



Convegno
ANALISI E PROPOSTE PER I CENTRI DI
CONSOLIDAMENTO PER LE COSTRUZIONI
Bologna, 27 Febbraio 2018

Centri di Distribuzione e Consolidamento
delle merci: potenzialità e criticità di un
modello ampiamente sperimentato



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City Logistics an old issue



City Logistics in Urban Areas

- Responsible of quarter of overall urban transport CO2 emissions (*and 30-50% PM and NOx*)
- **Relevant traffic component in the city** (*15% of circulating vehicles*)
- **Relevant role of the “self-supply” transport**
- **Very low load factor for delivery vehicles** (*i.e. 38%*)
- **Regulated/influenced by public authorities** (*at different levels*)
- **Operated by private companies, in general of very small dimension** (*85% with less of 5 employers, subcontracted for urban deliveries*)
- **Frequent/instant deliveries** due e-commerce, food on demand, home delivering, etc.

EU Policy: Achieve essentially CO2-free city logistics by 2030

Significant component of City Life Quality

Many services, schemes and best (or worst) practices



Key role of Public Authority

Policy, Rules, Measures

- Specific objectives in relation to urban and mobility plan
- Setting urban freight regulation scenario (time/space)
- Access in relation to goods-vehicle typology
- Enforcement schemes and control activities
- Make existing infrastructure available (ICT included)
- Incentives for “green/electric vehicles” (shopkeepers, operators)

Scenario

- Less resources for investment and management
- “Facilitator” role with respect to the different involved actors and stakeholders
- Role upper level Authority (Regional, National, .)
- **Need of integration with the overall SUMP**

Capability to choose and planning is necessary

Towards Sustainable Urban Logistics Plan

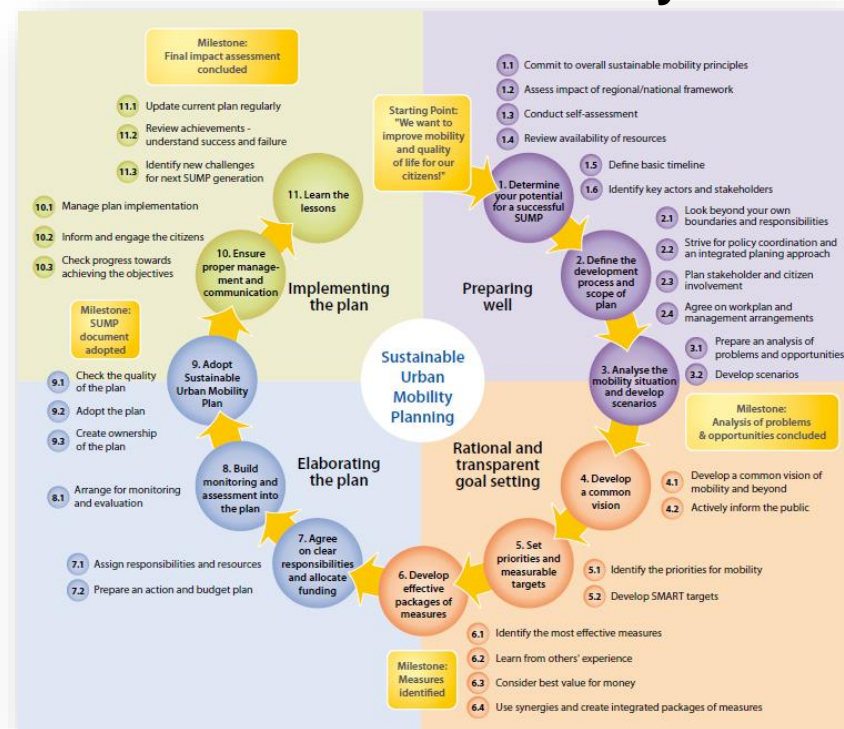


A specific Plan for designing and monitoring city logistics solutions within mid-term horizon

SULP as key part of SUMP devoted to freight distribution processes

SULP to be developed as part of SUMP or as starting point for SUMP development

Sustainable Urban Mobility Plan



SULP methodology is based on the SUMP approach

Practical methodology supporting City stakeholders in the SULP development

Working on:

- Institutional and Political level
- City Regulation level
- Stakeholders, associations and citizens involvement
- Operation/Organization level
- Infrastructures/ITS level
- Economic/Business level

with a participatory approach

**SULP is based on an effective
Feasibility Study**



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Some solutions/services

From regulations ...

...

...

...

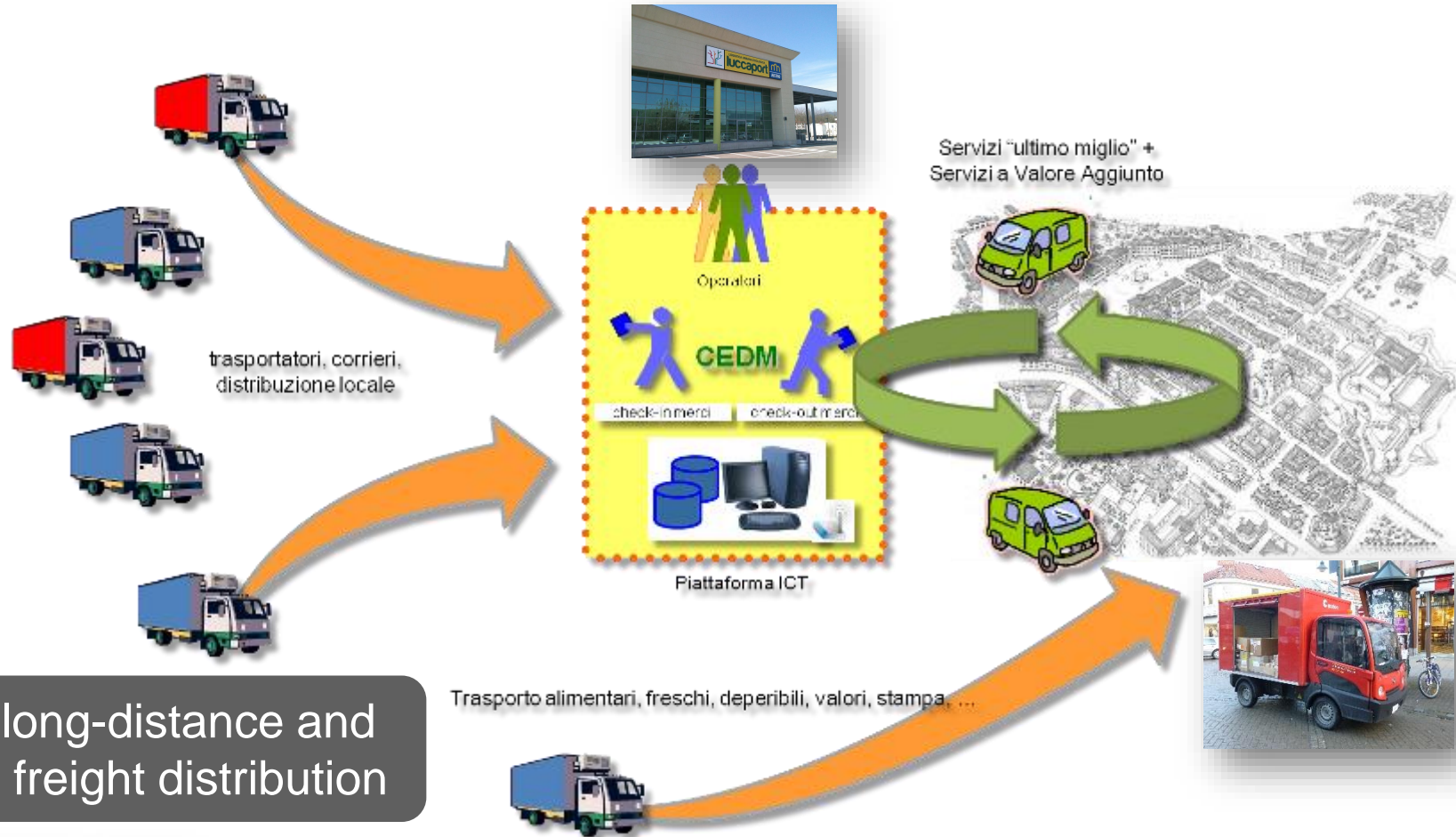
*... to Urban
Consolidation Centers*



**Municipality Initiative:
Top-Down approach**

**Last Mile and
Cross-docking Services**







**UCC Final destination of transport
operators and/or shops ...**



**City Access Rules
push the
transshipment,
consolidation,
cooperation, ...
UCC productivity**



Three European with UCC and Logistics services

<p>Lucca Italy</p>	<ul style="list-style-type: none"> - 80.000 inh. - 185 km² - 430 inh/ km² - 1.400 shops in study area - Pedestrian area in the inner centre. - High tourists flows 		
<p>Trondheim Norway</p>	<ul style="list-style-type: none"> - 168.000 inh. - 341 km² - 493 inh/ km² - 950 shops in study area + 4 Shopping Center - Pedestrian area in the inner centre. 		
<p>s'Hertogenbosch Nederland</p>	<ul style="list-style-type: none"> - 140.000 inh. - 91 km² - 1531 inh/ km² - 500 shops in study area - Pedestrian area in the inner centre - High tourists flows 		

's-Hertogenbosch (NL)

- UCC not managed by the Municipality (UCC-ECO2CITY service)
- UCC/Operators cooperation agreement
- UCC/Shopkeepers cooperation agreement
- Coordination of the supply demand, in particular for fresh food for restaurants, bar
- Delivery by clean vehicles



Low Emission Zone



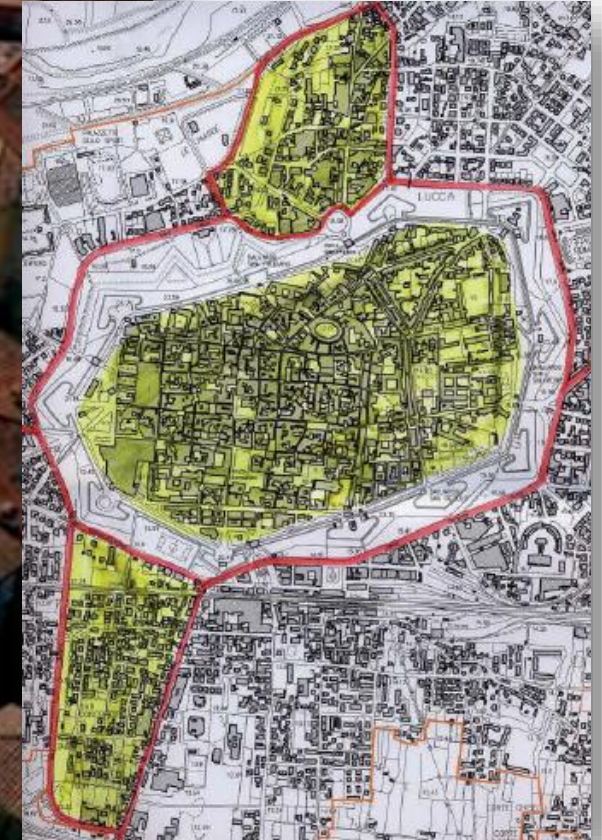
- Parcel/Freight distribution by different electric vans (trucks, vans, trolleys, etc).
- Pallets distribution
- Urban Consolidation Center



Towards Zero Emission Postal Distribution

Lucca study area for freight distribution

- 1400 shops in the historic center + S. Anna close district
- 2019 total deliveries/day (559 express, 1460 by operators)
- 746 vans/day circulating in the reference area
- each non optimized van → 2,7 deliv./trip (from 1 to 5 deliv./trip)



LUCCAPORT: the Urban Consolidation Centre of Lucca



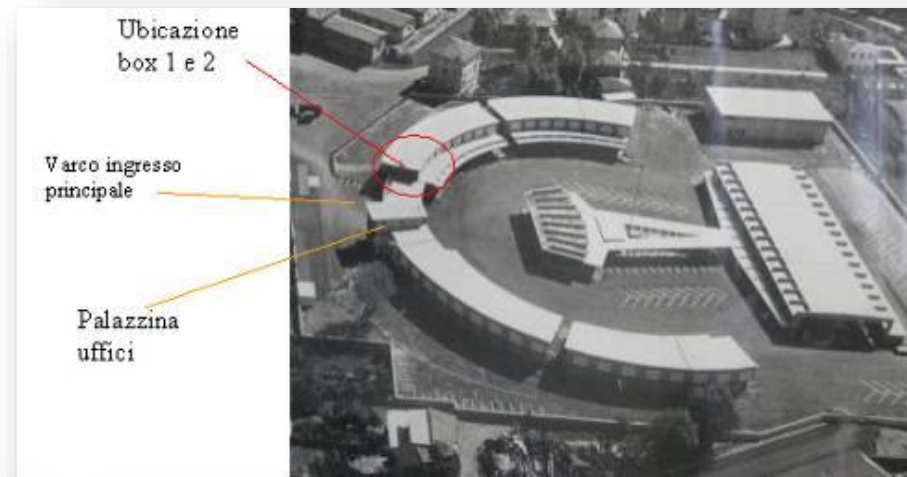
950 m² depot,
150 m² offices
1500 m² external area.
Possibility to realize 2 floors

Easy access: from highway and
to the city center max 1 km



There is a long history behind this choice !

CEDM: the temporary UCC in Lucca (former Fruit Market)



- Feasibility study for logistics solutions set up since 2003 (Interrerg MEROPE Project)
- In operation during the realization of the LUCCAPORT infrastructures (2010-2011)
- Partially funded by LIFE CEDM Project
- Located in two blocks of the former Municipal Fruit market
- Operated by a contracted local transport operator

LUCCAPORT: building phase (1/2)

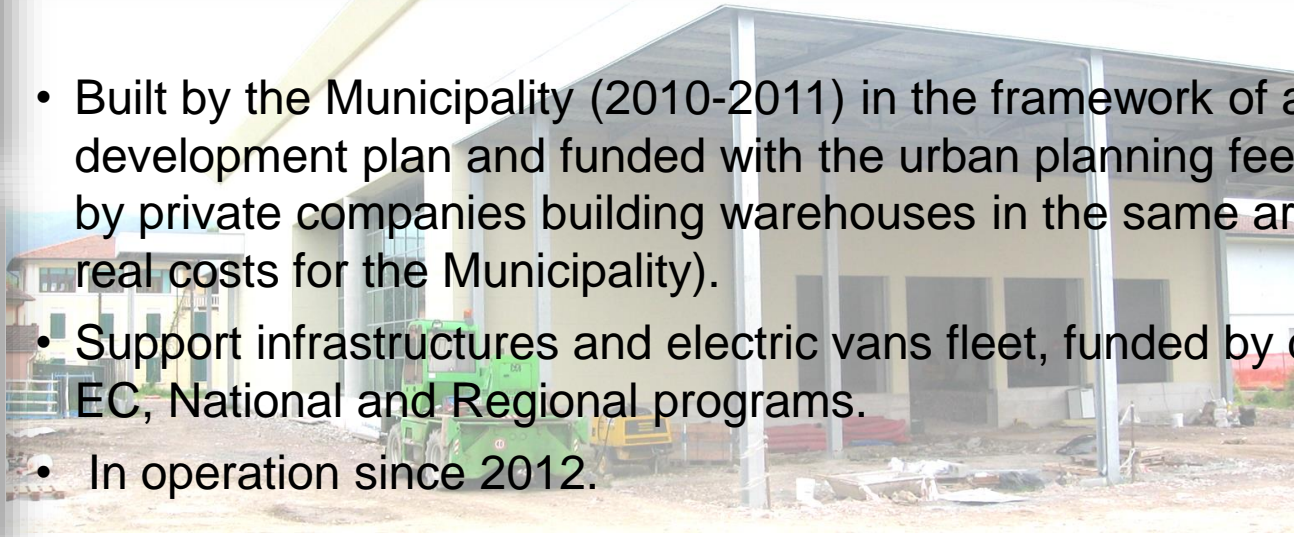


Since 2003 different administrations governed the Municipality and “City Logistics” always remained a priority.

LUCCAPORT: building phase (2/2)



- Built by the Municipality (2010-2011) in the framework of an urban development plan and funded with the urban planning fees paid by private companies building warehouses in the same area (no real costs for the Municipality).
- Support infrastructures and electric vans fleet, funded by different EC, National and Regional programs.
- In operation since 2012.



LUCCAPORT UCC

- A fleet of 7 Full Electric Vans (different loading capacity and dimension)
- An average of 4 optimized trips/vehicle/day, 13 deliv./trips., 360 deliv/day
- 18% of the current total deliv./day (25% excluding express courier)

Initial 2020 target: 810 deliv./day



LUCCAPORT UCC: Critical aspects and next steps

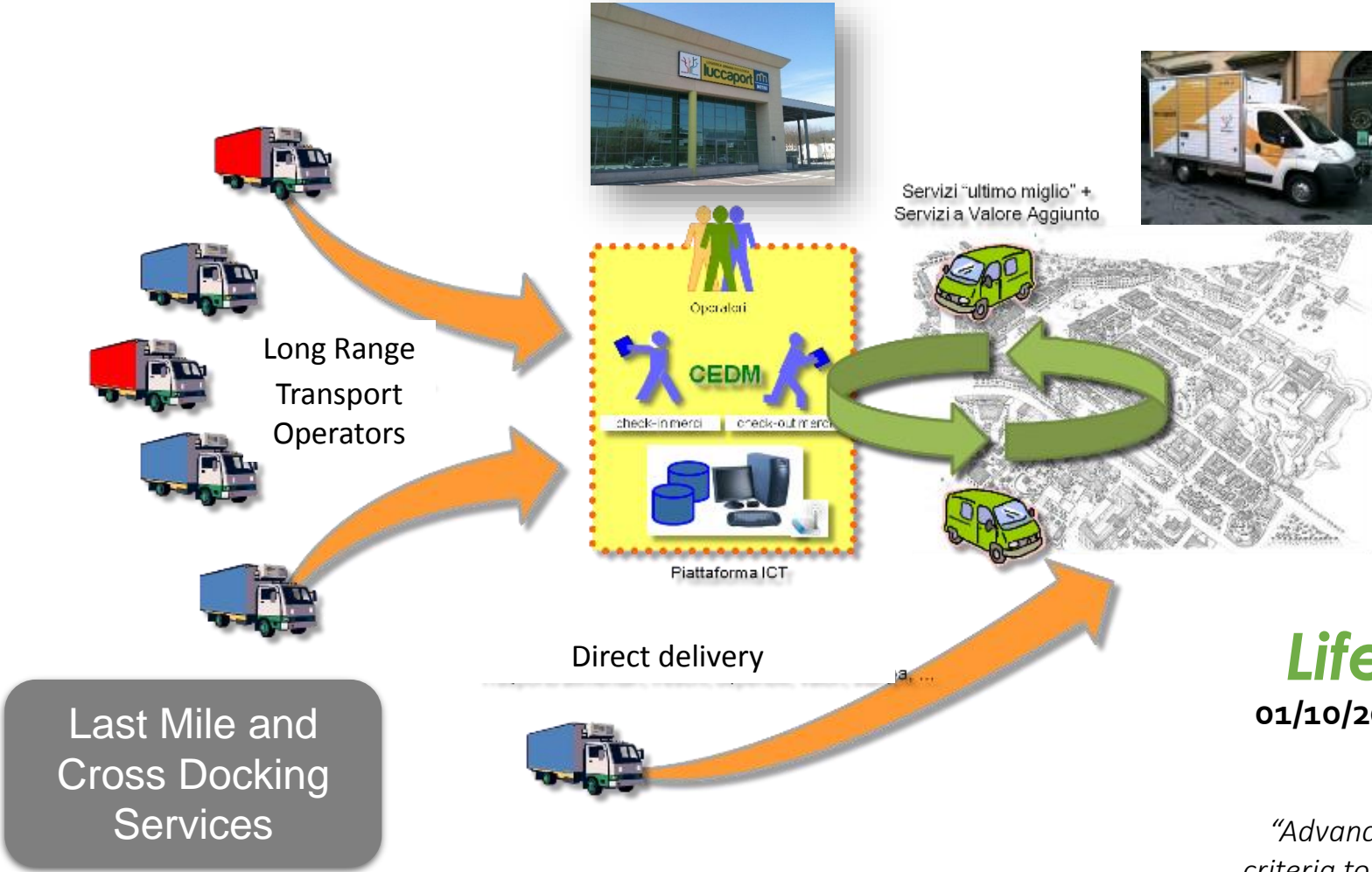
- UCC first temporary solution 2005
- Lucca Port Started in 2011
- Managed by Metro Srl (Lucca parking Company)
- Procurement for UCC management in 2016-2017. No answers
- **“Top down” UCC solution** is almost not feasible for lack of investments and efficient management
- Lack of added value services
- “Self supply” transport is one of the relevant problems.
- The UCC productivity is conditioned by access rules and enforcement
- Availability of clean vehicle and electric mobility
- Emerging political sensibility to green solutions

1. **UCC will be one of the elements** of the Logistics Solutions
2. “Consolidation” approach doesn’t mean Consolidation Center. **Increase the load factor is the problem.**
3. Support services as **Cargo Bike** and parking lot booking and mini trasnhipment .
4. **ICT enforcement infrastructure** in space and time dedicated to residents and goods (ACS).
5. Increase the “good behavior” of the operators policy - **CREDIT Policy**
6. New regulation favoring clean vehicles



Urban freight transport in Lucca: current situation and LIFE ASPIRE Project

Municipality Initiative: UCC "Luccaport"



Emerging EVs as feasible solution

Credits based access policy + eco-logistics services

Life Aspire

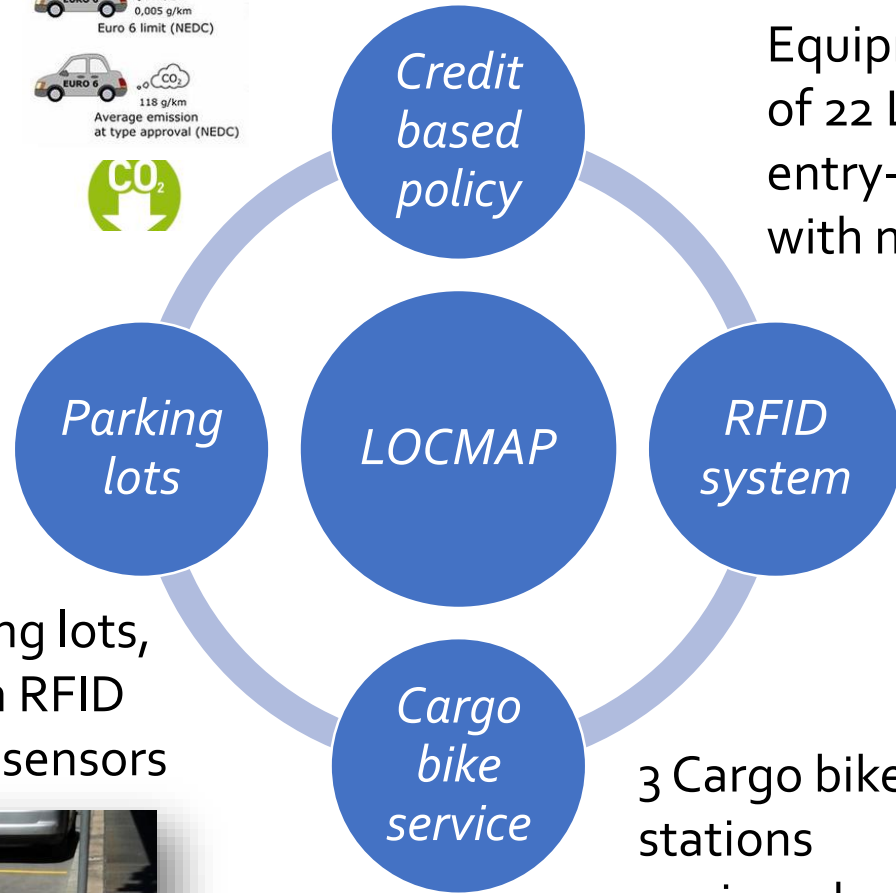
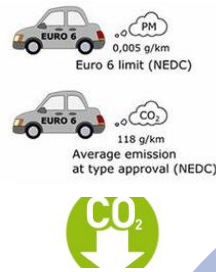
01/10/2017 30/09/2020



"Advanced logistics platform with road pricing and access criteria to improve urban environment and mobility of goods"

LIFE ASPIRE Credit Platform and support services in Lucca

Logistic factors and weights	Weight (credit)
1) Vehicle emission	1÷5
2) Frequency of daily trips	1÷5
3) Duration inside the LTZ.	1÷4
4) Use of L/U parking lots	0 (non-use); 3 (use)
5) Use of Cargo-bike	0 (non-use); 3 (use)
6) Use of booking services	0 (non-use); 3 (use)
7) Utilized time window	1; 2
8) Use of the local UCC (Luccaport) services	0 (non-use); 3 (use)



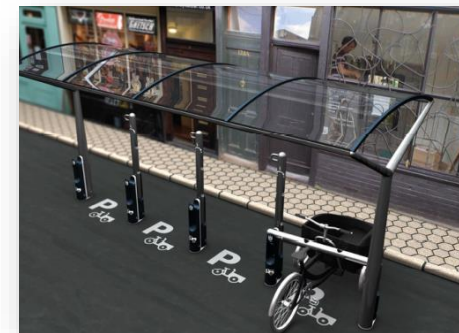
Equipment of a total of 22 LTZ gates (8 entry-, 14 exit-gate) with new RFID devices



N. 34 L/U parking lots, equipped with RFID technology and sensors



3 Cargo bike stations equipped with n. 3 cargo bike each



Credits based access policy + eco-logistics services



Life Aspire

01/10/2017 - 30/09/2020

“Advanced logistics platform with road pricing and access criteria to improve urban environment and mobility of goods”

LIFE ASPIRE Transferability and Scalability

LIFE ASPIRE in the City of Lucca



Transferability

City of Zadar



Scalability



City of Stockholm

“Advanced logistics platform with road pricing and access criteria to improve urban environment and mobility of goods”

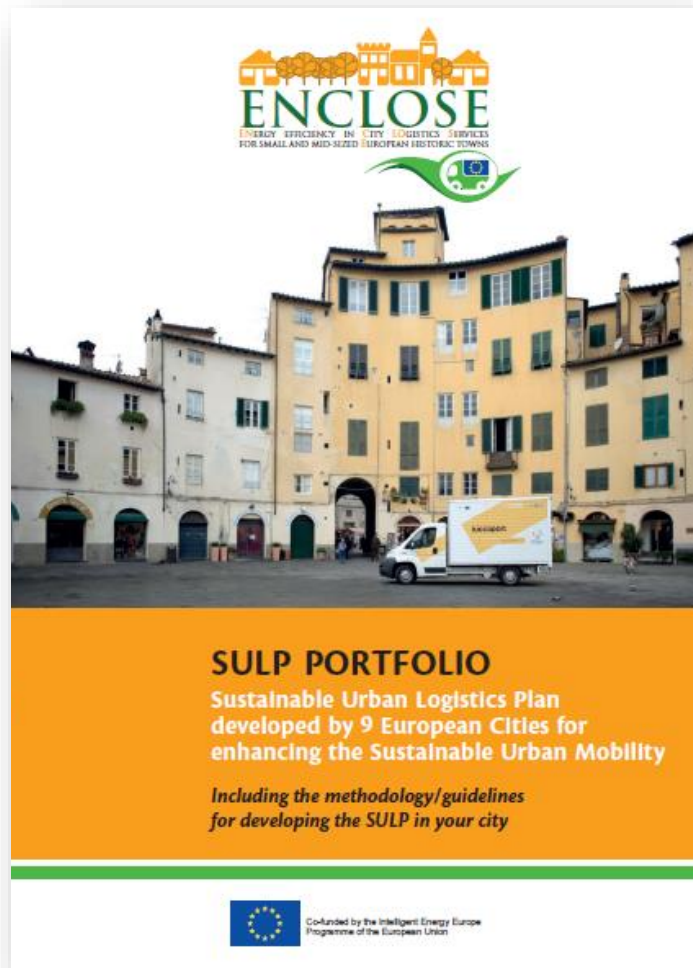
Not only “last mile” delivery services

Added Value Services, i.e.:

- Third party warehousing with on-demand delivery
- Direct delivery to the retail from Suppliers/Transport Operator
- Park&buy service
- Parcel lockers
- Packaging collection (reverse logistics)
- Hotel baggage collection from tourist bus
- Specific solution for “self-supply” transport (van sharing, Burgos approach, etc.)
- Special urban quick deliveries



... delivery service extension to the urban surroundings



Thanks for your attention

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