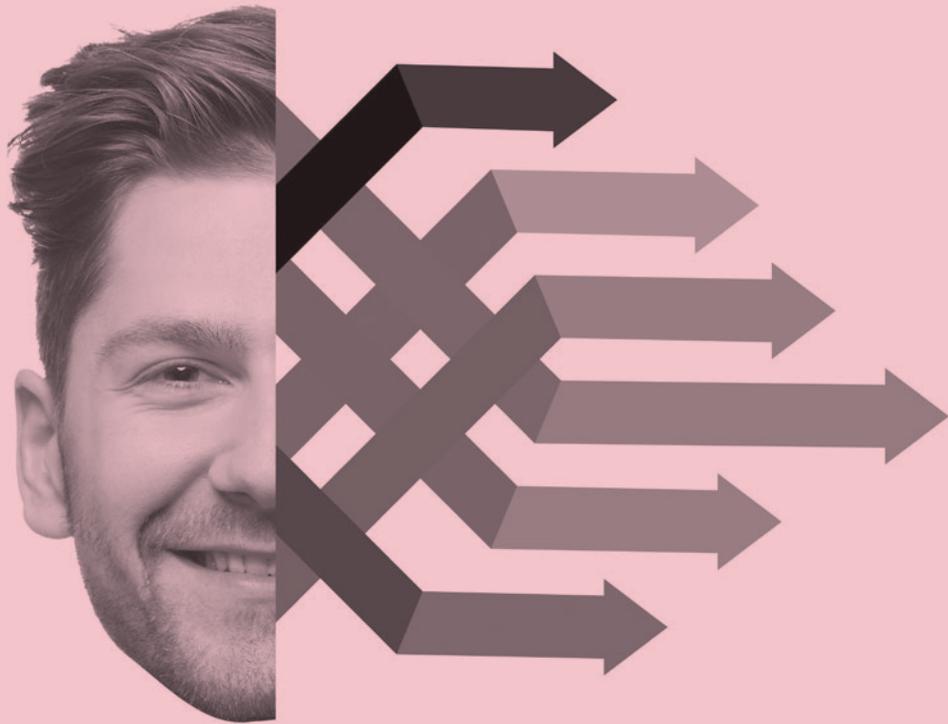


LAST KILOMETRE FREIGHT PLAN

JUNE 2016



CITY OF MELBOURNE



A CONNECTED CITY

We manage movement in and around our growing city to help people trade, meet, participate and move about safely and easily, enabling our community to access all the services and opportunities the municipality offers.

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Last Kilometre Freight Plan

June 2016

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FOREWORD FROM THE LORD MAYOR OF MELBOURNE AND COUNCILLOR CATHY OKE



Melbourne is the fastest growing city in Australia and we need to be smart about how we accommodate that growth.

We know that 46,000 vehicles and 11,500 bicycles enter the city during the morning peak and 10,300 service delivery vehicles enter the city on an average weekday. These figures are set to increase as a growing city will require more deliveries to supply our homes, shops and offices with the things we need.

The City of Melbourne is conscious that an increase in deliveries could result in more trucks and cars on our roads, contributing to congestion on our streets and pathways. We need to investigate, plan for and encourage more innovative ways for deliveries to reach their destination.

Our Last Kilometre Freight Plan focuses on the last leg of a product's journey into our homes and businesses. The plan is part of an integrated approach to transport, as outlined in the City of Melbourne Transport Strategy 2012.

Robert Doyle
Lord Mayor



Our plan links all modes of transport and is coordinated with development in the central city. It also recognises that the City of Melbourne must work with businesses, State Government and the private sector to facilitate innovation in last kilometre freight.

The Last Kilometre Freight Plan includes actions and recommendations that will ensure we keep a strong focus on the vital role that freight plays in the city and that we continue to improve the city's environment for all users. Work on the plan has already facilitated research and industry connections.

Our vision is for Melbourne to be a connected city: a city that's linked by a well designed transport system; a city where people can move through our streets safely and easily and a city where people have the things they need, thanks to an efficient and sustainable freight network.

Cathy Oke
Councillor (Chair Transport Portfolio)

INTRODUCTION

Why are we doing a last kilometre freight plan?

Last kilometre freight is at the heart of how our city works. It is the last leg of the journey of goods into our shops, cafes, restaurants, offices and homes. Efficient freight movement improves liveability, economic prosperity and sustainability.

While there is no evidence of a ‘city-stopping’ freight problem in Melbourne today, there are daily challenges and inefficiencies for freight delivery. These challenges will increase as the central city gets busier and construction of major public transport infrastructure commences.

There are no off-the-shelf solutions for improving freight movement in a central city. What works in one city may not work in another. An important aspect of this plan is considering the local context and establishing

clear roles and expectations about freight so businesses in Melbourne are well positioned to respond to change. This plan makes clear that the City of Melbourne can facilitate change by working with businesses, sharing knowledge and developing partnerships around freight innovation as the city changes. It also establishes that commercial freight initiatives must come from private sector and other players in the supply chain.

The plan has been developed to realise the City of Melbourne’s vision to foster innovative and low-impact freight in central Melbourne, whilst ensuring the central city is designed for people with safe and convivial streets and a prosperous central city for business.

The plan is supported by the following City of Melbourne documents. As well as establishing policy direction, aims, objectives and documenting current practices, these documents illustrate the process to identify the priorities for this plan.

- Last Kilometre Freight Background Report 2015.
- Last Kilometre Freight Case Studies Report 2015.
- Last Kilometre Freight Issues and Opportunities Report 2015.
- Last Kilometre Freight Breakfast Workshop (summary) 2015.
- Last Kilometre Freight Pre-draft Community Consultation (summary) 2015.
- Draft Last Kilometre Freight Plan 2015.
- Draft Plan Community Engagement Summary, Last Kilometre Freight 2016.

This plan identifies actions to ensure last kilometre freight is considered as our city grows and changes. These actions are supported by recommendations and steps to implementation. They have been developed in response to research and engagement undertaken by the City of Melbourne.

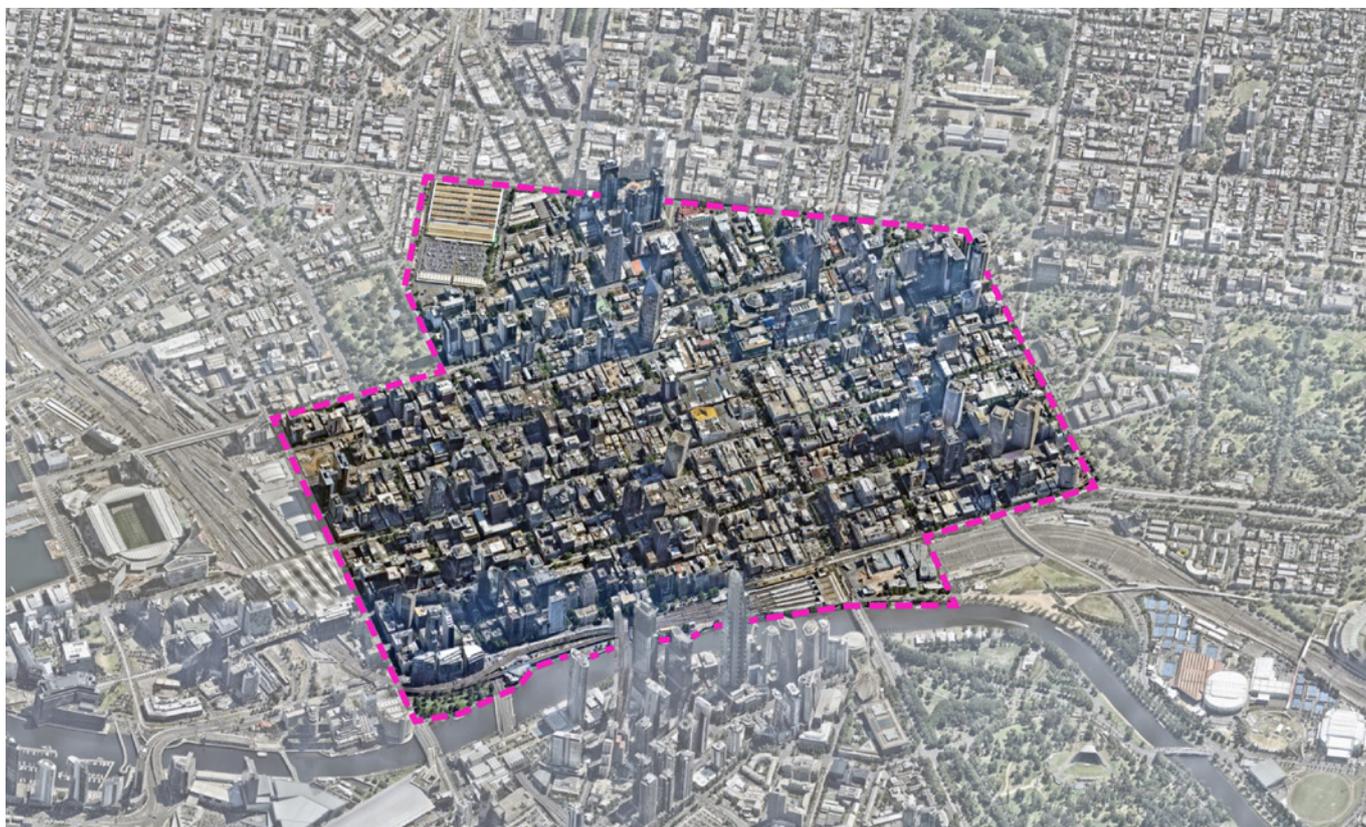


Figure 1: Last Kilometre Freight Plan area

What does this plan address?

The phrase “last-kilometre freight” covers a vast range of shops, businesses, goods, delivery processes, technologies, locations, industries, people and vehicles.

This plan addresses the last leg of the freight journey in the central city, as this is where most of the freight is delivered and where congestion and pressures on freight delivery are highest (see figure 2). It does not consider the movement of goods from international or interstate locations to distribution centres.

Freight delivery is relevant to everyone. Whether we live or run a business in the central city or visit to work, shop, relax or eat, we have a role in thinking about the future of freight.

People will respond differently to freight challenges and will change practices as appropriate. People will make the decisions that are best for them. They will innovate, adopt technology and change processes to ensure they have the goods they need to be successful in the central city environment.

This plan establishes City of Melbourne policy and action on last kilometre freight and a framework for private and public sector innovation to reduce the impact of freight delivery and ensure that it can get to its destination.



Figure 2: Central city street activities

City growth

The City of Melbourne is growing quickly. In the ten years to 2015, the number of jobs in the central city grew 20 per cent (to 219,000 people) and the number of dwellings increased 113 per cent (to 23,573 dwellings).

This will trigger changes to the way everyone moves in the central city, including how freight is delivered. Figure 3 illustrates the complexity of daily activity in the central city.

Major infrastructure initiatives such as the Melbourne Metro, new tram stops and re-routing trams will continue to transform the central city.

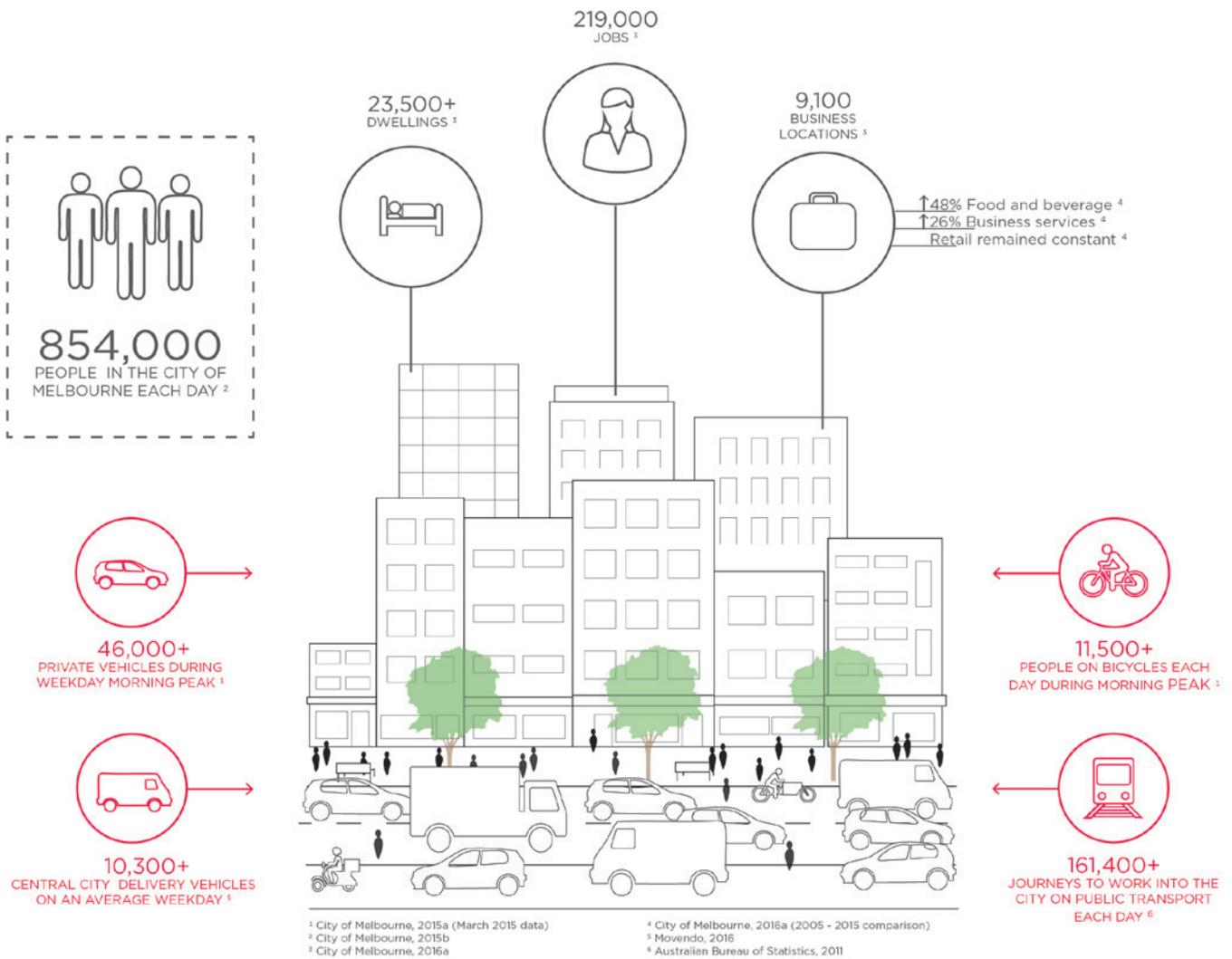


Figure 3: Central city activity



Who is responsible for what?

Freight vehicles form part of a complex and diverse central city transport picture, mixing with people walking, riding bicycles, using public transport and driving.

There are many roles undertaken in the delivery of freight. Much of the movement infrastructure is managed by government, but the task of delivering goods in the city will remain the responsibility of the private sector.

The appropriate roles for the City of Melbourne, building managers, businesses and receivers of freight, freight deliverers, residents and other agencies have informed the development of this plan. Figure 4 provides an overview of the roles different actors fulfil.

Roles	City of Melbourne	Building managers, businesses & receivers of freight	Freight deliverers	Residents	Other agencies
 Leadership & advocacy	✓	✓	✓		✓
 Facilitate collaboration & partnerships	✓				✓
 Manage & regulate	✓	✓			✓
 Research & educate	✓	✓	✓		✓
 Communicate	✓	✓			✓
 Generate solutions		✓	✓		
 Support innovation	✓	✓		✓	✓
 Innovate		✓	✓		
 Collaborate	✓	✓	✓		✓
 Reduce congestion	✓		✓		

Figure 4: Last kilometre freight roles in the central city

The role of the City of Melbourne

Support innovation



Supporting private sector efforts to test innovative and efficient freight practices. Raising central city businesses' awareness of last kilometre freight innovations and best practice.

Leadership and advocacy



Supporting and advocating for changes that will increase the efficiency of the last kilometre freight task and enhance the public realm.

Facilitate collaboration and partnerships



Partnering with and introducing key stakeholders, including community groups, precinct groups, local businesses, industry stakeholders and other government organisations, to achieve the best freight outcomes to meet their needs.

Manage and regulate



Balancing freight needs with the needs of other city users. Designing infrastructure and regulations that support innovative and efficient freight and contribute to convivial and safe streets for all.

Research and educate



Building an evidence base to inform and educate stakeholders and guide action and decision-making.

Communicate



Communicating the right information at the right time to ensure stakeholders possess the knowledge to make the best decisions.

The role of building managers, businesses and receivers of freight

Generate solutions



Building business resilience by identifying the best solutions to freight challenges as early as possible. Identifying the information and support required to inform their decision making and to help realise solutions.

Innovate



Adapting and responding to change with innovation. Ensuring the best and most efficient delivery models are servicing their needs whilst keeping their business costs down and minimising impacts on amenity.

Collaborate and communicate



Collaborating with like and neighbouring businesses to assist innovation and identify appropriate solutions. Sharing information and experiences to inspire innovation.

The role of freight deliverers



Innovate

Maintaining efficiency and responding to the changing central city and the needs of businesses through innovation. Servicing the growing central city by the most efficient and reliable means.



Reduce congestion

Consolidating deliveries and using alternative vehicles and different times of day to manage congestion in the central city through smart works procedures.



Leadership

Leading the way by providing new technologies and innovations that will serve the growing city and enhance the liveability and prosperity of Melbourne, whilst reducing environmental impact. Collaborating with business and residents to achieve these outcomes.

The role of residents



Support innovation

Being adaptable and open to change. Supporting and encouraging business and delivery companies to innovate to establish new ways to deliver freight in the central city.

The role of other agencies

There are multiple government and private agencies operating in the central city managing assets to achieve the best, safest and most efficient results. The actions of these agencies can affect the way last kilometre freight is delivered - for example, timely and efficient communication about road closures or infrastructure changes allows the freight delivery industry to develop contingency plans.

Other agencies and their responsibilities include:

- VicRoads - traffic light signals and arterial roads.
- Public Transport Victoria (PTV) - public transport infrastructure, including level access tram stops.
- Melbourne Metro Rail Authority - design and delivery of Melbourne Metro.
- Yarra Trams, Metro Trains and bus companies - the daily operations of our public transport system.
- Utility companies - the servicing and management of infrastructure. This includes emergency management response (for example - burst water mains), but also planned maintenance works.
- Universities - undertaking research and seeding innovation.

Major projects influencing freight

The following projects will change how freight is delivered in the central city. In the short term through construction and in the longer term as our city adapts to new transport infrastructure and an enhanced public realm.

Melbourne Metro

Our public transport system will undergo major transformation through the development of Melbourne Metro.

Melbourne Metro is planned to deliver:

- Two nine-kilometre rail tunnels from South Kensington to South Yarra, travelling underneath Swanston Street in the CBD, as part of a new Sunbury to Cranbourne/Pakenham line.
- New stations at Arden, Parkville, CBD North, CBD South and Domain, with surface level changes and improvements.
- Train/tram interchanges at Parkville and Domain.

Major works are expected to commence on the Melbourne Metro Rail project by 2018, these works may include road closures, reduced on-street parking and loading and changes to the public transport network.

In addition to increased rail network capacity, this project will provide new and improved access to inner Melbourne's urban renewal areas and changes to on-street public transport. This will lead to improved access to the central city, alleviating congestion and providing additional choice for central city mobility.

It will also enable more people to come to the city increasing the number of pedestrians on city footpaths and using other infrastructure.

Tram route changes

To respond to significant population growth and increased patronage of tram services and to support the implementation of Melbourne Metro Rail, changes to Melbourne's tram routes are required. These changes will ease tram congestion on the Swanston Street Corridor and allow for tram routes to be redistributed to other parts of the central city. This will create additional capacity and improve the level of tram service in other parts of the central city. New tram stops and routes can affect the streetscape and may have short and longer term impacts on freight in the central city.

Level access tram stops

The introduction of level access tram stops throughout the central city will ensure people of all abilities can use our public transport system. These works will be completed to ensure Victoria complies with the Disability Discrimination Act 1982 which stipulates Victoria must achieve 100 per cent compliance by 2032. Some tram stops are currently - or are predicted to be - overcrowded and will need to be expanded. Some may need to be expanded to serve new longer trams. The introduction of new tram stops can affect the layout of parking and loading zones and can change traffic capacity affecting how deliveries can be made.

New bicycle lanes

The City of Melbourne is committed to making Melbourne a cycling city, "with its entire road network safe and attractive for cyclists of all ages" (City of Melbourne, 2012a, p40). The City of Melbourne Bike Plan 2016-20 (endorsed March 2016) aims to increase bike use to one in four vehicles entering the city in the morning and eliminating serious crashes from the network. As new bike lanes are implemented throughout the city we need to be aware of the impact these can have on loading zones and of the opportunities new bicycle lanes and infrastructure can provide for cargo bike deliveries over the last kilometre.

Elizabeth Street Strategic Opportunities Plan

An Elizabeth Street Strategic Opportunities Plan is being developed by the City of Melbourne. This will guide future streetscape improvement works to Elizabeth Street in consultation with the community. This plan is being developed with consideration to the impact of major transport infrastructure projects in the central city - the design development of this plan is subject to ongoing consultation with Melbourne Metro Rail Authority, Public Transport Victoria and other key stakeholders.



THEME 1: LOCAL AREA PLANNING

Last kilometre freight will be a high priority in all local area plans (such as masterplans). This will mean assessing current and future freight needs, engaging stakeholders about freight issues and considering how innovations can help deliver the freight task.

Last kilometre freight must be considered in the context of each project as different parts of the central city will have different last kilometre freight requirements and therefore different solutions. This is due to a variety of uses (retail, residential, commercial etc.), different access and building types (with some buildings being restricted through heritage and other controls) and differing character and amenity.

In order to ensure freight requirements inform future structure and master plans, the following should be considered in the development of local area plans:

- Researching and communicating crash statistics for accidents involving freight vehicles in the central city.
- Undertaking freight surveying and analysis and identifying efficient ways of presenting the data.
- Supporting new freight infrastructure, including innovative and low-impact freight solutions.
- Specific engagement on last kilometre freight with stakeholders.



Figure 5: Queen Victoria Market precinct

Elizabeth Street

The Elizabeth Street Strategic Opportunities Plan is being prepared to accommodate improvements to the public realm and recognise Elizabeth Street's role as a primary pedestrian spine. There are potential opportunities for freight improvements in Elizabeth Street, including the potential to trial new solutions. Any freight solution for Elizabeth Street will need to be integrated with surrounding areas including the Vehicle Access Permit Scheme operating on Swanston and Bourke streets.

Queen Victoria Market

Redevelopment of the Queen Victoria Market (QVM) provides the opportunity to reinvigorate deliveries to and from this precinct, including the potential to deliver market goods to the increasing number of people living and working near the market and the potential to incorporate infrastructure to support innovative last kilometre freight delivery from the market.

Future projects

All projects undertaken in the central city (and other areas of the municipality) will consider the role of deliveries and servicing to ensure appropriate infrastructure and design options are identified.

Actions

1.1

Investigate the opportunity for low-impact local delivery opportunities as part of the QVM re-development. This could include the following:

- Pilot low impact vehicles for QVM goods delivery within the central city.
- Determine the feasibility of using QVM as a central distribution hub for low impact vehicles.
- Investigate infrastructure to improve the efficiency and safety of goods delivered to and from the QVM.

1.2

Investigate opportunities to reclaim unused or underutilised city space for freight and logistics. This could include the following:

- Refurbishing unused space in central city car parks.
- Undertaking inventory of buildings which have capacity to service surrounding businesses.
- Reassigning on-street space.
- Do last kilometre freight plan as part of local area planning.

THEME 2: PUBLIC TRANSPORT

Public transport – in combination with walking – has become the mainstay of central city mobility. It ensures we can move a large number of people into, through and around the city each day. Significant changes to public transport infrastructure will affect the way last kilometre freight is delivered in the central city.

Public transport infrastructure

Improvements to Melbourne's public transport network will increase personal mobility in the central city. Changes to infrastructure can affect the way freight is delivered through changes to loading areas, a reduction in on-street parking and the narrowing of streets.

The City of Melbourne will continue to work with our partners to ensure that changes to the public transport network consider the function of the street and the impact on freight and surrounding businesses.



Figure 6: Recent introduction of level access tram stops has affected the loading process in the central city

Melbourne Metro

Melbourne Metro Rail will transform Melbourne. The project will bring up to an additional 20,000 people into the heart of Melbourne in peak hours. Two of the new stations will be in the central city - with busy entrances and connections to the street network.

Building Melbourne Metro Rail provides unique challenges and opportunities. Managing impacts on the delivery supply chain in the central city, particularly in proximity to Melbourne Metro construction sites, will require a variety of responses to ensure freight

continues to reach city businesses. It is also an opportunity for the city to innovate in the way it manages freight to improve future amenity and prosperity.



Figure 7: Proposed Melbourne Metro Rail Project alignment

Source: Melbourne Metro Rail Authority, 2015

Action

2.1

Work with the State Government and our central city partners to promote efficient last kilometre freight in the planning and construction of Melbourne Metro Rail. This could include the following:

- Facilitate improved communication and collaboration between stakeholders around the staging and development of Melbourne Metro Rail and public transport works.
- Facilitate new ways of delivering and receiving freight in response to Melbourne Metro Rail and new public transport infrastructure.
- Ensure last kilometre freight is considered in Traffic Management Plans.

THEME 3: FREIGHT INITIATIVES

Each day, in response to rising city congestion and costs, businesses around the world are working to find cheaper, easier and more efficient ways to move goods. Raising awareness of local and global freight innovations will help local businesses improve central city freight delivery.

Cargo bikes

The City of Melbourne's Transport Strategy 2012 calls for Melbourne to become a cycling city and a city which supports efficient urban freight through increased innovative and low impact freight.

Cargo bikes are a low impact way to deliver goods. They emit no pollution. They are quieter, smaller and more transparent than trucks and so pose less of a safety threat. They do not block city views and require less space for parking. Cargo bike riders can have a strong connection to other city users because they are travelling at eye level and not inside an enclosed vehicle. Cargo bikes can be electrically assisted to move heavier loads.

There is an emerging cargo bike delivery sector in Melbourne and cargo bike use is growing around the world, especially in the busiest parts of cities. Because of their flexibility and relatively quick delivery times in crowded places, cargo bikes have also helped stimulate and facilitate new ways of doing business.

Pilot projects

As part of supporting business growth, development and innovation, the City of Melbourne will provide leadership, advice and support to businesses wishing to innovate.

To build greater resilience amongst the business community and assist business continuity planning, the City of Melbourne can:

- Fund and undertake trials.
- Share lessons learnt from trials.
- Provide support to other agencies interested in piloting projects within the central city.



Figure 8: Cargo bike courier, Melbourne

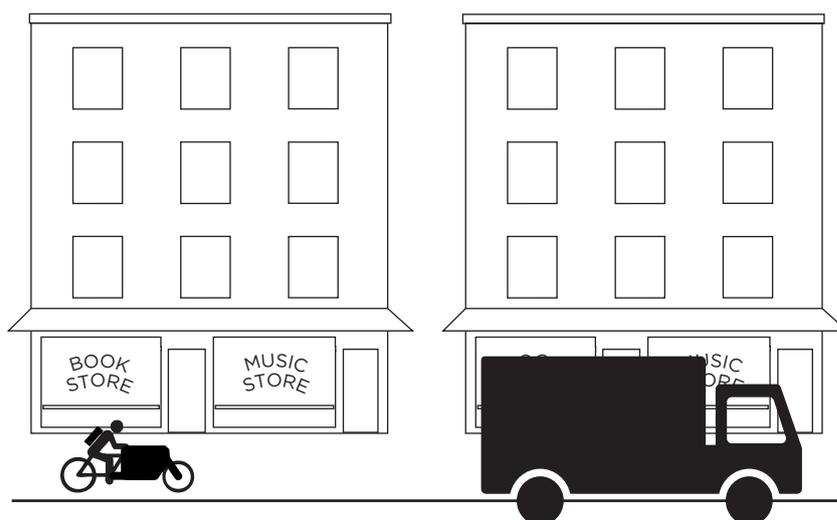


Figure 9: Visual impact of parked freight vehicles

Out of hours deliveries

The potential benefits of out of hours delivery include reduced congestion, quicker and more efficient delivery, reduced infrastructure requirements, maximising vehicle operational hours and consolidation of larger deliveries - therefore requiring fewer vehicles throughout the day.

Retiming deliveries to off-peak hours has been tried in many places around the world. The costs and benefits of out of hours delivery vary from city to city because every city has different people, traditions, customs, traffic conditions, buildings, street layouts and rules. To be successful, out of hours delivery must work for all players in the supply chain, including the receiver. Having

people available to receive freight after hours can be a cost to businesses. Some industries will be better suited to out of hours delivery than others. In many cases, trials of out of hours delivery have not become permanent due to the extra costs involved.

The Department of Economic Development, Jobs, Transport and Resources is working with VicRoads to understand the potential for out of hours delivery in the heart of Melbourne. The challenges are to establish a local rationale for out of hours delivery, to identify the local barriers and enablers and to identify deliverers and receivers interested in leading change.

Melbourne aims to be a 24 hour city. Out of hours deliveries must be managed to support and recognise the range of activities taking place in the central city at all times.

City of Melbourne has a role to play in out of hours delivery by ensuring the liveability of the city is maintained and enhanced where possible but also through the facilitation of out of hours trials and the application of our regulatory procedures such as the designation and timing of loading zones and parking permits, as explored in *Theme 4: Technology and communication* and *Theme 5: Regulation*.

Actions

3.1

Encourage and support the piloting of new and innovative technologies (including vehicles) and processes. Share the outcomes and lessons learnt with all stakeholders to ensure the full impact of new systems are understood and communicated. This could include the following:

- Investigate funding to support central city business and retail precincts (self-formed or other) driving innovation and developing new ways of handling freight over the last kilometre.
- Investigate the potential for the increased use of cargo bikes for goods movement in the central city.
- Promote and raise awareness about the use of cargo bikes and other freight initiatives for delivery in central Melbourne.
- Encourage and support low emission and low impact vehicles in the central city.
- Encourage and support the use of alternative vehicles that will increase safety by reducing conflict between heavy vehicles and vulnerable road users.

3.2

Work with State Government, industry and the community to overcome barriers (regulatory and other) to quiet out of hours delivery in the central city. This could include the following:

- Identify principles for out of hours deliveries to protect the liveability and amenity of the central city.
- Encourage out of hours infrastructure innovations.
- Support out of hours pilots and ensure the findings are shared with all stakeholders.
- Engage with all stakeholders on the potential use of alternative vehicles (including electric vehicles and cargo bikes) to perform out of hours deliveries.
- Provide input into the EPA Victoria review of State Environment Protection Policy (control of noise from industry, commerce and trade) No. N-1 to achieve the best balance for our residential and commercial stakeholders.

THEME 4: TECHNOLOGY AND COMMUNICATION

Advanced technology and improved communication and collaboration can transform the way we experience the city and increase our reputation as both a connected and knowledge city. It can assist in ensuring central city space is used as efficiently as possible. Improved communication ensures that stakeholders can make the best decisions about deliveries by having all necessary information available to them.

Technology

Rapid technology advancements are changing the way we move, eat, live and socialise. Technology will also have an increasing role in the mobility of cities and the movement of people and goods. Melbourne's central city freight systems should take advantage of 21st century technology.

Intelligent transport solutions can reduce delays, improve safety, cut noise and allow the efficient sharing of scarce resources including space in the central city.

Technology advancements in freight include systems for booking on and off street loading areas, systems for identifying empty vehicles and connecting them to customers, new low-impact vehicles and systems for combining several deliveries into a single load.

Communication

The central city is a complex environment, with many stakeholders managing, operating and interacting within a limited space. Timely and open communication between stakeholders including institutions, agencies, receivers of freight and freight delivery companies will ensure all parties can be prepared and make the best decisions to meet their freight needs. It will also ensure business continuity and resilience as the central city intensifies and undergoes significant transformation.

Actions

4.1

Investigate new opportunities for gathering and using freight data to improve freight efficiency. This could include the following:

- Collect data and survey loading zones to evaluate their efficiency and determine if they are achieving the desired occupancy at peak loading times.
- Develop tools to understand the freight generation rates for different land uses.

4.2**Ensure data which impacts on freight planning and delivery is visible and available. This could include the following:**

- Share our information and data to ensure we are adaptive, agile and provide consistent and reliable information to plan ahead and enable solutions – use the right channel at the right time, for the right thing.
- Integrate our technology and information with platforms and systems used by our stakeholders.
- Work with other agencies to share their data with the public.
- Work with inner Councils to share data and ensure efficient delivery across municipalities.
- Research and communicate crash statistics for accidents involving freight vehicles in the central city.

4.3**Investigate the use of technology to improve the efficiency of deliveries or change the way deliveries are undertaken. This could include the following:**

- Investigate changes to the provision and management of on-street loading zones in Elizabeth Street, where strategic opportunities are being investigated.
- Investigate the development of a freight journey planner.
- Publish a freight access map of the central city showing on-street loading zones and the quiet and busy on-street parking times (informed by the parking sensors) to assist freight deliverers to make the best decision on the timing and location of their deliveries.
- Ensure advancing technology, such as driverless vehicles, drones and robots are considered and appropriately regulated in the central city environment.
- Capitalise on Melbourne's hosting of the 2016 Intelligent Transport Systems (ITS) World Congress to promote the use of technology to improve the efficiency of last kilometre freight.

4.4**Support and encourage ongoing communication and engagement between all stakeholders to deliver better outcomes. This could include the following:**

- Facilitate the early provision of information so businesses have the best opportunity to respond to change.
- Seek the views of stakeholders to identify appropriate freight solutions.
- Develop a platform where all stakeholders can share advice and experiences, to encourage innovation and ensure all stakeholders are aware of freight initiatives.
- Investigate the usefulness of a regular multi-agency road freight bulletin and the best way to provide information on changes to central city roads.
- Collaborate with City of Sydney, our sister cities and other governments to identify opportunities to improve our last kilometre freight practices.
- Collaborate with and connect stakeholders who wish to expand their operations or change their practices to increase the use of cargo bikes.
- Build business engagement and collaboration around the transformation of the public transport network.
- Investigate the need for a freight education campaign amongst central city users to realise the Last Kilometre Freight Plan and the City of Melbourne Road Safety Plan 2013-17.

THEME 5: REGULATION

The City of Melbourne regulates the use of streets in many ways to deliver the greatest benefit to the community. Regulating streets can be a complicated balancing act and must respond to the changing demands of users. For example, the desire for a pedestrian mall in Bourke Street required regulation to prevent private vehicle access but to permit freight vehicles at certain times.

Building design

New buildings in the City of Melbourne should be designed to provide for efficient servicing and delivery. The City of Melbourne can influence building design through:

- Determining planning applications.
- Managing waste.

Street design

Areas of regulation undertaken by the City of Melbourne include:

- Traffic function on City of Melbourne roads.
- Allocating and positioning loading zones and on-street parking areas.
- Operating the Vehicle Access Permit Scheme in Swanston Street and Bourke Street Mall.
- Designing and constructing the public realm including footpaths.
- Issuing permits for the occupation of roads and footpaths to support construction.

The Vehicle Access Permit Scheme, which has operated in Swanston Street since 1978 and Bourke Street since 1991, prevents most vehicles using these streets except some delivery vehicles at specific times. This is to make the streets safer and more enjoyable, provide space for walking, cycling and trams and provide access for deliveries to businesses located on these streets. Some deliverers support the scheme because it makes delivery easier and more efficient. As the city grows and intensifies, the scheme will need to be managed to ensure it provides the greatest benefit to the community.

The City of Melbourne currently aims to have a 50 per cent or lower occupancy of loading zones in peak loading times (City of Melbourne, 2008). This low occupancy rate improves the likelihood of a loading space being available, makes it easier for freight deliverers and reduces vehicles circling and adding to city congestion. It may be possible to improve the efficiency and 'work rate' of our loading zones by using technology and improving practices relating to management of loading zones.

Actions

5.1

Ensure new buildings are equipped to meet the freight requirements for receiving and dispensing goods and services. This could include the following:

- Advocate for the inclusion of loading bays for waste collection and furniture removal in non-commercial buildings, including high rise residential, via the statutory planning process.
- Encourage new buildings to integrate new technologies and infrastructure so deliveries can be made in the most efficient and effective means possible. This may include the use of parcel-lockers, security protected delivery areas, electronic charging stations, consolidation points and quiet loading dock technology.

5.2

Investigate further opportunities to enhance the operations of central city streets to:

- **Meet the objectives of the Transport Strategy 2012, Bicycle Plan 2016-20, the Road Safety Plan 2013-17 and the Walking Plan 2014; and**
- **Minimise congestion and enhance central city mobility and amenity.**

This could include the following:

- Identify alternative ways to manage the street to achieve the most efficient use of on-street parking and loading services.
- Undertake a review of the Vehicle Access Permit Scheme. Assess the performance of the scheme, determine if it is an appropriate tool to expand into other areas of the central city and identify changes to improve the operation of the scheme including opportunities to improve efficiency through technology and training.
- Undertake a review of pricing to discourage lengthy occupancy of city streets for construction purposes to minimise the impact of long-term construction on the street environment.
- Investigate improvements to cycling infrastructure to support cargo bike deliveries in the central city.

ACTION	IMPLEMENTATION PROCESS	LEAD	DELIVERY MECHANISM	TIMEFRAME FOR DELIVERY			
THEME 1: LOCAL AREA PLANNING				2016	2017	2018	2019
	<p>1.2.2 Utilise off-street space for efficient freight practices:</p> <ul style="list-style-type: none"> Continue to promote off-street servicing in new buildings to ensure appropriate utilisation of on-street spaces. Encourage opportunities to service multiple locations from one area (repurposing of underutilised space). <p><i>Also implements Action 3.1, Action 5.1.</i></p>	Urban Strategy	Business as usual				
THEME 2: PUBLIC TRANSPORT							
Action 2.1 Work with the State Government and our central city partners to promote efficient last kilometre freight in the planning and construction of Melbourne Metro Rail.	<p>2.1.1 Provide information to the Melbourne Metro Rail Authority to ensure that Traffic Management Plans provide for local freight movements.</p> <p><i>Also implements Action 4.2, Action 4.4.</i></p>	Melbourne Metro Rail Project	Business as usual				
	<p>2.1.2 Support collaboration with business stakeholders around the construction of Melbourne Metro Rail.</p> <p><i>Also implements Action 4.4.</i></p>	Melbourne Metro Rail Project	Business as usual				
THEME 3: FREIGHT INITIATIVES							
Action 3.1 Encourage and support the piloting of new and innovative technologies (including vehicles) and processes. Share the outcomes and lessons learnt with all stakeholders to ensure the full impact of new systems are understood and communicated.	<p>3.1.1 Prepare a report investigating the potential for the increased use of cargo bikes for goods movement in the central city.</p>	Urban Strategy	Business as usual				
	<p>3.1.2 Investigate the introduction of special purpose loading zones to support innovative and low impact delivery.</p> <p><i>Also implements Action 5.2.</i></p>	Urban Strategy	Future planning				

ACTION	IMPLEMENTATION PROCESS	LEAD	DELIVERY MECHANISM	TIMEFRAME FOR DELIVERY			
THEME 3: FREIGHT INITIATIVES				2016	2017	2018	2019
	3.1.3 Encourage the use of alternative vehicles to reduce traffic conflict.	Urban Strategy	Business as usual				
Action 3.2 Work with State Government, industry and the community to overcome barriers (regulatory and other) to quiet out of hours delivery in the central city.	3.2.1 Identify principles for out of hours deliveries to protect the liveability and amenity of the central city.	Urban Strategy	Business as usual				
	3.2.2 Support quiet out of hours pilots that work for all parties in the supply chain and meet the principles identified by the City of Melbourne.	Engineering Services	Business as usual				
	3.2.3 Provide input into the EPA Victoria review of State Environment Protection Policy (control of noise from industry, commerce and trade) No. N-1.	Urban Strategy	Business as usual				
THEME 4: TECHNOLOGY AND COMMUNICATION							
Action 4.1 Investigate new opportunities for gathering and using freight data to improve freight efficiency.	4.1.1 Collect data and survey loading zones to evaluate their efficiency and determine if they are achieving occupancy of 50 per cent at peak loading times.	Engineering Services	Business as usual				
	4.1.2 Use technology to manage on-street parking: <ul style="list-style-type: none"> Increase the number of parking sensors within the central city. Work with innovators to deliver new responses to manage on-street space. <i>Also implements Action 1.2, Action 2.1, Action 3.1.</i>	On-Street Compliance	Future Planning				
		Smart City Office	Future Planning				
	4.1.3 Develop a tool to understand the freight generation rates for different land uses and apply to the central city. Investigate changes to Census of Land Use and Employment to include questions to gather additional data on freight.	Smart City Office	Business as usual				

ACTION	IMPLEMENTATION PROCESS	LEAD	DELIVERY MECHANISM	TIMEFRAME FOR DELIVERY
THEME 4: TECHNOLOGY AND COMMUNICATION				2016 2017 2018 2019
Action 4.2 Ensure data which impacts on freight planning and delivery is visible and available.	4.2.1 Work with research bodies to identify crash statistics in the central city and address through the implementation of the Road Safety Plan 2013-17.	Engineering Services	Business as usual	
Action 4.3 Investigate the use of technology to improve the efficiency of deliveries or change the way deliveries are undertaken.	4.3.1 Investigate changes to the provision and management of on-street loading zones in Elizabeth Street as part of strategic opportunities.	Urban Strategy	Business as usual	
	4.3.2 Publish data collected by On-Street Compliance and Engineering Services to inform a freight access map for areas in the central city which have the highest demand for on-street space, showing on-street loading zones and the quiet and busy on-street parking times.	Smart City Office (data) Urban Strategy	Business as usual Future Planning	
	4.3.3 Develop an understanding of disruptive technology and establish policies and regulations guiding their use in the central city in response to any changes in State Legislation.	Smart City Office	Future Planning	
	4.3.4 Promote our data and identify opportunities to capitalise on Melbourne's hosting of the Intelligent Transport Systems (ITS) World Congress to improve the efficiency of last kilometre freight.	Smart City Office	Business as usual	
Action 4.4 Support and encourage ongoing communication and engagement between all stakeholders to deliver better outcomes.	4.4.1 Host engagement activities (for example a Freight Open House) to facilitate the early provision of information to help businesses and industry to respond to change and innovate. <i>Also implements Action 2.1, Action 3.1.</i>	Urban Strategy Business and Tourism	Future Planning	
	4.4.2 Build collaboration and connect stakeholders at engagement events to increase the use of cargo bikes and other low impact freight initiatives. <i>Also implements Action 3.1.</i>	Urban Strategy Business and Tourism	Future Planning	

ACTION	IMPLEMENTATION PROCESS	LEAD	DELIVERY MECHANISM	TIMEFRAME FOR DELIVERY			
THEME 4: TECHNOLOGY AND COMMUNICATION				2016	2017	2018	2019
	<p>4.4.3 Engage stakeholders to identify appropriate freight solutions in response to local area changes or infrastructure.</p> <p><i>Also implements Action 1.1, Action 1.2, Action 2.1, Action 3.1, Action 4.3.</i></p>	Local Area Project Manager	Business as usual				
	<p>4.4.4 Communicate with other jurisdictions, agencies, municipalities to share findings of last kilometre freight work.</p> <p><i>Also implements Action 2.1, Action 3.2, Action 4.2.</i></p>	Urban Strategy	Business as usual				
	<p>4.4.5 Deliver the 'Share our Streets' program and other education and safety campaigns to raise awareness between heavy vehicles and vulnerable road users and realise the Last Kilometre Freight Plan and Road Safety Plan 2013-17.</p> <p><i>Also implements Action 5.2.</i></p>	Engineering Services	Business as usual				
	<p>4.4.6 Develop an online freight page to:</p> <ul style="list-style-type: none"> • Promote and raise awareness about freight initiatives and innovations, including the use of cargo bikes, out of hours delivery and other freight initiatives in the central city. • Ensure our data and information is visible and available. • Enable advice and experiences to be shared amongst the freight industry. • Link to information relating to central city activities and road closures. • Communicate grant and project pilot opportunities. <p><i>Also implements Action 3.1, Action 3.2, Action 4.2, Action 4.3, Action 5.1, Action 5.2.</i></p>	Urban Strategy Smart City Office	Future planning				

ACTION	IMPLEMENTATION PROCESS	LEAD	DELIVERY MECHANISM	TIMEFRAME FOR DELIVERY			
				2016	2017	2018	2019
THEME 5: REGULATION							
Action 5.1 Ensure new buildings are equipped to meet the freight requirements for receiving and dispensing goods and services.	5.1.1 Write to the Minister for Planning to request review of Victoria Planning Provisions (to be led by State Government) to advocate for the inclusion of loading bays for waste collection and furniture removal in non-commercial buildings, including high rise residential.	Urban Strategy	Business as usual				
	5.1.2 Encourage new buildings to integrate technologies and infrastructure.	Urban Strategy	Business as usual				
Action 5.2 Investigate further opportunities to enhance the operations of central city streets to: <ul style="list-style-type: none"> Meet the objectives of the Transport Strategy 2012, Bicycle Plan 2016-20, the Road Safety Plan 2013-17 and the Walking Plan 2014; and Minimise congestion and enhance central city mobility and amenity. 	5.2.1 Undertake a review of the Vehicle Access Permit Scheme and make recommendations for the ongoing operation of the scheme.	Urban Strategy	Business as usual				
	5.2.2 Review intermittent road closures to ensure cargo bicycles have appropriate access to the central city, in a safe manner.	Engineering Services	Future planning				
	5.2.3 In consultation with established cargo bike companies identify locations for cargo bike parking in the central city. Ensure appropriate infrastructure throughout the central city and at these locations to encourage delivery by bike. <i>Also implements Action 1.2, Action 3.1.</i>	Engineering Services	Future planning				



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Supporting documents

The following documents were prepared in the development of this plan and are available through the City of Melbourne's website:

City of Melbourne (2015). Last Kilometre Freight Background Report 2015.

City of Melbourne (2015). Last Kilometre Freight Case Studies Report 2015.

City of Melbourne (2015). Last Kilometre Freight Issues and Opportunities Report 2015.

City of Melbourne (2015). Last Kilometre Freight Breakfast Workshop (summary) 2015.

City of Melbourne (2015). Last Kilometre Freight Pre-draft Community consultation (summary) 2015.

City of Melbourne (2015). Draft Last Kilometre Freight Plan 2015.

City of Melbourne (2016). Draft Plan Community Engagement Summary, Last Kilometre Freight.

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