knowledge.
- It allowed to illuminate some of the root causes of our unsustainability and the ‘blind spots’ of the MiT instrument⁵⁴, providing an integral approach to transition governance, appropriate to face the scale and urgency of change.

I will now focus in presenting the inquiry process in more detail, namely describing what happened and who participated and why.

2) The inquiry process

The *Dive Deep & Dream Big* project was set as a collaborative inquiry with the question: “How can we better support people to co-create and sustain ambitious and inclusive responses to the climate and ecological crisis at a municipal scale?” (*Dive Deep & Dream Big*, 2019).

The expressed intention was to gather a “rich mix of activists, practitioners, politicians and others who have the skills and capacity to explore this issue, focusing on the town/city scale” in order to “develop and participate in an experimental process, map and share our experience, knowledge, practice and perspectives, build trust, listen deeply to what’s needed and stretch our understanding of what’s possible” (*ibid.*).

The Dive Deep & Dream Big project was initially designed for a period of nine months, from July 2019 to March 2020, latter extended until July 2020. The goals were:

- To map ongoing initiatives and pool resources relating local efforts for systemic transformation.
- To look for synergies that could catalyse these efforts, exploring new ways to respond to the urgent needs and opportunities that are currently emerging.

The central piece of the process was a 5-days meeting event in Brussels (5th-9th March 2020). Forty-seven people participated, mainly coming from the United Kingdom (40%) and Belgium (30%). Ages ranged from 20 to 78 years old, and there was a majority of female

⁵⁴ As expressed in the research question, I was looking for a “comprehensive governance instrument”. After the co-creation stage, I had the sense that the MiT instrument could provide an effective way to (re)organize and reinforce transition efforts, but something ‘else’ was needed to go ‘deeper’. My immersion in climate action (Appendix A) provided the insight that there were ‘unresolved’ issues that could not be met by ‘simply’ supporting existing collaborations.

participants (62%). Most of the participants had multiple and diverse occupations and firm commitments with sustainability transitions, acting as practitioners (e.g., Permaculture Association), experts (e.g., Université du Nous, Resilience Earth), networkers (e.g., C40 cities, Bioregional, Forum for the Future) and activists (e.g., Extinction Rebellion).

There was the purpose of working with emergence, so no concrete outputs or outcomes were expected in advance. This approach is characteristic of transdisciplinary research and relates to the need of dealing with complexity and allowing ‘room’ for the unexpected to manifest (Everitt & Robertson, 2007).

The inquiry process held during the five days event is represented in Figure G.1. Concepts used to name the sequential phases come from the *Theory U* (Scharmer, 2009), that was used as an inspiration for the facilitation process. Theory U is considered an effective tool to promote institutional innovation by investigating the deeper sources of our emotional drives and responses (Woodhill, 2010), producing productive conversations among all key stakeholders that have the potential to explore a new world (Scharmer, 2009, p. 81). Theory U allows to connect spirituality with management (Nullens, 2019) in a non-conventional way, designed to respond to a world in crisis (Heller, 2019).

The path of social transformation using Theory U begins with a contemplative practice intended to help suspend habitual patterns of thinking, making possible the co-creative state of ‘presencing’. This stage, the downswing of the U, is followed by a collective meditation to facilitate the creative, collaborative crystallization of new ideas, leading to prototyping and mainstreaming of innovations (Hardman & Hardman, 2014).

Accordingly, activities facilitated in the Dive Deep event (Table G.1) included deep listening of the challenges, by embodying the stories of our times; connection with deepest sources of self and will, allowing themes to emerge; cocreation in groups and open spaces (H. Owen, 2008); celebration and closing. As intended, it was an effective self-organized process.

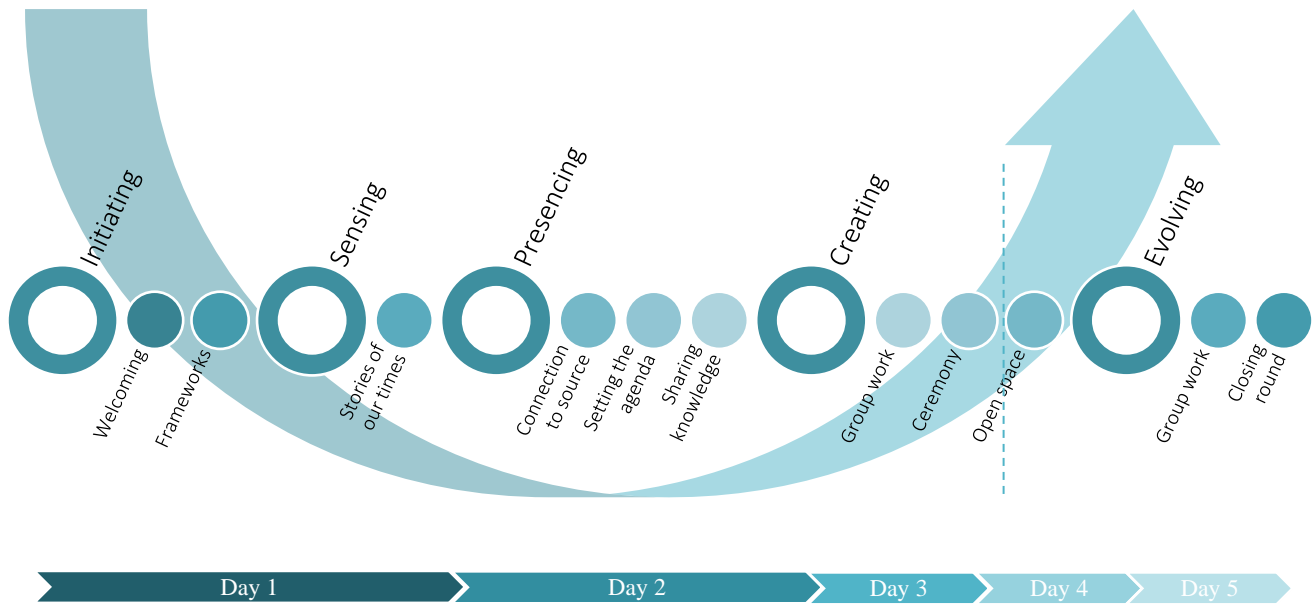


Figure G.1 – Unfolding the *Dive Deep & Dream Big* inquiry.
Showing the main phases (bigger circles) and some of the activities included (smaller circles) and the timeline.
The dash line represents a critical moment happening on day 4.

Table G.1 – *Dive Deep & Dream Big* inquiry: the processes and activities developed during the 5-days event held in Brussels with people involved in sustainability transitions.

Processes and activities	Methods and techniques
Initiating	Welcoming stage, establishing cocreation groups, sociometry exercises (Moreno, 1953), discussion around sustainability frameworks
Sensing	Exploring ‘stories of our times’ through dramatization (Scategni, 2005)
Presencing	Guided meditation recalling the roots and purpose of our work, coproducing the agenda, sharing knowledge
Creating	Group work on chosen topics and ceremony, also using open space technology (H. Owen, 2008). In between, there was the need to deal with polarization with a mapping exercise and a ‘sharing circle’
Evolving	Celebration. Further group work and closing

PARTICIPANTS

Forty-seven people participated in the *Dive Deep* event (see Appendix D). They mostly came from the United Kingdom (19; 40%) and Belgium (14; 30%) (Figure G.2). Ages ranged from 20 to 78 years old and there was a majority of female participants (29; 62%). The event took place in Brussels, in *See U*, a large temporary occupation with social and sustainable innovation, learning and experimentation purpose (former military installation).

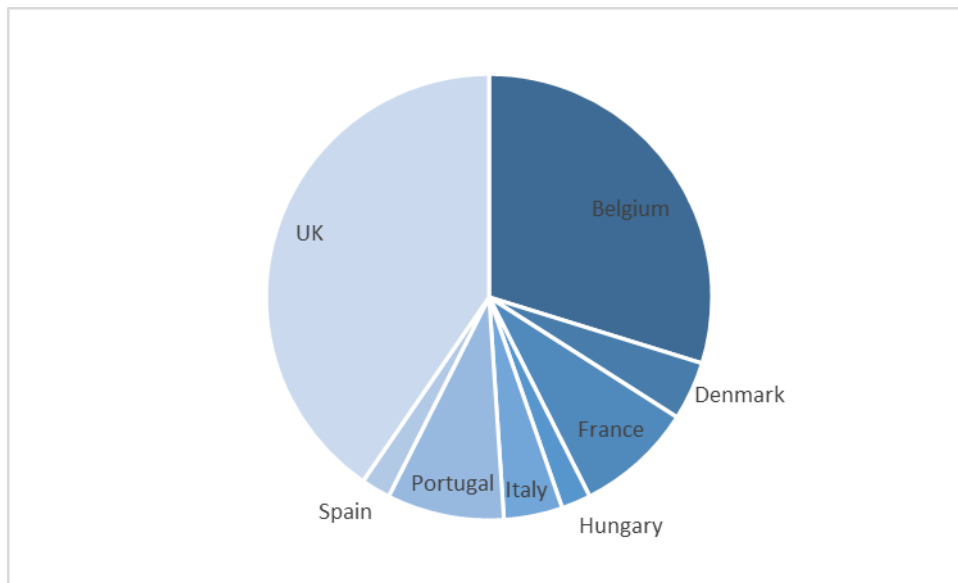


Figure G.2 – Dive Deep participants' country of residence.

Most of the participants had multiple and diverse occupations and strong commitments with sustainability transitions. Around one third (17) could be considered practitioners, mostly working with the Transition movement in Belgium, Hungary or UK and within the initiative *Municipalities in Transition*. These also included connections to permaculture, climate action, and people working in the private and cooperative sectors. Occupations were diverse and included shamanic celebrations, ecopsychology or supporting museums.

Another third of the participants (14) were connected predominantly to knowledge, mostly working as (action) researchers, educators, trainers, consultants and also facilitators, within universities, cooperatives or informal groups. These included producing documentaries and writing books. Topics included mindfulness, energy transitions, social justice, resilience, democracy and issues related to power and grief.

Networking and scaling sustainability frameworks were also the major calling for a significant group of people (10), including coordinators from Transition Network, C40 cities, Bioregional (One Planet Living) and Forum for the Future.

Many of the participants' activities also included some kind of activism on climate and social justice. This was the main occupation for some (5, with younger ages) working with XR, community groups and the citizen lobby La Bascule.

While around half of the participants were already working with municipalities, one was actually working in a municipality in charge of ecological transition and citizen innovation.

When asked about how they expected to benefit from the event⁵⁵, participants primarily mentioned the opportunity for learning and exchanging knowledge: *“Learn from others and share what we know”, “Learn from examples elsewhere, including case studies / stories we can use to connect more with municipalities where we are”, “... increase the impact of my work both through widening and cross-fertilization of my perspectives and ideas” (...)*

Secondary topics (mentioned by half of the participants) included networking: *“meeting other shift makers, finding projects I may be supportive to”, “connections”, “collaborative networking opportunities. This is of specific import to a study such as mine, which while being locally focused, must at the same time take a systemic view as energy systems have international networks and consequences” (...)*

And also, the opportunity to set new joint efforts towards transformation: *“To leave with clear pathways for action at the municipal scale, with a stack of tools and resources, and new people to work with.”, “potentially to help support/be part of some new/emergent thinking”, “creating new ideas for social change” (...)*

Related to this, the opportunity for bridging and convergence was emphasized: *“Deepened knowledge on how to build bridges across movements”, “alignment” (...)*

Other relevant expectations included inspiration: *“Coming away with some (surprising) connections or ideas to challenge and inspire my ongoing work” (...)*

And personal development: *“Opening my mind and conscious” (...)*

The prospect of having enough time for a deep reflection was underlined: *“It’s a bit like breathing in, and breathing out. The chance to think together is like a deep breath. We need one every once in a while, to calm our blood, create focus, dump distracting details. It’s time to reflect. Personally, I need this, though if I’m honest at a local level few other people see the need for this. So I carry the story, and this helps me rethink it, hone it and keep on track. Sounds a bit selfish perhaps, but it’s a useful role, a difficult one to hold, and needs nourishing sometimes.”*

⁵⁵ Qualitative data from the application form (open-ended question), with thematic analysis and a compilation of citations from participants’ answers

PREPARATION

During the *Dive Deep* process, and using holacracy, sociocracy and similar governance approaches⁵⁶, several roles and circles were created for organizational purposes, including a core group, an invitation circle, a communication & communities circle, a logistics & care circle, a design & facilitation circle and a mapping & tools circle. I played the role of embedded researcher, mostly observing but also actively supporting and participating in the process.

Regular organizational meetings and consultations (a support group was created) were held starting July 2019. In August 2019 the final location for the event was decided, considering the ease for travelling and the concentration of diverse initiatives. Initial dates for the event (November 2019) were postponed mostly due to the difficulty in dealing with the organizational demands. These initial dates were used for an in-person gathering of the group directly involved in the preparation.

Initial invitations were sent in October 2019, primarily through a ‘cascading’ process starting from the people and organizations involved. Around 100 applications were collected in this first phase and the process reopened in February 2020, additionally gathering 28 applications. A digital platform on Conferize® was used for communication purposes⁵⁷.

Two on-line meetings were organized with participants in advance of the gathering (24th and 26th February 2020).

MAPPING

One of the intentions was to support participants in the *Dive Deep* inquiry to identify, share and understand what relevant tools, models, resources are available and share them more effectively with those who could benefit beyond the inquiry. Overlap and potential synergies with other ongoing initiatives were discussed, namely the wiki from the European Union funded project UrbanA (Urban Arenas for Sustainable and Just Cities)⁵⁸ and the ECOLISE wiki.

The mapping & tools circle suggested to collect stories (before, during and after the event), focusing on personal accounts of experiences of using particular tools and methods, including experience, outcomes and reflection. A call for contributions was sent four days before the

⁵⁶ The mentioned governance approaches distribute authority and decision-making throughout an organization, defining people not by hierarchy and titles, but by roles (Robertson, 2015)

⁵⁷ <https://www.conferize.com/divedeepdreambig/event>

⁵⁸ <https://urban-arena.eu/sustainablejustcities-wiki/>

event and four stories were collected and shared in the event itself (including the MiT process).

Other mapping activities were promoted in the event.

THE EVENT

The inquiry process held during the 5 days event was represented in Figure G.1 (page 165). The process was cocreated and supported by a group of 7 experienced facilitators (see Appendix D).

On **Day 1**, the initial welcoming stage included framing the inquiry (Figure G.3), individually and collectively acknowledging the persons and organizations that allowed the group to be there, presenting the program (“*the flow/water that will carry us through*”), setting group agreements, establishing *home groups* and a mapping exercise.

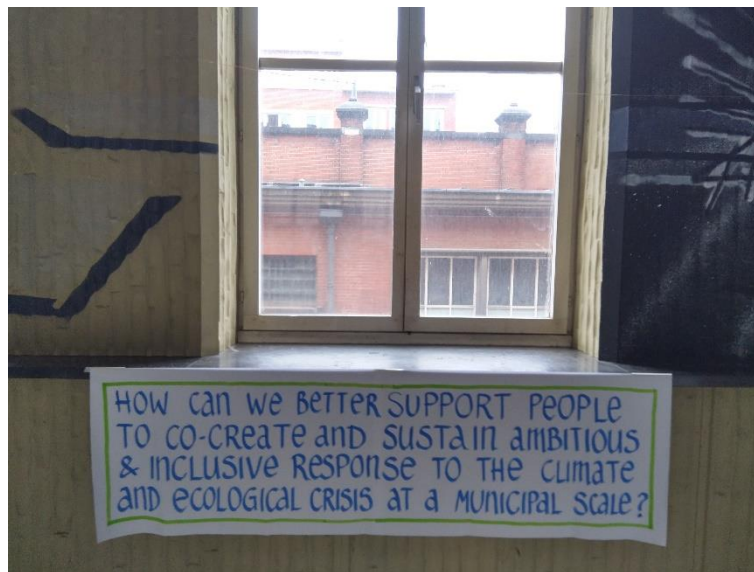


Figure G.3 – The *Dive Deep* inquiry question, made visible in the meeting room.

Home groups clustered participants and were meant to support the cocreation process (read more on this in page 181). They were based on the *8 shields* mentoring model (Young, Haas, & McGown, 2008) integrating learnings from natural processes and intended to rebuild “nature-connected, intergenerational mentoring communities” (8 Shields Institute, 2020). Each *shield* corresponds to a specific energetic archetype and is associated to a person’s journey through life, a time of day, season of the year and a cardinal direction, being used as metaphors for patterns on the learning process.

The *mapping* exercise followed the principles of sociometry (Moreno, 1953) and was intended to facilitate the process of group building and to support participants' awareness of differences and relations among the group. The diversity of cultures and roles was discussed. Several frameworks were then presented and debated, including the *iceberg model* to support systemic thinking (Figure G.4) and *four quadrants* from integral theory (Wilber, 2005), namely the distinction between inner and outer transition. The *regeneration model* (Reed, 2007) was used to contextualize different 'stories of our times', namely *renewal*, *greenwash*, *extractive/oppression* and *breakdown/chaos* (in a sequence from regenerating to degenerating systems, with growing needs of energy).

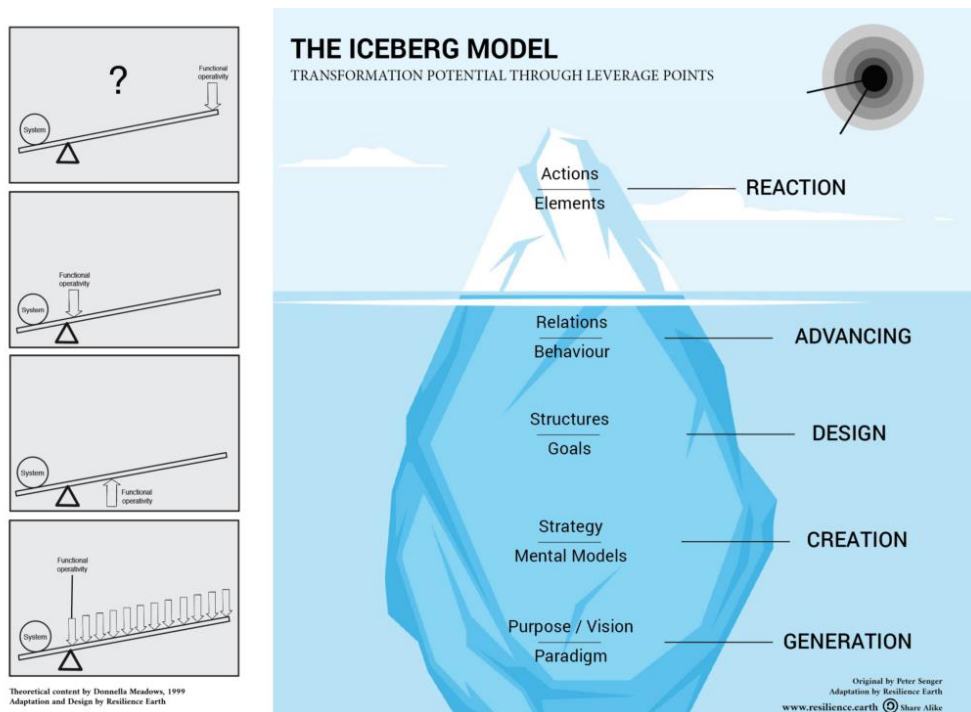


Figure G.4 – The iceberg model
(original by Peter Senge, adapted by Resilience Earth).

These stories were explored by different groups of participants, challenged to actively embody the related constellation of archetypes or “collective models on which the kinds of behaviour of human existence are based” (Scategni, 2005, p. xi). After the dramatization, those who have played roles (that included non-human beings and future generations) and watched the scene were invited to express their emotions and insights.

The end of Day 1 was used to share feelings: “*Happily dancing with roles and models*”, “*Déjà vu but confident*”, “*Deeper, deeper, deeper*”, “*Happy to be with people that think they don’t have all the answers*” (...)

Day 2 started with a guided meditation to recall the experiences from the previous day. Feelings and intentions were shared between participants and an energizer was played. Similar moments were performed during all of the event and most of them will not be mentioned here for the sake of simplicity. However, we should emphasize their critical role in supporting the learning process and the distinctiveness relating ‘business-as-usual’ events.

The second day was devoted to deepening the connection with the overlying inquiry and each other’s work. A sequence of activities was facilitated for “*setting the agenda*” for the *Dive Deep* process:

1. Guided meditation recalling the roots and purpose of our work, the sources of energy and inspiration.
2. Sharing unfiltered thoughts (“*happy stories*”, “*how do we slow down?*”, “*allow ourselves to dream*”; “*acknowledgement of trauma*” ...).
3. Individually suggesting DEEP topics (Figure G.5).
4. Thematic clustering (Figure G.6).
5. Group discussions.

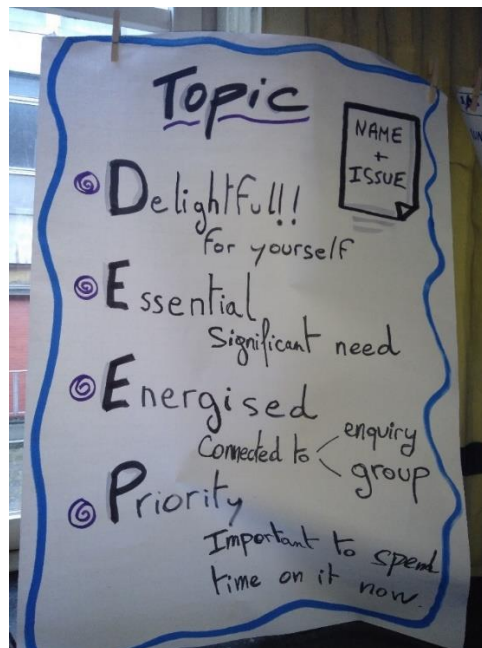


Figure G.5 – Setting the *Dive Deep* agenda: criteria for the topics to be discussed.

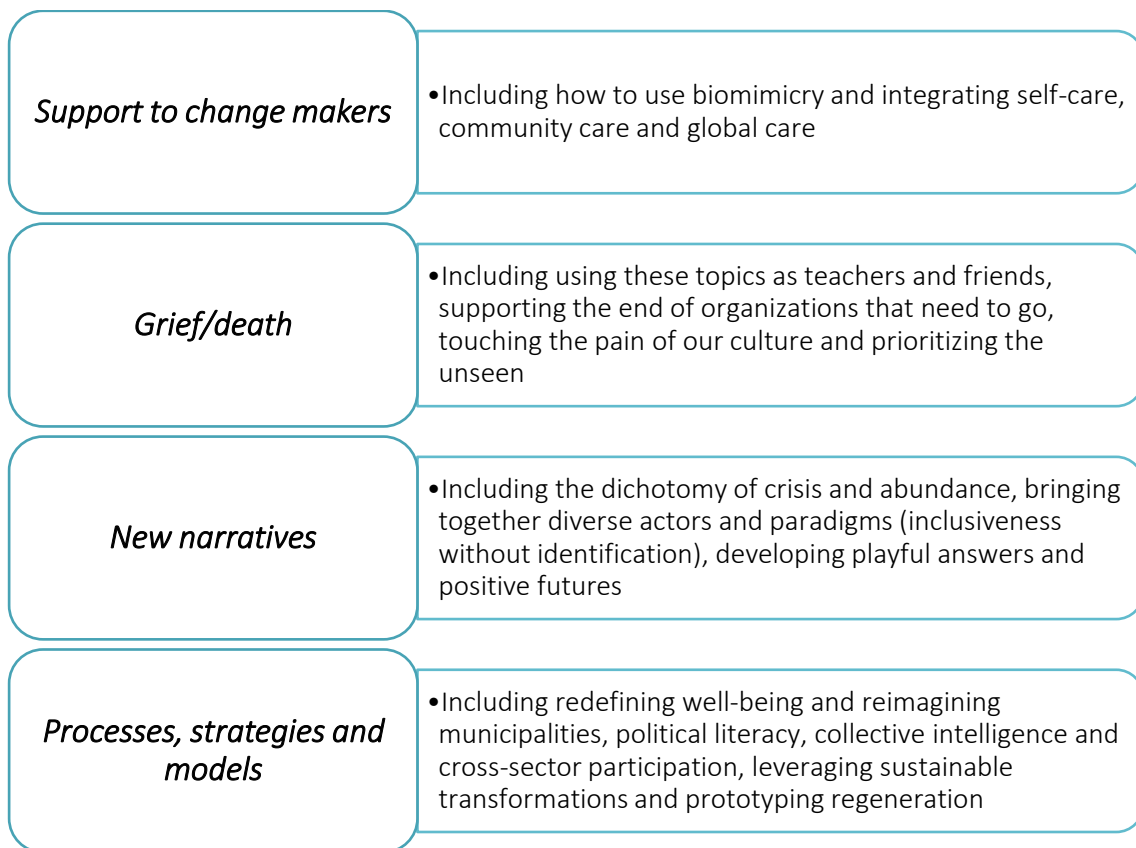


Figure G.6 – Themes set for the discussion in the *Dive Deep* inquiry, by clustering topics emerging from participants.

The rest of Day 2 was dedicated for sharing knowledge between participants, namely through short presentations and workshops⁵⁹.

The morning of **Day 3** was mostly used for group work (Figure G.7). Dynamics and activities were diverse and ranged from livable debates to psychodrama. The group on *processes, strategies and models* was the greatest in numbers and went through processes of division and coalesce. After lunch, each group presented their work and connections between themes were briefly discussed. A ceremony closed the day, exploring items to ‘let go and let in’.

⁵⁹ Themes included: Future Leeds Climate Hub; Dive Deep Research; Global Sustainable futures: Progress through partnerships; The Role of the School System in Perpetuating the Old Paradigm; Municipalities in Transition; Resilience cycle; One Planet Living; Qi Gong; Deeper democracy; Food Journey.



Figure G.7 – Thematic group work on day 3 of Dive Deep.

Day 4 was expected to support integration and convergence of ideas, grounded on the inquiry questions, and followed by an exploration of possibilities using *open space technology* (H. Owen, 2008), ending in celebration.

Instead, and following a call on feedback, a polarization started to become clear pointing to differentiated needs from participants. Some manifested requests for more practicality and deeper discussions of content, while others wanted to deepen the process, exploring emotions and truly facing power imbalances and the scale of emergency.

This polarization was further explored through a mapping exercise and a *council*⁶⁰, and included moments of vibrant manifestation of emotions (some participants were crying, and hugging, manifesting feelings of grief and solidarity related to environmental destruction and intergenerational injustice). Limited conciliation took place.

Some of the many thoughts and feeling shared included: “*Anger and grief for not exploring the inquiry question*”, “*We need to express emotions but not get drawn on them*”, “*We are just tiptoeing around strong emotions*”, “*Do we need to ‘explode’ the process?*”, “*Trusting*

⁶⁰ Participants sitting in a circle and talking ‘from the heart’.

the process, because we are hearing our different needs”, “Enjoying the process and knowing that there are no ‘solutions’”, “How to reconcile organizational culture and the spaces where ‘truth’ happens?” (...)

This moment can be considered a critical turning point in the event (Figure G.1, page 165) and will be discussed in the next chapter (The explosion, page 186).

The planned *open space* then happened, with group discussions on:

- New engagement strategies (including films and global citizens assemblies).
- Places for creativity (bringing memories and imagination forward).
- Collaboration at municipal level (mapping frameworks and strategies).
- Inclusivity and regeneration (connecting polarities and keeping power in place).

The intense Day 4 ended with informal celebration, including sharing written messages, open bar, lively music performed by several participants, dance, and relaxation.

The last day, **Day 5**, was used for further group work (Figure G.8), with coalesce around two themes, namely:

- Integration and connection between polarities (facing the complexity of our relationships, discussing inner shadows and how to rise from our shame).
- ‘Change pirates’ (acknowledging the ecology of movements and getting beyond competition, having imagination run wild, creating roadmaps for facing climate emergency, setting next steps).



Figure G.8 – Open space discussion on day 5 of Dive Deep.

Finally, groups shared their learnings, some next steps were discussed, the journey was recalled through meditation, gratitude was manifested showing appreciation non-verbally and closing done (including each participant sharing three words to reflect his experience).

FEEDBACK

To support the learnings, a post-event on-line survey was prepared (Annex E), and 23 responses were collected from participants, largely in the week that followed the meeting. The facilitation team met to discuss the information collected and their own impressions.

Feedback from participants related to the organization will now be discussed. While not providing direct insights to answer the research question, this data is included in the thesis to support an evaluation of the research process.

When asked about what worked well for them⁶¹, most people (> 80%) mentioned the networking and socializing process: *“Meeting lots of interesting people that I want to stay in contact with and maybe work with in the future.”* (...)

The (facilitated) process was also largely cited (> 60%) as being responsible for the positive experience: *“The kindness of the facilitators, who were open and thoughtful in their responses”* (...)

Several topics were mentioned related to *“the possibility to include deeper truth and feelings with action”* and the opportunity for self-development (*“personally reflective and deeply valuable”, “a decision to dive deep within myself rather than outside of myself”*). The venue and logistics were also referred (8; 35%).

When asked about what surprised them, responses were quite diverse and often divergent. Around one third mentioned topics related to the (deep) emotions that surfaced and were debated: *“Food Journey, Ceremony, Constellations!! That so many deep emotions came out in the group”, “I had no idea that we would get to a place of talking about grief and loss and challenging the dominant culture in such a way”* (...)

We also questioned the participants relating what “stretched/challenged” them. Around 2/3 of the participants mentioned process related aspects, manifesting varied and often contrasting perspectives, that will be explored in the results’ section. The following statement captures this complexity: *“The stretch between action and acknowledging trauma... (...) was there*

⁶¹ Qualitative data from the evaluation form (open-ended question), with thematic analysis and citations from participants’ answers.

enough stretch? how to accommodate very different cultures - people wanting stretch around content; people wanting stretch around emotional journey; people wanting stretch around modes of exploring, and those for whom the stretch is too much and bounces them out.”

The jumble of intense experiences is visible when different responses are compared, but quite frequently also within individual answers. When asked to summarize the experience in five words, one of the participants wrote what hopefully was a progressive journey: “*Frustrating alienating reengaging rewarding rich*”.

However, even if the extremes of feeling frustrated or rewarded are both abundant, the most represented theme in the ‘word cloud’ is by far about connections (which is coherent with the importance given to the networking process in assessing what went well).

When asked to rate different aspects of the event (Figure G.9), once more “networking & engagement” stands out as positive (just overtaken by the food journey evening).

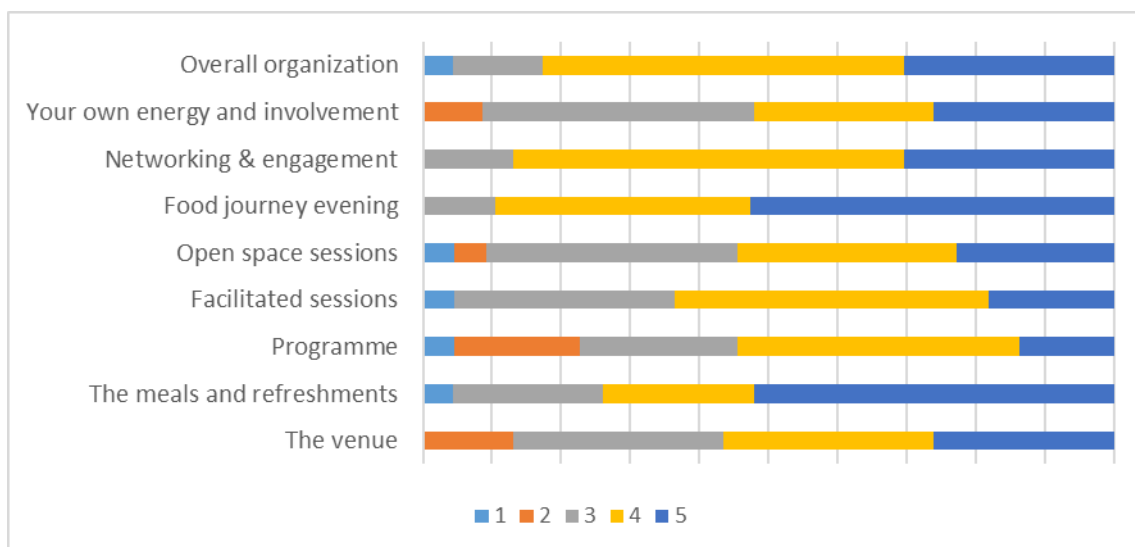


Figure G.9 – Evaluation by participants of different aspects related to the *Dive Deep* event.
(ratings from 1 = unsatisfactory to 5 = excellent)

Overall organization is evaluated as positive, while the venue’s appraisal seems to be quite a contentious issue. The programme, even if rated as positive, is the aspect with lower general evaluation.

Expectations were not fully met, even the event was considered quite useful and even a life changing experience for many (Figure G.10).

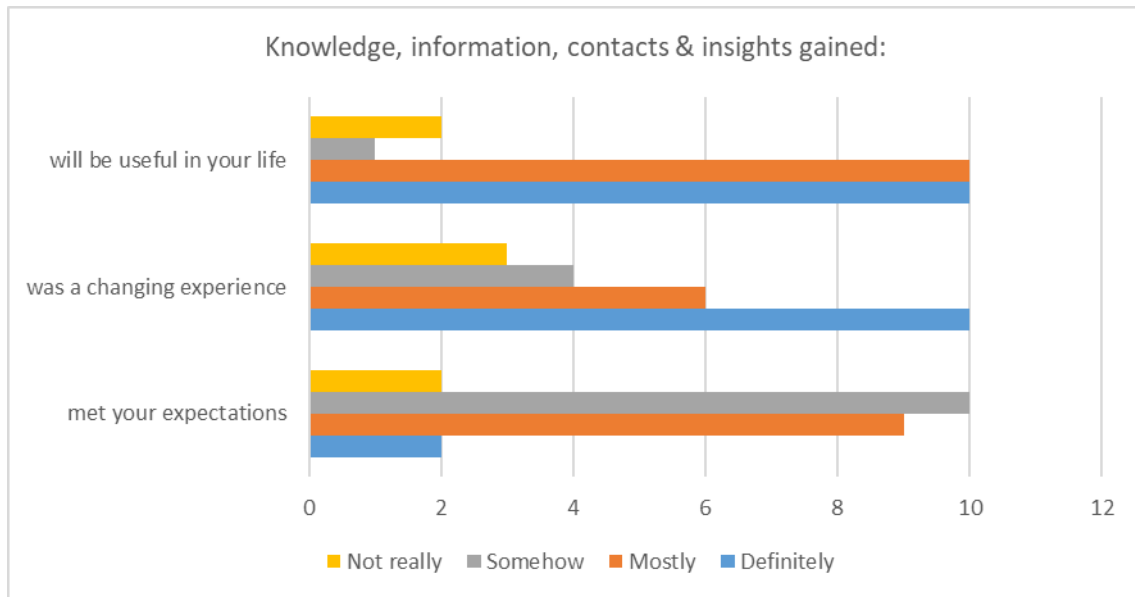


Figure G.10 – Evaluation by participants of the “knowledge, information, contacts & insights gained” in the *Dive Deep* event. (multiple choice)

Maybe this comment that was added to this specific question can capture the complexity of the impact: *“My expectations were different - I imagined a more structured, practically oriented journey. I am very happy with how it turned out though! it felt like it spoke to me in ways I don't really understand. the challenges we approached are profoundly relevant to my work in conflict and the insights will be so useful. feeling teary as I write this. incredibly grateful and devastated.”*

3) Evaluation

I will now focus on evaluating the *Dive Deep* inquiry process, namely relating the Brussels’ gathering. For evaluating results, I use a framework based on the dynamics of self-organizing, complex adaptive systems (Innes & Booher, 1999), providing a set of process and outcome criteria (Table G.2). According to this framework, consensus building processes are “not only about producing agreements and plans but also about experimentation, learning, change, and building shared meaning” (*ibid.*, p. 412).

This analytical approach suits the research purpose (page 34) of exploring how collaborative transition governance can be sustained in “today’s complex, uncertain, fragmented policy context” (*ibid.*, p. 413). Innes & Booher name the current period of social transformation as the ‘edge of chaos’ (what I call tipping point times) – periods where innovation and dramatic shifts in activity patterns can occur, and systems can move to higher levels of performance if adequate collaborative planning activities occur. This framework has already been used in the context of collaborative governance (e.g. Emerson, Nabatchi, & Balogh, 2012).

Table G.2 – Criteria for evaluating results from collaborative planning processes (Innes & Booher, 1999).

Process Criteria	Outcome Criteria
<ol style="list-style-type: none"> 1. Includes representatives of all relevant and significantly different interests. 2. Is driven by a purpose and task that are real, practical, and shared by the group. 3. Is self-organizing, allowing participants to decide on ground rules, objectives, tasks, working groups, and discussion topics. 4. Engages participants, keeping them at the table, interested, and learning through in-depth discussion, drama, humor, and informal interaction. 5. Encourages challenges to the status quo and fosters creative thinking. 6. Incorporates high-quality information of many types and assures agreement on its meaning. 7. Seeks consensus only after discussions have fully explored the issues and interests and significant effort has been made to find creative responses to differences. 	<ol style="list-style-type: none"> 1. Produces a high-quality agreement. 2. Ends stalemate. 3. Compares favorably with other planning methods in terms of costs and benefits. 4. Produces creative ideas. 5. Results in learning and change in and beyond the group. 6. Creates social and political capital. 7. Produces information that stakeholders understand and accept. 8. Sets in motion a cascade of changes in attitudes, behaviors and actions, spinoff partnerships, and new practices or institutions. 9. Results in institutions and practices that are flexible and networked, permitting the community to be more creatively responsive to change and conflict.

I will start the evaluation by using the process criteria (to see if the collective inquiry was properly handled) and then the outcome criteria (to harvest what came out of the process) (Table G.2).

WHO WAS MISSING?

The **first process criterion** is about the inclusion of representatives of all relevant and significantly different interests. Including as many stakeholders as possible is believed to lead to a more satisfactory and just process and one that serves the common good (Innes & Booher, 1999). Nonetheless, sustainability initiatives are not necessarily hindered by the absence of certain actors (Hauck et al., 2020).

The intention was to gather a “rich mix of activists, practitioners, politicians and others who have the skills and capacity to explore this issue, focusing on the town/city scale” (*Dive Deep & Dream Big*, 2019). We can thus conclude that the process was intended to mobilize front-runners committed to sustainability efforts at local level.

Considering the mix of participants, we can conclude that there was some heterogeneity in terms of gender and age groups. In geographical terms there is an evident concentration on two countries (UK and Belgium), accounting for 70% of the participants, leaving Southern and especially Eastern Europe underrepresented⁶².

In terms of backgrounds and occupations, there was a clear lack of city officers and politicians⁶³ and the European Union institutions were not represented. The intention of having funders present was also not fulfilled. Media, the private and the technology sectors were underrepresented, and organizations like impact hubs and social innovation labs as well.

The Transition movement had a clear dominance, with almost 2/3 of the participants having concrete connections to it. This was probably a consequence of the insufficient distributed organizational efforts in terms of disseminating the call and explains the greater numbers of people coming from the UK⁶⁴ (where the movement started and where Transition Network is based).

The group diversity was considered by participants both as positive and insufficient. Both these answers came to the question “What surprised you?": *“I thought there will be a more*

⁶² Even if not exclusive, the process is focused on the European continent. However, looking at nationalities and ethnic backgrounds, we could conclude that all Continents were represented.

⁶³ The coronavirus outbreak can be partially accounted for this fact (several representatives from local and regional administrations were confirmed but decided to cancel). Organizations like ICLEI and Covenant of Mayors were not involved.

⁶⁴ This can be a curious fact taking into consideration that the United Kingdom's withdrawal from European Union (‘Brexit’) had just taken place (*“A huge sadness as I felt very European just as we are planning to leave...”*).

"diverse" public" versus "The group diversity and the willingness to deep talk and listen from the great majority of the participants".

As previously underlined, networking was globally one of the most valued aspects in the event: *"Meeting many wonderful people and hearing about their stories and work" (...).*

Nevertheless, participants signalled several absent groups, including *"victims" and the "unprivileged": "The relative absence of "POC", given the ethnic diversity of Brussels", "the young, the old, the non-white, the unseen and unheard, the ones truly connected to nature, the ones who are truly shaping a radically new future, the ones who acknowledge the importance of the emotional", "organizations and networks with more resources and 'power'", "people from different class and races, and since we spoke a lot about them, refugees."*

In general, we might conclude that all the critical actor roles in sustainability initiatives (Hauck et al., 2020) were present, namely catalysts, intermediaries, frontrunners, drivers and visionaries.

We can also see from the expectations mentioned (and the committed participation in the process) that, for the great majority of the participants, sharing knowledge was the main motivation. This is in fact the cornerstone for a process like this. A precondition for success is to consider knowledge as a public good, leading people to share it because it is the 'right thing to do', i.e., from community interest rather than self-interest (McLure Wasko & Faraj, 2000). When asked how he was expecting to benefit from the process, a participant answered: *"by having a planet safer - by supporting and benefiting of the caring"*.

HOW DID IT GO?

THE AIM

The **second assessment criterion** (Table G.2, page 178) questions if the process "is driven by a purpose and task that are real, practical, and shared by the group".

We can easily argue that the inquiry question – "How can we better support people to co-create and sustain ambitious and inclusive responses to the climate and ecological crisis at a municipal scale?" – expresses a real and practical purpose. One of the intentions was to support emergence, so no fixed 'goals' or 'tasks' were set ahead of the event. Nevertheless, the purpose and intentions were specified and widely shared before and during the event (*Dive Deep & Dream Big*, 2019):

“We want to work skilfully and creatively with what emerges rather than drive ourselves towards predetermined outputs and outcomes. However, we are seeking to achieve the following by March⁶⁵ 2020:

- Relevant models, resources and good practice will have been mapped and shared before, during and immediately after the deep dive event; motivating, supporting and constructively challenging local politicians, officials and citizens to move from climate emergency declarations and other statements of intent to designing and implementing meaningful next steps towards one tonne living.
- The design of our interactive and experiential deep dive process will have been tested and shared ready to be adjusted and replicated with new actors in different contexts.
- Proposals for more structured collaborative interventions capable of catalysing and supporting ambitious and inclusive systemic change at the municipal scale will be under development with, and for, potential funders.”

Was this clear enough and ‘shared by the group’? During the event, several aspects were questioned (and partially debated) relating who is “we” or what is the “municipal scale”. Also, some proposals were offered to introduce changes: *“The inflexibility of the inquiry question - the question itself did not seem to be ‘on the table’ for the conference and although changes to it were suggested, they were never incorporated. Similarly, it never became an option that we could try to answer more than one question, as a whole group.”*⁶⁶

We might conclude that the shared ownership of the purpose could have been more deeply supported. But, as we will discuss in the following topic, cocreation was fully endorsed.

COCREATION

This **third process criterion** (Table G.2, page 178) asks if the process was “self-organizing, allowing participants to decide on ground rules, objectives, tasks, working groups, and discussion topics”.

One of the manifested intentions of the *Dive Deep* was in fact to “foster co-responsibility, sharing power and inviting all participants to help shape both the inquiry process and its outcomes”.

⁶⁵ Postponed to July.

⁶⁶ Included in the response to “What surprised you?” (feedback survey).

In the beginning of the event, *group agreements* were discussed and settled. Also, participants were allowed to freely join *home groups* with specific tasks like welcoming people, supporting active participation and emotional well-being, timekeeping or maintaining records. The use of *open space technology* (H. Owen, 2008) allowed participants to decide on topics to be discussed and self-organize workgroups. Right in the beginning, a facilitator reminded that everyone should be “*aware that we might be in a position of structural power and not taking advantage of that*”.

Appreciation for the possibility to jointly construct the process was manifested: “*having a chance to co-develop ideas with others*” was mentioned as one of the highlights. Other participant mentioned that “*this was a live complex democratic action which add rich colour to the reading I have done on deliberative democracy*”.

But inevitably, cocreation is never universally acknowledged: “*I was surprised and found it frustrating when people expressed that subjects they wanted to discuss and questions they wanted to consider weren't present in the room as I felt there was so much possibility to influence the content of the programme. Perhaps it just took people time to settle into that possibility?*”⁶⁷

THE MOOD

The **fourth criterion** (Table G.2, page 178) states the importance to engage “participants, keeping them at the table, interested, and learning through in-depth discussion, drama, humor, and informal interaction”.

It is well established that emotions play a central role in any learning process (Dirkx, 2001). It is argued that “humans react and learn through the lens of emotionally laden experiences” (Shuck, Albornoz, & Winberg, 2007, p. 108). During the event, several methods and activities were promoted to trigger and hold deep emotions for learning purposes. Apparently three of them caused a great impact⁶⁸: “*I didn't have any expectation, so I was surprised. But the food Journey the ceremony and the constellations were truly amazing !!!*”, “*Food Journey, Ceremony, Constellations!! That so many deep emotions came out in the group*”, “*my favourite experiences were the food journey and the ceremony*” (...)

As presented in the previous section (*the inquiry process*), constellations’ made use of psychodrama to explore the ‘stories of our time’. The *food journey* (Mama D, 2017) was the

⁶⁷ *idem*

⁶⁸ From the feedback survey.

most valued item in the program according to the feedback from participants (Figure G.9) and consists of “an animated, immersive, multi-sensory experience of a part of the human journey associated with the movement of food around the planet. It is part live theatre and participatory experiencing; it is part history, science and the socio-economy of food and people” (Sealey-Huggins, 2018). The ceremony was performed as a ritual and explored the landscape of personal renovation.

Other activities played a critical role, like the meditation in day 2, recalling the roots and purpose of our work, the sources of energy and inspiration. Several other informal initiatives were induced, namely coming from the *home group* expected to notice if emotions were “*alive in the room and naming/welcoming this*”, and “*supporting moments and processes for expressing emotions*”. These efforts included challenging participants to share their ‘celebrations’ for the planet, for someone else and for themselves (Figure G.11).

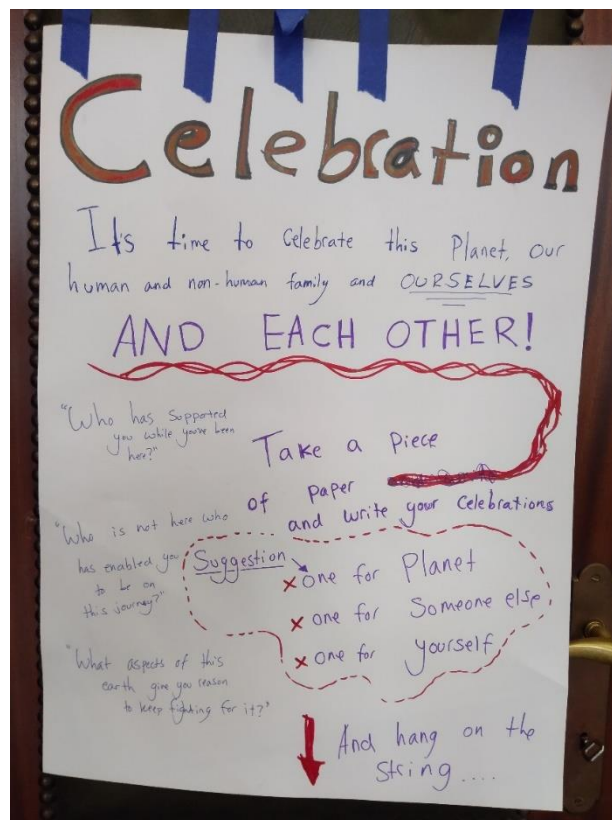


Figure G.11 – Dive Deep Participants were asked to share things they were grateful for.

As mentioned, in the beginning of the event there was a moment to express gratitude for the ones that allowed the group to be together. Exploring humour⁶⁹, connecting to positive feelings and honouring the past and future generations was equally encouraged⁷⁰, expecting that this could lead to the ‘right’ mood for the emergence of ideas of possible paths towards transformation.

Apparently, the objective of handling emotions in a good way was achieved, according to many participants that felt nourished by the process: *“Although I had a very challenging and emotional time, I am changed for the better. I found it a really beautiful, moving, supportive experience”, “I was so tired when I arrived, and felt so much better after”, “For me it was a lot of good time”, “spirit of adventure” (...)*

For sure, not only ‘positive’ feelings are needed to face the sustainability challenge. Grief for past and future losses of place, species and culture is growing rapidly and needs to be properly accounted for (Cunsolo & Ellis, 2018). This was a topic explored in several workgroup sessions and can embody personal challenges: *“The ritual and more spiritual sides. I believe these have value but since my Catholic childhood I have avoided these. Again the 4th day was difficult as this was completely new to me - I know anger and sadness. but grief I have individually avoided, and I guess been socially shielded from.”*

Were these efforts to deal with emotions too intense, taking precious time from other activities? Some participants expressed this view: *“Then Saturday afternoon, to me, was deeply frustrating. Indeed, I nearly decided to go home at that point. I entirely appreciate that there is a need for reflection and if necessary, grief, in events such as this. But if I had known that this event was going to be so dominated by an inner exploration of pain and grief and so on, I would have stayed at home.”*

Also: *“I thought it would be like a deep and rich exploration of that space where Transition meets municipalities, exploring how to shape policy, how to bring new economic thinking, new democracy models, etc etc. What I ended up with felt like a 3 day grief workshop with a useful half a day of Open Space on the end. While I don’t for a moment want to suggest that such things have no place in Transition, it wasn’t what I was expecting, nor what I feel we really need right now”.*

⁶⁹ *“The value of humour and the need for time and space to build connections and trust”* was a learning expressed by one of the participants, while another mentioned that (s)he *“was pleasantly surprised by how much humour translates across languages”*.

⁷⁰ One of the activities included moving around the space and sharing in pairs *“something that brought me joy, something that came from older generations and something we want to pass to the future ones”*.

CONTENT

Following the evaluation framework (Table G.2, page 178), I ask if the process “encourages challenges to the *status quo* and fosters creative thinking” (**fifth criterion**). We can conclude that this criterion was met, since all the process is meant to create change. Facilitation included several methods, like the iceberg model, to discuss change at a deep level. Participants were challenged to be creative, namely in their presentations, using body language and non-verbal communication.

I also ask if the process “incorporates high-quality information of many types and assures agreement on its meaning” (**sixth criterion**). Previously we discussed how emotions were deeply explored. Here, I consider if other sources of information were equally deepened, namely if debates were properly informed from ongoing research on sustainability transitions (Köhler et al., 2019), transformation (Fazey, Moug, et al., 2018), root causes (Michael Narberhaus & Sheppard, 2015, p. 24) or systems practice (Ison, 2017).

One of the manifested intentions of the *Dive Deep* was “to rigorously ground our inquiry in an understanding of the scale and types of change needed to return consumption within planetary boundaries and meet the diverse challenges of the coming decades” (*Dive Deep & Dream Big*, 2019). Looking at the inquiry process, we can conclude that formal moments for discussing knowledge about these topics was rare, and almost reduced to limited exchange between participants.

One of the participants felt challenged by this lack of content, questioning: “*Where were the guest presenters from outside the Transition movement who had things to offer to this question? Where were the real-life case studies of what this is already looking like in many places? Where were the presentations from people in municipalities about how they like to be approached, how it feels from their perspective, how we could help address their challenges? Where were the Transitioners sharing their stories about doing this work?*”

The small content that was shared was appreciated for some participants as quite positive⁷¹: “*Getting meta understanding on the transition movement (resilience cycle, iceberg model...)*”.

⁷¹ Included in the response to “What went well for you?” (feedback survey). Only 22% of the participants mentioned knowledge/insights in their responses.

According to the feedback from participants and my own perception, the reduced exploration of content was below expectations and led to the already mentioned polarization that will be discussed in the following topic.

THE EXPLOSION

The **final process-related criterion** (Table G.2, page 178), is about seeking “consensus only after discussions have fully explored the issues and interests and significant effort has been made to find creative responses to differences”.

As mentioned in the previous section (page 173), a polarization emerged on day 4, relating needs for deeper emotional work *versus* more time dedicated to content and pathways.

Facilitation efforts allowed these differences to become visible and be heard: *“I thought the steering of the process explosion was great. I managed to really let myself be held and relax into the process. I trusted the facilitation team greatly”*.

I argue that this was a critical turning point in the process. It was an intense discussion, with strong (and sometimes negative) feelings being manifested and only partial catharsis. It gave visibility to differences that are deeply rooted and most often unseen. It showed how trauma and grief, relating topics as patriarchy, colonization and (intergenerational) climate injustice need to be accounted for.

At this stage, the inquiry process reached a crossroad. After the council, where polarization was visible, the group moved to the *open space* without significant efforts being done from the facilitation to explore differences, promote conciliation, integration or some kind of convergence of sensibilities. Nor “to find creative responses to differences”, as requested by the criterion.

As expressed from one of the participants: *“I felt that the way I expressed myself at this session was inaccurate and more an emotional reaction, which it would have been good to explore with others so that we could have communicated more clearly, but again - this session was very constrained by time and I think partly as a result, it became more like a theatrical performance in which the objections and strong feelings that were raised by some, were transformed into a sort of tableau and then the conference moved on. It felt like these questions were vying for space at a table where the main event had already been decided and that it was not to be displaced.”*

As a consequence, there was somehow a cleavage between ‘heart’ and ‘head/hands’⁷² that persisted until the end of the event. Possibly a lost opportunity to discuss content related to the ethical challenge and look for practical answers to go beyond it, appropriately embracing the emotional aspects (some ideas will be discussed in the topic *Pathways* on page 191).

Nevertheless, the “*explosion*” (as it was named) brought useful “*insights into the range of 'realities' we are working with - they all have validity even if they are at times different and can sometimes put you at odds with each other (and sometimes at odds with oneself!)*”.

Or, as expressed yet by another participant, “*I thought we'll be more in building a new world than grieving the old one, but I think this step was needed. It was very interesting to me to be part of this experience. And I took lots of notes and ideas to work on for my job*”.

Box G.1 – Coronavirus and the ‘explosion’ in *Dive Deep*.

The *Dive Deep* process needed to race against the COVID-19 outbreak. A few days after the event, most of the European countries were in lockdown (Dunford et al., 2020). It impacted who was present and had many other side effects (like the need for several precautionary measures). Participants from Italy and others had to leave earlier. Some participants voluntarily set themselves temporarily apart from the group, due to light symptoms. Curiously enough, the impact of coronavirus was not integrated into the discussion.

The ‘explosion’ happened on the morning of day 4. Just after some participants had to leave and others were reintegrated. Was the ‘explosion’ influenced by the coronavirus? One of the participants shared after the event that “*the coronavirus has succeeded for the time being in re-establishing the border between ‘I’ and ‘not-I’*”.

We can speculate that this augmented separation fueled the polarization. Possibly the (hidden) fear increased the urgency to get results (and go home), putting the stakes higher. One of the participants mentioned the surprise “*that people were so negative on the 4th day. I think perhaps there was an overestimation of what we could achieve*”.

⁷² The Head, Heart, Hands principles (HHH), mentioned before, respectively correspond to the ideas of acting on the basis of the best information available, taking care of relationships and emotions and looking for tangible results.

WHAT WAS ACCOMPLISHED?

Until now, the evaluation revealed that the Dive Deep inquiry was adequately organized as a collaborative planning process. In this section I present evaluation according to the outcome criteria (Table G.2, page 178).

NARRATIVE OF CHANGE

The **first outcome criterion** relates the production of a “high-quality agreement”. Agreement on what? We can argue that the *Dive Deep* goal was mainly to collectively develop a new narrative of change. Narratives of change can be defined as “sets of ideas, concepts, metaphors, discourses or story-lines about change and innovation” (Wittmayer et al., 2015).

In the 5 days meeting the group produced a reasonable amount of reflection on “why does the world have to change (rationale)”, “who are the relevant actors (actors)” and “how is the desired future achieved (plot)” (Wittmayer et al., 2019). However, it did not reach a formal agreement on these issues. The divergent thinking was not followed by convergent thinking, bringing in the risk of reckless change (Cropley, 2006). As one participant put it, summarizing the experience⁷³: “*Multiple ideas needing clarification & synthesis*”.

We might imagine how this agreement could have looked like, putting the ‘pieces of the puzzle’⁷⁴ together:

We see many stories unfolding in our times. Some leading to renewal, with the emergence of a system without politicians, towards collective and self-governance, truly embodying nature. We see actors trapped in their roles and activists’ contortions to escape from the sustainability bargain. We suffer with recurrent dynamics of extraction, oppression, and control, leading to despair, grief and breakdown. We feel stretched and want to go deeper, deeper, deeper in our analyses, allowing us to move to a regenerating system.

We place ourselves in the border of inner and outer transition. We know we need to integrate self-care, community care and global care. We need to be conscious of (shadow) archetypes and touch the pain of our culture. Cultural shift is our leverage point and we need to develop playful answers and positive futures. By using collective intelligence and cross-sector participation, alongside humor and silliness, we can break preconceived ideas, prototype regeneration and re-imagine municipalities. By balancing power and addressing privilege, we can curate places of inclusion and connection that take advantage of edges and lead to participatory governance.

⁷³ Evaluation form.

⁷⁴ Insights collected from the workgroups and participants, in an integration effort performed by the author of the thesis.

We need to move skillfully across scales, from individuals, neighborhoods, municipalities, bioregions, nations, and the planet. We need mapping processes, appropriate frameworks, and a diversity of paradigms. We already have many tools on the shelf. However, we need action and practicalities that move away from patterns of domination and face the real emergency. We need safe zones for expression, bringing in memories from the elders and longings for the desired futures. We need to understand each other and connect our polarities.

How would we assess the quality of this ‘synthesized’ agreement? We can evaluate it as high taking into consideration that it integrates “the unique knowledge offered by each stakeholder, not only about their interests, but also about aspects of the problem they understand better than anyone else” (Innes & Booher, 1999). These agreements might “be more durable and implementable because, having taken more interests into account, they are less likely to produce unhappy stakeholders who might sabotage implementation”; they are also “more likely not only to be fair, but also to be regarded as fair” (*ibid.*).

How this narrative of change compares to others coming from social innovation initiatives? We see commonalities like the “high appreciation of communal and relational values” and an “holistic view of the human being” (Wittmayer et al., 2019). As a distinguishing element, we see that it does not focus in “alternative economic arrangements that question the current neoliberal market economy” (*ibid.*), at least not explicitly. In fact, this topic has not been discussed many times.

There is great proximity with the learnings from the Collective Psychology Project (Evans, 2019), that shows “how tribalism and them-and-us thinking is on the rise all over the world, presenting a clear danger not only to the health of our democracies, but also to our ability to respond to the defining challenges of our moment in history, above all climate change and mass extinction.” The project also “argues that the inner and outer crises we face are closely linked”.

FRACTALITY

Was this process able to end stalemate (**second outcome-related criterion** in the evaluation)? I argue that the polarization that was reached, and the difficulty to create informed consensus and convergence, is a pattern easily recognizable in our present times. It is visible in the many existing stalemates and gridlocks that prevent significant climate action. This polarization was possibly fuelled by the predominance of an intersectional approach from some of the

participants and facilitators, with a strong focus on power and privilege, something that can lead to divisiveness (Micha Narberhaus, 2018).

Processes like the *Dive Deep* are expected to produce creative ideas (**forth criterion**), as result of dynamic group discussion (Innes & Booher, 1999). Assessing creativity should involve considering novelty and usefulness (Sarkar & Chakrabarti, 2011), which for sure is not easy, especially in a complex context like this. We can consider that some of the ideas generated are ‘out the box’, probably as a consequence of systemically asking ‘what if’ questions (Hopkins, 2019a). However, we might also consider that the shortage of knowledge (content) and convergent thinking prevented the most creative ideas to come up (Cropley, 2006).

As shared by one of the participants, maybe what worked better in the meeting, was to give light to what is not working. Therefore confronting “*real world challenges*”⁷⁵.

SOCIAL LEARNING

Generally speaking, social learning can be considered as a collective process by which “actors develop shared meanings, values and understandings through interaction, which provides the basis for joint future action” (Bos, Brown, & Farrelly, 2013, p. 399).

We can consider that the *Dive Deep* process was effectively a social learning process, in which participants explored the stories of our times and discussed possibilities, cocreating knowledge. The polarization that occurred was one element that contributed to the learning process, leading to a shared understanding of the (emotional) barriers that might be blocking real transformation.

We can therefore expect “results in learning and change in and beyond the group” (**fifth criterion** in the evaluation, relating outcomes). As one participant put it: “*The conviviality, the excellent moderation, the great food, the time and space to bring in the unexpected and often the uncomfortable. That's how we promote real change.*”

To further lead to enduring change, nourishing the connections that were created might be crucial. Social (and political) capital (related to the **sixth criterion**) can be the cornerstone for adaptive governance, nurturing renewal in times of reorganization (Folke et al., 2005). The *Dive Deep* process provided an arena where social capital was enhanced – when asked to

⁷⁵ Highlighted by another participant.

summarize the experience, most of the words shared by participants related to connections – and it is expected to further foster (in)formal collaboration networks.

PATHWAYS

As previously discussed, no clear agreements were reached relating “proposals for more structured collaborative interventions capable of catalysing and supporting ambitious and inclusive systemic change at the municipal scale” (*Dive Deep & Dream Big*, 2019).

Once more, we can make efforts to put the ‘pieces of the puzzle’ together, imagining what a proposal for a “structured collaborative intervention” could look like, one that could translate the narrative of change⁷⁶ into action (Figure G.12).

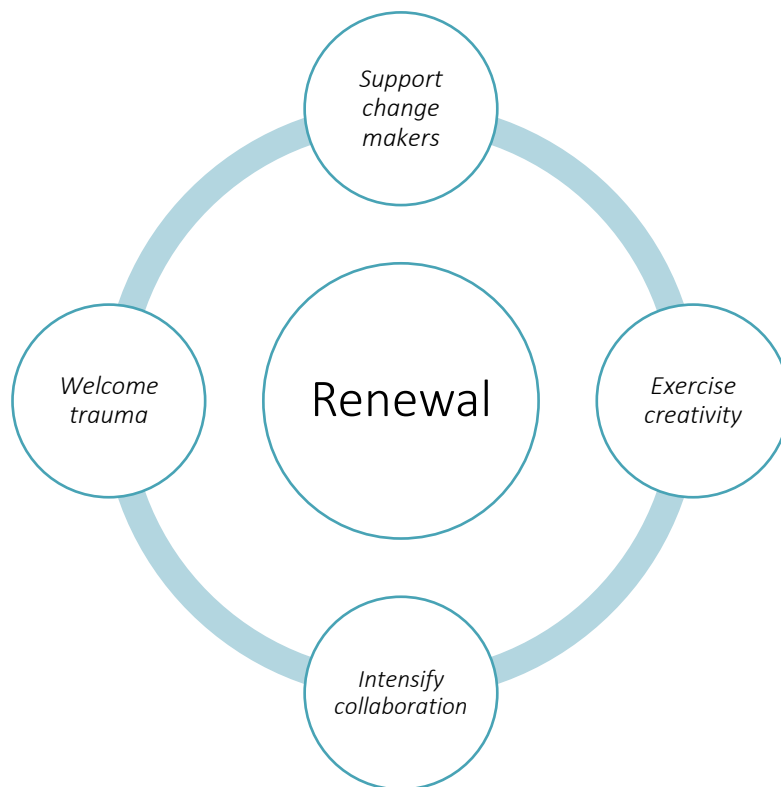


Figure G.12 – A model for a structured collaborative intervention capable of catalysing and supporting ambitious and inclusive systemic change at the municipal scale, based on the topics discussed in the *Dive Deep* event. It connects dimensions of inner and outer transition, moving (vertically) from the individual to the collective level, and (horizontally) from domination to imagination.

⁷⁶ See page 172.

Such an intervention could start by assisting change makers with the needed resources, including time for reflection, connection with nature and true self, finance and peer support, acknowledging that different individuals have different needs. Trauma and grief need to be appropriately handled, facing ethical and psychological aspects and issues of power and culture, making visible the patterns of domination still present, away from moral certainties and with conciliatory efforts.

This step should allow the individuals and collectives to enter a safe place where creativity can be allowed to run wild, creating new narratives and experiencing a desired future. Finally, we can bring strategies, models and tools to support inclusive collaboration and collective intelligence, balancing power and facilitating networks able to map and jointly navigate transformation.

Having a clear and agreed framework for an intervention, and a strategy to deliver it, can set “in motion a cascade of changes in attitudes, behaviors and actions, spinoff partnerships, and new practices or institutions”, resulting “in institutions and practices that are flexible and networked, permitting the community to be more creatively responsive to change and conflict” (**eight and ninth criteria**). New ways of doing, organising, framing and/or knowing, as expressed in the theory of Transformative Social Innovation (Haxeltine et al., 2017).

The *Dive Deep* process should be able to produce “information that stakeholders understand and accept” (**seventh outcome-related criterion**), relating the framework for a structured collaborative intervention. Other possibility, we could argue, is to accept the diversity of paradigms, and focus on mapping relevant models, resources and good practices. One of the participants shared that: “*What surprised me most is that maybe there isn't much deeper to go as such. Maybe deeper is local? I feel like the event confirmed that we already have most of the tools and processes we need, and the key thing is to share progress and challenges within a wider pool of support.*”

4) Discussion

In this section, I start by relating the outcomes of the Dive Deep process to the research aim. As shared, I want to look ‘down’, engaging with the root causes of unsustainability, while looking ‘up’ to identify solution-oriented approaches to transformational change.

AN INTEGRAL APPROACH

The Integral Theory (Wilber, 2011) represents an effort to embrace epistemological and ontological pluralism and the realms of consciousness, culture, and nature. It has been used to explore possibilities in climate adaptation (e.g. O’Brien & Hochachka, 2005), social transformation and sustainability (e.g. Riddell, 2013).

The Integral Theory proposes four quadrants to express the recognition that everything has an inside and an outside and is both singular and plural. Individuals have subjective *experiences*, express *behaviours*, and are members of collectives that manifest *cultures* and organize in *systems* (Esbjorn-Hargens, 2005) (Figure G.13).

There is a significant alignment between the Integral Theory and the *Dive Deep* framework to support transition governance (Figure G.13). We could argue that the Dive Deep framework expresses an intention to work in the borders of the quadrants:

- *Supporting change makers* has a focus on the individual, including providing experiences that might deeply embed a ‘worldcentric’ identity, contribute to a reconnection with nature and spiritual awakening, along with supporting the thrive of the individual from a cognitive and materialistic perspective, allowing the emergence of new practices and behaviours.
- *Welcoming trauma* focus on the interior, dealing with perceived experiences of separation and domination in order to deeply embed ethics in a new and reconciliatory culture.
- *Exercising creativity* is about materializing a new reality by questioning the way that individuals and communities express and organize themselves and exploring wild possibilities that might come into manifestation.
- *Intensifying collaboration* directs efforts to support a new culture based in systems thinking and reflection, facilitating collective intelligence, embedding agency and promoting a synchronicity of initiatives with the emergence of new patterns of collaboration.

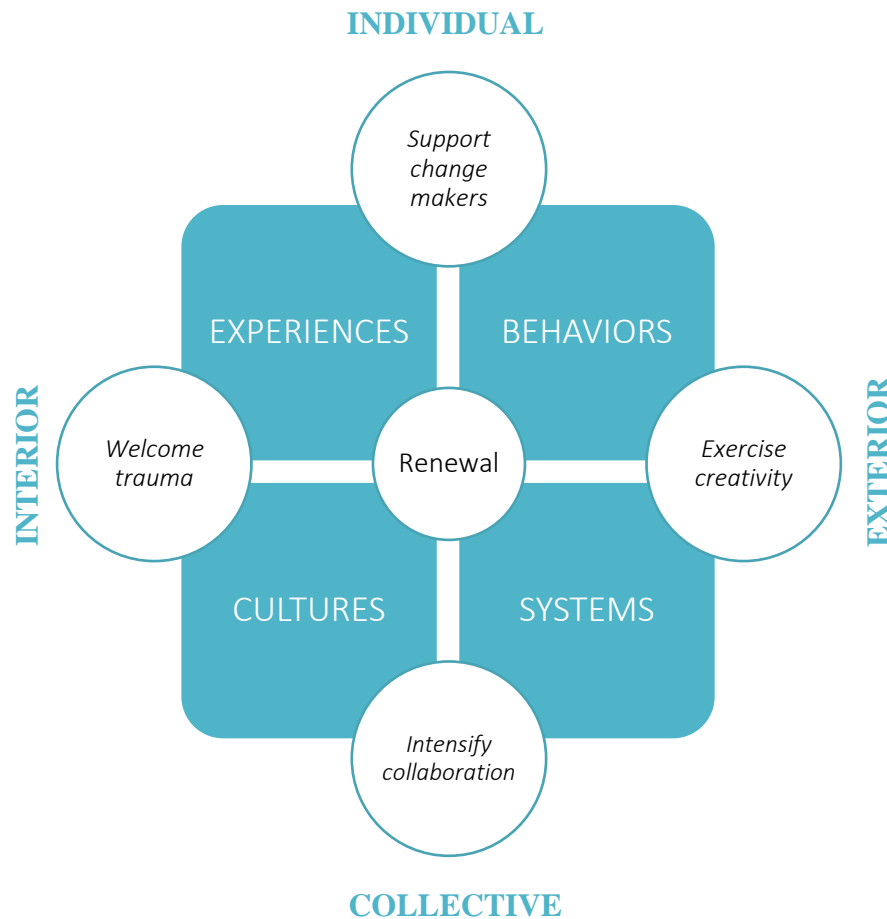


Figure G.13 – The dimensions included in the *Dive Deep* framework align with the four interconnected quadrants of the Integral Theory, representing interventions in the frontiers between experiences, behaviours, cultures and systems.

The *Municipalities in Transition* instrument, in its current formulation, relates mainly to the topic of *intensifying collaboration*. Thus, we can argue that the *Dive Deep & Dream Big* process allowed to enlarge the scope of intervention, suggesting a more integral approach to transition governance.

Also, using the lenses of the *Compass for Transformative Collaborations* (page 15), we see that the *Dive Deep* framework covers all the dimensions, namely cocreation, mutual support, coproduction and open innovation, while the MiT instrument is more focused in the processes of cocreation and coproduction.

In sum, the Dive Deep collective inquiry can support a better answer to our research question, that asked for an “applicable and *comprehensive* governance instrument to support the development of (trans)local transitions, facing the challenge of tipping point times”.

WHAT COULD BE IMPROVED?

In this section I discuss how could the inquiry process be improved to maximize results, for the sake of evaluating the research process and bringing useful knowledge for future efforts. In fact, one of the manifested expectations was to ensure that “the design of our interactive and experiential deep dive process will have been tested and shared ready to be adjusted and replicated with new actors in different contexts” (*Dive Deep & Dream Big*, 2019).

BEFORE

I am not in position to fully evaluate the effort put in actively involving different people and organizations. I know that a relatively big number was initially assembled, and that many participated in the event. I also know that it was frustrating (for the coordination) that most of them did not involve themselves actively in the preparation. I guess that more clarity on the budget, including earlier decisions, might (partially) have prevented this to happen. I acknowledge that significant personal efforts were made to be involved, but overwork and burnout sabotaged them. Delivery times were often compromised. I saw a complex process being developed with a great dose of passion and voluntarism, adding to undeniable skills.

Some participants mentioned not having enough information: *“I was also surprise at the lack of information in advance. I really had no idea what I was coming to and I think more structure in advance would have set the scene for a more productive time together.”*

Still in day 4, participants were questioning *“should we unpack the concepts in the inquiry, like the scale, the inclusivity, the cocreation? Should we reframe the question?”*. I also mentioned that a lack of content was felt by many (page 185).

Possibly, a pre-event webinar series could have been useful to discuss the concepts, to explore the challenges, to get inspiration from experts and practitioners, to create a shared language, to arrive in a more consensual inquiry question. For example, it has already been observed that there is a challenge “in more effectively connecting local, grassroots innovation capacity with the global parameters set by planetary boundaries” (M. Leach et al., 2012).

Or maybe, what was needed in advance, was deep emotional work (see next topic).

SENSING

The so called ‘explosion’ (page 186) allowed to illuminate our ‘blind spot’, “the inner place or source from which a person or a social system operates” (Scharmer, 2009, p. 22). It revealed how stretched we are between our (personal and collective) traumas and deep emotions of grief, begging for deep attention and healing, and the need to rush for urgent action to face the (climate) crisis, away from moralities and set to work.

We might consider that the ‘explosion’ came late (day 4). When we already passed the bottom of the U (‘presencing’) and were trying to surface on the other side. The facilitation team had already challenged participants many times – *“Is there anything I have noticed but not said, in myself or in the wider group, that I can share to support my own or the shared process?”* - sensing that something crucial was missing. Finally, it came and was flawlessly handled at that moment.

What could be the most appropriate thing to do next? This ‘explosion’ demanded the group to bounce back to ‘sensing’ (Figure G.1, page 165), making full sense of what happened, and, most of all, the possibilities. It asked for a conciliation that could bring in a shared will for finding integral pathways able to deal with trauma and work with content that could lead to action.

Unfortunately, I believe, this did not happen⁷⁷. The group was rushed to enter the *open spaces* and ‘forced’ to stay in the cocreation mood. The inevitable happened: the group split in two and no convergent thinking occurred, preventing the participants to fully embrace the complexity of the challenge. This was symptomatic of current polarization, sometimes fueled by social movements (Micha Narberhaus, 2018).

I give the floor to participants: *“A polarity between 'action' and 'feeling', or 'planning' and 'trauma work', or whatever emerged, which I do think could have been identified early on, by me too (especially as it often does come up). The planning of the conference perhaps could have favored a more complex response to this, trying to move it beyond polarity and beyond the adoption of small bits of one approach into a space designed for the dominant 'action' mindset.... Personally, I didn't manage to do this, I felt exhausted and confused before I saw clearly what was happening and then I feel I increased polarization by speaking strongly from a place of emotion. But I would love to think about how a conference could be designed to*

⁷⁷ Possibly because it was too sudden and unexpected, or there was a strong will in the organization to keep in track with the planning and the tight schedule, or still (part of the) facilitation was not neutral and was locked in entrenched positions.

enable a much more complex sort of shared learning that doesn't shut down or accentuate / create polarity."

And also: "There was most certainly significant "polarity" in the event, as observed or elided to from both ends of the poles over our time together - at least that's how I saw it. That's not a bad thing, nor are the individuals who occupied different places on that continuum.

As participants, we just didn't coalesce or come together due to the enormity of our differences in perception as to the nature of our mutual goal. This wasn't the fault of the imaginers of the process, or the facilitators, that's just where we got to. I suspect this was not a product of our specific event but more a result of our gathering being a reflection of our current system, as embodied by us all.

If there is healing and integration to take place - which is not in any way a given - I suspect it would have to take place through a process of individual completion and integration as a first step to then accompanying and inviting and join with whoever we can reach with our calls. I'm sure that for some people at this event that healing process was present. It was for me.

This will be too much hocus pocus for many at the event, an irrelevance alongside the urgency of doing the practical stuff at a municipal level. Yet that practical stuff is such small beer against the enormity of the challenges we face - evidence of which assails us every day should we care to look."

GOING DEEPER

In the U Theory, the first stages of co-initiating and co-sensing are intended to open the mind and heart, in order to be fully aware of past patterns. In the *Dive Deep* they were both performed in the first day (see Figure G.1, page 165), which probably was not enough time. Critical tools like the 'iceberg model' and 'four quadrants' were presented but not meaningfully used.

The 'constellations' allowed an emotional dive, but personal reflections were not fully explored⁷⁸. A participant suggested a *truth mandala*⁷⁹ for this purpose. One of these actions, if fully explored, could have brought light to the 'blind spot' sooner.

⁷⁸ "How does one engage with existing narratives of power, especially that located within persons? How does one challenge this using facilitation?" (questioned by one of the participants).

⁷⁹ The *Truth Mandala* (Macy & Brown, 2014, p. 119) is an exercise in which participants explore and express pain for the world.

CONVERGING

The biggest challenge for one of the participants was “*the difficulty in thinking together from a middle point of assumptions. For three days I felt like I was drifting from ethereal conversation to yet another purple haze*”. This was already discussed (fractality, page 189) and here I want to point to a possible different path.

Possibly, a (wasted) critical moment for converging happened on day 3. After lunch, each group presented their work and connections between themes were briefly discussed. This could have been a lost opportunity to fully account differences and the complexity of the inquiry, looking for bridges. On the contrary, not enough time was dedicated to this discussion and themes (Figure G.6, page 172) were kept siloed in the agenda, competing for attention. On the morning of day 4, the process ‘exploded’.

For sure, many of the participants were able to do this integration by themselves and cross-fertilization happened. One participant celebrated “*the possibility to include deeper truth and feelings with action*”.

HARVESTING

Harvesting group discussions was mostly left to their own self-organized responsibility, with intended support from a resourceless *home group*. The lack of an efficient harvesting process was evident in day 5, when there was no clarity about *open space* discussions going on.

Some similar events use teams of rapporteurs with the important task of objectively recording discussions, focusing on main points, and looking for connections. This is sometimes complemented by visual harvesting. Again, a better harvesting process could have allowed to give a faster visibility to differences and facilitate converging.

LIMITATIONS AND OPEN QUESTIONS

I will now discuss further limitations of the process, to explore possible next steps since they might contribute to better refine the outcomes from the inquiry process.

BENCHMARKING

The **third criterion** from the evaluation framework (Table G.2) and was not yet discussed. It brings the question: does *Dive Deep* compares favorably with other planning methods in terms of costs and benefits?

I briefly look at other initiatives with similar bridging goals in order to find similarities and differences, assumingly in a brief and explorative approach to look for possible next steps. I

focus on the three aims relating mapping, replicability and agreement (page 180), and on the cocreation component.

Relating mapping, the *Municipalities in Transition* initiative described in this thesis mapped and analyzed 71 cases of local, collaborative transitions happening in 16 countries (Macedo, Huertas, et al., 2020). The European funded UrbanA project created a wiki database of approaches, initiatives and people involved in creating sustainable and just cities. These are longer projects with much bigger budgets. *Municipalities in Transition* produced a clear instrument to navigate transformation and tested it in 6 pilots until now. It was developed internally, based on previous experiences. UrbanA intends to focus on policy insights, coming from four co-creative spaces ('arenas'). Other initiatives like the Collective Psychology Project⁸⁰ used around 200 structured interviews and convenings with experts, activists and policymakers to prepare their clear framework based on 3 transitions (Evans, 2019). The 'Transition Now' initiative⁸¹ mobilized mainly grassroots initiatives in 8 events and produced a manifesto supported by a joint reflexion with policymakers ('Agora Politique'). The 'Go Deep' initiative⁸² was set as an experimental process, tested in 4 communities by a diverse group of organizations, that developed a methodology ('game') and a network of trained facilitators for replication.

The *Dive Deep* compares favourably with these initiatives in terms of the capacity to congregate different actors, still lacking further contributions from policymakers. Mapping was comparably inconsequential, and it yet requires clear agreements and proposals for action.

COMMUNITY

Many of the participants manifested the intention to keep contacts alive. This can be supported in many ways, by means of new (online) gatherings or social networks. A community of practice might emerge, or possible existing ones could be potentiated (like the one that is being facilitated in the *Municipalities in Transition* project⁸³).

There is (was) the intention to keep collecting stories of change.

⁸⁰ <https://www.collectivepsychology.org>

⁸¹ <https://www.transitionnow.be>

⁸² <https://godeepproject.org>

⁸³ This possibility was included in a list of "next steps" prepared by the 'change pirates' group.

CRYSTALLIZING

We can argue that the Dive Deep process is still in the bottom of the U⁸⁴, *presencing* opportunities. According to the Theory U, *presencing* is the ‘one’ thing to achieve to support a profound change in people, organizations, and society. *Presencing*⁸⁵ is about “operating from the future as it emerges”, meaning “to sense, tune in, and act from one’s highest future potential – the future that depends on us to bring it into being” (Scharmer, 2009, p. 8). As previously argued, in the *Dive Deep* process we had a brief glimpse of this possible future, translated into the narrative of change, but we are letting it escape (until now).

Going up the U means to clarify vision and intention from our highest future possibility, in a process called *crystallizing* (Scharmer, 2009, p. 192). A proposal for a new narrative of change and a model for a structured collaborative intervention have already been presented (pages 188 and 191) and should be discussed and agreed on.

For this discussion, which involves conciliation, all the *Dive Deep* participants can be called for. Or maybe a subgroup, like the facilitation team – this core group, with its diversity and container, can be a vehicle for the whole to manifest.

It is not an easy task, and convergent thinking is (almost) never as fun as divergent (Akbari Chermahini & Hommel, 2012). Resistance of thought, emotion, and will is to be expected. But this (sub)group has the capacity and the possibility to prototype the new, exploring the future by doing.

Meanwhile, the Transition Network started an evaluation process⁸⁶ that includes “co-creating a new, updated narrative about the Transition movement to celebrate and demonstrate the potential of our approach and influence others to get involved, support us and dismantle the barriers we face”. Learnings from the *Dive Deep* are being taken into the process.

CO-EVOLVING

Co-evolving is the final movement of the U (Figure G.1, page 165), helping to interweave and link the process with the larger ecosystem around. Quite often, is a missing step: “we know about many episodes and stories of great transformational change and breakthrough. But at the end of day they remain merely that: episodes” (Scharmer, 2009, p. 425).

⁸⁴ See sensing, page 179.

⁸⁵ Blending of the words “presence” and “sensing”.

⁸⁶ <https://transitionnetwork.org/news-and-blog/help-us-to-evaluate-the-transition-movement/>

Many possibilities and strategies exist to scale out, up and deep (Moore et al., 2015). The *Dive Deep* process can try to impact greater numbers by replicating elsewhere⁸⁷, using the learnings from the existing process. Possibly, a guide on how to perform a *Dive Deep* process in our communities can be prepared and shared, or some training delivered.

Besides scaling out, we might try to scale up by impacting law, policy and other institutions. With the support of policy makers, an advocacy team can be set up. According to planning, the *Dive Deep* learnings should be appropriately translated and delivered to the funder(s), in order to influence future decisions.

Scaling deep is about impacting cultural roots. In my opinion, the need for a cultural shift to leverage change was evident, and the *Dive Deep* ‘message’ of conciliating trauma and planning, inner and outer transition (page 188), is a valuable one. To spread this idea, an appealing story or narrative and an effective strategy can be prepared, making good use of partners involved, existing networks and communities of practice.

5) Synthesis

The research presented in this chapter focused on results coming from the *Dive Deep* inquiry process and how they might contribute to set a governance instrument capable of catalysing society-wide transformation, thus helping to answer the research question.

I consider as first order effects, already visible and a direct consequence of the *Dive Deep* process:

- Creation of a social learning environment, that gave visibility to barriers that prevent effective action by fractally reproducing patterns of polarization.
- Enhancement of social and political capital, namely improving connections and the capacity to work together.
- Agreeing on the building blocks of a new narrative of change (page 188), based on reconciliation and still in need of crystallizing.

Potential second order effects, still manifesting and possibly moving beyond the borders of the process:

- Setting of a model for a structured collaborative intervention at municipal level (page 191), effectively supporting change makers at individual and collective level.

⁸⁷ Intentions for this already manifested. A participant also referred the will “to attend a second meeting, which builds upon the lessons learned during this one”.

- New partnerships and joint initiatives, pooling resources.
- Expanding the knowledge into the community, supporting replication of the inquiry with improved skills to go deep regarding emotional shifts as well as including systemic analysis, properly addressing polarities.
- Effective advocacy, influencing policies and funding.

As third order effects, that could emerge and get evident in the long run:

- New institutions, including new practices and discourses.

By supporting the Dive Deep process, I wanted to confront the cocreated MiT instrument with existing knowledge in scientific and societal practice and explore ways to increase its reach in providing adequate answers in tipping point times.

The *Dive Deep & Dream Big* process, as an effective collaborative inquiry (see evaluation), provided a governance framework translated in a model for a structured collaborative intervention, connecting dimensions of inner and outer transition, moving from the individual to the collective level, and from domination to imagination. This integral approach (Figure G.13, page 194) accommodates the full support of change makers; the exploration of trauma and grief to allow reconciliation; the exercise of wild creativity to create memories from the future; and the intensification of collaboration in the process of navigating transformation (the current focus of the MiT instrument).

This integral approach is expected to provide, collectively and individually, the capacity, intentionality and reflective consciousness that are needed to govern the Anthropocene, in the mixed context of crisis and future possibility (Delanty & Mota, 2017). It honours the *motto*: diving deep and dreaming big.

Box G.2 – Ripples from the *Dive Deep* process.

The *Dive Deep* process strongly resonated in me, so together with other participant, Sara Silva, and also Luis Pereira from the MiT project, I decided to experiment with this new structured collaborative intervention (prototyping the new as suggested by Theory U, combining head, heart and hands). We organized a in person two days' workshop in Lisbon in the beginning of October 2020, integrated in Umundu Lx (a collective festival for sustainable transformation). Taking in expertise from several initiatives, like the Awakened Life Project (Bampton, 2019), *Municipalities in Transition* and Pop-Up tomorrow (Transition Network, 2019), we went through a journey of transcendence, imagination and action (Appendix E).

Other 'ripples' from the *Dive Deep* process were also shared by some of the participants.

Part III

Resolution

DISCUSSION

In this thesis, I have already included 3 discussions, namely:

- In chapter E, where I analysed the Municipalities in Transition (MiT) instrument with the lens of several conceptual resources from sustainability transitions theory. I have concluded that the MiT instrument has the potential to support transition governance, by bringing systemic change, creating a learning arena, and establishing a reflexive governance approach, with cultural change as a purpose.
- In chapter F, I analysed the impacts and outcomes that MiT experimentation had in terms of transition governance at local level by supporting transformative social innovation (new way of organizing and doing transition) and explored the contexts where these changes occurred. I have concluded that the MiT instrument was indeed effective in terms of the proposed socio-institutional impact.
- In chapter G, I discussed the process of confronting the cocreated MiT instrument with existing knowledge in scientific and societal practice through the Dive Deep collective inquiry. I have concluded that a new narrative of change emerged, translated into a governance framework that sets the ground for a comprehensive and integral approach to transition governance.

The MiT governance instrument, complemented with the insights from the Dive Deep governance framework, is the answer to my research question: “What would be an applicable and comprehensive governance instrument to support the development of (trans)local transitions, facing the challenge of tipping point times?”

Before moving to the conclusion of the thesis, I want to explore how the results of my research contribute to improve the existing knowledge in the research field of sustainability transitions, namely on the topic of governing transitions (first section).

I will also put some arguments relating contributions to the topic of ‘methodologies for transitions research’ (Köhler et al., 2019) (second section).

Finally, I will discuss on limitations and open questions, bring a critical perspective on the work done at collective and individual level, closing with an assessment of impacts to society and possible future directions (third section).

1) Governing transitions

As stated by Köhler *et al.* (2019, p. 20), “much of the existing thinking on how to govern transitions focuses on the early stages of the process (e.g. transition arenas, experiments). A real challenge for current transition scholars now concerns developing more insights into how to govern later phases of transition”.

As previously discussed (*The research*, page 5 and *Moving Beyond*, page 34), this thesis represents a contribution to face this ‘governance challenge’ by focusing on already existing transition processes and how they could be catalysed, looking at synergies between actors.

The cocreated MiT instrument is expected to represent an innovative way to collectively govern transformative change and act as a systemic instrument for local **reflexive governance**, as already argued (*Discussion*, page 73). Also, in *Reflexive governance* (page 77), I argued that “by making sense and exploring how different organizations are jointly putting in place their decisions on sustainability, the instrument is a practical way of operationalizing the reflexivity of steering strategies. In other words, it centres the attention of transition governance in the governance system already in place to promote transitions, questioning it and adapting it, and hopefully affecting the community and its capacity to steer.”

This thesis thus provides a concrete instrument to operationalise the **metagovernance of sustainability transitions**. Metagovernance is about re-articulating and 'collibrating' the different modes of governance (Jessop, 2003). As stated, the MiT instrument provides a structured way to visualize the governance of sustainability efforts (capturing the complexity of who is involved, in what kind of actions, and how initiatives are being steered), facilitating the process of collaboratively introducing changes to re-equilibrate the governance of transitions. What Dunsire calls holistic governance or ‘collibration’, a process with many parallels in natural systems (Dunsire, 1990, 1996).

In the remaining of this section, I will compare the MiT governance instrument with other proposals to support transformative governance at local level, coming from science and practice, evidencing its distinctive character.

COLLABORATION IN THE DNA

We can find several instruments created to foster transformation at local level. Some have their origin in the public sector (e.g., Covenant of Mayors), civil society (e.g., Ecovillages) or the private/philanthropic sector (e.g., 100 Resilient Cities). Most of them, if not all, advocate for collaborations and intersectoral partnerships. The distinctive character of MiT is that collaboration is ‘built-in’ the instrument, and since the beginning of its birth, it was ‘all about collaboration’.

In fact, in the case of the MiT, the Transition movement challenged the academic field to work together with civil society, codesigning an instrument with collaboration in mind (fostering transitions based on collaborations between local governments and community-led initiatives). In this sense, the MiT can be considered a grassroots policy innovation aiming at collaborative governance. In the scaling process of the MiT experiments, the Transition movement acts as a bridging or boundary organization creating space for institutional innovation and the reinforcement of social capital, therefore reducing the costs of collaboration (R. R. Brown et al., 2013; Folke et al., 2005).

Equally significant, the *funzione energia*, that inspired the MiT instrument, was developed in a collaboration between the National Association of Italian Municipalities, the Italian Transition Hub and a University Consortium supported by the National Government (Rossi et al., 2014).

MANAGING FLUXES

As previously mentioned, the MiT instrument is designed to help navigating in the flux of transformation happening in the community. Therefore, contrasting to other approaches, the MiT instrument:

1. Does not include a visioning step, setting goals or identifying pathways.
2. Does not rely on the establishment of a concrete governance structure.
3. Rejects siloed approaches.

These properties are discussed below.

NO SINGLE VISION

In a ‘traditional’ approach to sustainability, creating a shared vision is considered a fundamental step and even the steering factor (Vergragt & Quist, 2011; Wiek & Iwaniec, 2014). It can also be considered illusionary and manipulative (Few et al., 2007).

The MiT instrument embodies the challenge of transcending paradigms, considered the highest leverage of all (Meadows, 1997). It is not about (the impossible task of) ‘getting rid’ of paradigms, it is about embracing the diversity of worldviews. And it is not a rejection of the importance of visioning, planning or altering governance models (these activities are included in the grid) – it is an instrument to capture and make sense of all these efforts with a holistic view.

This holistic approach means that it is assumed that individual transition interventions are so intimately interconnected that can all be interpreted by reference to the whole transformation process (as perceived by local actors). This ‘collibrating’ approach, we can argue, allows local actors to adequately cope with others and their own self-referentiality (Dunsire, 1996; Jessop, 2003).

Nurturing a diversity of visions is also a way to increase resilience by promoting redundancy, improving the capacity to deal with the uncertainty and complexity of tipping point times (Folke et al., 2005). In fact, and using a living systems perspective, we can conclude that “transformations require a multiplicity of initiatives and approaches perceived as part of a larger transformation system” (Kuenkel, 2019, p. 81).

Previously, I have mentioned the MiT efforts for bringing cultural change, which can be used as a counterargument to what I have just written relating transcending paradigms (cultural change can be interpreted as an effort to change underlying paradigms). In the case of the MiT, advocated principles are restricted to the ‘uncontested’ ways we should work (in cooperation, with best information, with intended results) and not related to a particular worldview or set of goals or policies. If any, the only paradigm inherent to the MiT instrument is systemic thinking.

NO PATHWAYS

Again, we can point that setting goals and pathways is a necessary action in many contexts, and so included in the transition grid. But, against other perspectives for sustainability transformations (e.g. M. Leach et al., 2012), the MiT use does not demand for concrete and explicit goals or directions for change. As Voß & Kemp (2006, p. 4) phrases: “sustainability cannot be translated into a blueprint or a defined end state from which criteria can be derived and unambiguous decisions taken to get there. Instead, it should be understood as a specific kind of problem framing that emphasises the interconnectedness of different problems and scales”.

The MiT instrument suggests that transition governance should be as broad as possible (covering all the cells in the grid, in an interconnected way). This should not be considered as setting a direction, having the purpose of reinforcing redundancy and diversity. With the MiT instrument, trajectories of change are not defined in terms of direction, expressing a pluralist approach to social change (Patterson et al., 2017). There is not an end point and not even the formulation of a desirable starting point⁸⁸.

In agreement with the *Arena of Development* approach, an identified pathway is not delivered, only an instrument to interpret and navigate changing relations. This can be considered a distinctive feature compared to the multi-level perspective (Jørgensen, 2012). In the grid, transformative actions gradually being produced are ordered but not in a temporal or hierarchical way as it occurs in a traditional planning process. This is expected to lead to emerging opportunities.

It should be mentioned however that in the case of the pilots, a prescriptive approach is used to set new initiatives. Yet, this approach is not connected to the fundamental attributes of the instrument, and it is just intended to allow familiarity with this new approach to transition.

In sum, the purpose of the MiT instrument is not to create a model or a ‘good practice’ that can be replicated as such, but to bring cultural change while providing the tools to govern complexity that can be effectively adapted to the different situations of the local context (Rossi et al., 2014). The instrument provides the resources to an incremental tactic related to ‘collibration’: “a little at a time, let things settle, see whether another touch is required” (Dunsire, 1996, p. 319).

NO HIERARCHIES

The use of the MiT instrument, namely the transition grid and database of tools, are open equally to all the actors. As noted by Rossi et al. (2014), a Mayor, an administrative official or an activist in a NGO, they all can use this instrument to map their current policies and activities and confront them with the overall context of the ongoing transformation (see page 81). They do not need to wait for managerial directions or conform with any kind of leadership. Unlike in the Transition Management approach, for instance, there is not a group of specific actors formulating long-term directions without much wider involvement, potentially jeopardizing democracy (Hendriks, 2009; see also Jhagroe & Loorbach, 2015).

⁸⁸ Action can start from any of the grid cells (Rossi et al., 2014).

It can be classified as a ‘flat’ approach, denying any kind of hierarchy (Geels, 2011; Jørgensen, 2012). Actors or actions are not classified in levels or assume differentiated ‘powers’. The focus is more on actor’s (and action’s) performance than in their specific roles. In this context, the MiT instrument is a way to manage the complexity, plurality, and tangled hierarchies found in prevailing modes of co-ordination (Jessop, 2003).

Nevertheless, I should state, as Jørgensen, the analytical usefulness of levels in understanding the dynamics and outcomes of transition efforts, like the MiT experimentation. This is the case, for instance, of the ‘reconfiguration pathway’ formulated by Geels & Schot (2007) where symbiotic innovations developed in niches are adopted by regimes to solve local problems, leading to subsequent substantial changes in the regime’s basic architecture. Also, as we saw in the pilots, issues of power need to be addressed and considered.

NO SILOS

Taking the case of the Sustainable Development Goals, we see that actions are contained in thematic boxes (e.g., health, education, and even partnerships). Even in the case of 100 Resilient Cities, defending a holistic cross-sectoral city vision (Arup, 2015), the framework is based in four dimensions (health & wellbeing; economy & society; infrastructure & environment; and leadership & strategy).

Differently, in the transition grid, cells are not there for the purpose of individually addressing actions or actors. The grid is a way to organize information with the purpose of ‘spreading’ transformation. Categories of actions used are merely instrumental and based mainly in common management systems (Rossi et al., 2014) for the sake of usability – they focus on roles that transition initiatives can play in the change system, in an interconnected way.

MiT shifts the strategic development from a focus on specific problems (possibly labelled as environmental, social or other) towards a greater accent on how our communities are responding.

A PRACTICAL INSTRUMENT FOR CHANGE

Usability was a critical design feature of the MiT instrument, as previously mentioned. It can be easily used without previous knowledge or experience on systemic change or similar topics. And it is flexible enough to adapt to different contexts (even the ones leading with scarcity of resources) and in everyday practices. From this perspective it can be contrasted against approaches like social network mapping (and other equally sophisticated quantitative systems modelling).

The capacity of the MiT instrument to be effective in supporting transformation processes is amplified by the use of the database of tools connected to the grid. This database is not merely a repository, since it incorporates guidance according to the structure of pattern language (Alexander et al., 1977). This means that tools in the database are linked to the deeper wisdom of what brings aliveness within a particular field of human endeavour, through a set of interconnected patterns. These patterns express the challenge to be met and activities that are necessary, with a practical perspective.

Box 0.1 – MiT: from a wicked problem to sustainability governance.

In Box B.1 (page 26), we saw that collaborations between local governments and community-led initiatives can be seen as a wicked problem, with a persistent and systemic nature. Therefore, to convert these problematic collaborations into transformative partnerships, we must use systems thinking and adopt a governance and agency perspective (Gorissen et al., 2018).

The MiT instrument deals with this ‘problem’ by not trying to ‘fix’ actors and their specific roles or in trying to promote illusionary consensus. Instead, it concentrates in fostering interdependencies and synchronous action with a pluralist perspective. The MiT instrument works by (1) improving the ability of the change system to self-organize; (2) setting principles and aims (through evaluation cycles and a measurable transition score) that are not related to specific worldviews, beliefs, or goals (3) spreading a standard of collaboration that might transcend the (sometimes) oppositional norms and values that puts us in apparent oppositional barricades. These are the leverages (Meadows, 1997) to change the system of local transformative collaborations and bring emerging opportunities.

The MiT is, therefore, an instrument that promotes reflexivity in governance – (meta)collaborations are set to take stock and learn with the transformative collaborations already happening. This approach based in (trans)local collaborative arrangements can be the basic design for sustainability governance (Westman & Broto, 2018) and in general for a system of what political science describes as ‘interactive network governance’ (EEA, 2018, p. 62) or ‘polycentric governance’ (Ostrom, 2010a). Translocal empowerment of people (Avelino, Dumitru, Cipolla, Kunze, & Wittmayer, 2020) is expected to be one of the outcomes.

In addition, the integral Dive Deep framework sets further requirements to the governance of transitions towards sustainability: besides the intensification of collaboration, there is the need to support change makers, welcome trauma, and exercise imagination.

2) Methodologies for transitions research

In this section, I explore some expected contributions from this thesis to the methodologies used in transitions research.

TRANSDISCIPLINARITY

The methodology used in this thesis connects Transdisciplinary and Participatory Action Research, developing an operational approach (presented in chapter D). In the research framework, a transdisciplinary research team was created with me and a group of practitioners. After the initial codesign phase, performed by the research team with the support of a vast network of contributors that gathered information, a governance instrument was experimented in an intricate set of **nested and concentric cycles of participatory action research** (page 89). These different cycles of research were jointly conducted by a team of ‘facilitators’ that were trained and supported by the research team. In each place, experiments involved local action teams and members of the communities.

This research structure allowed to **balance observation and participation**, facing the challenge of being simultaneously distant and engaged (Köhler et al., 2019). In fact, the research team was not involved directly in steering the experiments, acting mainly as ‘tutors’. Furthermore, as embedded researcher coming from the academia, I was the only member in the research team not acting as a tutor, further supporting objectivity.

Having a team of facilitators conducting the six cycles of participatory action research in a coordinated way, corresponding to the parallel pilots, was an opportunity to cross-pollinate and maximize the joint learning process. Reflectivity was favoured by nurturing a **transdisciplinary community of practice** at the core of the experimentation process, connecting all the cycles of participatory action research (that is why I name these cycles as ‘concentric’ – see page 89).

By further facilitating an ‘extended’ community of practice (involving people not connected to the experiments, see page 44), we have consciously “build benches” for outsiders, as advocated by Cundill *et al.* (2015). In this sense, the transdisciplinary community of practice was also an effective instrument to (re-)integrate knowledge into the societal and scientific realms (see *Integrating knowledge*, page 44).

The process of (re-)integration of knowledge was also backed in another innovative way, namely with a collective inquiry with researchers and practitioners, the *Dive Deep & Dream*

Big process. Using Theory-U (Scharmer, 2009) it was possible to deeply confront the cocreated knowledge with visible and hidden ‘reality’. In this way, (re-)integration of knowledge was not merely a uni-directional process of developing “targeted ‘products’ for both parties”, namely scientific actors and practice partners (Lang et al., 2012). In fact, this **interactive process of (re-)integration** allowed to cocreate new knowledge, supporting the development of a governance framework that puts the cocreated governance instrument in a ‘bigger picture’.

In synthesis, in this thesis I present an innovative model for **transdisciplinary participatory action research** based in nested cycles of action research, centred around a transdisciplinary and translocal community of practice, and powered by an interactive process of (re-)integrating knowledge in science and practice. This is expected to address the “absence of pragmatic scientific literature [within the field of sustainability transitions and beyond] on designing and organising experimentation to generate widespread social learning” (Bos et al., 2013, p. 399).

Box 0.2 – The experience of the MiT Community of Practice.

As already mentioned, it is expected that the MiT community of practice is a collective learning process and an evolving self-regulated community, that aims to improve and continue in the future. It should cross the boundaries of the experiments and foster cultural change.

With this in mind, some observations can be shared relating the experience of the MiT CoP:

- Pilots practitioners did have opportunities to share their experiences and disseminate information, something that was valued in general and considered insufficient by some of them.
- The *open diary* was mostly treated as a reporting exercise and considered ‘hard to read’ (long and mainly text-based); it provided systematic and comparable information between pilots.
- Online social networks had a relatively low use.
- The final meeting was considered essential to harvest learnings and coproduce new knowledge (possibly lacking a codesign feature).
- Peer-to-peer support among the participants was rare but highly valued.
- Webinars were an ambitious aim, with participation of co-presenters with high level of expertise and relevant topics; attendance was varied but in general low, specially from pilots.
- The fact that the MiT instrument and the experimentation process was not shared in detail with the wider CoP somehow reduced its potential and inevitably made participation fleeting and unanchored (Wenger, 2010).
- Self-governance was partially achieved by the creation of a circle of co-guardians (with members from research team, pilots and Transition Network).
- No significant synergies were (yet) identified outside the scope of the experimentation.

In sum, the networking activities promoted until now were useful and essential for the social learning process (e.g. shared understanding of what matters, identity, boundary crossing, commitment) and have the potential to help a ‘true’ CoP to emerge in the future (Wenger, 2010). The expected growing number of practitioners and connections will bring new challenges and also possibilities, namely for creating a needed “system of influence” as defined by Wheatley & Frieze (2006).

Finally, we could argue that almost all of the pilots intentionally supported the emergence of significant local CoP. Two of them, La Garrotxa and Vila Mariana, were remarkable (and particularly successful) in their efforts, through trainings and other dissemination activities.

TRANSITIONS IN-THE-MAKING

Researching transitions ask for a “methodological engagement with system innovation in-the-making, following situated actors in their negotiation of contested and uncertain attempts at system innovation”, opening an “ample room for deepening of process-methodological work in transitions research”, namely providing “linkages between sequences of events and the identification of critical conditions that causally link these events” (Köhler et al., 2019, pp. 35–37).

To explore this “ample room”, in this thesis I use grounded theory methods with **transformative social innovation** as an analytical framework, including *critical turning points* and *narratives of change* (Ruijsink et al., 2017). This innovative approach allowed me to take stock of learnings from the governance experimentation, evaluating simultaneously to which extent the MiT instrument enabled the intended results and understanding how this was undertaken. This included the interpretation of which interventions or design features might have played a role as barriers or enabling factors, illuminating the ‘micro-politics’ of transition processes (Avelino, Grin, Pel, & Jhagroe, 2016; Hess, 2014)⁸⁹.

In other words, I have concluded that *transformative social innovation* can be a valuable analytical framework to empirically make sense of how governance experimentation actually unfolds and about its effectiveness, something that is considered crucial (Bos & Brown, 2012).

MEASURING TRANSITION

Finally, I want to mention another critical contribution of the MiT instrument to the knowledge around the study of sustainability transitions.

In their paper related to the evaluation of sustainability transitions, Turnheim et al. (2015, p. 240) express that “in addition to the societal challenge, there is also a serious analytical challenge” and that we lack a practical approach that “involve the ability to capture analytically as robustly as possible the current state of transitions processes, through an assessment of the current scale, scope, and momentum of transitions”.

The MiT instrument can provide a ‘governance imprint’ of transitions, by mapping the actors and ongoing management actions that are involved (the building elements of governance), together with an assessment of how much transformative initiatives are inclusive, educated,

⁸⁹ and therefore also contributing to the research topics of *Politics and power in transitions* and *Civil society, culture and social movements in transitions* (Köhler et al., 2019)

caring and tangible. In this way, the MiT instrument can provide a practical tool to contribute to the “assessment of the scale, scope, and momentum of transitions”, as demanded by Turnheim et al.

As previously stated, it is possible to easily calculate a grid score that can be considered a proxy of the wideness of the transition governance in place in each community. By using the evaluation cycles, the MiT instrument can additionally provide a qualitative evaluation. Together, these scores represent a proxy for the broadness of the transition governance in place, which is similar to say a proxy for the full spectrum of transformative efforts happening in each community. This measurement can be used to monitor and evaluate specific interventions and transition as a whole, something that is considered to be a key theme related to societal transformation (Fazey, Moug, et al., 2018).

By measuring transition, even if roughly, the MiT instrument can help transformation becoming the new system goal in (trans)local governance – system goals are parameters that can make big differences, acting as a powerful leverage (Meadows, 1997).

3) Final remarks

Until now, I gave emphasis to the thesis contributions to the research field of sustainability transitions. Now, I will discuss on limitations and open questions, revise the research process, assess impacts to society and explore possible future directions.

LIMITATIONS AND OPEN QUESTIONS

The action research process was targeted at developing an operational instrument for supporting transition governance, one that could boost the transformative impact of existing efforts at local level. I assumed that collaborations between community-led initiatives and local governments would be an appropriate starting point.

One could argue that this approach narrows the **applicability** of the results, limiting it to places where collaboration is already happening⁹⁰. The role of contestation or the dynamics of (dis)empowerment might have been overlooked. The inclusion of a pilot where previous collaboration was absent and strong disputes were taking place allowed to partially face this limitation. This pilot’s results led to somehow contradictory conclusions: significant results

⁹⁰ All the pilots also corresponded to relatively privileged communities. See discussion in *Universal usability?*, page 156.

arrived from the use of the instrument, but the implementation showed to be quite challenging, especially in the long run.

I consider that an ideal implementation ground for the *Municipalities in Transition* instrument would be that all the key actors of the community are aware of the availability of the instrument and able to benefit from its use directly or indirectly. Apparently, it can be implemented in a top-down or bottom-up approach, but this is something yet to be tested.

The *Dive Deep & Dream Big* inquiry, as previous mentioned, allowed to give light to possible ‘blind spots’ and illuminate the dimensions that can nurture transition governance, namely supporting change makers, welcoming trauma, and exercising creativity. This more integral approach allowed to overcome the limitation of focusing on the practicality of developing an *instrument*.

Several other **open questions** still remain (see also pages 77, 151 and 198):

- Does the MiT instrument adequately integrates the concept of planetary boundaries (Galaz et al., 2012)⁹¹? Should we include the environment as an actor in the transition grid, allowing to support a fully adaptive and/or regenerative approach?
- Will these local activities be a ‘leading edge’ or just an ‘irrelevant fringe’ (O’Riordan, 2001)? Can they thrive, or even ‘survive’ in the complex and turbulent social times we live in? In which conditions? Would it be possible to gain the necessary critical mass to cross a social tipping-point (Centola, Becker, Brackbill, & Baronchelli, 2018)? Can we be accused of being too optimistic or naive?⁹²
- What is the desirable connection between the MiT instrument and formal governance structures, something that is often overlooked regarding transition governance practices (EEA, 2018, p. 116)?
- Transformation implies challenging the *status quo* in a profound way (Patterson et al., 2017) – is the present approach radical enough or it lacks a strong normative perspective? Should it integrate the role of destabilization (Geels, 2014), to prevent incumbent regimes to ‘dominate’ the grid? Or for the sake of wide acceptance, we

⁹¹ We can reason that this concern is included in the evaluation cycle related to the ‘head’ principle, namely using information concerning environmental impacts. Should this be made more explicit? Should we consider only local or also global impacts, since some actions can generate locally desirable outcomes but bring significant environmental and social trade-offs at a global perspective (EEA, 2018, p. 23)? Should the social boundaries (M. Leach, Raworth, & Rockström, 2013) also be stressed (namely social and gender equity), possibly inside the ‘heart’ principle? What about economic viability?

⁹² It could be claimed the need to ‘overcome’ the situatedness, something common to action-oriented approaches, and find (more) convincing explanations of how these local embedded experiments can lead to wider and significant change (EEA, 2018, p. 115).

pragmatically need to avoid a ‘political’ dimension⁹³? Can the MiT approach be the ‘middle-ground’, pulling ‘rivalry’ forces together gently into a more desirable direction, as in ‘collibration’ (Dunsire, 1990)?

- In the previous chapter I also mentioned that the MiT instrument does not deliberately include a visioning process, using a plural approach – it intentionally favours a diversity of worldviews to maximize resilience in tipping point times. ‘Sacrificing’ a visioning component might compromise the transformative goal by excluding the imagination needed to consciously build a desired alternative future (Fazey, Carmen, et al., 2018)? Again, The *Dive Deep & Dream Big* inquiry helped to define a more comprehensive response by incorporating the exercise of creativity.

ON THE RESEARCH PROCESS

The **research process** unfolded in a smooth while intense way, due to the amount of work developed. There was enough time to prepare the field work, to theorize, to fully experiment, and to reflect on results. Though, time and resource constrains did not always allowed to explore all the potential of the generated data.

The Transition movement showed once more to be an excellent experimental space with transformational ambition. By partnering with local governments, it is able to rethink, reconnect and revolutionize sustainability transitions, even in diverging local governance contexts (Ehnert, Egermann, & Betsch, 2019). The role of the embedded researcher was fully embraced and supported, both in his observant posture and active engagement.

The research did not limit itself to the Transition movement, as demonstrated. However, we could argue that the movement had a significant influence in what and how things happened, namely by assuming a dominant position in both the MiT and Dive Deep research teams. Efforts to have a greater diversity in the projects lead and participants not always were successful. Members of local governments, both civil servants and politicians, participated in the experimentation processes, but had a less prominent role facing the representatives from civil society. We can therefore label the outcomes as a grassroots policy innovation.

The transdisciplinary participatory action research approach (chapter D) brought some critical innovations (see previous chapter, section two), allowing to deepen the social learning

⁹³ This is something that could be associated to the Transition Culture (McGregor & Crowther, 2016). This approach can bring the risk of co-optation, with “apparent acceptance and silent neutralization”, but simultaneously opens possibilities for transformative action (Pel, 2016). This kind of institutional engagement, concurrently disruptive and conciliatory, might minimise the risks and maximize the opportunities (Henfrey & Penha-Lopes, 2018).

process. The three most critical components were the community of practice and the two intense participatory workshops – the MiT reflecting meeting (based in a transformative social innovation approach) and the Dive Deep event (inspired by Theory U and so able to explore the challenges of disruptive change). Complemented by a prolific outreach effort, we can argue that the research was able to positively “apply and adjust integrative research methods and transdisciplinary settings for knowledge generation and integration” (Lang et al., 2012).

But were the many **challenges** of transdisciplinary research in sustainability science faced appropriately? Looking once more at the reflections of Lang *et al.* (2012), I see issues on the “unbalanced problem ownership” and possible “lack of legitimacy of transdisciplinary outcomes”. This is mostly related to the way how the practice partner ‘controlled’ the unfolding of the research (as previously mentioned) – this manipulation can make the MiT instrument vulnerable to the critiques of acting as a ‘trojan horse’, as described by Leach *et al.* (2010, p. 100), intended solely to lead to the uptake of the Transition principles by incumbent actors through unfolding practice.

However, developments in some of the pilots exhibited the capacity of bringing the MiT instrument into play alongside official political processes, reinforcing its legitimacy. This happened through legal resolutions (like in Valsamoggia – see *Scaling up*, page 149), political ownership of the process (like in La Garrotxa, with administration leading decisions) and formal structures (CADES, a consultative and deliberative body playing a *pivot* role in Vila Mariana).

Looking at quality criteria of transdisciplinary and participatory research (Belcher, Rasmussen, Kemshaw, & Zornes, 2016; Bergmann et al., 2005; Blackstock, Kelly, & Horsey, 2007), I recognize a lack of self-reflection and monitoring in the research process. Even though “revision points” were promoted (Table D.2, page 53) and discussions took place relating individual and collective performances, there was no clarity on criteria for success or an evaluative methodology.

Also, no ‘outside’ perspectives were considered in the evaluation in a meaningful way. In the beginning of the process, a ‘support circle’ was in place, with people from Transition Hubs and Transition Network, but this limited participatory approach was dissolved. The late integration of a member of the Transition Network more deeply in the research process

allowed to manage existing tensions, reinforce reflexivity, and support the dissemination of knowledge in the movement and beyond.

In sum, I consider that genuine and explicit inclusion of a more diverse set of actors in the research steering and/or evaluative process, with their unique perspectives, values, and contexts, could have had reinforced aspects like legitimacy, credibility, fairness, transparency, accountability, and effectiveness of the research.

PERSONAL PERSPECTIVE

As mentioned in the methodology, I was simultaneously playing several roles in this process-oriented sustainability research (Wittmayer & Schöpke, 2014), namely change agent, process facilitator, knowledge broker, reflective scientist, and self-reflexive scientist.

As *change agent* and *process facilitator*, I had a participant observation in the development of solutions, mostly motivating and empowering participants and facilitating short-term activities, with a focus on supporting the learning journey. This role accounted for around 1 600 hours of participant observation.

As *knowledge broker* and *reflective scientist*, I analysed the ongoing socio-institutional dynamics and co-evolutionary processes, observed and reflected on research activities and their effects, sharing knowledge through three intermediate research reports and regular interactions with participants.

To support these roles, I initially produced a *Compass for Transformative Collaborations* (page 15), based in literature review (and own experience). I have used this heuristic along the research to stay grounded in *theory*, while analysing the *practice*. I used it as an assessment framework in the case studies, to evaluate the results from experiments, and the final collective inquiry.

Finally, I engaged in a *self-reflexive practice* with regard to my own normative orientation and participation in power dynamics. I was able to recognize a personal evolution from an ‘integrative’ mentality (focused in ‘uniting’ polarities) to a ‘systemic’ mindset (focused in interconnections and patterns), and finally an ‘holistic’ vision (going beyond paradigms). From avoiding conflict and looking for consensus and synergies, I went to sociocracy and the search for consent and leverages, and finally to a focus on co-evolution and regeneration.

IMPACTS IN SOCIETY

How to evaluate the impact generation of this transdisciplinary research, in the context of sustainability transformations? Many frameworks already exist, but they are still struggling to account for the complexity of the task (Schneider et al., 2019). We can divide between scientific and societal effects (Walter, Helgenberger, Wiek, & Scholz, 2007), with the former ones already discussed in the previous sections.

Relating societal effects (*ibid.*), we can identify the *outputs* or immediate results of the research process. This includes all the meetings, workshops, trainings, guides, databases, etc., produced in the context of the experimentation places, within the community of practice, the research team and beyond. They also include the significant social impact of the 14 actions implemented in the pilots, related to awareness-raising and capacity-building (workshops, trainings, an online TV, and a cocreated ideal profile for local politicians), increased resilience (by collaboratively planting trees and caring for vegetable gardens, producing renewable energy or promoting reusable cups), including tangible manifestations (two new centres for community development) or more intangible ones (working groups and a regional observatory). To evaluate outputs, the critical variable is stakeholder's involvement, and assessing all the impact of the research would almost be another PhD.

The second kind of societal effects are *impacts* (*ibid.*). These are intermediate effects corresponding to changes in knowledge, attitude, or behaviour of the stakeholders (caused by their involvement in the research). They were well studied in this thesis and are presented in chapter F, from a socio-institutional perspective. They essentially correspond to changes in social relations between participants, involving new ways of doing, organising, framing, and knowing about sustainability transitions. They translate into a more systemic and collaborative way of *transitioning*.

The video 'Voices from the Pilots' features the participants talking about how the MiT instrument changed their socio-institutional contexts

<https://youtu.be/IHYbsvDgR2A>



Finally, we should consider *outcomes (ibid.)*, defined as long-term effects related to the research. Outcomes can be evaluated by the (hopefully) enhanced decision-making capacity of the stakeholders, being able to co-produce the knowledge necessary for a better response to current sustainability challenges. Two years after the MiT reflecting meeting in Telheiras, it is possible to identify concrete examples where there was an increased capacity for decision-making, with new institutional arrangements in place⁹⁴, and a continuous use of the MiT instrument in supporting decisions.

NEXT STEPS

Future research can be directed to answer the still open questions already presented. It is expected to focus on testing the updated instrument in new communities, exploring new configurations (including the use of the instrument embedded in a sister framework or top-down approach). Also, the longitudinal assessment of pilots' experience will probably deliver important insights relating the institutional arrangements that can favour continuity. Questioning and researching on 'leverage cells' would also be recommended.

Besides the scaling deep process, there is the need to develop research on scaling up. The intention is to identify needed policies and initiatives to support (trans)local transformative efforts and accelerate significant change across various scales. How can the new transformative governance strategy presented in this thesis contribute to the emergence of a multi-level transition governance configuration? Which strategies and instruments of translocal diffusion are needed (Loorbach et al., 2020)? What are the implications for democracy and incumbent institutions?

There is the need to crystalize the proposed narrative of change and to look for creative ways to communicate it, also integrating the health crisis. According to Hetherington and Reid (cited in EEA, 2018), and from an evolutionary perspective, "the combination of crisis, communication and collaboration is a powerful generator of emergent social novelty". Something that is welcomed in these tipping point times.

⁹⁴ A good example is the Climate emergency declaration in Valsamoggia (page 149). Also, the changing relations between civil society and the local government in Kispest (more information here <https://municipalitiesintransition.org/wekerle-transition-opens-the-commons/>). The longitudinal evaluation of experiments is outside the scope of this research.

Box 0.3 – Developing the concept of regenerative governance can be the next research round.

The governance framework that is proposed in this thesis can be named as regenerative, in the sense that it focuses on the whole of the transformation process, supporting agents to co-evolve in that context. Like in the regenerative development approach, the *Municipalities in Transition* instrument does not concentrate on problems but rather in the systemic potential of what is already there (Mang & Haggard, 2016, p. 114).

Through the *Dive Deep & Dream Big* process, the proposal became more integral, reinforcing the field of caring, co-creativity, and co-responsibility (*ibid.*, p. 178). By supporting change makers and welcoming trauma, it might be possible to increase the capacity (or ableness) to fully explore the potential of a community, away from moral compasses (Sanford, 2019). This potential can be illuminated by the exercise of creativity in asking grounded ‘what if’ questions (Hopkins, 2019a).

In what is considered the “new sustainable” and by using sociocracy, regenerative governance can support the self-organizing capacity of the community across scales (Gibbons, 2020). It connects inner and outer efforts, something that has been neglected in sustainability science and practice (*ibid.*).

In sum, a new concept of regenerative governance can evolve by fully integrating the dimensions of the Dive Deep framework into the MiT instrument.

CONCLUSION

“We celebrate that public administration is much warmer to the idea of listening to and co-leading with civil society on future endeavours. This is very positive news and a significant potential leverage point - A door has opened!! Now, it is time to enter the age of grassroots-governmental collaborative regenerative development.”

MiT participant

1) Answering the research questions

With this research I was interested in exploring effective and holistic approaches to support transition governance at local level. The plan was to use transdisciplinary action research to codesign and test a new transition governance instrument, answering the research question:

What would be an applicable and comprehensive governance instrument to support the development of (trans)local transitions, facing the challenge of tipping point times?

I assumed that local organizations could create an enhanced combined effect that enables transformations towards sustainability across multiple scales. Accordingly, I started by investigating collaborations between community-led initiatives and local governments, in the context of transformation.

The first main question I was trying to answer was: What are the dimensions that we should use to assess collaborations that meet the needs for transformation towards sustainability? Based in literature review, I proposed a *Compass for Transformative Collaborations* (page 16). The compass includes the critical dimensions for assessing and developing effective partnerships, namely, to be cocreated (using collective intelligence), to take care of relations (promoting mutual support), to deliver goods and services that foster local resilience, and to provide disruption relating incumbent regimes. I used this compass to guide me through the entire research.

The second question was: What are the characteristics of existing local collaborative transitions, in particular in what relates governance? I harvested and studied 71 cases

happening in 16 countries using indirect observation, surveys and interviews. Through this research on exemplary cases, I was able to confirm the assumption that a great potential for transformation rests in the joint action between local authorities and civil society.

The third question was: What would be an effective governance instrument to improve those experiences by promoting synergies? I wanted to design a process for governing the latter phase of transitions, to be used in communities already going through transformation. After setting the preconditions for a governance instrument to catalyse collaborations and transitions in general (page 68), a codesign process was developed. The proposed instrument was based in one of the 71 cases and included a methodology to make sense of how transformative processes are happening in a community and how to develop the best tactics for enhancing them (page 80).

This innovative governance instrument for local transformative collaborations is based on systems thinking and has a relational vision, being supported by theories of adaptive governance and living systems. It allows to map, measure and trigger collective transformative action and it is expected to bring institutional and cultural change by providing a ‘learning arena’. Its simplicity makes it usable in all sorts of contexts, enabling conditions for systemic change arising from this new shared meaning of transformation and a rationale for taking collective decisions.

The beta version of the so-called *Municipalities in Transition instrument* was applied in 6 pilots (5 countries) – the governance experiments allowed to identify emerging evolutionary patterns and explore the critical design principles and institutional arrangements. Results were assessed, and the instrument was refined, embedding elements of sociocracy, resilience, deep adaptation, and cultural replication. A new ongoing set of pioneers are now testing the refined version of the system (outside the range of this thesis) and will hopefully deliver new insights (page 155).

To confront the MiT instrument with the scientific and practice realms, avoiding ‘blind spots’, I decided to ‘zoom out’ and to promote an open discussion around the question: How can we better support people to co-create and sustain ambitious and inclusive responses to the climate and ecological crisis at a municipal scale?

A collaborative inquiry was prepared, culminating in a 5-days intensive workshop with the participation of a diverse range of researchers and practitioners. In this process, the Municipalities in Transition instrument was explored, alongside other possibilities. Based in

the *Dive Deep & Dream Big* emerging narrative of change, a governance framework was developed, connecting dimensions of inner and outer transition, moving from the individual to the collective level, and from domination to imagination (page 191).

The *Dive Deep framework* enlarges the scope of the *Municipalities in Transition instrument* and sets the building blocks for transition governance. Together they allow an integral response to the challenge of governing transition in these tipping point times, based in the support of change makers, the welcoming of trauma, the exercise of creativity, and the intensification of collaboration.

My thesis statement is therefore:

The Municipalities in Transition instrument can be successfully used to govern transitions at (trans)local level, creating a supporting ground for wiser decisions to leverage existing transformative efforts and foster a collaborative learning arena. The instrument may benefit from the support of change makers, reconciliation efforts and the exercise of imagination, and has the potential to be easily adapted and embedded in diverse settings.

I will now highlight the two key functions that arise from this transition governance system⁹⁵, relating it to existing research and arguments previously discussed: the potential to *navigate transformation* and *promote reconciliation*.

NAVIGATING TRANSFORMATION

The *Municipalities in Transition* (MiT) instrument is expected to represent an innovative way to collectively govern transformative change and act as a systemic instrument for local reflexive governance. Therefore, the proliferation of experiments using the MiT instrument is envisioned primarily to lead to a change in the socio-institutional system, facing the dominant locked-in regime (Loorbach et al., 2017).

I argued that the MiT instrument has the potential to bring institutional and cultural change by providing a 'learning arena'. The transition grid (Figure Co.0.1) stores and structures the collective learning about the transition efforts happening in the community, increasing the overall system's resilience by nurturing renewal and facilitating reorganization (Folke et al.,

⁹⁵ I use the term *system* to refer to the conjugation of the MiT instrument and the Dive Deep framework. Together they represent an interconnected set of principles and procedures that support the development of (trans)local transitions towards sustainability. It is system of *transition governance* because it refers to structures and practices that determine how people take decisions and exercise responsibility, relative to these tipping point times.

2005). The support in the (re)design of interventions allows participating agents to learn and co-evolve in their ‘stakeholding’ (Collins & Ison, 2009).

		Actors Categories							
Actions Categories	U Upper Institutional Levels	A Municipality Political	B Municipality Organization	C Controlled Entities	D Suppliers	E Organizations	F Businesses	G Public	H Networks
	b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e
1 Vision	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
2 Organization	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
3 Planning	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
4 Technical aspects	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
5 Relations	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
6 Cultural change	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
7 Networking	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0

Figure Co.0.1 – The ‘transition grid’ is at the core of the Municipalities in Transition instrument, allowing to capture the governance imprint of transition efforts, making sense of complexity in tipping point times. Local initiatives are mapped according to actors and actions involved, with cells storing information on the baseline (b), the potential (p) and the evaluated impact (e). Additional evaluation cycles assess if initiatives use the best information available, take care of relationships, look for tangible results, support inclusion, contribute to resilience and deep adaptation, or facilitate replication. Planning activities are supported by leverage cells (with coloured background), a database of tools based in pattern language, and several algorithms. A governance model based in sociocracy, and a community of practice nurture the social learning process.

In the beginning of the research, I started by developing the preconditions of an instrument to improve local transformative collaborations (Macedo, Huertas, et al., 2020). These included the capacity to cope with high levels of complexity and uncertainty. In fact, growing feelings of powerlessness and ‘environmental melancholia’ may be blocking vast resources of creative potential for engaging in change actions (Hoggett, 2019). There is the need to cope with enormous and intricate problems, but also with the complexity of solutions, including all the planning, technology innovations, changing lifestyles, or new social configurations.

Therefore, the main feature of the proposed instrument might be the focus on navigating in the flux of transformation happening in the community. Against other perspectives for sustainability transformations (M. Leach et al., 2012), the MiT instrument does not demand

concrete and explicit goals or directions for change. An identified pathway is not delivered, only an instrument to interpret and navigate changing relations – this can be considered a distinctive feature comparing to the multi-level perspective (Jørgensen, 2012).

This approach to community resilience has already been proposed (Resilience Earth, 2017). To face the challenges of the VUCA world, characterized by Volatility, Uncertainty, Complexity, and Ambiguity, we can resort to Vision, Understanding, Clarity, and Agility (Bob Johansen, 2007, p. 45). In the case of this thesis, *vision* relates to the use of the transition and inclusion principles in a collaborative context, *understanding* comes from the use of the transition grid and evaluation cycles to make sense of existing patterns of transformation, *clarity* comes from the analysis of possible leverage points, and *agility* is related to the governance model that includes sociocracy.

The ‘overview effect’ proved to be of fundamental value in the MiT pilots, allowing the awareness of many new possibilities of synergies between available actions and actors. The capacity of the MiT instrument to be effective in supporting transformation processes is amplified by the database of tools connected to the transition grid. The latter is not merely a repository, embedding guidance according to the structure of pattern language.

PROMOTING RECONCILIATION

By bridging with other players, the *Dive Deep & Dream Big* initiative allowed the identification of possible ‘blind spots’ of the MiT instrument. A polarization emerged relating needs for more profound emotional work *versus* more time dedicated to content and next steps. The intense discussion gave visibility to differences that are deeply rooted and most often unseen. It showed how trauma and grief, relating topics as patriarchy, colonization, and (intergenerational) climate injustice, need to be accounted for.

Climate change (and the ecological crisis) might be considered, most of all, an ethical challenge coming from a “perfect moral storm” that makes us extremely vulnerable to moral corruption (Gardiner, 2006). Without addressing the large issues of inequality, we might not be able to solve existing policy gridlocks and deliver ‘just transitions’. Before looking ahead, we are asked to look back (Roberts & Parks, 2006, p. 213).

Simultaneously, the *Dive Deep* demonstrated the need for calling the power of imagination, enabling collective experimentation (Gabrys & Yusoff, 2012) and allowing disruption and innovation to emerge. However, this should be done in a way that does not impose an ‘artificial’ consensus or one singular vision but fully embrace the diversity of worldviews. As

Michael Narberhaus stresses, we should spread "stories about a larger us", avoiding the collapse, oppression, and the enemy narratives, a transversal movement away from ideologies (Michael Narberhaus, 2019). The challenge of transcending paradigms, qualified as the highest leverage of all (Meadows, 1997).

Accordingly, the MiT instrument tries to capture and make sense of the transformative efforts with a holistic perspective. It is assumed that individual interventions are intimately interconnected and can only be interpreted by reference to the whole transformation process. The instrument facilitates ‘collibration’, an alternative mode of metagovernance that allows to navigate the flux of social tensions, dealing with fragmentation and polarization (Dunsire, 1993) – transitions are gently shifted in more interconnected, collaborative, comprehensive, educated, caring, tangible and inclusive direction⁹⁶.

2) Closing

In the research, I assume that we are somehow and metaphorically in the ‘edge of chaos’, “juggling between the demands of stability and flexibility” (Robinson & Robinson, 2014), namely:

- Climate change (and other sustainability challenges) is creating disruptive change that is perceived as moderate. Accordingly, regime actors are slowly changing the direction of development trajectories, frustrating demands from several outsiders, including activists and researchers (Ripple et al., 2019), leading to even more pressure on regimes.
- The COVID-19 outbreak can be considered a specific shock, as defined by Suarez & Oliva (2005), with high amplitude and speed (still unpredictable scope and frequency). It is challenging regimes profoundly and can bring the destabilization necessary to overcome path-dependencies and lock-ins.
- A multitude of niche-innovations are flourishing, at all levels, but they keep fragmented, underdeveloped and often competing with each other, lacking structure and organization.
- Using the multi-level perspective on transitions (Geels & Schot, 2007), we might argue (Macedo et al., 2021) that we are now moving from transformation to a reconfiguration path (where some niche-innovations are adopted, especially at local

⁹⁶ This shift is supported by the internal evaluative and planning mechanisms (see page 99 and 107).

level), possibly followed by de-alignment (including collapse and chaos) and re-alignment.

- A new translocal governance might emerge by linking cross-scalar, collective, and distributive agencies (Moragues-Faus & Sonnino, 2019).

In this context, the research question was: What would be an applicable and comprehensive governance instrument to support the development of (trans)local transitions, facing the challenge of tipping point times? We assumed that to make sustainability transitions happen in a context of rapid change we need to catalyse (trans)local transformative efforts.

We adopted a strategy of critical participatory action research, with the Transition movement performing an intermediary role. Two bridging exercises were developed, namely the *Municipalities in Transition* project, focused on collaboration at local level between governments and community-led initiatives, and the *Dive Deep & Dream Big* project, linking transformative initiatives at different levels.

A proposal for a new governance framework was codesigned, connecting the support of change makers, the welcoming of trauma, and the exercise of creativity, together with the acceleration of systemic collaboration. It can be used as a heuristic in the design of (trans)local regenerative interventions, bringing in the capacity to promote reconciliation and navigate the flux of transformation. There is still the need to develop on scaling instruments and explore multi-level transition governance configurations.

Together these results are expected to renew relations, create a shared sense of meaning, and build supportive and resilient contexts for collective action, integrating local mechanisms for deepening and translocal mechanisms of expanding. This is a pursuit for regeneration.



A video presentation summarizing the thesis is available in YouTube®

<https://youtu.be/7wgmSsZwnIM>

EPILOGUE

Radical acceptance and The Power that Knows the Way

“It is not the climate ‘we want’, but the sort of people we want to be” Mike Hulme (2016)

After the *Dive Deep* event, I had the feeling that I had found a satisfying answer to the research quest for effective strategies and instruments to support transition governance. There was a sense of completion.

But yet, there was something ‘itching’, something calling to be understood. A new research question was emerging. The *Dive Deep* brought the insight of needing to deal efficiently with the clash between different worldviews, strong emotions related to (in)justice or planetary anguish. It was clear that the ‘inner transition’ approach that was explored, rested in victimization, just led to the increase of polarization. What could we do differently?

Some people in the room looked to be nicely navigating these troubled waters. Fully leaning into the strong emotions present and being able to respond meaningfully and with great empathy. With a full sense of purpose and being able not to be carried away by the polarization. From my inquiry, something stayed with me: “radical acceptance”. And it was clear that spirituality was the key.

So, in August 2020, I went to participate in a 10-days retreat in the Awakened Life Project, a spiritual community in Arganil, Portugal. What I have experienced goes beyond this thesis and it was truly a life changing event. And it also revealed a quite radical approach to ‘inner transition’, one that can indeed deal with the root causes of our unsustainability. I could not close this thesis without briefly sharing a few insights.

The first relates to non-duality, a state of consciousness in which the dichotomy of I-other is transcended. When a full awareness of our interconnectedness and the illusory nature of our individuation deeply lands, something changes in the way we perceive the world. The dualism of humans and nature, for long extensively accused of being a root cause of unsustainability, completely dissolves. Without a sense of separation, human relationships can evolve far away from any kind of polarization or victimization. We start seeing ourselves as part of a co-evolutionary whole (Mang & Haggard, 2016, p. XIV).

The second insight relates the radical acceptance of, basically, *everything*. By ‘letting’ everything be as it is, we free ourselves from any blocking anguish with collapse or guilty feelings with the state of the world. We lose our attachment to utopian dreams or saviour narratives. This does not mean that we dissociate ourselves from what is happening, on the contrary. But it allows us not to be affected by the chaos of our minds and emotions. Meditation becomes a “training ground for optimizing our capacity to respond creatively and compassionately to the inevitable challenges of living a committed life in this complex world of changes” (Bampton, 2019, p. 151).

Free from our egoic patterns and fully embracing the already miraculous reality of our world, we become aware that *nothing* is missing. We free ourselves from the permanent dissatisfaction that fuels consumerist and predatory behaviours. We detach from our constant quest for perceived comfort and stability (that is blocking the will to transform our lives). We even free ourselves from the need to know. We then potentially gain the profound commitment and the discernment needed to fully respond to our tipping point times, trusting Life and “the power that knows the way” (Bampton, 2019, p. 161).

“Seen in that light the rapidly converging crisis – ecological, social and economic – of our time are, for those of us who have the eyes to see and the ears to hear, a systemic spiritual call to Awaken and to Evolve. And not just for our own sake, but for the sake of humanity, for the sake of our shared Earth, and for the sake of the further Evolution of Life itself.”

Peter Bampton (2019, p. 58)

Box Ep.0.1 – Spirituality and Research.

Researchers are already becoming aware of the need to explore the current sustainability challenges with a wholeness approach, also embracing the spiritual dimension (Ives, Freeth, & Fischer, 2020). A new research agenda for ‘inner transition’ is being prepared (Bina, Schweizer-Ries, Veciana, & Woiwode, 2019). Research on altered states of consciousness is considered necessary to explore the full development of human potential and transformation (Nardini-Bubols et al., 2019).

We need to overcome our own bias and prejudice and explore less travelled paths. In the first year of the PhD, I was challenged by my teachers to defend religion against science, in an Oxford-style debate with a colleague. In my written essay, I was ‘forced’ to ask “can religion fix climate change?” (Macedo, 2017). I argued that, besides its numerous “sins”, religion “might at least be very useful in *fixing* the ethical principles about climate change in people’s minds, in helping us to get a *fix* on the role we might play and also in *fixing* up our differences in order to allow us to work together.” Interesting enough, somehow, I am partially coming back to these arguments.

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APPENDIX A – COMPLEMENTARY RESEARCH ACTIVITIES

During the thesis I had dived into the realms of climate action, allowing myself a deep understanding of existing social dynamics and psychological aspects. Action research is a delicate balance between participating and observing, being implicated and neutral. In the work within the *Municipalities in Transition* and *Dive Deep & Dream Big* initiatives, the research core, the observer prevailed. In several other ongoing initiatives, I was intimately wearing the practitioners’ ‘shoes’. I will now briefly share some information on the latter.

In the last years the *Fridays For Future* movement and *Extinction Rebellion* “have exploded onto the scene (...) changing how we talk about climate” (J. Falk et al., 2019, p. 6), making the case for climate and ecological emergency. I have participated in several climate protests that mobilized millions of people around the world (Moor, Uba, Wahlström, Wennerhag, & Vydt, 2020), including demonstrations and civil disobedience, also instigating family members and PhD colleagues (Figure Ap.A.1).

On a different level, I have participated in community-led initiatives that included developing a *Wood for Climate* in my kids’ school (Viana, 2019) or participating in a renewable energy cooperative. At the translocal level I had the opportunity to collaborate with ECOLISE.

I have joined the *Climate Reality Leadership Corps* in 2017, a global network of 27.000 climate advocates (Climate Reality, 2020), and in that context I delivered around 200 *acts of leadership* including presentations, media appearances, contacts with influencers and the participation in, and organization of, many events. This included being a cofounder of the *Common Home of Humanity* project, involved in building a new global governance system for humanity (Magalhães, Steffen, Bosselmann, Aragão, & Marques, 2016), and organizing a regional meeting for Climate and Carbon Neutrality.

All these experiences provided many insights useful for understanding the societal transformation that is rapidly happening. The growing potential for civic engagement, the clash between anti-capitalism and green growth approaches, the path-dependencies and lock-ins, the ‘professionalization’ of movements, the critical role of governance...



Figure Ap.A.1 – The movement *Fridays for Future*, triggered by Greta Thunberg and her school strike, allowed the involvement of young people as initiators, organizers and participants in climate activism on a large scale. Answering an explicit call for adults to join the movement, several support groups emerged, including *Parents for Future* and *Scientists for Future*. Above images from demonstrations in Frankfurt in May 2019 with other researchers and in Porto in September 2019 (myself with representatives of three family generations).

In 2019 the *Comunidade Intermunicipal do Ave* started the preparation of a regional climate adaptation plan, concerning their 8 municipalities in the North of Portugal. I was invited to participate as a consultant, recognizing the opportunity of embedding myself in the reality of climate efforts from a top-down perspective.

The methodology that we proposed was quite innovative in several features: using the concepts of *climate emergency* and *collapse* as a starting point, with a perspective of responding to the challenges of *deep adaptation*; an intricate engagement strategy inspired in nature that could induce a *social movement* towards transition (Figure Ap.A.2); a broad concept of adaptation, also including mitigation, aimed at supporting the growth of a *post-carbon* society, based in ecological regeneration, social economy, integral development and transition governance. Proposals in the plan (Macedo, Silva, et al., 2020) were diverse and included, for example, green corridors, ethical finance, energy communities, voluntary simplicity, a school for collective consciousness or a climate *ombudsman*.

The Municipalities in Transition system supported the baseline, and its' use is expected to be one of the outcomes (the process is still unfolding). The process met several institutional barriers common to other similar initiatives (Aguiar et al., 2018; Rendon et al., 2016), preventing until now the full manifestation of the engagement strategy while allowing a significant learning experience. Efforts to promote a pathways approach informed by politics (Wise, Butler, Meharg, Peterson, & Vaghelo, 2019) failed, possibly due to a lack of understanding on existing regimes of truth, rule and accumulation and related political dynamics (Scoones, 2016). The critical role of *bridging organizations* is very visible, in a similar way to the Municipalities in Transition's pilots (see *Roles and leadership*, page 143).

During the thesis, I also had the opportunity to be connected to the aftermaths of the ClimAdaPT.Local project, considered a “ground-breaking initiative within the Portuguese climate change adaptation research and policy landscape” (Mourato, Schmidt, Ferrão, & Bussler, 2018). The development of 26 local adaptation strategies ensuring a homogeneous coverage of the national territory was something unique in the European context (Aguiar et al., 2018). In this project, although the efforts to engage stakeholders, there were, once more, institutional barriers that prevented expected outcomes to arise – path-dependencies and vested interests have proven to be influential (Wise et al., 2014). The Municipalities in Transition approach of managing fluxes (page 207) is expected to overcome these barriers, alongside the work on governance that is analysed in this thesis (for example, using sociocracy showed to be instrumental).



Figure Ap.A.2 – The engagement strategy of the climate adaptation planning process in the Ave region.
 The process is supported in the *climatic social capital* reinforced by awareness and training actions. It feeds the process through a deep knowledge of local dynamics and their possible evolution. The core that holds the process is the *governance model*, which defines the involvement of different agents, articulating technicians, specialists, politicians, activists, and entrepreneurs. It is expected to facilitate the circulation of knowledge, power and other resources and included a proposal for a system for governing the territory's resilience. The canopy represents the *transition dynamics*, integrating and qualifying the multiple initiatives already underway (the leaves), the new opportunities for dialogue and the generation of ideas (flowers) and, if the conditions are met - namely pollinators (birds) - emerging actions (fruits). The actions contain within them the seeds that may originate new plants and should be nourished. The process was designed with several stages, going from sprout (the initial debate on the process) to harvesting and dissemination.

The research journey also included the participation in several **trainings**, complementing the PhD curricula, including:

- Advanced course of Participatory Holistic Methodologies Towards Sustainable Transition (March 2017, in Lisbon, Portugal).
- Climate Reality Leadership Corps training (March 2017, in Denver, USA).
- Climate KIC *The Journey Summer School* (July-August 2017, in Italy, Germany and Finland).
- Transition training (March 2018, in Lisbon, Portugal).
- Impressions Summer School *Exploring climate change challenges and solutions in the real world: from research to practice* (May 2018, in Sofia, Bulgaria).
- Climate Activism (October 2018, in Porto, Portugal).
- Sustainable Development Goals Training of Multipliers (September 2019, in Porto, Portugal).
- *Municipalities in Transition* tutors (February 2020, in Jerica, Spain).

APPENDIX B – CASE STUDIES OF LOCAL TRANSFORMATIVE COLLABORATIONS

Table Ap.B.1 – Case studies of local transformative collaborations.
 More information is available in the link <http://municipalitiesintransition.org/about-the-case-studies/case-studies/>.

Name of the case study	Country	Location	Population (approx)	Grid score	Summary
PAED - Plan d'action énergie durable (Convenance of the Mayor)	Belgium	Ath, Hainaut	28 000	27	The Town is building an action plan to decrease CO ₂ emissions and to build sustainable energy systems.
Halle aux Saveurs - Local Producers Market	Belgium	Soignies, Hainaut	27 000	18	Monthly local producers' market, with focus on artisanal production, geographical proximity (about 20 km around Soignies) and conviviality.
La Ruche qui dit Oui (The food assembly)	Belgium	not defined		6	City connects with farmers for good, fresh & healthy food and farmers meet the citizens for sharing knowledge and understanding.
Cre@farm + Liège district territorial development scheme	Belgium	Liège	620 000	41	CATL (bottom-up transition initiative) collaborating with municipalities for access to agricultural land and other resources.
Ecobairro São Paulo	Brazil	São Paulo	12 000 000	34	Transition to a local, circular and participatory governance in which community members are encouraged to act responsibly and consciously.
Bairro Vivo Project	Brazil	Grajaú, Rio de Janeiro	40 000	36	Neighbourhood project promoting the awakening of individual consciousness and the preservation of the planet and its biodiversity.
Balloon Latam	Chile	10 municipalities in 3 regions	30 000	32	Development of local economies in a dynamic of shared creation between change agents, social entrepreneurs, municipalities, universities and other institutions.
Challenge in search of an eco-neighbourhood	Chile	Bancaria and Santa Elena, Macul, Santiago	6 000	13	Eco-neighbourhood: in every house a garden, every neighbour a recycler.
Transition Rukapillan	Chile	Kurarwe, Panguipulli, Villarrica and Pucón (4 municipalities)	120 000	28	Linking and strengthening of sustainable initiatives in an area that is a world-renowned touristic destination surrounded by a rich indigenous cultural heritage.

Name of the case study	Country	Location	Population (approx)	Grid score	Summary
Santiago en Transición	Chile	Santiago de Chile (multiple Municipalities)	7 000 000	14	Unifying the collective genius to remember that we are paradise on earth.
Escuelas de Vida (Schools of Life)	Colombia	Manizales	400 000	37	Union of different organizations, foundations, collectives and transition initiatives from Manizales that join forces around a common purpose.
Community Living Classes	Colombia	San Miguel, San Francisco, Cundinamarca	1 500	13	The living classroom is an intervention to strengthen the community tissues in favour of sustainability and good living.
Nashira a song of love project for peace	Colombia	Palmira, Bolo San Isidro.	400 000	25	Ecovillage - Nashira a sustainable model of peace led by women for a better quality of life.
Promotion of Healthy lifestyle challenges of formation for the reception of childhood	Colombia	Arauca, Palestina, Caldas.	9 500	9	Generate new teaching and learning possibilities that make visible the transformation of healthy lifestyles as a meaning of education.
7RíosFest of Asociación 7Ríos	Colombia	Cali	2 400 000	15	Making river protection and river basin regeneration of the 7 rivers in Cali fashionable.
Uelkom	Colombia	Manizales Caldas	400 000	18	Social innovation project towards the transformation of the reality in vulnerable contexts, based on ethnography and models of communication.
Madre Kumbra - Ecovillage	Colombia	Manizales, Caldas	400 000	26	Madre Kumbra: territory for meeting, understanding and sharing with yourself, the other and Nature.
Conservation and sustainable production for the collective "good living"	Colombia	San Carlos and San Rafael, Antioquia.	30 000	36	Creating sustainable development in socially and culturally diverse rural community, around biodiversity conservation. We seek to unite.
Det Fælles Bedste (The common best)	Denmark	Vejle	52 000	21	A Convergence on solutions for a green sustainable organic transition.
The Impact Farm	Denmark	Nørrebro	80 000	30	Designing an ambitious urban greenhouse as a Hub for transition.
Transition Town Silkeborg - The Local Bicycle Infrastructure Plan	Denmark	Silkeborg	91 000	22	Collaboration between organizations and municipality to deliver a local bicycle plan.
La filière de la graine à l'assiette (The process of the seed to the plate)	France	Ungersheim	2 400	14	Short circuit for production of organic food, in a wide context of transition.

Name of the case study	Country	Location	Population (approx)	Grid score	Summary
Short supply chains House	France	Sucy-en-Brie, Val-de-Marne, Ile-de-France, France	26 000	14	A market hall for local food just born in a collaboration between municipality and associations.
Vélo-école	France	Ménilmontant, 20ème arrondissement, Paris	200 000	11	Teaching adults to cycle - can be a source of autonomy and freedom for adults who never learned when they were younger.
Zukunftsstadt Dresden 2030+ (future city Dresden 2030+)	Germany	Dresden, Saxony	550 000	43	Involving the people of Dresden into a strategic transition-process from visioning via planning to action and transformation, with scientific monitoring.
Stadtgärtle	Germany	Esslingen	90 000	13	Promoting a public green space to grow vegetables with the neighbourhood.
Transition Wekerle	Hungary	Wekerle, Kispest, Budapest	11 000	25	A transitioner trainer was elected as councillor and promotes sustainability issues.
Comune di Santorso	Italy	Santorso (Vicenza)	6 000	18	Facilitating the access of the public to technologies like renewables. It also promotes the integration of refugees, which is a distinctive feature.
Funzione energia (Energy Function)	Italy	Emilia Romagna Region	4 400 000	19	Development of a theoretical and operative framework to address "sustainability and resilience" at local government level in a systemic way.
Livorno	Italy	Livorno (City)	160 000	22	Emerging new relationship between local government and citizens searching for new methodologies and tools to develop and thrive.
La Coope - Comunidad de Intercambio Ecológico y Solidario	Mexico	Querétaro	958 000	24	A recent cooperative-community dedicated to the local food system.
Asociacion Projungapeo: JET (Jungapeo en Transición)	Mexico	Jungapeo, Michoacán	20 000	40	An ongoing community project seeking an integral local development.
Bacalar en transición	Mexico	Bacalar, Quintana Roo	15 000	21	Working together to protect the lagoon of Bacalar and the communities that live here.
El Itacate	Mexico	Tepoztlán, Morelos	37 000	19	Transition Reconomy project based in Tepoztlan settled as a think tank lab for helping food gardening, permaculture and educational projects.
Architecture for sustainability	Mexico	Guadalajara Jalisco	8 061 728	18	Social enterprise oriented to sustainable architecture and dissemination of tools for resilience.

Name of the case study	Country	Location	Population (approx)	Grid score	Summary
Achterhoekse Groene Energie Maatschappij (Achterhoek Green Energy Cooperative - AGEM)	The Netherlands	Achterhoek (region)	390 000	29	Regional energy cooperative owned and managed by municipalities.
Buurtfonds Dichters-Rivierenwijk (Neighbourhood Fund)	The Netherlands	Dichters and Rivieren, Utrecht	15 000	8	Neighbourhood initiative fund aimed at distributing small grants.
The Aardehuis project	The Netherlands	Olst	18 000	35	Sustainable living project with 23 houses and a community building; municipality, transition initiatives and other partners are involved.
Blue City	The Netherlands	Rotterdam	600 000	24	Breeding ground in Rotterdam for innovative companies that try to connect their loops together: one company's output is another company's input.
Parceria Local de Telheiras (Local partnership)	Portugal	Telheiras, Lumiar, Lisbon	17 500	43	Neighbourhood partnership that resulted from a transition initiative and a local agenda 21 promoted by the municipality.
Coimbra em Transição	Portugal	Coimbra	143 500	25	Designing a local hub for transition.
Zero Waste Village	Spain	Orendain, Gipuzkoa	210	14	Project based on waste management/circular economy.
La Garrotxa Territori Resilient	Spain	Garrotxa (21 Municipalities)	56 000	36	Rural region that is home to 21 municipalities and over 500 local community organisations that work together towards a sustainable and well-networked society.
Mares Madrid	Spain	Province of Madrid	6 500 000	48	Urban transformation by promoting social economy and collaboration (energy, recycling, food, mobility and social care economy).
Almócita, semilla en transición	Spain	Almócita, Almería, Andalucía	140	30	Municipality actively participating in the transition movement, in aspects such as energetic self-sufficiency, composting and car-free.
Iniciativa Rubí Brilla	Spain	Rubí, Barcelona, Catalunya	76 000	35	Local strategy to change the energetic model, promoting energy saving and energy efficiency in all the sectors of the city.
Descarboniza! Que non é pouco	Spain	Santiago de Compostela, Galicia	100 000	19	Organise and give support to groups of people who are willing to "decarbonise" their lifestyles.

Name of the case study	Country	Location	Population (approx)	Grid score	Summary
La Colaboradora	Spain	Zaragoza	660 000	33	First Coworking P2P that promotes a collaborative economy in the city through a time bank of voluntary exchange of services and knowledge.
Citizen initiative to improve people´s lives in the municipality	Spain	Quéntar, Granada	980	19	Citizen education for improving community living.
Comunidades en transición	Spain	Zarzalejo, Madrid	200	26	Transition Initiatives, CSA, collective space, transportation, waste management, participatory budgets.
Red Huertos Urbanos Comunitarios	Spain	Madrid	3 000 000	39	Many small gardens will grow small people who will change the cities.
Turuta Social currency	Spain	Vilanova i la Geltrú	66 500	29	Promoting collective citizenship projects, including social currency.
Sierra Oeste Agroecologica	Spain	Sierra Oeste de Madrid (19 Municipalities)	40 000	24	Regional partnership for agroecological development.
Montequinto (Dos Hermanas)	Spain	Seville	36 000	14	Permaculture project for local resilience.
Jaén en Transición	Spain	Jaén	114 000	37	Transition Initiative. The project opts for local initiatives that are moving towards economic degrowth and good living.
Murcia IT - Innovación y Tradición	Spain	Murcia	441 000	35	Participatory Integrated Sustainable Urban Development strategy.
Implementation of the local digital currency in the context of intelligent public spending	Spain	Santa Coloma de Gramenet, Barcelona, Cataluña	120 000	37	Local currency to promote social and democratic economy.
Móstoles en Transición	Spain	Móstoles	210 000	29	Transition initiative with the participation of the municipality; implementation of a new city model that faces the ecosocial challenges.
Vilawatt	Spain	Viladecans, Barcelona	65 000	31	Reduction of energy consumption with innovative tools (local currency).
Växjö	Sweden	City	65 000	38	More than 30 years of work on sustainability

Name of the case study	Country	Location	Population (approx)	Grid score	Summary
Air quality: an engaging narrative	United Kingdom	Southampton	250 000	40	Concerns about poor local air quality and health have helped create closer collaboration between local officials, councillors and groups of residents.
Caring Town	United Kingdom	Market Town of Totnes (and surrounding district), South Hams, Devon	28 000	45	Local network of public, voluntary and private organisation coming together to pool resources, skills and ideas.
Pollinator Preservation	United Kingdom	Monmouthshire	92 000	18	Preserving bees in a transition context.
Town Orchards	United Kingdom	Chepstow	10 000	15	The planting of orchards on Town Council land giving the community the opportunity to pick sustainably grown local fruit.
Walking Bus	United Kingdom	Chepstow	10 000	17	The creation of a walking Bus to encourage school children to walk to school reducing emissions and creating a healthier lifestyle.
Climate Protectors	United States of America	Sonoma County, California	500 000	35	The “climate protectors” is a well-structured collaboration in terms of promoting climate action, both from public and governments, with 7 years of experience.
Sanctuary School	United States of America	Milwaukee	600 000	10	Promoting healing arts with public, special “underserved communities” and “minorities”. Creativity seems to play a great role.
Transition Centre Emerging Sustainability Culture	United States of America	Centre County, Pennsylvania	160 000	45	The project’s focus is on promoting a shared vision, planning and networking. They give great importance to economy.
Compost pickup in Media PA	United States of America	Media, Pennsylvania	6 000	19	Recycling food waste in a transition context and collaboration with municipality.
Transition Streets pilot project - Des Moines Climate Action Plan	United States of America	Des Moines, Iowa	235 000	30	Climate Action Plan with a transition context.
Building Community Resilience through Grassroots and Government Collaborations	United States of America	Sonoma, California	500 000	59	Decade of successful collaboration between grassroots and local government that catalyse wide-scale community action.

Table Ap.B.2 – Analyses of eight cases of local transformative collaborations, including governance model, policies, tools, and work in progress.

	Case history	Governance model	Methodologies and tools	Work in progress
Daily Acts , Sonoma, United States of America	<p>Founded in 2002, Daily Acts (DA) is an educational NGO whose purpose is to be a catalyst for personal and community transformation. After running community-based sustainability education programs for five years, DA recognized that partnering with LGs was a critical pathway to build organizational capacity and affect systemic change. Meanwhile LGs recognized that DA could offer (1) a unique ability to engage the community; (2) sustainability expertise; (3) operating in a cost-effective way. The first contract for a joint educational program was signed with the city of Petaluma in 2007 and others followed. The main barrier initially was valuing DA's services.</p>	<p>Government partnerships are based on regularly yearly financial contracts to implement sustainability programs. DA engages sustainability experts and a wide range of non-profits, businesses, government agencies and other organizations across the gamut of sustainability-related issues. DA works with approximately a dozen different alliances and networks.</p> <p>Beyond flattening leadership and moving it to the edges of the organization and working in coalitions, DA is moving in a programmatic direction that more deeply engages the leadership of communities.</p>	<p>DA was born out of a permaculture design approach with the underlying ethical principles of earth care, people care and fair share and the primary methodology being to take an integrated and holistic approach.</p> <p>DA work with government agencies is a core strategy to affecting wide-scale community transformation while building organizational and movement capacity in the community resilience field. Some of the core operating principles are (1) shared leadership; (2) nurturing non-profit networks; (3) working with business and government; (4) doing both program implementation and advocacy work.</p>	<p>DA promotes 'Homegrown Programs' transforming homes and landscapes into productive, resilient ecosystems – educational tours expose people to inspiring and practical examples; workshops help people develop practical skills; garden installations and landscape transformations help people work together to create practical acts of transformation.</p> <p>'Community Resilience Challenge' is an annual campaign to inspire wide-scale collaborative action. Activities promoted range from planting fruit trees to installing greywater and rainwater catchment systems to committing to reduce waste, shop local and hosting neighbourhood potlucks.</p>
Ecobairro , São Paulo, Brazil	<p>Inspiration to Ecobairro came from educational experiences related to Ecovillages (2004). The initial founders (Lara Freitas and Paulo Santos) got together with other people and presented the program in 2005, receiving institutional support from the City Council and United Nations.</p> <p>Biggest challenge in the beginning was the lack of public awareness. The program is now also operating in Salvador and Feira de Santana.</p>	<p>Ecobairro is an enduring program from the Roerich Institute of Peace and Culture of Brazil. In São Paulo it is hosted by the organization Casa Urusvati. There is a structure of coordinators, advisers and nucleators, with a systemic approach to leadership. Decision-making is always in group.</p>	<p>Focus on urban sustainability and eco-neighbourhoods, while connecting different levels, from personal to planetary. Project is grounded in the 'Mother's Pedagogy', based on an analogy with motherhood (fostering values as deep inclusion, care, intuition, openness and flexibility). Use tools like Nonviolent Communication or Open Space and the framework of SDG.</p>	<p>Activities include recruitment of volunteers; active dialogues with local agents and universities; campaigns, trainings, exhibitions and workshops on environmental practices and topics; networking with the Global Ecovillage Network and Transition movement; collaborating in local public initiatives like UMAPAZ (Open University for Environment and Culture of Peace) and Municipal Council for Environment and Sustainable Development.</p>

	Case history	Governance model	Methodologies and tools	Work in progress
<p>Funzione energia (Energy function), Emilia Romagna, Italy</p>	<p>In 2008 “Monteveglia Città di Transizione” was the first Transition Initiative in Italy and started its activity with a quite visible, official and unusual strategic partnership with the Municipality. Together they led action on the Covenant of Mayors and succeeded in involving the whole ‘Unione di Comuni’ (6 municipalities). This was the basis for a partnership with the regional branch of ANCI (National Association of Municipalities), in 2009, aimed at replicating this example and create support tools. CURSA (University Consortium for Socioeconomic and Environmental Research) joined the effort on the behalf of the national Environmental Ministry.</p> <p>After a few years of experiments was evident the need of a general framework to make easier the day-by-day challenges posed by the complexity of the different contexts.</p>	<p>It is believed that energy issues (and the necessary transition to a low-carbon economy) brings new challenges to local governance and should be included as a new municipalities’ function (changing legislation).</p> <p>The Energy Function should be a local policy transversal to all existing policies; focused on facilitation and support of families and businesses; grounded in multi-level governance; strictly dependent on the peculiarities of the territory (natural and social capital); urgent while having a medium-long term perspective.</p>	<p>The principle for designing the Energy Function were: having a general, systemic framework easy enough to be understood with a simple learning curve and having a way to organize all the available tools, methodologies and needed information for those trying to “work in the field”.</p> <p>In spite of the name, the actual model for the Energy Function can hold much more than “energy issues” being a systemic tool strongly inspired by the Transition work, system thinking and various theories of change approaches. It has a stochastic design.</p>	<p>The Energy Function approach is based on a relationship grid that holds the “scenario” and a pattern language database that contains tools and needed information. All is designed to be practical and grounded on reality but without simplifying the complex environment and set of conditions and relationships real life presents.</p> <p>The Energy Function was indicated as a necessary tool on the Regional Energy Strategy of Emilia Romagna but kept underdeveloped.</p>

	Case history	Governance model	Methodologies and tools	Work in progress
Future City Dresden 2030+ , Dresden, Germany	<p>In 2015, the Federal Ministry of Education and Research (BMBF) launched the Future City for Sustainable Development competition. Three phases were considered: (1) development of a common vision; (2) planning; (3) implementation. Dresden's government decided to apply in 2015 and is one of the 7 finalists going for phase 3 in 2019, receiving around 1 million euros for that purpose.</p>	<p>The process is driven by the Municipality through a project manager who formed a 'Future City team'. First project partners were 2 scientific bodies, the Leibniz Institute of Ecological Urban and Regional Development and the Knowledge Architecture at the University of Dresden (with experience in designing processes for working with people). In phase 2 other partners joined (e.g. public transport company and energy provider) and a group was formed. Involvement was restricted to some meetings and a conference. Stronger collaborations are expected in phase 3, with joint implementation of projects. People from civil society were involved and there is a sense of excitement with the possibilities to collaborate.</p>	<p>The initiative follows the inspiration from the Transition movement, empowering people to act at their own places, creating rooms where they can meet ("people own the city, and they should be the ones developing it"). In this way, it is considered a pioneering project in the government.</p> <p>Discussion rooms have been streamlined to support people in the process of creating projects. For example, identifying objectives, problems to solve, useful personal experiences and skills, evaluation criteria, etc.</p>	<p>The initiative concentrates on the process as designed by BMBF, following what was included in the application.</p> <p>In this phase (2) efforts are directed to codesigning projects.</p> <p>Although this planning phase is considered too abstract by some participants, it is believed that it is affecting how people face sustainability issues and their own role in the city. Stronger connections are believed to be the greatest outcome at this stage.</p> <p>A catalogue was prepared with all the ideas relating education, campus and citizen knowledge; neighbourhood; energy; sustainable economy and business model; mobility; urban space; citizen participation; culture and capital of culture.</p>

	Case history	Governance model	Methodologies and tools	Work in progress
Jungapeo en Transición , Jungapeo, Mexico	<p>The NGO ‘Pro Desarrollo Integral del Municipio de Jungapeo’ was created in 2015 (grassroots’ activities started in 2005), focused in local, integral development. In 2016 the local mayor challenged the NGO to transform Jungapeo into the first official Transition Town in México, which led to a signed agreement.</p> <p>Barriers are mistrust based on previous bad experiences; apathy by the population; short exercise of power of the municipal authorities; lack of continuity due to overwork.</p>	<p>Jungapeo en Transición (JET) is managed by a full-time staff dependent on the CLI. It is grounded in a matrix organization with 3 axes (social, agriculture and tourism) and 5 components that interact with the axes (ecology, culture, health, education and sports). Collaboration with Municipality is supported by regular briefings and by inviting members of the municipality to workshops and activities.</p> <p>Local agents are involved, also through focal groups (children, students, business, teachers, elders).</p>	<p>Inspiration comes mainly from the Transition movement. It intends to “eradicate the mentality of assistencialism and dependency” and empower the community to identify their needs and help to resolve them.</p> <p>Collaboration between LGs and CLIs is expected to grow based on trust and confidence arriving from joint successful activities – small initial steps with big visibility.</p> <p>Tools like sociocracy, coaching and Robert’s Rules of Order are used to foster inclusion and participation.</p>	<p>Organized activities range from cleaning rivers to competitions to honouring the dead (embedded in Mexican culture), local markets to dry toilets.</p> <p>An educational approach is the focus, including workshops for elders, youth and other groups.</p> <p>Regardless of the several results that have emanated from own projects, they have been able to observe recent “outbreaks” of spontaneous and orderly teamwork among the local population, “as if the Transition Effect were contagious”.</p> <p>Monitoring includes regular and extensive surveys to partners, beneficiaries and public.</p>
MARES , Madrid, Spain	<p>The economic crisis of 2008 increased unemployment and urban social-spatial segregation. Dinamia (social consulting) joined the municipality, Tangente and Vivero de Iniciativas Ciudadanas (two collaborative platforms) with the idea of supporting existing CLIs related to social and solidarity economy. Other partners joined the initiative.</p>	<p>MARES is a partnership centralised in the Council. Several partners participate in the executive, economic and finance committee (with voting rights) and steering groups (led by different partners). Control processes were defined, such as management plan, quality plan, risk assessment plan, evaluation system and monitoring, handbook of internal communication and decision making.</p>	<p>The focus is on urban economic resilience. It intends to strengthen the emerging opportunities in strategic sectors (Transport, Food, Waste, Energy and Care, MARES in Spanish). It seeks for cooperation among local actors, social innovation and the active productive involvement of citizens. The base is to “put the people before the profit”. Use tools like the co-design for the reuse of disused buildings and public spaces; mapping citizens’ competencies; analysis of care needs and proposal for value chain; learning communities.</p>	<p>Initiatives of collective self-employment by means of increase awareness, training and support to citizen groups. The biggest challenge is the generation of real participatory public policies in the functional and social fields. There are expects outcomes like a change of transport to low emission models, implementation of renewable energies and energy efficiency, improved care for older people and for the infancy, consume of local products and agroecologic food, hopefully generating employment.</p>

	Case history	Governance model	Methodologies and tools	Work in progress
Rubí Brilla , Rubí, Spain	<p>In 2008 the Rubí Council joined the Covenant of Mayors, within the European initiative to reduce carbon emissions. A Plan of Action for Sustainable Energies was prepared externally, with the support of Barcelona Council. The Rubí Brilla initiative started in 2011.</p> <p>Angel Ruiz, working for the municipality and private entrepreneur, played a key role by bringing expertise and a business perspective.</p>	<p>Rubí Brilla is a service provided by the Municipality and managed by a working group of eight internal technicians. Energy experts have been hired in 2013 and several collaborations are established with external entities.</p> <p>A specific partnership is built with schools and other public organizations, where decisions are taken collectively – in this context savings from investment in energy efficiency are locally reinvested (50% in new measures for energy saving, leading to a positive feedback loop).</p>	<p>The initiative uses the economic factor as the leading motivational factor and prioritizes economic tools commonly used in the business sector. Using the ‘pareto principle’ they focused on energy efficiency in public buildings. Substantial emissions and cost reduction were achieved so ‘profits’ were reinvested in new actions (energy efficiency and renewable energy). The clear cost-cutting is used as an argument to convince private partners.</p>	<p>A major part of the work done relates to the private sector (industry accounts for 40% of emissions). This is mostly done by promoting technical meetings with the biggest energy users, where learnings are shared and support is provided. This includes collaborations with the Polytechnic University of Catalunya.</p> <p>Other activities include providing monitoring apps to families, energy centres at neighbourhood level and buying electric vehicles.</p> <p>Data monitoring is a key activity, including real time checking of consumption and efficiency indicators. Citizens are provided with information on energy costs in public buildings and street lighting.</p>
Växjö , Sweden	<p>The municipality saw a need to restore the local lakes in 1969 and the environmental focus has continued since then. In 1993, LG approved a local environmental policy and in 1996 decided to become a fossil fuel-free municipality. In 1999, a Local Agenda 21 strategy for Sustainable Växjö was adopted. In 2006, the LG’s Environmental Program was agreed (updated in 2010 and 2014). Several participatory efforts (polls, meetings...) have been tried but the results were unsatisfactory.</p>	<p>The development has been driven by municipal departments and municipally-owned corporations. Since May 2016 there is a sustainability group which is part of the development unit of the municipal management. The group has two politicians assigned to it and formulates the Environmental program. It is up to each operation unit to break this down into actionable, budgeted steps with measures related to the goals.</p>	<p>The main principle is to promote a strong political leadership with bold decisions. The basic approach, since 1969, has been a sequence of political decision > steering documents > goals > municipal boards/ corporations plans > budgets > follow up> publication in annual report with goal scorecards.</p> <p>To assure continuity three main factors are considered: (1) consensus among parties; (2) direct involvement of politicians; (3) strong management structure in place.</p> <p>Work is underway to align the program with the SDGs (ready 2019).</p>	<p>The environmental program's measurable goals are planned and monitored through Växjö municipality's management system. Each municipal steering board and company are responsible for fulfillment of the goals as well as to deliver statistics. The annual report is publically available.</p> <p>Multiple outcomes are visible, like better air and water quality, green spaces, or sophisticated waste sorting.</p> <p>There is a feeling of pride in being at the forefront of environmental development.</p>

APPENDIX C – THE MUNICIPALITIES IN TRANSITION PILOTS

Table Ap.C.1 – Pilots, local organizations involved in MiT and contextual differences.
 More information is available in the link <https://municipalitiesintransition.org/the-pilots/>.

Pilots' community	Local facilitators	Context
Kispest (Hungary), is a district of the capital city of Budapest, with around 60 000 inhabitants.	An active member of a local transition initiative (Transition Wekerle) was elected as councillor of the local district , which created the opportunity for a collaboration.	Kispest is considered a dynamically developing center of the southern region of Budapest and includes Wekerle, a pleasant neighborhood with many green areas.
La Garrotxa (Spain), <i>comarca</i> comprising 21 municipalities, with around 56 000 inhabitants, part of the <i>provincia</i> of Girona (Catalunya region).	ADRINOC (rural development organization) and several thematic regional consortiums participated in the initiative. Resilience.Earth is a cooperative dedicated to community resilience, ecological regeneration, and social solidarity economy, having connections to Spanish Transition Hub.	La Garrotxa is situated close to the Pyrenees, with a significant Volcanic Zone Natural Park. More than half of the population live in the capital city of Olot. It is considered a historical and contemporary reference in terms of social and ecological movements.
Santorso (Italy), <i>comune</i> with around 5 700 inhabitants in the <i>provincia</i> of Vicenza (Veneto region).	The Municipality of Santorso is active in terms of sustainable energy (Santorso, 2013). The local Transition Initiative has been developing smaller actions and potential for collaboration was identified.	Santorso is at the base of the Summano mountain (Vicentine Alps), overlooking a strongly industrialized valley.
Telheiras (Portugal), neighbourhood mostly in the <i>freguesia</i> of Lumiar, with around 28 000 inhabitants, in the capital city of Lisbon.	The Centro de Convergência de Telheiras is a citizen-led initiative managing the Parceria Local , a partnership involving the local administration (Lumiar and Lisbon Municipality) and around 30 organizations. It evolved from one of the first Transition Initiatives in Portugal (Matos, 2011).	Lisbon is the capital city of Portugal. Telheiras is located in the outskirts and it is mainly a residential area. It is characterized by relative good planification of public spaces, young population and wellbeing (Guimarães & Matos, 2010).
Valsamoggia (Italy), <i>comune</i> with around 31 000 inhabitants in the Metropolitan City of Bologna (Emilia Romagna region).	Valsamoggia is a new Municipality created through the merging of five in 2014, facing the trade-off between efficiency and democracy (Tavares, 2018). Monteveglia, one of the merged municipalities, was the birthplace of Transition in Italy (Biddau et al., 2016), now operating at Oggi, la Casa dell'innovazione.	Valsamoggia is settled in the river basin of Samoggia, mixing rural mountainous areas with industrialised planes. The region is one of the wealthiest in Italy and Europe.
Vila Mariana (Brazil), with around 345 000 inhabitants, one of the 32 subdivisions of the city of São Paulo (<i>subprefeitura</i>).	Ecobairro is a holistic citizen-led initiative operating in several locations in Brazil (Freitas & Santos, 2013). Locally it has connections with the Transition movement and institutional collaboration with the <i>subprefeitura</i> through CADES (Regional Council for the Sustainable Development).	The <i>subprefeitura</i> includes 3 <i>distritos</i> , namely Moema, Saúde and Vila Mariana. Vila Mariana is a wealthy <i>distrito</i> , mostly residential, close to the center of one of the biggest metropolises in the world.

Table Ap.C.2 – Participants in the MiT planning meeting and facilitators training.

Name	MiT role	Organization
Alessia Zanandrea	Pilot: Santorso	Santorso Municipality
Ana Huertas	Core circle, coordinator	MiT
Cristiano Bottone	Core circle	MiT
Elisa Sperotto	Pilot: Santorso	Santorso Municipality
Federica Govoni	Pilot: Valsamoggia	Valsamoggia Municipality
Genís Serra i Martín	Pilot: La Garrotxa	Resilience.Earth
Giulio Pesenti Campagnoni	Pilot: Santorso	Santorso in Transizione
Henrique Melo	Pilot: Telheiras	Lumiar parish
Jordi Terrades Burniol	Pilot: La Garrotxa	ADRINOC
Juan del Río	Core circle	MiT
Lara Freitas	Pilot: Vila Mariana	Ecobairro
Luís Pereira	Pilot: Telheiras	Centro de Convergência de Telheiras
Magda Beretta	Pilot: Vila Mariana	CADES
Manuel Leite	Pilot: Telheiras	Santa Casa
Nicola Hillary	Support circle	Transition Network
Oscar Gussinyer	Pilot: La Garrotxa	Resilience.Earth
Pedro Macedo	Researcher	University of Lisbon
Peter Fülöp	Pilot: Kispest	Kispest Municipality
Samu Márton Balogh	Pilot: Kispest	Atalakulo wekerle
Tommaso Brazzini	Core circle	MiT
Valerio Betti	Pilot: Valsamoggia	Oggi, la Casa dell'innovazione

Table Ap.C.3 – Participants in the Pilots’ reflecting meeting.

Name	MiT role	Organization
Ana Huertas	Core circle, coordinator	MiT
Cristiano Bottone	Core circle	MiT
Erika Zárate	Pilot: La Garrotxa	Resilience.Earth
Federica Govoni	Pilot: Valsamoggia	Valsamoggia Municipality
Filipa Pimentel	Support circle	Transition Network
Giulio Pesenti Campagnoni	Pilot: Santorso	Santorso in Transizione
Henrique Melo	Pilot: Telheiras	Lumiar parish
István Ferenczi	Pilot: Kispest	Kispest Municipality/ Atalakulo wek.
Jordi Terrades Burniol	Pilot: La Garrotxa	ADRINOC
Juan del Río	Core circle	MiT
Lara Freitas	Pilot: Vila Mariana	Ecobairro
Luís Pereira	Pilot: Telheiras	Centro de Convergência de Telheiras
Magda Beretta	Pilot: Vila Mariana	CADES
Manuel Leite	Pilot: Telheiras	Santa Casa
Michael Thomas	Support circle	Transition Network
Nicola Hillary	Support circle	Transition Network
Pedro Macedo	Researcher	University of Lisbon
Peter Fülöp	Pilot: Kispest	Kispest Municipality
Tommaso Brazzini	Core circle	MiT
Tracey Wheatley	Pilot: Kispest	Atalakulo Wekerle

Table Ap.C.4 – Ex-ante interviews to MiT facilitators.

Date	Name	Pilot
5 March 2018	Manuel Leite	Telheiras
	Luís Pereira	Telheiras
	Valerio Betti	Valsamoggia
	Jordi Terrades Burniol	La Garrotxa
6 March 2018	Federica Govoni	Valsamoggia
	Henrique Melo	Telheiras
	Lara Freitas	Vila Mariana
	Tracey Wheatley	Kispest
	Magda Beretta	Vila Mariana
7 March 2018	Peter Fülöp	Kispest
9 March 2018	Giulio Pesenti Campagnoni	Santorso
	Alessia Zanandrea	Santorso

APPENDIX D – *DIVE DEEP* PARTICIPANTS

Participants in the *Dive Deep & Dream Big* inquiry (Brussels event), including facilitators*:

Aama Sade	Lee Towers	Sophy Banks*
Ana Margarida Esteves	Leila Hoballah*	Talit Chauvin-Buthaud
Andy Goldring	Lena Abbou	Tracey Wheatley
Arthur Le Bihan	Mama D Ujuaje	Valerie Charavel
Cristiano Bottone	Manjola Piniqi	
Declan D'Arcy*	Maud Singy	
Delphine Verstraete	Mike Thomas	
Elizabeta Zijlstra	Muttiah Yogananthan	
Jovanovska	Nathalie Everard	
Ellen Grauls	Nicola Hilary	
Erika Isabella Zarate*	Nicole Lazarus	
Eva Schonveld*	Olivier Chaput	
Fany Ramadier	Patricia Cadron	
Filipa Pimentel	Patrick Chalmers	
François-Olivier Devaux	Pedro Macedo	
Giulio Pesenti	Rachel Ellman	
Campagnoni	Renuka Thakore	
Guillaume Dorvaux*	Rob Hopkins	
Henry Owen	Sara Silva	
Hilary Jennings	Sarah McAdam*	
Jack Goodwin	Savannah Lovelock	
Josué Dusoulier	Silver Sillak	
Julia Lipton		

APPENDIX E – THE *COMMUNITIES IN TRANSITION* WORKSHOP

The “Communities in Transition” was a in person two days’ workshop organized in Lisbon in the beginning of October 2020, integrated in Umundu Lx (a collective festival for sustainable transformation) (Figure Ap.E.1).



Figure Ap.E.1 – The participants in the workshop “Communities in Transition”.


On Figure Ap.E.2 and Figure Ap.E.3 we share the flow of the workshop, in which a collaborative manifesto was prepared (Figure Ap.E.4).



Figure Ap.E.2 – The flow of the “Communities in Transition” workshop (interactive poster shared with participants).

- Welcoming
 - Presentations, agreements, attunement
- Where are we?
 - Sociometry exercise on feelings relating collapse and states of inner transition to recognize differences
- Who are we, really?
 - Guided meditation to dive in true nature, eye gazing and freewriting exercise
 - Burning (literally) of written texts for non-dual awareness and confronting narcissism
- Self-imposed limitations
 - Sharing tensions between projected outer self (drawing our perceived masks) and inner turmoil
 - Reflection on own gifts
- Our purpose
 - Collective writing of a manifesto for who and how do we want to be in the world

To be



- Where to act?
 - Group work on root causes of our unsustainability, drawing causal loop diagrams to promote systems thinking and identifying leverage points
- How to act?
 - Understanding agents and agency (stakeholder analysis, actor roles in sustainability initiatives, assessing collaborations with the 'compass for transformative collaborations')
 - Exploring social dynamics in transitions through a constellation exercise (to bring intuitive knowledge)
 - Experimenting with sociocracy
 - Using the *Municipalities in Transition* system to map, improve and design transformative efforts
 - Sharing tools and experience between participants

To act



- Using imagination
 - Exercises to activate creativity
- Travelling to the future
 - Guided meditation to explore the possibilities of a post-carbon society by diving in an imagined day in ten years' time
 - Symbolically entering this space in the future
 - Writing of ideas of what we would be manifesting in the future and having them approved by the municipality (to identify synergies)
 - Prototyping the future by constructing the scenario and role playing (creating 'real' memories from the future)
- The future is now
 - Writing letters from the future self to the present self
 - Sharing round
- Closing

To dream



Figure Ap.E.3 – The flow of the “Communities in Transition” workshop, with topics and some of the methods and activities develop and related intentions.

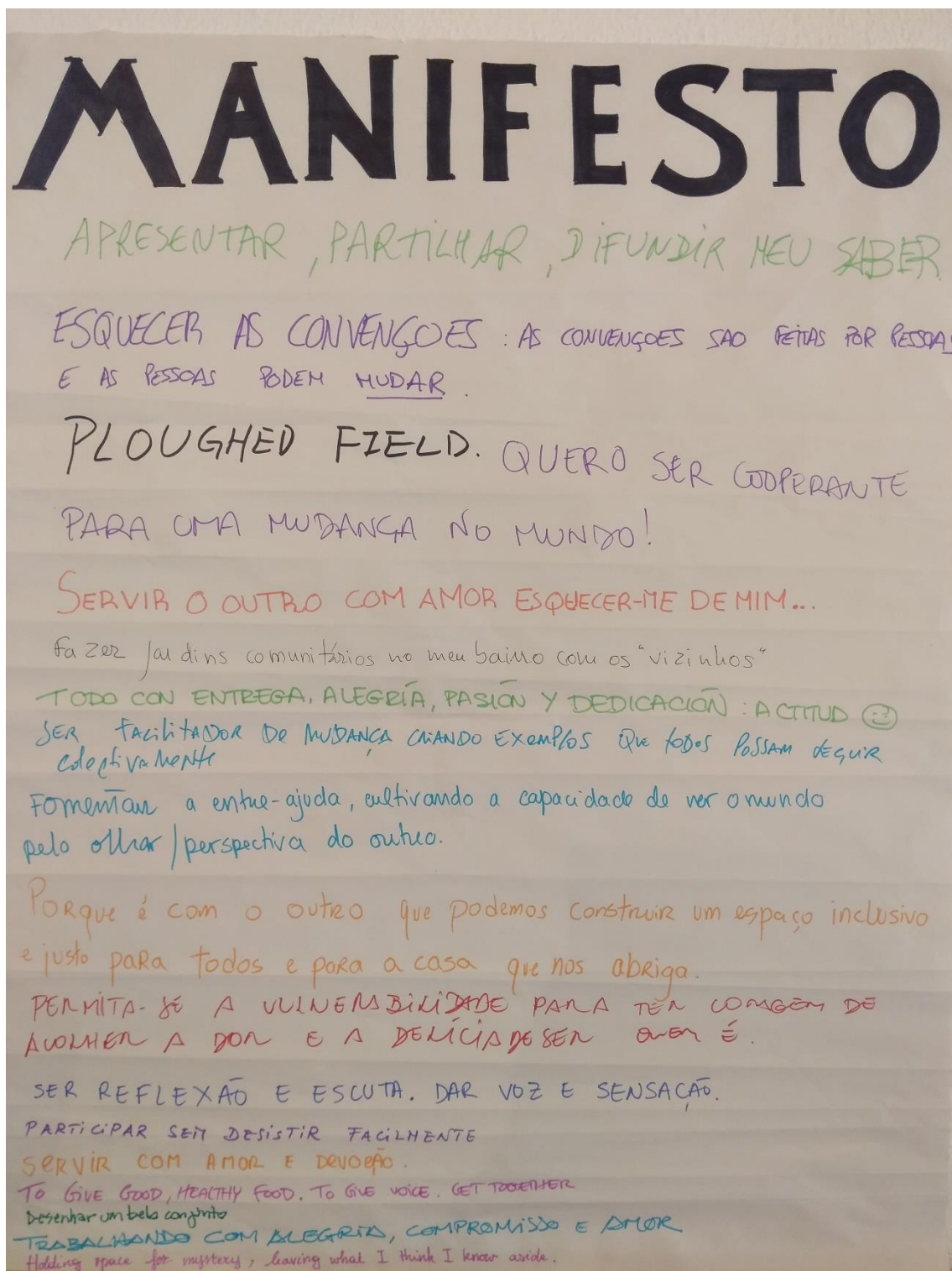


Figure Ap.E.4 – The result of a collective writing exercising using the *exquisite corpse* method to unlock the willingness to improvise in the unknown: a manifesto for who and how do we want to be in the world.

**ANNEX A – SURVEY ON LOCAL TRANSFORMATIVE
COLLABORATIONS**

MiT - Case Harvesting - Phase 1

This form is part of the case study harvesting activity of the Municipalities in Transition project (MiT). Please find more information about the project and the purpose of this form at https://docs.google.com/document/d/1v_cGmG2A4IgKcDP14Yy-d5i3nUTFEYG0EFGs1wkrIAw/edit?usp=sharing

Please read the instructions below carefully before filling out the form. The deadline for Phase 1 is 30/09/2017, but this form will be permanently open after that date.

Immediately after filling in the form, in case you want to edit minor details, you will have the option to go back and do so.

What are we searching for?

We need to gather information about experiences* (cases or case studies) where local governments are involved in a stable and organized way in something that has (or tries to have) the features of a Transition process.

The cases can be directly connected with the Transition movement (where Local Initiatives or the Transition Hub are involved), partially connected (inspired by), or completely disconnected (but showing transition features anyway).

The cases can be in different stages of implementation: design stage, just started, fully developed, going on for a long time, or recently concluded (over the past year).

We are not looking for cases of single, one shot, extemporaneous actions that are not connected or contained in a wider systemic design (see below for further details).

*We will use part of this information to showcase the experiences on the Municipalities in Transition website.

Experiences should show:

- A systemic approach in the design and management of a transition process towards resilience, sustainability, respect for planetary boundaries, economic activity in balance with available resources, social justice, happiness and prosperity (and ideally include a degree of acceptance of complexity)
- Head, Heart, Hands development (best data, best care of relationships/social aspects, action)
- Long-term intentions (vision)

Who will undertake the mapping efforts?

For Phase 1 (until end of September 2017): Transition Hubs, Initiatives and all those involved in Transition, on a voluntary basis (with possible exceptions, see below). For Phase 2, a deeper study of selected cases starting in October 2017, there will be a seed funding wave.

How long will Phase 1 last for?

We have set a deadline of 30/09/2017 for Phase 1 of the project and are aiming to collect as much information as possible by that date. However, we will continue collecting and sharing information about interesting cases throughout the whole project, and hopefully beyond 2019. All information received afterwards will go on to support further developments and fundraising.

In Phase 2 we will choose the most interesting and promising cases and allocate seed funding to support/explore the cases in more depth before choosing 3 case studies as pilots for 2018. There are between 18,000 - 23,000 Euros allocated for the seed-funding across all the phase 2 cases identified.

Phase 1 support

IMPORTANT NOTE: This information applies only to Transition hubs and local initiatives.

This first gathering of information is intended to be light, quick and based on voluntary contributions of transitioners worldwide BUT we agreed to reserve a limited amount of the seed funding budget for hubs and TIs (5.000 euros in total) in case you really need to be supported in this Phase.

That amount can be allocated to hubs in order to provide a little economic support to those harvesting information received within the deadline (30/09/2017). The money will be provided only to Transition Hubs and Emerging Hubs, but the hub can decide how to use it.

If you (really) need to take advantage of this option please contact Ana Huertas before 31/07/2017 at anahuertas@reddetransicion.org, explaining how much you would need, why you need the money and how you plan to use it. Please bear in mind that funding for Phase 1 is very limited when deciding on the amount you would need.

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MiT - Case Harvesting - Phase 1

*Required

Tell us who you are

Please provide information about yourself, the one collecting the data. This way we can get back to you in case we need to move on to Phase 2, complete missing data, etc.

If you have more than one case to submit, please use one form for each case.

Your first name *

Your answer

Surname *

Your answer

Email *

Your answer

Phone

Your answer

Country *

Your answer

Your connection to Transition *

- Hub member
- Local initiative member
- Hired by the hub
- Cooperating with the hub
- Other: _____

Your local initiative name

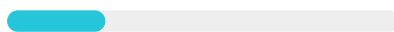
Your answer

Hub name (country, state or region)

Your answer

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MiT - Case Harvesting - Phase 1

*Required

Observed case

Please describe the case study you have observed or participated in. Try to be short and to the point. Please use this form to submit only one case - if you have more, just use a new form.

Name of the case study *

Name of project, Municipality, initiative, etc.

Your answer

Location (Town, Municipality, Province, County, State) *

Your answer

Country *

Your answer

Population (approximately) *

Your answer

Main domains *

Which are the main subjects that the case study focuses on? Please help us to classify them.

- Food and agriculture
- Renewable Energy
- Energy Efficiency
- Town planning, Urbanism and Housing
- Transportation
- Education
- Raising awareness about sustainability, climate change, healthy living, environmental issues, etc.
- Health
- Social Care
- Arts and Culture
- Participatory Democracy and Planning
- Economy
- Waste management
- Water management
- Industry and manufacturing
- Community work
- Systemic Change (not focused on particular projects)
- Other: _____

Beneficiaries / Public

Who is the project aimed at?

- Children
- Teenagers (13 - 17)
- Young adults (18 - 24)
- Adults (25 - 65)
- Elders (65+)
- Families
- People with disabilities
- Ethnic or Social Minorities
- LGBTQ+
- General
- Other: _____

Please summarize the experience in one sentence *

A short description for the MIT website

Your answer

Case description *

Try to synthesize the case indicating: objectives and vision; commitments and goals; topics addressed by the activities (food, energy, mobility, local economy...); frameworks and tools; greatest achievements so far; connection to the Transition Network... Please write no more than 20 lines.

Your answer

Governance model *

Actors involved and partnerships established, who is leading the process (civil society, municipality...), where and how decisions are taken, which tools are used to promote collaboration... Please write no more than 10 lines

Your answer

Stage of this case study *

Choose



Is there a concrete connection to the Transition Movement? *

- Yes (partnership with Local Initiative and/or Transition Hub)
- No
- Other: _____

How much do you agree with the following statements?

"The case has a high level of cooperation between actors" *

	1	2	3	4	5	
Fully disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fully disagree

"The case study is highly disruptive" *

It includes new products, services, ideas or social processes that radically change "business-as-usual"

	1	2	3	4	5	
Fully disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fully agree

"The case study is improving the local economy" *

Creating significant locally-based livelihoods and entrepreneurship that stewards the local environment and resources.

	1	2	3	4	5	
Fully disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fully agree

"The case study is supporting people in leading a healthy and engaged lifestyle" *

Including physical and psychological well-being, strong relationships, connection to nature, learning and sharing new skills, political mobilization, activism, etc.

	1	2	3	4	5	
Fully disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fully agree

"The case study is promoting equity and social justice" *

Including social inclusion and deliberate redistributive efforts.

	1	2	3	4	5	
Fully disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fully agree

This case contributes to climate change mitigation and adaptation by:

- Generating heat and electricity from renewable sources
- Promoting sustainable mobility (cycling, public transport, electric and shared cars...)
- Preventing waste and recycling (circular economy)
- Producing local and/or organic food and promoting healthy and sustainable diets
- Creating green infrastructures
- Institutional and behavioral change or reinforcement
- Other: _____

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MiT - Case Harvesting - Phase 1

*Required

Just one more thing (or two)

Does the case belong to any network? *

At local, regional, national or international level (e.g. Covenant of Mayors, ECOLISE, Energy Cities, Municipalities for the Common Good, etc.).

Your answer

What are the main sources of funding?

Your answer

Website of the case study

Your answer

Contact person (email, phone...) *

Person responsible for the case

Your answer

I observed this on *

DD MM YYYY
__ / __ / 2017

Do you think this case would be interesting for a deeper study (phase 2)? *

- Yes
- No

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!!! CONDITIONAL SECTION !!!

You'll see this section only if you answer "yes" to the question "Do you think this case would be interesting for a deeper study (phase 2)?" on Section 4 (page 12 of this pdf document).

MiT - Case Harvesting - Phase 1

*Required

Almost done

Why do you think the case is suitable for phase 2 (deeper study)? *

Your answer

Does it start from the "Head"?

The "Head" part of Transition is about providing the best available data on the topics they are facing to everyone involved. Avoiding an ideological approach or fake news, taking into account what we know for certain, aspects about which we have doubts and things we don't know. All this based on the scientific method, critical thinking and common sense.

Where do you see the "head" part in this case

Your answer

Does it take care of the "Heart"?

The "Heart" part of Transition is about taking care of emotions and the quality of relationships between all actors. The creation of safe spaces and facilitation to express emotions and explore different levels of connection and understanding. Empathy, compassion, solidarity, time and space to evolve are typical elements of Heart care. Also, we would like to see examples where inclusivity of minorities and other groups at risk of exclusion are taken into account.

Where do you see the "heart" part in this case

Your answer

Does it promote the use of the "Hands"?

The "Hands" part of Transition is about producing results in the real world. This can be the production of food or energy, changing the law, modifying a policy, creating sustainable businesses, etc.

Where do you see the "hands" part in this case

Your answer

How much do you agree with the following statements?

"I have access to all the actors of the described case study (including opponents)" *

	1	2	3	4	5	
Fully disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fully agree

"I can expect a high level of trust between the actors and myself (they will tell me the truth)" *

1 2 3 4 5

Fully disagree Fully agree

"I expect to be perceived as neutral (third party) by the actors" *

1 2 3 4 5

Fully disagree Fully agree

Do you have any additional comments?

Your answer

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MiT - Case Harvesting - Phase 1

*Required

And the last thing

Municipalities in Transition Community of Practice

One of the aims of the MIT project is to create a community of practice to share experiences, tools, and much more about Municipalities in Transition. Please let us know if you are interested in participating in the creation of this community of practice and as soon as we have more information we will contact you. Your ideas will help us in its development. Thanks.

Would you like to be part of a community of practice about Municipalities in Transition? *

Yes

No

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!!! CONDITIONAL SECTION !!!

You'll see this section only if you answer "yes" to the question "Would you like to be part of a community of practice about Municipalities in Transition?" on Section 6 (page 17 of this pdf document).

MiT - Case Harvesting - Phase 1

Municipalities in Transition Community of Practice

Do you have any suggestions about how this group could work (tools, methodologies,...)

Your answer

What topics do you think would be the most interesting to discuss?

Your answer

How could this community of practice best support you?

Your answer

Do you know somebody that could be interested? If so please write name and email.

Your answer

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MiT - Case Harvesting - Phase 1

All done, thank you

Thanks for your precious help in this harvesting. If you have another case to submit please use a new form.

If this case will result suitable for Phase 2 we will back to you around the 31/10/2017.

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SUBMIT

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ANNEX B – THE *MUNICIPALITIES IN TRANSITION* SYSTEM FOR THE PILOTS

- General guide
- Baseline guide
- Monitoring guide
- Reporting template

The MiT Framework for the Pilots

Version Beta 1.1 (April 2018)



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Framework:

*An essential supporting structure of a building, vehicle, or object.
A basic structure underlying a system, concept, or text.*

What we mean by “framework”

The main aim of the Municipalities in Transition project is to develop and test a structured way for municipalities and transition groups to create sustainable change together in a synergetic way, responding to the great challenges¹ of this historical period, adopting systemic thinking² and a specific set of methodologies, tools and principles.

The MiT Framework (MiTF) will provide a basic logical structure and methodology, a set of principles and cultural assets and a collections of Tools to be used to achieve the task.

Disclaimer

We are completely aware of the complexity of the project and we interpret our results as a first step of a longer process.

The MiTF is an experiment based on the general principle that what we propose was evaluated as “Good Enough for Now, Safe Enough to Try”³.

This is for you to get the general meaning of the framework, and we don’t advise using it in its current beta version.

The MiT team is working on a new, improved and usable version.

10 features of the framework

Here is a list of features we considered fundamental for a framework of this kind:

1. It’s closely linked to the Transition principles
2. It’s implementable both in a top-down and a bottom-up approaches.
3. It’s powerful enough to cope with high levels of complexity and uncertainty
4. It’s simple enough to be relatively easy to learn and to use in real life
5. It has a low level of preconditions for adoption (low resources, low technology)
6. It’s effective
7. It’s easily adaptable to a wide variety of very different contexts
8. It’s designed to be iteratively evolved by the users
9. It’s suitable for use in a context of shared/diffused governance

¹ Climate Change ([IPCC - AR5](#)), scarcity of resources, loss of biodiversity, pollution, increase in inequalities ... ([Planetary Boundaries](#))

² For a primer on systemic thinking you can check the videos of the [System Thinking Course](#) of the Complexity Lab or refer to [Thinking in Systems: a Primer](#) by Donella Meadows.

³ This is the basic principle in the governance methodology of [Sociocracy](#) and cognate to [Agile](#) approach to development. To refer to this sentence we can sometimes use the acronym “GENSET”.

10. It's capable of improving the quality of the cooperation between the involved actors

Who is MiTF for

MiTF is designed to foster the process of transformative collaborations within the Community. An ideal implementation would see all the key Actors of the Community aware of the availability of the System and able to benefit from its use directly or indirectly.

During the design of the MiTF we considered three main starting point scenarios:

1. Process generated and led by the municipality
2. Process generated and led by civil society
3. Process generated and led by both together

Our intent is to provide a framework applicable to all these scenarios.

Some fundamental premises

We try to summarize here very briefly some of the principles and ideas that guided the design of the MiTF. The framework has been shaped by following these principles.

About Transition principles and the MiTF Final Purpose

The Head-Heart-Hands principles⁴ at the core of the Transition Movement proved to be effective and disruptive in many different situations and socio-economic contexts. They were a central inspiration in the development of the MiTF:

Head: act on the basis of the best information and evidence available and apply collective intelligence to find better ways of living, keeping a strong systemic vision.

Heart: work with compassion, valuing and paying attention to the emotional, psychological, relational and social aspects of the ongoing work.

Hands: turn our vision and ideas into a tangible reality, initiating practical projects and starting to build a new, healthy economy in the place you live.

For a better understanding of the statements above it can also be useful to broaden the way in which we define and express the same ideas through a set of goals to achieve:

⁴ <https://transitionnetwork.org/about-the-movement/what-is-transition/principles-2/>

Respect resource limits and create resilience – The urgent need to reduce greenhouse gases emissions, reduce strongly our reliance on fossil fuels and make wise use of precious resources is at the forefront of everything we do. Our aim is to build resilient communities that can adapt to external socio-ecological shocks as climate change or economic instability.

Promote inclusivity and social justice – The most disadvantaged and powerless people in our societies are likely to be most affected by rising fuel and food prices, resource shortages and extreme weather events. We need to Increase the chances of all groups in society to live well, healthily and with sustainable livelihoods.

Adopt subsidiarity (self-organisation and decision making at the appropriate level) – The intention of the Transition model is not to centralise or control decision making, but rather to work with everyone so that it is practiced at the most appropriate, practical and empowering level.

Pay attention to balance – In responding to urgent, global challenges, individuals and organizations can end up feeling stressed, closed or constrained rather than open, connected and creative. We create space for reflection, celebration and rest to compensate for the moments when we're busy getting things done. We explore different ways of working which engage our heads, hands and hearts and enable us to develop collaborative and trusting relationships.

Be part of an experimental, learning network – Transition is a real-life, real-time global social experiment. Being part of a network means we can create change more quickly and more effectively, drawing on each other's experiences and insights. We want to acknowledge and learn from failure as well as success – if we're going to be bold and find new ways of living and working, we won't always get it right on the first attempt. We will be open about our processes and will actively seek and respond positively to feedback.

Freely share ideas and power – Transition is a grassroots movement, where ideas can be taken up rapidly, widely and effectively because each community takes ownership of the process itself. Transition looks different in different places and we want to encourage rather than unhelpfully constrain that diversity.

Collaborate and look for synergies – The Transition approach is to work together as a community, unleashing our collective genius to obtain a greater impact together than we can as individuals. We will look for opportunities to build creative and powerful partnerships across and beyond the Transition movement and develop a collaborative culture, finding links between projects, creating open decision-making processes and designing events and activities that help people make connections.

Foster positive visioning and creativity – Our primary focus is not on being against things, but on developing and promoting positive possibilities. We believe in using creative ways to engage and involve people, encouraging them to imagine the future

they want to inhabit. The generation of new stories is central to this visioning work, as is having fun and celebrating success.

The MiTF Final Purpose

This list of goals above is probably also the best way to explain what the use of the MiTF is trying to produce in a community that adopts it: what we could call the MiTF Final Purpose.

“To create deep cultural and practical changes towards sustainability and wellbeing through the implementation of the Transition Principles”

Resilience principles

Another concept that is central for Transition processes and ideas is resilience, and many of the indications, methodologies, tools we are proposing are designed to contribute towards resilience at several levels⁵.

Theory of fluxes

As far as we know this is not something already defined at the academic level⁶. It derives mainly from empirical work on the field with municipalities and communities, as well as marketing theories, and it was partially inspired by the work of the economist [David Lane](#)⁷ on complexity and social interactions.

The point is that we often try to produce change and new cultural assets creating “groups”.

A group in sociology exhibits cohesiveness to a larger degree. Aspects that members in the group may share include: interests, values, ethnic/linguistic background, roles and kinship. One way of determining if a collection of people can be considered a group is if individuals who belong to that collection use the self-referent pronoun “we;” using “we” to refer to a collection of people often implies that the collection thinks of itself as a group.

However when we organize ourselves in groups we automatically set some conditions that are inherent to groups that allow certain dynamics and forbid others.

⁵ A useful reference is the “Principles for Building Resilience Sustaining Ecosystem Services in Social-Ecological Systems” - Biggs, R. M. Schlüter - ISBN: 9781107082656 - [Link](#)

⁶ A further exploration of this subject is certainly necessary, Particularly in the field of [social innovation theories](#).

⁷ David A. Lane - Complexity and Innovation Dynamics; Envisioning a Socially Sustainable Future.

Some of the conditions that we see in groups and we considered particularly interesting for our project purpose are the following:

GROUPS	
Common analysis	A group normally needs to have a common/similar analysis of the reality.
Common vision and goals	A group normally needs to have common/similar general vision and goals.
We are similar, we are WE	A group normally develops an identity and borders/edges. In a group we define who is in and who is out.
Direct relations	A group operates in direct relationship within its membership (in person or virtual).
Time and space unity	A group normally acts within a definite space and time, it needs some synchronicity in the way it operates.
Common projects	A group normally develops common projects.

Observing these characteristics it is easy to understand that groups are not particularly suitable to support a **transversal** change, like the one we need, in order to produce sustainability for human societies. For this reason we developed the concept of fluxes: social structures with the characteristic to move and influence wider portions of society in a transversal way.

To better understand this concept we can think of what the marketing system does to promote, for instance, a technology like the “smart phone”. The system sends a signal to everyone to convince them that a smartphone is something they need/want. This signal works as a flux hitting simultaneously different targets at different levels (the top manager and the unemployed, the young person and the old one). However the final product (the smartphone) will be sold focusing on “groups” (targeting the customers): smartphones for rich people, for geeks, very cheap models (“even you can have one!”), and so on. The point is that if you want to sell that product to *everyone* you need first a “flux” informing, connecting and fostering as many groups as possible at the same time.

By analogy, if you’d like to produce systemic change, a wide social evolution, you should probably generate, promote, support and take care of the right fluxes or you’ll end up involving only certain niches of the system.

If we compare the characteristics of fluxes with those of groups we can note some interesting differences:

GROUPS	FLUXES ⁸
Common analysis and need	Common analysis and need
Common vision and goals	No need for common vision and goals
We are similar, we are WE	No need to be WE
Direct relations	No need for direct relations
Time and space unity	No need for time and space unity
Common projects	No need for common projects

With fluxes we can do things that we can't do with groups, like making people with different views produce positive effects in a community without fighting each other, or without having to connect between them. This can prove quite life-changing for everyone active in social innovation processes.

All this to say that the MiTF design tries to incorporate the use and care of fluxes in its model (in addition and as a complement to the care of groups).

Stochastic design

Another basic concept that guided the creation of MiTF concerns the need to face extreme complexity and resource scarcity for those trying to promote systemic change in our society.

One of the purposes of the MiTF is to help every actor to “design and plan” observing the opportunities arising around them, and when and where “energy” is available. Energy and opportunities can manifest themselves in many different forms, such as the availability of human and economic resources, the material availability of space, equipment, skills, the need for solutions to specific problems, etc.

Often we tend to design certain actions because we believe they are right and important. However, it may occur that not all the necessary conditions are present to make it happen (e.g. the local context, the lack of commitment of people, the lack of resources etc.). Hence, this could lead to a situation where we spend a lot of time and resources, eventually getting a disproportion between the effort made and the results obtained, and in many cases not reaching the goal expected.

Acting mainly on “opportunities” and “energy” availability (i.e. the necessary conditions) makes things easier and increases the number of actions that can be performed with higher impacts on reality. We call this attitude “stochastic design” to stress the concept of having a constant attention to the random evolution of the environment, recognizing and accepting variables, and designing on that attitude **without losing the scope of our work**. The risk is in fact that

⁸ It may be necessary, in the future, to arrive at a different and more complete definition of the characteristics of the fluxes.

following the opportunities, say money available through a government incentive campaign, we end up doing what the campaign is asking to us even if we don't really need it, or it is not aligned with our scope, but only because there are funds. This can be as ineffective and time consuming as the pursuit of unattainable goals.

By the way, thereway there is no need for the users to learn much more about it, the concept is embedded in the whole system. Every suggested procedure is oriented towards this attitude.

Managers are not confronted with problems that are independent of each other, but with dynamic situations that consist of complex systems of changing problems that interact with each other. I call such situations messes. Problems are extracted from messes by analysis. Managers do not solve problems, they manage messes.

Russell L. Ackoff
(organizational theorist)

Basic functions and structure of the MiTF

We begin now outlining the key elements of this methodology:

- the Functions
- the Grid
- The Database
- the Community of Practice.

Warning!

All the following elements are designed to be eventually adapted to local contexts. However, we suggest you don't make adaptations while in the early phase of using the System (unless the need is absolutely clear and with an agreement with your Tutor). See more on "MiTF adaptation" chapter in this document.

The Functions

The MiTF is designed to perform a set of functions that we consider extremely important for every community trying to evolve and change.

These are:

1. **The Evaluation and Diagnosis Function** - A way for the community to easily evaluate its initiative in an approximate way, but still sensible enough for the present purpose, and to set a Baseline from where its path toward the MiTS Purpose is starting. This will also let the same community to keep track of the progresses and changes over time. At the same time the MiTS helps to spot energy, resources, weak points of the community systems and Actions, providing a diagnosis tool to inform other activities.

2. **The Co-Design Function** - A better way to connect different actors and let them co-design plans and actions. The way the MiTF works tends to break walls and compartments making the power of connections, cooperation and sharing more visible and valuable.
3. **The Co-Implementation Function** - This is a consequence of the previous function. In a world facing various levels of scarcity, the need of doing a lot with less can be a key effect to pursue. By taking actions together, and fostering subsidiarity, we are more likely to be able to support shifts in culture and behaviour and to achieve impacts which are more proportionate to the ecological and social crises we face.
4. **The ToolBox Function** - The MiTF tries to make easily available in its Database a variety of Tools experimented so far around the world and particularly suitable for the kind of process we are trying to foster. It also suggests how to connect and use them in the most effective way, highlighting strengths, risks and weaknesses for each one of them.
5. **Cultural Leverage Function** - Everyone getting in touch with the MiTF will likely gravitate towards systemic thinking and the key patterns towards sustainability. This will happen for those aware and in direct contact with the MiTF but also for those that will use the Tools or that are part of processes designed within the MiTF logic. The basic principles will be replicated in a fractal way all over the framework elements (or at least this is our aim and hope).

The grid overview

As we already pointed out, municipalities, activists and all the Actors of a community have to face the complexity of their local system day by day. Like in a boardgame, the first element of the MiTF is designed to provide a clearer, more systemic view of the “playing field”.

The Grid performs three specific functions:

- Identifies **Actors and Actions Categories**
- Shows **Relational Proximity** between the actors
- Act as an organizer of Actions and **Tools**

Below the basic layout of the **Grid**.

		Actors Categories						
Actions Categories	A Municipality Political	B Municipality Organizatio n	C Controlled Entities	D Suppliers	E Organizations	F Businesses	G Public	H Networks
1 Vision								
2 Organization								
3 Planning								
4 Technical aspects								
5 Relation								
6 Cultural change								
7 Networking								

Refer to the MiTF Grid Template document for a full view of the table. Printing a copy of it can help you while reading the present document.

The Actors Categories

The upper horizontal row shows the key **Actors Categories** organized in eight columns. The way they are ordered suggests the relational distance between them.

This indication of distance must not be considered in a rigid way: reality can show us a great variety of situations. We highly encourage the use of the present column distribution, with some possible slight modifications, as discussed with the Tutor. You can see a different color for the first and the last column that indicates that those Actors are out of the community domain and/or space.

Here is the list of the basic Actors Categories:

Actors Categories							
A. Municipality Political	B. Municipality Organization	C. Controlled Entities	D. Suppliers	E. Organizations	F. Businesses	G. Public	H. Networks

For example, considering the relational distance among categories as the distance between columns, the **Political** level of the municipality can interact more easily with the **Organization** level of the municipality than with the **Suppliers**. This gives a very quick way to roughly estimate the amount of effort (energy, resources) one actor needs to reach and interact with another actor (particularly when the goal is to produce support, suggest changes, etc.).

The list below will help you to identify the **Actors** and focus on a few important traits they present:

- A. **MUNICIPALITY:** Political level
Elected (they care about votes and voters), they have to deal with political opponents and competitors, they often stay only a few years, often have or are forced to practice a “short-term thinking” attitude. Almost volunteers in small municipalities, well paid and powerful in many big cities.
- B. **MUNICIPALITY:** Organization level
Employees (civil servants) or freelancers often stay for a long time, very often have a deep understanding of the “municipality machine”, they are the practical “door to action”. They can easily be overwhelmed by the workload and suffer scarcity of resources.
- C. **CONTROLLED ENTITIES:** structures, consortia, companies controlled by the Municipality
Entities that are strongly connected to the municipality (public water services, waste, maintenance, social services), they can be controlled in a very direct way, they have to act as the municipality wants (if they don’t, move them on another appropriate column).
- D. **SUPPLIERS:** public and private suppliers
Entities connected through stable or occasional economic contracts.
- E. **ORGANIZATIONS:** non-profit, associations, schools, universities, unions, parties
Non-profit organized entities that are present on the territory, organized activists.
- F. **BUSINESSES⁹:**
Companies, cooperatives, freelancers, private schools and universities, businesses oriented organizations
- G. **PUBLIC:** families, citizens, individuals, people
Taken as single unity (one citizen, one family) or as not organized groups (all the people living in that street, an area...).
- H. **NETWORKS:** other municipalities, municipality consortia, regions, other actors (far away) ...
Entities that may or may not be present in the territory but that we know are important to achieve a particular goal.

Sometime you may find Actors not so easy to classify, don’t spend much time in finding “the perfect column” just place it in the most plausible position and be consistent if a similar case re-occurs.

⁹ We are not completely convinced of the need to have Organizations and Businesses as separated categories, we might decide in future to simplify the Grid merging those two columns.

The Actions Categories

The first vertical column on the left indicates the Actions categories we want to focus on in our “playing field”. Again this is not to be taken with rigidity and we acknowledge that we can have overlaps.

Actions Categories
1. Vision
2. Organization
3. Planning
4. Technical aspects
5. Relations
6. Cult Change
7. Networking

1. **VISION:** where do we want to go, what we see in the future
Actions and processes that tend to create/evolve/change a vision.
2. **ORGANIZATION:** people, roles, structures, governance, procedures...
Action and processes that tend to create or modify aspects about how the actors are organising/governing themselves or with others.
3. **PLANNING:** sector plans, policies integrations, budgets...
Action and processes that tend to create an action plan, step by step procedures.
4. **TECHNICAL ASPECTS:** monitoring, data, technicalities ...
Action and processes that modify the state of the system through technology and technical aspects in general (also social technologies).
5. **RELATIONS:** within actors, social aspects ...
Action and processes that want to create or improve relations between actors (key sentence: the way we talk to each other).

6. **CULTURAL CHANGE:** communication, trainings, involvement, empowerment ...
Action and processes that tend to modify or improve the knowledge and the understanding of the “world”.
7. **NETWORKING:** networking, diversity, info exchange, comparison ...
Action and processes that tend to create stable/new connections between actors
(key sentence: the way we share and work together).

The cells

Obviously Actors and Actions Categories intersect in Cells that we are going to use as containers when we perform the functions of our Framework. We can also imagine the Grid like a well organized cupboard where we can store everything we need for our “transition” activity with the community, and the Cells as drawers. Each cell can be identified by the letter of its column and the number of its row; this will be very useful to connect the cells to the records of the MiTF database as we will see in the next chapter.

When we move inside a Cell using the MiTF we will often use processes that we call Cells Cycles (CC): a way to avoid errors and focus on the most important aspects of the Functions that we are trying to do.

The Cells Cycles

The first Cycle (CC1) is a way to verify if the action we observe or plan within a Cell fulfills the Head/Heart/Hands (HHH) transition logic. It can be performed in a very rapid way answering to the following 3 questions:

1. Is this Action based on the best available data? (Head step)
2. Is it considering and taking care of emotional/relational consequences for everyone involved? (Heart step)
3. Does it produce practical effects? (Hands step)

The CC1 can be used for evaluation, correction and planning. It can be used at different levels of complexity to fine tune its effectiveness. Here is a more complete way to see it:

4. Is it based on the best available data? (Head step)
 - a. Would you classify the data as very solid and true¹⁰?
 - b. Would you classify the data as good but with some doubts?
 - c. Would you classify the data as quite uncertain?
5. Is it considering and taking care of emotional/relational consequences on everyone involved? (Heart step)
 - a. Is this producing fear or conflict?
 - b. Is this highlighting positivity, happiness, joy... ?
 - c. Is there “space” and “time” to take care for emotions?
 - d. Are participants feeling empowered?
6. Does it produce practical effects? (Hands step)
 - a. Can this produce change?
 - b. Can the change last?
 - c. Can the change foster further change?

¹⁰ Official data are not always solid and true so are not enough to answer “yes”.

The second Cycle (CC2) should always follow the first as a safety reminder of the power of connections and inclusion. It is based on the following 3 very simple questions:

1. Who is there?
2. Who is missing?
3. Who should be there?

Easy but very powerful.

More CCs could be added if necessary in the future and depending on the local conditions.

“The way to build a complex system that works is to build it from very simple systems that work.”

Kevin Kelly
(founder of *Wired* magazine)

The Database overview

The second element of the MiTF is a database where we collect all the transition patterns that we already know and those that we will discover in the future.

The word *patterns*¹¹ is the most appropriate to describe the contents of the database, but it is also abstract and unusual for the most. From now on we will use the words Actions and Tools instead, choosing one or the other depending of the type of pattern we are referring to. Don't worry too much about using the right word, it really doesn't have effects on the use of the database.

What are Tools in the database?

They can be a simple way to solve or handle a very specific problem:

Problem: Where do I get reliable information about new PV technology?

Tool: Subscribe to the XYW web newsletter!

¹¹ Pattern: any form of correlation between the state of elements within a system.

Or more complex questions:

Problem: How we can evolve the vision of the municipality employees?

Tool: Awareness raising and team building training program and methodology.

Tool: Deep ecology training program and methodology.

Tool: U-Lab training program

Tool: Guided tour of the National Climate Observatory Center

...

Or an even larger approach:

Problem: How do we involve citizens in that area of town?

Tool 1: Transition Street projects (examples, methodologies..)

Tool 2: REconomy projects (examples, methodologies..)

Tool 3: CSA scheme

Tool ...

How do we organize the Tools in the database?

The main features of the MiTF database are:

1. It is organized as Pattern Language database¹²
2. Therefore database records are connected with other relevant database records and we could call them *patterns*, according to the original definition of the Pattern Language methodology
3. Database records are connected to Grid cells (one or more)
4. The Database contains specific and transverse Tools

The Pattern Language concept was created for city planning, but in general it is a very interesting way to organize information when you are trying to keep and foster a systemic view. The way it works is quite self-explanatory, there is basically no learning curve for those that have to use the database and virtually no limits in the expandability of the system.

Our Pattern Language is organized around a logic of process¹³. Let's see how it works.

The database records (patterns)

Here is the general layout of every item of the MiTF database (more or less the same suggested by the original pattern language methodology, in fact we could say that a Tool is a Pattern):

¹² See https://en.wikipedia.org/wiki/A_Pattern_Language

¹³ In the original you can see that the organization was around the scale of the area you wanted to plan on, from regions to single rooms.

The record template

Grid positions Tags Categories Trust ranking Languages	Title of the Tool
	Up links (what we need to get ready to use this Tool)
	Description of the problem we are trying to solve
	Short summary (what is this for?)
	Analysis of the problem and Tool description Analysis and tool description Risks and precautions Advantages Case study Tips for adaptation
	Solution (what action we propose, resources)
	Down links (what else you should see to complete this action)

Let's have a look at an example with some data inside (we are using fake link here simply to give you a general idea of how the item can look like). Refer to the Grid Template document when you need:

ID: 00345 Grid positions G.4 <hr/> Tags Energy Efficiency, Low Income, Homes, Volunteers, Insulation <hr/> Categories G. Public <hr/> Trust ranking *** <hr/> Languages: English Spanish	Neighborhood Draft Busters Group
	Up links Check before " Cheap insulation techniques " and " How to connect with your municipality for common actions ". See also " How to run effective actions groups " and " Groups governance suggestions ".
	Description of the problem Buildings lose a great amount of energy through bad isolation and air leaks but in many cases complete renovations are not possible, particularly for people with low income. This means that millions of homes will never see the necessary actions to reduce energy needs.
	Short summary Draft Busters Groups are self organized groups of volunteers helping people in the Neighborhood to improve houses insulation with simple and affordable techniques.
	Analysis of the problem and Tool description The existing houses represent in many communities one of the major causes of energy consumption (around 40% in Europe) heating and cooling being the most impactful aspects for energy use and resulting emissions.

	<p>Full retrofitting would be the best solution to take these houses at the best possible level of efficiency, but this is possible only when a lot of financial power is in place.</p> <p>To help those house owners and tenants without the possibility of resorting to complete retrofitting volunteers local groups can be created under the name of “Draft Busters”. They train themselves to do very easy insulation works DIY style and help others to spot and eliminate draft, insulate the attics, windows, hot water pipes, etc.</p> <p>The groups are organized [...]</p> <p>Sometimes creating a buying group to get the materials at a cheaper price and support local suppliers can be a nice consequence of this activity.</p> <p>Risks and precautions</p> <p>This kind of activity must be pre analyzed for legal aspects country by country. There are also practical risks (use of tools, damages to property and people, etc) to be seen to consider appropriate insurance coverage for the group [...]</p> <p>Identification of the Groups Member can be an issue, a good coordination with local authorities and security forces can be very important to protect citizens from possible fraud. [...]</p> <p>Advantages</p> <p>This strategy allows to reach in a capillary way the citizens potentially house by house, in the less affluent sections of the population. Can be also a good connection tool and a way to raise awareness on energy efficiency in general.</p> <p>Case study</p> <p>Particularly interesting is the experience of the DBG of the town of XXXXX. You can read about it following this link.</p>
	<p>Solution</p> <p>Form groups of volunteers to help people to do basic insulations actions at home.</p>
	<p>Down links</p> <p>See also “Full energy efficiency retrofit plans” and “ESCO strategies” for a different approach to the same problem. Similar to this see also “Draft Busters Thermal Imager Tours” or “Draft Busters DIY Training”.</p>

As you can see, the main body of the database record contains the most important information about the Tool and there is a number of fixed sections that are the same for each item. They should be quite self-explanatory and with use, this way of organizing information becomes quickly familiar.

Please note: What is very peculiar is the presence of the **Up Links** and **Down Links**. This is the way a Pattern Language database structure gently (or not so gently) pushes the user to keep a systemic view of the problems. It basically teaches this kind of attitude becoming an educational tool in itself. It suggests connections, prerequisites, consequences, possible further developments, alternatives and so on.

On the left column we collect a number of other very useful information:

Item ID:

This is the identification number of the item.

Grid Position

It indicates the best position or positions in the Grid where you can use this Tool. The first letter indicates the column, and the number the row (like in the battleship game). A Tool can have a very specific position or more than one.

As already mentioned there are also Tools that are completely transverse, therefore they don't have a Grid Position indication and are collected in a separate category.

In the example above the "Neighborhood Draft Busters Group" item would be best used in the cell G.4.

Tags and Categories

These are indications to make the record searchable and easy to reach within a database that can become potentially very large. While Tags are used in a keywords logic (therefore they can vary a lot) Categories correspond to the columns of the Grid plus some additional category that can make the search easier.

Trust ranking

Social innovation and work on change, sustainability, etc. is about trial and error. Some of the Tools are well known, experimented and trustworthy, while others are new and trying to solve problems that no one has been able to solve before.

The "editorial staff" of the database will try to rank the records assigning following these general rules:

***** 3 stars = High Trust**

Known for a long time and experimented with success.

**** 2 stars = Medium Trust**

Known for a long time and experimented but with with alternating results.

Not so old, good so far.

*** 1 star = Low Trust**

Very new, promising but not enough data

Known, with alternating results and very often failures, problems, etc.

0 stars = No evaluation available

Be aware, use at your own risk

Languages

Indicates the availability of translations of the record in other languages.

We might decide in future to add to this same area some other indications that can be useful for fast references, for instance something about the ease of implementation.

You show me a successful complex system, and I will show you a system that has evolved through trial and error.

Tim Harford
(economist)

The Community of Practice (CoP)

So we have a set of principles, a Grid and a Database - what we need now are the users. The MiTF is designed to provide to local administrators and civil society organized groups a way to connect and work together in a better way.

In our complex society and in the current complex times, this is a goal that can not be achieved through something written on stones, the framework and everything around it need to be used and evolved by a live community of practice (CoP).

What we can imagine from now on is to have a local CoP in the municipalities where the framework will be in use, connected with a wider network of users at national and international level. Within the MiT Project we are designing and will begin the implementation of this community at the international level¹⁴.

¹⁴ A specific document on CoP will be available soon.

A recommendation regarding local governance

At the local level what we strongly recommend to those trying to use the MiTF is to keep in mind that, as soon as possible, they should make an agreement between the main actors involved in the use of the framework about the governance model they intend to use.

Important!

At this stage we are not suggesting a particular governance model, but we are pushing you to choose a model accepted by all the actors in the most clear and transparent possible way. You should all be able to identify roles, responsibilities, domains, ways to make decisions and policies.

This agreement on a governance model can be something quite light and informal or something structured and officially signed. It can be in place from the beginning or arise as soon as the conditions are right, but we see this agreement as an essential part of the MiTF. We will talk again about this in the chapter about the practical uses of the MitF.

Today the network of relationships linking the human race to itself and to the rest of the biosphere is so complex that all aspects affect all others to an extraordinary degree. Someone should be studying the whole system, however crudely that has to be done, because no gluing together of partial studies of a complex nonlinear system can give a good idea of the behavior of the whole.

Murray Gell-Mann

(physicist, Nobel laureate, father of the quark theory)

Using the MiTF for the Pilots

Facing complexity at the local level while simultaneously paying attention to the global scenario will prove difficult and messy even using the MiTF, so be ready for that. What we suggest is to trust the process and see what happens after a while.

At the beginning it can be strange and confusing, seeing the complexity around us is a quite anxiogenic task, particularly if you resist the temptation of trying to control it.

Our suggestion is: take it easy, follow the instructions and think that this is just an experiment. The instructions in this document are developed for the MiT Project Pilots and not intended for a general use of the MiTF.

The MiTF Facilitators Training

Those with the responsibility of the Pilots will take part in a 3 or 4 day training to learn more about the MiTF and its use and the Pilots management. In this chapter you can have a quick overview of the required activities and the use of the MiTF.

Starting point

As we stated before, the MiTF should be useful for processes driven by civil society organizations, local governments or both acting together, the last being the ideal condition. Different starting conditions can bring different needs and strategies but in this phase of the MiT Project we are selecting pilots where we can have both together from the beginning.

Set a governance model as soon as possible

We are trying to provide the best conditions for the Pilots and our suggestion is to try to set an agreement about the governance model for this experiment. There are many ways to create a governance policy, so choose the one you are more familiar with.

A few examples are:

Form a steering group with members of the different actors involved, agree on an agenda for meetings, make decisions together by majority, consensus, etc.

Hire a project team and form a circle of consultants with members of the different organizations involved.

Etc.

Our suggestion on governance models

It's very likely that the Transition Hub of your area will be involved in the Pilot. If possible, and if trained people are available, try to use a sociocratic methodology¹⁵ to run the governance of the Pilot (the people in the Hub might be ready for that being the model that we use at Hubs level within the Transition movement).

This can add another layer of innovation and cultural change and it will increase the potential of the experiment. At the same time, if you don't know the methodology and don't have people ready to help you with its use, it adds another level of complexity to the task.

¹⁵ In particular you can get inspired by [Sociocracy 3.0](#)

Starting from the baseline using the Grid

The first step in the use of the MiTF is the creation of a local baseline. It is a way to set a starting point, taking a picture of the state of the art of the municipality and its community. We are performing the **Evaluation and Diagnostics Function** of the framework.

The idea is to use the MiTF Grid to collect in an organized way every action, plan, process we can spot around us. Examples of what we are looking for are: trainings on sustainable waste management, low emissions mobility plans, local food production schemes, information campaigns on energy efficiency, climate change adaptation trainings, circular and sharing economy activities, etc. From now on we will indicate all these different elements (as many as you can think of) with the generic word **action**.

We are trying to be easy, cheap, and effective. This framework is designed by practitioners trying to make it as usable as possible and adaptable to very different starting point conditions. Therefore this collection of actions can be done in a very orderly and systematic way or in a disorderly and casual way. The actors can act together (synchronicity) or in different moments depending on the available conditions, work capacity, etc.

We suggest to use this form to collect the items.

The baseline in practice: collect data

The precise design of this activity will be to define together during the MiTF Facilitators Training. The scope of the Baseline is not to provide a precise scientific measurement methodology but a way to more clearly see “the big picture” of the community.

1. Define a small team responsible for this activity (with at least one member on the side of municipality and one on the side of civil society). Their task is to collect and report on the Grid all the available data.
2. Print a copy of the MiTF Grid for the Baseline document. Having it in a big format (UNI A2) would be ideal, but you can use it in smaller formats or in a digital format if you prefer. If you act in a low technology environment you can just redraw the table on a big piece of paper, the back of a poster or a billboard.
3. Start to list all the activities you can spot in the municipality and in the community that are oriented toward ecological sustainability, emissions and pollutants reductions, energy efficiency, food, goods and services relocalization, resources care and balanced distribution, and so on. To make the list you can use the List section of the Grid Calculator spreadsheet, and you can use this form to collect the single actions.
4. Don't ask too much of yourself from the beginning. Start from what is obvious, plain and easy to spot (complexity will then emerge). You can invite other actors to create similar lists if you can't create a synchronous process.

One possibility to foster synchronicity is the organization of a Baseline Workshop Day inviting all the interesting actors of the community and work together for one day building the list. This can be done with an “in-person” gathering, through a virtual meeting or a mix of the two.

5. Now move the collected info to the Grid, trying to find the most appropriate Cell for every item of the list. Sometimes you can have doubts about the perfect position, but don't worry and choose the one that you believe is most appropriate. Sometimes you can have complex actions that are present (that have effect) in many different Cells - no problem, do it. During the training we will play a lot with real life examples to make this task easier.

The baseline in practice: baseline quantitative evaluation

Having the Grid with all the info correctly positioned, we are now ready to evaluate the situation (to observe the big picture). A community strongly committed to change toward sustainability should produce a Grid with every Cell seeing many bold actions going on. Reality will probably bring different results.

Analysing the number of “active” Cells (cells containing at least one action) and the number of actions noted in the grid we have a first raw quantitative indicator of the commitment of the community. We can also transform the situation in a number assigning 1 point to every action present on the Grid.

E.g. in the table below each **X** represents the presence of an action.

Actions Categories	Actors Categories							
	A Municipality Political	B Municipality Organization	C Controlled Entities	D Suppliers	E Organizations	F Businesses	G Public	H Networks
1 Vision	X				X			
2 Organization	X	X			X		X	
3 Planning		X						
4 Technical aspects						X		
5 Relation			X					
6 Cultural change							XXX	
7 Networking								

We can count 12 action presences, the Baseline Quantitative Score is 12.

The baseline in practice: baseline qualitative evaluation

We can also add some qualitative meaning to our data in different ways. The easiest way is to give different values to the Cells. The empirical experience makes us think that there are positions in the grid that have a value greater than others. Actions in those positions can produce bigger, longer lasting results; therefore, we can give them a greater value.

In our view this remains a hypothesis, and one of the objectives of the Pilots is a first attempt to test this assumption.

Let's use the same results using a Grid that has some of the Cells marked with different colors.

		Actors Categories						
Actions Categories	A Municipality Political	B Municipality Organizatio n	C Controlled Entities	D Suppliers	E Organizations	F Businesses	G Public	H Networks
1 Vision	X				X			
2 Organization	X	X			X		X	
3 Planning		X						
4 Technical aspects						X		
5 Relation			X					
6 Cultural change							XXX	
7 Networking								

Now just apply a simple multiplier for the Cells we consider most important:

Total actions in white cells (*1)	5
Total actions in orange cells (*3)	6
Total actions in red cells (*5)	25
Total Grid Score	36

As you can see, now the same set of actions returns a score of 36. We have a Grid Calculator to do all this with a spreadsheet.

The baseline in practice: baseline quantitative evaluation adding CC

During the training we will see also the use of Cells Cycles to add a ranking of the single actions to “the game”. The principle is simple but it adds some work to the activity.

You can use the form to register this information.

Analyze every single item you placed on the Grid using the following cycles and scoring:

CC1

Head step - Is it based on the best available data? (0-2)	
Heart step - Is it considering and taking care of emotional/relational consequences on everyone involved? (0-2)	
Hands steps - Does it produce practical effects? (0-2)	
CC1 Tot	

For CC1 consider 0 when the answer would be “absolutely not”, 1 for “uncertainty”, and 2 when you can answer “yes”.

CC2

Are all the “natural” actors involved? (0-2)	
--	--

For CC2 consider 0 when the answer would be “no”, 1 for “maybe” , 2 for “yes”.

The sum of the values gives you the CC score of a particular Action.

The sum of all the CC scores of all the Actions in the Grid gives a general indicator of the quality of the activities in your area.

When a single Action can be assigned to many different cells in the Grid we calculate only a general CC score for that Action.

The baseline in practice: baseline quantitative evaluation by average action range of impact

One last way to evaluate the baseline is calculating the average action range of impact of the actions we listed. This can be done by dividing the number of presences in the Cells by the number of listed actions. The Grid Calculator will do this for you automatically.

The number we obtain will range from a minimum of 1 (meaning that each shows only in one Cell) to greater numbers. The higher the values, the more the listed actions are producing

effects in different Cells of the Grid. This indicates a more systemic action, probably a greater efficiency, more possibilities of subsequent extension, etc.

Let's start planning (the Planning Cycle)

After the creation of the Baseline for your community, what we'd like to see in the Pilots is the creation of a very basic initial systemic plan for the community.

Practically speaking, having a sort of full picture in front of you will allow you to work with this Planning Cycle¹⁶:

1. **Spot where “energy” is already operating** - If a successful action was spotted then there must be a lot of energy there, so you can ask yourself (the community of the involved actors) a few questions:
 - a. Is there an easy way to support or increase the available “energy” there?
 - b. Are there other actors that should be naturally involved (apply CC2)?
 - c. Could this action fulfill other functions (increasing therefore the number of categories with which it can be associated to)?
 - d. Can we easily connect this energy/action to other actions on the Grid?
2. **Write a simple plan to do what it is needed** (apply CCs) if you find good and easy answers to those questions. If not, go to point 3 of this cycle.
3. **Move to another action.**

The meaning of this planning cycle is to facilitate you in putting resources (time, people, energy, money) **where there are the best conditions for positive use and results**. When you have good results, then the subsequent planning becomes easier (more energy in place, more will, more commitment, etc).

During the pilots we will better plan together this activity, but we are confident that you should find some good actions on which you can plan (well, basically we know that from the [harvesting Phases](#) of our project).

Move to action using Database and Cells Cycles

In addition to planning on existing actions, you can start planning completely new actions. There are many ways to use your Baseline for this. E.g.:

1. You may spot empty cells where nothing is happening (maybe orange or red Cells which clearly are important) and you can decide to do something to fill the void.

¹⁶ This way to plan is strongly inspired and evolved by the insights of David Holmgren's permaculture framework - Permaculture: Principles & Pathways Beyond Sustainability - D. Holmgren's - Holmgren Design Services 2002 - ISBN-13: 978-0646418445

2. You may spot Cells with a lot of activities, which for some reason do not score high after analysing them through the CCs. So you know that there is potential energy there (probably people ready to act, maybe other resources) and you could plan a completely new action.
3. You may already have projects going on (Covenant of Mayors, EU projects, National projects, etc.) and you can inform the planning using the MiTF.
4. And so on...

To plan a new action you can first check what the MiT Database offers that can be useful in the cell of your interest. You can search the database in different ways, indicating the Cell of your interest, by Actors, by topics ... What you get is a set of suggested actions and all the connections to other actions related.

The Tools in the database are designed with the transition principles and the CCs (Cells Cycles) in mind. This should lead to common synergic actions (when possible), effectiveness and a good balance between efficiency and resilience.

But the MiT Database is just at the beginning, so you might not find what you are looking for already there. If you then design an Action from scratch, following the CCs logic, that will go towards enriching the database in the future.

Evaluate

Whenever possible each action implemented should be evaluated in its specific impact in terms of technological, social or institutional change and community resilience (e.g. climate adaptation, equity, cross-community links...), using appropriate indicators. Tools for this will be included in the database.

We already saw that we can use the Grid, the Cells and the CCs as an evaluation system, and this will be the last step for these first experiments. Going through a process similar to the one used for the Baseline, each community can compare the starting point situation to the present and draw some conclusions.

Alongside this, there are other aspects we can evaluate. For instance, the number of new Actors involved, the experience of the Actors in using the framework and the CCs, the quality of the relations between the Actors, the effectiveness of the model of governance in place and so on...

Enrich and populate the Database

Within the Transition movement we have quite a lot of Tools that we can consider ready to be loaded into the MiTF Database. It will take a little time and a dedicated team to do this job in a proper way, but we are confident that we can do this (at least in English) in time to provide a basic version of the database to the Pilots.

But this will only be the starting point, since the plan is to see the collection of records grow over time with the help of the pilots and other practitioners.

MiTF Adaptation

As we already mentioned we can imagine many ways to change the elements of the MiTF to serve different contexts. But now that you know a little more about it you can easily understand how deeply a change in a portion of the structure can affect the others.

The most delicate aspect is the relationship between the Grid and the Database. As you know, the records in the database are connected to the Cells; therefore, if you move the cells and/or the columns around, the records in the database should be updated accordingly.

Therefore for this phase of testing of the MiTF through the Pilots, we strongly suggest to use everything as it is.

Columns position change

One change we might consider feasible is about the column position. In other words, a change of the Relational Distance between Actors Categories. This can help the correct visualization of a different structure of your reality and you could do this without changing the identification letter assigned to the column (this way the references in the database will stay the same).

Columns elimination

We can already imagine situations where column C (Controlled Entities) might not exist. In that case we can imagine a Grid without that column without necessarily touching the database structure (the records of the database referring to that column will simply not be used).

END OF DOCUMENT

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Short MiT's Baseline Guide for Pilots

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0. Prerequisites checklist

- Did you form a Pilot Core Group (the group that will hold the governance of the Pilot)?
- Have you agreed on a Governance model (what's your domain? how do you make decisions)?

1. Draft list

1. Prepare an empty "MiT Grid Calculator 1.2" document
2. Navigate to the "Action List" tab of the document
3. Write down the "obvious" evident Actions that you can think of, putting the title and, if needed short description (insert manually the ID starting from 1).

The screenshot shows the Google Sheets interface for "MiT Grid Calculator_version 1.2". The spreadsheet has columns A through J. Row 1 shows a total of 8 items. Rows 4-12 list actions with their descriptions and counts in columns D, E, and F. Column G (A1) has a count of 1 for the first action. Columns H, I, and J (A2, A3, A4) are currently empty.

	A	B	C	D	E	F	G	H	I	J
1	8	Total Items in this list		Totals CCs		0	1	0	0	0
2										
3	ID	Action title + link	Short description	CC1	CC2	TOT	A1	A2	A3	A4
4	1	Local Gardens Scheme	Citizens organizing food gardens and sharing plans of production			0	1			
5	2	"Save Water Day"	One day event on how to save, harvest, recycle water at home			0				
6	3	Renewable Energy Incentive Plan				0				
7	4	Action 4				0				
8	5	Action 5				0				
9	6	Action 6				0				
10	7	Action 7				0				
11	8	Action 8				0				
12						0				

4. Don't bother about the other columns for the moment.

5. **! WARNING !** Big, complex Actions (eg. 'participation in the Covenant of Mayors') might be better analyzed and evaluated if splitted in a series of sub-actions.

2. Proper collection of the Actions

1. Prepare an empty "Baseline Action Form" document
2. Each action will consist of two pages of the form. Copy and paste an empty version of page 1 and 2 anytime you need to add a new action.

Baseline Actions Form 1.0

Action ID:

Action Title:

Short description:

Contact person:

Grid position (select all the appropriate)

Actions Categories	Actors Categories							
	A Municipality Public	B Nonprofits Organizations	C Contract Entities	D Suppliers	E Operations	F Businesses	G Plans	H Networks
1 Vision	R				O	O		
2 Organization	O							
3 Planning	O	R			O	O		
4 Implement plans								
5 Monitor								
6 Culture change					O	O	R	
7 Relicensing								

Total number of filled cells (range of impact):

1

Baseline Actions Form 1.0

Cell Cycles Evaluation

CC1

Head step - Is it based on the best available data? (0-2)	
Heart step - Is it considering and taking care of emotional/relational consequences on everyone involved? (0-2)	
Hands step - Does it produce practical effects? (0-2)	
CC1 Tot	

CC2

Are all the key¹ actors involved? (0-2)

CCs Total Score

2

¹ We can consider key actors those we identify with the "Who should be there?" question of the Cycle

3. From the list that you created on the "MIT Grid Calculator 1.2" document, write the corresponding Title and ID of each action in this document.
4. Do the necessary gathering of information and add a brief description of the Action.
6. Put the Action on the Grid and take note on the document.
 - a. Search the Key Position of the Action first and mark it with "X"
 - b. Then identify other involved cells and mark it with "x"
7. Run the CC's evaluation and take note on the document answering the corresponding questions.
8. Step 6 and 7 must be approved by the Core Group or by a sub group to which this responsibility has been officially transferred in accordance with your governance model.

3. Final reporting of the Actions on the Grid

1. Go back to the “MIT Grid Calculator 1.2” document, select the ActionList sheet.
2. For each action you have on your Baseline Action Form document:
 - Report the CC1 and CC2 values (the total will appear automatically) for each row

All changes saved in Drive

C	D	E	F	G	H	I	J	K
	Totals CCs			10	0	0	0	0
n	CC1	CC2	TOT	A1	A2	A3	A4	A5
ig food gardens and sharing plans of production	4	2	6					
i how to save, harvest, recycle water at home	3	1	4					
			0					
			0					
			0					

- Report each “X” or “x” adding the value 1 to the corresponding cell of the raw. On the last cell of the row you’ll have the Grid Score of each single action.

E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
	10	0	1	1	0	1	1	0	0	1	0	1	0	2	0	0	0	0	1	0
C2	TOT	A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	C5
2	6			1			1			1				1						1
1	4		1			1						1		1						
	0																			
	0																			

3. On the Grid Calculator sheet you can check the Grid that reports se summ of the information you entered and below the various scores that we are going to use as indicators for your Baseline:
 - Total Grid Score of all your Actions
 - Total CCs Score of all you Actions
 - Average Action Range of Impact (AARI) of all your Actions
 - Total number of Actions

MIT Grid Calculator_version 1.2 ☆ 🗑️
 File Edit View Insert Format Data Tools Add-ons Help All changes saved in Drive

100% £ % .0 .00 123 - Arial - 14 - B I S A

fx =ActionsList!BHI

	A	B	C	D	E	F	G	H	I	
1	MITF Grid Calculator 1.2									
2										
3		A	B	C	D	E	F	G	H	
4	1	0	0	0	0	0	0	0	0	
5	2	1	1	0	0	0	0	0	0	
6	3	1	0	0	0	0	0	0	0	
7	4	0	1	1	0	0	0	0	0	
8	5	1	0	0	0	0	0	0	0	
9	6	1	2	0	0	0	0	0	0	
10	7	0	0	0	0	0	0	0	0	
11										
12										
13	White *1	7				Total Items	9			
14	Orange *3	6				List Items	8	data from ActionsList		
15	Red *5	0								
16										
17	Tot Grid Score	13								
18	Tot CCs Score	10								
19	AARI	1.125	(Average Action Range of Impact)							

4. At the end of the process, save these documents, they represent now your Baseline. **Do not modify these documents once you have finished this phase.**

4. FAQ

1. **The forming of a new citizens group/association or a new office or function or a new company/business, must be considered an Action?**

YES! - The new entity can be internal to an existing organization or completely independent. Its formation must be considered an **Action** and after that the entity can be considered an **Actor** and it will probably produce other **Actions**.

(Eg. a new office in the municipality to follow the Covenant of Mayor process or a new association of citizen, formal or informal, is created to help the spreading of car pooling).

2. **Blocked Actions - While creating the list of Actions, we find a past action which currently is suspended/inactive/blocked, what shall we do?**

Don't use these Actions to calculate the Baseline, although they can be very useful for the Planning phase or to inspire new Actions. So, do not add these on the **Actions List** on the **Grid Calculator**, use instead the **Potentials** tab to take note of them, try to state the status (blocked, suspended, ended) and describe the situation.

3. **New Actions - During the creation of the list of Actions, some ideas emerged of new actions that we could create or promote, what do we do with these?**

Don't use these Actions to calculate the Baseline, if these are ideas of **Actions** based on available resources/situations you can list them on the **Potentials** tab of the **Grid Calculator** document for future use on the Planning phase. If they need to be started from scratch, take note of them on the **Ideas** tab.

4. **Cell Cycles evaluation - What do we do if we don't know much of the Action we are evaluating?**

You have basically 2 options: Investigate (if you have time, possibility, resources) or drop the Action and note it in the Potentials list for further use.

5. **Number of actions in the baseline - How many actions would I expect in a Pilot as a baseline?**

There is no fixed number, equal for every pilot. The number of actions depends on the dimension and complexity of the pilot. It is important to define the limit in each pilot as well as concentrate on those actions that result more interesting and important. Just to give a general rough idea, we would expect not more than 100.

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Short MiT's Monitoring Guide for Pilots

version 2.0

The purpose of the monitoring is to ensure that clear goals are set, progress is happening and concrete and evident results are achieved.

The “Municipalities in Transition” project (MiT) is about promoting a “collaborative transition towards a more sustainable future”. We can identify two critical dimensions to assess: **collaboration**¹ (between local governments and civil society) and **transition**² (to sustainability).

Each pilot should start by jointly reflecting on this questions:

- What do we want to change? And for whom?
- What does collaboration success look like to us?
- How can we measure this?

Maybe pilots can start with a broad perspective, including every kind of social, cultural, environmental, economical and/or political change they want to see happening, involving all kinds of agents. Pilots can do the baseline with this general purpose and then, when choosing the actions to implement, be more concrete: e.g. we want to promote gender equality, mainly at the business level. Or pilots can have a more focused purpose since the beginning (e.g. climate change mitigation). There is no “right answer” to this.

Concerning collaboration, the pilots might decide that for them is all about creating institutional spaces of dialogue. So they might focus on creating formal partnerships or consultative bodies. Or maybe it is about municipalities financing the work of community-led initiatives, or anything else depending on the context and expectations.

In any case it is crucial that pilots decide on shared objectives³ and define indicators for them. For measuring, pilots can create their own tools or use already existing ones like the resilience compass⁴ and others that will be included in the MiT database.

¹ Collaboration is a “process in which autonomous or semi-autonomous actors interact through formal and informal negotiation, jointly creating rules and structures governing their relationships and ways to act or decide on the issues that brought them together; it is a process involving shared norms and mutually beneficial interactions” (Thomson et al., 2009).

² Transition (or transformation) can be defined as a “change in the fundamental attributes of natural and human systems” and “benefit from iterative learning, deliberative processes, and innovation” (IPCC 2014, 1122). It may occur in any place, scale, sector, dimension or context, involving “energy and agricultural systems, financial systems, governance regimes, development paradigms, power and gender relations, production and consumption patterns, lifestyles, knowledge production systems, or values and world-views” (O’Brien, 2012).

³ Objectives can follow the SMART principles (specific, measurable, assignable, realistic and time-related).

⁴ See <http://www.sustainable-communities.eu/resilience-compass/>

It is also very important to distinguish between looking at the process or the intended changes, and to have goals and indicators for both of them. For the process, you can focus on the resources used, the activities developed and the outputs created⁵. Changes relate to the outcomes or benefits that pilots are trying to deliver and also the higher level of impacts they are looking for⁶.

The monitoring strategy and results should be included in the pilot's reports. Tutors and researcher can help.

You can find more information about monitoring and evaluation [here](#).

⁵ Indicators can be for instance the number of meetings organized during the pilot, the diversity of entities participating, the trees planted, the people trained or the posts in a web site.

⁶ Indicators can be trust between activists and politicians, greenhouse gas emissions, support of local producers, cross-community links or cultural shift. They can be aligned with other frameworks, like Agenda 2030 (Sustainable Development Goals).

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Pilots Reporting Diary

Municipalities in Transition Community of Practice

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Introduction

One of the main goals of the [Municipalities in Transition Community of Practice](#) is to share learnings, challenges and insights about the experimentation process happening in each pilot by using the MiT methodology. This document is a key element for the group of pilots within the MiT Community of Practice. It wants to be an alive open diary where the pilots can share their process. In this way, we can all learn from each other and harvest information about key aspects of our work. It will also serve as a reporting document.

The reporting diary is open for pilots members (look here the [contact list](#)), for MiT Core Team, and Transition Network members connected to the project. All its users share the responsibility sharing their experiences in this document. The co-guardians of the Community of Practice (Juan, Luís, Nicola and Tommi) will support the process.

How to use it

Every 6 weeks approximately, each pilot will write a summary of their experience following the table template proposed below (the same we used in the first report with small changes).

For each report, the MiT Core Team will add an empty table for each pilot, above the last report. The pilots just need to fill the new table in the respective week.

Please do not modify what other pilots wrote, and feel free to read their experiences, comment, and suggest improvements.

The first report you already sent is also included in this document under the pilot name title.

The dates are:

- Week of the 30th of April (already sent)
- Week of the 18th of June
- Week of the 3rd of September
- Week of the 29th of October
- Week of the 10th of December
- Week of the 14th of January
- Week of the 25th of February
- Final report: 12th of April 2019

The co-guardians of the Community of Practice will try to remind you a week before each date.

Template for final report:

Deadline: 12th April 2019

Name of Pilot	
Date of report	
Main activities undertaken <i>Please make a list of meetings, trainings, and any relevant pilot activities</i>	
Results <i>Compare what was planned with what was actually achieved, also relating to the data obtained through the baseline.</i>	
Monitoring <i>Please share the dimensions and indicators you have chosen to monitor the process and the outcomes, and their evolution</i> Link to Monitoring Guide for Pilots <i>Could you outline what the evolution was like?</i>	
Challenges <i>What has been most challenging for you overall?</i>	

<p>Opportunities <i>Have any new opportunities arisen due to the MiT work? What was most satisfying/useful?</i></p>	
<p>Collaboration <i>Has collaboration improved in your municipality thanks to MiT? How can you tell? What were the Critical Turning Points/emergent dynamics that you saw?</i></p>	
<p>Governance <i>What governance model did you use for the MiT pilot? How did it work? Please evaluate how the governance affected the dynamics of the work and the basis for collaboration. How did it affect the power relationships? Would you do anything differently?</i></p>	
<p>How can we improve the MiT Framework? <i>Please feel free to suggest improvements and developments for the grid, leverage cells, cell cycles, database, Community of Practice, Tutoring, Core Team, Research...</i></p>	
<p>The Grid <i>How can we make the grid visible and usable for concurrent users in the community?</i></p>	
<p>Support needed <i>Please describe what you would expect from the ideal tutor in terms of skills and support if you could choose, based on your experience. Any additional support you would benefit from?</i></p>	
<p>Community of Practice <i>How could the community of practice be more useful and engaging? What would you look for in such a community?</i></p>	
<p>Looking ahead <i>How do you imagine the continuation of the pilot work? Do you have a strategy for activities, collaborations,</i></p>	

<p><i>funding, etc.? What support can you foresee you could need?</i></p>	
<p>Connecting <i>What would you tell to other groups and municipalities wanting to take part in the project? What would you highlight, and what would you caution them on?</i></p>	
<p>Media outputs <i>Please list and share any outputs such as articles, reports, pictures, videos, etc. that you have produced and provide links</i></p>	
<p>Research links: <i>Please share the documents you have used to analyse the baseline and the 2 actions with the grid. Please indicate the correct links to let the research team work on the right documents. This data will be shared with professional statistician who will analyse.</i></p>	<p>Initial Baseline document (grid calculator):</p> <p>Action 1 (support) initial analysis: Action 1 (support) final analysis:</p> <p>Action 2 (new) initial analysis: Action 2 (new) final analysis:</p>
<p>Additional comments</p>	

The template for regular reports is the next one:

<p>Name of Pilot</p>	
<p>Date of report</p>	
<p>Main activities undertaken <i>Please make a list of meetings, trainings, and any relevant pilot activities</i></p>	
<p>Media outputs <i>Please list and share any outputs such as articles, reports, pictures, videos, etc. that you have produced and provide links</i></p>	
<p>Challenges <i>What has been most challenging for you so far? How did you respond to these?</i></p>	

Opportunities <i>Have any new opportunities arisen due to the MiT work? What are they?</i>	
Collaboration <i>Do you think that the relationship between the municipality and the transition initiative is changing? How?</i>	
MiT Methodology <i>Please give us your feedback on the use of the MiT methodology so far. (Anything to improve? Anything to change? Anything that was particularly difficult?)</i>	
Monitoring <i>Please share the dimensions and indicators you have chosen to monitor the process and the outcomes, and their evolution</i> Link to Monitoring Guide for Pilots	
Support needed <i>Is there anything for which you need additional support from your tutor?</i>	
Community of Practice <i>Is there anything you would like to present or discuss in this space?</i>	
Additional comments	

ANNEX C – THE *MUNICIPALITIES IN TRANSITION* FINAL SURVEY



MiT final survey

If you are part of the 'core team', please answer the following questions related to your pilot's experience. This is an anonymous survey. Deadline: 31st July, 2019.

***Obrigatório**

How much do you agree with the following statements?

"By using the MiT framework, local governments and civil society created an enhanced combined effect that promoted sustainability" *

Try to compare results achieved with a "business as usual" situation.

1 2 3 4 5 6 7 8 9

Fully disagree Fully agree

Can you please comment on this?

A sua resposta

"The MiT built capacities to generate sustainability solutions" *

Think about your organization. Is it now more capable to face challenges?

1 2 3 4 5 6 7 8 9

Fully disagree Fully agree



What are these capacities and how were they enhanced?

A sua resposta

"The pilot's actions contributed to the community resilience" *

Consider socioecological integrity, livelihood sufficiency, equity, democratic governance or any other.

1 2 3 4 5 6 7 8 9

Fully disagree Fully agree

What were the main contributions? How were they achieved? Was there any negative impact?

A sua resposta

"The MiT facilitated collaboration among participants in the process" *

1 2 3 4 5 6 7 8 9

Fully disagree Fully agree

Can you please comment on this?

A sua resposta

"The MiT fostered reflexivity and learning throughout the process" *

1 2 3 4 5 6 7 8 9

Fully disagree Fully agree



How? What were the crucial elements for this?

A sua resposta

"The MIT core circle secured sufficient support for the pilot" *

	1	2	3	4	5	6	7	8	9	
Fully disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fully agree

What was more important? *

Please choose a maximum of 2 options.

- Training
- Community of Practice
- The framework (governance model, grid, planning cycle...)
- Funding
- Tutoring
- Outra:

Can you please comment on this?

What was more useful and how? What can be improved?

A sua resposta



What is your affiliation? *

- I am primarily a member of a civil society organization
- I am primarily a member of the local/regional administration

Submeter

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ANNEX D – THE *MUNICIPALITIES IN TRANSITION* UPDATED SYSTEM

The Municipalities in Transition System

Version 1.5



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“Sustainable development is more about the organisation of processes than about particular outcomes. It is about the modes of problem treatment and the types of strategies that are applied to search for solutions and bring about more robust paths of social and technological development”

(Voß & Kemp, 2006)

1. What is the Municipalities in Transition System?

The Municipalities in Transition System (MiTS)¹ provides a local Community a way to reorganize itself towards sustainability and wellbeing, responding to the great challenges² of this historical period, adopting systemic thinking³ and a specific set of methodologies, tools and principles.

1.1 - Who is the MiT System for?

The MiT System is designed to foster the process of transformative collaborations within the Community. An ideal implementation would see all the key Actors of the Community aware of the availability of the System and able to benefit from its use directly or indirectly.

During the design of the MiTS we considered three main starting point scenarios:

1. Process generated and led by the local government
2. Process generated and led by one or more Actors in civil society
3. Process generated and led by both together

Our intent is to provide a system applicable to all these scenarios.

1.2 - Features of the system

Here is a list of features we considered fundamental for a system of this kind:

1. It has a Purpose (see also 2.1 and 2.2)
2. It's closely linked to the Transition principles (see also 2.1)
3. It's implementable in a top-down and/or a bottom-up approach
4. It's powerful enough to cope with high levels of complexity and uncertainty
5. It's simple enough to be relatively easy to learn and to use in real life
6. It has a low level of preconditions for adoption (low resources, low technology)

¹ In the beta version we called it "framework" which remains an accurate term, but which turned out to be difficult to understand and translate. We have therefore opted for the use of the term "system".

² Climate Change ([IPCC - AR5](#) and [IPCC - AR6 Synthesis](#)), scarcity of resources, loss of biodiversity, pollution, increase in inequalities ... ([Planetary Boundaries](#))

³ For a primer on systemic thinking you can check the videos of the [System Thinking Course](#) of the Complexity Lab or refer to [Thinking in Systems: a Primer](#) by Donella Meadows.

7. It's easily adaptable to a wide variety of very different contexts and cultures
8. It's designed to be iteratively evolved through its use
9. It fosters a model of shared/diffused governance
10. It's capable of improving the quality of the cooperation between the involved Actors
11. It's preparatory to a Deep Adaptation⁴ community strategy
12. It works

2. Some fundamental premises

We are fully aware that reading this document and entering the use of MiTS will produce two apparently contradictory effects:

1. Feeling that what is described is already something you know very well and do normally.
2. Feeling that what is described is out of focus, vague and difficult to understand.

Often the two feelings emerge from the same item. Consider this effect as normal in the first phase, please don't worry and take it as it is. This is typical when you start moving into systemic thinking, and every change of the work culture feels strange to start with. Things will become very clear when we move on to the practical phases of using MiTS and the effects on real life are observed.

The system has been designed and shaped according to the following principles, which we now summarize here very briefly.

2.1 About Transition principles

The Head-Heart-Hands (HHH) principles⁵ at the core of the Transition Movement proved to be effective and disruptive in many different situations and socio-economic contexts. They were a central inspiration in the development of the MiTS:

Head: act on the basis of the best information and evidence available and apply collective intelligence to find better ways of living, keeping a strong systemic vision.

Heart: work with compassion, valuing and paying attention to the emotional, psychological, relational and social aspects of the ongoing work.

Hands: turn our vision and ideas into a tangible reality, initiating practical projects and starting to build a new, healthy economy in the place you live.

For a better understanding of the statements above it can also be useful to broaden the way in which we define and express the same ideas through a set of goals to achieve:

⁴ Concept inspired by Jem Bendell's homonymous paper, intended here as ready to help the community develop elements of resilience in a worst case scenario (<http://www.lifeworth.com/deepadaptation.pdf>).

⁵ <https://transitionnetwork.org/about-the-movement/what-is-transition/principles-2/> ; you can also check the Database entry on [HHH](#).

Respect resource limits and create resilience – The urgent need to eliminate greenhouse gas emissions, quickly phase out our reliance on fossil fuels and make wise use of precious resources is at the forefront of everything we do. Our aim is to build resilient communities that can adapt to external socio-ecological shocks as climate change or economic instability.

Promote inclusivity and social justice – The most disadvantaged and powerless people in our societies are likely to be most affected by rising fuel and food prices, resource shortages and extreme weather events. We need to increase the chances of all groups in society to live well, healthily and with sustainable livelihoods.

Adopt subsidiarity (self-organisation and decision making at the appropriate level) – The intention of the Transition model is not to centralise or control decision making, but rather to work with everyone so that it is practiced at the most appropriate, practical and empowering level.

Pay attention to balance – In responding to urgent, global challenges, individuals and organizations can end up feeling stressed, closed or constrained rather than open, connected and creative. We create space for reflection, celebration and rest to compensate for the moments when we're busy getting things done. We explore different ways of working which engage our heads, hands and hearts and enable us to develop collaborative and trusting relationships.

Be part of an experimental, learning network – Transition is a real-life, real-time global social experiment. Being part of a network means we can create change more quickly and more effectively, drawing on each other's experiences and insights. We want to acknowledge and learn from failure as well as success – if we're going to be bold and find new ways of living and working, we won't always get it right on the first attempt. We will be open about our processes and will actively seek and respond positively to feedback.

Freely share ideas and power – Transition is a grassroots movement, where ideas can be taken up rapidly, widely and effectively because each community takes ownership of the process itself. Transition looks different in different places and we want to encourage rather than unhelpfully constrain that diversity.

Collaborate and look for synergies – The Transition approach is to work together as a community, unleashing our collective genius to obtain a greater impact together than we can as individuals. We will look for opportunities to build creative and powerful partnerships across and beyond the Transition movement and develop a collaborative culture, finding links between projects, creating open decision-making processes and designing events and activities that help people make connections.

Foster positive visioning and creativity – Our primary focus is not on being against things, but on developing and promoting positive possibilities. We believe in using creative ways to engage and involve people, encouraging them to imagine the future they want to inhabit. The generation of new stories is central to this visioning work, as is having fun and celebrating success.

2.2 - The MiTS Purpose

This list of goals above is probably also the best way to explain what the use of the MiTS is trying to produce in a community that adopts it: what we could call the MiTS Purpose.

“To create deep cultural and practical changes towards sustainability and wellbeing through the implementation of the Transition Principles”

2.3 - Resilience principles

Another concept that is central for Transition processes and ideas is resilience, and many of the indications, methodologies, tools we are proposing are designed to contribute towards resilience at several levels⁶.

2.4 - Theory of fluxes

As far as we know this is not something already defined at the academic level⁷. It derives mainly from empirical work on the field with municipalities and communities, as well as marketing theories, and it was partially inspired by the work of the economist [David Lane](#)⁸ on complexity and social interactions.

The point is that we often try to produce change and new cultural assets by creating “groups”. One of the typical definitions in classical sociology can be the following:

A group in sociology exhibits cohesiveness to a larger degree. Aspects that members in the group may share include: interests, values, ethnic/linguistic background, roles and kinship. One way of determining if a collection of people can be considered a group is if individuals who belong to that collection use the self-referent pronoun "we;" using "we" to refer to a collection of people often implies that the collection thinks of itself as a group.

However when we organize ourselves in groups we automatically set some conditions that are inherent to groups that allow certain dynamics and forbid others.

⁶ A useful reference is the “Principles for Building Resilience Sustaining Ecosystem Services in Social-Ecological Systems” - Biggs, R. M. Schlüter - ISBN: 9781107082656 - [Link](#)

⁷ A further exploration of this subject is certainly necessary, Particularly in the field of [social innovation theories](#).

⁸ David A. Lane - Complexity and Innovation Dynamics; Envisioning a Socially Sustainable Future.

Some of the conditions that we see in groups and we considered particularly interesting for our project purpose are the following:

GROUPS	
Common analysis	A group normally needs to have a common/similar analysis of reality.
Common vision and goals	A group normally needs to have common/similar general vision and goals.
We are similar, we are WE	A group normally develops an identity and borders/edges. In a group we define who is in and who is out.
Direct relations	A group operates in direct relationship within its membership (in person or virtually).
Time and space unity	A group normally acts within a definite space and time, it needs some synchronicity in the way it operates.
Common projects	A group normally develops common projects.

Table 1

Observing these characteristics it is easy to understand that groups are not particularly suitable to foster a **transversal** change, like the one we need, in order to produce sustainability for human societies. For this reason we developed the concept of **fluxes**: social dynamics with the characteristic to move and influence wider portions of society in a transversal way.

To better understand this concept we can think of what the marketing system does to promote, for instance, a technology like the “smart phone”. The system sends a signal to everyone to convince them that a smartphone is something they need/want. This signal works as a flux hitting simultaneously different targets at different levels (the top manager and the unemployed, the young person and the old one). However the final product (the smartphone) will be sold focusing on “groups” (targeting the customers): smartphones for rich people, for geeks, very cheap models (“even you can have one!”), and so on. The point is that if you want to sell that product to *everyone* you need first a “flux” informing, connecting and fostering as many groups as possible at the same time.

By analogy, if you’d like to produce systemic change, a wide social evolution, you should probably generate, promote, support and take care of the right fluxes or you’ll end up involving only certain niches of the system (the risk is *preaching to the converted* only).

If we compare the characteristics of fluxes with those of groups we can note some interesting differences:

GROUPS	FLUXES ⁹
Common analysis and need	Common analysis and need
Common vision and goals	No need for common vision and goals
We are similar, we are WE	No need to be WE
Direct relations	No need for direct relations
Time and space unity	No need for time and space unity
Common projects	No need for common projects

Table 2

With fluxes we can do things that can't be done with groups, like making people with different views produce positive effects in a community without fighting each other, or without having to connect between them. This can prove quite life-changing for everyone active in social innovation processes.

All this to say that the MiTS design tries to incorporate the use and care of fluxes in its model (in addition and as a complement to the care of groups). More on this topic in the Annex 1 of this same document. You can also check the [Database entry](#) on this topic.

2.4 - Stochastic design

Another basic concept that guided the creation of MiTS concerns the need to face extreme complexity and resource scarcity for anyone trying to promote systemic change in our society.

One of the purposes of the MiTS is to help every actor to “design and plan” observing the opportunities arising around them, and spotting carefully when and where “energy” is available. Energy and opportunities can manifest themselves in many different forms, such as the availability of human and economic resources, the presence of physical space, equipment, skills, the availability of solutions to specific problems, etc.

Planning and implementing actions to promote sustainability and systemic change can be very difficult and ineffective. The world around us is constantly changing and a traditional, linear way to design and plan often proves ineffective. On certain occasions we might want to design a specific action, while not all the necessary conditions are in place to make it happen. This can lead to extreme tiredness, making us (and the community) consume a lot of time and resources, eventually getting a disproportion between the effort made and the results achieved, in many cases not reaching the expected goal.

Acting mainly on “opportunities” and “energy” availability (i.e. where the necessary conditions are present) makes things easier and increases the number of actions that can be performed with higher impacts on reality. We call this attitude “stochastic design” to stress the concept of having

⁹ It may be necessary, in the future, to agree on a different and more complete definition of the characteristics of the fluxes.

a constant attention to the random evolution of the environment, recognizing and accepting variables, and designing on that attitude but **without losing the scope of our work.**

The risk is in fact that following the opportunities, say for example money available through a government incentive campaign, we end up doing what the campaign is asking us to do, even if we don't really need it, or it is not aligned with our scope, but only because there are funds. This can be as ineffective and time consuming as the pursuit of unattainable goals. You can also check the [Database entry](#) on this topic.

By the way, there is no need for the users to learn much more about it, the concept is embedded in the whole system. Every suggested procedure is oriented towards this attitude.

Let's move on to the MiTS description.

Managers are not confronted with problems that are independent of each other, but with dynamic situations that consist of complex systems of changing problems that interact with each other. I call such situations messes. Problems are extracted from messes by analysis. Managers do not solve problems, they manage messes.

Russell L. Ackoff
(organizational theorist)

3. Basic structure of the MiTS

We begin now outlining the key elements of this system:

- | | |
|--|-------------------------------------|
| ● The Functions | <i>What does it allow me to do?</i> |
| ● The Governance Model | <i>How do we make decisions?</i> |
| ● The Grid | <i>Where are we going to play?</i> |
| ● The Pattern Language Database | <i>Where are the right tools?</i> |
| ● The Community of Practice | <i>Who supports me?</i> |

Warning!

All the following elements are designed to be eventually adapted to local contexts. However, we suggest you don't make adaptations while in the early phase of using the system (unless the need is absolutely clear and with an agreement with your Tutor). See more in the "MiTS adaptation" chapter 5 of this document.

3.1 - The Functions

The MiTS is designed to perform a set of functions that we consider extremely important for every community trying to evolve and change.

These are:

- 1. The Evaluation and Diagnosis Function** - A way for the community to easily evaluate its initiatives in an approximate way, but still sensible enough for the present purpose, and to set a reference Baseline from where its path toward the MiTS Purpose is starting. This will also let the same community to keep track of the progresses and changes over time. At the same time the MiTS helps to spot energy, resources and weak points of the community systems and actions, providing a diagnosis tool to inform other activities.
- 2. The Co-Design Function** - A better way to connect different actors and help them co-design plans and actions. The way the MiTS works tends to break walls and

compartments, making the power of connections, cooperation and sharing more visible and valuable.

3. **The Co-Implementation Function** - This is a consequence of the previous function. In a world facing various levels of scarcity, the need of doing a lot with less can be a key ability to pursue. By taking actions together, we are more likely to be able to support shifts in culture and behaviour and to achieve impacts which are more proportionate to the ecological and social crises we face. Adding the energy of different actors we produce subsidiarity and we use complementarity to the best.
4. **The ToolBox Function** - The MiTS aims to make readily available in its Pattern Language Database a variety of tools and concepts from around the world that are particularly suitable for the kind of process we are trying to foster. It will also suggest how to connect and use them in the most effective way, highlighting strengths, risks and weaknesses for each one of them.
5. **Cultural Leverage Function** - Using the MiTS will help people gravitate towards systemic thinking and key patterns towards sustainability. This will happen for those aware and in direct contact with the MiTS but also for those that will use the tools or that are part of processes designed within the MiTS logic. The basic principles will be replicated in a fractal way all over the system elements.
6. **The Governance Innovation Function** - The MiTS introduces an innovative and disruptive governance model within the start-up and implementation teams managing the system and beyond. This function is transversal to all the others.

3.2 - The governance model

Whatever process or project you want to implement within a community you are probably going to face all the dynamics that characterize our cultural systems: conflict, competition, distrust, misunderstanding, etc. That is how reality is most of the time: messy and difficult.

Since we are trying to put in place a different kind of dynamic within the community, we have equipped MiTS with a special model of Governance called Sociocracy 3.0¹⁰ (S3) to provide what follows:

1. Strong orientation to inclusiveness and enhancement of collective thinking
2. Strong orientation to cooperation and subsidiarity
3. High levels of transparency, effectiveness and accountability
4. Great flexibility and adaptability to a wide range of different situations
5. Capable of disrupting most of the negative dynamics of groups (consent based)
6. Simple linkability to MiTS (Transition) principles
7. Nestability with other traditional methodologies (required by laws or institutional processes)
8. An open source methodology

¹⁰ You can find all the information about this methodology originally developed in 2014 by James Priest and Bernhard Bockelbrink on <https://sociocracy30.org/>

S3 develops from a very smart combination of classic Sociocracy (a democratic methodology), Agile¹¹ (a set of values and principles created to develop better software) and Lean¹² (a management tool to create more value with less resources). It fits very effectively in the MiTS because most of the goals, principles and problems to be solved are the same, it is a real game-changer piece of the system.

To put a MiTS Pioneer in place in a community the minimum requirement is the constitution of a Local Startup Team (LST) formed by the representatives of the municipalities and at least two other Actors from civil society. This will then evolve in a larger Local Implementation Team (LIT).

The use of the S3 methodology is required for the management of these groups and considered an indispensable part of the MiTS.

3.3 - The grid

As we already pointed out, municipalities, activists and all the actors of a community have to face the complexity of their local system day by day. Like in a boardgame, the first element of the MiTS is designed to provide a clearer, more systemic view of the “playing field”.

The Grid performs three specific functions:

- Defines **Actors and Actions Categories**
- Shows **Relational Proximity** between the actors
- Act as an organizer of **Actions and Tools**

¹¹ [Agile manifesto](#)

¹² [Lean Enterprise Institute](#)

Below is the basic layout of the **Grid**.

		Actors Categories							
Actions Categories	U Upper Institutional Levels	A Municipality Political	B Municipality Organization	C Controlled Entities	D Suppliers	E Organizations	F Businesses	G Public	H Networks
1 Vision									
2 Organization									
3 Planning									
4 Technical aspects									
5 Relation									
6 Cultural change									
7 Networking									

Fig. 1

The Actors Categories

The upper horizontal row shows the key **Actors** categories organized in 9 columns. The way they are ordered suggests the relational distance between them.

This indication of distance must not be considered in a rigid way: reality can show us a great variety of situations. We highly encourage the use of the present column distribution, with some possible slight modifications, as discussed with the Tutor. You can see a different color for the first and the last column that indicates that those actors are out of the community domain and/or space.

Here is the list of the basic Actors Categories:

Actors Categories								
U. Upper Institutional Levels	A. Municipality Political	B. Municipality Organization	C. Controlled Entities	D. Suppliers	E. Organizations	F. Businesses	G. Public	H. Networks

Fig. 2

For example, considering the relational distance among categories as the distance between columns, the **Political** level of the municipality can interact more easily with the **Organization** level of the municipality than with the **Suppliers**. This gives a very quick way to roughly

estimate the amount of effort (energy, resources) one actor needs to reach and interact with another actor (particularly when the goal is to produce support, suggest changes, etc.).

The list below will help you to identify the **Actors** and focus on a few important traits they present:

- U. **UPPER INSTITUTIONAL LEVELS** Regional/National/International governments, authorities, etc.
They are out of the community domain and not directly influenced by the community but they can produce effects in the community with their actions and policies, receive feedback, be inspired, involved or indirectly influenced by actions/decisions of the community, etc.
- A. **MUNICIPALITY: Political level**
Elected (they care about votes and voters), they have to deal with political opponents and competitors, they often stay in charge only a few years, and are often forced to practice a “short-term thinking” attitude. They can be almost volunteers in small municipalities, and well paid and more powerful in many big cities.
- B. **MUNICIPALITY: Organization level**
Employees (civil servants) or freelancers often stay for a long time, very often have a deep understanding of the “municipality machine”, they are the practical “door to action”. They can easily be overwhelmed by the workload and suffer scarcity of resources.
- C. **CONTROLLED ENTITIES:** structures, consortia, companies directly controlled by the Municipality
Entities that are strongly connected to the municipality (public water services, waste management services, maintenance, social services), can be controlled in a very direct way, they have to act as the municipality wants.
- D. **SUPPLIERS:** public and private suppliers
Entities connected through stable or occasional economic contracts. These are suppliers of the municipality or of any other actor in the community.
- E. **ORGANIZATIONS:** non-profit, associations, schools, hospitals, universities, unions, parties, etc.
Non-profit organized entities that are present in the territory, e.g. organized activists.
- F. **BUSINESSES:**
Companies, cooperatives, freelancers, private schools and universities, business oriented organizations.
- G. **PUBLIC:** families, citizens, individuals, people
Taken as a single unity (one citizen, one family) or as not organized groups (all the people living in that street, an area...).
- H. **NETWORKS:** other municipalities, municipality consortia, other actors (far away in terms of relational distance), etc.

Entities that may or may not be present in the territory but that we know are important to consider to achieve a particular goal. National or international networks or NGOs, organizations out of the community domain not sitting on a higher institutional rank (ex. the Red Cross).

You may find Actors not so easy to classify, don't spend much time in finding "the perfect column" just place it in the most plausible position and be consistent if a similar case re-occurs.

Also consider that a particular entity can play different roles. A business company can appear in the column F (Businesses) when it's acting in complete operational freedom, but in the column D (Suppliers) when acting under the bond of a contract with another actor of the community. In MiTS we care a lot about interactions. For instance, if a local government wants to produce a change in the way a business operates, having a contract in place with that particular business makes things easier than if they only have moral suasion as a tool and no other links to the business.

The Actions Categories

The first vertical column on the left indicates the Actions categories we want to focus on in our "playing field". Again this is not to be taken with rigidity and we acknowledge that we can have overlaps.

Actions Categories
1. Vision
2. Organization
3. Planning
4. Technical aspects
5. Relations
6. Cult Change
7. Networking

Fig. 3

1. **VISION:** where do we want to go, what we see in the future
Actions and processes that tend to create/evolve/change a vision.
2. **ORGANIZATION:** people, roles, structures, governance, procedures, etc.

Actions and processes that tend to create or modify aspects about how the actors are organising/governing themselves or with others.

3. **PLANNING:** sector plans, policies integrations, budgets, etc.
Actions and processes that tend to create an action plan, step by step procedures.
4. **TECHNICAL ASPECTS:** monitoring, data, technicalities, laws and regulations, etc
Actions and processes that modify the state of the system through technology and technical aspects in general (also social technologies).
5. **RELATIONS:** within Actors, social aspects, caring aspects, etc.
Actions and processes that want to create, modify or improve relations between actors (key sentence: the way we talk to each other).
6. **CULTURAL CHANGE:** communication, training, involvement, empowerment, etc.
Actions and processes that tend to create, modify or improve the knowledge and the understanding of the “world”.
7. **NETWORKING:** networking, diversity, info exchange, comparison, etc.
Actions and processes that tend to create, modify or improve connections between actors (key sentence: the way we share and work together).

The cells

Obviously Actors and Actions intersect in cells that we are going to use as containers when we perform the functions of our System. We can also imagine the grid like a well organized cupboard where we can store everything we need for our “transition” activity with the community, and the cells as drawers. Each cell can be identified by the letter of its column and the number of its row; this will be very useful to connect the cells to the records of the MiTS Pattern Language Database as we will see in the next chapter.

Cells are mainly used to store a set of 3 values for each cell:

1. Observed impact/presence¹³ **(b)**
2. Potential or expected impact/presence **(p)**
3. Evaluated impact/presence **(e)**

To each we can assign a value ranging from -10 to 10 where positive values measure a positive impact or presence (therefore in support of the goals of the action and the MiTS purpose) and the negative values negative impact or presence (therefore impediments, problems, etc.).

¹³ What does “impact/presence” mean? We try to observe and report on the Grid who is doing the actions, who else is involved and affected, how important is the positive (or negative) impact the action is creating. The LIT will quickly develop an internal culture on how to interpret their community reality transforming it into consistent values on the Grid.

4 Technical aspects	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
5 Relations	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
6 Cultural change	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
7 Networking	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0

Fig. 5

We know it might look scary and complex now, but using it will prove it to be much easier than you can imagine. To prove this, the first 6 pilot communities that used MiTS started with a much simpler version of this grid and, despite this, it looked frightening to them also, but in a very short time they were all asking to add all the elements you see now, to make the whole grid more powerful and useful.

3.4 - The Cynefin Space

Cynefin (pronunciation kə'nevɪn is a Welsh word meaning *habitat, haunt, acquainted, familiar*) is a conceptual framework created in 1999 by the management consultant Dave Snowden when he worked for IBM Global Services. It identifies 5 spaces in which to place what we observe around us. To each of these spaces then corresponds a specific sequence of action, which should increase the chances of success.

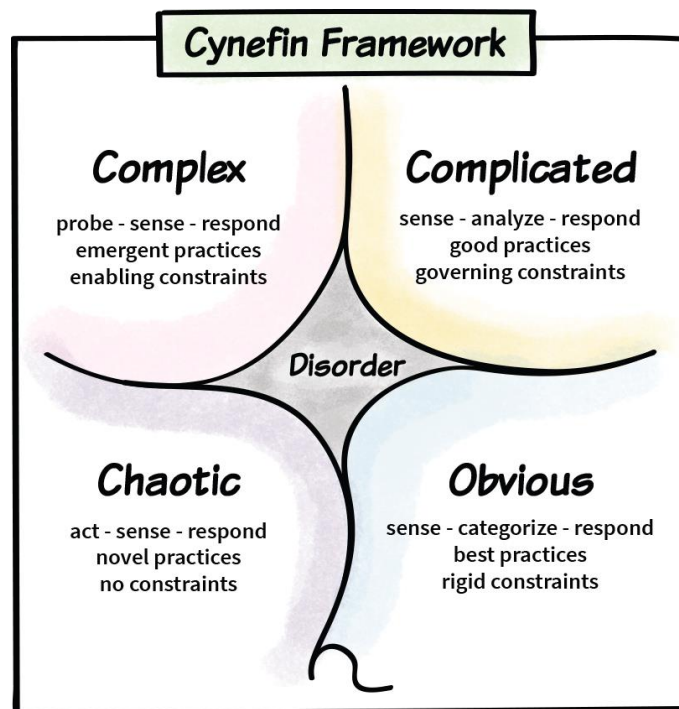


Fig. 6

In the MiTS context we suggest to use Cynefin as a quick, auxiliary method to Analyze and Plan our Actions. A very quick explanation on the use of this tool is going to be part of the training for the Local Implementation Team. Every action will be then marked by its position in the right Cynefin space and this will be useful to provide a set of first indications for its management (evaluation, development, improvement, modification, etc.)

3.5 - The Evaluation Cycles

Evaluation Cycles (ECs) are particularly helpful when we evaluate an action or we design a new one. We provide a number of basic ECs that we consider fundamental to guide our activity together with the use of the Grid, but the users could also decide to develop more cycles if they feel the need.

Each Evaluation Cycle is based on a simple set of three questions and for each one of them we ask to express a rating score from 0 to 10 where 0 is equivalent to a “full no” or “disagreement” and 10 is equivalent to a “full yes” or “full agreement”.

The HHH Cycle

The first cycle is a way to verify if the action we evaluate or plan fulfills Head/Heart/Hands (HHH) logic. This is the most important of the cycles and can't be skipped for any reason.

It can be performed in a very rapid way answering the following 3 questions:

1. Is this action based on the best available data? (Head step)
2. Is it considering and taking care of emotional/relational consequences for everyone involved? (Heart step)
3. Does it produce practical effects? (Hands step)

Or it can be used at different levels of complexity to fine tune its effectiveness. Here is a more complete way to see it:

1. Is this action based on the best available data? (Head step)
 - a. Would you classify the data as very solid and true¹⁴?
 - b. Would you classify the data as good but with some doubts?
 - c. Would you classify the data as quite uncertain?
2. Is it considering and taking care of emotional/relational consequences on everyone involved? (Heart step)
 - a. Is this producing fear or conflict?
 - b. Is this highlighting positivity, happiness, joy... ?
 - c. Is there “space” and “time” to take care for emotions?
 - d. Are participants feeling organically connected to the action¹⁵?

¹⁴ Official data are not always solid and true so are not enough to answer “yes”. This can be delicate, but connecting with reality is paradoxically a difficult task in the information era. You have to surf in a sea of fake news, reports on commission, low quality peer to peer papers, politically oriented pseudo scientific information, green washing, etc. The availability and the quality of the information can also be heavily influenced by the country you are operating in, the culture, the language, etc.

¹⁵ In the MiTS work environment empowerment or participation shouldn't be considered “good things” if not after analysing the context and the purpose of the action. Sometimes they are, sometimes not, our aim is facilitating each actor to find its right spot in the action development.

3. Does it produce practical effects? (Hands step)
 - a. Can this produce a useful change¹⁶?
 - b. Can the change last?
 - c. Can the change foster further useful changes?
 - d. Can you see useful changes in everyday's life of people?

The WWW Cycle

The WWW Cycle should always follow the first one as a safety reminder of the power of connections and inclusion. It is based on the following 3 very simple questions:

1. Who is there? (are the very fundamental/natural actors part of the actions?)
 - a. Ideally they should be involved in the governance of the action and given S3 objections right.
 - b. The minimum score of this question should always be 100.
2. Who is missing? (Are there other natural/well connecting actors that are not present?)
3. Who else should be there? (Are there other actors that might contribute to improve this action?)

We know that this cycle can be confusing, here is a practical example that can help you to better understand the 3 questions above:

WWW example

A Municipality has some money available to offer to the students of the local school a laboratory in Domestic Sustainable Waste Management. A local association has trainers already doing this type of activity in schools.

Who is there?

The fundamental actors here are: the Municipality (say the officer responsible for the project), the School (the teachers directly involved, the principal, the didactic direction, the students), the Association (the trainers).

Who is missing?

Other natural actors are: the families of the involved students, the other teachers in the school (those not directly involved in the laboratory activity), the Company/Service managing waste in the municipality that could help and provide info. All not essential but very connected and interesting to involve.

Who else should be there?

Other potential contributors: a similar school in the neighboring municipality (they might be interested in following this example), the shops selling the tools needed for the laboratory (they might offer the equipment), etc. All not essential and not so easy to engage but a way to amplify the effect of the action.

¹⁶ Change (or innovation) for the sake of change is not an intended outcome of the MiTS. We pursue changes useful to achieve the MiTS purpose.

The Flux Cycle

This cycle helps you to understand if the action, in addition to pursuing its specific objectives, is also producing or could potentially produce a beneficial flux effect on the community. This can be done asking this set of questions:

1. Is this action sowing transition memes¹⁷?
2. Is it connecting, supporting, complementing other actions?
3. Can it be supported by a range of different sectors of the community?

See the *Working With Fluxes* annex for a better understanding of this cycle.

The Deep Adaptation Value Cycle

This cycle is used to roughly estimate the value of the Action for the resilience of the community. Here are the set of questions to be asked:

1. How much impact has this action on basic services for the community (food, energy, shelter, relations/democracy).
2. How vital is this action for the services which it impacts?
3. What priority should the community put on the protection of this action in case of a disruptive event?

The Resilience Cycle

This cycle is used to evaluate the resilience of the action itself.

1. Does this action have a back-up protection of redundancy in the community?
2. At what level is this action resourced within the community?
3. How easily can the governance of this action be moved to another governance system in case of a disruptive event?

More Evaluation Cycles could be added if necessary in the future, or in the moment depending on the local conditions.

¹⁷ A meme is an idea, behavior, or style that spreads from person to person within a culture—often with the aim of conveying a particular phenomenon, theme, or meaning represented by the meme. A meme acts as a unit for carrying cultural ideas, symbols, or practices, that can be transmitted from one mind to another through writing, speech, gestures, rituals, or other imitable phenomena with a mimicked theme. Supporters of the concept regard memes as cultural analogues to genes in that they self-replicate, mutate, and respond to selective pressures. Example: “In nature the strongest survives” is a very simple meme on which to build an entire human cultural system or “A mosquito net can save lives” is a simple meme that has saved millions of lives around the world while “Smoking is cool” killed millions. For a reference Richard Dawkins “The selfish gene” (4th edition Oxford Landmark Science 2017) and Susan Blackmore “The Meme Machine” (Oxford University Press, 1999). Also Yuval Noah Harari “Sapiens” (Random House).

“The way to build a complex system that works is to build it from very simple systems that work.”

Kevin Kelly
(founder of *Wired* magazine)

3.6 - The Pattern Language Database

The second element of the MiTS is a database where we collect all the transition patterns that we already know and those that we will discover in the future. The Database is accessible to MiTS users through the web and it will probably be available also on paper in the future.

The word *patterns*¹⁸ is the most appropriate to describe the contents of the database, but it is also abstract and unusual for the most. From now on we will use the words *Actions* and *Tools* instead, choosing one or the other depending on the type of pattern we are referring to.

What are Tools in the database?

They can be a simple way to solve or handle a very specific problem:

Problem: Where do I get reliable information about new PV technology?

Tool: Subscribe to the *XYW* web newsletter!

Or more complex questions:

Problem: How can we evolve the vision of the municipality employees?

Tool: Awareness raising and team building training program and methodology.

Tool: Deep ecology training program and methodology.

Tool: U-Lab training program.

Tool: Guided tour of the National Climate Observatory Center.

...

Or an even larger approach:

Problem: How do we involve citizens in that area of town?

Tool 1: Transition Street projects (examples, methodologies,...)

Tool 2: REconomy projects (examples, methodologies,...)

Tool 3: CSA scheme.

Tool ...

How do we organize the Tools in the database?

¹⁸ Pattern: any form of correlation between the state of elements within a system. The way the elements correlate can be recognized and repeated. Normally we recognize a pattern as such because we've already seen that same kind of organization, correlation, sequence of events elsewhere.

The main features of the MiTS database are:

1. It is organized as a Pattern Language database¹⁹
2. Therefore database records are connected with other relevant database records and we could call them *patterns*, according to the original definition of the Pattern Language methodology
3. Database records are connected to grid cells (one or more)
4. The Database contains specific and transversal Tools
5. Tools in the Database are there to serve the purpose of MiTS
6. Each record is designed to solve a specific problem

The Pattern Language concept was created for city planning, but in general it is a very interesting way to organize information when you are trying to keep and foster a systemic view. The way it works is quite self-explanatory, there is basically no learning curve for those that have to use the database and virtually no limits in the expandability of the system.

Our Pattern Language is organized around a logic of process²⁰. Let's see how it works.

The database records (patterns)

Here is the general layout of every item of the MiTS database (more or less the same suggested by the original pattern language methodology):

The record template

Grid positions Tags Categories Trust ranking Languages	Title of the Tool/Action
	Up links (what we need to get ready to use/understand this Tool/Action)
	Description of the problem (that we are trying to solve)
	Short summary (what is this Tool/Action for?)
	Analysis of the problem and Tool description Analysis and tool description Risks and precautions Advantages Case study Tips for adaptation
	Solution (how this Tool/Action solves the problem)
	Down links (others patterns to check in this database to complement this Tool /Action or to follow after the present Tool/Action)

¹⁹ See https://en.wikipedia.org/wiki/A_Pattern_Language

²⁰ In the original you can see that the organization was around the scale of the area you wanted to plan on, from regions of a country to single rooms in a house.

Table. 3

Let's have a look at an example with some data inside (we are using fake links here simply to give you a general idea of how the item can look like). Refer to the Grid Template document when you need:

ID: 00345 Grid positions G.4	Neighborhood Draught Busters Group
Tags Energy Efficiency, Low Income, Homes, Volunteers, Insulation	Up links Check in advance: " Cheap insulation techniques " and " How to connect with your municipality for common actions ". See also " How to run effective actions groups " and " Groups governance suggestions ".
Categories G. Public	Description of the problem Buildings lose a great amount of energy through bad insulation and air leaks but in many cases complete renovations are not possible, particularly for people with low income. This means that millions of homes will never see the necessary actions to reduce energy needs.
Trust ranking ***	Short summary Draft Busters Groups are self organized groups of volunteers helping people in the neighborhood to improve houses insulation with simple and affordable techniques.
Languages: English Spanish	Analysis of the problem and Tool description <p>The existing houses present in many communities are one of the major causes of energy consumption (around 40% in Europe), heating and cooling being the most impactful aspects for energy use and resulting emissions.</p> <p>Full retrofitting would be the best solution to take these houses at the best possible level of efficiency, but this is possible only when a lot of financial power is in place.</p> <p>To help those house owners and tenants without the possibility of resorting to complete retrofitting, volunteers local groups can be created under the name of "Draft Busters". They train themselves to do very easy insulation works DIY style and help others to spot and eliminate draft, insulate the attics, windows, hot water pipes, etc.</p> <p>The groups are organized [...]</p> <p>Sometimes creating a buying group to get the materials at a cheaper price and support local suppliers can be a nice consequence of this activity.</p> Risks and precautions Check any legal aspects of offering this work in your country.. There are also practical risks (use of tools, damage to property and people, etc), so consider and arrange appropriate

	<p>insurance coverage for the group [...]</p> <p>Personal Identification can be an issue, so it can be useful to coordinate well with local authorities and security forces to protect citizens from possible fraud. [...]</p> <p>Advantages</p> <p>This strategy can potentially reach citizens house by house, in the less affluent sections of the population. Can be also a good connection tool and a way to raise awareness on energy efficiency in general.</p> <p>Case study</p> <p>Particularly interesting is the experience of the DBG of the town of XXXXX. You can read about it following this link.</p>
	<p>Solution</p> <p>Form groups of volunteers to help people to do basic insulation actions in homes.</p>
	<p>Down links</p> <p>See also "Full energy efficiency retrofit plans" and "ESCO strategies" for a different approach to the same problem. Similar to this see also "Draft Busters Thermal Imager Tours" or "Draft Busters DIY Training".</p>

Table. 4

As you can see, the main body of the database record contains the most important information about the Tool and there is a number of fixed sections that are the same for each item. They should be quite self-explanatory and with use, this way of organizing information becomes quickly familiar.

Please note: The presence of the **Up Links** and **Down Links** is a particular feature. This is the way a Pattern Language database structure gently (or not so gently) pushes the user to keep a systemic view of the problems. It basically teaches this kind of attitude becoming an educational tool in itself. It suggests connections, prerequisites, consequences, possible further developments, alternatives and so on.

On the left column we collect a number of other very useful information:

Item

This is the identification number of the item.

ID:

Grid

It indicates the best position or positions in the grid where you can use this Tool. The first letter indicates the column, and the number the row (like in the battleship game). A Tool can have a very specific position or more than one.

Position

As already mentioned there are also Tools that are completely transversal, therefore they don't have a grid position indication and are collected in a separate category.

In the example above the "Neighborhood Draft Busters Group" item would be best used in the cell G.4.

Tags and Categories

These are indications to make the record searchable and easy to reach within a database that can become potentially very large.

Trust ranking

Social innovation and work on change, sustainability, etc. is about trial and error. Some of the Tools are well known, trialled and trustworthy, while others are new and trying to solve problems that no one has been able to solve before.

The "editorial staff" of the database will try to rank the records assigning a 0 to 5 stars indication following these general rules:

****** 4 or ***** 5 stars = High Trust**

Known for a long time and trialled with success. We are highly confident that the Tool/Action can solve the problem that presents.

**** 2 or 3 ***3 stars = Medium Trust**

Known for a long time and experimented but with a range of results. Not so old, good so far, be prudent.

*** 1 star = Low Trust**

Very new, promising but not enough data, be very prudent. Known, but with a range of results and very often failures, problems, etc.

Languages

Indicates the availability of translations of the record in other languages.

We might decide in future to add to this same area some other indications that can be useful for fast references, for instance something about the ease of implementation.

You show me a successful complex system, and I will show you a system that has evolved through trial and error.

Tim Harford

(economist)

3.7 - The Community of Practice (CoP)

So we have a set of principles, a Grid and a Database - what we need now are the users. The MiTS is designed to provide local administrators and civil society groups with a chance to connect and work together in a better way.

In our complex society and in the current complex times, this is a goal that cannot be achieved through something written on stones, the MiTS and everything around it need to be used and evolved by a live Community of Practice (CoP).

What we can imagine from now on is to have a local CoP in the municipalities where the framework will be in use, connected with a wider network of users at national and international level. Within the MiTS we are designing and implementing so far a community at international level²¹.

²¹ A specific document on CoP will be available soon.

Today the network of relationships linking the human race to itself and to the rest of the biosphere is so complex that all aspects affect all others to an extraordinary degree. Someone should be studying the whole system, however crudely that has to be done, because no gluing together of partial studies of a complex nonlinear system can give a good idea of the behavior of the whole.

Murray Gell-Mann

(physicist, Nobel laureate, father of the quark theory)

4 - Using the MiTS for the Pioneers

Can I use it in my community?

We suggest that you should become a Pioneer community assisted by a MiT Tutor, to successfully use the MiT System.

After a two years phase of development and testing in six pilot projects around the world (2017-2018), this is the first publicly available version of the MiT System. It's designed for a new run of two years called the "Pioneers Phase" where communities experimenting with it will be closely assisted by a tutor specialized in the use of the full MiTS for at least one year.

Having a tutor at your side is crucially important and we need time to train a team of people in charge of this role in different countries. MiTS wants to bring the activities of the community into a different space where real transformation is possible. On the other hand the current system is profoundly rooted in our cultures, and it prevents an evolution that takes into account a systemic view. Following the MiTS process could result in a very difficult task without the help of a tutor, leading practitioners to fall back into the old patterns and models.

Obviously, being now an open document with all the basic information and suggestions available, nobody is going to stop you from trying on your own (at your own risk).

4.1 - Trust our system

Facing complexity at the local level while simultaneously paying attention to the global scenario will prove difficult and messy even using the MiTS, so be ready for that. What we suggest is to trust the process and see what happens after a while.

At the beginning it can be strange and confusing, dealing with the complexity around us is quite an anxiogenic task, particularly if you really resist the temptation of trying to control it.

Our suggestion is: take it easy, follow the instructions and listen to your tutor, this system is designed to be inherently safe.

4.2 - Implementing MiTS in your community as a Pioneer

Starting point

As we stated before, the MiTS should be useful for processes driven by civil society organizations, local governments or both acting together, the last being the ideal condition.

Different starting conditions can bring different needs and strategies but in this phase of the MiTS we are selecting pioneers where we can have both together from the beginning.

Pioneers will be asked to:

1. Sign an agreement with Transition Network about this pioneering phase;
2. Create a Local Startup Team (LST) formed by the representatives of the municipalities and at least two other actors from civil society (ideally two actors from column E);
3. Implement the MiT System (ideally a two hours team meeting a week imagining one person for each organization involved);
4. Allocate a budget to support the activity at local level (mainly to cover the activity of the tutor).

In the following picture you can see the MiTS flow for the pioneers and in this chapter, you can have a quick overview of the required activities to implement the MiTS in your community.

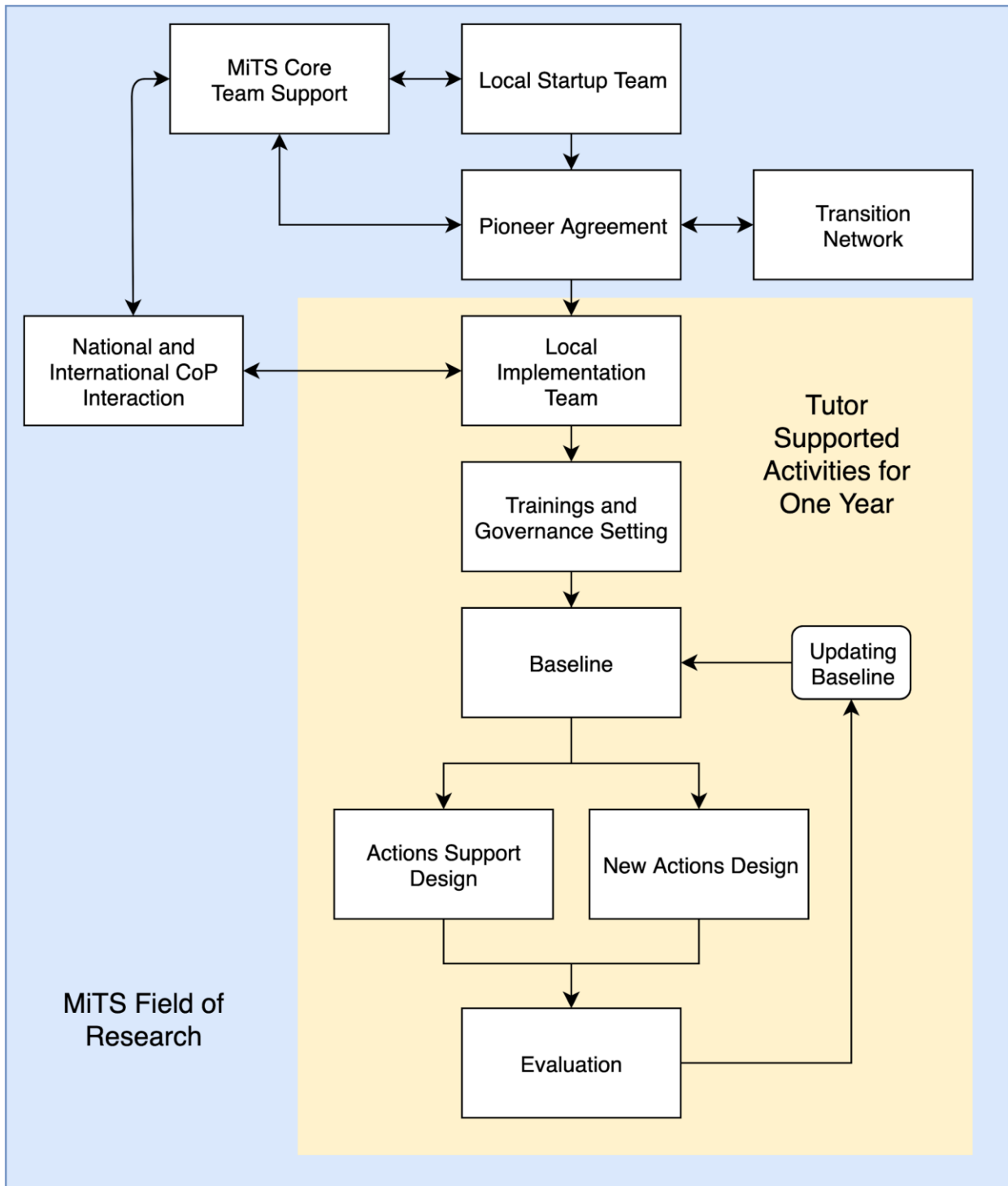


Fig. 7

The MiTS local training and governance setting

The Local Implementation Team will receive training to learn more about the MiTS, its use and the pioneer management through the S3 governance methodology. The next phase will be activated when the group will have a sufficient mastery of the governance model.

Creating a Baseline

The first step in the use of the MiTS is the creation of a local baseline (or just baseline for short) through the analysis of 30 actions already in progress and that we imagine oriented to serve the purpose of MiTS.

It is a way to set a starting point, taking a picture of the state of the art of the municipality and its community. We are performing a first run of the **Evaluation and Diagnosis Function** of the System.

The idea is to use the MiTS grid to collect in an organized way every action we can spot ongoing around us. Examples of what we are looking for are: training on sustainable waste management, low emissions mobility plans, local food production schemes, information campaigns on energy efficiency, climate change adaptation training, circular and sharing economy activities, low impact mobility, community-making actions, social/minority inclusiveness initiatives etc.

We are trying to be easy, cheap, and effective. This system is designed by practitioners trying to make it as usable as possible and adaptable to very different starting point conditions. Therefore this collection of actions can be done in a very orderly and systematic way or through a more random process.

The pioneers will use a specific custom WordPress based platform to collect and process all the necessary info. The same platform can provide initial suggestions on the collected data.

The baseline in practice: collect data

The precise design of this activity will be defined by the LIT and carefully assisted by the tutor to end up with the set of the most important 30 actions that the community can spot. The scope of the Baseline is not to provide a precise, scientific measurement methodology but a way to more clearly see “the big picture” of the community. These are the steps you’ll follow:

1. Define, using S3, the best way to perform this activity in your context.
2. Start observing from what is obvious, plain and easy to spot (complexity will then emerge) and create a list of potential actions to be part of the baseline, then choose the most important 30.
5. Analyze and register each action on the MiTS WordPress platform. During the training we will play a lot with real life examples to make this task easier.

In the end you’ll be in the position to evaluate each single chosen action and the group of all actions together as a general overview. This is what we call *Baseline*.

There are other ways to proceed that you can explore on the Annex 2 - *Baseline Creation*.

The baseline in practice: baseline quantitative evaluation

Having now a Baseline, we can start a first quantitative evaluation of it. An ideal community wonderfully committed to change toward sustainability should produce a grid with every cell seeing many bold actions going on. Reality will probably bring different results.

In this phase only the first position (Observed impact/presence) of every cell will contain a value. The grid of a single action will therefore look similar to the following example:

SINGLE ACTION GRID:

		Actors Categories							
Actions Categories	U Upper Institutional Levels	A Municipality Political	B Municipality Organization	C Controlled Entities	D Suppliers	E Organizations	F Businesses	G Public	H Networks
	b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e
1 Vision	0 0 0	2 0 0	0 0 0	0 0 0	-2 0 0	0 0 0	0 0 0	7 0 0	0 0 0
2 Organization	0 0 0	7 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
3 Planning	0 0 0	4 0 0	5 0 0	0 0 0	0 0 0	7 0 0	0 0 0	7 0 0	0 0 0
4 Technical aspects	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	7 0 0	0 0 0	0 0 0
5 Relations	0 0 0	0 0 0	8 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
6 Cultural change	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	7 0 0	8 0 0	0 0 0	0 0 0
7 Networking	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0

Fig. 8

Where:

- The cell with the bolder line (E6) indicates the origin of the Action;
- The numbers in the cells (A1; A2; A3; B3; B5; E3; E6; F4; F6; G1; G3) indicate where we see an effect of the action and how strong this effect appears in each cell;
- On D1 you can see a negative effect happening.

It is quite intuitive to understand that the more cells are involved and the higher the evaluations for each cell, the more a certain action can be considered of impact. Also, the more we have red and orange cells involved the more we are touching the leverage points of our community system increasing the impact of the action.

This kind of reasoning will be performed action by action and then observing the Grid Calculator that presents the sum of the actions to have a general idea of the overall impact of our actions.

GRID PRESENTING THE SUM OF THE 30 ACTIONS:

Actions Categories	Actors Categories								
	U Upper Institutional Levels	A Municipality Political	B Municipality Organization	C Controlled Entities	D Suppliers	E Organizations	F Businesses	G Public	H Networks
	b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e
1 Vision	0 0 0	270 0 0	0 0 0	20 0 0	0 0 0	0 0 0	34 0 0	56 0 0	0 0 0
2 Organization	18 0 0	167 0 0	57 0 0	20 0 0	36 0 0	0 0 0	0 0 0	0 0 0	16 0 0
3 Planning	0 0 0	91 0 0	15 0 0	0 0 0	0 0 0	156 0 0	0 0 0	7 0 0	0 0 0
4 Technical aspects	5 0 0	70 0 0	225 0 0	145 0 0	44 0 0	0 0 0	65 0 0	32 0 0	0 0 0
5 Relations	0 0 0	0 0 0	43 0 0	14 0 0	0 0 0	67 0 0	0 0 0	79 0 0	22 0 0
6 Cultural change	34 0 0	21 0 0	0 0 0	0 0 0	65 0 0	228 0 0	45 0 0	280 0 0	0 0 0
7 Networking	0 0 0	0 0 0	17 0 0	0 0 0	0 0 0	0 0 0	76 0 0	0 0 0	0 0 0

Fig. 8

The image above is just an example of the Grid showing the sum of 30 hypothetical Baseline Actions. You can intuitively spot cells where the values are high and cells where nothing is happening. This is a picture of your community and you’ll learn how to read it with a little practice²², it can tell you much more than it seems at first sight.

The tutor will be trained to analyze the grid and the results coming out of it, for the moment let’s just notice 3 small things to begin with to understand the mechanism. In the grid above we can observe:

	Observations	Meanings/Considerations	To do
1	There are orange cells at zero or very low (U1 ; F3 ; E1 ; G3)	None of our most important actions acts on those leverage	Understand why. Plan to produce impact there (check the MiTS Database).
2	Considerations on pink/red cells: A1 is quite high but B3 is	There is a strong “drive” in the political area, but not much resulting planning going on.	Investigate on why (lack of communication, lack of resources, internal conflicts,

²² We are also planning software and infographics aids based on typical patterns that we can easily recognize and explain. More patterns will emerge with the use of the system within the pioneers and the CoP.

	rather low.	This could strongly prevent concrete effects on the field.	etc.).
3	G6 is high A6 is low.	Is there a strong cultural innovation process going on in civil society which is not reflected in political representation? This can lead to conflict and many other problems.	Carefully verify the situation. Plan/act to restore balance if possible (check the Database).

Fig. 9

The aggregated data will offer you also a few other indicators (see an example below):

1. Cell scores shows the scores broken down by cell type, the original values in orange and red cells are shown multiplied respectively by 2 and 3;
2. Grid total score shows the total score of the grid;
3. The Average Action Efficacy (AAE) shows the percentage of effectiveness of the actions compared to the maximum obtainable score²³.

For all these values a simple statement can be enough for now: the higher the better.

	Baseline			Potential			Evaluation		
Cells scores	6208	2780	1506	0	0	0	0	0	0
Grid total score	10494			0			0		
AAE %	56			0			0		

Fig. 10

So far we are still working on our Baseline, potential and evaluation data are not part of the game yet. These data will take on a much more interesting meaning when we start planning and evaluating the results of our work.

The baseline in practice: baseline qualitative evaluation adding ECs

²³ To calculate this data we are considering the maximum possible score for the grid as 630, as if each cell had the same value, instead of 810 which is the maximum achievable value considering the multiplier effect of orange and red cells (AAE formula is: "Grid_Total_Score: x = 630:100"). This means that the work on the leverage Cells gives a bust in the percentage value we present. If every cell of the grid was set at 10 you would get a 129% indication.

We can see now how to evaluate our action in a more qualitative way. This can be done using the 5 Evaluation Cycles that we saw before. The process is quite simple, make yourself the questions and try to give the best answer available.

Once again, we are not going for “precision” or scientific absoluteness here, we want a general picture good enough to inform the following phases. In the platform you can add your answers to each single action and then view the aggregate result as a percentage of the maximum possible score²⁴ in the table below:

Evaluation Cycles %	HHH			WHO			FLUX			D. ADAPT VALUE			D. ADAPT RES.		
	B	P	E	B	P	E	B	P	E	B	P	E	B	P	E
	456	0	0	345	0	0	120	0	0	50	0	0	45	0	0

Fig. 11

As before: the higher the better.

Let’s start planning

So now we have our baseline and we can move to the next, more exciting phase of planning, designing and moving to action. We do this in two ways:

1. Supporting existing actions
2. Creating new actions

Supporting existing Actions

Practically speaking, having a sort of full picture in front of you will allow you to play with your community system of actions. This is the right time to work on the potential of the actions we put in our grid. This phase could develop quite smoothly and efficiently if the baseline is completed beforehand²⁵.

Review all actions and try to imagine where you could improve the impact or if you could produce impact in cells that are currently not interested by the action.

²⁴ The maximum possible score here is 30 for the single Action and 900 for the set of 30 Actions.

²⁵ Check [Annex 2](#) about the different ways of work planning.

SINGLE ACTION GRID:

		Actors Categories							
Actions Categories	U Upper Institutional Levels	A Municipality Political	B Municipality Organization	C Controlled Entities	D Suppliers	E Organizations	F Businesses	G Public	H Networks
	b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e
1 Vision	0 0 0	2 5 0	0 0 0	0 0 0	-2 0 0	0 0 0	0 0 0	7 7 0	0 0 0
2 Organization	0 0 0	7 7 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
3 Planning	0 0 0	4 7 0	5 5 0	0 0 0	0 0 0	7 7 0	0 0 0	7 7 0	0 0 0
4 Technical aspects	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	7 3 0	0 0 0	0 0 0
5 Relations	0 0 0	0 0 0	8 8 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
6 Cultural change	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	7 7 0	8 7 0	0 5 0	0 0 0
7 Networking	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0

Fig. 12

Using the hypothetical action that we have already seen before, the work on the potential may show different situations:

1. Cells where we don't see a way to improve the action because the evaluation is already quite high, like A2, B5, E3, E6, G1, G3. Here we will indicate the same value as the one we used on the Baseline evaluation;
2. Cells where we can see space for improvement like A1, A3, D1, G6;
3. Cells where we imagine a reduction of the impact like F4.

We will do the same with the Evaluation Cycles of the action.

Please consider that very often, the improvement can be obtained by connecting the action with a different one already present in our list or planning a new one. For example, the "Collective food garden" action can be linked to the "Rainwater collection DIY course" making both more effective. You can set connections between actions using a specific linking tool in the platform.

After adding the potential to all the actions we will also have a new picture in the aggregated view, a perfect situation to start the Planning Cycle²⁶:

1. **Spot where “energy” is already operating** - If a successful action²⁷ is spotted in the baseline then there must be a lot of energy there, so you can ask yourself and the actors involved in that particular action a few questions:
 - a. Is there an easy way to support or increase the available “energy” there²⁸?
 - b. Are there other actors that should be involved to support the action?
 - c. Could this action fulfill other functions (produce effects on other/more cells)?
 - d. Is the action already supporting a flux?
 - e. Can we make this action important for Deep Adaptation?
 - f. Can we easily connect this action to other actions in our baseline?
2. **Write a simple plan to do what is needed** to improve the situation if you find good and easy answers to those questions. If not, go to point 3 of this cycle.
3. **Move to another successful action.**

The meaning of this planning cycle is to facilitate you in putting resources (time, people, energy, money) **where there are the best conditions for positive use and results**. When you have good results, then the subsequent planning becomes easier (more energy in place, more will, more commitment, etc).

Create a new Action

In addition to planning on existing actions, you can start planning completely new actions. There are many ways to use your baseline for this, let's see some ideas:

1. You may spot empty cells where nothing is happening (maybe orange or red cells which are clearly important) and you can decide to do something to fill the void.
2. You may spot cells with a lot of activities, which for some reason do not score high after analysing them through the ECs. So you know that there is potential energy there (probably people ready to act, maybe other resources) and you could plan a completely new action to “move” the situation.
3. You may already have projects going on (Covenant of Mayors, EU projects, national projects, etc.) and you can inform the planning of those using information and insights emerging from MiTS.
4. And so on...

To plan a new action you can first check what the MiTS Database offers to help your work on the cells of your interest. You can search the database in different ways, indicating the cell of your

²⁶ This way to plan is strongly inspired and evolved by the insights of David Holmgren's permaculture framework - Permaculture: Principles & Pathways Beyond Sustainability - D. Holmgren's - Holmgren Design Services 2002 - ISBN-13: 978-0646418445

²⁷ High Grid score with many cells involved. High Evaluation Cycles score. High potential.

²⁸ More support, equipment, logistics, specialized people, dissemination, communication, etc.

interest, the actors, topics, etc. What you get is a set of suggested Actions/Tools and all the connections to other related Actions/Tools that might be useful in your situation.

The Tools in the database are designed with the transition principles and the ECs (Evaluation Cycles) in mind. This should lead to common synergic actions (when possible), effectiveness and a good balance between efficiency and resilience.

But the MiTS Database is just at the beginning, so you might not find yet what you are looking for. If you then design an action from scratch that action might later contribute to enrich the database.

Evaluate

Each action implemented should be evaluated in its specific impact in terms of technological, social or institutional change and community resilience (e.g. climate adaptation, equity, cross-community links, etc.), using appropriate indicators. Different evaluation Tools will be available in the **MITS Database**.

A list of useful indicators can either be included in the actions description during the creation of the baseline or be added in a second moment. But for each action you should indicate an evaluation deadline. This may vary substantially depending on the Action. The following table shows some examples:

Action type	Evaluation Deadline
Awareness Rising Show on Climate Change: one night show for children and families.	Immediate Evaluation. Poll and interview immediately after the event.
Green Electricity Switch Contract Campaign	Evaluation after 6 month of activity
Air Quality Monitoring	Periodic Evaluation each year

Table. 6

To run the evaluation we will use the third column in our Grid, like in the example below:

SINGLE ACTION GRID:

		Actors Categories							
Actions Categories	U Upper Institutional Levels	A Municipality Political	B Municipality Organization	C Controlled Entities	D Suppliers	E Organizations	F Businesses	G Public	H Networks
	b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e
1 Vision	0 0 0	2 5 4	0 0 0	0 0 0	-2 0 1	0 0 0	0 0 0	7 7 7	0 0 5
2 Organization	0 0 0	7 7 6	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
3 Planning	0 0 0	4 7 7	5 5 7	0 0 0	0 0 0	7 7 6	0 0 0	7 7 7	0 0 0
4 Technical aspects	0 0 0	0 0 0	0 0 0	0 0 8	0 0 0	0 0 0	7 3 1	0 0 0	0 0 0
5 Relations	0 0 0	0 0 0	8 8 8	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
6 Cultural change	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	7 7 4	8 7 7	0 5 4	0 0 0
7 Networking	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0

Fig. 13

And we can notice that:

1. In A1, A2, E3, E6, F4, G6 the effect is less than the potential we expected;
2. In A3, B5, F6, G1, G3 the effect is aligned with expectations;
3. In B3 and D1 the effect is even more than we expected, notice how in D1 we moved from a negative impact to a slightly positive one (well done);
4. In C4 and H1 we have completely unexpected positive effects.

Suggestion: stating clearly since from an early phase the expected goal of the action, the driver and the tension²⁹ (in the way the S3 suggests), can prove very useful to your evaluation.

Closing circle to a new baseline

The action evaluation closes a circle and the evaluation will become the new *Action Baseline* from which a new circle can start and so on. We could also call this: *Baseline Loop*.

In the next picture you can see the flow of the MiTS activity. There is a starting up phase which then becomes a circular activity that, in theory, could run forever.

²⁹ Here you can find the S3 patterns: "[driver mapping](#)" pattern and "[navigate via tension](#)" pattern

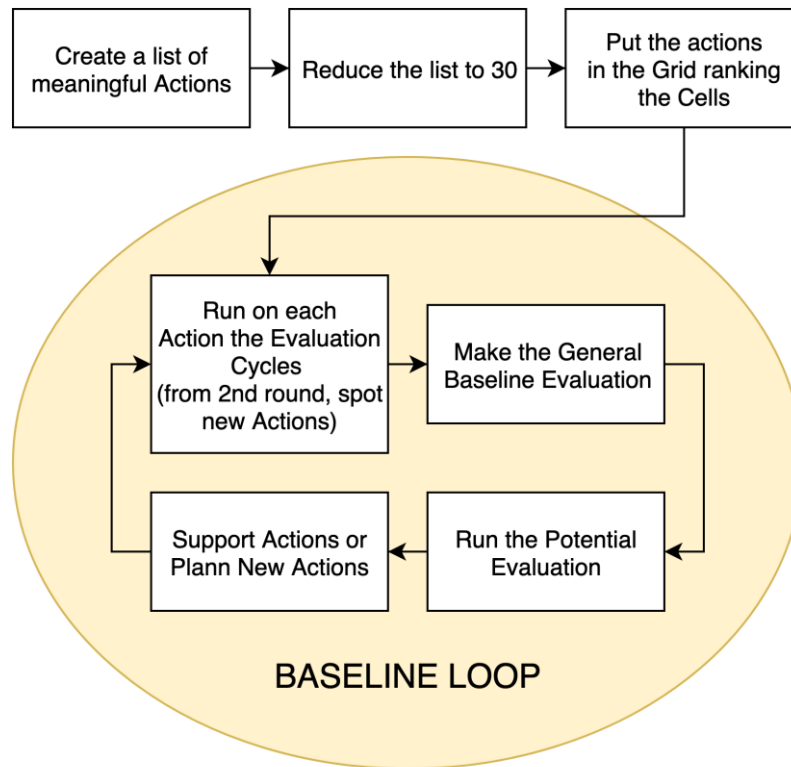


Fig. 14

But MiTS is not forever

Before explaining how to manage the circularity of MiTS it's very important to say that the System is not designed to run forever. The real purpose of MiTS is to become useless³⁰.

The idea is that the more the community uses it the more the local awareness and culture around sustainability should evolve. Attitudes that within the MiTS are now fostered by the use of the Grid, the ECs, the Database etc. should become habits, the normal way to go, a shared culture.

MiTS is not designed to close the community in a cage of rules, but to build familiarity and safety around a new set of principles and methodologies, having the time to fully appreciate all the advantages of a new way.

Ideally, each community that adopts MiTS will get to the point of not needing it anymore, the timing can be very different, but the potential is the typical one of an exponential spread.

The Baseline Loop

The idea is that a community should keep MiTS going as long as it considers it useful. We can imagine different ways to manage the loop of actions but for the pioneer phase we suggest to proceed as follows.

³⁰ There is a strong analogy here with what Harrison Owen says about [Open Space Technology](#), a methodology that is quite familiar and used within the Transition Movement and many other "social innovation" experiments. You can find the entry in the database ([here](#)).

Closed Loop

A starting point with your first BaseLine Evaluation (when you fill the sub-columns in the *Baseline* and *Potential* spaces [b and p respectively] on your Grid) and then you close the cycle deciding a closing date after 1 year (or whatever you think is appropriate) to evaluate the new situation in the sub-columns reserved for *Evaluation* (sub-columns e).

After this, you start a new Loop from a completely empty grid and:

- You may decide to keep some of the actions and the values in the sub-column e of those actions will become the new sub-column b for the new cycle.
- Then you will select a number of new actions to complete the set.

With every new loop you'll be able to compare the general picture and, hopefully, to easily show the improvements also to those not directly involved in the use of the MiTS.

Enrich and populate the Database

Within the Transition movement we have quite a lot of tools that we can consider ready to be loaded into the MiTS Database. We are also collecting materials coming from many other networks and disciplines. It will take a little time and a dedicated team to do this job in a proper way, but we are confident that we can do this (at least in English) in time to provide a basic version of the database to the pioneers.

This will only be the starting point, since the plan is to see the collection of records grow over time with the help of the pilots and other practitioners.

5 - MiTS Adaptation

As we already mentioned we can imagine many ways to change the elements of the MiTS to serve different contexts. But now that you know a little more about it, you can easily understand how deeply a change in a portion of the structure can affect the others.

The most delicate aspect is the relationship between the Grid and the Database. As you know, the records in the database are connected to the cells; therefore, if you move the cells and/or the columns, the records in the database should be updated accordingly.

Therefore for this phase of testing of the MiTS through the Pioneers, we strongly suggest to use everything as it is.

Columns position change

One change we might consider feasible is about the column position. In other words, a change of the relational distance between Actors Categories. This can help the correct visualization of a different structure of your reality and you could do this without changing the identification letter assigned to the column (in this way the references in the database will stay the same).

Columns elimination

We can already imagine situations where column C (Controlled Entities) might not exist. In that case we can imagine a grid without that column without necessarily touching the database structure (the records of the database referring to that column will simply not be used).

ANNEX 1

Working with fluxes

We briefly saw fluxes in 2.4 and we try now to provide some indications about the possibilities we have to generate, interfere and take advantage of them.

Spreading memes

This is a very effective way to create the condition to generate or influence a flux and, very important, it is something we can constantly do while we implement every action.

First of all, what's a meme³¹?

A meme is an idea, behavior, or style that spreads from person to person within a culture—often with the aim of conveying a particular phenomenon, theme, or meaning represented by the meme. A meme acts as a unit for carrying cultural ideas, symbols, or practices, that can be transmitted from one mind to another through writing, speech, gestures, rituals, or other imitable phenomena with a mimicked theme. Supporters of the concept regard memes as cultural analogues to genes in that they self-replicate, mutate, and respond to selective pressures.³²

As the historian Yuval Noah Harari poses it in its book Sapiens:

This approach is sometimes called memetics. It assumes that, just as organic evolution is based on the replication of organic information units called 'genes', so cultural evolution is based on the replication of cultural information units called 'memes'. Successful cultures are those that excel in reproducing their memes, irrespective of the costs and benefits to their human hosts.

There is a set of powerful memes that we can spread around to help our purpose and facilitate the creation of a useful flux that will help our community. Here is a short list of these memes, we could certainly identify many others, but we know those in the list as definitely effective and it is therefore reasonable to start from here:

Useful memes:

Meme		Extended concept
1	Producing energy costs energy.	ERoEI concept , energy return on energy invested. Investing more energy than the amount you can get in return is pointless.

³¹ Quick reference on Wikipedia: <https://en.wikipedia.org/wiki/Meme>

³² The meme in popular culture generally is mostly identified with the "Internet meme", which is a concept that spreads rapidly from person to person via the Internet, largely through Internet-based E-mailing, blogs, forums, imageboards like 4chan, social networking sites like Facebook, Instagram, or Twitter, instant messaging, social news sites or thread sites like Reddit, and video hosting services like YouTube and Twitch.

2	Zero impact does not exist.	Every action, every technology has an impact on the local and global system. Zero waste, zero emission and so on are slogans not connected to reality.
3	Free energy does not exist.	Strictly connected to EROEI . Laws of thermodynamics are quite clear here. Harvesting and or producing energy implies use of energy and resources.
4	Free meals do not exist in nature.	Same concept as above. Having different ways to express the meme lets you adapt to the context.
5	The more we become efficient in using resources (or energy) the more resources we use.	Jevons paradox (or rebound effect). Occurs when technological progress or government policy increases the efficiency with which a resource is used (reducing the amount necessary for each single use), but the rate of consumption of that resource rises due to increasing demand.
6	A huge amount of energy is contained in every object of common use.	Embodied energy . We don't use energy only when we switch the light on or we fill the car tank. Every single object embeds in itself all the energy that was used to produce it from the very first step of the production chain.
7	We can no longer burn anything.	Global warming is now so advanced that we should avoid burning anything. We know we must subtract CO ₂ from the atmosphere in all possible ways just to hope to stay under 1.5° C. Burning shouldn't be an option anymore.
8	Climate Emergency.	After decades of inaction on Global Warming, we are now in the Climate Emergency and we need radical decisions to cope with the present situation.
9	We have other ways to practice democracy.	The representative democracy that we know and use in a large part of the developed world is not the only way to go nor the most adequate to solve the big problems we have to face ³³ .
10	We must stop producing waste	This is connected to many of the concepts above, we can't afford to waste energy (6), raw material and the cost of recycling chains (2;3), etc. through the production of all kinds of waste.

³³ This will be explored and practiced within the governance model of MiTS. There are many situations when we can easily decide to replace representative democracy with other methodologies (for example with Deliberative Democracy) and others where we can simply help representative democracy with support methodologies.

The way we spread the memes is extremely important. We must be careful to fulfill the following conditions:

1. These are mostly scientific concepts. They don't belong to a party, a particular political area, a group, a brand, a flag or whatever. Ideally we want them to appear in messages coming from every possible direction. Therefore every time we spot the possibility to introduce one or more of these memes in messages going around our community, no matter what the origin or signature of the message is, we should do it.
2. We don't need to connect the meme with its possible solution, this is not what we are trying to do. Creating the flux is not proposing solutions, it is about creating the space where problems can be analyzed to eventually find solutions.
3. Remember that every action in your baseline is potentially a very good vector for many of these memes. Be focused and include the memes when possible. You have a push for that in the Flux Evaluation Cycle.

Examples 1

We can imagine a municipality producing the instruction guide for the separate waste collection in its territory. Here is a way to introduce a meme in the title:

Title of the guide	Title + memes #10
Recycling the right way to protect your future	Until we manage to <u>stop producing waste</u> recycle to protect your future

As you can see, the original title (on the left column) pushes “recycling” as “the solution” and we know very well that this is not the case³⁴. Recycling is, at best, a good way to keep waste dispersion in the environment under control, but it is energetically and economically very expensive: fundamentally unsustainable except in limited cases.

The real solution is *avoiding the production of waste*. However, it takes time to evolve our production and distribution system to obtain that. Therefore, in the meantime recycling is a transition solution. We can then use a different title for our guide introducing this concept and facilitating the flux toward the real solution.

Examples 2

An environmental association is helping the local government to promote the substitution of old wood stoves, very polluting, with more efficient home heating systems.

Message	Message + memes 2#, #5, #7, #8
Your old stove is no longer legal due to its impact on the environment and health. Take advantage of the economic incentives reserved for those who replace their old stove	Your old stove is no longer legal due to its impact on the environment and health. Because of the global <u>Climatic Emergency</u> and local pollution, we also know that we

³⁴ In case you are not familiar with this concept here is a very quick summary article about plastic on the [Guardian](#), but the same is true for many other materials.

with a modern, efficient and non-polluting system.	<u>should avoid any form of combustion</u> from now on. Take advantage of the economic incentives reserved for those who replace their old stove with a modern, efficient and <u>low-polluting</u> system and <u>try to reduce your need for heat by insulating the rooms.</u>
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Wave riding

Another way to spread the fluxes is the so-called *wave riding*. In our society and media we can clearly observe waves of topics emerging in particular moments and shining under a bright light for weeks or months or even years. We can also call it trends or fashion of the moment or hot news, etc.

You can combine these waves with spreading memes. You just need to spot the wave and add your message taking advantage of the communicative energy the waves bring.

Example 3

At the moment we can observe a big attention devoted to the “plastic problem”. Many may think that this is simply one of the numerous problems we have, but now the focus is there. Therefore, instead of trying to move the focus to something else, take advantage of it and shoot your memes just in front of the crest of the wave.

For instance plan a “plastic free” campaign or activity but use it to spread the memes #2, 6# and #10 stating in you messages concepts like:

We want to make the plastic disappear and with it all the disposable

Every object you use only once represents a waste of energy,
raw materials and produces direct and indirect pollution.

In this way you connect to the “plastic wave”, while at the same time you are introducing something wider, spreading memes to support your Flux.

ANNEX 2

Baseline creation

This is the initial main real task of the Local Implementation Team but for many reasons the group can try to escape this stage with the urgency of DOING PRACTICAL STUFF quickly to feel good, prove they are useful, show how good they are to the external observers, etc. It might prove to be difficult to manage this urgency, therefore, we can consider three ways to go:

1. Basic Baseline
2. Complex Baseline
3. Deferred Baseline

Basic Baseline

Consists in choosing and analysing a set of 30 Actions that are already in place in the community (observed actions). It gives you a picture of what was happening before the introduction of MiT. After this, the LIT will perform the potential speculations, plan and/or support new Actions, etc. This, in theory, should be the cleaner way to go, but it might prove too slow for the LIT or not interesting enough (too mechanical to keep the commitment at a high level). It has the advantage to be very similar to other well known processes like, for instance, the Covenant of Mayors, making it somehow “familiar” to municipalities’ people.

If you decide with the LIT to stick to this kind of planning, we warn you to resist the temptation to think about future or potential actions while performing the Baseline analysis. In case you need to experiment with something different to keep the LIT energy high, we suggest you to look at the other two Baseline planning cycles.

Complex Baseline

In adopting this strategy, we can let the LIT mix existing Actions with those under design. This is messier and creates several complexities in the reading of the Baseline initial picture and in the future evaluation (you are basically mixing an evaluation and a potential - not good under the research point of view), but can be a way to go to keep the LIT energetic and really involved (I think we must be activists first and researchers later). There are risks connected:

1. Lower systemic vision effect (risk of mixing reality with speculation);
2. Lower impact of the before/after comparison on the Grid Calculator;
3. New actions not designed under the MiT methodology (the tutor must be careful);
4. Never get to a real baseline to start from and compare to later on.

All this is manageable but requires a higher commitment and attention from the tutor.

Deferred Baseline

Using this approach the baseline is created adding new and observed actions on-the-go one at a time for a period of time. This way is emerging from the work of the first pioneer (Valsamoggia, Italy) where we can see a quite coordinated flow of activity in real time management of emergent opportunities and reactions to problems. This way is not particularly desirable in a project with a limited time to observe the process (like this one) but probably more realistic for a real life everyday use of the MiT. Proceeding this way you will observe a full picture only after a few months, six or so, and from there you will start to improve or support the actions. There are advantage though:

1. It seems a more progressive way to go and learn for the LIT. You probably have people already very busy and this way creates space and time for them to be present with quality time.
2. It fits very well with the use of th S3 because it's easier to involve the right people in each analysis and decision process due the greater availability of time to do so.
3. It feels less an "experiment" and more an operational tool.

You may consider to go this way if you have a very organic LIT deeply influencing the municipality activity and the actions within the community.

END OF DOCUMENT

ANNEX E – THE *DIVE DEEP* FINAL SURVEY

Dive Deep and Dream Big feedback from you

Feel free to write as much or as little as you want. All your comments are welcome - please feed Pedro's research report and support our learning!

What went well for you?

A sua resposta

What surprised you?

A sua resposta

What stretched/challenged you?

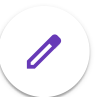
A sua resposta

Please summarise your experience in five words:

A sua resposta

Please tell us about any intentions you are taking away from the event

A sua resposta



Please rate and comment on the following aspects, from 1 = unsatisfactory to 5= excellent

	1	2	3	4	5
The venue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The meals and refreshments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Programme	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitated sessions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Open space sessions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Food journey evening	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Networking & engagement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your own energy and involvement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Would you provide us with constructive comments and tips on any of the items above?

A sua resposta



Knowledge, information, contacts & insights gained:

	Definitely	Mostly	Somehow	Not really
met your expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
was a changing experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
will be useful in your life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please comment how:

A sua resposta

Who was missing?

A sua resposta

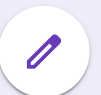
Thank you!

Submeter

Nunca envie palavras-passe através dos Google Forms.

Este formulário foi criado dentro de Transition Network. [Denunciar abuso](#)

Google Formulários



ANNEX F – MUNICÍPIOS EM TRANSIÇÃO - O SISTEMA

Municípios em Transição - O Sistema -

Versão 1.5



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“O Desenvolvimento Sustentável tem mais a ver com a organização dos processos do que com resultados particulares. É sobre o modo de tratar problemas ou o tipo de estratégias que são aplicadas na busca de soluções e de caminhos mais robustos de desenvolvimento social e tecnológico.”

Voß & Kemp, 2006

(tradução livre)

1. O que é o Sistema dos Municípios em Transição?

O Sistema dos Municípios em Transição¹ (MiTS) oferece a uma comunidade uma forma de se reorganizar no sentido da sustentabilidade e bem-estar, respondendo aos grandes desafios² deste período histórico, adotando o pensamento sistêmico³ e um conjunto específico de metodologias, ferramentas e princípios.

1.1 - Para quem é o sistema do MiT?

O MiTS está desenhado para promover o processo de colaborações transformativas numa comunidade. Uma implementação ideal teria todos os atores-chave da comunidade cientes da existência e disponibilidade do sistema e capazes de beneficiar do seu uso, direta ou indiretamente.

Durante a criação do MiTS, consideramos três cenários principais de ponto de partida:

1. Processo gerado e liderado pelo município
2. Processo gerado e liderado pela sociedade civil
3. Processo gerado e liderado por ambos em conjunto

A nossa intenção é fornecer um sistema aplicável a todas as situações anteriores.

¹ Na versão beta designá-mo-lo por “framework” e que se mantém um termo preciso mas que se mostrou ser difícil de compreender e traduzir. Assim, optamos por utilizar o termo “sistema”.

² Mudanças Climáticas ([IPCC - AR5](#) and [IPCC - AR6 Synthesis](#)), escassez de recursos, perda de biodiversidade, poluição, aumento das desigualdades... ([Limites Planetários](#))

³ Para obter informações básicas sobre o pensamento sistêmico, consulte os vídeos em inglês do [Curso de Pensamento Sistêmico](#) do *Complexity Labs*, ou consulte o artigo em inglês [Thinking in Systems: a Primer](#) de Donella Meadows.

1.2 - Características do sistema

Estas são algumas das características que consideramos fundamentais para um sistema deste tipo:

1. Tem um propósito (vê também 2.1 e 2.2)
2. Está intimamente ligado aos Princípios da Transição (vê 2.1)
3. Implementável tanto em abordagens de cima para baixo como de baixo para cima
4. Eficaz o suficiente para lidar com níveis altos de complexidade e incerteza
5. Simples o suficiente para ser relativamente fácil de aprender e ser usado na vida real
6. Tem um nível baixo de pré-condições para a implementação (poucos recursos, pouca tecnologia)
7. Facilmente adaptável a uma ampla variedade de contextos e culturas muito diferentes
8. Projetado para evoluir de forma interativa através do seu uso
9. Promove um modelo de governança partilhada/difusa
10. Capaz de melhorar a qualidade da cooperação entre os atores envolvidos
11. É preparatório para uma estratégia de *'adaptação profunda'*⁴ de uma comunidade
12. Funciona

2. Algumas premissas fundamentais

Estamos perfeitamente cientes de que ler este documento e começar a usar o MiTS vai produzir dois efeitos aparentemente contraditórios:

1. Sentir que o que está descrito é algo que já sabe muito bem e se faz normalmente
2. Sentir que o que está descrito não tem foco, é vago e difícil de entender.

Muitas vezes os dois sentimentos emergem do mesmo ponto. Considere este um efeito normal na primeira fase, por favor não se preocupe e aceite-o tal como é. Isto é típico quando se começa a transitar para o pensamento sistêmico, em que todas as mudanças na cultura do trabalho parecem, acima de tudo, estranhas. Tudo se tornará mais claro quando transitar para as fases mais práticas do MiTS e os efeitos na vida real começaram a ser observados.

O sistema foi desenhado e moldado de acordo com os seguintes princípios, que abordamos aqui sumariamente.

⁴ Conceito inspirado na publicação homónima de Jem Bendell, mencionada aqui como referência para apoiar uma comunidade a desenvolver elementos de resiliência num cenário de colapso. (<http://www.lifeworth.com/deepadaptation.pdf>).

2.1 Sobre os princípios da Transição

Os princípios Cabeça-Coração-Mãos (CCM)⁵ no cerne do Movimento Transição provaram ser eficazes e disruptivos em várias situações e contextos sócio-económicos diferentes. Foram uma inspiração central no desenvolvimento do MiTS:

Cabeça: age com base na melhor informação e evidência disponíveis e aplica a inteligência coletiva na procura de melhores formas de viver, mantendo uma visão sistémica forte.

Coração: trabalha com compaixão, valorizando e prestando atenção aos aspectos emocionais, psicológicos, relacionais e sociais do trabalho em andamento.

Mãos: transforma as nossas visões e ideias numa realidade tangível, iniciando projetos práticos e começando a construir uma economia nova e saudável no lugar em que vivemos.

Para uma melhor compreensão das afirmações acima, pode ser útil ampliar a maneira como definimos e expressamos as mesmas ideias através de um conjunto de metas:

Respeitar os limites dos recursos e criar resiliência — A necessidade urgente de reduzir as emissões de gases do efeito estufa, reduzir significativamente a nossa dependência de combustíveis fósseis e fazer um uso sensato de recursos preciosos está na vanguarda de tudo o que fazemos. O nosso objetivo é construir comunidades resilientes que se possam adaptar a choques socioecológicos externos, como alterações climáticas ou instabilidade económica.

Promover a inclusão e a justiça social — As pessoas mais desfavorecidas e impotentes da nossa sociedade são, provavelmente, as mais afetadas pelo aumento dos preços dos combustíveis e dos alimentos, pela escassez de recursos e pelos eventos climáticos extremos. Precisamos de aumentar as hipóteses de todos os grupos da sociedade viverem bem, de forma saudável e com meios de subsistência sustentáveis.

Adotar a subsidiariedade (auto-organização e tomada de decisões no nível apropriado) — A intenção do modelo de Transição não é centralizar ou controlar a tomada de decisões, mas sim trabalhar com todos para que ela seja praticada no nível mais apropriado, prático e capacitador.

⁵ <https://transitionnetwork.org/about-the-movement/what-is-transition/principles-2/> ; pode também consultar o registo da *Database* em [HHH](#).

Prestar atenção ao equilíbrio — Ao responder a desafios globais urgentes, pessoas e organizações podem acabar sentindo-se stressadas, fechadas ou coagidas, em vez de abertas, conectadas e criativas. Criamos espaço para reflexão, celebração e descanso com o intuito de compensar os momentos em que estamos ocupados a fazer acontecer. Exploramos formas diferentes de trabalho que envolvem as nossas cabeças, mãos e corações e que nos permitem desenvolver relacionamentos colaborativos e confiáveis.

Fazer parte de uma rede experimental de aprendizagem — A Transição é uma experiência social global em tempo real e da vida real. Fazer parte de uma rede significa que podemos criar mudanças de forma mais rápida e eficaz, aproveitando as experiências e os conhecimentos uns dos outros. Queremos reconhecer e aprender com o fracasso, assim como com o sucesso - se vamos ser ousados e encontrar novos modos de vida e de trabalho, nem sempre conseguiremos acertar na primeira tentativa. Seremos transparentes acerca dos nossos processos e procuraremos ativamente receber *feedback* e responder positivamente a ele.

Partilhar livremente ideias e poder — A Transição é um movimento da sociedade civil, onde as ideias podem ser adotadas de forma rápida, ampla e efetiva, porque cada comunidade toma posse do processo. A Transição vai parecer diferente em diferentes lugares e queremos encorajar, em vez de coagir, essa diversidade.

Colaborar e procurar sinergias — A abordagem da Transição é trabalhar em conjunto enquanto comunidade, soltando o nosso génio coletivo para termos um impacto maior enquanto grupo do que enquanto indivíduos. Procuraremos oportunidades para construir parcerias criativas e poderosas pelo movimento de Transição e além dele e desenvolver uma cultura colaborativa, encontrar elos entre projetos, criar processos abertos de tomada de decisão e elaborar eventos e atividades que ajudem as pessoas a fazer conexões.

Fomentar uma visão e criatividade positivas — O nosso principal foco não é ser “do contra”, mas desenvolver e promover possibilidades positivas. Acreditamos no uso de formas criativas para engajar e envolver as pessoas, incentivando-as a imaginar o futuro que querem habitar. Gerar novas histórias é fundamental para esse trabalho de visão, como também é a diversão e celebrar o sucesso.

2.2 - O Propósito do MiTS

A lista de metas acima é, provavelmente, a melhor maneira de explicar o que o uso do MiTS procura produzir numa comunidade que a adota: o que poderíamos chamar o Propósito final do MiTS.

“Criar mudanças profundas culturais e práticas no sentido da sustentabilidade e do bem-estar através da implementação dos princípios da Transição”

2.3 - Princípios de resiliência

Outro conceito central para os processos e as ideias da Transição é a resiliência; e muitas das indicações, metodologias e ferramentas que estamos a propor foram projetadas para contribuir para a resiliência em diversos níveis⁶.

2.4 - Teoria dos Fluxos

Tanto quanto sabemos, esta teoria ainda não está definida ao nível académico⁷. Ela deriva principalmente do trabalho empírico, no terreno, com municípios e comunidades, bem como de teorias de marketing, e foi parcialmente inspirada pelo trabalho do economista [David Lane](#)⁸ sobre complexidade e interações sociais.

O facto é que muitas vezes tentamos produzir mudanças e novos capitais culturais criando "grupos". Uma das típicas definições da sociologia clássica é a seguinte:

Um grupo em sociologia exhibe coesão num grau maior. Aspectos que os membros do grupo podem partilhar incluem: interesses, valores, origens étnicas/linguísticas, funções e afinidades. Uma maneira de determinar se um agrupamento de pessoas pode ser considerado um grupo é se os indivíduos que pertencem a esse ajuntamento usam o pronome autorreferente "nós". Usar "nós" para se referir a um ajuntamento de pessoas muitas vezes implica que ajuntamento se considera um grupo.

⁶ Uma referência útil é o livro (apenas em inglês) Principles for Building Resilience — Sustaining Ecosystem Services in Social-Ecological Systems - Biggs, R. M. Schlüter - ISBN: 9781107082656 - [Link](#)

⁷ Uma exploração adicional deste assunto é certamente necessária, particularmente no campo das [teorias sobre inovação social](#).

⁸ David A. Lane - Complexity and Innovation Dynamics; Envisioning a Socially Sustainable Future.

No entanto, quando nos organizamos em grupos, definimos automaticamente algumas condições inerentes a grupos que permitem certas dinâmicas e proíbem outras.

Algumas das condições que vemos em grupos e consideramos particularmente interessantes para o propósito do nosso projeto são as seguintes:

GRUPOS	
Análise comum	Um grupo normalmente precisa de ter uma análise comum/semelhante da realidade.
Visão e objetivos comuns	Um grupo normalmente precisa ter uma visão geral e objetivos comuns/semelhantes.
Somos semelhantes, somos NÓS	Um grupo normalmente desenvolve uma identidade e fronteiras/limites. Num grupo, definimos quem está dentro e quem está fora.
Relações diretas	Um grupo opera em relação direta dentro do seu quadro de membros (de modo presencial ou virtual).
Unidade de tempo e espaço	Um grupo normalmente age dentro de um espaço e tempo definidos, precisa de alguma sincronidade na forma como opera.
Projetos comuns	Um grupo normalmente desenvolve projetos comuns.

Tabela 1.

Observando estas características, é fácil entender que os grupos não são particularmente adequados para apoiar uma mudança **transversal** como a que precisamos a fim de produzir sustentabilidade para as sociedades humanas. Por esta razão, desenvolvemos o conceito de **fluxos**: estruturas sociais com a característica de mover e influenciar porções mais amplas da sociedade de forma transversal.

Para entender melhor este conceito, podemos pensar no que o sistema de marketing faz para promover, por exemplo, uma tecnologia como os "smartphones". O sistema envia um sinal a todas as pessoas para convencê-las de que um smartphone é algo que elas precisam/querem. Esse sinal funciona como um fluxo atingindo em simultâneo diferentes públicos-alvo em diferentes níveis (o gestor de topo e o desempregado, o jovem e o idoso). No entanto, o produto final (o smartphone) será vendido com foco em "grupos" (clientes-alvo): smartphones para pessoas ricas, para geeks, modelos muito baratos ("até você pode ter um") e assim por diante. A questão é que, para se vender este produto a *todas as pessoas*, precisa-se primeiro de um "fluxo" que informe, conecte e promova quantos mais grupos possível e ao mesmo tempo.

Por analogia, para produzir mudanças sistêmicas, uma ampla evolução social, é preciso, provavelmente, gerar, promover, apoiar e cuidar dos fluxos certos ou acabar-se-á por envolver apenas certos nichos do sistema (o risco que se corre é *pregar apenas aos convertidos*).

Se compararmos as características dos fluxos com as dos grupos, podemos reparar em algumas diferenças interessantes:

GRUPOS	FLUXOS ⁹
Análise e necessidade comuns	Análise e necessidade comuns
Visão e objetivos comuns	Não é necessário ter visão e objetivos comuns
Somos semelhantes, somos NÓS	Não é necessário sermos NÓS
Relações diretas	Não é necessário ter relações diretas
Unidade de tempo e espaço	Não é necessário ter unidade de tempo e espaço
Projetos comuns	Não é necessário ter projetos comuns

Tabela 2

Com fluxos, podemos fazer coisas que não podem ser feitas com grupos, como fazer com que partes contrárias produzam efeitos positivos numa comunidade sem lutarem entre si, ou sem precisarem de estar conectadas. Isto pode verificar-se ser bastante transformador para todos os que estão ativos nos processos de inovação social.

Tudo isto para dizer que o *design* do MiTS tenta incorporar o uso e o cuidado dos fluxos no seu modelo (em adição e como complemento ao cuidado dos grupos). Mais sobre este tópico no Anexo 1 deste mesmo documento. Pode ainda consultar o capítulo do registo da Database.

2.4 - Design Estocástico

Outro conceito básico que guiou a criação do MiTS tem haver com a necessidade de enfrentar uma escassez extrema e complexa de recursos para todos aqueles que estão a tentar promover mudanças sistêmicas na nossa sociedade.

Um dos propósitos do MiTS é apoiar cada ator no “desenho e planeamento” observando as oportunidades que surgem à sua volta, detectando, cuidadosamente, quando e onde a “energia” está disponível. Energia e oportunidades podem manifestar-se de várias formas, tais como, a disponibilidade de recursos económicos e humanos, a presença de um espaço físico, equipamento, habilidades, a disponibilidade de soluções para problemas específicos, etc.

⁹Pode ser necessário, no futuro, chegar a uma definição diferente e mais completa das características dos fluxos.

Planear e implementar ações para promover a sustentabilidade e a mudança sistémica pode ser muito difícil e ineficaz. O mundo à nossa volta está em constante mudança e uma forma tradicional e linear de desenhar e planear mostra-se muitas vezes ineficaz. Em certas ocasiões poderemos querer desenhar uma ação específica, não tendo reunidas todas as condições necessárias à sua concretização. Isto pode levar a cansaço extremo, fazendo com que nós (ea comunidade) consuma muito tempo e recursos, levando, eventualmente, a uma desproporção entre o esforço feito e os resultados obtidos, em muitos casos não atingindo o objetivo esperado.

Agir principalmente sobre “oportunidades” e disponibilidade de “energia” (i.e. onde as condições necessárias estão presentes) torna tudo mais fácil e aumenta o número de ações que podem ser desempenhadas com impactos mais elevados na realidade.

Chamamos a esta atitude “*design* estocástico” para reforçar o conceito de ter uma atenção constante na evolução aleatória do ambiente, reconhecendo e aceitando as variáveis e desenhando com essa atitude mas sem perder o âmbito do nosso trabalho.

O risco que há em seguir oportunidades, por exemplo, dinheiro disponível através de uma campanha de incentivo do governo, é o de acabar por fazer o que a campanha nos está a pedir mesmo que não o precisemos, ou que não esteja alinhado com o nosso âmbito, fazemos apenas pela disponibilidade de fundos. Isto pode ser tão ineficaz e sorvedor de tempo como perseguir objetivos inalcançáveis. Pode também consultar a [Database](#) neste tópico.

Já agora, não há necessidade dos utilizadores aprenderem muito mais sobre isto, o conceito está embebido em todo o sistema. Todos os procedimentos sugeridos estão orientados para esta atitude.

Vamos continuar para a descrição do MiTS.

Os gerentes não são confrontados com problemas independentes entre si, mas com situações dinâmicas compostas por sistemas complexos de problemas em mudança que interagem entre si. Eu chamo a essas situações de confusões. Os problemas são extraídos de confusões pela análise. Os gerentes não resolvem problemas, eles gerem confusões.

Russell L. Ackoff

(teórico organizacional, tradução livre)

3. Estrutura básica do MiTS

Começamos agora a delinear os principais elementos deste sistema:

- | | |
|--------------------------------------|--|
| ● As Funções | <i>O que é que me permite fazer?</i> |
| ● O Modelo de Governança | <i>Como tomamos decisões?</i> |
| ● A Grid | <i>Onde vamos jogar?</i> |
| ● A Pattern Language Database | <i>Onde estão as ferramentas certas?</i> |
| ● A Comunidade de Prática | <i>Quem me apoia?</i> |

Aviso!

Todos os elementos que se seguem foram desenhados para serem eventualmente, adaptados a cada contexto local. Todavia, sugerimos que não faça adaptações numa fase inicial do uso do sistema (a não ser que a necessidade seja absolutamente clara e com a concordância do seu tutor). Veja mais no capítulo 5 deste documento (Adaptação do MiTS).

3.1 - As Funções

O MiTS está desenhado para realizar um conjunto de funções que consideramos extremamente importantes para todas as comunidades que estão a tentar evoluir e mudar.

Estas são:

1. **A Função de Avaliação e Diagnóstico** — Uma forma fácil da comunidade avaliar as suas iniciativas, de um modo grosseiro mas suficientemente sensato para o propósito presente, e para criar uma referência de *Baseline* a partir do qual iniciam o seu trajeto a caminho do propósito do MiTS. Também irá permitir à comunidade monitorizar os

progressos e mudanças ao longo do tempo. Ao mesmo tempo, o MiTS ajuda a detetar energia, recursos e pontos fracos dos sistemas e ações da comunidade, fornecendo uma ferramenta de diagnóstico para informar outras atividades.

2. **A Função de Co-design** — Uma forma melhor de conectar diferentes participantes e permitir que eles desenvolvam em conjunto planos e ações. A forma como o MiTS funciona tende a derrubar muros e classes, tornando mais evidente e aconselhável o poder das conexões, da cooperação e da partilha.
3. **A Função de Co-implementação** — Esta é uma consequência da função anterior. Num mundo que enfrenta vários níveis de escassez, a necessidade de fazer muito com pouco pode ser uma habilidade chave a atingir. Implementando ações em conjunto, teremos mais probabilidade de ter a capacidade de apoiar mudanças culturais e comportamentais e de atingir impactos mais proporcionais às crises ecológicas e sociais que enfrentamos. Somando a energia de diferentes atores produzimos subsidiariedade e utilizamos a complementaridade ao máximo.
4. **A Função de Caixa de Ferramentas** — O MiTS tenta disponibilizar facilmente na sua *Pattern Language Database* uma variedade de ferramentas e conceitos de todo o mundo que são particularmente adequadas para o tipo de processo que estamos a tentar promover. Esta função sugere, ainda, como conectar e usá-las da forma mais eficaz, destacando pontos fortes, riscos e fraquezas para cada uma delas.
5. **A Função da Influência Cultural** — Utilizar o MiTS vai ajudar todos a gravitar em direção ao pensamento sistémico e aos padrões-chave rumo à sustentabilidade. Isto acontecerá para os que estiverem cientes e em contato direto com o MiTS mas também para aqueles que utilizarem as ferramentas ou que fazem parte de processos desenhados dentro da lógica do MiTS. Os princípios básicos serão replicados de uma forma fractal em todos os elementos do sistema.
6. **A Função Inovadora da Governança** — O MiTS introduz um modelo de governança inovador e disruptivo a ser utilizado entre as equipas iniciais e de implementação gestoras do sistema e para lá deste. Esta função é transversal a todas as outras.

3.2 - O modelo de governança

Qualquer que seja o processo ou projeto que queira implementar numa comunidade, irá provavelmente enfrentar todas as dinâmicas que caracterizam os nossos sistemas culturais: conflito, competição, desconfiança, incompreensão, etc. Assim é a realidade a maioria das vezes: confusa e difícil.

Como estamos a tentar instituir uma dinâmica diferente dentro da comunidade, equipamos o MiTS com um modelo especial de governança designado por Sociocracia 3.0¹⁰, para estabelecer o seguinte:

1. Orientação forte para a inclusão e o reforço do pensamento coletivo;
2. Orientação forte para a cooperação e subsidiariedade;
3. Altos níveis de transparência, eficiência e responsabilização;
4. Flexibilidade grande e adaptabilidade a um leque amplo de situações;
5. Capacidade de quebrar a maioria das dinâmicas negativas dos grupos (baseado no consentimento);
6. Ligação simples aos princípios do MiTS (Transição);
7. Encaixável com outras metodologias tradicionais (requeridas por lei ou processos institucionais);
8. Uma metodologia de código aberto.

A S3 desenvolve-se a partir de uma combinação inteligente entre a Sociocracia clássica (uma metodologia democrática), a metodologia Agile¹¹ (um conjunto de valores e princípios criados para desenvolver melhor *software*) e a metodologia Lean¹² (uma ferramenta de gestão que procura criar mais valor com menos recursos). A S3 encaixa perfeitamente no MiTS porque a maioria dos objetivos, princípios e problemas a serem resolvidos são os mesmos. É uma peça decisiva do sistema.

Para se criar um Pioneiro do MiTS numa comunidade, o requisito mínimo é a constituição de uma Equipa Local Inicial (ELI) formada por representantes do município e pelo menos duas organizações da sociedade civil. Esta irá evoluir, posteriormente, para um Grupo Local de Implementação (GLI) alargado.

O uso da metodologia S3 é um requisito para a gestão destes grupos sendo considerada uma peça indispensável do MiTS.

¹⁰ You can find all the information about this methodology originally developed in 2014 by James Priest and Bernhard Bockelbrink on <https://sociocracy30.org/>

¹¹ [Agile manifesto](#)

¹² [Lean Enterprise Institute](#)

3.3 - A Grid

Tal como já referimos, os municípios, ativistas e todos os atores de uma comunidade, têm de enfrentar a complexidade do seu sistema local no dia-a-dia. Tal como num jogo de tabuleiro, o primeiro elemento do MiTS está desenhado para fornecer uma visão mais clara e sistémica do “campo de jogo”.

A *Grid* desempenha três funções específicas:

- Define **atores** e **categorias de ações**
- Mostra a **proximidade relacional** entre os atores
- Atua como um organizador de **ações e ferramentas**

Abaixo está a estrutura básica da *Grid*.

Categorias das ações	Categorias dos Atores								
	U Níveis Institucionais Supra-locais	A Município - Político	B Município - Organização	C Entidades controladas	D Fornecedore s	E Organizações	F Empresas	G Público	H Atores externos
1 Visão									
2 Organização									
3 Planeamento									
4 Aspetos Técnicos									
5 Relação									
6 Mudança cultural									
7 Redes									

Fig. 1

As categorias dos Atores

A linha horizontal superior mostra as principais **categorias de atores** organizadas em nove colunas. A maneira como estão ordenadas sugere a distância relacional entre elas.

Esta indicação de distância não deve ser considerada de modo rígido: a realidade pode-nos mostrar uma grande variedade de situações. Encorajamos o uso da distribuição de colunas apresentada, com a possibilidade de algumas modificações ligeiras, após discutidas com o

Tutor. Podem ver uma cor diferente para a primeira e última coluna que indica que esses atores estão fora do domínio da comunidade e/ou espaço.

Veja abaixo a lista das categorias de atores básica:

Categorias dos Atores								
U Níveis Institucionais Supra-locais	A Município - Político	B Município - Organização	C Entidades controladas	D Fornecedores	E Organizações	F Empresas	G Público	H Atores externos

Fig. 2

Por exemplo, considerando a distância relacional entre categorias como a distância entre colunas, o nível **Político** do município pode interagir mais facilmente com o nível de **Organização** do município do que com os **Fornecedores**. Isto permite, rapidamente, estimar aproximadamente a quantidade de esforço (energia, recursos) que um agente precisa para alcançar e interagir com outro (particularmente quando o objetivo é dar apoio, sugerir mudanças, etc).

A lista abaixo ajuda a identificar os **atores** e foca qualidades particulares que apresentam:

- U. **NÍVEIS INSTITUCIONAIS SUPRA-LOCAIS:** Governo regional/nacional/internacional, autoridades, etc.
Estão fora do domínio da comunidade e não estão diretamente influenciados por esta mas podem ter efeitos nela através das suas ações e políticas, receberem feedback, ser inspirados, envolvidos ou indiretamente influenciados por ações/decisões da comunidade, etc.
- A. **MUNICÍPIO:** Nível político
Pessoas eleitas (preocupam-se com votos e eleitores). Têm que lidar com oponentes políticos e competidores, geralmente ficam no poder apenas alguns anos, têm frequentemente, ou são forçados a, uma atitude de "pensamento de curto prazo". São quase voluntários em municípios pequenos e bem pagos e poderosos em muitas cidades grandes.
- B. **MUNICÍPIO:** Nível organizacional
Empregados (funcionários públicos) ou profissionais independentes permanecem, geralmente, por um longo período de tempo; têm muitas vezes um profundo entendimento da "máquina municipal"; são a "porta para a ação" prática. Podem facilmente ficar sobrecarregados pela carga de trabalho e sofrer escassez de recursos.

- C. **ENTIDADES CONTROLADAS:** estruturas controladas, consórcios, empresas diretamente controladas pelo município.
Entidades que estão fortemente ligadas ao município (serviços públicos de água, gestão de resíduos, manutenção, serviços sociais); podem ser controladas de uma forma muito direta, têm que agir como o município quer.
- D. **FORNECEDORES:** fornecedores públicos e privados
Entidades conectadas através de contratos estáveis ou ocasionais. Estes são fornecedores do município ou de outro agente da comunidade.
- E. **ORGANIZAÇÕES:** sem fins lucrativos, associações, escolas, hospitais, universidade, sindicatos, partidos, etc.
Entidades sem fins lucrativos organizadas que estão presentes no território, por ex. ativistas organizados.
- F. **EMPRESAS:**
Empresas, cooperativas, trabalhadores independentes, escolas privadas e universidades, organizações orientadas para o negócio.
- G. **PÚBLICO:** famílias, cidadãos, indivíduos, pessoas
Encarados como uma unidade singular (um cidadão, uma família) ou então como grupos não organizados (todas as pessoas que vivem naquela rua, naquela área).
- H. **ATORES EXTERNOS:** outros municípios, consórcios de municípios, outros atores (distantes em termos de distância relacional), etc.
Entidades que podem ou não estar presentes no território mas que sabemos ser importante de serem consideradas para atingir um certo objetivo. Redes nacionais ou internacionais or ONGs, organizações fora do domínio da comunidade que não se situam num patamar superior institucional (por ex.: a cruz vermelha).

Pode parecer difícil classificar os atores mas não perca muito tempo a encontrar a “coluna perfeita”. Coloque-a na posição mais plausível e seja consistente caso apareçam situações semelhantes.

Considere ainda que uma entidade em particular pode desempenhar diferentes papéis. Uma empresa pode surgir na coluna F (Empresas) quando está a operacionalizar livremente ou na coluna D (Fornecedores) quando está ligada a um contrato com outro agente da comunidade. NoMiTS interessam-nos bastante as interações. Por exemplo, se um governo local quer provocar mudança na forma de uma empresa trabalhar, estabelecer um contrato com essa empresa torna tudo mais fácil do que se só tivessem um acordo moral sem outro tipo de ligação.

As categorias de ações

A primeira coluna à esquerda indica as categorias de ações em que queremos focar no nosso “campo de jogo”. Voltamos a reforçar de que estas não são para serem levadas com rigidez e reconhecemos que possa haver sobreposição.

Foco/Impacto das ações
1. Visão
2. Organização
3. Planeamento
4. Aspetos Técnicos
5. Relações
6. Mudança cultural
7. Redes

Fig. 3

1. **VISÃO:** onde queremos ir, o que vemos para o futuro.
Ações e processos que tendem a criar/fazer evoluir a visão.
2. **ORGANIZAÇÃO:** pessoas, papéis, estruturas, governança, procedimentos, etc.
ações e processos que tendem a criar ou a modificar aspetos sobre como os atores se organizam/governam a eles próprios ou com outros.
3. **PLANEAMENTO:** planos setoriais, integração de políticas, orçamentos, etc.
Ações e processos que tendem a criar um plano de ação, procedimentos passo a passo.
4. **ASPETOS TÉCNICOS:** monitorização, dados, tecnicidades, leis e regulamentos, etc.
ações e processos que modificam o estado do sistema através da tecnologia e aspetos técnicos em geral (incluindo tecnologias sociais).
5. **RELAÇÕES:** entre atores, aspetos sociais, cuidadores, etc. Ações ou processos que procuram criar, modificar ou melhorar relações entre atores (frase-chave: a forma como falamos uns com os outros).
6. **MUDANÇA CULTURAL:** comunicação, formação, envolvimento, empoderamento, etc.

ações e processos que tendem a criar, modificar ou melhorar o conhecimento e o entendimento sobre o “mundo”

7. **REDES:** criação de rede, diversidade, troca de informação, comparação, etc. ações e processos que tendem a criar, modificar ou melhorar conexões entre atores (frase-chave: a forma como partilhamos e trabalhamos em conjunto).

As células

Os atores e as ações intersectam-se em células que iremos utilizar como “gavetas” quando estivermos a desenvolver as funções do nosso sistema. Podemos imaginar a *Grid* como um armário muito bem organizado onde guardamos tudo o que precisamos para a nossa atividade de “transição” com a comunidade, em que as células são as nossas gavetas. Cada célula pode ser identificada pela letra da sua coluna e o número da sua linha; isto será muito útil na ligação das células aos registos da *Pattern Language Database* do MiTS, tal como iremos ver no próximo capítulo.

As células são principalmente utilizadas para armazenar um conjunto de 3 valores em cada uma:

1. Impacto/presença observada¹³ **(o)**
2. Impacto/presença potencial ou esperada **(p)**
3. Impacto/presença avaliada **(a)**

A cada uma atribuímos um valor entre -10 e 10 onde os valores positivos indicam um impacto/presença positivo (portanto suporta os objetivos da ação e propósito do MiT) e os valores negativos indicam um impacto/presença negativa (portanto impedimentos, problemas, etc.).

¹³ O que é que quer dizer “impacto/presença”? Procuramos observar e relatar quem na *Grid* está a executar as ações, quem está envolvido, afetado, quão importante é o impacto positivo (ou negativo) que a ação está a criar. O GLI irá desenvolver, rapidamente, uma cultura interna sobre como interpretar a realidade da comunidade, transformando-a em valores consistente na *Grid*.

Adicionando estes elementos, a *Grid* terá este aspeto:

		Categorias dos atores							
Categorias de ações	U Níveis Institucionais Supra-locais	A Município - Político	B Município - Organização	C Entidades controladas	D Fornecedore s	E Organizações	F Empresas	G Público	H Atores externos
	o p a	o p a	o p a	o p a	o p a	o p a	o p a	o p a	o p a
1. Visão	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
2. Organização	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
3. Planeamento	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
4. Aspetos Técnicos	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
5. Relações	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
6. Mudança cultural	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
7. Redes	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0

Fig. 4

Resta apenas um último elemento a ser adicionado à *Grid*. Sabemos, no entanto, que há células mais importantes que outras. No *pensamento sistémico* estas são designadas por “pontos de alavancagem” e sabemos que quando uma iniciativa tem efeito positivo nos pontos de alavancagem, o seu poder e a probabilidade de impulsionar a comunidade no sentido do propósito do MiTS é maior.

As células mais importantes estão coloridas a vermelho, depois seguem-se as laranjas, seguidas pelas brancas (ou cinzentas se fora do domínio da comunidade). Veremos mais tarde neste documento como isto será relevante. Aqui está a estrutura final da nossa *Grid* completa:

		Categorias dos atores							
Categorias de ações	U Níveis Institucionais Supra-locais	A Município - Político	B Município - Organização	C Entidades controladas	D Fornecedore s	E Organizações	F Empresas	G Público	H Atores externos
	o p a	o p a	o p a	o p a	o p a	o p a	o p a	o p a	o p a
1. Visão	o o o	o o o	o o o	o o o	o o o	o o o	o o o	o o o	o o o
2. Organização	o o o	o o o	o o o	o o o	o o o	o o o	o o o	o o o	o o o
3. Planeamento	o o o	o o o	o o o	o o o	o o o	o o o	o o o	o o o	o o o
4. Aspetos Técnicos	o o o	o o o	o o o	o o o	o o o	o o o	o o o	o o o	o o o
5. Relações	o o o	o o o	o o o	o o o	o o o	o o o	o o o	o o o	o o o
6. Mudança cultural	o o o	o o o	o o o	o o o	o o o	o o o	o o o	o o o	o o o
7. Redes	o o o	o o o	o o o	o o o	o o o	o o o	o o o	o o o	o o o

Fig. 5

Neste momento pode parecer assustadora e complexa, mas a sua utilização será bastante mais fácil do que pode imaginar. Para prová-lo, as primeiras 6 comunidades que utilizaram o MiTS começaram com uma versão da *Grid* muito mais simples e, apesar disso, também lhes pareceu assustadora. No entanto em pouco tempo começaram a pedir para adicionar os novos elementos que agora aqui vêm, para tornar a *Grid* mais útil e robusta.

3.4 - O Espaço Cynefin

Cynefin (pronuncia-se *quenévin*) é uma palavra gálica que significa *habitat, paradeiro, familiar*) é um sistema conceitual criada em 1999 pelo consultor de gestão Dave Snowden enquanto trabalhava para a IBM *Global Services*. Esta identifica 5 espaços onde podemos colocar aquilo que observamos à nossa volta. A cada um destes espaços corresponde uma sequência de ações específicas que deverá aumentar as probabilidades de sucesso.

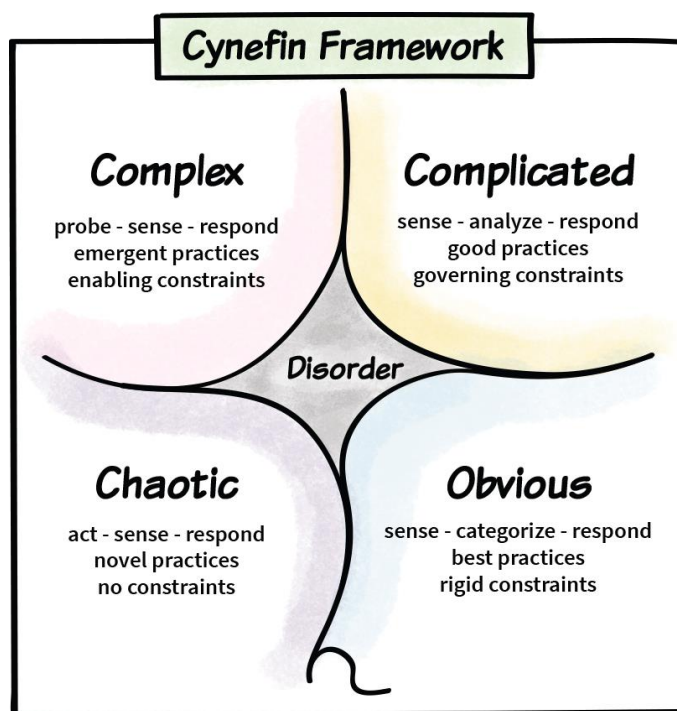


Fig. 6

No contexto do MiTS sugerimos a utilização do Cynefin como um método rápido e auxiliar na análise e planeamento das nossas ações. Uma breve explicação sobre a utilização desta ferramenta será abordada durante a formação do Grupo Local de Implementação. Cada ação será definida pela sua localização correta no espaço Cynefin o que contribuirá para obter um conjunto de indicações primárias para a sua gestão (avaliação, desenvolvimento, melhoramento, modificação, etc.).

3.5 - Os Ciclos de Avaliação

Os Ciclos de Avaliação (CAs) são particularmente úteis durante a avaliação ou o desenho de uma iniciativa. Apresentam-se aqui uma série básica de CAs que consideramos serem fundamentais para guiarem a vossa atividade em simultâneo com a *Grid*. No entanto, poderão decidir desenvolver os ciclos que acharem necessários.

Cada ciclo de avaliação é baseado num conjunto de três perguntas simples e cada uma delas é pontuada num intervalo de 0 a 10, em que 0 equivale a um "não 'redondo'" ou "desacordo" e 10 equivale a um "sim" ou "de acordo".

O Ciclo Cabeça, Coração e Mãos

O primeiro ciclo fornece uma forma de verificar se a iniciativa a ser planeada, ou em análise, preenche a lógica Cabeça, Coração e Mãos (CCM). Este é o ciclo mais importante e não pode ser ignorado por nenhuma razão.

Pode ser realizado de uma forma muito expedita respondendo às 3 questões seguintes :

1. Esta iniciativa é baseada na melhor informação disponível? (passo da Cabeça)
2. Considera e cuida das consequências emocionais/relacionais que provoca em todos os envolvidos? (passo Coração)
3. Produz efeitos práticos? (passo mãos)

Ou pode ser utilizado em diferentes níveis de complexidade para afinar a sua eficácia. Aqui fica uma abordagem mais completa:

1. Esta iniciativa é baseada na melhor informação disponível? (passo da Cabeça)
 - a. Classificam a informação como sólida e verdadeira¹⁴?
 - b. Classificam a informação como boa mas que levanta algumas dúvidas?
 - c. Classificam a informação como incerta?

1. Considera e cuida das consequências emocionais/relacionais que provoca em todos os envolvidos? (passo Coração)
 - a. Está a produzir medo ou conflito?
 - b. Está a realçar a positividade, felicidade, alegria, ...?
 - c. Permite “espaço” e “tempo” para cuidar das emoções?
 - d. Os participantes estão a sentir-se conectados à iniciativa¹⁵?

2. Produz efeitos práticos? (passo Mãos)
 - a. Pode esta iniciativa produzir mudanças úteis¹⁶?
 - b. Pode ser uma mudança duradoura?
 - c. Está a promover outras mudanças úteis?
 - d. Conseguem identificar mudanças úteis no dia-a-dia das pessoas?

O Ciclo QQQ

O ciclo QQQ deve seguir sempre o ciclo CCM como um lembrete prudente do poder da conexão e inclusão. Baseia-se nas 3 seguintes questões simples:

1. Quem faz parte? (Os atores fundamentais/naturais das ações estão presentes?)

¹⁴ Informações ou dados oficiais não são sempre sólidas e verdadeiras e, portanto, não são suficientes para um “sim”. Isto pode ser sensível mas ligarmo-nos à realidade é uma tarefa paradoxalmente difícil na era da informação. Temos que surfar num mar de notícias falsas, relatórios sob encomenda, publicações de pares de baixa qualidade, informação pseudo-científica politicamente orientada, “greenwashing”, etc. A disponibilidade e a qualidade da informação pode ainda ser muito influenciada pelo país em que estão a operar, a cultura, a língua, etc.

¹⁵ No ambiente de trabalho do MiTS, empoderamento ou participação não devem ser considerados aspetos positivos sem antes analisar o contexto e o propósito da iniciativa. Por vezes serão positivos, outras vezes não. O nosso objetivo é facilitar a definição do sítio certo de cada ator no desenvolvimento da iniciativa.

¹⁶ Mudança (ou inovação) só pela mudança não é o tipo de resultado esperado no MiTS. Procuram-se mudanças no sentido de alcançar o propósito do MiTS.

- a. Idealmente deveriam estar envolvidos na governança da ação e terem direitos de objeção dentro da S3).
 - b. O resultado mínimo desta questão deve ser sempre 100.
2. Quem falta? (Existem outros atores naturais/bem conectados que não estão presentes?).
 3. Quem mais deveria estar presente? (Existem outros atores que poderiam contribuir para a melhoria desta iniciativa?).

Sabemos que este ciclo pode ser confuso. Fica aqui um exemplo prático que vos pode ajudar a compreender melhor as três questões:

Exemplo QQQ

Um município tem algum dinheiro disponível para oferecer aos estudantes de uma escola local um laboratório em Gestão Sustentável de Resíduos Domésticos. Uma associação local tem formadores que já estão a fazer este tipo de atividades em escolas.

Quem faz parte?

Os atores fundamentais aqui são: o município (por exemplo o técnico responsável pelo projeto), a escola (os professores diretamente envolvidos, o diretor, a direção educativa, os estudantes), a associação (os formadores).

Quem falta?

Outros atores naturais são: as famílias dos estudantes, os restantes professores da escola (aqueles não diretamente envolvidos na atividade do laboratório), a empresa ou o serviço que gere os resíduos municipais que poderia apoiar e fornecer informações. Todos estes atores não são essenciais mas muito próximos e interessantes de envolver.

Quem mais deveria estar presente?

Outros participantes potenciais: uma escola semelhante no município vizinho (podem estar interessados em seguir este exemplo), as lojas que vendem ferramentas para o laboratório (poderão oferecer o equipamento), etc. Todos estes atores não são essenciais e não são fáceis de envolver mas serão uma forma de amplificar o efeito da ação.

O Ciclo do Fluxo

Este ciclo ajuda-o a perceber se a iniciativa, para além de cumprir os seus objetivos específicos, está também a produzir ou tem o potencial de produzir um fluxo benéfico na comunidade. Isto pode ser feito colocando este conjunto de questões:

1. Esta iniciativa está a semear *memes* da transição¹⁷?
2. Está a conectar, a apoiar ou a complementar outras ações?
3. Pode ser suportada por um conjunto de diferentes setores da comunidade?

Vê o anexo *Trabalhar com Fluxos* para uma melhor compreensão deste ciclo.

O Ciclo de Valor *Deep Adaptation*

Este ciclo é utilizado para estimar, grosseiramente, o valor da iniciativa para a resiliência da comunidade. Aqui está um conjunto de questões a serem colocadas:

1. Quanto impacto tem esta iniciativa nos serviços básicos da comunidade (alimentação, energia, abrigo, relações/democracia)?
2. Quão vital é para os serviços que impacta?
3. Que prioridade deve dar a comunidade na proteção desta ação no advento de um evento disruptivo?

O Ciclo da Resiliência

Este ciclo é utilizado para avaliar a resiliência da iniciativa.

1. Esta iniciativa tem na comunidade elementos de redundância que asseguram a continuação da sua função?
2. A que nível é esta iniciativa dotada de recursos dentro da comunidade?
3. Quão facilmente pode a governança desta iniciativa ser transferida para outro sistema de governança em caso de um evento disruptivo?

No futuro ou a cada momento, podem ser adicionados mais ciclos de avaliação dependendo das condições locais e se necessário.

¹⁷ Um meme é uma ideia, um comportamento, ou um estilo que se propaga de pessoa para pessoa dentro de uma cultura - usualmente com a finalidade de transmitir um fenómeno particular, tema, ou significado representado pelo meme. Um meme funciona como uma unidade que transporta ideias culturais, símbolos, ou práticas, que podem ser transmitidas de uma mente para a outra através da escrita, discurso, rituais, ou outros fenómenos imitáveis com um tema reproduzível. Apoiantes do conceito consideram os memes analogias culturais aos genes na medida em que estes se auto-replicam, mutam e respondem a pressões seletivas. Por exemplo: "Na Natureza só os mais fortes sobrevivem" é um meme muito simples no qual se pode construir um sistema humano cultural inteiro ou então "Uma rede mosqueira pode salvar vidas" é um meme muito simples que salvou milhões de vidas à volta do mundo enquanto que "Fumar é *cool*" matou milhões. Enquanto referencia "O Gene Egoísta" de Richard Dawkins (4ª edição Oxford Landmark Science 2017) e Susan Blackmore "The Meme Machine" (Oxford University Press, 1999). Ainda Yuval Noah Harari "Sapiens" (Random House).

"A forma de construir um sistema complexo que funciona é construí-lo a partir de sistemas muito simples que funcionam."

Kevin Kelly

(fundador da revista *Wired*, tradução livre)

3.6 - A *Pattern Language Database*

O segundo elemento do MiTS é uma base de dados onde colhemos todos os padrões de transição que já conhecemos e aqueles que iremos descobrir no futuro. A base de dados está acessível aos utilizadores do MiTS através da web e estará disponível, provavelmente, também em papel no futuro.

A palavra *padrões*¹⁸ é a mais apropriada para descrever o conteúdo da base de dados, mas também é abstracta e invulgar para a maioria. A partir de agora iremos utilizar ao invés as palavras *ações* e *ferramentas*, escolhendo uma ou outra dependendo do tipo de padrão ao qual nos estamos a referir.

O que são *ferramentas* na *Database*?

Podem ser formas simples de resolver ou lidar com um problema muito específico:

Problema: Onde é que eu posso obter informação segura sobre a nova tecnologia PV?

Ferramenta: Subscreve a newsletter XYW!

Ou questões mais complexas:

Problema: Como podemos fazer evoluir a visão dos técnicos municipais?

Ferramenta: Promover a consciência, um programa e metodologia de capacitação da equipa.

Ferramenta: Programa e metodologia da Ecologia profunda..

Ferramenta: Programa formativo do U-Lab.

Ferramenta: Visita guiada pelo Centro Nacional do Observatório Climático.

...

Ou até uma abordagem mais ampla:

¹⁸ Pattern: any form of correlation between the state of elements within a system. The way the elements correlate can be recognized and repeated. Normally we recognize a pattern as such because we've already seen that same kind of organization, correlation, sequence of events elsewhere.

Problema: Como envolver os cidadãos naquela área da cidade?

Ferramenta 1: Projetos da Transition Street (exemplos, metodologias, ...)

Ferramenta 2: Projetos do grupo REconomia (exemplos, metodologias, ...)

Ferramenta 3: Esquema CSA.

Ferramenta ...

Como organizamos as *ferramentas* na *Database*?

As principais características da base de dados do MiTS são:

1. Está organizada como uma base de dados de linguagem de padrões¹⁹
2. Portanto, os registos da base de dados estão ligados a outros registos relevantes da mesma base de dados, os quais podemos chamar de *padrões*, de acordo com a definição original da metodologia de linguagem de padrões
3. Os registos da base de dados estão conectados às células da *Grid* (uma ou mais)
4. A base de dados contém ferramentas específicas e transversais
5. As ferramentas da base de dados servem o propósito do MiTS
6. Cada registo está desenhado no sentido de resolver um problema específico

O conceito de *Linguagem de Padrões* foi criado para o planeamento urbano, mas, em geral, é uma maneira muito interessante de organizar informação quando se está a tentar manter e promover uma visão sistémica. O modo como funciona é bastante autoexplicativo; basicamente não há curva de aprendizagem para aqueles que precisam de usar a base de dados e, em teoria, não há limites para a capacidade de expansão do sistema.

A nossa linguagem de padrões é organizada à volta de uma lógica de processos²⁰. Vejamos como isso funciona.

Os registos da *Database* (padrões)

Aqui está a estrutura geral de cada item da base de dados do MiTS (mais ou menos o mesmo sugerido pela metodologia de linguagem de padrões original):

A estrutura do registo:

Posições na <i>Grid</i>	Título da ferramenta / Ação
<i>Tags</i>	Links para começar (do que precisamos para estar prontos para utilizar/perceber esta ferramenta/ação)

¹⁹ Consulte https://en.wikipedia.org/wiki/A_Pattern_Language

²⁰ No original, pode ver que a organização estava aproximadamente na escala da área que você queria planejar, de regiões a recintos individuais.

Categories	Descrição do problema (que estamos a tentar resolver)
Classificação de confiança	Sumário breve (para que serve esta ferramenta/ação?)
Idiomas	Análise do problema e descrição da ferramenta Análise e descrição da ferramenta Riscos e precauções Vantagens Casos de estudo Dicas para adaptação
	Solução (como esta ferramenta/ação resolve o problema)
	Links para continuar (outros padrões para consultar nesta base de dados que complementam esta ferramenta/ação ou para seguir após a presente ferramenta/ação)

Tabela. 3

Veremos agora um exemplo com alguns dados inseridos (utilizamos *links* falsos para dar uma ideia geral de como o item pode parecer). Consulte o documento Estrutura da *Grid* quando precisar:

ID: 00345	Grupo de exterminadores de correntes de ar da vizinhança
Posições na Grid G.4	Links para começar Consulte antes " Técnicas de isolamento baratas " e " Como se ligar ao seu município para a realização de ações comuns ". Consulte também " Como gerir grupos eficazes de ações " e " Sugestões para a governança de grupos ".
Tags Eficiência energética, baixa renda, casas, voluntários, isolamento	
Categorias G. Público	Descrição do problema Os edifícios perdem uma grande quantidade de energia devido ao mau isolamento e vazamentos de ar, mas, em muitos casos, renovações completas não são possíveis, especialmente para pessoas com rendimentos baixos. Isto significa que milhões de lares nunca verão as ações necessárias para reduzir suas necessidades de energia.
Classificação de confiança ***	
Idiomas: Inglês Espanhol	Breve resumo Os Grupos de exterminadores de correntes de ar são grupos de voluntários auto-organizados que ajudam as pessoas da vizinhança a melhorar o isolamento de suas casas com técnicas simples e acessíveis.
	Análise do problema As casas existentes representam em muitas comunidades uma das

	<p>principais causas do consumo de energia (cerca de 40% na Europa), sendo o aquecimento e o arrefecimento os aspectos mais impactantes para o uso da energia e emissões resultantes.</p> <p>Uma readaptação completa (<i>retrofit</i>) seria a melhor solução para levar essas casas ao melhor nível possível de eficiência, mas isso só é possível quando há muito poder financeiro envolvido.</p> <p>Para ajudar os proprietários dessas casas e inquilinos, que não têm a possibilidade de recorrer à readaptação completa, grupos locais de voluntários podem ser criados sob o nome de "Exterminadores de correntes de ar". Eles treinam-se para executar trabalhos de isolamento fáceis, ao estilo "faça você mesmo", e ajudam outras pessoas a identificar e eliminar correntes de ar, isolar sótãos, janelas, canalizações de água quente, etc.</p> <p>Os grupos estão organizados [...]</p> <p>Por vezes, criar um grupo de consumo para obter materiais a um preço mais barato e apoiar os fornecedores locais pode ser uma boa consequência dessa atividade.</p> <p>Riscos e Precauções</p> <p>Consulte os aspetos legais que envolvem fazer este trabalho no seu país. Há também riscos práticos (uso de ferramentas, danos a propriedades e pessoas etc) a serem analisados para considerar a cobertura de seguro adequada para o grupo [...]</p> <p>A identificação dos membros do grupo pode ser um problema. Uma boa coordenação com as autoridades locais e as forças de segurança pode ser muito importante para proteger os cidadãos de possíveis fraudes. [...]</p> <p>Vantagens</p> <p>Esta estratégia pode alcançar cidadãos, casa-a-casa, nos setores menos afluentes da população. Também pode ser uma boa ferramenta de conexão e uma maneira de promover a consciencialização sobre eficiência energética em geral.</p> <p>Caso de estudo</p> <p>De interesse particular é a experiência de Exterminadores de Correntes de Ar na cidade XXXXX. Pode ser sobre isso neste link.</p>
	<p>Solução</p> <p>Formar grupos de voluntários para ajudar as pessoas a realizar ações básicas de isolamento em suas casas.</p>

	<p>Links para continuar Consulte também "Planos completos de readaptação de eficiência energética" e "Estratégias ESCO" para uma abordagem diferente ao mesmo problema. Semelhante a isto, consulte também "Visão geral da câmara térmica dos exterminadores de correntes de ar" ou "Formação 'faça você mesmo' para exterminadores de correntes de ar".</p>

Tabela. 4

Como pode ver, o corpo principal do registo da base de dados contém as informações mais importantes sobre a ferramenta e há várias seções fixas que são as mesmas para cada item. Estas devem ser bastante autoexplicativas e, com o uso, esta maneira de organizar a informação torna-se rapidamente familiar.

Observação: A presença dos **Links para começar** e **Links para continuar** é uma característica muito particular. Esta é a maneira que uma estrutura de base de dados de linguagem de padrões, gentilmente (ou nem tanto assim), faz com que o utilizador mantenha uma visão sistémica dos problemas. A estrutura ensina, basicamente, esse tipo de atitude, tornando-se uma ferramenta educacional em si. Os *links* sugerem conexões, pré-requisitos, consequências, possíveis desenvolvimentos futuros, alternativas e assim por diante.

Na coluna da esquerda, coletamos uma série de outras informações muito úteis:

ID do item:

É o número de identificação do item.

Posição na Grid

Indica a melhor posição ou posições na *Grid* onde pode usar essa ferramenta. A primeira letra indica a coluna e o número da linha (como no jogo de batalha naval). Uma ferramenta pode ter uma posição muito específica ou mais de uma.

Como já foi mencionado, há também ferramentas que são completamente transversais, portanto, elas não têm uma indicação de posição na *Grid* e são coletadas numa categoria separada.

No exemplo acima, o item "Grupo de exterminadores de correntes de ar da vizinhança" seria melhor utilizado na célula G.4.

Tags e categorias

São indicações para tornar o registo pesquisável e fácil de aceder numa base de dados que se pode tornar potencialmente muito grande.

Classificação de confiança

A inovação social e o trabalho com mudança, sustentabilidade, etc., envolve tentativa e erro. Algumas das ferramentas são bem conhecidas, experimentadas e confiáveis, enquanto outras são novas e tentam resolver problemas que ninguém conseguiu resolver antes.

A "equipa editorial" da base de dados tentará classificar os registos atribuindo um valor indicativo de 0 a 5 estrelas seguindo estas regras gerais:

****** 4 ou ***** 5 estrelas = Confiança alta**

Conhecida há muito tempo e experimentada com sucesso. Estamos muito confiantes de que a ferramenta/ação poderá resolver o problema que apresenta.

**** 2 ou *** 3 estrelas = Confiança média**

Conhecida há muito tempo e experimentada, mas com resultados variados. Não tão antigo, bom até agora, seja prudente.

*** 1 estrela = Confiança Baixa**

Dados muito novos e promissores, mas não suficientes, seja muito prudente. Conhecido, com resultados alternados variados e muitas vezes falhas, problemas etc.

Idiomas

Indica a disponibilidade de traduções do registo noutros idiomas.

Podemos decidir no futuro adicionar a esta mesma área outras indicações que podem ser úteis para referências rápidas, por exemplo, algo sobre a facilidade de implementação.

Mostre-me um sistema complexo bem sucedido e eu vou mostrar-lhe um sistema que evoluiu através da tentativa e erro.

Tim Harford
(economista)

3.7 - A Comunidade de Prática (CoP)

Por isso temos um Conjunto de Princípios, uma *Grid* e uma *Pattern Language Database* - o que precisamos agora são os Utilizadores. O MiTS foi desenvolvido para oferecer aos administradores locais e grupos da sociedade civil a oportunidade de se conectarem e trabalharem juntos de uma maneira melhor.

Na nossa sociedade complexa e nos tempos atuais complexos, este é um objectivo que não consegue ser atingido através de palavras escritas em pedra, o MiTS e tudo à sua volta precisam de ser utilizados e desenvolvidos por uma Comunidade da Prática (CoP) viva.

O que podemos imaginar a partir de agora é ter uma CoP local nos municípios onde a estrutura será usada, conectada a uma rede mais ampla de utilizadores a nível nacional e internacional. Dentro do MiTS, estamos a conceber e a executar uma comunidade a um nível internacional²¹.

²¹ Um documento específico sobre as CoP estará disponível em breve.

Hoje a rede de relacionamentos que une a raça humana a si mesma e ao resto da biosfera é tão complexa, que todos os aspectos afetam todos os outros de forma extraordinária. Alguém deveria estar a estudar o sistema completo, por mais cruamente que isso tenha de ser feito, porque não será a soma de estudos parciais de um sistema complexo não linear que poderá transmitir uma boa ideia do comportamento do todo.

Murray Gell-Mann

(físico, Prémio Nobel, pai da teoria quark. Tradução livre.)

4 - Utilizando o MiTS para os pioneiros

Posso utilizá-las na minha comunidade?

Sugerimos que se torne uma comunidade pioneira acompanhada por um Tutor MiT, para a utilização bem sucedida do Sistema MiT.

Após uma fase de desenvolvimento e teste em seis projetos piloto por todo o mundo (2017-2018), esta é a primeira versão do Sistema MiT disponível ao público. Foi projetado para uma nova série de dois anos, chamada a "Fase dos Pioneiros", onde as comunidades que o estão a experimentar serão acompanhadas de perto por um tutor especializado no uso da totalidade do sistema, durante pelo menos um ano.

Ter um tutor ao seu lado é de importância crucial e precisamos de tempo para treinar uma equipa de pessoas encarregadas por este papel em diferentes países. O MiTS quer trazer as atividades da comunidade para um espaço diferente, onde a transformação real é possível. Por outro lado, o sistema atual está profundamente enraizado nas nossas culturas e previne uma evolução que tem em consideração uma vista sistémica. Seguir o processo MiTS pode resultar numa tarefa muito difícil sem a ajuda de um tutor, levando os profissionais a recorrer aos velhos padrões e modelos.

Obviamente, sendo agora um documento aberto com toda a informação básica e sugestões disponíveis, ninguém vai impedi-lo de tentar por conta própria (por sua conta e risco).

4.1 - Confie no nosso sistema

Enfrentar complexidade ao nível local e, ao mesmo tempo, prestar atenção ao cenário global será difícil e confuso, mesmo utilizando o MiTS, portanto, esteja preparado para isso. O que sugerimos é confiar no processo e ver o que acontece depois de algum tempo.

No início, pode parecer estranho e confuso, lidar com a complexidade à nossa volta é uma tarefa que pode causar muita ansiedade, principalmente se não resistir à tentação de tentar controlá-la.

A nossa sugestão é: vá com calma, siga as instruções e ouça o seu tutor, este sistema foi concebido para ser inerentemente seguro.

4.2 - Implementando o MiTS na sua comunidade enquanto um Pioneiro

Baseline

Como dissemos antes, o MiTS deve ser útil para processos conduzidos por organizações da sociedade civil, governos locais ou ambos agindo juntos, sendo o último a condição ideal.

Condições iniciais diferentes podem trazer necessidades e estratégias diferentes, mas nesta fase do MiTS estamos a seleccionar pioneiros onde possamos ter os dois desde o início.

Será pedido aos Pioneiros:

1. Assinar um acordo com a Rede de Transição acerca desta fase pioneira;
2. Criar uma Equipa Local Inicial (ELI), constituída por representantes dos municípios e pelo menos dois outros atores da sociedade civil (idealmente dois atores da coluna E);
3. Implementar o Sistema MiT (idealmente uma reunião de equipa de duas horas por semana, imaginando uma pessoa por cada organização envolvida);
4. Alocar um orçamento para apoiar a actividade ao nível local (essencialmente para cobrir a actividade do tutor).

Na figura seguinte, pode ver o fluxo MiTS para os pioneiros e, neste capítulo, pode ter uma vista geral rápida das actividades necessárias para implementar o MiTS na sua comunidade.

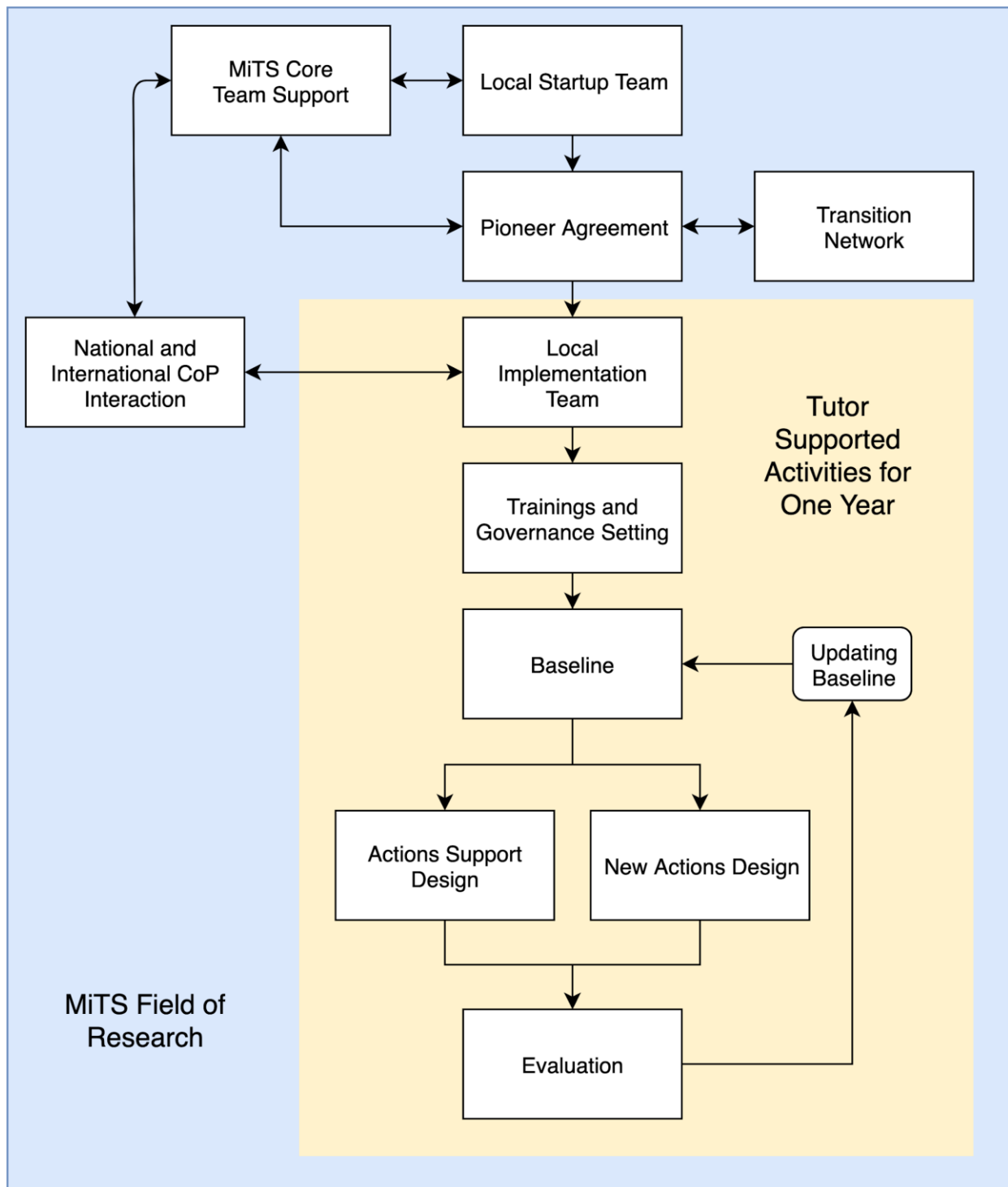


Fig. 7

As definições locais de formação e governança do MiTS

O Grupo Local de Implementação - GLI, irá receber formação para aprender mais sobre o MiTS, o seu uso e a gestão pioneira através da metodologia de governança S3. A próxima fase será activada quando o grupo possuir um domínio suficiente do modelo de governança.

Criando um *Baseline*

O primeiro passo no uso do MiTS é a criação de uma *Baseline* local (ou apenas uma base para abreviar), através da análise de 30 ações já em progresso e que imaginamos orientadas para servir o propósito do MiTS.

É uma forma de marcar uma *Baseline*, tirando uma fotografia à tecnologia avançada do município e à sua comunidade. Estamos a realizar uma primeira execução à **Função de Avaliação e Diagnóstico** do Sistema.

A ideia é utilizar a *Grid* do MiTS, para recolher todas as ações que possamos detectar a decorrer à nossa volta de forma organizada. Exemplos do que estamos à procura são: formação em gestão de resíduos sustentáveis, planos de mobilidade com emissões reduzidas, esquemas de produção de alimentos locais, campanhas de informação sobre energia eficiente, formação em adaptação às alterações climáticas, actividades de economia circular e compartilhadas, mobilidade de impacto reduzido, ações comunitárias, ações de inclusão social/ de minorias, etc.

Estamos a tentar ser fáceis, baratos e eficientes. Este sistema foi desenhado por profissionais que tentaram fazê-lo o mais utilizável possível e adaptável a condições de arranque muito diferentes. Assim, esta coleção de ações pode ser feita de forma muito ordenada e sistemática, ou através de um processo mais aleatório.

Os pioneiros vão utilizar uma plataforma de WordPress específica e personalizada, para recolher e processar todas as informações necessárias. A mesma plataforma pode fornecer sugestões iniciais sobre os dados coletados.

A *Baseline* na prática: recolher dados

O desenho preciso desta actividade será definido pelo Grupo Local de Implementação (GLI) e cuidadosamente assistido pelo tutor, para terminar com o conjunto de 30 ações que a comunidade consegue detectar. O âmbito da *Baseline* não é fornecer uma metodologia científica de medição precisa, mas uma maneira de ver com mais clareza o “panorama geral” da comunidade. Estas são as etapas que seguirá:

1. Definir, usando S3, a melhor forma de desenvolver esta actividade no seu contexto.
2. Começar a observar o que é óbvio, simples e fácil de detectar (a complexidade irá surgir) e criar uma lista de ações potenciais para fazerem parte desse *Baseline*, para depois escolher as 30 mais importantes.
3. Analisar e registar cada ação na plataforma de WordPress do MiTS. Durante a formação, iremos brincar muito com exemplos da vida real para tornar esta tarefa mais fácil.

No final, conseguirá avaliar cada uma das ações escolhidas e o grupo de todas as ações escolhidas como uma visão geral. Isto é o que chamamos de *Baseline*.

Existem outras formas de prosseguir que pode explorar no Anexo 2 - Criação da *Baseline*.

A *Baseline* na prática: avaliação quantitativa

Tendo agora uma *Baseline*, podemos começar a sua primeira avaliação quantitativa. Uma comunidade ideal, maravilhosamente comprometida a mudar em direção à sustentabilidade, deve produzir uma *Grid* com todas as células, vendo muitas ações ousadas a acontecer. A realidade trará provavelmente resultados diferentes.

Nesta fase, apenas a primeira posição (Observado impacto/presença) de cada célula irá conter um valor. A *Grid* de uma única ação irá portanto parecer semelhante ao seguinte exemplo:

GRID DE AÇÃO ÚNICA:

Categorias de ações	Categorias dos atores								
	U Níveis Institucionais Supra-locais	A Município - Político	B Município - Organização	C Entidades controladas	D Fornecedore s	E Organizações	F Empresas	G Público	H Atores externos
	b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e
1. Visão	0 0 0	2 0 0	0 0 0	0 0 0	-2 0 0	0 0 0	0 0 0	7 0 0	0 0 0
2. Organização	0 0 0	7 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
3. Planeamento	0 0 0	4 0 0	5 0 0	0 0 0	0 0 0	7 0 0	0 0 0	7 0 0	0 0 0
4. Aspetos Técnicos	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	7 0 0	0 0 0	0 0 0
5. Relações	0 0 0	0 0 0	8 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
6. Mudança cultural	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	7 0 0	8 0 0	0 0 0	0 0 0
7. Redes	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0

Fig. 8

Onde:

- A célula com a linha a negrito (E6) indica a origem da Ação;
- Os números nas células (A1; A2; A3; B3; B5; E3; E6; F4; F6; G1; G3) indicam onde vemos um efeito da ação e quão forte este efeito aparece em cada célula;
- No D1 pode ver um efeito negativo a acontecer.

É quase intuitivo perceber que o maior número de células envolvidas e a maior avaliação para cada célula, mais uma certa ação pode ser considerada impactante. Ao mesmo tempo, quanto mais tivermos células vermelhas e laranjas envolvidas, mais tocamos nos pontos de alavancagem do nosso sistema comunitário, aumentando o impacto da ação.

Este tipo de raciocínio será executado ação por ação e, em seguida, observando a *Grid* Calculadora que apresenta a soma das ações, dar-nos-á uma ideia geral do impacto global das nossas ações.

GRID COM A SOMA DAS 30 AÇÕES:

		Categorias de Atores							
Categorias de ações	U Níveis Institucionais Supra-locais	A Município - Político	B Município - Organização	C Entidades controladas	D Fornecedor es	E Organizações	F Empresas	G Público	H Atores externos
	b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e
1. Visão	0 0 0	270 0 0	0 0 0	20 0 0	0 0 0	0 0 0	34 0 0	56 0 0	0 0 0
2. Organização	18 0 0	167 0 0	57 0 0	20 0 0	36 0 0	0 0 0	0 0 0	0 0 0	16 0 0
3. Planeamento	0 0 0	91 0 0	15 0 0	0 0 0	0 0 0	156 0 0	0 0 0	7 0 0	0 0 0
4. Aspetos Técnicos	5 0 0	70 0 0	225 0 0	145 0 0	44 0 0	0 0 0	65 0 0	32 0 0	0 0 0
5. Relações	0 0 0	0 0 0	43 0 0	14 0 0	0 0 0	67 0 0	0 0 0	79 0 0	22 0 0
6. Mudança cultural	34 0 0	21 0 0	0 0 0	0 0 0	65 0 0	228 0 0	45 0 0	280 0 0	0 0 0
7. Redes	0 0 0	0 0 0	17 0 0	0 0 0	0 0 0	0 0 0	76 0 0	0 0 0	0 0 0

Fig. 8

A imagem em cima, é apenas um exemplo da *Grid* a apresentar a soma de 30 ações hipotéticas da *Baseline*. Pode intuitivamente detectar células onde os valores são elevados e

células onde nada acontece. Esta é uma imagem da sua comunidade e poderá aprender como lê-las com um pouco de treino²², pode dizer-lhe muito mais do que parece à primeira vista.

O tutor será treinado a analisar a *Grid* e os resultados que sairão dela, neste momento vamos apenas reparar em 3 pequenas coisas para começar a compreender o mecanismo. Na *Grid* de cima podemos observar:

	Observações	Significados/Considerações	A fazer
1	Existem células laranjas no zero ou muito baixas (U1; F3; E1; G3)	Nenhuma das ações mais importantes agem sobre essa alavanca	Perceber o porquê. Planear produzir impacto aí (verificar a <i>Database</i> do MiTS).
2	Considerações nas células rosa/vermelhas: A1 é bastante elevada mas B3 é bastante menor.	Existe uma "motivação" forte na área política, mas isso não se reflete muito em ações de planeamento. Isto poderia impedir fortemente efeitos concretos no terreno.	Investigar o porquê (falta de comunicação, falta de recursos, conflitos internos, etc.).
3	G6 é alta A6 é baixa.	Existe um processo de inovação cultural a acontecer na sociedade civil que não está reflectido na representação política? Isto pode levar a conflitos e muitos outros problemas.	Verificar a situação com cuidado. Planear/agir para restaurar o equilíbrio se possível (verificar a <i>Database</i>).

Fig. 9

Os dados agregados irão oferecer-lhe alguns outros indicadores (ver o exemplo em baixo):

1. Os resultados das células mostram os resultados repartidos por tipo de células, os valores originais nas células laranjas e vermelhas são mostrados multiplicados por, respectivamente, 2 e 3;
2. O valor total da *Grid* demonstra o valor total da *Grid*;
3. A Eficácia Média da Ação (EMA) mostra a percentagem da eficácia das ações, comparada com a pontuação máxima alcançável²³.

²² Também estamos a planear software e ajudas infográficas, baseadas em padrões típicos que facilmente podemos reconhecer e explicar. Mais padrões irão surgir com o uso do sistema entre os pioneiros e a CoP.

²³ Para calcular estes dados estamos a ter em conta o valor máximo possível para a *Grid* como 630, como se cada célula tivesse o mesmo valor, em vez de 810, que é o valor máximo alcançável, considerando o efeito multiplicador das células laranjas e vermelhas (a fórmula da EMA é: "*Grid_Pontuação_Total*: x = 630:100"). Isto significa que o trabalho de alavancagem das células dar-lhe-á um empurrão no valor da percentagem que apresentamos. Se cada célula da *Grid* fosse fixado a 10, teria uma indicação de 129%.

Para todos estes valores, uma simples afirmação pode ser suficiente para já: quanto maior, melhor.

	Baseline			Potencial			Avaliação		
Resultados das Células	6208	2780	1506	0	0	0	0	0	0
Resultado total da Grid	10494			0			0		
AAE %	56			0			0		

Fig. 10

Até agora ainda nos encontramos a trabalhar na nossa *Baseline*, os dados potenciais e de avaliação ainda não fazem parte do jogo. Estes dados terão um significado muito mais interessante quando começarmos a planear e avaliar os resultados do nosso trabalho.

A *Baseline* na prática: avaliação qualitativa adicionando ECs

Podemos ver agora como avaliar a nossa ação de uma forma mais qualitativa. Isto pode ser realizado utilizando os 5 Ciclos de Avaliação que vimos antes. O processo é relativamente simples, faça as perguntas e tente dar a melhor resposta disponível.

Mais uma vez, aqui não procuramos “precisão” ou o absoluto científico, queremos uma visão geral suficientemente boa para informar as fases seguintes. Na plataforma pode adicionar as suas respostas a cada ação única e depois ver o resultado agregado enquanto uma percentagem do resultado máximo possível²⁴, no quadro abaixo:

Ciclos de avaliação %	HHH			QUEM			FLUXO			D. ADAPT VALOR			D. ADAPT RES.		
	B	P	E	B	P	E	B	P	E	B	P	E	B	P	E
	456	0	0	345	0	0	120	0	0	50	0	0	45	0	0

²⁴Aqui o resultado máximo possível é de 30 para a Ação singular e 900 para o conjunto de 30 Ações.

Fig. 11

Tal como antes: quanto mais alto melhor.

Vamos começar a planear

Agora que temos a nossa *Baseline*, podemos seguir para o ponto seguinte, uma fase mais emocionante do planeamento, projetando e seguindo para a ação. Faremos isso de duas formas:

1. Apoiando ações existentes
2. Criando ações novas

Apoiando ações novas

Falando na prática, ter uma visão geral à nossa frente permitirá jogar com o sistema de ações da comunidade. Esta é a altura certa para trabalhar com o potencial das ações que colocarmos na *Grid*. Esta fase pode desenvolver-se sem percalços e de forma eficaz se a *Baseline* estiver completa previamente²⁵.

Faça a revisão de todas as ações e tente imaginar onde poderá melhorar o impacto ou, se consegue criar impacto nas células que não estão neste momento a ser focadas pela ação.

²⁵ Verifique o [Anexo 2](#) acerca das diferentes formas de planear o trabalho.

GRID DE AÇÃO ÚNICA

Categorias de ações	Categorias de atores								
	U Níveis Institucionais Supra-locais	A Município - Político	B Município - Organização	C Entidades controladas	D Fornecedores	E Organizações	F Empresas	G Público	H Atores externos
	b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e
1. Visão	0 0 0	2 5 0	0 0 0	0 0 0	-2 0 0	0 0 0	0 0 0	7 7 0	0 0 0
2. Organização	0 0 0	7 7 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
3. Planejamento	0 0 0	4 7 0	5 5 0	0 0 0	0 0 0	7 7 0	0 0 0	7 7 0	0 0 0
4. Aspectos Técnicos	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	7 3 0	0 0 0	0 0 0
5. Relações	0 0 0	0 0 0	8 8 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
6. Mudança cultural	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	7 7 0	8 7 0	0 5 0	0 0 0
7. Redes	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0

Fig. 12

Ao utilizar a ação hipotética que já vimos atrás, trabalhar o potencial pode apresentar diferentes situações:

1. Células onde não vemos forma de melhorar a ação porque a avaliação já é demasiado elevada, como A2, B5, E3, E6, G1, G3. Aqui iremos indicar o mesmo valor como o que usamos na avaliação da *Baseline*;
2. Células onde vemos forma de melhorar como A1, A3, D1, G6;
3. Células onde imaginamos uma redução do impacto como F4.

Nós faremos o mesmo com os Ciclos de Avaliação da ação.

Por favor, considere que, com muita frequência, a melhoria pode ser obtida conectando uma ação a outra já presente na nossa lista ou planejando uma nova. Por exemplo, a ação “Horta coletiva” pode ser vinculada ao “Curso DIY de coleta de água da chuva”, tornando os dois mais eficazes. Pode definir conexões entre ações usando uma ferramenta de vinculação específica na plataforma.

Depois de adicionar o potencial a todas as ações, também teremos uma nova imagem na exibição agregada, uma situação perfeita para iniciar o Ciclo de Planeamento²⁶:

1. **Local onde a “energia” já está a funcionar** - Se uma ação bem sucedida²⁷ for detectada na *Baseline* significa que deve haver lá muita energia, por isso deve perguntar-se e aos atores envolvidos nessa ação específica um conjunto de questões:
 - a. Há alguma forma fácil de apoiar ou aumentar a energia que aí está disponível²⁸?
 - b. Existem outros atores que possam ser envolvidos para apoiar a ação?
 - c. Poderá esta ação preencher outras funções (produzir efeitos noutras/mais células)?
 - d. Esta ação está a apoiar o fluxo?
 - e. Podemos transformá-la numa ação importante para uma Adaptação Profunda?
 - f. Poderemos facilmente ligar esta ação a outras ações na nossa *Baseline*?

2. **Escreve um plano simples para fazer o que é necessário** para melhorar a situação, se encontrar respostas boas e fáceis para essas questões. Se não, segue para o ponto 3 deste ciclo.

3. **Parte para outra ação bem sucedida.**

O significado deste ciclo de planeamento é facilitar o investimento de recursos (tempo, pessoas, energia, dinheiro) **onde existem as melhores condições para o uso e resultados positivos**. Quando se obtém bons resultados, o planeamento subsequente fica mais fácil (mais energia, mais vontade, mais compromisso, etc.).

Criar uma Ação nova

Além de planear ações existentes, pode começar ações completamente novas. Existem várias maneiras de usar o seu *Baseline* nesse sentido, vejamos algumas ideias:

1. Pode detectar células onde nada esteja a acontecer (talvez células laranjas ou vermelhas que são nitidamente importantes) e pode decidir fazer algo para preencher o vazio.
2. Também pode detectar células com muitas actividades, que por algum motivo não pontuam alto após a sua avaliação com os CAs. Por isso sabe-se que há lá energia potencial (provavelmente pessoas prontas a agir, talvez outros recursos) e pode-se planear uma ação completamente nova para “mover” a situação.

²⁶ Esta forma de planear é fortemente inspirada e desenvolvida pelas percepções do trabalho de permacultura de David Holmgren - *Permaculture: Principles & Pathways Beyond Sustainability* - D. Holmgren's - *Holmgren Design Services* 2002 - ISBN-13: 978-0646418445

²⁷ *Grid* de Pontuação elevada com muitas células envolvidas. Pontuação dos ciclos de avaliação alta. Alto potencial.

²⁸ Muito apoio, equipamento, logística, pessoal especializado, disseminação, comunicação, etc.

3. Pode já ter projectos em andamento (pacto de autarcas, projectos europeus, projectos nacionais, etc.) e tu podes informar o planeamento desses utilizando informação ou visões que emergem do MiTS.
4. E assim por diante...

Para planear uma ação nova pode primeiro verificar o que oferece a *Database* do MiTS para apoiar o trabalho nas células do seu interesse. Pode pesquisar de formas diferentes, indicando a célula do seu interesse, os atores, os tópicos, etc. Obtém-se um conjunto de ações/ferramentas relacionadas que podem ser úteis para a situação.

As ferramentas na base de dados foram desenhadas com os princípios de transição e os CAs em mente. Isto deve levar a ações de sinergias comuns (quando possível), eficiência e um bom balanço entre eficácia e resiliência.

Mas a *Database* do MiTS está apenas no início, por isso pode ainda não encontrar aquilo que procura. Se desenhar uma ação de raiz, essa ação mais tarde poderá contribuir para enriquecê-la.

Avaliar

Esta ação implementada deverá ser avaliada no seu impacto específico em termos de mudança tecnológica ou institucional e de resistência de comunidades (p. ex. adaptação climática, equidade, laços intercomunitários, etc.), usando indicadores apropriados. Ferramentas diferentes de avaliação estarão disponíveis na base de dados do MiTS.

Uma lista de indicadores úteis pode ser incluída, tanto na descrição das ações durante a criação da *Baseline*, como ser adicionada numa segunda fase. Mas para cada ação deverá ser indicado um prazo de avaliação. Isto pode variar substancialmente dependendo da ação. O quadro seguinte mostra alguns exemplos:

Tipo de Ação	Prazo de Avaliação
Demonstração de aumento de consciência sobre mudanças climáticas: demonstração noturna para crianças e famílias.	Avaliação imediata. Pesquisa e entrevista imediatamente após o evento.
Campanha de troca de contrato para eletricidade verde	Avaliação após 6 meses da atividade
Monitoramento da qualidade do ar	Avaliação periódica a cada ano

Tabela. 6

Para executar a avaliação utilizaremos a terceira coluna na nossa *Grid*, como no exemplo abaixo:

GRID DE AÇÃO SIMPLES:

Categorias de ações	Categorias de atores								
	U Níveis Institucionais Supra-locais	A Município - Político	B Município - Organização	C Entidades controladas	D Fornecedores	E Organizações	F Empresas	G Público	H Atores externos
	b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e	b p e
1. Visão	0 0 0	2 5 4	0 0 0	0 0 0	-2 0 1	0 0 0	0 0 0	7 7 7	0 0 5
2. Organização	0 0 0	7 7 6	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
3. Planeamento	0 0 0	4 7 7	5 5 7	0 0 0	0 0 0	7 7 6	0 0 0	7 7 7	0 0 0
4. Aspetos Técnicos	0 0 0	0 0 0	0 0 0	0 0 8	0 0 0	0 0 0	7 3 1	0 0 0	0 0 0
5. Relações	0 0 0	0 0 0	8 8 8	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
6. Mudança cultural	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	7 7 4	8 7 7	0 5 4	0 0 0
7. Redes	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0

Fig. 13

E podemos reparar que:

1. Na A1, A2, E3, E6, F4, G6 o efeito é menor que o potencial previsto;
2. Na A3, B5, F6, G1, G3 o efeito está alinhado com as expectativas;
3. Na B3 e D1 o efeito é ainda maior do que previsto, repare como na D1 passamos de um efeito negativo para um efeito ligeiramente positivo (muito bem);
4. Na C4 e H1 tivemos efeitos completamente inesperados.

Sugestão: afirmando claramente que, desde a fase inicial, o objetivo esperado da ação, o condutor e a tensão²⁹ (da maneira sugerida pelo S3), pode ser muito útil para a sua avaliação.

Círculo de encerramento para a *Baseline*

A ação avaliação encerra um círculo e a avaliação tornar-se-á a nova *Baseline* da ação da qual um novo círculo começa e aí por diante. Poderíamos chamar-lhe: *ciclo da Baseline*.

²⁹ Aqui encontra os padrões S3: padrão "[driver mapping](#)" e padrão "[navigate via tension](#)"

Na figura seguinte poderá ver o fluxo da actividade do MiTS. Há uma fase no começo que depois se transforma numa actividade circular que, na teoria, poderia funcionar para sempre.

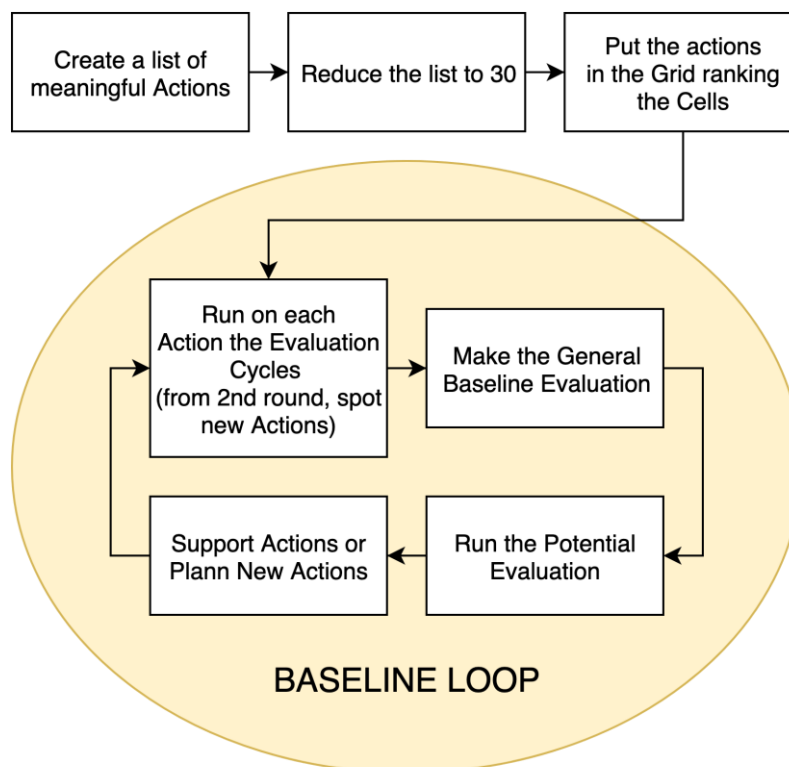


Fig. 14

Mas o MiTS não é para sempre

Antes de explicar como gerir a circularidade do MiTS é muito importante dizer que o Sistema não foi desenhado para funcionar para sempre. O propósito real do MiTS é tornar-se desnecessário³⁰.

A ideia é que quanto mais a comunidade a utilizar, a consciência e cultura locais à volta da sustentabilidade devem evoluir. As atitudes que, dentro do MiTS, foram agora promovidas pelo uso da *Grid*, das *CAs*, da *Database*, etc. devem tornar-se hábitos, um caminho normal a seguir, uma cultura partilhada.

O MiTS não foi desenhado para fechar a comunidade numa caixa de regras, mas para construir familiaridade e segurança à volta de um novo conjunto de princípios e metodologias, ficando com tempo para apreciar completamente todas as vantagens de um novo caminho.

³⁰ Existe aqui uma forte analogia com o que Harrison Owen diz acerca de [Open Space Technology](#), uma metodologia que é bastante familiar e usada dentro do Movimento de Transição e muitas outras experiências de “inovações sociais”. Pode encontrar o registo na base de dados ([aqui](#)).

Idealmente, cada comunidade que adopta o MiTS chegará ao ponto de não precisar mais dele, o momento pode ser diferente, mas o potencial é o típico de uma propagação exponencial.

O Ciclo da *Baseline*

A ideia é que uma comunidade mantenha o MiTS em funcionamento, enquanto for útil. Podemos imaginar maneiras diferentes de gerir o ciclo de ações, mas para a fase pioneira, sugerimos que proceda da seguinte forma.

O Ciclo Fechado

A fase inicial com a sua primeira Avaliação da *Baseline* (quando preenche as sub-colunas nos espaços da *Baseline* e nos espaços com Potencial [pp e p respectivamente] na sua *Grid*) e depois fecha o ciclo, decidindo uma data de encerramento após 1 ano (ou o que achar apropriado), para avaliar a nova situação nas sub-colunas reservadas para Avaliação (sub-colunas e).

Após isso, começa um novo Ciclo de uma *Grid* completamente vazia e:

- Pode decidir manter algumas ações e os valores da sub-coluna e daquelas ações tornar-se-ão a nova sub-coluna b deste novo ciclo.
- Depois, seleccionará um número de novas ações para completar o conjunto.

A cada novo ciclo, pode comparar a imagem geral e, com sorte, mostrar facilmente os progressos, aqueles que não estão directamente envolvidos no uso do MiTS.

Enriqueça e preencha a *Database*

Dentro do movimento de Transição temos bastantes ferramentas que consideramos estarem prontas para serem incluídas. Também estamos a reunir materiais que vêm de muitas outras redes e disciplinas. Irá demorar algum tempo, e uma equipa dedicada, para realizar este trabalho de forma adequada, mas estamos confiantes que conseguimos fazer isto (pelo menos em Inglês) a tempo de fornecer uma versão básica da base de dados aos pioneiros.

Esta será apenas a fase inicial, uma vez que o plano é ver a coleção de registos crescer ao longo do tempo com a ajuda dos pioneiros e outros profissionais.

5 - A adaptação ao MiTS

Como já foi referido, podemos imaginar muitas maneiras de mudar os elementos do MiTS para servir contextos diferentes. Mas agora que já sabemos um pouco mais sobre isto, podemos facilmente compreender como uma mudança numa porção da estrutura pode facilmente influenciar as outras.

O aspeto mais delicado é a relação entre a *Grid* e a *Database*. Como sabe, os registos na base de dados estão relacionados com as células; assim, se mexer nas células e/ou as colunas, os registos deverão ser atualizados em conformidade na base de dados.

Portanto, para esta fase de teste do MiTS através dos pioneiros, recomendamos fortemente a utilização de tudo tal como está.

Alteração da posição das colunas

Uma mudança que consideramos viável é a alteração da posição da coluna. Por outras palavras, uma mudança da distância relacional entre as categorias dos atores. Isto pode ajudar na visualização correcta de uma estrutura diferente da sua realidade e pode fazer isto sem alterar a letra de identificação designada à coluna (desta forma as referências na *Database* ficará a mesma).

Eliminação de colunas

Já podemos imaginar situações onde a coluna C (Entidades Controladas) não pode existir. Nesse caso, podemos imaginar uma *Grid* sem essa coluna, sem necessariamente ter um efeito na estrutura da *Database* (os registos a que se referem a essa coluna simplesmente não serão utilizados).

ANEXO 1

Trabalhar sem fluxos

Vimos brevemente fluxos no 2.4 e agora vamos tentar fornecer algumas indicações sobre as possibilidades que temos de gerar, interferir e tomar vantagem sobre eles.

Espalhando memes

Esta é uma forma muito eficiente de criar condições, de gerar ou influenciar um fluxo e também muito importante, é algo que fazemos frequentemente enquanto implementamos cada ação.

Primeiro de tudo, o que é um meme³¹?

Um meme é uma ideia, comportamento, ou estilo que se espalha de pessoa a pessoa dentro de uma cultura—frequentemente com o objetivo de transmitir um fenômeno, tema ou significado representado pelo meme. Um meme atua como uma unidade por carregar ideias, símbolos ou práticas culturais, que podem ser transmitidas de uma mente a outra através de escrita, discurso, gestos, rituais ou outros fenômenos inimitáveis com um tema meme. Apoiantes do conceito olham para os memes como análogos culturais dos genes, na medida que eles se autoimitam, mutam e respondem a pressões seletivas.³²

Tal como o historiador Yuval Noah Harari diz no seu livro *Sapiens*:

Esta abordagem é algumas vezes chamada 'memetics'. É assumido que, tal como uma evolução orgânica é baseada na réplica de unidades de informação orgânica chamada genes, então a evolução cultural é baseada na réplica das unidades de informação chamadas 'memes'. As culturas bem sucedidas são aquelas que superam na réplica de memes, independentemente dos custos e benefícios dos seus hospedeiros humanos.

Existe um conjunto de memes poderosos, que podemos espalhar por aí para ajudar o nosso propósito e facilitar a criação de um fluxo útil que ajudará a nossa comunidade. Aqui fica uma curta lista desses memes, podemos certamente identificar muitos outros, mas conhecemos estes da lista como certamente eficazes e é por isso razoável começar a partir daqui:

Memes úteis:

³¹ Rápida referência no Wikipedia: <https://pt.wikipedia.org/wiki/Meme>

³² O meme na cultura popular é geralmente mais identificado como o "meme da internet", que é um conceito que se espalha rapidamente de pessoa para pessoa por via da Internet, maioritariamente através de E-mailing baseados na Internet, blogs, fóruns, fóruns de imagens na Internet como 4chan, sites de redes sociais como Facebook, Instagram ou Twitter, mensagens instantâneas, sites de notícias sociais ou sites de discussão como o Reddit e serviços de hospedagem de vídeos como YouTube e Twitch.

Meme		Conceito Alargado
1	Produzir energia custa energia.	<u>ERoEI concept</u> , a energia regressa à energia investida. Investir mais energia do que a energia que consegue obter é inútil.
2	Impacto zero não existe.	Cada ação, cada tecnologia tem um impacto no sistema local e global. Lixo zero, emissão zero e por aí fora são slogans não relacionados com a realidade.
3	Energia livre não existe.	Estritamente ligada a <u>ERoEI</u> . As leis da termodinâmica são bastante simples aqui. Colher e ou produzir energia implica o uso da energia e de recursos.
4	Refeições grátis não existem na natureza.	Mesmo conceito que o anterior. Ter formas diferentes de expressar o meme possibilita a adaptação ao contexto.
5	Quanto mais nos tornamos eficientes na utilização de recursos (ou energia) mais recursos utilizamos.	<u>Jevons paradox</u> (ou efeito ricochete). Acontece quando o progresso tecnológico ou as políticas governamentais aumentam a eficácia com o qual um recurso é utilizado (reduzir a quantia necessária para cada utilização), mas a taxa de consumo desse recurso aumenta devido a um aumento da procura.
6	Uma quantia enorme de energia é contida em cada objecto de uso comum.	<u>Energia Incorporada</u> . Não utilizamos energia apenas quando ligamos a luz ou enchemos o tanque do carro. Cada objeto incorpora em si toda a energia necessária para o produzir desde o primeiro passo da cadeia de produção.
7	Já não podemos queimar tudo.	O aquecimento global está agora tão avançado que devemos evitar queimar qualquer coisa. Sabemos que temos de subtrair CO2 da atmosfera de todas as formas possíveis, esperando permanecer abaixo dos 1.5° C. A queima não deve ser mais uma opção.
8	Emergência climática	Após décadas de inactividade no que respeita ao aquecimento global, estamos agora num estado de emergência climática e precisamos de decisões radicais para lidar com a situação presente.
9	Temos outras formas de exercer democracia	A democracia representativa que sabemos e usamos numa grande parte do mundo desenvolvido não é a única forma de seguir, nem a mais adequada, para resolver os grandes

		problemas que temos de enfrentar ³³ .
10	Temos de parar de produzir lixo	Isto está relacionado com muitos dos conceitos descritos em cima, não podemos despende energia (6), matérias-primas e o custo das cadeias de reciclagem (2;3), etc. através da produção de todos os tipos de lixo.

A maneira como espalhamos os memes é deveras importante. Devemos ser cautelosos ao preencher as seguintes condições:

1. Estes são principalmente conceitos científicos. Não pertencem a um partido, uma área política específica, um grupo, uma marca, uma bandeira ou outra coisa. Idealmente queremos que apareçam em mensagens que venham de todas as direções possíveis. Assim de cada vez que detectamos a possibilidade de apresentar mais um ou mais destes memes em mensagens que correm a nossa comunidade, não interessa qual a origem ou a assinatura da mensagem, devemos fazê-lo.
2. Não precisamos de relacionar o meme com a sua possível solução, não é isso que tentamos fazer. Criar o fluxo não é propor soluções, é mais sobre criar o espaço onde os problemas podem ser analisados para eventualmente encontrar soluções.
3. Lembre-se que cada ação no seu *Baseline* é potencialmente um vector muito bom para muitos destes memes. Esteja focado e inclua memes quando possível. Há um impulso para isso no Ciclo de Avaliação do Fluxo.

Exemplos 1

Podemos imaginar um município a produzir o guia de instruções para a coleção de separação de lixo no seu território. Aqui fica uma forma de apresentar um meme no título:

Título do guia	Título + memes #10
Reciclando de forma correcta para proteger o seu futuro	Até conseguirmos parar de produzir lixo para proteger o seu futuro

Como pode ver, o título original (na coluna da esquerda) apresenta a “reciclagem” como “a solução” e sabemos muito bem que esse não é o caso³⁴. Reciclando é, no mínimo, uma boa forma de manter a dispersão do lixo no ambiente sob controlo, mas é muito caro energética e economicamente: fundamentalmente insustentável excepto em casos limitados.

³³ Isto será explorado e realizado dentro do modelo de governança do MiTS. Existem muitas situações quando decidimos facilmente substituir a democracia representativa por outras metodologias (por exemplo com Democracia Deliberativa) e outras onde simplesmente ajudar a democracia representativa com metodologias de apoio.

³⁴ No caso de não estarem acostumados com este conceito aqui fica um artigo resumido muito rápido acerca do plástico no [Guardian](#), mas o mesmo é verdade para muitos outros materiais.

A solução real é evitar a produção de lixo. Contudo, demora tempo a desenvolver o nosso sistema de produção e distribuição para obter isso. Entretanto, reciclagem é uma solução de transição. Podemos utilizar um título diferente para o nosso guia na introdução deste conceito e facilitação do fluxo face à solução real.

Exemplos 2

Uma associação ambiental está a ajudar o governo local a promover a substituição de fornos de madeira antigos, muito poluentes, com sistemas de aquecimento mais eficientes.

Mensagem	Mensagem + memes 2#, #5, #7, #8
<p>O seu velho forno já não está legal devido ao impacto no ambiente e na saúde. Tire partido dos incentivos económicos reservados para aqueles que substituem os seus velhos fornos por um sistema moderno, eficiente e não-polvente.</p>	<p>O seu velho forno já não está legal devido ao impacto no ambiente e na saúde. Por causa da <u>Emergência Climática</u> e poluição local, também sabemos que devemos <u>evitar qualquer forma de combustão</u> de hoje em diante. Tire partido dos incentivos económicos reservados para aqueles que substituem os seus velhos fornos por um sistema moderno, eficiente e de <u>baixa poluição</u> e tente <u>reduzir a sua necessidade de calor, isolando as salas.</u></p>

Salto das Ondas

Outra forma de espalhar os fluxos é o chamado Salto das Ondas. Na nossa sociedade e nos media podemos observar claramente ondas de tópicos que surgem em momentos específicos e que têm o foco durante semanas, meses ou até anos. Também podemos chamá-lo de tendências ou moda do momento ou notícias quentes, etc.

Podemos combinar essas ondas com o espalhar de memes. Só precisamos de detectar a onda e adicionar a mensagem tirando partido da energia comunicativa que as ondas trazem.

Exemplo 3

Neste momento, podemos observar uma grande atenção em devoção ao “problema do plástico”. Muitos podem pensar que isto é simplesmente um dos numerosos problemas que temos, mas agora o foco está aqui. Assim, em vez de tentar desviar o foco para outra coisa, tire partido disso e dispare os seus memes em frente da crista da onda.

Por exemplo, planeie uma campanha ou actividade “Sem plástico” mas utilize-a para espalhar os memes #2, 6# e #10 declarando nas suas mensagens conceitos como:

Queremos fazer desaparecer o plástico e com ele todos os descartáveis

Cada objeto que utiliza apenas representa um gasto de energia, matéria-prima e produz poluição directa e indirecta uma só vez.

Desta forma, relaciona a “onda do plástico”, enquanto ao mesmo tempo, apresenta algo mais vasto, espalhando memes para apoiar o seu fluxo.

ANEXO 2

Criação da *Baseline*

Esta é a principal tarefa real e inicial da Grupo Local de Implementação, mas, por muitas razões, o grupo pode tentar escapar desse estágio com a pressa de fazer coisas práticas para se sentir bem, provar que são úteis e mostrar como são bons para os observadores externos, etc. Pode ser difícil gerir essa urgência; portanto, podemos considerar três maneiras de seguir:

1. *Baseline* básico
2. *Baseline* complexo
3. *Baseline* diferido

Baseline Básico

Consiste em escolher e analisar um conjunto de 30 ações que já estão em vigor na comunidade (ações observadas). Fornece uma imagem do que estava a acontecer antes da introdução do MiT. Após isto, o GLI realizará as especulações potenciais, planeará e/ou apoiará novas ações, etc.

Este, em teoria, deve ser o caminho mais limpo a seguir, mas pode ser muito lento para o GLI ou não ser interessante o suficiente (mecânico demais para manter o compromisso num nível elevado). Tem a vantagem de ser muito semelhante a outros processos conhecidos, como, por exemplo, o Pacto de Autarcas, tornando-o de alguma forma "familiar" às pessoas dos municípios.

Se decidir com o GLI seguir esse tipo de planeamento, recomendamos que resista à tentação de pensar em ações futuras ou potenciais ao executar a análise da *Baseline*. Caso precise de experimentar algo diferente para manter a energia do GLI elevada, sugerimos que observe os outros dois ciclos de planeamento da *Baseline*.

Baseline complexo

Ao adoptar esta estratégia, podemos deixar o GLI misturar as ações existentes com as que estão a ser desenhadas. Isto é mais confuso e cria várias complexidades na leitura da imagem inicial da *Baseline* na avaliação futura (basicamente mistura uma avaliação e um potencial - não é bom sob o ponto de vista da pesquisa), mas pode ser um caminho para manter o GLI energético e

realmente envolvido (acho que devemos ser ativistas primeiro e pesquisadores depois). Existem riscos relacionados:

1. Efeito de visão sistêmica baixo (risco de misturar a realidade com a especulação);
2. Menor impacto da comparação antes / depois na Calculadora da *Grid*;
3. Novas ações não desenhadas sob a metodologia MiT (o tutor deve ter cuidado);
4. Nunca chegue a uma *Baseline* real para começar e comparar mais tarde.

Tudo isto é viável mas requer um compromisso e atenção grandes por parte do tutor.

***Baseline* diferido**

Usando essa abordagem, a *Baseline* é criado, adicionando ações novas e observadas em movimento, uma de cada vez, por um período de tempo. Dessa maneira, está a emergir do trabalho do primeiro pioneiro (Valsamoggia, Itália), onde podemos ver um fluxo de atividades bastante coordenado na gestão, em tempo real, de oportunidades emergentes e reações a problemas.

Este caminho não é especificamente desejável num projeto com um tempo limitado para observar o processo (como este), mas provavelmente mais realista para o uso cotidiano do MiT na vida real. Procedendo dessa maneira, só observará uma imagem completa após alguns meses, seis ou mais, e a partir daí começará a melhorar ou apoiar as ações. Existem vantagens:

1. Parece uma maneira mais progressiva de ir e aprender para o GLI. Provavelmente já tem pessoas muito ocupadas e, dessa forma, cria espaço e tempo para que elas estejam presentes com tempo de qualidade.
2. Encaixa-se muito bem com o uso do S3, porque é mais fácil envolver as pessoas certas em cada processo de análise e decisão, devido à maior disponibilidade de tempo para fazer isso.
3. Parece menos uma “experiência” e mais uma ferramenta operacional.

Pode optar por seguir este caminho se tiver um GLI muito orgânico, influenciando profundamente a atividade do município e as ações dentro da comunidade.

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**“All I can tell you is that when we stop needing to know,
we are Happy!”**

Peter Bampton (2019, p. 144)