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## The Amplification of Sustainable Food Initiatives: A Look at the Role of Intermediary Networks

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*Master in, International Studies*

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Political Economy

October, 2020



SOCIOLOGIA  
E POLÍTICAS PÚBLICAS

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*In Everything Give Thanks – Wendy Jo Goers*

## Resumo

A alimentação é um tópico cada vez mais importante que encontra-se nos debates sobre sustentabilidade e desempenha um papel fundamental para os Objetivos de Desenvolvimento Sustentável das Nações Unidas. Como resposta à alta volatilidade dos preços, extensos recursos e cadeias de abastecimento de alimentos de longa distância, foram formadas iniciativas alimentares sustentáveis. Essas iniciativas são vistas na literatura atual como possíveis caminhos para um sistema alimentar mais sustentável. Os intermediários de redes, em particular, são os atores nessas iniciativas que foram negligenciadas e, os mesmos, podem ser reconhecidos pelo seu potencial de funcionar como via intermediária na reunião de diferentes iniciativas sustentáveis. Este estudo busca compreender o papel que esses intermediários de redes desempenham como atores na difusão de iniciativas alimentares sustentáveis. O presente trabalho foi realizado utilizando duas tipologias. Uma tipologia de intermediários de transição para mapear os seus tipos e outra tipologia de processos de amplificação para aprofundar o entendimento de como os intermediários facilitam a difusão de iniciativas. No presente estudo, foi descoberto que *stabilizing*, *speeding-up*, *scaling-up* and *scaling-deep* foram os quatro processos influenciados pelos intermediários de redes. Além disso, foi possível expandir o conhecimento sobre como o tipo de intermediário que cada rede possui, exerce uma influência em como essas redes atendem seus objetivos. Finalmente, o estudo também expandiu a importância de ver as relações de causa e efeito que diferentes processos de amplificação têm uns sobre os outros, tais como a forma como os potenciais intermediários precisam trabalhar juntos para a realização dos seus objetivos.

Palavras-chave: Transições Sustentáveis, Sistemas Alimentares Sustentáveis, O MLP, Amplificação, Difusão, Redes Alimentares Alternativas

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## **Abstract**

Food is an increasingly important topic that finds itself at a nexus in the debates of sustainability and plays a key role in answering to the United Nation's Sustainable Development Goals. As a response to the high price volatility, resource extensive, and long-distance food supply chains, sustainable food initiatives have formed. These initiatives are seen in recent literature as possible pathways towards a more sustainable food system. Intermediaries in particular are actors in these initiatives that have been overlooked and can be seen for their potential to work as an in-between and bring initiatives together. This study looks to understand the role that intermediaries play as actors in the diffusion of sustainable food initiatives. The work was realized by using a typology of transition intermediaries to map their types and a typology of amplification processes to deepen the understanding of how the intermediaries facilitate diffusion. The study found that *stabilizing*, *speeding-up*, *scaling-up* and *scaling-deep* were 4 processes that the intermediaries influenced. Additionally, it expanded on how the type of intermediary each network is has a certain level of influence on how they meet their goals. Finally, the study expanded on the importance of viewing the relationships of cause and effect that different amplification processes have on one another and the potential intermediaries have to work together to realize their goals. This all comes with a hope to bring more information to actors and decision makers in the sustainable transition of food systems.

Key Words: Sustainable Transitions, Sustainable Food Systems, The MLP, Amplification, Diffusion, Alternative Food Networks

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## 1. Introduction

Sustainable food and agriculture are seen as a cross-section between people and the planet and has potential to have an impact on all 17 of the United Nations (UN) Sustainable Development Goals (SDGs) (FAO, 2019). Just as food is seen as important to the individual, the way that food is grown, sold, and consumed, and the systematic structures of those processes, greatly influence communities, societies, and economies. In 1977, Frances Moore Lappé and Joseph Collins suggested that grappling with food issues “provides the most useful tool in making sense out of our complex world” (Moore Lappé et al., 1977, p. 3). Food systems are at the center of the nexus of current environmental, social, and economic problems (El Bilali, 2019). This has been realized increasingly worldwide as there is a demand to act sustainably in production, allocation of resources, and energy consumption. Sustainability in food-systems is a timely matter which cannot be ignored (Matacena, 2016).

The ongoing dialogue of the commoditization of food through the global conventional food system has showed concerns due to high price volatility; an increase in processed foods from far distances; a problem of over and under nutrition, corporate consolidation and control of markets; and an overall concern for the sustainable and ethical practices of the food system (Blumberg et al., 2020; Matacena, 2016; Spaargaren et al., 2012). Increasingly, agriculture is becoming less relevant in the mechanics of the system that is managed by a smaller number of powerful corporations and focused on a model of maximized profit (Matacena, 2016). In these instances, food systems are working less for humans and their health, and more for the wealth of a few. These problems of the current food-system have been a growing topic as the world faces problems such as climate change, economic disruptions, and shortages of both food and energy (S. Duncan et al., 2018; FAO, 2019).

In the 2006-08 financial, food, and energy crises, the world saw drastic food and energy prices spikes (Giménez & Shattuck, 2011). The results lead to food riots in various countries around the world and a public realization of over-abundance for some, while others suffered. It also importantly highlighted the dependance many nations had on the global supply-chain of food to feed themselves (Giménez & Shattuck, 2011). The most recent display of this issue has been with the COVID-19 world-wide pandemic which slammed logistics to a halt and placed many without access to food. This had massive implications and showed how connected these supply-chains are to how humans source our daily food. It was also yet another reminder of how deeply good food is connected to health and well-being (Anderson et al., 2020).

A response to these sorts of concerns has been a strong focus on transitions towards sustainable food-systems and the role food systems play in sustainability. Within sustainable transitions literature the local, grassroots or “niche” initiatives have been focused on as key to sustainable transitions (Brekken et al., 2018;

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El Bilali, 2019; Goodman, 2012). These niches have been identified as crucial to a change in the current food-system and confront many of the societal problems involved with it (Blay-Palmer et al., 2016; Connelly & Beckie, 2016; S. Duncan et al., 2018; Maticena, 2016). These niches alone cannot confront this change on a large scale, but together have a greater impact.

The study of sustainable transitions looks to confront the sorts of hard to handle socio- environmental problems and unsustainable consumption involved with it (Elzen et al., 2004; Köhler et al., 2019). The ever-expanding literature crosses over into many fields as the call to action for sustainable changes grows. The Multi-Level Perspective (MLP) is one of the most common frameworks used in the discussion of socio-technological movements towards transitions. Within this framework are the niche, regime, and landscape, which upon alignment create a socio-technological transition (F. Geels, 2011). In research on agro-food sustainable transition, the MLP has recently become the most common framework used (El Bilali, 2019, 2020). This research has opened up to viewing the niches in agro-food as grassroot niches (Hossain, 2016, 2018; Seyfang et al., 2014; Seyfang & Smith, 2007), with potential at changing the conventional food-system (regime) (El Bilali, 2019).

In the last two decades of literature there has been a considerable amount of studies done on how local & regional food initiatives, labeled by some as Alternative Food Networks (AFN), have the potential to build sustainable communities ( see; Blay-Palmer et al., 2016; Kitchen & Marsden, 2011; Renting et al., 2003) and challenge the current neo-liberal food regime through a sustainable socio-technical transition (Blay-Palmer et al., 2016; Blumberg et al., 2020; Connelly & Beckie, 2016; Goodman, 2012; Herrero et al., 2020). Renting et al. (2012), argue that the term AFN has no clarity or normative of its own, and is only distinctive in its difference from the conventional. Many other names are used such and local food initiatives or regional food networks (Brekken et al., 2018; S. Duncan et al., 2018; Gellynck et al., 2006). In this study however, these alternative options are grouped based on their sustainability ambitions. A common trend in AFN and local initiatives seems to be the desire for sustainable practices within food (Blay-Palmer et al., 2016; Johnson et al., 2016; Sonnino & Griggs-Trevarthen, 2013).

Within transitions studies, diffusion by means of scaling has been a commonly used term alongside the MLP. The idea is that scaling initiatives brings them out of their niche and into both the landscape and regime (Hermans et al., 2016; Pitt & Jones, 2016). However, simply scaling in the discussion of sustainability is not enough to understand the complexities at hand (Lam et al., 2020; Wigboldus & Brouwers, 2016). To specifically view the transformative impacts and processes, Lam et al. (2020) have developed an *Amplification Typology* bringing together research in social innovations, socio-ecological transformations, and socio-technological transitions. Within the processes of amplification, actors can more easily be identified for the impacts that they intend to amplify.

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In the literature on scaling and sustainable transitions, individual niches have been most frequently looked at. Recently however, there has been a call to view the intermediary network of networks that locate themselves between the local niches of grassroots innovations and network between many of them across an international scale (Kanda et al., 2020; Kivimaa, Boon, et al., 2019; Kivimaa, Hyysalo, et al., 2019; Köhler et al., 2019; Sovacool et al., 2020). Understanding the role of intermediaries in AFNs could assist further research on their potential of leading these grassroots initiatives towards diffusion and their common goals of sustainable transitions (Gliedt et al., 2018; Hossain, 2018, 2018; Kivimaa, Hyysalo, et al., 2019; Seyfang et al., 2014; Smith et al., 2016; Sonnino & Griggs-Trevarthen, 2013). Identifying intermediaries has proven to be difficult as there are many varieties of classifications, for this reason Kivimaa, Boon et al (2019) created a typology defining the different intermediaries in transitions to better understand them. With a deepened understanding of roles, decision makers and policy officials can better make choices on how to advance transitions in sustainable agro-food. Likewise, since sustainability is a timely matter, this sort of information could potentially deepen information on how to accelerate a transition towards sustainable food-systems.

The current study aims to “zoom-out” from the niche, and zoom-in on the role that different intermediaries play in sustainable transitions in agro-food (Köhler et al., 2019). It combines the transition intermediary typology of Kivimaa, Boon et al. (2019) to identify the actors and the *Amplification Typology* of Lam et al. (2020) to further explore the types of diffusion that intermediaries facilitate in sustainable transitions of food systems and what they do as actors. The focus of this work is then to answer, “how do intermediaries as actors facilitate diffusion in sustainable food-system transitions?”. In operationalizing this work, a case study of 9 transition intermediaries in sustainable agro-food was undertaken. These cases were selected based on their activity in 2 or more physical places pertaining to sustainable agro-food, and their availability for an interview. It was found that intermediaries in food system sustainable transitions focus on facilitation of 4 amplification processes, *stabilizing*, *speeding-up*, *scaling-up*, and *scaling-deep* and have potential to aid one another in different processes.

### 1.1 Case Introductions

Agroecopolis (AE)- A not for profit (NFP) and non-governmental organization (NGO) network in Greece set as the focal point for Community Supported Agriculture (CSA) and Food Sovereignty European Movements for Greece and the Mediterranean network. Their focus is to be a communications and collaboration network representative for their region in the matters of agroecology, nutritional sovereignty, and access to land.

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The Open Food Network (OFN)- A global network and organization based on building a new food system. They have developed an open-source platform that connects producers and consumers in innovative, independent, and community-based food-systems. Their aim is to transform food systems and society through open source community networks. They work as a global team with what they call instances at the national level in 21 countries and growing (including Australia, UK, France, Katuma (Iberia), Canada, USA, and Belgium) and hubs at the regional levels.

The Future Food Network (FFN)- A network based in Italy, focused on creating changes in the global food system through innovation and education. At the core of what they do is their institution the Future Food Institute, which is located in Bologna. Their programs are based around bootcamps, training platforms, master's courses, future leaders and most importantly, research. The network is comprised of living labs or incubation labs, eating lifestyle labs, farms, and more. These networks have expanded to China and Japan, as well as an operating office and community in The United States.

The Sustainable Food Trust (SFT)- A registered charity in the UK built on the desire to transition food systems to be healthy and sustainable for the planet and people. They base their work on the idea that policymakers, businesses, and civil society will act when there is sufficient pressure from informed public opinion.

The Food Share Network (FSN)- A network built with the goal of enhancing food security in the capital region of Victoria, Canada and how people get their own food. They work specifically with 40+ NFP agencies and other networks to bring together a connection of food sourcing to their networks that provide food security to their own beneficiaries.

Northeast Sustainable Agriculture Working Group (NESAWG)- A network of over 500 members consisting of a regional area of the food systems of 12 states and Washington DC. Their goals are to create a robust network across the region, embody and shepherd equity, and advance regional interest, sustainability, and equity in food policy.

Tasting the Future (TTF)- A freelance sustainable food system consultant with an aim working on policy and practice for the change towards a sustainable, healthy, and fair food system. The intermediary consists of one individual located in the UK, where a large part of the work is focused. TTF works with actors such as governments, producing groups, communities, businesses, and civil societies, which also extends the work to an international level.

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The Good Food Purchasing Center (GFPC)- The center works specifically with their Good Food Purchasing (GFP) program and institutions implementing it, to assist in supply chain transparency. The program is based on creating sustainable food procurement within institutions and harnessing buying power to support local food. They aim to unite actors and stakeholders across food systems under the same goals and strategies. They are located in the United States, with partners across the nation and policy adaptations in 7 major cities, and 4 more with institutional commitments.

O Prato Certo (OPC)- A communication project stemming from In Loco, focused on consumer health and Mediterranean Lifestyle food choices in the southern region of Portugal, Alentejo. It is connected with the municipalities in the region and helps create programs fit to each one. The program provides information on what types of products are healthy, how to use them, and where to get them for a good price. Their mission is to put food into the hands of individuals and help them learn to make healthy choices in their food. The translation of the project name would be “the right plate (choice)” in English.

### **1.2 Research Question**

To answer the research question “How do intermediaries as actors facilitate diffusion in sustainable food-system transitions?” the study operationalizes the research with the application of two typologies. The first is by mapping the transition intermediary type based on Kivimaa, Boon et al. (2019). This is used with the intention of identifying each case’s intermediary position as an actor. The process of diffusion will be represented through the processes of amplification derived from Lam et al. (2020). This typology aims to view how sustainability initiatives purposefully aim to impact transformations towards sustainable transitions. By combining these typologies, the research will “zoom-out” from the niche and focus on the role that intermediaries play in sustainable transitions of food-systems (Köhler et al., 2019).

### **1.3 Research Objectives**

The objectives of this case study are based on four key areas to help operationalize and answer the research question. The objectives come from a mixture of calls from other authors along with the aim to contribute to the current discussion of sustainable transitions in food systems. The study aims to contribute to the understudied literature on intermediaries in sustainable transitions. Intermediaries are networks or organizations which are actors and/or platforms that actively influence sustainability transitions (Howells, 2006; Kivimaa, Boon, et al., 2019). The role of intermediaries has increasingly been viewed as important to understand sustainable transitions (Kivimaa, Boon, et al., 2019; Köhler et al., 2019). Secondly, the study will “zoom-out” from the niche to intermediary actors in sustainable transitions of agro-food (Köhler et al., 2019). This is an increasingly important area to focus as majority of the past research in sustainable transitions has focused on the niche or the “alternative” (El Bilali, 2019; Köhler et al., 2019).

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Since the study will use two different typologies it is also the aim to test each one of them and apply it to the food systems discussion in sustainable transitions. The first is to test and improve the *Amplification Typology* (Lam et al., 2020). Amplification here means a process of diverse actions to purposefully increase the transformative impact of sustainable initiatives (Lam et al., 2020). A part of improving the typology is to analyze facilitators and barriers of the amplification processes. Finally, the study aims to provide deeper knowledge on the types of intermediaries in agro-food system sustainable transitions based on Kivimaa, Boon et al. (2019) typology of transitions intermediaries.

### 1.4 Thesis Structure

This section is to present a summary of how each chapter is presented to provide a guide to the research.

Chapter 1 – In this chapter the focus of the topic and its relevance is introduced. It provides insight into the discussion of sustainable transitions, intermediaries, food systems, and where they meet. The cases for the study are then introduced to give a basis for what the research uses as examples. Finally, the research question is determined, objectives clarified, and open the study to the main research on the topic.

Chapter 2 – The theoretical frameworks are defined and main contributing authors to this field of study. This framework rewinds to the important authors and progresses to where the literature is now in the main topic areas of sustainable transitions, intermediaries, and diffusion. It is here that both typologies used are introduced, Amplification by Lam et al. (2020) and Transition Intermediaries by Kivimaa, Boon et al. (2019).

Chapter 3 – In this chapter it is explained how the research was designed to find an answer to the questions of the research. The method of gathering cases for analysis is explained here along with the reasoning for semi-structured interviews as a method of data collection.

Chapter 4 – This chapter is used to present that findings from the research method and data gathering. It is in this chapter that the two tables are presented as a visual aid and guide to understanding of how the analysis was used. It begins by determining the type of transition intermediaries present in the cases based on Kivimaa, Boon et al. (2019). Then, the analysis of amplification processes inspired by Lam et al. (2020) is applied to the different cases, categorized within their transition intermediary type. Finally, through the process of data gathering and analysis provided a list of common barriers that the intermediaries and their networks face.

Chapter 5 – In this chapter the data generated from the selected methodology is used to explore the importance of what was found in the data in relation to the research question. It provides suggestions for further uses of the typologies and limitations to the data and method of study for creating a full picture. It

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finally provides conclusions to the work and suggestions on how the work may be used and expanded on in the future.

Chapter 6 – The bibliography is where an organized list of the empirical sources used for this work can be found. It also includes references and sources that were used in the different case studies and analysis.

Appendices – The appendices were used to provide the transcripts of the data that was gathered via interviews, additional tables, and additional information on how the study was carried out.

## 2. Theoretical Framework

### 2.1 Innovation and Transition Studies

The study of transitions has progressed with roots in innovative studies and socio-technological change (Smith et al., 2010; Törnberg, 2018). It began with research focused specifically in technological transitions, such as from sailboats to steam-ships (F. Geels, 2002; Kemp et al., 1998). It has since come to be a motivation for research due to environmental problems, and focusing in unsustainable consumption areas (Köhler et al., 2019). A sustainability transition is a large-scale and complex process that typically occurs over the course of decades (F. Geels, 2011; Kivimaa, Hyysalo, et al., 2019). These are problems which cannot be easily and incrementally confronted in the same way as technology, but require sustainable transitions into new socio-technological systems (Elzen et al., 2004; Köhler et al., 2019; Smith et al., 2010). “As such, transitions typically involve a broad range of actors (e.g., individuals, firms and organizations, and collective actors), institutions (e.g., societal and technical norms, regulations, standards of good practice), and technological elements (e.g., material artifacts and knowledge)” (Zolfagharian et al., 2019, p. 1). Due to its multi-dimensionality, sustainable transitions have opened up to a great variety of literature over the past years and has been argued to be an important aspect of looking at the meso-level of societal changes (Avelino et al., 2019; Köhler et al., 2019; Loorbach et al., 2020; Zolfagharian et al., 2019).

#### 2.1.1 The Multi-Level Perspective in Sustainable Transitions

The Multi-Level Perspective (MLP) investigates the phenomenon of transitioning innovations on a societal level. It is a perspective most popularly, though not originally, brought into the transition dialogue by Frank W. Geels and Johan Schot (El Bilali, 2019; F. Geels, 2002; F. Geels & Schot, 2007; F. W. Geels, 2004). Under MLP, sustainability innovation has become a particular pathway investigated which the terms “niche” at the micro and “regime” at the macro level, have become reoccurring concepts within sustainable transition literature (F. W. Geels, 2004; Seyfang & Smith, 2007). This has led the MLP itself to be a useful middle ground framework in the analyzing of sustainable transitions (F. Geels, 2011).

The niche is a space where innovation takes place and protection from dominance is offered (El Bilali, 2019). The regime then refers to the overall incumbent socio-technical system which includes sets of rules, norms, networks, and actors of the dominant system (El Bilali, 2019). The landscape is then the third aspect in MLP which refers to broader contextual developments which have influence over regimes and are slow changing developments in the environment (F. W. Geels et al., 2017). A transition under this perspective is then realized through the shift from one regime to the next, or in the alignment of all three niche-regime-landscape (F. W. Geels et al., 2017). El Bilali (2019, p. 2), summarizes the interaction as when “niche-



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innovations build up internal impetus and a momentum for change, while landscape changes create pressure that destabilizes the socio-technical regime, and the resulting destabilisation of the regime creates opportunities for niche-innovations to take the centre stage.”.

The MLP has made it easier to form a model in which innovations are able to be viewed against the mainstream “regime” for their potential to create a change. It creates a sort of plot which can show patterns in a short term, simplify the analysis, and look at pathways towards the large-scale transformations (F. Geels, 2011; F. W. Geels, 2004; Kivimaa, Hyysalo, et al., 2019). The “multiple” aspect of this approach intends to allow for the wide range of actors and levels involved in a particular society, norm, or regime in question. A beneficial use for the MLP is that it can help understand how individual or organizational actions have the possibility to have an out-ward ripple effect, and make a change to the system (Fischer & Newig, 2016; Rauschmayer et al., 2015).

### **2.1.2 Agro-Food in Sustainable Transitions**

Since the very first call to the research agenda for sustainable transitions in 2010, the research field has “...broadened empirically, deepened intellectually and extended geographically.” (El Bilali, 2019, p. 1; STRN, 2010). The expanded literature however has, for the most part, overlooked the agro-food research field until recently. The MLP has become the most common framework within agro-food sustainability transition research, often times complimented with other research methods and approaches (El Bilali, 2019, 2020; Hermans et al., 2016). In the application of the MLP, AFNs at the local and regional level have been placed into the niche or grassroot innovation (GI) category by some (Hossain, 2016, 2018; Seyfang & Smith, 2007), where the regime is seen as the conventional or global food system and its institutions (Seyfang & Smith, 2007, El Bilali, 2019).

In El Bilali’s (2019) systematic review of the use of MLP in sustainable transitions in agro-food studies, it was found that the landscape is generally over-looked, even labeled as the “garbage can”, in which all that is not regime and niche are thrown into. Some authors see that the cooperation between the AFNs (niche) and the conventional (regime) in the food system, have the highest potential in influencing a sustainable change (Bui et al., 2016; Hubeau, 2019; Smith, 2006). It is here that AFNs can be seen as more than just a bunch of individual niches, or “just a rag-bag of ephemeral initiatives” (Marsden & Franklin, 2013, p. 640), but as a potential to one another to contribute to collaboration towards a changed system.

### **2.2 Intermediaries in Sustainable Transitions**

To advance their goals, some initiatives have employed a strategy of developing broader networks. These networks of networks, take various forms which can operate on different spatial scales from local to international (J. Duncan & Pascucci, 2017; Kivimaa, Boon, et al., 2019; Kivimaa, Hyysalo, et al., 2019).

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These types of networks have come to be known as intermediaries in the innovation and sustainability transitions literature.

### **2.2.1 Intermediaries as Actors**

Intermediaries are networks or organizations that act as a mediation in any aspect in the innovation process between any two parties (Howells, 2006). The intermediaries serve for multiple functions which include collective resource and knowledge sharing, mobilizing resources, organization guidance, coordination, and even advocating for new policies or regulations (J. Duncan & Pascucci, 2017; Mignon & Kanda, 2018; Polzin et al., 2016). An interesting aspect is that of Parag and Janda (2014) who view these “middles” as more than just intermediaries or “fillers” and that they ought to be acknowledged for their unique qualities and functions which are seen to be essential for a durable systematic change.

Intermediaries were first being explored in the transition literature with Van Lente et al., (2003) looking at systemic intermediaries in transition. Since then, they have been related to actor roles in sustainable transitions (Gliedt et al., 2018; Mignon & Kanda, 2018; Wittmayer et al., 2017). The role that intermediaries play between the niche and regime level as actors has been gaining recent attention in sustainable transition literature (Köhler et al., 2019). In the literature one of the commonly agreed upon aspects of intermediaries is their ability to “work across the often-impermeable boundaries between different actor groups, arenas of action, or geographical scales.” (Vihemäki et al., 2020, p. 2).

### **2.2.2 Classifying Transition Intermediaries**

In both innovation and sustainable transition studies, what exactly intermediaries do and what they intermediate between is undefined (Kivimaa, Boon, et al., 2019; Kivimaa, Hyysalo, et al., 2019; Mignon & Kanda, 2018). For the purpose of this study we have chosen to define intermediaries as transition intermediaries as according to (Kivimaa, Boon, et al., 2019) They are therefore:

“...actors and platforms that positively influence sustainability transition processes by linking actors and activities, and their related skills and resources, or by connecting transition visions and demands of networks of actors with existing regimes in order to create momentum for socio-technical system change, to create new collaborations within and across niche technologies, ideas and markets, and to disrupt dominant unsustainable socio-technical configurations.” (Kivimaa, Boon, et al., 2019, p. 1072)

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For the purpose of this work, the typology of intermediaries comes from Kivimaa, Boon, et al., (2019). The current study aims to use this typology to expand on transition intermediaries in sustainable agro-food. The selected typology was fit for this since it is based on the MLP, in the context of sustainability transitions and was constructed for the purpose of bringing more clarity to the discussion of transition intermediaries.

Their work gathered a systemic review of intermediaries in transitions and determined important criteria for various intermediary types. The 5 different transition intermediary types are classified by 4 principle criteria, context/level of action, emergence, goal of intermediation, and normative position.

Kivimaa, Boon, et al., (2019) identified (1) systemic; (2) regime-based; (3) niche/grassroot; (4) process; and (5) user as transition intermediaries.

Systemic intermediaries are seen as whole system intermediaries by operating at all three levels of niche, regime, and landscape. They often times function at a network level and are seen as one of the most important players in a transition due to the complexity of their work (Kant & Kanda, 2019; Kivimaa, Boon, et al., 2019; Vihemäki et al., 2020). They many times are found to advance the standardization of their processes and align interests and compatibility across niches and even at times the regime (Kivimaa, Boon, et al., 2019; van Lente et al., 2003).

Regime-based intermediaries are a part of the established regime and institutions in a certain context, and are many times initiated by and for the regime to carry out certain transition strategies (Kivimaa, Boon, et al., 2019; Vihemäki et al., 2020). They are not to be confused with non-transition orientated regime intermediaries, which as Kivimaa, Boon, et al., (2019, p. 1070) say “try to preserve the status quo”. These intermediaries typically engage with a range of niches or at a whole system level, and can found to be engaging with systemic and/or niche intermediaries (Kivimaa, Boon, et al., 2019; Parag & Janda, 2014; Polzin et al., 2016).

Niche/Grassroots intermediaries focus on specific niches and are working for their cause, to change the system in their favor. They can be found operating within and across different individual niches and projects, to bring them together through knowledge, visions, and experiences (Vihemäki et al., 2020). One of their most important factors is their ability to allocate resources and provide the niche with otherwise difficult to access support (Seyfang et al., 2014). These intermediaries are often found advocating, and are seen as critical to gaining support at the regime level (Smith et al., 2016).

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Process intermediaries are often outsiders to both the niche and the regime, and focus on specific supporting roles in niches and transition processes (Vihemäki et al., 2020). They may help advancing transitions by gaining trust of other actors due to their viewed neutrality (Kivimaa, Boon, et al., 2019; Vihemäki et al., 2020). Kivimaa, Boon, et al. (2019, p. 1071), argue that “process intermediaries are important in the overall “ecology of intermediaries” because they can carry out day-to-day work to concretely advance transitions”.

User Intermediaries, like the name, are based on the users and connect the niche to the public’s every-day practice and usage (Vihemäki et al., 2020). This is particularly important to ensure that sustainable solutions are adopted in the every-day (Kivimaa, Boon, et al., 2019). These intermediaries represent users in-between the niche and regime, often articulating the innovation demands of their community. Hyysalo et al. (2013, 2018), in their research on sustainable heat-pump internet forms, found that these intermediaries form knowledge sharing types of networks which have potential in increasing the size and stability of the accelerating niche (Kivimaa, Boon, et al., 2019).

When using this typology there are however some warnings and limitations in flexibility. Intermediaries have tended to be viewed in a positive bias. Manders et al. (2020), whom specifically analyzed this typology, warn that it is here especially that a single intermediary ought not be over-stated for being of more value to an entire transition than it actually is. Likewise, not all actors or intermediaries are aware nor are all their actions focused on leading towards a transition. Some intermediaries may also engage solely in transition roles while others only randomly do so in certain roles. It is important to therefore view intermediaries as neither positive nor negative, and to not over-state their level of agency and impact. The typology however does leave room to see how different intermediaries perform in various roles and how they may complement one another (Glaa & Mignon, 2020; Manders et al., 2020; Vihemäki et al., 2020).

Connecting the literature on intermediary types with actor roles in innovation diffusions in the sustainable transition literature has been pointed to as an important area of focus (Kivimaa, Boon, et al., 2019; Kivimaa, Hyysalo, et al., 2019; Mignon & Kanda, 2018; Wittmayer et al., 2017). This is why the approach is using this typology to “zoom-out”, to look at the various roles intermediaries may have and inclusively how different intermediaries influence diffusion (Köhler et al., 2019). As Gliedt et al. (2018) say, it is important to see how intermediaries as actors have the potential to act at all levels in the MLP and collaborate to impact the acceleration of sustainable transitions.

## 2.3 Diffusion and Amplification in Sustainable Transitions

### 2.3.1 Diffusion and Scaling

Transition studies often refer to innovation diffusion as a means of adapting a new technology to the greater society (Aspeteg & Bergek, 2020; Loorbach et al., 2020; Vihemäki et al., 2020). The term scaling has been used widely in terms of innovation and development and often a form of measuring diffusion practices (Hermans et al., 2016; Lam et al., 2020; Moore et al., 2015; Vervoort et al., 2012; Wigboldus & Brouwers, 2016). The MLP has been used to help understand how scaling happens (Wigboldus & Leeuwis, 2013). Scaling initiatives beyond their niche brings about the potential of causing a transition and moving these place-based movements further. It is exactly through variations of scaling dynamics that some authors argue the niche food networks have the potential to break-through into a transition (Goodman, 2012; Marsden & Franklin, 2013). When referring to transitions in the MLP, scaling refers to growing a niche and moving into landscape and regime. Then, “expansion and replication lead to innovations occupying more or enlarged niches” (Pitt & Jones, 2016, p. 3).

Simply, “scaling” itself, is not necessarily helpful, especially in the discussion of sustainability (Wigboldus & Brouwers, 2016). This is why, it is important to look at exactly what is meant, and to heed to warnings such as those given by Wigboldus and Leeuwis (2013) on page 26 of their work on concepts and principles of scaling in agriculture. Diving fully into the scaling debate is however beyond the scope of this essay and should be further looked at in the works done by Wigboldus and Leeuwis (2013) and Wigboldus and Brouwers (2016).

### 2.3.2 Amplification

For the purpose of this work, the term amplification is applied, to not be confused within the debate of scaling. Lam et al., (2020) argue that “scaling” is often suggesting an increasing in an initiative’s impact on “levels” or “scale” and not paying attention to things such as values or mindsets. The amplification processes model was constructed with the intention to bring together various research areas to build a coherent term in sustainability transitions studies, and to be of assistance to sustainability initiatives looking to increase their transformative impact (Lam et al., 2020).

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The 6 frameworks of amplification are derived from three different areas of research, social innovations, socio-ecological transformations, and socio-technological transitions (See Appendix E). “Despite the different theoretical backgrounds, the three research areas all describe sustainability transformations as multilevel, multiphase, and cross-scale processes” (Lam et al., 2020, p. 7). Each of them ultimately aims to understand how to increase the impact of sustainability initiatives and foster respective transformations and transitions (Lam et al., 2020). To understand the amplification process then further helps understand the conditions required to create interventions and simultaneously support the processes.

The amplification typology is made up of 8 processes which are then aggregated into 3 categories to reduce the process complexities, *Amplifying Within*, *Amplifying Out*, and *Amplifying Beyond* (See Appendix E). *Amplifying Within* is made up of processes which aim to increase the impact of a specific initiative via *stabilizing* its existence or *speeding up* the way in which it impacts. *Amplifying Out* many times intends to increase the impact of initiatives through a greater impact range and higher number of initiatives, ultimately involving more people and places. This category is broken into 2 sub-categories based on dependency of the amplification to the existing initiative. Therefore, *amplifying out dependent* aims to create initiatives dependent on already existing ones. Within this sub-category fits the processes of *growing*, the increase of an existing initiative’s impact range in a similar context, and *replicating*, when an already “existing initiative is replicated into a dissimilar context” (Lam et al., 2020, p. 16). *Amplifying out independent*, is then similar, but referring to the creation of independent initiatives via the process of either *transferring* of an initiative to another place with a similar context, or by *spreading* the principles and ideas of the existing initiative into a similar type of initiative, but in another place with a dissimilar context. *Amplifying Beyond* is different from the other two and is made up of the two processes that tend to increase their impact through ways in which suggest a reconfiguration and changing of ideas around how an initiative creates impact. This is through *scaling-deep* to change values and mindsets and *scaling-up* to higher institutional levels.

*Stabilizing*: A process that “involves strengthening and more deeply embedding initiatives in their context, making them more resilient to up-coming challenges and ensuring that they last longer.”(Lam et al., 2020, p. 11). Initiatives take actions based on existing opportunities to maximize benefits. They increase the number of members, supporters, and/or users in the network and create a “lean procedure” or professionalization in their practice and clear communication of the purpose for action and their mission (Lam et al., 2020).

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*Speeding-Up:* The acceleration of the rate at which an impact is created or realized. This can be done in many ways, in which change is able to happen faster than before. Examples of this sort of change speeding would be creating efficient procedures and creating more impact over time (Rosenthal et al., 2017). This is particularly important in the area of sustainability, as many of these challenges require fast-acting change (Lam et al., 2020; Olsson et al., 2017).

The next four, *growing, replicating, transferring, and spreading* are characterized under their dependence of the existing initiative as well as the similarity of context in which the initiative is amplified into. The context refers to the “social, ecological, political or technical structures and dynamics do not substantially differ between the old and new contexts.” (Lam et al., 2020, p. 14). In the context of the promotion of sustainability in food, the food system is one of the key parts to the context (Lam et al., 2020).

*Growing:* An initiative expands its range of impact in the same way across a geographical location, organization, or sector (Lam et al., 2020; Naber et al., 2017). The initiative creates extensions which are dependent through ways of its solution, services, or program, to reach a greater area of impact (Lam et al., 2020).

*Replicating:* Is creation of a dependent copy of the initiative into a dissimilar context (Hermans et al., 2016; Naber et al., 2017). The easiest way to imagine this scenario is a sort of franchising that is initiated in a new place with its own context, but still reliant on the original initiative for guidance and structure.

*Transferring:* This process is similar to *growing* except that here, a similar but independent initiative emerges into a similar local context (Lam et al., 2020).

*Spreading:* It is the active dissemination of core principles and approaches of an initiative. A similar but independent initiative emerges into a dissimilar context, which is guided and informed by practices, principles, and approaches of an existing initiative (Lam et al., 2020).

*Scaling-Up:* Is a process with the aim of impacting at a higher institutional level through the changes of rules and/or logics of the regime at hand. The process is carried out in ways such as “codifying of impact of initiatives into law, policy, or institutions through methods such as advocacy, lobbying, networking, or the support of alternative visions and discourses.” (Lam et al., 2020, p. 15).

*Scaling-Deep:* The process of the changing of values and mindsets of initiatives (Loorbach et al., 2020; Moore et al., 2015). This impact reaches beyond the initiative itself to focus on the way people think and what norms and values they hold. The mind-sets and value systems of individuals inevitably may change their behaviors in relation to the initiative (Avelino et al., 2019; Lam et al., 2020).

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Through exploring the different processes and categories of amplification there is a potential to see in what way an initiative has impact on influencing a sustainable transition. It is however important to note as Lam et al., (2020) have, that the amplification impacts are neither positive nor negative and will not apply in all contexts and places. The processes are also not exhaustive and may over-look other important processes in the amplification of impacts in sustainable transitions.

Since the amplification typology views the actions of an initiative at amplifying its impacts, it is interesting to view this as a sort of activity or action taken by a given actor. Actors in sustainability transitions play many roles and are driven to foster change in various ways. Kant and Kanda (2019) and Kivimaa, Boon, et al., (2019) both look at intermediaries as essential actors to pay attention to in sustainable transitions. They argue that these actors have great potential to facilitate processes that lead towards diffusion of niches.

By using this typology along with the mapping of the intermediaries by Kivimaa, Boon, et al., (2019), it is intended for this research to “zoom-out” from the niche, and zoom-in on what role different intermediaries play in sustainable transitions in agro-food (Gliedt et al., 2018; Köhler et al., 2019). This sort of analysis is needed to better understand the existence of intermediaries as well as what role they play as actors in transforming and transitioning (Kivimaa, Boon et al., 2019). One of the aims of this study is to further explore and understand the types of intermediaries and what they do. With a better understanding, hopefully, governments and policy makers can make better decisions on how to advance transitions in sustainable agro-food. This framework will allow the research question to be answered, by identifying the types of intermediaries involved and what processes they amplify to create an impact. This framework will also allow for the opportunity to see cross-over in the types of amplification processes different intermediaries influence as well as give further understanding as to how cooperation could be possible between intermediaries (Lam et al. 2020, Vihemäki et al., 2020).



## 3 Methodology

### 3.1 Research Design

The study takes a deductive approach to the data through a qualitative and empirical case-based study. The deductive approach was taken to expand on typologies that were already constructed based on similar theory. Likewise, the study takes a theory testing approach for the typologies of both Lam et al. (2020) and Kivimaa, Boon et al. (2019). This allows the research to use the cases as a form of testing the theories built by each of these works (Løkke & Sørensen, 2014). The qualitative and case-based approach is best suited for this type of research for its ability of understanding each individual in their real-life context (Baxter & Jack, 2008; Yin, 2014; Zolfagharian et al., 2019).

The cases were gathered through an online research of networks consisting of smaller networks within sustainable food systems. To identify the networks within a google search were used in various combinations the key words “food systems”, “sustainable”, “food networks”, alternative food systems”, “local” and “regional”. These searches lead to various pages and lists of different networks, charities, and acceleration programs. Through these searches, intermediaries in sustainable food systems were determined based on their visible activity in 2 or more physical locations.

### 3.2 Data Gathering

#### 3.2.1 Case selection

The selection for cases was based on actors in food systems and was based on the ability to discover them via web searches in English, Portuguese, and Spanish. The networks were only investigated if they were primarily focused on food systems. Initial cases for contact were those which I already had previous contact with. From there, an internet search via google using key words “sustainable food systems”, “alternative food systems”, and “food networks” were conducted.

Before selecting to contact each of them, a brief over-view of what activities they are involved in and if they are working at an intermediary level was determined. One of the main criteria for this selection was their participation in 2 or more networks or “projects” in sustainable food based in different physical locations. The initial contact was to inform the various networks of an interest in working with them as a case-study, a request for more information and documents, and for the availability for an online interview. A total of 29 intermediaries were emailed to be contacted, 13 of which responded, and two of them providing me with other networks to contact. Upon response to the email, an interview date was purposed

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along with the sending of an agreement to have the conversation recorded. In total, 9 of the individuals contacted responded positively and were open for an interview.

Since the contact was primarily done in English and through websites and email, it led to a bias of location in which the intermediaries are acting. Possible biases that are raised by this method are that the researcher did not get in contact with any sort of intermediary that did not have a website and did not have communications in at least one of these three languages. This method ended with a prevailing majority of intermediaries based within “Northern” and “Western” countries. Due to the author’s own context of research and connections with The United States and The European Union, the level of access to these networks was more readily available and took less effort. This is a common bias in research on AFNs and therefore should not be taken as relevant for all places and regions (DeLind, 2011; Goodman, 2012).

### **3.2.2 Archival and Document Retrieval**

A starting point with each of the organizations as a matter of data gathering was using secondary sources of information derived from organization webpages, secondary news sites, documents produced, and documents provided by the organization representatives. This information allowed for an initial understanding of how the network was structured and allowed the researcher to focus on the types of questions that were most important to derive from an interview. The sources were also used to go back to as reference after interviews for confirming and deepening information.

### **3.2.3 Semi-Structured Interviews**

Interviews are a method well suited for conducting research on intermediaries in sustainable transitions. The method allows for sense making as well as a drawing out of conflicting views (Murto et al., 2020). The semi-structure was selected due to its nature of providing a structure, but also allowing for concept expansion based on the individual’s insights (Baxter & Jack, 2008).

COVID-19 made interviews particularly difficult as people were restrained from being able to meet in person, and field work was not possible in most cases. For this reason, interviews were conducted via online video calls between 14.07.2020 – 27.08.2020. This allowed the researcher to record the interviews with permission of the individuals for transcription. Taking in consideration people’s lack of time in the COVID-19 conditions at the time of data gathering, the interviews ranged from 40 – 120 minutes and were held one time per intermediary.

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The interviews were undertaken with an individual that was agreed as a representative of the organization. In majority of the instances the individual was one of the founders or had a high level of position in the intermediary. The structure of the interview followed a semi-structured base, coming from a format of questions derived based on functions associated with the amplification typology. These questions were also slightly altered based on the course of the interview, and on some prior knowledge of each organization due to initial research.

To conclude the gathering of data, a final e-mail containing questions and clarifications for additional information was sent to all the interviewees. This data was then used to finalize the analysis and gather any missing data where necessary. A note however is that majority of the cases did not respond to this email and so it was not used as a primary source of data. The interviews will be quoted throughout this research as key sources of data. To keep the individual anonymous that was being interviewed, each individual will be identified by their organization and then “interviewee” ex. “OFN interviewee” followed by the date of the interview. Additionally, in the exceptional case of OPC, there were 2 interviewees during the interview, and each will be identified as interviewee 1 or 2.

### **3.2.4 Limitations**

Due to the methods used in gathering data for analysis there are a few limitations to the results. The first is that since all cases were found via internet searches, this only included those which had a website and someone responding to emails. The next limitation is related and has been mentioned, that of the language of communication which though could have been and was searched in Portuguese or Spanish, was all only in English. The third limitation is that of the responses, and amount of cases. Since there are only 9-cases and roughly 45-minute interviews, it does not provide for a full and in-depth knowledge of each case. Similarly, 9-cases will not give a full picture of intermediaries in the field of sustainable food systems and can only be viewed as a sort of example of what is present. A final, and similarly related limitation is that of the possible bias which comes from data gathering. All data was taken from available documents and the interview was performed with a single representative of the intermediary. Future work would benefit from looking at other actors, in particular those on the receiving or “niche” end that work with the intermediaries.

### 4. Analysis and Results

This chapter presents the findings that responded to the research question, “How do intermediaries as actors facilitate diffusion in sustainable food-system transitions?”. A deductive approach was taken with a predetermined set of code to identify and code within the data. The codes represented were each of the amplification processes which were actively searched for. The three different stages of analysis are in order by identifying the intermediary categories that each case fit into, exploring their amplification processes, and finally revealing the various types of barriers faced within the cases. The section on amplification takes a specific step to better organize the data. It implements an analysis based on the findings from step 1 of the analysis, and presents the data responding to each case and category.

As a first step to analyzing the results, we identified the types of transition intermediaries in the cases. The intermediary types were determined based on Kivimaa, Boon et al., (2019)’s typology. Each of the networks were analyzed based on the factors of their context/level of action, emergence, goal of intermediation, and normative position. Normative position was further broken into position vis-à-vis the niche and neutrality/interest in the niche. The results can be seen in Table 4.1 where each of the intermediaries was analyzed using the typology created by Kivimaa, Boon et al. (2019) and influenced by the analyzation used by Vihemäki et al. (2020).

The study secondly identified the amplification processes that the different cases implemented throughout their histories as actors. In this section, each of the amplification impacts were identified within the 9 cases. A deductive approach was taken to provide a basis of the code being used in the data. Each case was categorized within the intermediary typologies built in the previous analyzation step. The amplification typology by Lam et al. (2020) was used to analyze each of the cases. *Atlast.ti* was used in this step to organize and visualize the amplification code in the data. Through the analysis, it was found that not all intermediaries participated in all aspects of amplification for impact. Due to this, some sections do not have data to analyze, and therefore do not mention transition intermediaries or cases which do not have correlating data. An overview of the case analysis can be seen in Table 4.2. Here, the intermediaries are sorted by their identification in the previous analysis and mapped on a table for their amplification processes facilitation. The table gives a brief summary of each activity and is marked with “N/A” where data was not available for that process. In Table 4.1 there is no particular order of cases and in Table 4.2 there is also no particular order, however the cases are grouped based off of the analysis shown in Table 4.1.

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Finally, types of barriers that were faced arose in the data as significant areas of interest that the intermediaries engaged in. To search for what barriers were present, the data gathering actively looked for what types of barriers were being faced. In coding the data, it became apparent there were five key barriers amongst the cases, COVID-19, financial based, methods of philanthropy, organizations being spread-thin, and policies & bureaucracy. Atlas.ti was used to gather the data and code the occurrences of events based off the amplification typology.

### **4.1 Identifying Intermediary Types**

Four cases resulted as Systemic Intermediaries, The OFN, The FFN, The SFT, and NESAWG. Each case resulted from different specific reasons, but all of them having in common their level of action at all levels of the system between the niche and regime. Each of the networks also had a type of focus which was intended at impacting change beyond their own niche of focus. The OFN for example, works in an intra-national way, from local to national within different countries, and between nations at the global level. They do not focus on one individual vision, but rather a tool for each context to create their own.

The FFN is directly working between the niches and the regimes while focusing on changing the landscape at the same time. Their goal of intermediation goes deep into changing food-systems in many ways and at each level. The SFT is founded by and for the grassroots level as a voice and convening at various levels. Much of their work is focused at a regime and landscape level, but they come from the niche's background and emerged with them in mind. Specifically, their transition goals are set for the whole system. NESAWG is working outside of the grassroots/niche, and though they specifically advocate for them, they are not focused on one particular niche. They focus on the creation of a fair and sustainable food-system for all.

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## Table 4.1 – Mapping Transition Intermediaries

| Name                        | Website "About" Page  | Category                                      | Context/Level of Action   | Emergence  | Goal of Inter-Mediation   | Normative Position   | Position vis-à-vis niche:   | Neutrality/Interest |
|-----------------------------|---|---|---|--|---|--|---|---------------------|
| Agroecopolis                | <a href="https://www.agroecopolis.org/about-us/">https://www.agroecopolis.org/about-us/</a>   | Grassroots Intermediary                       | Coordination between grassroots CSA initiatives within Greece, while aggregating to a higher level as a member of URGENCI at a EU/Regime level  | Emerged as the founder was an advocate and had direct relations with many people already. She wanted to found this CSA work in Greece to give people more tools and support. (AE Interviewee, 14/07/2020)  | To advocate for Agroecology(CSA), Nutritional Sovereignty, and Land Ownership Rights  | The guiding vision of this grassroots movement in Greece and the Mediterranean   | A key player and their purpose is to advance these specific beliefs around CSA  |                     |
| Open Food Networks (OFN)    | <a href="https://www.ofn.net/about-us/">https://www.ofn.net/about-us/</a>   | Systemic Intermediary                         | Supra-National level. Meaning, they are the binding and coordination for the movement as well as the technology itself. Not specific to any one of their members or regions, and rather push to make their technology as a movement to open source.   | Established due to a growing network in different contexts/locations. Originally was a grassroots movement in Australia.   | 1.To pursue communication and facilitation of their open-source technology between all of the "instances".<br>2. To act as a supporting body and a movement for the overall right to accessible and sustainable food<br>3. A movement for open-source and communizing in food.  | Outsiders to the grassroots that are the member-hubs of their instances. Meaning, though they are a guiding body, these grassroots members may be of multiple different niches. Ex. Organic, Bio, CSA, etc...  | Neutral in terms of their members' individual pursuits. However, they do have interest in the expansion of their open-source and their sustainable ideology.  |                     |
| The Future Food Network     | <a href="https://futurefoodnetwork.org/about/">https://futurefoodnetwork.org/about/</a>   | Systemic Intermediary                         | They are operating between the niche and the regime and as an institution themselves that is spreading ideas and knowledge. They work both at a grass-root level with farmers and niche creation while also being someone communicating and building relationships at a higher-UN level (FFN Interviewee, 11/08/2020) | It emerged as a niche being formed by Sara Roveri who was interested and a part of the niche... then it expanded into something larger through their continual growth.   | 1.To bring many people and ideas together to inspire them through their institution as well as to start new niches and research new innovation in food systems.<br>2. To change the policy level and interaction at a higher-regime level<br>3. To create new innovation and also a new entire eco-system of entrepreneurial ways of acting with Food-Systems | Began as grass-roots but have come out of it. Aligned with the grass-roots but also outsiders as they don't only need to focus on the action of now...but are planning for a future of an organizational institution. Guiding vision of the grass-roots that they work with. | Key in the movement of their niches as well as the sustainable transitions they search for. An institution looking to collaborate...and to work at a higher-level to meet the common goals  |                     |
| The Sustainable Food Trust  | <a href="https://sustainablefoodtrust.org/about-us/what-we-do/">https://sustainablefoodtrust.org/about-us/what-we-do/</a>               | Systemic Intermediary                         | Operate as a "steering committee" and at the level of regime specifically to fight for the vision that they believe in for the food-system. Working in The UK and US mainly but have a target global audience.  | Established by Patrick Holden in 2011 in response to the worsening human and environmental crises that are associated with the vast majority of today's food and farming systems (Sustainable Food Trust, 2019).   | To have open discussion and guide their vision for sustainable transition and by creating policy changes worldwide. Their policy changes specifically focus on new tactics to enhance a sustainable transition. <a href="https://sustainablefoodtrust.org/articles/?category=food-policy">https://sustainablefoodtrust.org/articles/?category=food-policy</a> | Not a direct network head or supporter directly. Claim to be fighting for the rights of the individuals...and are more of outsiders though they connect with the public.   | Neutral in terms of the pursuits of individuals... but they have a sustainable transition desire for agriculture...so they are actually specifically "radically" focused on that.   |                     |
| The Food Share Network      | <a href="http://www.foodsharenetwork.com/about/">http://www.foodsharenetwork.com/about/</a>   | Process Intermediary                          | Coordinate between various grass-root levels and support them to work together towards their missions of taking food security in their own hands.   | They emerged coming from an already existing Food-Bank in the region with the support of a grant which wanted them to create an action-plan for Food Security.   | To coordinate and decentralize the food supply chain. Through this collaborative work they want more food to be available to the people who need it most, and allow people to take control of their own food situation.   | A network head, meaning not all their networks are specifically focused on this vision, but they participate in it to realize the change that the FSN wants to see.  | Involved in the advancing of food security and sustainable food being available for all. They are not directly a part of the network's individual goals in many of the cases however...but they lead them all to connect with this vision |                     |
| NESAWG                      | <a href="https://hesawg.org/about/">https://hesawg.org/about/</a>   | Systemic Intermediary                         | They position themselves between the niche and the regime. They operate outside of the networks and regions... however they are strongly connected and are working at pushing forward the policies affecting their member-network.  | They emerged in 1992 as a group focused around sustainable agriculture and food systems through their discussions in "It Takes A Region" conference. (Ruhf, 2018)  | <ul style="list-style-type: none"> <li>Cultivate a robust network that spans across sectors and the region</li> <li>Embody and shepherd equity</li> <li>Advance regional interests, sustainability, and equity in food policy</li> </ul> To do this, they target policy and works to change the way policy is made and confronted                             | Not a part of the individual niches and are at an in-between as a guidance, an adhesive and a higher-level policy creation   | Radically focused on these goals and are a leading vision-maker and setter.   |                     |
| Tasting The Future          | <a href="https://tastingthefuture.com/about/">https://tastingthefuture.com/about/</a>   | Process Intermediary                          | They work as a support or consulting for different projects to help advance different sustainability aspects, policy, or research around the organizations that need their support.   | Emerged based on the founder's own vision, past experiences, and desire to help transition and change the work around him by supporting what others are already doing (TTF Interviewee, 03/08/2020).   | The goal of intermediation is to build partnerships across various actors that can come together over the topic of Sustainable Food Systems...it is also to build up a change in the narratives around scaling-up policy that actually makes a difference for those at the local and regional level. (TTF Interviewee, 03/08/2020).                           | An outsider, although TTF wants to be a personal 1-1 "friend"... their work is as a consultant to the niche that they work with. Targeting the higherlevel to make changes for those at the lower level. (TTF Interviewee, 03/08/2020).                                      | An interest in the sustainability vision...their work however does not focus on changing the niche's vision. The hope is to turn these visions into real work on the ground   |                     |
| Good Food Purchasing Center | <a href="https://goodfoodpurchasing.org/about-the-center/#-what-we-do">https://goodfoodpurchasing.org/about-the-center/#-what-we-do</a> | Regime-based Intermediary                     | Working at a high-level and focusing on institutions and regime level in cities with The United States. Aim is to target national policy through public procurement to focus on sustainable food systems and target their 5-core values.  | A team founded by themayor in Los Angeles, focused on being a Food Policy Working Group. The Center then formed after other cities began to take interest and they realized the program was not space/place specific and could not focus on LA only. (CGFP Interviewee, 14/08/2020). | To create goals and targets based on 5 core values to create a more sustainable and ethical way of procuring food for institutions that have a large buying power.  | 1. Outside of the niche and focusing on bringing the niche value by creating new spaces and income through public procurement<br>2. Policy and local actor side of what can be changed via way of spending.  | Neutral in terms of each of the individual niches. Though they hold that these are rights and that a sustainable food system transition is needed...they see their avenue through public procurement.                                     |                     |
| O Prato Certo               | <a href="https://www.pratocerto.pt/">https://www.pratocerto.pt/</a>   | Regime Based (Started as a user-intermediary) | Act as knowledge bringers and encourage people to be a part of a "movement" in ways and also be empowered in their local food system.<br>1. Between consumers/individuals and the niche to help provide them information and knowledge<br>2. An experientary way at municipality level.                               | Institutionally founded and encouraged. Emerged as a project introduced by In Loco to help against food insecurity and health issues, and to give vulnerable populations information on how to get better food and contribute to local economy. (OPC Interviewee 2, 27/08/2020).     | Encourage people to make their own choices and be aware of the local food that is around them and how to use it. They are not directly related to those who sell and are advertising for no one specifically.   | Aiding the niche by making it more well known and accessible to the users around them...but are an outsider.   | They believe in the local movements, and although they aid the niche from time to time, their own goal is to make users connect with these local food outlets.  |                     |

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## Table 4.2 – Amplification Processes

| Transition Intermediary Type | Name                               | Amplify Within   |   | Amplifying Out (Dependant)  |   | Amplifying Out (Independent) |  | Amplifying Beyond   |  |
|------------------------------|------------------------------------|--|---|---|---|------------------------------|--|---|--|
|                              |                                    | Stabilizing  | Speeding-Up   | Growing   | Replicating   | Transferring                 | Spreading  | Scaling-Up  | Scaling-Deep   |
|                              |                                    |  |   |   |   |                              |  |   |  |
| Grassroot Intermediary       | Agroecopolis                       | Protecting the niche for the future and creating an environment with support for CSA in Greece. Ex "Meet Your Producer" program as a response to COVID-19  | Aim to create more impact over a longer period of time by involving more users and producers with CSA procedures & creating more incentives through their "Meet Your Producer" work.            | N/A   | N/A   | N/A                          | Much of their work is through spreading their ideas around CSA and allowing others to take their own control. They are a vision and principle guidance, while others make things happen in their own contexts. | Bring their local work in Greece and the Mediterranean area to UN and EU level through a partnership with URGENCEI. Also, bringing CSA to EU level through their Erasmus+ partnership.  | Encourage relationships to be built and for individuals to become a part of CSA as more than just food.  |
| Systemic Intermediaries      | Open Food Networks (OFN)           | The creation of lean-procedures in their technology and consistent improving for better access and smooth running.   | The creation of "bubble-wrap paths" for faster hub and instance functionality. There is also an improved method for helping networks initiate their technology.                                 | N/A   | Technology as a solution has been replicated across the globe into 19 and growing locations to fit within each local's needs.   | N/A                          | N/A  | N/A   | Involving people into a community with a core around the technology. This has created networks of people working together both directly and indirectly. Community Building encouragement.                              |
|                              | The Future Food Networks (FFN)     | Building of a 100-year vision. The creation of support across many levels through their institutional core. Focusing on education as a tool for environment change.  | The creation of environments to test and create faster implementation of innovations through living labs and acceleration programs. This is also through direct funding of innovation projects. | Increasing their network size through creation of new local chapters in Italy   | The FFN has replicated its living labs and hub networks into Japan and China.   | N/A                          | N/A  | Works directly with influencing awareness at a supra-national level with UN and FAO partnerships over topics. They also by means of an institutional and educational center are scaling-up their initiative to higher-levels of validity. | Through their institution and network at many levels they work to build a "family". They want people to feel included and change the way that they think about food systems in their life.                             |
|                              | The Sustainable Food Trust (SFT)   | Creating support via users and partnerships. They Collaborate and Communicate the vision that they believe in. True Cost Accounting works on creating better procedures in financing for sustainable initiatives | Creating financial incentives for farmers to practice sustainable farming (they believe farmers will and want to practice sustainably with the correct resources.)                              | N/A   | N/A   | N/A                          | N/A  | Main focus is on policy and lobbying for change. They have facilitated policy changes in Germany as well as lobbied the government in the UK in relations with Local Authorities  | Through their work with building education around Harmony, they are working to Scale-Deep their beliefs and practices.   |
|                              | NESAWG                             | Partnerships and Collaborations built across the nation and within their region. They aspire to create Communication and awareness through their conference and partnerships.                                    | N/A   | N/A   | N/A   | N/A                          | N/A  | Function as an influence and guidance for their vision of equity. They do not have any official members. They also work on making their principles open to be disseminated beyond their regional-network.                                 | Encourage a mindset beyond the food-system to look at Equity. They want people to see a different reality, with the food-system as an example. An example of this active work is in their It Takes a Region Conference |
| Process Intermediaries       | The Food Share Network (FSN)       | Collaborate and Communicate to create a better functioning supply-chain and distribution of food to their beneficiaries.   | N/A   | N/A   | N/A   | N/A                          | N/A  | N/A   | N/A  |
|                              | Tasting The Future (TTF)           | Collaboration, Partnerships and Support building within various sectors and groups around food systems. Ex. The Health Sector in the UK  | Free-Lance consulting to improve the impact of sustainable projects. Ex of work Protein Challenge for 2040, and faster access to alternative proteins.  | N/A   | N/A   | N/A                          | N/A  | Focus on working with champions that have influence with decision makers to create collaborations for policy changes. Ex. Business and Health Sector  | Changing narratives towards pro-competitive and non-intensive sustainable food systems.  |
| Regime-Based Intermediaries  | Good Food Purchasing Center (GPPC) | Gaining support through their national conference and partnerships across the national level. They also create more users and support through job creation for ex. In LA 150 local jobs were created.            | Faster action in their work, by building a network of examples around sustainable food procurement to attract national attention.   | Work on growing the GPP within each city/state they are active in. The growth is based on each Replicated initiative. | The CGFP replicates the GPP into new cities. The cities look to the CGFP as a guide for the program and to be a part of it but are replicating into a new environment in a new state. | N/A                          | N/A  | Work directly with influencing policy changes based on the GPP in institutions in US cities and counties. Ex Policy changes with LA public schools around food procurement  | Through the enacting of their policies, they work to change mindsets on how food can be procured. Ex. Less Meat, Better Meat in schools.   |
|                              | O Prato Certo (OPC)                | Support building within their regional and national level as well as creation of a vision through increased users and procedures.  | Working on creating awareness and impact which happens faster in their regional and national environment. Ex. Building of a database for users to have direct access to local food.             | Began as a project, which grew regionally, and is now expected to grow nationally                                     | N/A   | N/A                          | N/A  | Bring their project to municipalities and focus on partnering with them to increase users in the locales. They are working on bringing the project national through working with the health ministry.                                     | Direct work on changing behaviors and mindsets in government and for users around The Mediterranean Life food system.  |

One case resulted as a Grassroots Intermediary, AE, due to its direct role within and for the niche level. Their direct goal of intermediation and level of context was in relation with vision creation and expansion of the niche. Likewise, they emerged through an individual's relationships and past experience as an advocate for the work at a niche level (AE Interviewee, 14/07/2020).

Two cases were identified as Process Intermediaries, TTF and the FSN. TTF's level of context was as a consultant and working on various projects. The intermediary does not create the vision, but rather uses it to influence how they consult. One of their focus goals of intermediation is the convening and building of bridges between those with influence (businesses and the health sector) and the niche, to work towards food system change. The FSN has a priority focus on food security in the capital region of Victoria. Their level of context is that of their regional area and have a specific mission of coordinating the efficiency of

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the supply-chain in food distribution. They are the coordination head of a project to distribute food to different beneficiary networks which use food distribution as one of their practices. They are not creating any sort of vision for the niche but are supporting them in their own processes.

Finally, two of the cases were identified as Regime-Based Intermediaries, OPC and the CGFP. Though each of them has their own particularities that identify them as regime-based, they are both working at a high level with decision makers. Much of their focus appears to be, working directly with decision makers and at the city governmental levels in both of their own regional contexts. OPC in particular was originally a project created by In Loco, an NFP association in Portugal and the ministry of health, to measure food insecurity in the southern Algarve region of Portugal (OPC Interviewee, 27/08/2020). The project originated as a user-intermediary, but as mentioned by Kivimaa, Boon et al (2019), there is a possibility that once these projects grow, they become regime-based. The intermediary focuses on changing users' behaviors, but they do so at a regional via government and institutional bodies. The CGFP was assembled by the mayor of Los Angeles, California with the focus of being a Food Policy Working Group (CGFP Interviewee, 14/08/2020). They have since been focused on creating changes in ways of food procurement and policy around food at regional and local levels across The United States. They hold 5-core values which they set as their benchmark of operation within different contexts, and though they support the causes of niches, it is indirectly. Their focus of work is to make changes that work at the regime level, with the aim of food-system change.

Since the 9 cases were identified and they resulted in being broken into 4 different categories of intermediaries there are limitations to the data gathered. This data is not representable for all intermediaries but was also not identified for this purpose. By classifying the intermediary type, it is hoped to better understand how their intermediary classification has influence on the type of diffusion they facilitate. Secondly, the data shows that the selected intermediaries have differences between one another though they are in the agri-food category and the majority speak about sustainable food systems. Thirdly, it should be importantly noted that the decisions made for intermediary type were based off both interview and secondary sources and run the risk of misinterpretation. Since the interviewees were not directly asked their roles, the interview questions were used to find details about the intermediaries to deduct their typology. The identification through this typology is not static and does not explicitly mean that these intermediaries are as identified or are aware of fitting into this typology. A final note was that no intermediaries arose as user intermediaries in the cases.



### 4.2 Identifying Amplification Within the Cases

#### 4.2.1 Amplifying Within

This amplification of impact was identified as the two processes (*stabilizing* and *speeding-up*) that all 9 of the cases were involved with facilitating. The decisions between which type, either *stabilizing* or *speeding up*, were identified within the interviews and document analysis based on the end goal of the impact that was intended. It was seen in the data that as Lam et al. (2020) differentiate, some intermediaries were focused on creating more impact at a faster-pace while others took on the role of ensuring a more stabilized environment for the continuance of the niche. A particular trend in the data was that of the dual application of *speeding-up* and *stabilizing* at the same time. An example of this was seen with The FFN whom creates support and an environment in which they also encourage faster growth of innovations in both what they call living-labs and acceleration programs (Future Food Institute, 2020).

#### 4.2.2 Stabilizing

##### *Process Intermediaries*

The FSN works to create a smooth-running system for getting access to food, both dry-goods and from super-markets. They have created a system which brings all of the goods donated from super-markets and other outlets to one place and makes it available to their beneficiaries. Together, they also collaborate with food donors and communicate availability of goods to beneficiaries to create better procedures.

I try to kind of be this communication point as well to communicate items that may be of benefit to the members in the food landscape....so there is a communication-collaboration with the other members and then the food service grants. (FSN Interviewee, 27/07/2020)

Their role is in creating a more stable environment for each of these different member-niches. The interviewee noted that if they were not doing this, much of the same food would not be accessible as it is now.

FSN also help create a stabilized future due to people's uncertainties around COVID-19. They function as an access to information and resources, to support the niches specifically in being food secure within their own networks. Their focus is on improving the supply chain for beneficiaries to have access faster, easier, and to what was not previously available.

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TTF uses *stabilizing* through the encouragement and facilitation of collaboration with other sectors such as the health department in the UK. Through TTF's work, decision makers and representatives from these various sectors have been brought together to work on the same topics and make decisions together.

[...] I'm working with for example the world obesity federation...the NCD alliance...so really looking at the opportunity of getting food system actors and collaborators to work with the health sector, because governments and private sector are often more driven around the health of populations and individuals in terms of their consumers than they are necessarily around purely sustainability motivations, so getting those sectors to work more closely, is a key element of unlocking sustainable..or moving food systems to more sustainable fair equitable systems. (TTF Interviewee 27/07/2020)

This can be seen as *scaling-up*, but also crosses over into *stabilizing* by gaining more support as well as creating a more stable environment. TTF focuses on building partnership and collaboration which simultaneously is building support and strengthens the environment of the initiatives. The data showed this through the active work done by TTF to work on projects that crossed into various sectors, such as with the global alliance for the future of food as well as the public health sector in the UK (Global Alliance for the Future of Food, 2020). TTF encourages the building of support of food system change as well as creates a clear message of what mission ought to be focused on. The intermediary also specifically works for and with large organizations in the food-sector to create new means of practice around more sustainable methods.

### *Regime-Based Intermediaries*

OPC's project began by being a response to the 2010-2014 financial crises in Portugal (OPC Interviewee 2, 27/08/2020). Now, they are refocusing within the new COVID-19 crises and projecting the future of it to protect their users and niche. They focus on building a sort of knowledge base on regional food, information on how and when to get it, and how to prepare it, ultimately to secure users. The network has created a more effective way for users to connect with the niche via the creation of an online database of producers accessible through their website (O Prato Certo, 2020). This has built more support as well as users within the environment in Portugal. COVID-19 as mentioned in the interview, was an opportunity they saw, to get more people involved with how they access healthier food.

The CGFP has helped create more users and support as well as more jobs in some regions. For example, in Los Angeles they were the direct cause of creating 150 new, well-paying, food supply-chain worker jobs (Watanabe, 2013). The intermediary also focuses on raising support and increasing their users within regional areas.

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[...] .so we're now working in 20 cities with over 50 public institutions [...] within each institution we do very detailed supply chain research for them and technical assistance. (CGFP Interviewee 14/08/2020)

One of the other ways this is accomplished is through a large national conference named Power of Procurement in which they deepen the knowledge base and coordination around public procurement. Through their use of clear language and direct support, they are also creating a smoother way of communication within the environment around food procurement (Center for Good Food Purchasing, 2019).

### *Grassroot Intermediaries*

As a response to COVID-19 AE took advantage of the opportunity to build a support system for both users as well as CSA niche. They built a Facebook platform that allowed the communication and supplying of CSA to users in their local areas around Greece (Agroecopolis, 2020a). They were the coordination of this project named “meet your producer” and are planning on staying a coordinator for the possible future second-wave with a hope to protect from the similar future results. They are also building plans for the future of *growing* through crowdfunding and support systems (AE Interviewee, 14/07/2020). The aim will be eventually to have more focus on *speeding-up*, by *stabilizing* right now. An example was given in the interview of the past when AE created a means of communication between CSA farmers and users. There was a problem due to users growing their own produce, which they did not require from the CSA producers. So, AE investigated these products and built a form of communication which allowed for the producers to select other types of produce to grow. Ultimately, they have built better collaboration in their network by making different CSA producers aware of one another and working together.

### *Systemic Intermediaries*

The FFN have a department which specifically focuses on research and development within the food systems. This department is then a sort of consultancy also for outside actors, which creates more support as well as users. They are also working on building a clear communication of the vision for all parts of their network. They prove this by focusing on long-term decisions and thinking about what their existence will be “100-years from now” (FFN Interviewee, 11/08/2020) and not only in the present. They also focus on creating better solutions to working as an organization around the topic by providing trainings to anyone that wants to be involved with their network. To be focused on a similar vision, the interviewee expressed that they aim to have all members on a similar basis knowledge level about what they are working with through workshops. They are *stabilizing* the environment and building a strong basis of support and users

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in this idea. One of their focuses is in normalizing this type of food-system environment, to create a better future.

NESAWG holds a yearly conference named “It Takes A Region Conference” that has been a part of the core of their identity since 1992 (Ruhf, 2018). This conference is a main way the network connects with people and “once they plug into our conference...that's when we are able to connect with them for other efforts” (NESAWG Interviewee, 04/08/2020). This conference is a way they have built support, communication, and users around their vision.

[...] people wanna come to our conference because it's an opportunity to connect with different stake-holders that they wanna learn from or form collaborations with. (NESAWG Interviewee, 04/08/2020)

They also have the sorts of conversations which “may be uncomfortable” with one another, to maintain a similar vision they are all working towards (*It Takes a Region Conference*, 2020). They meet and partner with other groups around their topics so that they can support one another. An example of this that arose in the interview, is their partnership with a network of urban farmers of color in Philadelphia. Together they focus on food-apartheid and defending food growers in Philadelphia.

They also support other organizations which strengthens their own context around their beliefs. There is a level of relationship building that they have done with certain public figures as well, which has built them higher levels of support. An example of this is their indirect relationship with a US Senator of Vermont who is also a member of the agriculture committee (NESAWG Interviewee, 04/08/2020). One of their responses to COVID-19 was to create a fund dedicated to specific people in need at the time, to help survive the hard-times. The intermediary strengthens the environment by giving a voice to all network members in their conference and online surveys to ensure the intermediary is focusing on network needs. They have for example intermediated and convened the providing of relief checks to People of Color (POC) in their network, by building upon a relationship they had and facilitating the meetings necessary.

The OFN has built a more reliable and alternative supply-chain based on their technology which in turn has given more lean-procedures to aid in how niches and users are able to connect over food. They build more users and members through their open-model and network, which motivates people intrinsically. The OFN is also building a learning-curve based on experience in other locations. This has allowed the members of the networks to learn from one another in the past, by for example providing information on common start-up mistakes.

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[...]And I do think that the kind of global network nature of it has been a kind of strength for us...I think that cross pollination of ideas around something that's working , somewhere else in the world...you know it's a bit like this learning curve that I was talking about before where we're having these personal conversations with everything we've learned from helping people in Australia for however many years...and ...they can be having that conversation with a food hub in France [...]. (OFN Interviewee, 15/07/2020)

The Global aspect of the OFN is focused on *stabilizing* the environment and making the growth possible on the terms of users and niches themselves. They are constantly improving and making the technology available and easier to access. For example, in 2019 OFN Global reported online shops being 92% faster, admin orders 78% faster, and maps being 98% faster (OFN Global, 2019). Likewise, they are the guiding vision through the technology, as well as influencing members to ascribe to certain levels of practice within their system.

The OFN has compiled information and open possibilities for the easier use of their technology. There is a constant desire to create a smooth environment that is able to be disconnected from the food regime and technology systems. They also focus on the future, by mapping out their own work and the use of their technology to see what needs to be improved to ensure it keeps working for all stakeholders. The technology is available in 13-languages with 20 more on the way. As they have been experiencing rapid growth during COVID-19 in many instances, the global team has been there to help them handle the user growth (OFN Global, 2020a). By doing this they are ensuring that the niche can withstand the hard influx with unexpected growth.

The SFT has focused on creating a clarified vision of how sustainability is to be measured, accompanied by a project named “True Cost Accounting”. This has helped begin to create a simplified system and method of support for UK farmers. This also in turn is to make it more understandable what “cheaper” means, increasing the user base for the niches as well (Sustainable Food Trust, 2019). They have gained popular support through people such as The Prince of Wales, which gives more credibility and recognition to their cause. Their support system of high-level individuals in the food-sector creates a level of visibility and capability to actualize their ideas (Sustainable Food Trust, 2019). Their aim is to increase the profitability of sustainable farming and producing so that both producers and users can afford this means of sustainable production. Though most of this work is done at a national level, they have been diligent in making it available inter-national and with supra-national institutions.

### 4.2.3 *Speeding-up*

#### *Process Intermediaries*

TTF instigated Forum For the Future's Protein Challenge for 2040, focused specifically on providing awareness as well as funding for the types of initiatives and innovative ideas around alternative protein sources (Forum For The Future, 2018). They have also worked on creating faster impact on large organizations' sustainable impact approaches. As a free-lance consultant, TTF also works to *speed-up* sustainable changes within the organizations and businesses based on their desired projects. For example, they worked with McDonalds and Diageo on "Food Systems Future Trends" in 2020 and supporting Quorn Foods with sustainable policy development in December 2019 (Tasting The Future, 2020). This allows a faster response to sustainable issues when confronted. TTF believes specifically that sustainable transitions need to occur within the food systems and aims to contribute to making them happen faster.

#### *Regime-Based Intermediaries*

O Prato Certo has worked on *speeding-up* their initiatives especially through COVID-19 times, by creating a network that can more quickly collaborate in the alternative food supply-chain. They have done this by responding to the lock-down and using social-media as a way to inform people in their homes about choices of food and how to prepare it.

so we designed a full communication strategy that its...that has been very effective...also people are more at home...so people are more available for media content...so the team has produced a wonderful strategy...very efficient with good results....and with a lot of feedbacks...that means they are doing this in the way people respond, people communicate, people contribute...and it has been very very interesting. (OPC Interviewee 2, 06/10/2020)

They also created an online data-based which mapped out locations of different farmers and producers with contact details available for users. This database was mentioned as *stabilizing* but also has an intent in *speeding-up* for local producers to be able to access customers.

So, we created the database of local producers so that people could look "I'm doing this recipe...I need green pepper where can I buy green pepper?" I go to the database and I look for it...so we have done it from day 1...and we had in February we had 64 producers in the data base...64...in February...in April we have 260 producers in the database...because small scale local producers find this to be a good tool for them to communicate and to say look I'm here I can sell you

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products...I have things...I can take you to our home...you can buy here [...]. (OPC Interviewee 1 (27/08/2020))

The CGFP is *speeding-up* the sustainable food-procurement initiative in The United States by the means of their work. Their food-procurement ultimately is creating faster realization of sustainable practices through projected direct funding of 500million USD (*The Center for Good Food Purchasing*, 2020). Their acts of *speeding-up* are more indirect to the niche through their work by focusing on how institutions spend their money. They also *speed-up* by creating something that has impact over more time by changing the ways that money is spent and who contracts are made for.

### *Grassroot Intermediaries*

AE has focused on *speeding-up* through their COVID-19 response of “meet your producer”. They have been actively making more people a part of the initiative and creating more impact for the niche. This has also created a higher CSA visibility, with an intention of more impact over a longer time. They want to work on *speeding-up* through farm incubation and hands on learning in the future but is not something they are yet doing. It seems that their means of *speeding-up* are not direct. Though they would like to make it happen faster, they believe in doing things slow and the correct way, which ultimately is a way of creating more impact, but more *stabilizing*.

### *Systemic Intermediaries*

FFN specifically focuses on creating environments which allow innovations and niches to thrive. They want to create faster impact by allowing these sorts of innovations to have a place to practice and make their ideas become reality. They have Living Labs which are purposed for this. They want to strengthen research projects to make them be able to better enter the real world and create impact. They also sometimes provide funding to ideas that match along with their goals and visions. They help the creations of what they call “proto-types” and “spin-offs” to “hack” the food-system for the better.

An example given in the interview of their *speeding-up* was by supporting the innovation MyGrants, which created a way for migrants in Italy to prove their skills and apply them in a working setting withing the food-industry. FFN partnered with and supported this innovation. They also provide support and funding to create faster impact in locations, for example the interviewee expressed that in The US they have a partner/member of the FFN whom they supported through her ventures to build faster relationships in California.

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The OFN has created what they call a “bubble-wrap path” which they used in Belgium where the global-team is prepared to support and allow the new instances (niche) to start faster (OFN Global, 2020b). They also focus on creating available information and procedures based on past experiences for new instances to form faster. Their working with *stabilizing* has allowed them to create faster methods and more easily accessible technology.

We’ve done a lot of work in terms of regional economic development, in mentoring, education, resources and as much as we’ve got some examples of where we can see a direct link between our work and something starting.. it’s also obviously really hard to know what was enabled [...]. (OFN Interviewee, 15/07/2020)

Their technology has been a means for people to organize their ideas much faster than they would have been able to without it. Their aim is to make things faster and easier so that people can start-up their own initiatives as smoothly as possible. They have “cut out” the learning curve, which allows faster action.

The SFT focuses on being able to *speed-up* as a goal because they believe by creating better policy and practice for their environment, that more people will join the system. The sorts of policy they work on involves creating more incentive for sustainable methods of farming. They believe that all farmers would prefer to use sustainable methods, but that they need to have the resources and the capability to do so. True Cost Accounting is where they have focused this work, and

[...] it makes sustainable food production a much more prosperous business model, and that’s an idea we had 8 or so years ago, we’ve held 4 conferences, we’ve kindof managed a working group, we’ve been involved in a kind of number of UN projects on the theme [...]. (SFT Interviewee, 17/07/2020)

This can be seen in their policy work done for local abattoirs in England to receive funding from the agriculture bill (Sustainable Food Trust, 2020). They aim to continue these sorts of support for funding of what they believe is the sustainable methods as a mission.

### 4.2.4 Conclusions of Amplifying Within

*Amplifying within*, whether by means of *speeding-up* or *stabilizing* is what seems to be a core activity within all of the transition intermediaries. The difference in how, does depend on the resources and goals of the intermediaries. *Speeding-up* tended to be a goal and aim of initiatives, but was tending to be realized through the *stabilization* of the environment that the niches and users found themselves in. The OFN for example is using *speeding-up* as a means of amplifying, as opposed to AE who focuses more on *stabilizing* the environment as a means of amplifying. The systemic-intermediaries were unique in that they focused both



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on *stabilizing* throughout the whole system while also using *speeding-up* as a means of amplifying. For example, the creating of more easily accessible “know-hows” and technology done by the OFN and the SFT.

### 4.3 Amplifying Out

In the process of *amplifying out*, not all intermediaries participated in each impact area. Due to this reason, certain transition intermediary categories will not be present as the data did not lead the researcher to believe they amplified this impact.

#### 4.3.1 Amplifying Out: Dependent

##### 4.3.1.1 Growing

###### *Regime-Based Intermediaries*

O Prato Certo has *grown* since the beginning of their work, by connecting with the entire Algarve region, and working towards *growth* into the entire country.

[...] we had the first pilot project, but then, we have another project to disseminate the results of the first project, so we produced the results...the techniques...the methodologies and the product in the first project....and then we designed a second one to do it on the ground, so we have a 3year program that we are doing, now with activities running every day.....well every day....if there was no pandemics [...]. (OPC Interviewee 2, 27/08/2020)

This shows that they are keeping the same context and moving the same project into new locations in Portugal. Overall, they work on *growing* the project across Portugal and have presented their project in January 2020 to the sector of state of health (OPC Interviewee 1, 27/08/2020).

CGFP have worked on having local partners in each new location that they begin to work which they label as local lead partners and local institutional partners. These sorts of partners have been for purposes such as being grounded in local priorities and facilitating relationships and collaborations in the local area (*The Center for Good Food Purchasing*, 2020). An example of their national partners that work on the ground are Food Chain Workers Alliance.

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[...] we have multiple networks...both within cities and across cities...we have a coalition model at the local level..so we have a peer to peer network of ...in every city where we work [...]since we started in 2015 we've been working closely with the Food Chain Workers Alliance to help to network the efforts across the cities...through that network[...]. (CGFP Interviewee, 14/08/2020)

This is to help *grow* within each city and have more level of impact than just the initial sector that they are working with. Sometimes, these local initiatives are also there to advocate and grow the idea before the CGFP itself enters the city or region.

### *Systemic Intermediaries*

The FFN has grown in its local regions by creating a larger network, specifically in Italy. They have been *growing* within Italy and opening new chapters that are all reliant on the FFN (Future Food Institute, 2020). These same practices have been happening in other locations such as Japan as well but are *growing* within the Japanese food-system environment in relations with the *replicated* Japanese Hub (FFN Interviewee, 11/08/2020).

#### **4.3.1.2 Replicating**

### *Systemic Intermediaries*

When the FFN find partners in different locations that share the same vision, they open new living-labs and hubs (Future Food Institute, 2020). They have done this in China and Japan, and opening partnerships within The United States. These new initiatives are dependent on FFN but are based on their own locales and needs.

[...] the majority of them actually represent places where some of our fellows started to open kind of one of our foreigner houses and representing future-food running local projects with their communities in their places [...]. (FFN Interviewee, 06/10/2020)

As a part of their creations of B-Corp and “spin-offs” of the FFN, they are still a part of the network and are dependent, but they have a different focus on their environment and means of supporting themselves. To note here, is that to be a member or a spin-off does not mean paying into the FFN but being able to be self-sufficient. The interviewee expressed that each one of their entities has its own business-model and is able to work in its own way.

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The OFN uses their technology as a means of expanding into new places across the world. These new hubs and instances are encouraged to be formed based on their own local needs and specifically by them. However, they are connected to the OFN by the use of technology and being a part of the OFN. They rely on them as the holders of the key technology.

They generally start forming a team and sign-on to the global pledge around taking care of the commons and becoming an affiliated member of the community...hopefully at that point they have started coming to global meeting and functionals [...] they at that point they are responsible for deploying the software in their location [...]there is the choice to opt in to being this sort of global and member and becoming part of this having your global maintenance looked after by the team because you're paying for it. (OFN Interviewee, 15/07/2020)

Though they are independent to act in their own best seen fit ways, they are still dependent on the OFN as a cohesive and source of technology. The instances are required to contribute as a part of using the software, this does not need to be money in all cases but needs to be practicing open source in what they do (OFN Global, 2020b).

### *Regime-Based Intermediaries*

The CGFP *replicates* the GFP into new cities. The cities look to the CGFP as a guide for the program and to be a part of it but are *replicating* into a new environment in a new state.

[...] Austin for example...I met the Food Policy Director there at a conference...it was his first week on the job and he was kindof like "Oh, I think procurement is gonna be one of the priorities that we focus on for the city of Austin"...he got interested in what we were doing in LA...and then....ultimately after doing a lot of research was kinda like "this is more progressive than anything we've seen....we don't wanna reinvent the wheel so we'd love to do what you're doing...can we do it in Austin?"[...] so by creating a national organization that was no longer affiliated with one city specifically it kindof freed up or created more opportunity for other cities to get involved. (GFPC Interviewee, 06/10/2020)

This was an example given of how the GFPC began, and how they based their work on *replicating* their program into new cities and environments based on their 5-core values as a guideline.

### 4.3.2 Amplifying Out: Independent

#### 4.3.2.1 Spreading

##### *Grassroot Intermediaries*

AE focuses on *spreading* their ideas of CSA and do not require any sort of membership. Their idea is to be a place for information and dissemination of ideas. This can be seen in their active blogging on their website as well as productions of documents and being a point of information for CSA through workshops they host (Agroecopolis, 2020b). An example of one of their works has been “Democracy Not for Sale” (Backes et al., 2018), looking at food sovereignty in Greece. Even in their COVID-19 response, by building the “meet your producer” tool, the interviewee expressed that they do not take control over this and allow users to operate by and for themselves. They are a facilitator and believe in the growth of CSA based upon people’s own wants and desires to do so.

##### *Systemic Intermediaries*

NESAWG is focused on *spreading* their initiative as they do not expect any sort of dependence on their initiative. They rather want to be a form of information for others to focus on the areas that they see are important. NESAWG is a cohesive and guide for common visions, they disseminate their beliefs and ideas through their newsletters and webpage, as well as through their conference that they hold. In the interview, it was discussed how their work is informal, and to be a part of NESAWG does not mean that you need to follow certain guidelines.

They are formed unofficially and do not require any sort of subscription of membership or networks. Their principles are disseminated but are not even necessarily commonly agreed upon officially. An example of their informal *spreading* has occurred through their conference.

C: would NESAWG be in any way involved in the emergence or the starting of any sort of initiatives....any sort of networks?

I mean there is certainly the informal aspect of that[...] for example ...we started a youth track at our conference in 2016 that's been really popular....and so I could see a formal youth network coming out of our conference because youth organizations from around the region get together every year. (NESAWG Interviewee, 04/08/2020)

### 4.3.3 Conclusion of Amplifying Out

*Amplifying out* as a means of amplifying impact to create more range of impact and locations is something confronted by all intermediaries in different ways. The data shows that not all cases focused on the area of *amplifying out*, and even those which did, it was not a main priority but rather a result of their actions. An interesting note in the data, is the lack of data on process intermediaries in any of the 4 amplification processes in *amplifying out*. It is notable to point out here that the lack of data amidst the cases in these areas makes it hard to draw any distinct conclusions. It could possibly be, that the lack of data means that *amplification out* is not a priority of these intermediaries.

### 4.4 Amplifying Beyond

The processes of *amplifying beyond* for impact were something that each of the 9 cases facilitated in their networks in one way or another. Two words which appeared commonly in the code throughout this section were collaboration and networking. They tended to be important aspects of how this amplification for impact was facilitated.

#### 4.4.1 Scaling-up

All but one of the networks in the study deal with *scaling-up* to some extent. To what level depends on their context as well as what exactly they are “*scaling-up*”. If it is policy or to a higher institutional level, depends greatly on the access of the intermediary.

#### *Process Intermediaries*

TTF has been working to *scale-up* policy through collaborating with other players that were known to “have the keys” or higher-level access, as well as in better power positions than themselves (Gliedt et al., 2018). When discussing the intermediary’s role working with the global alliance for the future of food the interviewee expressed

[...] I've been working with them on a stake-holder led process of engaging stakeholders across the food and health system, so we believe there is an opportunity for food system actors to work more closely with the health sector, so doctors practitioners..nurses..care providers....to really scale up policy and practice for changing government policy that would enable the transition toward sustainable food and systems [...]. (TTF Interviewee, 03/08/2020)

In the instance of TTF, they work with multiple actors at different levels to bring the *scaling-up* of policy changes around access to finance as well as health. They work with champions such as large agro-food businesses and the health sector to collaborate and to empower them to make policy-changes themselves (Sovacool et al., 2020). TTF has also worked with influencing higher-level institutions to become involved

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with niche activities and support the funding of them through a “Next Protein Challenge”. In this challenge, alternative protein innovations in the food sector have been given special attention to encourage their adaptations (Forum For The Future, 2018). Collaboration and networking are the key tactics here to bring the right players into contact with the ideas for making changes.

### *Regime-Based Intermediaries*

Through the analysis of CGFP there is a direct relationship with their ability to influence policy decisions and *scaling-up* to institutional levels. Their role is greatly involved in this aspect and gives them access to working with decision-makers. They have worked on the creation of official policy changes in 6 different cities and counties across The United States (Bronsing-Lazalde, 2020). One of their 9 examples provided on their webpage was the “*Oakland Unified School District, 17-2057 Board Policy*” which looked to upgrade the nutritional standards and kitchens in the Oakland School District based on the GFP (Johnson-Trammell & LeBarr, 2017). Their involvement is also focused on creating a collaboration with public schools in how they procure food. To some level, this is really their purpose and reason for intermediation. Their position allows them to interact directly and influence those that make policy change.

OPC works with the health sector and is supported by them in changing mindsets. They ultimately are *scaling-up* by providing a sort of information and validation through their partnership with health as well as university level collaborations. Through their relationships and awareness, they are working with health and government agencies to encourage them to think about OPC’s work when making decisions. They themselves do not make the change but influence those who do.

We also work closely with the social security ministry from the first moment....we also work very closely with the university of Algarve from the first moment....we have....and we maintain this close connection with the health ministry....so we have a very how to say, support community, support partnership very very strong with this key players that are fundamental on anything that can change attitudes and behaviors in this field. (OPC Interviewee 2, 27/08/2020)

Due to their working directly with municipalities, they influence them to make better local policy decisions through their level of awareness. They are bringing users and municipalities into contact, which raises more awareness around the topic. This is done by focusing on collaboration as well as building a network of municipalities at some level to communicate and be aware of this area. The project has grown from a project, to a regional level, expanding country wide policy-wise. Through doing this they are bringing change to a higher level ultimately.

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### *Grassroot Intermediaries*

AE is specifically located as an in-between to report on Greece and the Mediterranean Region, to the higher level, URGENCI, which has collaborations and seats with the UN and policy creation at an EU-level (Urgenci, 2020). They do not work at this level but give a voice through their higher-level collaborations. They are directly an advocate for CSA throughout the country of Greece and work on giving the movement a voice. Their aim is to create a higher level of advocacy that focuses specifically on their niche and makes decisions on behalf of them. They advocate the *scaling-up* of policy which allows the niche to function at its own terms.

They have *scaled-up* to a higher institutional level by partnering with Erasmus+ and collaborating the idea of the niche. The interviewee mentioned that through their Erasmus+ projects they were able to advocate CSA at a higher level in Greece since it is something so new. They have also been involved in their own local municipalities to some extent. When discussing their work with the municipality in using green-spaces the interviewee mentioned “In some cases they are going to give permission, help us gather the people, give the plants...going to help a lot.... In other cases, they are just going to give us permission and we will do everything.” (AE Interviewee, 14/07/2020).

### *Systemic Intermediaries*

The core of what the FFN is, is an institution within a university, which in itself is a level of *scaling-up* their initiative as a means to create impact. By creating an educational institution, it has brought their voice a level of legitimacy that may not otherwise be present. In their beginning, they did not want to be involved with local politicians and policymakers. However, the interviewee said they determined that it was necessary for their future as an organization to work in this area.

“[...] but then we understood that if you wanna make the things happen and be a long-lasting innovation that can really impact the community you have to interact with them....at least try to influence them or to give them inspiration or give them the tools or the knowledge to understand better what people need from the bottom. [...] And so we started really designing almost all of our programs to make sure that someone from local-regional-national institution were always involved in some way.” (FFN Interviewee, 11/08/2020).

The FFN also works at an even higher-level, with UN-Agencies, which they claim are easier to work with than at their own regional level. They have also been involved with the UN-Level advocacy of Food Loss and Waste, to pay more direct attention to this topic area. They lead this initiative which resulted in the official Food Loss and Waste day with the UN-Agencies on September 29<sup>th</sup>.

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The FFN has focused on partnering with higher level institutions that have already done a lot of research and have available resources.

[...] I don't think we need to reinvent the wheel and sometimes I see NGOS, organizations, that are putting a lot of energies and money to rebuild something that we already have been paved....because anyways the UN is let's say, our global government...it's an organization that is taking care of the global good from many different perspectives [...]. (FFN Interviewee, 11/08/2020)

The FFN connected with the FAO and UN to use a data-base that they had already created, and remodel it to be more user-friendly and function better at a lower level. In turn, they have built a continued relationship at this high-institutional level.

NESAWG collaborates and is a member of other organizations which advocate for lower level initiatives at a higher national level (Ex. The Sustainable Agriculture Coalition). They “amplify” advocacy positions of their partners that work at a higher national level. They convene directly as an advocate at the national and regional Department of Agriculture level to be a voice in the decision making that these higher-level decision makers influence.

[...] we are convening a group of stakeholders to participate in the national and north east association of state departments of agriculture's annual meeting so this is basically the heads of each state's department of agriculture. (NESAWG Interviewee, 04/08/2020)

This level of *scaling-up* has also in return, given NESAWG access to these individuals as a resource. For example, when working with Somalian Refugees, these individuals are able to provide resources for access to land and tax knowledge (NESAWG Interviewee, 04/08/2020). In this way, they facilitate this direct relationship between the regime's resources and the niche's needs, in a *scaling-up* manner. They do not do their own lobbying or policy making but are rather an advocate and listening to their members and base their position accordingly on their members and collaborations. An example of their current action to *scale-up* is their work to legitimize past government funding. They are compiling information on sustainable agriculture and how their member organizations have used different funding to improve regional systems to provide information to the state Department of Agriculture as influence (NESAWG Interviewee, 04/08/2020).

The OFN does not *scale-up*. They however do work in a defensive way of advocacy. When necessary and when something specific happens, they react to it. They have conversations with the types of decision makers involved with policies, to inform them on how policies are affecting the OFN's work. In this way they work to advocate impacts, to influence how decisions are made (OFN Interviewee, 06/10/2020).



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The SFT has been involved with the creation of an idea of the Polluter Pays, which has involved them, now, in working directly on a project with The UN to push this idea further into policy. They have been pushing and advocating these ideas at a high level to change policy around sustainable food production (Sustainable Food Trust, 2019). Their members are to some extent a part of the niche and they also partner with other NGOs that are based in this area. This is to make sure that the types of supra-national policy advocacy that they work on, is something that the niche is wanting change for.

At a national level they work very closely with policymakers in London. They directly lobbied the tax on nitrogen fertilizer and advocated the 4 parts per 100 soil carbon initiative at the French National Ag level at the UN's COP 21 and in Germany at the UN COP 22 (Sustainable Food Trust, 2019). They have a high-level of connection with both national and international decision makers which highly influences their level of influence in *scaling-up*.

Another important aspect of their *scaling-up* work is with local abattoirs in the UK. The SFT created a policy network and directly lobbied for local abattoirs. They have been working on changing laws, to make methods more profitable for these local businesses before they are forced to disappear. The results of their work are aiming to change the language used in the Agriculture Bill in the UK, to protect this type of local producer (Sustainable Food Trust, 2019, 2020).

### **4.4.2 Scaling-Deep**

*Scaling-deep* was an amplification process that was facilitated in different levels of the MLP. To this extent, the data revealed the context in which *scaling-deep* was occurring within the cases.

#### *Process Intermediaries*

TTF focuses on changing narratives across various levels to attempt at a shift away from the productivism mindset in agriculture. The focus is through pre-competitive and collaborative projects that shape the way people look at the sustainable food system. There is also a want to change a mindset not around just more sustainable food, but what food is being sustainably produced. The example provided is that many organizations focus on only a few mass-produced crops (ie. corn, soy, wheat) (TTF Interviewee, 03/08/2020). TTF has worked on producing narrative documents to make these ideas known such as the document produced along with the global alliance for the future of food. In this document the present their shared vision for a transitional change in the narratives around global food system (Global Alliance for the Future of Food, 2020).

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[...] yknow politics affects food systems and that's why changing the mindset and narratives of politicians is so important above and beyond any sort of individual policies [...]. (TTF Interviewee, 03/08/2020)

In a way, they *scale-deep* to be able to *scale-up*. They focus on bringing this narrative change which they find more important than just changing a policy, but to actually change the minds of those making decisions. TTF has also recently helped produce the Global Alliance for Health narrative at a supra-national level (Global Alliance for the Future of Food, 2020).

### *Regime-Based Intermediaries*

O Prato Certo focuses on communication as it is the communication branch of the original project started by In Loco. Their main role is to change the behaviors of users. It is the organization that makes an “in-between” for the users and the regime level. They work directly with municipalities and ministers as well to focus on changing their mindsets around Mediterranean food systems. They hold workshops and provide users hands-on knowledge to work with their food and how to source their food. One of their main values is to “show not to teach”. People can take these decisions into their own hands and be a part of making their own changes. They work at 3-levels for this awareness raising, the beneficiaries, the technicians who teach, and the decision makers who support the technicians (OPC Interviewee 2, 27/08/2020).

[...] look we know that we are changing attitudes and behaviors...and things like this don't change over night....needs to be done and redone and insisted..and it needs to be continued...before it can produce a little result...so we know its a long run...but we are prepared to run it [...]. (OPC Interviewee 2, 27/08/2020)

CGFP is focused on the values that are held around food procurement. One of these examples is by hosting “less meat, better meat” where they buy meat less often, but for higher quality in public schools (Wong, 2013). This ultimately has a position of changing the way that people view meat consumption. Their practices of policy changes are intended to also *scale-deep* by which they are changing mindsets around the ways that food is procured, ultimately this is intended to change mindsets (Bronsing-Lazalde, 2020).

They also have examples of giving voices to young students in a youth-program in Buffalo, New York to educate and change their ideas about food (Good Food Purchasing Program, 2020). They change expectations and language to allow people’s mindsets to be changed around the idea of how food is sourced

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and what food is healthy and sustainable. The CGFP uses their method of *scaling-up* as a *scaling-deep* process.

### *Grassroot Intermediaries*

AE, since focused on CSA, works with changing people's mindsets around their niche. They do this by getting people involved and encouraged to take CSA into their own hands. They support the idea that people should be able to make their own decisions in this. Part of their response to COVID-19 was also *scaling-deep* by supporting a change in how people see their food ought to be sourced, by creating awareness, "meet your producer". They for example pass these ideas through their website and social-space Perivoli "our vegetable garden", in which they hold workshops and events such as group cooking for homeless and refugees as well as educational food system classes (Agroecopolis, 2020b).

### *Systemic Intermediaries*

FFN facilitates *scaling-deep*, since at their core is an institution focused on changing mindsets around the food-system. They hold many workshops, "bootcamps" and classes which have involved ranges of users, niches, and regime level organizations and decision makers. They are a place for idea growth and information exchange throughout various levels. They also provide this sort of "family feeling" where members feel they are a part of the whole FFN.

"[...] so the hubs represent really this chapters that have been developed thanks to the community. Our first program was a master's program and then we developed many other bootcamps, summer schools, and many other say programs...and of course if you train people that then become fellow and they feel a kindof affiliated or a part of a family [...]" (FFN Interviewee, 11/08/2020).

This has been shown in their members opening new locations and *replicating* to new places in the world. They use communication and involvement as a way to get people at a local level, niche level, and regime level to each be involved in different ways throughout the landscape.

The SFT works directly with creating new ideas to get those ideas "out into the world" for others to take ahold of and make changes with. While talking about the polluter pays initiative during the interview the interviewee expressed

It has become real in the world and has been run with several organizations you know very big organizations including the UN....so I suppose that's our role....its to foster new ideas and get them out there into the world so other people can run with them. (SFT Interviewee, 17/07/2020)

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They provide the sorts of ideas and realizations to the information that they believe in. For example, they lead the Carbon Soil Initiative which spread internationally for others to adapt (Sustainable Food Trust, 2019). In doing this, they changed the mindsets of individuals around the level of carbon which is allowed in soils.

An impactful way to *scale-deep* for the future is their educational project named Harmony which focuses on educating students and educators around doing all things in “more harmony”. By this, they mean that all things are taken into account within the environment when decisions are made (Sustainable Food Trust, 2019). They are focusing on changing these mindsets in an educational way for both students and educators.

One of the broad ways they *scale-deep* is making entrance into newspapers and dialogues through things they have produced such as “the true cost of food” for the United States and the UK both. These analyses provide information about what goes into the cost of “cheap-food” that makes it not so cheap for the environment or taxes in the end (Sustainable Food Trust, 2017). They are pushing towards changing the way people view the cost of food as more than just the price-tag at the store. In their reports they shed light on how, communities pay in taxes, and when the money goes to super-markets and large farms, public funding is subsidizing their activities.

NESAWG is focuses on creating and lifting-up the idea of equity by creating an example in the food system. They are encouraging that equity is a movement that the food system is just a part of. They want conversations and narratives, to be aware of equity within food systems, and whom is being mistreated and whom the access of resources is available for.

[...] a conversation that we've really been trying to lift up and support within our network, like equity not just in the food system but in the movement itself [...] we're trying to lift-up that conversation in addition to addressing equity in the food system at large like farm worker abuse...food apartheid, land access, access to funding and farm bill programs, that sort of thing.  
(NESAWG Interviewee, 04/08/2020)

They actively push for a broader set of people to be involved and have their input be involved in how people think about decisions and the food-systems. They *scale-deep* in their networking, by making people aware of equity issues.

OFN *scales-deep* by changing the way that people think about the ways that technology can be used to connect around them within the food system.

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[...] it feels that there is like this desire around the world for people to be able to build those community based enterprises and you know there's value based supply chains of accessing food where you know the province and you know or trust the person [...] And that people are really motivated to help each other and that you really just kindof need things like OFN infrastructure that helps make it easier. (OFN Interviewee, (15/07/2020))

They are allowing for people to come together and are encouraging them to be a community in their own places. They are also setting an example based on being open source through the availability and community building aspect, as opposed to capital gains.

### 4.4.3 Conclusions of Amplification-Beyond

The process of *amplification beyond* is apparent in all cases whether through one process alone or both. It can therefore be viewed as an important aspect of facilitation acted on by intermediaries. When talking about *amplification-beyond*, both *scaling-up* and *scaling-deep* tend to work alongside one another as they are a method of obtaining one or the other. For example, some intermediaries are focused on changing policy which in turn will change mindsets, while others want to change mindsets with the hope that policy will follow.

## 4.5 Barriers

The barriers which arose from the data were not separated by type of intermediary but were rather trends that were noticed in all of the cases. The barriers that arose as being significant across the cases were COVID-19, financial based, methods of philanthropy, organizations being spread-thin, and policies & bureaucracy.

### 4.5.1 COVID-19

One of the most obvious barriers that arose amidst each of the interviews and cases was that of COVID-19. This was expected as the pandemic put a very tight pressure on agri-food supply-chains. However, COVID-19 presented various problems as well as opportunities. Many of these intermediaries were the ones responding to the COVID-19 complications. Those that reported information on COVID-19, generally were not being so deeply affected by it, whereas the niche in their networks were implied as the ones feeling the brunt of it.

AE saw that people did not have access to healthy food and had to pay too much for it, while farmers were simultaneously throwing away food due to lack of being able to transport it. So, AE decided to pull their network together and put power into the hands of the producers, to connect with consumers and vice-versa. They created “meet your producer”, a Facebook group made-up of many smaller groups based on

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areas. This has allowed people in local areas in and across Greece to access CSA and fresh food while supporting these farmers.

FSN has responded as being an area for their network to ask questions and to ease their anxieties around the uncertainty of COVID-19. They also maintained food supply to their beneficiaries. COVID-19 was hard on beneficiaries however, as many had to close to resort their cleanly policies to be able to operate as normal (FSN Interviewee, 27/07/2020). These difficulties resulted in the FSN filling the gap where possible to continue to distribute food to those who needed it.

TTF has been affected in ways because of COVID-19, which has made it hard to work while many businesses, especially in the agriculture sector, are suffering. They however believe that this is a positive opportunity and that many people are turning to see the importance of coming together over food-systems and having shorter food-system chains. TTF believes these struggles will in the long-term make organizations think more systemically and be aware of this happening again.

O Prato Certo has faced difficulties since their whole way of functioning is based on practical in-person demonstrations. However, they have been able to take this time to respond on social media and become more involved with people while they are at home. They have gone full-force into their social-media. They believe this has barriers though, because people need to “have their hands in the dough” to learn (OPC Interviewee 2, 27/08/2020). They have also used COVID-19 as an opportunity to create a database which connects farmers to users around the country.

CGFP was not directly hurt by COVID-19, but they believe that it is going to cause a slipping backwards in the progress that schools and institutions have made (CGFP Interviewee, 14/08/2020). The changing to quick and easy food and plastic due to COVID-19 has complicated things. It has also made supply-chains more difficult to work with, which in turn is creating problems.

FFN was affected since their core is a university, due to this, they were not having any in-person interaction. They also are focused on learning by doing and being active in what members are doing. They however took this opportunity to redesign their approach and are becoming more accessible online and providing more interaction online.

The OFN has seen a difficulty in the sudden spike of usage of their platform. Many people have become interested and started using the OFN software which has created a surge of difficulties as well as many questions. People in turn have been wanting to learn everything at the same time.

I think it's just been really evident particularly during this last period where everyone is really busy in their local communities and local instances and really stretched really thin and at the same time

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had more instances starting up during this time because they you know in response to COVID can see the benefit of having something like OFN where they are.....and it ... it feels kindof messy in the section of need...like at the same time as more people want more from us....we have less to give. (OFN Interviewee, 06/10/2020)

They are using a *stabilizing* and *speeding-up* strategy to help during the rapid growth due to COVID-19. They have held meetings, forums, online workshops, and created manuals to help people more. They have been fully engaged at this time.

NESAWG has been keeping their network informed of how to get funding and relief during COVID times. They have also facilitated the granting of funds to those they believe need it most. Their strategy during COVID has also been to collect information on ways that people are benefitting from more sustainable practices in the food system.

### 4.5.2 Financial

An interesting emergence within the data was that every-single interviewee, apart from those categorized Regime-Based Intermediaries, mentioned financials were a barrier to their work. Equally notable was that it was the very first barrier mentioned by each of them in the interviews.

AE – The way that they get funding is changing and they are worried they will not get the funding either. The funding they were getting is also being given to more organizations and the amount is being reduced. They also said at the niche level, funding is given based on the sizes of farms, and so small farms get little access to funds when needed.

FSN – Funding is a constant problem as an NFP working with other NFP organizations and NGOs. All their funding is based on relying on receiving it from institutions as well as donations.

FFN – Their financial problems came from the costs that it took to be the type of business structure they wanted. To become a foundation in Italy, it is required to have 200,000 euros in cash. Due to this, they choose a different structure, had difficulty operating as a different non-existent business model in Italy. They also invested a lot of their own money and took little to keep it going in the start (FFN Interviewee, 11/08/2020).

NESAWG – Their lack of money is a barrier for them to do the sort of lobbying and targeting of political debates that they would wish to be doing. They are limited in their *scaling-up* ability due to a lower access to funds.

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OFN – They said it is very hard to fund projects and they have been having to stretch very little money for a very long time and a long way. Equally, their lack of funding has also made it hard for them to focus on creating more awareness around how philanthropy funding is not going towards public-good, like OFN investments would be. Lack of money has also been a barrier to *growing* and *speeding-up* their technology. They cannot do what they would have the ability to do, because they cannot afford to pay someone to focus on it.

SFT – They say that the financials of practicing sustainable agriculture is a barrier to change. The interviewee believes that farmers would all like to practice more sustainably. However, they do not get the same funding and it does not make sense for them financially many times.

### 4.5.3 Philanthropy

Philanthropic barriers were originally a part of financial barriers, but through the high presence of it being exclusively mentioned, it arose as important as its own significant barrier. The current ways that return-on-investment and what investors are willing to put their money into something, creates a barrier to access to funds (Polzin et al., 2016). As seen in the cases, this form of philanthropy is not only private investors, but also those with access to public funds.

The TTF interviewee has said that investors are still greatly focused in technology and the same 6-7 global traded crops (03/08/2020). This means that many of them will invest in sustainable technology solutions in these specific areas, and not in what TTF considers as the actual problems to sustainability in food systems.

FFN has had investors interested in their model, however since the FFN does not “have a bench-mark” investors do not actually want to invest. People want short-term scalability, when FFN is trying to “produce a large intangible service”. They do not want to just scale to scale and want to do things at the right pace. People think that “social-entrepreneurs are the naïve one.” (FFN Interviewee, 11/08/2020).

The NESAWG interviewee mentioned philanthropy is a barrier for trying to fund their organization (04/08/2020). They said it is also particularly difficult for their niche because, those who are in control have access and share it with other people similar to themselves. This is also a problem of philanthropy being viewed as more important and taking away land from people to put in “investments”. The example given was that of people moving away from larger cities into Philadelphia and building new properties.

OFN runs into the problem of people loving their idea, and then investors not being very interested when they realize it is involved with the supply-chain of food. The OFN also refuse to accept venture capital that is trying to pull income from farmers, they do not want to do that. However, they say that this is what



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investors are wanting. There is also large funding going to technology companies instead of to them because of philanthropy standards (OFN Interviewee, 15/07/2020). They believe that many investors care most about dividends back to the shareholders over ethics and sustainability.

### 4.5.4 Spread-Thin

AE is only 5-people and have been spread very-thin when they are working on projects. They also have many things planned on mobility projects, which is difficult when people cannot move around due to COVID-19 restrictions.

NESAWG has 4 staff, none of which are full-time. They are not always able to manage communications with everyone nor to do all the things which they would like to be doing. They would like to grow a little bit due to this, “I do feel like I am being torn in a million different directions” (NESAWG Interviewee, 04/08/2020). However, they only want to grow in terms of doing what they already do better, not entering new things.

OFN Global has very few people that already have their time being asked of them constantly. They have too few people volunteering their time, and nearly no-one is full-time or paid. This is particularly hard as they have had sudden *growing* during COVID-19 and people want their help constantly. Their being stretched thin is a problem of funding, it is something that goes hand-in-hand.

SFT is very small and is stretched thin at times in what they do. It is both a positive and a negative for them, however. They feel they are able to better function and make decisions at a small size. The difficulty is that they sometimes simply do not have enough human-time to be able to do things (SFT Interviewee, 17/07/2020).

### 4.5.5 Policies and Bureaucracy

AE has had problems working with local-governments due to the officials’ lack of communication. The communication of bureaucratic problems has also been back and forth as AE wants to ensure that any progress made such as planting in greenspaces, is something committed long-term (AE Interviewee, 14/07/2020).

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TTF has said that they have seen a disconnect between high policy reports and the actual need on the ground of those within the food system. The decision-makers are not paying attention to those on the ground. The interviewee expanded on this talking about how there is more need for leadership in government along with, where agriculture subsidies are going. They have also seen communication and lack of clear language used between people as a large barrier to collaboration.

O Prato Certo believes communication has been a problem for them in terms of working with municipalities. This is also a barrier related with time spent doing something. It takes far too long at times to communicate with the municipalities and to schedule meetings (OPC Interviewee 2, 27/08/2020). This is an issue with some people communicating while others take a lot of work.

The interviewee for SFT said policy encourages farmers to use more intensive and conventional methods to farming because the policy supports doing that. A way which encourages economies of scale. There is also a problem of “black and white”, a problem of either “...you’re an intensive farmer or you’re an organic farmer...” (SFT Interviewee, 17/07/2020). This has created barriers in understanding who is considered sustainable, and policy decisions around it.

### **4.5.6 Conclusion of Barriers**

The data shows that the barriers are not specific to any one intermediary type. The 5-barriers that emerged within the cases, represent a theme of problems faced within all the different types of transition intermediaries in sustainable food-systems. The two which stood out most were COVID-19 which presented complications present in all cases, and that of financial barriers which only regime-based intermediaries did not report on. The importance of these barriers will be further discussed in the next section.

## 5. Discussion & Conclusions

In the analysis it was explained, with use of data generated through the research, the ways in which intermediaries facilitate diffusion. The data also presented examples of which ways the type of intermediary they were, influenced their role in the amplification of impact (Kant & Kanda, 2019; Kivimaa, Boon, et al., 2019; Kivimaa, Hyysalo, et al., 2019). By combining the two typologies, the actor roles were examined in a deeper manor, allowing for a better understanding of what the intermediaries do (Fischer & Newig, 2016; Vihemäki et al., 2020; Wittmayer et al., 2017). For example, by understanding if an intermediary intends to *stabilize* or *speed-up* and provides an understanding of how they *amplify-within* their own network. This was seen equally important in *scaling-up* and *scaling-deep* for *amplification-beyond*.

### 5.1 Intermediary Typologies

Although there is a limited amount of cases in the study, there are some signs that the type of intermediary holds influence over the intermediary's ability to amplify different processes. An example of this is that regime-based intermediaries in the study seemed to have the best relationship working directly with governments, institutions, and decision makers. For this reason, their impact on *scaling-up* seemed to be their most effective processes. Equally, regime-based intermediaries were the only cases to not mention financial nor philanthropic barriers. This could possibly be that they are getting funding from the regime level or it is something that they do not need to worry about to the same extent as the other networks.

The systemic and grassroots intermediaries were seemingly actively amplifying each of the four processes *stabilizing*, *speeding-up*, *scaling-up*, and *scaling-deep*. The FFN for example *stabilizes* through the building of a future and support systems, *speeds-up* through living-labs and acceleration environments, *scales-up* to UN policy levels and through their institution, and *scales-deep* through building a network that is "like a family". This information confirms that the different intermediaries may be of more importance within transitions, but also each hold their own importance to the transition process (Kivimaa, Boon, et al., 2019; Kivimaa, Hyysalo, et al., 2019).

As noted, there were no examples of user intermediaries which were indicated in the data. This could be a potential lack of information and harm the use of this typology as these intermediaries are seen as important in the diffusion of innovations (Mignon & Kanda, 2018). Interestingly, a similar study to this one carried out on the diffusion of wooden-multi story construction in Finland also did not identify user-intermediaries in their data (Vihemäki et al., 2020).

Finally, it is important to note that in the data, there were a lack in the number of cases which were only 9. In the distribution of the 9-cases it turned out that only 1 of them was a niche-intermediary which may not provide enough information and no other cases to compare to. Likewise, regime-based and process

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intermediaries only each had 2 cases as examples. Though providing more to compare, it still may not be enough. The only intermediary type which may have a better overview is systemic intermediaries which had 4-cases as representation in the data.

### 5.2 The Four Processes

To answer the question “how do intermediaries as actors facilitate diffusion in sustainable food-system transitions?”, the data shows that transition-intermediaries as a whole focus on *stabilization*, *speeding-up*, *scaling-up*, and *scaling-deep* as methods to amplify initiatives’ impacts. For this reason, conclusions have been drawn from the data on each of these four processes. The other 4 processes *growing*, *replicating*, *transferring*, and *spreading* do not have that same conclusions drawn due to the lack of overall data generated on these processes.

#### 5.2.1 Conclusions of *Stabilizing*

*Stabilizing* is something that all cases have in the past and are currently participating in. It is arguably one of the most important processes revealed in the data. *Stabilizing* involves communication, collaboration and a strengthening of the network which are common goals of intermediation in the cases. The data shows that regardless of the intermediary, a significant part of their facilitation as an actor is to *stabilize*. A possible reason for this is due to *stabilization’s* overlap with many characteristics of being an intermediary (J. Duncan & Pascucci, 2017; Mignon & Kanda, 2018). Many of the intermediaries used *stabilization* as a means to increase impact and means of support during COVID-19 to protect the niches and users from the challenges that have arisen. Communication of the vision held for the future and joining their network together over clear goals have been something across all intermediary types as well. This has been noticeably effective in support building within systemic intermediaries and regime-based intermediaries in the case-study. Using the examples of CGFP and FFN for each, the data shows that they built support in local and international ways as well as with important decision makers around their goals. Overall, the data shows these intermediaries tend to have the contacts and know-how to get higher level support for their networks.

#### 5.2.2 Conclusions of *Speeding-up*

Many of the cases though focused on sustainability and calling for a need of faster change, were not directly focused on *speeding-up* transitions. Their actions are contributing to it, but it was not their direct work. As an example, the work of OPC in building a data-base had the focus of *stabilizing* during COVID-19 but also continued as a method of *speeding-up* connections between farmers and users. The ones who could be considered “*speeding-up*” orientated were the systemic-intermediaries in this case-study. They had more fund providing, idea creation & support, and “incubation” so to speak, which allows faster-acting changes.

### 5.2.3 Conclusions of *Scaling-up*

The facilitation of *scaling-up* was apparent as an important role in many of the cases. For some such as the SFT it was their main goal of intermediation. The level of commitment and to what extent greatly varied within each case. Within the data, even those which did not aim to amplify via *scaling-up*, still ended up facilitating some level of advocacy such as the FSN and the OFN. For this reason, the data shows that *scaling-up* is an important aspect of the role that many intermediaries play in facilitation of an initiative's impact. This role is particularly important as it aims to create changes in the regime ultimately benefitting the niche (Lam et al., 2020).

### 5.2.4 Conclusions of *Scaling-deep*

The cases each focus on *scaling-deep* at different levels within the MLP and in different ways. As Gliedt et al. (2018) talk about, this can be particularly interesting to understand the actor's role in the MLP. Some such as the FFN are focused on *scaling-deep* methods at each level by for example the heart of their work, their institution. It is involved with inviting regional and national decision makers, supra-national decision makers and involving the users and niches to collaborate and form new ideas together. NESAWG is passing an idea of equity to both the niche and the regime level. Their idea is that the food system is only an example of equity importance and their way of changing the mindsets around equity. The OFN *scales-deep* by changing ideas around how open source is used to collaborate and build communities around food-systems. In a way, they are constructing new food-system beliefs through their use of technology. The intermediary is changing the niche who were already practicing sustainability, by introducing the use of technology that is compatible with them, without the capital-gain idea. Finally, the SFT is focused on *scaling-deep* at various levels, while aiming directly at regime-level policy. The organization wants their ideas to be turned into policy and changing the mindset of those who make decisions. Their work seems to be focused on the users, regime, and landscape for the favor of the niches as a whole.

### 5.2.5 Four Processes Conclusions

The way each intermediary focuses on the different processes greatly depends on the goal of intermediation the intermediary holds. This was most apparent in the data derived from regime-based intermediaries, as they seemed to be the ones different from the rest and *scaled-up* in a different manor. All cases however focus on building a larger support system and collaborating with other actors within their environments. Their reactions to COVID-19 were also evidence of *stabilizing* the networks for difficulties and preparing them for the future. Nearly all intermediaries had an influence on assisting in the difficulties that came with COVID-19. This sort of information could be of importance in looking at how decision makers can aim to

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protect these niches for the future. A perfect example is that of AE's response, in the creation of the "meet your producer" program.

### 5.2 Reflections on the Amplification Processes

Through the data, there is evidence that could be useful for transition intermediaries, food networks and decision makers alike. The barriers that intermediaries face may be things that other intermediaries are able to *stabilize*. An example of this could be the OFN's defensive means of *scaling-up* where the SFT is focused on policy changing and lobbying. Reversely, the *SFT* does not focus on providing hands-on tools like the OFN does. Together, these two intermediaries could focus on their own roles while supporting one another, and equally facilitate *stabilizing* and *scaling-up*. This data also goes in line with Kivimaa, Boon et al. (2019), that pose that intermediaries need one another for the various difficulties in the progress of transitions.

Based on the analysis in accordance with Lam et al. (2020), the amplification typology should not be viewed as static processes. It was seen that even though a specific amplification such as *stabilization* may have been focused on, the end result also facilitates, indirectly, *speeding-up*. Similarly, when an initiative such as OPC *scales-deep* and changes the mindsets of decision makers through their program, the results can lead to the *scaling-up* of initiatives. Or reversely, when the GFPC enacted a "less meat better meat" initiative which decreased the amount of meat consumed in public schools, while also changing mindsets on meat quality standards. This sort of action causes the potential of *scaling-deep* within public schools through *scaling-up* policies around food in public schools.

This goes even further than within amplification processes such as *scaling-deep* and *scaling-up* being a part of *amplifying beyond*. In the data it arose that there are cases of processes that cross into different types of amplification. An example is the work of FFN as a systemic intermediary through their connection with The UN and The FAO to realize their work. Through the data it was seen that they practiced both *amplifying within* and *amplifying beyond* at the same time. The position that these higher-level institutions hold further validates the work of FFN and provides them with access to knowledge and resources. The FFN is also working to *amplify beyond* within the institutions to change their dialogue and way of looking at current issues in the food systems. This sort of collaboration amplifies impact within their initiative in various ways and takes a step of bringing niche work closer to the regime while also *scaling-deep* at the regime level.

An interesting observation suggested in the data, is that the level of context in which the intermediary is working tends to influence their *amplification beyond* as well as the impact that they indeed have in doing so. There is also a difference in, if an intermediary is aiming to *scale-deep* or, if it is a result of what they

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are doing (Lam et al., 2020). For example, OFN *scales-deep* more through what they do and what they provide access to. Their existence and application of what they do is a level of *scaling-deep* in communities and new locales where it enters. There is then NESAWG who strives to *scale-deep* and to *amplify beyond* themselves into other aspects of equity.

What looking at this type of *amplification beyond* broken into different types of intermediaries may provide, is not exactly how each intermediary type focuses on *scaling-deep* or *up* or if they do at all. It sheds light on what ways they are able to do so. It allows the questions to be asked, “what would make one intermediary more able to focus on this?” (Glaa & Mignon, 2020; Manders et al., 2020; Vihemäki et al., 2020). Systemic intermediaries for example, that were in the case, provided all different methods and processes of *scaling-up* and *scaling-deep*, however what they did hold in common was that they were doing so at various levels. The process intermediary and grassroots intermediary tended to focus on their own specific target(s).

The processes of *amplifying out* varied from one another greatly. In the given cases the data did not show that it was a common focus of the intermediary’s facilitation processes. The data showed that there were cases in which these processes were important to some level. Since there were no trends in the data, it is hard to make any clear observations based on the intermediary types having a relationship with this amplification process. A possible difficulty in the analysis may have also been present in the lack of depth in the data. In particular, *spreading* seemed to be a process that depended on the intermediary’s perspective of their work. For example, NESAWG and AE both worked as a guiding vision for other initiatives. They did not have direct members as a part of their work and wanted to keep ideas growing and available. Other intermediaries also had blogs or areas for providing information but did not in the data show to be spreading their practice as a guideline for other initiatives. This could also be difficult to determine due to only directly working with the intermediary as an actor.

Interesting to note is that *transferring* was the only process which no intermediaries were found to be participating in. It is possible that the reason the process was not present was that questions and information did not reveal the other initiatives that were present but not directly working with them. That being said, it may be interesting to further explore how intermediaries influence other independent initiatives through *transferring*.

The application of the amplification typology to the data gathered, showed some of the ways these transition intermediaries in sustainable food systems facilitate diffusion in different parts of the MLP and in different ways (Glaa & Mignon, 2020; Kant & Kanda, 2019; Lam et al., 2020). Some intermediaries apply multiple amplification processes which in-turn influence other amplification processes. This

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contributes to the sustainable transition literature (Köhler et al., 2019) and further provides an understanding of the actor roles of intermediaries in transitions (Wittmayer et al., 2017). Through this study it is apparent that there is a potential and need to stay open to the idea that amplification is fluid, and that consequences of one amplification intention can lead to other amplification results whether with intention or not (Lam et al., 2020). By expanding on the amplification processes that the different intermediaries focus on, it can potentially lead to better collaborations between the intermediaries in *speeding up* and realizing a sustainable transition (Bui et al., 2016; Kant & Kanda, 2019; Kivimaa, Boon, et al., 2019). In the sustainable food system literature this is increasingly relevant and responds to calls of the SDGs (FAO, 2019). It is however important to reiterate the caution of over-stating the intermediary's role and the effect of amplification on a realization in a sustainable transition (Lam et al., 2020; Manders et al., 2020).

### 5.3 Barriers

The 5 barriers, COVID-19, financial based, methods of philanthropy, organizations being spread-thin, and policies & bureaucracy, that arose in the data give an important aspect of the similar challenges that are being faced within these different networks. The barriers were not specific to any of the intermediary types, other than that the 2 cases identified as regime-based intermediaries did not mention the same financial problems all others faced. Interestingly, all of the other intermediaries mentioned financial strain to some extent as the very first response to barriers that are faced. How these intermediaries gather funding and receive financing seems to be an ongoing issue which limits their capacities. These limited capacities then drive feeling of being “stretched-thin” or strained on the level of work the individuals must do.

With knowledge of these barriers, it could be beneficial information for policy and decision makers to focus a larger amount of investment and financial aid to benefit these sorts of intermediaries. This does not mean only directly providing funds, but also creating a pathway for funding to reach these types of actors. This is also something that could be useful for regime-based intermediaries as an area of collaboration with the other intermediaries which face these barriers. Likewise, through seeing how these intermediaries handled the challenges their networks face from COVID-19 it further reinforces the public good that these organizations influence. This information is also useful for institutions such as the UN and FAO which have set the SDGs (FAO, 2019), to understand what actors need. Ultimately, these networks are focused on and creating a better environment for something that is hard to be given a financial value and is increasingly important to humanity and this planet, sustainability.



### 5.4 Conclusions and Future Research

Transitions towards a more sustainable food-system are increasingly important in the face of extreme events such as that of the COVID-19 pandemic (Anderson et al., 2020; Köhler et al., 2019). With the role that food-systems play as a center-nexus within a few of the most key sustainable problems societies face today, there is an increasing need to understand how to act (FAO, 2019). This work has sought to deepen the available knowledge on actors in transitions and to test a typology which seeks to simplify the understanding of what actors do to influence transitions towards a sustainable agro-food system. It has expanded upon the important roles that intermediaries play in facilitating different processes of creating impact, and diffusion towards a sustainable transition. It found that 4 processes *stabilizing*, *speeding-up*, *scaling-up* and *scaling-deep* interchangeably were keyways these intermediaries amplify these initiatives. Likewise, it was seen that these processes each lead to influencing one another to different extents and in different parts of the MLP (Gliedt et al., 2018; Lam et al., 2020). It is through these deeper understandings of all actors, that a sustainable transition in food-systems may sooner be realized (Kant & Kanda, 2019; Kivimaa, Hyysalo, et al., 2019; Köhler et al., 2019).

To further explore the roles of intermediaries as actors, it would be interesting to view the perspectives of other actors such as the niche or the regime on how intermediaries facilitate diffusion (Köhler et al., 2019; Murto et al., 2020). Likewise, since the landscape is generally overlooked, it could also be beneficial to see what role the landscape plays in each initiative by for example studying the given food-system history and politics (El Bilali, 2019, 2020). To expand on current findings, a study with more cases would be of benefit to deepen the understanding of the different types of transition intermediaries in sustainable transitions of agro-food systems. Since this study gathered no solid evidence on *amplifying out* it could also be interesting to perform a deep study on the influence intermediaries have on this particular amplification. Finally, it could be interesting to further explore the amplification typology and understand the relationship of processes to one another when amplified for impact (Lam et al., 2020). By doing this, there is a potential to further understand how some amplification processes can lead to various in-direct results as noticed in the analysis.

## 6. References

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## Appendix A: Semi-Structured Interview Template

### General questions:

What is your name?

What is your position/role in the “Network Name”? How did you get there? (why?)

What are the challenges that the organization is currently facing?

How would you define “Network Name”’s role? (Inside each network, between networks, with government?)

How are decisions made? How do they affect the member networks? (governance structure)

What kinds of decisions would a member network be obliged to report to “Network Name”?

What is “Network Name”’s future goals for expansion?

### Theory: Amplification:

What have been the most significant barriers that the partner networks have faced?

-Regulatory, Economic, Ecological

How was it handled?

How can this information be used for the future?

Theory :Social Network Building :

How has “Network Name” found its member networks?

How does it plan to find them in the future?

What are the steps for a network become a member? What is the benefit for them?

### Theory : Articulation of visions and expectations

What expectations do you have of the member networks?

What expectations do the networks have of “Network Name”?

How have expectations been articulated between partners? On which experiences were the expectations based?

Is there a common future vision?

### Theory : Learning processes

How has “Network Name” encouraged learning?

What type of learning has occurred?

Theory: Laws and Policies

## The Amplification of Sustainable Food Initiatives

Historically, have there been many legal difficulties or restrictions in “Network Name” or its member networks?

Has the “Network Name” influenced any policy or law changes?

How do you view “Network Name” as a potential to aid in the changing of laws? What resources does it have? What does it need?

How could laws or policies aid the SRFN model?

### **Final Questions for all:**

Some studies and theories point that larger networks of networks help lead regional food networks such as yours towards making a change in the food system....What are your thoughts on that?

Are there any topics that you feel have not been covered that you would like to share?

**Appendix B: Debriefing / Explanation of The Investigation**

Thank you very much for participating in this study. As stated at the beginning of its participation, the study focuses on the role of intermediary networks as actors in grass-root food networks. A principal aim of this study is to contribute to theories and frameworks that help provide information for these networks for the benefit of regional food networks. It also aims to provide further information for policy and the importance of intermediary-networks in sustainable agri-food.

We reinforce the contact details you can use if you want to ask a question, share any comments, or indicate your intention to receive information about the main results and conclusions of the study: Christian Goers, [christian\\_goers@iscte-iul.pt](mailto:christian_goers@iscte-iul.pt), and coordinator Professor Ana Margarida Esteves, [ana.margarida.esteves@iscte-iul.pt](mailto:ana.margarida.esteves@iscte-iul.pt).

Once again, thank you for your participation.

**Appendix C: Initial Contact Email**

Greetings,

My name is Christian Goers, an International Studies masters research student at the University ISCTE-IUL, Lisbon. I am currently working on my dissertation project in which I would be interested in including your network. The project is focusing on sustainable food networks and initiatives and aims to focus in on the larger networks that connect the regional networks to one another.

I would appreciate to be directed to someone that would be able to provide me more information and discuss these interests with. If there are any concerns or further information needed, I would be happy to answer any questions.

I look forward to learning more about your network.

All the best,

Christian Goers

**Appendix D: Informed Consent**



**INFORMED CONSENT**

The present study is part of a master's dissertation in International Studies taking place at ISCTE - Instituto Universitário de Lisboa. This study focuses on the role of actor networks in local/regional/grass-root agri-food networks.

The study is carried out by Master student Christian Goers, christian\_goers@iscte-iul.pt and coordinated by Professor Ana Margarida Esteves, ana.margarida.esteves@iscte-iul.pt, who you can contact if you want to ask a question or share any comments.

For the purpose of this study, I would like to request an interview with you as a representative of your network.

Your participation, which will be highly valued, consists of answering a set of open-ended questions directly applicable to your food network. Although the results may not directly benefit you or your organization, your participation will potentially contribute to further mapping on the role of actor networks in sustainable food networks. This information aims to be useful for networks and their members, researchers, and policy makers.

The interview will be held through Skype or Zoom and will last **approximately 45minutes**. With permission, it will be **recorded** for the purpose of data analyzation and transcription. The recording will be available to you at all times upon request.

**There are no significant expected risks associated with participating in the study.**

General Topics to be Discussed:

- Governance, Laws, and Policies
- Motivations, History, & Goals
- Network Building and Connections

Participation in this study is strictly **voluntary**: you can choose to participate or not participate. If you choose to participate, you can stop participating at any time without having to provide any justification. In addition to being voluntary, you will remain anonymous. Your name will not be provided in the final work unless permission is formally given and your information will be used only to analyze significant historical events.

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Upon completion of the masters research your recorded interview will be removed as the purpose of its use will have been completed.

During the online interview, you will be presented the opportunity to **verbally agree** to all the aforementioned information.

Given this information, if you agree to participate, please fill in your name, date, organization you are representing, and return this document to [Christian\\_goers@iscte-iul.pt](mailto:Christian_goers@iscte-iul.pt).

Name: \_\_\_\_\_

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_(date)

Organization: \_\_\_\_\_

We will communicate on what time and date works best for you in scheduling the interview.

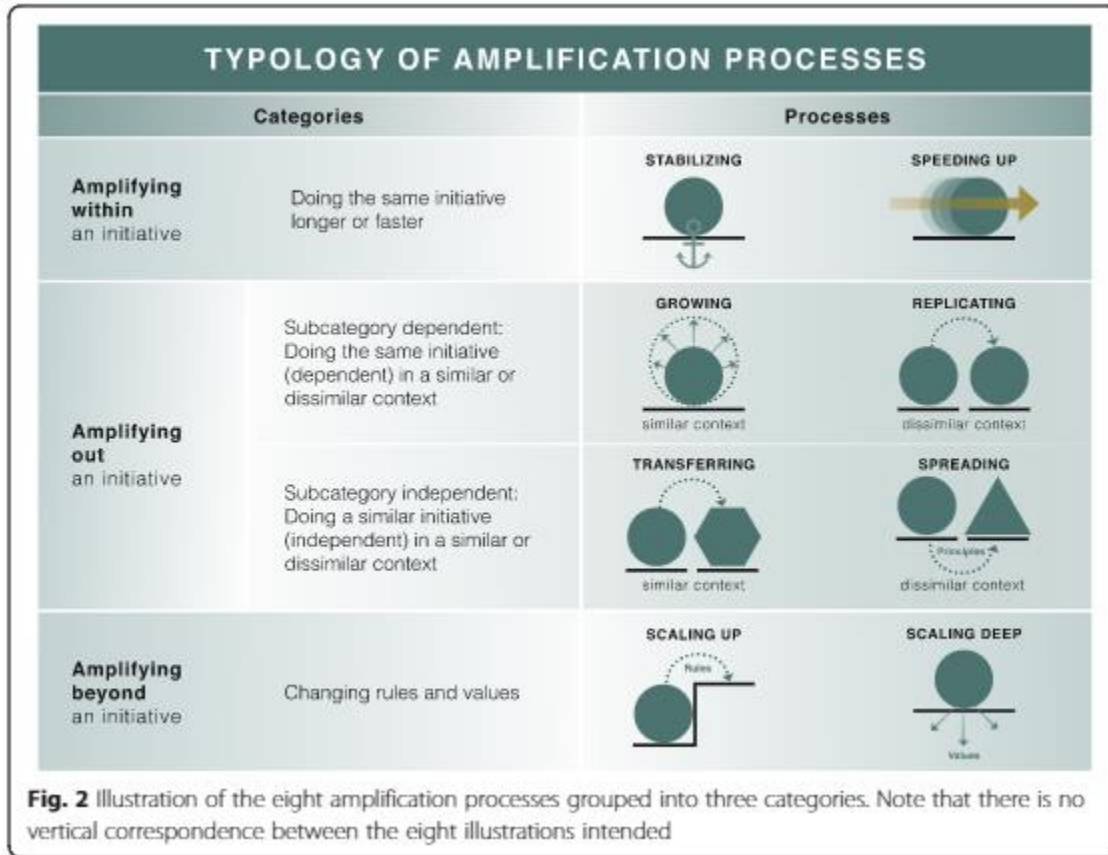
Thank you,

Christian Goers

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[www.iscte-iul.pt](http://www.iscte-iul.pt) [www.facebook.com/ISCTEUIUL](https://www.facebook.com/ISCTEUIUL) [twitter.com/iscteuiul](https://twitter.com/iscteuiul) [www.linkedin.com/company/iscte-iul](https://www.linkedin.com/company/iscte-iul) [www.flickr.com/photos/iscteuiul](https://www.flickr.com/photos/iscteuiul) [www.youtube.com/user/iultv](https://www.youtube.com/user/iultv)



Appendix E: Lam et al. 2020 Amplification Models



| Amplification processes | Amplification frameworks         |                            |                |                         |                       |                            |
|-------------------------|----------------------------------|----------------------------|----------------|-------------------------|-----------------------|----------------------------|
|                         | Strategies for social innovation | Seeds of good Anthropocene | Scale dynamics | Acceleration mechanisms | Transition management | Strategic niche management |
| Stabilizing             |                                  | Scale up                   |                | Upscaling               |                       | Growing                    |
| Speeding up             |                                  |                            |                | *all processes          |                       |                            |
| Growing                 |                                  | Scale up                   | Outscaling     | Upscaling               |                       | Growing                    |
| Replicating             | Scaling out                      | Scale out                  | Outscaling     |                         | Broadening            |                            |
| Transferring            |                                  |                            |                | Replicating             | Broadening            | Replication                |
| Spreading               | Scaling out                      |                            |                | Replicating             | Broadening            | Replication                |
| Scaling up              | Scaling up                       |                            | Upscaling      | Embedding               | Scaling up            | Transformation             |
| Scaling deep            | Scaling deep                     | Scale deep                 |                |                         | Deepening             |                            |



# The Amplification of Sustainable Food Initiatives

| Amplification frameworks   | Strategies for social innovation | Seeds of a good Anthropocene | Scale dynamics         | Acceleration mechanisms | Transition management       | Strategic niche management |
|----------------------------|----------------------------------|------------------------------|------------------------|-------------------------|-----------------------------|----------------------------|
| Sustainability initiatives | Social innovations               | Seeds                        | Grassroots innovations | Transition initiatives  | Transition experiments      | Transition experiments     |
|                            | Scaling out                      | Scale up                     | Outscaling             | Replicating             | Deepening                   | Growing                    |
|                            | Scaling up                       | Scale out                    | Upscaling              | Partnering*             | Broadening                  | Replication                |
| Amplification processes    | Scaling deep                     | Scale deep                   |                        | Upscaling               | Scaling up                  | Accumulation*              |
|                            | Cross-cutting*                   |                              |                        | Instrumentalising*      |                             | Transformation             |
|                            |                                  |                              |                        | Embedding               |                             |                            |
| Key reference              | Moore et al. (2015)              | Bennett et al. (2016)        | Hermans et al. (2016)  | Gorissen et al. (2018)  | Rotmans and Loorbach (2008) | Naber et al. (2017)        |

\* Not used in analysis because this process does not focus specifically on increasing impact.

**Fig. 1** Overview of amplification frameworks used in sustainability transformation research and their conceptualization of sustainability initiatives and amplification processes. Note that these are examples of key references that describe the amplification processes of each framework, but there are many others discussing the respective processes in the literature (see main text, Tables 1 and 2 for further references)