8. Precinct approaches to freight activity

A precinct approach is a centralised and planned infrastructure approach to logistics between multiple customers in the same precinct. By coordinating their service and supply needs, cooperating customers aim to improve the place outcomes for the local environment. This approach can improve delivery efficiency to the precinct and within the local transport network.

8.1 Precinct approach

A precinct approach, where multiple buildings in the same precinct share common dock facilities, can significantly reduce the total number of vehicle movements to an area while still meeting customer demand. Allowing suppliers to deliver to multiple customers in a precinct from a single loading dock improves logistics efficiency and reduces local traffic congestion. The precinct dock effectively becomes a consolidation centre to drive more efficient last mile deliveries.

This collaborative approach is more logical and achievable when a precinct is planned and built by one developer, such as Barangaroo in Sydney. Where this is not the case, challenges may arise over ownership, organisational structures and security concerns. However, the benefits of a precinct approach are likely to outweigh the costs of navigating these challenges. Either way, the ability to develop a precinct dock or common approach depends on cooperation between developers, owners, managers, tenant businesses and local authorities.

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CASE STUDY

Precinct servicing at Barangaroo

In 2018, 57 outlets sold coffee in Barangaroo. When asked about freight and servicing in the precinct, a common response from people working in the area was, *"You know, I've never seen a delivery vehicle here."* Little did they realise that the precinct dock below their feet was handling approximately 10,000 vehicles per month.

The facilities that were planned and developed to enable the seamless and discrete management of this large transport task have contributed significantly to the placemaking outcomes in Barangaroo. Because the transport task goes unnoticed, its contribution to the area's amenity can be easily overlooked.

Logistics activity occurs behind the scenes (underground) at Barangaroo

For developers, one key benefit of a precinct dock is that its total size and capacity is likely to be less than the sum of the individual loading docks that would otherwise be required for each building. In addition to being cost-effective, well-managed precinct docks can significantly enhance place outcomes and improve the amenity of a precinct, as in Barangaroo.

Figure 24 illustrates the transport and logistics efficiency of precinct loading docks. In the traditional approach (shown in scenarios 1 and 2), a driver delivering goods to the precinct needs to enter four separate docks in four different buildings. In these scenarios, a driver is likely to look for on-street parking to complete deliveries so that they do not have to move their vehicle multiple times. By providing a combined dock, a precinct approach limits the number of trips drivers need to make, reducing kerbside congestion, increasing operational efficiency and reliability, and improving the precinct's place outcomes.

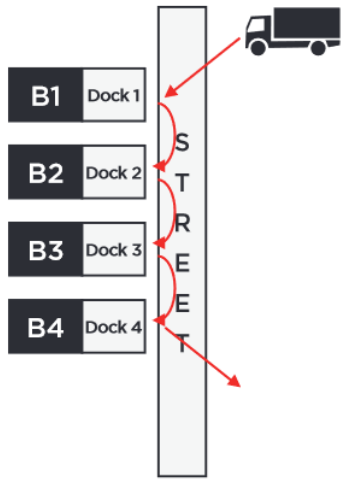
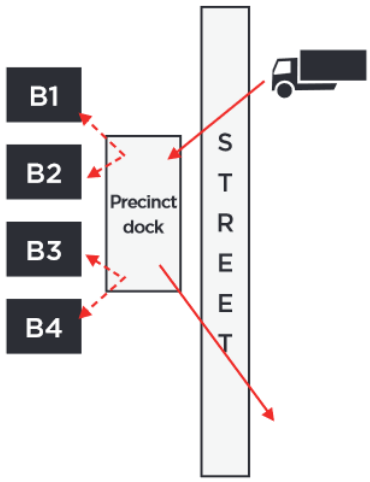
1. Individual loading docks	2. Street parking: common reaction to individual docks	3. Precinct dock approach
		
One truck needs to move five times to service four buildings, increasing traffic in the area.	The truck only needs to move twice, but it is relying on unpredictable kerbside space and causing congestion on the street.	The truck only moves twice, and it is off the road, reducing traffic and congestion.

Figure 24 How precinct docks can reduce the number of freight and servicing vehicle movements

8.2 Precinct approach assessment

The general objective of a precinct dock facility is to accommodate all the freight and servicing needs of the buildings it supports. Precinct docks allow logistics operators to consolidate deliveries, reducing the number of freight and servicing movements that need to be made to the precinct. Compared to single-building loading docks, the precinct approach can reduce the space a loading dock requires and increase the efficiency of the logistics task.

Table 20 compares the two approaches, using the example of a precinct comprising five buildings with a total gross floor area of approximately 220,000m^2. As it demonstrates, the precinct approach results in fewer vehicle movements and requires 30 fewer dock spaces – saving participating businesses money and space.

Table 20 Number of movements generated by a precinct dock compared to individual docks

Measure	Precinct dock movements	Movement to five individual docks
Freight vehicles (arrivals only) per day	378	617
Vehicles in busiest hour	50	82
Number of dock spaces required	46	76

8.3 Precinct procurement led by Business Improvement Districts (BIDs)

A precinct-based group procurement solution is an extension of the freight consolidation strategies explored in **Section 6.5.11**. Precinct partnerships, such as BIDs, have been implemented in London, UK, and elsewhere to help improve environments with local stakeholder input. Through joint procurement, buildings benefit from cost and delivery efficiencies. These partnerships also lead to transport efficiencies, and improved local environmental and placemaking outcomes.

One example is the New West End Company in London. A group procurement trial for waste collection conducted in Bond Street in 2018 resulted in:

- 94 per cent reduction in daily waste and recycling vehicle movements
- 67 per cent reduction in waste bags left on pavements
- 17 per cent reduction in kerbside vehicle stops.

(New West End Company 2019)

Australia currently has no regulatory framework for BIDs, but local chambers of commerce or groups of neighbouring businesses with common interests can still pursue similar joint procurement approaches.

8.4 Best practices in precinct planning: a summary

This section summarises the key principles for planning freight and servicing activity in order to deliver successful place and amenity outcomes in a precinct.

8.4.1 Designing self-sufficient precincts

For a precinct approach to be successful, it must efficiently accommodate the freight and servicing task it generates. This will involve providing space for large vehicles to enter the precinct and considering the most efficient way to deliver goods to the customers. Planners, developers and other stakeholders can do this by designing loading docks that can accommodate heavy vehicles (such as large waste or removal trucks), either within or at the fringe of the precinct. They can also use space-efficient, low-carbon vehicles to make travel between the dock and the final customer more efficient.

8.4.2 Enhancing the precinct's amenity

Waste management in the Barangaroo loading dock

Both design and management of off-street facilities, and supply chain plans for a precinct, must aim to secure successful place and amenity outcomes. To ensure the logistics task helps to secure these outcomes, dock design and management plans need to address how vehicles enter, exit and are managed in the dock in a manner that is discrete and minimises their impact on the surrounding area. They may also need to address supply chain practices that extend beyond the precinct's geographic boundary.

This may require planning at early stages and potentially incorporating conditions into development approvals. Precinct managers should consider the placemaking goals of a precinct and the non-discretionary nature of freight. Organisational approaches such as a freight consolidation schemes to reduce vehicle traffic, may need to be incorporated into planning approaches and implemented as the precinct is developed.

8.4.3 Harnessing innovation to drive efficiency

The precinct plan should enable logistics operators to adopt emerging technologies that can unlock greater efficiencies, such as small electric vehicles, driverless vehicles and terrestrial and aerial drones. Stakeholders need to plan ahead by considering the infrastructure needs of the different types of larger vehicles that operate to and from the precinct as well as the space efficient ones that may operate within the precinct.

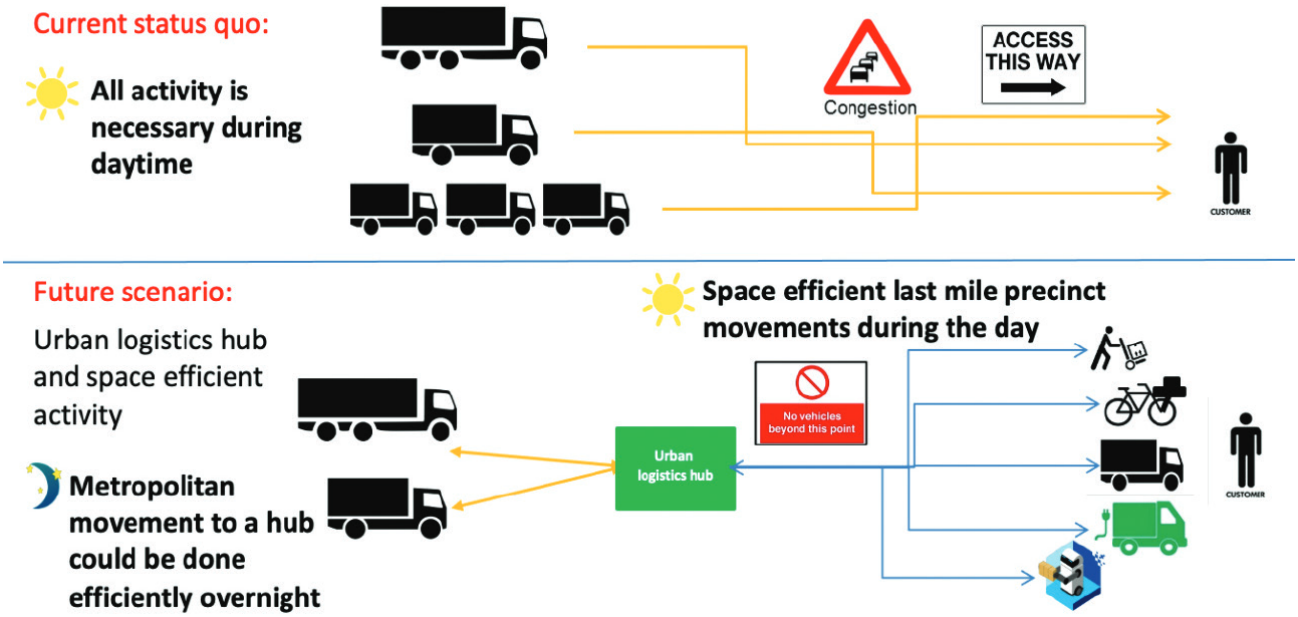


Figure 25 Using a precinct approach to improve urban delivery efficiency