

How to create value with urban freight transport solutions?

A comparison of consolidation solutions

Susanne Balm

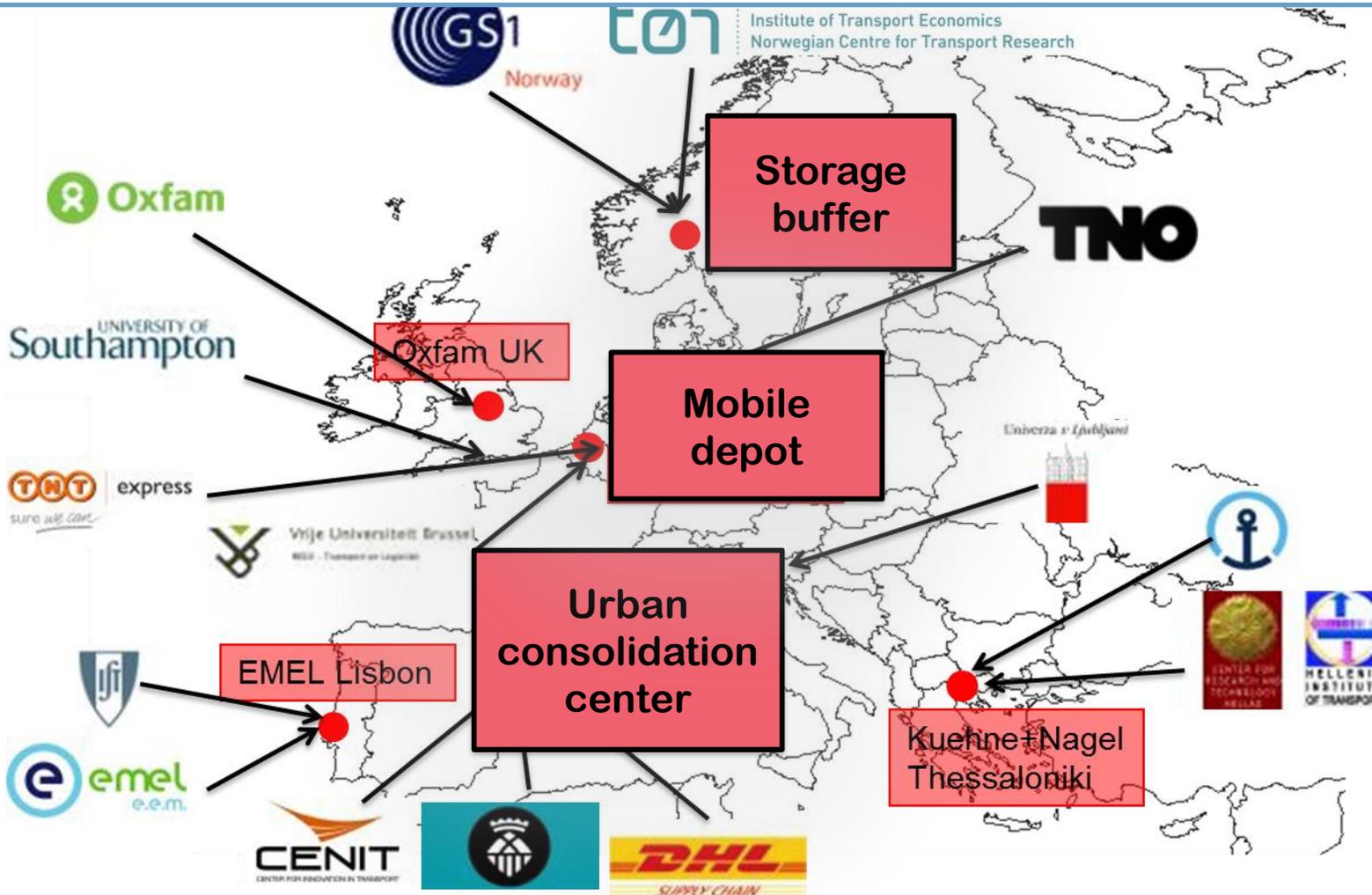
Consultant Logistics

Sustainable Transport and Logistics – TNO

Delft, The Netherlands

susanne.balm@tno.nl

Today: a comparison of consolidation solutions

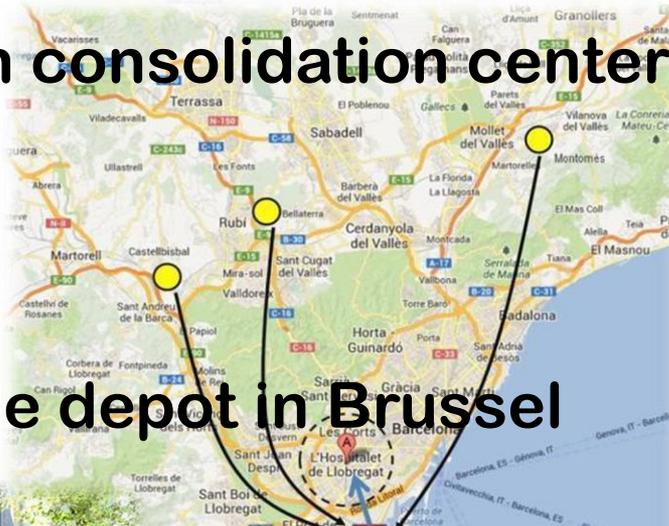


Content of today

- › Introducing the solutions
- › Comparison
 - › Business model changes
 - › Effects and requirements
 - › Value for different stakeholders and willingness to pay

The STRAIGHTSOL demonstrations

DHL's urban consolidation center near Barcelona



TNT's mobile depot in Brussel



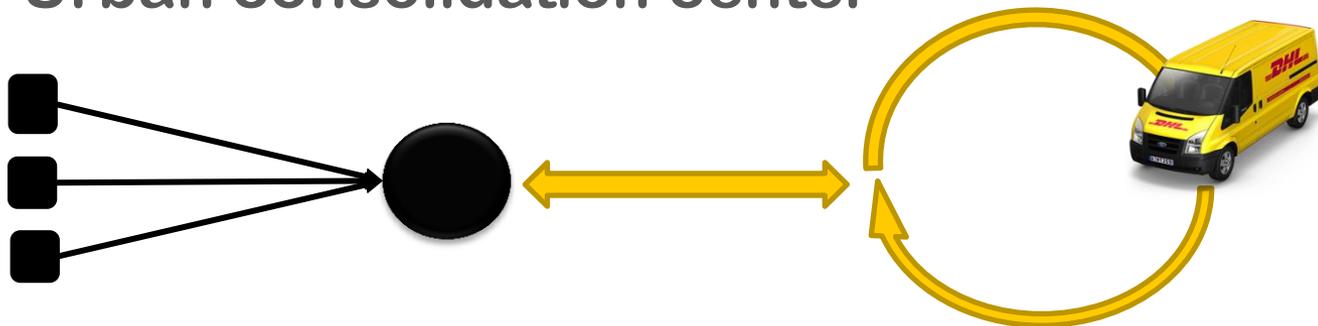
Source: www.finn.no



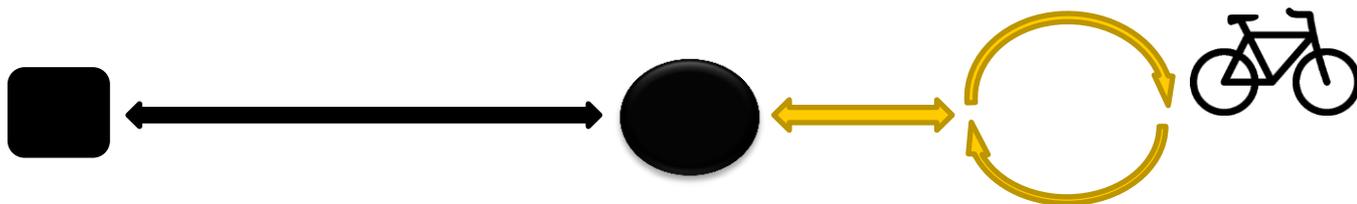
Stovner Senter's storage buffer in Oslo



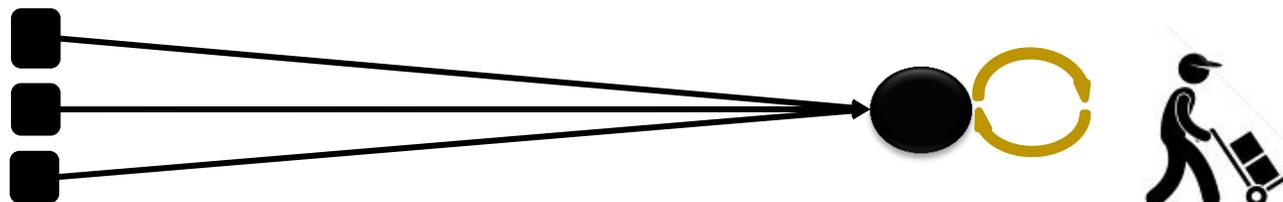
Urban consolidation center



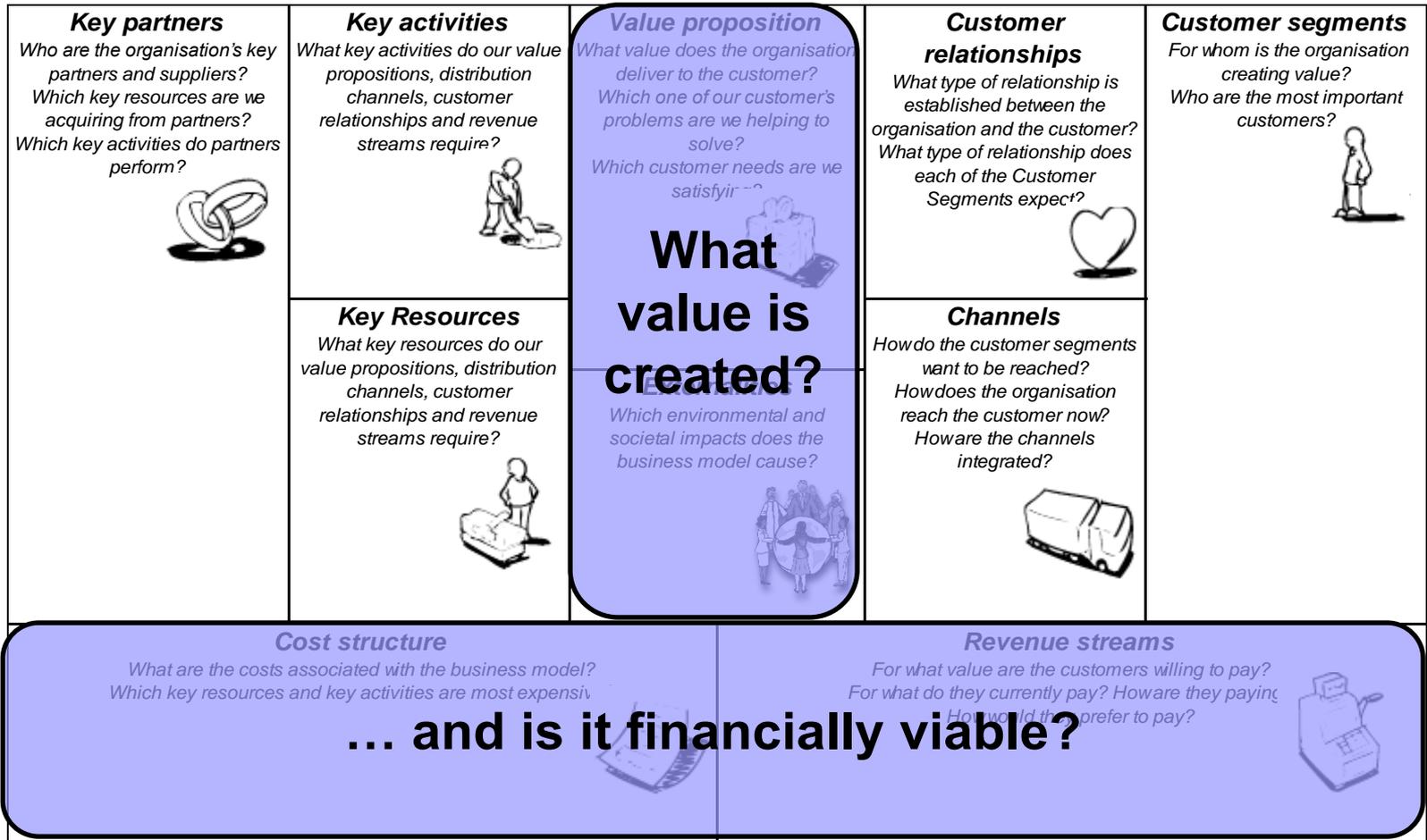
Mobile depot

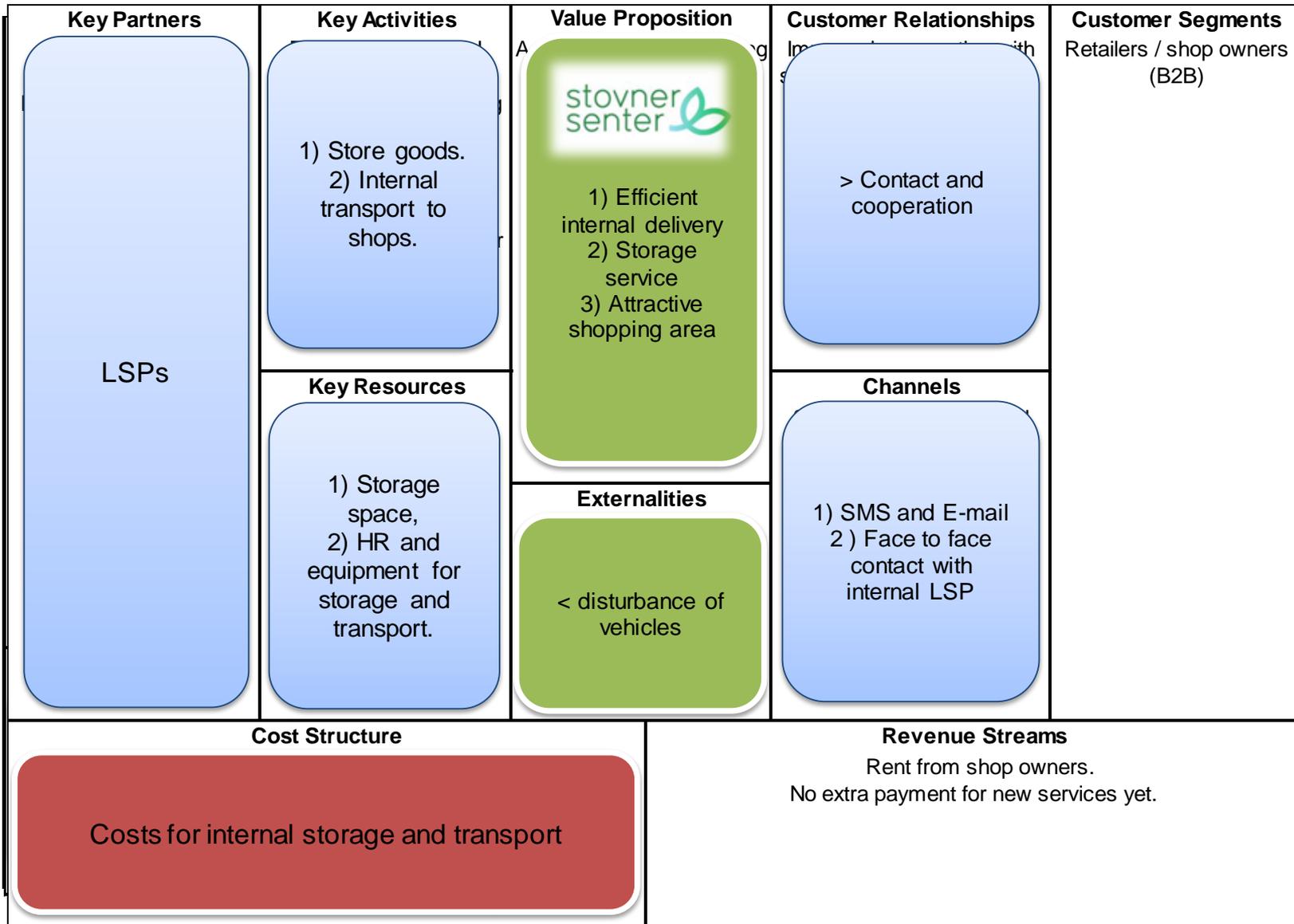


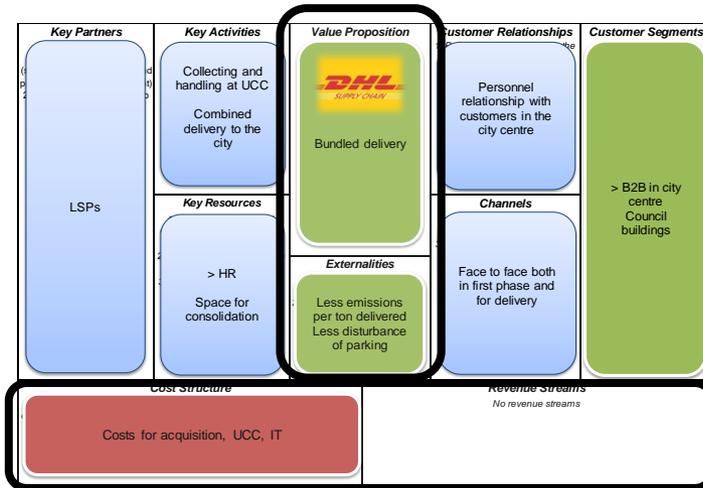
Storage buffer



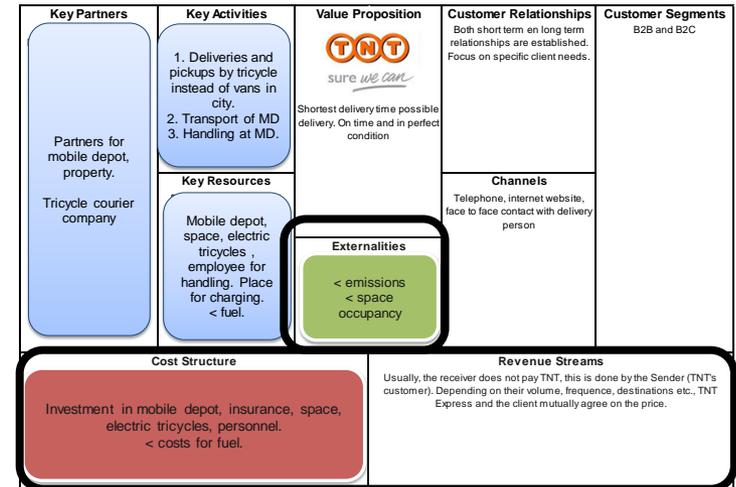
Business Model Canvas



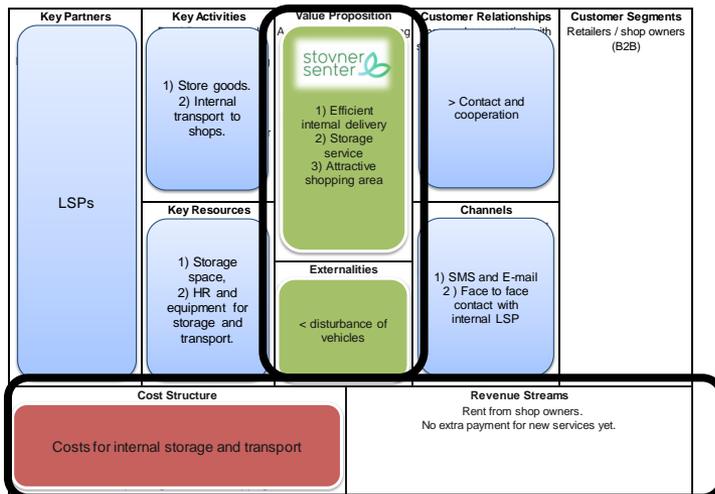




No compensation for the costs!



Not (directly) financially viable



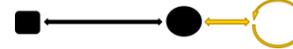
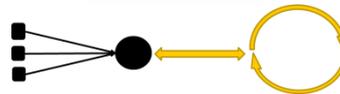
Environmental and societal effects



	Urban CC	Mobile depot	Storage buffer
CO ₂ emissions	++ 1	+ 2	+/- 3
Air quality	+ 2	++ 1	+/- 3
Employee satisfaction	+ 2	+/- 3	++ 1
Customer satisfaction	+/- 2	n/r 3	++ 1

1 = most effective

Requirements for successful implementation



	Urban CC	Mobile depot	Storage buffer
Proximity of receivers	+/-	+	++
	3	2	1
Number of receivers	++	++	+
	2	1	3
Participation of stakeholders	Receivers LSP	Authority	Receivers LSP
	1	3	2
Small goods	+	++	+/-
	2	1	3

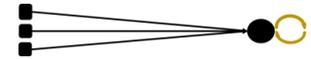
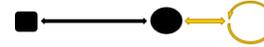
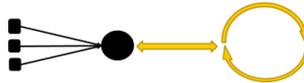
1 = most depended

Value creation



Stakeholder	Value	Urban CC	Mobile depot	Storage buffer
Receiver	Bundled delivery and storage	✓		✓
Shipper / transport operator	Delivery time savings	✓		✓
Authority	Liveability of the city / shopping area	✓	✓	✓
Society		✓	✓	✓

Willingness to pay



Stakeholder	Value	Urban CC	Mobile depot	Storage buffer
Receiver	Bundled delivery and storage		n/r	
Shipper / transport operator	Delivery time savings		n/r	
Authority	Liveability of the city / shopping area			
Society				

Conclusions and recommendations

- › Consolidation solutions improve the logistic system and therefore the liveability of the urban area in terms of pollution and disturbance
- › The solutions improve efficiency for the transport operator and receiver. Though, these stakeholders are often not willing to participate, pay or share their benefit.
- › A more equal and transparent distribution of costs and (social) benefits is essential.

Key for successful implementation:

- › **UCC:** Participation of receiver, shipper and transport operator and transparency of costs and benefits.
- › **Mobile depot:** support from city authority
- › **Buffer storage:** shipper / transport operator should take part in the investment, transparency of costs and benefits.
- › Integration of IT supports operational performance.