

Planning Instruments for the Intersection of urban freight and decarbonisation

Luciano A Pana Tronca¹

IUSS Pavia & university of Trieste

(999 words)

It is estimated that urban demand for goods mobility will increase threefold by 2050 with an expected volume of 28.5 trillion tons/km (Arthur D Little, 2015). Cities face a dilemma between the economic growth that increased sales and activity represent in terms of job creation and business taxes with the social-environmental externalities that arise from increased transport-related trips.

Increasingly, businesses look into streamlining and optimising their processes to increase the revenue margin and adapt to environmental regulations. However, the institutional setting in which urban freight stakeholders move is disjointed in terms of objectives and sometimes lacks vision as it is mostly based on specific public policies and not in frameworks such as Sustainable Urban Logistics Plans (SULP).

SULPs are the logistics-specific version of the more developed Sustainable Urban Mobility Plans launched in 2011. Still, SULPS follows similar steps and stages to the former. These go from preparation and analysis, moving on to strategy development and measure planning (Aifandopoulou & Xenou, 2019).

However, the lack of a planning framework to improve freight transport in cities (20% of cities have SULPs (DGMOVE EU, 2021)) does not imply that cities are condescending in the fight against climate change. Due to various factors, such as lack of resources, lack of administrative and planning capacities, etc, cities may opt for a more targeted or incremental approach by funding trials, projects, or regulations.

The need of cities and regions to accelerate decarbonisation in transport and achieve net zero has led to an increment of innovation and experimentation in the sector. In their quest to better organise these activities, the concept of living labs emerged, to set a structure in which experiments can provide feedback to other activities, give citizens a voice and take advantage of the scale and number of organisations in their landscape to collaborate (institutional thickness).

The Transportation Innovation Lifecycle Subcommittee (RIIM TRB, 2023) has defined the innovation process in transport going from ideation, conceptualisation, development, diffusion, and commercialisation. All these stages are fundamental for the change of system, and all require different degrees of planning. However, for this paper we consider planning approaches to innovation the public sector involvement in the first three stages.

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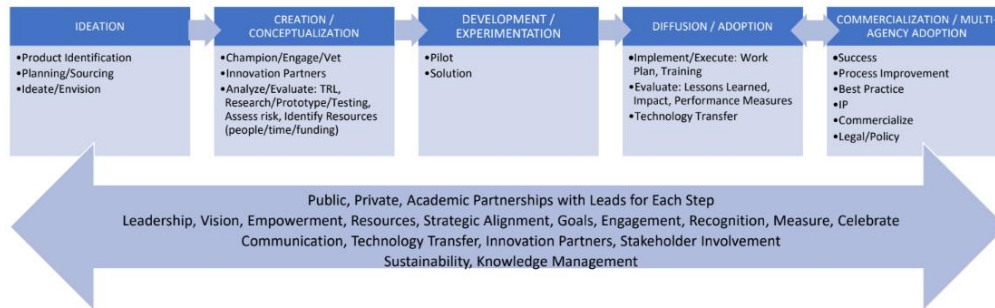


Figure 1 Transport Innovation Lifecycle (source: (RIIM TRB, 2023))

In the mobility transition literature, we find several concepts related to the public sector approach to innovation. For instance, Smets (2021) looking at mobility experimentation summarises the tensions of urban governance of innovation between strategic vs piecemeal (similar to the urban freight planning dilemma), long vs short-term funding, and competitive funding vs greater funding certainty. She considers the four modes of governance by Bulkeley and Kern (2006) that could also be applied to the governance or planning of innovations at the city level:

Self-governing (or self-innovation regarding the public sector functions), governing by provision innovation in delivering public services and infrastructure), governing by authority (regulations), and governing through enabling, and adds governing by co-provision, which relates to the provision of public services in partnership with other actors.

Traditionally, urban freight has been considered a private-sector matter. However, due to its increased externalities, the public sector has been increasingly interested in managing and collaborating with logistics stakeholders. This special characterisation (in comparison to the role and power a local authority has to plan for public transport for example) requires other types of planning frameworks that are better aligned to the role of local authorities in shaping such an ecosystem. In this line, a concept that has gained traction is the one of Living Labs or Urban/City Labs, which originally comes from the private sector innovation management sector. These are place-based interventions with a heavy component of interaction between stakeholders and focusing on innovation and sustainability (Schliwa, Evans, McCormick, & Voytenko, 2015).

To summarise, in the innovation and transport (freight in this case) for sustainable transitions we find three planning levels:

- Planning frameworks: SUDP, Innovation Strategies, Climate Action Plans, SUMP
- Planning vehicles: City Labs, Living Labs, Urban Living Labs², Innovation Districts, etc
- Individual actions: projects, public policy

To analyse planning frameworks I introduce the Climate Plan and Transport Actions database. This is a set of spreadsheets that contains data about 50 European Climate Plans approved after the EU net zero targets based on the CDP database. The user can search for transport actions and identify which cities are planning to apply them. Once the city/cities were identified, the user can use the third sheet to get a link to the Climate Plan, with further information about that action. The goal of the database is to help cities to identify suitable transport actions to include in their climate planning strategies.

To analyse the planning vehicles and actions I analyse two case studies of innovation calls within a City Lab context in Antwerp and Lucca.

² Different denominations but overall refer to the same approach as described in the text.

While planning frameworks for innovation, urban freight, and sustainability are not widespread (Bjorgen & Ryghaug, 2022) there is an increased interest in city administrations in orchestrating or enabling the ecosystem. Increasing knowledge transfer, stable funding options, marketing, and engagement seem to be key considerations that local governments need to think of when designing public policies or planning tools in this sector.

The case studies in this paper show two examples of local authority-led and research-led urban freight innovations. In both cases, the public sector has taken the lead to define the sustainability goals of “innovation calls”, which were also in line with supra-state funding available (EU funding based on SUMP and the Mobility White Paper (EC, 2011)). The private sector is overall welcoming of these opportunities to help shape public policy and supportive of these endeavors, while real tools are created and scaled up and emissions reductions counted.