

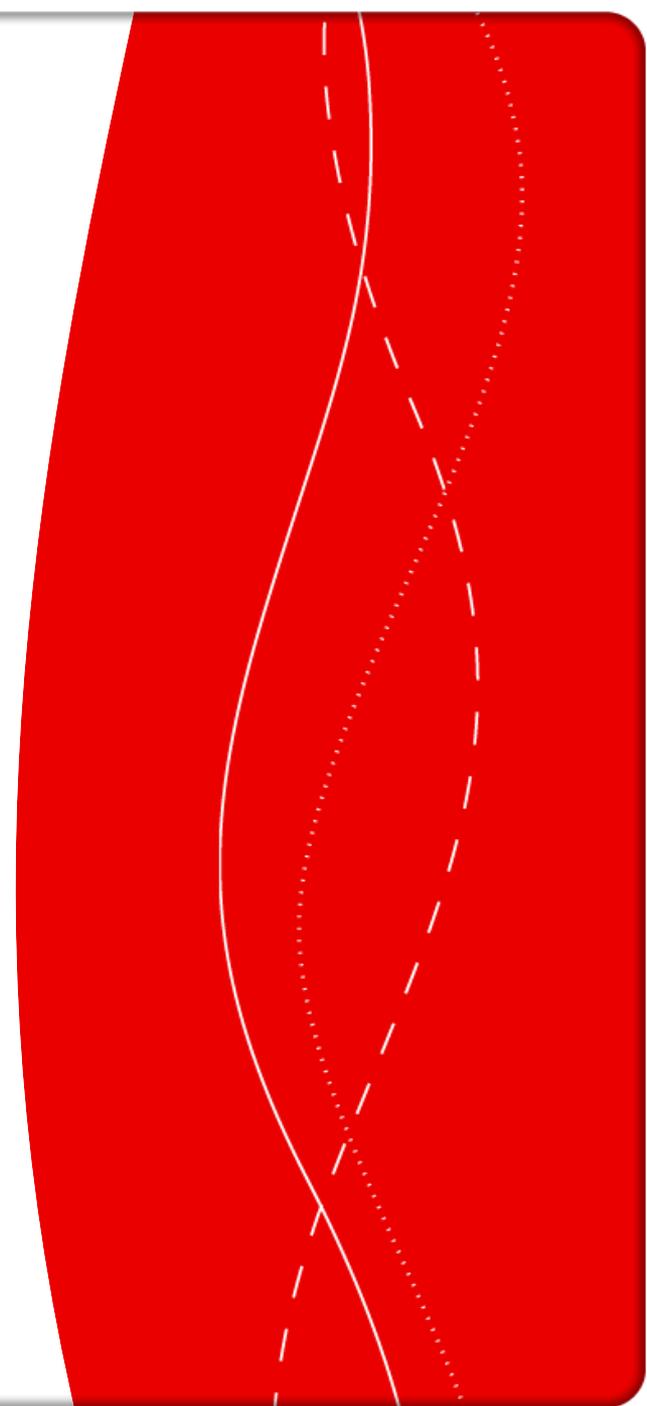


FINDING A BETTER WAY

# Freight transport from an urban development perspective

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# Agenda

## 1. Why is City Logistics important?

- *Efficient city logistics is a key factor for sustainable city development!*
- Objectives, challenges and possibilities

## 2. How can visions for sustainable City Logistics be realized?

- Solutions for efficient City Logistics
- City planning for a sustainable city

## 3. A road map for Sustainable City Logistics

- Activities to meet challenges and stimulate development of sustainable solutions
- Roadmap from Swedish perspective: CLOSER, VTI, Chalmers University, Linköping University, Transport companies, Municipalities, Authorities, ...

# City Logistics – Urban freight transport

## Goods transport in urban areas

- Scope? Geographical delimitations? City center – City – Municipality - ...
- *Goods transport in urban areas*
  - dense areas, area restrictions, narrow roads, a lot of residents, working places, meeting place, commerce, ...

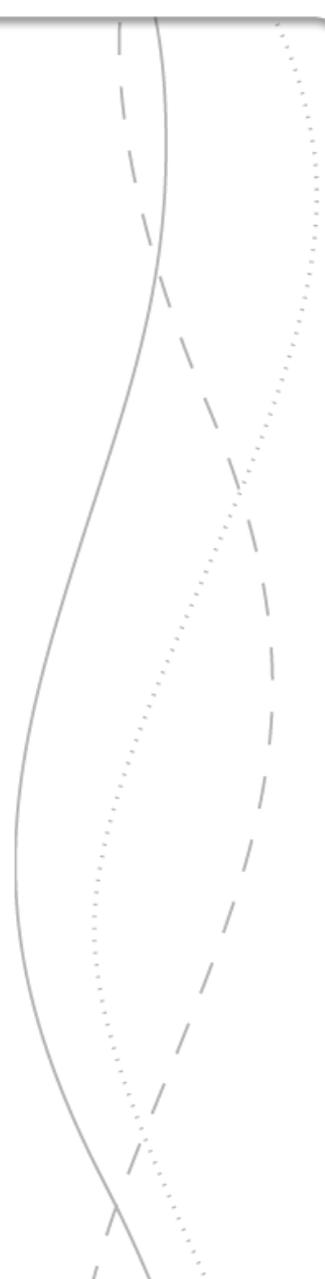
## Logistics systems for efficient goods transport in cities

- Logistics systems – Transport systems
- ... systems which give prerequisites for efficient goods transport in cities

## Cost and functionality from a systems perspective

- Sustainable transport: Environmental, Social and Economic objectives

# Why is City Logistics important?



# Sustainable City development

## - Efficient City Logistics is an important component!

### The global trend of urbanization

- 1950: 50% of the population lives in cities,
- 2000: 77%
- 2020 prognoses point at 85%.

### Economic growth is strongly connected to cities

- Economic growth is dependent on **geographical propinquity**
- **Cities is growing**
- Market driven **densification of cities**
- Trends in trade and service business lead to **increased transport demand**

Urban freight transport is a key functionality in cities - but have also negative effects!

***More efficient CL systems is needed -  
otherwise CL will be a hindrance for economic growth***

# Environmental aspects

## Urban freight transport has negative environmental effect

- Goods correspond to 20-30 % of vehicle-km in urban areas
- 40 % of CO<sub>2</sub> emissions and 70 % of other emissions and pollutants

## Environmental objectives

- Considerable reduction of CO<sub>2</sub> emissions!
- Considerable reduction of energy consumption!
- **CO<sub>2</sub> free city logistics 2030**
- Directive on Air quality
- EC White paper (2011), EC directive on air quality (2008), EU 20-20-20

# Social aspects

## Attractiveness of the city

- Increased availability for residents and visitors
- Attractive milieus, meeting places and surroundings
- Wide range of high quality products and services
- Decreased congestion
- Decreased noise
- Increased Safety
- Good health and quality of life

# Economic aspects

## **Economic growth is strongly connected to cities**

- Transport system is a key functionality in cities
- Efficient transport systems is a necessity for sustainable city development

## **An attractive city is dependent on a lively economy**

- Lively business activities
- Advantageous prerequisites for companies, service and commerce

# The challenge of CL – challenging trends

*Current trend – increasing..*

**Service business**

**Goods transport in combination with service**

**Number of service trips**

**Total goods consumed**

**Fragmentation of demand**

**Number of deliveries**

**Fragmentation of supply**

**More own operations**

*Number of vehicle trips related to business in urban areas is increasing!*

# Trends in an urban development

*Increased number of vehicle trips related to business in urban areas*

- Increased congestion
- Increased emission
- Increased access restriction



- **Increased interest in quality of urban life**
- **Innovative vehicle/ fuel technologies**
- **Innovative Information Technology**

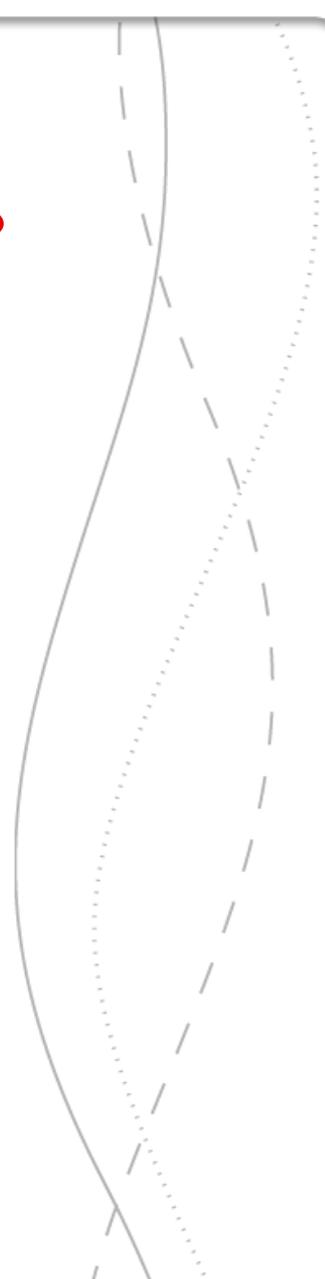


Economic Effects

Environmental

Social effects

# How can sustainable City Logistics be realized?



# What characterize energy efficient goods transport?

- Build city districts which **minimize the need** of goods transport
- **Optimal** design of material and immaterial **infrastructure**
- **Optimal use of infrastructure** by policies and use of new technique
- More **environmental friendly vehicles**
- Optimal use of vehicles: **maximize fill-rate**, adaption of fleet to...

Prerequisites

How to carry out

Potential (Logistikforum, Sweden, 2011):

Logistics + Policy + Technique: potential reduction of emissions: 70 % !

# How could visions for sustainable City Logistics be realized?

*What characterize energy efficient goods transport?*

- Build city district which **minimize the need** of goods transport
- **Optimal design** of material and immaterial **infrastructure**
- **Optimal use of infrastructure** by using policy measures and new technique
- More **environmental friendly vehicles**
- Optimal use of vehicles: **maximize fill-rate**, adaption of fleet to...

Prerequisites

How to carry out

**Authorities:** Have possibilities to **influence the prerequisites** for transport

**Authorities/ Politicians:** Have possibilities to **stimulate use of new technology**

**Logistics companies:** are the **experts of efficient logistics!**



**Sustainability..**

- can not be realized by short-term economic goals
- requires decisions with respect to long-term objectives

**Change-over to sustainable life-style must be supported by political decisions!**

# Authorities role:

Create an arena which give incentives for sustainable solutions

City planning

Master plan for a Sustainable City				
				Transport

Mobility, Availability, Emissions, Energy efficiency

Transport system

Transport system of the City				
Walking	Bicycle	Public Transport	Car Traffic	Goods

Emissions  
Traveltime  
CO2  
.....

Urban freight planning

Transp.  
Goods

Environment  
Functionality

# Collaboration of different stakeholders

Transport companies and other actors in the (urban) business must be involved in development of new solutions

Transport companies represent expert knowledge in efficient logistics

# A road map for Sustainable City Logistics



# Political anchorage for City Logistics development

**Show CL is profitable! ...What is the cost of doing nothing?**

- **Cost evaluations and evaluations of future needs** in urban transport systems
- Evaluation from different actors perspective, **who will win and who will loose?**

**Clear and measurable goals**

- The overall objective of sustainable city development need to be decomposed to measurable short-term and long-term goals for City Logistics

**New arena for goods transports in cities**

- New solutions from systems perspective
- Incentives (regulations) for sustainable solutions



# Coordination on national level

## Coordination on national level

- Objectives for City Logistics
- Coordination of solutions
- Accelerate knowledge transfer and experience exchange
- Networking between cities

# Urban freight planning is part of traffic planning and city planning

## Develop prerequisites for efficient urban freight transport planning

- Vision of **overall objectives** and **measurable goals**
- **Decision support** systems
- Efficient **data** collection methods
- **Necessary resources:**
  - **knowledge** in Logistics and physical planning
  - **time** to spend on urban freight planning issues
- Developed **planning processes**
- Methodologies for beforehand **evaluation of effects of measures**

# Collaboration between different stakeholders

## Collaboration between different stakeholders

- National networks
- Networks on City level
- Authorities develop **arena for sustainable transports**
- How could this arena be designed **with respect to transport companies and other business' prerequisites and needs?**
- Development of **new efficient solutions**

# New solutions for sustainable City Logistics

## Need for new solutions for different type of goods transports..

- New business models for **consolidation and use of UCC**
- Improve upon the prerequisites for **retail in cities**
- Clarify the effects and new solutions for **E-commerce**
- Survey of transport generated from the **Service sector**
- Energy efficient **waste collection and reverse logistics**
- **Construction logistics**
- **New vehicles** adapted to urban freight deliveries

# Summary

## 1. Why is City Logistics important?

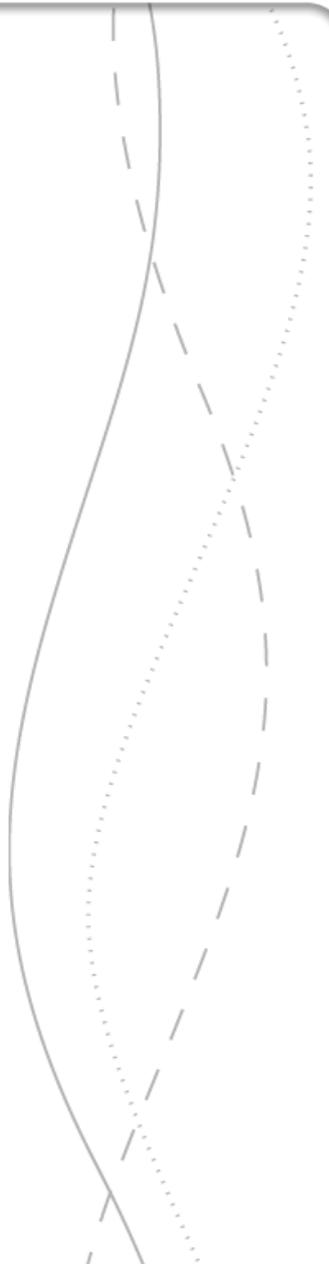
- *Efficient city logistics is a key factor for sustainable city development!*
- Urbanization, economic growth and environmental goals..

## 2. How could visions for sustainable City Logistics be realized?

- Change-over to sustainable city development is a political question..

## 3. A road map for City Logistics to realize the vision of sustainable City Logistics

- Political anchorage for City Logistics development
- National collaboration
- Urban freight planning is part of traffic planning and city planning
- Collaboration between different stakeholders
- New solutions for sustainable City Logistics



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**Thank you!**