How to create value with urban freight transport solutions?

A comparison of consolidation solutions

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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
DHL’s urban consolidation center near Barcelona

TNT’s mobile depot in Brussel

Stovner Senter’s storage buffer in Oslo
Urban consolidation center

Mobile depot

Storage buffer
Business Model Canvas

**Key partners**
Who are the organisation's key partners and suppliers?
Which key resources are we acquiring from partners?
Which key activities do partners perform?

**Key activities**
What key activities do our value propositions, distribution channels, customer relationships and revenue streams require?

**Value proposition**
What value does the organisation deliver to the customer?
Which one of our customer's problems are we helping to solve?
Which customer needs are we satisfying?

**Customer relationships**
What type of relationship is established between the organisation and the customer?
What type of relationship does each of the Customer Segments expect?

**Customer segments**
For whom is the organisation creating value?
Who are the most important customers?

**Key Resources**
What key resources do our value propositions, distribution channels, customer relationships and revenue streams require?

**Channels**
How do the customer segments want to be reached?
How does the organisation reach the customer now?
How are the channels integrated?

**Cost structure**
What are the costs associated with the business model?
Which key resources and key activities are most expensive?

**Revenue streams**
For what value are the customers willing to pay?
For what do they currently pay? How are they paying?
How would they prefer to pay?

... and is it financially viable?
Key Partners

- LSPs

Key Activities

1) Store goods.
2) Internal transport to shops.

Value Proposition

1) Efficient internal delivery
2) Storage service
3) Attractive shopping area

Customer Relationships

> Contact and cooperation

Customer Segments

Retailers / shop owners (B2B)

Key Resources

1) Storage space,
2) HR and equipment for storage and transport.

Externalities

< disturbance of vehicles

Channels

1) SMS and E-mail
2) Face to face contact with internal LSP

Cost Structure

Costs for internal storage and transport

Revenue Streams

Rent from shop owners.
No extra payment for new services yet.
No compensation for the costs!

Not (directly) financially viable
Environmental and societal effects

<table>
<thead>
<tr>
<th></th>
<th>Urban CC</th>
<th>Mobile depot</th>
<th>Storage buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CO₂ emissions</strong></td>
<td>++</td>
<td>+</td>
<td>+/-</td>
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<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td><strong>Air quality</strong></td>
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<td>+/-</td>
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<td>++</td>
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<tr>
<td></td>
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<td>3</td>
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1 = most effective
## Requirements for successful implementation

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<th>Urban CC</th>
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<tbody>
<tr>
<td>Proximity of receivers</td>
<td>+/-</td>
<td>+</td>
<td>++</td>
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<tr>
<td></td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Number of receivers</td>
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<td>++</td>
<td>+</td>
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<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>3</td>
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<tr>
<td>Participation of stakeholders</td>
<td>Receivers</td>
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<td>LSP</td>
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<tr>
<td></td>
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<td>3</td>
<td>2</td>
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<tr>
<td>Small goods</td>
<td>+</td>
<td>++</td>
<td>+/-</td>
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<tr>
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<td>1</td>
<td>3</td>
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1 = most depended
## Value creation

<table>
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<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Receiver</td>
<td>Bundled delivery and storage</td>
<td>✔️</td>
<td></td>
<td>✔️</td>
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<tr>
<td>Shipper / transport operator</td>
<td>Delivery time savings</td>
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<td>✔️</td>
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<tr>
<td>Authority</td>
<td>Liveability of the city / shopping area</td>
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<td>✔️</td>
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<tr>
<td>Society</td>
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<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
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## Willingness to pay

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<tr>
<td>Receiver</td>
<td>Bundled delivery and storage</td>
<td>![Hand Thumbs Down]</td>
<td>n/r</td>
<td>![Hand Thumbs Down]</td>
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<tr>
<td>Shipper / transport operator</td>
<td>Delivery time savings</td>
<td>![Question Mark]</td>
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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.