

**Summary:**

# Knowledge guidance for Norwegian sustainable urban logistics planning

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*A sustainable urban logistics plan aim to improve urban logistics by providing overall guidance for urban planners. It can also act as a relatively set framework for industry on what specific policy measures local authorities aim to implement. Additionally, such a plan can facilitate stakeholder cooperation and increase knowledge and experiences on urban freight. Thus, it is a tool to increase urban logistics planning and boost resources spent on policy in this field. The Norwegian urban logistics stakeholders are willing to participate in urban freight planning, however, it is first a need to establish a common ground of knowledge on Norwegian urban freight among stakeholders. This report therefore aim to act as knowledge guidance on urban freight, establishing a certain level of urban freight awareness among various stakeholder groups. This guidance provides, for public sector stakeholders, a basis for planning within urban freight, while for private sector it is a way to get insights to the public planning processes and specific measures which can improve their every-day situation.*

Urban goods movement, city logistics, or urban freight<sup>1</sup> can be defined as the: “the movement of goods, equipment and waste into, out from, within or through an urban area” (European Commission, 2011b). The market sectors of urban freight are retail, express, courier and post, hotel, restaurant and catering, construction and road services and waste. Urban freight is complex as it includes a huge variety of transport operations and logistics activities performed in an urban area. Therefore, urban freight is characterised by many different stakeholders. The main groups of these stakeholders are supply chain actors (shippers, transport operators and receivers), public authorities (international, national, regional and local), resource supply stakeholders (infrastructure providers, infrastructure operators and landowners) and impactees (other traffic participants, city residents and city users and visitors/tourists). The urban freight policy measures which can reduce the negative consequences of urban freight can be grouped into the following six categories of initiatives: i) regulations, ii) market-based initiatives, iii) land use planning and infrastructural measures, iv) new technology-driven measures, v) “ecologistics” awareness-raising measures and vi) stakeholder engagement and management measures (MDS Transmodal, 2012; Stathopoulos et al., 2012; Stefanelli et al., 2015). These measures have to be applied correctly depending on each city’s context to solve the main urban logistics challenges in Norwegian cities which are: i) accessibility in terms of loading and unloading, truck routs and restrictions, ii) use of space in the city centre, iii) efficient urban logistics transport and iv) limited local knowledge on urban logistics activities especially compared to passenger transport.

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<sup>1</sup> There are some differences in how these concepts are used but overall they all cover the activities included in the definition developed by the European Commission.

## **Planning guidance for urban logistics in Norway**

Existing legislation, standards, plans and visions/objectives all impact the way urban freight is planned for and organised. At the same time, this can be important resources and tools to plan and facilitate efficient urban freight. There are in Norway few laws, which directly target urban freight. However, the main laws which have an influence are plan- og bygningsloven, arbeidsmiljøloven, vegloven, vegtrafikkloven and matloven. Additionally, a standard (Bransjestandard for varelevering) for how public planners can secure the interests of the transport industry has been developed.

Plans which impact urban freight are both on European, National, Regional and local level, however, urban freight is mostly an issue for local planning. At a European level these are mostly guidelines, approaches or methodologies on how to design a certain type of plan locally rather than existing plans with directions for urban freight planning in Norway. The relevant guidelines are Sustainable Urban Transport Plans (SUTP), Sustainable Urban Mobility Plans (SUMP), Sustainable Urban Logistics Plan (SULP) and The European Commission White Papers (Fossheim & Andersen, 2016).

The National level point out tasks and interests which are key for the sitting government but these are to a little degree targeted at urban freight. The central government has also stated that housing- space and transport planning should be coordinated, which can impact urban freight if it is considered as part of the transport plans (Kommunal- og moderniseringsdepartementet, 2014c).

Regional plans can direct local plans and it is therefore valuable to include urban freight in these plans. Although regional plans tend to have a more general perspective on transport, it is important not only to take into account long-haul transport but also the last-mile logistics that takes place in the urban areas within the region (Kommunal- og moderniseringsdepartementet, 2014a). Similar to national, regional transport planning may include urban freight. The localisation of terminals often discussed in these plans can affect the urban freight transport trips and the urban areas, thus it is important to see the overall picture.

Local authorities are responsible for facilitating for urban freight transport. National and regional planning only guides and realise urban freight in the municipal planning processes (Miljøverndepartementet, 2012, Miljøverndepartementet, 2008, Medalen, 2011). There are several types of plans which can impact urban freight, most often these are climate- and energy strategies, city-centre plans, accessibility strategies and spatial planning. Both kommunedelplan, arealplan and temaplan is used in this work. A sustainable urban freight plan can in a Norwegian context be organised as an individual self-standing plan, urban freight can be included in existing plans or it can be included in plans to be developed such as mobility plans.

In today's existing plans visions, objectives and targets are often included to guide the work done in a certain area and the selected policy measures. On an international, European, and national level the existing visions which might impact urban freight focus on climate and environment, safety and security, accessibility, space, transport and logistics. Similar to Norway, only a few directly target urban freight. Those Norwegian visions/objective, which might impact urban freight has an overall focus on climate and environment. In the existing European urban freight plans sustainability is a key element. They ensure the sustainability components of environment, society and efficiency by viewing freight together with its surrounding environment.

## Indicators, resources and evaluation

A comprehensive understanding of urban freight requires information about the current situation and future developments in terms of scale, efficiency and environmental impact in a given geographical area. Data on urban freight is limited compared to passenger transport due to logistics being a private matter and that freight has been given less attention among authorities (Browne et al., 2007). Urban freight transport data is useful as it provides knowledge about freight demand and supply necessary to identify freight transport in a city, as well as driver behavior, infrastructure activities and other factors useful for policy design and evaluation of chosen initiatives (Allen et al., 2012, Sánchez-Díaz, 2016). Continuous data for national freight transport is collected and stored by Statistics Norway and key resources here are i) Lastebilundersøkelsen, ii) Varetransportundersøkelsen and iii) Statens vegvesens traffic counts. The two former data sources are collected based on Eurostat regulations, which only require data at national and regional level, removing incentives to collect data for freight transport within urban areas (Council of the European Union, 2012), creating poor indicators of the urban freight activity taking place in cities. Examples of local urban freight data can be found in Stavanger they have developed an urban freight map and completed analysis of the regional and local freight flows.

To measure current status and developments indicators are often used. Such indicators have two purposes which is to reduce the number of parameters otherwise required to capture the freight flows and they produce a simpler presentations of different measures(OECD, 2003). Andersen and Eidhammer (2010) defined indicators for urban freight transport based on the DPSIR-model from EEA which also has been the basis for a similar study on passenger transport.

Indicators are not only key in planning but also important in evaluating urban freight activities and measures. In urban freight planning it is important not only to evaluate the specific implemented measures but also, if developed, the sustainable urban logistics plan. The former can be achieved using techniques for economic efficiency and costs, business models, social-cost-benefit analyses and multi-actor multi-criteria analysis (Macharis et al., 2009). The latter can be evaluated using similar methods in addition to process evaluation of developing the plan.

## Stakeholder cooperation

Involvement of stakeholders in urban freight planning improves the legitimacy of the solutions, thus reduce the risk of opposition to the implementation of policies. For example, research has shown that engagement of stakeholders and citizens is highly important in Sustainable Urban Mobility Plans (Cré, Mourey, Ryder, Heckley, & Valant, 2016; Lindenau & Böhler-Baedeker, 2014). In urban freight, stakeholders are sometimes involved through freight-quality partnerships which is *«a long-term partnership between freight stakeholders concerned with urban freight, that on a formal or informal basis meet regularly to discuss (and sometimes find solutions to) problems and issues that occur in the urban area»* (Lindholm & Browne, 2013). Active end-user involvement is also highlighted as key in the SUTP, SUMP and SULP methodologies. Lindholm and Browne (2013) summarise three main aspects to be considered when developing an urban freight forum:

- 1) Formation of partnership i.e. objectives, relevant stakeholders, political involvement;
- 2) Management i.e. action plan, manageable number of participants, regular attendance at meetings, strong project management; and,

- 3) Outcomes i.e. accept complexity and avoid seeking solutions, consider urban freight as business propositions.

There is a challenge in Norway that the responsibility for urban freight is spread across different municipal agencies (Sund et al., 2016). One way to agree on solutions for urban freight issues are through cooperation among authorities (Lindholm, 2010). Therefore, intra-municipal collaboration to improve the knowledge of urban freight issues among the employees and support planning in relatively new areas of interests regardless of the main every-day tasks is important. In addition, inter-municipal collaboration which involves two or more municipalities entering into an arrangement to provide a local service can be beneficial. This means that municipalities can participate in everything from joint service sharing to information sharing, which in turn means that they can share costs, pool resources and share knowledge (Spicer, 2017). Finally, cooperation with regional and national authorities is key, especially since the regional perspective sometimes challenges the emphasis on urban freight changing the focus from last-mile transport to long haul transport (Fossheim and Andersen, 2016). Ownership and knowledge about this topic in public sector contributes to improved internal awareness and better possibilities for coordination.