



# Which opportunities do local governments have to support low carbon city logistics?

Dr Jacques Leonardi



Workshop II on Urban Freight  
Berlin, 20 Sep. 2017



# Bottom-up *and/or* Top-down

- **Bottom-up** approach to sustainable operation:
  - First develop a case; assess if the change is more sustainable; if yes then develop a replication and a supportive strategy for long term development
  - Learning objective: Understanding of sustainable operations out of case studies, tests, innovations
  - Very little general rule how to develop a sustainable operation in freight & logistics, most cases are specific
  - Tentative coordinated bottom-up?
- **Top down** strategy: increase taxes first and see later how the sector is developing
  - Thesis after French eco-tax cancellation: did all top-down strategies have failed so far?
  - Coordinating top-down *and* bottom-up approach?



# Project examples in Europe

- BESTUFS BEST Urban Freight Solutions (2001-2008)  
[www.bestufs.net](http://www.bestufs.net) + BESTFACT (2012-2016) [www.bestfact.net](http://www.bestfact.net)
- SMARTFUSION (2012-2015) [www.smartfusion.eu](http://www.smartfusion.eu)
- CITY PORTS ‘A network of cities following a co-ordinated approach to develop feasible and sustainable city logistics solutions’ (2003-2006) [www.cityports.net](http://www.cityports.net)
- CITY- MOVE (2009-2012)
- FIDEUS ‘Freight Innovative Delivery in European Urban Space’ (2005-2008)
- FREILOT (2009-2012)
- MOSCA ‘Decision Support System For Integrated Door-To-Door Delivery: Planning and Control in Logistic Chains’ (2003)  
[www.idsia.ch/mosca/intro.phtml](http://www.idsia.ch/mosca/intro.phtml)



## Project examples in Europe (2)

- NICHES ‘New and Innovative Concepts for Helping European transport Sustainability’ (2004 - 2007)  
[www.niches-transport.org](http://www.niches-transport.org)
- SMARTFREIGHT <http://www.smartfreight.info>
- START ‘Future solutions for goods distribution’ (2006-2009),  
[www.start-project.org](http://www.start-project.org)
- SUGAR ‘Sustainable Urban Goods Logistics Achieved by Regional and Local Policies’ (2009-2012)  
<http://www.sugarlogistics.eu/>
- Programme « Goods in Cities », ADEME & French Ministry of transport, [www.transports-marchandises-en-ville.org](http://www.transports-marchandises-en-ville.org) (since 1993)



# UK examples

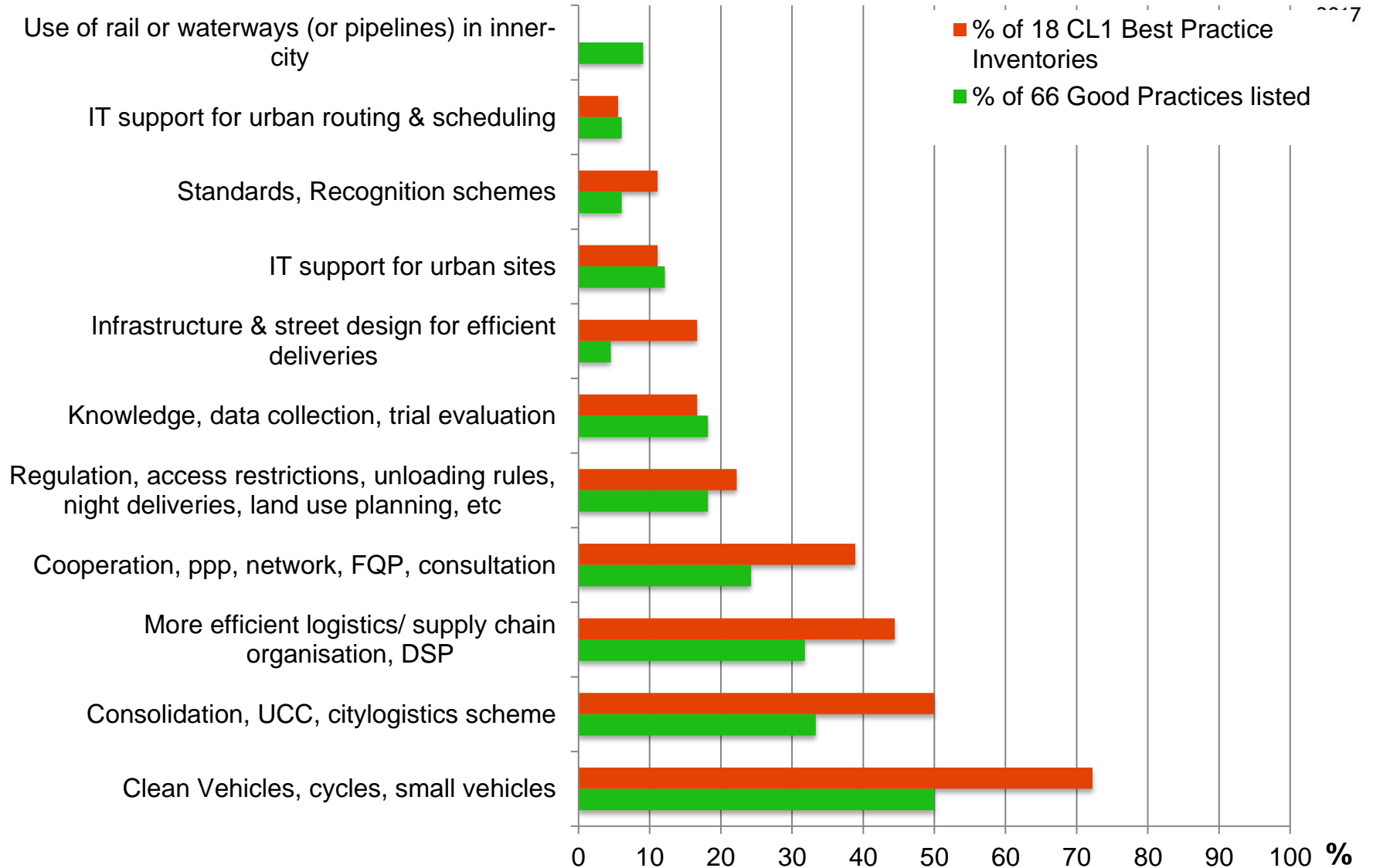
- Transport for London freight plan  
<http://www.tfl.gov.uk/microsites/freight/>
- London Lorry Control Scheme  
<http://www.londonlorrycontrol.com/>
- London FQP <http://www.londonsfqps.co.uk/>
- Green Logistics, urban freight module  
<http://www.greenlogistics.org/>
- Freight Best Practice  
<http://www.freightbestpractice.org.uk/>

*Involving Municipality of London, TfL, London Boroughs authorities, National Department of Transport, Companies, Research Council, Universities*



## Initiatives: criteria for ‘best practice’

- Recognition in the expert community: high
- Replication in different cities: more than 2 cities
- Applicability and feasibility: easy to difficult
- High impact on km driven: total trucks-km, vans-km
- Lowering emissions: total CO<sub>2</sub>, CO<sub>2</sub> intensity per tkm
- Relatively low costs per km avoided
- Lowering noise: dB(A) reduction
- Existing quantified evaluation: yes-no
- Before-after data: yes-no
- Transferability to other cities: easy to implement?





## Interporto Padova case study



- Cityporto transit point is located inside the freight village area of Interporto Padova
- 2 miles outside the City Centre, close to the major highways
- Urban delivery of goods with a fleet of hybrid and CNG vehicles

### Savings in:

- Mileage: 1200 km/day
- Fuel: >30,000 litres/year
- Emissions of CO<sub>2</sub> and pollutants







## Costs, data, impacts

- Costs: started 2004, self sustained in 2007, Benefits to Cost Ratio for the period 2008-2013: 2.94
- Data: True before-after data of a client joining the scheme are missing. High load factor and CNG vehicle use are key cost positions for profitability analysis
- Impacts: 0.5 million km saving per year, 220 tonnes of CO<sub>2</sub>



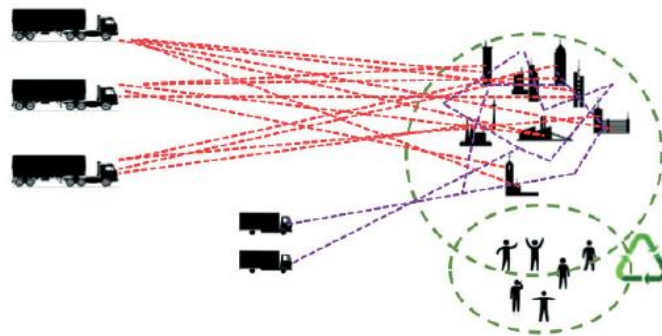
# Barriers, success factors and transferability

- Market barriers removed: key success factor was to allow a special regime for Cityporto CNG vehicles with no time windows for loading/unloading in the ZTL (Limited Traffic Zone). Also key was the independent manager enabling trustful cooperation with new customers, and excellent stakeholder involvement/participation at city level
- Transferability: Aosta and Modena have started a similar Cityporto scheme, other cities are preparing new initiatives.

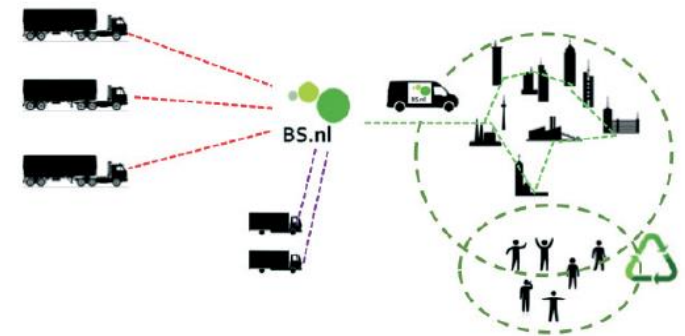


## Case of Binnenstadservice: Before-After comparison of UDC

Situation without  
Binnenstadservice



Collective receiving point for  
shopkeeper: Binnenstadservice



# San Sebastian Donostia UCC + Clean vehicle trial

## Costs data 2010 to mid-2012

Concept	2010	2011	2012
<b>Expenses</b>	<b>-69,920.05</b>	<b>-164,553.08</b>	<b>-55,851.06</b>
Suppliers	-33,759.83	-53,486.40	-15,719.71
Staff	-36,160.22	-111,066.68	-40,131.35
<b>Incomes</b>	<b>67,294.85</b>	<b>108,643.88</b>	<b>34,581.22</b>
Invoices	23,294.85	71,781.38	34,581.22
Subsidy CIVITAS	40,000.00	30,000.00	-
Subsidy EVE	4,000.00	5,690.00	-
Subsidy Webpage	-	1,172.50	-
<b>Partial result</b>	<b>-2,625.20</b>	<b>-55,909.20</b>	<b>-21,269.84</b>
Other incomes	41,432.70	121,463.59	7,655.84
<b>Result**</b>	<b>38,807.50</b>	<b>65,554.39</b>	<b>-13,614.00</b>
<b>TOTAL*</b>	<b>90,747.89</b>		

## Innovative traffic/ street space management



*before*



*now*







## Multi use lanes in Barcelona

6 boulevards today are “multi uso” with side lanes restricted to:

- **8:00 to 10:00 general traffic**
- **10:00 to 17:00 pick up and deliveries only**
- **17:00 to 21:00 general traffic**
- **21:00 to 8:00 on street residential parking**

Variable message signs inform drivers of the regulation in real time





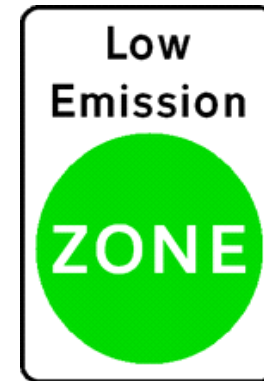
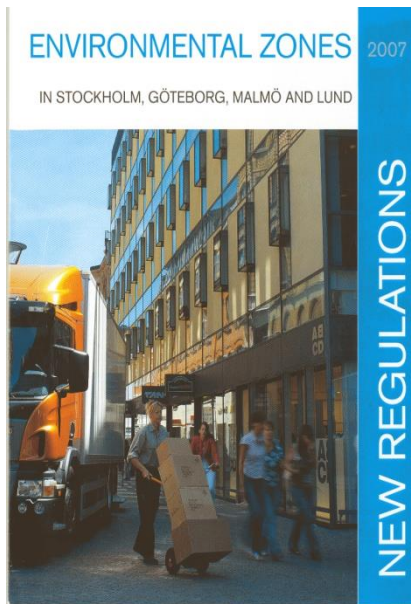
## Transfer: Multiuse Lanes in Bilbao

- The idea resides in taking a lane to function more 'natural', meeting the needs of traffic and based on time slot:
- Free parking: from 9:00 pm to 8:00 am
- Booking for loading and unloading (heavy vehicles only): from 08:00 am to 12:00 noon
- Normal circulation: from 12:00 to 9:00 pm
- Transfer from Barcelona (why only here?)





# Environmental zones, access regulations, noise and night deliveries





## Night deliveries

- Night deliveries promoted in the Netherlands (PIEK program), in UK, Dublin, Barcelona, Paris
- Silent equipment (vehicle, handling equipment...) developed, working <60dB



- <http://www.piek-international.com/>



## Providing dedicated logistics space

- A ‘specialty’ of French cities
- Cities (Paris, Toulouse...) provide spaces in strategic places (such as underground municipal car parks) to logistic service providers who respect a set of specifications (environmental criteria)

On behalf of:



# Transport and Week

an Mobility  
ember 2017



## Zero Emission Boat in Utrecht

- Delivery of 4 breweries and 1 catering industry to 65 clients along the canals of Utrecht is performed via an electric zero emission boat
- Cost efficient, time-efficient (not dependent on time windows)
- Reducing almost 17 tonnes of CO<sub>2</sub>/year
- Preservation of the bridges and roads of Utrecht
- Publicly owned (small private costs)







## Mokum Mariteam in Amsterdam

- Full-electric barge with own crane, operating in Amsterdam
- 20 m length, 4.25 m width, 85 m<sup>3</sup> load capacity



- Barge is used together with trucks and vans
- Replication from Utrecht Best Practice of electric Beer Boat





## Chapelle International, urban rail hub under construction in Paris



- Rail freight terminal
- Electric vans
- Access for large trucks
- 90 million EUR construction investment



# Consultation, PPP, charters between local authorities and freight transport operators

- London's 'tradition' for negotiating with transport organisations (Freight Transport Association)
- London's Freight Operator Recognition Scheme
  - Training of operators in fuel management, penalties, safety
  - Offering a market access to bronze, silver and gold certified companies
  - >7400 FORS member businesses in UK



HELPLINE  
08448 09 09 44

**FORS** FLEET OPERATOR  
RECOGNITION SCHEME

Who's  
On  
Board

Express  
Interest

Apply  
Now

User  
Login

[Home](#)

[What is FORS?](#)

[Training](#)

[Case Studies](#)

[Resources](#)

[Offers and discounts](#)

[Contractors](#)

[Contact](#)

[News](#)



1



FORS REGISTRATION SIGN UP  
TODAY

2



FORS TRAINING  
& E-LEARNING

3



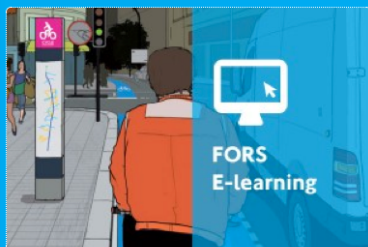
FORS ACCREDITATION &  
PROGRESSION

4



SUPPLIERS &  
CONTRACTORS

## ONLINE DRIVER TRAINING



[More ...](#)

## WHO'S ON BOARD?

### FORS accredited companies

Many companies are already taking advantage of the benefits offered by the FORS accreditation scheme.



**VIEW**  
FORS  
COMPANIES

**FORS associates**

## LATEST NEWS

### VAN SMART DRIVER TRAINING

Posted on October 15, 2015 by admin

Van Smart is a Transport for London (TfL) backed driver training programme that aims to reduce work related road risks,

# Replicable dimension of the success stories

- If for example a company that initiates a new solution invests a lot of effort and finance into a new project, and claims that it has become self-sustaining after a short period of time, this seems to suggest that the solution could be easily replicable.
- To check: Transferability
  - what is the size of the business?
  - Is it a typical case for a general cargo operator, or is it a very specialised market?



# Concluding remarks

## Solutions for sustainable urban logistics

- **Innovations:** Many solutions, slight dominance of consolidation and clean vehicle projects
- **Transferability:** Very few large scale transfer, mostly limited to another company, upscale within a company or transfer to another city
- **Impacts and Benefits:** Very high benefits but difficulty with quantification of robust impacts estimates
- **Data availability:** Biggest difficulty is with data on the 'Before' situation, in order to obtain the business case information out of the trials and tests
- Rare assessment of transfer or **upscaling** of solution: Prototype→Trial→Industry Scale