



A tale of three cities – lessons from GrowSmarter and recommendations for upscaling and replication

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GrowSmarter

...aims to demonstrate, validate & roll out 12 smart solutions to support the transition to a smarter, more sustainable Europe

Economic, social and environmental project targets:

- Save resources and increase economic growth
- Improve quality of life and create 1,500 jobs across Europe
- Reduce energy usage by 60 % and cut GHG by 60 %

Low energy districts



Smart building shell refurbishment



Smart building logistics



Smart energy-saving tenants



Smart local electricity management

Integrated infrastructures



Smart street lighting



Waste heat recovery



Smart waste collection



Big data management

Sustainable urban mobility



Sustainable delivery



Smart traffic management



Alternative fuel driven vehicles



Smart mobility solutions

MOBILITY & TRANSPORT SMART SOLUTIONS

Smart building logistics
Sustainable deliveries
Smart traffic management
Alternative fuel-driven vehicles and e-vehicles
Smart mobility solutions

17 measures in 3 cities



SMART SOLUTION 2 – SMART BUILDING LOGISTICS AND ALTERNATIVE FUEL VEHICLES

Stockholm: Construction consolidation centre for housing renovation project.



SMART SOLUTION 9 – SUSTAINABLE DELIVERY

Barcelona: Micro-distribution of freight using cargo bikes in inner city.

Stockholm: Delivery room introduced to multi-family residence.

SMART SOLUTION 10 – SMART TRAFFIC MANAGEMENT

Barcelona: Modelling of traffic management to reduce congestion.

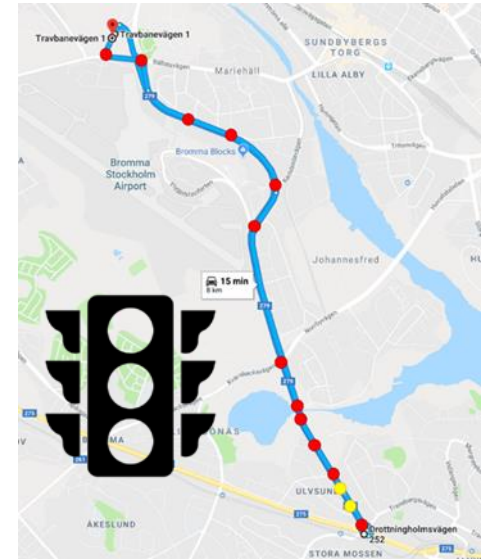
Stockholm: Travel demand management and signal prioritisation for smart passenger vehicles and alternatively-fuelled HGVs.

SMART SOLUTION 11 - ALTERNATIVE FUEL DRIVEN VEHICLES FOR DE-CARBONISING AND BETTER AIR QUALITY

Barcelona: improve charging infrastructure and management.

Cologne: develop e-vehicle charging infrastructure.

Stockholm: increase number of e-vehicle charging points and number of alternative fuel pumps for HGVs.



SMART SOLUTION 12 - SMART MOBILITY SOLUTIONS

Barcelona: Smart taxi stand management system.

Cologne: Mobility stations and increasing electric and conventional car-sharing.

Stockholm: E-vehicle car-sharing and e-cargo bike pool in Living Lab.

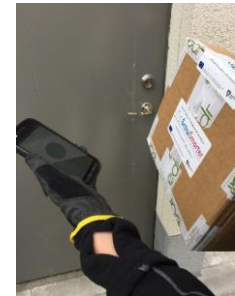


DELIVERY ROOM IN MULTI-STOREY HOUSING



Smart deliveries by electric cargo bike to app-managed delivery room at Valla Torg, Stockholm

Residents avoid unnecessary journeys to collect parcels; cargo bike deliveries reduce use of trucks



Challenges & opportunities for replication of delivery room

Challenges

- Complex to use? Can be simpler!
- Individuals, addresses, postcodes... work required to ensure such deliveries are possible in upscaled system
- Who should access delivery rooms and how do we ensure proper use? (both a challenge and opportunity)
- What can be delivered and by who? Stakeholder collaboration required
- Business model still developing

Opportunities

- Great idea – real need (increased and rising levels of delivery traffic; customers want it)
- Potential to reduce volume of van/truck travel and replace journeys with cargo-bikes or e-vehicles
- Reduce car journeys to collect parcels
- Cost reductions may be possible in upscaled system
- Potential for synergies with other services / approaches

Self-sustaining at 35+ packets per working day

Exploitation and replication plans

- Five follower cities, each with their own replication plan.
- No grand "exploitation plan" but... exploitation plans are contained within thematic WP reports and "Market Introduction" business model analysis with full cost-benefit analysis for most measures.
- These have been evolving since start of project – process of continuous iteration involving all project partners.
- For example, significant effort to plan replication workshops in follower cities so presented solutions match local needs.
- Final project reports contain information on next steps upscaling and replication for each measure, as well as barriers/challenges/opportunities and recommendation.

Smart solutions – urban mobility and logistics

- Active mobility is always smart mobility
- Cities should have an orchestrating role
- Technology can be right but the context wrong
- The evaluation of mobility measures can be more challenging than other sectors
- In most cases significant emission and energy consumption reductions are achieved



Further reference on Exploitation strategies



https://ec.europa.eu/inea/sites/inea/files/exploitation_best_practices_2019-008.pdf



Thank you!
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