

Business Case Key Findings

September 2022



Australian Government



A rail link between Melbourne Airport and the CBD has been talked about for decades, pre-dating the opening of the airport itself in 1970. With around 37 million passengers in 2018/19, Melbourne Airport remains one of only 18 of the world's top 100 airports by patronage without access by train.



*Sunshine Station will become a transport superhub.
Concept image only, subject to planning approval
and stakeholder engagement.*



Concept image only.

Melbourne Airport Rail will address this long-awaited need for the benefit of all Victorians and visitors to the state, connecting Melbourne Airport to the heart of the CBD via the Metro Tunnel in around 30 minutes, to key metro destinations and Victoria's thriving regional cities.



Making Melbourne Airport Rail a reality

Victoria is strong and growing. Despite the challenges of the global coronavirus (COVID-19) pandemic, the state remains one of Australia's highest-performing economies, one of the most liveable places in the world, and a great place to visit, work, study and invest.

But unlike many cities around the world, Victoria doesn't have a train line to its major international airport. Melbourne Airport Rail will change that.

Melbourne Airport Rail will link Victoria's primary airport to metropolitan and regional rail networks for the first time – enabling more people to travel to and from Melbourne Airport and giving them more choice about how to get there. The project will increase Victoria's productivity and competitiveness, reduce road congestion and connect people from across Australia and the world to Victoria – opening up new markets for trade and tourism.

Melbourne Airport is a major commercial centre, supporting around 20,600 full time employees directly and 20,900 jobs in airport-related businesses surrounding the precinct. Activity at the airport is growing, with air passenger volumes growing by 52 per cent over the decade to 2019 to around 37 million passengers.

The airport's major access route, the Tullamarine Freeway, has significant and increasing congestion as more people travel to, from and past the airport precinct. Connecting Melbourne Airport to the rail network brings Victoria in line with airports of similar stature in Australia and overseas and contributes to easing congestion along this major road arterial.

In peak periods, Melbourne Airport Rail will deliver a faster and more reliable public transport alternative between Melbourne Airport and the CBD (around 30 minutes), compared with a trip on the Tullamarine Freeway, which is expected to take 40 minutes in 2031 and 66 minutes in 2051.

A direct rail link to the airport has been considered since before the opening of Melbourne Airport in 1970, with various planning studies undertaken over the years to identify and assess potential routes.

Informed by previous studies, the Australian and Victorian governments' partnership to deliver this project will be crucial to stimulate the economy, complement the expected growth of airport activity and provide Victorians and visitors with a viable, reliable alternative to get to and from Melbourne Airport for decades to come.

A measured approach

This Business Case was developed in 2020 and 2021. During this time, necessary measures to slow the spread of the coronavirus (COVID-19) pandemic led to unprecedented economic challenges.

Measures introduced included:

- restrictions on domestic and international travel for Australian citizens
- mandatory 14-day quarantine for all inbound travellers, except those from New Zealand
- ‘Last Step’ restrictions in Victoria, which included caps on people densities indoors, and restrictions regarding social gatherings, religious gatherings, hospitality, community facilities and recreation, as well as ongoing limitations to on-site and office working.

By the end of 2021, most of these restrictions had been lifted in line with *Victoria's Roadmap: Delivering the National Plan*. Although the full length and severity of the economic contraction remains uncertain, the lead times for Melbourne Airport Rail will likely be longer than the recovery timeframe and the underlying problems that it aims to alleviate – such as growing pressures from population growth, and improving access to both Victoria's primary airport and economic hubs – are expected to remain relatively unchanged over the long term.

Melbourne Airport Rail will be a key tool in economic stimulus, initially by creating direct employment during the delivery phase, and subsequently by relieving bottlenecks that constrain productivity growth.



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A project that stacks up

The Business Case presents extensive analysis that demonstrates Melbourne Airport Rail via the Metro Tunnel is the most appropriate solution to improve connectivity to Melbourne Airport.

The Business Case finds Melbourne Airport Rail has strong economic credentials as a standalone project, with a Benefit Cost Ratio of up to \$2.10 for every dollar spent.

The cost of the project is within the \$8-13 billion estimated cost outlined in the 2018 Sunshine Route Strategic Appraisal.

The delivery of Melbourne Airport Rail will directly and indirectly support up to 8,000 jobs. These jobs will range from engineers and planners to construction workers and local suppliers. This level of investment will increase the size of the state's economy and jobs market – creating 1,880 net additional jobs across the state at peak construction.

Melbourne Airport Rail also provides for improvements to the rail network in the future by incorporating features such as longer platforms and enabling a new station at Keilor East.

Melbourne Airport Rail:

- aligns with the strategic policy objectives of Australian, Victorian and local governments
- meets a pressing need to increase the capacity and reliability of access to and from Melbourne Airport
- represents the best option identified to deliver the objectives of rail investment
- delivers substantial social, environmental and economic benefits
- is economically viable and backed by a strong strategic case
- is the best value for money option which is deliverable within the proposed timeframes
- is widely supported by stakeholders and the community.



New rail bridge over M80 freeway.
Concept image only, subject to planning approval and stakeholder engagement.



Moving more people, more efficiently

Among the world's top 100 airports by patronage, Melbourne Airport is one of just 18 without a rail link to the CBD. Sydney, Brisbane and Perth (targeted to open in 2022) airports all have a rail link to the CBD.

Melbourne is undergoing rapid demographic and economic change. In line with national trends, the fastest growing sectors of the Victorian economy are service and knowledge-based industries. This is attracting more people to live in Greater Melbourne, drawn by higher employment prospects, education and social opportunities.

Activity at Melbourne Airport continues to grow. Underpinned by rising international visitor numbers pre-COVID, passenger movements through the airport have grown by 3.6 per cent annually over the last decade. Total passenger movements are forecast to grow from 37 million in 2018-19 to 87 million in 2048, at an average annual growth rate of 3.2 per cent.

The sustained growth in patronage and air freight has contributed to increasing demand for land access to the airport. Together with network-wide increases in vehicles on Melbourne's roads this growth has contributed to deteriorating travel times and heavy reliance on the key access routes to the airport. Given there are few transport options other than via the Tullamarine Freeway, travel times and reliability to the airport will only worsen over time.

Within this context, there are two key problems that underpin the need for a rail link to Melbourne Airport:

- Limited transport connections to Melbourne Airport constrain passenger access, with nearly half of passenger trips to and from the airport being cross-city journeys from the inner, east or south-east suburbs. The majority (around 90 per cent) of airport users travel by private vehicle (including private car, taxi or ridesharing) to get to the airport.
- Increasingly congested links to Melbourne Airport limit Victoria's economic prosperity. Growing patronage at the airport will generate more ground transport movement and add more cars to already-congested roads, while network-wide congestion will have impacts beyond delaying airport passengers such as adding to supply chain costs.

These problems, which will only compound over time, demonstrate a clear need to provide an alternative transport option between the state's primary airport and Melbourne's CBD.

More than just new tracks

Melbourne Airport Rail will connect Melbourne Airport with a rail service for the first time, integrating seamlessly into the existing rail network to provide the best connection for Victorians and visitors alike.

Melbourne Airport Rail will give people choice and certainty in how they get to Melbourne Airport – in time to catch a plane – and connecting people from the airport to wherever they need to go across Victoria.

The overwhelming majority of people travel to and from the airport from their home, so providing a solution that benefits most Victorians through good connectivity to the existing metropolitan and regional rail network is important.

With the Tullamarine Freeway and surrounding roads into Melbourne Airport forecast to only get busier, Melbourne Airport Rail will provide a viable, reliable alternative to road travel without worrying about potential road delays caused by congestion or incidents.

It will provide for turn-up-and-go services every 10 minutes and a journey between Melbourne Airport and the heart of the CBD in around 30 minutes, via Sunshine and the new Metro Tunnel.

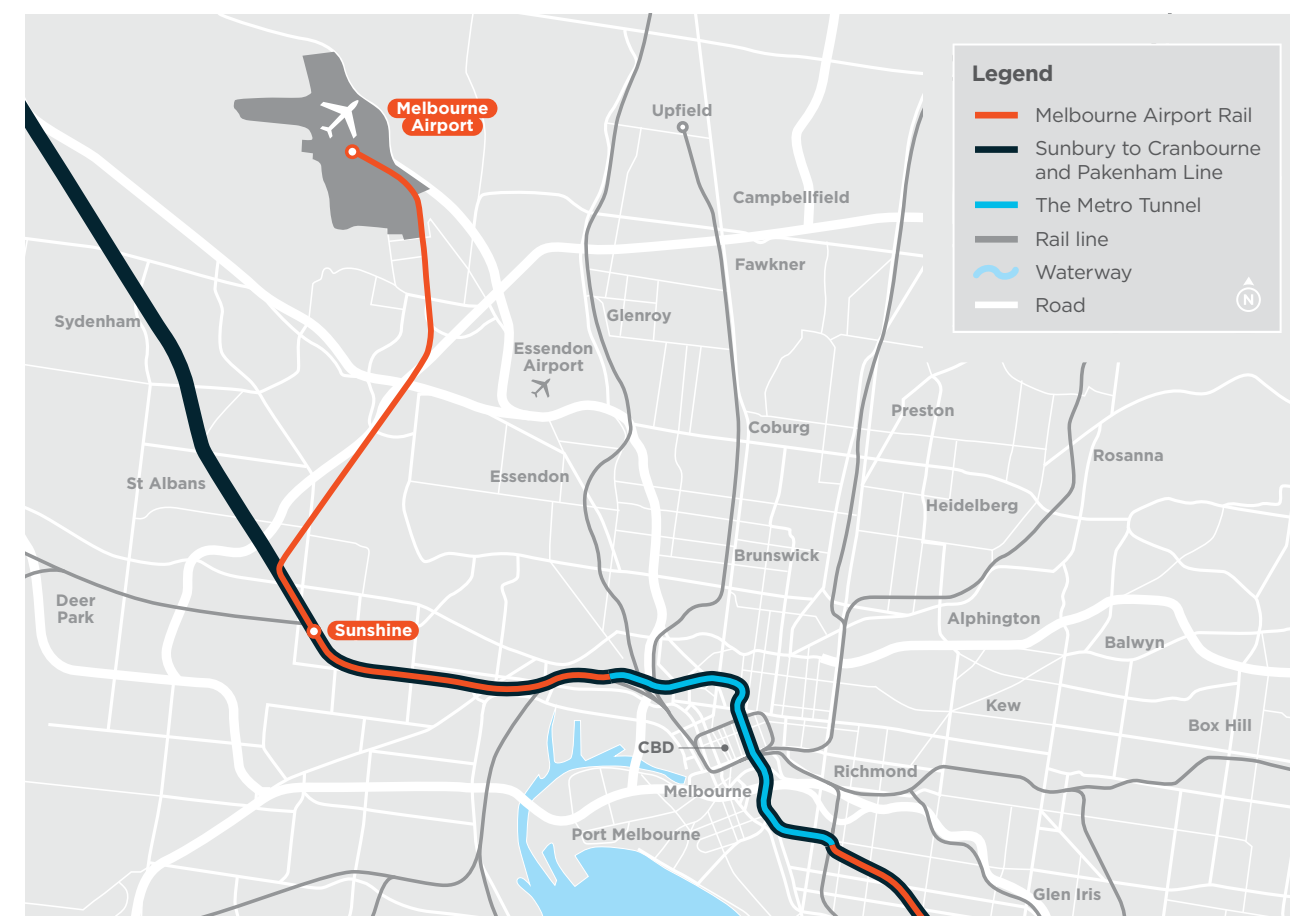
Supported by previous planning studies, the Sunshine Route takes advantage of the existing Albion-Jacana freight corridor and an interchange at Sunshine Station to provide better metro and regional connections. It can be delivered earlier and at a lower cost when compared to other options.

Melbourne Airport Rail will use the new fleet of High Capacity Metro Trains (HCMTs). The HCMTs are the most modern and passenger-friendly trains operating on the Victorian network with more carriages, more space, better accessibility features and more hand-holds than existing trains.

Under the Melbourne Airport Rail route, the new fleet of bigger, better trains will:

- travel on around 13 kilometres of dedicated, new twin tracks between the new Airport Station and Sunshine, via Airport Drive and the existing Albion-Jacana corridor
- stop at an upgraded Sunshine Station, which will continue to transform into a transport superhub over the coming decades in line with a strong pipeline of major projects, providing easy connections between metro (Sunbury and CBD), regional (Ballarat, Bendigo and Geelong) and airport services
- stop at Footscray to connect to the Werribee and Williamstown lines
- travel through the Metro Tunnel, providing direct access to and from key CBD destinations, the Cranbourne and Pakenham lines in the south east – Melbourne's busiest passenger rail lines – and a connection to Gippsland.

The Business Case provides detailed analysis, comparisons and recommendations for key aspects of Melbourne Airport Rail scope.



The key components of Melbourne Airport Rail include:

- a premium elevated railway station at Melbourne Airport, designed to accommodate a future Suburban Rail Loop connection
- new twin tracks between Melbourne Airport and Sunshine, including elevated sections of rail along Airport Drive, over the Western Ring Road (M80 freeway) and at Albion
- futureproofing for an intermediate station at Keilor East
- a new rail bridge over the Maribyrnong River
- upgrades at Sunshine Station and to the precinct around Albion Station
- protection and relocation of utility services, including ExxonMobil jet fuel pipeline and AusNet high-voltage transmission lines
- freight reconfiguration from Airport West to Albion
- line-wide rail systems that are compatible with those being incorporated into the Metro Tunnel.

Work is continuing to further refine all aspects of scope required to deliver Melbourne Airport Rail.

Better connections for airport users

Melbourne Airport Rail will provide more competitive and reliable travel times to and from Melbourne Airport.

Travelling via the Sunshine Route means Melbourne Airport Rail service will be able to use existing infrastructure already being delivered as part of the Metro Tunnel project. It will also mean that significant additional works between Sunshine and the CBD will not be required to deliver Melbourne Airport Rail services.

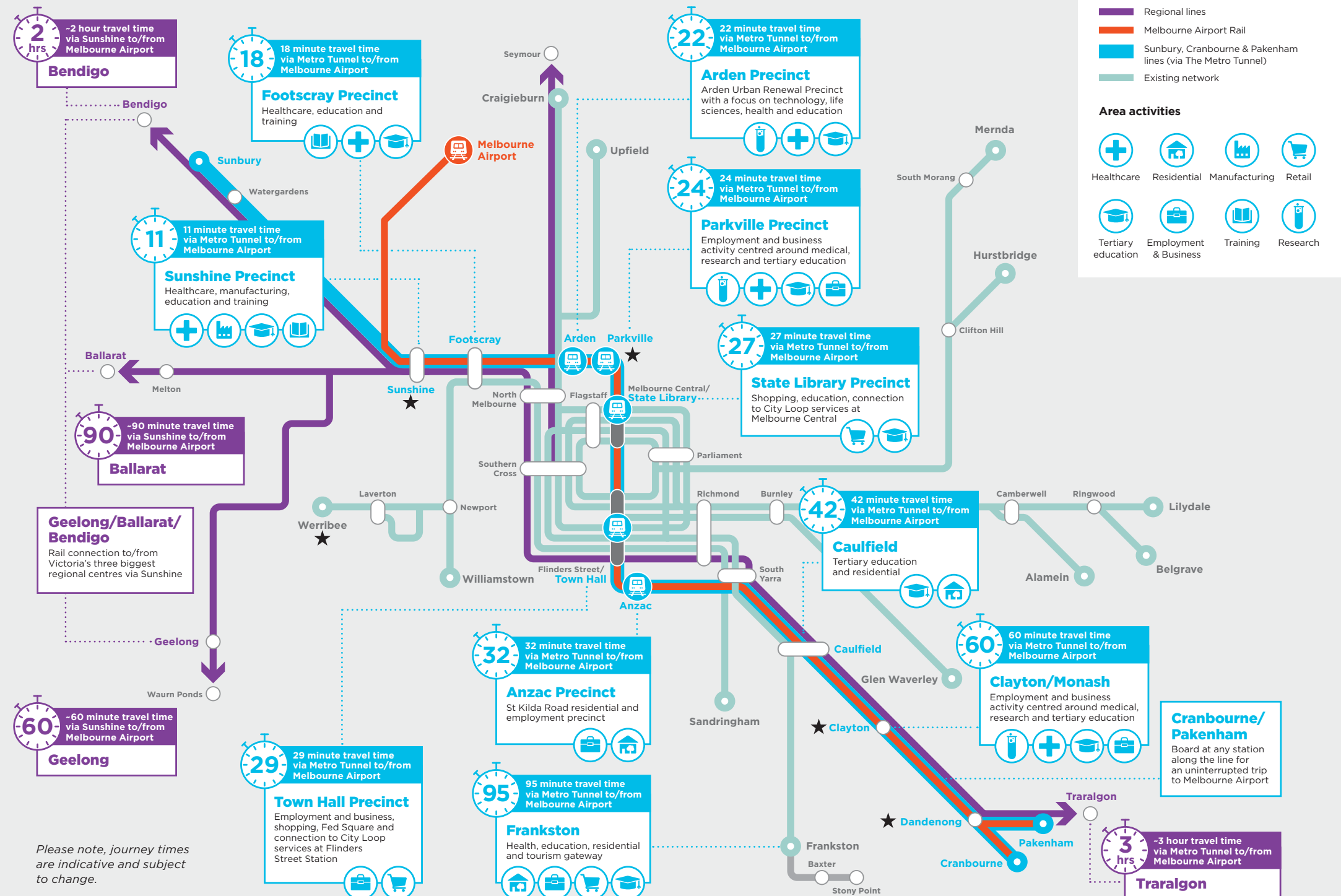
This route will provide direct access to Melbourne Airport for passengers at 30 stations without the need to change trains.

Passengers coming from all other metropolitan and most regional stations will need to change only once to catch a train to the airport, with connections available along the Cranbourne and Pakenham lines, at the new Metro Tunnel stations, and at Sunshine and Footscray.

Sunshine will become a key interchange for passengers travelling from the west of Melbourne such as Sunbury, Bendigo, Ballarat, Melton and Geelong, while Footscray provides an interchange for passengers on the Werribee and Williamstown lines. Gippsland passengers will be able to transfer to an airport service at Pakenham or at other stops along the Pakenham Line.

Connecting with the Metro Tunnel means direct access to key health, research and education, development and employment precincts at Dandenong, Parkville and Sunshine, and future connections to Monash and Werribee.

Completion of Suburban Rail Loop North (SRL North) will provide direct access to and from a further 11 stations across Melbourne's outer suburbs, with a single interchange at Broadmeadows, better connecting to rail services in Victoria's north-east.



A rail link with real benefits

Melbourne Airport Rail provides a faster and more reliable alternative to road travel in the immediate and long term, encouraging public transport use and releasing capacity on the road network.



a frequent 10-minute service to and from **Melbourne Airport.**

around **30 mins** seamless transit into the CBD

compared with expected journey times of 40 minutes in 2031 and 66 minutes in 2056 via road-based travel.

Melbourne Airport

1

direct airport access from **30 metro stations** including all stations on Melbourne's busy Cranbourne and Pakenham lines, the five new Metro Tunnel stations and major activity centres such as Sunshine and Footscray.

support for up to **8,000**

direct & indirect jobs during construction, including valuable job opportunities for cadets, apprentices and trainees.



train capacity for around

6,600

passengers per hour one way significantly increasing the public transport capacity for airport users.



expected patronage growth from

20,000 to 51,000 trips per day

between 2031 and 2056.



taking cars

OFF THE ROAD

in peak periods

as more people across Victoria catch the train to the airport.

Reduced road congestion in **Melbourne's south-east** from less cross-city airport journeys.



improved air freight management

by freeing up the roads around Melbourne Airport.

Melbourne Airport handles around 20 per cent of Australia's air freight value and this is expected to double in volume by 2038.

Social and environmental benefits

Melbourne Airport Rail will contribute to improved social outcomes through lower greenhouse gas emissions and improved health benefits (due to increased walking) resulting from people switching from car to public transport.

The delivery of Melbourne Airport Rail will consider social impact through sustainability and recycled first policies and sustainability frameworks and strategies. Melbourne Airport Rail's Recycled First Policy will support circular economy outcomes through the prioritised use of recycled materials on the project which is key in reducing greenhouse gas emissions.

An Urban Design Strategy has been developed for Melbourne Airport Rail to inform the architectural design and line-wide identity of the stations and the rail corridor. Implementation of the Urban Design Strategy will support the delivery of high-quality and context-sensitive design outcomes that will improve local amenity, enhance the function and identity of activity centres along the rail corridor – such as Sunshine and Albion – and ensure a positive passenger experience.

To complement the significant investments and upgrades proposed to Sunshine Station by Melbourne Airport Rail and other major projects, the Department of Transport is working to plan for further opportunities around the station precinct, including preparing a Masterplan to provide clear direction for its long-term development.

Economic Benefits Assessment

Supporting jobs and building careers

Melbourne Airport Rail will support thousands of skilled workers and provide real opportunities to train the next generation of workers as Victoria recovers from the economic impacts of the COVID-19 pandemic.

From engineers and subject matter experts planning behind the scenes, to construction workers and local suppliers who will help to deliver the project on site, the delivery of Melbourne Airport Rail will support up to 8,000 direct and indirect jobs during construction.

This level of investment will increase the size of the economy and jobs market, creating 1,880 net additional jobs across Victoria at the peak of construction. The construction and operation of Melbourne Airport Rail is expected to increase Victoria's Gross State Product by up to \$17.9 billion in present value terms.

Like all major transport projects in Victoria, other economic benefits of Melbourne Airport Rail will include employment targets for priority jobseekers, prioritising local suppliers through the Victorian Industry Participation Policy (VIPP) and promoting the use of recycled materials through the Recycled First initiative.

The delivery of Melbourne Airport Rail will support up to 8,000 direct and indirect jobs during construction.



A strong return on investment

Melbourne Airport Rail has strong economic credentials with a positive Benefit Cost Ratio, indicating benefits outweigh costs for every dollar spent.

The project's economic appraisal has been undertaken both including and excluding the SRL North connection to Melbourne Airport in 2051, given the interdependency between Melbourne Airport Rail and SRL, and using a 4 per cent discount rate given the project's intergenerational nature.

Melbourne Airport Rail has a Benefit Cost Ratio of 1.8 - 2.1 excluding the SRL North connection, meaning it is economically viable with a net present value of \$7.5 billion to \$10.8 billion.

The project remains economically viable when including the SRL North connection, with a BCR of 1.1 - 1.3 and a net present value of \$0.9 billion to \$2.8 billion.

Economic evaluation results

	Benefit Cost Ratio ¹ (4 per cent discount rate)	Net Present Value (4 per cent discount rate)
Melbourne Airport Rail excluding SRL North connection to Melbourne Airport in 2051	1.8 – 2.1	\$7.5bn – \$10.8bn
Melbourne Airport Rail including SRL North connection to Melbourne Airport in 2051	1.1 – 1.3	\$0.9bn – \$2.8bn

1. Includes wider economic benefits

Value Capture

Additional value above and beyond what would ordinarily be achieved by Melbourne Airport Rail will be produced by applying the Victorian Government's Value Creation and Capture Framework. Opportunities for value capture associated with Melbourne Airport Rail at the time of the Business Case have been identified and may include advertising opportunities at stations, VicTrack telecommunications infrastructure services, and farebox revenue premiums to offset operational costs.

Melbourne Airport Rail's ticket cost and integration with Myki is subject to further consideration and will be finalised closer to the opening of the new line. For the purposes of economic analysis in planning for both Melbourne Airport Rail and its integration with Suburban Rail Loop, sample fare structures were modelled for Melbourne Airport Rail, considering operational costs and the price of a comparable city to airport Skybus ticket. The final ticket price is expected to be comparable to other airport rail services operating across Australia. Alternative fare options, such as for group trips or airport workers, will also continue to be considered.

4 per cent discount rate

The economic assessment of Melbourne Airport Rail has been undertaken using a discount rate (real) of 4 per cent. This reflects the intended outcomes of the multi-generational investment and is more in line with the risk-free rate over the past decade and current global economic environment.

More broadly, the use of a 4 per cent discount rate is consistent with global and local practice for appraising long term, large scale infrastructure investments. For example, a 4 per cent discount rate was used to the Inland Rail project, an expansive multi-generational rail infrastructure initiative.



Delivering Melbourne Airport Rail

Melbourne Airport Rail is a massive engineering task which requires significant planning and longer lead times to ensure all aspects are delivered efficiently and effectively.

As a key state government delivery authority overseeing several major rail projects including the Metro Tunnel and Regional Rail Revival, Rail Projects Victoria is overseeing the planning and delivery of Melbourne Airport Rail on behalf of – and in close consultation with – the Australian and Victorian governments.

Rail Projects Victoria sits under the Major Transport Infrastructure Authority, which helps to coordinate all major transport infrastructure projects being delivered by the Victorian Government including the Level Crossing Removal Project, West Gate Tunnel Project, North East Link Project and Major Road Projects Victoria.

All major transport projects work closely with the Department of Transport, which manages the operations and strategic direction of the road and rail transport network. In the context of Melbourne Airport Rail, the Department's complementary interests include working to identify opportunities that build on the investment of major projects around the Sunshine priority precinct.

Planning approvals

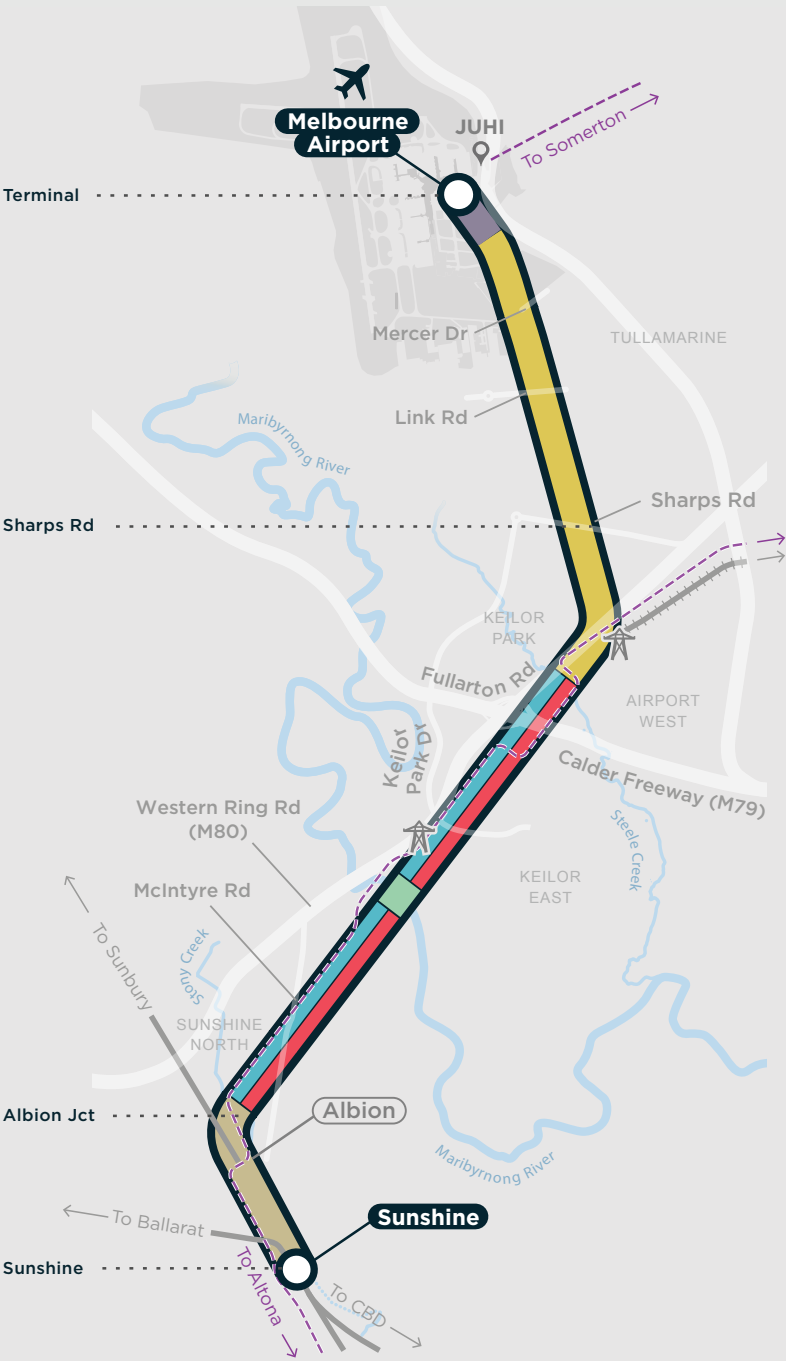
As part of planning for Melbourne Airport Rail, Rail Projects Victoria will seek a range of Victorian and Commonwealth planning, environment and other statutory approvals. The Melbourne Airport Rail route includes brownfield (existing) and greenfield (new) rail networks on both State land and Commonwealth land at the airport.

Community and stakeholder feedback has played an important role in the project's planning and development, with opportunities for people to provide input as part of the formal assessment processes for both the primary approvals for both the Commonwealth and State jurisdictions.

Project timeline

- 2018**
 - Sunshine route announced for Melbourne Airport Rail
 - Expert technical and commercial advisors appointed
 - Technical studies for Melbourne Airport Rail commenced
 - 100 local and global companies signed up to Melbourne Airport Rail's Registration of Interest
- 2019**
 - Site investigations commenced
 - Heads of Agreement signed between Victorian and Australian governments
 - Community and stakeholder engagement commenced
- 2020**
 - Melbourne Airport Rail route via the Metro Tunnel announced
 - Business case and design development
 - Community engagement on what's important
- 2021**
 - Community engagement on key elements of scope
 - Ongoing planning and design development
 - Market engagement
 - Procurement processes
 - Statutory planning approval processes
- 2022**
 - Construction starts*
- 2025**
 - The Metro Tunnel opens
- 2029**
 - Target opening date*

*Subject to relevant Victorian and Federal planning, environmental and government approvals.



Legend

Proposed

- MAR track
- MAR station

Existing

- Rail track
- Rail track (freight)
- Road

- Jet fuel pipeline
- Waterway
- Culvert
- High voltage power line

MAR: Melbourne Airport Rail

Delivery approach

In carefully considering the most appropriate, best value-for-money approach to delivering Melbourne Airport Rail, several factors have been weighed up and lessons drawn from the experience of other major transport infrastructure projects both locally and internationally.

A detailed options assessment was undertaken to determine the best way to build Melbourne Airport Rail. The assessment was informed by feedback from the industry and considered factors such as the potential benefits of delivering elements with specific characteristics separately, the ability of the packaging option to assist in achieving project objectives and reduce interface risks.

A collaborative Alliance model

The Business Case proposes a collaborative Alliance model for several of the works packages, including a range of measures that encourage all parties involved to work more closely together to deliver these highly complex works.

Other works packages are using alternative contract models, such as Managing Contractor and an Incentivised Target Cost – a more collaborative form of the traditional Design & Construct contract, and a method most recently used on some major road upgrades by Major Road Projects Victoria.

The procurement process will continue for several years as individual works packages progress and contracts are progressively awarded. Each works package progresses through a robust, multi-staged process to help find and procure the best contractors for the job.

Successful delivery of the project requires a high degree of coordination, collaboration and cooperation between the multiple work packages.

As the procurement process progresses, shortlisted bidders are assessed against rigorous tender requirements, with performance on current projects in Victoria also factored in.

Works package	Procurement model
Airport Package: Includes a new elevated station at Melbourne Airport; track and civil works; and construction/installation of overhead power systems.	Alliance
Viaduct Package: Spans between Steele Creek at Airport West and the Value Car Park at Melbourne Airport, including an elevated viaduct along Airport Drive; a bridge structure over the M80 Ring Road; track and civil works; and construction/installation of overhead power systems.	Alliance
Corridor Package: Spans between the Albion-Jacana junction at Stony Creek and Steele Creek at Airport West along the Albion-Jacana freight corridor, including track and civil works; shared-use path; and construction/installation of overhead power systems.	Alliance
ARTC Package: Spans the same geographic extent as the Corridor Package and comprises civil and track works such as shifting Australian Rail Track Corporation (ARTC) track to accommodate Melbourne Airport Rail; utilities works; and signalling and rail control systems works on the ARTC line.	Incentivised Target Cost
Maribyrnong River Bridge Package: Involves the construction of a new rail bridge spanning the Maribyrnong River adjacent to the existing heritage-listed freight bridge.	Incentivised Target Cost
Sunshine Systems Package: A combination of Sunshine/Albion works, including track and civil works between Sunshine and the Albion-Jacana junction at Stony Creek and works at or around Sunshine and Albion stations; and line-wide rail systems works, including the installation of new substations and train control systems/signalling across the Melbourne Airport Rail route between Sunshine and Melbourne Airport.	Alliance
Early Works Package: Comprises important utility relocation and protection works that will clear the way to build the new infrastructure needed to support Melbourne Airport Rail services, making it easier to deliver the other works packages.	Managing Contractor

Community and stakeholder engagement

Meaningful and tailored engagement since the inception of the Melbourne Airport Rail project has focused on both users and those affected during construction on this highly anticipated project.

Melbourne Airport Rail spans a large geographic area through a variety of suburbs, with a diverse range of communities likely to interact with the project.

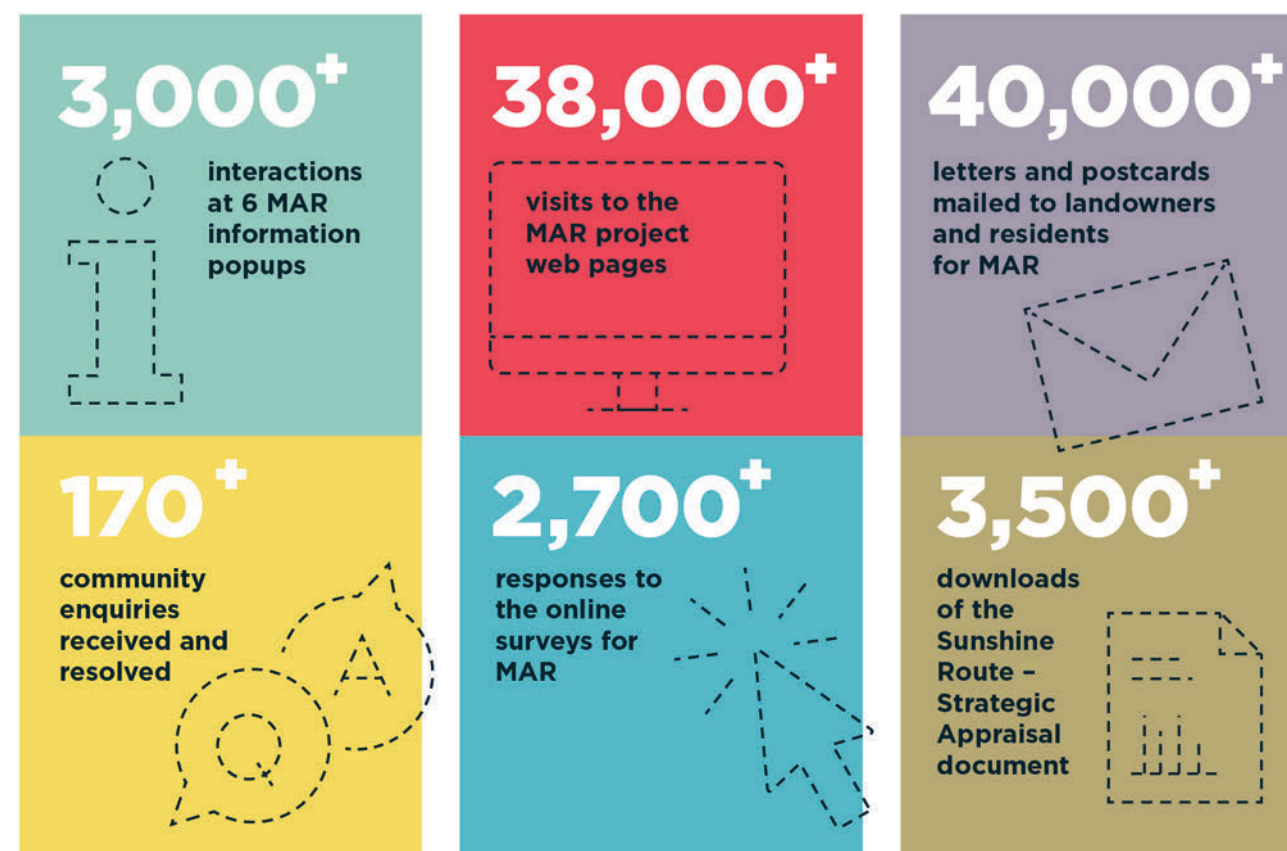
The diversity of these communities is being considered when developing and undertaking engagement activities.

Through engagement conducted to date, stakeholders and the community have provided valuable feedback and ideas and identified parts of the project of the most interest to them.

This feedback has been used to inform the Business Case and will help support the design development and planning and approvals process.

Community consultation will continue across the project's lifetime to keep the public up to date with the latest information and to help inform decisions on project negotiables.

Engagement snapshot



Statistics are a snapshot from mid-2021.





The Business Case for Melbourne Airport Rail is an essential piece of the planning puzzle which outlines the current context of the project, highlights the need for a rail service to Melbourne's primary airport, provides project details and proposes the best way to deliver it.

With the Australian and Victorian governments committing funding to make the project a reality and detailed planning well advanced, work will continue to refine the scope, procurement and relevant approvals ahead of construction targeted to start in the second half of 2022.

Community and stakeholder engagement – including market engagement – will continue throughout planning and construction to maintain two-way communication and to gain feedback that will inform the development and delivery of Melbourne Airport Rail.

Melbourne Airport Rail services are targeted to start in 2029*.

**Subject to relevant Victorian and Federal planning, environmental and government approvals.*

More information

To find out more about
Melbourne Airport Rail:



airportrail.vic.gov.au



1800 105 105
(24 hours a day, 7 days a week)



Australian Government

