



citylog

sustainability and efficiency
of city logistics

CITYLOG

Project overview

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Centro Ricerche FIAT

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Why city logistics

- ✓ **Urban freight distribution is still an open issue**
in every governance agenda at local, regional, national and European level
- ✓ **Need to reduce its impact on city life**
traffic, road occupancy, emissions, ...
- ✓ **City logistics involves several aspects**
logistic models, vehicle technologies, ICT tools
- ✓ **Integrated approach as a solution**
working on initiatives that gather all the stakeholders (logistic operators, OEMs, public authorities) and all aspects



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CityLog essentials

- ✓ CITYLOG: Sustainability and Efficiency of city logistics
- ✓ Initiative supported by EUCAR (European Council for Automotive R&D)
- ✓ Co-funded within 7FP by the European Commission – Directorate General for Research
- ✓ Coordinator: Centro Ricerche FIAT
- ✓ Starting date: 1 January 2010
- ✓ End date: 31 December 2012





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Partnership (1/2)

Manufacturers



CENTRO
RICERCHE
FIAT

IVECO

VOLVO

Logistic operator



Public authorities



GRANDLYON
communauté urbaine

Infomobility services & tools

NAVTEQ



mizar



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Partnership (2/2)

Research centres



Associations



SMEs





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Project objectives

- ✓ To contribute to the improvement of the overall city logistics efficiency through a combination of several measures:
 - Technology
 - Info-telematic support functionalities
 - New logistic-oriented vehicle solutions
 - Delivery process review
 - Vehicle-to-vehicle transshipment
 - Innovative and interoperable load units



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Infotelematic solutions

- ✓ **Optimized trip planner**, to find the optimal sequence of the delivery destinations taking into account
 - delivery constraints (time windows, etc.)
 - Historical/statistical traffic data
 - Other inputs (real-time traffic data, map info, floating car data)
- ✓ **Ad hoc map attributes** to report constraints for heavy and commercial vehicles (bridges, bottlenecks etc.)
- ✓ **Dynamic navigation services** through an innovative approach that merges the benefits of on-board and off-board navigation
- ✓ **Last mile parcel tracking** to warn the customers a few minutes before the delivery



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Vehicle and logistics solutions

✓ Low environmental impact and safe vehicles

- Complementary set of vehicles (LCV IVECO + M/HV VOLVO) to implement the “Freight bus” concept
- On-board telematics for clean and efficient mobility
- Safety and maneuvering support systems



✓ Logistic model & load units

- New compact containers
- Mobile pack stations

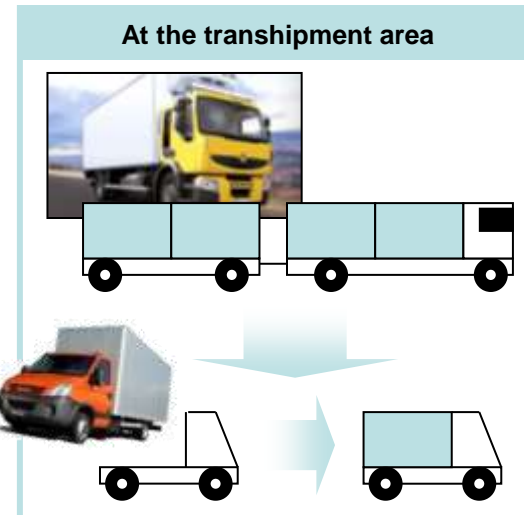
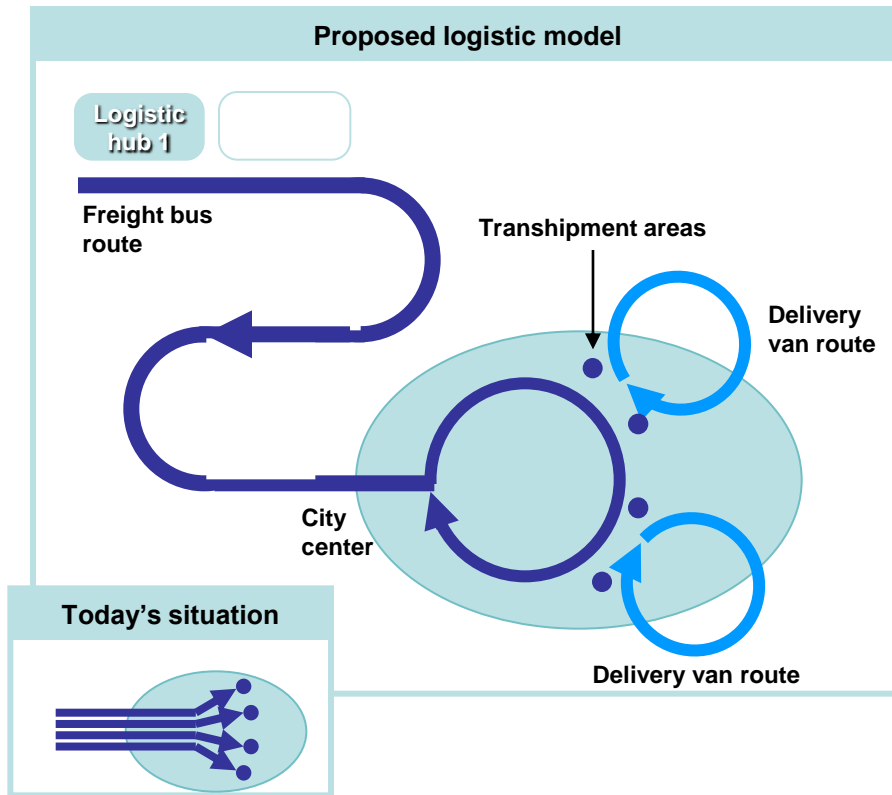




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Freight bus concept





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Impact (1/2)

✓ **A step towards sustainability**

Reduction of CO₂, pollutant emissions and noise at least in compliance with EU guidelines (increased energy efficiency at least by 20%)

✓ **Safety besides efficiency**

Increased safety during the delivery operations, especially in pedestrian areas and for vulnerable road users

✓ **Exploring new approaches**

CityLog will implement new concepts for a first demonstration phase. Future initiatives can be launched to adopt and improve the most promising solutions



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Impact (2/2)

✓ **Evaluation through simulation tools**

Important research institutions like TNO and Fraunhofer will develop simulation tools to assess on a large scale the impact of the CityLog solutions

✓ **Mission efficiency**

for the improvement of timing and scheduling



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Initial results

- ✓ Survey of the main trends of city logistics in Europe
- ✓ User needs and use cases collection with the support of the logistic stakeholders of the Consortium
- ✓ Definition of an overall reference architecture that integrates the several infotelematic solutions, starting from the basic functional requirements



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Next steps

- ✓ Consolidation of the use cases to extract all the functional requirements
- ✓ Specification of the infotelematic systems
- ✓ Preliminary design of vehicle and logistic solutions
- ✓ Identification of evaluation criteria



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Cooperation with CityMove

✓ **One vision, two challenges**

City logistics problems will be faced up through two parallel initiatives, focused on vehicle technologies (CityMove) and the overall delivery process (CityLog)

✓ **Complementarity...**

The two projects will be fully autonomous and independent in achieving their expected results

✓ **...and synergy**

Joint initiatives will be undertaken to share opportunities and methods, especially for dissemination and linking with the stakeholders



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Contact



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