

Best practices in urban freight logistics

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What is a 'Best Practice' case description?

Focus on the most crucial key questions

- Cost-benefits: why are the costs lower or the profit higher or the cost-benefit ratio better?
- Why is the solution more efficient ?
(cost-, transport-efficient, environmentally/external cost-efficient)
- Good and bad experience (warning): not a one-sided praise but a balanced, (market)independent review
- Identify candidates for scale-up and transfer

2-page summary for each of 147 cases: www.bestfact.net

Cityporto Padova: Consolidation and Clean Vehicles



Cityporto transit point is located inside the freight village area of Interporto Padova

2 miles outside the City Centre, close to the major highways

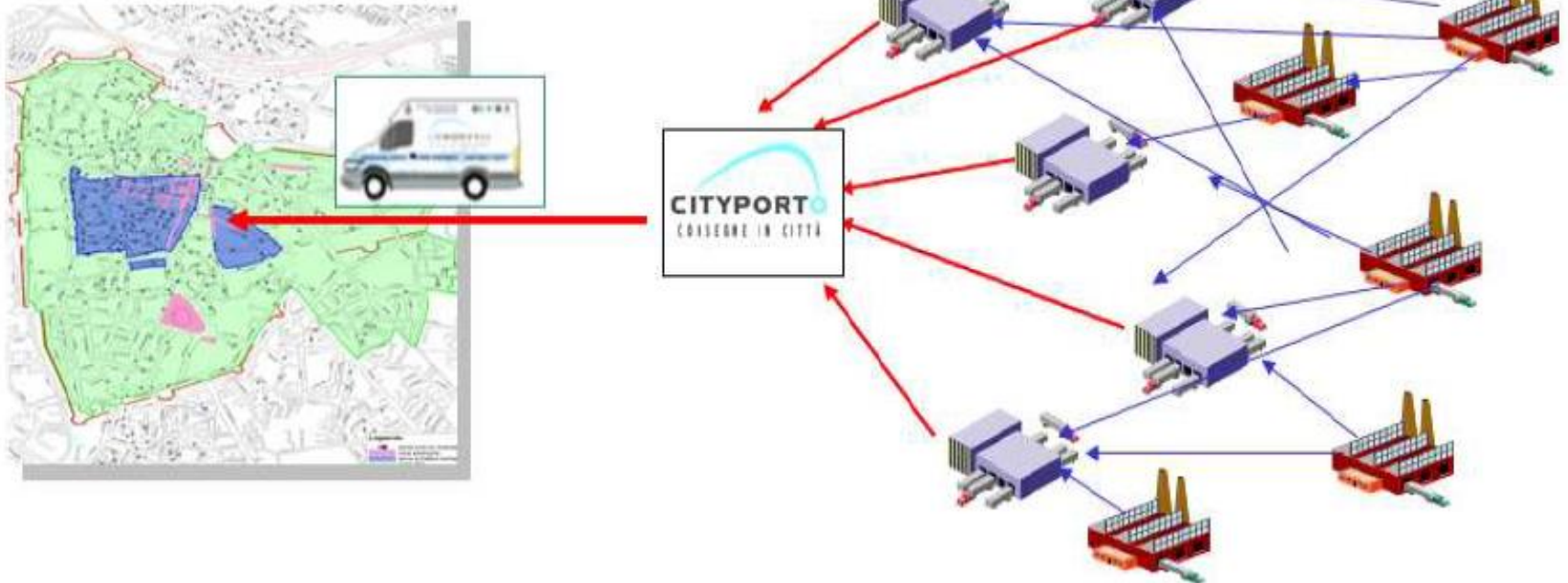
Urban delivery of goods with a fleet of hybrid and CNG vehicles

Savings in:

- Mileage: 1200 km/day
- Fuel: >30,000 litres/year
- Emissions of CO₂ and pollutants



Cityporto Padova distribution model

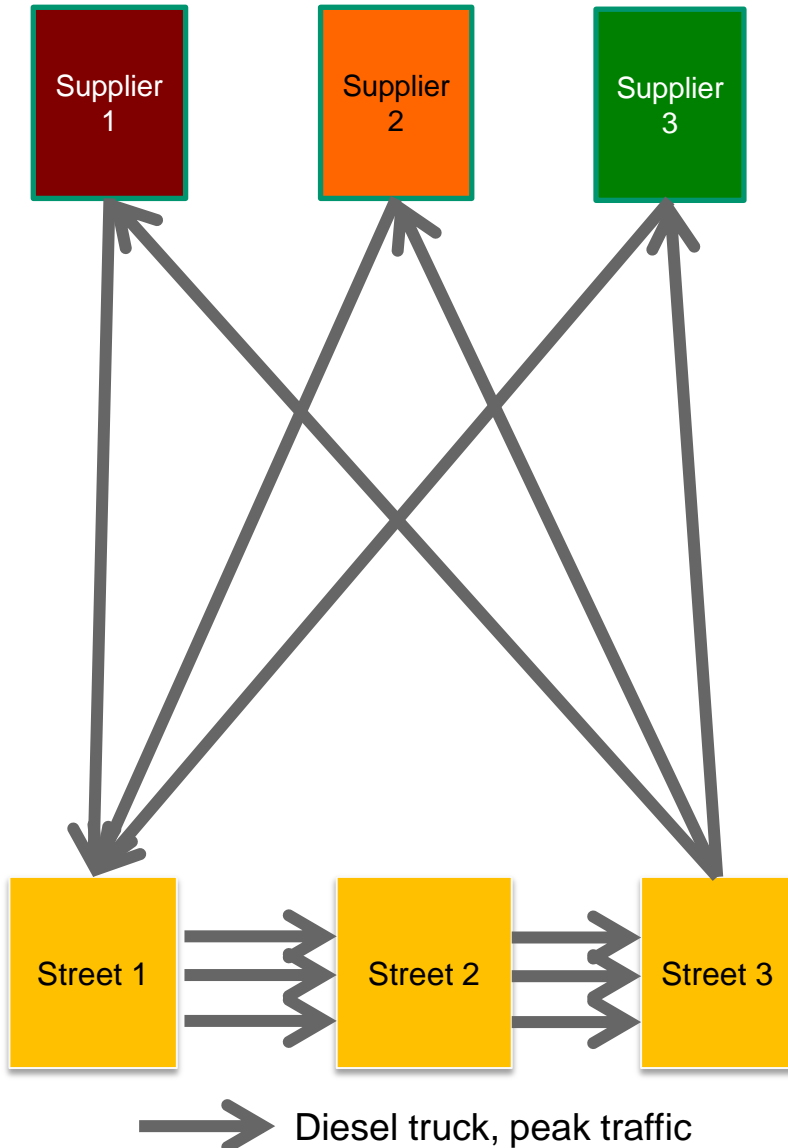


Cityporto success factors

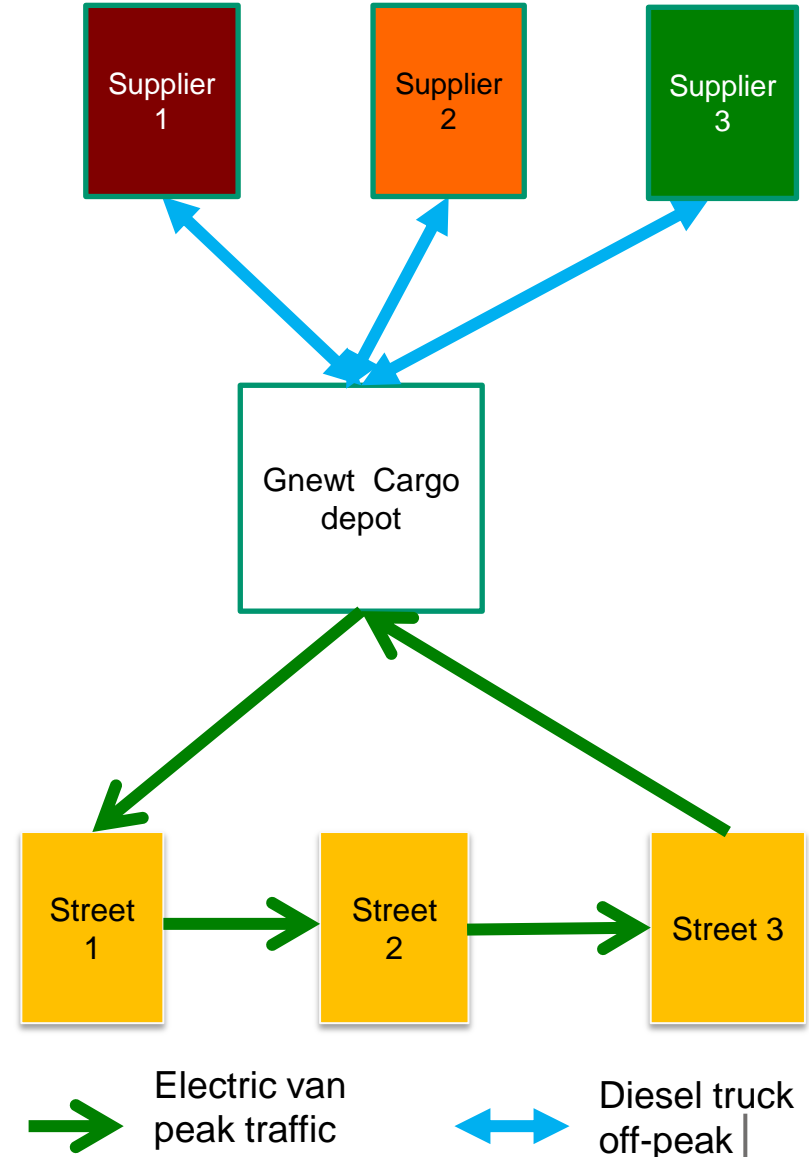
- Stakeholder involvement
- Accessibility without time restriction to Padova city centre
- Full support by the Municipality, public funding for 3 years
- Participation on a voluntary basis
- Gradual steps of implementation
- Reliability and neutrality of the platform manager

Electric Freight and UCC: Optimised Logistics Model

BEFORE *starting using Gnewtcargo*



AFTER *starting using Gnewtcargo*



Consolidation in city centre allows more clients for electric van deliveries

Carriers' carrier business model



Benefits and impacts of consolidation in Central London

Micro-consolidation centres and complete replacement of the diesel van fleet by electric vans and tricycles for the last mile

→Reduction of 20-67% in the total distance driven by vehicle/ parcel delivered (annual average, depending on clients).

The total CO₂ emissions per parcel delivered was 54% lower in May 2010 than in October 2009, before the start. In 2016 the last mile CO₂ reduction is 20-100%/parcel, depending on clients.

Use of electric vehicles using fuel generated from renewable, carbon-free sources.

Start-up company paid back all debts after 1 year

Strong growth and upscale now to 100 vehicles & 3 depots

Binnenstadservice Consolidation in The Netherlands

Binnenstadservice operates a warehouse and distribution service on behalf of the joint retailers and other organizations located in the inner city.

It started in Nijmegen and now covers 12 cities.

Basic approach is that goods are delivered at a distribution centre just outside the city. From there the goods are bundled and brought to shops in the city centre. Empties/packaging/paper is taken back to the distribution centre.

Binnenstadservice does not operate their own vehicles. Transport is subcontracted to one logistics service provider per city.

Source: BESTFACT - Binnenstadservice www.bestfact.net

http://www.bestfact.net/wp-content/uploads/2016/01/CL1_074-QuickInfo_Binnenstadservice-16Dec2015.pdf

Binnenstadservice: the beginning



Benefits of Binnenstadservice (Business Case)

Financial benefits:

- Shop keeper: reduced stock at expensive shop floor, reduced time needed to receive/ship goods
- Transport company/shipper: reduced time loss for last mile delivery, thus cost reduction

Benefits in the field of services:

- Shop keeper: pays a little fee for time consuming activities such as packaging, empty boxes, paper

Benefits for society:

- Less congestion, more liveable city centre

Environmental benefits:

- Reduced CO₂ and particle emission due to bundling of freight and cleaner vehicles



Twinkl
clean, safe and sustainable
city systems

urban
Elektro-L

Messe

BentoBox TNT test in Berlin

Courier parcel services has a vehicle fleet including bikes, cargo bikes and light commercial vehicles.

Before the start of the BentoBox pilot, deliveries were made to different customers.

The tested solution was used as a consolidation hub or decentralised stock for collecting and delivering the shipments from and to customers.

Drivers had a personal access to the BentoBox.

This new stop enabled the drivers to extend their range when using (e)bikes, reducing the kilometres driven by conventional vans.

Positive impacts on traffic situation and emissions.

Multi use lanes in Barcelona



6 boulevards today are “multi use” 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



Multiuse Lanes in Bilbao

The idea resides in multi-purpose use of a lane 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 in Bilbao?



Multi-Use Lane Benefits (Business Case)

- Reduction of parking & unloading in wrong place
- Optimization of the distances travelled
- Satisfaction of the carriers, less fines
- Residents' satisfaction, more free parking space
- Reducing pollution by less lag in the second row
- Extension of parking space in peak hours

Chapelle International, urban rail hub under construction in Paris



- Rail freight terminal
- Electric vans
- Access for large trucks
- 50 m Euro land purchase + 50 m construction investment

Concluding remarks on case studies

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 to other businesses or to other cities or to other countries

Even more rare assessment of up-scaling of innovation:
Prototype → Trial → Industry Scale

Policy options

Combined land use policy and real estate investment for relocating consolidation centres nearer or within city centre area

- Multi-tenant
- Accessible for large trucks at night
- Clean vehicles operating on last mile during the day

Develop research and non-research trials and innovations on scaling-up good practices in consolidation

→ so we better understand how to grow the different business cases and their different consolidation techniques

Embed consolidation policy within wider Urban Logistics policy packages, including clean vehicle, street management, monitoring and data, cooperation and networking

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