Urban Logistics Measures in MobiliseYourCity SUMPs

2025

Mobilise Your City

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Title: Urban Logistics Measures in MobiliseYourCity SUMPs

Distributed: February 2025

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1. Introduction

Logistics and freight are gaining increasing importance in the Global South. Presently, numerous investments are being made to enhance the extent and efficiency of logistics infrastructures and operations in these regions, as they are regarded as crucial engines for development and economic performance. Noteworthy initiatives, such as the EU's Global Gateway strategy and the Strategic Africa Corridors, exemplify international development cooperation specifically targeting this sector. At the same time, logistics and freight contribute significantly to global GHG emissions, highlighting the need for a transition towards more sustainable logistics systems.

Addressing these issues is crucial, yet we find a significant knowledge gap on urban logistics and freight for Global South geographies. As the MobiliseYourCity Secretariat, we thus want to look deeper into how cities along transport corridors can prepare for the anticipated increase in goods flow, ensure alignment with SDGs, and prevent becoming bottlenecks in multinational logistics systems.

In this report, we present the findings of an analysis looking into the urban logistics measures proposed in 16 MobiliseYourCity SUMPs.

2. Comparative Analysis - Logistics and Freight Measures in MobiliseYourCity SUMPs

The vast majority of MobiliseYourCity SUMPs list measures aimed at improving the efficiency of urban logistics and freight (both in terms of last-mile connectivity and on a wider regional scale) and reducing negative externalities, such as congestion, road safety implications and pollution. Measures related to regulation and logistics infrastructure are most prominent, but some SUMPs also foresee measures related to urban planning integration, governance, knowledge and capacity building, and to address environmental challenges.

The following table provides an overview of the measures mentioned in MobiliseYourCity SUMPs.

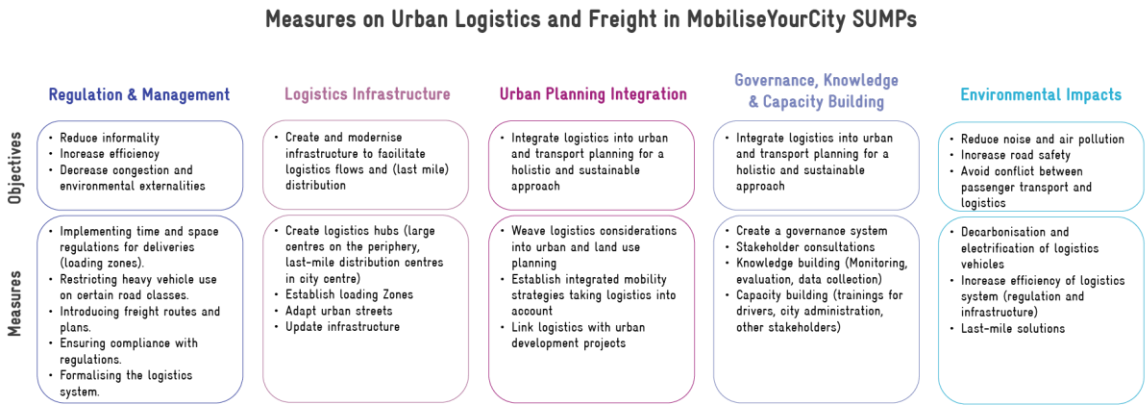

Figure 1 Compilation of measures found in MobiliseYourCity SUMPs regarding urban logistics and freight. Own illustration.

2.1. Regulating and Managing Logistics Flows

Almost all cities formulate measures to increase regulation of logistics and freight flows, corresponding with the lack of regulation outlined as the crucial challenge of urban logistics in MobiliseYourCity SUMPs. Some key strategies include:

Implementing time and space regulations for deliveries - mentioned in 13 SUMPs- is the most common measure that cities formulate. This measure is particularly important to regulate deliveries with heavy vehicles, for example, in cities such as Douala, which will develop explanatory guidelines and maps for loading zones and parking areas. Moreover, Santo Domingo is introducing a pickup system to lessen traffic during peak hours related to port activities.

On a city-wide level, several SUMPs aim to develop freight routes and plans to increase the efficiency of freight flows and mitigate congestion and conflicts with passenger transport. This includes

introducing freight routes along the primary road network to segregate urban and transit freight flows in Dire Dawa, Arequipa, and Douala. In Trujillo, the SUMP foresees planning an urban distribution system and optimising freight routes, prioritising freight routes on peripheral roads with national and local importance to avoid congestion in the city centre. Additionally, Santo Domingo is considering a macro-level circulation plan for freight vehicles. Ahmedabad is working on tools to help the freight community navigate the city and accommodate safe freight movement. Moreover, cities like Abbottabad and Ambato are focusing on policies for efficient freight transport. Linked to these measures, cities like Abbottabad, Antofagasta, and Arequipa also aim to restrict heavy vehicle use on certain road classes.

Formalising the logistics system is another crucial measure in the area of regulation. For example, Bouaké, a city with a very high degree of informality in its logistics system, plans to revitalise its Gbaka lines (passenger minibuses also used to transport goods) and improve their governance. Trujillo, instead, is working on establishing a central regulatory body for freight and logistics and introducing regulatory signage to improve the framework for freight transport.

Ensuring compliance with regulations is vital as well. For instance, Arequipa is tasked with controlling adherence to freight transport regulations. Trujillo is focusing on fiscal policies and sanctions to enhance compliance.

These measures collectively aim to enhance urban freight efficiency, reduce informality, and thus decrease congestion and environmental externalities.

2.2. Creation of Logistics Infrastructure

Regulatory measures are widely connected to the creation of logistics infrastructure, which aims to provide the space and physical requirements to manage logistics flows. These measures are mentioned in most SUMPs and respond to challenges related to a lack of logistics infrastructure in the cities.

Logistics hubs play a crucial role in enhancing urban freight efficiency, and several cities like Abbottabad, Antofagasta, Ambato, Arequipa, Dakar, Dire Dawa, Kumasi, Guadalajara and La Habana are implementing various strategies to optimise these facilities. For instance, Ambato has plans to establish a logistics activity zone, while Arequipa and Douala are focused on developing metropolitan logistics centres dedicated to receiving, storing, and distributing goods. Some cities like Abbottabad, Antofagasta, Dakar and Trujillo aim to develop urban logistic facilities on their peripheries to regulate freight flows before entering the city. The objectives include consolidating port and road freight activities and reducing urban congestion. Finally, Guadalajara emphasises last-mile efficiency through the establishment of micro logistics hubs.

Loading zones are another vital component of urban logistics, for example, foreseen in Antofagasta, Guadalajara, La Habana, Santo Domingo, Trujillo and Santo Domingo. The main objective is to improve last-mile delivery through designated loading areas. Arequipa is also working on this,

including implementing technological platforms to reserve loading spots and technical equipment to monitor the duration of stay. These efforts are generally coupled with regulatory measures.

Measures targeted at adapting urban streets to segregate freight from passenger vehicles are also foreseen in some SUMPs. Arequipa is implementing physical elements to create dedicated urban freight transport corridors; Bouaké and Douala are making efforts to provide parking facilities for heavy vehicles, addressing the need for designated areas to alleviate potential congestion.

Other infrastructure updates required to support these logistics improvements include the modernisation of infrastructure for freight deliveries in Ambato or the implementation of BRT infrastructure to enhance freight flows and last-mile delivery in Abbottabad. Furthermore, Bouaké is focusing on the organisation and upgrading of intercity stations.

Overall, measures to create logistics infrastructure are found in the majority of SUMPs, with cities recognising the need for certain physical elements to organise and regulate freight flows. At the same time, it should be noted that the degree to which logistics infrastructure is already present varies greatly from city to city.

2.3. Integrating Logistics into Urban Planning Strategies

The integration of logistics into urban planning is mentioned in some of the SUMPs, with the objective of reducing conflicts between different interests and increasing land use efficiency. One of the most extensive examples can be found in Ahmedabad, where multiple measures are foreseen to weave logistics considerations into urban and land use planning. These measures include integrating freight and logistics needs when designing streets, ensuring adequate land and infrastructure for logistical activities in transport planning schemes, and elaborating and implementing an urban freight masterplan tailored for the city. Additionally, Ahmedabad prioritises collecting, consolidating, and validating urban freight data to underpin informed decision-making processes.

In Abbottad, the primary objective revolves around establishing integrated mobility strategies that also consider freight. Similarly, Antofagasta showcases efforts to meld urban planning with logistics, specifically emphasising last-mile delivery integration. Ambato aims to develop a demand management plan that incorporates urban logistics considerations. In the case of Santo Domingo, the city intends to consider the logistics systems surrounding its port in its future urban planning considerations to mitigate the negative externalities of the port activities on the urban environment. Another example is Dire Dawa, which aims to create an urban logistics development plan.

In some cases, logistics is also mentioned in relation to urban development projects. In Ambato, for example, plans for a public space renovation project include redesigning the station to enhance logistical flows. Moreover, Trujillo echoes this sentiment by seeking to embed urban logistics into its urban planning projects, aiming to incorporate land use and densification guidelines that align with urban logistics needs.

Overall, measures related to urban planning integration are less present in the MobiliseYourCity SUMPs than those related to infrastructure and regulation.

2.4. Governance, Knowledge & Capacity Building

Some cities also foresee 'soft' measures to enable a sustainable development of their logistics systems. Measures related to governance, knowledge building, and capacity building are crucial to enable the implementation of all the practical measures related to regulation, infrastructure, and urban planning integration.

In this context, a few MobiliseYourCity cities aim to create a governance system that can deal with urban logistics and freight. It involves establishing stakeholders in charge of governance and logistics management, as is foreseen in the SUMPs of Abbottabad, Dire Dawa and Trujillo. Similarly, Ahmedabad and La Habana aim to establish effective governance mechanisms to enable coordination among relevant stakeholders.

Some cities also foresee external stakeholder consultations. For example, Ambato aims to involve the private sector in the investments and construction process by organising stakeholder meetings. In Douala, the SUMP foresees efforts to engage retailers, shippers, manufacturers, and hauliers in discussions regarding changes to HGV parking and delivery regulations. This is supposed to be coupled with participative approaches, such as organising workshops to bring together those involved in goods transport, to aid in co-constructing delivery and parking rules.

Knowledge building is another aspect mentioned in the SUMPs, particularly through monitoring and data collection. Ambato and La Habana are focusing on this area, with La Habana planning to include indicators on logistics and freight in monitoring, specifically the number of loading zones created. Preparative studies are also mentioned; for instance, Baixada Santista is conducting a study to investigate the institutional and legal barriers of sustainable urban mobility in relation to logistics, while Dakar is exploring seven main topics in a holistic preparatory study, with a planned operationalisation by 2030. La Habana is undertaking a preparatory study for the relocation or construction of warehouses on the city periphery, and Guadalajara is studying the origin-destination of freight traffic. Additionally, Santo Domingo is planning to work on a preparatory study for a circulation plan, and Yaoundé is conducting a study on the feasibility of a bypass road for heavy vehicles to circumvent the city centre.

Finally, some SUMPs list capacity building as an element to improve urban logistics. For example, training for logistics drivers is being emphasised in Antofagasta, Baixada Santista, and Douala. Furthermore, Guadalajara and Abbottabad are focusing on capacity building for the local transport authority to strengthen governance and regulatory frameworks in urban logistics.

2.5. Addressing Environmental Impacts

Although the negative environmental impacts of logistics on the urban environment and its inhabitants (e.g. noise and air pollution) are mentioned in most SUMPs, this topic is barely directly addressed in the measure sections of the SUMPs. Mainly, cities aim to indirectly address these challenges by increasing the logistics system's efficiency and reducing congestion, an approach that is crucial for a cost-effective and swift improvement of the situation and aligns with the EASI principles.

Nevertheless, a few cities like Ambato, La Habana and Ahmedabad go beyond by planning measures related to decarbonisation and electrification of logistics vehicles. Only a handful of cities, like

Guadalajara, refer to last-mile solutions, which could be crucial for decreasing environmental impacts.

2.6. Particularities of Port and Transport Corridor Cities

Improving logistics systems is most pressing in port cities, and those located along (trans-) national transport corridors, as the freight flows, are relatively more extensive than in other cities. Thus, these cities focus on efficiently integrating port activities with the urban logistics system. For example, Antofagasta is planning a logistics platform to improve intermodality and reduce negative externalities of the port, while Douala aims to implement measures related to improving last-mile connectivity. In Santo Domingo, the focus lies on improving the port-city relationship by integrating local and national planning related to port activities. Moreover, the city aims to introduce a pick-up system and platform to reduce traffic during peak hours in the port area.

3. Conclusion – What role do Urban Logistics play in MobiliseYourCity SUMPs?

Overall, the analysis of the SUMPs showed that urban logistics and freight are considered in most SUMPs, even if to varying degrees. For example, cities like Ahmedabad, Antofagasta, Douala and Trujillo deliberate urban logistics and freight as a considerable pillar to improving their mobility systems. Logistics is also dealt with in a less detailed yet still relevant manner in cities like Abbottabad, Ambato, Arequipa, Guadalajara, La Habana, Santo Domingo, Dire Dawa and Dakar. Nevertheless, in some cities, urban logistics are mentioned at some point (usually in the diagnosis section), yet the SUMPs develop few concrete measures. Oftentimes, cities with more elaborate measures packages on logistics have ports or are located along important transport corridors.

Generally, the analysis also showed that the potential is not fully exhausted yet. Although many SUMPs consider freight flows in their diagnosis section, they often do not fully address related challenges in their vision and measure section. We thus see a problem-action disconnect. Emphasising holistic and integrated approaches could support cities in transforming logistics alongside the mobility system.

4. Takeaways for the MobiliseYourCity Partnership

The weaknesses identified in this analysis regarding a lack of integrated and holistic approaches to urban logistics and freight in MobiliseYourCity SUMPs suggest a need for increased capacity building and technical assistance on the topic. Moreover, collecting more in-depth information on the challenges and visions of cities tackling urban logistics and freight would provide essential information a) for MobiliseYourCity to understand what cities need to advance their efforts on the topic and b) to enable peer learning between cities. Highlighting good practices and cities' obstacles

through case study analyses of selected cities could be a valuable follow-up approach to this first analysis.

Finally, it must be mentioned that this analysis was subject to limitations and, therefore, cannot demonstrate a highly detailed representation of measures planned by MobiliseYourCity cities. For example, comparing 20 cities of very different contexts (be it geographically or in size) is tricky, especially when considering the varying degrees to which their logistics systems are already developed. For example, comparing a city like La Habana, which is considering implementing cargo bikes for last-mile delivery, with cities like Dakar or Dire Dawa, where horse-drawn carts play a part in their logistics systems, is almost impossible. Therefore, while this analysis focused on identifying common threads, mentioning specific examples was crucial, nevertheless fell short of illustrating detailed pictures of each city. A case study analysis focusing on a smaller set of cities would counterbalance the shortcomings of this research.

5. Annex

5.1. List of analysed SUMPs:

City	Country	Relevant port or transport corridor ?
Abbottabad	Pakistan	
Ahmedabad	India	Transport corridor
Ambato	Ecuador	
Antofagasta	Chile	Port
Arequipa	Peru	
Baixada Santista	Brazil	Port
Bouaké	Ivory Coast	
Dakar	Senegal	Port, Strategic Africa Corridor 3. PRAIA / DAKAR-ABIDJAN
Dire Dawa	Ethiopia	
Douala	Cameroon	Port, Strategic Africa Corridor 6. DOUALA / KRIBI-KAMPALA
Guadalajara	Mexico	
Kumasi	Ghana	
La Habana	Cuba	
Santo Domingo	Dominican Republic	Port
Trujillo	Peru	
Yaoundé	Cameroon	Corridor Douala/Kribi-Bangui/Ndjamena regional corridor