Relevant references to the topic CL5-2022-D6-02-02: Urban logistics and planning: anticipating urban freight generation and demand including digitalisation of urban freight from POLIS\_ALICE\_Guide-Zero-Emission-Urban-Logistics

## 3.1Smart Governance & Regulations

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| Topic | Learnings | Gaps | More info/Examples |
| Cities define Sustainable Urban Logistics Plans (SULPs) and emissions reduction target | 1. Freight and logistics need to be addressed specifically with a dedicated planning process. 2. When SULP is isolated, it may neglect the big picture, while as part of a SUMP it adds complexity but ensures that freight is not forgotten in overall transport planning. 3. Logistics planning require skills, resources and collaboration with Companies. 4. Once defined long-term targets, it is necessary to define together the pathway and a roadmap for the intermediary steps on the short-medium term. 5. Changing the status quo may require addressing conflicts with citizens and particular sectors. 6. Understanding of freight and logistics flows and needs is vital. A targeted transition to emission-free operations for each stakeholder segment is desirable[[1]](#endnote-1) 7. Considering the regional and transnational dimension and policymakers to partner with[[2]](#endnote-2) 8. Identifying local city typology and looking for best practices as a first step. | 1. Few cities think of freight as a priority and have defined clear objectives and targets, although there are clear signs of growing awareness. 2. Few cities have SULPs and fewer have actual action plans to implement them. 3. SULP guidelines may need to include the perspective and strategic input from companies. 4. Lack of inhouse staff with freight skills working there. 5. Missing clear understanding of the different flows and categorization of actual logistics needs. 6. Lack of link between specific issues and their causes (e.g. which activities are actually generating congestion?) | [Topic Guide Sustainable Urban Logistics Planning](https://www.eltis.org/sites/default/files/sustainable_urban_logistics_planning_0.pdf) (2019)  [ELTIS SULP Guidelines Summary](https://www.eltis.org/sites/default/files/sump2019_d3_ayfantopoulou_georgia_certh.pdf) (2019)  [SULPITER project](https://www.interreg-central.eu/Content.Node/SULPiTER.html) Including examples of SULPs in Bologna, Brescia, Budapest, Maribor, Poznan, Rijeka and Stuttgart.  [ENCLOSE](https://urbanaccessregulations.eu/). Including guidelines on SULP for Small and Medium Cities and zero emission zones currently developed in [SURF project](https://www.polisnetwork.eu/surf/) |
| Measures incentivising the transition: Rewarding, recognition, incentives, subsidies schemes and enforcement of measures. | 1. Extended delivery windows, preferential lanes or parking, exclusive loading unloading areas have showed to be a good incentive for the adoption of clean vehicles[[3]](#endnote-3). 2. Small and Medium Enterprises (SMEs) require additional effort to make them engaged and supportive. 3. [UK Fleet Operator Recognition Scheme](https://www.fors-online.org.uk/) is having significant impacts regarding economic savings and social benefits. | 1. Not enough best practices are available. Sometimes there is no agreed position amongst city departments. 2. Actual requirements/needs for incentives or subsidies useful for companies to invest in e-vehicles aren’t always clear. 3. Very fragmented schemes across Europe. | [Trieste’s rewarding scheme](http://mobilitasostenibile.comune.trieste.it/wp-content/uploads/2020/08/all_15_relazione_generale_del_PUMS.pdf) for consumers picking deliveries to Pick-up Drop-off locations (PuDo)  [EIT Urban Mobility living labs report published](https://eit.europa.eu/news-events/news/eit-urban-mobility-living-labs-report-published) (2021) |
| Smart management of access regulations and controlled speed areas.  Urban Vehicle Access Regulation (UVAR) is a measure “to regulate vehicular access to urban infrastructure”[[4]](#endnote-4). Examples of UVAR include Low/Zero Emissions Zones, Congestion Charges, Traffic Limited Zones. It regulates under what conditions certain vehicles are allowed to access certain parts of a city[[5]](#endnote-5). Geofencing and other technologies can help control speed and enforce access to sensitive city areas. | 1. When designing such schemes, early engagement with local stakeholders is key. Enough resources need to be dedicated to this step. 2. Access regulation should be integrated in the national / federal system[[6]](#endnote-6) (“, otherwise cities will miss tools to make emission free delivery more attractive to the delivery operators. 3. Enforcement (physical, electronic, or virtual) is key to having a level playing field: regulation without enforcement is counterproductive as it only impacts those willing to follow. | 1. Definition of zones, procedures and vehicles access is not harmonized across Europe, so it is complicated for users to understand access and to develop scalable solutions. 2. Schemes are not always properly enforced. 3. Legal frameworks vary across countries and cities. National frameworks are needed to expand best practices. 4. Modelling, simulation and quantification of impacts is needed to understand the effects of UVAR schemes.. | [UVAR Box project](https://uvarbox.eu/). Digitising data of UVARs across Europe.  [Urban Access Regulations](https://urbanaccessregulations.eu/)  [UVAR Exchange](https://www.eltis.org/in-brief/news/uvarexchange-project-kicks) project, to enhance the experience of road users by improving the communication of information to drivers in the vicinity of UVARs.  [Dynaxibility4CE:](https://www.interreg-central.eu/Content.Node/Dynaxibility4CE.html) to expand existing UVAR schemes to integrate the Functional Urban Area.  [Civitas Reveal Project:](https://civitas-reveal.eu/) Regulating Vehicle Access for Improved Liveability  [Emilia-Romagna region](https://www.eltis.org/discover/case-studies/urban-policy-harmonisation-italian-emilia-romagna-region) working on rules harmonization in the cities of the region.  [The Netherlands applies certain objectives in a homogeneous way for all cities](https://www.government.nl/latest/news/2021/02/11/new-agreements-on-urban-deliveries-without-co2-emission) (2021)  [GeoSence project](https://alice2-my.sharepoint.com/personal/fliesa_etp-alice_eu/Documents/Theme%205_Urban%20Logistics/Industry%20&%20Cities%20Group/Joint%20Document/GeoSence%20elaborates%20on%20geofencing%20solutions%20aiming%20at%20improving%20urban%20traffic%20management%20and%20planning.): geofencing solutions for urban traffic management and planning. |
| Public Procurement to enhance and speed up introduction of sustainable solutions. Public bodies can lead by example by including sustainable procurement requirements in public tenders (e.g., office and hospitals supplies, waste collection, maintenance, etc.) with low/zero emission vehicles and by requiring suppliers to consolidate deliveries. | 1. Public procurement of innovative solutions for zero-emission urban delivery of goods and services can create a market condition to speed up infrastructure and new vehicles development creating trust in the market. 2. Engaging with suppliers before tendering contracts is critical to this process, to both understand potential zero-emission options and readiness of the solution requested. 3. Sharing resources (EVs and charging points, loading, and unloading points) amongst logistics companies is a way to optimize their usage and allow for smart management and operation of logistics activities. | 1. Lack of scalable models of public procurement of sustainable solutions | [Big Buyers:](https://bigbuyers.eu/) European Commission Initiative for promoting strategic public procurement  Stockholm city made a tender within the [ECCENTRIC](https://www.bable-smartcities.eu/explore/use-cases/use-case/useCase/night-time-deliveries-using-clean-and-silent-vehicles.html) project on off-peak solutions([link](https://www.bable-smartcities.eu/explore/use-cases/use-case/useCase/night-time-deliveries-using-clean-and-silent-vehicles.html)).  [BuyZET project](http://www.buyzet.eu) created a [handbook](http://www.buyzet.eu/wp-content/uploads/2019/05/POLIS_BUYZET-Handbook_EN_web.pdf) for procuring zero emission delivery of goods and services. |
| Develop and manage shared spaces for logistics  The way urban space is distributed and designed has a major impact. New concepts, techniques, and practices enable local authorities to effectively allocate the use of urban space. This includes the curbs, dedicated lanes, delivery loading/ unloading and other high- demand areas that can be booked and managed dynamically. | 1. It is key that local authorities and stakeholders identify together the spaces needed for logistics and delivery operations, as well as their strategic positioning and associated services. 2. Using bus lanes for zero emissions vehicles may be considered in some cases, e.g. for operators joining access or recognition schemes. 3. The curb side management mindset is important when it comes to densification and urban development of the city. This is broader than just freight and includes all modes of transport. 4. Enforcement is key to make regulation work, but it requires substantial effort. | 1. With multiple modes competing for curb space, understanding and defining the space needs for urban freight and logistics operations (e.g. double parking) is needed to reduce congestion. 2. There are no proven strategies and practices yet on dynamic curb side management and related effects, as cities are only in the piloting phase of testing solutions. 3. Need for replicable and scalable approaches to understand the desirable level and the availability/scarcity of freight logistics spaces. 4. Enforcement is still complex and time consuming. Digital enforcement is widely missing. | New projects on “digital loading zones” are testing the usage of digital app solutions to regulate the traffic in the loading zones (Madrid, Stuttgart, Barcelona, the Netherlands amongst others).  [SPROUT Project – Connected delivery spaces in Kalisz](https://sprout-civitas.eu/wp-content/uploads/2020/09/SPROUT-D4.6_SET-UP-Kalisz.pdf) (Poland)  [Urban Radar](https://urbanradar.io/)  [Coding the Curbs](https://www.codingthecurbs.com/)  [Park Unload](https://www.parkunload.com/)  In the United States, transport departments have partnered with [curbFlow](https://www.curbflow.com/) and [Coord](https://www.coord.com/). The US based [Urban Freight Lab](https://depts.washington.edu/sctlctr/news-events/in-the-news/parking-pain-delivery-drivers-tri-cities-lab-working-app) is currently working on a parking prediction app as well. |
| Co-creation with key stakeholders  Co-creation labs focused on urban freight have proven to be effective. These involve different city departments and freight quality partnerships i.e. permanent working groups involving all stakeholders groups and companies to discuss the main issues related to urban freight distribution | 1. Living Labs are a recognised avenue to assure a real shift from the existing paradigm of incremental change to fundamental transformation of the present urban mobility system creating cooperation between stakeholders. 2. Cities require a segmentation of problems and stakeholders as different flows (e.g. waste, construction, parcel delivery, e-commerce, groceries and retail), involve different stakeholders and have different implications to manage urban freight. 3. Training, trust building, and sharing activities should be in a city’s agenda, increasing capability for cross sector planning and de-conflicting interests of different city users. 4. Having a neutral organization as moderator may help as cities are already part of the direct stakeholder’s involvement and may not be able to remain neutral. | 1. Companies are often reluctant to participate in these forums and can find it difficult to agree with competitors on certain issues and solutions. 2. Timespan for the development of SULP is often too slow compared to the rapidly changing trends in urban logistics. . 3. Standardised processes s would help cities build consensus and co-define and co-implement measure. 4. Need to accelerate uptake of best practice and replicable solutions tested in the living labs 5. Need to improve knowledge of user needs, habits and preferences in terms of deliveries by public-private schemes for data collection and sharing. |  |

## 3.3 Logistics operations

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| Topic | Learnings | | Gaps | | More info & examples | | |
| Implement freight flows consolidation strategies. Fragmentation of freight flows and deliveries cause a variety of inefficiencies in urban logistics: low load factors, low number of deliveries per stop and too many kms driven. Some solutions are: Mutualization of B2B flows, Combination of different flows (B2B, B2C, Direct and reverse/returns,) combined use of transport for people and goods, crowdsourced deliveries where the delivery of a package is taken care of by an independent individual in a personal mobility trip. | | 1. Shared transport by multiple logistics providers can be profitable with proper order management, operational adjustments and process adaptation. Several key success factors include an order process management team or automatic tool, client cooperation and customers who accept flexibility in fulfilment. 2. In some cases, city restrictions (access, etc.) create the level playing field to achieve shared logistics. (e.g. [Antwerp CULT program](https://www.cultcitylogistics.be/)). 3. Adoption of Zero emissions vehicles (see section 3.2) increases the importance of being efficient and increase the use favouring consolidation strategies. 4. The flows are extremely fragmented and current logistics systems lack interoperability make mutualization complex. | | 1. In many cases, the efficiency gained by consolidation does not outweigh the cost of organizing and managing consolidation. 2. Lack of interoperability of physical systems (including automation) used by manufacturers and retailers create friction and sometimes are a barrier for consolidation. 3. Current models apply in very particular contexts and are complex to scale-up. 4. It is unclear if crowdsourcing deliveries offers value from a sustainability and social point of view. | | Application of pooling practices and consolidation through a Logistics Service Provider ([FM Logistic Pooling](https://www.fmlogistic.com/solutions/supply-chain-optimisation-services/) and [Citylogin](https://www.fmlogistic.fr/Notre-metier/Supply-Chain-Optimisation/Citylogin))  Proximus and L’Oréal partner up for the delivery of telecom and hair salon products by [electric bicycle](https://www.proximus.com/news/2019/proximus-and-loreal-partner-up-for-the-delivery-of-telecom-and-hair-salon-products-by-electric-bicycle.html) electric bicycle ([Link](https://www.proximus.com/news/2019/proximus-and-loreal-partner-up-for-the-delivery-of-telecom-and-hair-salon-products-by-electric-bicycle.html)  [CULT](https://www.cultcitylogistics.be/) Collaborative Urban Logistics & Transport  [CITY LAB](https://www.eltis.org/resources/case-studies/city-logistics-living-laboratories-italian-pilot) Project on an innovative circular recycling system that integrated direct and reverse logistic flows in the urban area of Rome  For crowdsourcing see [Dynahubs project](https://www.dynahubs.com) or [Pick me](https://www.mypickme.com/) (France) |
| Making use of Consolidation Centres/hubs. Urban consolidation centres and hubs allow opportunities to decouple the operations of transportation, sorting and handling, making it possible to arrange last mile transportation in a more efficient way. Some options for the consolidation centres are: Multipurpose (vs. product or company specific) consolidation centres, dedicated consolidated centres, temporary location/pop up consolidated centres and mobile hubs. | | 1. Although using consolidation centres and hubs increase efficiency and reduce transportation, higher real estate costs may make this solution unsustainable from an economic point of view. 2. Most of the successful cases and projects worked only while there was a subsidy or there is a regulatory obligation to work through a consolidation centre. 3. There are three types of spaces best suited to maximize the use of urban hubs in cities or at the entrance to cities: mixed use facilities, vertical spaces, vacant-temporary spaces. 4. Difficult to find locations adapted for logistics usage; legal authorization to operate is complex to get especially when looking for a temporary use. | | 1. Few examples and no best practices are in place to use shared consolidation centers and hubs. | | RATP shared part of its bus depots in Paris. During the day, the place is used for parcel distribution and during the night, as a bus parking.  Paris: [P4 project](https://www.sogaris.fr/fiche/p4/) Porte de Pantin Pré saint gervais -installation of a hub in a tiny space under the highway ([link](https://www.sogaris.fr/fiche/p4/))  Paris : La chapelle Internationale mixed usage and Air2 Logistique as example of vertical space, [Praha](https://www.depot.bike/)  There are different experiments with the [city of Paris](https://www.paris.fr/pages/logistique-marchandises-livraisons-4738) and Stuart, UPS, transgourmet and Geodis using mobile micro hubs. |
| Decoupling transport and delivery including Division of deliveries in different segments: transport by truck to the edge of the city and then scooter, bike or foot for the last mile and last 50 meters, Pick up points: A location for collecting items ordered online with a staff member on site to support the process. They can be spaces dedicated to logistics or part of an existing shop; Lockers are a storage container, with no human presence. Different types of lockers exist such as mobile lockers, connected or smart lockers, and locker walls in apartment buildings. They can be dedicated to one company or shared. | | 1. This solution is mainly used for B2C deliveries. 2. It is usually a preferred solution vs. home deliveries from a sustainable point of view if the recipient collects the delivery on soft modes or on foot. | | 1. Standard processes and operations need to be developed (e.g. Physical Internet concept) to make sure Logistics Service Providers/Couriers/retailers can seamlessly integrate pick up points and lockers as delivery points independently of the asset owner. | | [Delivening](https://delivening.fr/) - home delivery of large and bulky items in France  SPROUT Project - [Connected parcel lockers in metro stations in Valencia](https://sprout-civitas.eu/valencia-installs-within-its-metro-stations-the-first-e-lockers-to-collect-online-shopping-in-2-of-the-busiest-points-of-its-metro-network)  SESAM - [Business model and technical platform for digital locks](https://closer.lindholmen.se/en/closer-projects/sesam)  City of Stockholm introducing [delivery boxes](https://news.cision.com/iboxen-infrastruktur/r/a-nationwide-infrastructure-of-delivery-boxes-to-be-launched-in-sweden,c3287628) open to all actors |
| Flexible and broad delivery options including off-peak and night deliveries. Urban infrastructure and space is in high demand during the day but less so during off-peak hours when logistics operations can be much more efficient and favour the use of zero emission vehicles. This is a suitable solution for groceries, retail stores and proximity shops. Additionally, flexible delivery windows may support using zero emission vehicles and reduced congestion. | | 1. Noise is one of the main barriers for night deliveries. Currently, many technologies are in place to avoid these nuisances 2. The benefits of night deliveries and positive effects on congestion during days should be highlighted to ease public acceptance 3. Off-peak and night deliveries combined with other usages may favour fleet electrification | | 1. Managerial tools for cities to simulate and model the effects of these measures in cities. 2. Citizens understanding of the benefits of night deliveries. 3. Better technology for noise management as well as security inside stores. It is ideal if the driver has secure access to the business and therefore no store employee needs to be present for delivery. 4. Night deliveries increase in costs to be balanced with the benefits for the whole society and mitigated with additional social and health policies for night workers. | | [ZEUS project](https://www.colruytgroup.com/wps/portal/cg/en/home/stories/quiet-zero-emission-deliveries): Zero Emission off-peak Urban Deliveries.  [ECCENTRIC project](https://civitas.eu/resources/eccentric-m74-night-delivery-evaluations-stockholm): goods transport operations at night in Stockholm. |
| Ensuring worker welfare, safety and improving skills. Require heavy vehicle safety accreditation schemes for road safety in urban freight and ensure healthy working conditions and level playing field for logistics employees, including riders. | | 1. Ensure safety for everyone (urban logistics workers, road users and pedestrians) 2. The question of the workers type of contracts is critical to increase working conditions, attract and retain workers and enable proper trainings whether on quality, safety or environment. | | 1. Only a few cases of regulation for riders stablishing common level playing field. Still a new arena. 2. Not enough push from companies, governments, and citizens for ethical deliveries in which there are fewer incidents and people are paid appropriately. 3. Direct involvement of drivers and transport workers help find agile solutions to increase loading and efficiency of the system. | | Club Demeter has created [L’academie Demeter](https://www.club-demeter.fr/lacademie-demeter/), to provide trainings to drivers on different topics such as new technologies |

## 3.4 Purpose Oriented Data Acquisition and Sharing

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| Topic | Learnings | Gaps | More info |
| Embracing the value of data driven urban freight. Data supports understanding of urban freight and facilitates planning, decision making, measuring performance and fact-based interaction with stakeholders. | 1. Effective data driven UF planning and operational performance implies fewer conflicts amongst different city players and better understanding of UF measures on policy implications (e.g., incentives and enforcement). Development and application of simulation instruments can structure this process and strongly support it. 2. Information build based on data allows building capacity, creating trust, training and understanding on the interdependence between UF and other policies. This allows balanced decision-making to match all priorities and needs and to make the right and necessary investments 3. Growing need for process oriented multistakeholder interactions including transactions, dynamic management of urban space occupancy with pricing, planning, fair incentive system and effective enforcement, traffic management data gathering and provision. 4. New revenue gains for the city (e.g., not just from parking fees), new jobs creation and additional GDP can be generated by quantitative UF data knowledge. 5. Data driven urban freight interdependencies with other usages of city space is key (e.g., waste, ride hailing, public transport and utilities). | 1. Not underdeveloped data driven urban freight frameworks that are cost effective for cities regarding value. Relevant issues are: availability of quality data and lack of quantitative problem analysis and difficulties to derive policy goals and measures. 2. Concrete use cases for urban freight data collection and use are scarce and underdeveloped. Associated processes are missing. More shared knowledge on what data to collect, where and from whom it is needed: city authorities find difficulties in collecting UF insightful and focused data and linking it to specific policy. 3. Dashboards for cities do not have enough granularity on the usage of urban spaces for urban freight operations. 4. New technologies and methods for data collection are not well known and it is difficult to get a good overview. 5. Creation of Digital Twins is seen as a potential enabler for value generation. Products still in low technology readiness levels. | [Designing Urban Logistics for the Future](http://www.rolandberger.com/en/Insights/Publications/Designing-urban-logistics-for-the-future.html) This article includes information on how integrated IT platforms can increase efficiency in the urban freight logistics sector  [Harmony 2020](http://www.rolandberger.com/en/Insights/Publications/Designing-urban-logistics-for-the-future.html) Recommendations to update spatial and transport strategies, using up-do-date simulation tools  [Shenzhen city's 10 green logistics zones](https://thecityfix.com/blog/shenzhens-green-logistic-zones-fast-tracking-zero-emission-freight/): Stakeholders co-created right criteria for setting "zones" regulations and boundaries have been established based on emissions hotspot data and modelling  The [Logistics City Chair](https://www.lvmt.fr/en/chaires/logistics-city/) is research on urban logistics with a focus on urban and peri-urban logistics real estate and on trends and new consumer practices and their impact on urban logistics and its real estate. "Welcome to Logistics City" is a white paper to capture new developments and contribute to providing methods for understanding today’s urban logistics.  [LEAD Project:](https://www.leadproject.eu/) Digital Twins of urban logistics networks |
| Establish cross sectorial and cross stakeholder governance models for urban freight data | 1. Sound governance on UF data allows the identification of roles for different stakeholders and understands asset value sharing potential to unlock barriers for a clearer understanding of data power focusing on dynamic decisions. 2. Cross sector cooperation in UF is needed to establish clear leadership and principles to set balanced measures and timed / punctual interventions. New business models shall guide governance to able to generate new (and appropriate) revenue streams and tariffs for all mobility users. 3. Neutral third parties are suitable to lead in order to guarantee equal treatments, social implications, safety, and sustainable solutions - and set conditions to ensure that conflicts are mitigated. Neutral governance may lead to better quality of data (and better focus), allowing policies to be addressed for the right stakeholders. 4. Cities and operators can jointly act to identify impactful pilots for defining tools & solutions that can facilitate trust and allow for seamless integration of data, technology, and digital instruments adoption. | 1. Not yet available governance models and best practices on data sharing in the urban domain. 2. Small private companies are difficult to involve, as they are not adequately engaged in the process with clear roles and defined targets to achieve. 3. From the local authority side, it is not easy to understand which competences from local authorities are suitable to manage the complexity of UF regulation. | [EVOLUE](https://www.francesupplychain.org/evolue/) A platform on urban logistics (on a voluntary basis) governed by Chamber of Commerce in France. It was established to create a tool to model the flow of goods, and then organise urban logistics efficiently |
| Creating scale across cities and companies supporting the definition and adoption of urban freight data protocols, processes standards and governance models. All players in UF need to be able to seamlessly communicate either by speaking the same language or seamless connectivity of systems and have a clear understanding of rules and benefits when sharing data. Cities need to base policies upon common definitions: e.g., vehicles type, access regulation, data requirements for access etc. | 1. Neutral parties can often guarantee a trusted environment amongst logistics players. 2. Cities and companies need to agree on common data sharing principles and set criteria on which data to collect and how. Data owners must be motivated – with meaningful arguments - to get the most out of this joint opportunity for the city and for the companies. 3. Seamless integration and harmonization of data governance models and standard protocols across cities can facilitate the scaling of solutions and market penetration. 4. General acceptance and use of data definitions, standards and protocols by cities may be supplied by an international board (e.g., DTLF) – new clouds for UF data spaces. 5. Common principles can be the basis for UF city community systems (like in the port community) enabling digital processes to be managed seamlessly. 6. Scale is key to reduced costs and easy adoption. | 1. No trusted body with a vision and mission, able to make stakeholders converge on commonly accepted agreements, understand rules of the game, within an neutral framework that can establish proper conditions for an open dialogue and mitigate barriers in UF data sharing. 2. Little experience and only very recently adopted B2G processes in cities (linked to access regulation, vehicle certification, management of city space, loading and unloading). | [Alliance for Parking Data Standards](https://www.allianceforparkingdatastandards.org/) for a uniform global standard to share parking data across platforms worldwide.  [The DTLF](https://www.dtlf.eu/) is a team of experts that brings together stakeholders with the goal to build a common vision and road map for digital transport and logistics.  [WBCSD Enabling data sharing. Emerging principles for transforming urban mobility](https://docs.wbcsd.org/2020/01/WBCSD_Enabling_data_sharing_Emerging_principles_for_transforming_urban_mobility.pdf). Report to create common ground between stakeholders, by developing a shared understanding of the problem and defining a set of principles that can shape a model and standards for data sharing in mobility.  [Populus Mobility Data Standards](https://www.populus.ai/white-papers/mobility-data-standards). This report highlights key city use cases that necessitate mobility data, current standards, and key policy issues.  [NxtPort](http://nxtport.com/) - This initiative connects all data providers via a state-of-the-art data sharing platform where data governance provides trust - an enabler for open data from port community systems. |
| Achieve information-based policies and decision making. The large legitimacy of a political decision in a city is linked to the ability to deliver focused and clear outcomes that are based on crystal clear evidence. Such outcomes must be generated by reliable, quantifiable, and purpose-oriented data, to transform a political decision into clear, measurable, and effective initiatives for all. | 1. The adoption of simulation tools for UF by city authorities can smooth the integration of existing data knowledge and give evidence of the level of performance of the logistics system of a city. Cities need to adopt harmonized data calculation, collection, and sharing to make prioritized decision. This allows for appropriate investments as well as informed and comprehensive urban planning. Simulation tools can establish and process local needs, by assigning priorities according to the function played by the stakeholder and the urban space used for moving and servicing. Furthermore, they should be able to continuously assess the performance of the UF system, deconflicting services and operations needs from other city users' needs. Simulation tools should also enable managing enforcement and incentives systems, based on the value of the urban space considered (real estate) and define a data and collection method that is suitable to achieve different scopes. 2. Exploiting all potential options to have well informed (and quantifiable) data sets, allows decision makers to empower their role in performing dynamic decisions, by defining priorities according to city and its neighborhoods’ functions and services. | 1. Institutional capacity and use / adoption of existing tools (underused) is not often sufficient for making the right decision and taking the lead for implementing smart and dynamic urban planning, as well as motivating stakeholders to share data, on trust principles. 2. There is a gap in adequately manage complex demand in UF and mobility in general, and its dynamic evolution. 3. There is the looming future of driverless cars requiring available curb space to stop and exchange passengers: it can be an opportunity for the city. | [EVOLUE](https://www.francesupplychain.org/evolue/) A platform on urban logistics (on a voluntary basis) governed by Chamber of Commerce in France. It was established to create a tool to model the flow of goods, and then organise urban logistics efficiently |
| Fast-track dynamic planning and access to urban spaces, zones and resources | 1. Dynamic planning and access allow city authorities to intervene with effective and tailored decisions to manage scarcity of urban space and achieve an adequate level of satisfaction for all city space users. 2. Freight vehicles can be motivated to reduce time in loading zones and reduce the time to find a loading zone or dedicated space, avoiding double park or far / private parking 3. Dynamic regulation on freight operations requires a very efficient exchange of information between cities and operators. Furthermore, every neighbourhood has different purposes, functions, and needs in a city. A prioritization can maximise the effectiveness of operations and mobility at every city level (e.g., residential, commercial, recreational-free time, industrial areas, etc) and dynamically distribute modes via space allocation and pricing in a synchronised way. 4. Having curb data information and road user category requirements, can make possible to understand how to reduce conflicts and how the actual road use can vary in space and time. | 1. There are big gaps between technical capability, knowledge, and consequential correlation to spatial-temporal planning policy, harming the implementation of dynamic planning in UF. 2. Not enough available best practices of dynamic planning and access to urban spaces/zones/resources. | [Smart Loading Zones in Chalmers](https://www.chalmers.se/en/projects/Pages/Using-data-analytics-for-smart-loading-zones-management-in.aspx) Using data analytics for smart loading zones management in cities.  [Flexible access & space management working session](https://www.polisnetwork.eu/event/flexible-access-space-management-working-session/) POLIS (Cities), ALICE (logistics), EPA (Parking) are exploring the opportunities to improve parking management and urban logistics with the support of FIT and Erasmus University. These associations are looking into the potential of access management integrated with flexible and shared use of urban space and parking.  [Populus Curb Innovation Cohort](https://www.populus.ai/curb-innovation-cohort) - Populus provides cities with a holistic view of demand, and the digital tools they need to efficiently manage access to their curbs. |

1. See as a best practice [Rotterdam Zero Emissions City Logistics in 2025](https://www.rotterdam.nl/wonen-leven/stappenplan-zero-emissie/Roadmap-ZECL.pdf) [↑](#endnote-ref-1)
2. See [SULPITER](https://www.interreg-central.eu/Content.Node/SULPiTER.html) [↑](#endnote-ref-2)
3. (e.g.: Turin, Padua, Rome). Add references [↑](#endnote-ref-3)
4. 2013 European Commission Staff Working Document on Access Regulations " A call for smarter urban vehicle access regulations" SWM (2013) 526 [↑](#endnote-ref-4)
5. <https://civitas-reveal.eu/resources-overview/glossary/> [↑](#endnote-ref-5)
6. (e.g. “Straßenverkehrsordnung” in Germany) [↑](#endnote-ref-6)