



D 2.7 | Deployment plan for all local sites

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1. LIST OF TABLES, FIGURES AND ABBREVIATIONS

1.1. List of tables

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1.2. List of abbreviations

This table provides an overview on all abbreviations used in this document.

Abbreviation	Full name Explanation
CO ₂	Carbon dioxide
KPI	Key performance indicator
PA	Public Authorities
UCC	Urban Consolidation Centre
UFT	Urban Freight Terminal
UDC	Urban Distribution Centre
B2B	Business to Business

Table 1: Abbreviations used in this document

2. ABOUT SMARTSET

Transports of goods, both on long distances and within cities contribute to a substantial part of the total emissions generated from the transport sector, as well as congestion. Up to 20% of traffic, 30% of street occupation and 50% of greenhouse-gas emissions are generated by freight.

Yet freight and distribution schemes are often structured in traditional ways, based on vertical solutions with individual solutions. These systems lead to sub-optimisation of freight transports, with low load factors and an unjustified amount of tonne-kilometres generated by the vehicles used. The need for more efficient solutions that leads to less transport kilometres and a more sustainable economic model is obvious. The latter is foreseen to be the key factor of a long-term success in implementing a working model for urban freight transport and thus supply all involved stakeholders with the correct incentives to change their distribution networks.

The SMARTSET project will develop and show how freight transport in European cities and regions can be made more energy-efficient and sustainable by a better use of freight terminals. To reach this overall goal, the project will provide examples of good practice that can support cities, regions and countries to contribute to the European Union „20-20-20“ targets¹ for reduction in carbon dioxide emissions and improvement in energy-efficiency.

SMARTSET targets	Reduction by 2016	Reduction by 2020
Reduction of CO ₂ emissions in tonnes	9,063 tonnes per year	31,346 tonnes per year
Reduction of energy consumption in tonnes	3,096 tonnes per year	10,303 tonnes per year
Reduction of energy consumption in GWh	36 GWh per year	120 GWh per year

Table 2: SMARTSET targets during project duration (by 2016) and beyond (by 2020)

SMARTSET is a project, co-funded by the Intelligent Energy Europe Programme of the European Union and is composed of 14 partners, coming from Austria, Germany, Italy, Sweden and the United Kingdom. It will run from 01.05.2013 until 30.04.2016.

¹ The climate and energy package is a set of binding legislation which aims to ensure the European Union meets its ambitious climate and energy targets for 2020. These targets, known as the "20-20-20" targets, set three key objectives for 2020:

- A 20% reduction in EU greenhouse gas emissions from 1990 levels
- Raising the share of EU energy consumption produced from renewable resources to 20%
- A 20% improvement in the EU's energy efficiency

3. INTRODUCTION

“What is to be done?” Quoting Vladimir Lenin’s pamphlet, in which the need for a revolution was stated, the SMARTSET project partners have asked themselves about the future of their city logistics initiatives. The answer seems to be at this stage of development a substantial upscaling of the current activities, through the deployment of the relevant outcomes achieved within the project time frame and perimeter.

The present Deliverable, starting from the outcomes achieved by SMARTSET application sites, aims at presenting the deployment approaches for the future which have been drafted during the implementation of the key activities.

The results of this last phase of the WP2 analysis represents the basis on which a durable development strategy based on SMARTSET experience is being developed and daily carried on by partners responsible for the test site applications, in order to implement effective city logistics approach within the interested territories and beyond.

The approach of this analysis draws from the WP2 activities aimed at defining the deployment strategic approach for each site, considering the specific activities carried on, the maturity of the city logistics debate and operations at local level, and differences in resources and policy mandate.

The report highlights in particular the deployment approach developed, as well as the main elements representing local deployment strategies and plans.

4. GOTHENBURG | SWEDEN

4.1. Deployment objectives

The inner city of Gothenburg is a compact area where business, shops and restaurants represent a major opportunity for efficient and effective last mile delivery services. Clean vehicles and consolidation schemes have since long been in focus regarding solutions for developing a cleaner, safer and more attractive city, as well as adapted legal framework.

Within the project, a broad range of key activities has been implemented, from the set of specific demand, economic and technical studies for the development and enhancement of the service, to the set up of a UFT and of a new legal framework for minimizing the contribution of last mile logistics to congestion and pollution phenomena.

Moreover, the need for approaching new customers and enlarging the critical mass of activities in order to reach higher levels of effectiveness and economic sustainability has emerged, in order to pursue the virtuous path that led so far to a decreasing dependency from public contribution.

Increasing the fleet by putting a further vehicle in operation and finding a new location for the platform in order to be able to manage higher volumes and serve a broader area represent the main objectives of Gothenburg's approach towards further deployment of SMARTSET outcomes.

4.2. Deployment plan

Action 1: put in operation of a third vehicle

The service managers are working to put a third vehicle in operation, in order to foster and efficiently face an increase of demand.

Action 2: moving of the facility to a new location

The identification of a new facility is necessary in order to rationalise and scale up current city logistics activities.

Time frame	Action 1: from summer 2016 Action 2: 2016-2017
Territorial size	Same area
Funding schemes/ opportunities	55% customers 30% public contribution 15% advertising
Market (segment, area, customers)	More customers, more volumes
Breakeven conditions (time/ volumes)	A full exploitation of the new resource is expected in the short run. Although no specific calculations have been made, economies of scale are expected to help the public contribution share fall significantly in the next 3 years.

5. NEWCASTLE | UNITED KINGDOM

5.1. Deployment objectives

The business model implemented in Newcastle focuses at its very first stage in providing internal logistics services to the university main campus, composed by over 80 buildings. Performed activities followed the development and implementation of the service, and analysed possible replication and upscaling options. With a slightly different approach than Gothenburg, the Newcastle experience and analyses came to the conclusion that the expansion of the business both in terms of volumes and of territory/supply chains covered is a fundamental aspect in order to guarantee durability to the implemented services.

For this reason, expansion opportunities for the model are being investigated both towards other university campuses and to other similar contexts such as the City Administration district, and Hospital facilities.

5.2. Deployment plan

Action 1: extending the business to other university

Extending the model to the other university in town would help to enhance the efficiency of the service. Moreover, since the model implemented within SMARTSET has identified relevant benefits inside the campus area, another objective might be the application of the model to other universities in different towns in UK.

Action 2: moving of the facility to a new location

The identification of a more suitable facility closer to the delivery areas would enhance the potential for consolidation, involving those operators which did not join the scheme.

Action 3: finding synergies with other poles in Newcastle

Not only universities, but also City administration and Hospital are generating similar flows which might be served by the current service approach. Therefore these options are being pursued.

Time frame	2016 -
Territorial size	City of Newcastle, other university campus/ city
Funding schemes/ opportunities	To be identified
Market (segment, area, customers)	From office supply to medicals, other supply chains. Subjects to be involved include Newcastle College, Newcastle Municipality, NHS
Breakeven conditions (time/ volumes)	Not Available

6. PADUA | ITALY

6.1. Deployment objectives

One of the major strengths of the “Cityporto - Consegne in Città” urban delivery service is represented by the synergy with freight village operations. Although Cityporto experiences a substantial and steady growth since its foundation, with a business counting around 100.000 deliveries per year (2012) on behalf of about 50 customers, the managers of the initiatives are well aware of the need for continuous innovation and extension of the service. Therefore, during the SMARTSET experience some strategic steps have been undertaken, among which most notable are the extension of business to parcels and perishable goods, but also to other areas outside the city. Moreover, the subscription of an agreement with rail operators paves the way to further rail-road integration.

6.2. Deployment plan

Action 1: Increase of traffic by integration of the delivery of different kind of goods and new customers

The main deployment action is the increase of volume and business, starting from the experience made with parcels and perishable goods, whose target is set by an expected 100% increase of traffic volumes within 2018.

Action 2: Maintaining deliveries to non-urban areas (Abano and Montegrotto)

A second relevant target is the stabilization of the service in the Montegrotto area, which was experimented during the SMARTSET project run. This represent a further piece of the strategy, which aims at consolidating existing volumes and expanding the geographical coverage.

Action 3: 2. Exploring rail-road transshipment

The third deployment strategy is to explore the potential of rail-road transshipment for urban deliveries. Moving from the agreement reached, potential synergies will be analysed and put in place.

Time frame	2016-2018
Territorial size	Municipality, and Montegrotto area
Funding schemes/ opportunities	Self funded
Market (segment, area, customers)	Same as the ones served during the project
Breakeven conditions (time/ volumes)	From 100.000 to 200.000 deliveries per year

7. BERLIN | GERMANY

7.1. Deployment objectives

Berlin experience on freight transport combines policy and regulatory aspects with feasibility analyses for specific measures. In particular, the former freight train station Tempelhof as an urban consolidation centre is considered as an essential “green urban logistics” node for the city.

The activity in Berlin was mainly aimed at a feasibility analysis and the elaboration of a business model for a future initiative and did not include any actual test or demonstration.

Activities run within the project framework partially focus on the Tempelhof node and its feasibility both related to planning and construction as well as to operations; a second crucial aspect is related to the test of electric options for heavy duty vehicles.

Looking at the specific elements to be specifically deployed, three concrete options have been identified in order to support the implementation of urban logistics operations in Berlin: the electrification of tracks connecting the terminal, the enhancement of operation by the existing Westhafen terminal, and the development of incentive schemes for green urban logistics.

7.2. Deployment plan

Action 1: electrified tracks

The electrification of the tracks to the Tempelhof terminal is a very important objective, under competence of the infrastructure manager.

Action 2: enhancing operations

City logistics operations in the Westhafen terminal managed by Behala will be implemented further broadening the range of customers.

Action 3: incentives

Incentives for e-trucks must be implemented according to the guidelines issued.

Time frame	2016 -
Territorial size	Tempelhof, Westhafen, and other areas in town
Funding schemes/ opportunities	10 – 12 Meuros for new tracks, Deutsche Bahn competence Not Available/ Not Relevant for other actions
Market (segment, area, customers)	DB main stakeholder for electrified tracks, Westhafen terminal manager(Behala)
Breakeven conditions (time/ volumes)	N.R.

8. FORLÌ | ITALY

8.1. Deployment objectives

The Municipality of Forlì participation in SMARTSET project brought to the definition of a feasibility study and a business plan for a new city logistics initiative, building on the experience of other partners.

The objectives of the deployment phase are basically oriented at a better integration of the urban freight delivery issue in the planning process, in order to pave the way for an implementation of the service.

8.2. Deployment plan

Action 1: Valorising feasibility and business plan outcomes

The outcomes of the feasibility and business planning activities will be included in the ongoing process for the definition of the new urban mobility plan.

Action 2: Consolidating freight committees activities

The freight committee created within the SMARTSET framework will continue its activity under the umbrella of the urban mobility plan, as a thematic table for the definition of the plan strategy and options.

Time frame	2016 – 2020
Territorial size	Municipality
Funding schemes/ opportunities	To be identified at Regional, National, EU level
Market (segment, area, customers)	Local business in the city centre
Breakeven conditions (time/ volumes)	N.R.

9. GRAZ | AUSTRIA

9.1. Deployment objectives

Graz activities within the project followed a twofold approach: on one side the feasibility of a city logistics initiative at city level has been analysed, and a new model especially focused on last mile logistics has been drafted; on the other side, the project helped to launch and extend the Bring mE bike delivery service in the city centre.

Deployment activities will be implemented according to this strategy, on one hand the Bring mE experience needs to be scaled up in order to become more efficient and economically viable, and on the other the new urban development will face the challenge of implementing new last mile delivery solutions.

9.2. Deployment plan

Action 1: expansion of business in the city centre

The Bring mE services will be scaled up extending shop's participation (including the biggest shopping mall in the centre), in order to reach the break even point.

Action 2: extension to Business to Business (B2B) services

Concerning the definition of new city logistics services, following the feasibility analysis the extension of service to the B2B segment represents an objective to be deployed.

Action 3: extension to western Graz

The planning and implementation of city logistics options within the brownfield-based residential expansion in western Graz will be implemented involving stakeholders (especially Real Estate developers and logistics operators) in the process, including their contribution in financing the service.

Time frame	2016-2018
Territorial size	
Funding schemes/ opportunities	Novelog Project (H2020), other sources
Market (segment, area, customers)	Retailers, shops. Real Estate developers involved in the process, Chamber of Commerce, logistics operators
Breakeven conditions (time/ volumes)	Bring mE, around 12 to 15 deliveries per day B2B: N.A. Development on western Graz should be market effective from the start

10. ROME | ITALY

10.1. Deployment objectives

The SMARTSET approach applied in the City of Rome identified three main aspects that will be deployed within the following years beyond the SMARTSET project. First, a further enforcement of the regulation on freight vehicles access will be pursued, in order to make low carbon options become more competitive; second objective is represented by the implementation of UFT based services, starting from the identification of public areas which can be provided as assets to make the solution more viable; third, van sharing services based on electric vehicles will be implemented, in order to provide shopkeepers with low carbon mobility options to be tested.

10.2. Deployment plan

Action 1: enforcement of regulation

Enforcement of regulation was one of the key points of the Rome experience within SMARTSET, based on regulatory acts implementing restricting measures at different scale: in 2014 (freight limited traffic zone in the centre) and 2015 (low emission zone, applied to a broader area). Further enforcement is needed in order to make the measures become effective.

Action 2: implementation of UFT based services

Services will be set up and implemented on an experimental level, once suitable public areas will be identified for the creation of a UFT. Available areas are being identified and cooperation with the private sector for management of Urban Freight Terminal activities is in place.

Action 3: van sharing

Van sharing option will be provided to shopkeepers in the city centre and old town, in order to foster the use of low carbon options for last mile daily provisions.

Time frame 2016-2018

Territorial size From Tridente area to broader area

**Funding schemes/
opportunities** N.A.

**Market (segment,
area, customers)** Shops, retailers

**Breakeven
conditions (time/
volumes)** 2 years

11. SUNDSVALL | SWEDEN

11.1. Deployment objectives

Sundsvall has adopted a strategy with the aim of becoming a logistics centre for goods destined to the Sundsvall area and the mid-Nordic region. The plan integrates last mile logistics options, but needs the development of intermodal options also for the long range in order to implement green supply chains for the area.

The experience developed within the SMARTSET framework will be deployed according to the different components of the logistic chain, including measures fostering intermodality, the use of hybrid locomotives for operations in the terminal allowing rail road transshipment, and city logistics activities based on synergies with the waste management sector.

11.2. Deployment plan

Action 1: City deliveries

The Sundsvall approach envisages the involvement of waste logistics operators, in order to provide cost effective services in particular within the commercial areas/ malls. Small scale set ups will be implemented in a first phase, as a part of a broader approach involving other cities.

Action 2: long distance intermodality

The studies and networking activities developed within SMARTSET resulted in a set of solutions and initiatives to be implemented, some of which based on infrastructural development. The construction of an intermodal facility represents so far the central node of the strategy.

Action 3: hybrid locomotives in terminal

In order to optimise operations and provide sustainable and viable options for intermodal transport, hybrid locomotives able to perform the last mile into terminal have been tested. Fostering a broad use of this technological option represent a relevant issues for greening local logistics operations.

Time frame	2016-2018
Territorial size	From city to region
Funding schemes/ opportunities	All actions will be self-funded
Market (segment, area, customers)	Malls for urban deliveries, operators and manufacturers for larger scale actions will be involved.
Breakeven conditions (time/ volumes)	N.A:

12. CONCLUSIONS

Two main approaches can be found in the deployment plans envisaged by the SMARTSET test sites, according to different levels of maturity of the debate and actions undertaken to develop sustainable city logistics concepts.

On one side, most sites standing at the feasibility and business planning stage identify as a further needed step towards implementation the inclusion of the SMARTSET outcomes and findings in the broad programming framework at local, regional and in some cases national level. This is the case for example of Berlin, Forlì, and in part Rome and Sundsvall.

On the other side, SMARTSET's advanced test sites, as many other experiences throughout Europe, are facing the need for scaling up experimental approaches into a solid and self-sustained business model without public contributions. Although at different maturity stages, the experiences made in Padua and Gothenburg with urban freight deliveries, in Newcastle with the campus dedicated last mile services, but also in Graz with e-bike deliveries, once identified a virtuous path towards sustainability need to build a scaling up strategy addressing new areas, sectors and services.

In general, the deployment strategies envisaged have been largely developed thanks to the cross fertilisation and knowledge exchange between partners that contributed to the development of SMARTSET outcomes. The experiences made within the project framework represent a quite broad picture of a range of approaches to urban freight issues according to different levels of maturity as well as different issues to be tackled, territorial specificities, governance and technological options to be applied.

The great challenges to be faced from now on by partners and stakeholders involved in the project must be supported by a high degree of participation and collaboration, following the path drafted by the freight committees and stakeholders' engagement practices, and by an outstanding degree of creativity and commitment of policymakers in identifying viable solutions making the best use of available resources to be shared.