

CHAPTER 2: Last Mile Distribution logistic operations and impacts

UNIT 2: Last Mile Distribution schemes

Capsule 2.2.4

Optimising operations near the city

To be done prior to this capsule:

Link with the topics of capsules 1.3.1, 1.4.4, 1.4.6, 2.1.4, 2.3.1, 2.4.1, 2.4.2, 2.4.3, 2.4.4, 2.4.5, 2.5.1, 2.5.2, 3.1.1, 3.1.2, 3.1.3, 3.4.1.

Capsule linked with:

The knowledge provided in this capsule is complementary to capsules 2.2.1, 2.2.2 and 2.2.3.

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Objectives of the capsule

The aim of this capsule is to provide two case study examples of a company that has implemented a specific model to optimise its operations near or in the city, and present the benefits gained from this new strategy.

Category	Document, source	EQF		
		4	5	6
			X	X

Exercises included	YES
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Effort for the capsule	Content 15 Min.	Exercises 20 Min.	Extra material 40 Min.
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Content of the capsule

Examples and case studies on a company's optimisation of operations to near the city

Whenever possible, it outlines the situation before and after the implementation of new solutions to optimise operations

Exercise:

Questions on the analysis of the model implemented and the benefits for the company

Instructions for the capsule

You will find attached to this capsule several documents:

1. SUSMILE introduction to the case study attached, and the reason why we selected this example of “Last Mile Distribution logistic”
2. Case study documents, presenting a specific situation and the rationale behind their logistics optimisation, for a specific flow of products

Other case studies may be more adapted in the future with more recent data and more innovative operations to suit the needs of urban logistic demand. We invite you to keep watch for those updated reviews that may bring additional value to this SUSMILE MOOC content.

Source 1 – SUSMILE Synthesis

This document is meant to present briefly the case study for this capsule:
“Optimising operations near the city”

It will briefly expose the reasons why we have selected the different sources indicated for the creation of 2 case studies to analyse. It will position the 2 situations in regard of the overall SUSMILE MOOC content, in order for you to reflect its use and eventually search for other case studies if needed.

Please note it may be time-related as the initial production of this synthesis was done in 2022 and new technologies, practices or company models may have merged in the years to come.

The objective of such sources is to invite students putting theoretical elements into perspective and understand each private sector model to face either its environment, competition, etc.

Source 2 – Case study n°1 : online article

Accenture.com (2018, March), “Optimising last-mile delivery”

<https://www.accenture.com/nl-en/blogs/insights/optimizing-last-mile-deliveries>

Blog article in English, 10 minutes reading

Source 3 – Case study n°1 : online article

OptimoRoute (2021, December), “What is Last Mile Delivery? Costs and how to optimize”

<https://optimoroute.com/last-mile-delivery/>

Complementary link (available in the previous article but not to be skipped): “What is route optimisation?”

<https://optimoroute.com/what-is-route-optimization/>

Both articles in English, 25 minutes reading

Source 4 – Case study n°1 : online article

Descartes.com (2022, January), “Best practices for optimising Last Mile Delivery”

<https://www.descartes.com/resources/knowledge-center/best-practices-optimizing-last-mile-delivery-route-planning>

Article in English, 7 minutes reading

Source 5 – Case study n°2 (S5)

Patrick Siegfried and John Jiyuan Zhang – Scientific Research Publishing (2021, September), “Developing a Sustainable Concept for Urban Last-Mile Delivery”

Document available in English

Summary:

With the rapid development of e-commerce and the rapid increase in parcel shipments, the urban logistics sector is facing the challenge of sustainability. In particular, the delivery of the last mile, the final stage of freight transport, that is linked to customer satisfaction, profitability of logistics companies and the growing public expectations for sustainability of urban logistics.

To cope with the complex conditions of urban logistics, governments and logistics companies need to develop a cooperative strategy for the sustainability of last-mile delivery in cities. This document uses data collection from long-term empirical research and a survey of e-commerce users in Germany and China to develop a sustainable concept for last-mile delivery in cities. The key to the development of this concept is to create a balance between the requirements of customers, the competitive capabilities of logistics companies and the public interest.

Source 5 – Case study n°3 (S6)

ALICE – Alliance of Logistic Innovation through Collaboration in Europe (2020),
“Urban Freight – Research and innovation roadmap”

Document available in English

Summary:

This document is a roadmap for urban freight and logistics research, jointly developed by ERTRAC, the European Road Transport Research Advisory Council, and ALICE, the Alliance for Logistics Innovation through collaboration in Europe. The objective of this roadmap is to identify research priorities related to urban freight delivery, returns and urban logistics in order to improve the efficiency, sustainability and safety of this activity.

The vision is to achieve a full integration of freight flows in cities' operations and activities that allow citizens to access the goods they require and the goods to access the citizens, while at the same time supporting sustainable development. Research areas identified aim to: increase energy efficiency, improve the urban environment by increasing air quality and reducing noise, increase customer satisfaction and increase safety and security.

Exercises

The questions are listed in the second part of Source 1.

There is limited guidance on the expected answers (provided in the document “S1 Answers”), to allow teachers to adapt their messages or to deepen some of the information available to their students. The aim of this capsule is to invite them to formulate a synthesis of the key messages and to be able to defend them.

Some of the questions are directly linked to the documents provided, but some are designed to understand the overall approach that has been indicated or reflect the environment of a given situation. Teachers are free to challenge their students with the questions they find interesting or possibly to formulate their own questions, especially for EQF 6 levels.