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SERVICE DESIGN FOR FOOD SYSTEMS: AN EDUCATIONAL EXPERIMENT TO EXPLORE ALTERNATIVES FOR THE MILANESE FOOD SYSTEM IN ITALY.

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ABSTRACT | Prioritizing sustainable and fair food is essential to achieve the Sustainable Development Goals. While food systems contribute significantly to climate change and social inequality, these issues also severely impact them. Moreover, urbanization intensifies these concerns in cities, highlighting the need for design interventions across various domains. In this context, the Milanese Food System presents an interesting study area. Since 2015, the city has seen alternative food networks flourish alongside the conventional supply chain. These contributions have emerged as critical transformational nodes within Milan's food system. However, together with the conventional ones, they face several challenges, mainly connected to their evolution into actual service solutions. This paper presents ten service design projects by MSc students from the School of Design of Politecnico di Milano (A.Y. 2023-2024) that challenge and rethink the current Milanese Food System and its nodes. Solutions intend to combine social and environmental sustainability in a mitigation or adaptation strategy. At the end of the course, students and the teaching staff collaborated to map their projects into what the authors define as a 'Service Master Plan' for the Milanese Food System in 2030. The plan, already shared with stakeholders in the closing event of the course, provides a comprehensive overview of the actions, people, and infrastructure necessary to implement node-related changes in the city, offering provocations for future development. The course was developed under the OnFoods project, which aims to set the basis for starting design-driven conversations with the Milanese Food System actors, igniting design activism processes that could influence decision-making policies.

1. Background Knowledge: Food Systems, Urban Areas, and Service Design

Contemporary food systems manifest a paradox within themselves. On the one hand, food is one of the goods whose production, delivery, and consumption impact climate change and social inequalities; on the other, climate change has directly reduced food security by affecting water safety and agricultural productivity. If we keep moving inside this paradox, there will be negative impacts on the achievement of the Sustainable Development Goals, as envisioned in the 2030 Agenda for Sustainable Development (IPCC, 2023).

FAO projections (2003) indicate that by 2050, almost seven in ten people will live in cities. With the current food consumption behaviours and globalization of goods, this increasing trend makes cities a strategic point for food studies. During the last years, since the outbreak of the COVID-19 pandemic in 2020 and the conflict in Ukraine in 2022, the weaknesses of the current food system have been exposed, showing an increase in food insecurity and global hunger in comparison to pre-pandemic numbers (FAO, 2023).

Urban areas are relevant in studying agri-food systems, given their impact on food production, distribution, procurement, and consumption. Factors such as the consequences of population density, the effect of citizens' consumption choices, and the emergencies cities risk facing because of climate change (FAO, 2023) make urban areas a context in which possible design actions are several and touch many points of the food system, directly involving the demand side (IPCC, 2023).

Knorr et al. (2018) discuss the challenges of urban food systems and how their complex interrelationships have made it harder to ensure a resilient supply chain. They also underline the impact that the current large-scale and centralized approach to food production has had on the accessibility to food in cities. Because of this complexity and the short time ahead, a deep and effective systemic rethinking is urgently required.

In this context, Milan stands out as an area of study. Since 2015, the city has taken a path of envisioning a new food system with a focus on sustainability. After the Expo 2015, 'Feeding the Planet, Energy for Life', Milan Municipality implemented its own Food Policy. Through the Food Policy, and with actions involving citizens and local organisations, the city has set a future vision for its food system. It is working to rebalance the presence of different operators, rewarding supply chains and systems that prove to be more socially and environmentally virtuous (Comune di Milano, 2024).

Over the past nine years, the city has continued its path towards optimising the food system by involving all stakeholders in improving food quality, promoting healthier and more sustainable diets, creating advanced logistics platforms, coordinating major operators, supporting local producers and businesses, and fighting food waste. A big part of this work comes from informed and proactive groups of citizens joining together to experiment with alternative solutions to the large-centralised system. We can cluster these actions under the umbrella of Alternative Food Networks (AFN); a concept that, as Michael-Villareal et al. (2018) define, arrives in opposition to conventional food systems. While the main distinctions between the two models still need to be clarified, some authors have characterised AFNs by their proximity (short distances, etc.) and sustainability. In this direction, Milan has encouraged experimentation with alternative solutions in an effort to radically transform food practices, increase participation, and spread environmental and social sustainability practices. The city promotes the integration of various systems, scales, and actors within these approaches. Awareness, activation, and collaboration of all stakeholders are recognized as priorities to achieve the changes made urgent by climate change and growing social disparities (Comune di Milano, 2024).

Food system actors use adaptation and mitigation¹ strategies to rethink the Milanese food system processes, to integrate new services, and connect its different nodes. A 'node' is a space (digital, physical or both) inside of the system where different actors and products interact and make exchanges (Aucoin & Fry, 2015). In the case of Milan, the identified nodes are the wholesale market, indoor and outdoor markets, food waste hubs, farmers' markets, and public and private canteens. These nodes constitute an interconnected network that, although characteristic of Milan, can also be identified in other urban areas.

Although Milan has received international recognition for its good practices and policy vision, it still faces many challenges due to the complexity of the system. Several nodes and actors interact at different levels of governance, with imbalanced power, and low and inefficient communication between them. Additionally, managing complex logistics is difficult. As a result, AFNs may struggle to create a model that allows them to replicate or scale their initiatives and distribute their services to different contexts while safeguarding their purpose and identity. Here, there is a clear opportunity and need to rethink Milan's nodes around food.

Design has long played a role in the food sector, covering areas from products and packaging to services and strategies. In cities like Milan, design has significant potential to impact the food system, especially on the demand side. Here, we have identified design opportunities in various areas regarding solutions around mitigation and adaptation strategies. These strategies are crucial not just for cutting carbon emissions but also for addressing climate change impacts (Wang et al., 2023). Studies show that feasible, effective, and low-cost mitigation and adaptation options exist, and that many options are available for reducing emission-intensive consumption, including behavioural and lifestyle changes, which can improve societal well-being. Moreover, research also highlights the importance of integrating climate adaptation into social protection programmes to improve resilience (IPCC, 2023).

This paper presents ten service design projects by MSc students from the School of Design of the Politecnico di Milano (A.Y. 2023-2024) that challenge and rethink the current Milanese Food System and its nodes. Solutions intend to combine social and environmental sustainability in a strategy of mitigation or adaptation. At the end of the course, students and the teaching staff collaborated to map their projects into what the authors define as a 'Service Master Plan' for the food system of Milan in 2030. The plan provides a comprehensive overview of the actions, people, and infrastructure necessary to implement node-related changes in the city.

Following this introduction, the paper outlines the methodology implemented in the design studio course, proceeds with descriptions of the student projects, and concludes with a focus on the Service Master Plan, highlighting results and next steps.

2. A Case Study: Envisioning Alternatives for the Milanese Food System in the 'Urban Food Systems' Design Studio

Our case study builds on the current work of the Politecnico di Milano for OnFoods, a research programme funded under the National Recovery and Resilience Plan (NRRP). The university is working on Spoke 1 of the programme, which aims to improve the efficiency of food value chains to provide food access for society's most vulnerable.

As part of this project, a team of service design researchers from the Polimi Desis Lab is developing scenarios for Milan's food system in 2035. These scenarios intend to spark design-driven conversations with

¹ Adaptation means anticipating the adverse effects of climate change and taking appropriate action to prevent or minimise the damage they can cause, or taking advantage of opportunities that may arise. (...) In essence, adaptation can be understood as the process of adjusting to the current and future effects of climate change (European Environment Agency, 2023). Mitigation means making the impacts of climate change less severe by preventing or reducing the emission of greenhouse gases (GHG) into the atmosphere. (...) In short, mitigation is a human intervention that reduces the sources of GHG emissions and/or enhances the sinks (European Environment Agency, 2023).

different food system actors, identifying contexts that improve food access in the city and encourage new partnerships. The project will end in 2026 with pre-prototyping these new food services, showcasing possible evolutions of the food system.

Aligning with the research project, the 'Urban Food Systems' Final Synthesis Studio (LSF) course of the 2023/2024 academic year explored opportunities for reimagining existing or creating new services centred around food in Milan. LSF courses at Politecnico are the culmination of the master's degree in Product-Service System Design. They wrap up the programme's design work by teaching business modelling and co-design methods, preparing students to tackle complex challenges. Each LSF has a unique topic, runs for 4 months, and closes with a public event.

The LSF named 'Urban Food Systems' had the general goal of designing a collection of services and solutions that would focus on social and environmental sustainability and combine them into a strategy of adaptation or mitigation to climate change. Students worked with different 'nodes' within the system: pivotal points where significant activities and interactions related to food production, transformation, distribution, and consumption occur. These nodes are the wholesale market, the food hubs, the indoor markets, street markets, farmers' markets, and public and private canteens.

Each node is assigned starting challenges to guide the student's path (table 1). These challenges were identified in advance thanks to the first research phase of the OnFoods project. Here, design researchers analysed food-related nodes from Milan and other cities worldwide through mainly desk research, on-site visits, and interviews with different actors. This process supported the recognition of the most critical nodes and actors in Milan and opened the conversation about the sustainability issues they usually faced. Issues were summarised in eighteen challenges, representing the situation of one node, or different nodes, or the whole food system.

For each node, a short description in the Milanese context is provided below:

Wholesale market: Milan's fruit and vegetable wholesale market, managed by SOGEMI (the Joint Stock Company that, on behalf of the city, manages its wholesale agri-food markets), is the largest wholesale market in Italy, supplying national and international goods to Italy and Europe. Based on small and medium business clients, they also open their spaces to the public on Saturday mornings, selling food at lower prices.

Other activities connect to the distribution of surplus food for charitable purposes.

Food hubs: The Neighbourhood Hubs Against Food Waste are a Milan Food Policy project. The initiative aims to reduce urban food insecurity and food waste by implementing innovative ways of recovering and redistributing surplus food to fragile citizens. Together, actors from the private and public sectors, associations, and academia join to offer food and welfare services at the neighbourhood level.

Indoor markets: Milan's municipality established covered markets in response to urban expansion and growing commercial activities. These markets hold historical significance for Milanese citizens. However, after years of witnessing their commercial activities decrease and their infrastructures decay, the municipality has started a renewal project. The project aims to transform these markets into diffused food distribution points around the city, where citizens can access different non-food services.

Street markets: Itinerant markets that move around neighbourhoods in Milan selling fresh food sourced from the wholesale market. They improve access to fresh food in areas where there are no other markets. However, they face challenges related to their use of public spaces, such as safety concerns, street circulation, and ensuring that the public space is clean after use.

Farmers' markets: Weekly markets where small producers and food crafters from areas near Milan sell their products directly to the public. These markets are always located in the same area, and their participants comply with a set of sustainable and social values for the production and distribution of their goods.

University canteens: They operate through a contracting process, where businesses compete in an open call, and the contract is awarded to the company that presents the most cost-effective proposal. Unfortunately, this approach has led to university food services that often overlook environmental and social considerations.

Table 1. The challenges and nodes.

Challenges	Wholesale market	Farmers' market	Food hubs	Indoor markets	Street markets	University canteens
1. Reducing food waste in all steps of the food chain, from producer to consumer (from: canteens, restaurants, and catering services; greengroceries, indoor and outdoor district markets; the wholesale market; home)	X	X	X	X	X	X
2. Reducing emission of CO2 in all steps of the food chain, from producer to consumer, and achieving net-zero carbon food systems.	X	X	X	X	X	X
3. Facilitating the local supply of local produce to restaurants and canteens.	X	X	X	X	X	X
4. Designing sustainable intra city transportation solutions for food recovery, distribution, and delivery for both B2C and BTB supply chains, considering light vehicles and means.	X	X	X	X	X	X
5. Improving traceability of local food supply chains, including food recovery and redistribution, for social purposes.	X	X	X	X	X	X
6. Defining strategies and solutions to develop agriculture and food production activities within the city (outdoor/indoor).	X	X	X	X	X	X
7. Facilitating the accessibility of final consumers to the wholesale market, to purchase surplus/end-of-life food in bulk.	X					
8. Integrating the kitchen of Milan Restoration (the main food catering for the school system and welfare services in Milano) to the wholesale market.	X		X			X
9. Facilitating the planning, running and management of a farmers' market for both organizers and participants.		X				
10. Facilitating customer access and loyalty to a farmers' market.		X				

11. Integrating food hubs into neighbourhoods and combine them with relevant and complementary services, such as welfare and social services, composting, education, food processing and transformation, etc.				X			
12. Integrating the food neighbourhood hubs with the wholesale market and with the food-hub there located				X			
13. Designing an innovative concept of indoor food market in an integration with the wider food system and the neighbourhood.					X		
14. Increasing and improving the collection and redistribution for charity and social purposes of the surplus/end-of-life food, from outdoor street markets and indoor markets.			X	X	X		
15. Integrating policies and services of healthy dietary guidelines with sustainability guidelines	X	X	X	X	X	X	X
16. Increasing the consumption of fresh food and plant-based foods, reducing animal proteins in the human diet.	X	X	X	X	X		X
17. Understanding and improving the condition of health and nutrition inequity, and access to urban fresh and healthy food, combating maldistribution of nutrition intake.	X	X	X	X	X		X
18. Providing fresh, nutritious, and quality food to vulnerable people (people in need, urban poor, working poor, etc.) while ensuring fair treatment of all actors.	X	X	X	X	X		X

3. From Research to Service Development: The ‘Urban Food Systems’ Studio Journey

The field of service design encompasses a wide range of applications. In this final synthesis studio (LSF), the approach to services was twofold. At the node level, the aim was to improve existing solutions or suggest new ones (Meroni & Sangiorgi, 2011), focusing on service-level aspects. At a more systemic and macro level, the goal shifted. Through co-design workshops that introduced these new service ideas as provocations to system actors (Meroni et al., 2018) and by examining and presenting these final services collectively, the aim as service designers was to act as a catalyst for broader transformations (Meroni & Sangiorgi, 2011).

The design studio was organised into 3 macro-phases: a research phase to investigate the food topic and context in Milan, a concept generation phase complemented with the opportunity to co-design new service ideas with the stakeholders of the Milanese food system, and a development and prototyping phase stage in which students, divided into ten groups, went in depth in elaborating ten related service solutions. The studio culminated in a public event, a sort of fair of sustainable ideas engaging all participants at its conclusion. In doing so, the student projects provided actual provocations around what is possible and desirable for the development of the nodes to those currently managing and shaping them.

3.1 Research

Two assignments make up this first phase to help students understand the context and generate an initial compass for envisioning possible project directions. After composing ten groups, students selected a design challenge that crossed with a node (table 1). Parting from the challenge, a desk and field research was performed to better understand the context and stakeholders (figure 1). The aim was to narrow their focus by redefining a more specific challenge that would later fuel the concept creation process.



Figure 1. Some of the results from desk and field research.

Next, students engaged in a blue-sky research exercise. By looking into different cultural inspirations like movies, talks, and exhibitions they gathered new ideas and perspectives about their chosen challenge that they later materialised on an object. The goal was to stimulate the students' creativity and provide a more innovative catalyst for concept creation (figure 2).

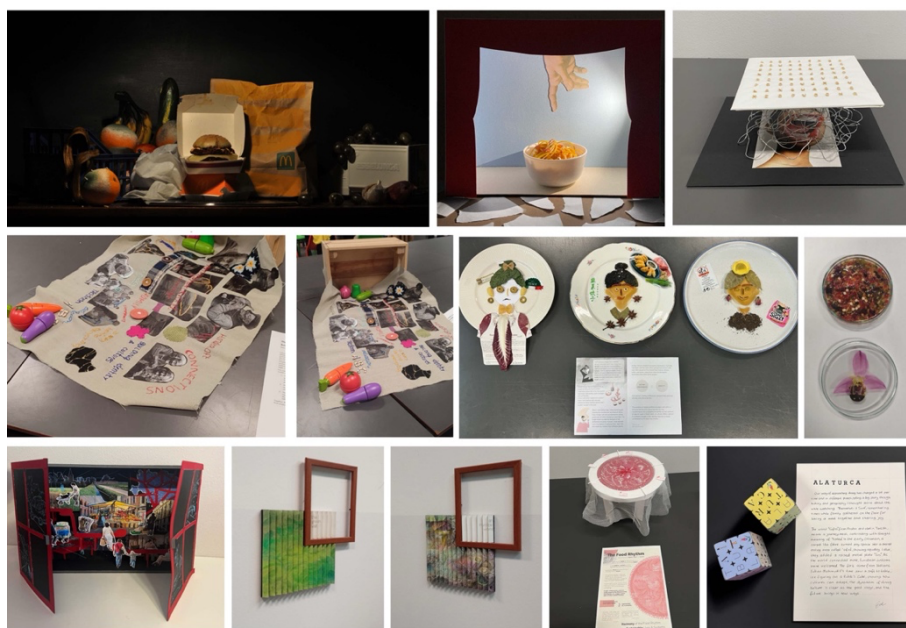


Figure 2. Some objects from Blue Sky research.

3.2 Concept Generation and Co-Design

Students then took their challenge redefinitions and insights from their blue-sky research and performed several brainstorming exercises, some powered by AI, to boost creativity. The result was three most-promising concepts for each group, which they then narrowed down to one.

To assess and enrich their concepts, students then conducted co-design workshops with node stakeholders, users, and experts. This co-design phase aimed to facilitate collaboration between students and various actors in the food system during the concept definition process. Here, the aim was to elaborate on the students' already existing ideas through a thought-provoking process for the actors engaged in the workshops (Meroni et al., 2018).

In advanced design phases, that seek to expand on and consolidate options, like this one, designers recur to specific types of 'prototypes.' These co-design tools (figure 3) are a sort of physical manifestation of the concepts the students see promise in developing (Sanders & Stappers, 2014) mixed with additional components that simulate interactions and behaviours (Meroni et al., 2018). Here, students used the co-design prototypes to explore their ideas with participants, starting a strategic conversation around them.

The co-design workshops served not only for the students to question and enrich their ideas but also as a first provocation for the actors involved in shaping and managing the nodes. The resulting insights altered the students' original service concepts, leading to a rethought concept for each student group.



Figure 3. Codesign tools and presentations.

3.3 PSS Design and Prototyping

In this last phase, students fully fleshed out the resulting concepts from many angles, mirroring the steps that real-world projects take to turn ideas into tangible innovations. They defined the product-service system offering, the user experience, the front and backstage, the touchpoints, and the spatial/urban requirements. They also focused on criteria to measure their idea's impact and how it engaged with different stakeholders, along with its business model and feasibility. (figure 4)



Figure 4. Closing event of the course at the NoLo Market.

The outputs of the 'Urban Food Systems' studio are ten service ideas aiming to make Milan's food system more equitable and sustainable. When we bring these ideas together, showing where they happen and what or who they need to function, we get a big picture of the actions, people, and infrastructure needed to activate node-related changes in the city.

Twine – Connecting indoor markets and the wholesale market

Twine is an online marketplace and distribution network that optimises urban B2B food logistics. With its collection/delivery model, Twine connects suppliers with distributors through a warehouse at the Wholesale market and distribution points in indoor markets.

By optimising intra-urban food logistics, this model presents an opportunity from both an ecological and commercial perspective. It shortens the chain not only geographically—reducing physical distance—but also relationally and informationally, directly connecting suppliers and customers and offering transparency on products and their impact. This solution could lead to improved relationships, a reduced carbon footprint, and an overall more sustainable city.

Al Mercà – Indoor markets

Al Mercà is a digital-enhanced shopping experience in Milan's indoor markets, offering recipe-based shopping lists, market navigation, and real-time product availability, saving time and reducing stress for shoppers.

By leveraging technology and appealing to younger generations, neighbourhood services could strengthen their position in the food distribution sector, offering a competitive alternative to supermarkets. This approach would also enable the expansion of home delivery services, providing an incentive to promote neighbourhood communities and relationships among vendors, encouraging personal promotion.

A un passo da te – Food hubs

A un passo da te is a Mini hub, operating at the neighbourhood scale and distributing food by bicycle, paired with a digital platform that matches beneficiaries with the nearest option for food pick-up and neighbourhood services, benefitting users but also non-profits in delivering their services.

The project aims at creating a network, an opportunity that various stakeholders consider necessary to better achieve common goals, and which is in line with the non-profits' mission to facilitate meaningful dialogue and cooperation.

Cozina – Food hubs

Cozina is a training service linked to the Food hub Gallaratese, providing unemployed youth with professional and life skills in the food sector, offering a pathway to employment and personal empowerment.

Acknowledging the shortcomings of current educational models, which often overlook the distinct needs of individuals and result in a lack of engagement and inclusion, particularly among the youth, this initiative seeks to fill a critical gap. Together with the need in Milan for qualified personnel in the food sector, there is an open opportunity to provide specialised training and employment in this area for individuals who are currently the most vulnerable and marginalised.

Cucinando – Food hubs

Cucinando is a catering training programme using surplus food to address unemployment and food waste, providing practical culinary skills and job market entry support to unemployed persons.

This initiative capitalises on the transformation of surplus food through culinary processes, aligning with the Food Hubs' objectives to maximise the utilization of surplus food, which often arrives in limited quantity and quality. At the same time, it is creating new paths to autonomy and professionalism for the hub's beneficiaries.

ResQ – Food hubs and supermarkets

ResQ is a service that, through a dedicated shelf and refrigerator supermarket section, streamlines the collection and distribution of surplus foods, offering them at advantageous prices for everyone while mitigating the differences between regular consumers and those in need.

Although supermarkets were not initially listed among the nodes presented to students, the project introduces a valuable collaboration between them and social actors. This would lead to the involvement of supermarkets in sustainable practices and to the creation of a network with different partners inside of the system.

ATMarket – Street markets and the wholesale market

ATMarket is a mobile market that travels via buses and trams delivering fresh, quality food to Milan's suburbs with a pricing strategy that makes healthy food more accessible to underserved communities.

The offer combines the already available options of food in the city center with the ones on the outskirts of the city, an opens an opportunity to use public transportation to reduce gaps in peripheral areas.

Co_MAP – Farmers' markets

Co_MAP is a service mapping farmers' markets in Milan and their associated farms to strengthen their connections and facilitate their expansion. The service allows producers, consumers, and the entities organising the markets to have clarity on agricultural production and to better manage market offerings.

Given that Milanese farmers' markets are managed by various entities under differing regulations, this presents a crucial need to enhance their temporal organisation and foster collaboration among organisers. This situation also creates an opportunity to publicise information about agricultural businesses and their

product sales, making it readily accessible and integrated into a digital space for shared knowledge, network growth, and, as a result, increased market participation.

Nostra – University Canteens

Nostra is a student-run canteen at the Bovisa Campus of the Politecnico di Milano offering plant-based meals, where students actively contribute to the food supply on campus, participating in both the management and preparation of meals.

This initiative acknowledges that while plant-based diets are increasingly common, maintaining them can be challenging due to evolving food trends and preferences. University students, however, represent a demographic likely to welcome this dietary approach, especially when combined with culinary education and integrated with management and organisational skills.

CareBites – Hospitals

A new care experience in hospitals starting from food, introducing hydroponic systems for fresh produce and creating an alternative environment for patient care that highlights the link between nutrition and healthcare.

The service would allow for shortening the supply chain, reducing transportation, and fostering a new food culture in a sensitive context where the food system remains "invisible", introducing an element of well-being in an environment characterized by waiting, vulnerability, and pain.

Each of these service ideas, ranging from logistics solutions to canteen services, tackles different aspects of our food system. Despite their diversity, they gain deeper meaning and impact when considered together. This 'vision of togetherness' leads to a Service Master Plan (Meroni & Selloni, 2022) for the Milanese Food System in 2030, showing how these new service ideas link to current nodes in the system, as illustrated in the following section.

4. Conclusions: Towards a Service Master Plan for the Food System of Milan

The main outcome of the studio is the integration of the resulting ten service solutions into a comprehensive document named Service Master Plan that describes how the city could transform and enrich itself over the next decade to increase the sustainability, accessibility, and quality of the food it produces, distributes, and consumes. The general notion of Service Master Plan was originally developed by Meroni and Selloni (2022) in their book 'Service Design for Urban Commons': it is described as a planning tool that results from understanding a place and designing services for it, going beyond the spatial planning logic while embedding a service logic (Vargo & Lausch, 2016). It has a high strategic value, as it provides multiple alternatives of what might happen in a specific context in terms of services to facilitate public administrations, stakeholders, civic organizations, and citizens in populating a place with activities consistent with a shared strategy.

The Service Master Plan can be considered as complementary to the traditional urban planning tools. According to Kelly (2010), it must include all the land area subject to the planning jurisdiction, all subject matter connected to the physical development of the community and all the physical elements of plans associated to economic developments. Another important feature that characterises a Service Master Plan is the time dimension: it is crucial to develop it considering a time horizon of about ten to twenty years, envisioning possible scenarios for the future. Here is why, Selloni and Meroni (2022) suggest that the Service Master Plan is above all a 'scenario driven' tool that must comprise more than one single option: the underlying reasons for comprising multiple possibilities rather than one can be found in the very nature

of the scenario building theory (Ogilvy, 2002) that assumes that the future is not predictable and the best way to align the interests of diverse stakeholders is to consider a variety of different narratives, providing a range of possible options, even if guided by a common vision and values.

This was precisely what happened in the LSF ‘Urban Food Systems’: various alternative solutions populate the ideal Service Master Plan for the food system of Milan in 2030, shaping a city distinguished by an increasingly pronounced commitment to sustainability. More specifically, the services are linked and integrated to the 3network of the previously described food nodes (figure 5) and have strategic connections with the stakeholders of both conventional and alternative urban supply chains. This food-related Service Master Plan presents a desirable future scenario for the Milanese food system, emphasising on one side some existing options, but also showing some counter-narratives to the current system. The work of the students was particularly useful to unveil unprecedented possibilities: the educational aim of the studio was to develop their specific ability to propose counter-narratives related to new and more sustainable ways of living, to exercise an activity of envisioning and thinking out-of-the-box that is indeed the very nature of the design job. As Margolin (2012) states, design is essentially a propositional activity and in this specific case the studio ‘Urban Food Systems’ brought the contribution of proposing new contents: this was valuable to ignite a strategic conversation among the different stakeholders, allowing differentiation in views but also bringing people together toward a shared understanding and envisioning of the Milanese food system (Nardone & Salvini, 2004; Meroni, 2008).

The contribution of the LSF studio was not only to propose contents but also to integrate them in a common Service Master Plan and to add stimuli that raised the conversation within the OnFoods programme to a more ‘expert’ level (Manzini, 2015). This was fundamental to provide the basis for next steps of the programme and to shape strategies of adaptation and mitigation across various scales and systems, to better identify those modifications made urgent by climate change and social inequalities. In another words, the Service Master Plan was useful to raise crucial (and sometimes neglected) issues and, above all, to propose them in a way that shows their interconnection and interdependence, as this is the very nature of a shared strategic document as the master plan is.

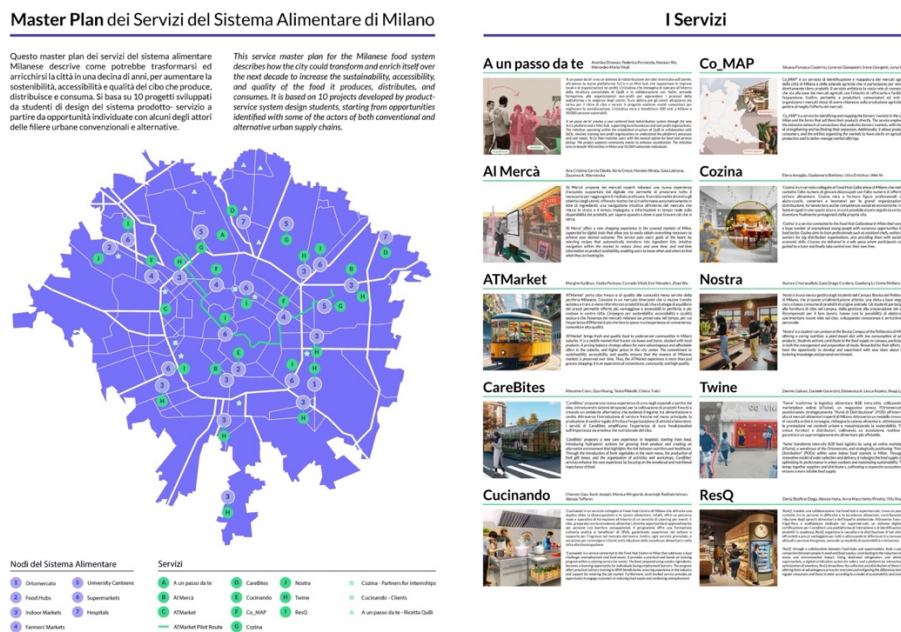


Figure 5. The Milan Food System Service Master Plan for 2030.

Hopefully, the Service Master Plan may well integrate the Milano Food Policy, the strategic plan of the Municipality that, since 2015, governs the urban food system with the aim of making it more sustainable from all perspectives and it may contribute to the evolution of the OnFoods programme that is currently undergoing and aims at developing a new sustainable food model from production to distribution and

consumption. Here there is room for further research, in which the design contribution can span from ideating product, packaging, and communication, to conceiving services, systems and strategies and as stated, to providing scenario-building activities that can generate counter-narratives and ideas out-of-the-box challenging the current situation and envisioning alternative futures.

References

- Aucoin, M., & Fry, M. (2015). *Growing Local Food Movements: Farmers' Markets as Nodes for Products and Community*. 56(2), 61. <https://www.questia.com/library/journal/1P3-3863424511/growing-local-food-movements-farmers-markets-as>
- Comune di Milano. (2024). Food policy. Comune di Milano. Retrieved September 4, 2024, from https://www.comune.milano.it/aree-tematiche/food_policy
- European Environment Agency. (2023). What is the difference between adaptation and mitigation? Retrieved August 2, 2024, from <https://www.eea.europa.eu/en/about/contact-us/faqs/what-is-the-difference-between-adaptation-and-mitigation>
- FAO, IFAD, UNICEF, WFP, & WHO. (2023). *The state of food security and nutrition in the world 2023: Urbanization, agrifood systems transformation and healthy diets across the rural-urban continuum*. FAO. <https://doi.org/10.4060/cc3017en>
- Intergovernmental Panel on Climate Change. (2023). *Climate change 2023: Synthesis report. Contribution of Working Groups I, II, and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H. Lee & J. Romero (Eds.)]. IPCC. <https://doi.org/10.59327/IPCC/AR6-9789291691647>
- Kelly, E. D. (2010). *Planning: An introduction to the comprehensive plan* (2nd ed.). Island Press.
- Knorr, D., Khoo, C. S. H., & Augustin, M. A. (2018). Food for an urban planet: Challenges and research opportunities. *Frontiers in Nutrition*, 4. Frontiers Media S.A. <https://doi.org/10.3389/fnut.2017.00073>
- Nardone, G., & Salvini, A. (2004). *Il dialogo strategico*. Ponte alle Grazie.
- Manzini, E. (2015). *Design, when everybody designs*. MIT Press. <https://doi.org/10.7551/mitpress/9873.001.0001>
- Margolin, V. (2012). Design and democracy in a troubled world. Lecture at the School of Design, Carnegie Mellon University, 11 April 2012.
- Meroni, A. (2008). Strategic design: Where are we now? Reflection around the foundations of a recent discipline. *Strategic Design Research Journal*, 1(1), 31–38. <https://doi.org/10.4013/sdrj.20081.05>
- Meroni, A., & Sangiorgi, D. (2011). *Design for services*. Gower Publishing.
- Meroni, A., Selloni, D., & Rossi, M. (2018). *Massive codesign* (Design International series). FrancoAngeli. Retrieved August 2, 2024, from http://ojs.francoangeli.it/_omp/index.php/oa/catalog/book/303
- Meroni, A., & Selloni, D. (2022). *Service design for urban commons*. SpringerBriefs. <https://doi.org/10.1007/978-3-031-06035-9>
- Michel-Villarreal, R., Hingley, M., & Bregoli, I. (2018). Defining alternative food networks: A systematic literature review. *International Food Marketing Research Symposium 2018*, Bournemouth University. <https://doi.org/10.20944/preprints201901.0011.v2>

Ogilvy, J. (2002). *Creating better futures: Scenario planning as a tool for a better tomorrow*. Oxford University Press. <https://doi.org/10.1093/oso/9780195146110.001.0001>

Sanders, E. B. N., & Stappers, P. J. (2014). Probes, toolkits and prototypes: Three approaches to making in codesigning. *CoDesign*, 10(1), 5–14. <https://doi.org/10.1080/15710882.2014.888183>

Vargo, S. L., & Lusch, R. F. (2016). Institutions and axioms: An extension and update of service-dominant logic. *Journal of the Academy of Marketing Science*, 44(1), 5–23. <https://doi.org/10.1007/s11747-015-0456-3>

Wang, F., Harindintwali, J. D., Wei, K., Shan, Y., Mi, Z., Costello, M. J., Grunwald, S., Feng, Z., Wang, F., Guo, Y., Wu, X., Kumar, P., Kästner, M., Feng, X., Kang, S., Liu, Z., Fu, Y., Zhao, W., Ouyang, C., ... Tiedje, J. M. (2023). Climate change: Strategies for mitigation and adaptation. *The Innovation Geoscience*, 1(1). <https://doi.org/10.59717/j.xinn-geo.2023.100015>

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