

# CITIZEN JURY

Prioritising options  
for Victoria's 30-year  
infrastructure strategy





THE QUESTION:  
WHAT SHOULD  
WE DO TO  
MEET VICTORIA'S  
INFRASTRUCTURE  
NEEDS?

# Welcome from the Chair and CEO

Welcome to Infrastructure Victoria's citizen juries. Thank you for agreeing to take part in this innovative process to help guide Victoria's first ever 30-year infrastructure strategy. It's a fresh approach and one we're excited to share with you.

Victoria is growing and changing at a rapid pace, placing ever greater demands on our infrastructure. Over the next 30 years, Melbourne could become Australia's largest city and Victoria will face challenges and opportunities from global trends in emerging technologies, an ageing population and a changing climate.

We must begin planning now to put us in a strong position to deal with the challenges of the future. This will mean making tough choices about how we use and maintain our existing infrastructure, how we pay for new infrastructure and how we prioritise initiatives.

In developing the strategy we want Victorians to have a chance to have a say, which is where you come in. As a member of one of our citizen juries, you have the opportunity to help shape the future of Victoria.

Our two citizen juries - one in metropolitan Melbourne and one in regional Victoria - are each made up of 43 community members who have been chosen at random and are demographically representative.

Over the next three months you will be immersed in infrastructure information and analysis. You will have access to experts from across our nine infrastructure sectors, and you will discuss and deliberate on ideas, issues and opportunities. At the end of this journey, your report of recommendations to Infrastructure Victoria will be a key input into our strategy development.

This is a genuine opportunity to influence infrastructure planning in Victoria.

We appreciate your decision to give your time and to get involved in this unique and important process, and we look forward to your recommendations.

We hope you find the experience rewarding.

**Jim Miller**  
Infrastructure Victoria Board Chair

**Michel Masson**  
Infrastructure Victoria CEO



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**DEVELOPMENT OF A 30-YEAR  
INFRASTRUCTURE STRATEGY  
FOR VICTORIA IS WELL  
UNDERWAY.**

Infrastructure Victoria has already consulted on objectives and needs.

**THE NEXT PHASE IS FOCUSED  
ON OPTIONS.**

That's where you come in - the citizen juries will provide recommendations on what we should do to meet Victoria's infrastructure needs.

**THE FINAL STRATEGY WILL BE  
RELEASED BY THE END OF 2016.**

We hope the strategy will shape and improve infrastructure decision-making in Victoria for many years to come.

# The 30-year strategy

Infrastructure Victoria is a new independent advisory body, which has been tasked with producing a 30-year infrastructure strategy for Victoria. The strategy will consider infrastructure needs and priorities for the state over the short, medium and long term. It will assist governments to make informed decisions, help take the politics out of infrastructure planning and provide more certainty.

Infrastructure Victoria is following a rigorous, logical methodology – defining goals and assessing challenges and opportunities, before coming up with possible solutions and ultimately making recommendations. We are consulting at every phase of the strategy development.

In February and March, we consulted on what the strategy should be aiming to achieve and what issues need to be addressed. The original draft objectives and needs are summarised on page 8. These are currently being revised based on feedback received during consultation. The final list will be confirmed shortly.

In May, Infrastructure Victoria will release another discussion paper on possible solutions, or options, for further consultation. **The citizen juries will play a key role in this phase. You will be asked to consider the question – what should we do to meet Victoria's infrastructure needs? This means considering the options in light of the objectives and needs that have been agreed and giving us your recommendations on how they should be prioritised, whether anything is missing, and how we should fund and finance them.**

In September, Infrastructure Victoria will release a draft of the strategy for further consultation, which will take into consideration your deliberations as well as the outcomes of broader public consultation on options. Infrastructure Victoria will submit the final strategy directly to Parliament by the end of 2016 and release it publicly the same day.

Once the strategy is released, the Victorian Government will have 12 months to respond to Infrastructure Victoria's recommendations and come up with a 5-year tactical plan. We hope many of our recommendations will be supported by all political parties, as well as stakeholders and community members.

More broadly, we hope that the release of the strategy is just the beginning of a transformation of infrastructure decision-making in Victoria, one that sees a greater emphasis on consultation, evidence and transparency, and improving outcomes.

2016

Q1 FOUNDATION PAPER

Consultation

We are here

Q2 OPTIONS PAPER

Consultation

Q3 DRAFT STRATEGY

Consultation

Q4 FINAL STRATEGY



# Summary of draft objectives and needs

The objectives and needs are currently under revision. The final set will be circulated shortly.

DRAFT OBJECTIVES		DRAFT NEEDS
1	Respond to population growth and change	<ul style="list-style-type: none"> <li>A. Address infrastructure deficits in high-growth areas</li> <li>B. Manage increasing demands on health infrastructure</li> <li>C. Provide access to high-quality school facilities</li> </ul>
2	Support healthy, safe and vibrant communities	<ul style="list-style-type: none"> <li>A. Enable physical activity through infrastructure and urban design</li> <li>B. Provide good public spaces where communities can come together</li> <li>C. Strengthen access to cultural infrastructure</li> <li>D. Maximise positive impacts on amenity and wellbeing from infrastructure</li> </ul>
3	Reduce disadvantage	<ul style="list-style-type: none"> <li>A. Improve accessibility for people with disabilities and/or mobility challenges through infrastructure</li> <li>B. Address housing affordability challenges with better social housing</li> <li>C. Support changing approaches to social service and justice delivery through infrastructure</li> </ul>
4	Enable workforce participation	<ul style="list-style-type: none"> <li>A. Provide access to the diversity of employment opportunities offered by the central city</li> <li>B. Provide better links to non-central city employment centres</li> <li>C. Improve access to early childhood care facilities</li> </ul>
5	Lift Victoria's productivity	<ul style="list-style-type: none"> <li>A. Improve the efficiency of freight supply chains through infrastructure</li> <li>B. Move people to and from airports more efficiently</li> </ul>
6	Support Victoria's changing, globally integrated economy	<ul style="list-style-type: none"> <li>A. Boost tourism through infrastructure provision</li> <li>B. Enable the growth of a highly skilled, digitally connected workforce through infrastructure</li> </ul>
7	Promote sustainable production and consumption	<ul style="list-style-type: none"> <li>A. Improve rural and regional water security</li> <li>B. Manage pressures on landfill and waste recovery facilities</li> </ul>
8	Protect and enhance natural environments	<ul style="list-style-type: none"> <li>A. Help preserve natural environments and minimise biodiversity loss through infrastructure</li> <li>B. Improve the health of waterways through infrastructure</li> </ul>
9	Support climate change mitigation and adaptation	<ul style="list-style-type: none"> <li>A. Smooth the adjustment to a carbon-constrained world through infrastructure</li> <li>B. Adapt infrastructure to changing climate conditions</li> </ul>
10	Build resilience to shocks	<ul style="list-style-type: none"> <li>A. Improve the resilience of critical infrastructure to disruptive events</li> <li>B. Address infrastructure-related emergency response challenges</li> </ul>



## UNDERSTANDING THE INFORMATION PACKS

### Information pack 1a – Foundation phase

- *Citizen jury*. This briefing book (the one you're reading) provides an introduction to the 30-year strategy and the citizen jury process. Keep it to hand as it's a useful reference guide.
- *From the ground up*. This paper was published in November 2015. It outlines why the strategy is needed and how it's being developed.
- *Laying the foundations*. This paper was released for public consultation in February 2016. It provides further information on the context for the 30-year strategy, an overview of Infrastructure Victoria's guiding principles and a discussion of the draft objectives and needs for the strategy (summarised on the previous page).

You will receive this pack before the first meeting.

### Information pack 1b – Foundation phase consultation outcomes

- *We hear you*. This report will be published later in April 2016. It will summarise the outcomes of consultation on *Laying the foundations* and confirm the final set of guiding principles, objectives and needs.

You will receive this pack before the first meeting.

### Information pack 2a – Options phase

- *All things considered*. This paper will be released for public consultation in May 2016. It will outline a range of options, or possible solutions, for meeting Victoria's infrastructure needs.
- *Options book v1*. This technical report will be a companion document to *All things considered* and will be released at the same time. It will provide an assessment of every option we have considered to date.

You will receive this pack before the second meeting. Be sure to look out for it. These papers on options will help form the basis of your deliberations and are the most important papers you will receive.

### Information pack 2b – Options phase consultation outputs

- *'Raw' consultation material on options*. Outputs from public consultation on *All things considered* will be made available to the juries in June 2016. It will give you a sense of what other community members and stakeholders think of the options you're considering.

You will receive this pack before the fourth meeting.

# Your role

## CITIZEN JURIES ARE A NEW FORM OF DELIBERATIVE DEMOCRACY.

They rely on everyday people gaining a deep understanding of the issues and making informed recommendations.

## INFRASTRUCTURE VICTORIA IS HOSTING TWO CITIZEN JURIES DURING THE DEVELOPMENT OF THE 30-YEAR STRATEGY.

One jury will be held in Melbourne and the other in Shepparton - this will help ensure both metropolitan and regional perspectives are considered.

## YOU ARE BEING ASKED TO CONSIDER AND PRIORITISE OPTIONS FOR MEETING VICTORIA'S INFRASTRUCTURE NEEDS.

This includes considering funding and financing of infrastructure.

Citizen juries bring together broadly representative, random samples of citizens who are briefed in detail on the background and current thinking relating to a particular issue and asked to discuss possible approaches and/or solutions. They are a relatively new concept, but are not untested. The City of Melbourne and VicHealth hosted successful citizen juries in 2014 and 2015.

Infrastructure Victoria has asked the newDemocracy Foundation, an independent research body, to convene two citizen juries, one in Melbourne and one in Shepparton, to provide input into the 30-year strategy.

A key part of Infrastructure Victoria's role in developing the 30-year strategy is to promote informed debate and help build consensus on what is important for Victoria's infrastructure now and in the future. We know we can't do everything and trade-offs will have to be made. Bringing together two citizen juries, one metropolitan and one regional, will help ensure a broad cross-section of community views is considered.

**You are being asked a simple question: what should we do to meet Victoria's infrastructure needs?** Whether you're in the Shepparton or Melbourne jury, you need to think broadly about needs across Victoria. Your main task is to prioritise possible solutions to the issues identified through the first round of consultation in February and March. Part of the discussion will focus on funding and financing of infrastructure.

You can draw from Infrastructure Victoria's papers on options, which will be circulated in information pack 2a, but you shouldn't feel constrained by this material. You are encouraged to read widely and think broadly, and are welcome to request additional information and expert advice.

The diagram below shows one way to understand different options for meeting infrastructure needs. It aligns with Infrastructure Victoria's commitment to consider non-build solutions first.

## Options for meeting infrastructure needs

**1** CHANGING BEHAVIOUR, MANAGING DEMAND  
For example, using public awareness campaigns and pricing to encourage people to use less water.



**2** GETTING BETTER USE FROM OUR EXISTING ASSETS  
For example, using school facilities out of hours for community activities to make the most of what we already have.



**3** EXPANDING ASSETS OR BUILDING NEW ONES  
For example, building new roads and rail lines to increase the capacity of our transport networks.

## WHAT TO EXPECT

As a citizen jury member, you will be provided with extensive written material as well as other information, support and tools to help with your deliberations. Some of this information may be confidential so we ask that in this instance you not share this material beyond the jury room (you will be advised of any material that falls into this category).

The jury will also be able to request information or to hear from experts of your own choosing to provide information or further explain an issue. These could include but are not limited to expert groups, community groups and interest groups.

No minutes will be recorded during the sessions, therefore you are encouraged to take down notes throughout the deliberations to help you prepare the final report.

You are encouraged to continue interacting with each other outside of the set meeting days, including through the private online discussion forum established for your use.

It is important to remember that you have agreed to attend all six workshops. This is essential for the process to be successful.

Media outlets will have an active interest in the operation of the jury. We ask that you liaise with the newDemocracy Foundation before speaking with the media or using social media outlets in relation to the citizen juries. We also ask that if you do speak about your involvement through any of these means, that you limit your comments to your experience of the process and not comment on behalf of the jury. This is important to respect the role your fellow jurors also play and ensures that there is no inadvertent suggestion as to what the final recommendations may be ahead of the jury's conclusion.



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**AT THE END OF THE PROCESS, BOTH CITIZEN JURIES WILL PRODUCE REPORTS WITH RECOMMENDATIONS.**

These don't need to be especially polished, but should be well thought through.

**IDEALLY, YOUR RECOMMENDATIONS WILL BE BASED ON CONSENSUS.**

However, there is always room for dissenting views.

**THE CITIZEN JURY REPORTS WILL FORM A KEY INPUT INTO THE 30-YEAR STRATEGY.**

Infrastructure Victoria will also provide a formal response to your recommendations.

# Your recommendations

As a group, you will be responsible for writing up your recommendations and submitting a report to Infrastructure Victoria. Your facilitators can assist with this task, but you will hold the pen.

It will be up to you to decide how you want to present your recommendations. However, it will be critical that your intent is clear and that your recommendations are specific, measureable, actionable, relevant and timely.

Part of the aim of convening the citizen juries is to help build consensus around what we need to do to meet Victoria's infrastructure needs. Therefore, we hope, but don't demand, that you all stand by your group's recommendations.

We will publish your reports, unedited, on the Infrastructure Victoria website. In other words, your recommendations will be made public.

Infrastructure Victoria will consider the recommendations of both citizen juries and provide a formal written response. The Chair and CEO of Infrastructure Victoria will also meet with both groups face-to-face to respond to your recommendations.

Ultimately, your reports will help shape Infrastructure Victoria's 30-year strategy, which will be released by the end of 2016.



# The team

## INFRASTRUCTURE VICTORIA

Infrastructure Victoria is an independent statutory authority which has been established to provide expert advice and guide decision-making on Victoria's infrastructure needs and priorities. It is governed by a Board made up of four independent members, Jim Miller (Chair), Maria Wilton (Deputy Chair), Ann Sherry and Professor Margaret Gardner, and three Victorian Government Departmental Secretaries, Chris Eccles (Premier's), David Martine (Treasury) and Adam Fennessy (Planning). The Board is not subject to ministerial direction and the 30-year strategy will be submitted directly to Parliament and released publicly without government approval.



### **Jim Miller – Board Chair**

Jim Miller was an Executive Director at Macquarie Capital from 1994-2015, with experience across a range of sectors, working with both government and private sector clients. Jim has extensive experience in infrastructure having worked in the areas of regulated assets, transport, energy, utilities and resources and social infrastructure. He has both a Bachelor and Masters of Economics from Macquarie University. He is currently the Deputy Chair of Infrastructure Partnerships Australia, a Fellow of the Australian Institute of Company Directors and a Fellow of the Institute of Actuaries Australia.



### **Michel Masson – Chief Executive Officer**

Michel started his career at Deloitte before joining the Bollere Group where he held various senior finance positions in the transport and logistics division in the UK, Australia and New Zealand. In 2005, Michel joined Keolis as head of Finance and Operations for the International Division. Michel was appointed CEO of Yarra Trams in 2009 and helped lead the development of Keolis Downer throughout Australia, before joining the Calibre group in 2014 to create and lead its Transport Infrastructure business. Michel is a graduate from the Harvard Business School (AMP), the EDHEC Business School in France, and the Australian Institute of Company Directors. He holds the Chartered Financial Analyst® (CFA) credential and is a member of the US CFA Institute. Michel became an Australian citizen in 2014.

## NEWDEMOCRACY FOUNDATION

The newDemocracy Foundation (nDF) is a not-for-profit research institute registered as a charity, with a particular focus on best practice citizen engagement and innovations in democratic structures.



### **Iain Walker – Executive Director**

At newDemocracy, Iain works to design and advocate processes which aim to restore trust in public decision-making through more representative and less adversarial methods. Since starting with small trials in local councils Iain has been commissioned to design projects for major cities and Premiers in two states. Through newDemocracy, Iain led the design, operation and oversight for the \$5 billion 10 Year Financial Plan process for City of Melbourne in 2014, the Safe and Vibrant Nightlife project for Premier Weatherill (SA) and subsequently Premier O'Farrell (NSW).



### **Georgina Inwood – Program Manager**

With a background in engagement and strategy across local, state and federal government, Georgina leads the implementation, management, supervision and evaluation of the newDemocracy Foundation's democratic innovation projects.

## FACILITATORS



### **Bruce Turner – Lead facilitator, Melbourne**

Bruce is an experienced facilitator of stakeholder involvement in a wide range of projects. His background includes work as a scientist and teacher and a decade in the Victorian public sector, mainly in environmental impact assessment and land use planning. Since then, Bruce has worked independently as a facilitator, mediator, and trainer for a wide range of government and private sector clients across a number of sectors for over 15 years.



### **Max Hardy – Lead facilitator, Shepparton**

Max is a consultant who helps a wide range of organisations to engage communities around challenging issues. He specialises in deliberative engagement processes such as citizen juries. He co-facilitated Australia's first Citizens' Assembly in Old Parliament House, Canberra in 2009, and is regularly requested to present guest lectures at universities. Prior to working as a consultant Max worked in the NSW public sector for 15 years.



### **Danielle Annells – Facilitator, Melbourne**

Danielle is a highly skilled facilitator who has considerable experience working with government on complex issues utilising deliberative processes. The processes Danielle designs and facilitates are genuinely transformative for both internal and external working relationships and the direction of the solutions that emerge from the process overall.



### **Catherine Botta – Facilitator, Shepparton**

Cath works extensively as a soil scientist, educator and facilitator with rural and regional communities. Cath facilitates strategic planning and project planning workshops. She also designs and delivers stakeholder consultation and engagement processes, and delivers facilitation training programs for a range of organisations.

# Practical information

<b>Remuneration</b>	Members of both juries will be provided with a one-off payment of \$500 at the end of the process, in recognition of your commitment to both the online and face-to-face components of this jury process and to cover your out of pocket expenses.
<b>Meals</b>	Meals will be provided on the days that the juries convene including tea and coffee on arrival, morning tea, lunch and afternoon tea. We will cater for any dietary requirements advised to the newDemocracy Foundation in advance (see contact details on the next page).
<b>Times</b>	Meeting dates are listed on the next page. You will meet from 9.30am to 4.30pm each day.
<b>Location - Melbourne</b>	<p>All Melbourne jury meetings will be held at Melbourne Park, Olympic Boulevard, Melbourne. The first meeting on 30 April will be held in Hisense Arena. All the following meetings will be held in the Yarra Room in the Melbourne Park Function Centre.</p> <p>Getting there:</p> <ul style="list-style-type: none"> <li>• Train: Melbourne Park is a short walk from Richmond and Jolimont train stations.</li> <li>• Tram: Tram route 70 (Wattle Park) can be accessed from Flinders Street and Richmond Stations with stops at Rod Laver Arena (Stop 7B) and Hisense Arena (Stop 7C). Tram routes 48 (North Balwyn) and 75 (Vermont South) stop adjacent to the MCG on Wellington Parade.</li> <li>• Bus: Bus route 605 (City-Gardenvale) travels down Exhibition Street, Batman Avenue and Olympic Boulevard (previously known as Swan Street). Bus route 246 (Latrobe Uni-Elsternwick Station) travels down Punt Road, stops at the corner of Olympic Blvd. From here patrons can walk approximately 500 metres to Melbourne Park.</li> <li>• Car: Car parking is available at \$7.50 a day. Detailed maps and directions will be provided outlining parking and public transport options.</li> </ul>
<b>Location - Shepparton</b>	<p>All Shepparton jury meetings will be held at the Quality Hotel Parklake, 481 Wyndham St, Shepparton.</p> <p>Getting there:</p> <ul style="list-style-type: none"> <li>• Local bus: The bus interchange on the corner of Vaughan and Maude Streets is a short 600m walk to the hotel. Route 1 (Parkside Gardens via GV Health), Route 1 (Mooroopna), Route 2 (Parkside Gardens via The Boulevard), Route 3 (Golf Drive/TAFE), Route 4 (Connolly Park), Route 5 (Archer), Route 6 (South East), Route 7 (Market Place), Route 8 (Euroa via Kialla) and Route 9 (Shepparton-Kialla) all stop at the interchange.</li> <li>• Train or coach: It is a 15 minute walk from the Shepparton train station down Purcell, Hayes and Wyndham streets to the hotel. A taxi from the station to the hotel will cost around \$10.</li> <li>• Car: Free on-site and street parking is available at the Quality Hotel Parklake.</li> </ul>
<b>Accessibility</b>	If you need to discuss alternative transport options, please contact us at the newDemocracy Foundation (see contact details on the next page).
<b>Online portal</b>	<p>You will be provided with a personal log-in for a secure online portal which will house all jury session information (past and future), useful documents and links, preparation materials for each session, and a discussion forum for sharing ideas and posing questions.</p> <p>The online portal can be accessed by visiting <a href="https://yoursay.infrastructurevictoria.com.au/jury">yoursay.infrastructurevictoria.com.au/jury</a>. The site will be coordinated and supported by jury facilitators.</p>



## More information

You can contact Iain or Georgina at the newDemocracy Foundation for more information about the jury process.

Iain Walker: [iain.walker@newdemocracy.com.au](mailto:iain.walker@newdemocracy.com.au) or 0412 544 116

Georgina Inwood: [georgina.inwood@newdemocracy.com.au](mailto:georgina.inwood@newdemocracy.com.au) or 0451 626 906

## Key dates

<b>Saturday 30 April</b>	Meeting 1
<b>Monday 16 May</b>	Public consultation on options opens
<b>Saturday 21 May</b>	Meeting 2
<b>Saturday 4 June</b>	Meeting 3
<b>Friday 10 June</b>	Public consultation on options closes
<b>Saturday 25 June</b>	Meeting 4
<b>Saturday 16 July</b>	Meeting 5
<b>Saturday 30 July</b>	Meeting 6



# BACKGROUND INFORMATION



## 30 YEARS AGO



Victoria has a resident population of around 4.2 million people in 1986. Regional Victoria has been growing faster than Melbourne for over a decade. Women have a life expectancy at birth of 79.5 years, while for men it is just 73.2 years.



Manufacturing is the biggest industry in Victoria in 1986, employing 19% of the state's workforce. Health care and social assistance is the fourth largest industry by employment, with an 8% share of the workforce.



Environmental issues are centred on localised concerns such as pollution, pests, rising salinity and protecting wilderness areas.



People board Melbourne's public transport around 300 million times in 1986-7 and connectivity has improved with the opening of the Underground Rail Loop (1985). Road commuters benefit from the construction of the Westgate Bridge (1978).



Education in Victoria is paper-based. Teachers rely on pens, paper, and the blackboard to deliver lessons to their students.



Goods and services in Victoria are purchased from the local store, or by contacting providers through a phone book.

### CHANGES TO OUR SIZE AND DEMOGRAPHICS

### CHANGES TO OUR KEY INDUSTRIES

### CHANGES TO OUR ENVIRONMENTAL CONCERNS

### CHANGES TO THE WAY WE MOVE

### CHANGES TO THE WAY WE LEARN

### CHANGES TO THE WAY WE ACCESS GOODS & SERVICES

## TODAY



Now the fastest growing state in Australia, Victoria's population sits at around 6.1 million people. Melbourne is growing faster than the regions. Women's life expectancy is 84.7 years in 2014, while men can expect to live to 81.1 years.



Health care and social assistance is now the biggest industry in Victoria, accounting for 12% of the workforce. Manufacturing has not kept pace, with a 9% share of the workforce, though it remains the state's second largest employer.



Broader environmental challenges are now high on the agenda, including climate change, water quality, land degradation, native vegetation and biodiversity.



People board Melbourne's public transport around 520 million times in 2010-11. The introduction of the CityLink (2000) and Eastlink (2008) network of tolled freeways has made getting people and goods around Melbourne easier.



Tablets and specialised learning websites assist students to learn new concepts. Internet access is common place, with increasing numbers of students learning via online platforms.



Victorians increasingly search for, compare and purchase goods and services online.

### CHANGES TO OUR SIZE AND DEMOGRAPHICS

### CHANGES TO OUR KEY INDUSTRIES

### CHANGES TO OUR ENVIRONMENTAL CONCERNS

### CHANGES TO THE WAY WE MOVE

### CHANGES TO THE WAY WE LEARN

### CHANGES TO THE WAY WE ACCESS GOODS & SERVICES

## IN 30 YEARS



Victoria houses a population of around 9.4 million people. Melbourne experiences the majority of this growth, while growth in regional areas is focused on city centres. Life expectancy is around 89.5 years for women and around 87.0 for men.



Continued growth and structural change in Victoria's economy sees a further shift away from goods-producing sectors towards services. Victoria continues to capitalise on its strong service sector, exporting our knowledge and expertise to the world.



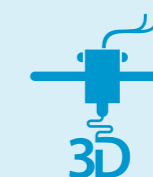
Rapid urbanisation fuels innovation and the quest for sustainable and resilient cities. Sustainability metrics are improved giving rise to smarter environmental decisions.



Greater network capacity, improved system connectivity and population growth are driving even higher numbers of public transport passengers. Innovations such as driverless cars are changing how we use roads.



Unbundled, personalised, and dynamic education is the new normal. Virtual learning, digitisation and augmented reality mean that students can learn from anywhere in the world.



Customers will experience access to truly tailored goods and services through the use of data analytics and the widespread use of other technological innovations such as the 3D printer.

# Victorian infrastructure at a glance

Infrastructure Victoria has commissioned assessments of Victoria's infrastructure across nine sectors, which are available in the online portal at [yoursay.infrastructurevictoria.com.au/jury](https://yoursay.infrastructurevictoria.com.au/jury). We encourage you to read these assessments to gain a more in depth understanding of Victoria's complex infrastructure landscape. In the meantime, we've extracted some key facts and issues for your consideration.



## ENERGY

- Victoria's energy sector is almost entirely privately owned, but government still has a role in regulating the sector and creating energy policy.
- Victoria has four coal fired plants in the Latrobe Valley which provide base load power. Gas fired plants provide extra capacity during peak periods. Renewables are growing.
- The key challenge for Victoria's energy sector is migrating from an abundant, low cost, easily accessible brown coal fuel source to a low carbon environment encompassing renewables.
- New technologies such as smart grids and home battery storage have the potential to transform the electricity industry.



## WATER AND WASTE

- Victoria's water sector consists of one bulk water and sewerage business (Melbourne Water), three metropolitan retailers and 13 regional water businesses. Nine Catchment Management Authorities and Melbourne Water are responsible for waterway health.
- Water infrastructure, particularly in rural areas, requires significant ongoing renewals and maintenance spending. Climate change also poses a threat to the sector in the medium term. In particular, the capacity of infrastructure outside Melbourne to deal with events such as lower average rainfall, bushfires and flood events is uncertain.
- The waste sector in Victoria includes 267 standalone resource recovery centres/transfer stations, 51 licensed landfills and 32 landfills exempt from licensing. The majority of the \$2.2 billion waste industry in Victoria is privately owned and operated. In some regional areas local governments are the owners and operators.
- The growing waste and resource recovery industry has played a pivotal role in reducing the volume and types of waste to landfills. Planning encroachment on key waste and recovery infrastructure across the state poses a long term threat to the industry as facilities consolidate and additional capacity is required.

## TRANSPORT



- Victoria has well-established transport networks across road, rail, sea and air. These systems are complex, incorporating a number of linked networks and shared infrastructure including roads, heavy rail, tram networks, ports and shipping channels, walking/cycling paths, point-to-point (such as taxis) and airports.
- The delivery of transport services and infrastructure in Victoria is governed by a series of complex statutory, government and commercial relationships including a significant role for the private sector in a number of areas.
- Key challenges include ensuring that broader community, business and land use needs are integrated with the planning and development of the sector. This is particularly acute in the west and north of Melbourne.
- Technological innovations, such as driverless vehicles and ride-sharing, have the potential to be highly disruptive to transport systems and planning.

## EDUCATION AND TRAINING



- The education and training sector provides services from birth to adulthood via early childhood education, school, vocational education and training, and higher education.
- The Victorian Government plays a role across all these areas, ranging from ownership and management, planning and regulation, to capital funding grants. Victorian Government assets are owned and operated by the Department of Education and Training. A significant portion of education assets are privately managed and/or owned.
- Investment in maintenance and asset renewal is a key challenge across the sector.
- New technologies are changing education delivery models. This, as well as flexible work practices, will create opportunities for increased asset utilisation.

## HEALTH AND HUMAN SERVICES



- The health and human services sector incorporates a broad array of infrastructure including public hospitals, private hospitals, primary care, mental health, emergency services, aged care, social housing and disability services.
- The assets in this sector are diverse, numerous and geographically dispersed with ownership, management and funding split between the government, private and not-for-profit organisations. This complexity creates challenges in optimising services and assets across the system.
- The most significant concern for this sector is the escalating cost of health and human services associated primarily with population growth and ageing. Investment will also be needed in growth corridors and to realign demand and supply.
- Investment in technology provides an opportunity to enable improved system integration, better asset utilisation and treatment in the home and community.

## JUSTICE AND EMERGENCY SERVICES



- The justice and emergency services sector incorporates a number of areas of government including Victoria Police, Court Services Victoria and the Court network, Corrections Victoria, the Sheriff's Office, Emergency Management Victoria, the Emergency Services Telecommunications Authority, the Metropolitan Fire Brigade, the Country Fire Authority and Victorian State Emergency Services.
- The justice system is highly integrated, with increased demand for services across any component of the justice system having a direct flow-on effect, boosting demand for services throughout the system. Key drivers of service demand are changes in the population's demographics and policy and legislative environment.
- Emergency services are being increasingly challenged by growing expectations for response and the challenges of increased hazards from climate change.
- Investment in ICT across the sector could improve the effectiveness of agencies and support their future state service delivery models.

## CULTURAL, CIVIC, SPORT, RECREATION AND TOURISM



- This sector provides infrastructure which contributes to Victoria's creative brand and cultural heritage, facilitates community engagement, hosts major national and international sporting events, and supports large-scale participation in physical activity.
- A high proportion of major assets in this sector are publically owned – across local, state and federal government. However, operating arrangements for these assets and associated services is distributed among a mixture of public and independent agencies, as well as private enterprises.
- The elements which comprise this sector complement each other and aim to position Victoria as a destination of choice to both live in and visit. This can make it challenging to separate demand drivers and attribute performance outcomes to specific areas.
- Challenges to the sector include changing lifestyle requirements (impacted by time constraints) and competition for tourism across Australia and internationally.

## AGRICULTURE, SCIENCE AND ENVIRONMENT



- Agricultural infrastructure facilitates and supports the production, sale and export of food and fibre primary produce industries. Much of this is privately owned, operated and managed. Agriculture is also dependent on infrastructure from other sectors – transport, energy, water and ICT – for its success.
- Scientific infrastructure comprises the physical built assets and the collaborative organisations that provide an input into the creation of scientific knowledge for public or private use and dissemination. Much of this infrastructure is co-located with universities.
- Environmental infrastructure refers to physical built assets that are used as inputs into the creation, protection, and monitoring of a clean, safe and sustainable natural environment. It both protects the natural environment from human activities and protects human activities from hazards posed by the natural environment (for example levee banks and sea walls).
- Environmental infrastructure is diverse and overwhelmingly public sector operated, managed and maintained. Parks Victoria manages much of the infrastructure and has inherited a diverse portfolio of assets over time – including dams, recreational infrastructure, decommissioned mines, former landfill sites and heritage assets. Significant pressure on environmental infrastructure is driven by deferred maintenance, increased demand and increased incidence of extreme climatic events.

## ICT



- The Information and Communication Technology (ICT) sector covers large scale assets used to deliver significantly increasing demand for technology from businesses and households, as well as government and research facilities.
- Telecommunications infrastructure in Australia was deregulated in 1992 so the industry is significantly influenced by market and commercial forces with ICT assets largely privately owned and operated. The private market model has meant that areas of low economic return, such as rural and regional communities, have a lower level of service than more populated areas.
- There are a number of challenges for the sector but, in particular, Australia's broadband services are lagging behind the developed world in terms of average speed and affordability. While this will improve with the nbn, the initial top speed of the nbn at 100 megabits per second (Mbps) is significantly slower than the 1 gigabits per second (Gbps) becoming widely available overseas.
- Notably demand for nbn services has seen a much higher demand for the faster service tiers than originally anticipated.



# Further reading

## INFRASTRUCTURE VICTORIA RESEARCH PAPERS

Infrastructure Victoria, *Learning from others*, February 2016

Infrastructure Victoria, *Learning from the past*, February 2016

## INFRASTRUCTURE VICTORIA TECHNICAL REPORTS

Deloitte Access Economics, *The current and future state of Victoria: A macro perspective*, February 2016

Deloitte/Aurecon, *Victorian infrastructure capability assessments*, February 2016

Deloitte/Aurecon, *Options cost and contribution assessment*, forthcoming

Price Waterhouse Coopers/Aecom, *Options triple bottom line assessments*, forthcoming

SGS Economics and Planning, *The current and future state of Victoria: A spatial perspective*, February 2016

Infrastructure Victoria is committed to transparency. All research papers and technical reports underpinning the 30-year strategy, as well as the outcomes of consultation (including submissions), are being made public. These resources are available in the online portal at [yoursay.infrastructurevictoria.com.au/jury](http://yoursay.infrastructurevictoria.com.au/jury).

If you're interested in reading more broadly, the list of sources at the back of *Laying the foundations*, included in information pack 1a, is a good place to start.



# About us

Infrastructure Victoria is an independent advisory body, which began operating on 1 October 2015 under the *Infrastructure Victoria Act 2015*.

It has three main functions:

- preparing a 30-year infrastructure strategy for Victoria, to be refreshed every three to five years
- providing written advice to government on specific infrastructure matters
- publishing original research on infrastructure-related issues

Infrastructure Victoria will also support the development of sectoral infrastructure plans by government departments and agencies.

The aim of Infrastructure Victoria is to take a long-term, evidence-based view of infrastructure planning and raise the level of community debate about infrastructure provision.

Infrastructure Victoria will not directly oversee or fund infrastructure projects.





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Printed by Infrastructure Victoria

April 2016

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