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Deliverable 6.3

Report on transferability to non-Citylab cities

Document Control Sheet

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CITYLAB consortium by Living Lab			
Living lab	**Municipal partner(s)**	**Industry partner(s)**	**Research partner(s)**
Brussels	Brussels Mobility	Procter & Gamble Services	Vrije Universiteit Brussel
London	Transport for London	TNT Gnewt Cargo	University of Westminster University of Gothenburg
Oslo	Oslo commune	Steen & Strøm	TOI
Paris	Mairie de Paris		IFSTTAR DLR
Rotterdam	Gemeente Rotterdam	PostNL	TNO
Rome	Roma Capitale	Poste Italiane MeWare SRL	Università degli studi Roma Tre
Southampton	Southampton City Council	Meachers Global Logistics	University of Southampton
Networking and outreach partner			
POLIS			

Executive summary

The objective of the CITYLAB project is to develop knowledge and solutions that result in roll-out, up-scaling and further implementation of cost effective strategies, measures and tools for emission free city logistics. In a set of Living Laboratories ('Living Labs' – LL), promising logistics concepts will be tested and evaluated, and the fundament for further roll-out of the solutions will be developed.

The CITYLAB solutions are tested and validated in seven Living Labs. However, the project encourages the replication and uptake of the CITYLAB solutions in other cities. CITYLAB interacts with external cities and regions demonstrating a high interest and priority in developing innovative urban freight distribution strategies.

Deliverable 6.3 "Report on transferability to non-Citylab cities" reports the dissemination and transferability activities that have involved the so-called Transfer Cities and Regions (TCRs), that is a group of local and regional authorities outside the CITYLAB consortium that are committed to closely and constantly follow the project's developments, are interested in the adoption of the Living Lab approach and in the replication of the implementations tested in the CITYLAB sites. Each Transfer City selected a local industry partner, to be actively involved with in the project. They benefit from a dedicated support for the implementation of transfer activities including training, technical visits, interactive workshops and transferability analyses.

To ensure a substantial and consistent participation of the TCRs in the activities of the project, a transferability plan was developed, with some common points but customized for each of them. The CITYLAB Transferability Plan aims to encourage the i) adoption of the Living Lab approach and ii) the replication of the solutions tested in the CITYLAB sites by the Transfer Cities and Regions Group (CTG).

The group comprises nine local authorities, selected among the larger CITYLAB Followers group (more details in Deliverable 7.3 - Dissemination to follower cities and regions). All members submitted an application describing their context, ambitions and expectations with respect to urban freight policies.

The cities involved participated with great interest in all the initiatives, and are currently in contact with CITYLAB partners and their local industry partners to evaluate the possible implementation of the CITYLAB solutions, through a dialogue based on the guidelines and recommendations referable to the CITYLAB Living Lab approach.

1 Introduction

1.1 Background and overview of CITYLAB

The objective of the CITYLAB project is to develop knowledge and solutions that result in roll-out, up-scaling and further uptake of cost effective strategies, measures and tools for emission free city logistics. In a set of Living Laboratories ("Living Labs"), promising logistics concepts are being implemented, tested and evaluated, and the potential for further roll-out and upscaling of the solutions is being investigated and explained.

In CITYLAB, an implementation is defined as **the process of preparing and putting into practice a new service or a new way of operating or organising logistics activities.**

The project focuses on **four axes** that call for improvement and intervention. Within these axes, CITYLAB supports **seven implementations** that are being tested, evaluated and rolled out. The cities involved are London, Amsterdam, Brussels, Southampton, Oslo, Rome and Paris. If the four axes for intervention are not explicitly tackled in the EU, the rising populations and densities of cities will produce such an increase in freight transportation that the economic and environmental sustainability will no longer be guaranteed. This, in turn, will endanger the future growth potential of European cities. The four axes and the related CITYLAB implementations are shown in Table 1.

Table 1 - CITYLAB axes for intervention and implementations

Axes for intervention	Implementation	City	Partner
Highly fragmented last-mile deliveries in city centres	Growth of consolidation and electric vehicle use	London	TNT and Gnewt Cargo
	Floating depot and city centre micro-hubs	Amsterdam	PostNL
	Increasing load factors by utilising free van capacity	Brussels	Procter & Gamble
Inefficient deliveries to large freight attractors and public administrations	Joint procurement and consolidation	Southampton	Meachers Global Logistics
	Common logistics functions for shopping centres	Oslo	Steen & Strøm
Urban waste, return trips and recycling	Integration of direct and reverse logistics	Rome	Poste Italiane, Meware
Logistics sprawl	Logistic hotels	Paris	SOGARIS

Work already carried out in CITYLAB has evaluated the expected economic, social and environmental outcomes of the initiatives in the seven CITYLAB implementations. The results of this analysis are provided in Table 2 - Analysis of Living Lab implementations and their expected positive economic, social and environmental impacts and reflect expected improvements in operational efficiency, traffic safety, air quality, and carbon dioxide (CO_2) emissions across the seven implementations. Table 2 - Analysis of Living Lab implementations and their expected positive economic, social and environmental impacts reflects the wide coverage of the expected positive efficiency, traffic and environmental impacts of the CITYLAB implementations, beyond that of CO_2 emissions reduction (CITYLAB, 2017).

Table 2 - Analysis of Living Lab implementations and their expected positive economic, social and environmental impacts

Logistics impacts	London	Amsterdam	Brussels	Southampton	Oslo	Rome	Paris
Reduction in vehicle kilometres	✓✓	✓✓	✓✓*	✓✓	✓	✓✓	✓✓
Reduction in CO_2 emissions	✓✓	✓✓	✓✓	✓✓	✓	✓✓	✓✓
Improvement in air quality	✓✓	✓✓	✓✓	✓✓	✓	✓✓	✓✓
Reduction in logistics-associated noise and disturbance	✓	✓	✓	✓	✓	✓	✓
Reduction in total time spent by vehicles on roads (driving/ loading / unloading)	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Retiming of logistics operations (i.e. out of peak period)	✓	✓		✓	✓		✓
Alleviation of logistics sprawl**	✓✓	✓✓		✓✓			✓✓
Promotion of alternatively-fuelled / clean delivery vehicles	✓✓	✓✓				✓	✓✓
Reduction in time spent by receivers on goods reception and internal logistics	✓✓	✓✓	✓✓	✓✓	✓✓		✓✓

✓✓ - expected outcome ✓ - possible outcome * - also expected to reduce car trips by shop owners
** - In the sense of reducing the need for road-based stem mileage.

For more details of the practical implementations in each of the seven CITYLAB cities, see the CITYLAB website[1].

1.2 Scope and structure of the deliverable

This deliverable reports the transferability activities taking place in Task 6.3, namely all the activities addressed to the CITYLAB Transfer Cities and Regions (TCR) joining the CITYLAB Transfer Group (CTG)[2] during the project lifetime.

It is important to highlight that the nine of the TCR are also part of the broader CITYLAB Follower Cities and Regions Group (CFG)[3]. However, this inner group of transfer cities benefits from additional support and dedicated initiatives that are presented in this deliverable.

This deliverable is structured as follows: Section 2 explains the motivation of establishing a Transfer Cities and Regions Group; Section 3 illustrates why and how CITYLAB aims to transfer its Living Lab approach and its solutions; Section 4 describes the application and selection process of the TCRs; Section 5 presents the CITYLAB transferability plan; Section 6 reports all the transferability activities, including questionnaires and interviews, and site visits

[1] http://www.citylab-project.eu/documents/Living_labs_300917.pdf

[2] http://www.citylab-project.eu/transfercities.php

[3] http://www.citylab-project.eu/followers.php

and bilateral meetings between TCRs and CITYLAB local partners, as well as dedicated transferability sessions; Section 7 section reports the findings of the transferability activities for each transfer city, on the one hand for the adoption of the CITYLAB Living Lab approach, and on the other for the dedicated transferability analysis of the potential to replicate their preferred CITYLAB solution in their local context.

This deliverable excludes dedicated activities, meetings and workshops associated with WP7 activities, as these are reported in Deliverable 7.3 “Dissemination to follower cities and regions”.

2 CITYLAB approach and involvement of external cities

In the first stage of the project, the CITYLAB solutions are tested and validated in the seven Living Labs.

The second stage is dedicated to promoting the **replication and take up of the CITYLAB solutions to other cities**. Indeed, many previous research projects on urban freight transport (UFT) solutions often struggled when it came to transfer the solutions to other cities.

This implies to first assess whether a UFT solution is transferable at all; if so, then the specific context of follower cites should be considered, to assess if it represents the suitable environment for adopting that specific measure.

In order to In order to encourage a wide dissemination of the CITYLAB measures outside the cities participating in the project,, CITYLAB interacts with external cities and regions demonstrating a high interest and priority in developing innovative urban freight distribution strategies: the project established two groups of external cities interested in observing the progress of the project, being involved in some of the project's events and initiatives, and getting tailored support from the research partners. The CITYLAB Transfer Group comprises nine local and regional authorities and their respective local industry partners. They benefit from a specific budget dedicated to the implementation of transfer activities including training, technical visits, interactive workshops and transferability analyses. They were selected among the broader CITYLAB Followers Group, interested in the adoption of the Living Lab approach and in the replication of the implementations tested in the CITYLAB sites. European local authorities submitted an application to join the Group (see D7.3).

It is essential to clarify the different level of commitment of i) Follower and ii) Transfer cities and regions, characterized by different levels of uptake and commitment.

The 21 Follower Cities and Regions, whose activities are presented in Deliverable 7.3, have been identified within WP7 on Dissemination and exploitation, whereas the Transfer Cities and Regions have been selected within WP6 on Transferability. Transfer Cities and Regions (TCR), have been chosen among the wider group of Follower Cities and Regions (see Figure 1: FCRs in blue, TCRs in green). Therefore, *Transfer Cities and Regions are also Follower Cities and Regions*, whereas the opposite does not hold true.

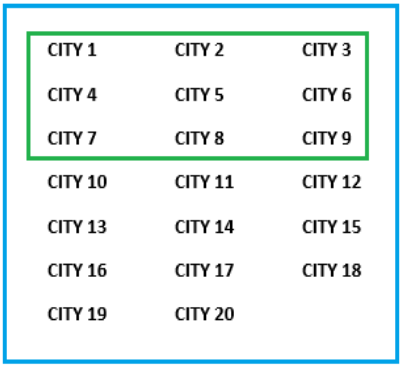

Figure 1 - Selection of TCRs from FCR group

Figure 2 provides an overview of the different uptake levels for each category of cities and regions: CITYLAB cities are directly involved in the project, they set up a local Living Lab and implemented a UFT solution. Transfer Cities and Regions have engaged in a structural dialogue with the partners of the project, i.e. each of them received a dedicated programme of activities ('Transferability Plan', see table Table 5), including questionnaires for the transfer of the Living Lab approach and the preferred CITYLAB implementations, bilateral interviews, dedicated workshops, technical visits with bilateral meetings and transferability sessions.

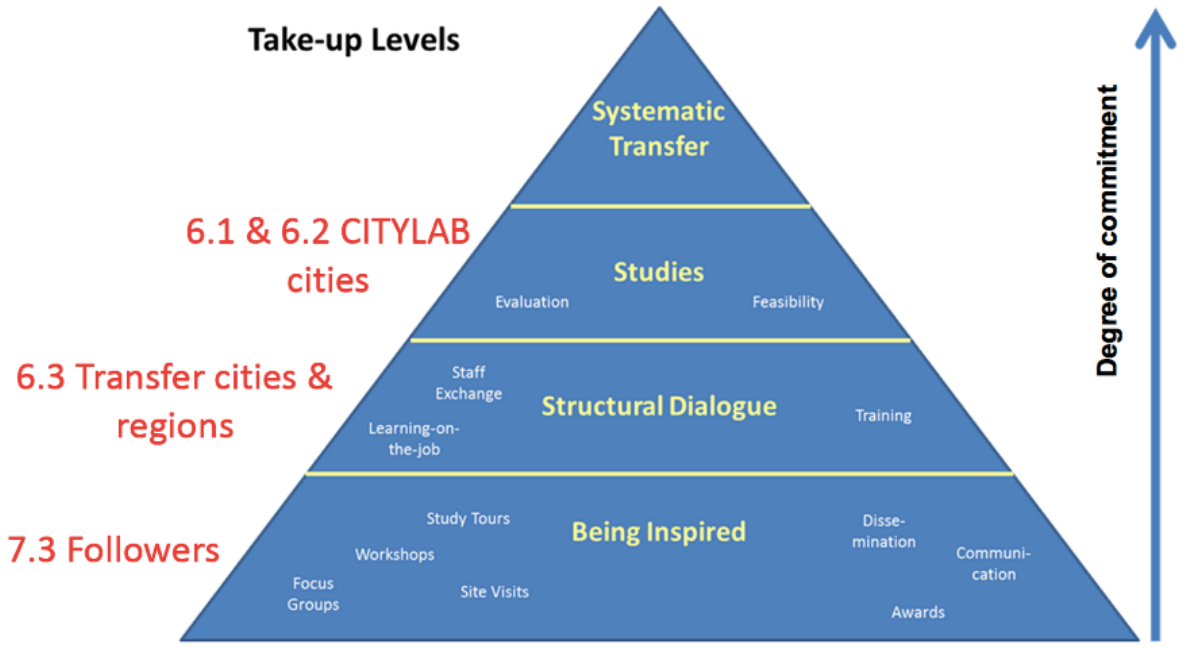

Figure 2 - Different levels of uptake: i) CITYLAB cities, ii) Transfer cities & regions, iii) Follower Cities & regions

3 Policy and measures transfer

Most European cities want to be innovative, but there are risks associated to be the first to implement a new measure:

- Financial: refers to the economic and financial resources available to properly afford the introduction of the measure.
- Political: refers to the support by the political level, and the acceptance by citizens – would they vote in favour of it?
- Effectiveness: refers to the appropriateness of a new measure for the specific context, i.e. if the measure would solve the problems it is meant to solve.
- Implementation: refers to the ability of the local authority to introduce the measure smoothly, without delays or extra cost (Hüging et al., 2014).

Therefore, there is the need to understand the context conditions for innovation. A detailed transferability analysis is able to overcome these challenges. Transferability implies a transfer of a measure or a measure bundle from one city to another: horizontal influences have proven to be an effective, relatively low-cost and direct tool to transfer good urban mobility practices (Dziekan et al., 2013).

There are two types of policy transfer, vertical and horizontal, according to the city/cities interested and the scale of implementation: *upscaling* refers to the estimation of the effects of a measure if it/they were applied at a larger scale in the same city, whereas transferability refers to the degree to which the tested effects of a measure can be transferred to other contexts or settings (Dziekan et al., 2013).

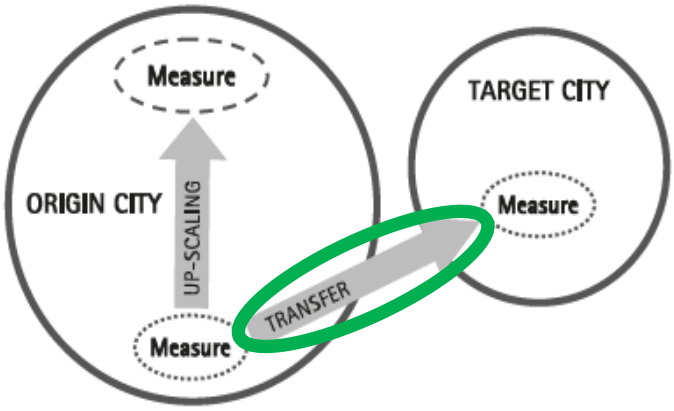

Figure 3 - Upscaling and Transferability

Source: Dziekan et al., 2013

This Work Package only addresses horizontal transferability, starting from the CITYLAB implementations. It is important to carefully assess whether a specific solution, successfully implemented in a city, might be suitable for another local context: as said, transferability is about understanding the context conditions for innovation.

4 The selection of CITYLAB Transfer cities

CITYLAB aimed at establishing a group of seven non-CITYLAB cities, including one public and one private partner representative per city, to support the transfer of the living-lab approach and to exchange on the implemented CITYLAB measures. Non-CITYLAB cities representatives would be selected according to their interest in and activities on innovative urban freight solutions, representing a balanced mix of 'advanced' and 'less advanced' candidates.

TCRs have been identified among the broader group of FCRs (see more in D7.3). The selection was based on six criteria, according to the Description of Action and further developed together with the CITYLAB research group:

- **Maturity**: balanced mix of 'advanced' and 'less advanced' candidates
- **Enlargement of geographical scope**: special attention to countries not represented in the project consortium (especially Poland, Hungary, Czech Republic).
- **Partnership**: significance and actual likelihood of the involvement of the industry partner identified by each local authority.
- **Applicant preference** on the CITYLAB cities, to ensure a balanced distribution.
- **CITYLAB cities' preferences**, based on applicants' characteristics.
- **Proactive interest** in the project: as CITYLAB followers, participation in previous events and provision of relevant information about their urban freight local context.

Table 3 - Overview of evaluation results of followers to become a CITYLAB TCR (in green: selected cities)

City	Country	Maturity	Industrial partners	Enlarging geographical scope
Delft	NL	A	++	
Madrid	ES	B	++	✓
Manchester (TfGM)	UK	A/B	++	
Rogaland Region	NO	C	++	
Budapest (BKK)	HU	B	++	✓
Flanders Region	BE	B		
Pisa	IT	C	++	
Prague	CH	C	+	✓
Turin	IT	A/B	+	
Gothenburg	SE	A	++	✓
Mechelen	BE	C	+	
Antwerp	BE	B	++	
Gdynia	PL	C		✓
Graz	AT	A/B	++	✓
L'Hospitalet	ES	B		✓
Milan	IT	B		
Skedsmo	NO	B	++	
West Midlands	UK	B	+	

As it can be seen in Table 3, for each follower the degree of maturity was assessed, on the basis of the information provided in the application to become a follower (the entire application for each city can be consulted in D7.3). Furthermore, we tried to give weight to the proposed industry partners, on the basis of the significance and actual likelihood of their involvement. Transfer cities' effective implementation of the CITYLAB solutions was not foreseen within the transferability activities. CITYLAB has as its objective the dissemination of the Living Lab methodology applied to city logistics. Since this approach implies a close and continuous dialogue between the public and private sectors, and as the scope of the project is limited in time, it has sometimes been preferable to involve a start-up with limited resources but with a proactive approach rather than a large operator.

Another selection criterion, more subjective but not less important in this type of research projects, was the proactive interest and participation of the local authorities, which have been able to demonstrate it since they were previously selected as followers. In particular, the submission of a complete application, to develop a satisfactory profile, was considered, as well as the participation in the CITYLAB events to which the followers were invited to participate (encouraged by the full reimbursement of their travel costs). Although the high interest of all the FCRs in the project was confirmed during the following months, some applications were incomplete and in some cases cities had not positively responded to invitations to CITYLAB events, and some cities renounced due to lack of time to participate in the time-consuming transferability activities. In the case of Mechelen, since the Flemish region was also present in the group, it was estimated that the latter could act as an intermediary for the two Flemish cities present among the followers, i.e. Mechelen itself and Antwerp.

In the end, nine cities and regions were considered appropriate to be part of the CTG, and it was decided to involve them all. In the next page, the list of the nine CITYLAB TCRs is reported, including the industry partners they identified at local level, and their preferred CITYLAB implementations.

Table 4 - List of CITYLAB TCRs

City / Region	Country	Industry partner	Type	1st choice	2nd choice	3rd choice
Budapest (BKK)	HU	Kantaa	Cargo-bike bicycle messenger cooperative	London	Paris	Brussels
Delft	NL	Stadslogistiek Delft (PostNL)		Oslo	London	Paris
Flanders Region	BE	VIL	Flemish Institute for Logistics	Paris	Roma	
Madrid	ES	SEUR (DPD Group)	Logistic operator	London	Brussels	Rome
Manchester (TfGM)	UK	* Esprit Warehousing & Docks Trafford Park * Gnewt Cargo	*warehousing/ logistic operator	London	Amsterdam	Southampton
Prague	CH	* UPS * Messenger	* Logistic operator * Bike courier	Brussels	Southampton	
Rogaland Region	NO	* International Research Institute of Stavanger, IRIS * Logistics association, Rogaland * Norwegian Logistics and Freight association (NHO)		Rome	Southampton	Brussels
Turin	IT	Ponyzero	Last-mile cargo-bike operator	Rome	Brussels	Paris
Pisa	IT	Kiunsys	Monitoring & management of cities mobility	London	Amsterdam	Oslo

The figure below provides a geographical overview of the TCRs distribution, as well as the FCRs and CITYLAB cities.

Figure 4 - Geographical distribution CITYLAB partner, transfer, follower cities & regions

5 The CITYLAB Transferability Plan: the approach

To ensure a substantial and consistent participation of the TCRs, a transferability plan was developed, with some common points but customized for each of them. The CITYLAB Transferability Plan aims to encourage the i) adoption of the Living Lab approach and ii) the replication of the solutions tested in the CITYLAB sites by the CTG, and is structured as follows:

5.1 Adoption of the Living Lab approach

The first step is a Living Lab training session (held in Rotterdam on 1 December 2016, see more in 6.2.2.1), on the City Logistics Living Lab (CLLL) concept and approach, developed in CITYLAB, and the experiences of the CITYLAB partner cities which already set up such a laboratory at their local level. The second step is the application of Living Lab guidelines to the Transfer cities & regions, to capture i) the city-specific ambitions for the setting of a potential Living Lab and ii) the measures and implementations tested in CITYLAB that contribute to achieving the ambition. This is done through a questionnaire, mapping the local UFT status, with respect to city logistics strategy and measures, stakeholder cooperation in the city and data collection and monitoring methods in place. Based on the answers by the city officers, an interview was organised to further illustrate and discuss the CITYLAB LL approach, and how this can be tailored to the city local environment.

5.2 Replication of the solutions tested in the CITYLAB

Transferability analysis: CITYLAB performs a transferability analysis focusing on the potential for rolling out the CITYLAB logistics solutions to external cities. City officers of these external cities are requested to fill out a questionnaire, to self-evaluate if there are constraints or support in their local context with respect to the success factors characterising the chosen CITYLAB logistics solution. An interview was organised to discuss possible adaptation actions to mitigate the risks and constraints identified.

MAMCA workshop: On the basis of the results of the transferability analysis, a workshop with local stakeholders of the external cities was organised, to consider their view in case the identified solution was implemented in their city. The methodology used for this workshop is called MAMCA[4], a decision-making model for simultaneous evaluation of alternative policy measures and scenarios. During the workshop, the facilitator went through the different steps of the MAMCA with the participants, to map their preferences and evaluate whether the solution would reach a sufficient consensus and therefore be feasible in their city.

Technical visit: Follower cities and regions are invited to take part in a technical visit of their preferred CITYLAB implementation site. This includes a bilateral meeting with the partners responsible for the local implementation and a dedicated, interactive session, where external stakeholders give their advice to the cities on the best way to implement their preferred solution.

[4] Multi-Actor Multi-Criteria Analysis (MAMCA) is a decision-making model developed by MOBI-VUB.

Table 5 - Template for personalised Transferability Plan

[Transfer city]			
	Activity	**Your actions**	**Where/When**
Adoption of the LL approach	**Living Lab approach transfer** <u>Output:</u> "A City Logistics Living Lab for [Transfer city]": (see *Annex 1*), including: 1) policy 2) policy measures 3) cooperation platforms 4) evaluation/monitoring 5) feedback on the LL approach and concrete steps you can take up.	*1) Short questionnaire* to better define your Urban Freight profile[5] *2) Bilateral interview* (Skype/phone), to illustrate and discuss how the CITYLAB Living Lab approach fits with your local context and which steps you can do for the uptake of the City Logistics Living Lab approach.	Where: - (by phone/e-mail) When: September 2017-November 2017 (before MAMCA workshop - 8 December 2017)
Replication of the implementations	**Transferability analysis** <u>Output:</u> Quantitative assessment of the extent your preferred CITYLAB solution has the potential for a successful roll-out in your city.	*1) Fill the Transferability excel table[6]:* you will weigh the likely support or constraint for transferability (from -2 to +2) of the characteristics of your preferred CITYLAB implementation, and motivate this assessment (see *Annex 2*). *2) Bilateral interview* (Skype/phone), to discuss the results of (1) and provide feedback on the next steps.	Where: - (by phone/e-mail) When: September 2017-November 2017 (before MAMCA workshop - 8 December 2017)
	MAMCA workshop <u>Output:</u> Summarized evaluation of all CITYLAB solutions together by explicitly accounting for the objectives of the local stakeholders of the transfer cities.	*Attendance of a 3-hours MAMCA workshop with your industrial partner.* Multi-Actor Multi-Criteria Analysis (MAMCA) is a decision-making model to enable a participated, simultaneous evaluation of alternative policy measures, scenarios, technologies by different types of local stakeholders.	Where: Brussels, Polis office (Rue du Trône, 98) When: 8 December 2017, 9:00-12:00 (day after the Polis Conference)
	Technical visit: - dedicated bilateral meeting - dedicated transferability session	*1) Attendance with industrial partner* *2) Preparation of questions, short presentation, interactive feedback session*	[local city workshop]

[5] Integrating the information they already provided to join the Follower Cities Group (see D7.3). TCRs received the questionnaire in September 2017

[6] TCRs received the the excel table in September 2017

6 Report of the transferability activities

This section reports the real implementation of the transferability plan for each city. The results of the questionnaires and interviews concerning the adoption of the LL approach and the transferability analysis, as illustrated in the previous paragraph, are reported here. Below an overview of transferability activities carried out by the CITYLAB TCRs.

Table 6 - Overview of transferability activities carried out by CITYLAB TCRs

		LL approach			Transfer. analysis		MAMCA workshop		Site visit		
City / Region	Country	LL training	Questionnaire	Interview	Interview	Questionnaire	City	Ind. Partner	Number	Bilateral meeting	Dedicated WS
Budapest (BKK)	HU	✓	✓	14/11/2017 (10-12)		✓ (x2)	✓	✓	4	✓	✓
Delft	NL		✓	29/11/2017 (10-12)		✓	✓		1		
Flanders Region	BE	✓	✓	20/11/2017 (14-16)		✓	✓	✓	3	✓	
Madrid	ES	✓	✓	13/11/2017 (10-12)		✓ updated	✓	✓	3	✓	✓
Manchester (TfGM)	UK	✓	✓	23/10/2017 (10-12)		✓	✓	✓	4	✓	✓
Prague	CH		✓	20/11/2017 (10-12)		✓	✓	✓	1		
Rogaland Region	NO		✓	16/11/2017 (10-12)		✓	✓		2	✓	
Turin	IT	✓	✓	17/11/2017 (10-12)		✓ updated			2	✓	
Pisa	IT	✓	✓	on field - 24/11	no	no	✓	✓	2		

6.1 Implementation of the plan

6.1.1 Questionnaires

TCRs were asked to fill out two questionnaires (the templates are available in the Annexes section), to provide inputs to the analyses of both the adoption of the CITYLAB Living Lab approach and the replication of the CITYLAB implementations.

Adoption of the CITYLAB Living Lab approach

In order to provide for tailored recommendations to the TCRs on how to adopt and adapt the CITYLAB Living Lab approach to their local context, cities were asked to describe the existing local city Living Lab environment, focusing on the current urban freight transport context, the urban freight transport problems in the city, the existing policy guidance and cooperation frameworks, and existing data collection. The survey, similar to the preliminary analysis carried out for the CITYLAB cities (see D3.2 - D3.2 - CITYLAB local living lab roadmaps) aims at mapping the urban freight status with regard to:

- City logistics strategy and implementations
- Stakeholder cooperation on urban freight in each city
- City logistics data collection and monitoring.

The questionnaire, developed by Nina Nesterova (TNO), includes 8 questions and 5 pages. In order not to burden the cities, since resources are limited, they were asked to provide only an indication on what kind of data / resources are available, without sending the actual data. This information was used to understand the UFT local context of the cities, and to provide them with recommendations on how to successfully set up a local Living Lab, given their specific characteristics. The recommendations per city are reported in section 7.

Transferability analysis

In order to assess the chances for a successful transfer of their preferred CITYLAB implementation, TCRs were asked to fill out a second questionnaire. In the questionnaire, developed by Jens Klauenberg (DLR), TCRs had to rate a set of success factors that were developed for CITYLAB's transferability analysis between CITYLAB cities (Task 5.6, reported in Deliverable 5.6). CITYLAB's transferability analysis consists of three important steps: (i) identifying the importance of success factors for the local implementation, (ii) assessing the local attitude towards the success factors, and (iii) combining both inputs and analysing transferability potential of a certain implementation to another local context. TCRs were asked to assess the local attitude towards the success factors of their preferred CITYLAB implementation in the second questionnaire. Ideally, the questionnaire had to be validated by the industry partners. The transferability analysis for TCRs consists of comparing the answers of the TCRs with the rating of success factors by CITYLAB cities for the local implementations. This was meant to evaluate and suggest the changes for a successful implementation of the chosen CITYLAB solution in the TCRs.

Methodology for CITYLAB transferability analysis

The data analysis was conducted according to the following scheme. The results per city are reported in section 7.

i. The ratings from the perspective of the CITYLAB implementations about the importance of success factors were converted according to the following rule:
   - Not relevant at all 0
   - Low importance 1
   - Medium importance 2
   - High importance 3
   - Essential 4

ii. The rating from the perspective of the CITYLAB transfer cities about the local assessment of the success factors (in terms if there are constraints or support) were converted according to the following rule:
   - strong constraint -2
   - constraint -1
   - neutral 0
   - support 1
   - strong support 2

- o no answer na/0

iii. The score for each success factor was calculated as product of i. and ii. Thus, possible values for each success factor are in the range between -8 and 8.
iv. The results for all success factors for each logistics initiative were accumulated.
v. The maximum and minimum possible score for each logistics initiative for each CITYLAB implementation were calculated, underlying the assumption that all success factors were rated as 'strong constraint' or 'strong support' respectively.
vi. As the number of success factors for the logistics initiatives are unevenly allocated a normalisation of the ratings was necessary to avoid the over estimation of initiatives with a large number of success factors. The scores for each logistics initiative for each CITYLAB implementation were normalised to scores between 0 and 100.
vii. The score for the preferred CITYLAB implementation in context of TCRs was calculated as the average of the normalized score of all relevant logistics initiatives. Each logistics initiative was weighted equally. The score indicates to which extent an applied CITYLAB implementation may be successfully roll-out in TCRs.

The scores for TCRs have been ranked for the preferred CITYLAB implementation. The ranking enables to evaluate in which CITYLAB city the best chance is given for a successful transfer of the implementations.

6.1.2 Bilateral interviews

Subsequently, TCRs were involved in bilateral interviews, to discuss and explain the results of their answers to the questionnaires, regarding both the adoption of the LL approach and the transferability analysis of the preferred CITYLAB solution. All the cities, together with their industry partners, participated in the interviews, lasting a couple of hours and held via Skype with the transferability team, formed by Polis, TNO and DLR.

Based on what was discussed in a direct and interactive way, CITYLAB partners provided preliminary recommendations on how to interact locally to set up a City Logistics Living Lab, and identified local constraints and success factors to transpose, with the necessary adjustments, CITYLAB solutions in their own context.

In chapter 7, we provide the results of the transferability activities for each transfer city, on the one hand for the adoption of the CITYLAB Living Lab approach, and on the other for the dedicated transferability analysis of the potential to replicate their preferred CITYLAB solution in their local context.

6.2 Site visits and events for CITYLAB Transfer Cities

6.2.1 MAMCA workshop, Brussels, 8 December 2017

Taking place back-to-back with the Polis Conference 2017 (Brussels, 6-7 December)[7], the aim of the CITYLAB MAMCA workshop was to explore if different types of stakeholders consider the tested CITYLAB implementations feasible in their city or region.

The CITYLAB MAMCA workshop, jointly organised by Vrije Universiteit Brussel (VUB) and Polis, took place on the 8th of December in Brussels. Transfer Cities and Regions, as well as their local industrial partners, some CITYLAB followers and other local authorities attended the workshop, for a total of 22 persons.

Multi-Actor Multi-Criteria Analysis (MAMCA)[8] was used as an interactive tool to integrate different stakeholders' opinions. The idea behind MAMCA is to evaluate alternatives from the

[7] https://www.polisnetwork.eu/2017conference

[8] www.mamca.be

combined perspective of all stakeholders involved at local level, to assess whether there is overall stakeholder support for one of the alternatives.

Sara Verlinde from VUB guided the participants, who were divided in groups representing the different urban freight transport stakeholders, in expressing how important certain (decision) criteria are to her/him when choosing or evaluating a certain last-mile distribution option. In a second step, it was asked to all participants how well they think the CITYLAB implementations score on those criteria. Finally, the results were discussed and compared to the actual performance of the CITYLAB implementations.

The workshop also gave the opportunity to take stock of the results of the overall transferability plan, and to discuss how CITYLAB can further support local authorities to adopt the Living Lab approach[9] and implement the CITYLAB solutions[10].

In general, participants were satisfied about the workshop, not only for what they learned, but also for networking purposes. Many of them are getting inspired by CITYLAB, and trying to combine different CITYLAB solutions, tailoring them to their local context. MAMCA is considered useful for deciding with local stakeholders which solution would fit the best, for putting different stakeholders in the same room and for prioritizing the options.

CITYLAB is considered useful also to check how other cities are placed in terms of planning and implementation for urban freight and logistics. According to participants, CITYLAB could represent a useful information desk for local authorities. It should focus more on the role of the local authority for each implementation, and provide for some insights from previous experiences, 'behind the scene'. This would enable the comparison of scenarios for the direct use of local authorities.

To download the **agenda** of the workshop, click here[11]:

To download the **presentation** of the workshop, click here[12]:

An extended report of the MAMCA workshop will be available in the D6.2. For a short summary, click here[13]:

The event was attended by 8 TCRs (Table 7).

Table 7 - CITYLAB Follower and Transfer Cities attending the CITYLAB MAMCA workshop - Brussels, 8/12/2017

City	Country	Officer	TCR	Industry partner attending
Budapest (BKK)	HU	Patrik Toth	✓	✓
Delft	NL	Jan-Kees Verrest	✓	
Flanders Region	BE	Tijl Dendal	✓	✓

[9] https://youtu.be/2k3k5NNH7w0

[10] http://www.citylab-project.eu/implementations.php

[11] https://www.polisnetwork.eu/uploads/Projects/CITYLAB_MAMCA_workshop_20171208_agenda_V1.pdf

[12] https://www.polisnetwork.eu/uploads/Projects/MAMCA_workshop_Transfer_cities.pdf

[13] https://www.polisnetwork.eu/publicnews/1567/45/CITYLAB-MAMCA-workshop-to-discuss-urban-freight-initiatives

Manchester (TfGM)	UK	Richard Banks	✓	✓
Prague (Institute of Planning and Development)	CH	Lukáš Tittl	✓	✓
Rogaland County	NO	Sigurd Ur	✓	
Pisa (Navicelli SpA)	IT	Marilena Branchina	✓	
Madrid	ES	Enrique García Cuerdo Sergio Fernández Balaguer	✓	✓
Antwerp	BE	Laura Tavernier		
Jerusalem	IL	Nimrod Levy		
La Rochelle (agglomeration)	FR	Matthieu Graindorge		
TOTAL	**11**		**8**	**5**

6.2.2 Transferability meetings

6.2.2.1 CITYLAB Living Lab training session, Rotterdam, 1 December 2016

The second dedicated event for external cities was planned to coincide with the Polis conference taking place in Rotterdam on 1-2 December 2016[14]. It was co-organised by TNO, in charge of the development of the Living Lab methodology and guidelines, and Polis, coordinating the Followers Group.

This second meeting was divided into 2 sessions: session 1 on the replication and uptake of Living Lab approach on a city level, session 2 on replication and uptake of the CITYLAB solutions/implementations.

The 1st session started with a presentation by TNO about the City Logistics Living Lab (CLLL) concept and approach[15], developed in CITYLAB, and about the experiences of the CITYLAB partner cities which already set up such a laboratory at their local level. Then, three different experiences implementing new UFT initiatives in Amsterdam, Barcelona and Greece were presented. On the basis of those, participants discussed how the presented experiences would deploy with the CLLL approach, as intended in CITYLAB. This session has been very useful to demonstrate to local authorities that CLLL is an extremely flexible methodology, which can be adapted to different contexts (namely the ones presented there), and useful for involving in a cyclical and continuous way the most interested stakeholders in urban logistics interventions.

The second session, which took place on the afternoon of the same day, began with a TNO presentation of the seven CITYLAB implementations and how the respective CLLLs are organized. Jacques Leonardi from University of Westminster provided a concrete example on how CITYLAB is trying to support the growth and upscaling of consolidation and electric vehicle use in London, explaining how crucial and challenging is to pass from demos to full scale implementations.

Participants were then divided into groups, to discuss for the implementation of their choice (see Table 4):

[14] https://www.polisnetwork.eu/2016conference

[15] Deliverable 3.1 “Practical guidelines for establishing and running a city logistics living lab”: http://www.citylab-project.eu/deliverables/D3_1.pdf

- what they want to learn from these implementations, and what they would like to see as a result;
- what they expect this implementation can mean / imply for their city;
- what circumstances are needed to transfer the implementation to their city.

Table 8 - Agenda of CITYLAB training session: Living Lab approach on a city level

09.30-11.00 CITYLAB 1st session: Replication and uptake of Living Lab approach on a city level	
Time	**Activity**
9.30	Welcome/introduction: "Living Lab approach for city logistics: experiences from CITYLAB's living labs" - Nina Nesterova, TNO
9.40	Presentation of 3 papers: – "The functioning of city logistics from a neighbourhood approach" - Martijn Altenburg, Amsterdam University of Applied Sciences & Claes Groot, Municipality of Amsterdam – "Transnational policy framework - Guidelines for energy-efficient cities" - Afroditi Anagnostopoulou, CERTH – "Urban goods distribution in the city of Barcelona" - Adria Gomila, City of Barcelona
10.20	Discussion on how the presented experiences would deploy with the LL approach, as intended in CITYLAB.
10.50	Summary, conclusion
14.30-16.00 CITYLAB 2nd session: Replication and uptake of of CITYLAB solutions	
Time	**Activity**
14.30	Brief introduction on the CITYLAB implementations
14.45	Division of participants (mixed CITYLAB Pilot cities + Followers, according to the mutual interest already expressed) into groups, each discussing one implementation – what is necessary to transfer/scale up the implementation?
15:20	Present results back to the general audience
15.50	Summary, conclusion

On the basis of the discussion, CITYLAB research partners had the opportunity to start the process of selecting Transfer Cities and Regions from the CITYLAB Followers Group, considering also the mutual interest generated with CITYLAB partner cities: after these sessions, the consortium had more elements to select Transfer Cities and Regions, and to assess their potential level of commitment in the project, as well as the significance and actual likelihood of the involvement of the industrial partner they had previously identified in their application.

In order to facilitate their participation in the workshop, invited local authorities benefited from a specific budget dedicated to travel/accommodation expenses.

The event was attended by 6 TCRs (Table 9).

Table 9 - CITYLAB Follower and Transfer Cities attending the CITYLAB Living Lab training session, Rotterdam, 01/12/2016

City	Country	Officer	Transfer Cities
Antwerp	BE	Laura Tavernier	
Budapest (BKK)	HU	Patrik Tóth	✓
Flanders Region	BE	Tijl Dendal	✓
L'Hospitalet	ES	Marc Segura	
Madrid	ES	Enrique García Cuerdo Sergio Fernández Balaguer	✓
Manchester (TfGM)	UK	Helen Smith	✓
Mechelen	BE	Anne Recour Nicole La Iacona	
Pisa	IT	Marilena Branchina	✓
Skedsmo	NO	Øyvind Daaland Lesjø Martine Matre Bonarjee	
Turin	IT	Giuseppe Estivo Erica Albarello	✓
TOTAL	**10**		**6**

To download the **presentations** of the workshop, click here[16] (1E. CITYLAB session).

6.2.2.2 London Transferability activities, 11-12 May 2017

This section reports the transferability activities the Transfer cities of Budapest, Madrid and Manchester have attended during the CITYLAB London workshop (11-12 May 2017).

Table 10 – Attending Transfer Cities and their industrial partners

Delegations from Budapest, Manchester and Madrid

• Budapest, CITYLAB Transfer city
  o BKK Budapest – Patrik Toth
  o Kantaa – Levente Eros (industry partner)
• Madrid, CITYLAB Transfer city
  o Madrid City Council – Enrique Garcia Cuerdo
  o SEUR SPAIN – May Lopez (industry partner)
  o DPD Group (from London office) – Trevor Berry (industry partner)
• Manchester, CITYLAB Transfer city
  o Transport for Greater Manchester – Helen Smith & Richard Banks
  o Esprit Warehousing & Docks Trafford Park (industry partner) – Graham Dixon

CITYLAB partners involved in the Transferability (London) activities

• CITYLAB London implementation partners
  o University of Westminster – Jacques Leonardi & Julian Allen
  o Transport for London – Steve Steele

[16] https://www.polisnetwork.eu/2016presentations

  - London Borough City of London – Thomas Parker
  - Gnewt Cargo – Sam Clarke
- CITYLAB research partners involved in Transferability
  - POLIS – Giacomo Lozzi
  - TNO – Nina Nesterova & Tariq van Rooijen
  - DLR – Jens Klauenberg
  - VUB – Sara Verlinde
  - TOI – Jardar Andersen & Olav Eidhammer

11 May: London bilateral meeting with local stakeholders

Objective: A bilateral meeting between the Transfer cities' delegates and the partners responsible for the CITYLAB London implementation was organised on the day before the workshop. This first, informal meeting served to get acquainted, to clarify different aspects regarding the implementation and to better plan together the CITYLAB transfer activities.

Main topics addressed: The meeting was organised as an open discussion, specifically giving the opportunity to the Transfer cities and their industrial partners to ask targeted questions to their equivalent London implementation partners regarding, for instance, the business model in place and the challenges they are facing in the implementation phase; to investigate similarities/differences between cities and between industrial partners; to assess how likely the implementation can be transferred; and which type of adjustments it needs for becoming feasible in the Transfer cities' context.

The discussion primarily focused on consolidation. Any additional level of consolidation has an extra cost, but there are economies of scale which allow to set up a viable business case. For Gnewt Cargo, this has been possible thanks to multiple elements. One of these, is the need to utilise at maximum the (scarce) land available in the city. Even though at some point there is an extra demand, and consequently there are too many parcels to distribute, which in theory would need a much bigger area to organise the distribution process, this allows to implement more innovative and efficient solutions.

In Madrid, SEUR is doing something similar with a subcontractor. This experience taught SEUR that it is important to have a close dialogue and continuous cooperation with the local authority, but also with the owners of logistics-allocated lands in the city centre. Indeed, Gnewt Cargo had the possibility to get such a great location because they had good personal relationships with many actors from the logistics sector. For the Freight Electric Vehicles (FEVs) to be constantly maintained and monitored, a very good relationship with car manufactures is also essential.

The role of the public authority (TfL) should consist in creating the right business environment and raise stakeholders' awareness about these innovative logistics solutions.

There is a problem of logistics sprawl in London. Nowadays, there is a lack of logistics lands in the city centre: former industrial areas are quickly becoming residential areas. However, the issue is not only cost-related. Even when there is the possibility to establish a distribution/consolidation centre in a central area, the citizens are afraid of the negative impacts on the liveability of the neighbourhood: noise, congestion, pollution, etc. The public authority (TfL in this case) can have a role, as said below, in increasing the acceptance of these new solutions, through awareness/behavioural change campaigns.

There is also a strong need for behavioural change of the consumers, which in this case should be mainly driven by the business sector: for example, the concept of "free deliveries" is a very big issue, and there is no agreed solution at the moment.

B2C: represents a good share of business for Gnewt Cargo, however, even if 100% clean, from TfL point of view it is an inefficient market, because it increases congestion.

The City of Madrid is currently focusing on new air quality standards. TfL is implementing an Ultra Low Emission Zone (ULEZ), which will also affect the logistics operators.

12 May: Successfully transfer innovative urban transport and mobility concepts from one city to another

This session was included in the 12 May CITYLAB workshop agenda (13:00-15:00):

"Session on exchange with external cities

- *Transfer of CITYLAB Living Lab approach and London solutions to external cities"*

This public session was focussed around the three Transfer Cities - **Greater Manchester, Budapest and Madrid** – which selected London as preferred CITLAB implementation, i.e. that have expressed an interest in learning from and potentially implementing urban freight transport ideas and initiatives to emerge from the CITYLAB project.

This Transfer City session was organised by Giacomo Lozzi (POLIS) and the three discussions were facilitated by CITYLAB research partners:

- VUB – Sara Verlinde
- TNO – Nina Nesterova & Tariq van Rooijen
- DLR – Jens Klauenberg
- University of Westminster – Jacques Leonardi

Figure 5. Round table workshop session in London

Participants were organised into three round-table discussion groups. Each group focused on the needs and interests of the three participating CITYLAB Transfer cities with city authority and business representatives from each in attendance. Discussions were held with participants from London and elsewhere about the ways in which they can learn and build on the following concepts and activities in CITYLAB: i) the London implementation; ii) the interest in and potential benefits that could result from creating a freight transport Living Laboratory (Living Lab) in their city, and iii) how to establish successful partnerships between the public and private sectors in their city. Workshop participants were free to join any table they preferred at each session. This setting enabled three interactive discussions per session, and each Transfer city and their industrial partners had the chance to collect personalised suggestions

for each of the three topics, supported by a "topic leader" (a CITYLAB research partner). The sessions were organised as follows:

- *1st round:*
  - *Manchester: how to adopt the living lab approach (supported by TNO)*
  - *Budapest: how to replicate the CITYLAB London solution (supported by DLR/UoW)*
  - *Madrid: how to set up a successful partnership with industrial partners (supported by VUB)*
- *2nd round:*
  - *Manchester: how to set up a successful partnership with industrial partners (supported by VUB)*
  - *Budapest: how to adopt the living lab approach (supported by TNO)*
  - *Madrid: how to replicate the CITYLAB London solution (supported by DLR/UoW)*
- *3rd round:*
  - *Manchester: how to replicate the CITYLAB London solution (supported by DLR/UoW)*
  - *Budapest: how to set up a successful partnership with industrial partners (supported by VUB)*
  - *Madrid: how to adopt the living lab approach (supported by TNO)*

Each Transfer city and its industrial partner reported the results of the three-round discussions to the plenary sessions. Outcomes are reported in chapter 7, under each city's sub-section.

6.2.2.3 Rome bilateral meeting with local stakeholders, 19 October 2017

The CITYLAB implementation in Rome focuses on combining forward and reverse logistics in the collection of recycled materials. Rome City representatives explained how useful CITYLAB has been in testing innovative solutions and acquiring relevant information that can help them developing their Mobility Master Plan and Sustainable Urban Mobility Plan (SUMP). They also expressed their keen interest in continuing to collaborate especially for topics linked to the circular economy and to better manage 'post-consumption materials' (avoiding calling it 'waste') with the need to reduce, reuse and recycle (see more here: http://www.citylab-project.eu/171020_Rome.php).

On 19th October, the day before the workshop, 3 transfer and 3 follower cities & regions' delegates participated in a meeting, organised by Polis, with the partners responsible for the CITYLAB Rome implementation. This meeting served to: (i) get acquainted and familiar with CITYLAB local Living Lab application in Rome, (ii) clarify different aspects regarding the Rome implementation and (iii) to discuss possible transferability issues to other cities and regions. Such an open and detailed discussion would have not been possible during the public event (20 October), with more than 80 attendees.

Table 11 - Agenda of CITYLAB Transferability meeting – Rome, 19/10/2017

Time	Activity	Responsible
16.00	Arrival and coffee/tea	UR3
16.10	Welcome and introduction – CITYLAB	TOI
16.15	*Tour de table* & Transfer c/r 3-mins presentation of UFT local context	all
16.30	Freight transport policy in Rome and City Logistics Living Lab	RSM/UR3
16.45	Start-up and management of a Living Lab: engaging with the local context and stakeholders	all

17.05	How to set up a successful partnership for innovative UFT solutions: the Rome implementation	all
17.25	Wrap-up and conclusions	all
17.30	End of meeting	

The event was attended by 6 TCRs (Table 12)

Table 12 - CITYLAB Follower and Transfer Cities attending the CITYLAB Rome workshop - 20/10/2017

City	Country	Officer	Transfer Cities	Participation 19/10 meeting
Budapest (BKK)	HU	Patrik Tóth	✓	✓
Flanders Region	BE	Tijl Dendal	✓	✓
Rogaland Region	NO	Joachim Weisser	✓	✓
L'Hospitalet	ES	Marc Segura		✓
Graz	AT	Lisa Sebros		✓
Lyon	FR	Emilie Fodor		
		Clemence Routhieau		
TOTAL	**6**		**3**	**4**

6.2.2.4 Pisa transferability workshop, 24 November 2017

The aim of the meeting, that took place on 24th of November 2017 in Pisa, was to introduce the CITYLAB project and the Living Lab approach to local mobility stakeholders and to draw an initial analysis of the current and future situation of Pisa's urban freight transport. The meeting was structured as a round-table discussion that involved PISAMO Mobility Agency of Pisa and Spa Navicelli di Pisa, TNO's technical project experts, a POLIS representative as project transferability co-ordinator, and some local stakeholders in urban freight transport (Tages, Kyunsis, Cubit scarl).

Participants: Marilena Branchina-SpA Navicelli; Giacomo Lozzi-Polis; Gilda Greco-Pisamo SpA; Massimiliano Petri, TAGES; Hans Quak-TNO; Nina Nesterova-TNO; Paola Ponticelli, Kyunsis; Rossella Frasca, Cubit Scarl.

The outcomes of the discussion have been embedded in chapter 7, in the section dedicated to Pisa.

Citylab Project

Transferability activities

Technical visit in Pisa

SpA Navicelli, 24th November 2017

9.00 - 9.15

Welcome and Introduction of participants, *Marilena Branchina-SpA Navicelli.*

9.15- 9.30

Introduction of CITYLAB, *Giacomo Lozzi-Polis.*

9.30 - 9.45

Local Pisa environment/urban freight policy- Key questions, main outcomes form the project, *Marilena Branchina-SpA Navicelli; Gilda Greco-Pisamo SpA.*

9.45 - 10.00

Current challenges and opportunities in urban freight, *Hans Quak-TNO.*

10.00 - 10.30

Living labs approach, *Nina Nesterova-TNO.*

10.30 - 11.00

Practical application in Rotterdam *Hans Quak-TNO.*

Examples other CITYLAB cities *Nina Nesterova-TNO.*

11.00 - 11.15 Coffee break

11. 15 - 12.00

Working session on how to apply to Pisa (TNO, SpA Navicelli, Pisamo, Polis)

12.00 - 13.00 Lunch at Darsena Cafè-Galileo Galilei Hotel

13.00 - 14.00

Rounding up/conclusions, next steps for Pisa, all participants

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Figure 6. Agenda of CITYLAB transferability workshop – Pisa, 24/11/2017

6.2.3 Site visits to CITYLAB implementations

An overview of the participation of each TCR to CITYLAB local workshops is reported in table 6. For a description of the workshops in detail, please check D7.3.

7 Living Labs and transferability analysis for CITYLAB Transfer Cities and Regions

This section reports the results of the transferability activities for each transfer city, on the one hand for the adoption of the CITYLAB Living Lab approach, and on the other for the dedicated transferability analysis of the potential to replicate their preferred CITYLAB solution in their local context.

7.1 Budapest

7.1.1 A City Logistics Living Lab for Budapest

Plans and measures

Urban Freight measures are integrated into the first SUMP based transport strategy of Budapest, the Balázs Mór-Plan. In addition, in 2015 a research study has been published with recommendations for integrated objectives of Budapest City Logistics. The main aim of this document is to define city logistics with a new approach focusing on sustainable urban mobility planning. E-mobility is going to be included into the new City Logistics strategic document that will be published next year. Budapest wants to deploy EVs, improve last-mile distribution and have a better stakeholder involvement. Budapest used to have a City Logistics department, which now is closed and is not on the agenda for the future.

Cooperation platforms

Political commitment exists in Budapest. The SUMP has been completed and approved; now the administration is implementing innovation in city logistics. The SUMP can be the instrument to create and support a living lab platform in Budapest.

Stakeholder involvement so far consisted in trying to bring companies together. Industry is creating a forum with several companies, not very far from the CITYLAB approach. However, this should be strengthened and the city aims to put more effort into this: there is some cooperation among private companies, and within the public sector, but not yet a good cooperation between the two.

Steps for setting up a living lab:

- contact market forerunners (e.g. electric transportation companies) and create a group, which can represent the stakeholder communication platform;
- share business contacts with each other;
- trade organisations and/or chambers of commerce, to create new opportunities.

The municipality aims to improve the level of communication with UF actors, although it is not usual in Budapest. For the SUMP preparation, there was a 2-way communication, with proactive feedback from 2,000 people, so there is a strong willingness by the municipality to involve again stakeholders in such a way for the freight strategy.

Regarding the involvement of research actors, there are links with the science department of the university, as well as some projects in place with academia and private sector together.

Evaluation/monitoring

Budapest currently monitors freight traffic (loops, mobile and fix cameras) although this can be improved with more data collection, specifically on freight.

The data available has been used to develop some UF measures, like access restrictions and position of L/U bays. There is not yet monitoring and ex-post evaluation of the measures, even though this is foreseen in the Budapest SUMP.

There is a need to involve academia to get support to better use and understand data: it can ensure further research and a deeper understanding of freight data.

Next steps for a City Logistics Living Lab

- Facilitating research in low-emission transportation and in innovative urban logistics systems can help private sector partners to create new business cases. By experimenting with different models, also public stakeholders can gain more experience in the field of urban logistics. Different urban logistics experiments should be conducted and evaluated enabling the municipality to evaluate and disseminate the findings.
- Suggestions and experiences from other cities (during transferability workshop in London):
    - Oslo: working together with industry really improved working relationships.
    - Amsterdam: it is better if a group of companies proposes measures rather than cities as they are likely to be more readily accepted.
    - London: Freight Quality Partnerships function well and have a lot of impact. Upscaling them to living labs provides even more tangible impact.
- The network of trade organisations can be an effective asset to reach out to other industry actors when creating the common platform.
- Academia is already partly involved, with some PhD students (from technical university) working for the industry partners. Academic partners should also be involved in the freight and logistics forum.

Bonus input from London Transferability session (12 May 2017)

How to set up a successful partnership with industrial partners?

It is important to involve a wide audience, to increase visibility and ensure the participation of key potential partners.

Create a general call; make the tendering simple; set transparent procedures. It could be simpler to involve active partners through (EU) projects, and help them with the proposals. Just handing out money to companies is not effective, they need to be involved in a common project, in order to learn more.

At a first step, local authorities and universities should use their own processes to generate delivery volume, and ensure a reliable and complete monitoring activity, evidence-based, of the flows directly generated by their own demand of deliveries.

The local authority should use the SUMP for lobbying, and should facilitate networking and spreading the word towards other stakeholders.

How to replicate the CITYLAB London solution?

Kantaa (cycle logistics company): The product to sell here is green delivery – but who is willing to pay for this? Based on Kantaa's latest customer research, less than 15% of its customers considered 'green delivery' as an important factor when choosing a subcontractor. Nevertheless, green delivery is generally important for citizens by reducing pollution.

The municipality can support by providing consolidation centres at attractive prices, removing parking fees, etc. But in order to make these initiatives effective it is important to involve politicians and decision makers.

In order to scale up business activities, Kantaa is investigating whether there are ways to find subsidies for a green fleet and activities (related to the start of the business case). They also look for a strategically located place to rent. Would it work with 5 vehicles at the beginning? There is also the need for a helping hand concerning parking spots.

London explains that location and dependencies, number of vehicles related to number of deliveries, match of infrastructure and vehicle types (especially for cargo bikes) must be evaluated.

In the Budapest context, there is the problem that workforce is missing. In general, the logistic sector in Hungary needs more employees. This is also the case of freight companies, not able to attract workforce, which hinders expansion or sometimes even the day-to-day operations. The source of the problem is the general phenomena of workforce moving from Hungary towards similar but better paid jobs in Western Europe. It is particularly true for freight couriers who are usually young, and represent the most mobile part of the labour force.

General comment: find ways to use the extensive tram network in Budapest for freight transport.

Levente Eros (Kantaa, industry partner): "*In Budapest, we should exploit the adopted SUMP as a strong basis to build a participatory and collaborative approach to involve stakeholders in the decision-making process. As business, we should be more involved in research activities, to collect evidence-based data about our business models and make them as much effective and efficient as possible*".

Next steps

Two ideas, linked to the London implementation and to be developed, taking into account the feedback received at the workshop, are:

1) Increasing cargobike usage in cities: public cargobike infrastructure/community oriented sharing systems. A comparative study of the incorporation of electric and non-electric cargobikes into public bike sharing networks, different impacts, costs, economic models in comparison to community based open-source cargobike sharing systems.

2) The last km challenge in the city centre of Budapest: focusing on last-mile locally produced organic food distribution (B2B & B2C) with cargobikes and EVs, in partnership with several local businesses, a pilot could analyse the environmental, energy, time, benefits, costs, limits and challenges of such an approach.

7.1.2 Transferability Analysis for Budapest

See methodology in section 6.1.1. Preferred solution: London

Support and constraint for success factors in context of the CITYLAB transfer city Budapest

The results of the assessment of 72 success factors show that generally the conditions in Budapest for a successful transfer of the CITYLAB implementations London are very good compared to other CITYLAB cities: 21 out of 72 success factors were rated as 'strong support' and 18 success factors were rated as 'support'. In contrast, only 5 success factors were rated as 'strong constraint' and 9 success factors were rated as 'constraint'. 9 success factors are rated 'neutral' in context of the CITYLAB transfer city Budapest. For 18 success factors no answer was given. This limits the validity of the analysis.

Table 13 - Results of CITYLAB transferability analysis – Budapest

Logistics initiative	Score	Min	max
Urban consolidation centres/mobile depots	26 (3)	-86	86

Improving loads carried on goods vehicles (vehicle fill and return loads/empty running)	26 (1)	-42	42
Electric and other alternatively-fuelled goods vehicles	19 (4)	-94	94
Urban distribution property and land use planning interventions	4 (4)	-48	48
Partnership working in the supply chain operations	17 (6)	-68	68
Normalized score	**64.57** (1)	**0.00**	**100.00**
Figures in brackets illustrate rank of transfer city compared to CITYLAB cities			

London implementation in Budapest city context

There are nine success factors for which the importance was rated as 'essential' for the London implementation. Three of them were rated as 'strong support' in the context of the CITYLAB transfer city Budapest:

- SF4 Industry can obtain appropriate location for the consolidation centre
- SF21 We can ensure close inter-company working (between shippers, carriers and receivers)
- SF106 There is pressure on logistics land uses in the urban area due to land values (countering logistics sprawl).

The following success factor (SF) which is seen as 'essential' for the London implementation was rated as 'support' in the context of the CITYLAB transfer city Budapest:

- SF7We can ensure sufficient product throughput to generate revenue

None of the success factors seen as 'essential' for the London implementation were rated as 'strong constraint' or 'constraint' in the in the context of the CITYLAB transfer city Budapest. This underlines the good conditions in Budapest for the London implementation.

In general, the conditions in the CITYLAB transfer city Budapest are very good for the transfer of the London implementation. The chance for a successful adoption of the London implementation in Budapest is higher than in other CITYLAB cities.

However, to further improve the chance for a successful implementation of the London solution in Budapest, the City of Budapest might improve the support for the following success factors for which the importance was rated as 'Essential' or as 'High importance' for the London implementation:

Essential success factors

- SF2 We can keep capital costs for urban consolidation centres/mobile depots to a minimum
- SF47 There are refuelling/recharging networks available.
- SF48 Green electricity is available.
- SF50 Time taken for refuelling/recharging fits operating patterns.
- SF110 We can identify and protect suitable urban sites (regulation/safeguarding to counter logistics sprawl).

High importance

- SF6 Industry can avoid the need for expensive handling systems
- SF8 Suitably sized vehicles will be selected to make deliveries from centre.
- SF10 We can provide method for allocation of costs and benefits arising from centre between supply chain users.

- SF11 We can develop suitable charging mechanisms to reflect costs and benefits arising from centre.
- SF18 There will be a focus on product types with limited logistics handling / storage requirements.
- SF35 There are comparative purchase prices of clean vehicles.
- SF40 Comparative payload of clean vehicles is given (weight and volume).
- SF41 Comparative vehicle reliability for electric vehicles compared with conventional vehicles is given.
- SF44 There are corporate Social Responsibility (CSR) commitments and concerns about corporate image of shippers and receivers
- SF104 We have land use planning interventions implemented alongside free-market approach in land acquisition and development - by easing planning rules and conditions for suitable distribution centre and warehousing facilities.
- SF108 There is no political difficulty in limiting development that prevents logistics use in future (especially residential development).
- SF137 There is agreement that softer' solutions based on collaboration rather than regulation and restriction are likely to be more acceptable and beneficial.
- SF138 We are able to find a common ground between disparate stakeholders and views.
- SF139 We can find a consensus of the partnership needs regarding focus and direction.
- SF140 We are able to manage people's expectations based on realistic outlooks.

During the first call, Budapest partners expressed their interest also for the Amsterdam implementation. Therefore, a second transferability analysis for this solution was performed, and presented by phone.

7.2 Delft

7.2.1 A City Logistics Living Lab for Delft

Plans and measures

The city of Delft has a Clean Air strategy in place, as well as a low emission zone for the city centre. The City Logistics Delft measures are integrated in the Sustainability Policy and Climate Plan of the city of Delft. The upcoming revision of the local Mobility Plan, corresponding to a SUMP, will include specific urban freight measures.

Cooperation platforms

Stadslogistiek Delft (City Logistics Delft) is a new distribution centre located in the outskirts of the city. It represents a living lab for sustainable last mile freight transport, and the city hopes it will become the main way of transporting freight on the last mile to and from the city centre. Financial viability will play a key factor for the near future. Combining goods on the last mile will reduce time for transport companies. Time benefits and efficiency are key factors for the business model and financial viability. The combination with reverse logistics is essential for optimizing efficiency.

Cooperation with operators and companies is challenging. Implementing alternatives like Stadslogistiek Delft and encouraging (voluntary use of) the provided sustainable transport options has not yet reached the desired scale. This is why Delft now, in addition to its nudging strategy, also proceeds to regulatory measures for logistics traffic in the city centre: the Logistics Protocol.

This approach is developed by consulting the widest possible group of interested stakeholders ranging from companies, residents to logistical representatives. Stakeholder involvement allows for the adoption of a set of less strict rules, since these parties produce a joint framework

directly affecting their activities; if they do not do it, the policy measures continue to tighten entry requirements. Therefore, stakeholders define the boundaries and the next steps of UF regulation. Started on the 1st of April 2017, there are regular meetings after which they define the next goals.

The group of stakeholders is well balanced, therefore it's upon invitation only (7 people). Each of them represent a group of stakeholders, so they first have to discuss internally and bring a common position on the table.

Evaluation/monitoring

Not many data available so far, besides traffic counts and split of freight vehicles. For the former, they use several kinds of traffic counts: traffic lights in Delft count traffic on a permanent base, as well as traffic cameras on main roads. They also occasionally set up counts on other road sections according to the need for information. For the latter, an overall inventory was made in 2014.

Next steps for a City Logistics Living Lab

- Regulation and stakeholder consultation should go together. Stakeholder participation is important to make them aware about the goals fixed by the municipality. A stronger involvement of the research sector could help to mediate and make a synthesis between the different positions, and to collect UFT-related data and provide ex-post evolution on the impact of the usage of Stadslogistiek Delft.
- Given the imminent revision of the local SUMP, the freight department should take the opportunity to give more emphasis to freight in the new SUMP, and propose a set of measures based on the on-going stakeholder consultations.
- To enhance the sustainability of Stadslogistiek Delft, the municipality could support the utilization of the hub by the municipality premises, as well as other public local attractors like universities and hospitals, through a smart procurement procedure.

7.2.2 Transferability Analysis for Delft

See methodology in section 6.1.1. Preferred solution: Oslo

Support and constraint for success factors in context of the CITYLAB transfer city Delft

The results of the assessment of 54 success factors show that generally the conditions in Delft for a successful transfer of the CITYLAB implementations Oslo are very good compared to other CITYLAB cities. The total normalized score is higher than in all other CITYLAB cities. Six out of 54 success factors were rated as 'strong support' and 35 success factors were rated as 'support'. In contrast, no success factor was rated as 'strong constraint' and only 2 success factors were rated as 'constraint'. Eleven success factors are rated 'neutral' in context of the CITYLAB transfer city Delft. For all success factors an answer was given.

Table 14 - Results of CITYLAB transferability analysis – Delft

Logistics initiative	Score	Min	max
Urban consolidation centres/mobile depots	27 (3)	-98	98
Improving loads carried on goods vehicles (vehicle fill and return loads/empty running)	24 (2)	-52	52
Common internal logistics for a major multi-tenanted building or area (including reception and storage facilities and internal logistics)	10 (3)	-30	30

Partnership working in the supply chain operations	37 (3)	-68	68
Normalized score	**70.18** (1)	**0.00**	**100.00**
Figures in brackets illustrate rank of transfer city compared to CITYLAB cities			

Oslo implementation in Delft city context

There are eleven success factors for which the importance was rated as 'essential' for the Oslo implementation. One of them was rated as 'strong support' in the context of the CITYLAB transfer city Delft:

- SF144 We can ensure open communication and transparency.

The following success factors (SF) which are considered as 'essential' for the Oslo implementation were rated as 'support' in the context of the CITYLAB transfer city Delft:

- SF4 Industry can obtain appropriate location for the consolidation centre
- SF5 It will be possible to make use of existing depot/warehouse space to reduce capital costs
- SF13 We have contractual obligations to make receivers use the centre.
- SF14 We have regulatory obligations to make receivers use the centre.
- SF27 Industry will have good advance knowledge and there will be warning for carriers about future demand for product movement and available loads.
- SF146 There is enthusiastic support from members to improve efficiency and reduce external impacts.
- SF147 We have a clear structure, Terms of Reference and Action Plan, based on achievable goals.

None of the success factors seen as 'essential' for the Oslo implementation was rated as 'strong constraint' in the in the context of the CITYLAB transfer city Delft. This underlines the good conditions in Delft for the Oslo implementation.

Nevertheless, one success factor seen as 'essential' for the Oslo implementation was rated as 'constraint' in the in the context of the CITYLAB transfer city Delft:

- SF12 We can ensure there is a single site owner/landlord.

In general, the conditions in the CITYLAB transfer city Delft are very good for the transfer of the Oslo implementation. The chance for a successful adoption of the Oslo implementation in Delft is higher than in other CITYLAB cities.

However, to further improve the chance for a successful implementation of the Oslo solution in Delft, the City of Delft might improve the support for the following success factors for which the importance was rated as 'Essential' or as 'High importance' for the Oslo implementation:

Essential success factors

- SF10 We can provide method for allocation of costs and benefits arising from centre between supply chain users.
- SF11 We can develop suitable charging mechanisms to reflect costs and benefits arising from centre.
- SF12 We can ensure there is a single site owner/landlord.

High importance

- SF6 Industry can avoid the need for expensive handling systems
- SF7 We can ensure sufficient product throughput to generate revenue
- SF21 We can ensure close inter-company working (between shippers, carriers and receivers).

- SF25 We will avoid operations that are subject to complex scheduling constraints.
- SF85 We will focus to non-business critical products. Business critical products are products which are essential in their availability for the business of the receiver.
- SF136 We are able to identify appropriate funding to support administrative tasks and actions.

7.3 Flanders Region

7.3.1 A City Logistics Living Lab for Flanders Region

Plans and measures

SUMPs are well established in Flanders. Nevertheless, they lack SULPs and this is an important element to take into account for the new Mobility Plan Flanders. This long-term vision for the overall mobility (2030-2050) is currently being developed. However, this vision has not been validated at political level, and it is not clear if this document will be supported by the government, although logistics is quite high in the political agenda. The Plan covers broad goals, and has a general approach, because it gives Flemish cities the possibility to develop their own strategy and fix their priorities from a social, economic and environmental perspective. Sector organisation were involved in the preparation the new Mobility Plan Flanders (e.g. VIL, retailers' representatives), but private companies were not directly involved.

The Flanders Region is currently developing a regional policy framework on urban freight which has to give guidance to local authorities and stakeholders in developing a stimulating environment for urban logistics solutions.

Flanders has done extensive work (2 'PIEK' pilot projects) on off-hour (early morning and late evening) deliveries for big food retailers. The results of these projects lead to a proposal to change the legal environmental framework in order to enable off-hour deliveries to big retailers. The modification is currently about to be adapted by the Flemish government.

At the moment, there is only one person working full time in the freight department, and another one working part time.

Cooperation platforms

The Government of Flanders (Department Mobility and Public Works) coordinates a working group on urban freight that gathers three times a year. This group facilitates the exchange of best practices between cities and should enable them to upscale some of these. The working group also plays an important role for the development of the regional policy framework and the actions within it.

At the moment, the Region involves and consults local authorities (municipalities), but not the private sector. The role of the region is educating cities to include freight in their own strategies, then each city has to actively involve local stakeholders in the planning activity.

The research sector is already involved in the study of urban freight: a very good working relation has been established between the Department of Mobility and Public Works and VIL. VIL is currently running two innovative projects (Intello City: http://vil.be/project/intello-city/ and ALEES: http://vil.be/project/alees/) in which both industry as local authorities are involved. These projects also include a stakeholder analysis.

As for mobility in general there is a direct link between research clusters and the Regional decision-makers, but not really on freight.

Evaluation/monitoring

The Region is currently working on data of flows and vehicles movements. Recently, Ghent has developed a model for data collection, the region should consider how to upscale and transfer it to other cities. There is no ex post evaluation, but they think it is not suitable at regional level.

Next steps for a City Logistics Living Lab

- The Region is thinking about implementing a more structured and extensive cooperation platform with municipalities and private stakeholders. Indeed, this should be organised in a cyclical way, to have a continuous top-down and bottom-up exchange, complementary to the working group already in place.
- VIL mainly has the role to create partnership between municipalities and research partners in their projects, however there is not direct link with policy-making and strategies, the Region mainly follows on the research. A closer and more structured relationship could bring to positive impacts of the research activities for a stronger policy support.
- As for data, the Government should bring together Flemish cities and other departments to validate and discuss which role they can play in filling the lack of data that currently exists at regional level, in order to be supportive for the Flemish cities.

7.3.2 Transferability Analysis for Flanders Region

See methodology in section 6.1.1. Preferred solution: Paris

Support and constraint for success factors in context of the CITYLAB transfer city Flanders Region

The results of the assessment of 89 success factors show that generally the conditions in Flanders Region for a successful transfer of the CITYLAB implementations Paris are on an average level compared to other CITYLAB cities. The assessment of the survey reveals, that only one out of 89 success factors was rated as 'strong support', but 26 success factors were rated as 'support'. Furthermore, only one of the success factors was rated as 'strong constraint', but 14 success factors were rated as 'constraint'. Eleven success factors are rated 'neutral' in context of the CITYLAB transfer city Flanders Region. For 37 success factor no answer was given. This limits the validity of the analysis.

Table 15 - Results of CITYLAB transferability analysis – Flanders Region

Logistics initiative	**Score**	**Min**	**max**
Urban consolidation centres/mobile depots	6 (5)	-86	86
Improving loads carried on goods vehicles (vehicle fill and return loads/empty running)	10 (2)	-42	42
Electric and other alternatively-fuelled goods vehicles	-3 (6)	-94	94
Urban distribution property and land use planning interventions	-16 (6)	-48	48
Non-road modes	14 (3)	-90	90
Partnership working in the supply chain operations	18 (6)	-68	68
Normalized score	**53.75** (5)	**0.00**	**100.00**
Figures in brackets illustrate rank of transfer city compared to CITYLAB cities			

Paris implementation in Flanders Region context

There are 21 success factors for which the importance was rated as 'essential' for the Paris implementation. None of them were rated as 'strong support' in the context of the CITYLAB transfer city Flanders Region. Nevertheless, the following success factors (SF) which are seen as 'essential' for the Paris implementation were rated as 'support' in the context of the CITYLAB transfer city Flanders Region:

- SF3 Industry can generate revenue from value added services
- SF46 We have city access regulations (regulatory support) for clean vehicles.
- SF114 We promote innovation in architecture and building techniques for urban warehouses.
- SF116 We can ensure clear leadership from major public sector stakeholder backing modal shift.
- SF132 Industry has efficient goods handling/terminal equipment.
- SF145 We are able to find a chair and administrator to direct and take forward the work of the partnership.

One of the success factors seen as 'essential' for the Paris implementation was rated as 'strong constraint' in the in the context of the CITYLAB transfer city Flanders Region:

- SF124 Industry can achieve unit transport costs (including the last mile delivery costs) equivalent to direct delivery by road.

The following success factors seen as 'essential' for the Paris implementation were rated as 'constraint' in the in the context of the CITYLAB transfer city Flanders Region:

- SF106 There is pressure on logistics land uses in the urban area due to land values (countering logistics sprawl).
- SF107 There is public subsidy of costs of suitable urban logistics land (countering logistics sprawl).
- SF108 There is no political difficulty in limiting development that prevents logistics use in future (especially residential development).
- SF112 We can quantify/ forecast freight trip generation rates associated with different types of land use (freight travel planning for major sites).
- SF113 We have an understanding in freight transport compatibility of different land use types (mixed use developments countering logistics sprawl).
- SF142 We can ensure specific actions and tasks with timescales in order to avoid becoming a talking shop.

In general, the conditions in the CITYLAB transfer city Flanders Region are good for the transfer of the Paris implementation. The chance for a successful adoption of the Paris implementation in Flanders Region is on average level compared to other CITYLAB cities.

However, to further improve the chance for a successful implementation of the Paris solution in Flanders Region, the Flanders Region might improve the support for the following success factors for which the importance was rated as 'Essential' for the Paris implementation:

Essential success factors

- SF5 It will be possible to make use of existing depot/warehouse space to reduce capital costs
- SF44 There are corporate Social Responsibility (CSR) commitments and concerns about corporate image of shippers and receivers
- SF45 We have regulatory vehicle emissions standards that favour the use of electric vehicles.
- SF104 We have land use planning interventions implemented alongside free-market approach in land acquisition and development - by easing planning rules and conditions for suitable distribution centre and warehousing facilities.

- SF105 We see a risk of making city less attractive than its urban competitors (through the requirement of inclusion of loading regulations for large buildings and freight travel planning which can reduce the rentable space in a commercial building).
- SF106 There is pressure on logistics land uses in the urban area due to land values (countering logistics sprawl).
- SF107 There is public subsidy of costs of suitable urban logistics land (countering logistics sprawl).
- SF108 There is no political difficulty in limiting development that prevents logistics use in future (especially residential development).
- SF109 We can ensure that city planning authorities take initiative/lead.
- SF110 We can identify and protect suitable urban sites (regulation/safeguarding to counter logistics sprawl).
- SF111 We can ensure facilitation of acquisition of building permits in some cases.
- SF112 We can quantify/ forecast freight trip generation rates associated with different types of land use (freight travel planning for major sites).
- SF113 We have an understanding in freight transport compatibility of different land use types (mixed use developments countering logistics sprawl).
- SF124 Industry can achieve unit transport costs (including the last mile delivery costs) equivalent to direct delivery by road.
- SF142 We can ensure specific actions and tasks with timescales in order to avoid becoming a talking shop.

7.4 Madrid

7.4.1 A City Logistics Living Lab for Madrid

Plans and measures

In the frame of Madrid´s Climate Change, Energy Efficiency and clean air strategies, several measures have been deployed. Madrid has 2,400 loading and unloading areas, economic and regulatory incentives have been designed to promote the use of clean vehicles (municipal tax discounts, free access to residential priority areas, free parking on parking regulation areas, etc.). Besides, some new UF measures have been integrated into Madrid´s SUMP approved in the year 2014.

The new Air Quality and Climate Change Strategy (2016 – 2020) includes a set of measures focused on the improvement of urban logistic operators' environmental performance. It is expected to create a big Residential Priority Central Area (low emission zone) with traffic restrictions where logistic operators will have to comply with emissions standards to access with their vehicles. At the same time, a logistic operator register will be created and all the operators will have to be registered to access the Restricted Areas and to use on-street loading areas. The access to on street loading areas will be controlled trough an app.

There is not a department working only on logistics within the municipality, nor a dedicated UF master plan – an integrated approach has been adopted.

Under the frame of the CIVITAS ECCENTRIC Project, the city has the commitment of supporting at least 5 companies based in Madrid with the aim of deploying the electrification of their fleets:

- FM logistics has developed its consolidation centre within ECCENTRIC, using also FEVs.
- EVs prototype developed for UF operations (12 tonnes) – mid-2018.

Cooperation platforms

A permanent consultation platform does not exist yet. The City Council started working with stakeholders from the freight sector for the drafting of the Air Quality plan, and the measures proposed were supported. This consultation process consisted of three meetings: in the 1st meeting, the measures were presented, in the 2nd the discussion focused on the deployment of the measures, then participants had 1 or 2 months to send their opinion and proposals about the measures (open consultation).

The City Council also carried out a study about UF in the city, which analysed all the logistics models implemented in the city of Madrid, where many companies where involved.

In 2018, associations and operators will be consulted in order to set up the restriction conditions to access the above-mentioned low emission zone. Also some research institutes will participate. On the 15th November 2017, a workshop organised by Madrid City Council for UF stakeholders, consisting of logistics operators and big retailers, took place.

There is not yet a confirmation from the political level about the possibility to set up an official Freight forum, however stakeholders will be consulted with regular meetings.

Research institutes are supporting the City Council, in all the previously mentioned activities. They are quite important for defining policies and UF measures, to give a new approach for freight and municipal regulation. UNO is main transport and distribution association in Spain. It is the main actor, representing an important innovation cluster at national level, and it has created CITET[17], a technological innovation centre for last-mile distribution, gathering together the main actors of the sector.

Evaluation/monitoring

The City Council has performed a survey on the total vehicle fleet characterization (both type of vehicles and type of engine), done for the year 2013 and under update for the year 2017. It is expected to be calculated yearly for next years. Data con congestion are available on real time on the City Web Site.

LL approach and next steps for a City Logistics Living Lab

- In Madrid, there are contacts with the university, but mainly for environment, not logistics. Therefore, there is the need to create an urban logistics-focused platform, to gather the right competences together and discuss the related issues at stake. Freight companies, universities and innovation organisations should be involved to foster sharing and development of knowledge and best practice.
- The analysis of big data is a great opportunity for innovation in Madrid. It is helpful for evaluation and monitoring. Therefore, it would be very helpful to involve research institutes and universities in the logistics planning process.
- Operators need clear messages from the City Council. Currently, it is not clear which type of vehicles will be allowed in the LEZ. The driver is often a subcontractor, so they have to be informed and involved in the decision-making process. Need to identify the impact of the different measures, depending on the type of deliveries and vehicles consequently needed, considering that 50,000 vehicles enter every day in the city centre.

Bonus input from London Transferability session (12 May 2017)
How to set up a successful partnership with industrial partners? It is essential to take advantage of the experience and the relationships established in previous and successful partnerships, and to make use of all the knowledge and background

[17] http://www.citet.es/

of previous experiences, for example FREVUE: electric logistics from an urban consolidation centre with the dairy company Calidad Pascual and parcel companies SEUR (part of DPD group) and TNT.

Collaboration between local administrations and private companies usually offers the possibility of finding suitable test sites for new logistic approaches (access to protected areas and facilities, e.g. use of car park in Beaugrenelle, Paris as an urban logistics terminal) and the experience is usually considered to be positive for all the stakeholders. Provides knowledge and it can be considered as an urban lab useful for the design of cities strategies and new operation models for companies.

Partnerships should be considered as an interchange of experience: disseminate city regulations, foster the interchange of good practices and knowledge among stakeholders, feedback for the design of new policies and regulations. In particular, partnerships for companies with EVs are important, also to address big players (retailers), and convince them to offer green options.

The integration of sustainable requirements in public procurement standards can boost the demand for EVs, increasing the volume of green deliveries and services. In this case, it is important that cities establish a close dialogue and partnership with the logistics operators and service suppliers. This triggers virtuous practices, like joint procurement, share the use of logistic facilities and even improvement of logistic processes, due to collaborative strategies among stakeholders.

More in general, it is advisable that the whole urban logistics chain is involved when it comes to set up strategic partnerships, including real estate companies. Furthermore, a commitment at political level is essential.

How to replicate the CITYLAB London solution?

The urban logistics sector is limited by the lack of logistics space inside the city centre and very high land prices. The prices of logistics and industrial land inside the first ring of the city, the most suitable for consolidation activities, are so high that it is difficult to set up a viable business case.

The collaboration of the City Council, owner of different types of facilities around the city or another local public authority/company may be necessary. They can be considered as a provider of space, searching for a new approach for the use of public facilities and innovative solutions. For example, can parking facilities be adapted for logistics use?

Some research is needed to assess the optimal distance between the delivery areas and the distribution/consolidation centre to reduce stem mileage. A solution could be the use of a location not exactly in the city centre but within 10 km, say.

- Consequence: requirements for better charging infrastructure – fast charging needed?

Safety matters – what kind of regulations must be met? Local legal requirements to open a business including parking facilities are quite strict.

Financial support needed at the beginning: Gnewt Cargo was skilled in finding funding opportunities.

Consider research for the development of such an innovative solution.

May Lopez (SEUR, industry partner): *"All the major logistics companies in Madrid are making a big effort to switch to clean commercial vehicles. The dialogue with the local authority is key, in order to reach clear and long-term agreements, regardless of changes to the political leaders. The Living Lab is the main takeaway from this workshop: it would be very fruitful to involve the freight transport companies in a common platform, together with local authorities and academia to improve our knowledge of the sector"*.

Next steps

Madrid City Council will continue to foster collaboration between EMT (the Municipal Transport Company of Madrid) and SEUR. The strategy is to explore consolidation opportunities and solutions using EMT parking facilities. They recently had a meeting focused on the use of EMT parking facilities as micro-logistic hubs. The City Council expects them to reach an agreement as soon as possible. Under the framework of the CIVITAS ECCENTRIC Project, the city has the commitment to support at least 5 companies based in Madrid with the aim of deploying the electrification of their fleets.

7.4.2 Transferability Analysis for Madrid

See methodology in section 6.1.1. Preferred solution: London

Support and constraint for success factors in context of the CITYLAB transfer city Madrid

The results of the assessment of 72 success factors show that generally the conditions in Madrid for a successful transfer of the CITYLAB implementations London are quite weak compared to other CITYLAB cities: Six out of 72 success factors were rated as 'strong support' and 18 success factors were rated as 'support'. In contrast, one success factor was rated as 'strong constraint' and 16 success factors were rated as 'constraint'. 25 success factors are rated 'neutral' in context of the CITYLAB transfer city Madrid. For 6 success factors no answer was given.

Table 16 - Results of CITYLAB transferability analysis – Madrid

Logistics initiative	Score	Min	max
Urban consolidation centres/mobile depots	16 (4)	-86	86
Improving loads carried on goods vehicles (vehicle fill and return loads/empty running)	18 (3)	-42	42
Electric and other alternatively-fuelled goods vehicles	25 (3)	-94	94
Urban distribution property and land use planning interventions	-20 (7)	-48	48
Partnership working in the supply chain operations	-3 (6)	-68	68
Normalized score	**54.20** (6)	**0.00**	**100.00**
Figures in brackets illustrate rank of transfer city compared to CITYLAB cities			

London implementation in Madrid city context

There are nine success factors for which the importance was rated as 'essential' for the London implementation. One (none) of them was rated as 'strong support' in the context of the CITYLAB transfer city Madrid:

- SF 21: We can ensure close inter-company working (between shippers, carriers and receivers).

The following success factors (SF) which are seen as 'essential' for the London implementation were rated as 'support' in the context of the CITYLAB transfer city Madrid:

- SF 2: We can keep capital costs for urban consolidation centres/mobile depots to a minimum
- SF 47: There are refuelling/recharging networks available.
- SF 48: Green electricity is available.

None of the success factors seen as 'essential' for the London implementation was rated as 'strong constraint' in the in the context of the CITYLAB transfer city Madrid. The following success factors which are seen as 'essential' for the London implementation were rated as 'constraint' in the context of the CITYLAB transfer city Madrid:

- SF 4: Industry can obtain appropriate location for the consolidation centre
- SF 50: Time taken for refuelling/recharging fits operating patterns.
- SF 106: There is pressure on logistics land uses in the urban area due to land values (countering logistics sprawl).
- SF 110: We can identify and protect suitable urban sites (regulation/safeguarding to counter logistics sprawl).

In general, the conditions in the CITYLAB transfer city Madrid are weak for the transfer of the London implementation. The chance for a successful adoption of the London implementation in Madrid is lower than in all CITYLAB cities.

To further improve the chance for a successful implementation of the London solution in Madrid, the City of Madrid might improve the support for the following success factors for which the importance was rated as 'Essential' or 'High importance' for the London implementation:

Essential success factors

- SF 4 Industry can obtain appropriate location for the consolidation centre
- SF 7 We can ensure sufficient product throughput to generate revenue
- SF 50 Time taken for refuelling/recharging fits operating patterns.
- SF 106 There is pressure on logistics land uses in the urban area due to land values (countering logistics sprawl).
- SF 110 We can identify and protect suitable urban sites (regulation/safeguarding to counter logistics sprawl).

Success factors with high importance

- SF 6 Industry can avoid the need for expensive handling systems
- SF 10 We can provide method for allocation of costs and benefits arising from centre between supply chain users.
- SF 35 There are comparative purchase prices of clean vehicles.
- SF 49 There is sufficiently wide range of vehicle availability by vehicle manufacturers given.
- SF 104 We have land use planning interventions implemented alongside free-market approach in land acquisition and development - by easing planning rules and conditions for suitable distribution centre and warehousing facilities.
- SF 107 There is public subsidy of costs of suitable urban logistics land (countering logistics sprawl).
- SF 108 There is no political difficulty in limiting development that prevents logistics use in future (especially residential development).
- SF 134 We are able to involve a wide range of stakeholders.
- SF 135 We have the support of public and private senior managers.
- SF 137 There is agreement that softer' solutions based on collaboration rather than regulation and restriction are likely to be more acceptable and beneficial.
- SF 138 We are able to find a common ground between disparate stakeholders and views.
- SF 139 We can find a consensus of the partnership needs regarding focus and direction.

- SF 140 We are able to manage people's expectations based on realistic outlooks.
- SF 144 We can ensure open communication and transparency.

7.5 Manchester

7.5.1 A City Logistics Living Lab for Greater Manchester

Plans and measures

Greater Manchester has published the GM Freight and Logistics Strategy. The strategy is aligned with and supports the delivery of Greater Manchester's 2040 Transport Strategy (the conurbation SUMP), the Greater Manchester Low Emissions Strategy and the emerging Northern Freight Strategy. The strategy has five key areas of focus, each with a primary intervention and a supporting package of interventions.

The particularly relevant areas of focus in this instance are:

- Facilitating and promoting the uptake of low emissions vehicles, particularly in relation to urban deliveries and collections.
- Investigating options for the implementation of consolidation models at the difference spatial scales.
- Better use of existing assets, with a particular focus on increased usage of the canal network for freight activities.

The vision for freight in Greater Manchester is that a significant proportion of medium and long-distance flows will be transported to and from the city region by rail or water, for storage in warehouses within GM; and that urban deliveries and collections will be by low emission vehicles.

The high-level objective is to support and encourage economic growth whilst reducing the negative impact of such on the environment and population.

Cooperation platforms

Policy and political guidance are already well established. The Transport for Greater Manchester (TfGM) freight and logistics forum meets twice a year (>60 city, industry and academic representatives) and has met three times so far discussing urban deliveries and clean vehicles. The city drives it at present and it is gradually gaining more feedback and engagement and, the city hopes that, other stakeholders will take a greater role in leading. However, the number of participants is reducing slightly over time, need to think about how to keep the attention high, they want a (more regular) feedback on the policy introduced.

Strong political involvement is key, therefore now is the right time to get the mayor on board for Manchester. The implementation of a living lab could be useful to bring these elements together.

Role of academia, and cooperation with researchers: TfGM recently started to discuss with Manchester Metropolitan University, to see what can be done together. Also Esprit, TfGM's industry partner, has started discussing with the university about consolidation. Need to enlarge the scope of the discussion to the three types of actors together.

Evaluation/monitoring

Need to have both ex-ante and ex-post analysis. Often the 2nd is lacking. TfGM did it for the cycling infrastructure: they put counters to see, after the measure have been implemented, which was the impact. Something similar should be implemented for freight.

Next steps for a City Logistics Living Lab

- The freight and logistics forum should be considered as a "burning platform", to discuss urgent issues at stake (e.g. in London: the 2012 Olympic Games, closure of London Bridge).

- In London, TfL paid Westminster University to provide independent analysis and this was considered to be very helpful. TfGM should work more with the University of Manchester and with Manchester Metropolitan University.
- Creating communications channels with the wider industry can help in maintaining good working relationships, and increase participation.
- Need to build an Urban Freight wider team (now 3 to 5 people), to develop a coherent and complete action plan to include also safety, air quality, etc. and better understand what is needed from the industry side.
- Need to start with small scale projects to test a city logistics living lab environment, with selected operators and research partners.

Bonus input from London Transferability session (12 May 2017)

How to set up a successful partnership with industrial partners?

What do partners want? Shared goals for reduced congestion, possible with a higher motivated industry.

Added value of such a partnership:

- Time allocated, facilities and policy support.
- Communication and spreading the word.
- Greater flexibility in contracting for Metrolink to maximise the use of capacity of the asset.
- Facilitating contact with other community partners.
- Supporting experiments with industry partners, who might be attracted by the temporary exemption from rules.
- The industry sector can provide valuable and real data. If it shares it with the local authorities and the research partners, this can allow for the quantification of the impacts of the sector.

A comment from an industry representative: support from academics and public sector is valuable. However, backing of large private sector players could be good or bad (may strangle with bureaucracy).

How to replicate the CITYLAB London solution?

Main issues:

- Double handling – it could be overcome by offering a guaranteed on-time delivery
- Land availability - need at least short-term support from the city for use of land in the city to get this off the ground. However, since the Esprit site (transport and warehousing at Salford Quays) is 1.5 miles away, a site in the city centre is not necessarily needed.

To optimise the consolidation process:

- Could load on to barge from Esprit and use the journey for sorting the goods.
- Could also use the return leg for waste (combine buying power – driving source needed).

Customers/receivers do not switch – they have no advantage. It would be interesting to look at the distribution chain from a preferred supplier point of view rather than a one operator/many customer point of view? Possibly start with the Council/National Health Service/universities?

The concept should be sold to the industry, advertisement is needed. The double handling could increase the costs of the operations, so the advantages should be clear to the industry.

Graham Dixon (Esprit): *"The main takeaway for me from both days, and from listening to the challenges other cities faced, was Manchester is already in an excellent position to push this forward. With Gnewt Cargo, TfGM and Esprit on board we have the necessary prerequisites in place, so I am looking forward to being an active part of the Manchester project, inspired by CITYLAB"*.

Next steps

The TfGM ambition is to identify and deliver real solutions which demonstrate tangible benefits to the city region and are transferable and scalable. TfGM believes it has partners in place to help develop an electric vehicle model of consolidation, using the warehousing facilities at Esprit. The model envisages cooperation between TfGM, Esprit and Gnewt Cargo and possibly with independent analysis and advice from local university transport groups.

7.5.2 Transferability Analysis for Manchester

See methodology in section 6.1.1. Preferred solution: London

Support and constraint for success factors in context of the CITYLAB transfer city Manchester

The results of the assessment of 72 success factors show that generally the conditions in Manchester for a successful transfer of the CITYLAB implementations London are very good compared to other CITYLAB cities: 11 out of 72 success factors were rated as 'strong support' and 29 success factors were rated as 'support'. In contrast, only 4 success factors were rated as 'strong constraint' and 5 success factors were rated as 'constraint'. Twenty success factors are rated 'neutral' in context of the CITYLAB transfer city Manchester. For eleven success factors no answer was given.

Table 17 - Results of CITYLAB transferability analysis – Manchester

Logistics initiative	**Score**	**Min**	**max**
Urban consolidation centres/mobile depots	19 (4)	-86	86
Improving loads carried on goods vehicles (vehicle fill and return loads/empty running)	9 (2)	-42	42
Electric and other alternatively-fuelled goods vehicles	30 (3)	-94	94
Urban distribution property and land use planning interventions	2 (4)	-48	48
Partnership working in the supply chain operations	41 (2)	-68	68
Normalized score	**63.99** (1)	**0.00**	**100.00**
Figures in brackets illustrate rank of transfer city compared to CITYLAB cities			

London implementation in Manchester city context

There are nine success factors for which the importance was rated as 'essential' for the London implementation. None of them were rated as 'strong support' in the context of the CITYLAB transfer city Manchester. Nevertheless, the following success factors (SF) which are seen as 'essential' for the London implementation were rated as 'support' in the context of the CITYLAB transfer city Manchester:

- SF 2 We can keep capital costs for urban consolidation centres/mobile depots to a minimum
- SF 7 We can ensure sufficient product throughput to generate revenue
- SF106 There is pressure on logistics land uses in the urban area due to land values (countering logistics sprawl).

None of the success factors seen as 'essential' for the London implementation was rated as 'strong constraint' or 'constraint' in the in the context of the CITYLAB transfer city Manchester.

In general, the conditions in the CITYLAB transfer city Manchester are very good for the transfer of the London implementation. The chance for a successful adoption of the London implementation in Manchester is higher than in other CITYLAB cities.

However, to further improve the chance for a successful implementation of the London solution in Manchester, the City of Manchester might improve the support for the following success factors for which the importance was rated as 'Essential' or 'High importance' for the London implementation:

Essential success factors

- SF4 Industry can obtain appropriate location for the consolidation centre
- SF21 We can ensure close inter-company working (between shippers, carriers and receivers).
- SF47 There are refuelling/recharging networks available
- SF110 We can identify and protect suitable urban sites (regulation/safeguarding to counter logistics sprawl).

Success factors with high importance

- SF6 Industry can avoid the need for expensive handling systems
- SF10We can provide method for allocation of costs and benefits arising from centre between supply chain users.
- SF11 We can develop suitable charging mechanisms to reflect costs and benefits arising from centre.
- SF46 We have city access regulations (regulatory support) for clean vehicles.
- SF107There is public subsidy of costs of suitable urban logistics land (countering logistics sprawl).
- SF108 There is no political difficulty in limiting development that prevents logistics use in future (especially residential development).
- SF138We are able to find a common ground between disparate stakeholders and views.
- SF139 We can find a consensus of the partnership needs regarding focus and direction.

7.6 Pisa

7.6.1 A City Logistics Living Lab for Pisa

Plans and measures

The city of Pisa is adopting a SUMP that involves only partially a SULP. In fact, SUMP is mainly addressed to passenger transport, with tools for permits management, parking control, bike sharing, car sharing, and environment monitoring.

The actual SULP is looking at permits to access the low emission zone (LEZ) by freight vehicles, and foresees an initial step for an EVs van sharing scheme, integrated with the EV Car sharing. So far, Pisa has made available 5 EVs for urban freight, that can be reserved via WEB application by the good transportation companies, to access the LEZ without restrictions.

Regarding the tools already in place, the city of Pisa releases temporary permits to access the LEZ, during specific time windows; these permits are integrated into the general permits

program, to count the number of permits requested, and determine policies to release them. There are no tools and policies to control/count freight vehicles outside the LEZ but still inside the city.

Cooperation platforms

The involvement of stakeholders is related to NOVELOG project and the implementation of pilot actions, therefore at the moment there is not a permanent platform established.

Evaluation/monitoring

The pilot case implemented in NOVELOG consists of a software/hardware development infrastructure to collect data related to the registry of the freight vehicles, permits to access the LEZ, accesses through Flow Sensor gates, and to monitor the freight parking spots through specific sensors. A mobile application was built to help freight vehicle drivers identifying the best route to reach available Freight parking spots, and to know the available freight parking spots in that moment. The technology solutions put in place have been developed by Cubit and Kyunsis, industry partners of the city. The project also led to a first administration of questionnaires, addressed to third party carriers and to own-account carriers, to analyse the logistic context in Pisa.

Next steps for a City Logistics Living Lab

- Freight transport in Pisa is characterized by very few big players and many small businesses, managing their own transport. There is no "common vision" for the development of urban freight transport, and it is necessary more institutional commitment to plan and implement coherent and constant measures in term of transport policies.
- There is a need for a specific strategic plan in urban logistics (eg. "SULP"): so far, Pisa adopted a Sustainable Urban Mobility Plan (SUMP).
- The approach of city logistics living labs can be a positive and effective way of working for Pisa, to identify effective and shared measures by all local stakeholders; It could be useful to start with a small set of measures to test the answer of operators and their effective implementation. The first measures in which the City and Pisamo (the mobility agency of Pisa) could operate is regulation, then Pisamo could work to propose positive measures and incentives for operators.
- It’s necessary to create a permanent working group on urban freight transport with positive measures that could attract the main logistic operators and stakeholders.
- It’s important to be able to put pressure on the city's political decision-maker about these issues through a clearer presentation of the measures needed.
- More urban freight transport movements and flows should be monitored, using more effectively the technological solutions already available.
- It’s necessary to collect more data on urban logistics, currently insufficient, to increase the knowledge of the decision-makers in the field of urban freight transport, so that they will be able to define more precisely the priority measures to be implemented in the city of Pisa.

7.7 Prague

7.7.1 A City Logistics Living Lab for Prague

Plans and measures

Prague does not have any city logistics plan or similar documents. General goals are an effective logistics chain and reduced impact on the environment and inhabitants. The ambition is to use rail, water and bike transport for urban freight transport more than today.

The SUMP is under preparation, where some general targets are defined for the freight sector. The SUMP has three parts: analysis, strategy, proposal for an action plan to 2023 – the last part is still under preparation. A strategy for city logistics should be ready by 2018, including analysis, strategy (completed in June 2018) and proposal action plan (after June 2018).

Cooperation platforms

As for the preparation of the SUMP, Prague Institute of Planning and Development (IPR) is involved at a strategic level, but the implementation phase is in the hand of the municipality.

The city of Prague already had some meetings with UPS and DPD, that proactively asked for that. They already have their own sustainability strategies in place, and they would like to know more about the local strategy for city logistics, in order to make their business choices, but the city does not have a defined plan yet. Some meetings are planned for January 2018, in order to identify some targets together.

For the SUMP implementation process, 60 participants have approved the proposed targets. The municipality is satisfied about the stakeholder involvement in the SUMP preparation. Three stakeholder meetings have been organized so far, and there will be two or three more. However, no freight stakeholders have been involved so far. At first, their participation was not considered necessary, now the municipality would prefer to have a specific stakeholders meeting on freight.

In Prague there is a private platform called Ecologistics, composed of stakeholders from the city logistics sector. Messenger, the industry partner involved in CITYLAB, belongs to this platform. They were also partner in a pilot on cargo-bikes of the EU project CycleLogistics Ahead.

In terms of relationships with the research sector, the municipality of Prague has many agreements with some universities, in order to carry out studies for them. But for city logistics there is not a relationship in place, and probably the university is not even studying city logistics from the perspective of the city.

Evaluation/monitoring

Private data are not collected, but many stakeholders belonging to the Ecologistics platform are keen on sharing data.

A data collection process of parking areas for city logistics is currently in place – they will have data on the real situation of parking situation – ready by end of 2017. The technical part of the survey was prepared by IPR, but a private company is implementing it.

Next steps for a City Logistics Living Lab

- Need to create a group of urban freight transport stakeholders, regularly involved in the discussion of the freight issues, especially in the SUMP process definition.
- Problems with illegal parking, emissions from small companies (own account, etc.): need to gather point of view of stakeholders in terms of problems and needs, for example for not qualified drivers.
- Important to strengthen the link with the research sector, in particular with local universities, to make agreements with them and commission dedicated urban freight studies, in particular for data collection. This could be done setting up a cooperation with the Ecologistics platform, keen on sharing useful data.

7.7.2 Transferability Analysis for Prague

See methodology in section 6.1.1. Preferred solution: Paris

Support and constraint for success factors in context of the CITYLAB transfer city Prague

The results of the assessment of 89 success factors show that generally the conditions in Prague for a successful transfer of the CITYLAB implementations Paris are on an average level compared to other CITYLAB cities. The assessment of the survey reveals, that none out of 89 success factors was rated as 'strong support' and eleven success factors were rated as 'support'. Furthermore, none of the success factors was rated as 'strong constraint' and only one success factors was rated as 'constraint'. With 77 success factors, most success factors are rated 'neutral' in context of the CITYLAB transfer city Prague. This limits the validity of the analysis. Nevertheless, all questions have been answered.

Table 18 - Results of CITYLAB transferability analysis – Prague

Logistics initiative	**Score**	**Min**	**max**
Urban consolidation centres/mobile depots	0 (7)	-86	86
Improving loads carried on goods vehicles (vehicle fill and return loads/empty running)	8 (2)	-42	42
Electric and other alternatively-fuelled goods vehicles	9 (6)	-94	94
Urban distribution property and land use planning interventions	4 (1)	-48	48
Non-road modes	2 (5)	-90	90
Partnership working in the supply chain operations	6 (6)	-68	68
Normalized score	**53.43** (5)	**0.00**	**100.00**
Figures in brackets illustrate rank of transfer city compared to CITYLAB cities			

Paris implementation in Prague city context

There are 21 success factors for which the importance was rated as 'essential' for the Paris implementation. None of them were rated as 'strong support' in the context of the CITYLAB transfer city Prague. Nevertheless, the following two success factors (SF) which are seen as 'essential' for the Paris implementation were rated as 'support' in the context of the CITYLAB transfer city Prague:

- SF 44 There are corporate Social Responsibility (CSR) commitments and concerns about corporate image of shippers and receivers
- SF 110 We can identify and protect suitable urban sites (regulation/safeguarding to counter logistics sprawl).

None of the success factors seen as 'essential' for the Paris implementation was rated as 'strong constraint' or 'constraint' in the in the context of the CITYLAB transfer city Prague.

In general, the conditions in the CITYLAB transfer city Prague are good for the transfer of the Paris implementation. The chance for a successful adoption of the Paris implementation in Prague is on average level compared to other CITYLAB cities.

However, to further improve the chance for a successful implementation of the Paris solution in Prague, the City of Prague might improve the support for the following success factors for which the importance was rated as 'Essential' or 'High importance' for the Paris implementation:

Essential success factors

- SF3 Industry can generate revenue from value added services
- SF5 It will be possible to make use of existing depot/warehouse space to reduce capital costs
- SF45 We have regulatory vehicle emissions standards that favour the use of electric vehicles.
- SF46 We have city access regulations (regulatory support) for clean vehicles.
- SF104 We have land use planning interventions implemented alongside free-market approach in land acquisition and development - by easing planning rules and conditions for suitable distribution centre and warehousing facilities.
- SF105 We see a risk of making city less attractive than its urban competitors (through the requirement of inclusion of loading regulations for large buildings and freight travel planning which can reduce the rentable space in a commercial building).
- SF106 There is pressure on logistics land uses in the urban area due to land values (countering logistics sprawl).
- SF107 There is public subsidy of costs of suitable urban logistics land (countering logistics sprawl).
- SF108 There is no political difficulty in limiting development that prevents logistics use in future (especially residential development).
- SF109 We can ensure that city planning authorities take initiative/lead.
- SF111 We can ensure facilitation of acquisition of building permits in some cases.
- SF112 We can quantify/ forecast freight trip generation rates associated with different types of land use (freight travel planning for major sites).
- SF113 We have an understanding in freight transport compatibility of different land use types (mixed use developments countering logistics sprawl).
- SF114 We promote innovation in architecture and building techniques for urban warehouses.
- SF116 We can ensure clear leadership from major public sector stakeholder backing modal shift.
- SF124 Industry can achieve unit transport costs (including the last mile delivery costs) equivalent to direct delivery by road.
- SF132 Industry has efficient goods handling/terminal equipment.
- SF142 We can ensure specific actions and tasks with timescales in order to avoid becoming a talking shop.
- SF145 We are able to find a chair and administrator to direct and take forward the work of the partnership.

7.8 Rogaland County

7.8.1 A City Logistics Living Lab for Rogaland County

Plans and measures

The regional transport strategy for Rogaland defines regional guidelines for future transportation for urban, suburban and rural areas of the county. Objectives are the reduction of vehicles, improvement of air quality, a better infrastructure to improve the performances of the network.

The new transportation plan clearly distinguishes between passenger and freight transportation. It defines a framework helping to develop and support a sustainable and efficient urban logistics system. Urban areas have committed to develop local plans for city logistics, and the county is part of the planning for one of the cities (the capital). Currently, they are not so far in the implementation phase.

In Rogaland city, there are two persons working full time on city logistics – one in the planning sector and one in the environmental sector of the municipality. The urban freight department of the county coordinates their effort.

In Norway, the county is the responsiblebody for public transportation. They are developing a SUMP, which does not include freight.

County political level is supporting, not clear yet at municipal level.

Cooperation platforms

A few logistics organisations are currently working close with the county, now also retailers have been closely involved to feel the ownership of changes. There is a project going on, focused on the in-flows of goods to the city centre. The steps of the project are the following:

1) Survey with ground floor businesses in the city centre - 90% response rate.
2) Workshop with retailers, logistic operators, municipality, research partners.
3) Establishment of smaller working groups, to develop specific measures they would like to implement.

There is a very high response rate and active engagement of both retailers and operators. The research partners are responsible for quality assurance of the questionnaires and the elaboration of data. There is a direct link with NORSULP project.

Evaluation/monitoring

Rogaland County carried out a study that revealed that 2/3 of the goods is transported by 1/3 of the vehicles. Two surveys, one with retailers, and one with logistics operators, confirmed this tendency. The aim is invert these ratios.

There are permanent traffic counts by camera and road detectors. However, it is not possible to establish whether commercial vehicles are trucks or buses.

LL approach and next steps for a City Logistics Living Lab

- Rogaland County has developed very good relationships with both public and private stakeholders, but there is lack of political involvement and knowledge about the urban freight sector. Therefore, the participation in a project like CITYLAB has been (and will be) important to establish a European network and raise awareness.
- The survey and the workshop helped to improve the dialogue with stakeholders, now it is important to maintain it constant and apply this scheme on a regular basis to future initiatives, including the involvement of urban freight stakeholders in the SUMP process, neglected so far.
- After attending the workshop in Rome, they started thinking about reverse logistics initiatives. They should involve their research partners to further investigate implications at local level.

7.8.2 Transferability Analysis for Rogaland County

See methodology in section 6.1.1. Preferred solution: Rome

Support and constraint for success factors in context of the CITYLAB transfer city Rogaland Region

The results of the assessment of 46 success factors show that generally the conditions in Rogaland Region for a successful transfer of the CITYLAB implementations Rome are good compared to other CITYLAB cities: Seven out of 46 success factors were rated as ‘strong support’ and 17 success factors were rated as ’support’. In contrast, only one success factor was rated as ‘strong constraint’ and five success factors were rated as ‘constraint’. Nine success factors were rated ‘neutral’ in context of the CITYLAB transfer city Rogaland Region. For seven success factors no answer was given. This does not limit the validity of the analysis.

Table 19 - Results of CITYLAB transferability analysis – Rogaland Region

Logistics initiative	Score	Min	max
Improving loads carried on goods vehicles (vehicle fill and return loads/empty running)	14 (1)	-54	54
Electric and other alternatively-fuelled goods vehicles	5 (5)	-42	42
Partnership working in the supply chain operations	35 (4)	-102	102
Normalized score	**62.02** (5)	**0.00**	**100.00**
Figures in brackets illustrate rank of transfer city compared to CITYLAB cities			

Rome implementation in Rogaland Region city context

There are six success factors for which the importance was rated as 'essential' for the Rome implementation. None of them was rated as 'strong support' in the context of the CITYLAB transfer city Rogaland Region.

The following success factors (SF) which are seen as 'essential' for the Rome implementation were rated as 'support' in the context of the CITYLAB transfer city Rogaland Region:

- SF 22 We will avoid the inclusion of goods that are time-critical.
- SF 135 We have the support of public and private senior managers.
- SF 136 We are able to identify appropriate funding to support administrative tasks and actions.

None of the success factors seen as 'essential' for the Rome implementation was rated as 'strong constraint' or 'constraint' in the in the context of the CITYLAB transfer city Rogaland Region. This underlines the good conditions in Rogaland Region for the Rome implementation.

In general, the conditions in the CITYLAB transfer city Rogaland Region are good for the transfer of the Rome implementation. Rogaland Region is ranked 5 out of seven, but the overall normalized score is close to the score of the CITYLAB cities. The chance for a successful adoption of the Rome implementation in Rogaland Region is thus relatively good compared to CITYLAB cities.

However, to further improve the chance for a successful implementation of the Rome solution in Rogaland Region, the Rogaland Region might improve the support for the following success factors for which the importance was rated as 'Essential' or as 'High importance' for the Rome implementation:

Essential success factors

- SF 24 We will focus on operations with balanced flows of product in both directions (for reducing empty running).
- SF26 We will focus on goods that can be easily combined in direct and reverse flows in terms of size, types (linked to safety issues) and packaging.
- SF44 There are corporate Social Responsibility (CSR) commitments and concerns about corporate image of shippers and receivers

High importance

- SF140 We are able to manage people's expectations based on realistic outlooks.
- SF148 We have online meeting tools to assist and increase participation in national and international partnerships available.

- SF149 There is social diffusion among relevant community members of participants' role and achievements obtained via dedicated and general-purpose media.
- SF150 We can implement multi-purpose gamification and stakeholder engagement dedicated tools.
- SF151We can develop a third-party green logistic integrated certification measurement system (linked to both previous points).

7.9 Turin

7.9.1 A City Logistics Living Lab for Turin

Plans and measures

The City of Turin signed an agreement with the Italian Ministry of Transport aimed at testing innovative solutions in last-mile delivery. The protocol foresees the involvement of all the interested players; the adoption of measurable objectives in terms of freight delivery, energy efficiency, CO2 reduction, traffic reduction; the voluntary adhesion to the innovative tests and the adoption of an incentives system; the economic sustainability of the projects. The Mobility Department of the City of Turin thus engaged in a project aimed at the gradual replacement of the freight vehicles and the rationalization of delivery trips.

The goal of Turin is to implement the provisions of the SUMP adopted by the City Council in 2011, and to update it, including the freight dimension linked to the new Low Emission Zone. It is going to be developed in the framework of the SOLEZ project co-funded by the INTERREG CENTRAL EUROPE programme. A "Freight Quality Partnership" has been signed by the City, Chamber of Commerce and all interested associations. The rationale behind the document is to reward all users who implement the required measures (green vehicles, full load, on board units) in order to make freight transport more efficient and sustainable. The Master Plan for Torino Smart City Plan also envisages a part dedicated to freight.

Currently only one person is working in the freight department, but the number is likely to increase in the future. There is a direct contact with the deputy mayor and there is the political willingness to keep city logistics high in the agenda.

Cooperation platforms

Every three months there is a meeting on different topics with UF stakeholders, including associations and all the main companies and logistics operators. The city wants the private sector to be active part of the decision-making process. In December 2017 they opened 4-5 tables with several stakeholders, with delivery operators, mobility services, retailers, politicians, to discuss the policy implications of the introduction of a low emission zone.

The Living Lab they set up for the NOVELOG project pilot involves different companies for a total of 50 vehicles. A special permit was created for vehicles of companies joining the recognition scheme of the municipality. They can access the city centre during extended time windows and can use bus lanes. In exchange, vehicles have to respect high emission standards, install an on-board unit connected with the central traffic management system, and anonymously share some data, useful to plan for the last mile and to define new policies for the future, i.e. congestion charging.

Data is also used for research, in particular by the polytechnic institute of Turin, and the municipality is connecting together all the Horizon 2020 research projects it is involved in.

Evaluation/monitoring

The municipality follows several projects. Data target is very complicated, but they try to use their stakeholder and research network to analyse the data.

Within projects, they carried out ex-post analysis of the pilots, that in the case of NOVELOG proved to have a positive impact in terms of reduction of CO_2 and other pollutants' emissions. They aim to expand the use of on-board units, in order to have more reliable data and real-time information about the overall UF fleet circulating in the city.

Next steps for a City Logistics Living Lab

- The city of Turin already involves the main UF stakeholders in the discussion about its urban logistics policies, with an innovative system of rewards and incentives that have given an excellent result in the pilot phase.
- A potential area of improvement could be the direct involvement of small businesses and own account, which until now seem not to have actively participated in the discussion tables.
- Given the high position of freight in the political agenda, and the imminent revision of the local SUMP, the freight department should take the opportunity to give more emphasis to freight in the new SUMP.
- Following the success of the NOVELOG pilot, it is important to take advantage of the momentum and upscale the measure, as well as encourage data sharing and on board unit installation among operators.

7.9.2 Transferability Analysis for Turin

See methodology in section 6.1.1. Preferred solution: Rome

Support and constraint for success factors in context of the CITYLAB transfer city Turin

The results of the assessment of 46 success factors show that in general the conditions in Turin for a successful transfer of the CITYLAB implementations Rome are quite weak compared to other CITYLAB cities: Only two out of 46 success factors were rated as 'strong support' and six success factors were rated as 'support'. In contrast, nine success factors were rated as 'strong constraint' and one success factor was rated as 'constraint'. 21 success factors are rated 'neutral' in context of the CITYLAB transfer city Turin. For seven success factors no answer was given.

Table 20 - Results of CITYLAB transferability analysis – Turin

Logistics initiative	**Score**	**Min**	**max**
Improving loads carried on goods vehicles (vehicle fill and return loads/empty running)	-9 (7)	-54	54
Electric and other alternatively-fuelled goods vehicles	-2 (6)	-42	42
Partnership working in the supply chain operations	-13 (7)	-102	102
Normalized score	**44.30** (7)	**0.00**	**100.00**
Figures in brackets illustrate rank of transfer city compared to CITYLAB cities			

Rome implementation in Turin city context

There are six success factors for which the importance was rated as 'essential' for the Rome implementation. None of them was rated as 'strong support' or support in the context of the CITYLAB transfer city Turin.

The following success factors which were seen as ‘essential’ for the Rome implementation were rated as ‘strong constraint’ in the in the context of the CITYLAB transfer city Turin:

- SF 22 We will avoid the inclusion of goods that are time-critical.
- SF135 We have the support of public and private senior managers.

None of the success factors seen as ‘essential’ for the Rome implementation was rated as ‘constraint’ in the in the context of the CITYLAB transfer city Turin.

In general, the conditions in the CITYLAB transfer city Turin are well below average and thus quite weak for the transfer of the Rome implementation. The overall normalized score is below the score of all CITYLAB cities. The chance for a successful adoption of the Rome implementation in Turin is thus relative low compared to CITYLAB cities.

To further improve the chance for a successful implementation of the Rome solution in Turin, the City of Turin might improve the support for the following success factors for which the importance was rated as ‘Essential’ or as ‘High importance’ for the Rome implementation:

Essential success factors

- SF22 We will avoid the inclusion of goods that are time-critical.
- SF24 We will focus on operations with balanced flows of product in both directions (for reducing empty running).
- SF26 We will focus on goods that can be easily combined in direct and reverse flows in terms of size, types (linked to safety issues) and packaging.
- SF44 There are corporate Social Responsibility (CSR) commitments and concerns about corporate image of shippers and receivers
- SF135 We have the support of public and private senior managers.
- SF136 We are able to identify appropriate funding to support administrative tasks and actions.

High importance

- SF139 We can find a consensus of the partnership needs regarding focus and direction.
- SF140 We are able to manage people’s expectations based on realistic outlooks.
- SF141 The partnership should work on a variety of issues.
- SF143 We can allocate clear responsibility for actions across members.
- SF145 We are able to find a chair and administrator to direct and take forward the work of the partnership.
- SF148 We have online meeting tools to assist and increase participation in national and international partnerships available.
- SF149 There is social diffusion among relevant community members of participants’ role and achievements obtained via dedicated and general-purpose media.
- SF150 We can implement multi-purpose gamification and stakeholder engagement dedicated tools.
- SF151 We can develop a third-party green logistic integrated certification measurement system (linked to both previous points).

8 Findings and conclusions

CITYLAB Deliverable 2.3 identifies success factors for logistics initiatives, that have been used to characterise the seven CITYLAB implementations.

Deliverable 5.6[18] reports the detailed results on the importance of success factors for each CITYLAB implementation: each CITYLAB implementation leader provided a rating on the importance of success factors for the logistics initiatives belonging to her/his local implementation, according to the following scale:

- Not relevant at all 0
- Low importance 1
- Medium importance 2
- High importance 3
- Essential 4

This analysis has allowed the assessment of the enabling and hampering factors for the potential transferability of the CITYLAB implementations. At this point, CITYLAB aims to assess whether these solutions are transferable in practice to the TCRs, taking account of their potential, given by the success factors. Therefore, the CITYLAB TCRs were asked to assess the local attitude towards the success factors of their preferred CITYLAB implementation, reflecting on the concrete possibilities to face constraints or support from the local freight environment with respect to the solution. The answers provided were analysed and discussed for each of them in a call with i) CITYLAB partners, ii) local authority, and iii) local industry partner.

The findings indicate that, for the majority of the TCRs, there is a high potential for the adoption of the preferred CITYLAB solution: in particular, the conditions for the transfer of the London implementation to Budapest and Manchester are very good, as well as the implementation of the Oslo solution to Delft, and the Paris solution to Flanders Region. The transposition of the Rome solution to Rogaland needs some dedicated interventions for the enablement of the related success factors. This is also the case for Madrid and Turin, that are requested to adopt a substantial modification of the local conditions to successfully implement the CITYLAB solutions proposed in London and Rome, respectively. Finally, the city of Prague presents an insufficient knowledge of its local freight-related characteristics and trends, that have hindered a sound assessment of the local constraints and supporting factors.

This overview of the Transferability Analysis results, combined with what was discussed first-hand with the TCRs about the adoption of the CITYLAB LL approach, makes it possible to discern some implications. First of all, the fact of evaluating the local attitude towards the success factors of the preferred implementation was in itself a useful exercise for many cities, in particular for those that do not have a strategy and priorities defined for UFT, as in the case of Prague. Once the supporting elements and in particular the constraints have been clarified, it is important that these are addressed and solved with the local stakeholders. A consultation and engagement platform, like the one proposed in the LL approach, is the ideal structure for this type of dialogue. While some TCRs already have similar platforms, which include industrial partners but also research centres, others have not yet started a structured discussion with other parties. This discussion can be supported by the MAMCA methodology, illustrated to the TCRs during a dedicated workshop in Brussels, which serves to represent and align the different points of view of the stakeholders.

It is important to clarify that even the cities that have obtained the most encouraging results in the Transferability Analysis need to adapt the solutions to their local context, with the approval and support of the actors and a strong political will behind them. A positive example is the case of Madrid: although the Transferability Analysis has provided non-ideal results, the attitude of

[18] Appendix A

the actors involved is positive: they feel inspired by the London implementation, but they are also aware and eager to adapt it to the local context, taking into account the Madrid environmental strategy - supported by the SUMP - and with the support and integration of other projects still in progress. Chapter 7 provides an overview of how some TCRs, among the most active, intend to continue the work started in CITYLAB (‘Next steps’ for Budapest, Madrid, Manchester).

CITYLAB and its Transferability Plan was limited in time, and had few (including economic) resources available. The main intent was to involve cities outside the project and start with them a path that made them reflect on the potential of the LL methodology and the solutions tested in the project. The results achieved are encouraging, and the support phase of the cities has ended positively. As far as possible, CITYLAB partners will continue to support TCRs in the framework of other initiatives, like future research projects and city networks’ dialogue and actions.

References

CITYLAB (2017) “Deliverable 5.4. Sustainability analysis of the CITYLAB Solutions”. Retrieved from http://www.citylab-project.eu

Dziekan, K., Riedel, V., Müller, S., Abraham, M., Kettner S., Daubiet, S. (2013) “Evaluation Matters, A Practitioners’ guide to sound evaluation for urban mobility measures”. Waxmann Verlag GmbH, Münster

Hüging, H., Glensor, K., Lah, O. (2014) “The TIDE Impact Assessment Method for Urban Transport Innovations: A Handbook For Local Practitioners”, TIDE (Transport Innovation Deployment for Europe) Project

ANNEXES

Annex 1: Description of Task 6.3 Transferability to non-CITYLAB cities (Task leader: POLIS)

"A group of non-CITYLAB cities (7 including 1 public and 1 private partner representative per non-CITYLAB city) will be established, to support the transfer of the living-lab approach and to exchange on the implemented CITYLAB measures. Non-CITYLAB cities representatives will be selected according to their interest in and activities on innovative urban freight solutions, representing a balanced mix of 'advanced' and 'less advanced' candidates. Special attention will be paid to attracting non-CITYLAB cities from countries which are not represented in the project consortium, including Poland, Hungary and the Czech Republic. Some of the follower cities identified under 7.3 could also become involved.
A tailored plan on the different activities with the non-CITYLAB cities will be defined and updated throughout the project. These different activities could include training on the living lab approach (see task 6.1), direct exchange with the CITYLAB cities, including technical visits to the demonstration sites, and access to specific project deliverables and events. In addition, the non-CITYLAB cities will provide input to the project partners on relevant activities and tasks within the project, such as the identification of key trends influencing urban logistics, the development of guidelines for setting living labs or the CITYLAB dashboards".

Annex 2: City Logistics Living Labs: Questionnaire for transfer cities, September 2017

Introduction to this questionnaire

The objective of the CITYLAB project is to develop knowledge and solutions that result in roll-out, upscaling and further implementation of cost effective strategies, measures and tools for emission free city logistics.

What is a City Logistics Living lab?

There is an increasing interest of city logistics in the public domain due to the associated negative impacts on congestion, emissions, noise, and the use of space in dense urban areas. Many solutions are trialled to make urban logistics processes and transport more sustainable. However, a big change towards a more sustainable urban freight transport system did not yet occur: very often the measures/technologies/innovations do give a very positive result, but only within limited period of time and are not widely picked up by the big urban freight transport community improving an urban freight transport system in a long term.

The Living Lab concept looks beyond the traditional set-up of pilots. It changes the emphasis from the solution as an isolated object to the process of integration with its environment. This environment facilitates cooperation between real-world stakeholders, forming favourable conditions which speed up development and roll out of innovative solutions. In a City Logistics Living Lab, citizens, governments, industry and research partners can co-design and co-create new policies, regulations and actions through a shared long-term goal.

Why City Logistics Living Labs?

The underlying assumption is that by forming city logistics living labs, more can be achieved than by simply demonstrating that an urban transport solution can work. The Living Lab approach brings various urban freight transport stakeholders together in the continuous exchange and communication process, thus, ensuring that implementations are adapted to local circumstances and are deployed where best possible, increasing possibilities of scaling up and faster roll out of the successful measures. Within Living Lab approach, urban freight is seen as an integrated part of the long-term city policy with a focus on its continuation and non-disruptiveness. Involvement of various stakeholders in the consultation processes facilitate their participation with innovative solutions, when the “windows of opportunities for transport innovations” do occur. The overall knowledge base on the urban freight flows in the cities improves through the continuous monitoring and evaluation of transport freight measures, facilitating the transferability of results between different urban freight measures.

Overall, the living lab approach aims to contribute to innovation deployment in city logistics, not necessarily by testing solutions never tested before, but in establishing new ways of working that lead to permanent and long-term change. The ambition is to establish a process in which implementations are tried out, supported by dynamic prediction and evaluation tools, where the working environment is adapted to make it work, and where barriers are directly dealt with to have a maximum impact.

The Living lab city environment and implementation actions

The Living Lab approach is based on an idea that successful upscaling of innovation requires a supporting environment on the city or neighbourhood level. Therefore, a city logistics Living lab is both the overall guiding city environment and targeted real-life implementations of urban freight measures and solutions. The implementations are placed in the heart of the supporting environment, which can be described as:

- An existence of the political and policy support, defined within urban freight strategy/plan and supported with a specific set of priority measures, creating “windows of opportunity” for the innovations increasing the chances for wider uptake and roll out;

- Established regular cooperation and communication forms between the main stakeholders involved in urban freight innovations, including, at least: local authorities, research institutes and industry;
- Continuous monitoring and analysis of data on urban freight, that facilitate the decision-making process.

Living Lab environment provides the local authorities, industry partners and researchers with an opportunity to work together at a more general urban freight level. If implementation is built upon the learnings from the previous trails, if it falls within a "window of opportunity", supported by the current policy and strong cooperation between local authorities, industrial and research partners - it has increased chances for the wider uptake and roll out.

CITYLAB transferability city questionnaire

In order identify the current context within which transport innovations are implemented within this city, we would like to assess what is the status of the Living Lab environment your city. Therefore, this questionnaire aims at mapping the urban freight status with regard to:

- City logistics strategy and implementations
- Stakeholder cooperation on urban freight in your city
- City logistics data collection and monitoring.

This questionnaire includes 8 questions and 5 pages (excluding the front-page). We ask you to provide only an indication on what kind of data / resources are available. There is no need to actual send the data. This questionnaire contains the following subjects: contact details, urban freight transport strategy, implementations and actions (measures), monitoring and data collection on traffic, environment, and spatial, as well as other data / documents relevant to urban freight transport, and previous studies investigating this sector (e.g. stated preference).

Please fill in your answers in the appropriate (grey) boxes and send it to us in order to have a productive discussion during the upcoming Skype call. If you have any questions in filling in this questionnaire, please contact us (nina.nesterova@tno.nl).

1. Contact details

City	
Contact person (name)	
Contact person (e-mail address)	
Contact person (telephone)	
Date	

2. Urban freight transport (UFT) strategy

Please fill in 'not available' if this requested input is not available in your city

	Short description, date published	Web-link (if available)
UFT ambition (long term, >7 years)		
UFT goal (medium term, 2-7 years)		
UFT targets (short term, < 2 years)		
UFT action plan		
UFT other policy document, i.e.:		

3. Urban freight transport implementations and actions (*measures*)

Both relevant policy measures (specifically aiming at urban freight transport or only affecting urban freight transport) and other relevant initiatives or projects. You can add more measures by copying the last row.

Please fill in 'not available' if this requested input is not available in your city

	Short description (including if available e.g. timeline and planning, expected impact, resources and expected costs, involved stakeholders, implementation and enforcement plan, web-link, results from evaluation or monitoring, etc.).
Measure 1	
Measure 2	
Measure 3	
Measure 4	
Measure 5	
Measure 6	
Measure 7	
Measure 8	
Measure 9	
….	

3. Stakeholder involvement in the urban freight topics

Please describe stakeholder involvement in the decision making process on urban freight in the city (what form stakeholder involvement is organised (forum/workshops/ other), what geographical scope, what kind of communications, frequency of communication, contribution to decision making process, integration of the feedback in the policy making process etc.)

4. Monitoring and data collection: *traffic*

Please fill in 'not available' if this requested input is not available in your city. Under results please mention actual data available for this indicator.

	Short description and results	How often collected and link or report available?)
Traffic counts (and how)		
Split of freight vehicles (in city or nationally) by engine type (e.g. EURO norm)		
Vehicle km per year in the city (total by freight vehicles and non-freight, and split by vehicle type, e.g. artic HGV, rigid HGV, van, car, bus etc.).		
Tonnes of freight lifted in the city (year)		
Tonne-kilometres performed in the city		
Empty running data for freight vehicles		
Vehicle load factors for freight vehicles		
(Average) journey distances for freight vehicles		
Percentage lorries / vans		
Data on congestion		
Freight modal split (road, rail, water in vehicle km, tonne-km or tonnes lifted)		
Data on enforcement (e.g. illegal parking, violation of low traffic zone, low emission zones, etc.)		

5. Monitoring and data collection: *emissions and environment*

	Short description and results	How often collected and link or report available?)
(Estimates) on CO_2 emissions		
(Estimates) on local emissions (PM10, NOx, …)		
Air quality		
Noise emissions		
Traffic safety		

6. Monitoring and data collection: *spatial*

	Short description and results	How often collected and link or report available?)
(Estimates) commercial activities in city (e.g. floorspace / FTE)		
Total non-residential floorspace in the city		
Total residential floorspace in the city		
(Estimates) logistics activities (in m^2)		
Estimates land use (residential area, commercial area, industrial area, etc.)		
Loading zones and bays (and usage)		
Size of the city (in km^2)		
Population of the city		

7. Other data / documents relevant to urban freight transport

Please mention relevant data or documents if these did not fit any of the previous questions

	Short description
Used KPIs, monitoring approaches	
Legal and ethical issues (legal framework	
Other related running initiatives (e.g. from interest groups, national level)	
Stated preferences data / studies	
Any other available relevant / important document	
Relevant / important tools or models (to collect data, or estimates effects)	

Annex 3: CityLab Transferability Analysis. Questionnaire for transfer cities – sample for Budapest BKK

This questionnaire is part of the CITYLAB transferability analysis. It will help to understand the chances for a successful transfer of implementation. Fields of action for the enhancement of these chances will be conducted.

How to fill in this questionnaire?

You will find in the questionnaire different logistics initiatives which can be part of the CITYLAB implementation you are aiming to adopt.

To answer the questionnaire for each logistics initiative, please focus on the specific field of action. Rate the statements for the success factors of the logistics initiative given in the questionnaire with regards to your city. Please mark whether the given success factors are a constraint or whether there is support in the context of your city. If necessary please check with your partners. They do not need to fill in the questionnaire on their own, but may be consulted.

- "*Support*" in the context of this questionnaire means that there are actions taken to provide the right conditions for this success factor.
- "*Constraint*" means there is no support for this success factor possible and there are reasons preventing the city to fulfil this success factor.
- Choose "*Neutral*" if you see that there is neither particular constraint nor support for this success factor in the context of your city.
- You may choose "*No answer*" if the question cannot be answered from the point of view of your city.

How will the data be used?

Beforehand we ask the CITYLAB cities to judge on the importance of the given success factors in the context of their CITYLAB implementation. We will analyse your answers on the support and constraint together with the CITYLAB cities' answers on the importance of the success factors to evaluate the changes for a successful implementation of the chosen CITYLAB solution in your city.

Please mark your answers in the grey boxes and send it to us in order to have a productive discussion during the upcoming Skype call. If you have any questions in filling in this questionnaire, please contact us (jens.klauenberg@dlr.de).

Initiative: Urban consolidation centres/mobile depots

Please rate the following statements with regards to your city.

Success factors	Strong constraint	Constraint	Neutral	Support	Strong support	No answer
We can keep capital costs for urban consolidation centres/mobile depots to a minimum						
Industry can generate revenue from value added services						
Industry can obtain appropriate location for the consolidation centre						
It will be possible to make use of existing depot/warehouse space to reduce capital costs						
Industry can avoid the need for expensive handling systems						
We can ensure sufficient product throughput to generate revenue						
Suitably sized vehicles will be selected to make deliveries from centre.						
There will be two-way flows on vehicles delivering from the centre.						
We can provide method for allocation of costs and benefits arising from centre between supply chain users.						
We can develop suitable charging mechanisms to reflect costs and benefits arising from centre.						
We can ensure there is a single site owner/landlord.						
We have contractual obligations to make receivers use the centre.						
We have regulatory obligations to make receivers use the centre.						
We will implement related supportive urban freight transport measures.						
We can provide public financial support during start-up phase.						
There is public funding for consolidation centre impacting positively on traffic and environment available.						
There will be a focus on product types with limited logistics handling / storage requirements.						
There will be planning systems / flow optimisation when handling goods from and for multiple users.						

Initiative: Improving loads carried on goods vehicles (vehicle fill and return loads/empty running)

Please rate the following statements with regards to your city.

Success factors	Strong constraint	Constraint	Neutral	Support	Strong support	No answer
We can ensure close inter-company working (between shippers, carriers and receivers).						
We will avoid the inclusion of goods that are time-critical.						
We will avoid goods with specialised transport requirements (for reducing empty running).						
We will focus on operations with balanced flows of product in both directions (for reducing empty running).						
We will avoid operations that are subject to complex scheduling constraints.						
We will focus on goods that can be easily combined in direct and reverse flows in terms of size, types (linked to safety issues) and packaging.						
Industry will have good advance knowledge and there will be warning for carriers about future demand for product movement and available loads.						
There will be desire to reduce vehicle activity and negative impacts (as well as to achieve cost savings) among supply chain partners.						
There will be changes in maximum permissible weight / size dimensions for vehicles (in general or in given urban location).						
We can standardise processes via iso-modular units.						
Design/configuration of vehicle carrying space suits carried goods and return loads.						
There is suitable handling equipment to make it easier and quicker to load and unload vehicles.						
Storeowners are willing to order online.						
Storeowners are able to pay online (internet connectivity / registered bank account or credit card available).						
Storeowners have a wide product assortment.						

Initiative: Electric and other alternatively-fuelled goods vehicles

Please rate the following statements with regards to your city.

Success factors	Strong constraint	Constraint	Neutral	Support	Strong support	No answer
There are comparative purchase prices of clean vehicles.						
There are comparative fuel prices for electric vehicles.						
There are comparative maintenance and servicing costs for electric vehicles.						
We can cover capital costs associated with recharging systems.						
We can make vehicle information available of a sufficiently wide and detailed basis.						
Comparative payload of clean vehicles is given (weight and volume).						
Comparative vehicle reliability for electric vehicles compared with conventional vehicles is given.						
Types of operating patterns of carrier (distance, duration, intensity of vehicle use) fit electric vehicles.						
We can provide public support for clean vehicles.						
There are corporate Social Responsibility (CSR) commitments and concerns about corporate image of shippers and receivers						
We have regulatory vehicle emissions standards that favour the use of electric vehicles.						
We have city access regulations (regulatory support) for clean vehicles.						
There are refuelling/recharging networks available.						
Green electricity is available.						
There is sufficiently wide range of vehicle availability by vehicle manufacturers given.						
Time taken for refuelling/recharging fits operating patterns.						

Initiative: Urban distribution property and land use planning interventions

Please rate the following statements with regards to your city.

Success factors	Strong constraint	Constraint	Neutral	Support	Strong support	No answer
We have land use planning interventions implemented alongside free-market approach in land acquisition and development - by easing planning rules and conditions for suitable distribution centre and warehousing facilities.						
We see a risk of making city less attractive than its urban competitors (through the requirement of inclusion of loading regulations for large buildings and freight travel planning which can reduce the rentable space in a commercial building).						
There is pressure on logistics land uses in the urban area due to land values (countering logistics sprawl).						
There is public subsidy of costs of suitable urban logistics land (countering logistics sprawl).						
There is no political difficulty in limiting development that prevents logistics use in future (especially residential development).						
We can ensure that city planning authorities take initiative/lead.						
We can identify and protect suitable urban sites (regulation/safeguarding to counter logistics sprawl).						
We can ensure facilitation of acquisition of building permits in some cases.						
We can quantify/ forecast freight trip generation rates associated with different types of land use (freight travel planning for major sites).						
We have an understanding in freight transport compatibility of different land use types (mixed use developments countering logistics sprawl).						
We promote innovation in architecture and building techniques for urban warehouses.						

Initiative: Partnership working in the supply chain operations

Please rate the following statements with regards to your city.

Success factors	Strong constraint	Constraint	Neutral	Support	Strong support	No answer
We are able to involve a wide range of stakeholders.						
We have the support of public and private senior managers.						
We are able to identify appropriate funding to support administrative tasks and actions.						
There is agreement that softer' solutions based on collaboration rather than regulation and restriction are likely to be more acceptable and beneficial.						
We are able to find a common ground between disparate stakeholders and views.						
We can find a consensus of the partnership needs regarding focus and direction.						
We are able to manage people's expectations based on realistic outlooks.						
The partnership should work on a variety of issues.						
We can ensure specific actions and tasks with timescales in order to avoid becoming a talking shop.						
We can allocate clear responsibility for actions across members.						
We can ensure open communication and transparency.						
We are able to find a chair and administrator to direct and take forward the work of the partnership.						
There is enthusiastic support from members to improve efficiency and reduce external impacts.						
We have a clear structure, Terms of Reference and Action Plan, based on achievable goals.						
We have online meeting tools to assist and increase participation in national and international partnerships available.						
There is social diffusion among relevant community members of participants' role and achievements obtained via dedicated and general-purpose media.						
We can implement multi-purpose gamification and stakeholder engagement dedicated tools.						
We can develop a third-party green logistic integrated certification measurement system (linked to both previous points).						
We can give start-up support to involve and instruct customers (storeowners).						

Success factors	Strong constraint	Constraint	Neutral	Support	Strong support	No answer
We can create a software platform to track all operations and communication when multiple companies are involved, particularly with more shippers.						