National Urban Policy

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Introduction

It is pleasing to see that the National Urban Policy Consultation Draft recognises that our urban areas need to more sustainable and that transport emissions are a challenge. Am encouraged that it is recognised that urban development should actively improve social, environmental and economic outcomes. Am in agreement that poorly integrated urban freight and land use planning leads to congestion and affects the efficiency of freight networks. This submission outlines a number of approaches that can address these challenges.

Land use patterns in urban areas have a substantial influence on the sustainability of freight. Total emissions from transport is the product of emissions produced per vehicle kilometre and vehicle kilometres travelled. The location of freight terminals, warehousing and manufacturing determines the origins and destinations of freight vehicle trips has a major effect on the nature of freight trips in terms of the distances travelled and frequency.

To improve the sustainability of goods movement in cities it is important that City Logistics solutions be successfully implemented (Taniguchi and Thompson, 2015). City Logistics is an integrated approach for urban goods distribution based on the systems approach that promotes innovative schemes that reduce the *total cost* (including economic, social and environmental) of goods movement within cities (OECD, 2003).

Consolidation has been identified as the key to achieving sustainable urban goods transport. Improved network efficiency, that is vehicle loading tonnes moved by km driven (*tonne-km / vehicle–km ratio*) has been identified as a key driver of emissions decrease in logistical field (ITF, 2018). This implies reducing the number of empty trips or km driven, increasing the use of *available capacity* in vehicles (which involves optimising three measures of capacity: volume, weight and space floor) and *reducing the overall km driven by vehicles while delivering the same amount of goods.*

There are a number of planning based initiatives that can significantly improve the sustainability of freight movement in cities, including:

(i) Consolidation centres,
(ii) Parcel Lockers,
(iii) Transport Zones,
(iv) Intermodal terminals and depots, and
(v) Protection of freight areas in inner metropolitan regions.

Consolidation Centres (CCs)

It is important that freight consolidation centres be planned in major urban areas to facilitate improving the efficiency of freight networks. Consolidation centres provide facilities for transferring goods between vehicles to increase load factors to reduce the distance travelled by vehicles delivering goods. They should be open to all carriers to exchange goods and reduce last mile distribution costs.

For example, Sydney has a courier hub that facilitates transfer of goods between trucks, vans, bikes and walkers to increase the efficiency of the distribution of parcels to and from the CBD (Stokoe, 2017). A number of micro-consolidation centres are planned to be established in the

Sydney metropolitan area to facilitate the reduction in vehicle kilometres of travel in response to the growth in eCommerce deliveries (Thompson et al. 2023).

It is also important to establish consolidation centres in industrial areas in cities to promote the use of high capacity freight vehicles to transport goods between them (Thompson et al., 2020). These facilities and shared freight services can dramatically reduce congestion levels and infrastructure maintenance costs.

Urban logistics hubs are facilities for transferring parcels between vehicles to create more efficient routes that provide necessary infrastructure for facilitating higher utilisation of various types of vehicles for delivering parcels in cities (ITF, 2024). Larger vehicles can be used to transport parcels between warehouses and consolidation centres with smaller vehicle used to perform delivery routes in local precincts (Thompson et al, 2023). Urban consolidation centres provide short term storage facilities that promote the exchange of goods between transport modes.

Public Parcel Lockers

Recently there has been dramatic changes in shopping and work activity patterns that have had a profound impact on parcel deliveries. The COVID-19 pandemic led to increased working from home that created a massive growth in demand for parcels to be delivered directly to households in metropolitan areas. The growth in business to consumer (B2C) deliveries highlights that goods follow people.

The boom in eCommerce has shifted demand away from traditional store based retailing with supply chains having been transformed from push based to pull based with a decline in deliveries of goods to retail stores in commercial centres and an increase in deliveries of parcels directly to households.

Parcel lockers provide a delivery point that does not require carriers to deliver to separate receiver's locations. This is more efficient for couriers and more flexible for receivers. The chances of deliver failure due to residents not being at home or couriers not being able to access premises are reduced when parcel lockers are used. Delivery failure leads to reduced productivity for couriers and additional transport for receivers travelling to pickup locations or for couriers to redeliver parcels.

To ensure the viability of parcel lockers it is important that they are available for all couriers to use to maximise their utilisation. Parcel lockers can be installed in different types of locations, including public places within residential precincts, in residential towers as well as in loading docks of commercial towers.

Planning is required to ensure that parcel lockers are provided in public places (eg. near transport terminals), in loading docks of commercial towers as well as in residential towers to improve the sustainability of parcel deliveries in cities.

Our recent study showed that parcel lockers installed in a commercial tower in Melbourne's CBD significantly reduced the dwell time for couriers in the loading dock and that led to less demand for locking dock space as well as more flexible deliveries for receivers. More broadly, if parcel lockers were installed in all loading docks of commercial towers this could reduce vehicle kilometres travelled by couriers by around 50%. This would provide substantial productivity gains for couriers as well as reduced emissions and congestion in the CBD.

Zones for transport depots

Due to the rising costs on urban land, freight depots are being forced well away from shippers and receivers substantially increasing the distances travelled by freight vehicles. It is important to plan for transport depots and designating parking through land use zoning, special sites near industrial and manufacturing areas. Truck parking, maintenance and servicing areas located near shippers are required to improve the efficiency of freight transport.

Intermodal Terminals

It is important that intermodal terminals be planned in large urban areas to promote the use of rail and high performance freight vehicles such as B-doubles. Intermodal terminals should be located within key freight areas and have adequate land to provide shared storage space and facilitate consolidation opportunities.

Protection of freight areas in inner metropolitan regions

There needs to be improved planning to ensure that there are adequate logistics facilities in inner areas of large cities. Lack of sites for storing and transferring goods in inner areas substantially increases the distances travelled by freight vehicles distributing goods in cities.

Many cities are experiencing logistics sprawl, where due to the price of land, warehousing distribution centres and major freight generators are being pushed out to the fringe of urban areas. This is significantly increasing distribution costs to service high and medium density residential and commercial areas located in central areas.

An example, was the relocation of the wholesale fruit and vegetable market in Melbourne. The market was moved from the inner west of the city to the outer north, substantially increasing distribution costs to retailers within the metropolitan area (Aljohani and Thompson, 2018)

Conclusions

It is important that freight be explicitly considered in planning by all levels of government to improve sustainability. Planning can facilitate the implementation of City Logistics schemes that improve freight efficiency. There is growing recognition in Europe for Sustainable Urban Logistics Plans (SULPs) to be developed that involve setting visions and goals as well as conducting analysis and selecting measures.

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