

Overview of consolidation centres for urban and specialist use

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Structure of presentation

- General background and key questions
- Terminology and functions
- Range of examples of trials/schemes
- Perceived benefits and costs
- Summary of key issues

Background

- BESTUFS II focused on City Logistics Solutions (CLS)
- Urban consolidation projects identified as potential measure
- But:
 - What do we mean by urban consolidation?
 - Does it work? Why/why not?

Urban freight consolidation centre project

- 6 month scoping study (UoW/Mike Sweet)
- Started December 2004
- Funded by Department for Transport
- Literature review almost complete
- Future stages:
 - Study different types of consolidation centre
 - Obtain views of sample of supply chain parties
 - Preliminary evaluation of different types of centre
 - Produce report (by summer 2005)

Key questions

- What is meant by consolidation?
- How does consolidation work?
- What are the advantages and disadvantages of consolidation?
- What impacts does consolidation have on transport operations (up and downstream)?
- What impacts does consolidation have on other supply chain activities?
- What schemes/trials have been implemented?
 - How have they been set up?
 - What are the outcomes?

Terminology

- Range of concepts/terminology, including:
 - Consolidation centres
 - Transshipment centres
 - Public logistics terminals
 - Urban platforms
 - Off-site stock room/logistics support centre
 - Collection points
- All above involve a physical centre, but boundaries are blurred
- Also other forms of consolidation

Functions of consolidation centres

- Transshipment/cross-docking:
 - Break-bulk (inbound)
 - Load consolidation (outbound)
- Other functions may include:
 - Stockholding
 - Customer collection
 - Other supply chain activities (see later)

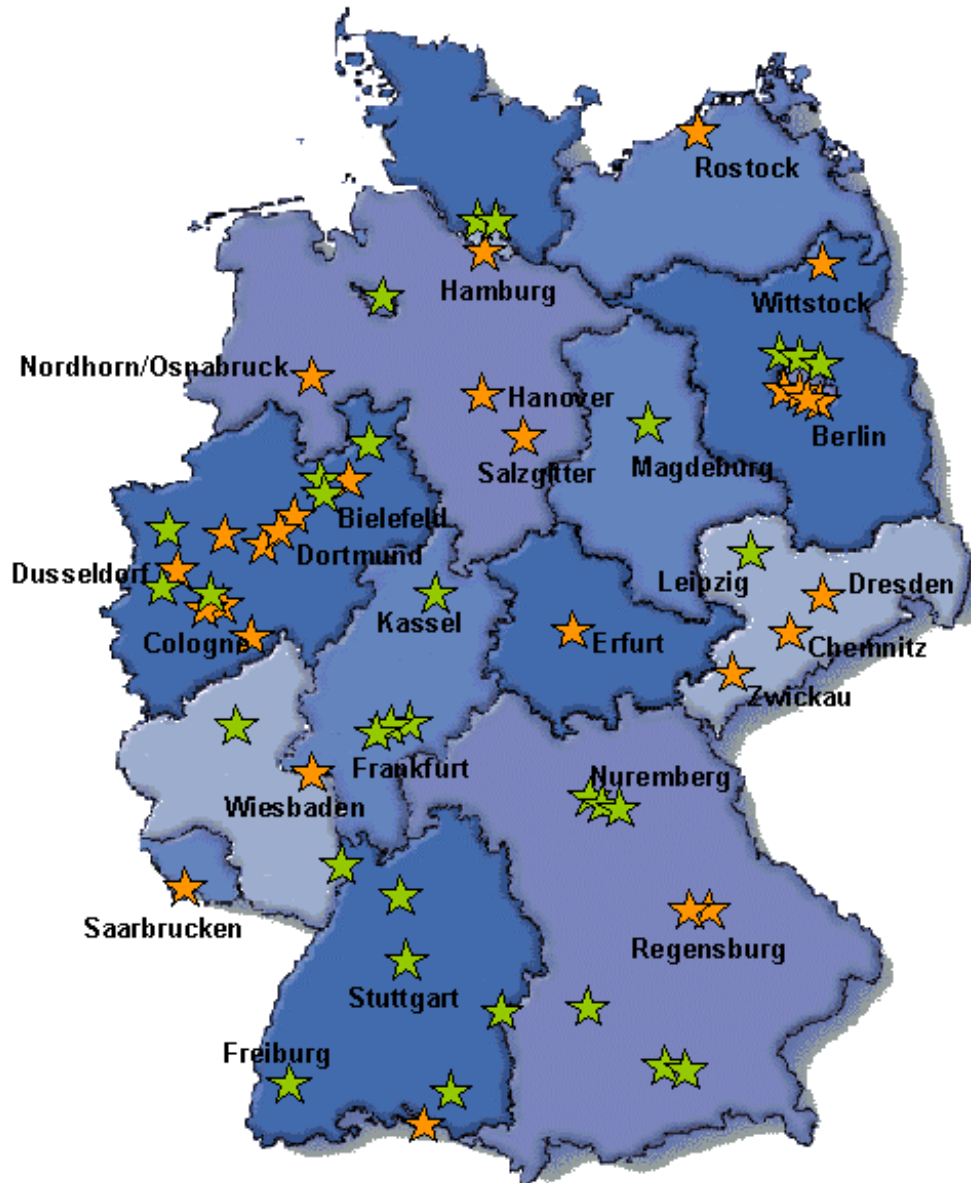
Examples of consolidation centre types

- Publicly-owned terminal(s) for urban area
 - More common in European mainland examples
- 3PL operated centre:
 - For specific retailer
 - For specific location
 - More common in UK trials
- Temporary centre, e.g. for duration of large construction project

Geographical spread of urban consolidation centres (Europe)

- Trials/schemes most prevalent in:
 - Germany
 - Netherlands
 - France
- More recent examples include:
 - Italy
 - Sweden
 - United Kingdom
- Details of other schemes?

German City Logistic Projects



★ in operation

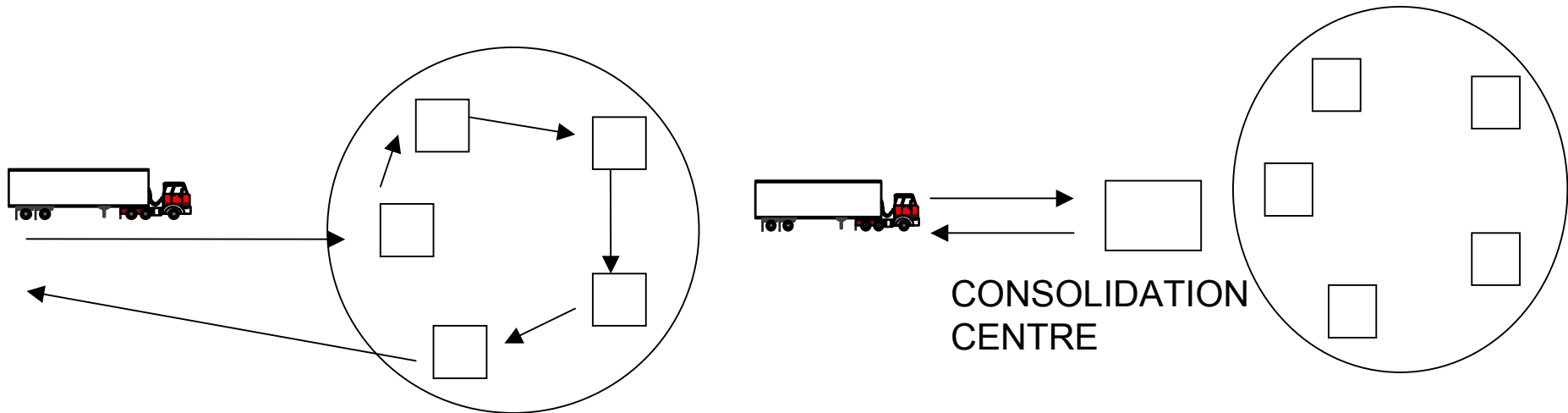
★ in preparation

April '97

Potential economic benefits

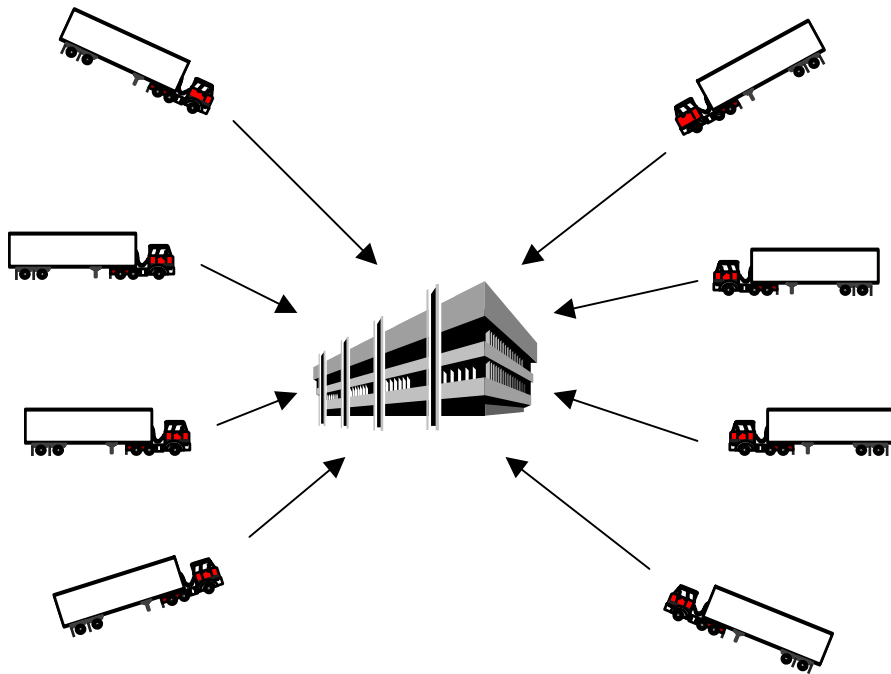
- Increase volume of goods per vehicle, so reducing unit costs of urban transport
- Reduce number of deliveries that have to be received at a particular location
- Reduce time spent driving to delivery address and accessing point of delivery by driver

Deliveries to store versus deliveries to consolidation centre

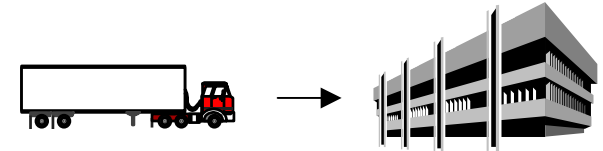


- Fewer vehicle kilometres
- Less time spent making deliveries
- Less time in congested traffic

Fewer vehicle trips at delivery point

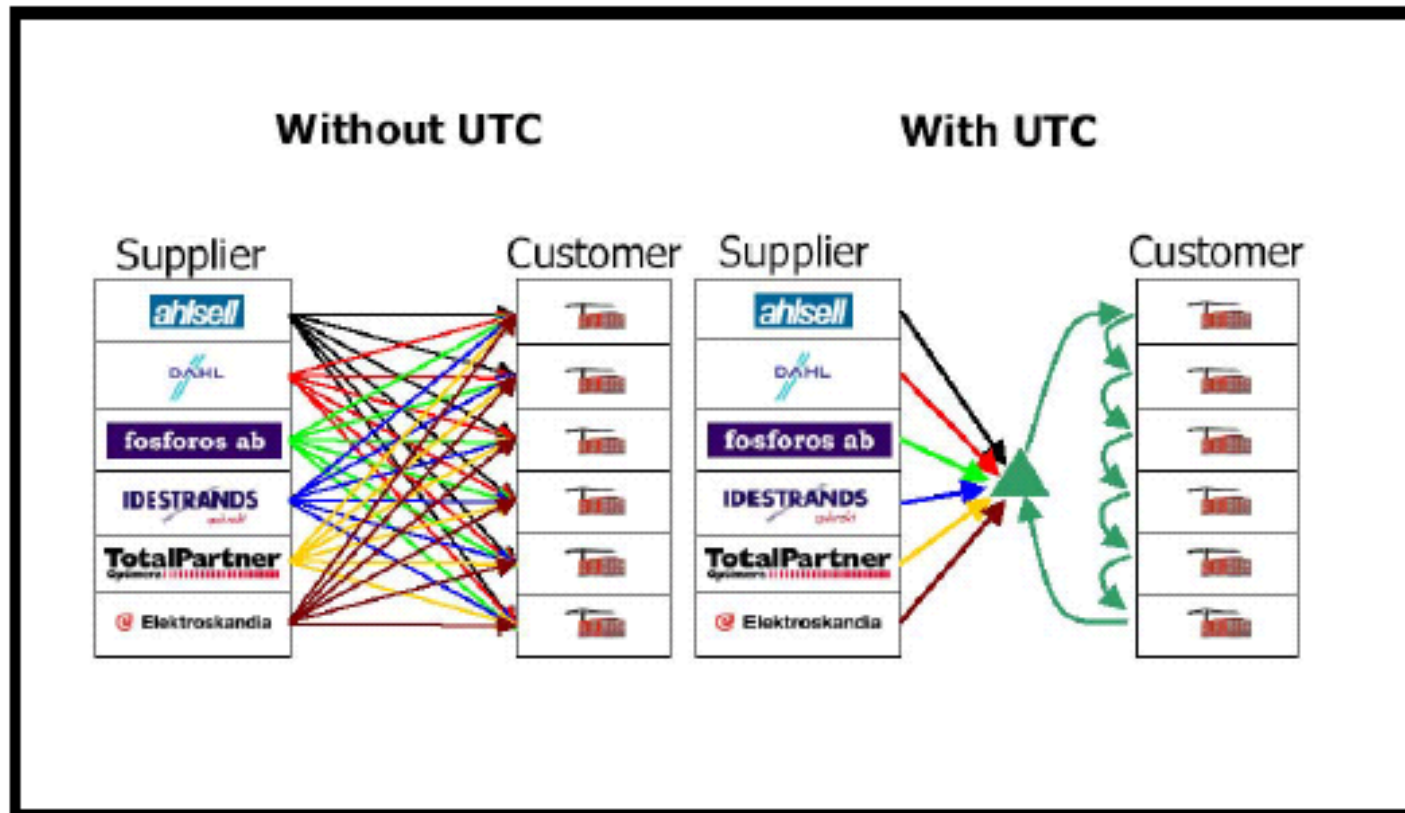


BEFORE



AFTER

Logistics Consolidation Centre Stockholm, Sweden



Other potential (retail) supply chain benefits

- Reduction in time taken to replenish stock
- Additional floorspace for retailing activity
- Utilise centres for other activities, such as:
 - Unpacking of products
 - Preparing items for display in retail outlets
 - Product pricing/labelling
 - Waste removal/recycling

Potential environmental and social benefits

- Reduce number of unsuitable goods vehicles in urban area
- Improve vehicle lading factor and reduce empty running – fewer movements
- Reduce fuel consumption, pollution, noise, etc.
- Allow use of environmentally-sensitive vehicles
- Enhance viability of alternative modes for trunk haulage into consolidation centre
- Fit with other transport, environment and social policies

Likely additional costs

- Capital cost of consolidation centre
 - Centre operating costs
 - Additional handling stage in supply chain
 - Security, liability, customer service issues, etc.
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- Do costs and benefits accrue to same or different organisations?

Summary of key issues (to date)

- Lots of specific studies, trials and schemes
- Lack of clarity of definition and scope
- Little overall analysis of factors contributing to success or failure, particularly from supply chain perspective
- Lack of evidence-based information about scheme viability
- Mixed experiences –more evaluation needed to establish what works