



Consolidation concepts to reduce retail traffic in urban centres



Picture: SendSmart



Example - Lindholmsleveransen

- Established in 2008
- Consolidates goods and waste transport at Campus Lindholmen
- 100% electric vehicles



Lindholmsleveransen at present

- Two main customers (real estate owners), and a total of 10 organizations (mainly education).
- Running since 2008. Fully commercial since 2011. Newly developed business model and relaunch in 2016.
- Well-established and appreciated service among both transport companies and customers in the area.



Base service

- Reception of up to two EUR-pallets per customer and shipment
- Two daily distribution and pickup routes for goods
- Collection of waste and recycling material individually scheduled
- Only electric vehicles
- Core function in the work to minimize the traffic work in the area

Example - Stadsleveransen



- **Common goods reception for businesses in the inner city in Gothenburg**
- **Consolidation and last mile delivery with electric powered vehicles**
- **Runned by Innerstaden** (a joint company owned by the merchants, real estate owners and the city)
- **Operator – Paketlogistik** (a small haulier company)
- **Functions both as c/o address and haulier** (PostNord och DHL)

Goals with the legal framework in the inner city area

- **Minimize congestion and environmental impact**, and create a **safe environment with high accessibility**
- **Separate unprotected road users from heavy traffic** by redirecting goods flows to hours when the streets are less busy
- **Ensure reliable goods supplies** during daytime **with clean, energy efficient, and safe transport solutions**, based on **consolidation of goods**.
- Create a **traffic system** which contributes to a **pleasant, competitive and safe inner city**.



Development - Stadsleveransen



Phase 1

- Concept phase 1-2 years
- Small number of shops
- C/o address/consolidation point
- Mapping and evaluation
- 2012-13

Phase 2

- Development phase 2–3 years
- Increased number of shops, larger area
- Goods redirected from hauliers
- Development of value adding services
- 2014-16

Phase 3

- Establishment phase
- **Open for all businesses within the inner city area**
- **Fully commercial business**
- 2017-

Areas of operation (1-2 active, 3 planned)



Different prerequisites for different businesses....



Stadsleveransen at present

- **Goods reception and terminal function in Gullbergsvass**
- **Consolidation and last mile delivery with electric vehicles – 3 cars with trailers and 2 electric cargo bikes in use**
- **Over 500 packages per day on average**
- **Operates in the area around Domkyrkoplan in the inner city**
- **Mainly financed by transport companies, public funding and by advertising**



City of
Gothenburg

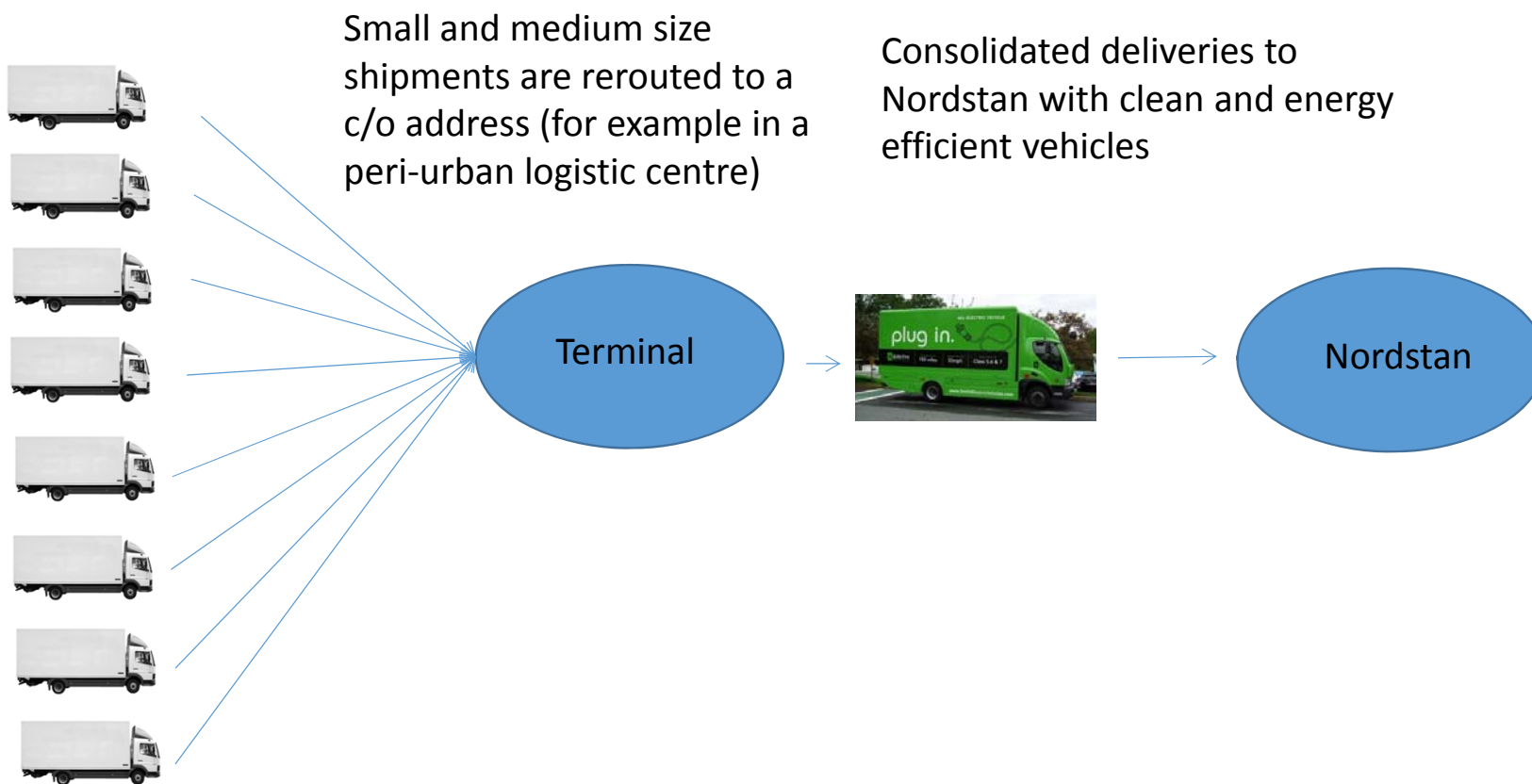


Novelog – quick facts

- EU-financed project in the field of sustainable city logistic solutions within the HORIZON 2020 program
- 28 Partners, of which 12 cities/city areas and 8 universities
- 6 pilot projects and 6 case studies
- The main activity for the city of Gothenburg is to perform a case study regarding a c/o address for the Nordstan shopping mall. Important elements are gathering of information and analysis of goods flows



Base concept



Nordstan – key facts

- Biggest shopping mall in Sweden
- 200 shops and restaurants sharing 70000 square metres of floor space
- Over 35 million visitors annually
- Turnover of about 450 MEUR
- Allmost all deliveries via an underground loading street
- Owned by five real estate owners



Activities - Nordstan

- Information to all companies (approximately 200 tenants)
- Mapping of goods flows
- Performed 1-14 of February 2016, 22 Aug- 4 Sep 2016, and 30 Mar – 1 Apr 2017
- Measurement of traffic volumes to the underground loading street
- Measurement of traffic volumes – surrounding streets
- Compilation of results and analysis
- Development of solution proposals
- Simulation and improvement of solutions
- Pilot-test

Goals

- Create a well-functioning "ready to run" concept for consolidation by a c/o address outside the city core, to enable more efficient and sustainable solutions to businesses in the central parts of Gothenburg
 - Development of a commercially sustainable solution
 - Increase the knowledge of goods flows in central Gothenburg
 - Strengthen the work within the city to encourage future sustainable and efficient solutions for city logistics
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- Less heavy transport in the city centre
 - A more pleasant and attractive city environment

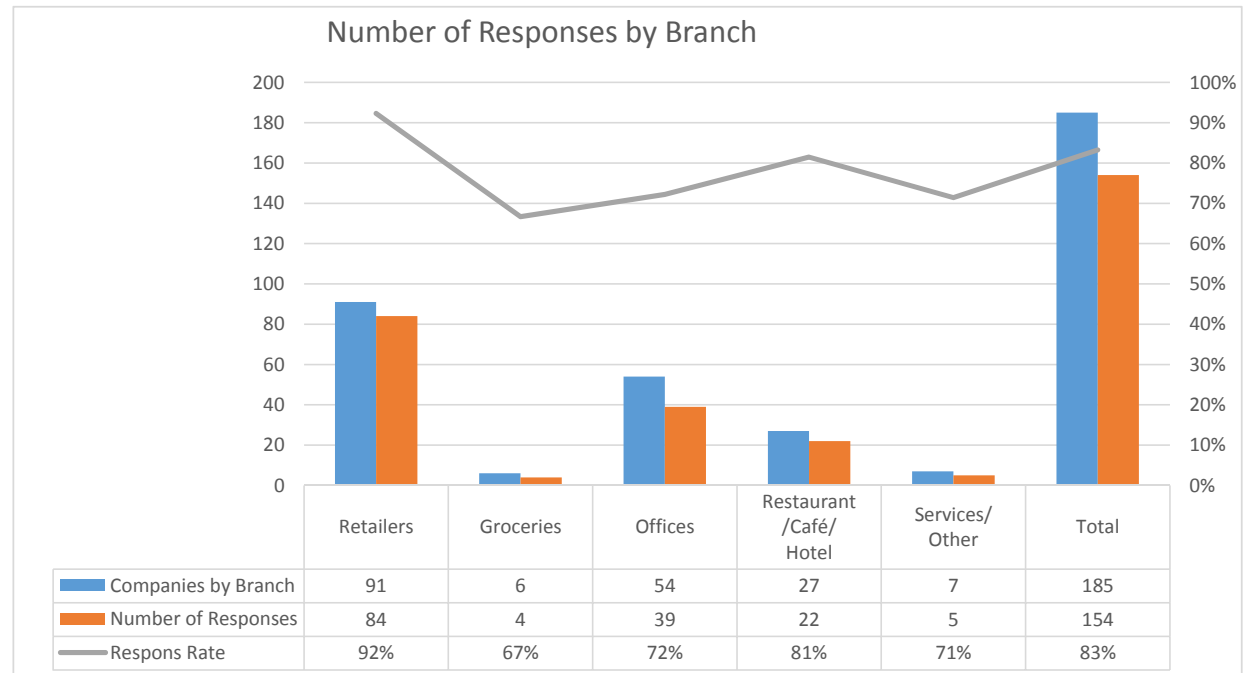


Data available – deliveries and shipments

Type of information collected
General business info
Conditions and routines for deliveries
Time for goods handling
Time and date for each delivery
Number of parcels, pallets, cages etc. for each delivery
Transport operator
Types of goods
Delivery vehicle

Preliminary results – overall statistics

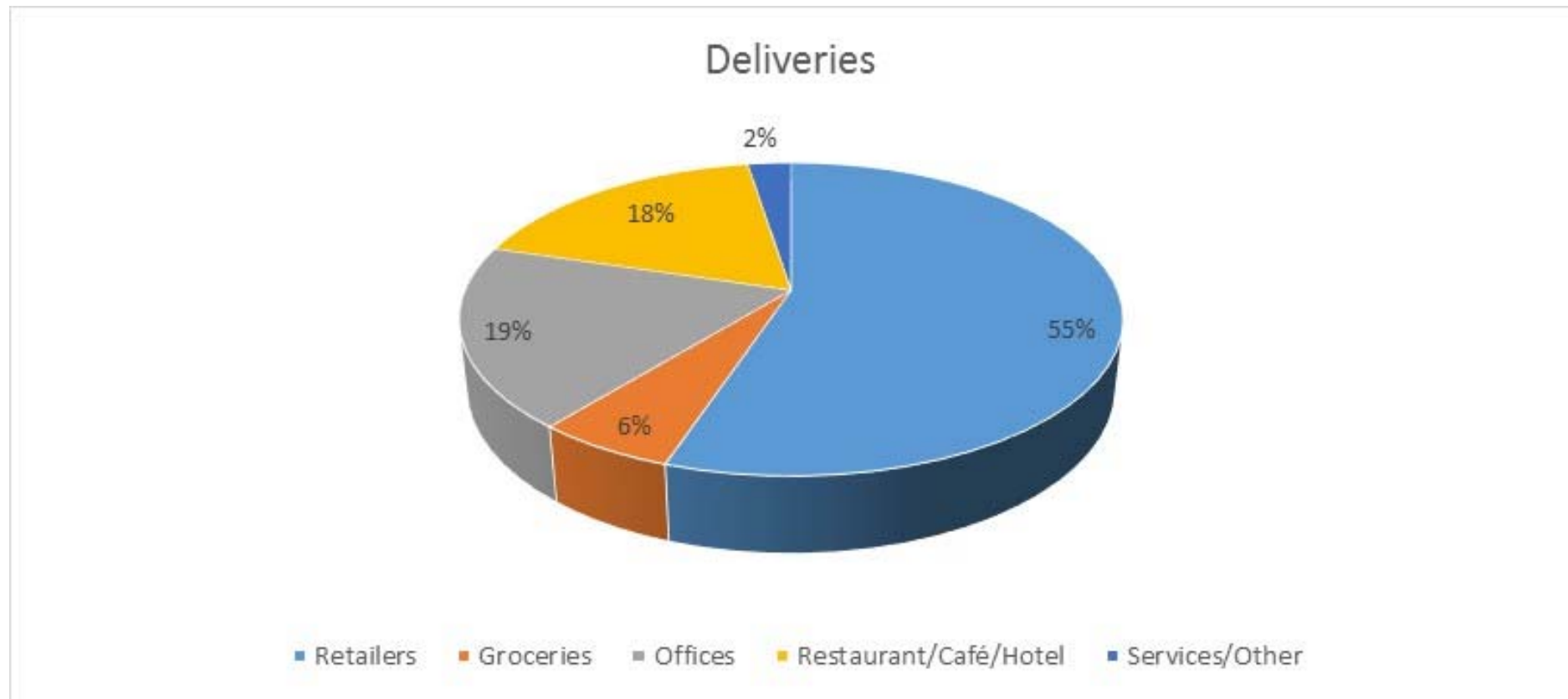
	Companies by Branch	Number of Responses	Response Rate
Retailers	91	84	92%
Groceries	6	4	67%
Offices	54	39	72%
Restaurant/Café/Hotel	27	22	81%
Services/Other	7	5	57%
Total	185	154	83%



Total number of deliveries	2632
Total number of parcels	1490
Total number of pallets	760
Total number of cages	574
Total number of other deliveries	342
Total cargo units	3166



Deliveries per branch

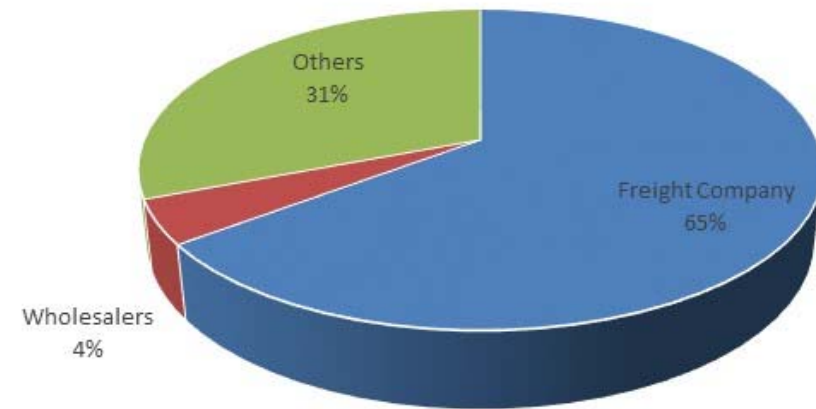


Transport companies and part of deliveries

Companies that Delivers Goods



Part of Deliveries

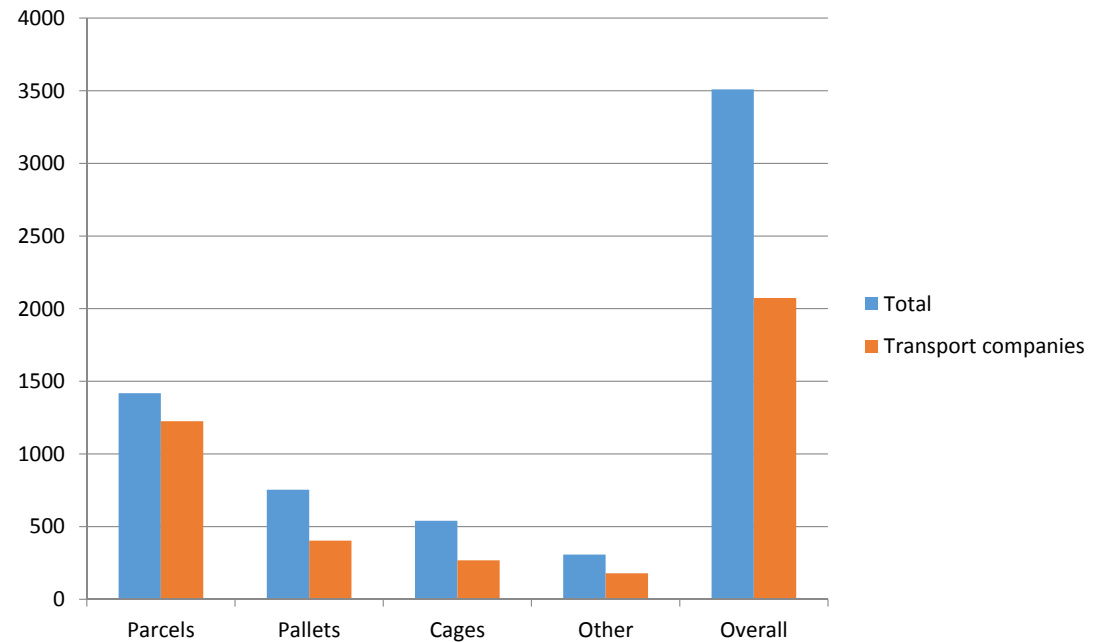


Transport operators involved per branch

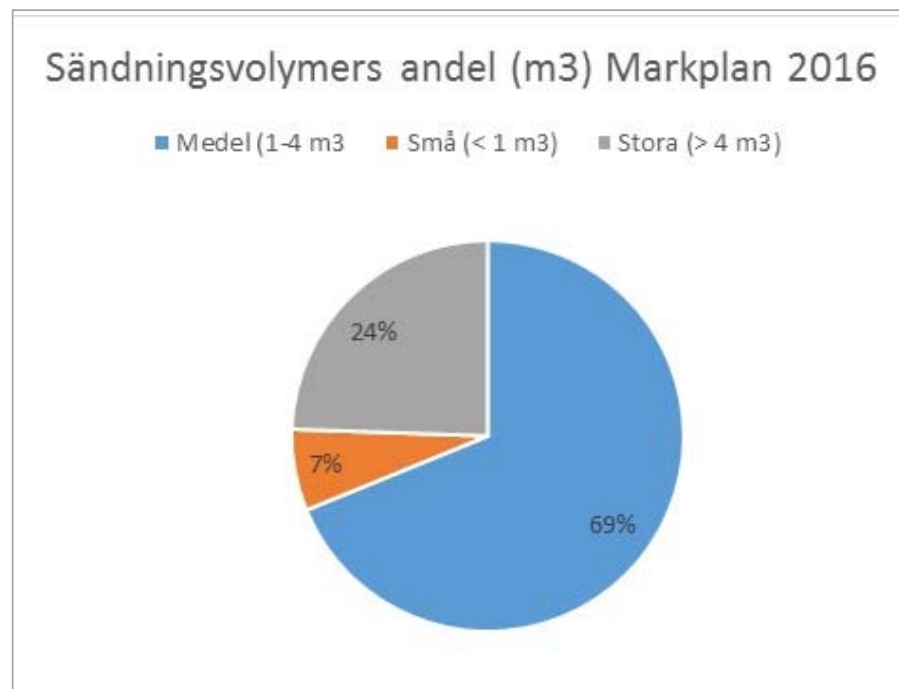
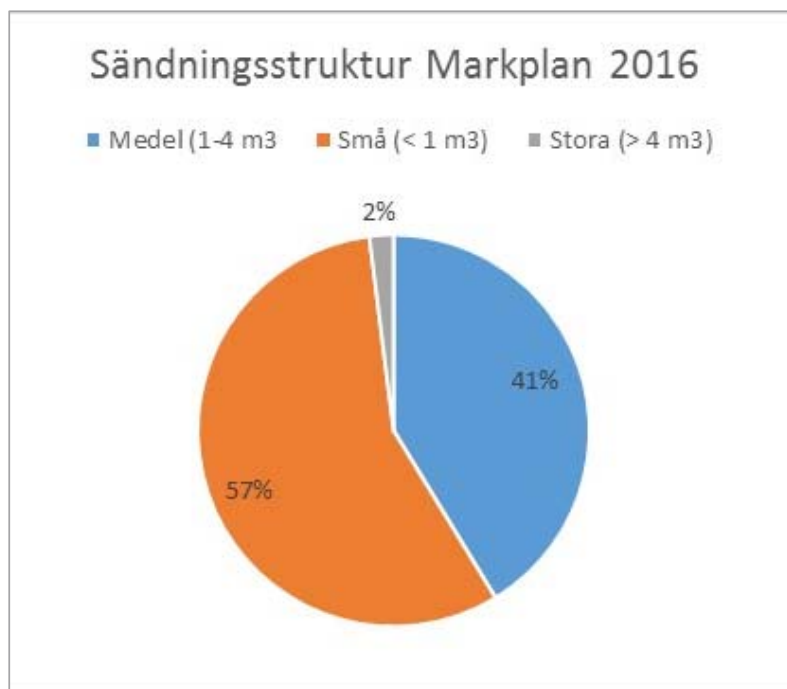
Companies that Delivers goods
Totalt 195

Branch	Average
Retailers	3,13
Groceries	8,50
Offices	5,32
Restaurant/Café/Hotel	4,52
Services/Other	4,00
Total	3,97

Part of freight volumes delivered by freight companies



Shipment sizes (surrounding streets)



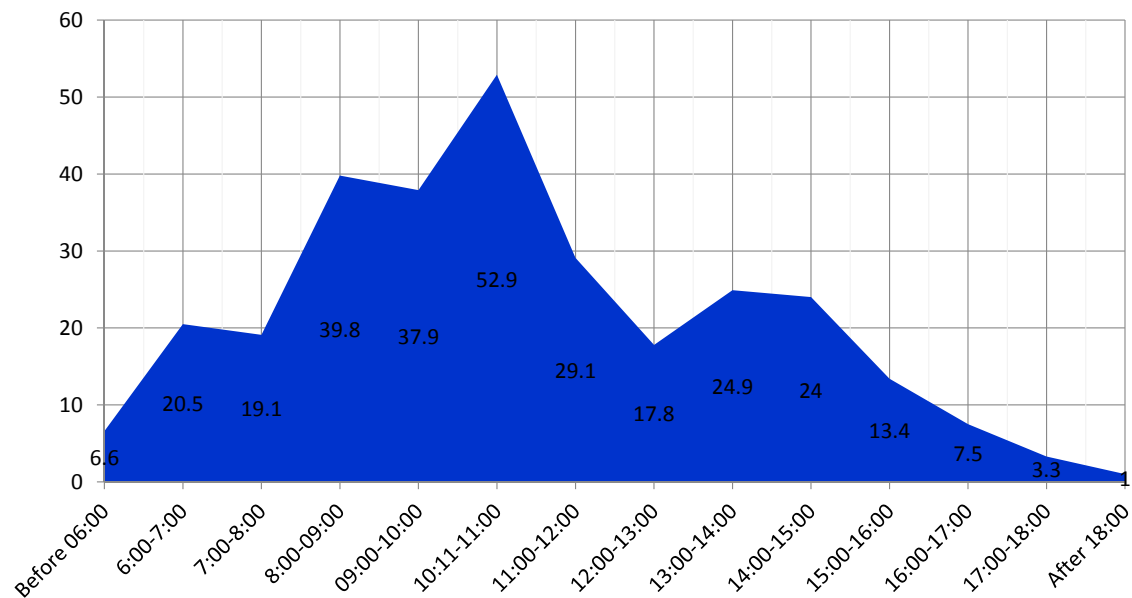
Terms and conditions for deliveries

Terms/Conditions for Deliveries				
Branch	Central Controlled	Controlled by Reciever	Not Controlled	Other
Retailers	65	9	11	3
Groceries	2	1	2	1
Offices	6	6	19	5
Restaurant/Café/Hotel	10	6	7	4
Services/Other	2	2		2
Total	85	24	39	15
	52%	15%	24%	9%

Branch	Time Slot	No Time Slot	Partly Time Slot	Do not know
Retailers	22	32	28	1
Groceries	2		3	
Offices		25	6	1
Restaurant/Café/Hotel	5	5	13	
Services/Other		3	1	
Total	29	65	51	2

Retailers	Central Controlled	Controlled by Reciever	Not Controlled	Other
Electronics	9			
Home Decoration	3		1	
Fashion and Retail	31	3	6	1
Watches, Jewelry etc	8	3	2	
Others	14	3	2	2
Total	65	9	11	3

Distribution of deliveries over time (average day)



Initial development areas

- Framework agreement between involved stakeholders (real estate owners, city of Gothenburg, Swedish Transport Administration)
- Selection of businesses and goods segments for the pilot phase
- Specification of functions
 - Main service (goods reception, terminal handling, consolidation, last mile transport etc.)
 - Add on services (delivery to door, unpacking goods, collection, packaging material etc.)
- Procurement and contracting

Questions

- Possible value adding aspects for shops and offices with consolidated deliveries
- What size shipments is it purposeful to consolidate?
- Consolidating food and perishables - is it a good idea?
- Important aspects for a successful tendering process of a consolidation service

Thank you for your attention!



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