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Policy brief: Urban freight logistics

Urban freight represents 10-15% of urban traffic, is responsible for approximately 25% of transport-related CO2 emissions, 30-50% of other transport-related pollutants (particulate matter and nitrogen oxide gases), and heavily contributes to ambient noise in cities.

Photo credit: Voor Sustania

In this sector, there is the need to find a balance between two aims that can seem difficult to reconcile. They are creating an effective and efficient goods distribution system that responds to market needs, whilst ensuring that this same system adheres to high environmental and social sustainability standards.

In recent decades, institutions and public authorities have gained a better understanding of the crucial role of urban freight logistics (UFL) in city traffic, and policymakers are designing and testing innovative urban logistics schemes. However, there remains the need to identify more effective solutions and integrate more UFL solutions into urban mobility planning processes.

In 2011, an EU white paper on transport[1] identified the need for increased attention on urban logistics and set goals for achieving CO2-free city logistics by 2030. In December 2017, the European Commission - Mobility and Transport Directorate General published a study including guidance documents on six different aspects of urban logistics[2].

In May 2018, the CIVITAS freight projects NOVELOG[3], CITYLAB[4], SUCCESS[5] and U-TURN[6] concluded with a joint final conference in Brussels. The four projects developed policy recommendations and strategies for innovation, incentives, data collection and analysis, stakeholder engagement and participation, and logistic consolidation centres.

Together, they envisaged recommendations for the sustainable development of e-commerce, overcoming the fragmentation of the supply chain, and tackling the lack of data and cooperation. They also identified the need to integrate urban freight into urban planning.

[1] https://ec.europa.eu/transport/sites/transport/files/themes/strategies/doc/2011_white_paper/white-paper-illustrated-brochure_en.pdf
[2] https://ec.europa.eu/transport/themes/urban/studies_en
[3] www.novelog.eu
[4] www.citylab-project.eu
[5] www.success-urbanlogistics.eu
[6] www.u-turn-project.eu

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Policy recommendations

Include logistics in strategic planning

The growing rate of urbanisation and new trends in urban logistics, such as e-commerce, instant deliveries, and logistics sprawl, require local authorities to play a central role in planning and rationalising distribution flows.

To do this, **cities need to get a clear understanding of the logistics sector and integrate its planning process into their local Sustainable Urban Mobility Plan (SUMP)**. The success of strategic planning, as exemplified by SUMPs, has been a great benefit for sustainable transport development.

The incorporation of logistics planning into the SUMP process - for instance by developing a Sustainable Urban Logistics Plan (SULP) as part of the SUMP - would go some way to ensuring that a multidisciplinary, multi-stakeholder approach is utilised. Such an approach would also likely entail the use of broader planning instruments, such as land-use planning.

Long-lasting public-private planning partnerships

Just-on-time distribution strategies and the new trends mentioned above have heightened the fragmentation of the urban logistics sector, resulting in inefficiencies and low vehicle load factors. To exploit vehicles and infrastructures to their full potential, **new public-private collaboration systems must be established, as well as new cooperative business models that are not only environmentally and socially sustainable, but also economically viable**.

Long-lasting cooperation programmes that exceed the planning period of a specific plan can support the continued development of appropriate measures with proper stakeholder engagement. Such partnerships can facilitate co-creation, contribute to the definition of rules and measures, and ease the development of policies which stimulate the optimisation of the supply chain in a “collaborative” framework.

Data for a better understanding of logistics

The projects revealed that current data availability and the rigid data analysis methods being used are insufficient for a data-driven planning process. **By developing data collection mechanisms, encouraging data analysis (monitoring and evaluation) and developing tools that help to observe and understand urban freight transport and its dynamics, local authorities and business alike would have much to gain and it would also improve urban planning**. The analysis of specific supply chains is also crucial for sourcing meaningful data.

The regulatory framework for logistics consolidation hubs

The trends in logistics suggest higher freight volumes (e-commerce) and the need for decarbonisation means that zero-emission vehicles (e.g. e-vehicles, cargo bikes, drones) will be predominant in the urban logistics of the future. However, these vehicles have shorter ranges and require reloading of shipments closer to the final receivers of goods. Thus, the trend of consolidation and micro-consolidation solutions, such as locker systems, is likely to continue. **A legal and regulatory framework is required that governs the installation and operation of such hubs in public spaces**. This will also need to include specifications to guarantee that the relevant equipment is fitted to and complies with safety, security and interoperability requirements.

Strategic and consistent investment

Although a lot of knowledge and experience has been gathered on successful logistics implementation and generating added value for the whole supply chain, implementation remains an issue. Thus, **defining and funding transformative approaches and initiatives that facilitate a paradigm shift must be a priority**. By incentivising holistic approaches at the local level and strategic priorities like intermodal (logistics) solutions, a critical mass can be achieved for sustainable logistics solutions, as opposed to merely mitigating the negative externalities of increasing volumes.

Cutting-edge transport and distribution technologies

E-commerce is growing in almost every country in Europe. In parallel, new technologies such as modularisation of transport units, autonomous delivery vehicles and drones are presented as potential technologies to be implemented in the near future. The way these systems work and their potential to transform city dynamics needs to be further explored and understood.

Tools and publications

In the document

- Joint urban freight policy recommendations; CityLab, NOVLEOG, SUCCESS, and U-Turn projects, link

Further resources

CityLab

- City Logistics Living Lab Handbook, link
- CITYLAB Transferability leaflet, link

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NOVELOG

- Evaluation Tool, link
- Impact Assessment Guidance Tool, link
- NOVELOG guidelines for the planning and development of SULPs, link
- NOVELOG cities and regions factsheets, link

SUCCESS

- Business models for construction logistics optimisation and Construction Consolidation Centre introduction, link
- Good practices in construction logistics and supply chain management, link

U-TURN

- New business models and practical guidelines, link