

Open Research Online

The Open University's repository of research publications and other research outputs

D3.8 Comparative evaluation of the MAZI pilots (version 1)

Other

How to cite:

Davies, Gareth; Gaved, Mark; Adams, Anne; Antoniadis, Panayotis; Apostol, Ileana; Lüning, Elizabeth Calderon; Hausel, Katalin; Helgason, Ingi; Klaus, Philipp; Smyth, Michael; Stevens, James and Unteidig, Andreas (2017). D3.8 Comparative evaluation of the MAZI pilots (version 1). The MAZI consortium.

For guidance on citations see [FAQs](#).

© 2016-2018 The MAZI Consortium

Version: Version of Record

Link(s) to article on publisher's website:

<http://www.mazizone.eu/wp-content/uploads/2017/03/D3-8-final.pdf>

Copyright and Moral Rights for the articles on this site are retained by the individual authors and/or other copyright owners. For more information on Open Research Online's data [policy](#) on reuse of materials please consult the policies page.

oro.open.ac.uk



ICT - Information and Communication Technologies

Project Acronym: **MAZI**
Project Full Title: **A DIY networking toolkit for location-based collective awareness**
Grant Agreement: **687983**
Project Duration: **36 months (Jan. 2016 - Dec. 2018)**

D3.8 Comparative evaluation of the MAZI pilots (version 1)

Deliverable Status: **Final**
File Name: **D2-4_CreekNet-final-formatted.doc**
Due Date: **28 February 2017**
Submission Date: **06 March 2017**
Dissemination Level: **Public**
Task Leader: **Mark Gaved (Open University)**
Author: **Gareth Davies (OU)**
Mark Gaved (OU)
Anne Adams (OU)
Panayotis Antoniadis (NH)
Ileana Apostol (NH)
Elizabeth Calderon Lüning (CG)
Katalin Hausel (UM)
Ingi Helgason (NU)
Philipp Klaus (INURA)
Michael Smyth (NU)
James Stevens (SPC)
Andreas Unteidig (UdK)



Copyright

© Copyright 2016-2018 The MAZI Consortium

Consisting of:

Organisation Name	Short Name	Country
University of Thessaly	UTH	Greece
NETHOOD	NH	Switzerland
Edinburg Napier University	NU	United Kingdom
Universitat der Kunste Berlin	UdK	Germany
The Open University	OU	United Kingdom
Slacktivist Limited	SPC	United Kingdom
INURA Zurich Institute	INURA	Switzerland
Common Grounds	CG	Germany
UnMonastery	UM	United Kingdom

Disclaimer

All intellectual property rights are owned by the MAZI consortium members and are protected by the applicable laws. Except where otherwise specified, all document contents are: “© MAZI Project - All rights reserved”. Reproduction is not authorised without prior written agreement.

All MAZI consortium members have agreed to full publication of this document. The commercial use of any information contained in this document may require a license from the owner of that information.

All MAZI consortium members are also committed to publish accurate and up to date information and take the greatest care to do so. However, the MAZI consortium members cannot accept liability for any inaccuracies or omissions nor do they accept liability for any direct, indirect, special, consequential or other losses or damages of any kind arising out of the use of this information.

History

Version	Author	Date	Status
1.0	Gareth Davies	31/01/ 2017	Initial Draft
1.1	Gareth Davies, Mark Gaved, Anne Adams, Patrick McAndrew	26/02/2017	Second Draft
2.0	Gareth Davies, Mark Gaved,	03/03/ 2017	Final Draft
FF	Stavroula Maglavera	07/03/2017	Final Draft reviewed

Executive Summary

This deliverable is the first of three reporting on the MAZI pilots' comparative evaluation. We report on progress towards developing a comparative evaluation approach that will draw from the four MAZI pilots to inform the project, to understand progress and enable lessons learned to be applied across MAZI and beyond.

In this report we introduce our approach to a comparative meta-evaluation strategy in the context of MAZI, taking into account the rich diversity of the consortium partners, their wide range of disciplines, and the different contexts of the pilots. Given this diversity, we emphasise a participatory approach to evaluation, drawing from partners' academic disciplines and practitioner fields to inform the development of an evaluation framework. Each partner brings with them their own paradigms and methodologies for analysing progress, and a 'one size fits all' approach to evaluation applied to all pilots risks losing the richness each has to offer. Therefore, we have found it necessary to begin the process through negotiating a set of high level, lightweight instruments that can initially engage each pilot team in the activity, and elicit data while enabling the reporting of local diversity.

We briefly describe the diversity of contexts, then introduce our participatory approach to engaging with partners. We introduce the first set of tools used to gather data and report on initial data gathered from the two pilots that are underway, Nachbarschafts-Akademie / Neighbourhood Academy (NAk, Berlin) and CreekNet (London).

We conclude by outlining the coverage of the second version of this deliverable (D3.9, to be reported in M26) and the third version (D3.10, to be reported in M36).

Table of Contents

1. INTRODUCTION	6
1.1 STRATEGIC FIT OF DELIVERABLES WITHIN WORK PACKAGE 3	6
1.2 ROLE OF THIS DELIVERABLE	7
2. PURPOSES FOR COMPARATIVE EVALUATION	9
2.1 MAZI'S DIVERSITY- THE CHALLENGES AND OPPORTUNITIES OF INTERDISCIPLINARITY	12
3. TOWARDS A COMPARATIVE EVALUATION FRAMEWORK	15
3.1 THE 6P'S.....	16
3.2 INTERVIEWS AND SURVEYS	18
3.3 CROSS-FERTILIZATION EVENTS	21
3.4 PROJECT MEETINGS	22
3.5 PROJECT DELIVERABLES	22
3.6 CONTRIBUTION TO KNOWLEDGE.....	22
3.7 ADDITIONAL INSTRUMENTS.....	22
4. FUTURE WORK	23
5. REFERENCES	24
6. APPENDIX A MAPS OF NEIGHBOURHOOD ACADEMY AND CREEKNET PILOTS	26
6.1 NEIGHBOURHOOD ACADEMY / NACHBARSCHAFTS- AKADEMIE (NAK) VISUALISATIONS.....	26
6.2 CREEKNET VISUALISATIONS	28
7. APPENDIX B: RESULTS OF SURVEY ON OBJECTIVES AND MEASURES	30

1. Introduction

The objective of this deliverable is to report on progress so far in developing a comparative meta-evaluation strategy, bringing together the expertise of the consortium partners and their learning outcomes so far from reflecting on their respective pilot studies. This will enable the MAZI consortium to integrate elements of the individual partners' disciplinary backgrounds, and through evaluations of the pilots, inform interdisciplinary debate (D3.11-D3.13). This in turn will support the development of strategies and guidance documentation for engaging publics for collectively developing DIY networks.

This introduction sets the scene for this comparative evaluation deliverable by highlighting the strategic fit of the deliverable within the context of Work Package 3. We then turn to explain how it will inform the second deliverable (D3.9, to be submitted M26) and the third deliverable (D3.10, to be submitted M36).

1.1 Strategic fit of deliverables within Work Package 3

In this section, we describe how the different deliverables link together and inform each other in MAZI Work Package 3, 'Interdisciplinary research framework'.

As the pilots try out and contribute to various elements of the evolving MAZI toolkit, the toolkit itself is designed to act as a "boundary object" by facilitating the pilots' inter- and potentially trans-disciplinary work (D3.2). In parallel to this each pilot is required to contribute towards four parallel "threads" for structuring (D3.5-7), analysing (D3.8-10), evaluating (D3.11-13), and engaging in cross-fertilization to share successes and challenges with regards to identifying strategies for engaging publics (D3.11-13) (Figure 1).

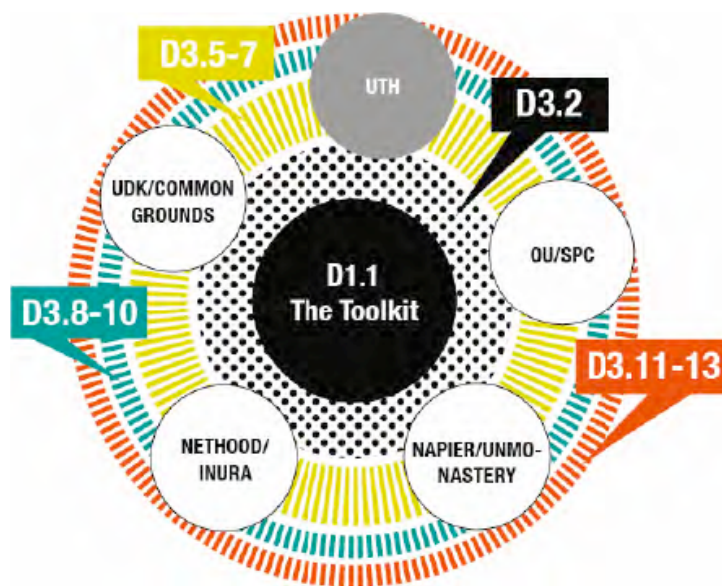


Figure 1: The different, interrelated instruments set up for structuring, analysing, evaluating and sharing strategies in our transdisciplinary work (from MAZI Deliverable D3.6, p. 6)

Figure 2 illustrates how the four pilots inform the development of the comparative evaluation framework (D3.8-10), the MAZI DIY-toolkit (D1.1), and the interdisciplinary framework (D3.2-5), and the pilots in turn stand to gain feedback which can inform the design and evaluation of their pilots. The learning coming out of this comparative evaluation 'framework' will inform the development of the interdisciplinary framework and the

planning of the planned cross-fertilization events. The cross-fertilization events in turn are creating opportunities for the pilots to share strategies for engaging publics; and the learning from these events will provide valuable feedback for the development of the interdisciplinary framework and the comparative evaluation. Finally, the development of the comparative evaluation framework and the interdisciplinary framework are designed to provide feedback to inform the development of the MAZI DIY-toolkit.

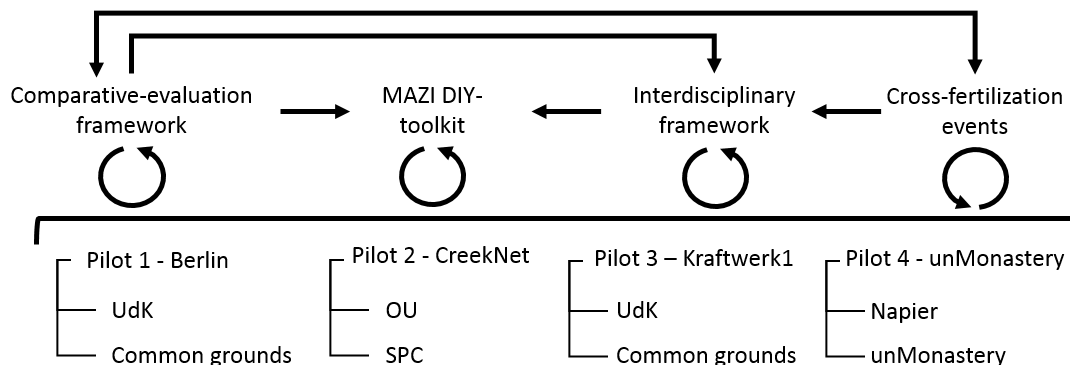


Figure 2: Relationship between the four pilots, the development of the comparative evaluation framework, the MAZI DIY-toolkit, the interdisciplinary framework and the contribution of the cross-fertilization events

1.2 Role of this deliverable

D3.8 is the first of three deliverables within reporting on the comparative evaluation of the MAZI pilots. In Version 2 (M14-26) we will perform a comparative evaluation of the pilots, which will provide feedback to the pilot design methodology. The results of the evaluations will then be used in Version 3 (M26-36) to explore correlations between design choices and objectives, and inform a set of best practices to be included in the toolkit (Task 1.5) (Figure 3).

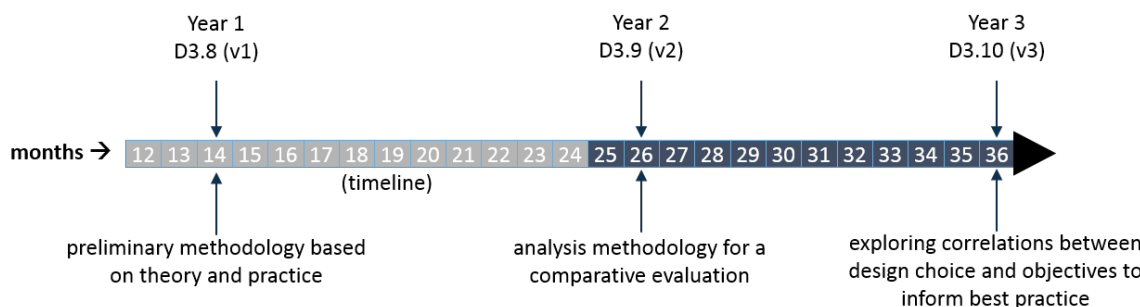


Figure 3: Purposes of the three phases of D3.8-10 along project timeline

In this initial development of a comparative evaluation framework the focus has been on introducing our plans for comparative evaluation to MAZI pilots. Given the diversity of context and issues involved we have emphasised the need to adopt a participatory approach, to encourage partners' to engage actively, bring their expertise and articulate how success is defined and measured in their respective fields of practice. We believe that the value of this approach is that it provides an ability to capture the diversity of paradigms and methodologies for analysing progress in a way that a one-size-fits-all model of comparative evaluation would not be able to achieve.

The remainder of this deliverable will: explain our approach of adopting a relatively simple approach of focusing on a common set of principles for capturing the complexity of comparing evaluations across disciplines in a way that doesn't lose partners' voices; introduce the participatory approach we adopted to engage partners; and introduce the first set of tools we are using to gather data and report on initial data

gathered from the two pilots that are underway. Bossen et al. (2016) suggest that researchers should consider seven questions when reflecting upon and discussing evaluations in Participatory Design:

1. What are the purposes of the evaluation?
2. Who conducts the evaluation?
3. Who participates in the evaluation?
4. Who defines the evaluation criteria?
5. What evaluation method(s) are used?
6. Who is the intended audience of the evaluation?
7. What is the intended use of the evaluation?

For this document, we can respond as follows:

1. To provide formative feedback to partners (and reviewers) on methods being explored, and preliminary observations from the initial pilot data
2. Evaluation conducted by OU
3. All pilot partners participate in the evaluation process
4. At this stage, the OU has engaged partners to find out suitable criteria
5. Qualitative methods: so far, a number of instruments for gathering data (described in Section 3)
6. Intended audience for this document is the partners themselves, and project reviewers, however we expect this audience to expand after this version
7. The intention is that it will help partners reflect on how they are planning and designing their pilot studies, identifying gaps in their own thinking and making them aware of good practice by other partners, and highlighting opportunities for collaboration. It is also to keep reviewers and wider interested audience of CAPS project aware of our progress.

2. Purposes for Comparative Evaluation

MAZI Description of Work identifies that key objectives include “to address the real needs ... of local communities” (p.8, Objective 2), and ensuring “a self-reflective attitude towards our own collaboration” (Objective 3). Our evaluation will need to both be used to understand significant contextual factors that have impacted upon the project, and understand the effectiveness of the project’s activities towards achieving the pilots’ strategic goals. This section provides a background to the supporting concepts and approaches that have informed our thinking.

The fundamental purpose of evaluation is to learn from experiences so that actions are directed towards bringing benefits to people who have an interest related to its outcomes (Harvey, 1998). In the context of MAZI, this involves contributing toward DIY networking can offer the four pilots and their publics’ potential benefits, effects or changes (i.e. impacts) by engaging with location-based collective awareness. However, trying to account for the types of impacts that may occur as a result of such interdisciplinary activities across contexts can be very challenging, especially when there is limited access and understanding of the events and the publics that are likely to be involved. Therefore, the challenge we face is in identifying a pragmatic means of analysing and comparing impacts generated across the diverse range of contexts addressing a breadth of issues. To address this, we draw lessons from the field of evidence-based decision making as guide for adopting a culture of reflective practice and for understanding and comparing the types of knowledge used to evaluate impacts.

Planning for impact evaluation and the process of identifying appropriate mechanisms for gathering and analysing results should start early in the process (‘upstream’) and not be left to the end of projects or project phases (Chevalier and Buckles, 2013). Through upstream planning, researchers can structure activities in ways to enable evaluation criteria to be answered. Inappropriate or absent evaluation criteria, methods of data collection, or techniques of analysis will act as a barriers, reducing the likelihood of the evaluation being able to evidence any benefits, effects, or changes. Figure 4 illustrates this logic by showing how one line of inquiry (b) achieves its goal in contrast to other lines of inquiry (a) & (c) that fail because of their inappropriate techniques of analysis, and absent evaluation criteria respectively.

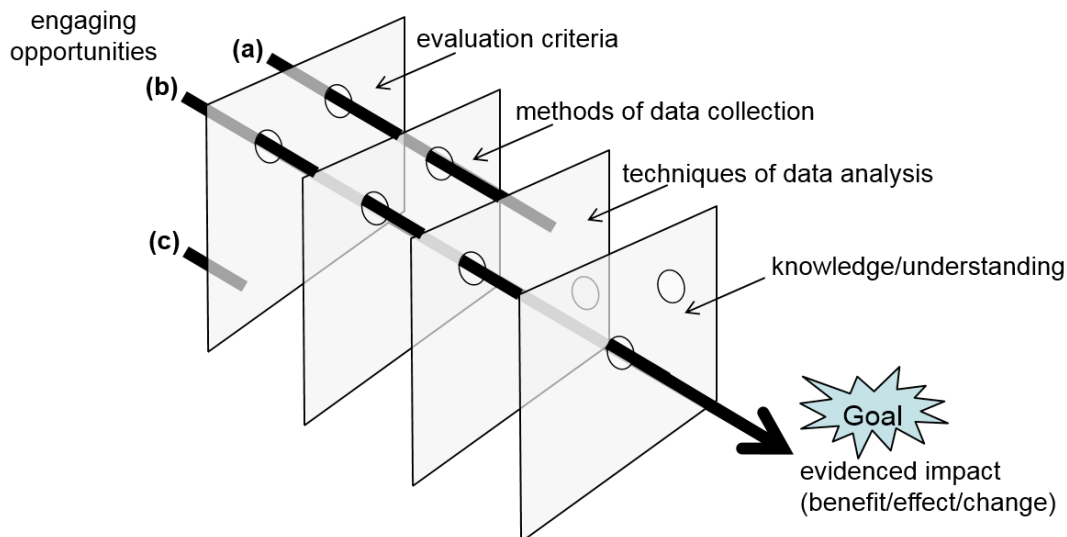


Figure 4: The importance of upstream planning and the need for appropriate evaluation criteria, methods of data collection and techniques of analysis if the correct types of knowledge are to be obtained for evidencing impact(s) (adapted from Reason, 2001)

Adopting a culture of reflective practice throughout can strengthen and improve the way the work is carried out in the future (Manwaring and Calverley, 1998). Adopting approaches such Kirkpatrick’s Levels of Evaluation

(Kirkpatrick, 1959) or the guidance of the Evaluation Cookbook (Harvey, 1998) together with action research (Reason and Bradbury, 2001), for example, can help ensure this by making sure there is a continuous feedback of information about the design of the process (formative evaluation) and review of the potential benefits, effects or changes (summative evaluation). The manner in which publics are engaged, however, will determine the types of impacts on offer.

Irwin (2008) explained the distinction between first order engagement (deficit model), second order, (dialogue) and third-order (contextual) engagement and how the distinction between these emphasise the risk of only providing opportunities for first order engagement when activities end up primarily consisting of one-way communication. Second and third order engagement however are generally thought of as being of greater value and more conducive to generating greater depth as opposed to the reach of engagement. Evaluation of such engagement generally tend to rely on access to longitudinal qualitative data and emphasise the need for upstream planning and the early detection of appropriate mechanisms. Moreover, the analysis gets a lot more complicated as soon as impacts have to be compared, especially in the case of comparing across the contexts of the MAZI pilots, where they are being evaluated by people from different disciplinary perspectives. One way of mapping out the richness of what is being evaluated across the pilots' contexts could be to borrow from the logic of Funtowicz and Ravetz's typology of problem solving strategies to develop a typology of knowledge (Figure 5 a & b respectively).

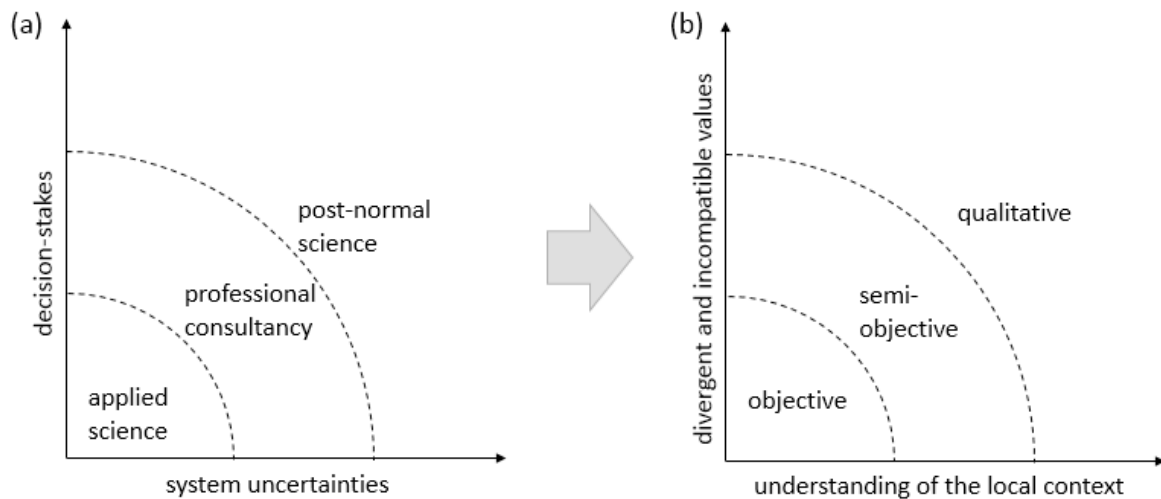


Figure 5: Potential for developing a typology of knowledge (b) based on the underpinning logic of Funtowicz and Ravetz (1993) typology of problem-solving strategies (a)

Funtowicz and Ravetz's typology (see Figure 5a) uses levels of decision stakes (x-axis) and system uncertainties (y-axis) to distinguish between applied science, professional consultancy and post-normal science respectively as suitable types of problem solving strategies.

The logic underpinning Funtowicz and Ravetz's model could be adapted to develop a typology of knowledge. This would allow us to evaluate partners' choice of mechanisms for evaluating their pilots. For example the x-axis could be relabelled as 'divergent or incompatible values' across the involved publics and y-axis could be relabelled 'understanding of the local context'. Then low, medium or high levels (of each axes) could be used to distinguish between different types of impacts based on their dependence on the rational need to gather and analyse objective, semi-objective or subjective knowledge (Figure 5b).

The limitation of such an approach would be the significant amount of time required to develop a defensible rationale of what constitutes 'low', 'medium', and 'high' levels of 'divergent or incompatible values' and 'understanding of the local context'. On the other hand, the advantage would be the opportunity of developing a logic model that could guide pilots towards the correct types of engaging opportunities, evaluation criteria,

methods of data collection and techniques of analysis based on the types of knowledge rationally required to evidence specific types of impacts expect to be generated by the DIY MAZI-toolkit (Figure 6).

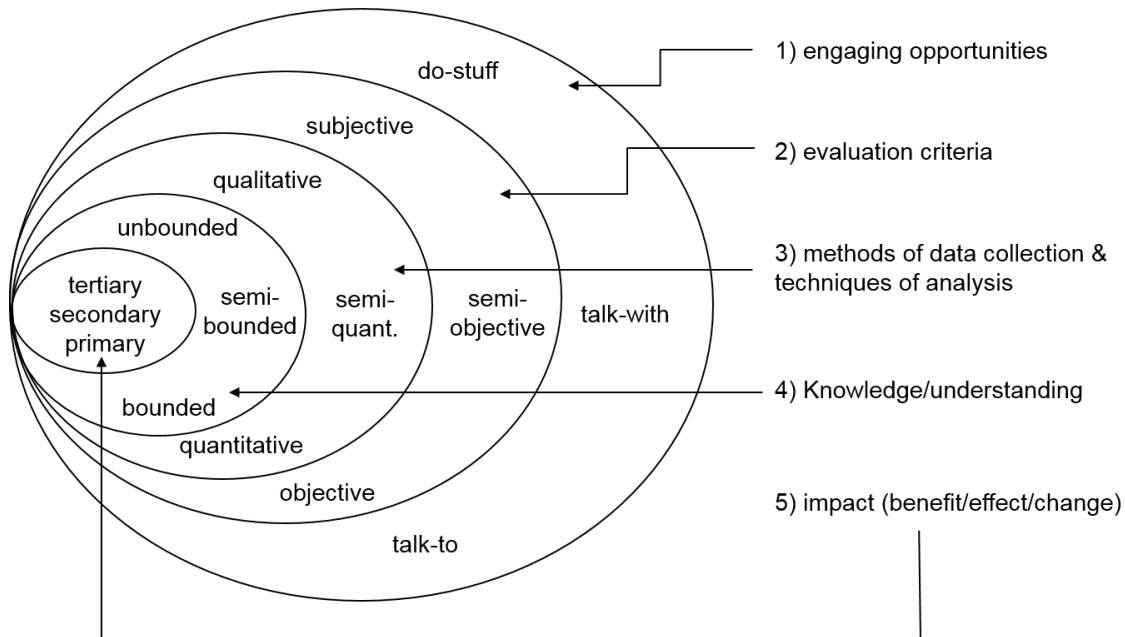


Figure 6: Multilevel model illustrating the logic between types of engaging opportunities, evaluation criteria, methods of data collection and techniques of analysis, knowledge/understanding and impacts (adapted from Saunders et al., 2007)

The potential value of drawing on the logic illustrated in Figure 6 is the scope of using it: (1) to position pilots in terms of their reliance on different types of knowledge for meeting different strategic objectives; and (2) to act as platform for comparing the different mechanisms (e.g. methods of data collection and techniques of analysis) that pilots choose to use to evaluate similar types of knowledge.

A key challenge therefore is managing complexity: other authors have recognised the challenges of theorising and generating analytic models that enable research and evaluation of participatory processes (e.g. Bossen et al., 2016; Carpentier, 2016). We recognise, however, that the challenge evaluating the effectiveness of technology that represents a diversity of stakeholder interests is not new and we will endeavour to draw upon existing approaches. McAndrew et al. (2010), for example, demonstrated the use cultural historical activity theory to aid in carrying out a multi-level evaluation. Drawing upon this provides us with a method and a rationale for evaluating the nature and quality of learning alongside the user-centred approach to understanding interactions with the technology. Other CAPS projects have also developed comprehensive frameworks for assessing social innovation from the perspective of both impact and social change (CAPPSI, 2017). A greatest challenge, however, will be ensuring that pilots are engaged throughout and actively participating in the development of the comparative evaluation framework. To achieve this, we will follow the lead of scholars such as Stillman who “encourages the adoption of participatory action research methodologies for the evaluation of community technology” (Stillman, 2005, p.77). By adopting a participatory approach towards the development of a comparative evaluation framework will give us the opportunity to provide a thick description of the technical and social challenges.

Going forwards we will draw upon these and other existing approaches to enable us to simplify the challenge of gathering in data from partners; enabling meaningful comparative evaluation, while not losing richness or creating tasks that overburden partners. We now turn to present our initial responses to this challenge.

2.1 MAZI's diversity- the challenges and opportunities of interdisciplinarity

In the section immediately above we outlined ways of potentially developing a framework for carrying out a comparative evaluation of MAZI pilots. We now turn to consider how this might be achieved given the diversity of MAZI partners and the pilot studies, and recognise that this creates both challenges but also opens up opportunities. A key challenge we face is to establish a participatory approach that is sophisticated enough to account for diversity of contexts and roles that the pilots play in the development of MAZI toolkit, without overburdening the partners.

The four MAZI pilots consist of the following:

- *Pilot 1 – Neighbourhood Academy*: Explores and aims at creating local and global neighbourhoods through collective learning, sharing knowledge and experiences within the scope of critical urban practice.
- *Pilot 2 – CreekNet*: explores how a long standing wireless community network may be revitalized and enhanced to bring together communities facing gentrification and environmental challenges along an urban watercourse.
- *Pilot 3 – Kraftwerk1*: explores how technology can further support existing democratic and participatory processes within a large housing cooperative through playful interactions for collective awareness and an external knowledge transfer project for self-reflection and engagement
- *Pilot 4 – The unMonastery*: investigating how temporary communities of strangers can live and work together based on a monastic model, and working alongside local communities to contribute towards the identification and dissolution of local social challenges.

The four 'academic partners' in the pilots have different disciplinary backgrounds and each of the 'community' partners bring different expertise, and are operating under a different set of organisational constraints, based in different countries, engaging with a different set of publics and addressing a different set of issues (see Table 1 for declared domains of expertise). The common theme across the pilots is the commitment by the academic partners to work together with their community partner to find ways that they (and/or their publics) can use DIY networking to better engage their publics.

Table 1: Partners' declared domains of expertise of Universitat Der Kunste Berlin (UdK), COmmon Grounds (CG), Open University (OU), Slacktivist Limited (SPC), Nethood (NH), INURA Zurich Institut (INURA), Edinburgh Napier University (NU), UnMonastery (UM)

Pilot	Partner	Expertise
1	UdK	Interaction design, Participatory design, Design research
1	CG	Community based learning, Community activism and participation, Eco-social transformation
2	OU	Community informatics, Human-Computer Interaction, Engaged research, Decision science
2	SPC	DIY network and access technology training, Media production
3	NH	Computer science, Interdisciplinarity, Urban studies, Architecture
3	INURA	Geography, Urban and Cultural studies
4	NU	Urban Interaction Design, Human-Computer Interaction
4	UM	Philosophy, Design, Anthropology, Politics, Technology, Art

Each of the pilots operate over a different duration (Berlin M3-33, Creeknet M5-33, Kraftwerk1 M12-33 and unMonastery M15-36) and have approached how they evaluate their work in different ways. The following figures (7- 10) represent the phases activities recorded in the Description of Work for each pilot.

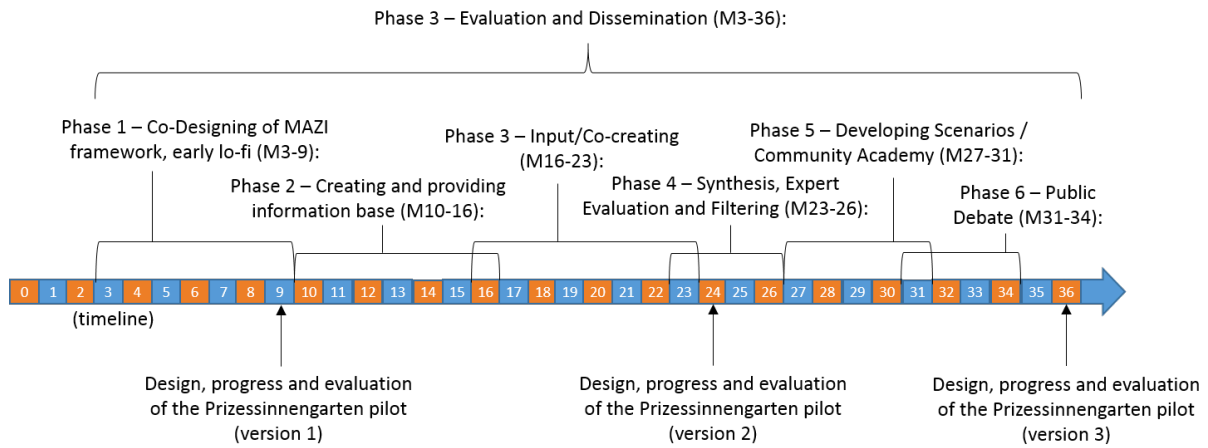


Figure 7: Timeline for the seven phases of the Neighbourhood Academy pilot

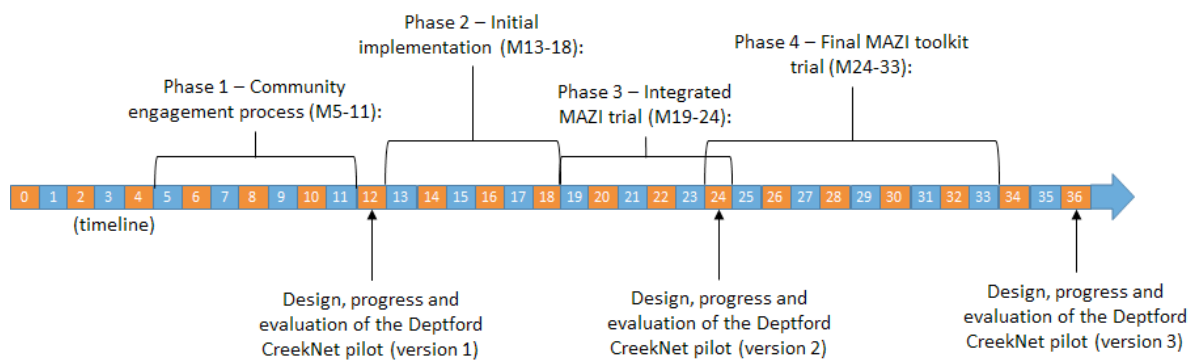


Figure 8: Timeline for the four phases of the CreekNet pilot

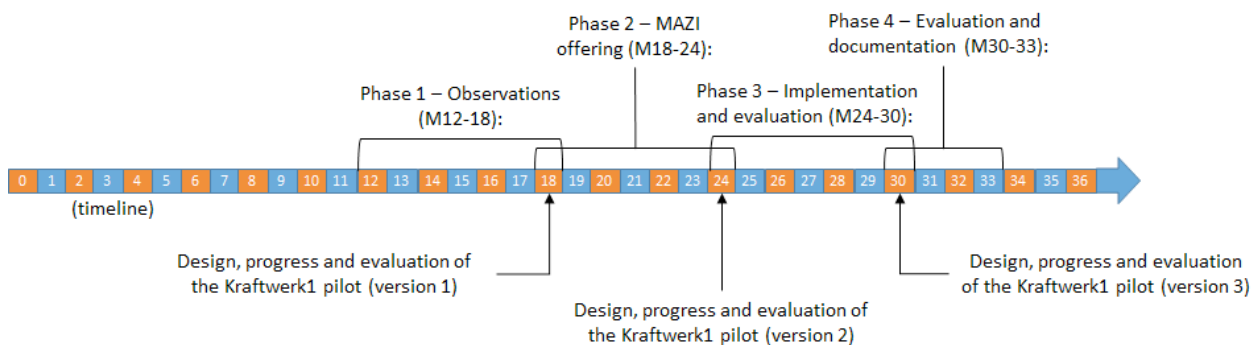


Figure 9: Timeline for the four phases of the Kraftwerk1 pilot

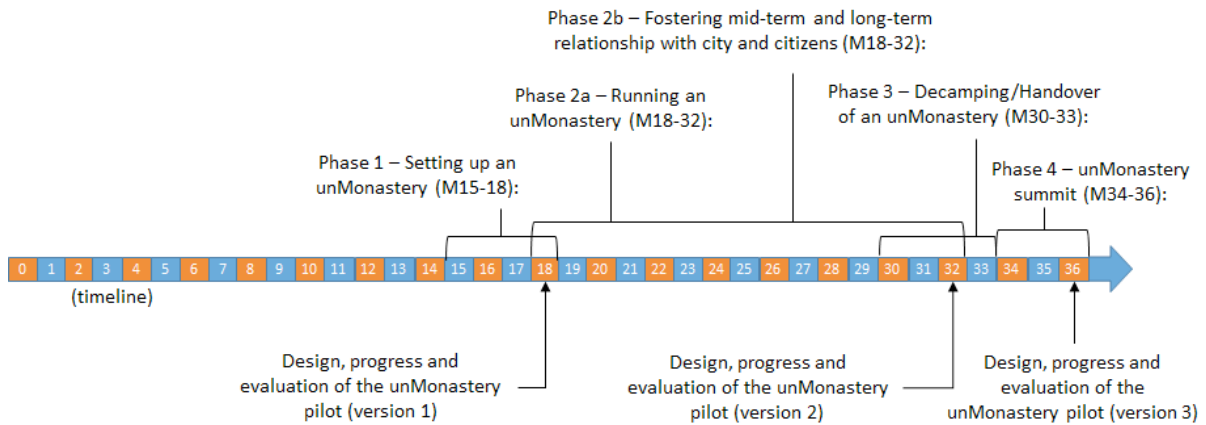


Figure 10: Timeline for the four phases of the unMonastery pilot

The challenges we face in bridging across the different pilots’ evaluations also gives us a great opportunity to explore how different disciplines value, access and utilise knowledge in different ways. This will also put us in good stead to highlight opportunities for academic and community partners to learn from each other, thereby informing the design of the cross-fertilization events (reported in D3.5-7 and D3.11-13). Mapping the different disciplinary approaches into a complementary picture that represents the full range of understandings will support the development of a shared comparative meta-evaluation strategy that has the potential to become a learning process for the MAZI participants (the partners) respecting their different expertise bases (Arden et al. 2010) and move us towards “a shared understanding about the problem, and a shared commitment to the possible solutions” (Conkin 2005 p17).

3. Towards a Comparative Evaluation Framework

This section will explain what sources of information we are drawing on to carry out a comparative evaluation of MAZI pilots, with the goal of moving towards a comparative evaluation framework. We explain how a series of mechanisms are being used to gather information from the pilots and the wider consortium. The emphasis is on adopting a participatory action research approach to ensure we are actively listening and learning from our pilots. Wherever possible we intend to provide valuable feedback about the pilots' complementary definitions and measures of success.

It is our intention that the final framework will reflect the pilots' values and expertise, so that it's representative of their own paradigms and methodologies for analysing progress. This intends to go beyond the conventional 'one size fits all' approach to evaluation. We intend for the framework to be capable of drawing together each partner's expertise to achieve a synthesis that celebrates diversity as it attempts to piece together insights in what might be closer to something resembling a 'jigsaw approach'.

One of the achievements so far has been to negotiate a set of high level, lightweight instruments that can initially engage each pilot team in the activity, and elicit data while maintaining local diversity. These have enabled us to gather data about the pilots' activities and commence with the initial developments of a comparative evaluation framework (see Figure 11).

Figure 1 illustrates mechanisms we are using to pull together information from across the work packages, which partners will actively engage with in the process of interdisciplinary activity to assess the validity of logic underpinning the developing framework. Currently, we have identified the following mechanisms to draw upon to gather data, inform the comparative evaluation and the theorising of a framework:

1. The 6Ps: principles for guiding engaged research, used as a structuring device for pilot's reporting- we have data from Neighbourhood Academy and CreekNet pilots' first deliverable reporting (D2.1 and D2.4). These were summarised using the 6P's as a structuring device in D3.6.
2. Interviews and surveys: with partners to prompt reflection and follow-up reporting, e.g. asking partners for examples of evaluation methods used in their fields
3. Cross fertilization events (reported in D3.11 to .13): identifying best practices and reflection on strategies for engaging with the goals of MAZI
4. Project meetings: reflecting on notes taken and reports (Volos M1 , Berlin M6 and Rome M13)
5. Project deliverables: deriving knowledge from formal project reporting
6. Contributions to knowledge: other dissemination and publishing activities carried out by project partners, e.g. project blogs, publications, existing tools

This initial set of mechanisms has enabled us to begin to gather data, according to the progress made by each pilot. We expect the ecology of tools to vary and grow over the course of the project and their reporting level to also vary.

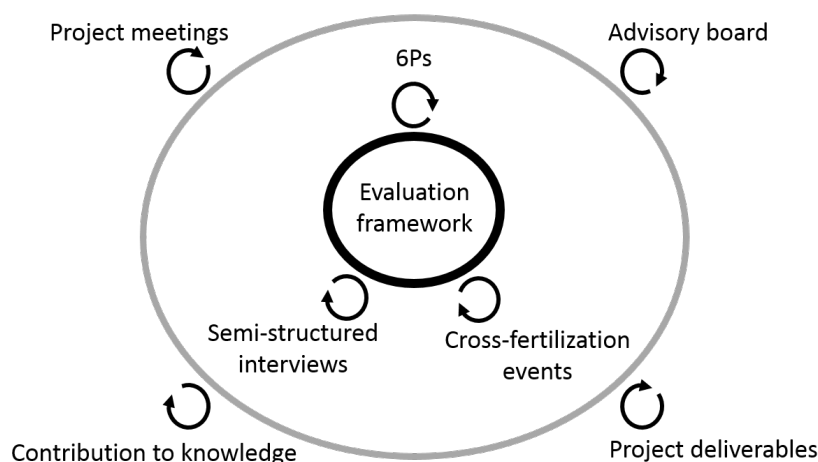


Figure 11: Mechanisms to support the development of an evaluation framework

Below, we describe the instruments and how they have been used to date.

3.1 The 6P's

To enable reporting from each pilots in a coherent manner we have employed the six principles of engaged research (6P's: Holliman et al. In Press; 2013). Originally designed to help universities plan and reflect on public engagement with research, the 6Ps act as a set of prompts to aid in making sure due consideration is paid towards:

- *'Preparedness'*: identifying local contexts, understanding of the challenges to be faced, the researchers' preparations for dealing with these challenges.
- *'Politics'*: understanding the local social and political contexts in which the research would be carried out.
- *'People'*: identifying the people that will be involved or affected by the work: the researchers, the community partners with whom are engage and any other participants that may be affected.
- *'Purposes'*: clarifying the aims and objectives of the research from the perspective of MAZI, the participants involved and other stakeholders.
- *'Processes'*: pinning down the approach and the methods of data collection and techniques of analysis used to evaluate impacts.
- *'Performances'*: considering what was found and the extent to which this met the objectives of the research.

Each pilot represents a different interdisciplinary partnership set-up to address similar yet different issues. The introduction of the 6Ps has been a success in creating a structure that ensures that the feedback we get from the pilots in the deliverables are addressing the same set of principles. The four MAZI pilots are at different stages of development, starting at different times, so the evaluation cannot draw direct comparisons in terms of progress. The third pilot (Kraftwerk1) has just commenced (M12) and the fourth pilot (UnMonastery) has yet to start (M15). We therefore provide initial findings from the first two pilots, Neighbourhood Academy (commenced M3); and CreekNet (commenced M6). The table illustrated in Figure 12 has appeared previously in D3.6 and is represented here with additional commentary that identifies key insights that have been derived. These observations will provide feedback to the pilot design methodology, and help inform project best practices.

Commentary 1 ('Preparedness'; 'Politics'): both pilots reflect on the politics characterising their engagement, both are related to issues characterised by the societal-level politics and challenges of urban development ("gentrification"; "contested space"). Pilot 1 is focused more on institutional level politics, and Pilot 2 is more focused on the stakeholder level politics. During earlier D2.1 discussions, the UdK leader indicated that reporting through the 6P's lens on politics had prompted reflection around the value for their host organisation, as well as the groups with which they were engaging. 'Power relations', a similar concept to 'politics' has been analysed within D3.11 ('MAZI as an experiment in interdisciplinarity') as part of the process of constructing a shared, common vocabulary around the design of hybrid space.

In the future we might ask partners to reflect on ways that DIY networking has enabled them to engage with the implications of pertinent policy instruments and whether this has changed things in terms of how ethical and fair they perceive the process to be.

Commentary 2 ('People'): both pilots seek to explore how DIY networking might foster conversations between co-located disparate groups, and local residents, around challenges specific to their locality. Initial community engagement activities have revealed a wide range of attitudes and competencies with respect to networked technologies and DIY-tech cultures. We will need to reflect in Task 1.5 (MAZI Toolkit 'Guidelines and templates') about the implications this has for the supporting documentation for the Toolkit. We cannot assume technical expertise on the part of likely participants. These common themes also raise the possibility that a MAZI cross-fertilization event might enable community activists in each separate location to share common experiences, both in terms of strategies for addressing community challenges and measuring progress towards goals, but also sharing best practice and peer support around the MAZI toolkit to ensure they can share expertise (and resolve issues) to achieve their aims.

	UdK/CG Nachbarschafts-Akademie (NAK) in Berlin	OU/SPC CreekNet in London
1	Preparedness The pilot supports Neighborhood Academy as it builds platforms between various actors and networks from the context of DIY urbanism in Berlin and beyond. NAK is located in Berlin's Prinzessinnengarten, a contested space with an unclear future. Through developing tools for sharing knowledge about novel forms of urban action, the pilot aims at sparking and fostering lively discussions among neighbours, initiatives and city authorities.	The pilot supports SPC's engagement with local community organisations and activists as they seek to respond to local challenges. Reinvigoration of SPC's Open Wireless Network, in operation since 2008. Challenges of rapid gentrification in Deptford area displacing existing communities and social and cultural organisations and bringing in new residents. Major infrastructure project (Thames Tideway) on site next to Deptford Creek likely to have environmental impact due to works (building, and transportation of waste either by boat or road).
	Politics The research is closely tied into various political dimensions. Urban development is a highly discussed topic in Berlin at the time of the pilot, with city government now pushing for a turn towards more sustainable practices. Pilot involves a diverse range of formal and informal practitioners (e.g. right-to-the-city-activists).	Recognising SPC's longstanding engagement and interactions in the local area. Working with small scale voluntary organisations and individuals who are limited in resources. Pilot involves a diverse range of local actors across the geographic spread of the pilot study area facing a range of challenges and with a variety of established political networks.
	People The pilot has different levels of inclusion and affection: UDK and NAK are the main partners that carry out the research. However, the wider network of initiatives around NAK plays an important role, either as actors involved in participatory design sessions or as bearers of knowledge that NAK aims at combining within and by the MAZI pilot. Finally, citizens and decision makers of the city of Berlin are affected by the urban development processes this pilot aims at engaging in, hence the range of affected people can increase significantly.	Developing a working relationship between OU as an academic partner and SPC as a community technology organisation already deeply embedded within the locality and having existing and long term relationships with diverse groups. Working alongside community activists, technology enthusiasts, and community organisers; individuals and small scale organisations, many of which work on a voluntary basis.
	Purposes Creating "spaces" for different forms of knowledge around critical urban practices to coexist and synergize. Providing a knowledge base to engage with for both experts and laymen (neighbors). Provide discursive base for deriving collective awareness that leads to political action. Developing network technology in and out of a non-market, critical, value-driven context.	Enabling the building of relationships across diverse groups and the development of tools to allow collection and dissemination of information to build a sense of collective awareness, informing long-term and new residents about what is happening around them, revealing hidden stories and histories, and engaging and enabling debates about the identity and future potential of their shared lived environment. An exploration of the extent to which the MAZI toolkit can provide an alternative media channel to current outlets and enable debate around urban development issues.
5	Processes Participatory Design: Designers & non-designers, technologists and non-technologists, community activists and institutional researchers as well as artists and non-artists collaborate on iterative processes of development. Stages include the exhaustive discussion of context and problem space, the ideation of possible routes, rapid prototyping and the deployment of early-stage instantiations for explorative use.	Participatory Action Research approach: actively engaging with local community partners in the cocreation of knowledge, building alliances and promoting social/collective change, recognising their expertise around local challenges. Emphasises empowerment and seeking long term sustainability. Stages include community engagement, shared explorations of challenges and potential solutions, rapid prototyping, deployment of early-stage implementations and building local capacities.
6	Performances The pilot is currently in phase II, after completing community outreach, definition of problem spaces, first prototyping and testing. Currently, we are simultaneously working on a second generation prototype while use-testing the first one, generating valuable content for the NAK knowledge base.	Phase 1 has been completed (community engagement) reaching out to identify potential MAZI participants. Activities in Phase 2 are likely to focus on four groups who act as hubs for local activity at different locations along the Creek, developing their infrastructure and capacity to support and explore MAZI toolkit prototypes within their working practices.

Figure 12: Summary of Neighbourhood Academy (NAK) and CreekNet reporting to 6Ps (from D3.6)

Commentary 3 ('People'): Both pilots have incorporated the use of maps into their recording processes to identify the geographical spread and relationship networks of participating groups and organisations in their pilot study (examples are presented in Appendix A). These have been used within workshops as engagement tools and boundary objects, and form a dynamic record of interactions. The CreekNet pilot has been exploring the use of the web based Kumu relationship mapping software (<http://www.kumu.io>) and this was introduced at the Rome project meeting (January 2017) and well received by other pilot teams. We will explore trialling this across the pilots to enable the generation of representations using a common platform, which will help comparative analysis.

Commentary 4 ('Purposes'): Supporting the development of sense of place, and neighbourhood are invoked by both pilots; building relationships through the generation of a shared “knowledge base”. The provision of an alternative to existing network channels is a common theme (“non-market”; “alternative media channel”); though the Neighbourhood Academy reporting highlights “political action” while the CreekNet reporting indicates supporting “debate”. ‘Participation’ is also highlighted as a vocabulary term that has been explored within D3.11 (‘MAZI as an experiment in interdisciplinarity’) as part of the process of constructing a shared, common vocabulary around the design of hybrid space.

Commentary 5 ('Processes'; 'People'): Different disciplinary approaches are taken in the two pilots to participatory-based research: design, and action research. These reflect the backgrounds of the partners, and while both emphasise both “rapid prototyping” and discussion as mechanisms for understanding community needs the CreekNet pilot has a greater focus on ‘engagement’ and building relationships than the Neighbourhood Academy pilot, where the focus is more on collaborative processes, suggesting that a broad spectrum of participants have already engaged with the MAZI project concept.

This aspect of the 6Ps, ‘Process’, may in future be a useful lens through which we can analyse the pilots to reflect on the success and challenges of gaining buy-in for DIY networking, e.g. asking what competences, credibility and organisational capacities are necessary for the implementation of the MAZI-toolkit in their areas of study. ‘Process’ is also a key term that has been analysed within D3.11 (‘MAZI as an experiment in interdisciplinarity’) as part of the process of constructing a shared, common vocabulary around the design of hybrid space.

Commentary 6 ('Performances'): Both pilots structure their discussion in terms of phased approaches to actions: community outreach/engagement and exploration of toolkit prototypes. The difference between the capacities of each pilot team is revealed with the Neighbourhood Academy pilot referring to developmental work on prototypes, while the CreekNet team instead declares exploration of the toolkit, indicating usage rather than hands-on development. Both pilots refer to their focus on encouraging the use of the MAZI toolkit within the communities to support working practices of the groups themselves.

3.2 Interviews and surveys

Interviews and surveys will be used to carry out periodic prompting of questions to stimulate reflection from partners about their design, progress and evaluation of their associated pilots. Interviews will be carried out face-to-face at convenient points in the project (e.g. regular project meetings, cross fertilisation events) and also remotely (e.g. Skype). We expect to use both individual and group interviews. Semi-structured surveys will be used in a similar manner to elicit rich data around specific topics.

So far we have used two instruments:

- Email survey: to understand pilots’ strategic objectives, detailed objectives, key performance indicators and metrics being considered. This has provided us with a snapshot of instruments and goals currently being considered.
- A semi-structured interview with each pilot team to understand (a) definitions and measures of success, and (b) concerns and hopes about what a comparative evaluation might achieve.

Responses to the email survey we recently sent out to pilots can be seen in Table 3 (in Appendix B). Further analysis of this data will be presented in version 2 of this deliverable (D3.9).

The first set of interviews we carried out were semi-structured centred around understanding how pilots defined and measured success in their respective fields (or disciplines) and what fears and hopes they had about participating in a comparative evaluation of the MAZI pilots. We recognised some of the terminology around evaluation (e.g. 'Key Performance Indicators', 'Metrics') may not be familiar to project partners so aimed to bridge this linguistic divide by asking partners to reflect on what success looked like for them in their practices, and how they were accustomed to measuring progress towards their goals. The following list provides illustrations of partners' responses to questions about: their definitions of success in their disciplines and in the context of MAZI; measures of success; and their fears and hopes for what role the comparative evaluation of the MAZI pilots will serve. A more detailed analysis will be reported in D3.9, the second version of this deliverable (M26).

3.2.1 Definitions of success:

Pilot 1:

- On an impact scale - to start discussions around ownership of digital networks with partner organisations. At the pilot level, if the infrastructure being built will be comfortable enough for other teachers and people getting connected to use. At the outreach level, the interest by other organisation wanting to take part in the project and use the technology being developed.
- When DIY networking acts as a triangulator to bring different discourses together and to see how they relate to each other; creating a place where people can work together in ways that permit social relationships to emerge. To introduce the topic of technology into discourses because it could be hugely influential. From an urban design perspective that the end product will correlate with the needs of the people. Development of a participatory process where the technology can be seen as a triangulator to facilitate the political process.

Pilot 2:

- When you feel the tug of feedback - when you feel the project you're supporting, activity that you've initiated or are helping 'floats' and is sustained by its own energies without needing constant input from yourself. The swell of goodwill of people feeling that they had a positive outcome.
- Evidence of 'learning' occurring in pilots (in the broadest sense) and 'sustainable' outcomes: community groups taking on the MAZI-toolkit themselves and being able to sustain with little or no input from the MAZI project team; local appropriation of MAZI-toolkits to solve own needs; evidence that engagement with MAZI has advanced local causes in Deptford CreekNet (e.g. engaging with politicians, changing decisions); positive outcomes for SPC.

Pilot 3:

- Expand institutional capabilities to conduct research with the goal of being able to expand into education with a balance between publications and action orientated outputs. The ability to promote a new concept such as the hybrid city.

Pilot 4:

- The prospect of developing a theory of change institutionally and within the context of MAZI. The ability to contribute towards design of the users' experience before they get to engage with the technical components of the toolkit.
- Generally, by making a contribution to the broader knowledge of toolkit design based on the work of the project and the ability to articulate this learning both within and across disciplines. Specifically looking at success from three different perspectives: (1) as a research institution; (2) at the pilot level; and (3) as a project as a whole, which aren't necessarily dependent on each other.

3.2.2 Measures of success:

Pilot 1:

- Whether people are interested in it. How many people have taken up the concepts and are using it to build something. By listening to how people talk about structures built by the pilot to know whether they are projecting the correct impression.
- The willingness of the community itself to adopt the technology. That other pilots start to use the technology we develop for our pilot. The breadth and number of others adopting the tools and whether MAZI values are sustained in the use of MAZI tools.

Pilot 2:

- People 'paying forward' - helping others. Subscriptions to SPC: a commitment: (1) people using the SPC space; (2) people paying to join as a subscriber and taking on the philosophy of SPC's collaborative model (3) people introducing others to the space and bringing them along; (4) supporting the infrastructure (e.g. attending regular open sessions and taking on the role of opening up the room for visitors; maintaining the computer network; etc.).
- Mostly qualitative. Independent evidence of impact; examples of groups working with MAZI promoting the toolkit to other groups; evidence of local change as a result of engaging with MAZI; enquiries about participating in MAZI from groups not approached by the project team; academic publications.

Pilot 3:

- The opportunity, possibility and engagement of others in the debate around new concepts. Journal & conference publications and reports & event documentation. Citation of publications. Funded research and community outreach. Fellowships. Being able to contribute towards a network where the number of people that attend and revisit events matters. Collaborations with similar citizen initiatives. When ideas or concepts are taken up by others. Receiving endorsements.

Pilot 4:

- The UnMonastery Book of Mistakes: whether visitors enjoy the work and find it fruitful; use of narratives to inform decision making.
- Publications, future research based on the work carried out within MAZI.

3.2.3 Fears regarding the comparative evaluation framework:

Pilot 1:

- Overuse of questionnaires and that focus will be about gathering data and not about understanding the project. That the community and social part of the projects gets lost. That all the attention will be taken up by focusing on appropriate yet very time consuming indicators of success. Time consuming that would create stress.
- That it will focus on the number of clicks rather than the content of conversations.

Pilot 2:

- Despite the efforts to annotate and record, the same familiar mistakes and misunderstandings that have happened before in DIY networking will occur, and will prevent the best use of time and energy on the project.
- That the work is seen as a burden by partners and is not engaged with, and hence becomes a single partner endeavour (OU); that the work does not inform either the pilots or beyond.

Pilot 3:

- That too much emphasis will be placed on the use of weak measures, such as requiring community partners to use a scale of trust when the setting is inappropriate, which could erode the trust between partners.

Pilot 4:

- Potential confusion and divisions between pilots as a result of differences in understandings about

the meaning of terminology and the relevance of what they are being asked to report on.

- That it won't succeed communicating the ways of working and these won't be valued.

3.2.4 Hopes regarding the comparative evaluation framework:

Pilot 1:

- That we would get a different form of evaluation that speaks to people and that doesn't repel people. Finding ways of presenting results of evaluations that speak to people that make it interesting to see why it's important to evaluate your own project; that you really have the possibility to evaluate the project and change your way of working in a way that's going to help. That it can be made part of the project in a way that helps the pilots to really understand the purpose for engaging.
- That it will help pilots to navigate the need for evidencing the reach as well and depth of impact. That it will help pilots really to learn how to evaluate themselves so that it makes the project better and the following project better too.

Pilot 2:

- That the evidence arising in one situation (the MAZI pilots) benefitting the others.
- The development of a model that enables us to capture and interpret the activities of each of the pilots and can be used more widely (e.g. evidence that it is taken up and explored by others). Hoping that it will enable pilot teams to be reflective about their practice and learn examples of best practice from the other pilots, so that the result is greater interaction between pilots and improved performance from each. Our ambition is that the comparative evaluation work is seen as valuable by partners and becomes 'owned' by them, and they play an active role in contributing.

Pilot 3:

- That it will allow pilots to express themselves by carrying out their own evaluation; operating at the meta level, curating, analysing and pulling together comparable insights and lessons from each pilot. That it will draw upon participatory approaches that give the pilots opportunities to critique each other's tools and techniques for evaluating their pilots. For example, giving pilots the opportunity to experience the diversity of methods and difference of perspectives. To function as the triangular facilitates self-reflection and a sense of community within the team.

Pilot 4:

- That the framework would bring people from the pilots together, acting as way of help them really see and learn from each other.
- That evaluation across the pilots will validate the methodological approach and the validity of knowledge that comes out of the project. That it is practically useful with regards to bringing clarity to the different aspects; to be a helpful articulation that able to provide clarity about how aims, goals, sub goals, methods, approaches etc. all relate to each other.

At the end of each of these interviews we emphasised that our intention for D3.8 primarily would be to learn from the pilot teams about perspectives and measures of success. All partners expressed interest in learning about the approach other pilots used in their fields, and the suggestion that they might consider using complementary measures outside their domains was met with a positive response and an openness to learn by all partners.

3.3 Cross-fertilization events

MAZI Cross-fertilisation events are intended "to ensure that the design and evaluation of the different pilots will allow us to draw some high-level conclusions, and that successful strategies can be replicated between pilots" (Task 3.3; DoW, p.21). These are reported elsewhere in MAZI deliverables (D3.11-D3.13) and outputs also recorded after each event. These offer the opportunity to gather data from partners on the approaches they are taking to evaluation: provide evidence of mechanisms in action and in context for the host organisation, and also sessions in events may identify the approaches being taken, concerns, issues.

3.4 Project meetings

Face to face meetings where conversations occur that both provide updates on pilot activities and partners' approaches to evaluation. These can illuminate written, formal recorded reporting by pilots. For example, the issue of technical and digital literacy arose during the Rome project meeting (Jan. 2017). There were concerns were noted by two pilots about the level of expertise expected from eventual users of the MAZI toolkit (the people or publics we are seeking to engage with), and the implications this would have for the project (e.g. the level of expertise expected by the reader from the documents produced in Task 1.5, Guidelines and Templates). This conversation has since re-emerged (Feb. 2017) in an email exchange on the project partners' mailing list.

3.5 Project deliverables

MAZI deliverables represent a formal reporting mechanism that provides us with structured reflections by project partners. These can be analysed to identify approaches to both evaluation techniques and also state of pilots (data on pilots' progress). These will be reviewed to understand partners' current thinking during the project. In this report, we have drawn on the first periodic reports from the Neighbourhood Academy pilot (D2.1) and CreekNet pilot (D2.4).

3.6 Contribution to knowledge

Partners contributions to knowledge through dissemination and publishing activities may provide data or tools that enable the meta-evaluation of progress and approaches to analysis methodologies, including project blogs (e.g. <http://wrd.spc.org/>), publications, and their existing tools. For example, UnMonastery has developed the 'UnMonastery BIOS' toolkit as a boundary object to evaluate their projects throughout their development (<http://unmonastery.org/bios/>).

3.7 Additional instruments

The above list of instruments has been those first identified in initial scoping from the bounds of the project and we expect to identify and utilise an extended range as the project progresses, both from within the project and beyond.

Part of the process includes exploring existing approaches to evaluating interdisciplinary projects; for example, the CAPS project IA4SI (Impact Assessment for Social Innovation (<http://ia4si.eu/>)) has a self-assessment toolkit for social innovation projects to help understand the difference that is being made at a socio-economic, environmental, and political level by mapping inputs, outputs, outcomes and expected impacts. Contact has been made with the IA4SI team and the MAZI project will explore the extent to which we can incorporate their instruments within our evaluation processes, either through direct use of developed tools (such as the Self-Assessment Toolkit) or by drawing on their methodologies and metrics, as reported in IA4SI's Deliverable 2.2 (Passani et. al, 2016). We will explore this set of resources in further detail during the next reporting period.

Mapping and visualisation tools may provide a mechanism for partners to capture and present both the geographical range and the extent of their relationships with local actors. At the Rome project meeting (January 2017) the OU team introduced the Kumu relationship mapping tool (<http://www.kumu.io>) and we will explore this as a mechanism for pilots to capture their social networks during the next reporting period. This tool is a free, web-based application and provides visualisations based on data entry that is underpinned by the user identifying relationships and their characteristics. This underlying data set can also be exported and analysed.

4. Future Work

This deliverable represents the first of three that will report on 'Comparative Evaluation of Pilots'. Given the early stage of the pilots, this report has focussed on the development of our initial approaches to this task, and early reporting.

In version 2 (D3.9, due M26) and version 3 (D3.10, M36) we will extend our development of a comparative evaluation framework, and report on and analyse the pilots in more detail as they reach a more advanced stage of their field studies. As we do so we will explore correlations between design choices and objectives, and to inform a set of best practices to be included in the toolkit (Task 1.5).

5. References

- Arden, C., McLachlan, K., and Cooper, T. (2010). Flying blind, or going with the flow?: Using constructivist evaluation to manage the unexpected in the GraniteNet project. *The Journal of Community Informatics*, 6 (3). Available at: <http://ci-journal.net/index.php/ciej/article/view/774/647>
- Bellini, F., Passani, A., Klitsi, M., and Vanobberghen, W. (Eds.) (2016). *Exploring Impacts of Collective Awareness Platforms for Sustainability and Social Innovation*. Eurokleis Press, Rome, Italy.
- Bossen, C., Dindler, C., and Iversen, O.S.. (2016). Evaluation in participatory design: a literature survey. In Bossen, C., Smith, R.C., Kanstrup, A.M., McDonnell, J., Teli, M., and Bødker K. (Eds.) *Proceedings of the 14th Participatory Design Conference: Full papers - Volume 1* (PDC '16), Vol. 1. ACM, New York, NY, USA, pp. 151-160. <https://doi.org/10.1145/2940299.2940303>
- CAPPSI (2017) Collective Awareness Platforms for Sustainability and Social Innovation. Available at <https://ec.europa.eu/digital-single-market/en/collective-awareness>
- Carpentier, N. (2016) Beyond the ladder of participation: an analytical toolkit for the critical analysis of participatory media processes. *Javnost - The Public*, 23(1), pp.70-88, <https://doi.org/10.1080/13183222.2016.1149760>
- Conklin, J. (2005). *Dialogue mapping: building shared understanding of wicked problems*. Chichester: John Wiley and Sons Ltd.
- Chevalier, J. and Buckles, D. (2013). *Handbook for Participatory Action Research, Planning, and Evaluation*. SAS2 Dialogue, Ottawa, Canada.
- Funtowicz, S. and Ravitz, J. (1992). Three types of risk assessment and the emergence of post-normal science. In Krimsky, S. and Golding, D. (eds.) *Social theories of risk*. Westport CT Greenwood. 251-273.
- Gertler, P.J., Martinez, S., Premand, P., Rawlings, L.B. and Vermeersch, C.M. (2016). Impact evaluation in practice. World Bank Publications. Available at: https://siteresources.worldbank.org/EXTHDOFFICE/Resources/5485726-1295455628620/Impact_Evaluation_in_Practice.pdf
- Gurstein, M. (2007). *What is community informatics (and why does it matter)?* Milan, Italy: Polimetrica
- Harvey, J. (ed.) (1998). *Evaluation Cookbook*. Learning Technology Dissemination Initiative, Edinburgh.
- Holliman, R. (2013). *An engaging thesis*. National Coordinating Centre for Public Engagement (NCCPE) blog. Available from <https://www.publicengagement.ac.uk/blog/engaging-thesis>.
- Irwin, A. (2008). Risk, science and public communication: third order thinking about scientific culture, in Bucchi, M. and Trench, B. (eds.) *Public communication of science and technology handbook*. London: Routledge, pp. 199-212.
- Kirkpatrick D.L. (1959). Techniques for evaluating training programs: Part 2 - Learning. *Journal of ASTD*, 13 (12), 21-26.
- Lipsey, M. (2000). Meta-analysis and the learning curve in evaluation practice. *American Journal of Evaluation* 21, 2, 207-213
- McAndrew, P., Taylor, J., and Clow, D. (2010). Facing the challenge in evaluating technology use in mobile environments. *Open Learning: The Journal of Open and Distance Learning*, 25(3) pp. 233-249.
- Manwaring, G., and Calverley, G. (1998). Directing your evaluation. In Harvey, J. (ed.) *Evaluation Cookbook*. Learning Technology Dissemination Initiative, Edinburgh pp 9 -11.
- O'Neil, D. (2002). Assessing community informatics: a review of methodological approaches for evaluating community networks and community technology centers *Internet Research* 12, 1, 76-102. DOI: <http://dx.doi.org/10.1108/10662240210415844>
- Passani, A., Bellini, F., Prampolini, A., Vanobberghen, W., Firus, K., and Dulaskaia, I. (2016). *IA4SI Methodological framework: final version. Deliverable 2.2 of the project "IA4SI - Impact assessment for Social Innovation"*.

European Commission – 7th Framework Programme. Available from: http://ia4si.eu/wp-content/uploads/2016/07/D2.2_final.pdf

- Reason, J. (2000). Human error : models and management *British Medical Journal*, 320, 7237, 768-770
- Reason, P., & Bradbury, H. (Eds.). (2001). Handbook of action research: Participative inquiry and practice. London: Sage Publications.
- Rogers, P. (2014). Overview of Impact Evaluation, *Methodological Briefs: Impact Evaluation 1*, UNICEF Office of Research, Florence
- Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research Methods for Business Students*, (6th ed.). London: Pearson.
- Stillman, L. (2005). Participatory Action Research for Electronic Community Networking Projects *Journal of the Community Development Society*, 36, 1, 77-92

6. Appendix A Maps of Neighbourhood Academy and CreekNet Pilots

These maps have been drawn from D2.1 and D2.4, the respective deliverables for Neighbourhood Academy / Nachbarschafts- Akademie (NAK) and CreekNet to report on 'design, progress, and evaluation' of their pilots. They illustrate the approaches taken so far by pilots to represent the geographical and relationship mapping of interested and potential publics.

6.1 Neighbourhood Academy / Nachbarschafts- Akademie (NAK) visualisations

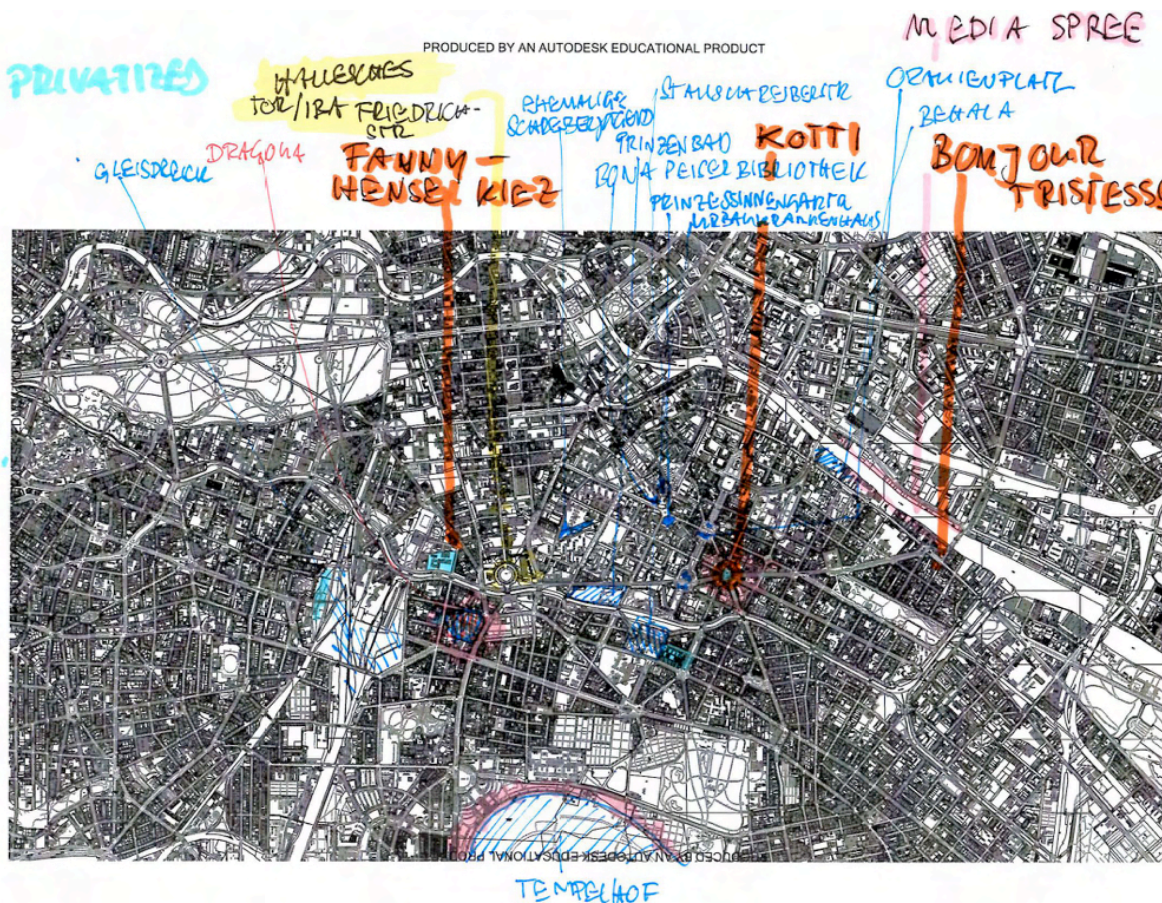


Figure 9: Contested spaces in the district of Friedrichshain-Kreuzberg

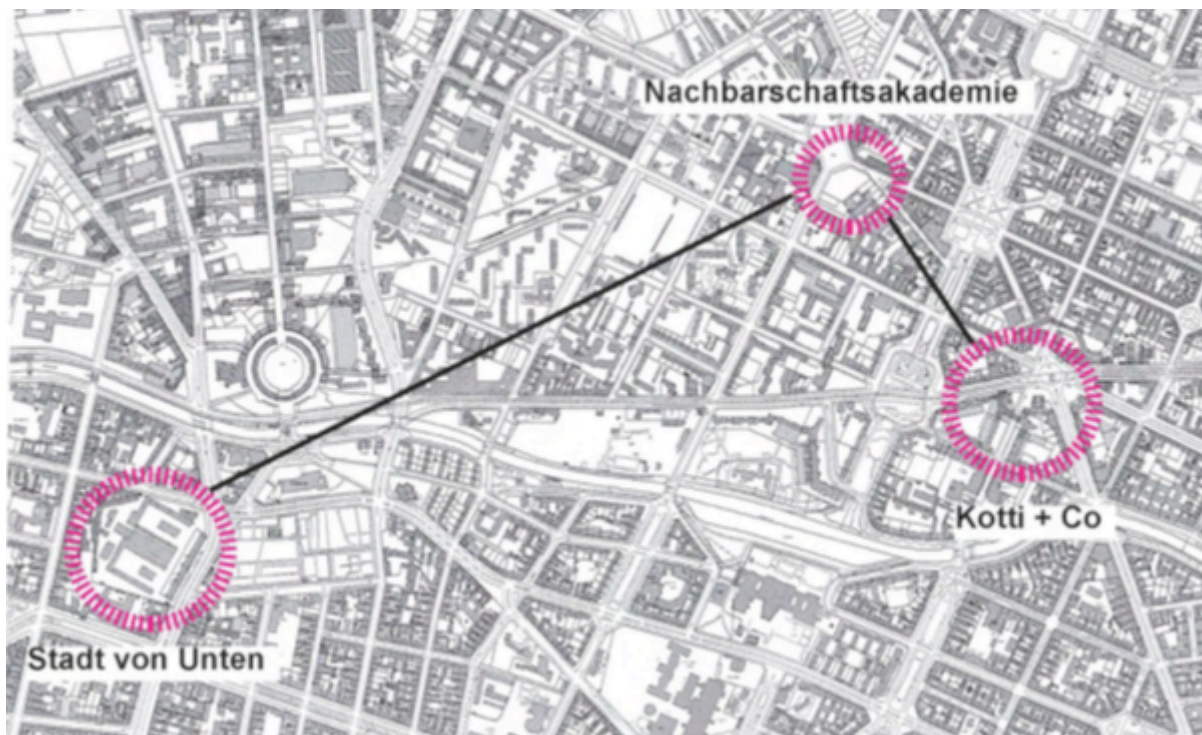


Figure 10: Physical proximity of 3 highly related initiatives in Berlin-Kreuzberg

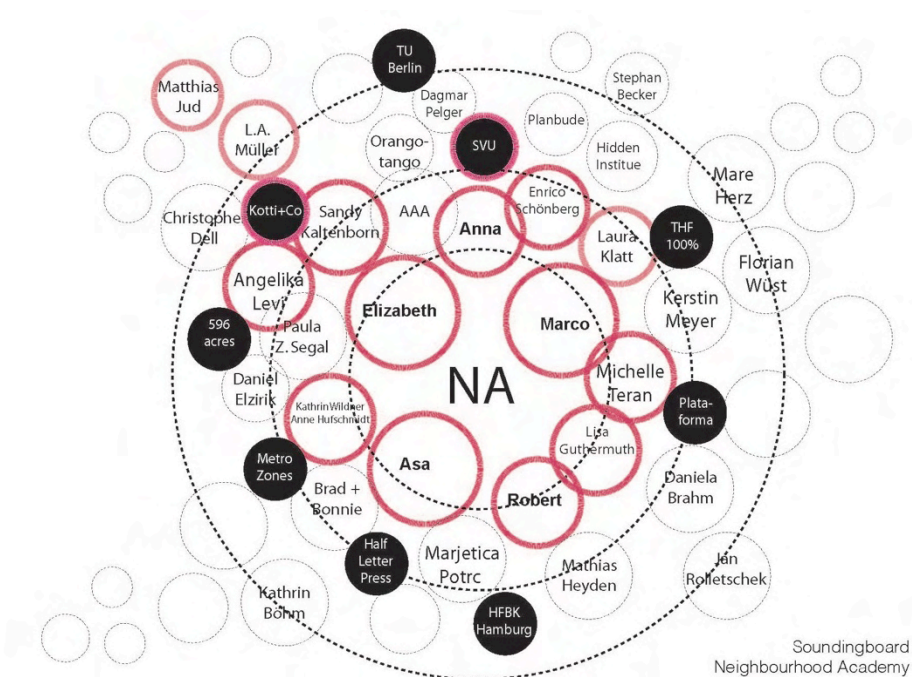


Figure 11: Stakeholders of the surrounding environment of NAK

6.2 CreekNet visualisations

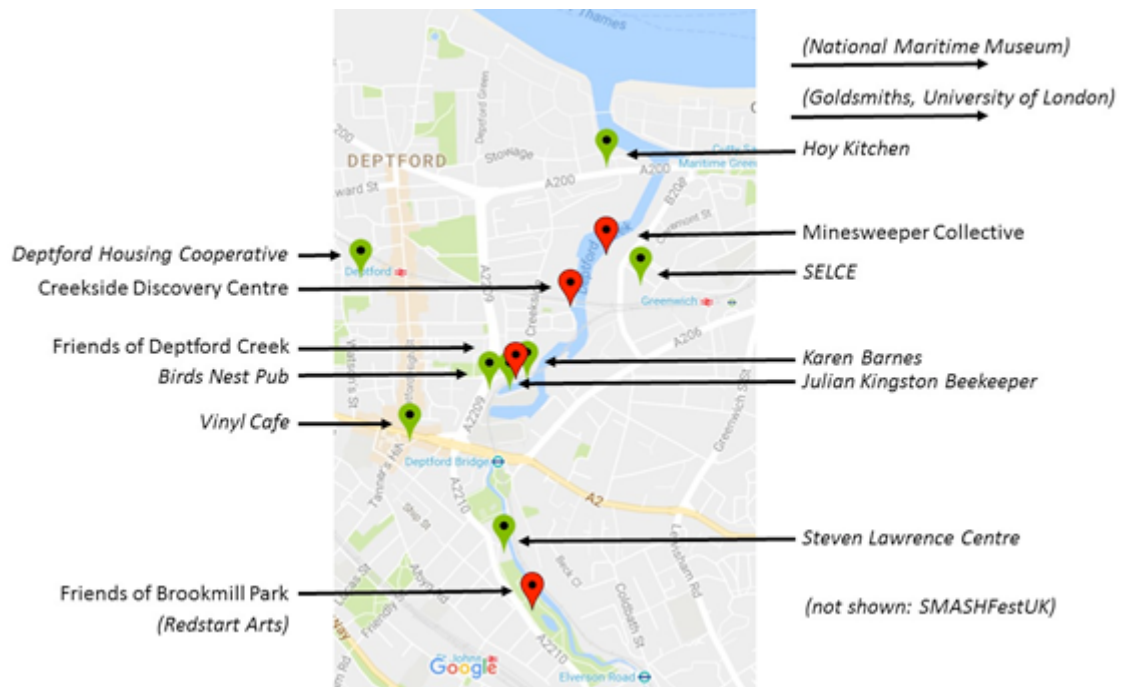


Figure 12: Location of communities contacted during CreekNet Phase 1

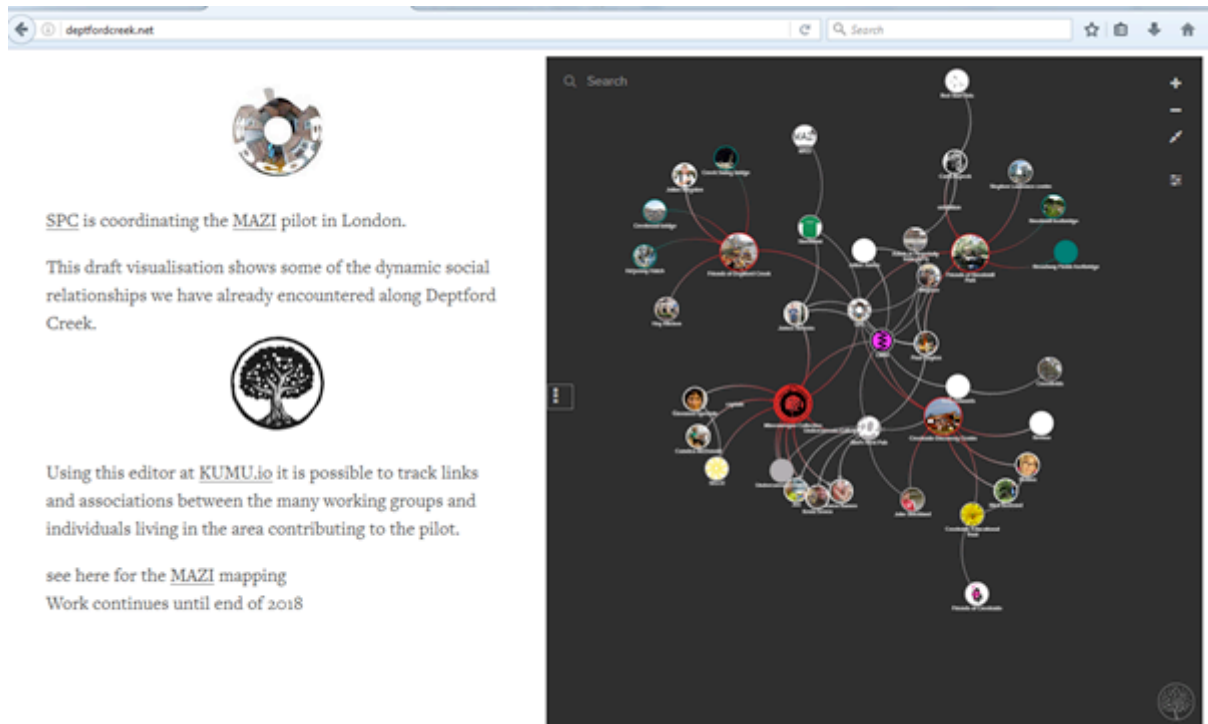


Figure 13: Kumu.io community mapping of MAZI community partners in CreekNet

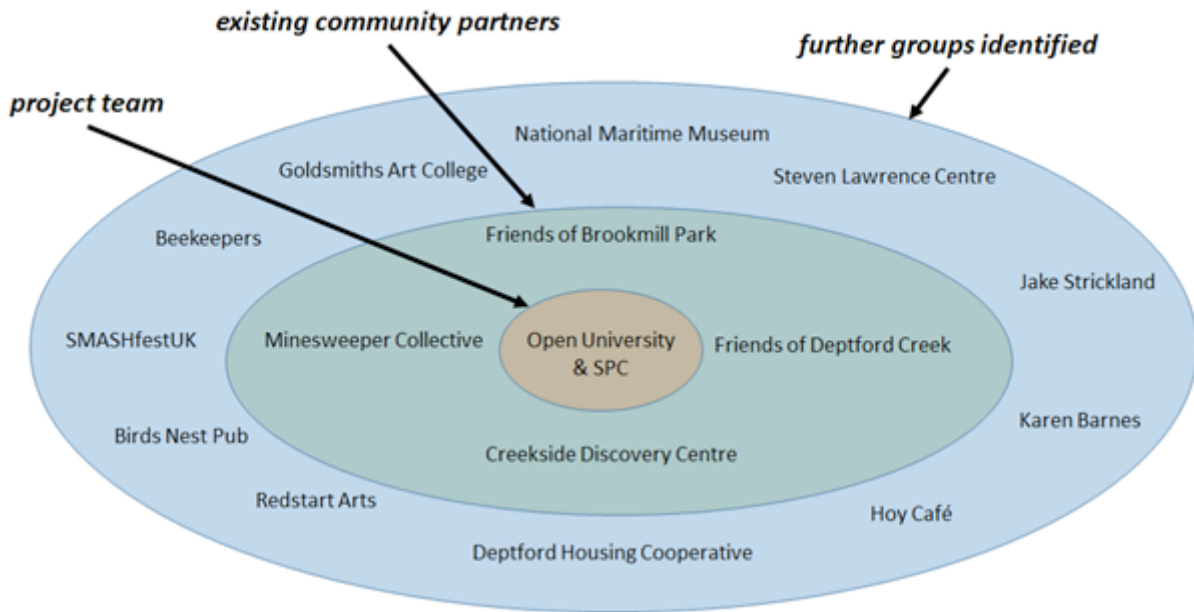


Figure 14: Actors in the CreekNet pilot: project team, existing community partners, and further groups identified

7. Appendix B: Results of survey on objectives and measures

Table 3: Partners strategic goals, detailed objectives, key performance indicators, metrics, examples of positive outcomes, and examples of useful ways of measuring success

	Neighbourhood Academy (UdK /CG)	CreekNet (OU/SPC)	Kraftwerk1 (NH/INURA)	UnMonastery (NU/UM)
Strategic goals	<p>G1: Piloting MAZI in the bottom-up development of community-oriented spaces that link together social, cultural and ecological aspects of our urban life.</p> <p>G2: Explore how MAZI can foster the cross-fertilization of local initiatives</p> <p>G3: Locating local engagement and activism as spaces of learning</p> <p>G4: Explore how the use of DIY networks can trigger a discussion on Digital Rights to the City</p>	<p>G1: Enabling community groups along Deptford Creek to capture and share information about activities, local challenges, and generate discourse</p> <p>G2: Exploring the extent to which DIY networking technologies can facilitate this communication process</p> <p>G3: Investigating the value of adding local web based services to the existing SPC wireless network</p> <p>G4: Playful exploration of current state of DIY networking tools and services currently available to understand potentials for implementation</p>	<p>G1: Support existing participatory process in Kraftwerk1/NeNa1</p> <p>G2: Act as triangulators/facilitators/ catalysts in collective awareness processes in Kraftwerk1</p> <p>G3: Develop rules and guidelines for the use of the MAZI toolkit in social processes</p> <p>G4: Collectively produce knowledge on lessons learned from 20 years of Kraftwerk1 and from the first steps of NeNa1, to be used in different environments outside Switzerland.</p> <p>G5: Participate in the current development of an operational concept for future cooperative housing projects (NeNa1), including network and social infrastructures</p>	<p>G1: Exploring the extent to which DIY networking technologies can be relevant and useful to the work of unMonastery, particularly the contexts of “temporary communities”, and working “alongside” local communities to contribute towards the identification and dissolution of local social challenges”.</p> <p>G2: Exploring the use and design of DIY technology toolkits, with a particular focus on collective and participatory activities.</p> <p>G3: Supporting the work of unMonastery in accordance with the unMonastery aims, in order to contribute to knowledge and understanding of this practice.</p>
Detailed objectives	<p>O1 (G1): Test how MAZI can be used to make information, networks and experiences of the Neighbourhood Academy accessible to a broader audience in the garden and neighbourhood.</p> <p>O2 (G1): How can MAZI foster communication between different actors concerning specific spaces or neighbourhoods.</p> <p>O3 (G2): Other local initiatives become interested in MAZI and local DIY networks.</p> <p>O5 (G4): Initiatives cooperating in the project gain interest in the relationship between rights to the city and digital ownership.</p>	<p>O1: To see the extent to which information exchange is facilitated by groups self-publishing using the MAZI toolkit</p> <p>O2: To work with an environmental organisation to see how DIY tools can improve their collection of data and engagement with local schools</p> <p>O3: To understand the take-up and use of MAZI tools when incorporated into neighbourhood locations</p>	<p>O1: Engage residents in interactions through the MAZI toolkit both inwardly (sharing information between residents) and outwardly (sharing knowledge with outsiders building new similar projects)</p> <p>O2: Organize events that bring together experts in cooperative housing projects with those interested in creating new projects in different contexts</p> <p>O3: Bootstrap the creation of a network of experts for translating Zurich’s cooperative housing models for the Greek reality.</p> <p>O4: Include knowledge developed in MAZI at NeNa1’s “operational concept” documents on technology for sustainable urban living</p>	<p>O1: To develop, through co-creation, scenarios of possible and potential use of DIY networking technologies within the unMonastery context. These scenarios are intended to reveal themes and understandings, rather than necessarily being practical or functionally realistic i.e. using critical/speculative design methodology.</p> <p>O2: To understand and articulate good practice and design recommendations for the development of participatory DIY technology toolkits.</p> <p>O3: To understand and articulate the potential role of DIY networking for unMonastery, particularly in addressing local challenges.</p>
Key performance indicators	<p>KPI01 (O1): How often and how is the NAK MAZI used within the NAK</p> <p>KPI02 (O1): Do people outside the NAK-core (i.e. teachers, residencies, public) use or want to use the MAZI to collect/archive information?</p> <p>KPI03 (O1): Is the NAK MAZI being used as a tool for learning?</p> <p>KPI04 (O1): What do visitors of the Laube/ Prinzessinnengarten</p>	<p>KPI1: How often do groups use the MAZI publishing tools?</p> <p>KPI2: What do visitors to the environmental centre think about being able to take a live digital record of the species they’ve seen when they are out and about?</p> <p>KPI3: What do local history groups think about being</p>	<p>KPI1: Participation of people in organized events and further engagement in related activities</p> <p>KPI2: Engagement of Kraftwerk1 residents in the MAZI zones deployed on the premises</p> <p>KPI3: Diversity and richness of information shared through hybrid interactions around the MAZI Zones.</p> <p>KPI4: Impact of MAZI activities in the overall quality of participatory</p>	<p>KPI1: Publishing and presenting, through appropriate outlets (e.g. website, exhibition), clearly articulated and understandable scenarios that generate useful feedback.</p> <p>KPI2: Production and dissemination of knowledge on good practice in DIY technology toolkit design</p>

	<p>think about the presentation of Information from the MAZI?</p> <p>KPI05 (O2): What types of applications have been deployed?</p> <p>KPI06 (O3): Do other initiatives show an interest in MAZI?</p> <p>KPI07 (O3): Do other initiatives decide to deploy own MAZIs?</p> <p>KPI08: (O5): Are topics of digital rights to the city being discussed in cooperating initiatives?</p>	<p>able to add their information to a DIY network based tourist trail around Deptford Creek?</p>	<p>processes</p> <p>KPI5: MAZI team’s participation in related initiatives and working groups outside our project</p> <p>KPI6: Successful integration of MAZI concepts in NeNa1’s operational concept documents.</p> <p>KPI7: Actions and events demonstrating the creation of a network of experts participating in the Greek project.</p>	<p>and participatory use.</p> <p>KPI3: Production of knowledge that is considered relevant and useful to the unMonastery communities.</p>
Metrics	<p>M1 (KPI01): How many interviews have been made in the NAK MAZI?</p> <p>M2 (KPI01): How many interviewers/administrators?</p> <p>M3 (KPI01): How many receivers of the NAK-MAZI? (guests logging on)</p> <p>M4(KPI01): What uses of NAK-MAZI have been recorder? (listening to interviews, reading synopsis, looking at attached files etc.)</p> <p>M5(KPI02): Number and role of different ‘interviewers’</p> <p>M6(KPI02): Number of contributors of information (can also be just texts, photos etc.)</p> <p>M7 (KPI06): How many interested initiatives have contacted pilot-team for more information?</p> <p>M8 (KPI06): How many initiatives/org have participated in hands-on activities?</p> <p>M9 (KPI06): Number of people/initiatives taking part in WS</p> <p>M10 (KPI07): How many initiatives deploy own MAZIs</p>	<p>M1: How many people are downloading the MAZI toolkit?</p> <p>M2:How satisfied are people with the environmental data they are getting from the MAZI toolkit (could be either a number on a scale, or interpreting their response in an interview)</p> <p>M3: Would people recommend the tourist trail to other people?</p>	<p>M1: Number of participants in events</p> <p>M2: Engagement ratio (how many people from those interacting with the pilot keep participating in similar actions and related communications)</p> <p>M3: Number of interactions during the MAZI Zone deployments (e.g., letterbox cards)</p> <p>M4: Survey the social acceptance of the MAZI technology and its role toward our strategic goals (participation and collective awareness)</p> <p>M5: Number of related events, working groups, networking activities outside the project, in which MAZI team organized or invited to participate</p> <p>M6: Dissemination activities (blog posts, tweets, articles, working documents) and their corresponding impact</p> <p>M7: The size and diversity of the network of experts being created around the knowledge transfer project.</p>	<p>M1: The quality of feedback that is recorded in response to the developed scenarios.</p> <p>M2: Measurements of “reach” of published resources on toolkit design.</p> <p>M3: Qualitative feedback from (unMonastery) individuals, gathered through interview and/or other methods.</p>
Examples of positive outcomes	<p>The NAK MAZI is an integral part of the NAK infrastructure. Coordinating team as well as “teachers” of the academy use it as a tool in their work.</p> <p>Another initiative deploys a MAZI and uses it to communicate with the residents around their space. They use it as an information-tool and a broadcaster for their political struggle.</p>	<ol style="list-style-type: none"> MAZIZones deployed on OWN nodes in the Deptford Creek area Self-sustaining network of MAZI-toolkit users (e.g. shown by ongoing attendance at SPC Wireless-Wednesday tech drop-in meetings and evidence that members are both continuing to use MAZI-toolkits in their practices and peer-resolving issues) Evidence of use of MAZI toolkit extending capacity of one or more groups who have participated in field trials, e.g. ability to self-publish, reaching out to new audiences, engaging new stakeholders/ policy-makers in debate around their challenges. 	<p>A MAZI Zone deployed at Kraftwerk1’s “Pantoffelbar” attracts the attention of more than 20 residents whose contributions go beyond impersonal statements and generate dialogue and playful interactions.</p> <p>The concept of DIY networking becomes part of the narrative on NeNa1’s visions of the use of technology.</p> <p>A number of events are organized in Greece toward creating new groups and initiatives that wish to develop a novel cooperative housing model.</p>	<ol style="list-style-type: none"> Internal to the project: Indicators and feedback from the unMonastery community that the pilot study work had value. Internal to the project: Reflections on what was learned, and what could be changed or improved for the future, in order to build on the work. External to the project: Published contributions to academic conferences and journals. External to the project: Producing/publishing practical and theoretical resources based on the experiences and findings of the pilot study such as good practice guidelines, sets of principles, accessible case study reports, manifestos. <p>Examples: http://urbanixd.eu/documents-publications/</p>

<p>Examples of useful ways of measuring success</p>	<p>(none noted)</p>	<ul style="list-style-type: none"> - New subscriptions to SPC -Quantifiable measures such as number of people attending events, downloading MAZI software, creating content posts - Examples of MAZI being referred to independent of our dissemination activities 	<p>See metric, also (from NH notes)</p> <ul style="list-style-type: none"> - number of citizens engaged in participatory events, in a sustainable way - interest, invitations, similar initiatives both in the local residents' community and in the research networks -research projects, pedagogical dimension of NetHood - collaborations with citizens' initiatives, similar non-profit organizations - successful funding, long- term and growing networks - take up of our ideas/ concepts (e.g., the term DIY networking, right to the hybrid city): scaling through replication - diversity instead of volume - connecting people, networking, bridging research and action - addressing real needs, real life - good people accepting invitations, "endorsement" - sustainability, projects active for a long time - trust (not measurable, but "obvious". 	<ul style="list-style-type: none"> 1 & 2. Qualitative and quantitative feedback using interviews and questionnaires. 3. Academic acceptance and citations. 4. Success can be measured by quantifiable measurements of reach, such as downloads, viewing figures, sharing on social media etc. Qualitative measures include positive indicators of influence and use in practice in other situations.
--	---------------------	---	---	---