Executive Summary
The following case studies are provided as a guide only and are to assist in understanding the basis for the policy and project directions within the Integrated Transport Strategy.

The case studies cover the same themes identified within the Draft Integrated Transport Strategy:

1. Parking
2. People
3. Movement
4. Place
5. Technology
Parking

CASE STUDY: AUCKLAND COUNCIL PUBLIC CARPARK

The most common form of shared parking are publicly accessible parking buildings, as provided in many CBD environments. These buildings allow parking spaces to be shared between multiple users. They may be either publicly or privately-owned but operate most effectively with some form of public-sector governance.

Shared parking opens up a range of opportunities to use parking spaces more efficiently ensuring occupancy remains high between different periods. It also allows complementary land uses to share parking spaces, creating greater efficiencies than what the car parking rates in planning schemes are based.

Within suburban contexts, the multi-story public car parking building in New Lynn, Auckland is an example of a shared parking facility, managed by a public authority within a private development.

The project was instigated by government investment in trenching a surface railway, freeing up land previously used as a bus interchange and surface car-parking. A mixed-use development was delivered by private developers incorporating a four-story 300-space public carpark, 7,000 square metres of retail and commercial space including a health centre and a residential tower with 110 apartments.

Source: http://architecturenow.co.nz/articles/a-street-in-the-sky/

Integrated Transport Strategy Link

Pilot 4.5 Encourage efficient use and innovative management approaches to parking within new developments

References

- Auckland Transport (2017) 'The Merchant Quarter' Available at: https://at.govt.nz/projectHoadworks/new lynn transit oriented development/the merchant quarter/
CASE STUDY: MULTI-DECK CAR PARK IN ATKINSON STREET OAKLEIGH

The City of Monash recognised the need for extra car parks within the Oakleigh Activity Centre (a highly desirable retail and hospitality location), especially during peak periods when existing car parks were 100% occupied.

As such in August 2016, the City of Monash started construction of a new multi-deck car park in Atkinson Street, Oakleigh. This $7.5 million extension of an existing ground floor car park has created a 274-space car park in the centre of Oakleigh, boosting parking in Oakleigh by 195 spaces.

The project included:
- The addition of two decks of car parking
- An electronic car counting system at the entries to the car park, indicating available spaces
- Amenity considerations for neighbouring residents
- Lifts, stairwells and decorative timber facades with feature lighting at both the Atkinson Street and Palmerston Grove frontages
- Solar cells on the rooftop level to power internal lighting
- Landscaping, planting and footpath works

Source: www.monash.vic.gov.au

Integrated Transport Strategy Link

Policy 4.1 Develop and implement parking overlays to contribute to the development of public parking within our centres

References
People

CASE STUDY: NEIGHBOURHOOD PROJECT – CODESIGN STUDIO

The Neighbourhood Project aims to help communities bring different projects to life as well as working with their councils to help embed lasting changes that support active neighbourhoods. The first round involved three local city councils: Hobsons Bay City Council, City of Whitehorse and Cardinia Shire Council. A variety of community-led projects have emerged from consultation, with some being implemented permanently due to their success as a temporary project.

Hobsons Bay City Council projects.

- Brooklyn – laneway activation
  A local artist drew a map of Brooklyn in a new laneway and families were invited to add to the temporary artwork.

- Brooklyn – pop up dog park
  Residents organised an eight-week dog park trial and evaluated its impact. As a result council is now creating a permanent dog park in the area.

Integrated Transport Strategy Link

Policy 2.1 Ensure meaningful engagement with the community and involve the community and stakeholders in all transport projects.

References

- http://theneighbourhoodproject.org/projects/
CASE STUDY: YARRA TRAMS ACCESSIBILITY ACTION PLAN

Yarra Trams has led the way in developing an Accessibility Action Plan to adapt and improve the service delivery for all users of the network.

Yarra Trams has a vision to transform Melbourne’s tram network into a modern light rail system offering world class services to all passengers. An important part of this vision is providing a network that is accessible to everyone and a positive customer experience for people with a disability or mobility restriction, and older people.

Plans include:

- an accessible-only low floor tram fleet and
- increased accessible tram stops at all major destinations.

Integrated Transport Strategy Link

Policy 2.2 Plan for all members of the community and ensure that universal design principles are embedded into all projects, policies and programs
Movement

CASE STUDY: LEVEL CROSSING REMOVAL

The removals of the level crossings at North, McKinnon and Centre Roads have delivered tangible benefits for the Glen Eira community. This includes new train stations, traffic congestion improvements, and public realm enhancements.

The 2014 VicRoads report *Strategic framework for the prioritisation of level crossings in metropolitan Melbourne* applied criteria to determine priority levels for the removal of level crossings across Melbourne. The report identified the Glenhuntly Road level crossing as a high priority and the Neerim Road level crossing removal as a medium priority for removal based on traffic and train volumes in 2013 and 2022. The report also recommends that both of these grade separations are constructed together.

The Level Crossing Removal Authority (LXRA) was established in 2015 to oversee the removal of 50 of the most dangerous and congested level crossings across Melbourne. The LXRA has identified the following benefits for removing the crossings:

- Deliver significant safety improvements for drivers and pedestrians
- Improve travel around Melbourne – whether you are a train user, pedestrian, cyclist or driver
- Get people home safer and faster
- Make our roads more reliable, enabling people to better predict their travel times
- Stimulate economic growth by creating thousands of jobs during construction
- Revitalise local communities, with many areas benefiting from station rebuilds
- Enable more trains to run more often and on time

Integrated Transport Strategy Link

Policy 3.2 Advocate for the removal of all remaining level crossings.

References

CASE STUDY: REMOVAL OF PARKING ON PUNT ROAD AND HODDLE STREET

VicRoads implemented 24/7 clearways along Punt Road in August 2016 to improve traffic flow along one of Melbourne’s most congested roads. It was identified that parked cars contributed to high levels of congestion and were an opportunity to create an additional traffic lane.

VicRoads identified the following benefits from implementing 24/7 clearways:
- Improve safety along Punt Road
- Relieve congestion and get traffic flowing again outside of peak periods and on weekends
- Provide more reliable journeys for people commuting by bus and tram

In late 2015, VicRoads consulted the community on the operation of Punt Road and Hoddle Street. Feedback suggested parked cars contributed to congestion, increased the likelihood of accidents, are dangerous and are a hindrance to public transport. In response, VicRoads conducted a parking review of Punt Road to better understand how the community is currently using parking and where parking demand was highest. VicRoads stated that the majority of people they spoke with supported the extension of clearways. To compensate for the loss of on street car parking, two sites at 182 and 198 Punt Road are designated car parking facilities.

The below graph illustrates that after the implementation of these clearways, drivers have experienced reduction in travel times during non-peak periods. The most significant reduction is the halving of travel times on a Saturday afternoon.

Source: www.vicroads.vic.gov.au

Integrated Transport Strategy Link

Project 3.3 Improve efficiency of existing road network on key driving routes.
References

CASE STUDY: BRIMBANK BUS NETWORK REFORM

Recent reform of the bus network in the City of Brimbank in Melbourne’s Western suburbs offers an example of how improved bus services have resulted in increased patronage and improved levels of service for customers. PTV introduced a revised bus network for the municipality in 2014 focusing on:

- Establishing a hierarchy of bus routes with more frequent, direct services on key routes and lower frequency 'local' services
- Improving bus route directness, particularly for frequent routes to increase travel speed between key destinations
- Rationalising service provision by redistributing resources from under-performing routes to routes with higher demands
- Coordinating schedules with rail services

The impacts of these changes included a 10 per cent patronage increase across all routes within six months.

For some routes, patronage impacts were more dramatic with the 400 and 424 routes seeing more than 20 per cent increases in patronage, despite 10 to 12 per cent reductions in timetabled service kilometers.

This shows evidence of potential for substantial improvements to the efficiency of bus network operations, with opportunities to grow patronage by redeploying existing resources.
Pre and post July 2014 bus network in Brimbank, with existing network issues annotated. Annotations in green were addressed in the new network design.

Pre July 2014 | Post July 2014
---|---
Low peak frequency | No connections to Keilor Plains or Keilor SC
Uncoordinated overlapping services | No connection to Keilor Plains or Keilor SC
Weak terminus | No Sunday service
No Sunday service | No Sunday service
No Watergardens connection | No Watergardens connection
Frequent, highly indirect | No connections to Watergardens
Weak terminus | No connections to Watergardens
Peak crowding | No connections to Watergardens


Integrated Transport Strategy Link

POLICY 3.1 Advocate for improved public transport in areas that are identified as lacking options.

References

CASE STUDY: WALTHAM FOREST - MINI HOLLAND PROGRAM

The Mini-Holland program as part of the Mayor of London’s Healthy Streets agenda aims to make these boroughs as cycle-friendly as their Dutch equivalents – where in some cities more than half of all journeys are made by bike – so that more Londoners can choose to cycle. The project aims that all road users will benefit from improvements to streets and better facilities for pedestrians.

In 2013, all 18 outer London boroughs were invited to apply for funding from the Mayor of London’s Mini-Hollands fund and Waltham Forest was one of three boroughs (Enfield and Kingston being the others) selected to pilot the program.

Waltham Forest’s plans include improving:

- residential areas around Walthamstow Town Centre – such as Walthamstow Village – by slowing down vehicles on residential streets, discouraging non-local traffic from cutting through the area and prioritising pedestrians at junctions;
- town centres – including Leyton and Leytonstone – with changes that allow pedestrians to access shops and facilities safely, attracting visitors to these areas to boost business, and providing public spaces and meeting points for people to enjoy; and
- key routes in the borough – such as Lea Bridge Road – by proposing changes such as: protected separate spaces for people to cycle in, new facilities for public transport users and new crossing points for walkers and cyclists.

Provisional results for Walthamstow reveal an overall traffic reduction of 16 per cent, including a slight increase in traffic on two roads bordering the “village”. Traffic in Hoe Street rose three per cent and 11 per cent in Lea Bridge Road. There were no reported collisions between last September and April, compared with 15 between September 2012 and August 2015.

Integrated Transport Strategy Link

Pilot 3.5 Plan and design a pilot cycle corridor improvement project with a protected cycleway to encourage an increase in cycling
References


- https://www.walthamforest.gov.uk/content/creating-mini-holland-waltham-forest
CASE STUDY: KING STREET TRAM PILOT PROJECT

The King Street Transit Pilot is a project undertaken by the City of Toronto that provides priority to streetcars and restricts the through movement of private vehicles at most intersections. Instead, drivers are channelled into right turn lanes at most signalised intersections and forced to take alternate routes. This allows the streetcars to pass through the centre lane uninhibited.

Additionally, on-street parking will be removed to make way for loading zones, taxi stands, and new public spaces.

The pilot project aims to:
- Move people more efficiently
- Support economic prosperity
- Improve place-making

The 504 King streetcar is the busiest surface transit route in Toronto moving more than 65,000 riders on an average weekday. City staff believe giving streetcars the right-of-way will allow for the more efficient movement of people downtown, because the majority of those who use King are transit riders. The 504 King streetcar carries 65,000 people every weekday, but is often stuck in traffic behind the 20,000 drivers who use the street.

The statistics show that during the evening rush hour period of 4 to 7 pm, the mean travel time for westbound streetcars in the pilot area has been cut by 24 per cent to 17.3 minutes, from 22.8 minutes before the pilot began. The mean travel time for eastbound streetcars has been reduced by 20 per cent to 16.4 minutes from 20.6 minutes.

The figures suggest a remarkable return on investment in terms of transit service for a project that cost just $1.5 million to implement.

Interestingly the project was undertaken as a Pilot Project, to help the City try out new ideas, quickly and cost-effectively, and learn what works and what doesn’t without permanent commitment, an approach that could be easily replicated throughout the city.

**Integrated Transport Strategy Link**

Pilot 3.4 Design and implement a transport corridor improvement project

**References**

CASE STUDY: WALK TO SCHOOL TRAVEL PROGRAMS

Ride and Walk to School programs are designed to drive culture change within the school community to once again, make riding and walking to school common practice for all children.

Promoting physical activity for school aged children is a great way to help students learn healthy habits and achieve the recommended 60 minutes of physical activity. In addition to the health benefits, active travel to school has benefits for the whole community including:

- Reducing traffic congestion
- Reducing parking requirements
- Helps us connect with family and friends
- Reduces carbon emissions

Many Victorian Schools have tailored programs to their individual needs.

Healthy Together Geelong and the City of Greater Geelong Engineering Services Unit continue to support local schools to identify safe active travel routes to and from school. Active travel routes with designated pick up/drop off points between 500m and 1km from schools provide opportunities for families who live greater distances from school to drive part-way and walk the rest of the way to school. These active travel routes can support families and children to meet the physical activity guidelines, as well as reduce traffic and parking congestion around schools.

The program provides a fact sheet that explains how to identify, map and promote safe active travel routes to school. It also provides quick ‘did you know’ facts about active travel and encourages schools to use other resources such as Victoria Walks Smart Steps resources.

Integrated Transport Strategy Link

Pilot 1.4 Work with a school to pilot and develop new ways to encourage behavior changes and reduce the reliance on car based transport

References

CASE STUDY - TRANSIT ORIENTED DEVELOPMENT PERTH CITY LINK

Perth City Link is an urban renewal project managed by the Metropolitan Redevelopment Authority with the aim of reconnecting the Perth CBD with the northern neighbourhood of Northbridge. By sinking the rail line and Wellington Street Bus Station, the project seeks to create a 13.5 hectare space for residential and commercial uses.

It is expected the area will be transformed with quality designed buildings, inviting public spaces, improved connections across the city and an additional 1,650 apartments providing living spaces for 3,000 new residents.


This project is an excellent example of Transit-oriented development (TOD). Taking advantage of under utilised land adjacent to a transport hub and creating a highly desirable location with a mix of high density residential and mixed use commercial and civic spaces.

Transit orientated development is key to realising the 20 minute city concept adopted by direction 5.1 in Plan Melbourne.

Integrated Transport Strategy Link

Policy 1.2 Support and promote the increased dwelling density at key transport hubs

References

CASE STUDY: BARCELONA STREET REDESIGN

Barcelona Superblocks is a plan to create pedestrian-centric neighbourhoods while addressing the health, sustainability, and pollution problems facing Barcelona.

The existing grid design of Barcelona lends itself to this concept. A superblocks test case was launched in the Poblenou neighbourhood in 2016 as illustrated in the photograph below.

Photograph: Kevin Brass

The neighborhood, converted to a superblock in 2015, was promoted as the first test case for the plan. Streets were cut off to through-traffic, and four new public squares of 2,000 square meters each were created.

The concept works by limiting the number of roads that cars can use to cross the city and maximizing the space for the neighbourhoods residents. Following the diagram below, through traffic is permitted only on roads around the perimeter of each superblock, where new bus lines are installed to mop up residents who have abandoned regular driving. The streets within the block have a low 10 kilometers-per-hour speed limit and allow access only for local residents, public transit, delivery vehicles, and emergency services.

Once this system is in place, the less car-encumbered streets are redesigned, extending pedestrian space and allowing for amenities such as playgrounds.
Integrated Transport Strategy Link

Pilot 1.3 Design neighbourhood streets that balance the needs of diverse users in order to create an environment that ensures access, safety, comfort and enjoyment for everyone.

References

CASE STUDY: SIDE STREET SAFETY TREATMENTS: WILLOUGHBY ROAD, CROWS NEST NSW

Willoughby Road in Crows Nest, New South Wales provides a good example of side street treatments with clear pedestrian priority along a suburban activity centre main street. Each side street that joins Willoughby Road is crossed by a zebra crossing and the signalised intersections at either end of the retail strip have pedestrian crossings on every leg.

These side street treatments aim to increase safety and attractiveness for people on foot by inducing lower traffic speed, improving communication between road users and minimising the detour required by people walking.

While each will bring safety benefits for all road users, less mobile pedestrians such as parents with children and elderly people will benefit especially.

The establishment of a legible, structured pedestrian network that recognises the desired movement patterns within and through the precinct has led to an increase in pedestrian footfall and an expected increase in economic performance of the centres retail businesses.

Integrated Transport Strategy Link

Pilot 3.5 Plan and design a pilot cycle corridor improvement project with a protected cycleway to encourage an increase in cycling

References

CASE STUDY: SUSTAINABLE TRANSPORT CHOICES AND THE RETAIL SECTOR 2006

The Commission for Integrated Transport London reviewed the way in which the business community viewed the role of sustainable transport and validity of these perceptions. Historically, members of the retail business community in certain towns and cities where sustainable transport strategies are in place, perceived the implementation of these strategies as having a damaging effect on the local retail economy. Therefore, the concerns of the business community were seen by the Commission as a barrier to the future implementation of sustainable transport policies and to the future development of the retail centres.

Key findings of the study include:
- There isn't a great disparity between the spending habits of car users and public transport users.
- The way shoppers travel has very little effect on how much they spend, with income level being a more significant determinant.
- When deciding where to shop, people will consider parking availability and cost. However, parking may not be as singularly significant of a determinant as the total shopping experience (e.g. range of shops, pedestrian-friendly shopping area).
- Shoppers forgoing the car as a mode of transport are more likely to support their local town and city centres, and local shops, thereby visiting them more frequently.

There isn’t a great disparity between the spending habits of car users and public transport users. The way shoppers travel has very little effect on how much they spend, with income level being a more significant determinant. When deciding where to shop, people will consider parking availability and cost. However, parking may not be as singularly significant of a determinant as the total shopping experience (e.g. range of shops, pedestrian-friendly shopping area). Shoppers forgoing the car as a mode of transport are more likely to support their local town and city centres, and local shops, thereby visiting them more frequently.

Integrated Transport Strategy Link

Pilot 3.5 Plan and design a pilot cycle corridor improvement project with a protected cycleway to encourage an increase in cycling

References

- Sustainable Transport Choices and the Retail Sector, Mott MacDonald 2006

Good for Business is a discussion paper for built environment professionals and business people to highlight the positive and financial benefits of making streets more accessible for cyclists and pedestrians. The report suggests that a well-designed, quality street environment that promotes walking, cycling and public transport creates positive outcomes for business owners.

A New Zealand study found that retailers and shoppers have different priorities. When asked about transportation and urban design of local shopping areas, it was found that a high level of importance was placed on active and public transport infrastructure such as pedestrian crossings, wide footpaths and frequent bus services, whilst on-road parking was less concerning for shoppers.

Conversely, retailers considered parking as the primary concern and high quality urban design and provision for sustainable transport were identified as important by both shopper and retailer.

It is traditional for retailers to pursue increases in car parking numbers, and to resist measures that may result in a net decrease of parking – although pedestrian friendly shopping areas tend to be the most successful commercially.

Integrated Transport Strategy Link

Pilot 3.5 Plan and design a pilot cycle corridor improvement project with a protected cycleway to encourage an increase in cycling

References

- Good for business$: the benefits of making streets more walking and cycling friendly, Heart Foundation South Australia
CASE STUDY: PUBLIC DOMAIN GUIDELINES – CITY OF PARRAMATTA

Parramatta’s Public Domain Guidelines (PDG) provide design strategies, technical guidelines and materials palettes for streets and public places in the City of Parramatta. The guidelines ensure the co-ordination of materials, and design and construction standards across the Local Government Area and allow for the streamlining of procurement, operational, maintenance and management processes.

As the the public domain is designed and built by many different parties including Council, utilities companies, other public authorities, private developers and residents. Consistent standards preferred design outcomes are outlined within the guidelines to ensure coordinated design and construction methods are achieved in the delivery of public places as numerous separate projects. A co-ordinated suite of elements and materials will similarly facilitate the cleaning, management and maintenance of public assets.

Typically Street Design Guidelines offer a set of principles and aspirations to help guide and support the appropriate development of current and future streets within a city. Many successful cities both locally and internationally have developed street design guides and strategies including:

Integrated Transport Strategy Link

Project 5.1 Quickly respond to changing technologies

References

- National Association of City Transport Officials
  https://nacto.org/publication/urban-street-design-guide/
- Adelaide Design Manual
- Transport for London - Streetscape Guidance
  http://content.tfl.gov.uk/streetscape-guidance-pdf
Technology

CASE STUDY: STRAVA METRO DATA

Strava is a GPS based activity tracking app that lets users track their travels, workouts, bike commutes and steps. It also has a division, called Strava Metro that gathers together the anonymized data from millions of bike rides and uses it to find patterns on how, when, and where people ride. Now it is sharing that data with transportation departments in cities around the world, with the goal of improving street infrastructure.

Strava Metro data enables deep analysis of cyclist and pedestrian activity including popular or avoided routes, peak commute times, intersection wait times, and origin/destination zones. Metro processes this data for compatibility with geographic information system (GIS) environments. Key features include:

- Street activity counts across the entire network
- Origin and destination surveys
- Activity counts and wait times at intersections

In 2014, Queensland began working with Strava Metro to capture street-level bicycle usage and gain insights on a range of questions about bicyclist behavior, including preferred routes, peak days and times, average speeds, and gaps in the bicycle network.

Integrated Transport Strategy Link

Project 5.2 Develop a transport data action plan to equip Council to measure, collect and analyse transport data to guide better decision making in the future.

References

- https://metro.strava.com/
CASE STUDY: RESPONDING TO CHANGING TECHNOLOGIES

Transport technologies are changing a faster rate each year — delivering a range of opportunities and obstacles for Council to overcome, examples of rapid changing transport technologies include:

Dockless bike share

Dockless bike share is a new business model that allows people to access a fleet of bikes through a smartphone app. Bikes can be used for return or one-way trips and don’t have to be returned to a docking station.

Mobility as a service

Describes a shift away from personally owned modes of transportation and towards mobility solutions that are consumed as a service. This is enabled by combining transportation services from public and private transportation providers through a unified gateway that creates and manages the trip, which users can pay for with a single account.

Shared streets

Shared Streets is a collaboration between National Association of City Transportation Officials, the World Resources Institute, and the OECD’s International Transport Forum. Together they are developing a digital commons for streets: a universal language for communicating information about city streets, and a launching pad for public/private collaboration and data exchange.

This will include:

- road safety data;
- real time parking and congestion data; and
- integrated public transport scheduling.

Integrated Transport Strategy Link

- Policy 5.1 Quickly respond to changing transport technologies