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**Deliverable 7.8**

**Dissemination and Exploitation Plan – Final**



Document Control Sheet

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Brussels	Brussels Mobility	Procter & Gamble Services	Vrije Universiteit Brussel
London	Transport for London	TNT Gnewt Cargo	University of Westminster University of Gothenburg
Oslo	Oslo kommune	Steen & Strøm	Transportøkonomisk institutt
Paris	Ville 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
<b>Networking and outreach partner</b>			
POLIS			

## **CITYLAB Dissemination and Exploitation Planning**

<b>Executive summary</b>	<b>5</b>
<b>1 Introduction</b>	<b>6</b>
1.1 Project aims	6
1.2 Project activities	6
<b>2 Dissemination</b>	<b>9</b>
2.1 Information and data to be disseminated	9
2.2 Target groups	9
2.2.1 External cities and regions (Task leader: POLIS)	10
2.2.2 Businesses (Task leader: Procter and Gamble Business Services)	14
2.3 Living Lab Advisory Group	14
2.4 Publications	15
2.4.1 Publishing routes	15
2.4.2 Deliverables	15
2.4.3 Newsletters and leaflets	16
2.4.4 Other dissemination formats	16
2.4.5 Measuring dissemination impact	17
2.4.6 Open access	20
2.5 Events and meetings	20
2.5.1 Project-level events	20
2.5.2 Local workshops	20
2.5.3 External events	20
2.5.4 Local stakeholder meetings	21
2.5.5 Inter-living lab transferability workshops	21
2.5.6 Meetings with transfer cities	21
2.5.7 Clustering and liaison with other projects	22
2.6 Website	23
2.7 CITYLAB logo and image	23
<b>3 Exploitation</b>	<b>25</b>
3.1 Management of Foreground	25
3.2 Exploitation routes	25
3.2.1 Municipal authorities	25
3.2.2 Freight industry	25
3.3 Exploitable results	26
3.3.1 Exploitation of project-level results	26
3.3.2 Brussels Living Lab	27
3.3.3 Oslo Living Lab	28
3.3.4 Paris Living Lab	29
3.3.5 Rome Living Lab	30
3.3.6 Rotterdam / Amsterdam Living Lab	31
3.3.7 Southampton Living Lab	32
3.3.8 London living lab	33
3.4 Individual partner exploitation plans	34
3.4.1 Brussels Mobility	34
3.4.2 DLR	35
3.4.3 Gemeente Rotterdam	35
3.4.4 Gnewt Cargo	35
3.4.5 IFSTAR	36

3.4.6 Meachers Global Logistics	36
3.4.7 Meware	36
3.4.8 Oslo commune (City of Oslo)	37
3.4.9 POLIS	37
3.4.10 Poste Italiane	37
3.4.11 PostNL	38
3.4.12 Procter and Gamble Business Services	38
3.4.13 Roma Capitale	38
3.4.14 Southampton City Council	39
3.4.15 Steen & Strøm	39
3.4.16 TNO	39
3.4.17 TNT Express UK Ltd	40
3.4.18 TOI	40
3.4.19 Transport for London	40
3.4.20 University of Gothenburg	40
3.4.21 University of Roma Tre	41
3.4.22 University of Southampton	41
3.4.23 University of Westminster	42
3.4.24 Ville de Paris	42
3.4.25 Vrije Universiteit Brussel	42
<b>Appendix A – Dissemination activities</b>	<b>43</b>

## Executive summary

Dissemination and exploitation has been a headline objective for all CITYLAB activities. This deliverable, D7.8 (Dissemination and Exploitation Plan - Final), provides an updated and final version of the mid-term plan (Deliverable 7.7) produced in December 2016.

The plan provides details of the following dissemination aspects:

- Key target audiences for dissemination
- Working with the independent advisory panel (Living Lab Advisory Group)
- Hosting of regional symposia, local meetings and workshops
- Dissemination routes that have been used and will most likely be used, or considered for use in the future, depending on target audiences and information to be disseminated (e.g. journal and trade press articles, cartoon storyboards, newsletters, videos, webinars)
- The project website ([www.citylab-project.eu](http://www.citylab-project.eu))

All dissemination outputs have been included in Appendix A.

The main potentially exploitable results are:

- The Observatory of strategic developments impacting urban logistics (D2.2 and 16-page summary version)
- Guidelines on success factors from previous urban freight initiatives (D2.3)
- CITYLAB handbook for city logistics living labs (D3.4 and a summary version)
- Lessons learned from the individual implementations (WP4)
- Implementation evaluation results, including analyses of sustainability, willingness to pay, roll-out potential and transferability (WP5 and WP6)
- Recommendations for future implementation strategies and roadmaps for CO<sub>2</sub>-free logistics in cities by 2030 (D6.4)

## 1 Introduction

This document presents the final version of the CITYLAB dissemination and exploitation plan. The plan states the main dissemination activities and events that have taken place and are currently foreseen and the main expected avenues for exploitation of project results to promote continuation of the project's impact beyond the formal contract end date of 30 April 2018.

### 1.1 Project aims

The project set out to develop knowledge and solutions that result in upscaling and roll-out of strategies, measures and tools for emission-free city logistics in urban centres by 2030. Objectives were to:

1. Improve basic knowledge and understanding on areas of freight distribution and service trips in urban areas that have received little attention to date
2. Test and implement seven innovative solutions that are promising in terms of impact on traffic, externalities and business profitability and have a high potential for future growth
3. Provide a platform for replication and spreading supported solutions.

### 1.2 Project activities

The main activities that have been undertaken to meet the project objectives are:

**WP1 – Project management and coordination:** All matters relating to the financial and legal management, reporting and administration of the project.

**WP2 – Knowledge development and data management:** Existing urban freight knowledge has been collated, refined and further developed, along with creation of new knowledge and analysis of key trends influencing urban freight transport. Baseline information and data pertaining to the living labs has been collected and made available to all, subject to its confidentiality.

**WP3 – Living laboratories:** A methodology has been developed to enable municipal authorities to set up a 'living laboratory' (LL), comprising those people/organisations with an interest in tackling local urban freight sustainability issues. The aims were to develop a common understanding of the most important issues and how they may be most effectively addressed. The name implies that the LL develops over time and an important objective is that the LL continues to run after the project ends.

**WP4 – Implementations:** Each LL designed, studied, developed and tested an urban freight initiative that was selected according to the previous experiences, on-going projects, and specific interests of the city authorities and industry partners. These implementations were:

#### 1. Amsterdam - City centre micro-hubs and cycle freight deliveries

In their original vision, PostNL aimed to use a floating depot on the canal network for delivery of food and drink items for bars, restaurants and hotels and for collection of waste. As this proved to be too expensive to operate, their revised plan involves the use several micro-hubs in fixed city centre locations, with electric bikes and stints (segways) used for transport between the micro-hubs and customers.

## **2. Brussels - Increasing vehicle loading by utilising spare capacity**

The aim was to unlock available freight vehicle capacity to cost-efficiently supply consumer goods to small urban stores in Brussels. This has been realised by interventions into both the physical flow of goods and information flow. The vans of different service providers were considered for use such as BPOST, Rentokil and the ones actually implemented from Febelco (pharmacy supplies), delivering products on behalf of Procter and Gamble Business Services. The living lab testing aimed to increase load factors by consolidating and bundling internally and externally.

## **3. London - Growth of consolidation and electric vehicle use**

The main aim was to demonstrate and better understand how to develop and scale up sustainable urban freight solutions. The implementation action is developing viable business models, with scope for scalability, transferability and growth, for last mile delivery in busy, city centre locations using electric vehicles and cycles. The implementation experimented with integrated and co-operative supply chain approaches between a large carrier (TNT) and a small 'last-mile' carrier (Gnewt Cargo) using a fleet of battery-powered electric vans for parcel deliveries in central London.

## **4. Oslo - Common logistics functions for shopping centres**

Steen & Strøm aim to reduce time spent by freight vehicles at their shopping centres through the introduction of common logistics functions for inbound and outbound freight flows, with the Citylab focusing in particular on the planned new shopping centre at Økern in Oslo. Previous demonstrations and analyses have suggested that such functions should be operationally and financially viable. The implementation will reduce unloading times for trucks and vans and facilitate identification of consolidation opportunities for logistics service providers as well as off-hour deliveries, as the transport leg and in-house transport leg in the shopping centre may be decoupled.

## **5. Paris - Logistics hotels to counter logistics sprawl**

The municipality and the region of Paris, together with Sogaris, a specialist in real estate for urban and inter modal logistics developed and implemented a model for logistical zones and facilities called 'logistics hotels', that is appropriate for dense urban environments, combining logistics with other activities such as offices, retail and public services.

## **6. Rome - Integration of direct and reverse logistics flows**

Poste Italiane, supported by software providers Meware, aim to improve clean waste collection and reverse logistics in the city of Rome by combining forward with reverse logistics supply chains. The integration between direct and reverse logistics, together with the use of electric vehicles, will increase freight vehicle load factors and reduce vehicle trips, congestion and CO<sub>2</sub> emissions, while providing the potential for a financially sustainable business model. This was demonstrated during the Citylab project for a specific application (collection of plastic caps) but the concept has much wider scope.

## **7. Southampton - Joint procurement and consolidation for large public institutions**

The aim was to reduce the freight impact generated by large municipal organisations (e.g. local authorities, hospitals, universities), when purchasing goods and services, by identifying opportunities for consolidation (e.g. of orders, suppliers or supply chains).

One option was to use the Southampton Sustainable Distribution Centre (SSDC) on the outskirts of Southampton, operated by Meachers Global Logistics. The University of Southampton, Southampton Solent University, the City Hospital and Southampton City Council all signed a memorandum of understanding related to the SSDC. The implementation centred around consolidation case studies at the University of Southampton, the Southampton and Isle of Wight hospitals and the city council based on a methodology to allow large public institutions to audit their freight and service vehicle flows and quantify the benefits of consolidating subsets of these.

#### **WP5 – Evaluation**

The evaluation aimed to address a number of different aspects of urban freight transport in each of the living labs, including the following questions:

1. To what extent were load factors increased and vehicle movements reduced?
2. Was the solution economically viable? And if so, under which conditions?
3. What were the costs and benefits to society?
4. Are potential clients willing to pay for the value that is created by the solutions?
5. Which of the solutions are suited to be rolled out or transferred to one or more of the other CITYLAB living labs?
6. Under which conditions could the solution be scaled up to obtain a higher market share?

**WP6 – Living lab interaction and transfer:** The aim was to promote applications of the CITYLAB implementations in other living labs and other follower cities.

**WP7 – Dissemination and exploitation:** as described in this deliverable.

## 2 Dissemination

The objectives of the CITYLAB dissemination activities are to raise awareness of the project and its work among a wide but targeted audience including key stakeholder groups; to create enhanced opportunities for stakeholder feedback that can be used to guide the project; to embed the project results as state of the art in this field and to promote use of the project results by the key stakeholder groups and other interested parties. The dissemination activities focussed on how the project results could be usefully exploited not only by the project partners themselves but also by the wider community and industry. This has been done through engagement with stakeholders to maximise uptake of CITYLAB findings and to ensure that urban freight management policy and business practices are influenced by the findings.

Careful consideration has been given to the specific nature of the project's target audience and how different external communications channels can be best utilised during each phase of the project. Different communication tools and dissemination channels have been developed and used to that end, as described below. Due consideration has been given to the useful EU guidance document on 'Communicating EU Research and Innovation' ([http://ec.europa.eu/research/social-sciences/pdf/communicating-research\\_en.pdf](http://ec.europa.eu/research/social-sciences/pdf/communicating-research_en.pdf)).

This section describes the dissemination plan; a full list of dissemination outputs is given in Appendix A.

### 2.1 Information and data to be disseminated

All project information and data to be disseminated have been identified by partners, particularly by WP leaders, as the project progresses, and, in some cases, beyond the end of the project, as anticipated for the [Observatory of Strategic Developments Impacting Urban Logistics](#), which is intended to be an ongoing review of latest trends, last updated in April 2018.

We have made arrangements to identify and share all non-confidential data sources to enable other parties to experiment and recreate operations and situations relevant to their specific cases using outputs from the implementations, as described in Deliverable 1.2.

### 2.2 Target groups

The key target groups for CITYLAB to achieve its impact objectives are those stakeholders that could potentially implement the methods that are being developed and tested within the project. The project has actively gained feedback through direct contact with key stakeholders, in particular 'end-users', to ensure that their needs are considered and this has also been done through consultation with the Living Lab Advisory Group, as described in section 2.3. Dissemination also takes place more widely by utilising relevant networks of contacts of the partner organisations.

Key stakeholders include the following groups:

- Local, regional and national transport authorities, both at decision-making and technical levels
- Logistics companies involved in primary centralised/decentralised transport operations, together with their clients. These may be effectively communicated with via logistics industry bodies, such as the UK Freight Transport Association (a CITYLAB partner) and the European Logistics Association (with representation from the LLAG chairman, Jos Marinus – see Section 2.3).
- Service companies, involved in secondary logistical support
- Technology providers and manufacturers (e.g. software, hardware)

In addition, there has been a wider audience for the project results, with other potentially interested parties coming from various backgrounds and/or being members of various networking groups, including:

- European organisations and networks such as:
  - POLIS (a CITYLAB partner)
  - ECTRI (European Conference of Transport Research Institutes)
  - EARPA (European Automotive Research Partners Association)
  - The Urban Freight Platform (UFP) initiated by the Volvo Research and Educational Foundations (VREF) - [www.urbanfreightplatform.se](http://www.urbanfreightplatform.se)
  - Open ENLoCC, the European Network of Regional Logistics Competence Centres
- US organisations and networks (identified as part of Task 6.4)
- The research and wider academic communities, including other existing, freight-related EU projects, many of which are listed at our website links page (<http://www.citylab-project.eu/links.php>)
- Other national projects operating in the partner countries and elsewhere
- EU institutions
- Logistics and transport consultants
- Non-governmental organisations and environmental groups
- Standards organisations
- General public

The WP7 leader maintains a database of contacts together with any subscribers to the project website. The University of Southampton is responsible for complying with any relevant data protection matters arising from such a contacts list.

Two WP7 tasks - Task 7.3 (Dissemination to external cities and regions) and Task 7.4 (Business-targeted dissemination) – were created to consider the differing needs of the two stakeholder groups. The planned approaches in each of these tasks are as follows:

### **2.2.1 External cities and regions (Task leader: POLIS)**

Just a few months after the kick-off of the project, a call to join the group was published. The candidate cities and regions submitted an application describing their context, ambitions and expectations with respect to urban freight policies. This process resulted in the formation of the Follower Cities and Regions Group (FCG) comprising 21 cities and regions across Europe with a keen interest in the CITYLAB project (Table 1). Targeted dissemination activities were organised for the FCG and for the sub-group of 9 transfer cities and their industry partners (Table 2) who have received some funding from the CITYLAB project to actively meet with us and discuss opportunities for exploitation of our methods and results. Full lists of events and attendances are given in Deliverable 6.3 (Report on transferability to non-Citylab cities) and Deliverable 7.3 (Dissemination to follower cities and regions), with a brief summary given here.

### **Follower Cities and Regions**

Follower cities and regions have engaged in a structural dialogue with the partners of the project: they all benefit from the access to project deliverables, tailored updates on CITYLAB cities' developments, attendance of CITYLAB local workshops and dedicated Follower Cities

and Regions sessions, as well as the general communication and updates about CITYLAB's activities.

Most of the cities involved showed great interest in the project and the consortium agreed with the European Commission, to allocate more funds to the FCRs, so that they could participate in further activities and events that encourage the transfer of the methodology and the solutions tested in CITYLAB: bilateral interviews, technical visits including bilateral meetings and transferability sessions.

**Table 1. Overview of FCRs and their priority interests in the CITYLAB implementations.**

City ↓	Country ↓	CITYLAB implementation						
		Amsterdam	Brussels	London	Southampton	Oslo	Rome	Paris
Antwerp	BE		3		1			2
Budapest	HU		3	1				2
Delft	NL			2		1	3	4
Flanders Region	BE				3		2	1
Gdynia	PL		1		2	3	3	
Gothenburg	SE	3		1			2	
Graz	AT		2	1			3	
Jerusalem	IE							
L'Hospitalet	ES			1		3		2
La Rochelle	FR							
Lyon	FR							
Madrid	ES			1	2			3
Manchester	UK	2		1	3			
Mechelen	BE		2	1	3			
Milan	IT		1			2	4	3
Pisa	IT	2		1		3		
Prague	CH	2			3			1
Rogaland Region	NO		3		2		1	
Skedsmo	NO			2		1		3
Turin	IT		1			2		3
West Midlands	UK					3	2	1
1st choice		0	3	7	1	2	1	3
2nd choice		3	1	2	3	2	3	3
3rd choice		1	3	0	4	3	2	3
<b>TOTAL</b>		<b>4</b>	<b>7</b>	<b>9</b>	<b>8</b>	<b>7</b>	<b>6</b>	<b>9</b>

### Transfer Cities and Regions

The so-called Transfer Cities and Regions (TCRs) 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.

The group comprises nine local authorities, selected among the larger CITYLAB Followers group (see above). All members submitted an application describing their context, ambitions and expectations with respect to urban freight policies.

Each Transfer City selected a local industry partner, to be actively involved with in the project. They benefited from a dedicated support for the implementation of transfer activities including training, technical visits, interactive workshops and transferability analyses.

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

**Table 2. Overview of CITYLAB Transfer Cities and their industry partners.**

City / Region	Country	Industry partner	Type
Budapest	HU	Kantaa	Cargo-bike bicycle messenger cooperative
Delft	NL	Stadslogistiek Delft (PostNL)	City logistics
Flanders	BE	VIL	Flemish Institute for Logistics
Madrid	ES	SEUR (DPD Group)	Logistic operator
Manchester	UK	Esprit Gnewt Cargo	Warehousing/ logistic operator Parcel carrier (100% electric)
Prague	CH	UPS Messenger	Logistic operator Bike courier
Rogaland	NO	IRIS	Research Institute
Turin	IT	Ponyzero	Last-mile cargo-bike operator
Pisa	IT	Kiunsys	Monitoring & management of cities mobility

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, and is structured as follows:

#### **Adoption of the Living Lab approach**

The first step was a Living Lab training session held in Rotterdam on 1 December 2016, 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 was 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 was done through a questionnaire, mapping the local urban freight transport 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 living lab approach, and how this can be tailored to the city local environment.

#### **Replication of the solutions tested in the CITYLAB**

**Transferability analysis:** CITYLAB performed a transferability analysis focusing on the potential for rolling out the CITYLAB logistics solutions to external cities. City officers of these external cities were requested to fill out a questionnaire, to self-evaluate if there were 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 workshops:** 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<sup>1</sup>, 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 visits:** Follower cities and regions were invited to take part in a technical visit of their preferred CITYLAB implementation site. This included a bilateral meeting with the partners responsible for the local implementation and a dedicated, interactive session, where external stakeholders gave their advice to the cities on the best way to implement their preferred solution.

The results of the questionnaires and interviews concerning the adoption of the LL approach and the transferability analysis, are fully reported in D6.3. Table 3 gives an overview of transferability activities carried out by the CITYLAB TCRs.

**Table 3. Overview of transferability activities carried out by CITYLAB TCRs.**

City / Region	Country	LL approach			Transfer. analysis		MAMCA workshop		Site visit		
		LL training	Questionnaire	Interview	Interview	Questionnaire	City	Ind. Partner	Number	Bilateral meeting	Dedicated WS
Budapest	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	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	✓	

<sup>1</sup> Multi-Actor Multi-Criteria Analysis ([MAMCA](#)) is a decision-making model developed by MOBI-VUB.

Pisa	IT	✓	✓	on field - 24/11	no	no	✓	✓	2		
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## 2.2.2 Businesses (Task leader: Procter and Gamble Business Services)

Task 7.4 leader (Procter and Gamble Business Services) has used its marketing experience to summarize the insights obtained from the living labs and their implementations, using simple tools and formats tailored to the industry (e.g. flowcharts, decision trees, business model summaries). These aim to help companies on their journey regarding opportunities for sustainable business collaborations in the field of more efficient goods, waste and service trips in urban areas, based on the findings from the living lab cities and their follower cities/regions. The content was derived from the living labs and the analyses undertaken by them in the different work packages that deal with knowledge enhancement, implementation and evaluation (D5.3, D5.4, D5.6). While the initial ambition was to also offer cost-modelling tools, the significant differences between the individual living labs and their implementations meant that it would not be possible and would not help business-targeted dissemination. Moreover, such cost models could be misleading, as too much depends on the individual company and stakeholder context (e.g. existing investments, sunk costs, etc.). Instead, the project looked at how to organize the learnings in a way that they can serve as an introduction and overview and lead businesses to explore specific examples in greater detail. For future dissemination of these findings beyond the project, PGBS intend to work with the Alliance for Logistics Innovation through Collaboration in Europe (ALICE) and the European Logistics Association to address the most business-relevant channels (e.g. specific conferences, business websites, blogs and magazines). These activities are described fully in Deliverable 7.4 (Business-targeted dissemination).

## 2.3 Living Lab Advisory Group

The Living Lab Advisory Group (LLAG) was formed towards the start of the project and is an independent panel of experienced freight industry experts, each nominally representing one of the living labs although taking an interest in and advising on the project as a whole. The LLAG comprises (with nominated living lab indicated):

- Frans de Keyser (Brussels Enterprises Commerce and Industry) – Brussels
- Jolyon Drury (Surge Logistics, UK) - London
- Hervé Levifve (City of Paris) - Paris
- Erik Regterschot (City of Amsterdam / Royal Haskoning) - Rotterdam
- Bjarte Engen Grostøl (Asko) - Oslo
- Nicoletta Ricciardi (Sapienza - University of Rome) - Rome
- Graham Ellis (Ellis Transport Services) - Southampton

In addition, Jos Marinus (European Logistics Association) was appointed as chairman of the LLAG.

The specific agreed roles of the LLAG were to:

- a) Participate in local workshops and regional symposia and provide feedback
- b) Critically question the accomplishments of 'their' living lab
- c) Identify potential avenues for further exploitation and suggest ways in which methods may be adapted for use by other stakeholder groups
- d) Help to identify follower cities
- e) Provide guidance on user needs from their specific stakeholder groups

- f) Ensure contact with stakeholders (local, regional and national transport authorities, logistic companies and other businesses operating fleets of delivery vehicles)
- g) Disseminate project outcomes amongst their peer groups
- h) Critically assess and comment on project outcomes
- i) Formally review selected project deliverables or sections thereof (pertaining to their cities).

All feedback from the LLAG have been incorporated within project deliverables, particularly D7.2 (Reporting of project symposia, workshops, meetings and other events), and given all due consideration when undertaking the implementations and other project activities.

## 2.4 Publications

All publications, regardless of format, relating to the project are subject to the terms of the EC Grant Agreement and Consortium Agreement, in particular concerning procedures for obtaining approval of publication by the partners and acknowledgements of EC funding. All publications relating to CITYLAB have been gathered, stored and made widely available, subject to any copyright restrictions, by the WP7 leader. Subject to such restrictions, all publications have been made available through the project website:

- <http://www.citylab-project.eu/publications.php> for published articles
- <http://www.citylab-project.eu/outputs.php> for all types of output.

### 2.4.1 Publishing routes

CITYLAB partners seek to publish project-related articles and scientific papers in relevant journals, conferences, press magazines or other publications, including online, and utilising web portals and communications networks such as:

- Transport Research and Innovation Portal (TRIP) – <http://www.transport-research.info/web/>
- Community Research and Development Information Service (CORDIS) - [http://cordis.europa.eu/home\\_en.html](http://cordis.europa.eu/home_en.html)
- POLIS (CITYLAB partner)
- The Rensselaer Polytechnic Institute's freight initiative selector tool (described in D6.4) with an example Citylab contribution shown at: <https://coe-sufs.org/wordpress/rldcp/>

### 2.4.2 Deliverables

All public deliverables have been made available from the project website, <http://www.citylab-project.eu/deliverables.php> as soon as available. In addition, and in recognition of the fact that practitioners and policy makers prefer more concise documents, we produced two summary versions and distributed at the Civitas Urban Freight Conference (23-24 April 2018):

1. The Observatory of strategic developments impacting urban logistics (D2.1) has been summarised in a 20-page A5 brochure (<http://www.citylab-project.eu/brochure.php>). The latest version (April 2018) supersedes an earlier version (May 2017).
2. The CITYLAB Handbook for city logistics living labs (D3.4) has been summarised in a 16-page A5 brochure (<http://www.citylab-project.eu/brochure/LL.pdf>).

The deliverables comprise:

- D1.1 - Risk management and quality assurance
- D1.2 - Data management plan
- D2.1 - Observatory of strategic developments impacting urban logistics

- D2.3 - Success factors of past initiatives and the role of public-private cooperation
- D2.4 - Assessing the EC's target of essentially CO<sub>2</sub>-free city logistics in urban centres by 2030
- D3.1 - Practical guidelines for establishing and running a city logistics living lab
- D3.2 - CITYLAB local living lab roadmaps
- D3.3 - CITYLAB: Lessons and experiences with living labs
- D3.4 - CITYLAB Handbook for city logistics living labs
- D5.1 - Definition of necessary indicators for evaluation
- D5.2 - CITYLAB dashboards
- D5.3 - Impact and process assessment of the seven CITYLAB implementations
- D5.4 - Sustainability analysis of the CITYLAB solutions
- D5.5 - Evaluation of the willingness to pay for the sustainable CITYLAB solutions
- D5.6 - Assessment of roll-out potential of CITYLAB solutions to other CITYLAB living labs
- D6.1 - Report on living-lab transferability activities
- D6.2 - Minutes of local stakeholder meetings
- D6.3 - Report on transferability to non-CITYLAB cities
- D6.4 - Tools for achieving CO<sub>2</sub>-free logistics in cities by 2030
- D7.2 - Reporting of project symposia, workshops, meetings and other events
- D7.3 - Dissemination to follower cities and regions
- D7.4 - Business-targeted dissemination
- D7.5 – Newsletters
- D7.6 – Videos, animations and cartoons
- D7.8 - Dissemination and exploitation plan

#### 2.4.3 Newsletters and leaflets

Electronic newsletters informing the identified target groups and other potentially interested stakeholders about the progress of the project have been distributed by email approximately every six months utilising our extensive lists of contacts and networks. The newsletters are available at <http://www.citylab-project.eu/newsletter.php> and are reported in D7.5 (Newsletters). We have also contributed to Civitas internal newsletters, most recently in January 2018.

A high quality project leaflet was produced towards the start of the project (August 2015) and was distributed at various events such as the Civitas Forums in Ljubljana and Gdynia, the POLIS conference 2015, Brussels and the Transport Research Arena 2016, Warsaw. An electronic version is available for download from the website ([http://www.citylab-project.eu/leaflet/CITYLAB\\_leaflet.pdf](http://www.citylab-project.eu/leaflet/CITYLAB_leaflet.pdf)). The leaflet aimed to inform a wide audience about the project's objectives, implementations and expected results.

A factsheet for each of the living labs was produced for distribution at the Civitas Urban Freight Conference (23-24 April 2018), available from the website at: <http://www.citylab-project.eu/implementations.php>.

#### 2.4.4 Other dissemination formats

A range of other dissemination formats have been used:

- **Cartoon storyboards** – cartoon-style posters were developed that presented the project concepts and implementations in a simple, attractive and fun way while, at the same time, delivering a 'serious message'. We consider this format to be particularly suitable for engaging with the general public; however, posters were also used as supporting material at stakeholder events (e.g. regional symposia and local

workshops). Cartoon posters have been produced for each implementation and for the project as a whole, available at <http://www.citylab-project.eu/cartoons.php>.

- **Videos/webinars/webcasts** – the following short video films, webinars and webcasts have been recorded and published:
  - A webcast of the local workshop hosted at the University of Southampton on 27 January 2017 (<http://www.citylab-project.eu/presentations.php#Soton>)
  - Webinars co-organised with clustering and networking partners (section 2.5.7)
  - A video describing the Rome implementation, available at: <http://www.citylab-project.eu/Rome.php>
  - An animation of the living lab concept (<http://www.citylab-project.eu/>)
  - An animation of the Oslo implementation action (<http://www.citylab-project.eu/>)

[Note: Steen & Strøm plan to extensively use this animation for dissemination and marketing purposes, for example, when giving presentations to the City of Oslo and real estate developers; when marketing their ambitious CO<sub>2</sub> reduction goals; and when communicating with the 155 tenants expected to be present at the Økern shopping centre in Oslo.]
- **Dashboards (web-based)** – Results from each implementation and their local contexts (e.g. population, land use, road density and congestion) are summarised in user-friendly dashboards. Links to these are found at <http://www.citylab-project.eu/implementations.php>. An example partial screenshot is shown (Figure 1).

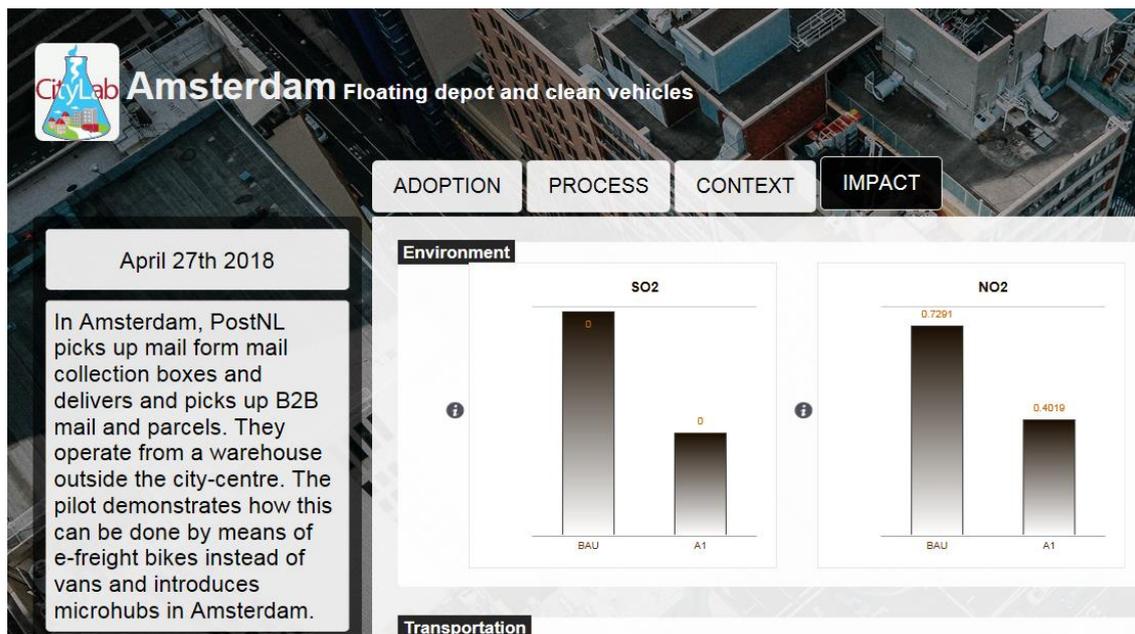


Figure 1. Example partial screenshot from Amsterdam dashboard.

#### 2.4.5 Measuring dissemination impact

The WP7 leader has maintained a record of all project dissemination activities throughout the project along with the number of people that attended events or estimated numbers of people reached (Table 4). The number of people reached by flyer was very high because it included a flyer to 35,000 students and staff at the University of Roma Tre to promote their recycling initiative and invite participation.

**Table 4. Dissemination activities and audiences.**

<b>Dissemination activity</b>	<b>#</b>	<b>#people</b>	<b>average (people/activity)</b>
Participation to a Conference	108	8542	79
Participation to an Event other than a Conference or a Workshop	40	924	23
Participation to a Workshop	31	690	22
Organisation of a Workshop	22	713	32
Flyer	20	38642	1932
Non-scientific and non-peer-reviewed publication (popularised publication)	9	4000	444
Participation in activities organized jointly with other H2020 projects	9	1635	182
Video/Film	4	1180	295
Communication Campaign (e.g. Radio, TV)	2	2000	1000
Organisation of a Conference	1	70	70
<b>Total</b>	<b>246</b>	<b>57796</b>	<b>235</b>

[Note: Where there was more than one participation at the same event, the participations were counted individually but the audience size was only counted once.]

For each dissemination activity, we estimated a breakdown of the total audience by the type of audience (scientific, industry etc.), with totals shown (Table 5). This excludes the 35000 students and staff targeted for the Rome implementation as this would have disproportionately skewed the percentage breakdown by audience type. It can be seen that the scientific community (38%), industry (22%) and policy makers (20%) were the largest audiences reached.

**Table 5. Audiences reached.**

<b>Type of audience</b>	<b>Total reached</b>	<b>%</b>
Scientific	8613	38%
Industry	4917	22%
Civil Society	1560	7%
General Public	1437	6%
Policy Makers	4489	20%
Media	1195	5%
Investors	195	1%
Customers	390	2%
<b>Total</b>	<b>22796</b>	<b>100%</b>

Our publications in refereed journals are available at <http://www.citylab-project.eu/publications.php> with open access links for all of them. Journal impact factors have been noted, where relevant (Table 6).

**Table 6. Publications.**

Main author	Title	Year	Journal information	Impact factor
TNO	From freight partnerships to city logistics living labs - Giving meaning to the elusive concept of living labs	2015	Transportation Research Procedia, 12, 461-473	0.61
TOI	Private Public Collaboration on Logistics in Norwegian Cities	2016	Transportation Research Procedia, 16, 81-88	0.61
TOI	Comparing Deliveries to On-street Consignees and Consignees Located at Shopping Centers	2016	Transportation Research Procedia, 14, 1221-1229	0.61
SOTON	Logistics impacts of student online shopping – evaluating delivery consolidation to halls of residence	2016	Transportation Research C, Emerging Technology, 78, 111-128	3.08
TNO	A city logistics living lab: a methodological approach	2016	Transportation Research Procedia, 16, 403-417	0.61
UR3	Smart urban freight planning process: integrating desk, living lab and modelling approaches in decision-making	2017	European Transport Research Review	0.8
IFSTTAR	City Logistics	2017	The Wiley-AAG International Encyclopedia of Geography: People, the Earth, Environment, and Technology.	-
IFSTTAR	The Rise of On-Demand 'Instant Deliveries' in European Cities	2017	Supply Chain Forum – an International Journal	0.22
UR3	Integrating direct and reverse logistics in a “living lab” context: evaluating stakeholder acceptability and the potential of gamification to foster sustainable urban freight transport	2017	In: Taniguchi E., Thompson R. (Eds), “City Logistics 3: Towards Sustainable and Liveable Cities”, p. 1-22. ISTE London, UK, ISBN: 9781786302076.	-
VUB	Tackling Fragmented Last Mile Deliveries to Nanostores by Utilizing Spare Transportation Capacity - A Simulation Study	2018	Sustainability, 10, 653.	1.85
VUB	Monitoring Urban Freight Transport based on GPS Traces of HGVs	2018	IEEE Transactions on Intelligent Transportation Systems	4.17

## 2.4.6 Open access

As required by the EC Horizon 2020 programme, we have ensured that all journal articles and conference papers (with an ISSN number) are freely available in an Open Access repository. These repositories have either been provided by partner institutions, including the project website (<http://www.citylab-project.eu/publications.php>) or by the journals in which we publish.

## 2.5 Events and meetings

The Citylab project has organised three large-scale project symposia and five local workshops, attended by around 600 people in total, representing over 300 different organisations from a range of different sectors, with an approximate breakdown by participant type of freight industry (~20%), local, regional or national government agencies (~18%, of which 5% Citylab follower/transfer cities), research community (~27%), consultants (~6%), Citylab advisory group (LLAG) (~6%) and Citylab partners (~23%). A number of other dedicated meetings were organised for specific target audiences (e.g. follower/transfer cities, local stakeholders). The events and meetings are fully reported in the following CITYLAB deliverables and are briefly summarised in the subsections below:

- D5.4 - Sustainability analysis of the CITYLAB solutions (incorporating local stakeholder (MAMCA) workshops)
- D6.1 - Report on living-lab transferability activities
- D6.3 - Report on transferability to non-Citylab cities
- D7.2 - Reporting of project symposia, workshops, meetings and other events
- D7.3 - Dissemination to follower cities and regions
- D7.4 - Business-targeted dissemination

### 2.5.1 Project-level events

- Innovative urban freight management systems in Paris, 26 May 2016, attended by 89 people, jointly organised with the SUCCESS project
- Innovative Solutions for Urban Freight Transport and Environment in the Circular Economy Era, Rome, 20 October 2017, attended by 70 people
- CIVITAS Urban Freight Conference, organised jointly with the other urban freight projects NOVELOG, SUCCESS, U-TURN, attended by 192 people

### 2.5.2 Local workshops

- Making freight consolidation centres work - Experiences from Southampton, 27 January 2017, attended by 51 people
- Growth of Electric Freight and Consolidation in Urban Logistics, London, 12 May 2017, attended by 49 people
- Logistics strategies for shopping centres - how to improve the efficiency of delivery and service vehicle activity, Malmö, 7 June 2017, attended by 24 people
- City deliveries using micro-hubs and innovative freight bikes, 8 March 2018, Amsterdam, attended by 45 people
- Sharing economy logistics: access over ownership, 28 March 2018, Brussels, attended by around 85 people

### 2.5.3 External events

Citylab partners have been highly active in participating in externally-organised events, including CIVITAS Forums (Ljubljana, 2015; Gdynia, 2016; Torres Vedras, 2017) and Transport

Research Arena conferences (Warsaw, 2016; Vienna, 2018) with presentations, posters and videos being shown. A full list of all such activities are included in the list of dissemination activities (Appendix A).

#### **2.5.4 Local stakeholder meetings**

Fundamental to the living lab approach, Citylab partners have met with key local stakeholders on a regular basis to agree goals and actions, to review progress and to make any changes of plan. MAMCA (multi-actor, multi criteria analysis) workshops were also organised for each living lab and are fully reported in Citylab deliverable 6.2 (Minutes of local stakeholder meetings). MAMCA is an established technique to take into account all stakeholder views and to verify the identified roll-out potential of each CITYLAB solution.

#### **2.5.5 Inter-living lab transferability workshops**

As part of Task 6.1 (Inter-living lab transferability), led by TNO, workshops were organised with a focus on transferability of the living lab methods and results between the CITYLAB cities. They took place in:

- Paris, 25 May 2016
- Rotterdam, 1 December 2016
- London, 11 May 2017
- Gothenburg, 7 November 2017

Most of these workshops were between Citylab partners only, although the workshop in Rotterdam, organised alongside the POLIS Conference, welcomed external speakers from Amsterdam, Barcelona and Greece and was attended by some follower cities (e.g. Budapest, Manchester and Turin).

The iterative knowledge exchange facilitated by these workshops is central to the living lab concept and allowed partners to identify strengths, weaknesses, opportunities and potential barriers to implementation. Learning from what did not work well is crucial to move on to the new living lab cycle to improve the process. Citylab Deliverable 6.1 reports on the key outcomes of the workshops.

#### **2.5.6 Meetings with transfer cities**

As part of our targeted dissemination towards the 9 identified transfer cities (section 2.2.1), dedicated meetings and site visits were organised for them, as fully reported in Citylab deliverable 6.3 (Report on transferability to non-Citylab cities). In summary, these meetings and site visits comprised:

- A Living Lab training session, Rotterdam, 1 December 2016, attended by 10 follower/transfer cities/regions (Antwerp, Budapest, Flanders, L'Hospitalet, Madrid, Manchester, Mechelen, Pisa, Skedsmo and Turin)
- A MAMCA workshop, Brussels, 8 December 2017, attended by 8 of the 9 transfer cities
- A workshop on transferability of solutions, organised alongside the London local workshop, 11-12 May 2017, attended by the transfer cities of Budapest, Madrid and Manchester, along with their industry partners
- A dedicated meeting on the Rome implementation, held 19 October 2017, attended by six transfer or follower cities/regions (Budapest, Flanders, Rogaland, L'Hospitalet, Graz and Lyon)
- A transferability workshop, 24 November 2017, Pisa, organised especially for the transfer city of Pisa. The aim of the meeting 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.

### **2.5.7 Clustering and liaison with other projects**

As specified in Task 6.4 (Collaboration with US initiatives) and Task 7.5 (Clustering and liaising with other projects), CITYLAB partners have actively liaised with other urban freight practitioners and projects, especially the other urban freight projects funded in the first H2020 MG 5 call (NOVELOG, SUCCESS and UTURN) and with the US Federal Highway Administration's Office of Operations as part of the EU-U.S. 'Twinning Program'.

Clustering with the other urban freight projects has included:

- (i) shared stands at the CIVITAS Forums of 2015, 2016 and 2017 and at POLIS conferences
- (ii) our first project-level event in Paris on 26 May 2016 including an optional site visit to the SUCCESS project's construction site at L'Îlot Fontenoy-Ségur
- (iii) organisation of our joint final conference, 23-24 April 2018 in Brussels

Collaboration with US partners has included: co-hosting a study tour delegation, with presentations made to them on 27 and 28 September 2016 in London and Brussels, respectively; their participation in our joint final conference (23-24 April 2018 in Brussels); plans for Citylab representatives to attend the 'Implementing a Freight Fluidity Performance Measurement System' workshop organised by the U.S. Federal Highways Administration and the Transportation Research Board (5/9/18). We have also shared our results via the Rensselaer Polytechnic Institute's freight initiative selector tool (link below) which aims to allow interested parties (e.g. city authorities) to identify which freight ideas might be most suitable to their context and requirements:

<https://coe-sufs.org/wordpress/ncfrp33/appendix/initiativeselector/>.

Other relevant projects that we are collaborating with include the FP7 project FREVUE and URBACT-project FREIGHT Tails. The ALICE-ERTRAC European Technology Platform's participation in national, European and international events will provide opportunities to present the CITYLAB project and its results as well as provide networking opportunities with other people involved in the freight industry or related areas.

Specific activities have included:

- A webinar "Making urban freight logistics more sustainable: from theory to practice" co-organised as part of the Civitas Urban Freight Logistics thematic group, with participation from Citylab partners TNO and Polis <https://www.youtube.com/watch?v=SQX0rIC7Y1Y>
- A webinar "Logistics and Land Use Planning: The Example of Paris" organised as part of the peer-to-peer exchange program of the VREF Center of Excellence for Sustainable Urban Freight Systems, featuring a presentation from Laetitia Dablanc (IFSTTAR) <https://coe-sufs.org/wordpress/peer-to-peer-exchange-program/webinar18/>
- A webinar "United States and European Examples: Gaining insights from freight data", co-organised by the US Federal Highway Administration's Office of Operations (FHWA-HOP) and the European Commission's (EC) Directorate-General for Mobility and Transport, featuring a presentation from Tom Cherrett (University of Southampton) <https://connectdot.connectsolutions.com/pwkpi2pf5e8u/>, 27 March 2018
- Participation at the Alice-Ertrac-Civitas Collaborative Innovation Day, 23 May 2017, Brussels

- As part of the project's U.S. twinning activities a Citylab article has been written and is expected to be included in a forthcoming Federal Highway Administration's (FHWA) Primer for Improved Urban Freight Movement and Delivery: Collaboration, Coordination, and Communication (C3) Strategies.

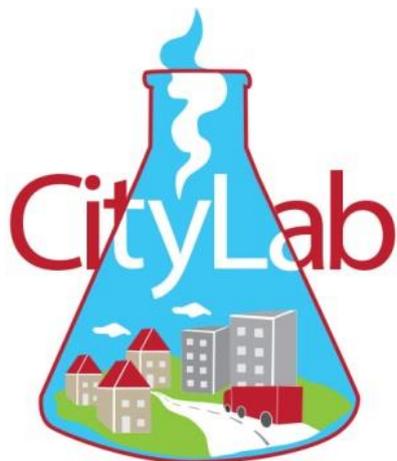
## 2.6 Website

The project website ([www.citylab-project.eu](http://www.citylab-project.eu)) makes all of our dissemination outputs freely available and readily accessible. It is managed and hosted by the University of Southampton (WP7 leader) and it is planned that it will be maintained for as long as we consider it remains relevant and useful and at least 3 years after the end of project. Key features include:

- Homepage – events calendar, project news, a CIVITAS newsfeed, news from the Innovation and Networks Executive Agency (INEA)
- Living Labs – information about the living lab approach and developments in each of the cities
- Objectives – information about what the project aims to do
- Project outputs
  - Deliverables and Publications
  - Leaflets, newsletters and brochures, including the Observatory brochure
  - Cartoons and animations
  - Workshop reports
  - Presentations
- Follower and Transfer City activities
- Links to related websites
- Partner information, contacts page and a subscriber function, allowing visitors to register to receive project newsletters and other dissemination information.

## 2.7 CITYLAB logo and image

To give the project a visual identity, a CITYLAB logo (Figure 1) and banner image (Figure 3) were created in month 2 of the project (June 2015) for use on the website, presentations, posters, documents etc. Template files for Microsoft Powerpoint and Word documents, incorporating the logo, have been created, for use by partners, to provide a consistent style and format to be used for all dissemination activities.



**Figure 2. CITYLAB logo.**



**Figure 3. CITYLAB banner image.**

### 3 Exploitation

This exploitation plan identifies how the project partners envisage their implementations, analyses, deliverables and other project outputs may be exploited, either by themselves or by others, but particularly those who were targeted as part of the dissemination activities described in section 2. Practical exploitation has been a key objective for all the implementation activities and the aim is that exploitation continues long after the formal end of the project.

#### 3.1 Management of Foreground

Protection and exploitation of project foreground is undertaken in accordance with the terms of the EC Grant Agreement. In the Consortium Agreement, the partners have agreed:

- terms on which access rights will be granted
- terms relating to transfer of ownership in foreground and management of jointly owned Foreground

The partners in each WP have considered what elements are capable of exploitation (including industrial or commercial applications) which informs WP7 and enables reporting within the EU Participant Portal. Where the nature of such foreground is such that intellectual property protection is feasible, the owning partner has informed the coordinator (TOI) of its intentions with respect to such protection. The partners will abide by the terms of the Grant Agreement with regard to protection of such foreground.

#### 3.2 Exploitation routes

Two main exploitation routes are anticipated for the results of CITYLAB:

1. **Municipal authorities** - policy development and adoption of the living lab approach by city authorities, with support from local stakeholders, including industry and independent researchers
2. **Freight industry** - incorporation of the CITYLAB implementation strategies into the on-going business operations of the industrial partners or external operators

In both cases, potential exploitation is not limited to the CITYLAB partners but may be transferable to other cities and to other freight operators, as elucidated in WP6 deliverables.

##### 3.2.1 Municipal authorities

It is anticipated that proactive municipal authorities, bringing together their local urban freight stakeholders in a living lab approach to develop shared goals and action plans, can exploit the CITYLAB methodologies and implementations to directly improve the quality of life for citizens (e.g. by reducing noise, pollution and accident risk). Regular meetings of the living lab increase the likelihood that positive actions will be taken. A living lab helps the municipal authority to better understand the needs of businesses and the freight transport industry laying the groundwork for developing further policies at local, regional, national and EU levels.

##### 3.2.2 Freight industry

For freight industry stakeholders engaging with a city or region's living lab there may be direct benefits through efficiency gains and improved compliance with local policies and regulations. Representation in the living lab also ensures that their views are heard and they can influence policy. Even without engagement with a living lab, operators may be able to directly benefit from taking up some of the implementation ideas that have been explored in Citylab.

Business model analyses of the CITYLAB implementations have been undertaken in WP5, examining:

- a) The business model used during the implementation
- b) The potential business model for continuing the implementation, taking into account lessons learned during the implementation
- c) The requirements and required value propositions to continue the method/scheme on a larger scale.

### **3.3 Exploitable results**

The main anticipated exploitable results are described in this section for the project as a whole and for each of the living labs. Where a living lab has developed more than one distinct strand of research and development, we have chosen to present the outcomes and anticipated exploitation by means of a simple A3 'spider diagram' with the living lab participants sitting in the middle, linking the strands. Some of the strands of research and development have not formed part of the core Citylab implementations but have emanated from the continual dialogue between the living lab stakeholders and are included to illustrate the progression of the research and the changing industry needs over the period. The diagrams include quotations from some of the key stakeholders involved as these can often tell the story of anticipated future exploitation better than a list of 'facts'.

#### **3.3.1 Exploitation of project-level results**

The main project-level results relate to learnings from the living lab approaches adopted in each city and from the implementations that took place or were investigated in each city as well as findings from initiatives that are external to the project. These have been presented in a variety of different dissemination formats, targeting key user groups, including follower and transfer cities, as described in section 2.

3.3.2 Brussels Living Lab

**Understanding heavy goods vehicles’ behaviour by means of floating car data:**  
 Key participants: BCR, VUB

Timeline: 2016 - present

- Series of meetings between BCR and VUB to assess scope for analysis of data from On-Board Units (OBU) in heavy goods vehicles to better understand urban freight transport in Brussels
- Urban freight transport analysis for Brussels based on sample of OUB data (maps and graphs)
- Continued collaboration between BCR and VUB by funding a researcher to further explore the OBU data and to carry out other research on urban freight transport that supports BCR

**OUTCOMES:**

- Joint contract between BCR and VUB for research that fills BCR’s knowledge gaps
- Paper submitted on OBU data analysis to Transactions on Intelligent Transportation Systems.
- Agreement with the city of Mechelen to also do an OBU data analysis for them as well (in combination with an ANPR camera data analysis).

**FUTURE OPPORTUNITIES:** The OBU data may also be used to analyse duration of stops for deliveries. Further research in this area is planned.

Marianne Thys (BCR): *“The OBUs in trucks provide huge amounts of data. The analysis of these data gave us added value because the information that can be retrieved from it to monitor UFT in Brussels is much richer than information from conventional traffic counts.”*

**Brussels living lab participants**

- Brussels-Capital Region (Department of Mobility) (BCR)
- Procter & Gamble (P&G)
- Febelco
- Vrije Universiteit Brussel (VUB)

**IMPLEMENTATION - Sharing spare transportation capacity**  
 Key participants: P&G, Febelco, VUB

Timeline: 2015 - present

- Talks with multiple service-driven companies operating in Brussels and choice for cooperation with Febelco
- Survey among independent shopkeepers in Brussels
- Web shop and payment module development
- Selection of product assortment and distributor to manage, store and sell the products
- Net supply chain network design
- Store visits by a sales company with knowledge of the nanostore retail channel in Brussels to introduce the new sales channel and place the first order
- Store deliveries by Febelco

**OUTCOMES:**

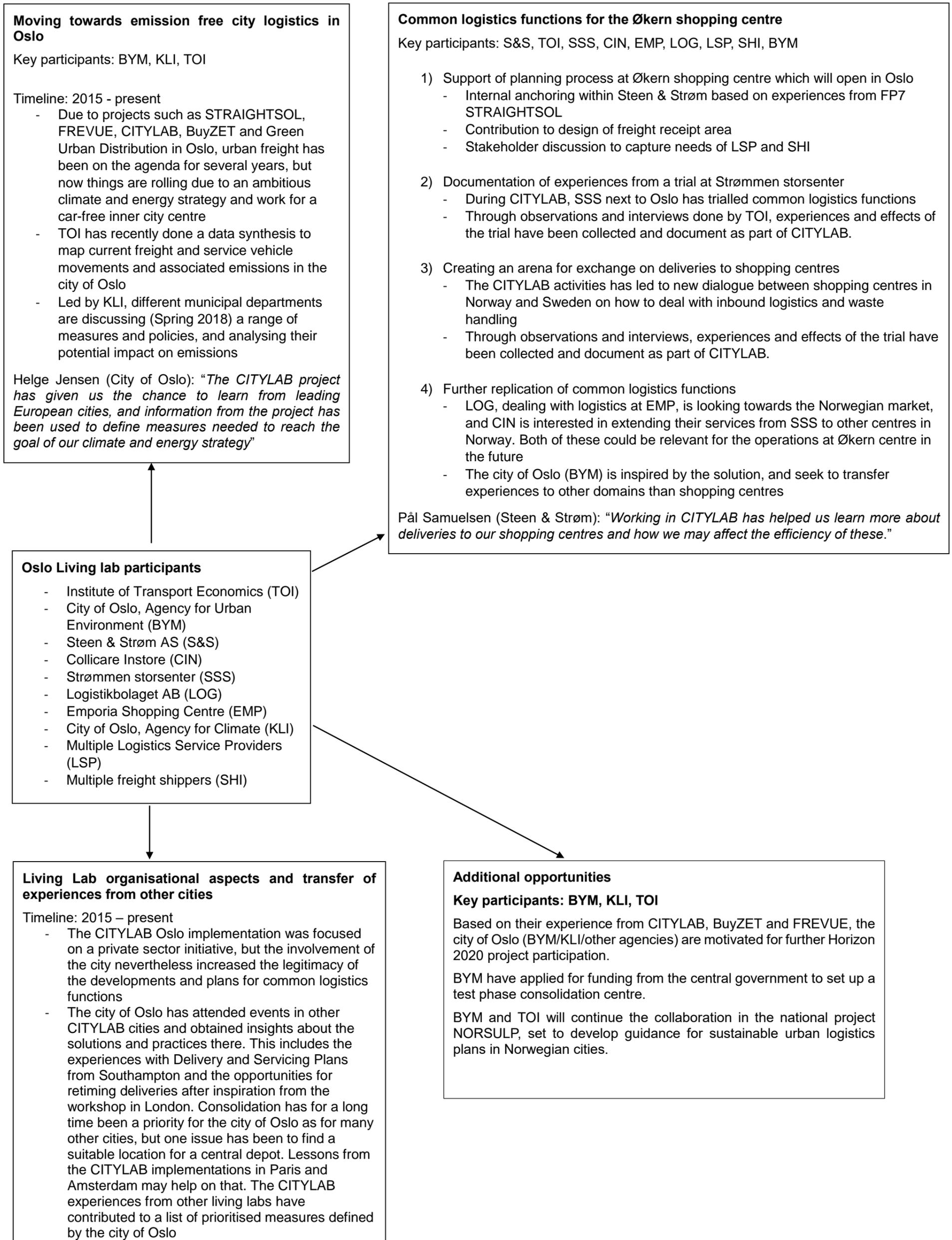
- Test of the solution in Brussels
- Introduction of the new sales channel in Antwerp
- Sharing of learnings with P&G employees that are related to the supply of nanostores in different cities globally
- Simulation of different scenarios leading to this [paper](#)
- Presentation 14<sup>th</sup> NECTAR Conference
- Learnings on role receivers (presentation at ICPLT Conference 2017 and paper planned)

**FUTURE OPPORTUNITIES:** Use of the survey among independent shopkeepers for a project on van sharing between neighbours to achieve a better low emission zone in Brussels by 2020 (initiated by Cozycar and BCR).

Lieven Deketele (P&G): *“For us as a company, it is important to reach the consumer where they shop. With the challenges linked to city environments and independent retail channels like nanostores, we need to explore new ways of sustainable distribution for our products in partnership with different stakeholders in the supply chain and the urban area. Only by experimenting in the marketplace and by learning from what works and what doesn’t we can iteratively identify the path forward. The Brussels Living Lab showed that it is possible to synergistically share transport assets between service- and cost-driven cargo as long as service requirements are adjusted. It also taught us more about the need for truly customer-centric ordering solutions for nanostores in order to be able to make an impact. Partnering with our supply chain partners (Fastlane), VUB, the Brussels Regional Government and logistics service providers like Febelco enables the needed depth in the research to eventually identify winning solutions.”*

Bram Van Deyck (Febelco): *“Febelco is a distributor of pharmaceutical products with a dense distribution network. We deliver to our customers (independent pharmacies) up to three times per day. This leads to a lot of vehicle kilometres, fuel consumption and business hours. The basic values of the company are, on the one hand, sustainability and innovation; on the other hand, operational excellence. In this context, Febelco is constantly looking for optimisation opportunities within its distribution process. Maximizing vehicle fill rates, optimizing delivery routes and minimizing empty running are aspects that require out-of-the-box thinking. Participating in the Citylab project enabled us to test some of these aspects in a living lab. One of the lessons learnt for Febelco is that the commitment to deliver to customers on a fixed time – the current way of working – limits the flexibility to maximize vehicle capacity. By phasing out deliveries during an exact point in time and evolving towards deliveries during time windows, the opportunity to optimize free capacity becomes more realistic. This allows servicing non-Febelco customers as well by using our existing distribution network. Consequently we can reduce vehicle kilometres. Realising this necessitates cooperation beyond company borders which we did in Citylab.”*

### 3.3.3 Oslo Living Lab



### 3.3.4 Paris Living Lab

**Paris Living lab participants**

- Municipality of Paris
- Sogaris (logistics real estate developer)
- Chronopost (parcel express operator)
- French Institute of Transport (IFSTTAR), University of Paris-East
- All other stakeholders of the Paris Logistics Charter

“The Parisian living lab has enabled all the actors to work in cooperation over the long term, leading to the first achievements of urban logistics hotels. The CITYLAB project allowed us to learn about the urban logistics policies of our European neighbours and to make known ours” – Municipality of Paris

**Description of the two logistics hotels**

Key participants: Municipality of Paris, Sogaris, Chronopost

- 1) Municipality of Paris (2013-present)
  - Logistics Charter 2013
- 2) Logistic hotel of Beaugrenelle, 3000m<sup>2</sup> (2013-present)
  - Building owner: Sogaris, use of an old car park in the 15<sup>th</sup> arrondissement
  - Transport operator: Chronopost
  - Consolidation of parcels of less than 30kg flows from the Chilly Mazarin logistics base (10km south of Paris)
  - Use of a few electric vehicles and diesel vehicles to Euro 6 standard; willingness to use CNG vehicles
  - Reduction of one third of air emissions thanks to the logistics hotel (mostly through consolidation)
- 3) Chapelle International logistics hotel: 33,000m<sup>2</sup> (building works: 2015-2017)
  - Mixed urban development project, including an urban rail terminal and a distribution centre, sport facilities, a data centre, an urban farm – Wider development project including housing.
  - Building owner: Sogaris; Rail operator: Eurorail; Road operator: XPO Logistics
  - Rail operations: freight originating from two logistics parks: Dourges and Bruyères-sur-Oise, bi-modal transport (train + road), 2 trains/day = 60 trucks less on the road
  - ISSUE: lack of extra train slots to accommodate more trains
  - Inauguration of the logistics hotel in April 2018. First client: Metro (wholesaler).
  - SITL (International Week of Transports & Logistics) (logistics main expo in France) “*Best innovation Infrastructure of logistics site*” Award, March 2018.

**Key steps in the Chapelle project development: a very long process**

Key participants: Municipality of Paris, Sogaris, Chronopost

Timeline:

- 2006: New Paris Land Use Plan with land parcels reserved for logistics
- 2010: SNCF launches a **request for proposals** for a logistics project
  - o with rail freight operations (imposed)
  - o not above 7 metres from street level (imposed)
- 2011: Sogaris project selected
- 2012 + 19 months: **building permit**
- 2013: **Special agreement** for large industrial buildings
- 2014 Nov-Dec: **Impact Study** and public enquiry
- 2014: **ICPE permit** (hazardous activities)
- 2014: **Specific Notice for Rail Safety permit**
- 2015 Sept: ownership of the site to Sogaris and start of works
- 2015 Dec: agreement signed with rail operator and logistics provider
- 2016 Jan: end of excavation works; agreement signed with wholesaler
- 2016: **‘Modifying Building Permit’** solicited and granted
- 2017 Sept: construction finished, Nov-March 2018: train tests
- 2018 April inauguration

**Future directions for potential dissemination of living lab results**

Future logistics hotels of Vitry-Ardoines (39,000m<sup>2</sup>) and Bercy-Charenton (2018)

Development project (similar to Chapelle) in Vitry-sur-Seine (4km south of Paris) of a logistics hotel.

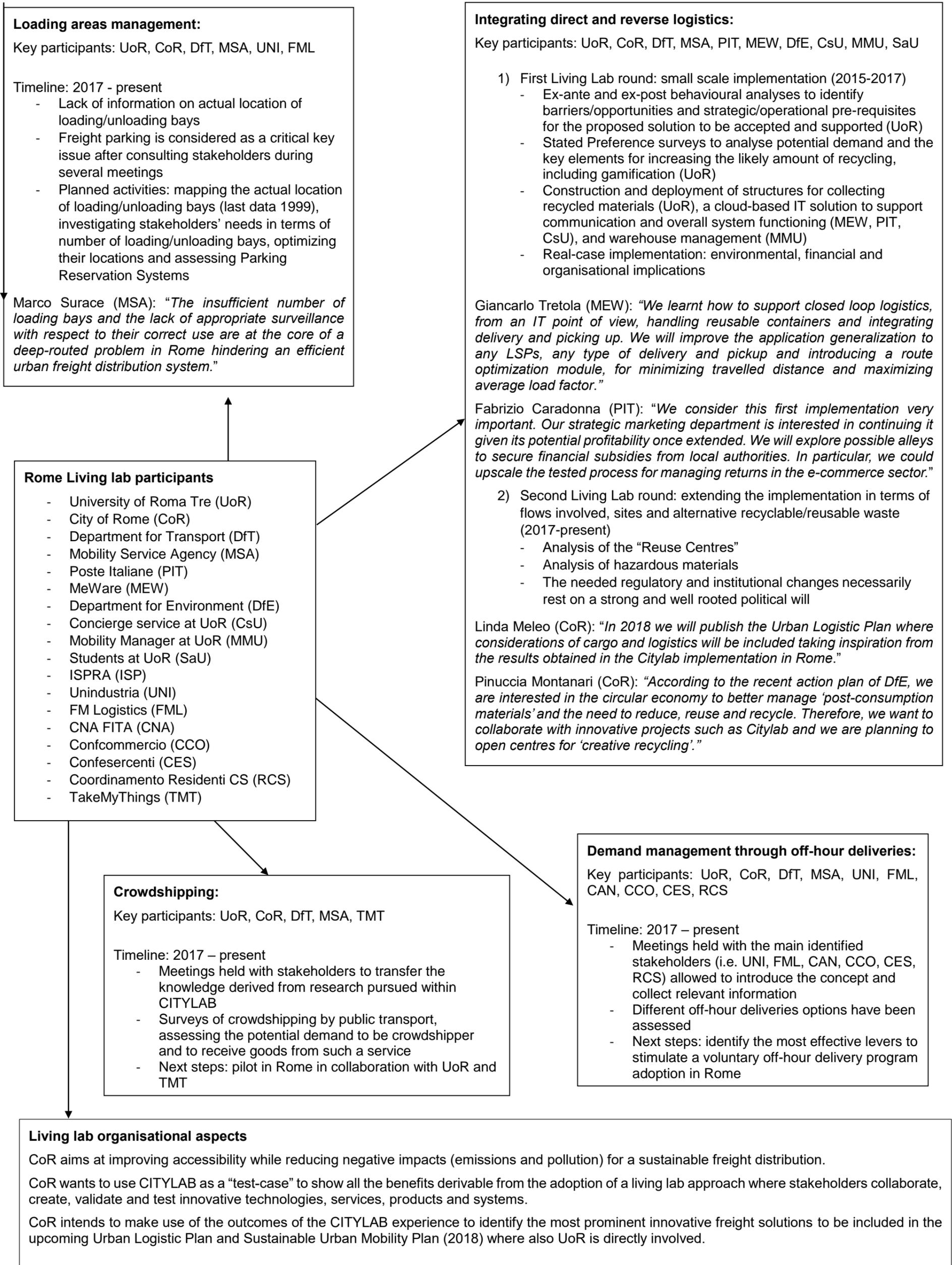
Choice in May 2018 of the future leader for the logistics hotel project in the 12<sup>th</sup> arrondissement of Paris, dates not known yet

In the 2016 Paris zoning ordinance, the municipality has reserved logistics spaces for future uses

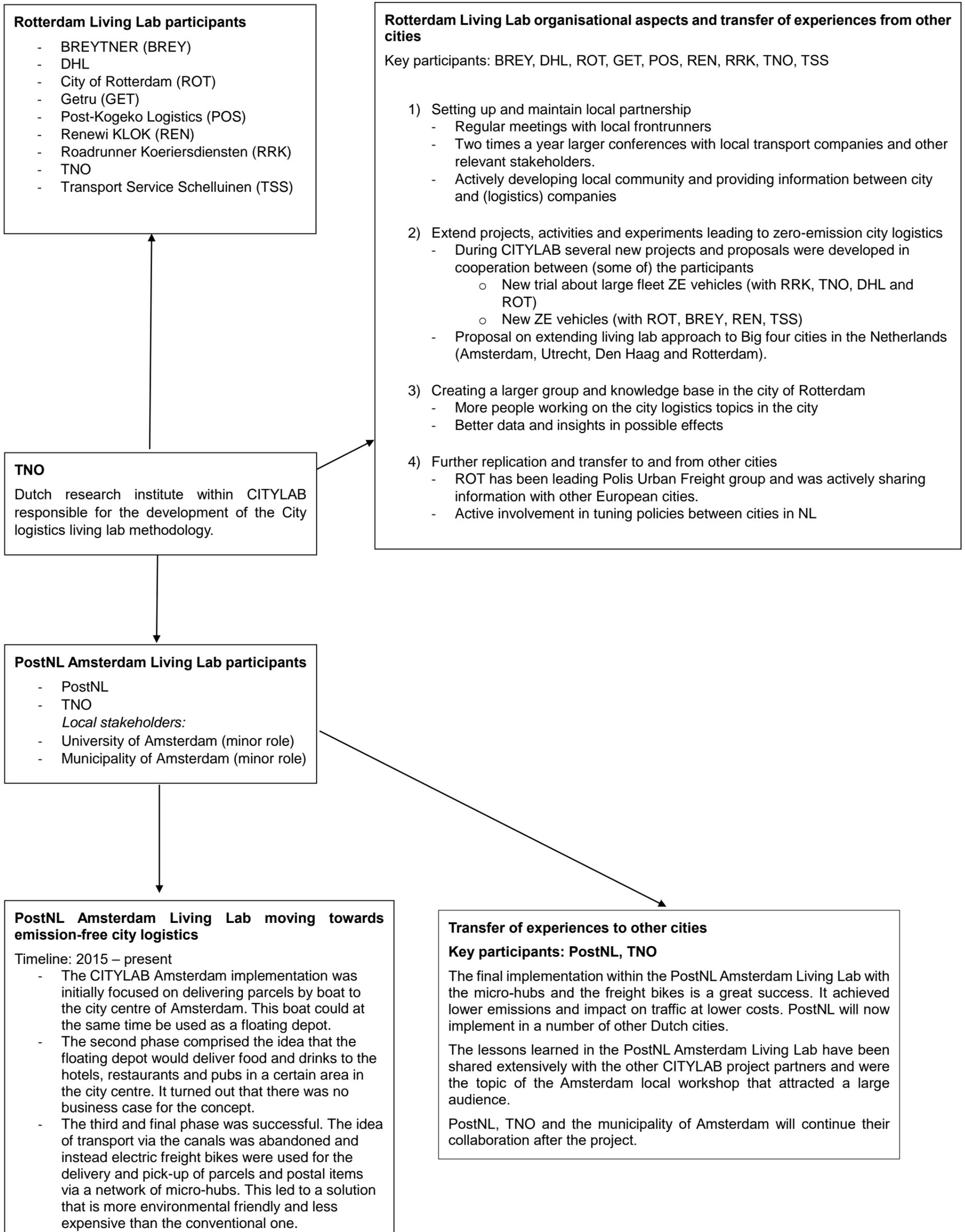
Beyond Beaugrenelle & Concorde, Chronopost would like more logistics spaces in urban areas.

Projects involving the use CNG or hydrogen to replace electric vehicles (specific to Beaugrenelle)

3.3.5 Rome Living Lab



3.3.6 Rotterdam / Amsterdam Living Lab



**3.3.7 Southampton Living Lab**

**Joint Procurement:**  
 Key participants: UoS, SSU, BU, UHS, SCC

Timeline: 2015 - present

- Assessment of scope for joint procurement of common inventory for large municipals
- Key issue is the nature of supplier contracts & when they are tendered
- Series of meetings held between heads of procurement at UoS and UHS
- **OUTCOMES:** Sharing of best practice information; joint contracts between UoS/SSU/BU for waste collection; contracts between UoS and UHS for occupational health services; SCC rental of property and space to UoS and SSU; Citylab LRN paper 2016; MSc dissertation 2016

Eychelle Heywood (UoS): *“Collaboration is a key activity ensuring we deliver service excellence and value for money. Building effective relationships with partners within the HE sector and beyond, such as Local Government Authorities and the NHS ensures we are focused on delivering best practice. Currently 23% of our impactible spend is channelled through collaborative procurement arrangements”.*

Chris Meayers-Norkett (UHS): *“Exploring options for collaboration is now firmly embedded in our business as usual strategic procurement process. Increasingly we are looking to creatively broaden the scope of collaboration beyond the healthcare sector and into wider public sector as well as other sectors. This is set to expand further as we continue to pursue value and not price.”*

**Consolidation Initiatives:**  
 Key participants: UoS, SSU, SGH, IoW, MGL, SCC, BU

- 1) University Halls of Residence mail consolidation case study (2016-present)
  - Surveys of incoming goods to halls at 3 universities (UoS, SSU, BU)
  - Student opinion surveys at UoS and BU
  - Survey data used to present a business case to UoS and SSU
  - Concerns about same-day delivery meant scheme not adopted

Gary Whittle (MGL): *“We will continually discuss with both Southampton universities the possibility of consolidating some of their goods. The introduction of the new Clean Air Zone will focus their attention given their geography and we are hoping that this has been the stimulus for further projects.”*
- 2) IoW St Mary’s hospital case study (2016)
  - Delivery and Service Plan (DSP) undertaken
  - Business case developed and presented by MGL and SCC
  - Hospital initially agreed to use SSDC but subsequent management changes and competing priorities led to indefinite postponement
- 3) Southampton General Hospital case study (October 2015 – present)
  - DSP undertaken
  - Business case developed and presented by MGL and SCC
  - Temporary storage and transportation of automated dispensers
  - Scoping study for pharmacy consolidation
  - DfT and TSC undertook economic evaluation of consolidation for large municipals (2017-18) using UHS as case study.

Gary Whittle (MGL): *“We are working very closely with the hospital and have started a number of significant projects which will progress throughout the year. We are looking at a much broader project where we are more involved in their supply chain process.”*

Chris Meayers-Norkett (UHS): *“The development of consolidation logic or nearby sequencing centre is a crucial enabler to ensure our NHS Trust is fit for purpose. It will help ensure future growth is possible while creating operational efficiencies, reducing the cost to serve, reducing our environmental impact and enhancing the staff and patient experience. There is much to look forward to in the future.”*

**Electric fleet adoption:**  
 Key participants: SCC, UoS

Timeline: 2017 – present

- UoS Student Group Design Project to evaluate the potential adoption of electric vehicles across SCC own-account fleet
- Business case developed for SCC
- Procurement of 6 electric vehicles resulting from the case (March 2018)
- Fleet replacement plan under development; target of 90 EVs (20% of fleet) by 2020
- SCC commissioned EV charging project from UoS; 30 publicly accessible charging points launched 16 March 2018 with more planned in 2018/19; located in city centre (destination charging) and on residential streets without off-road parking.
- Clean Air Zone consultation spring/summer 2018. Business Case to be submitted to Secretary of State September 2018.

Christopher Hammond (SCC): *“We have been one of 5 places in the UK identified as having an air quality issue, so addressing this is a priority for our local sustainable transport agenda. We’re working extremely hard to improve local air quality in Southampton and encouraging the uptake of electric vehicles is a very important part of our strategy.”*

**Southampton Living lab participants**

- Southampton City Council (SCC)
- University of Southampton (UoS)
- Meachers Global Logistics (MGL)
- University Hospital Southampton Foundation Trust (UHS)
- Isle of Wight NHS Trust (IoW)
- Bournemouth University (BU)
- Southampton Solent University (SSU)
- Transport Systems Catapult (TSC)
- Department for Transport (DfT)

**Living lab organisational aspects**

SCC hope to extend existing framework agreement with MGL for another year to promote use of the SSDC and actual use by SCC for records management.

A formal consultation process on the proposed Clean Air Zone will take place in Spring 2018. SCC want to make sure that organisations are aware of the solution the SSDC can play in mitigating the effect of Clean Air Zone charges (as the SSDC is outside the zone).

SCC aim to secure funding to offer local businesses free DSP audits.

### 3.3.8 London living lab

#### ***Living lab project participants***

- Transport for London (TfL)
- University of Westminster (UoW)
- Gnewt Cargo Ltd
- TNT UK

#### ***Further local stakeholders, participants at Living Lab meetings***

- Anglo Stationery
- London Borough of City of London
- Better Bankside Business Improvement District

#### ***Strengths and exploitation of outcomes***

The results of the London implementation actions and living lab activities relating to growth of electric vehicle use and consolidation resulted in significant reductions in distance travelled (up to -67% km per parcel), emissions (particularly CO<sub>2</sub> (-88%) NOx and PM10 (-100% at tailpipe), total energy use (up to -75% toe per parcel) and empty running (up to 93%) when compared to standard diesel delivery without consolidation using Central London depot locations.

The efficiency increase in operations, notably the shorter vehicle distance per parcel delivered for TNT, leads to a significant reduction in diesel vehicle use, lowering air pollutant emissions per parcel delivered. Economic profitability was also established.

By using central London consolidation centres, distance-related external impacts such as accidents, noise and congestion are significantly reduced. It also reduces travel time and business costs for the clients, contributing to stabilising the business model of electric van delivery.

As a legacy, the effects of introducing the solution on the market are clearly beneficial for the environment and business efficiency and profitability. The data collected and analysed provides evidence that the operational solution trialled can be replicated, new Central London depots can be opened and run efficiently, and new clean freight vehicles can be acquired and used successfully in London.

In order to scale up the solution demonstrated in this project, several possibilities are feasible. The first would be the economic growth of the current business through acquisition and contracting of new large-scale clients in London, the opening of new larger depots with access for large articulated trucks, and the acquisition of additional clean vehicles. The knowledge on how to do this is now available and is replicable. The greatest barrier to a lasting legacy is lack of available space within city centres, safe-guarded for environmentally friendly logistics last-mile solutions. Such available space will become an absolute necessity to keeping parcels moving in the future in a clean and efficient manner.

The second legacy concept would be to transfer the solution to one (or more) other area(s) of London, to open a new depot there, to obtain a contract with a new client, and to purchase a clean vehicle fleet. This transfer of good practice from one client to another would benefit from a trial phase and from a quantitative evaluation.

Gnewt Cargo's business model and infrastructure has been tailored towards this type of operating model since the company's inception. It is this fact that has enabled Gnewt to achieve the environmental savings and operational efficiency that has proved a barrier to other logistics companies.

The concept of smaller, central consolidation centres, a fully 100% electric fleet, a robust data collection system and monitoring of operations is integral to the success of Gnewt, as is the ability to provide viable research results for CITYLAB and the wider CIVITAS community.

### ***Technical barriers***

The electric freight business is not yet profitable for heavy loads transported by HGVs. For pallets or heavy goods deliveries to receivers of more than one tonne per day, trials with other alternative fuels are likely to currently prove more successful, such as the experience of Howard Tenens with biogas as fuel and a gas motor as the main engine. This has not been tested in London yet.

The newly started (March 2018) London trials with Mercedes Fuso Canter and the announced arrival of 12-27 tonne electric trucks from Volvo, Tesla and Mercedes suggests that 2019 and coming years will see a possible overcoming of this technical barrier to future growth of electric vehicle adoption in freight transport.

The 100% fully-electric freight operations of Gnewt Cargo will not suit long distance transportation of goods, and the current range of approximately 60 miles per day in winter is fairly limited, but this is considered sufficient for parcel deliveries. Due to the range limitation, a high density of customers is required. A transport business that requires long distances between customers is not suitable for full-electric vans at this time.

### ***Concluding remark on further take-up and scale up of the solution***

The results show a strong decrease in distance, emissions, energy use and empty running although a slight increase in total number of vehicles. The efficiency increase in operations leads to lower air pollutants emissions per parcel delivered. The lower distance also diminishes external costs of transport such as accidents and congestion costs that are distance related.

The London Living Lab results are in line with the wider objective of the EC, London and several governments, to lower air pollution in transport. The cooperation between government, industry and researchers has proven highly successful in London, and will continue in future.

## **3.4 Individual partner exploitation plans**

This section gives a summary indication of how each individual partner envisages how they will exploit CITYLAB results both during and after the project has ended.

### **3.4.1 Brussels Mobility**

Brussels Mobility takes part in CITYLAB through its Directorate Strategy and the unit in charge of goods transport whose objective is to improve mobility notably by helping public and private entities to optimize their flows, thanks to a better understanding of the impact of their logistics and solutions used. The Strategic Plan for Goods Traffic, adopted in 2013, comprises 36 actions aiming at optimizing the flows, making the delivery man's life easier and supporting modal shift. Brussels Mobility have previously worked in other European projects and is looking for on-the-ground-trials to develop its knowledge of both problems and solutions on urban logistics. Brussels-Capital Region is currently in the process of developing a new Regional Mobility Plan (called Good Move) which will also include urban freight measures. The experience from CITYLAB will support the development and implementation of the strategic visions of Brussels Mobility by providing useful examples. As part of CITYLAB, Brussels Mobility and VUB explored together how the data collected by the On Board Units (OBU) of heavy goods vehicles (HGVs) in Belgium can increase knowledge about freight transport in Brussels. They already agreed on how to expand that work in the near future.

### 3.4.2 DLR

DLR's contribution to the CITYLAB project concentrated on knowledge development in urban freight transport and assessing the potential roll-out of CITYLAB solutions. The knowledge gained on trends and influencing factors in urban freight transport contributes to the understanding of urban freight within and beyond the project. This knowledge was shared within the project consortium and with national and international stakeholders and focused on land use and urban sprawl as well as on service trips. To assess the roll-out potential of CITYLAB solutions, an evaluation framework and key result indicators (KRI) have been developed together with the project partners. DLR will disseminate the developed methods, which will be used to further evaluate the roll-out of CITYLAB solutions. The results of both knowledge development and the evaluation framework will be used for scientific publication and presentation at international scientific conferences. The findings on the local analysis of logistics sprawl, presented at the WCTRS conference 2016 contribution will be published as a journal paper. DLR has also submitted abstracts related to the transferability methods and evaluation to scientific conferences. Furthermore, DLR will use existing project networks to contribute to the distribution of the CITYLAB ideas among actors in Germany and especially in Berlin.

### 3.4.3 Gemeente Rotterdam

The city of Rotterdam is a well-known port city with about 600,000 inhabitants. One of the main issues in Rotterdam is to address the local air quality. For several years the municipality, together with other organisations, have been trying to improve air quality. One of the ways is the approach to urban goods distribution. Together with six regional transport companies and TNO, a 'Green Deal' - cooperation was signed between the public and private sector to address local air quality within the realm of urban goods distribution. The role of the municipality of Rotterdam in other projects, such as FREVUE and TIDE, has been used to enhance the outcomes of CITYLAB. The knowledge and experience from other city partners of the development of a living lab, and the scientific consultancy of the scientific partners has been of direct use in Rotterdam. Together with the hands-on approach of the logistic partners, an integrated living lab in Rotterdam is being developed with the ambition to reach zero emissions in the city centre of Rotterdam by 2020. The living lab partners are part of a discussion to make more use of electric and hybrid large transport road vehicles. All activities related to the city logistics living lab are now coordinated in 'Logistiek 010' (<http://www.logistiek010.nl/en/>).

### 3.4.4 Gnewt Cargo

The main exploitable CITYLAB result of Gnewt Cargo is the growth of the full-electric freight delivery business in central London, with plans for expansion to other UK cities, thus reducing air pollutant emissions, lowering noise levels, reducing carbon emissions, while maintaining a high quality of service. Gnewt Cargo will exploit the results of the CITYLAB project in two ways: it will benefit internally through the trial development, achievements and impacts, and with the management knowledge related to multiple depots and clients in central London; it also benefits from information received on other CITYLAB innovations. This leads to an improvement of the management of Gnewt Cargo and will secure, in the medium-term, the competitiveness of the electric delivery business in central London. Gnewt Cargo gained better knowledge on how to open a new depot according to the needs of new clients, and learnt how to deal with a more complex business situation when carrying goods from different clients in the same depot and in the same round trip, and to compare it with a more standard situation in which one client has one main depot with a fleet associated to it. The benefit for London is to obtain a growing private logistics sector with clean deliveries. The results have been further disseminated with presentations at public events, through the Gnewt Cargo contribution to data collection, and through the cooperation within the London Living Lab.

### **3.4.5 IFSTTAR**

Within CITYLAB, IFSTTAR is committed to knowledge development and analysis of trends that will affect urban freight in the future. IFSTTAR are working closely on the Paris demonstrator (logistics hotels) and have been involved in networking with US partners. CITYLAB will directly benefit IFSTTAR in the promotion and consolidation of some of the Institute's most active and promising fields of current and future research, in particular logistics sprawl, new supply chains for e-commerce and the circular economy. New conceptual models have been developed for CITYLAB that are the basis for IFSTTAR research (including PhD developments) after CITYLAB ends. The Observatory of Strategic Development (Task 2.1) will outlive CITYLAB and our objective is to make it permanent. It should become a regularly updated knowledge platform for all European urban freight stakeholders. We also expect to learn a lot from the seven living labs and their implementations. Some of them have been scrutinized by our team members, especially by some of our PhD students: common logistics for malls, as it is a specific issue for today's shopping centres in large cities in France; joint procurement for municipalities, as this theme has recently been discussed by some municipalities but lacks performance indicators. Logistics hotels are also a hot topic at IFSTTAR, who have been receiving solicitations for research and expertise from real estate companies and logistics providers to contribute to innovative designs, planning and regulation for logistics buildings in urban areas. Networking on urban freight with US partners, both academics and practitioners, will continue to be extremely useful as IFSTTAR, currently involved in the MetroFreight project ([www.mettrans.org/metrofreight](http://www.mettrans.org/metrofreight)), is looking at ways to consolidate relationships with urban freight research in North America.

### **3.4.6 Meachers Global Logistics**

MGL currently operate the Southampton Sustainable Distribution Centre (SSDC) which is designed to reduce congestion and pollution in the region, but predominantly in the Southampton city area. The SSDC has been running since February 2014 and is progressing well, with several private clients but relatively little use from the public sector, which the Citylab project has sought to address. As a result of the Citylab implementation, Meachers have learnt some very valuable lessons and tips about how to establish and operate the SSDC and will continue to share our knowledge, experiences and thoughts with other freight consolidators to maximise effective exploitation through greater participation and economy of scale efficiencies. Meachers' goal is to see a proliferation of both their usage and the general growth in SDC provision throughout Europe. It is their belief that this is part of a solution to address increasing pollution and congestion. During the past 18 months Meachers have developed the SSDC and have forged a stronger more strategic relationship with most of the potential end users. They have agreed, albeit provisionally at this stage, an extension of the current arrangement which will allow some significant projects to be implemented in the coming months. We are working with SCC to adapt the current framework contract for future use and will be aggressively bidding for a new term.

### **3.4.7 Meware**

Meware's involvement in CITYLAB has been aimed at participating and supporting the experimentation in the living lab with the City of Rome, Poste Italiane and the University of Roma Tre, with the objective of developing software tools to be used in the realization of the use case, while acquiring a deeper knowledge of the related problems and opportunities. From the living lab implementation, Meware has gained knowledge and experience in the task of designing a software solution for enabling the integration of deliveries and collections in order to optimize the last mile logistics in urban centres. The developed application has been implemented as a Software-as-a-Service solution, deployed in a cloud environment. The cloud solution has been selected because it provides scalability and robustness. The application functionalities, tested during the living lab experimentation, enable integration between direct and reverse logistics, enabling receivers of mail and parcels from Poste Italiane to coordinate with the mailman for retrieving parcels,

allowing the integration of direct and reverse logistics. The application is able to process the pickup requests and send notification to the involved actors. Furthermore, it is able to track the reusable modular containers, used in a closed loop approach.

Meware's objective is to further exploit the implemented solution, for managing the delivery capabilities and the collection opportunities, in order to develop a cloud-based set of generic tools for enabling integration between any kind of LSPs, optimizing the paths and leveraging the potential use of modular containers, as defined by the Physical Internet Initiative, with the aim of improve efficiency in urban logistics, so reducing congestion and pollution. Regarding the path optimization, Meware has defined a mathematical model for addressing the problem of optimizing the route of a logistic operator, engaged in delivering and picking up, minimizing the travelled distance and maximizing the average load factor, alternating delivering and picking.

### **3.4.8 Oslo commune (City of Oslo)**

It is beneficial for Oslo to put in efforts in accordance with our ongoing strategic projects for city distribution. The city has a strategy for reducing fossil emissions from city distribution by 50% by 2020 and an ambitious 'Climate and energy' strategy. CITYLAB has therefore been very welcome for the city to keep the focus on city logistics issues.

The CITYLAB implementation in Oslo focusing on common logistics functions for shopping centres has not required a strong involvement by the city, but this collaboration has nevertheless given the city an additional channel for discussing and cooperating with the private sector. Also, several representatives of the city administration have been inspired by the common logistics functions idea and want to explore the idea outside the shopping centre environment and see if there is a potential for similar solutions in regular street networks. This approach has also been discussed in the local freight forum of Oslo.

Furthermore, the city of Oslo has attended events in other CITYLAB cities and obtained insights about the solutions and practices there. This includes the experiences with Delivery and Servicing Plans from Southampton and the opportunities for retiming deliveries after inspiration from the workshop in London. Consolidation has for a long time been a priority for the city of Oslo as for many other cities, but one issue has been to find a suitable location for a central depot. Lessons from the CITYLAB implementations in Paris and Amsterdam may assist that. The CITYLAB experiences from other living labs have contributed to a list of prioritised measures defined by the city of Oslo during the spring of 2018. These prioritised measures are the main ones to support during the next years for reaching the goals set out in the climate and energy strategy.

### **3.4.9 POLIS**

POLIS, which is a network of European cities and regions, promotes, supports and advocates innovation in local transport, in particular in relation to the environment & health, mobility & traffic efficiency, the economic & social aspects of transport and safety & security. POLIS communication channels, including its fortnightly member's newsletter, website, annual conference and thematic working groups will be used to widely disseminate CITYLAB outcomes and to advertise relevant events. They were a key partner in organising the final conference on 23-24 April 2018 which attracted a large audience (190 people). POLIS also has good working relations with other European networks, platforms, and associations in the field and participates in several EU-funded projects and will continue to disseminate the project outcomes going forward.

### **3.4.10 Poste Italiane**

In a context of changing the service model, the CITYLAB project represented a significant opportunity for Poste Italiane to evaluate the possibility of reconsidering its offering and to develop a new business model aimed at reducing the environmental impact and costs of freight travel in urban areas. Post Italiane consider this first implementation very important and their

strategic marketing department is interested in continuing the concept, given its potential profitability once extended, and we are actively exploring possible avenues to secure financial subsidies from local authorities.

#### **3.4.11 PostNL**

PostNL are the leading mail and parcels company in the Benelux. A main strategic aim of PostNL is to drive sustainable, future-proof service propositions and ways of working enabling us to make a distinctive contribution towards solving social and environmental dilemmas. The microhub concept, being implemented in Amsterdam, meets this strategy aim very well, allowing them to make more sustainable deliveries in city centres using historical waterways and feasible locations and decreasing emissions and accessibility problems in the crowded part of Amsterdam. After the project, the microhub concept will be extended to other Dutch cities.

#### **3.4.12 Procter and Gamble Business Services**

The Supply Network Innovation Center (SNIC) based in Brussels, is part of Procter and Gamble's Supply Network organization. Part of the research that is currently conducted in SNIC is around how to distribute our products to high frequency stores in urban environments at lower cost and/or better service and/or in a more sustainable way. Currently this is often done through a traditional network of distributors, wholesalers and/or retailers. With the increasing constraints in the growing urban environments (increased congestion, pressure on the environment, possible taxes, regulations etc.) SNIC is researching new approaches for supplying these high frequency stores. The Brussels living lab investigated a new approach and documented the results of the experiments in detail: background of the living lab, purpose, set-up, lessons learned, benefits (costs, service, environment), do's and don'ts. SNIC will continue to disseminate all the findings through its global internal company networks to all P&G supply chain practitioners that are, day to day, supplying high frequency stores across the entire globe, which will help them assess and integrate the results of the Brussels living lab into their day-to-day operations.

#### **3.4.13 Roma Capitale**

The city of Rome will contribute to the project through the involvement of its mobility agency Roma Servizi per la Mobilità (RSM). RSM, amongst all the processes related to planning, supervising and coordinating private and public mobility. RSM also supports the city administration in managing projects relevant to freight distribution and logistics. Rome Council approved the Urban Mobility Masterplan (PGTU in Italian), in which the general framework for freight distribution is included, and Rome will thus support CITYLAB by following the guidance of the PGTU. The objective is to make the distribution of goods more efficient and environmentally friendly. Proposed actions going forward include: the reduction of the number of vehicles circulating; the consolidation of goods to increase vehicle loading factors and the rationalisation of loading and unloading areas, accompanied and supported by specific rules and incentives.

A living lab approach has been adopted in our current drafting of a Sustainable Urban Management Plan (SUMP), with citizens and stakeholders being consulted via an online platform on proposed policies and instruments, involving coordination between various sectors (transport, urban planning, environment, economic activities, social services, health, safety, energy, etc.). Citizens and stakeholders were asked to comment on public and private transport, freight logistics, cycling, environmental issues, accessibility, and information technology systems. By the 28 February 2018 consultation deadline, over 2,600 comments or proposals were received and these are now being evaluate by a steering committee with the more interesting ones being taken into account during the SUMP drafting.

#### **3.4.14 Southampton City Council**

The city of Southampton is home to a thriving container port business, Europe's busiest cruise port, and a premier league football club. The city is a regional hub for retail and commercial businesses and it has two well-recognised universities attracting just under 40,000 students. All of this positive growth activity brings with it issues of congestion and pollution impacting on the air quality of the city and surrounding area. Southampton City Council (SCC), over a number of years, has the ambition to not only address these negative impacts of a positive economy, but also be at the vanguard of implementing change to more sustainable models. They were instrumental in setting up the Southampton Sustainable Distribution Centre which has been running since February 2014. SCC recognises however that there is still a long way to go, so through CITYLAB has been keen to share its experiences and learn from other places where best practice models have been developed, implemented and tested. SCC is keen to continue to work closely with its living lab partners to provide further effective urban freight management models to tackle congestion, pollution and air quality issues in and around the city. This exploitation can also be extended to other local authorities in the Solent area where SCC already has influence through geography and regular contact.

#### **3.4.15 Steen & Strøm**

Steen & Strøm is Scandinavia's leading shopping centre company, partly owned by the French group Klépierre. Steen & Strøm is an enterprising company, continuously seeking to meet our target group's increasingly complex needs, which encompass safe and effective shopping, exciting experiences and pleasant, attractive meeting places. Steen & Strøm has been involved throughout the project as part of their ambition to establish common logistics functions in the new shopping centre at Økern in Oslo. The project has also given Steen & Strøm new contacts with service providers, and even been an opportunity for intra-company learning between the Scandinavian countries. CITYLAB has raised the attention on freight deliveries and waste management in shopping centres, and Steen & Strøm's ambition is to have common logistics functions as the de facto standard for their future shopping centres.

#### **3.4.16 TNO**

TNO's research activities in CITYLAB resulted in the development of a handbook for city logistics where practical guidelines have been provided for the preparation, setting up and conducting of a living lab. The living lab city logistics methodology, tested and improved within the CITYLAB project, will be and has been made available for broader use in form of publicly available reports, scientific papers and other means (e.g. presentations at the workshops, conferences, leaflets, etc.). TNO is a task leader responsible for the collection of the specific information, data and knowledge on the urban freight status of the CITYLAB cities. The outcomes of these tasks are providing an overview of data collection methods that have been made available for cities in order to enable monitoring of individual policy objectives in time. Dissemination of results also took place through a series of workshops on inter-living lab transferability that TNO organised. These workshops gave CITYLAB cities the opportunity to exchange their experiences of setting up and using a living lab. TNO will continue to actively participate in the Rotterdam city logistics living lab and local workshops. The cooperation with PostNL will continue after the project.

There is great potential to expand the scope of living lab activities in the Netherlands as the approach is becoming highly popular with funding available from Dutch funding agencies, e.g. <https://www.nwo.nl/financiering/onze-financieringsinstrumenten/sgw/duurzame-living-labs.-fase-1-ontwikkelingsubsidies-voor-consortiumvorming/duurzame-living-labs.-fase-1-ontwikkelingsubsidies-voor-consortiumvorming.html>. Experiences from the Citylab living lab will be directly exploited by TNO (and possibly other Dutch institutions too) in building further collaborative working relationships adopting the living lab approach.

### **3.4.17 TNT Express UK Ltd**

TNT will now, through this CITYLAB project, develop the clean vehicle operation and central consolidation centre concept to overcome the obstacles identified in many cities by working with cost effective methods of moving freight within the 'last mile' area in London. TNT's main contribution to the CITYLAB project, and within the London living lab team, was in providing an alternative solution to our standard operational methods currently used to deliver to City locations, at equivalent or improved cost and service levels. We expect that the solutions, having been tried and tested, will be fully portable, allowing TNT to adopt these across the UK network, providing both cost and environmental benefits accordingly. TNT's current outlook strategy programme includes significant pressure on reducing CO<sub>2</sub> emissions across the business with annual reduction targets being imposed. By adopting the consolidation centre and carrier's carrier concept, and using alternative fuel/vehicle for last mile delivery solutions across the network, TNT is well placed to deliver significant emission reductions.

### **3.4.18 TOI**

TOI has been the coordinator of the project and has an important role in sharing all CITYLAB results with external parties at all stages of the project as well as post-project. Knowledge from the project has been transferred to industrial parties, authorities and the research community. As a research institute, TOI has a policy that all research results should be public, which will also be the case for the results from the CITYLAB project (except where specific confidentiality obligations apply). TOI is currently working on research papers based on CITYLAB, which will communicate CITYLAB experiences to the research community. On top of that, it is seen as important to spread the knowledge on key findings that may contribute towards reaching emission-free city logistics in the future.

TOI has supported the Steen & Strøm implementation of common logistics functions, and will continue to investigate opportunities for transfer and roll-out of such solutions to other shopping centres. If there should be a need for consultancy services for further exploration of project results after the closure of the project, TOI will be available for such services.

Finally, new projects have arisen in the spirit of CITYLAB, and the results from CITYLAB will be used in these. One example is the Norwegian project NORSULP, set to develop guidance for sustainable urban logistics plans in Norwegian cities. Lessons from the living labs with public – private – research collaboration will be incorporated there.

### **3.4.19 Transport for London**

Using the lessons learned from the 2012 Olympic Games, Transport for London (TfL) produced a two-year programme ('Delivering a road freight legacy') focused on joint priorities of TfL and the freight industry, including improving road safety, making best use of the road network, minimising congestion and ensuring reliable journey times. Using this programme as a base, and complemented by their activities in CITYLAB, TfL are working with stakeholders from across the industry, the businesses they serve and London's boroughs to help us develop a new strategic approach to freight in the capital.

### **3.4.20 University of Gothenburg**

The University of Gothenburg (UGOT) was added to the consortium after the appointment of Professor Michael Browne, formerly of the University of Westminster, as it was considered important to retain his key roles in the project, especially in leading the Knowledge Development and Data Management workpackage (WP2). The knowledge acquired through CITYLAB will contribute to his research portfolio and to teaching at the University and externally where he is often invited to give keynote lectures. In addition, UGOT will ensure that information about the CITYLAB project is disseminated in Sweden through the Urban Freight Platform (UFP) initiative (a joint initiative involving UGOT and Chalmers and supported by the Volvo Research and Educational Foundations). The UFP has organised a number of workshops and conferences to bring together city authorities, industry/business and

researchers to consider urban freight innovations and how to embed urban freight more securely within city planning and development. The outputs from CITYLAB will form a valuable input to this discussion in Sweden and there is interest in several aspects of the implementations in both Gothenburg and Stockholm. UGOT's involvement in CITYLAB strengthens its role as a research node in Sweden and more widely within Scandinavia. In addition, CITYLAB is also relevant to the connection of the UFP to two other VREF Centres of Excellence (CoE-SUFS and MetroFreight).

#### **3.4.21 University of Roma Tre**

The University of Roma Tre (UR3) contributes to the project by both supporting the creation and development of the living lab in Rome and performing ex-ante and ex-post behavioural analyses for all innovative solutions proposed with a particular focus on Rome's living lab. UR3 has a direct role in Rome's implementation and, during the project, has been involved in the dissemination activities for transferring: 1) the living lab concept/approach mainly to academic and public sector audience; 2) the innovative solution tested to other geographical contexts (i.e. Italian cities: Milano, Lecco and Palermo); 3) the outcomes of the ex-ante and ex-post behavioural analyses, including the investigation of the *gamification* design to foster stakeholder engagement and behaviour change, to national/international conference participants. Not only presentations at meetings/workshops/conferences, but also two papers, one in a scientific journal (another paper is under consideration) and a second as a book chapter have been published. UR3 will continue to disseminate CITYLAB outcomes and results, including those related to the living lab at a city level, through the same channels already used.

Moreover, UR3 has been exploiting the CITYLAB project by strengthening the relationship with local authorities in Rome to support them in their future urban freight planning as well as with industrial firms interested in the innovative solutions investigated and tested within the Rome's living lab. In particular, contacts with relevant stakeholders (e.g. departments/public organisations, industry/retailers/citizens associations) and preliminary discussions about possible joint endeavours have been initiated and will continue in the future. As an example, UR3 members have been nominated in the Steering Committee of the Sustainable Urban Mobility Plan (started in 2017) where both dissemination and exploitation activities will be performed. Additionally, thanks to CITYLAB, UR3 has recently underway a collaboration with Poste Italiane (partner in the Rome Living Lab) who, starting from the implementation related to the integration between direct and reverse logistics that is still operating in Rome, is interested in upscaling the tested solution for managing ecommerce returns.

#### **3.4.22 University of Southampton**

The University of Southampton (UoS) has been a key member of the Southampton living lab, providing the city and industrial partners with research support, helping them to devise, design and evaluate planned implementation measures. Evaluations have included cost-benefit analyses for consolidation of deliveries to large municipal organisations (hospitals, universities, city council) and for the introduction of electric vehicle use for council-run services. The research has directly led to several papers, articles and presentations, enhancing our research reputation; they include a published paper on consolidation to university halls of residence in a high-quality journal (Transportation Research C, impact factor 3.805) as well as two presentations made at the annual Logistics Research Network conference in the UK and an article in the ITS(UK) Autumn Review, 2016. UoS also contributed to a paper presented at the European Network of Living Labs Conference, 29 Aug-1 Sep 2017, Krakow, which used the Southampton living lab as an example of collaborative working. All of these articles are freely available at: <http://www.citylab-project.eu/publications.php>. The knowledge acquired through CITYLAB will feed directly into the Faculty of Engineering and the Environment's M.Sc. Transportation Planning and Engineering degree. The University of Southampton through the Transportation Research Group will continue to work with Southampton City Council and the

stakeholders to further the Southampton Living lab and investigate sustainable travel and logistics policies with industry through student and stakeholder funded projects. Areas that will be progressed relate to last-mile logistics concepts for supplying samples and pharmacy products to the St Marys and Southampton General Hospitals.

#### **3.4.23 University of Westminster**

The University of Westminster's main tasks in CITYLAB includes contributing to the Knowledge Development and Data Management workpackage (WP2), supporting the work and ambitions of the London living lab (WP3), supporting implementations in London by Gnewt Cargo and TNT (WP4), and supporting evaluation efforts, especially in relation to London (WP5). Westminster's plans for exploiting the results and achievements of CITYLAB include: promoting the project's results through the dissemination and exploitation workpackage (WP7) and presenting project findings to private businesses (freight operators and their customers), local authorities and other public-sector organisations and academics through academic and non-academic conferences and written academic papers. Use will be made of existing relevant urban, national and international networks of individuals and organisations of which Westminster is already an active member such as the Central London Freight Quality Partnership, the Institute of City Logistics, and the Special Interest Group in Urban Goods Movement of the World Congress on Transport Research (WCTR). Westminster will also continue to work with the CITYLAB industrial partners and with Transport for London to disseminate project information and findings, to a substantial number of UK and international freight operators and customers. Use will also be made of the knowledge gained through CITYLAB in the University's MSc Logistics and Supply Chain Management and MSc Purchasing and Supply Chain Management programmes.

#### **3.4.24 Ville de Paris**

The City of Paris is committed to tackling urban logistics challenges as evidenced by its Sustainable City Logistics Charter of 18 September 2013 and the regular steering committee and focus group meetings that are held. The Charter included an objective for 50% of delivery vehicles to be non-diesel by 2017 and a range of possible measures were proposed to reach this target, including those associated with consultation/partnerships with the freight industry, traffic and road space management, off-peak deliveries, low emission zones, land use and logistics planning. The CITYLAB project supports our aims well, particularly in the areas of land use (reintroducing logistics terminals in the city), freight consolidation and the use of electric vehicles. Our main 'exploitation' is the direct benefit for Paris citizens and visitors through enjoyment of an improved environment.

#### **3.4.25 Vrije Universiteit Brussel**

VUB lead WP5 on evaluation, developed the CITYLAB dashboard, organised local MAMCA workshops in each CITYLAB city using VUB's MAMCA software, supported and monitored the Brussels CITYLAB implementation and was part of the Brussels CITYLAB living lab. Results from the CITYLAB dashboard and from the MAMCA workshops are shared freely within the CITYLAB consortium and with a range of national and international stakeholders through the project's dissemination. VUB presented CITYLAB results at several national events and international scientific conferences and will continue to do that with results that have not been disseminated yet. VUB expect to also apply the dashboard outside the CITYLAB project and to replicate the MAMCA workshops in other cities or at other occasions which will further disseminate the results of the CITYLAB implementations. They will use the solutions and their results, for example, during the MAMCA workshops in their courses. The experience and expertise VUB gained from applying the MAMCA methodology in the local workshops will be useful for future research both in the field of urban distribution and in other fields. As part of CITYLAB, Brussels Mobility and VUB explored together how the data collected through the On-Board-Units (OBU) of all heavy goods vehicles (HGVs) in Belgium can increase knowledge

about freight transport in Brussels. They already agreed on how to expand that work. VUB will also apply the same methodology for the city of Mechelen in spring and summer 2018.

## **Appendix A – Dissemination activities**

All dissemination activities relating to the Citylab project were recorded throughout the project and are listed in full here, presented in separate tables according to the category headings used for entry to the EC participation portal, that is:

Table 7. Participation in activities jointly organized with other H2020 projects.

Table 8. Organisation of a Conference

Table 9. Organisation of a Workshop

Table 10. Participation to a Conference

Table 11. Participation to a Workshop

Table 12. Participation to an Event other than a Conference or a Workshop

Table 13. Flyer.

Table 14. Non-scientific, non-peer-reviewed publication.

Table 15. Video/Film.

Table 16. Communication Campaign (e.g. Radio, TV).

**Table 7. Participation in activities jointly organized with other H2020 projects.**

<b>Main leader</b>	<b>Title</b>	<b>Date</b>	<b>Place</b>	<b>Audience type</b>	<b>Size</b>
TOI	Civitas Forum (shared stand with UF projects)	07/10/2015	Ljubljana, Slovenia	Mixed	600
POLIS	Understanding urban freight transport (with Novelog)	14/04/2016	NOVELOG 1st Open Training Workshop, Bologna	Mixed	60
IFSTTAR	1 <sup>st</sup> Regional Symposium (with SUCCESS project)	26/05/2016	Paris, France	Mixed	89
MGL	Southampton Sustainable Distribution Centre	07/09/2016	FREVUE-CIVITAS - London Study Tour Electric Freight & Consolidation Centres	Mixed	50
Gnewt Cargo	EU US delegation visit of European projects	27/09/2016	Gnewt Cargo, London, United Kingdom	Govt.	7
TOI	Civitas Forum (shared stand with UF projects)	28/09/2016	Gdynia, Poland	Mixed	600
TOI	EU US delegation visit of European projects	28/09/2016	Brussels, Belgium	Govt.	7
TOI	Civitas Forum (shared stand with UF projects)	27/09/2017	Civitas Forum, Torres Vedras, Portugal	Mixed	600
TOI	Session: Innovative approaches for engaging and supporting industry and city authorities in urban freight strategy development	27/09/2017	Civitas Forum, Torres Vedras, Portugal	Mixed	30
POLIS	CIVITAS Urban Freight Conference	23/04/2018	Brussels	Mixed	192

**Table 8. Organisation of a Conference.**

<b>Main leader</b>	<b>Title</b>	<b>Date</b>	<b>Place</b>	<b>Audience type</b>	<b>Size</b>
UR3	Innovative Solutions for Urban Freight Transport and Environment in the Circular Economy Era	20/10/2017	Campidoglio, Rome, Italy	Mixed	70

**Table 9. Organisation of a Workshop.**

<b>Main leader</b>	<b>Title</b>	<b>Date</b>	<b>Place</b>	<b>Audience type</b>	<b>Size</b>
TNO	Floating depot	24/05/2016	Amsterdam	Mixed	10
POLIS	Follower Cities Group breakfast - presentation of D2.1 and interactive discussion with city authorities	26/05/2016	Paris, France	Govt.	25
TOI	Establishment of joint logistics functions in shopping centre - New Økern Shopping Centre, Oslo	31/05/2016	Oslo, Økern Shopping Centre	Mixed	20
UR3	For GreenMetric ( <a href="http://greenmetric.ui.ac.id/">http://greenmetric.ui.ac.id/</a> ), Iniziative sostenibili dell'Università degli studi di Roma Tre: CITYLAB	03/10/2016	Roma Tre University, Rome, Italy	Scientific	50
TNO	LEVV-LOGIC (light electric freight vehicles in logistics in urban areas)	10/10/2016	The Hague, Netherlands	Mixed	12
TNO/ RDAM	Bijeenkomst Logistiek 010	03/11/2016	Rotterdam	Industry	100
TNO	Inter-living lab transferability therapeutic workshop	01/12/2016	Rotterdam (Alongside Polis conference)	Scientific	80
SOTON	Making freight consolidation centres work – Experiences from Southampton	27/01/2017	Southampton	Mixed	51
MGL	Site visit	27/01/2017	Southampton	Mixed	40
City of Oslo	ITS Cooperation between Agency for Urban Environment, Ruter PT and National Road Administration	01/03/2017	Oslo	Mixed	20
Gnewt Cargo	Site visit	12/05/2017	London	Mixed	49
UoW	Growth of Electric Freight and Consolidation in Urban Logistics	12/05/2017	London	Mixed	70
TOI	Logistics strategies for shopping centres	07/06/2017	Malmo	Mixed	30
VUB	Local MAMCA workshop: London	25/10/2017	London	Mixed	9
VUB	Local MAMCA workshop: Oslo	15/11/2017	Oslo	Mixed	13
VUB	Local MAMCA workshop: Amsterdam	27/11/2017	Amsterdam	Mixed	6
VUB	Local MAMCA workshop: Southampton	05/12/2017	Southampton	Mixed	6
VUB	Local MAMCA workshop: Brussels	08/12/2017	Brussels	Mixed	20

Main leader	Title	Date	Place	Audience type	Size
TNO	Floating depot	24/05/2016	Amsterdam	Mixed	10
POLIS	Follower Cities Group breakfast - presentation of D2.1 and interactive discussion with city authorities	26/05/2016	Paris, France	Govt.	25
TOI	Establishment of joint logistics functions in shopping centre - New Økern Shopping Centre, Oslo	31/05/2016	Oslo, Økern Shopping Centre	Mixed	20
UR3	For GreenMetric ( <a href="http://greenmetric.ui.ac.id/">http://greenmetric.ui.ac.id/</a> ), Iniziative sostenibili dell'Università degli studi di Roma Tre: CITYLAB	03/10/2016	Roma Tre University, Rome, Italy	Scientific	50
TNO	LEVV-LOGIC (light electric freight vehicles in logistics in urban areas)	10/10/2016	The Hague, Netherlands	Mixed	12
TNO/ RDAM	Bijeenkomst Logistiek 010	03/11/2016	Rotterdam	Industry	100
TNO	Inter-living lab transferability therapeutic workshop	01/12/2016	Rotterdam (Alongside Polis conference)	Scientific	80
SOTON	Making freight consolidation centres work – Experiences from Southampton	27/01/2017	Southampton	Mixed	51
VUB	Local MAMCA workshop: Paris	08/12/2017	Paris	Mixed	6
VUB	Local MAMCA workshop: Rome	31/01/2018	Rome	Mixed	11
TNO	City deliveries using micro-hubs and innovative freight bikes	08/03/2018	Amsterdam	Mixed	45
VUB	Sharing Economy Logistics: Access Over Ownership	28/03/2018	Brussels	Mixed	80

Table 10. Participation to a Conference.

Main leader	Title	Date	Place	Audience type	Size
TOI	Smart Urban Freight Conference	03/06/2015	Berlin, Germany	Mixed	80
TNO	From freight partnerships to city logistics living labs - Giving meaning to the elusive concept of living labs	17/06/2015	Tenerife, Spain	Scientific	40

Main leader	Title	Date	Place	Audience type	Size
VUB	Addressing fragmented last mile logistics	08/07/2015	Second International Physical Internet Conference, Paris, France	Scientific	50
SOTON	Sustainable procurement for greener logistics in the higher education sector	09/09/2015	Logistics Research Network Conference, Derby, UK	Scientific	80
Steen& Strøm	Økern Sentrum - the new nordic model for city development	29/09/2015	International real estate conference "Oslo Urban Area"	Mixed	200
UR3	CITYLAB: City Logistics in Living Laboratories	01/10/2015	International Conference on "Urban Freight and Behaviour Change", Rome	Mixed	40
TOI	CITYLAB - City Logistics in Living Laboratories	04/11/2015	Oslo, Oslo freight forum	Mixed	20
TOI	European solutions – can they be adapted to a Norwegian context?	12/11/2015	City logistics day, Norwegian Public Roads administration, Region West, Bergen, Norway	Mixed	40
POLIS	POLIS Conference	19/11/2015	Brussels	Mixed	300
TOI	CITYLAB: Horizon 2020 project	20/01/2016	Cities of the future, Oslo, Norway	Mixed	300
TOI	Investment in new knowledge on city logistics. Seminar for experts on logistics	18/02/2016	Oslo, Norwegian Road & Traffic Association	Mixed	70
TNO	A city logistics living lab: a methodological approach	29/02/2016	Green Cities, Sydney, Australia	Mixed	80
MGL	Southampton Sustainable Distribution Centre	07/04/2016	Slovenian Logistics Association Annual Conference, Ljubljana	Industry	80
UR3	CITYLAB project: integrating direct and reverse logistics	11/04/2016	"Oggi vediamo tappi, domani guardiamo al futuro", Palermo, Italy	Mixed	60
TOI	CITYLAB – city logistics in living laboratories	18/04/2016	Transport Research Arena 2016, Warsaw	Mixed	80
SOTON	CITYLAB – City Logistics in Living Laboratories - Floating Depot	21/04/2016	Commercial Boat Operators Association, UK	Industry	20
TOI	Strategy for 50% reduced greenhouse gas emissions from distribution of goods in Oslo	03/05/2016	Oslo, Oslo City Hall	Govt.	40
IFSTTAR	Site visits	26/05/2016	Paris, France	Mixed	89
TOI	Citylab intro				
UGot	CO <sub>2</sub> reductions from a range of initiatives				

Main leader	Title	Date	Place	Audience type	Size
LLAG	Sustainable urban logistics in Paris				
IFSTTAR	Logistics hotels in Paris	01/07/2016	Seoul, Korea	Mixed	25
DLR	Dynamics in the spatial distribution of general cargo hubs in groupage networks– the case of Berlin	10/07/2016	World Conference on Transport Research - WCTR 2016 Shanghai	Scientific	30
UR3	Gamification design, stakeholder engagement and behavior change in urban freight transport	13/07/2016	World Conference on Transport Research - WCTR 2016 Shanghai	Scientific	30
SOTON	'Shop and we'll drop' - Understanding the impacts of student e-shopping on deliveries to university halls of residence during Black Friday week	07/09/2016	Logistics Research Network conference, Hull, UK	Scientific	80
TNT UK	City logistics - operational consolidation in London	07/09/2016	FREVUE-CIVITAS - London Study Tour Electric Freight & Consolidation Centres	Mixed	50
IFSTTAR	New logistics facilities in western Sweden - where they are built, and why there?	14/09/2016	Gothenburg, Sweden	Mixed	100
UR3	CIVITAS CITYLAB – City logistics in living laboratories (as part of European Mobility Week)	16/09/2016	Rome, Italy	Mixed	40
IFSTTAR	City logistics in Europe	22/09/2016	CAF Banco de Desarrollo de América Latina, Montevideo, Uruguay	Mixed	200
POLIS	Dissemination approach in CITYLAB	28/09/2016	Civitas Forum, Gdynia, Poland	Mixed	50
VUB	Evaluation activities in CITYLAB				20
TOI/TNO	Improvement of the citizen, stakeholder, user participation in city logistics processes: living lab approach				50
IFSTTAR	Logistics hotels and logistics planning	03/10/2016	AFILOG (3PL trade group in France), Paris	Industry	10
TOI	Poster session	17/10/2016	Transport & Logistics 2016, Gardermoen, Norway	Mixed	800
TNO	Stakeholder cooperation as an enhancer of the urban freight transport system efficient	17/10/2016		Scientific	50

Main leader	Title	Date	Place	Audience type	Size
	performance: experiences of London, Paris, and Rotterdam		VREF conference, Gothenburg		
IFSTTAR	Logistics hotels in Paris	18/10/2016		Mixed	150
IFSTTAR	The Rise of Instant Delivery Services in European Cities. What Impacts on the Urban Freight Routine?	18/10/2016		Mixed	100
TOI	CITYLAB - City Logistics in Living Laboratories	19/10/2016	Oslo Science Park (Oslo Innovation Week)	Mixed	50
IFSTTAR	Paris city logistics	03/11/2016	Bijeenkomst Logistiek 010, Rotterdam, The Netherlands	Industry	100
R'dam	Rotterdam meeting for transport companies	03/11/2016	Rotterdam	Industry	100
UoW	Growth of consolidation and EV use in London	23/11/2016	Smart, Innovative & Sustainable urban mobility, Brussels	Mixed	230
Brussels Mobility	Urban Freight in Brussels-Capital Region				
POLIS	POLIS Conference	01/12/2016	Brussels	Mixed	500
TOI	Poster session	01/12/2016	POLIS conference, Rotterdam, Netherlands	Mixed	480
IFSTTAR	What is smart city logistics?	13/12/2016	Smart City Day (Transport Logistique de France), Paris	Industry	100
IFSTTAR	International Approach	01/03/2017	Freight in the City Spring Summit	Mixed	300
IFSTTAR	E-commerce and logistics sprawl	07/03/2017	Fondation TUCK (Energy think tank)	Mixed	100
UR3	Italian universities: coordination activity and objectives	08/03/2017	U-MOB - I European Conference on Sustainable Mobility at Universities - Universitat Autònoma de Barcelona	Scientific	50
IFSTTAR	E-commerce	09/03/2017	E-commerce working group of the Paris Living Lab (Charter), Paris	Mixed	50
UR3	Le esperienze sul campo: mobility management univ.	10/03/2017	Giornate del Mobility Manager, Roma	Mixed	40
Steen& Strøm	Økern Sentrum - environmental focus	16/03/2017	Oslo, convention for efficiency of buildings, "Varmepumpekonferansen"	Mixed	100

Main leader	Title	Date	Place	Audience type	Size
UoW	Urban Logistics research	29/03/2017	Conference 'Opportunities for a Knowledge and Innovation Community in Urban Mobility' Brussels	Mixed	200
TOI	Common logistics functions for shopping centres	11/04/2017	US NCHRP 08-111 Freight Efficient Land-use research team	Scientific	20
SOTON	Right on time! Surviving the internet shopping revolution	11/04/2017	Association for Student Residential Accommodation, Brighton	Industry	60
IFSTTAR	Last Mile for Real - International Perspectives	04/05/2017	LogistikTrender 2017, CATENA, Helsingborg, Sweden	Mixed	40
POLIS	Observatory of strategic developments impacting urban logistics	22/05/2017	POLIS Urban Freight Working Group, Brussels	Mixed	40
VUB	Addressing fragmented last mile deliveries: Increasing load factors by utilizing free transportation capacity	31/05/2017	NECTAR Conference 2017, Madrid	Scientific	100
UR3	Circular economy, environment protection and innovative freight transport solutions: the case of Rome living lab				
IFSTTAR	City logistics cases	07/06/2017	World Bank Seminar, Efficiency in Urban Logistics, Innovative & Green solutions, Sao Paulo	Scientific	30
IFSTTAR	Urban logistics	07/06/2017	World Mail & Express Conference, Paris	Mixed	40
UR3	Integrating direct and reverse logistics in a living lab context: the role of gamification to foster sustainable urban freight transport	14/06/2017	10th International Conference on City Logistics, Phuket, Thailand	Scientific	80
IFSTTAR	Chapelle logistics hotel	16/06/2017			
UoW	London implementation supporting the deployment of electric freight vehicles in the city	22/06/2017	"Energy systems for smart mobility" Event from POLIS and ERRIN, Brussels, Belgium	Mixed	40
IFSTTAR	Recent developments in Paris urban logistics	28/07/2017	Metrans seminar series, University of Southern California	Mixed	25

Main leader	Title	Date	Place	Audience type	Size
IFSTTAR	Instant Deliveries: New Jobs and New Questions for Cities	30/08/2017	Royal Geographical Society, RGS-IBS Annual Conference, August 30, London, United Kingdom.	Scientific	30
UR3	Innovative urban freight transport solutions	15/09/2017	Eco2city Meeting - Nijmegen	Scientific	20
VUB	Citylab - Evaluation	27/09/2017	Civitas Forum Conference, Torres Vedras, Portugal	Mixed	36
LLAG	Citylab	28/09/2017	Amsterdam	Mixed	30
UR3	Innovative urban freight transport solutions in the sharing & circular economy era	29/09/2017	VI Meeting on International Economics: "Freight Transport in Europe: Facts and Challenges"	Scientific	30
UR3	Investigating stakeholders' preferences for sustainable urban freight transport solutions: the CITYLAB project	05/10/2017	XIX SIET Conference	Scientific	80
POLIS	Citylab: successfully transfer innovative urban freight transport solutions to follower cities	17/10/2017	7th METRANS International Urban Freight Transport Conference, Long Beach, USA, 17-20 October 2017	Mixed	60
POLIS	CITYLAB project: successfully transfer innovative urban freight transport solutions to follower cities	19/10/2017	Long Beach, USA	Mixed	50
TOI	Introduction to Citylab	20/10/2017	Campidoglio, Rome, Italy	Mixed	70
RSM	Living Lab opportunities for developing freight distribution in Rome				
UR3	CITYLAB Rome implementation: Activities, lessons learned and next steps				
Poste Italiane	Poste Italiane - Horizon 2020 - Citylab				
Meware	ICT Platform for direct and reverse logistics integration				
City of Rome	(no title)				
UoW	Which opportunities do local governments have to support smart purchasing and clean urban logistics?	02/11/2017	Logistiek010 conference, Rotterdam	Mixed	12

Main leader	Title	Date	Place	Audience type	Size
UR3	CITYLAB project and the implementation in Rome	01/12/2017	Tavola rotonda "L'integrazione della logistica diretta e inversa per i materiali post-consumo: il progetto Citylab"	Mixed	50
UR3	CITYLAB: economia circolare sostenibile	01/12/2017	Manifestazione: Isola della Sostenibilità, Rome Italy	Mixed	150
UR3	CITYLAB Living Lab: uno sviluppo insostenibile	16/12/2017	Festival Riscarti: Sostenibilità, la Natura si ribella	Mixed	50
UR3	Soluzioni alternative per il trasporto merci urbano	24/01/2018	Seminario di Economia Politica - Bocconi University, Milan, Italy	Scientific	40
Soton	Citylab	31/01/2018	CILT, London	Industry	25
UR3	Il Mobility Management Universitario: un'esperienza sul territorio Nazionale	08/03/2018	Giornate del Mobility Manager, Fiera di Roma	Mixed	120
IFSTTAR	Livraison dans l'heure ou livraison à l'heure: quels sont les enjeux?	21/03/2018	Semaine Internationale du Transport et de la Logistique (International Week of Transport and Logistics)	Mixed	100
IFSTTAR	Parcel delivery and Urban Logistics	29/03/2018	10th bi-annual Postal Economics Conference on "E-commerce, Digital Economy and Delivery Services"	Scientific	50
TOI	Common logistics functions for shopping centres	16/04/2018	Transport Research Arena 2018, Vienna, Austria	Mixed	50
DLR	Success factors for innovative urban freight measures – method and results of an inter-city transferability analysis	13/09/2018	3rd International Conference Green Cities 2018 Szczecin, Poland	Scientific	50
DLR	Successful transfer chances Evaluation Methods for urban freight initiatives	17/10/2018	3rd VREF Conference on Urban Freight, Gothenburg Sweden	Scientific	50
TNO	Posters for each living lab and project as a whole	23/04/2018	Brussels	Mixed	192
VUB					
UoW					
TOI					
IFSTTAR					
UR3					

Main leader	Title	Date	Place	Audience type	Size
SOTON					
TOI	Citylab				
TNO	City logistics Living labs				
IFSTTAR	An observatory to better understand urban freight				
Brussels Mobility	Urban freight policies and stakeholder engagement in the Brussels Capital region				
UoW	Growth of consolidation and electric van use in London				
R'dam	Panel debate				
TOI	Panel debate				

**Table 11. Participation to a Workshop.**

Main leader	Title	Date	Place	Audience type	Size
UR3	The CityLab Project and the contributions to city logistics	19/10/2016	Workshop NOVELOG: 'Urban Freight Distribution: Current Challenges & Future Goals', Rome, Italy	Mixed	100
UoW	CITYLAB Inter-living lab transferability workshop: London implementation action	01/12/2016	Rotterdam (Alongside Polis conference)	Govt.	30
SOTON	Introduction to Citylab				
SCC	Southampton City Council's rationale for implementing the Southampton Sustainable Distribution Centre	27/01/2017	Southampton local workshop	Mixed	51
SOTON	The role for Delivery and Service Plans in developing a case for consolidation				
Gnewt Cargo	The scope for electric delivery as part of a consolidated freight service				

Main leader	Title	Date	Place	Audience type	Size
MGL	The trials and tribulations of setting up the SSDC - the logistics providers view				
P&G	Citylab Brussels - Increasing load factors by utilizing spare van capacity to supply small independent retailers	11/05/2017	Citylab workshop, London	Mixed	50
TNT UK	City Logistics at TNT UK	12/05/2017	London local workshop	Mixed	49
POLIS	Citylab London Workshop Transferability Session				
UoW	Introduction, Examples and Beneficial Impacts of Growing Consolidation and Electric Vehicle Solutions in Urban Logistics				
TfL	Urban Logistics policies developments, Consolidation and Efficiency				
TOI	CITYLAB	23/05/2017	Alice-Ertrac-EC Collaborative Innovation Day, Brussels	Mixed	50
IFSTTAR	(no title)				
City of Oslo	(no title)	24/05/2017	Workshop at Mobility Lab at the facility for start ups in Oslo commune	Mixed	25
Steen& Strøm	Experiences with using common logistics functions in Emporia. The pros and cons of Logistikbolagets in-house logistics solutions	07/06/2017	Malmo local workshop	Mixed	30
TOI	Findings from the Citylab evaluation				
TOI	Introduction to Citylab				
	Oslo - The new shopping centre, planning, process and challenges				
TOI	Site visit				
City of Oslo	The shopping centre as an integrated part of Økern District, Oslo				
TOI	Citylab: City Logistics in Living Laboratories (Jardar Andersen, TOI)	08/03/2018	Amsterdam local workshop	Mixed	45
LLAG	Case Amsterdam (Erik Regterschot, City of Amsterdam)				

Main leader	Title	Date	Place	Audience type	Size
PostNL	The journey: floating depot, light electric vehicles (e-bikes), microhubs and public procurement				
TNO	City logistics 010 (Richard van der Wulp, City of Rotterdam and Hans Quak, TNO)				
IFSTTAR	'Instant deliveries' by bike: new jobs and new questions for cities (Laetitia Dablanc, IFSTTAR/Université Paris Est)				
PostNL	Site visit				
VUB	Introduction to Sharing Economy Logistics				
P&G	Increased Vehicle Loading by Utilising Spare Transport Capacity (Lieven Deketele (Procter and Gamble) and Bram Kin (VUB-MOBI))	28/03/2018	Brussels local workshop	Mixed	80
VUB	Crowd Logistics (Jan Merckx (VIL) and Heleen Buldeo Rai (VUB-MOBI))				

**Table 12. Participation to an Event other than a Conference or a Workshop.**

Main leader	Title	Date	Place	Audience type	Size
P&G	Conference call to present the P&G implementation to local supply chain divisions	15/09/2016	Poland, Warsaw	Industry	3
P&G	Citylab Brussels - Increasing load factors by utilizing spare van capacity to supply small independent retailers	29/09/2016	Brussels	Govt.	8
UR3	Meeting at BNC Foundation	07/10/2016	Rome, Italy	Mixed	50
UR3	Promoting plastic caps initiative	20/10/2016	Meeting with University student reps, Roma Tre University, Rome, Italy	Mixed	20
TOI	CITYLAB – overview and data	24/10/2016	Freight TAILS Phase 2 Transnational Meeting, Umeå, Sweden	Govt.	30
R'dam	Polis working group on city logistics, also discussion examples from Citylab	30/11/2016	Rotterdam (Alongside Polis conference)	Govt.	30

Main leader	Title	Date	Place	Audience type	Size
P&G	Conference call to present the P&G implementation to local supply chain divisions	06/12/2016	Bucharest, Romania	Industry	3
P&G	Sharing Citylab with Matthias Winkenbach, Director MIT	19/12/2016	P&G Brussels	Mixed	7
LLAG	Developments in urban freight to contribute to resolving congestion	25/01/2017	CILT submission on Urban Congestion UK Transport PSC	Govt.	10
VUB	P&G implementation in Brussels	21/04/2017	Adobe Connect call with team of José Holguín-Veras (Rensselaer Polytechnic Institute, New York)	Scientific	6
Meachers	Freight consolidation	28/04/2017	Skype with Oslo University	Scientific	5
POLIS	Observatory of strategic developments impacting urban logistics	22/05/2017	POLIS Urban Freight Working Group, Brussels	Govt.	10
IFSTTAR	Logistics and Land Use Planning: The Example of Paris	21/06/2017	<a href="https://coe-sufs.org/wordpress/peer-to-peer-exchange-program/webinar18/">https://coe-sufs.org/wordpress/peer-to-peer-exchange-program/webinar18/</a>	Mixed	120
VUB	Study visit USA Delegation on 'Shared Mobility'	30/06/2017	Brussels	Govt.	5
LLAG	Future of mobility roundtable discussion	07/09/2017	UK Government Office for Science, London	Govt.	12
LLAG	Sustainable transport round table. Chief Scientific Advisor. Fed into UK Government policy.	20/09/2017	UK Government Office for Science, London	Govt.	30
UoW	Mayor of London's Transport Strategy	02/10/2017	London	Govt.	15
LLAG	Future of freight and logistics. Chief Scientific Advisor. Feeding into UK Government policy.	16/01/2018	UK Govt. Office for Science, London	Govt.	12
SOTON	Gaining insights from freight data	27/03/2018	<a href="https://connectdot.connectsolutions.com/pwkpi2pf5e8u/">https://connectdot.connectsolutions.com/pwkpi2pf5e8u/</a> (webinar)	Mixed	130

Table 13. Flyer.

Main leader	Title	Date	Place	Audience type	Size
SOTON	Newsletter #1	30/10/2015	Email distribution and website	Mixed	1000
SOTON	Newsletter #2	30/06/2016	Email distribution and website	Mixed	1000
UR3	Roma Tre University Newsletter	17/10/2016	Roma Tre University	Scientific	35000
UR3	CITYLAB: Raccolta tappi	18/10/2016	Roma Tre University, Rome, Italy	Mixed	1000
SOTON	Newsletter #3	15/11/2016	Email distribution and website	Mixed	1000
POLIS	CityLab workshop "Growth of Electric Freight and Consolidation in Urban Logistics"	30/03/2017	InfoPolis #162 - 30 March 2017 (Polis members NL)	Govt.	100
SOTON	Newsletter #4	31/05/2017	Email distribution and website	Mixed	1000
POLIS	Observatory of strategic developments impacting urban logistics	22/06/2017	InfoPolis #168 - 22 June 2017 (Polis members NL)	Govt.	100
IFSTTAR	Observatory	11/07/2017	TRB E-newsletter	Scientific	150
UR3	CITYLAB: Università Roma Tre e Caritas	31/07/2017	Roma Tre University Newsletter	Mixed	35000
POLIS	CIVITAS CITYLAB Symposium "Innovative Solutions for Urban Freight Transport in the Era of the Circular Economy"	31/08/2017	InfoPolis #171 - 31 August 2017 (Polis members NL)	Govt.	100
SOTON	Newsletter #5	21/12/2017	Email distribution and website	Mixed	1000
POLIS	Factsheets for the 7 living labs	23/04/2018	Online and distributed at CIVITAS Urban Freight Conference, Brussels	Mixed	192
SOTON	Newsletter #6	30/04/2018	Email distribution and website	Mixed	1000

**Table 14. Non-scientific, non-peer-reviewed publication.**

Main leader	Title	Date	Place	Audience type	Size
SOTON	Reducing Southampton's carbon footprint	01/12/2015	Hampshire Chamber of Commerce Business News Magazine	Industry	100
UR3	Meno CO <sub>2</sub> più tappi: la logistica diventa sostenibile	05/10/2016	Canale Energia - Energy Italy Group Editor, Rome, Italy	Public	1000
VUB	"Citylab" project entering pilot stage	01/01/2017	European Review of Regional Logistics - Quarterly Journal of Open ENLoCC	Mixed	500
SOTON	Consolidating deliveries to student halls of residence	27/02/2017	ITS (UK) Review	Industry	500
IFSTTAR	Les livraisons instantanées	04/05/2017	Dossier logistique urbaine, TEC Mobilité Intelligente n°233.		500
LLAG	CILT Logistics & Transport Focus - Policy Watch-July 2017	01/07/2017	CILT Focus on Chairman of Public Policies Committee	Govt.	500
LLAG	A few words from the chair	14/09/2017	CiTTi magazine	Mixed	200
Media	Al Campidoglio il workshop "City logistics in living laboratories"	22/10/2017	<a href="http://www.abitarearoma.net/al-campidoglio-workshop-city-logistics-living-laboratories/">http://www.abitarearoma.net/al-campidoglio-workshop-city-logistics-living-laboratories/</a>	General	200
UoW	City logistics 2020: The challenge of efficient, sustainable and environmentally-friendly urban freight	Autumn 2016	Freight Transport Association, UK	Mixed	500

**Table 15. Video/Film.**

Main leader	Title	Date	Place	Audience type	#views
SOTON	Webcast of local workshop	27/01/2017	Citylab website	Mixed	unknown
SOTON	Animation of living lab concept	01/09/2017			805
Poste Italiane	Rome implementation, available at: <a href="http://www.citylab-project.eu/Rome.php">http://www.citylab-project.eu/Rome.php</a>	31/03/2018			25
TOI	Animation of Oslo implementation	31/03/2018			50

**Table 16. Communication Campaign (e.g. Radio, TV).**

<b>Main leader</b>	<b>Title</b>	<b>Date</b>	<b>Place</b>	<b>Audience type</b>
UR3	The Garbage Patch State, 11 April 2016 Workshop Università di Palermo	05/05/2016	TGS News channel (Rome region)	General public
UR3	Canale Energia - Energy Italy Group Editor ( <a href="http://www.canaleenergia.com/archivio-rubriche/42-smart-city/5058-meno-co2-piu-tappi-la-logistica-diventa-sostenibile.html">http://www.canaleenergia.com/archivio-rubriche/42-smart-city/5058-meno-co2-piu-tappi-la-logistica-diventa-sostenibile.html</a> )	05/10/2016	Rome, Italy	General public