



## **ENCLOSE Project** **1<sup>st</sup> Awareness Rising Event (ARE1)**

### **Overall ENCLOSE Project** **overview and state of the city** **logistics solutions**



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*Project Coordination*  
**Memex Srl – Livorno (Italy)**

**Dundee June 27<sup>th</sup> 2013**

# Urban Mobility Measures: Main Axes of Intervention

- **Systems and ICT infrastructures realization**
  - Access Control
  - Traffic Light coordination, traffic sensors network
  - Integrated Parking management, Variable Message Signs
  - Integrated Ticketing
  - Infomobility services
- **Additional "green" services** (bike sharing, bike station, collective taxi, car sharing, etc.)
- **Qualification and differentiation of PT services (BRT, DRTS etc.)**
- **Urban logistics services (city logistics, last mile, etc.)**
- **Coordination, Cooperative and integration of different modalities (FS-Bike, FS-TPL, P&R schemes, etc)**



**MIXED SOLUTIONS by TECHNOLOGIES and INFRASTRUCTURES.....**

**but also... ORGANIZATION/OPERATION and NORMATIVE....**

# City Logistics: in Urban Areas

- A key element of the whole **Urban Mobility System**
- Organized and operated by **private companies**, regulated (conditions, rules) by **public authorities** (i.e. cities)
- Several types of **schemes** and service models
- **Impacts** on living and working conditions
  - congestion, occupation of urban space, pollution, noise, safety, ...
- Need for **efficient solutions**
  - interactions between long distance freight flows and local mobility, impacts of traffic passing through the urban area, ...
  - interfaces between long-distance transport and short-distance distribution
  - etc.



# City Logistics: in SMHT context

- More critical issues and negative impacts in **Small-/Mid-Size Historic Towns**
  - more complex transport environment  
*old road infrastructure, narrow streets, ...*
  - higher impacts (emissions, noise, safety, etc)
  - heritage and historic assets to protect
  - higher risks for pedestrian safety
  - more strict access regulations
  - higher costs of operation



**Lucca evolving situation**

# Urban Freight Distribution

## ENergy efficiency in City LOfistics Services for Small and Mid-sized European Historic Towns (SMHTs)

### IEE-ENCLOSE PROJECT

Starting date: 03<sup>rd</sup> May 2012

Duration: 30 months

Project Coordinator: MemEx (Italy)

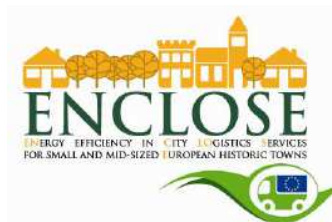
Project budget: € 2.105.958

Funding from EU: 75%

16 partners from 13 EU countries

**One the most on-going relevant EU project on**

**City Logistics**



# ENCLOSE Consortium Composition

<i>PROJECT COORDINATOR</i>	MEMEX SRL, LIVORNO (I)
<i>LOGISTICS AND ICT INSTITUTES</i>	ILIM , INSITUTE OF LOGISTICS & WAREHOUSING, POZNAN (PL) AUSTRIATECH, FEDERAL AGENCY FOR TECHNOLOGICAL MEASURES, VIENNA (A)
<i>FORERUNNERS CITIES</i>	LUCCA (I), WITH THE SUPPORT OF LUCENSE AND METRO TRONDHEIM (NO), PARTNER POSTEN NORGE S'HERTOGENBOSCH (NL)
<i>FOLLOWER CITIES</i>	BURGOS (E), CON PARTNER ASOCIACION PLAN ESTRATEGICO CIUDAD DE BURGOS ALMADA (P) DUNDEE (UK) ALBA JULIA /(RO) SERRES (GR) BALCHIK (BG)
<i>INTERNATIONAL MULTIPLEYERS</i>	EAHTR - EUROPEAN ASSOCIATION OF HISTORIC TOWNS AND REGIONS (UK) WTFC - WALLED TOWNS FRIENDSHIP CIRCLE (NL), VIA S'HERTOGENBOSCH
<i>ENERGY AGENCY</i>	TEA - TIPPERARY ENERGY AGENCY (IR) ESS - ENERGI KONTOR SYDOST (SE)
<i>PROMOTION AGENCY</i>	M&C COMMUNICATION AND MARKETING, LUCCA (I)

# ENCLOSE Project – Main Specific Objectives

## SPO1

- **logistics services operation** in 3 SMHTs: Italy (Lucca), Norway (Trondheim), The Netherlands (s'Hertogenbosch);
- **feasibility and transferability analysis** and implementation of **soft measures** in 6 SMHTs: Spain (Burgos), Portugal (Almada), UK (Dundee), Romania (Alba Julia), Greece (Serres), Bulgaria (Balchik).

## SPO2

*Development of*

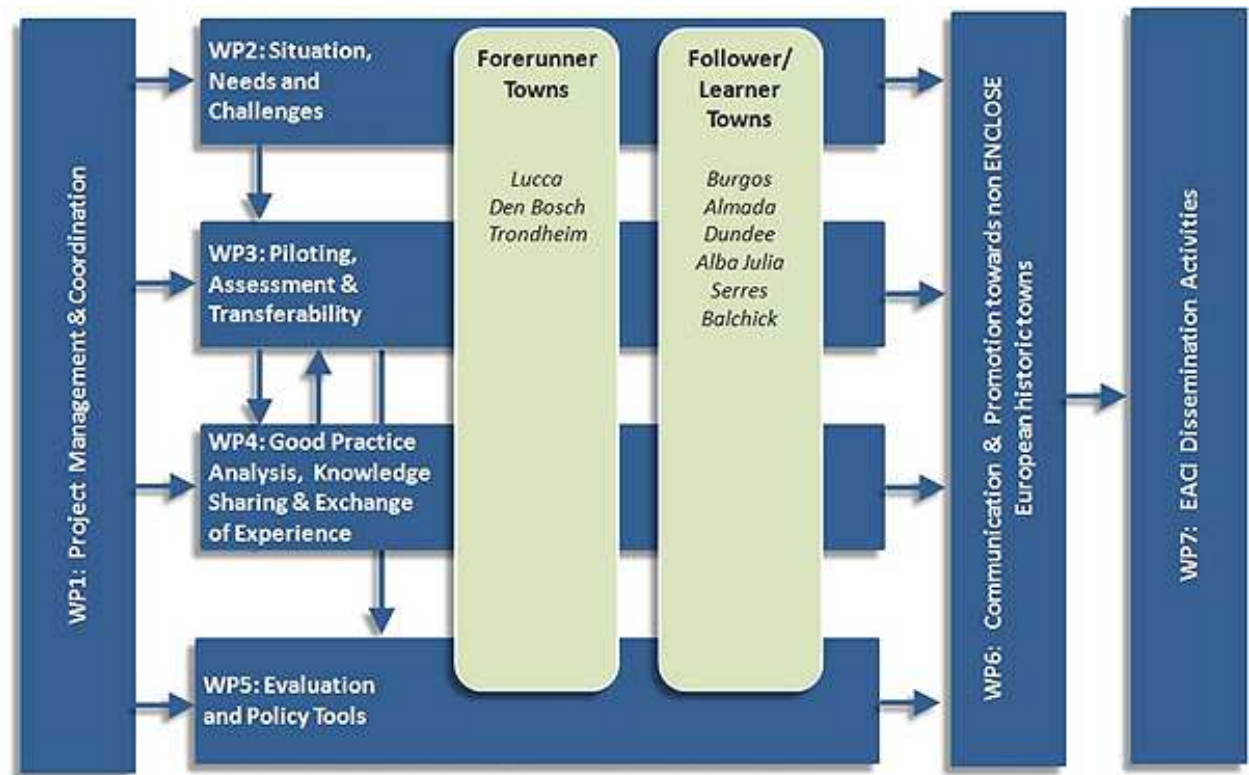
**Sustainable Urban Logistic Plans (SULPs) in the overall 9 ENCLOSE towns**

## SPO3

**Building up a suitable and usable framework for the definition of Sustainable Urban Logistics Plans for SMHTs as Key. usable tool for the other European towns.**



# Main Activities



**Situation to June 2013:**  
**Pilot services in operation, implementation of Soft measures**  
**Development of Feasibility study and Sulp running**



# ENCLOSE WEB SITE [www.enclose.eu](http://www.enclose.eu)





## City logistics reference services

**WP02 Deliverable D2.1, D2.2 and D2.3**  
Sustainable logistics and freight  
operation in small/midsize historic  
towns: **review and assessment of  
the European situation**

# City Logistics approaches

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- Several different **schemes, service models, solutions**
  - Urban Consolidation Centres / City Distribution Terminals / etc.
  - “Last mile” delivery services
  - Space management for urban delivery (*e.g. dedicated load/unload areas, multi-use lanes, ...*)
  - Night delivery, Reverse logistics services
  - Third part warehouse,
  - Home delivery services, dedicated Pick-up-Points, ...
  - Integration with eCommerce
  - Parkings, Hotels, shop services, park & buy,
  - Dedicated Van sharing
  - cargo cycles, freight taxi, ...
  - .....

# UCC: LUCCA PORT



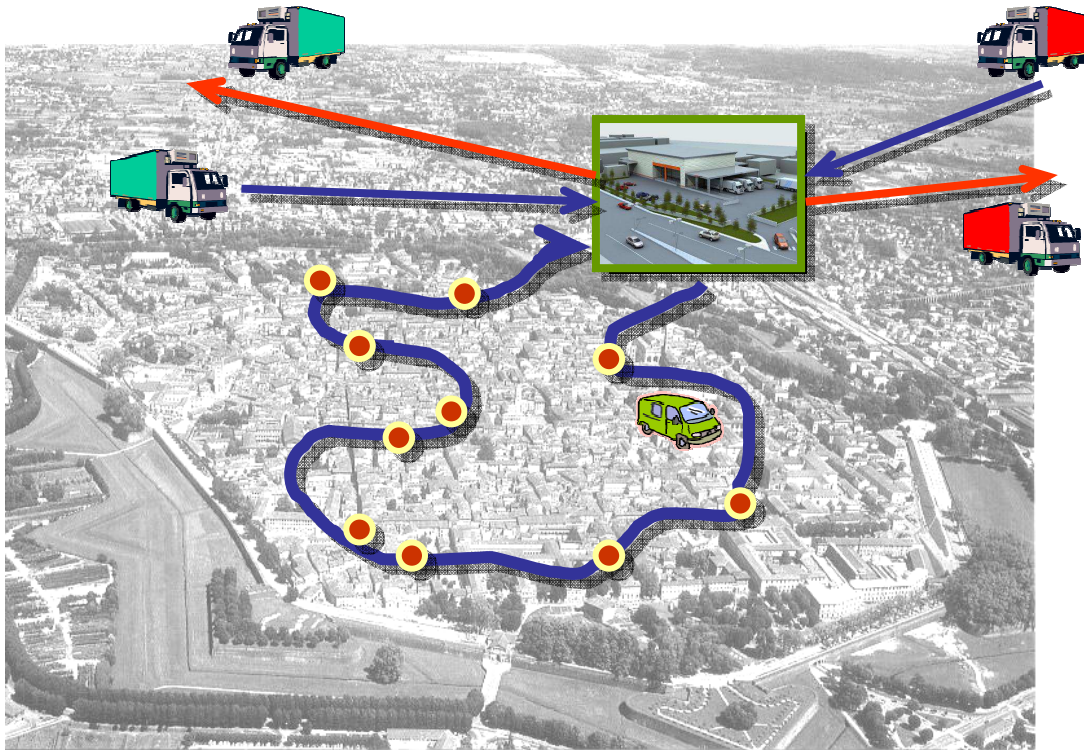
# UCC – Main Agreements

## - Agreements among transport operators and UCC

Freight delivered to the UCC by the producer/national transport operator, and are temporarily stored, **for final delivery**

## - Agreements among UCC and shopkeepers

UCC as final destination (this request coming from shopkeepers to the producer)



### examples:

Berlin (DE), London (UK), Norfolk (UK), Stockholm (SE), La Rochelle (FR), Toulouse (FR), Graz (AT), Lucca (IT), Vicenza (IT), ...

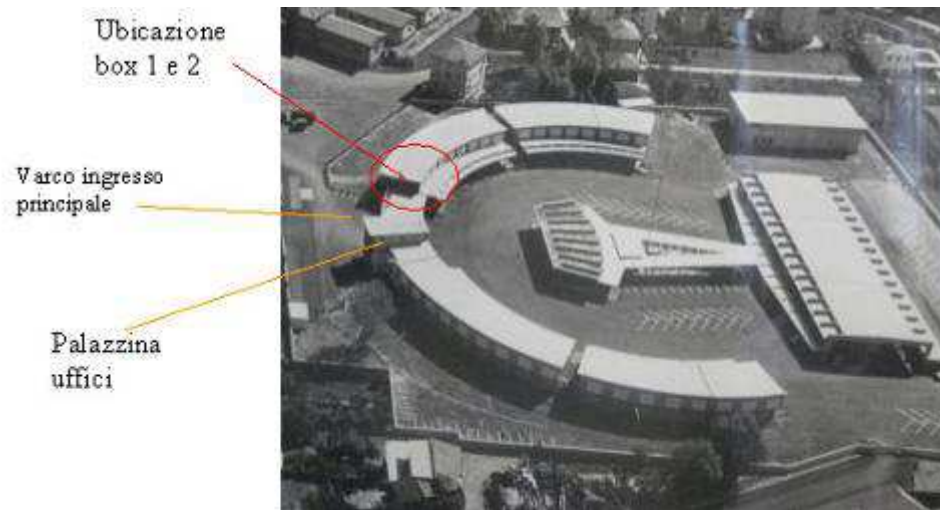
### examples: ECO2CITY

's-Hertogenbosch (NL), ...

**Towns Access rules push the transshipment, consolidation, cooperation, ...**

# Lucca Port: UCC base (2008-2011)

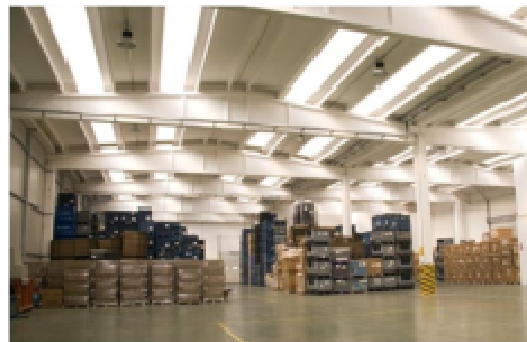
## Demonstration phase



- Low investments
- Existing public infrastructures
- Involvement of local operators

# Lucca Port – New UCC

in operation since 2011



[www.luccaport.it](http://www.luccaport.it)

# Main Service Results

Total Deliveries on the day 1 600 in the inner centre  
More than 200 daily deliveries (average 4/5 parcels/consignee, 2,5 teu/gg.) 18% of city deliveries



**Electric Van Operating  
Fleet 6 Vans**

**4 (3.5 ton), 2 (1.6)**

**at the 2015 12 Vans**



# Added Services

- Shipments from the city to outside
- Packaging collection (reverse logistics)
- Hotel baggage delivery (touristic bus check point out inner center)...



**examples:**

Lucca (IT), ...

# Added Value service: Park-Buy

- **Delivery at parking facilities**

- B2B - B2C service
- 3PL / Service Centre
- User information
  - track and trace of delivery
- Integration with P+R

**examples:**  
Norwich (UK), Siena (IT,  
demonstrated service)...



# Delivery at contact point

- **Kiala, delivery at dedicated collect points**

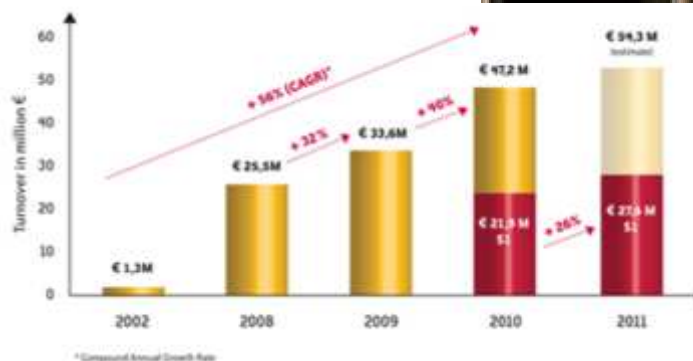
- delivery at shops, gas stations, ...
- user information
  - track and trace of delivery
- integration with on-line shopping (eCommerce, TV, ...)



**Operated in:**

Belgium, France, Luxembourg,  
The Netherlands, Spain

Over 145.000 delivery a day



# Last mile: Bike cargo



- **Cargo cycles/small electric vehicle** delivery (London)
  - multi-drop delivery
  - zero-emission cargo cycles and minivans
  - for 3rd party logistics companies, large retailers, organisations, ...



© Gnewt Cargo Ltd

# Main common problems

BURGOS



LUCCA



ALMADA



# Loading-Unloading areas

- **Space management for urban delivery: dynamic load/unload areas**

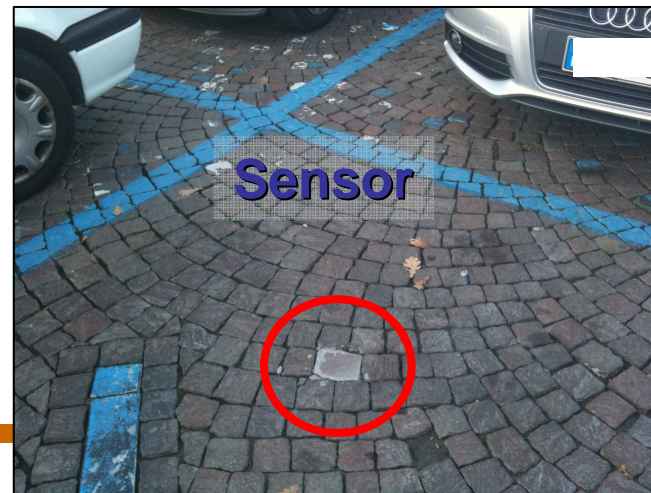
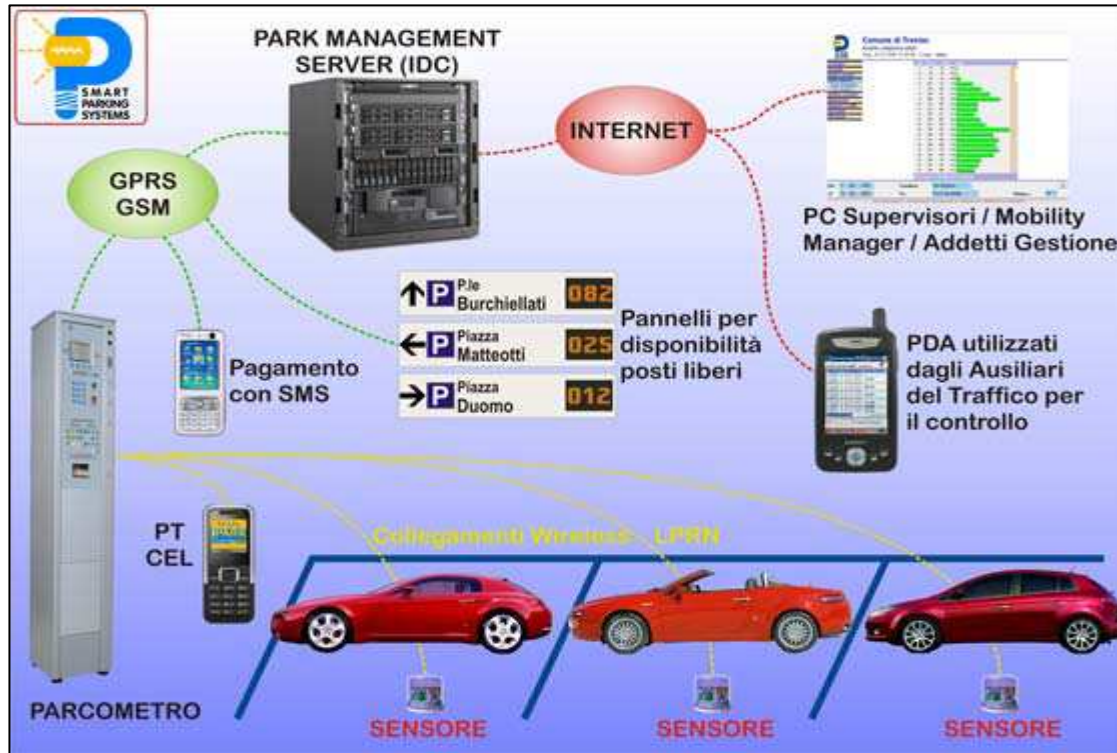
- dedicated load/unload parking lots
- dynamic reservation schemes
- stop time control
- violation detection, enforcement

**examples:**

Barcelona (ES, Poitiers (FR), Treviso (IT), Imola (IT), ...



# Treviso (LIFE -PERHT project) Solution by Parking system



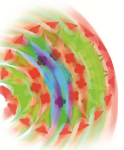
## Soft measures identified in Burgos

- ❑ NEW REGULATION FOR THE HISTORICAL CENTRE ACCESS, WITH SPECIAL PROCESSING FOR LOADING- UNLOADING TASKS.
- ❑ CARD SYSTEM ON LOADING AND UNLOADING FOR SHOP OWNERS AND HOSTELRY OWNERS (for non-labeled vehicles).



BURGOS  
Asociación Plan  
Estratégico  
Ciudad de Burgos

2020





# ALMADA: Market possible solution

... with simple measures/infrastructures !

- **Electric trolley services**

- use in pedestrian areas (mail distribution, from I/u parking lots to shopkeepers, urban market feeder, ...)



**examples:**

- Trondheim (NO, Almada (PT, ...

# City Logistics: regulations and public support (1/2)

- **Key role of Public Administrations**
  - city distribution policies and regulations
  - control and enforcement
  - incentives
  - PPP (e.g. UCC building, operation, ...)
- **Policies regulations**
  - access restriction rules
    - e.g. in relation to type of goods/days/times
    - e.g. Traffic Limited Zones, Environmental Zones, etc.
  - certificates / permits schemes
  - access charging
  - access incentives
    - e.g. FEVs, PHEVs
  - etc. ...

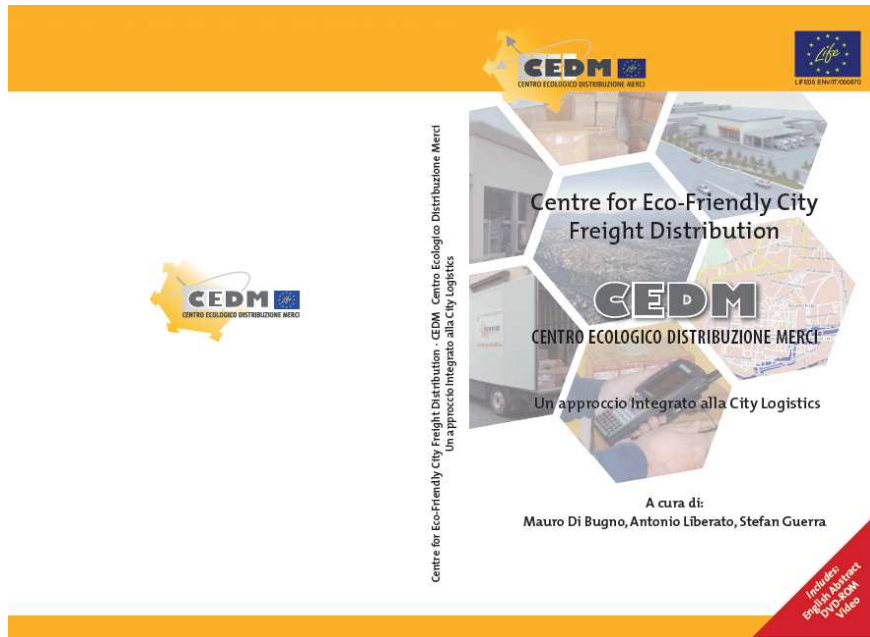


City Goods permits, Aalborg (DK), © Aalborg CC

## Some Consideration

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- City Logistics is an ongoing process, the solution has long
  - Already quite a long history, many good examples, some failures (valuable knowledge as well !!!)
  - Doesn't mean to realize from the beginning systems or infrastructure or making great investments
  - Many different solutions, schemes and services
  - Not all schemes fit all town !!! Local objectives and requirements must be understood well ...
  - Fundamental role of Public Administration in rules and control
  - In some cases "simple" measures, adapting the existing, can be a real and effective step ahead !!!
  - *Business model remain an "open issues"*
  - A cooperation forum among the different social and economic town actors is needed
- **ENCLOSE philosophy "Keep the things simple "**



G. Ambrosino, M. Di Bugno, S. Guerra, A. Liberato

“CEDM Centre for Eco-friendly City Freight Distribution: un approccio integrato alla city logistics”

**Thanks for your attention**

[www.enclose.eu](http://www.enclose.eu)



G. Ambrosino, M. Boero, J. Nelson, M. Romanazzo

“Systems and Advanced Solutions for eLogistics in the Sustainable City”