

Comprehensive planning of urban logistics

Who are the stakeholders and what are the benefits?

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Comprehensive and cross-sectoral planning of urban logistics and space-demanding urban operations is expected to provide municipalities with increased expertise and a better knowledge base to promote sustainable urban development. For businesses, cross-sectoral and regionally coordinated spatial planning will provide better predictability, more efficient goods delivery, improved working environments for drivers and facilitate the transition to the use of zero-emission vehicles. Effective logistics and transportation solutions contribute to reduced traffic and less land use, resulting in broad alignment of goals between the public sector and the business community. There are likely to be positive synergy effects from coordinated planning of areas for urban logistics and areas to address space-demanding urban operational tasks.

In this report, a categorization of the actors and stakeholders related to urban logistics and space-demanding urban operations has been carried out. Furthermore, a qualitative assessment has been made of the type of gains that the individual actors can expect when the public sector plans urban logistics more comprehensively at an overarching planning level and when planned measures are implemented. For the analysis of benefits, it is assumed that more comprehensive planning would contribute to the three following effects:

1. Political anchoring to investigate, plan, and implement measures in line with a long-term strategy for sustainable urban logistics and urban operations.
2. Better alignment between the organization of logistics for the city as a whole and the access to space for urban logistics and urban operations in the most densely populated areas.
3. More appropriate location, design, and efficient use of logistics and urban operational areas.

Table S.1 provides a summary of expected gains from comprehensive planning of urban logistics. Chapters four and five provide more detailed overviews of actors, stakeholders, and gains.

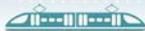


Table S.1: Summary of potential gains from comprehensive planning for sustainable urban logistics.

Stakeholder / Actor	Gains
Government	Avoid urban sprawl, support zero-emission goals, support the traffic safety vision, and improve competitiveness for businesses. Better knowledge base to modernize regulatory frameworks.
County Municipality	More knowledge and better advice for municipalities, improved collaboration between municipalities and county municipalities, better data, supports emissions, land use, and traffic safety goals. Fewer conflicts between groups of road users. Benefit from concrete regional long-term planning collaboration relevant to county roads, public transport, urban operations, and urban logistics. Fewer conflicts between public transport and wrongly parked freight and delivery vehicles in city streets.
Municipality	Fewer conflicts between groups of road users, better collaboration between municipal departments and businesses, better data, more knowledge, fewer goal conflicts, contribution to achieving emission goals, less pressure on land, more attractive for local non-chain affiliated businesses, fewer trucks at schools and in residential areas, more attractive city centers and better urban life. Simplified processing and more tools for urban development, planning and building cases, and urban operations. Fewer complaints.
Goods owner	Predictability for the development of terminals. Basis for efficient long-term logistics. Possibly lower freight rates. Easier transition to zero emissions and improved reputation. Value increase associated with attractive city center/street.
Recycling/Reuse	Easier access for waste management, or other ways to solve waste collection. Predictability for storage and processing areas. Basis for efficient long-term logistics. Easier transition to zero emissions and improved reputation.
Transport sector	Reduced stress and physical strain as well as fewer fines for drivers, less time per delivery, more deliveries per day. More deliveries per driver result in lower cost per job. Predictability for the development of larger terminals and access to urban logistics terminals provide the basis for efficient long-term logistics.
Property owner	Better utilization of and reduced need for parking spaces. Possibly value-enhancing use of city center and street space (increased rental income). Can offer tenants good conditions for goods reception and waste management (increased rental income).
Property developer	Clearer requirements for logistics areas. Opportunities for gains by considering logistics solutions in the construction phase in relation to logistics in the operational phase.
Construction	Requirements and facilitation for efficient and safe freight transport during construction operations.
Mobile service provider	Better access to parking for vans during assignments or facilitation for other ways to transport equipment and goods to assignments.
Resident	Better and easier access to goods (online shopping). Reduced traffic in residential streets, better living environment, more space for recreation and play. Increased real estate value.
City user	Better urban environment, urban life, and less illegal parking in areas for pedestrians and cyclists. Reduced risk of traffic accidents with freight vehicles, increased perceived safety.

Comprehensive planning provides a knowledge base for developing regulations and infrastructure across administrative levels and sectors, so that the regulatory framework more effectively supports overarching societal goals and removes barriers to adopting better designs for urban spaces, buildings, vehicles, aids, and new technology.

The benefits of comprehensive planning for urban logistics stem from increased knowledge and better collaboration within the public sector and between the public sector and the business community. Within the public sector, there is a need for better coordination between administrative levels, sectors, departments within municipalities, and between municipalities and counties (Jensen et al., 2020). In the private sector, there is also a need to explore new logistics solutions and alter the distribution of roles between actors to reduce the occupation of loading space in central and residential areas where there are conflicts regarding land use. The public sector has limited insight into the socio-economic impacts of measures affecting urban logistics. Land use for urban logistics terminals and other logistics areas must be considered in conjunction with policy to reduce commercial traffic and space use by loading in city centers and residential areas.