

## Article

# Territory Matters: A Methodology for Understanding the Role of Territorial Factors in Transforming Local Food Systems

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**Abstract:** The unsustainability of the globalized food system is a relevant debate. Despite the vast amount of literature on sustainable food systems, there is little research explaining how food system innovations can scale impact and influence systemic change. Moreover, not much literature considers the territorial context in which innovations take place, as a key factor in fostering transition. In this paper, we attempt to understand how territorial factors, such as actors and networks, influence sustainable food system transition. To achieve this goal, we built and applied an original methodology that was able to map the specific territorial context and dynamics. Considering a case study of 12 urban food system innovations in Montpellier (France), we reconstructed the relational context, in order to demonstrate the key role of embedded territorial dynamics in fostering sustainable transition. The application of our methodology produced about seven territorial conditions, which are defined by the differences between innovations, power relations and dynamics, the role of politics and the so-called “spaces of governance”. Each of these conditions plays a critical role in the transition to a sustainable food system.



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**Keywords:** local food systems; sustainable transition; food aid; Montpellier

## 1. Introduction

The current globalized food system is the origin of many social and environmental problems. Crippa et al. [1], state that the food system is responsible for a third of the global anthropogenic GHG emissions. Moreover, the globalized food system significantly contributes to the geographical and cultural rupture between cities and rural areas [2]. According to Paturel and Ndiaye [3], the food system, in spite of having failed to solve the problems of food security in developing countries, continues to produce inequalities in industrialized countries, excluding the most fragile segment of the population from quality food.

In response to these and other pressing social and environmental challenges, the concept of a Sustainable Food System (SFS) has recently emerged. It is defined by FAO as a “food system that delivers food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition for future generations are not compromised” [4]. However, the ways to achieve sustainable food systems are very different in practice. Several practices could be viewed as an SFS, or parts of it, such as agroecology [5], organic farming, or fair-trade certifications [6]. However, this research deals with one way to achieve the sustainable food system, which is the “re-territorialization” of the food systems. Some scholars refer to this condition as “local food systems” [7], “urban-regional food systems” [2] or “territorialized food systems” [8,9].

According to these models, food production and consumption should primarily occur in the same geographic area, assuming a local or regional scale. The choice of “local” can be interpreted as a response to the distancing forces exerted by the globalized food system.

The distances to which these proposals seek to respond are of a geographical, economic, cognitive and political nature [10]. Direct sales, Community-Supported Agriculture and short supply chain practices removing or reducing intermediaries, have been promoted, in order to respond to geographical and economic distancing between production and consumption. These practices also bring a cognitive re-linkage, as the consumers know the origin and way of production of the food, often knowing the farm directly. Finally, to solve the problem of political distance and perception of loss of food sovereignty, there is the emergence of practices that increase food democracy, such as cooperative supermarkets or participatory municipal councils on food policies. According to Anderson and Cook [11], “re-localization” processes can rework “power and knowledge relationships in food supply systems that have become distorted by increasing distance (physical, social, and metaphorical) between producers and consumers” (pp. 237–238).

However, the concept of “local” is not immune to criticism. We should avoid the “local trap”, that assumes a priori that “eating local food is more ecologically sustainable and socially just” [12] (p. 195). In addition, “local” must not lead to localism, as it would be unrealistic to exclude imports and exports from our food system.

Our research has focused on the transition process from a globalized industrial food system to a sustainable food system, considering the shift to a “relocalized” food system.

There is a large amount of literature that discusses sustainable transitions and explains, from a sociological perspective, the shift from a conventional to a new system. In this work, we considered the Multi-Level Perspective model of Geels [13], in order to explain the mechanism by which a number of innovation niches can break through the traditional system and stimulate sustainable transition.

Unfortunately, not all innovations succeed in changing the system, and there is scant literature attempting to explain why, especially with reference to the scaling processes of innovations in the food system. Our research aimed to address these processes.

In addition, there is a paucity of literature suggesting what are the conditions, external to the innovations, that allow them to spread their impact. Which are the territorial conditions, which do not depend on the innovation itself, but on the context in which it operates, that influence the “scaling” processes? In our research, we tried to detect which territorial factors can foster or hinder the scaling processes of innovations, and thus to ascertain sustainable transitions to a territorial food system.

However, it is necessary to clarify what we mean by “territorial factors”. Although the concept of “territory” has several interpretations, we employ its “relational” meaning. According to our analysis, the territory is a dynamic governance space, in which different actors, with different levels of power, interact [14]. Its meaning is therefore related to the concept of *network* [15].

Using this theoretical framework, we identified the territorial conditions that affected the scaling processes of 12 food system innovations in the food aid sector of Montpellier, France.

In order to study the territorial conditions, we built a methodology, consisting of four sections, to identify the relational context in which the innovations operated. The methodology aimed to: identify the actors on the territory; identify the multi-actor networks; identify the bilateral links; *geospatialize* the actors and links in the territory.

The construction of this methodology is intended to contribute to and enrich the debate on food system studies: a specific disciplinary field aimed at increasing knowledge and design policies about food systems.

## 2. The Theoretical Framework

### 2.1. Sustainable Transitions and Innovations

Different theoretical frameworks have shed light on the functioning of sustainable transition processes. A seminal theory is the “Multi-Level Perspective” (MLP) model proposed by Frank W. Geels in 2002 [13].

According to the Geels model, transition occurs when the landscape level (i.e., environmental issues) puts pressure on the sociotechnical regime (the globalized food system), creating opportunities for niches (food system innovations).

The application of this model to sustainable transitions of the food system has been made by many authors. El Bilali [16] offers a very good literature review of the applications of the Geels model to sustainable food transitions. According to this literature, innovation niches in the food system include agro-ecology practices, organic agriculture, permaculture, integrated farming, and alternative food networks. The sociotechnical regime is the conventional agriculture and industrialized food system. The landscape level is generally overlooked, but it can refer to the social, health and environmental issues that industrial agriculture and the globalized food system have created.

According to the Geels model, the role of social niche innovations is extremely important. They are incubators of future regimes [17]. In the context of food systems, social innovations are a fundamental resource of change. They can occur: at policy level, through innovative practices introduced by politics; in the market, for example by using technological innovation; or in civil society, through experimentation with new relations and actions [18].

Unfortunately, not all niche innovations can impact the status quo of regimes. Most of them lose their transformative power, remaining only alternative experiences. Why are some niches of innovation stronger than others? How can we scale their impact?

Two bodies of literature have tried to address these questions: the first one focuses on strategic niche management (SNM) [19–22]; the second is the broader literature on social innovations [23,24]. In the framework of sustainable food systems, some scholars have addressed the issue of innovations [25,26]. In particular, Pitt & Jones [25] focus on scaling-up and scaling-out processes, arguing that policy transfer is a key condition for transition.

However, while it is important to address the scaling processes of innovations, there is scant literature [27] discussing what conditions external to food system innovations permit their impact to spread. The models addressed so far decontextualize the innovations from the complex network of territorial relations in which they operate. Our research was interested in understanding which are the context conditions that affect the scaling processes of the innovations.

## 2.2. Territory and Networks in Local Food Systems

Our research aimed to identify the territorial conditions that foster sustainable food system transitions. In order to attain that objective, we enriched the literature and models mentioned earlier with the notions of territory [14,28,29] and networks [15,30].

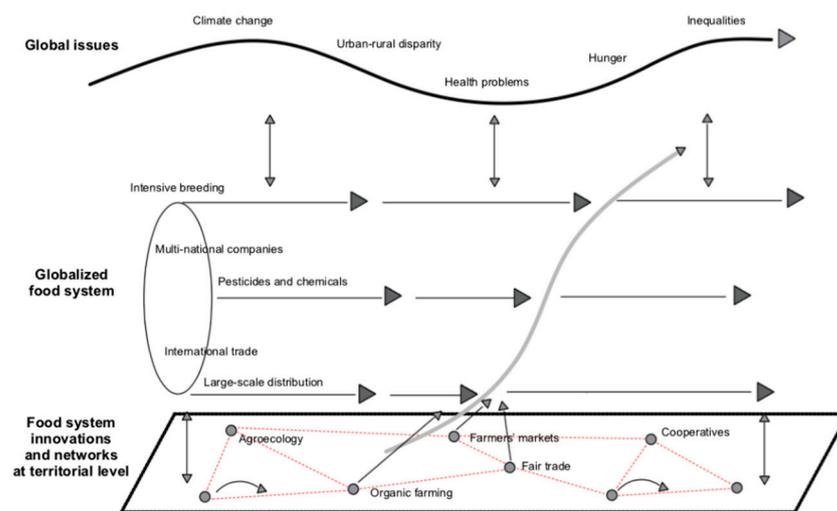
The relationship between territory and network, as concepts, has had a long history within geographical scholarship, especially after the “relational turn” in geographic theory [31,32]. The same intersection between these concepts can be found in the literature on clusters and proximity. According to some authors [33,34], it is precisely proximity that stimulates the construction of a network, considering the network itself as a comparative advantage for territory.

In the food systems literature, the concepts of territory and networks are addressed by some scholars, including Lamine, et al. [27,35], Moschitz, et al. [36], El Bilali [37], and Walther, et al. [38].

Our research is very much in line with what Lamine, et al. [27], wrote about the role of governance mechanisms in shaping food system transitions: “Our main argument is that the development of innovative pathways for agri-food systems at territorial level relies on the existence of a diversity of initiatives and actors, and therefore on the structuration of networks of relations between them, but also on appropriate governance mechanisms” (p. 232).

The concept of *network*, mixed with the conceptualization of territory as space of governance and actors' relations, is applied by us to describe the relationships in the local food system.

In a nutshell, our theoretical framework was concerned with “spatializing” the literature on sustainable transitions and innovations' scaling processes. A graphic we developed (Figure 1) can explain how we embedded the concept of territory and networks within the traditional framework. Referring to the Geels Multi-Level Perspective model, we gave it a fourth dimension, adding territorial and relational factors (highlighted in red).



**Figure 1.** The Multi-Level Perspective model adapted to the sustainable food system transition and provided by the territory and networks (authors' elaborations).

Other literature had already tried to add the geographic dimension in the Geels model [39–41], and some others have done it within a discussion around food systems [42].

### 3. Methodology

#### 3.1. Building a Methodological Framework to Understand Actors and Networks in Sustainable Food Systems

Given the importance that actors and networks have on the territorial context, we created a methodology that was able to analyze them. The methodology was built on previous literature from different research fields. Table 1 summarizes the sections of the methodology and presents the literature on which each section relied.

Our methodology owed much to the Social Network Analysis (SNA), in terms of visualizing the links between actors. It consisted of four parts and could be implemented through qualitative and quantitative methods. Each section of the methodology could be applied separately, depending on the objectives of the research.

The methodology was designed to study food systems, especially regional or urban ones. The results of this methodology consisted of a series of visual data, but also information about the system that did not fit into the visualization.

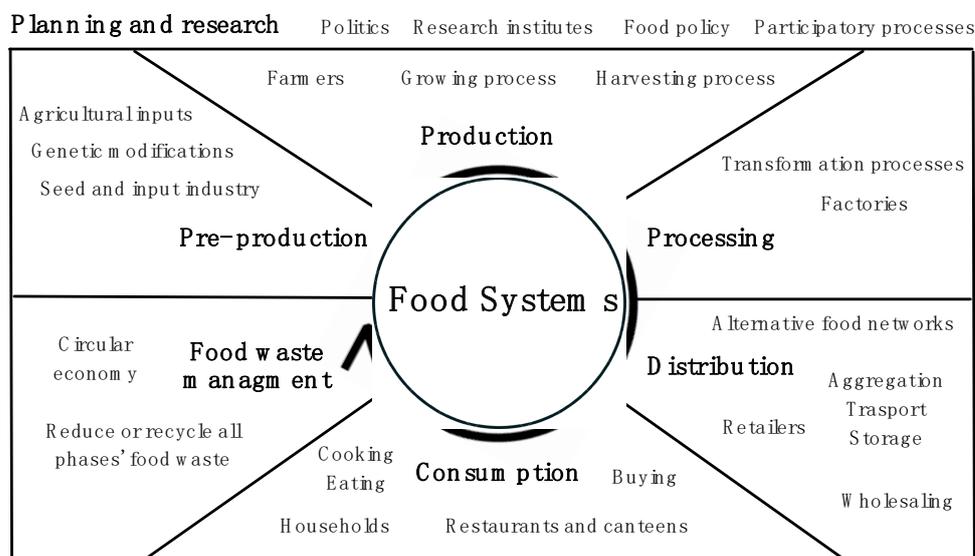
The first section consisted of identifying the actors of the food system, and placing them through two axes, defined by the governance sectors and the food system phases.

The governance sectors were the public institutions, the private companies and the civil society/no-profit organizations sector. They derived from the “governance triangle” [43] composed of the state, the market and civil society.

As for the second axis, we referred to the different stages of the food system. The phases of the food system were identified especially by the food system approach [4]. Our conceptualization of the food system is visualized in Figure 2.

**Table 1.** The operational construction of the methodology and the key literature (authors’ elaborations).

Methodology’s Sections	Activities to Carry Out	Key Literature
(1) Identify actors.	Placing the actors through two axes: the governance’s sectors and the food system phases.	[27,43–46]
(2) Identify multi-actor networks (“spaces of governance”).	Identifying groupings of actors, made possible through programs or projects, common strategies, collaborations, partnerships or collective actions.	[47–52]
(3) Identify bilateral ties.	Identifying the following links between the actors: commercial; financial; cooperation; coordination; flow of resources; control; competition; conflict.	[53–57]
(4) Geospatialization of actors and networks.	Mapping the actors and their relations, identifying clusters of actors and overlapping areas of action.	[55,58,59]



**Figure 2.** The food system phases elaborated by the authors.

We took into consideration the pre-production, production, distribution, consumption and waste management phases [46]. In addition, we also added another phase, concerning planning and research, into the food system, including public institutions and research organizations. The role of this phase was to legislate the sector, guide the market, create food policies or strategies, and give suggestions or policy advice. This phase included all the actors who strove to guide the food system, without being part of the food supply chain.

The second section of our methodology aimed to identify the multi-actor networks. These networks were groups of actors, made possible through programs or projects, common strategies, collaborations, partnerships, or collective actions. It is important to note that at this stage we were not interested in the bilateral ties of actors, but in the multi-actor networks that were created. These networks did not necessarily foster bilateral relations between actors; they worked like *meta-networks*. Usually, this phase is not found in the traditional Social Network Analysis (SNA), because it favors the study of bilateral links between actors.

In this work, we called all these *meta-networks* “spaces of governance”, being physical spaces (meeting places or digital platforms) or symbolic (formal membership of the network), in which the actors could collaborate, negotiate, and create a common strategy. These networks affected and strengthened the network made up of bilateral agreements, but they were also fundamental to developing a common territorial vision, or to carrying out advocacy actions.

The third section had to identify the territorial network that was made by bilateral ties. This phase owed much to the SNA, as it aimed to identify the links between the

actors. These ties are at the core of food system functioning, because they make possible the exchange of goods or practical collaborations. They can also be a source of conflict or competition. In Table 2, the eight types of bilateral links conceptualized in our methodology are described.

**Table 2.** The types of bilateral links considered for the third section.

Type of Bilateral Link	Description
Commercial	They are defined by relations of purchase and sale, exchanging goods for money, and vice versa. They are the most numerous ties in the food system, as the supply chain is based on this type of trade [53].
Financial	They occur when one actor provides money to another, with no apparent return in material or economic means. This link occurs when organizations participate in public funding calls or receive funds from private foundations.
Cooperation	They occur with “common actions strategically taken in the context of shared objectives” [55] (p. 349).
Coordination	They occur when “actors undertake independent actions, but consult with each other in relation to these actions to avoid conflict or replication” [54].
Flow of resources	They occur when there is a flow of tangible and intangible resources between actors. With the word “flow” we mean all exchanges that are not commercial or financial (they are not directly related to money). Furmankiewicz & Stefańska [54] identify flows of information (discourses and technical information); human resources (pooling and exchange of human resources); tangible resources (such as equipment, facilities, transport, materials etc.).
Control	They concern “supervision and ownership of projects and decision-making in relation to the use of resources” [55] (p. 349).
Competition	They concern “competing in the context of power positionality and finite resources” (ibid.).
Conflict	They occur in cases of “disagreements or confrontations” (ibid.).

In all these relationships, it is important to indicate the direction of the link, although types of links such as coordination or cooperation are almost always bidirectional.

The fourth section dealt with the *geospazialization* of actors and networks. Mapping the actors was important, to indicate their areas of action. Mapping relations is useful for identifying clusters of actors and overlapping areas of action. Spatialization was carried out through QGIS software.

In literature, the *spatialization* of relations is not common. However, some scholars show interesting examples (see [55,58,59]).

### 3.2. Presentation of the Case Study and Data Collection

The case study, to which this methodology was applied, was located in France. Twelve actors, operating in the city of Montpellier, were taken into consideration (see Table 3). A large amount of literature has been produced around Montpellier’s urban food policy and local food system [60–62]. However, there is a lack of literature addressing the territorial conditions of innovations.

The choice of these given innovations over others was due to the fact that, in the framework of the local food policy (called P2A), the city has been animated in recent years by a debate on food democracy, food aid and new forms of food solidarity [63]. The local food policy of Montpellier started in 2014, with Territorial Food Projects (PAT), which led to the adoption of the Agroecological and Food Policy (P2A) in 2015. The P2A was developed in all 31 municipalities of the metropolis, in a territorial cooperation approach. The P2A is based on five objectives: providing healthy and local food for all; supporting the local economy; preserving the landscape heritage and natural resources; limiting greenhouse gas emissions and adapting to climate change; and fostering social cohesion between the city and the countryside. For more information, see: <https://www.entreprenre-montpellier.com/fr/la-politique-agroecologique-et-alimentaire> (accessed on 25 March 2022). The actors

chosen for our analysis carried out social innovations in this field, fostering new pathways for food aid, and contributing to wider access to food.

**Table 3.** Summary of the 12 actors–innovations chosen (elaborated by the authors).

Name of the Actor	Characterization	Innovation Carried Out or Still in Progress
Léris	Action research laboratory.	Coordination of the multi-actor project “Tiers-Lieux” to promote food aid based on short food supply chain.
Marché Paysan	Association to promote peasant agriculture, agroecology and farmers’ markets.	Creation of numerous farmers’ markets in Montpellier, and experimentation of the use of a local currency to buy organic local food.
CIVAM Occitanie	Associative federation of local farmers to foster the exchange of practices.	Experimentation of practices to make organic local food accessible to low-income families.
Croix Rouge Insertion—Capdife	Association of social inclusion through agriculture.	Providing organic local food to food aid associations in Montpellier.
La Cinquième Saison	Association of popular education, carrying out agriculture, processing and distribution.	Creation of a solidarity purchase group of organic local products in a low-income neighborhood.
Les Jardins de Cocagne Mirabeau	Association of social inclusion through agriculture.	Providing organic local food to food aid associations in Montpellier.
Secours Populaire	Food aid organization.	Providing organic local food to low-income families.
VRAC & Cocinas	Association of popular education, raising awareness of issues related to food and sustainability.	Creation of a solidarity purchase group of organic local products in a low-income neighborhood, and the construction of a shared kitchen.
L’Esperluette	Neighborhood association and solidarity grocery store.	Creation of a solidarity purchase group of organic local products in a low-income neighborhood.
La Cagette	Cooperative supermarket.	Consumer cooperative able to lower the prices of local and organic products.
SIAO34	Association that provides shelter and food to people in difficulty.	Construction of shared kitchens, and provision of organic local food to low-income families.
Marché d’Intérêt National (MIN) de Montpellier	National agri-food central market.	Implementation of the urban food policy; structuring of the short food supply chain; promotion of organic food.

The data collection methodology was qualitative. Twelve semi-structured interviews, one for each actor, and four participating observations (in four meetings of two actors’ networks) were conducted. The interviews were divided into two sections of questions: the first was designed to understand the nature of the innovation implemented by the responding organization, while the second focused on investigating the territorial relationships related to the innovation explained above.

Interviews and participant observations were elaborated through textual analysis, through which actors in the system, type of bilateral ties, governance spaces and geographic clusters were identified.

To identify actors in the system, semi-structured interviews and participant observations were used as a “name generator”, that is, as a means of finding the names of other actors with whom innovations had relations.

During the participating observations, the chosen actors also made “participatory mappings”, using the “concentric circles” technique [64], to define their position within the network. The participatory mapping techniques helped the authors to understand how the respondents perceived and experienced their network. This technique helped to identify the types of ties between actors and possible spaces of governance [65].

### 4. Results

The application of the methodology to our case study produced a series of visual data, such as graphs and maps. During the analysis, the territorial conditions that favored or hindered the sustainable transition of the food system were highlighted.

The first and second visuals are the results of the application of the first section of the methodology. As we can see in Figure 3, the 12 innovations interviewed belonged to different phases of the food system. In addition, they belonged mainly to the civil society sector. Within the innovations chosen, the only public organization was represented by the MIN of Montpellier.

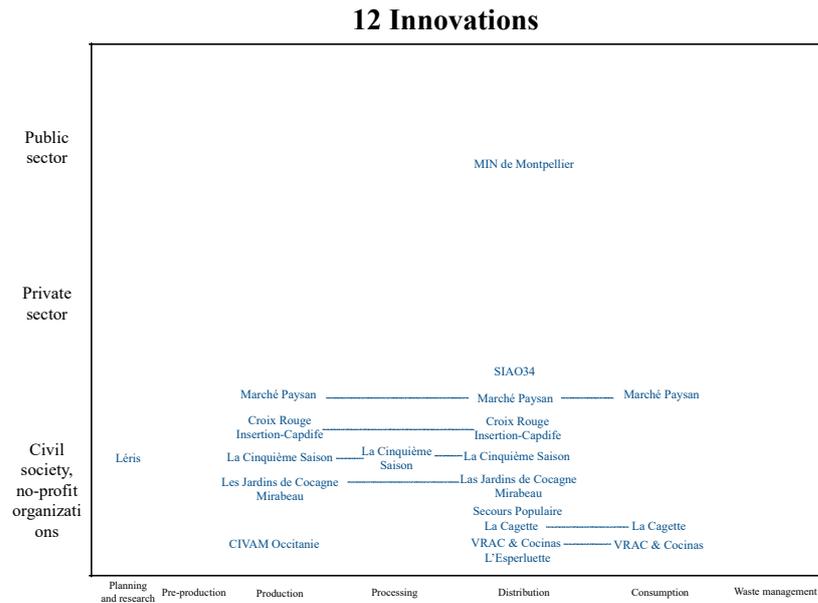


Figure 3. The innovations chosen.

During the interviews, through the “name-generator” technique, the system of actors operating in the sustainable food system of Montpellier was reconstructed (Figure 4).

### Actors identified during the interviews

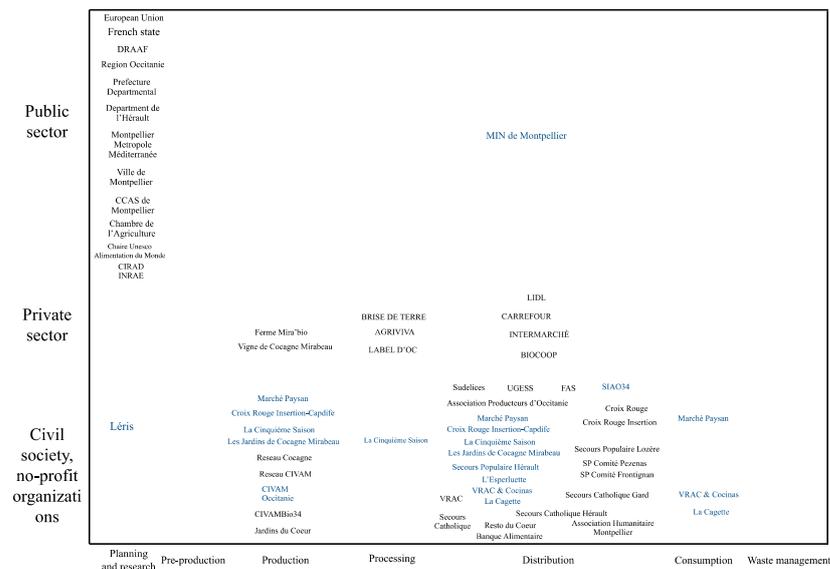


Figure 4. All the 54 actors identified.

The social map above is not exhaustive, in the sense that it does not identify all the actors operating in the territory; only those around the 12 innovations were considered. The actors identified numbered 54. They mainly belonged to the public sector and to the civil society. In regard to the food system phases, we observed a large number of actors in the “distribution” phase, but many fewer in the production or processing sector.

In the second phase of the methodology, we identified the multi-actor networks that were the existing “spaces of governance” between the actors (Figure 5). Six networks were identified, mainly present in the civil society.

### Multi-actor networks (“spaces of governance”)

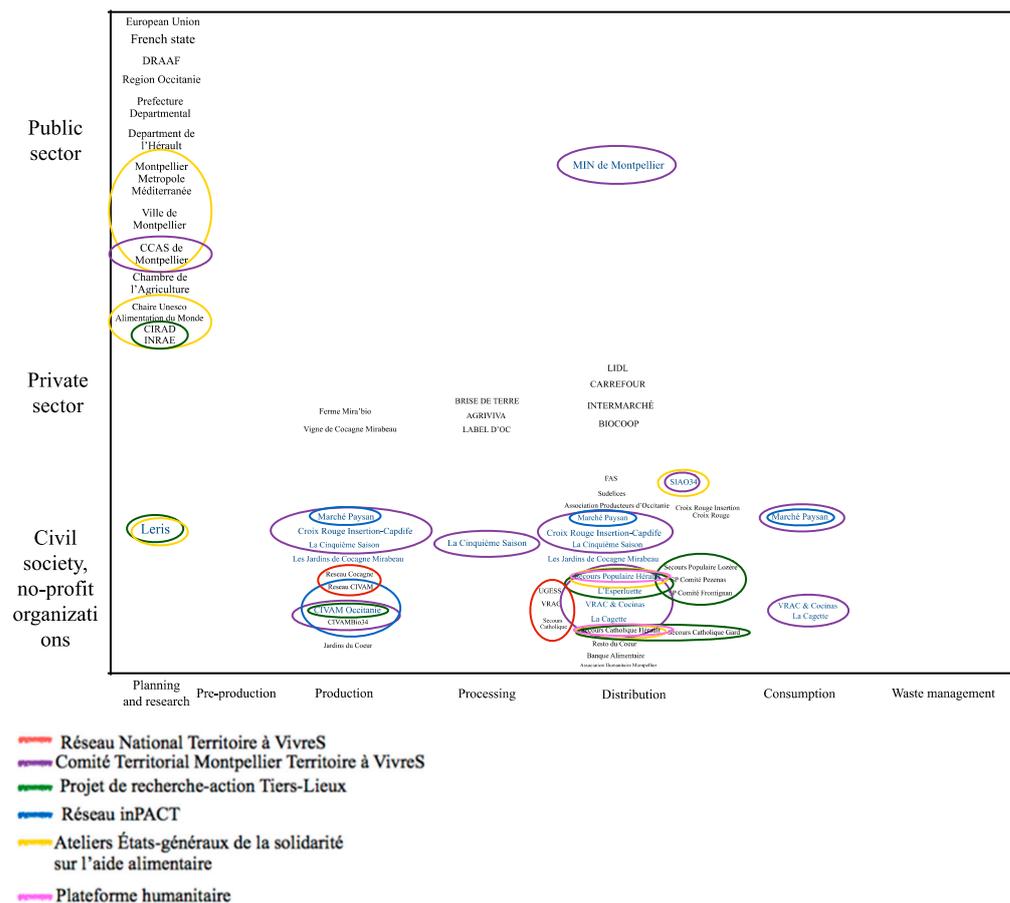


Figure 5. The six “spaces of governance” identified.

In the third section of the methodology, we realized the bilateral links between actors (Figure 6).

The first thing we observed was the huge financial flow from public institutions to civil society organizations. Then, we observed the small number of commercial links between production and distribution. As for the links of cooperation, we observed that there were very few of them. We observed greater cooperation in the production sector. As for the coordination bonds, we can say that there were more than those of cooperation. However, the greatest coordination occurred with politics and institutions. We observed a huge exchange of resources, whether material (such as food) or immaterial (such as skills or information). Despite the lack of cooperation or coordination, we saw a strong material flow among food aid actors. We found ties of control from politics to public organisms, or from national networks to control their local organizations. We did not find any ties of competition or conflict. Regarding the conflict, we observed some divergences regarding opinions about food aid interventions but found more at the level of the multi-actor networks.



## 5. Discussion

Considering our results, we identified the different territorial conditions that were able to characterize the relational context of the Montpellier food system. We grouped the conditions into four main groups: those related to the difference between actors; bilateral ties; the role of politics; and the spaces of governance.

### 5.1. Conditions Related to Actors' Differences

Many actors belonged to the civil society. This was due, in part, to the distinctiveness of some of the actors/innovations chosen (many of them from the food aid sector). However, this also reinforced the theory that in recent decades there had been a shift in food governance towards a greater involvement of civil society actors [27,45]. Contrary to the literature that proposes collaboration and new partnerships between public and private [27,35], we observed that private actors were not contributing to the transition as much as others. They were less involved and, in general, less interested, because they maintained a commercial and corporate point of view, not considering territorial transformation in a sustainable way. During participant observations, we noted that civil society actors tried several times to engage private actors in innovations, without much success. The only private actors involved in the network were those who were interested in financial gain.

We observed that the actors of the food system had different scales, defined by their area of actions and belonging. This contributed to a multi-level governance design of the food system [66]. We identified four different scales: national, regional, departmental and local. Actors belonging to different levels interacted simultaneously at the territorial level. Furthermore, we observed the local scale as particularly present in our relational context. Montpellier presented strong local governance of food issues. So, within multi-level governance, the local level was definitely heavily involved in the transition to a sustainable food system [67].

According to our analysis, the same organization may have several scales. In this case, the higher one controlled and gave both material and immaterial resources to the actors on the lower scale. This meant that within the same organization, scale determined power relationships and stream of resources. For example, during the interviews, we observed that actors such as *Secours Populaire Hérault*, who represented the local level but depended also on the national scale, had difficulty making autonomous decisions at the local scale.

### 5.2. Conditions concerning Relations between Actors

We observed that between the different phases of the food system, the links were above all commercial, since this is the way in which the supply chain takes place [53]. However, among the actors of the same phase of the food system, we did not observe commercial links, because they were not linked in the supply chain. Between them, we observed link resources exchanges (such as exchange of materials, information, human resources), not related to economic exchanges [55].

We identified difficulties in creating links between local production and distribution. According to our interviews, local production representatives preferred direct sale marketing channels, and they did not have enough volume for wholesale. This issue represents an obstacle to sustainable transition, especially as in our case the food aid actors had problems with the provision of local products.

As for bilateral ties, we observed mainly material flows from actors with more resources (such as the *Secours Populaire*), to smaller ones, such as community associations. However, this exchange also took place between large organizations. The actors with more resources were resistant to cooperating with, or being coordinated by, other actors. This resistance was due to the fact that they wanted to maintain their independence, for reasons of legitimacy. In addition, they had a pyramidal organization that exercised control over the local associations, making them less flexible and free in regard to building ties. But also, these actors had a large amount of funding, and sometimes did not need to collaborate with someone to achieve their goals. This independence led to a lack of coordination

and cooperation in the territory, which sometimes caused replication of the same actions, or inefficiencies.

Material and immaterial exchanges were common between actors in the same sector who had more resources. However, these were informal exchanges and, often, related to urgency.

The only links that the largest actors could not renounce were those of coordination with politics. This was because their existence depended on public funding, and because they were considered almost as institutional actors in dialogue with the institutions, due to their importance in the territory. However, for all the actors, large or small, the relationships with politics were limited to coordination, and not to cooperation, since they preferred to maintain their independence.

### 5.3. *The Role of Politics in the Territorial Transition*

Viewing the graphs above, and according to the interviews, we observed that politics played a fundamental role in the territorial transition [68]: firstly, because it fostered the *spaces of governance* in which the actors could converse; secondly, because it was the main financial actor, especially in the solidarity sector [69]; thirdly, because it was the food policy main actor, and it operated at every level [70].

However, we can state that politics created spaces of governance not only to stimulate collaboration between local actors but also to achieve, in a participatory way, its objectives. This meant that it used these spaces to legitimize its actions. By consulting the relevant actors, it could declare that its policies were shared by a part of the electorate.

Furthermore, politics not only created spaces of governance but also maintained bilateral links, as coordination, with local actors. This allowed it to exercise control, but also to make policies based on the needs of the territory. For example, through the organization of the *Ateliers États-généraux de la solidarité sur l'aide alimentaire* and some other consultations with local actors, the city of Montpellier decided to create some solidarity grocery stores, since it was understood that this was the new form of food aid that the population wanted. Furthermore, it wanted to strengthen the role of the MIN (i.e., the central national market) in structuring the offer of local products, because it was understood that there were not many links between local production and distribution. Politics wanted to connect provision and demand in the food system. The creation of the *Association des producteurs d'Occitanie*, together with the *Chambre de l'Agriculture*, was an example of this intention.

In addition, we observed that politics usually worked together with the research sector, to implement better and more informed policies.

### 5.4. *The "Spaces of Governance"*

Regarding the spaces of governance, we observed that these could occur at different levels. They could be national (such as the *Reseau national Territoire à VivreS*), regional, local (such as the *Ateliers États-généraux de la solidarité sur l'aide alimentaire* or the local network of *Territoire à VivreS*) or inter-municipal. However, all these networks had a consequence on the territory. Actors of different scales could be found in the same network. This fact made it difficult sometimes to define the nature of the scale of the network.

Spaces of governance often brought together actors with the same vision (for example *Territoire à VivreS*), or with the same short-term objectives (the *Plateforme Humanitaire*). This meant that multi-actor networks could be useful in resolving territorial needs or shared problems, despite actors having different visions. The fact that actors met to achieve a short-term goal, or a territorial problem, did not exclude the possibility that these spaces could be the sources of unprecedented bilateral ties that changed relationships and governance.

We observed that each organization that participated in a space of governance always wanted to achieve its personal goal. In this sense, each organization always had a "corporate" vision. From our interviews, it emerged that each actor that participated in a shared project or carried out an innovation, wanted to achieve a personal goal, e.g., to increase the size of the association; to increase their impact and prestige in the territory; to

receive more public funding. What changed was that, through the spaces of governance, they wanted to reach their personal objectives through coordination with other actors in achieving a common goal. This meant that the actors wanted to reach their own objectives through a common territorial strategy, transforming “corporate” objectives into territorial and shared ones.

When multi-actor networks shared a vision and long-term goals, they often also had a common “enemy”, which could be symbolic or could come from an existing conflict in the territory.

These spaces of governance were particularly important for all actors, but especially for the little ones, who needed to connect with others to make their actions worthwhile. These spaces had an important political role, as they created advocacy actions.

These networks, in addition to the action of advocacy, were laboratories of innovation, because they stimulated the creation of bilateral links between actors and the exchange of information.

We observed that politics tended to collaborate in these spaces of governance with the largest actors, since it involved the small actors less in these situations.

The most important thing we found was that multi-actor networks stimulated bilateral ties. They were capable of creating new cooperation and exchanges of resources in the territory. However, we found that the nature of the collaborations that took place within the spaces of governance were not made by bilateral ties. This meant that they were important not only from the point of view of the exchange of resources, but above all in creating a common, territorial strategy to change the food system. As for innovations, they were relevant for leaving the corporate vision and entering into a vision of territorial transition. They created a territorial culture, in which actors recognized themselves as part of the same system, sharing the same space, and implementing a common action.

Finally, we observed that geographic proximity could be a collaborative factor. The fact of sharing the same space could lead the actors to collaborate, in order to solve local needs and shared problems.

All the factors described are summarized in Table 4. According to the interviews, COVID-19 seemed to be an important temporal and territorial factor, which obliged the actors to collaborate and exchange resources, in order to respond to the increasing needs of the population.

**Table 4.** The results summarized: territorial factors and related evidence.

Territorial Factors Identified	Evidence
Many actors belonged to the civil society (private actors did not contribute to the transition).	31 out of 54 actors belonged to the civil society sector (almost 57%).
Food system actors had different scales, interacting at the same territorial level.	We identified actors at several scales: national (e.g., the France State, <i>reseau CIVAM</i> , <i>reseau Cocagne</i> , CARREFOUR); regional (e.g., <i>CIVAM Occitanie</i> ); departmental (e.g., <i>Secours Populaire Hérault</i> , <i>Secours Catholique Hérault</i> ); local (e.g., <i>L’Esperluette</i> , <i>La Cagette</i> , <i>Les Jardins de Cocagne Mirabeau</i> ).
Difficulty in creating links between the local production and the distribution sector.	Few commercial ties between these sectors, confirmed by the interviews. Many distribution actors interviewed admitted they had problems with the provision of local products.
The fundamental role of politics.	It could create the <i>spaces of governance</i> (as in the cases of <i>Ateliers États-généraux de la solidarité sur l’aide alimentaire</i> , and the <i>Plateforme humanitaire</i> ). It was the main financial actor, especially in the solidarity sector (there was a huge flow of financial resources from politics to civil society actors; it was present in 13 out of 14 financial ties). Politics was the main food policy actor at every level (the political framework of food issues went from the European Union to the local government of Montpellier, through the “P2A food policy”).

Table 4. Cont.

Territorial Factors Identified	Evidence
The actors with more resources were resistant to cooperating with, or being coordinated by, other actors.	Few cooperation and coordination links. During the interviews, they affirmed that they wanted to maintain their independence, and they had a pyramidal organization that made them less flexible and free in collaborating. However, they also had a large amount of funding and resources, and they did not need to collaborate to achieve their goals.
The <i>spaces of governance</i> stimulated new bilateral ties; they were laboratories of innovation; they played an advocacy role, and they could move actors from a “corporate” point of view to a “territorial” perspective.	We identified that many collaborations arose as a result of participation in multi-actor networks. We observed that, in these spaces, the exchange of information led to the experimentation of innovations. We observed that one of the goals of these networks was to influence politics, through the scope of a new vision. Finally, according to some of the actors interviewed, these spaces were important for creating a “territorial culture” and making the actors feel part of territorial action to change the food system.
Geographical proximity between actors.	Geographical proximity between actors could foster collaboration, as in the case of the cluster in the <i>Restanque</i> neighborhood.

## 6. Conclusions

Throughout this research work, we attempted to understand which territorial conditions affect the transition towards a sustainable food system. We applied a methodology composed of four sections, to identify the actors and networks present in the territory. In particular, we were interested in understanding how territory and networks could affect the scaling process of innovations and the food system transition. Through interviews with twelve actors and four participant observations, we reconstructed the relational and territorial context of the food aid sector in the city of Montpellier, and we identified the factors influencing food system transition.

We identified several external factors influencing transition. We observed that there were different scales (from supra-national to local) that interacted simultaneously on the same territory, and conditioned food system change. We also identified a lack of linkage between local production and the distribution sector, particularly wholesalers, due to the fact that local farmers preferred to sell direct, skipping the distribution chain. We identified commercial relationships as the core of the food system. In order to facilitate a transition, we could not preclude the creation of these links throughout the food chain.

We analyzed the role of politics, and stated that its role was fundamental in fostering transition. We observed that the biggest actors in terms of resources had difficulties in achieving coordination or cooperation with other actors. The reason seemed to be their desire to maintain independence, but also their hierarchical organization. We observed that actors, big or small, did not want to establish collaborative relationships with politics. This was due to the fact that each actor wanted to maintain its independence.

We identified a cluster, which suggested that geographical proximity can be a collaborative factor among actors, encouraging them to take common actions, and to coordinate.

Finally, we analyzed the role of *spaces of governance* in food system transitions. We observed that these spaces were crucial for stimulating new bilateral ties which actually changed the system. We saw that they were often laboratories of innovation, since there was an information exchange that led to dissemination and sharing of practices (they stimulated what we might call a “scaling out” process). Moreover, they were fundamental for the “scaling up” processes, as they played a very important advocacy role in influencing policies [25]. The most important thing we observed was that these spaces succeeded above all in moving actors (and therefore innovations) from a “corporate” point of view to a “territorial” perspective. Through these multi-actor networks, innovations re-defined themselves as a group of actions sharing a common vision and a territorial strategy. The

spaces of governance were able to create a “territorial culture”, making the actors feel part of a territorial community capable of changing the food system.

However, this research was not lacking in limitations and shortcomings which, could be addressed by future research. Firstly, it would be interesting to test the validity of the methodology used. It should be applied to different contexts, in order to show if it is really capable of being informative about the actors and networks of sustainable food system transitions.

Furthermore, it would be worthwhile to test the methodology in a context of quantitative data collection and analysis with statistical software. Its applicability should be tested in larger scenarios with a larger number of actors.

Finally, it would be interesting to identify other territorial conditions that affect innovations’ scaling processes, and sustainable transitions of the food system. For example, non-relational factors, such as the physical characteristics of the territory, or the historical context, could be considered.

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