



Transport Research Arena Europe 2010

3rd edition
Brussels, Belgium

7 - 10, June 2010

CITYLOG - New solutions for urban freight distribution

Saverio Zuccotti
Project Coordinator

Centro Ricerche Fiat

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



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



Partnership

- The CITYLOG consortium is composed of 18 Partners from 6 European countries
 - Manufacturers
 - Logistic operators
 - Public Authorities
 - Infomobility and services providers
 - Research Centres
 - Associations
 - SMEs



Project objective

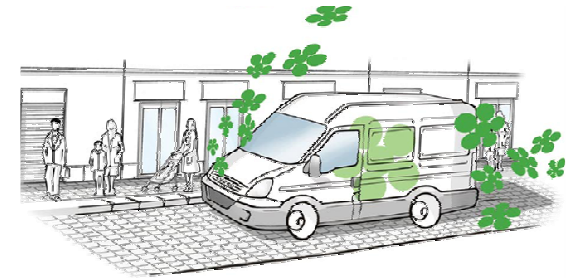
- To contribute to the improvement of the overall city logistics efficiency through a combination of several measures:
 - ***Technology***
 - Info-telematic support functionalities
 - New logistic-oriented vehicle solutions
 - ***Delivery process review***
 - Vehicle-to-vehicle transshipment
 - Innovative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

Infotelematic solutions

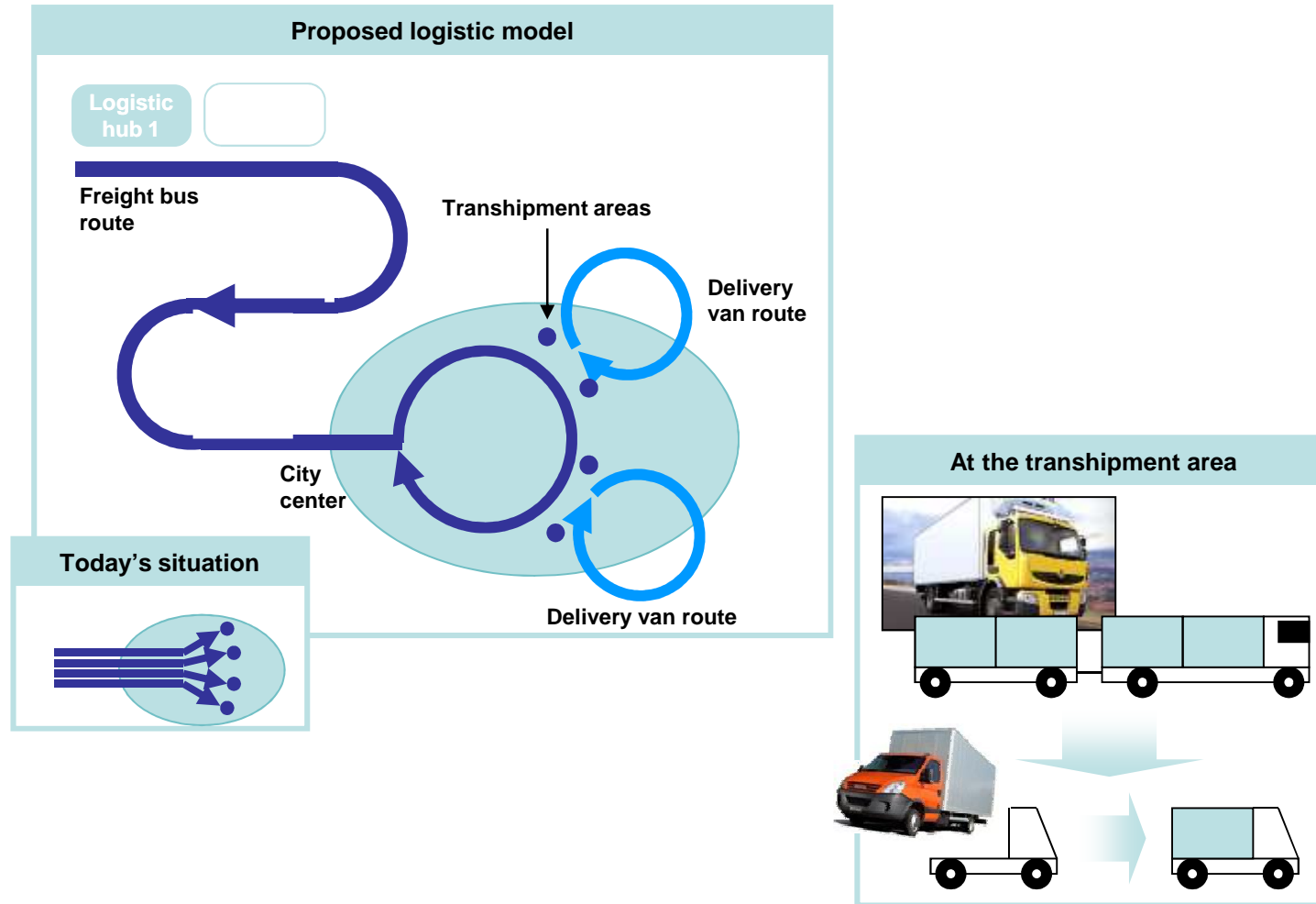
- **Optimized trip planner**, to find the optimal sequence of the delivery destinations taking into account
 - delivery constraints (time windows, etc.)
 - Historical/statistical traffic data
 - Other inputs (real-time traffic data, map info, floating car data)
- **Ad hoc map attributes** to report constraints 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

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



Freight bus concept



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

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

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
 - a dedicated open workshop will be held next week in Brussels in cooperation with the **CityMove** project
- Definition of an overall reference architecture that integrates the several infotelematic solutions, starting from the basic functional requirements

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

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

Thank you for your attention!



**CENTRO
RICERCHE
FIAT**

Saverio Zuccotti
Product research
Telematic functions

Centro Ricerche Fiat S.C.p.A.
Strada Torino, 50 - 10043 Orbassano (TO), Italia
Tel.: +39 011 9083 948
saverio.zuccotti@crf.it