

# 2019

## WP 3\_Report - UFIL Milano Ristorazione



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## 1. Executive Summary

Within a dynamically changing regulatory environment and along with continuous developments in technologies and urban infrastructure systems, sustainable mobility and green logistics have become priorities in cities' development strategies all around the world. Over the last years, Milan Municipality has significantly invested in this direction, adopting a sustainable urban mobility plan and undertaking several measures to reduce CO<sub>2</sub> emissions and traffic congestion in the city. Moreover, since 2014 Milan has developed a comprehensive strategy on food for the city of Milan called Milan Food Policy and promoted the adoption of an international pact on urban food policies signed by 200 cities around the world, called Milan Urban Food Policy Pact (MUFPP). Within this context, Milano Ristorazione (MiRi) operates as a large public company that manages catering for a wide network of public schools and prepares meals for elderly nursing homes, elderly at home, disability centers, immigration centers and affiliated private schools in Milan. MiRi provides on average 85.000 meals per day, prepared in 26 kitchen centers and distributed to a network of 437 school canteens.

Over the last years, MiRi has promoted several sustainability initiatives oriented to a more sustainable urban food system, related to, among all, sustainable food procurement, food waste reduction, removal of single use plastic products, children education on healthy nutrition and responsible consumption. In line with its strong commitment towards sustainability, MiRi is now focusing on improving its logistic service and network, making it more resilient to urban shocks and stresses and reducing the environmental impact generated by the fleet of vehicles used for meal delivery from its kitchen centers to school canteens in Milan.

Indeed, the innovation under study deals with reviewing the current public logistic tender for assigning the meal delivery service, by changing existing requirements and introducing new sustainability criteria for selecting logistic providers.

The innovation process involves different stakeholders, who can provide relevant information and insights on the innovation context and/or enable the innovation through policy, programs and tools. They differ for the level of interest in the innovation and the capability to influence the innovation process. The network of stakeholders includes MiRi own staff, children in schools and the parents' delegates (so called "Commissari Mensa") acting as consumers' representatives, teachers and the kitchen staff in schools, Milan Municipality Administration, logistics service providers and experts, technology providers (of vehicles and measurement/monitoring tools applied to the vehicles).

In this innovation process the School of Management of Politecnico di Milano acts as facilitator, supporting MiRi' staff in analysing the problem, understanding the innovation context, identifying

and involving key stakeholders and setting the theoretic framework for the new tender.

In order to identify the key sustainability dimensions of the tender to focus on, intense consultations and analysis of constraints were conducted with MiRi staff. In line with URBAL Methodology, interviews with key stakeholders were performed along with a preliminary analysis of best practices and technological innovations in the field of sustainable logistics and the integration of sustainability-oriented criteria in public tenders. This analysis allowed to develop the conceptual basis for selecting the key dimensions of the tender to focus on and developing the criteria to include in the new tender, which refers to environment, food security, governance, economic and social-cultural sustainability. Based on the key learnings from the interviews, a preliminary impact pathway map was developed, identifying the linkages between the activities and the relative changes introduced by the new logistic tender and the sustainability impacts which could be generated for the benefit of primary users (first of all children in schools) and the overall Milan food system.

Finally, this innovation case study provides useful insights for policy makers to develop a participative model for building tenders with focus on food system sustainability and sustainable logistics. It might influence the debate on the sustainability of the school canteens providing knowledge to public authorities on public contracts with the aim of improving the legislation and ensuring the sustainability of the Milan urban food system.

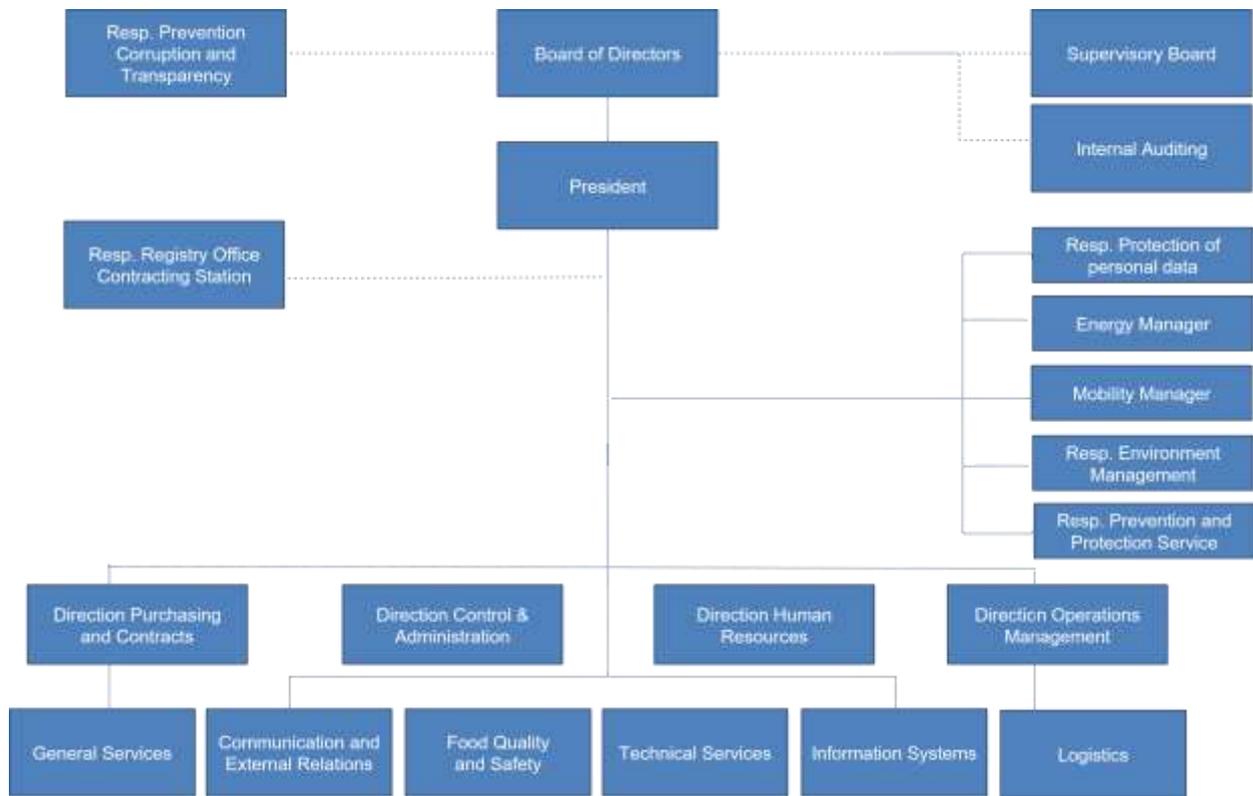
## **2. The Innovation Context**

Founded in July 2000, Milano Ristorazione (MiRi) is a large public company that distributes meals to nursery schools, preschools, primary and secondary public schools as well as elderly nursing homes, elderly at home, disability centers, immigration centers and affiliated private schools in Milan. Its priority mission is to offer children in school safe, healthy, good and nutritious food, along with educational activities on proper nutrition and sustainable consumption.

MiRi provides on average 85.000 meals per day, prepared in 26 kitchen centers and distributed to a network of 437 school canteens. The company employs 837 employees in the kitchen centers and 1.469 employees in the distribution of meals. It offers a variety of more than 9.200 different food menu and 2.300 diets to take care of the multiple religious and cultural diversities and specific nutritional diets of consumers (for example for diabetes, celiac, particular allergies).

MiRi is almost entirely owned by Milan Municipality (99%) and detains the remaining 1% of owned capital shares. Figure 1 illustrates the company's organizational structure and allocation of responsibilities.

*Figure 1: MiRi Organizational Chart*



*Source: own elaboration from MiRi internal documentation*

In order to proactively and timely respond to children’s needs, MiRi has developed an innovative governance model, involving in the decision making process parents’ delegates, so called “Commissari Mensa”, who represent the families of the children attending the schools of the network. The company organizes regular meetings with them throughout the year to share relevant information and collect feedbacks in order to adapt and continuously improve the service and the food menu.

MiRi is actively promoting several activities and innovative projects to improve the sustainability of the whole food chain of the school canteens, regarding the type of food, the procurement process, logistics, processing, transparency policy, waste management, food education for children and parents, training, governance, food safety and food security policy. This commitment towards sustainability is driven by a strong social responsibility of the top management as well as the need to respond to current legislations regulating public administration, both at local, national and European level, which set strict mandatory requirements in terms of food safety, green procurement and CO<sub>2</sub> emission reduction.

In particular, regarding the normative landscape, according to the new procurement code (D. LGS 50/2016), *Green Public Procurement* has become mandatory, implying that public administrations must “integrate environmental criteria at all stages of the purchasing process, encouraging the dissemination of environmental technologies and the development of environmental-relevant products, through research and the choice of results and solutions that have the least possible impact on the environment throughout the entire life cycle”. There are minimum environmental requirements, so called “CAM” (Criteri Ambientali Minimi), defined for the various phases of the purchasing process, aimed at identifying the design solution, the product or the best environmental service along the life cycle, taking into account the market availability. Those requirements are defined within the framework of the Environmental Sustainability Plan, “Piano della sostenibilità ambientale”<sup>1</sup>, regulating the consumptions of the sector of the public administration and are adopted by decree of the Minister of the Environment, of the protection of the Territory and the sea. Their application is mandatory by all contracting stations.

This obligation ensures that national green public procurement policy is incisive not only for reducing environmental impacts, but also for promoting more sustainable, “circular” production and consumption models and for spreading the "green" occupation.

Focusing on the local urban context, since 2014 the Milan Municipality has developed a comprehensive strategy on the urban food system, called Milan Food Policy, based on a Memorandum of Understanding signed with Fondazione Cariplo<sup>2</sup>. The Milan Food Policy is focused on five priorities:

1. to ensure healthy food and sufficient drinking water as primary nourishment for everybody;
2. to promote the sustainability of the food system, by enabling the conditions necessary for managing a sustainable food system and promoting local production and consumption of fresh and seasonal quality food;
3. to understand food, by increasing consumer awareness on healthy, safe, culturally appropriate and sustainable food;
4. to fight against waste;
5. to support and promote scientific agri-food research.

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<sup>1</sup> <https://www.minambiente.it/pagina/piano-dazione-nazionale-sul-gpp>

<sup>2</sup> <http://www.foodpolicymilano.org/>

Meanwhile the Milan Municipality has promoted the development of an international pact on Urban Food Policies called Milan Urban Food Policy Pact (MUFPP)<sup>3</sup>, which was signed by 200 cities all around the world with the aim of activating joint actions towards more sustainable food systems.

Furthermore, in 2017 Milan Municipality has adopted a new urban plan for sustainable mobility, called “Piano Urbano della Mobilità Sostenibile” (PUMS), which contains the strategic guidelines to promote a sustainable, safe and efficient mobility in the city.

In particular, the PUMS sets 4 general objectives<sup>4</sup>:

1. *Sustainable mobility*: satisfy the mobility needs of residents, companies and other actors, ensuring a sustainable viability and governance of public spaces;
2. *Equity, safety and social inclusiveness*: guarantee proper conditions of safety, security, access and information for all;
3. *Environmental quality*: promote and improve the environmental sustainability of the mobility system;
4. *Innovation and economic efficiency*: valorize the opportunity of innovation and pursue sustainability and efficiency compatibly with the available resources.

The tool of PUMS has been introduced by the national Law number 340 in 2000, which states that its adoption by local Municipal administrations is non mandatory but is an essential requirement to get access to specific national and European funding.

Since the adoption of the PUMS, several measures have been introduced and/or reinforced by Milan Municipality to move towards a more sustainable urban mobility.

In particular, it is important to mention the introduction of “Area C” in 2012, which substituted the previous pollution charge “Ecopass”, and more recently in 2019 “Area B” to restrict the access to certain vehicles in specific areas of Milan with the aim of reducing traffic congestion and air pollution, promoting public transport and the conversion to hybrid and electric vehicles.

Those measures set access restrictions for different types of vehicles in the historical center of Milan (Area C) and for the most polluting vehicles in a broader area of the city (Area B), while giving free access to cycles, electric vehicles, mopeds and motor vehicles (motorcycles, motor tricycles and quadricycles), for vehicles transporting disabled or people in need to get to the hospital for emergency.

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<sup>3</sup> <http://www.milanurbanfoodpolicypact.org/>

<sup>4</sup> Piano Urbano Mobilità Sostenibile, 2015:  
[http://download.comune.milano.it/24\\_03\\_2015/Documento%20di%20Piano%20febbraio%202015%20\(1427206289866\).pdf](http://download.comune.milano.it/24_03_2015/Documento%20di%20Piano%20febbraio%202015%20(1427206289866).pdf)

Moreover, in 2018 Milan Municipality joined the “100 Resilient Cities” Program, pioneered by The Rockefeller Foundation, aimed at supporting cities around the world to integrate resilient measures in their urban development strategies to be able to prevent and face existing and emerging environmental, social and economic urban shocks and stresses (for instance related to poverty, unequal access to public services, flooding, air pollution and climate change). Indeed, as the other cities involved in the program, in 2017 Milan appointed a *Chief Resilience Officer*, Dr. Piero Pellizzaro, who is in charge of leading the city’s resilience efforts, coordinating actions with the other Milan Municipality Directions<sup>5</sup>.

Within this normative context and along with the evolution of the market, MiRi has been rethinking its logistics system in order to make it more sustainable, safe and efficient, in line with the strategic directions of the urban mobility plan adopted by the Milan Municipality.

In particular, the innovation under study is the development of an innovative public tender for the logistic service of meal distribution from MiRi’s kitchen centers to its wide network of school canteens around the city of Milan, which integrates sustainability parameters as selection criteria of the logistic service providers. Therefore, the tender aims at promoting a more sustainable logistic system, which takes into account Milan Municipality’s new traffic regulations and, more generally, its urban mobility, environmental and resilience policies as well as MiRi’s constraints in order to safely, timely and consistently supply its kitchens and deliver the meals from these kitchens to its network of almost 440 decentralized canteens.

### **3. The Methodology**

In line with URBAL Methodology, multiple research methods have been applied along the innovation process, following a step-by-step approach:

- 1- Review of scientific and sectoral literature related to innovative trends in the logistics market as well as MiRi internal and public tender documentation. In particular, we analysed existing and emerging technological and “green” solutions adopted in logistics and applied to the urban context. For the internal analysis we analysed the documentation describing MiRi’ school canteen network and logistic system and the details and mechanisms of the previous public tender.

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<sup>5</sup> <https://100resilientcities.org/building-resilience-milans-2030-city-plan/>

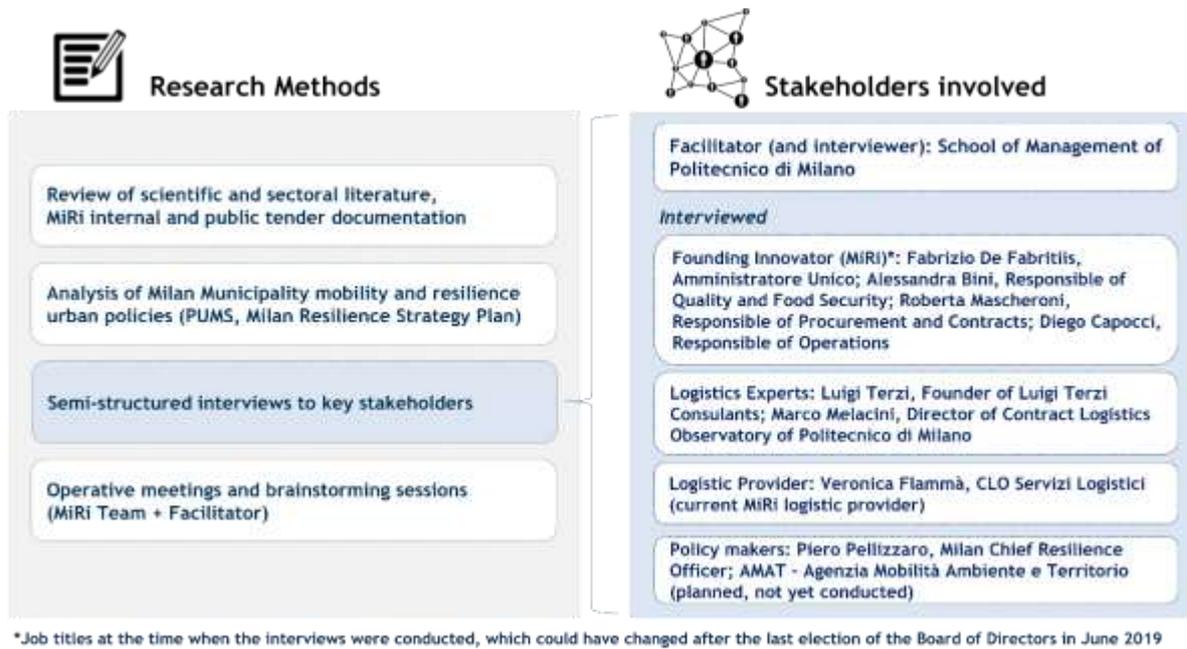
- 2- Analysis of the local regulation system related to Milan urban mobility system (PUMS) and resilience policies.
- 3- Semi-structured interviews with founding innovator (MiRi own staff) and other stakeholders to collect information relevant to the innovation process. In order to gather a complete understanding of the current logistic and procurement strategy of MiRi and the public tender process and mechanisms, several Directors were interviewed and involved in operative meetings. Moreover, two experts in logistics were interviewed to get insights on current available technological solutions and urban infrastructure system as well as understand emerging trends towards sustainable logistics and principal drivers and barriers in this direction.

Furthermore, in order to deeply understand the needs and expectations of the logistic provider (to whom the public tender is addressed), we interviewed CLO Logistics, current logistic provider of MiRi. Finally, we investigated the perspective of the policy maker to understand the regulatory context and the future strategic directions regarding urban mobility and resilience policy.

- 4- Operative meetings and brainstorming sessions with MiRi's Directors were conducted to understand challenges and areas of improvement in the current logistic system, identify the key dimensions of the tender to focus on and the criteria to be included in the new tender.

Throughout the innovation process, the School of Management of Politecnico di Milano has been participating as a facilitator, providing knowledge on sustainability issues and scientific analysis with a multidisciplinary approach.

Figure 2: Methodology



#### 4. Description of the Innovation

Given the regulatory context and the recent changes in the Milan landscape, Milano Ristorazione is now focusing on promoting sustainable logistics as part of its commitment and overall strategy towards more sustainable urban food systems.

Indeed, MiRi's public procurement policy and meal distribution system for school canteens can strongly improve the sustainability of the urban food system mainly for the following reasons: a limited number of actors manages large amounts of food that are produced in advance, regulating procurement and logistics processes with long-term contracts and throughout tenders.

Over the last years, MiRi replaced plastic tableware with a biodegradable and compostable alternative, facilitated the procurement of local and organic products in its public tenders and introduced Fair Trade products. Its work focuses mainly on children who receive a healthy, good and nutritious meal along with educational activities regarding sustainability, waste prevention and socio-cultural integration. Now, as part of its sustainability strategy, MiRi is willing to innovate the requirements included in the public logistic tender for the service of meal distribution from its kitchen centers to the network of school canteens in Milan, by introducing sustainability criteria.

According to URBAL Methodology, in the following paragraphs the innovation is described considering the stakeholders involved in the process, the timeline of the innovation, the key

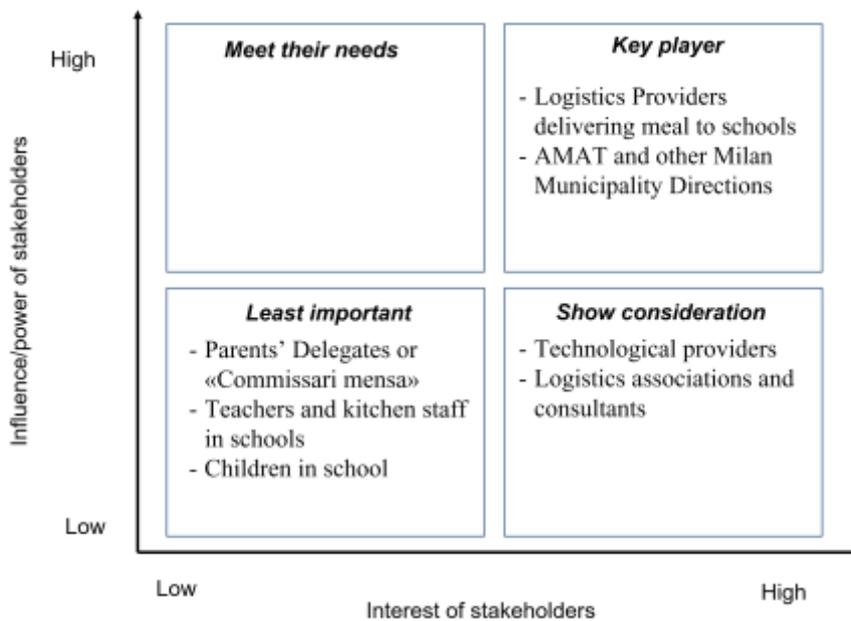
sustainability dimensions the innovation focuses on and the impact pathway, which builds linkages between innovation’ activities, relative changes and the sustainability impacts generated.

### 4.1 The Network Map

The innovation process involves different stakeholders, who can provide relevant information and insights on the innovation context and/or enable the innovation through policy, programs and tools. The network of stakeholders includes MiRi own staff, children in schools and the parents’ delegates (“Commissari Mensa”) acting as consumers’ representatives, teachers and the kitchen staff in schools, Milan Municipality Administration, logistics service providers and experts, technology providers (of vehicles and measurement/monitoring tools).

Applying the stakeholder analysis framework by Reed et al. (2009), it is possible to classify stakeholders according to their interest in the innovation (high/low) and power/influence in the innovation process (high/low). In particular, the “key players” are those who have both a high interest and strong influence in the innovation, therefore should be managed closely, engaged and consulted regularly and eventually involved in the decision making process.

Figure 3: Network Map



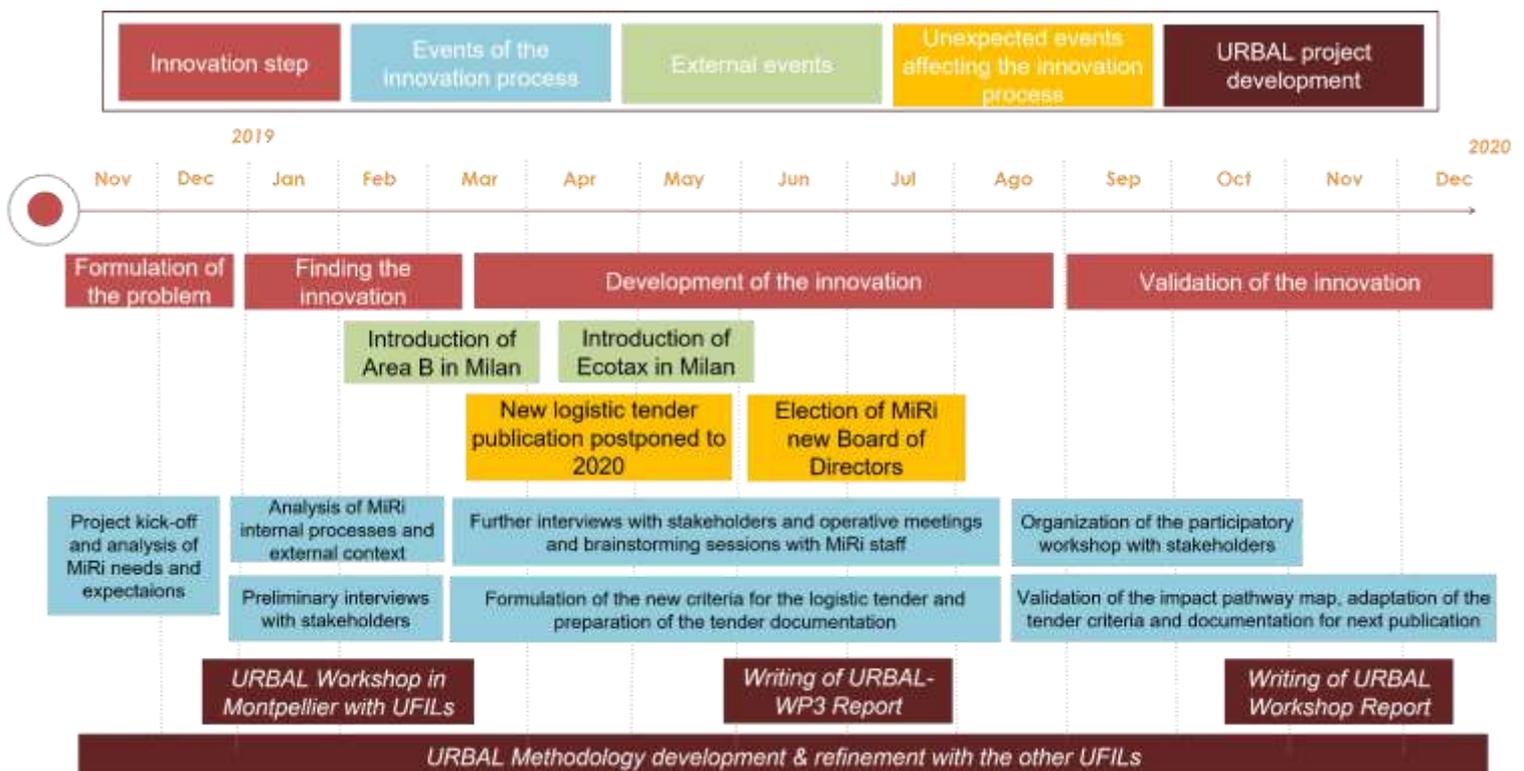
## 4.2 The Innovation Roadmap

In the original work plan, the public tender was expected to be ready in March 2019 in order for logistic service providers to respond to the call by June 2019. However, due to the recent elections of the new board of directors in June 2019, the publication of the new tender has been postponed to 2020, thus affecting the ongoing innovation process.

In order to prepare the public tender, consultations and analysis of constraints were conducted. In line with the URBAL Methodology, interviews with key stakeholders were performed over the last months along with a preliminary analysis of best practices and technological innovations in the field of sustainable logistics and the integration of sustainability-oriented criteria in public tenders. This analysis allowed to developed the conceptual basis for identifying the key dimensions of the tender to focus on and developing the criteria to include in the new tender. The next step in the innovation process will be the organization of the participatory workshop with key stakeholders to validate the innovation pathway and the tender’s criteria, expected to occur in the upcoming autumn 2019.

The chronogram helps visualize the roadmap of the innovation, identifying and understanding the interconnections between the overall *innovation steps*, the *events during the innovation process*, *unexpected events* occurred affecting the process, relevant *external events* affecting the context of the innovation and *URBAL project development*.

Figure 4: The Chronogram



### 4.3 Sustainability Dimensions

Currently, the logistics service is managed by four providers serving four different areas of Milan, employing 120 small trucks (30 km daily on average). The decision to allocate the service to different providers was made to efficiently cover the wide network of school canteens around the city, reduce the risk of low quality service due to bad performance of the logistic providers and guarantee its continuity. The previous tender set certain requirements for the vehicles, including: useful capacity not less than 1000 KG, diesel as power supply, minimum category Euro 4.

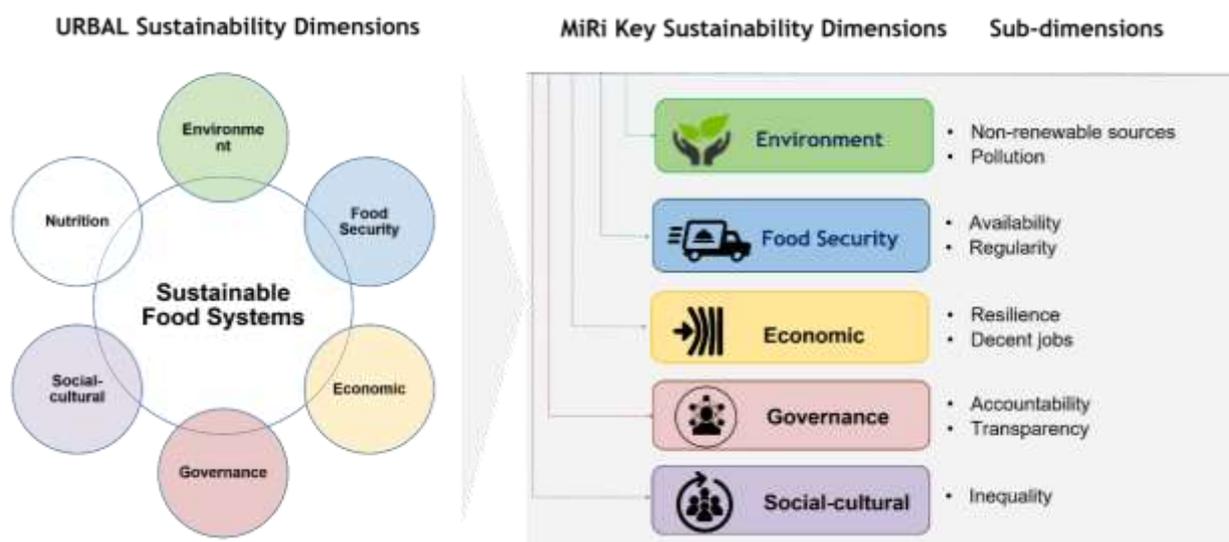
There are a few rewarding criteria included in the previous tender, some of which in the direction of sustainability:

- availability of the greatest number of vehicles;
- guarantee the use of Euro 5 class vehicles;
- guarantee the use of vehicles powered by Methane;
- guarantee the exclusive use of the vehicles in favor of Milano Ristorazione.

For the next public tender, MiRi is willing to review those criteria in compliance with the most recent changes in the regulatory environment related to Milan mobility and environmental policy, integrating additional sustainability parameters.

According to URBAL Sustainability framework, specific sustainability sub-dimensions were identified as most relevant for the innovation under study, related to the macro-dimensions of *Environment, Food Security, Economic, Governance, Social-Cultural*.

Figure 5: MiRi’s relevant Sustainability Dimensions



In particular, those sustainability sub-dimensions were identified as connected and potentially impacted by the parameters of the new logistics tender, as illustrated below:

- *Environment: non-renewable sources and pollution*

The logistic tender might integrate CO<sub>2</sub> emission reduction criteria and reconsider means of transport in favor of more sustainable solutions, along with the review of MiRi transportation plan;

- *Food Security: availability and regularity*

The logistic tender must integrate requirements to ensure a continuous and regular meal distribution service to all school canteens of the network on a daily basis;

- *Economic: resilience and decent jobs*

In this case, resilience is considered as the capability of logistic providers to promptly respond to unexpected events, such as road congestion due to a car accident or difficult mobility as a consequence of deluge or snowfall, in order to guarantee the regular meal delivery service to schools.

From an economic perspective, for the logistic tender MiRi must consider the trade-off between the willingness to invest in more environmentally sustainable logistics service and infrastructure and the need for an economically efficient logistic system with rigid budget constraints.

Moreover, decent work conditions for truck drivers must be ensured and could be improved in the logistic provider contracts, considering different social sustainability aspects (such as appropriate remuneration, adequate training, etc.).

- *Governance: transparency and accountability*

The logistic tender could introduce measurement and monitoring systems to ensure the transparency and the traceability of the logistic service and keep track of energy consumption and CO<sub>2</sub> emission generation.

- *Social-cultural: inequality*

The logistic tender can include measures to promote diversity and reduce inequality in the work environment.

#### **4.4 The Impact Pathway**

Based on the preliminary literature analysis and the key learnings from the interviews with the various stakeholders, we identified the key dimensions to focus on and for each dimension one or more

criteria to be included in the new logistic tender. The criteria can be either mandatory requirements or rewarding criteria for the logistic provider participating to the tender.

*Table 1: The new logistic tender's dimensions and criteria*

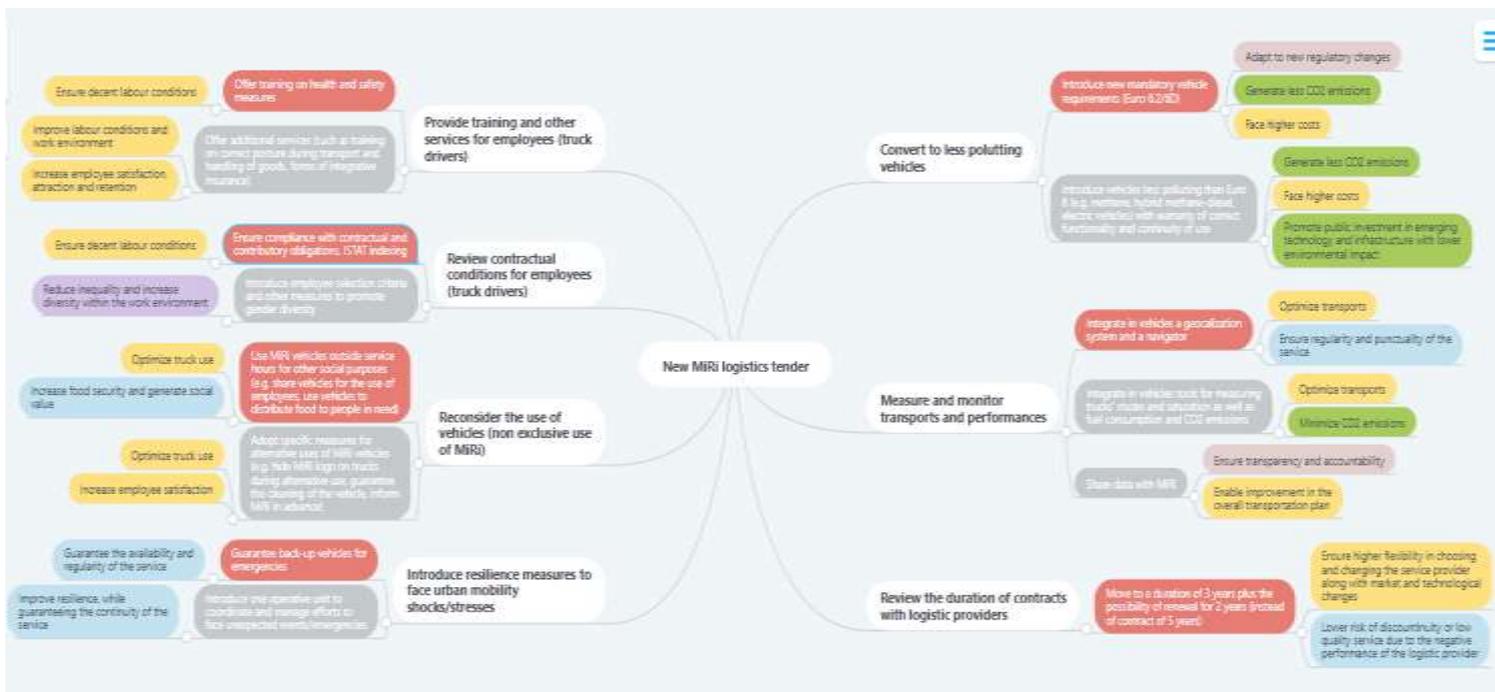
<b>Dimensions</b>	<b>Mandatory requirements</b>	<b>Rewarding criteria</b>
Features of the fleet of vehicles	Vehicles Euro 6.2/6D diesel (minimum threshold)	Vehicles less polluting than Euro 6 (e.g. methane, hybrid methane-diesel, electric vehicles) with warranty of correct functionality and continuity of use
Measurement and monitoring of transports and impacts	Vehicles with geolocation system (GPS) to optimize routes and track&tracing	Vehicles with tools for measuring trucks' routes and saturation as well as fuel consumption and CO2 emissions. Sharing data with MiRi.
Training and other services for employees	Training programs for employees (truck drivers) about health and safety	Additional services for employees (e.g. training programs on correct posture during transport and handling of goods, forms of integrative insurance)
Labor contracts	Compliance with contractual and contributory obligations, ISTAT indexing	Gender diversity
Non exclusive use of vehicles	Coverage of MiRi logo during alternative uses, guarantee of vehicle cleaning, information sharing with MiRi	Use of vehicles in the hours not used for the meal delivery service to the schools of the MiRi network for other purposes useful to the community (e.g. sharing of vehicles for the use of logistic cooperatives' members; recovery and redistribution of products and meals in excess to the Onlus of the territory)
Duration of contract with logistic providers	Contract of 3 years plus possible renewal for 2 years	
Resilience measures	Availability of back-up vehicles in the fleet for emergencies	Operative unit to coordinate and manage unexpected events/emergencies

Having defined the key dimensions and criteria for the new logistic tender, we built an *impact pathway map*, which visualizes the *activities* related to the new logistic tender (first level), the *changes* from these activities (second level) and the relative *impacts* on sustainability.

In particular, the identified changes refer to the new criteria included in the logistic tender, which can be *mandatory* (red color) or *rewarding* (grey color). Each criterion can have a potential impact on the different sustainability dimensions identified as relevant for the logistic tender, codified in the map by using different colors (Environment: green; Economic: yellow; Food Security: light blue; Governance: pink; Social-cultural: violet).

The map is accessible at the following link: <https://mm.tt/1304833607?t=NgMVaQLIBE>

Figure 6: Impact Pathway Map



## 5. Conclusions

The innovation described is a paradigmatic example of an innovative project promoted by a public entity, which involves various public and private stakeholders and along its path faces multiple challenges linked to the external changing environment and internal administration processes. Thus, as underlined by the preliminary impact pathway map, this innovation does have the potential to generate powerful sustainable impacts for the benefit of children in schools (the main target) and the whole urban system, providing useful insights for the policy maker.

Indeed, overall the expected impacts of the innovation are:

- *Local (Milan):* move to a more sustainable logistic system and contribute to the overall improvement of Milan sustainable food system; provide scientific data and relevant information to support the debate toward sustainability among the different stakeholders that are part of the school canteens systems (MiRi, Milan Municipality, food producers and processors, traders, families, logistics service and technology providers). Develop a participative model for building tenders with focus on food system sustainability and sustainable logistics;
- *General:* building a relation among MiRi and other managing authorities of school canteens, influencing the debate on the sustainability of the school canteens and providing knowledge to public authorities on public contracts with the aim of improving the legislation.