



**H2020-MSCA-RISE-2016**

## **ProSFeT Project**

**Promoting Sustainable Freight Transport in Urban  
Contexts: Policy and Decision-Making Approaches**

**D5.1**

**Follow-up Plan**



## Project Information

Acronym: ProSFeT Project

Title: Promoting Sustainable Freight Transport in Urban Contexts: Policy and Decision-Making Approaches

Coordinator: The University of Sheffield

Reference: 734909

Program: H2020-MSCA-RISE-2016

Start: 1<sup>st</sup> January 2017

Duration: 36 months

Website: <http://prosfet.eu/PROSFET/>

Consortium:

The University of Sheffield (USFD)

Consiglio Nazionale delle Ricerche (CNR)

Universidad de Extremadura (UNEX)

South East European Research Centre (SEERC)

Sheffield City Council (SCC)

City of Bradford Metropolitan District Council (CBMDC)

Stockholms Stad (SS)

Softeco (SOFTECO)

Shaping Cloud (SC)



## **Deliverable**

Number: **D5.1**

Title: Follow-up Plan

Lead beneficiary: USFD

Work package: WP5

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Due date: 31.12.2019

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Authors: Project Coordinator

Contributors: Beneficiaries



During the lifetime of the ProSFeT project, the project Coordinator, along with a member of the consortium, has also successfully applied to two programmes offered by the European Commissions.

Led by Prof. Andrea Genovese, at the University of Sheffield, the [ReTraCE Project](#) has received funding from the European Union's Horizon 2020 Research and Innovation Programme under the Marie Skłodowska-Curie Innovative Training Networks (H2020-MSCA-ITN-2018) scheme (grant agreement number 814247 - ReTraCE), it will support the implementation of the European Commission's Circular Economy strategy, and, within Work Packages 1 and 2, work towards the definition of decision support tools for identifying CE opportunities within supply chains and logistical systems, and for measuring their performances according to environmental, social and economic perspectives. Also, within this WP, risk and barriers (mainly at a micro level) for the implementation of circular supply chains will be discussed, also investigating the potential for mitigation measures and interventions at both technological and planning levels. Apart from USFD, some of the ProSFeT project beneficiaries are also involved in ReTraCE (such as SEERC, which is involved as a beneficiary; Prof. Sergio Rubio, from UNEX, involved as a member of the advisory board; SCC involved as a partner).

As such, some of the themes covered within the ProSFeT project will be continued to be investigated within this new MSCA action.

The [ProCEedS Project](#), also led by Andrea Genovese, at the University of Sheffield, has received funding from the European Union's Horizon 2020 Marie Skłodowska-Curie European Research and Innovation Staff Exchange (H2020-MSCA-RISE-2018) scheme (grant agreement number No 823967 - ProCEedS). This project aims at identifying and evaluating the Circular Economy practices implemented in each stage of agri-food supply chain from primary production to consumption and, within Work Packages 1 and 2, it works towards the definition of decision support tools for identifying CE opportunities within food supply chains and logistical systems and for measuring their performances according to environmental, social and economic perspectives. Apart from USFD, some of the ProSFeT project beneficiaries are also involved in ProCEedS (SEERC is involved as a beneficiary).

As such, some of the themes covered within the ProSFeT project will be continued to be investigated within these two new MSCA actions.

A further proposal has been submitted for evaluation to the H2020-MSCA-RISE-2019 call (DeMOptiMa; reference number 872108). Building on ProSFeT experience, the proposal is concerned with the design of Decision Support Systems for aiding Local Authorities in designing delivery networks for public services. Such proposal is led by Dr. Antonino Sgalambro and includes USFD and CNR as beneficiaries. The proposal has been positively valued (85/100) and included in the reserve list for potential funding. This could provide additional scope for continuing the work started through ProSFeT.



## Further Follow-up Plans

Even if the concepts of Urban Logistics (and its practical applications, such as Urban Consolidation Centres, in the following UCCs) have been around for a very long time, the impact on the logistical practice of these has been very limited to date. Many initiatives have been implemented by municipalities across Europe in the field; however, the success of such initiatives has been questionable. This is due to a variety of reasons that can be listed as follows, which have been discussed in the work which has been produced as part of the ProSFET project:

- Most of these initiatives were developed on the basis of very limited understanding and partial data about Urban Logistics. Indeed, most of the focus has been about distribution to retail stores and similar establishments; however, this just constitutes a fraction of the logistical flows happening within urban areas, often already involving some form of consolidation from the shipper. Traditionally, other forms of flows (such as the ones related to construction materials, waste management, materials needed in the facilities management cycle, catering industry remained out of the picture).
- UCCs have traditionally failed to attract stable and significant revenue models that could be attractive for the whole set of stakeholders involved; for instance, delivery operations involving the usage of an UCC might end up being significantly more expensive for shippers, failing to create a convincing economic case.
- Not much research has been devoted to cost, risk and revenue sharing models that could lead to the implementation of successful Urban Logistics initiatives (including UCCs).
- UCCs operations can be significantly affected by political decisions; often, in the European context, local political situations might be uncertain and volatile, producing significant changes in the administrative landscape. This is not ideal for the stability and certainty requested for the success of UCCs.

UCC can certainly be valuable facilities, but they should not be seen as a quick *one-size fits all* solution for any sort of problem related to logistic in urban areas.

As highlighted in [1], so far UCCs effectiveness has been assessed mainly through multiple or single case studies analysing best practices and pilot projects. However, little is reported about the reasons for the failure of such facilities; being very difficult finding information on failed UCC projects and initiatives.

Empirical evidence suggests that their design and implementation should be guided by a careful assessment of their estimated impacts. For this reason, the availability of adequate tools, capable of addressing also strategic issues (for instance, related to the investment planning phase) rather than just operational ones (concerned with the day-to-day functioning of already established logistical platforms) could be of interest to stakeholders involved in the policy- and decision-making process.

In addition to this, there seems to be some delay in the integration of some of the latest policy priorities (for instance, the recent promotion of an ambitious Circular Economy package by the European Union), economic paradigms (such as the diffusion of business models inspired by the so-called Sharing Economy) and technological developments (such as the Physical Internet in the current Urban Logistics practices implementation (as highlighted in [2] and [3])).



For these reasons, we identify an opportunity for a research project that could consider, from a holistic and inter-disciplinary point of view, the potential and the feasibility of innovative Urban Logistics solutions in the XXI century. A first sketch of potential individual projects is shown in the following Table 1, along with required expertise from different disciplinary areas.

Topics	Expertise Required
Physical Internet and Urban Logistics: Technological Solutions	Computer Science and Automatic Controls (preferably, with previous track record of applications to Logistics)
Physical Internet and Urban Logistics: Practical Implementation	Computer Science and Automatic Controls (preferably, with previous track record of applications to Urban Logistics)
Participatory Decision-Making and Stakeholder Engagement for Urban Logistics	Urban Planning (with inputs from Transport Studies and Mathematical Methods for Decision-Making)
Strategic Decision-Making for Urban Logistics Planning: Models and Methods	Optimisation (with inputs from Computer Science for the algorithmic implementation and from Transport Studies for the modelling side)
Tactical Decision-Making for Urban Logistics Planning: Models and Methods	Optimisation (with inputs from Computer Science for the algorithmic implementation and from Transport Studies for the modelling side)
Risk, Cost and Revenue Sharing for the Successful Implementation of Urban Logistics initiatives: Methods and Mathematical Models	Mathematics (with special emphasis on Game Theoretical models), with inputs from Finance.
Risk, Cost and Revenue Sharing for the Successful Implementation of Urban Logistics initiatives: Innovative Business Models	Business Studies and Entrepreneurship (with inputs from Mathematics and Finance)
Urban Logistics and the Circular Economy: a Necessary Integration	Environmental Studies (with an understanding of Logistics and Supply Chain Management)
Urban Logistics in the Era of the Sharing Economy: Opportunities, Risks, Pitfalls	Business Studies and Entrepreneurship (with an understanding of Logistics and related industries)
What Workforce for the XXI Century Urban Logistics?	Labour Economics (with an understanding of the Logistics industry)

**Table 1** – Individual projects and related disciplinary areas

Through this note (which follows a meeting held in Sheffield in September 2019), we hope to stimulate some discussion and to identify potential partners for the preparation of a research proposal (that could be submitted, for instance, to the Innovative Training Networks call within the H2020-MSCA framework).



## References

- [1] Lagorio, A., Pinto, R., & Golini, R. (2016). Urban distribution centers: Doomed to fail or optimal solutions for last mile deliveries? *Proceedings of the Summer School Francesco Turco*, 13, 220-224.
- [2] Deloitte Consulting (2016) The Rise of the Sharing Economy. Impact on the Transportation Space. <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/consumer-business/us-cb-the-rise-the-sharing-economy.pdf> [Last accessed on the 6<sup>th</sup> of July 2017]
- [3] Crainic, T. G., & Montreuil, B. (2016). Physical internet enabled Hyperconnected Urban Logistics. *Transportation Research Procedia*, 12, 383-398.

