CULTiVATE

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Introduction

This briefing note provides a high-level summary of findings from the manual mapping of food sharing initiatives (FSIs) which have a digital footprint through their own website, app, or social media profile in CULTIVATE's three Hub cities: Barcelona, Milan, and Utrecht. The mapping methodology adopted is detailed in the *Manual for Categorising FSIs*[1]. These findings will be used to establish queries for, and ground truth the results of, automated mapping experiments. The data has been used to inform CULTIVATE research activities in Hub cities, including identifying candidate FSIs for sustainability impact assessment reporting (WP2) and for examining trends in governance arrangements (WP4).

What is Cultivate?

CULTIVATE is a four-year Innovation Action funded by the EU Horizon Europe (GA No. 101083377) and designed to support sustainable urban and peri-urban (UPU) food sharing and help transform urban food systems towards more just and sustainable. CULTIVATE will co-design a ground-breaking online social innovation support platform – The Food Sharing Compass – with food sharing initiatives (FSIs), local authorities, food supply actors, researchers and citizens in order to: map, track and monitor UPU food sharing landscapes; identify the costs, benefits and impacts of FSIs; help actors navigate governance architectures and ensure appropriate policies and regulations of food sharing; support increased citizen engagement in UPU food sharing; and create a community of practice for FSIs. Working collaboratively with multiple actors, CULTIVATE will develop more sustainable, resilient and healthy UPU food systems supporting inclusive climate mitigation and adaptation ambitions of the EU.

What is food sharing?

Food sharing involves collective actions around food and food related items, spaces, skills, and knowledge. It can take place between friends, families, neighbours, communities, and strangers across the food system from growing, cooking, and eating to surplus food redistribution. In CULTIVATE we focus on food sharing beyond friends and family, and specifically initiatives explicitly set up to share food. We call these food sharing initiatives (FSIs). FSIs adopt different organisational forms, including co-operatives and social enterprises, charities and for-profits and can be community, private sector or state-led. Examples include, seed libraries, community gardens, food related co-operatives, community kitchens, and surplus food redistribution organisations.

Manual mapping approach

The CULTIVATE manual mapping approach expands on the key search terms developed in the SHARECITY project[2]. Translations of the refined list of key terms were produced by a professional translation company in 25 languages (24 EU languages and Catalan, the official language of Barcelona, a Hub city) and the translations were sense-checked by native speakers from within and beyond the CULTIVATE consortium for their relevance for food sharing activities. Native speakers were also asked to submit additional and replacement terms for direct translations which culminated in the European Food Sharing Dictionary (D2.1)[3]. Using the relevant language sections of the European Food Sharing Dictionary, a team of locally based researchers mapped the food sharing landscapes of Barcelona, Milan, and Utrecht using a common search protocol and bringing local knowledge to the activities[4]. Three individual city reports were developed and provide the extended background on which this briefing note is based[5,6,7]. These city reports will be translated into local languages for dissemination.

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City profiles

Barcelona

The cultural and ethnic diversity of Barcelona means cuisines from all over the world can be accessed across the city. Alimentària Barcelona Food Fair, Terra I Gust, the Sustainable Food Festival, and the Soups of the World Festival are some of the many large gastronomic events that the city hosts, where thousands of people meet to share their passion for food together. Barcelona is also surrounded by agricultural land which provides 16% of locally produced food. However, despite this abundance, nearly 10% of households living in the city have experienced some form of food insecurity[8, 9]. In response, agroecological cooperatives have emerged to provide food for families, increasing food security and reducing food waste through social and neighbourhood initiatives grounded in social solidarity economy principles[10, 11]. Barcelona earned the title of the capital of Sustainable Food In 2021, which led to the 'Strategy for Healthy and Sustainable Food' in 2022. This strategy seeks to transform the city's food system to become more transparent, resilient, participative, safe, equitable, and responsive to the climate emergency[12].

Milan

Milan has long had strong relations with its surrounding rural areas. In addition to cattle breeding, dairy products, wheat, and rice production, which are integral to Milan's traditional dishes, the city is a hub in northern Italy for redistributing national and international fresh goods. Moreover, migration has made Milan a place where different cuisines meet. It hosts international fairs, such as Fiera dell'Artigianato, TuttoFood, and the Milan Food Week, and organises events for traditional festivities with ethnic foods, such as the End of Ramadan and the Chinese New Year. However, food sustainability remains a pressing challenge for the city and food security is an issue for its most vulnerable citizens. In response, Milan has led efforts to make urban food systems more sustainable locally and internationally through the Milan Urban Food Policy Pact established in 2015. Milan has implemented an urban food policy with five key priorities: ensuring healthy food and water for all citizens, promoting the sustainability of the food system, enhancing food education, reducing food waste, and supporting scientific research in agri-food sectors. The policy encourages collaboration among private companies, public entities, and third sector actors to address these priorities. The crucial role of the agri-food sector is evident in planning policies which aim to create agricultural parks in a belt around the city.

Utrecht

The Utrecht Food Agenda seeks to transform Utrecht's food system in line with the UN's Sustainable Development Goals[14]. The key areas of this strategy are promoting awareness, healthy and integrated supply, rural-urban connectedness, circularity, and edible city landscapes[13]. Utrecht municipality also commits to halve the amount of food waste as recorded in 2020 by 2030[14]. Furthermore, to expand the share of food grown in the city, Utrecht is championing 'edible district' initiatives, creating green spaces and encouraging residents to maintain and harvest from them[15]. Most of the agricultural land in Utrecht is grassland and used for dairy production. Utrecht's agricultural landscape is made up of small-scale farms and gardens with an average size of 4 hectares[16]. The farms often provide non-agricultural services such as biodiversity conservation and enhancement as well as educational activities and labour integration programs with the latter being recognized as 'zorgborderij' (care farms)[17]. Food banks in Utrecht distribute significant numbers of food packages each week to help vulnerable families[18],[19].

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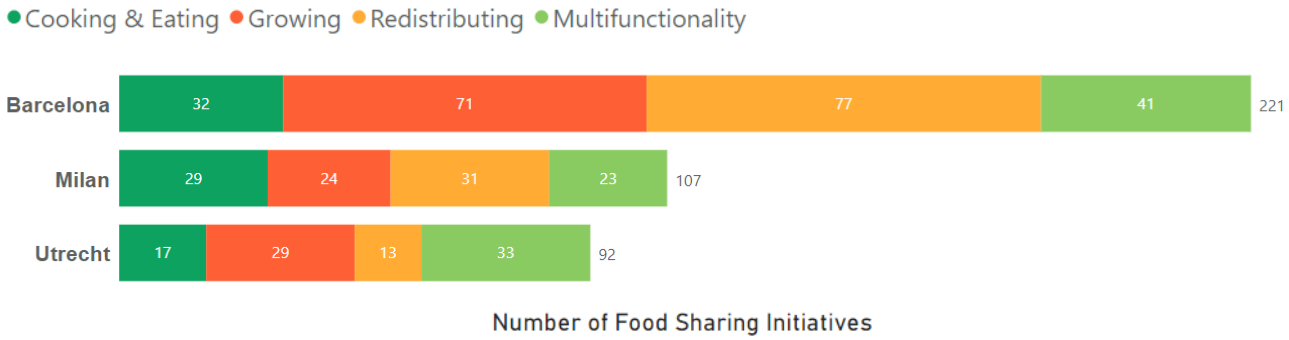
Hub city mapping results

Overview of food sharing landscapes

Manual mapping revealed 420 FSIs across Milan, Barcelona, and Utrecht, with Barcelona having 221 initiatives, Milan 107 and Utrecht 92. The food-sharing landscape across the three cities is mapped in terms of the main activity of the FSIs: cooking and eating, growing, and redistributing. Across the three cities 29% of the initiatives focus on growing, 19% on food redistribution and a further 19% on cooking and eating. Almost a quarter (23%) of initiatives focus on more than one activity. The graph below shows the relative proportion of key sectors of sharing for each city.



While Utrecht has the lowest number of FSIs overall, it also has the fewest inhabitants. There are almost twice as many people per FSI in Barcelona and nearly three times as many in Milan when compared to Utrecht.

Inhabitants per FSI	
Milan	11738 inhabitants/FSI
Barcelona	7493 inhabitants/FSI
Utrecht	4255 inhabitants/FSI

Motivations: Why food sharing initiatives were formed

The top five most frequently appearing phrases

- Healthy food (68 times)
- Together (60 times)
- Food surplus (50 times)
- Sustainable (48 times)
- Organic (38 times)

The mission statements of all FSIs were translated and analysed[20]. The most common phrases observed are 'healthy food' or 'fresh food', 'together', 'food surplus', 'sustainable' and 'organic'. Promoting responsible consumption, supporting elderly and other vulnerable local groups, and supporting education activities around food are also commonly observed. While their specific goals may vary, FSIs often prioritise their ties to local communities. They frequently emphasise integration and care, welcoming neighbours, serving as social hubs, and sharing common interests and goals with residents.

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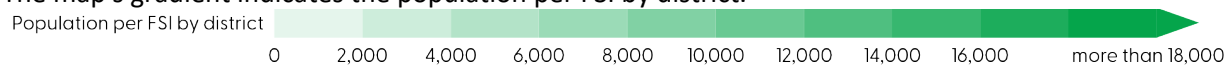
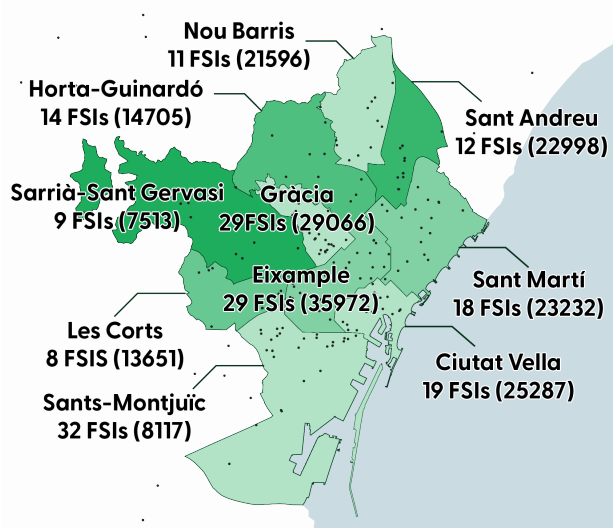
Comparative geospatial analysis of FSIs

The map's gradient indicates the population per FSI by district.



Data label: District name, Number of FSIs (The number of people per km2 of land area)

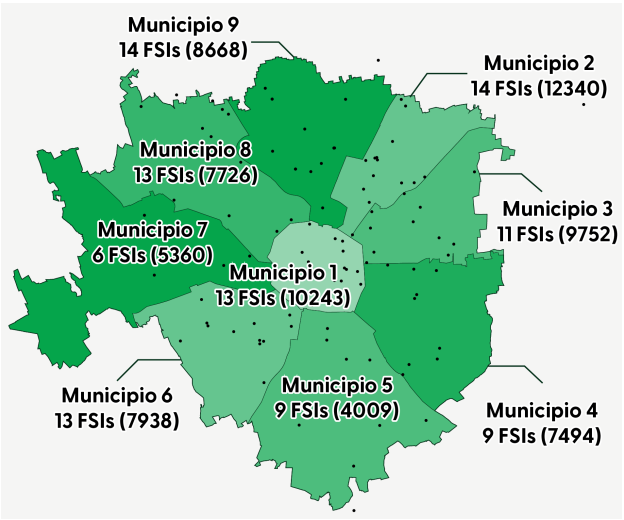


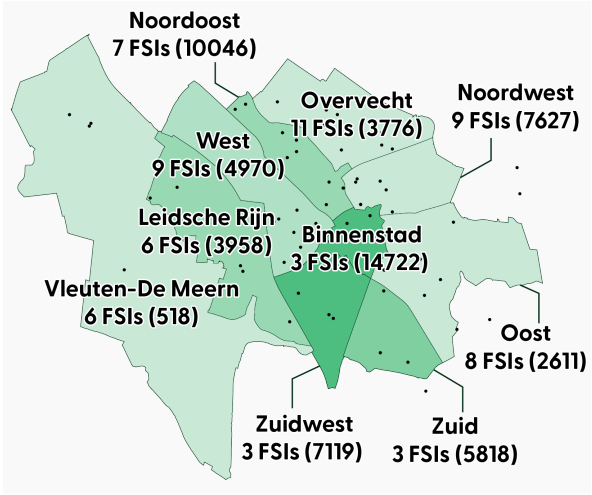
Barcelona

Not all the Barcelona FSIs have a physical location. Among 221 FSIs, 20 FSIs were only present online, mostly related to knowledge sharing. Meanwhile, 13 initiatives have more than one location in the city and 17 initiatives have locations outside but also serving the city. There is a higher FSI concentration in central districts, with the lowest concentration in the north-western districts. While growing FSIs are relatively evenly distributed, other FSIs, focusing on cooking, eating and redistributing, tend to concentrate in the central area.

Milan

Among its 107 FSIs, Milan has 4 FSIs without a physical location, while 7 operate in more than one location, and 14 are located outside the administrative border of Milan. Milan's FSIs tend to cluster in areas with high population density. This is observed clearly in the FSIs focusing on growing activities which tend to be outside the city centre. For example, Municipio 4 has only 9 FSIs but among them, 5 initiatives focus on growing (56%), while only 1 initiative among 13 (8%) includes growing activities in Municipio 1.





Utrecht

Among the 92 FISs mapped in Utrecht, 24 have no physical location, the highest number among the three cities. Three initiatives organise activities in more than one location. The population density in Utrecht is lower than in the other two cities, and it is not a significant driver for the distribution of FSIs. The highest concentration of FSIs in Utrecht is in the Centre-East side of the city. Previously agricultural land, Leidsche Rijn and Vleuten-De Meern, were the last two districts transferred under the Utrecht Municipality jurisdiction. They are less densely populated than the rest of the districts, with the low number of FSIs.

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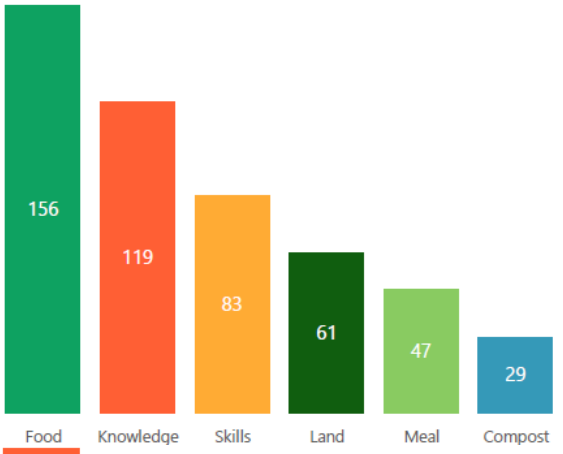
What is shared by FSIs

FSIs share a diverse range of resources, from tangible materials like food and tools to intangible assets such as knowledge and skills. Food and knowledge are the most shared resources across all three cities. However, aside from these two resources, the types of shared items vary depending on the dominant activities in each city. For instance, in Milan, land is not commonly shared, which is reflected in the relatively low proportion of FSIs focused on growing activities. The graphs show the top six shared resource categories in each city, indicating the number of FSIs sharing each resource. In initiatives that share multiple resources, each type of resource is counted separately within its respective category (NB: total number of counts are more than the total number of initiatives due to multifunctionality).

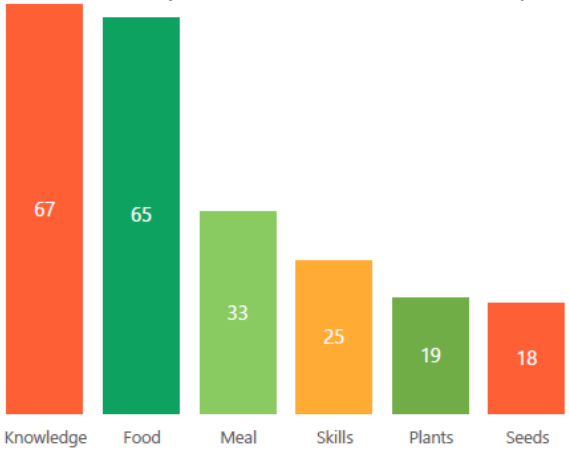
Barcelona

Approximately 50% of initiatives share food-related items like meals, compost, and plants. 32% focus on sharing skills and knowledge, while fewer than 20% share spaces, primarily community gardens. Over half of the initiatives share more than one resource, often combining educational efforts with their main activities to pursue multiple goals, with environmental and social objectives.



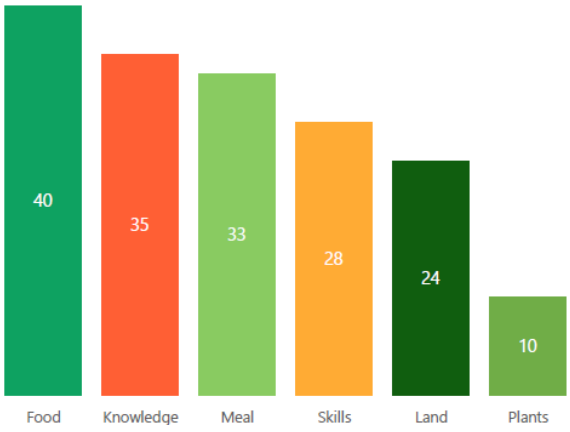
Milan

The most shared resource in Milan is 'knowledge' (67 FSIs, 62.6% of total FSIs). This refers to direct or indirect educational and training activities aimed at promoting sustainable behaviours around food and its supply chain from growing to cooking and including waste reduction and management. In Milan, initiatives sharing land are relatively limited, which reflects a smaller number of growing initiatives. Only 8 out of 107 FSIs rent or offer kitchen spaces or land lots.



Utrecht

Out of the 92 initiatives in Utrecht, over three quarters (78%) share food and food related items. Knowledge ranks as the second most shared resource, encompassing educational activities on growing, food preparation, foraging tours, and specialized workshops. Land is less shared resource than food and knowledge, although it is a higher proportion compared to initiatives in other cities. Half of the initiatives primarily share material goods such as food and meals, while 40% sharing more than one type, often combining material products with skills and knowledge.



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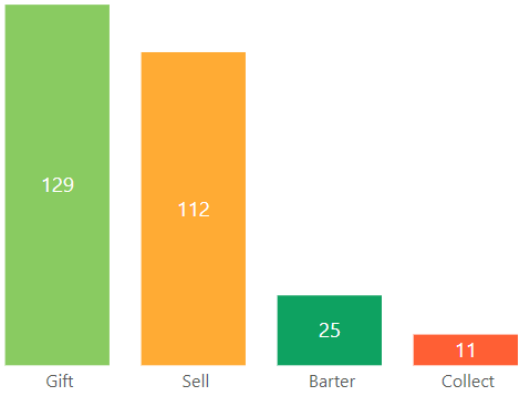
FSI modes of sharing

FSIs were also categorised based on the transactional nature of sharing using four broad categories: barter (non-monetary exchange for other goods/services), gifting (for free), selling (for-profit or not-for-profit), collecting (such as foraging and gleaning). The modes of sharing appear similar across the three cities, with all showing a high percentage of gifting and selling. Only Utrecht shows a slightly higher percentage of selling, while the other two cities show a higher percentage of gifting. FSIs in Utrecht may be more reliant on selling due to limited government subsidies. The graphs illustrate the number of FSIs utilising each mode of sharing. In initiatives that utilise multiple modes of sharing, each mode is counted separately within its relevant category.

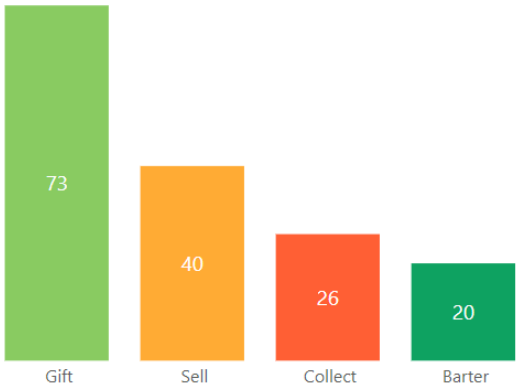
Barcelona

Gifting is the most common method of sharing for Barcelona's FSIs, reflecting their social mission to support vulnerable communities. However, selling is a close second, including all consumer groups, cooperative supermarkets, or social economy restaurants. These initiatives suggest alternative ways of consumption, reducing environmental or economic costs of food or adding a societal value to the consumption of food, but still involve monetary interactions.



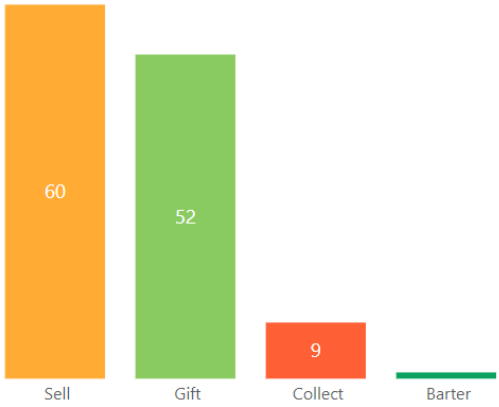
Milan

The primary mode of sharing food is gifting (more than two-thirds of initiatives). Gifting includes providing meals, seeds, plants, and food surplus. The presence of selling may be related to the presence of social enterprises (24.3% of the total FSIs mapped) which are mainly focused on job training and employment activation for vulnerable or marginalised people. Multimodal sharing is observed in over a third (36.4%) of FSIs.



Utrecht

In Utrecht, in contrast to the other cities, selling is the primary mode of sharing among initiatives, followed by gifting. However, selling is not always for profit. FSIs organising community meals may charge a symbolic fee to cover basic costs such as staple ingredients and rent. FSIs focused on growing often sell their products in their community cafés or to other restaurants in Utrecht. Volunteers working in community gardens may be rewarded for their work with fresh products, but these are rarely recognised as formal modes of sharing, resulting in the lower level of barter observed in the data.



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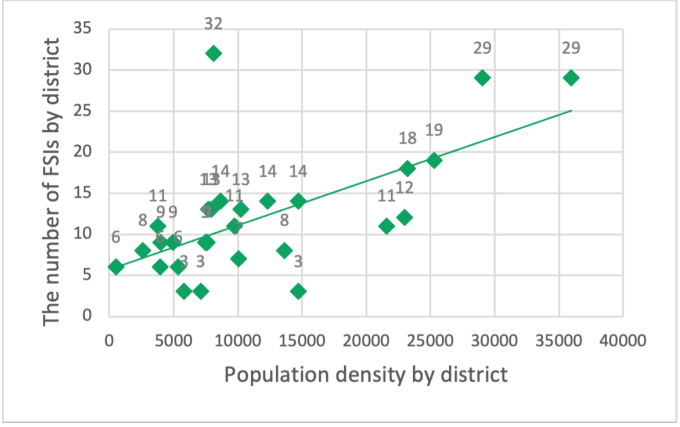
Summary

Analysis of food sharing initiatives (FSIs) in the Hub cities which have a website, app, or social media profile suggests a set of interrelated drivers shape these landscapes: people, governance, place, and culture.

People - The most prominent trend identified across food-sharing landscapes in the hub cities is the correlation between the number of FSIs and population density. This correlation is most significant for surplus food redistribution initiatives, due to their explicitly social focus and the limited edible life of surplus food.



Governance - External governance of food sharing is a key force shaping the food sharing landscape in each city. For example, while Barcelona demonstrates explicit support for local initiatives and the solidarity economy, Utrecht's food policies focus more on food waste reduction across all sectors and edible landscapes for community growing. With fewer funding opportunities for socially-focused FSIs, this has created a food sharing landscape in Utrecht dominated by selling to sustain activities. In Milan, the high-profile activities of Milan's Urban Food Policy Pact, driven by the municipality, have led to expanded opportunities for FSIs, particularly those involved in surplus food redistribution. As detailed in relation to urban food governance more broadly[21], time, place, relationships and power matter in the [re]shaping of food sharing landscapes. For just transitions more diverse engagements are required.

Place - While there is a general trend of FSIs locating in densely populated areas, each city exhibits distinct patterns. For example, there is a clear division among FSI activities in Milan, with growing activities located in the least densely populations areas of the city. Growing initiatives in Milan concentrate in peri-urban areas and historically developed agricultural belt parks. Growing FSIs tend to be evenly distributed in Utrecht and Barcelona. Characteristics such as urban green space planning within high-density residential areas contribute to these differences. In Milan, agri-food policies have influenced urban planning and the provision of agricultural green spaces, leading to concentrations of growing initiatives in specific areas. In contrast, urban farming activities in Barcelona also utilise small-scale urban community gardens which are spread through the central area resulting in more even distribution across the city.

Culture – Social norms and values, as well as skills and understandings of food and food-related activities, also play a significant role in shaping distinct food sharing landscape patterns in each city. For example, cooking and eating activities are more commonly observed in the central areas of Milan compared to other cities, reflecting cultures of commensality around food that emphasize eating and cooking as social activities. In Barcelona, cooking and eating initiatives more strongly correlate with the percentage of the population with migration backgrounds in particular places. The FSIs in ethnically diverse neighbourhoods in Barcelona are often seen as social spaces, fostering interaction through communal eating and cooking for minority groups whilst also addressing food poverty.

Mapping FSI landscapes gives visibility to initiatives that often fly under the radar of policy makers and the public. Using CULTIVATE's European Food Sharing Dictionary and mapping protocol ensures a consistent approach to identifying and classifying FSIs and this facilitates the production of comparable data. However, manually documenting these landscapes is labour intensive and still only provides a partial and static snapshot of FSI incidence and configuration. Automated functionality is being explored in CULTIVATE to reduce this resource cost, provide real-time data tracking the emergence and disappearance of FSIs over time, and scale out mapping across an additional 100 European cities. This work forms the bedrock for the development of CULTIVATE's Food Sharing Compass.

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[20] To understand the objectives of FSIs, the phrases describing the type of initiatives (e.g. social enterprise, cooperative) are excluded from this analysis. Phrases are grouped with other phases with similar meanings (e.g. 'Healthy food' includes fresh food and healthy seasonal food)
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