The efficiency of local pick-up and delivery – a case study in Gothenburg (Sweden)

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Gothenburg
Sweden’s second largest city, 500 000 inhabitants
Gothenburg, Kungsportsavenyn
Gothenburg, near Central Station

Source: www.goteborg.se
Van traffic in Sweden continues to increase

Trafikanalys (2013)
Research background and purpose

New urban planning paradigm: high-density attractive urban space
• Reduce space for road traffic
• Increase space for other land use forms, e.g. public transport, walking and cycling, green areas and recreation area

Lack of space in high-density urban areas reduces efficiency
• Higher costs for carriers
• Lower logistics quality for receivers/buyers
• More environmental impacts for residents/tourists

→ Efficient use of kerbside space for urban logistics required

Research purpose
• How is urban space for urban logistics activities managed?
• Can current management practices achieve a more efficient use of kerbside space?
The Case Study
Data collection methods

Interviews
- local authority (traffic authority, city planning authority)
- Carriers (drivers, transport planners)
- real estate owners

Direct observations
- Delivery tours
- Usage of loading zones
Forms of urban space for logistics

Private
• Loading docks at receiver’s site

Public
• Loading in public street area
General access to curbside

- Competition with passenger cars
- Illegal parking
Loading zones

- Curbside space reserved for loading and unloading
- Often limited to day hours
- Requires enforcement
Walking speed streets

- Streets with no curbside
- Speed limit is walking speed
- No parking
- Loading/unloading allowed everywhere
Pedestrian areas

- No private car traffic allowed
- Deliveries are allowed in certain time windows, usually before 10 am
Results

• How is urban space for urban logistics activities managed?
• Can current management practices achieve a more efficient use of kerbside space for urban logistics?
Legal aspects

- **City planning department**
  - responsible for *amount of space for traffic purposes*
  - Legal requirements on real estate developers to provide certain number of car parks on-site
  - Can require real estate owners to provide *loading docks on-site*

- **Traffic planning department**
  - responsible for *allocation of traffic space to transport modes*
  - Number, location and design of loading zones

- **Tickets for illegal parking**
  - paid by *drivers*
Management

Information channels

- Application for loading zones by receivers
- Complaints/suggestions from the public
- Stakeholder meetings with carriers
  - i.e. local freight network, trade unions, etc.
Current situation – Planning departments

City Planning
• Lack of logistics considerations in land use plans
• do not require real estate developers to provide on-site loading spaces

Traffic Planning
• Many improvements measures in recent years
  – Loading zones
  – Walking-speed-streets
• Prefer private loading spaces
• Loading zones are “less-than-ideal solution”
• Long-term goal: walking-speed-streets only
Current situation - Carrier

Observed problems with loading zones
- Too few loading zones
- Illegal parking of private cars
- Problematic locations
- Problematic design (gradient, curbstones, etc.)

Information channels
- Drivers do not report problems
Current situation – Real estate owners

- Increasing **awareness** for logistics…
  - Logistics solutions is part of their offering to their customers
- … but **no strategic way** of working with logistics
  - Lack of knowledge
  - Ad-hoc solutions based on customer’s situation and case context
- **Lack of collaboration** with planning departments
Conclusions
Conclusions

“Current situation works”

- Low impact on distribution tours
- Implemented measures improved the situation
- Good business climate between carriers and authorities

Current practices not sufficient for securing efficient use of kerbside space

- Low priority of logistics in city planning and building design
- Lack of sufficient data on supply and demand for logistics space
- Inappropriate design of loading zones
- Inappropriate information channels
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