

City Access for Businesses

Challenges and Best Practices for Urban Freight Transport



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1. EXECUTIVE SUMMARY

This report presents the work of the European Commission Expert Group on Urban Mobility (EGUM) Phase II subgroup on City Access for Businesses, with a focus on road freight transport. It examines how freight operators access European cities under evolving urban mobility policies and how access regulations interact with the transition to low- and zero-emission fleets. The overall objective is to support fair, efficient and sustainable access to urban areas for freight, balancing economic activity with climate, air quality, safety and liveability goals.

Freight transport is a critical enabler of urban life. It underpins retail, e-commerce, hospitality, construction and maintenance services, yet it also generates externalities in terms of congestion, air and noise pollution, greenhouse gas emissions and safety risks. Cities are increasingly introducing Urban Vehicle Access Regulations (UVARs), such as low- and zero-emission zones, congestion charging, urban tolls, limited traffic zones, time windows and weight-based vehicle limits, alongside parking and curbside management schemes and logistics-specific measures. These developments are framed by the New EU Urban Mobility Framework and the revised TEN-T Regulation, which place renewed emphasis on urban nodes and first- and last-mile connectivity.

Against this backdrop, the subgroup has collected input from a wide range of stakeholders, including cities, national authorities, industry associations, NGOs and logistics platforms, to identify:

- Key challenges for freight operators in accessing cities
- The effects of access restrictions on fleet transition and on sectors such as tourism and construction
- Approaches and good practices that help reconcile efficient freight access with wider societal and environmental objectives

The report complements previous EGUM work on UVARs and Parking. It does not formulate new policy recommendations. Instead, it consolidates existing EGUM recommendations that are particularly relevant for freight and provides practical insights and examples from practice.

The report is structured as follows. The introduction (Chapter 2) defines the scope of “city access” for freight and outlines the methodology used by the subgroup. Chapter 3 describes the urban freight market segment and highlights key trends such as more ambitious climate objectives, rapid e-commerce growth, ongoing fleet transition and increased digitalisation and data needs. Chapter 4 consolidates relevant recommendations from earlier EGUM work on UVARs, Parking and Urban Logistics.

Chapter 5 sets out the main challenges identified by the subgroup for freight access to cities, grouped under four headings: market access, zonal access, access to physical infrastructure, and governance and engagement. Market access challenges relate to the cost and risk of transitioning to zero-emission vehicles, charging and refuelling constraints, regulatory inconsistencies (e.g. weight limits that disadvantage zero-emission vehicles) and growing data and digital requirements. Zonal access challenges include a fragmented landscape of UVARs, inconsistent delivery time windows and conditions, and the need for clear, predictable communication on low- and zero-emission zones. Access to physical infrastructure issues include shortages and poor placement of loading/unloading zones, grid constraints and permitting delays for depot and hub charging and the strategic placement of logistics hubs. Governance and engagement challenges include limited coordination across levels of government, insufficient systematic stakeholder involvement and low profit margins.

Chapter 6 presents good practice examples from cities, Member States and stakeholders, grouped into integrated governance, stakeholder engagement, infrastructure and operations, incentives and support, and operational efficiency. Examples include national guidance on urban logistics (Portugal), a national zero-emission zone for freight framework with phased implementation (Netherlands), geofencing and dynamic access management pilots, public-private partnerships for charging infrastructure, national programmes such as InTerLUD+ in France, digital permit systems (e.g. Antwerp), urban logistics hubs and microhubs (Madrid, Braga, Hamburg), flexible loading zones (Gothenburg, Stockholm), and cooperative consolidation and last-mile schemes (e.g. GrazLog or TransMission).

Throughout these examples, several cross-cutting messages emerge. First, flexibility, harmonisation and innovation should drive the next generation of urban mobility strategies: harmonised approaches to low- and zero-emission zones, strategic hub placement at Functional Urban Area level, and innovative digital access management can all reduce complexity for operators while supporting local objectives. Second, there is a strong need for collaborative policy design that combines regulatory foresight with business realities. Early and continuous engagement with freight operators, SMEs, vehicle manufacturers and other businesses helps ensure that access measures are operationally workable, financially realistic and socially acceptable.

The conclusion (Chapter 7) synthesises these findings. It underlines that achieving fair, efficient and sustainable freight access will depend on (i) greater alignment and predictability of access rules, (ii) deeper integration of freight into urban mobility and spatial planning, (iii) coordinated investment in charging, refuelling and grid infrastructure, (iv) trusted governance frameworks for data and digitalisation, and (v) targeted support for SMEs and diverse sectors. It also stresses the importance of learning from both successful and unsuccessful pilots and of continued exchange of practices across Europe. Combining clear long-term direction with flexibility, harmonisation, collaboration and innovation is central to balancing efficient freight access with sustainable and liveable cities.

2. Introduction

This report responds to the 2025 mandate of the EC DG MOVE's Expert Group on Urban Mobility (a) to establish cooperation and coordination between the Commission, Member States, cities, regions and stakeholders on city access issues for businesses to address mobility challenges and implement the new Urban Mobility Framework and (b) to bring about an exchange of experience and good practice in the field of city access for businesses. The third task was (c) to deliver a report identifying key issues, case studies and best practice for urban access, including aspects such as examining the challenges for collective passenger road transport and road freight transport, service providers, when accessing cities, including challenges related to urban vehicle access regulations and parking; examining the role and effects of access restrictions on the development of sustainable tourism and commercial fleet transition of cities applying the regulations.

This report is one of three issued by the subgroup, addressing the impacts of city access restrictions on road freight transport. This is complemented by two other reports on coach transport and on mobility service providers.

The report draws on the input of EGUM sub-group members, as collected through a dedicated workshop, qualitative interviews (both in-person and online), a stakeholder questionnaire, free-text written input. This report has relied on input from the following organisations:

- Interviews: Portugal (IMT), Municipality of Braga (PT), City of Amsterdam (NL), T&E
- Completed questionnaires: ACEA, Greek Ministry of Infrastructure and Transport, City of Stockholm
- EGUM subgroup meeting: kick-off meeting on 19 February 2025; freight-focused meeting on 20 May 2025 with input from City of Graz, City of the Hague, POLIS, final meeting on 9 September 2025.
- Free-style text or reports submitted: ALICE, T&E, Portugal (IMT) and Municipality of Braga (PT), the Dutch Ministry of Infrastructure and Water Management.

This report focuses on city access for road freight. It builds on earlier EGUM deliverables on UVARs and Parking, zooming in on how access measures are experienced by freight operators and how cities are experimenting with new approaches to freight access, logistics hubs and zero-emission transitions. The report is intended for city authorities, national governments, EU institutions and stakeholders involved in urban mobility and logistics. Its aim is to provide a structured overview of current challenges and best practices and highlight approaches that can inspire future work.

3. Description of the Market Segment

Urban freight is a diverse and rapidly evolving market segment. It encompasses:

- Parcel and express delivery operators, responding to e-commerce growth;
- Retail and Fast-Moving Consumer Goods (FMCG) logistics, supplying supermarkets, shops, hospitality and tourism;
- Construction logistics, including material deliveries, waste removal and heavy machinery;
- Service providers and tradespeople, often using LCVs for multi-purpose trips (maintenance, repairs, installations).

These activities are often concentrated in urban nodes, which are critical interfaces in the TEN-T network. First- and last-mile operations connect long-distance corridors to dense urban areas, where space is limited and a wide range of users compete for road and curbside capacity.

Key trends are affecting this market segment, these include increasingly ambitious environmental and climate objectives, rapid growth in e-commerce; ongoing fleet transition and associated infrastructure needs and finally, increasing digitalisation and data demands.

Most European cities have or are introducing UVARs, these can take the form of low- and zero-emission zones, congestion charging and other measures to tackle air pollution, noise and emissions. Many are also setting targets for zero-emission urban logistics. At the same time, there is increased parcel volumes and higher expectations for fast delivery. Furthermore, tourism, with potential for sharp fluctuations in visitor numbers, also create unpredictable demand for goods, high parcel volumes from tourist-driven e-commerce and food delivery, and waste management, temporarily overloading delivery networks, parking zones and freight corridors. These developments create more frequent and fragmented trips, putting pressure on curbside space and increasing the importance of efficient loading and unloading.

Freight operators face increasing expectations to adopt zero-emission vehicles. However, high upfront costs, limited availability of suitable vehicles and infrastructure and uncertainties in local rules complicate investment decisions, particularly for SMEs. Within this context, city access rules and infrastructure play a decisive role in determining how, when and with what vehicles goods can reach urban customers.

In link with these, cities and operators are experimenting with digital permits, geofencing, real-time access management and logistics data platforms. However, concerns about data privacy, driver workload and commercial sensitivity are being raised.

4. Summary of Summary of EGUM Recommendations Relevant to Freight Transport

a. Urban Vehicles Access Regulation:

The 2024 EGUM recommendations on UVAR highlight several issues that are relevant for road freight operators. We think it is useful to highlight the most important aspects because they align very well with the challenges (in section 5) that emerge from the fact-finding process this subgroup has conducted. In this view, this chapter summarises and consolidates recommendations from previous EGUM reports that are particularly relevant for freight access to cities and urban logistics. It does not introduce new recommendations but highlights elements that provide the framework for this report and the most relevant EU projects and case studies.

In March 2024, the European Commission Expert Group on Urban Mobility (EGUM) adopted its Recommendations, best practices and possible actions on establishing and operating Urban Vehicle Access Regulations (UVARs).¹

For the purposes of EGUM's work, UVARs are measures that regulate motor vehicle access to urban areas through regulations, physical interventions or pricing instruments. They include, for example, low- and zero-emission zones, congestion charging, limited traffic zones, access permits for pedestrian areas and time- or weight-based restrictions. UVARs are designed to manage urban mobility, improve environmental sustainability, quality of life and support EU

climate targets (including the goal to reduce greenhouse gas emissions by at least 55% by 2030).

The UVAR recommendations underline that:

- UVARs should be integrated into Sustainable Urban Mobility Plans (SUMP) and supported by impact assessments, stakeholder consultations and comprehensive communication strategies.
- Enforcement must be transparent, proportionate and compliant with GDPR. Road signage should be clear and, where possible, harmonised at UNECE level.
- Digital representation of UVARs is essential for fair accessibility, with obligations under the Single Digital Gateway and the ITS Directive to provide machine-readable UVAR data via National Access Points (NAPs).
- UVARs should be predictable and stable over time and can be used to support the uptake of low- and zero-emission vehicles when combined with appropriate transitional arrangements and exemptions, particularly for SMEs and essential services.
- UVARs work best when designed in coherence with broader urban mobility strategies, land use and logistics planning.

The report puts forward a number of key recommendations to establish and operate more seamless UVARs. This includes the recommendation to improve road-user information and compliance. It is suggested that this can be achieved by improving communication strategies and digital tools to increase awareness and compliance, including harmonised signage and digital access information. The report also recommends to implement the new provisions on UVAR digitalisation under the ITS Directive and Single Digital Gateway, leveraging tools such as UVAR Box and DATEX-II profiles.

The report also calls for efficient cross-border enforcement. To achieve this, members recommend to develop vehicle information-sharing approaches that allow enforcement without pre-registration and support mutual recognition of vehicle conformity across Member States and to use the revision of the Cross-Border Enforcement (CBE) framework to address remaining gaps, including future coverage of zero-emission zones.

Finally, the report also stresses the importance of integrating UVARs with SUMP and the need for stakeholder engagement. It is recommended to clarify the relation between UVARs and SUMP and provide guidance on integrating access regulations with wider mobility and logistics strategies. The report also recommends to involve non-resident stakeholders (including freight operators, SMEs and tradespeople) from the outset and maintain ongoing dialogue and capacity building.

The UVAR report also builds on several relevant EU-funded projects and studies, including: UVAR Box,ⁱⁱ UVAR Exchange,ⁱⁱⁱ CIVITAS ReVeAL^{iv} and a 2017 Study on Urban Vehicle Access Regulations.^v

b. Parking and Curbside Management

In December 2024, the EGUM Plenary adopted its report Increasing the positive impact of parking policies on the city.^{vi} While focused on all vehicle types, several points are particularly relevant for freight.

The report calls for the strategic integration of freight in parking policy, recommending that parking and curbside management should explicitly consider freight and service vehicles, and be linked to overall access strategies and SUMP.

In link with this, the report calls for flexible curbside allocation, ensuring that loading and unloading zones are designed in a way that can adapt to changing demand (by time of day, day of week or season) to increase efficiency and reduce conflicts between users. Digital permit and enforcement systems are put forward as crucial to improve compliance and provide data for planning.

The report also highlights that parking infrastructure can facilitate the roll-out of charging infrastructure for light- and heavy-duty vehicles, including at depots and hubs. Finally, the report calls for the transparent use of parking and curbside revenues to support sustainable mobility measures can improve public acceptance.

Although the full parking report is not repeated here, it draws on work such as the EU-funded Park4SUMP project, which provides practical guidance and game-changer examples on integrating parking into SUMPs, and on city case studies where parking revenues are earmarked for sustainable mobility (e.g. Ghent).

c. Urban Logistics and SULPs

The 2024 EGUM recommendations on Urban Logistics and SULPs put forward a number of relevant recommendations:

- Developing an EU-wide common approach for data collection and voluntary data sharing for Sulp
- Update existing Sulp guidance and include new elements
- Provide expert support and training to local authorities on urban logistics
- Set a policy framework at national level to ensure safety, social sustainability, and good working conditions of all workers of the logistics sector
- Set a policy framework to encourage collaborative logistics to share vehicles and assets
- Strengthen the collaboration between local authorities and private sector, establish or maintain effective partners to ensure various actors' contributions to policy making
- Develop awareness campaigns and incentive schemes to encourage sustainable e-commerce activities from business and citizens

5. City Access for Freight Transport - Challenges

The input gathered through the subgroup shows a high degree of convergence on the main challenges faced by freight operators and cities in relation to city access. This chapter summarises the main findings. It looks at how market conditions, access regulations, physical infrastructure and governance arrangements can either support or hinder fair, efficient and sustainable urban freight. A final section focuses specifically on the challenges faced by public authorities.

a. Market Access

Market access refers to the economic and regulatory conditions under which freight operators can invest in and operate low- and zero-emission fleets in cities. This subsection outlines key barriers related to vehicle costs and risks associated with fleet transition, charging and refuelling constraints, regulatory inconsistencies, notably regarding weight restrictions and increasing data and digital requirements.

1. Cost and risk of fleet transition

Freight operators, and particularly SMEs, the high upfront costs for zero-emission vehicles remains a barrier, despite the fact that electric trucks generally have lower Total Cost of Ownership (TCO) than vehicles with other powertrains. For certain urban freight operations, suitable vehicles are not yet widely available or remain more expensive than internal combustion engine (ICE) equivalents. Mapping of market demand can support the increased vehicle availability. Furthermore, limited experience with residual values and long-term operating costs increase perceived investment risk.

2. Charging and refuelling constraints

Depot-level charging for LCVs and trucks is often constrained by grid capacity, permitting procedures and long lead times. Public charging points may be too expensive for regular use or not designed for freight vehicle layouts or dwell times. For heavy-duty vehicles, the lack of dedicated high-power charging and refuelling infrastructure in urban areas is a major barrier to the uptake of zero-emission heavy-duty vehicles. There are different experiences with regards to the operational impact of transitioning to EVs in freight.

3. Regulatory inconsistencies for zero-emission vehicles

The transition to zero-emission freight vehicles faces a significant challenge due to regulatory inconsistencies at EU and local level. While the revised Driving Licence Directive now allows holders of a B licence for over two years to operate alternatively fuelled vehicles up to 4.25 tonnes, thus addressing the extra weight of batteries compared to internal combustion engine (ICE) equivalents, many local regulations still impose strict 3.5-tonne limits in certain streets or zones. This mismatch means electric vans, despite being treated as equivalent to ICE vans under EU law on Driving Licences, risk fines simply because their gross vehicle weight exceeds outdated local thresholds.

Other EU, national and municipal rules, as well as road signage, are not yet adapted to mitigate the regulatory effects of the extra weight of zero-emission vans. Without harmonisation, businesses seeking to deploy zero-emission vehicles in cities will continue to face barriers, undermining efforts to decarbonize urban freight.

4. Data and digital requirements.

Digitalisation of logistics operations and access management, including digital tracking, can bring many benefits to cities, such as improved enforcement, improved and dynamic regulation and planning. However, operators also underlined the administrative burden and sensitivity of sharing certain data (e.g. parcel weight/volume). Concerns include data privacy, commercial confidentiality, increased driver workload and unclear benefits in return for data provision.

b. Zonal Access

Zonal access covers the rules that govern which vehicles can enter which parts of a city, when and under what conditions. This subsection highlights the operational complexity created by fragmented UVAR designs, varying time windows and delivery conditions and evolving low- and zero-emission zones. It also underlines the importance of legal certainty, clear communication and workable enforcement, including recent developments such as Slovenia's GDPR-compliant framework for camera-based access control.

1. Varying UVAR rules across cities create complexity

Operators face a patchwork of UVAR designs, emission standards, signage, time windows and exemptions. Following EU principles of subsidiarity, local authorities are responsible for adopting rules and regulations regarding vehicle access, including low or zero-emission zone policies and other access and circulation policies. The varying design and implementation of UVARs has led to a fragmentation across Europe, making it difficult for operators to navigate due to the many different types of schemes, timelines, exemptions, and enforcement methods. Even within a single Member State, differences in scope and implementation timelines increase complexity and costs. This can lead to suboptimal routing, higher mileage, additional administrative burden (e.g. vehicle pre-registration for cross-border freights) and difficulties in planning long-term investments.

Of particular concern to operators are (i) the variety of enforcement methods (automatic number plate recognition, stickers, etc), (ii) the different channels that must be followed to ensure the vehicle is compliant with the enforcement method (online registration, stickers, etc), (iii) the diversity of exemptions, and (iv) The lack of a fully functional and widely known centralised platform for UVAR information.

2. UVAR rules impact efficiency

Many cities limit freight deliveries to specific hours (e.g., nighttime or early morning) to reduce congestion. These time-based access restrictions have a significant impact on logistic operations. Cities often apply differing time windows for deliveries in pedestrian areas and shopping streets. For multi-city routes, operators must reconcile conflicting windows, sometimes leading to additional trips or longer working hours. Restrictions can also affect the feasibility of night-time or off-peak deliveries, even where quiet, low-emission vehicles are available.

Cities that impose access restrictions based on vehicle weight or dimensions often unintentionally incentivize the use of smaller vehicles, which can reduce efficiency and increase emissions. While smaller vehicles are necessary in certain sensitive areas, such as vulnerable quays, it is generally more sustainable and practical to use larger vehicles where possible. For example, a single truck can replace up to 13 delivery vans; using multiple vans instead of one truck not only increases congestion and emissions but also compromises road safety and exacerbates the shortage of qualified drivers. Striking the right balance between operational efficiency and local restrictions is therefore essential for greener and safer urban freight transport.

Finally, certain cities also prevent access to certain roads or areas or set car-free areas and pedestrian zones; this creates complications for the supply of goods to local businesses. To avoid these zones, delivery routes can be made longer and hence less efficient and sustainable. It also increases the complexity of route planning. This particularly impacts last-mile delivery.

Certain cities also apply these time, weight or zonal restrictions to zero-emission vehicles, potentially missing an opportunity to offer an operational incentive for their uptake.

3. Legal certainty and communication for low- and zero-emission zones

Legal and regulatory certainty is key for commercial road transport operators. Operators need predictable timelines and clear communication to adapt fleets and logistics models. Late changes to UVAR designs or implementation dates or limited communication to non-resident operators, can undermine compliance and investment planning. Furthermore, first movers and early adopters will be disadvantaged if public authorities cancel plans for the establishment of low- or zero-emission zones.

It is crucial that all stakeholders involved in city logistics are involved in the process from the outset. Less-represented actors, such as self-employed tradespeople, carpenters, etc... can be difficult to reach, inform and involve in the process of UVAR setting. However, it is key that a wide range of businesses are involved in the process to take into account their specific needs and ensure high levels of public acceptance.

4. Night deliveries with zero-emission vehicles

One of the solutions put forward to incentivise road freight transport with zero-emission vehicles in cities is to allow for night-time delivery with zero-emission vehicles. Night-time deliveries using quiet zero-emission vehicles have been piloted in several cities, with positive results in terms of congestion and emissions. However, practical obstacles remain, including staffing at receiving sites, neighbourhood noise concerns, and regulatory constraints (e.g. on loading/unloading at night).

c. Access to Physical Infrastructure

Access to physical infrastructure relates to the availability and suitability of loading/unloading areas, parking, logistics hubs and energy infrastructure for freight. This subsection sets out challenges around the quantity and location of loading zones, competition for scarce street space, grid constraints and permitting delays for charging and refuelling infrastructure and strategic planning for urban logistics hubs at city and Functional Urban Area level.

1. Shortage and location of loading/unloading zones and parking

Many cities report limited number of appropriate loading and unloading zones. This lack of designated areas can lead to illegal parking or delays, with freight vehicles often forced to double-park or use general parking spaces, creating safety risks and impacting logistics. Generally, within cities, space is a scarce resource. Competition for land/space is fierce and road freight transport is often not prioritised.

2. Grid constraints and permitting delays

Where operators wish to install charging infrastructure at depots or hubs, they may face lengthy permitting procedures and local grid bottlenecks. This can delay fleet transition and complicate planning for zero-emission zones.

As illustrative example of this is the situation in the Netherlands. In the Netherlands, there has been a rapid increase in electric HDVs on the roads. Today, there are nearly 2,000 battery electric trucks on Dutch roads and, given current trends the expectation, is that by 2030 approximately 25,000 battery electric trucks will be on the road.^{vii} By 2030, the share of zero-emission trucks in new sales is expected to be roughly 50%. The main factor which will determine whether this can be achieved is whether grid expansion can meet this growth rate.

3. Placement and role of logistics hubs

The location of city logistics hubs should be carefully considered. urban logistics hubs, consolidation centres and microhubs are not always integrated into city planning in a strategic way. Hubs located too far from delivery areas can increase mileage and costs; too many small hubs can fragment operations. Conversely, the absence of suitable sites limits the uptake of consolidation and bike-based last-mile solutions.

Furthermore, placing urban logistics hubs right at the borders of zero-emission zones to facilitate transshipment from diesel to zero-emission vehicles may not be conducive to the hub's long-term viability, as zero-emission zones may continue to expand and the hub may require relocation.

d. Governance and Engagement

Governance and engagement refer to how cities, regions, national authorities and stakeholders coordinate on freight policies and access measures. The 2024 EGUM Recommendations on Urban Logistics and SULPs already cover some of the challenges on this front and put forward a list of recommendations to address these (as summarised above). This subsection briefly outlines gaps in integration of freight in city planning, limits to stakeholder involvement (particularly SMEs and tradespeople), and how competitive market structures and low margins can slow innovation and the low-carbon transition.

1. Limited integration of freight in city planning

As mentioned in the 2024 EGUM recommendation on SULPs, the integration of urban logistics within the global mobility framework of cities is a key challenge.^{viii} Most cities have Sustainable Urban Mobility Plans (SUMPs) that marginally consider or do not mention urban freight. The same applies to Low Emission Zones (LEZ), Zero Emissions Zones (ZEZ). This translates into difficulties as the transport of passengers and freight share networks, infrastructures and urban space and should therefore be considered in tandem.

2. Insufficient stakeholder involvement

Where freight operators, vehicle manufacturers, retailers, construction stakeholders and SMEs are not systematically involved from an early stage, regulatory measures may not fully reflect operational realities. This can lead to low acceptance, non-compliance or the need for later adjustments. EGUM members signal that access regulations often affects small companies relatively more than larger companies. This can be addressed in the stakeholder involvement.

3. Conservative market structure and low margins

The logistics market is highly competitive and operates on low margins. Operators can be reluctant to engage in pilots or new models (such as white-label delivery or shared hubs) when the business case is uncertain or benefits are hard to capture. This can slow down innovation.

e. Challenges faced by public authorities

Finally, local/regional and national authorities face certain challenges in implementing UVARs, parking restrictions and access to infrastructure. This can have a direct impact on city access for freight transport operators and on the effectiveness of measures meant to enable fleet transition. Stakeholders mentioned the following challenges: (1) **institutional coordination issues**, leading to a lack of effective coordination among stakeholders; (2) **regulatory complexity**, which can lead to difficulties in a uniform implementation, as well as create ambiguities that hinder enforcement and enable resistance or evasion of compliance by drivers; (3) **legal restrictions**, Municipalities face challenges in fully optimising the systems to control UVAR or parking restrictions, due to constraints on the use of video monitoring for enforcement. This limitation makes it more difficult to effectively monitor and penalise the misuse of loading zones - an element that could significantly improve the overall performance of the system; (4) **technical limitations**, related to legal constraints in the use of cameras, sensors, or other technological devices that enable image capture, identification, and infringement recording, as well as their enforcement; or issues with technological compatibility among different control systems, particularly between municipalities/regions, hindering integration and efficient management of access control; (5) enforcement challenges due to **limited resources for monitoring and ensuring compliance** with urban area access regulations; (6) **insufficient supporting infrastructure**, considering the limited access to multimodal terminals, urban consolidation centers, and digital tools for real-time data. These

infrastructure gaps hinder the ability to implement efficient and sustainable urban logistic systems.

6. City Access for Freight Transport - Good Practice Examples

This chapter presents illustrative examples of how cities, Member States and stakeholders are addressing the challenges identified in Chapter 5. The examples are not exhaustive and do not constitute formal recommendations. They demonstrate how flexibility, harmonisation and innovation, combined with collaborative policy design, can support fair, efficient and sustainable access for freight.

a. Integrated Governance

Integrated governance refers to frameworks and initiatives that align freight, access and climate policies across cities, regions and national authorities. The examples in this subsection show how national guidance, harmonised access rules and digitalisation can reduce fragmentation and provide long-term certainty for operators. Cities such as Stockholm work continuously with adapting regulations for heavy vehicles to support the transition to zero-emission vehicles.

1. Clear transition pathways: the Netherlands

A fragmented approach to LEZ and ZEZ, where each city sets its own access policies, creates complexity and uncertainty for transport operators. The Netherlands is a European frontrunner in addressing the transition for freight vehicles. This challenge was addressed directly through the setting of a nationwide strategy for low- and zero-emission zones for freight. This is the world's first nationwide programme targeting freight vehicles. From 2025, 18 cities will operate zero-emission zones with harmonised rules on vehicle standards, timelines, and exemptions, expanding to around 30 municipalities by 2030.^{ix} A phased transition will gradually tighten entry requirements until only zero-emission trucks and vans are permitted by 2030. This harmonisation simplifies planning for businesses, improves efficiency, and reduces administrative burdens for operators serving multiple cities.

Crucially, the success of this approach stems from having a clear “spot on the horizon.” In 2014, the Green Deal Zero-Emission City Logistics was signed by government bodies and the business community, setting a firm objective: zero-emission zones by 2025. This shared commitment provided certainty and alignment, making today's implementation possible. Without such a long-term vision, the rollout of zero-emission zones would likely have been far more fragmented and delayed.

The phased introduction of these ZEZ has had a significant impact on fleet transition. The Netherlands leads Europe in freight electrification. By early 2025, 78.4% of new vans registered in the Netherlands were electric, compared to just 8.5% across the EU. Electric truck registrations in the Netherlands have grown 187.6% in the first half of 2025, while in the EU only by 46.1%. Municipalities with ZEZ-F commitments see higher uptake of electric vans (6.1% vs. 1.7% in non-ZEZ-F areas). Furthermore, neighbouring municipalities also benefit, with a 2.9% share of electric vans, suggesting a spill-over effect. Company strategies also highlight ZEZ-Fs as a key driver, supported by clear timelines and strong engagement.

The Dutch experience demonstrates that ZEZs are a game-changer. They accelerate the transition to electric delivery fleets and reshape city logistics by providing clear rules and certainty businesses need to invest in electric fleets. However, success also depends heavily on combining regulation with financial support, enforcement and the availability of affordable charging infrastructure and grid capacity.

2. National guidance: Portugal's Urban Logistics Handbook

Portugal has developed a national Urban Logistics Technical Handbook (Caderno Tecnico Logistica Urbana)^x to guide cities in planning sustainable urban logistics and last mile deliveries as a way to promote balance between economic and sustainable solutions. The handbook focuses on coordinating municipal mobility regulations to prevent conflicting rules that could have a financial impact on local businesses.

Some of the key measures put forward are (1) standardizing vehicle access policies across cities; (2) creating low-emission delivery zones; (3) supporting off-peak delivery times to ease congestion and (4) encouraging data sharing between municipalities and logistics operators for smarter planning.

3. National programme to support local authorities in developing urban logistics plans: InTerLUD+ in France

The Innovations Territoriales et Logistique Urbaine Durable+ (InTerLUD+)^{xi} is a national initiative aimed at accelerating the transition toward sustainable urban logistics in France. In total, 61 urban areas will be provided with 4 years of financial and technical support to develop and implement Urban Logistics Charters. It builds on the previous InTerLUD programme and focuses on three main pillars (1) supporting territories with the implementation of their Urban Logistic Plans, (2) training and knowledge sharing, (3) creating a long-term knowledge hub. Overall, InTerLUD+ seeks to strengthen cooperation, deploy innovative solutions and create lasting resources to reduce the environmental impact of urban freight transport across France.

The InTerLUD+ programme is coordinated and supported by government ministries and agencies (DGEC, DGITM, ADEME) and programme carriers (Cerema, Logistic Low Carbon, ROZO).

4. Funding for municipalities to develop urban logistics solutions: Portugal

The Portugues government has allocated €75,000 per municipality through the Transport Fund to support the development of innovative and sustainable urban logistics solutions. These initiatives align with Portugal's broader goals around urban decarbonization, smart city innovation, and advancing sustainable mobility at the local level.

5. Public-private partnerships for charging infrastructure

Some cities are exploring partnerships with energy providers and logistics operators to deploy charging infrastructure at depots and hubs, especially for heavy-duty vehicles. By coordinating planning and sharing information on grid capacity and demand, these partnerships help ensure that infrastructure is located where it is most needed for freight.

6. Dynamic traffic regulation and geofencing

Several cities are piloting geofencing and dynamic traffic regulations that adjust access rules based on time of day, vehicle type or real-time conditions. These approaches allow more flexible management of freight flows and can prioritise zero-emission vehicles during sensitive periods. Deliveries to receiver on pedestrian streets are permitted in Stockholm, often within certain time intervals.

7. ANPR enforcement: Slovenia

In Slovenia, the introduction of smart traffic management and access control systems was initially constrained by national data protection rules. Following an amendment to the *Zakon o celostnem prometnem načrtovanju (ZCPN-A)*, adopted on 4 April 2025 and entering into force on 19 April 2025, cities can now deploy camera systems (including ANPR) to register and

manage vehicle access to restricted urban areas, provided that data protection safeguards are respected. This change, published in the Official Gazette No. 22/25 on 9 May 2025, provides a clear legal basis for digital enforcement of city access while maintaining GDPR compliance.

8. Data sharing via digital permits: Antwerp

Antwerp has introduced a digitised permit system for deliveries in pedestrian areas. The system provides real-time enforcement data and allows the city to monitor usage patterns, while giving operators a clear framework for access. The experience illustrates how digital tools can both support compliance and inform planning. Digital permits also provide data that can be used to refine access rules and better understand freight patterns.

b. Stakeholder Engagement

Effective city access policies depend on early and structured engagement with operators, shippers, SMEs and other stakeholders. This subsection presents examples of initiatives that bring public and private actors together to co-design solutions and align regulatory foresight with business realities. For instance, the Stockholm experience shows that cooperation with and interest of property owners is crucial for developing logistics hubs, especially in underused garage spaces.

1. Early engagement and cooperation on low- and zero-emission zones: The Netherlands

In the Netherlands, transport operators anticipated access challenges more than a decade ago and initiated dialogue with cities on the design of low- and zero-emission zones. The national government joined as a facilitator, providing a common framework and financial schemes that helped ease the investment burden for upgrading fleets. This tripartite cooperation between operators, cities and the national government has allowed businesses to actively shape access rules, secure predictable timelines and prepare operationally for upcoming changes.

2. Fostering good and virtuous Logistics practices through the implementation of public strategies: the example of the Ile-de-France Region

The Ile-de-France Region enacted in 2022 its second freight and Logistics strategy aimed at promoting four axes: « know more to act better », decarbonisation, maintain and consolidate the regional Logistics framework in planning documents, and promote the regional ecosystem through strengthening training, communication, and the coordination of collective actions and partnerships.

To foster concrete results of these objectives, the Region has allocated public funds to support projects that have turned out to be innovative best practices aligned with the ambition to promote the development of multimodal logistics chains notably favouring inland waterways and to improve intermodality for “last mile” deliveries through the development of tailored containers, suitable logistics hubs and the use of appropriate zero-emission vehicles and a long-term strategic vision for freight operations in dense urban areas.

Sogaris, for instance, manages Les Amarres – Paris Austerlitz, a river-based logistics hub integrated into a complex that combines socio-economic activities, productive uses and urban logistics in a location allowing for multimodal operations to be carried out. The project, developed in partnership with Haropa Port, has received substantial regional support. The same company also operates La Chapelle International, another major logistics site designed to receive freight trains, although this facility has not yet begun regular rail operations. High

rail-access costs and the heavy saturation of rail slots (*sillons ferroviaires*) in the region are cited as the main obstacles.

In addition, for many years, the Region has closely monitored the development of freight transport on the Seine. Franprix has delivered goods to the heart of Paris using the river for a few years now, a system that avoids around 450,000 kilometres of road traffic every year.

More recently, in 2022, a standardised multimodal container for last-mile deliveries (**Box2Home**) was launched with IKEA, financed by the Region. This arrangement enables goods to be carried by barge from the port of Gennevilliers to the port of Bercy in the Paris city centre, followed by B2C delivery in electric vehicles for the final kilometre. The partnership is expected to expand with the regional support in 2026 of the extension of the port of Limay where a new Ikea logistics platform is to settle, but concrete results are already visible: the scheme eliminates around 12,000 truck trips every year, reducing both congestion and emissions in central Paris.

Lastly, another identified good practice involving the optimisation of construction sites logistics operations in the Paris area, through consolidation of deliveries from multiple suppliers, lies with the Region's support of the **BATAIL Log - City Flow** project which introduces a new operating model that incorporates a river link with materials collected at a consolidation hub near a port, transferred into multimodal containers, transported by barge as close as possible to the worksites, and delivered for the last mile by zero-emission vehicles.

c. Infrastructure and Operations

Infrastructure and operations examples focus on how cities and operators are reorganising logistics hubs, loading space and last-mile operations to support low- and zero-emission freight. The cases illustrate the role of urban logistics hubs, microhubs, flexible loading zones and depot-based charging, as well as strategic hub placement at the Functional Urban Area level.

1. Strategic placement of urban logistics hubs

Experience from several Member States shows that logistics hubs should be located and sized strategically rather than on a simple "one hub per city" basis. In some cases, a shared hub in a smaller, central location between cities can be more efficient, especially when serving multiple municipalities within a Functional Urban Area. Locating hubs at the edge of a zero-emission zone can be a useful transitional solution, but long-term strategies should anticipate zone expansion and consider hubs that can serve wider catchment areas, including surrounding smaller municipalities.

2. Mapping and planning of urban logistics hubs: TLN

In the Netherlands, the sector association TLN developed an overview of urban logistics hubs via the stadshubs.nl platform.^{xii} This mapping exercise provides public authorities and operators with a clear picture of existing hub locations and functions, helping to identify gaps, overlaps and optimal locations for new facilities. Similar mapping could be undertaken by city networks, national ministries or sector associations in other Member States, with national platforms encouraged to centralise and maintain these.

3. Piloting urban logistics hubs and microhubs: Madrid, Braga, Hamburg

Cities such as Madrid and Braga are experimenting with urban logistics hubs and microhubs, including the reuse of indoor garages and other existing buildings for last-mile operations. Braga is a demonstration city in the European project LogE-Hub focused on deploying data-driven platforms for urban logistics. The project involves the development of micro-hubs and

real-time data integration to optimise freight flows. A pilot involving 20 logistics operators is under development, aiming for measurable reductions in vehicle kilometres travelled (VKT) and emissions. Hamburg is testing multi-purpose micro-recycling centres that also function as logistics nodes, combining circular economy objectives with freight consolidation.

4. Charging at hubs and depots

Operators and cities are working together to integrate charging stations into depots and logistics hubs, particularly for vans and medium-duty vehicles. Strategic placement along main access corridors and in urban nodes helps facilitate the transition to electric fleets, while balancing grid capacity constraints.

5. Dedicated lanes for low- and zero-emission vehicles

In some cities, dedicated or time-restricted lanes are being considered or piloted for low- and zero-emission freight vehicles. These measures can support efficient operations and provide additional incentives for fleet transition, particularly in congested corridors.

6. Flexible loading zones

Cities have piloted flexible loading and unloading zones that vary in size and location based on real-time demand and support off-peak and night-time deliveries with quiet vehicles. This helps reduce conflicts with other road users and supports more efficient use of street space.

Portuguese cities such as Lisbon and Porto are pushing ahead with the implementation of low emission zones (LEZs) and urban access regulations as part of a wider national strategy to accelerate the transition to low and zero emission vehicles. As part of this effort, two pilot projects are currently underway. These are fully funded by the Portuguese Environmental Fund (supported by Carbon Tax revenues) and aim to test and evaluate innovative last-mile urban logistics solutions. The pilot projects are being implemented in Lisbon's Baixa Pombalina area and Porto's Bolhão Market area, with each city receiving 250,000 euros in public funding. Implementation of the projects is scheduled for the calendar year 2025, with evaluation and reporting scheduled for the beginning of 2026.

These pilot projects, led respectively by Lisbon City Council and EMEL (Lisbon's municipal mobility and parking authority), and by Porto City Council, are considered living laboratories, designed to generate logistics data, improve operational efficiency and inform long-term policy and infrastructure planning. In particular, the pilot project in Lisbon aims to develop a digital application that utilizes real-time occupancy data from street-level sensors to support both user-facing services and regulatory enforcement of loading zones.

d. Incentives and Support

Incentives and support measures help make the transition to cleaner freight financially and operationally feasible, especially for SMEs. They can also stimulate more sustainable logistics models, such as cargo bikes, waterways, or night-time fully loaded deliveries. This subsection highlights subsidy schemes, transitional exemptions, time-based incentives and recognition of lower-emission technologies where full zero-emission operation is not yet possible.

1. Reinvesting road revenues to accelerate zero-emission road freight: the Netherlands

The high upfront cost of electric trucks remains a major barrier to adoption, even though the total cost of ownership (TCO) gap with diesel is expected to close before 2030 for most applications, including long-haul transport. To accelerate this transition, the Netherlands has introduced several financial incentives aimed at reducing the TCO gap for zero-emission

heavy-duty vehicles (ZE-HDVs). Starting mid-2026, a national truck toll will apply, with an 80% discount for ZE-HDVs. The expected net revenues, around €350 million, will be reinvested into decarbonizing the road freight sector through targeted subsidies.^{xiii} These include schemes for private and public charging infrastructure (SPRILA^{xiv} and SPULA^{xv}), purchasing subsidies for zero-emission trucks,^{xvi} hydrogen mobility support (covering refueling stations and H2-HDVs),^{xvii} and incentives for clean and zero-emission construction equipment.^{xviii} A substantial portion of these subsidies is financed by future toll revenues, creating a self-reinforcing system that supports the transition.

2. ZEZ exemptions for SMEs: the Netherlands

To support smaller operators, Dutch cities apply harmonised exemption rules for zero-emission zones. Companies can currently apply for exemptions in three main scenarios: (i) grid congestion that prevents timely transition to zero-emission vehicles; (ii) specific personal circumstances (such as imminent retirement); and (iii) economic hardship (e.g. risk of bankruptcy). These provisions help safeguard continuity of service and protect vulnerable businesses, while keeping the overall direction towards zero-emission city logistics.

e. Operational Efficiency

Operational efficiency measures seek to reduce empty kilometres, optimise routing and consolidate flows while maintaining service levels. The examples here show how night-time deliveries with electric trucks, consolidation centres, shared delivery systems, cooperative hubs and digital access and permit systems can improve efficiency and support fair, efficient and sustainable access.

1. Off-peak and night-time deliveries with electric trucks: Sweden

In Gothenburg and Stockholm, night-time deliveries with electric trucks have been piloted for sectors such as retail and hospitality. Digital access management, silent trolleys and careful planning help minimise disturbance. These pilots have demonstrated benefits in terms of reduced congestion and emissions, as well as improved working conditions for drivers. Stockholm's strategy is to enable 24/7 deliveries for electric trucks (quiet off-peak transport taking into account noise guidelines), which has proven beneficial for operators. Sweden recently amended rules to formally allow this in the entire country.^{xix}

2. Mutualisation and consolidation of logistics operations: TransMission (BE, NL, LU)

Mutualisation, meaning to pool transport resources and standardise containers, can be used as a tool to reduce empty kilometres and increase efficiency. TransMission, a network of transport operators active in Belgium, the Netherlands and Luxembourg, illustrates how consolidation across operators and borders can improve efficiency.^{xx} By pooling linehaul capacity and consolidating deliveries for multiple carriers, TransMission reduces empty kilometres and allows more direct deliveries into urban areas. This type of cooperative model relies on common standards, mutual trust and careful attention to competition rules and can be supported by city and national policies that recognise and facilitate shared logistics platforms.

3. Cooperative urban logistics hub and shared delivery systems: GrazLog pilot (Graz, Austria)

The GrazLog pilot (2018–2023) in Graz, Austria, tested a cooperative urban logistics hub and sustainable last-mile solution for the historic city centre.^{xxi} The project aimed to reduce freight traffic in the pedestrian zone, improve the shopping experience, reduce emissions and optimise vehicle utilisation. Building on earlier EU projects such as Smartset^{xxii} and

NOVELOG^{xxiii}, GrazLog established a centrally located hub with a “white-label” operating model open to all carriers, cross-company consolidation of shipments and last-mile deliveries using electric trucks and cargo bikes. The pilot included the development of an operator and business model, hub location planning, route optimisation and a monitoring and evaluation framework. While the pilot phase ended in January 2023, the project generated valuable lessons on the conditions needed for viable cooperative hubs, the importance of stakeholder cooperation (city authority, Chamber of Commerce, business owners), the importance of long pilot durations and the role of additional services (e.g. pick-up stations, just-in-time deliveries) in making the model attractive for businesses.

7. Conclusion

The work of the subgroup confirms that significant challenges for freight city access remain. City access for freight transport sits at the intersection of multiple, sometimes competing, policy objectives: climate mitigation, air quality, noise reduction, safety, economic vitality and social inclusion. Ensuring fair, efficient and sustainable access to urban areas requires balancing these objectives in a coherent way.

The report highlights the importance of collaborative policy design that combines regulatory foresight with business realities. Early and structured dialogue between cities, national authorities, logistics operators, vehicle manufacturers and other stakeholders can reduce uncertainty, improve the practicality of measures and enhance public acceptance. The examples collected also show that not all pilots lead to permanent schemes. Documenting both successes and failures and sharing lessons across cities and Member States is therefore critical.

Continued exchange of practices, data and governance approaches within EGUM and beyond can support a more coherent European landscape for city access, while leaving room for local adaptation. Combining clear long-term direction with flexibility, harmonisation, collaboration and innovation is central to delivering fair, efficient and sustainable freight access in increasingly dense and liveable European cities.

8. Annexes

a. List of acronyms and abbreviations

Acronym	Full name
ACEA	European Automobile Manufacturers' Association
ANPR	Automated Number Plate Recognition
DG MOVE	Directorate General for Transport
EC	European Commission
EV	Electric Vehicle
EGUM	Expert Group on Urban Mobility
IMT	Institute for Mobility and Transport
UVAR	Urban Vehicle Access Regulation
SUMP	Sustainable Urban Mobility Plan
SULP	Sustainable Urban Logistics Plan
TEN-T	Trans-European Transport Network
TLN	Transport en Logistiek Nederland
ZEZ	Zero-emission Zone
LCV	Light-commercial Vehicle
HDV	Heavy-duty Vehicle
LEZ	Low-emission Zone
ZEZ-F	Zero-emission Zone for Freight

b. List of organisations participating to the subgroup

Expert group on urban mobility – subgroup 2

City Access for businesses

Subgroup leaders

POLIS

IRU

Cities & regions

City of Amsterdam

Municipality of Braga

City of Graz

City of Stockholm

City of The Hague

Member States

Czechia

Greece

Lithuania

Malta

Poland

Portugal

Romania

Slovenia

The Netherlands

Organisations

ACEA

ALICE

CEMR

Cycling Industries Europe

EIT Urban Mobility

Ertico

ETF

Eurocities

LEVA-EU

MaaS Alliance

Move EU

T4SM

Transport & Environment

UITP

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