FROM THE GROUND UP

Developing a 30-year infrastructure strategy for Victoria
Why Victoria needs a 30-year infrastructure strategy

In 30 years’ time, Victoria will be a very different place. There will be a lot more people overall (around 3.5 million more) and especially more older people. Many will be living in communities that do not yet exist. Some will be doing jobs we cannot envisage, supported by technologies we cannot imagine. The climate will potentially be harsher and resources more constrained.

The performance of our infrastructure will affect the shape of our society, economy and environment, just as our society, economy and environment will affect our infrastructure needs.

Infrastructure influences almost every aspect of our lives – how and where we live, what services and jobs we access, the ease with which we buy and sell products, how we connect with each other and the outside world, and how we impact on, and adapt to, our natural environment.

Getting infrastructure right is not easy. Big infrastructure projects require long lead times and cost a lot of money. It’s also not just about building things. Managing demand for infrastructure often means changing people’s behaviour. Using existing infrastructure better requires us to think in different ways. Getting people to agree is perhaps the hardest thing of all.

Victoria needs a well-considered infrastructure strategy for the short, medium and long term that factors in social, economic and environmental impacts and builds community consensus. This will assist governments to make informed decisions about the best ways to address challenges and make the most of opportunities. It will help take the politics out of infrastructure planning, providing more certainty for the community and business about our future infrastructure priorities.

Infrastructure Victoria will produce this strategy by the end of 2016.
We need your help

What do you want Victoria to be like in 30 years? What infrastructure issues need to be addressed as a priority? What is important to you? What trade-offs are you willing to make?

Infrastructure Victoria will run an extensive consultation program throughout 2016 to hear the answers to these and other questions.

The program will begin early in 2016 with online consultations and face-to-face workshops about setting objectives and identifying needs. In the middle of the year, we will consult on the prioritisation of options and funding of potential initiatives. Towards the end of the year, there will be an opportunity for people to comment on the draft strategy, prior to its finalisation and release.

Infrastructure Victoria is keenly aware of the need to make potentially difficult choices at almost every stage of the strategy’s development – deciding which objectives to pursue, which infrastructure needs to address, which options to prioritise, and what funding mechanisms could be used.

At times, social, economic and environmental aspirations will have to be balanced against one another. There are no ‘silver bullet’ policies or projects that will meet all the needs identified and there is no ‘magic pudding’ for funding infrastructure.

Infrastructure Victoria will bring the community, business and government into this conversation. It will provide data and analysis to facilitate informed debate. Infrastructure Victoria is committed to transparency and will publish the results of consultations, as well as all technical reports underpinning the strategy.

We look forward to hearing your views on how infrastructure can enhance our society, economy and environment now and in the future.
Our society

Victoria’s population profile is expected to change significantly over the next 30 years. By 2046, there are likely to be around 3.5 million more people. Around 21 per cent of the population will be older (over 65), compared to around 15 per cent in 2016, and around 62 per cent will be of prime working age (15-64), compared to around 66 per cent in 2016.

This growth and change will not be evenly distributed across Victoria. Around 82 per cent of the population growth is expected to be in Melbourne, which may overtake Sydney as Australia’s most populous city as early as 2030.

The health profile of the population is expected to change, with an increase in chronic diseases including heart disease, cancer, osteoporosis, stroke, diabetes and depression. Our understanding of these conditions, and mental health in particular, is evolving and maturing. As new medical therapies come on the market, people will expect access to these treatments.

Education and employment patterns are also changing. For example, there has been a shift to lifelong learning, with more people undertaking formal education for longer. There has also been a shift away from the traditional 9 to 5 working day, with calls for more flexible working arrangements.

All of this means there will be greater demands on the infrastructure we already have, and greater demands for new infrastructure. Infrastructure will also need to be more flexible to adapt to changing behavioural patterns.

In certain places, demands on infrastructure will be acute and may significantly impact the liveability of communities unless action is taken. Trends in the health sector are expected to have a particularly large impact on infrastructure need, and on the capital and operating budget available for infrastructure investment more generally.
Over the next 30 years, the proportion of Victorians aged 65+ is likely to rise from one in seven to one in five.
VICTORIA’S ECONOMY IS UNDERGOING A NUMBER OF STRUCTURAL SHIFTS.
Manufacturing is giving way to services, and the economy is responding to new technology, globalisation, demographic change and environmental sustainability.

PRODUCTIVITY GROWTH HAS BEEN SUBDUED IN VICTORIA OVER THE PAST 15 YEARS.
This is a problem because productivity growth is critical for the state’s long-term prosperity.

INFRASTRUCTURE CAN MAKE A MAJOR CONTRIBUTION TO LIFTING PRODUCTIVITY.
Efficient, high-quality infrastructure is particularly important in Melbourne, where there is a high density of jobs and economic activity.

Our economy

If current trends continue, the Victorian economy is expected to shift further away from manufacturing towards service and knowledge-based industries. For example, international education is now Victoria’s largest export. These industries benefit from businesses being close together, allowing a free-flow of ideas, skills and services.

Global forces are changing how our economy operates. For example, technological advances are creating new avenues of competition and disrupting some industries, while the shift in economic power towards Asia promises to open up new and expanded markets for Victorian exports. Victoria will also have to adapt to a lower carbon economy in the future.

One of Victoria’s biggest challenges relates to productivity. Productivity growth in Victoria has averaged only 1.2 per cent a year since 1999-2000, well below the national average of 1.5 per cent. Addressing this issue must be a priority, because with fewer workers to support an ageing population, there is a risk our economy could go backwards in per capita terms in the long run.

Better use of, and investment in, infrastructure could make a significant contribution to lifting Victoria’s productivity performance. There is an opportunity to build on Victoria’s existing competitive strengths, which include two universities in the global top 100, Australia’s largest curfew-free 24/7 airport and a high capacity container port.

Melbourne’s ability to support more jobs, facilitate the movement of people and goods and manage competing demands for space will be of key importance to the state’s economy.

Labour productivity – Labour productivity is defined as output (value of goods and services) per unit of labour input (for example, hour worked). It relates to what workers do, not how many workers there are or how many hours they work.

Victoria’s changing economy, 1990 to 2014:
shifting contributions to Gross State Product by key industries
CLIMATE CHANGE WILL BE ONE OF THE BIGGEST CHALLENGES FOR VICTORIA OVER THE NEXT 30 YEARS.

Responding to climate change involves both adaptation and mitigation.

INCREASED CONSUMPTION WILL PLACE PRESSURE ON VICTORIA’S NATURAL ENVIRONMENT.

Population growth, urbanisation and more economic activity are likely to negatively impact biodiversity, water, land and air quality.

OUR INFRASTRUCTURE NEEDS TO BE MORE RESILIENT AND EFFICIENT.

Infrastructure has an important role to play in responding to the effects of climate change and reducing the impact of growth on the environment. Improving the environmental performance of our infrastructure can also have economic and social benefits.

Over the coming decades, climate change is expected to have a significant effect on the Victorian environment. Along with higher average temperatures, there will likely be more frequent droughts, higher bushfire risk, sea level rise and more intense storms. This will place stress on infrastructure that was built to operate in a different climate.

Per capita greenhouse gas emissions have gone down in Victoria in recent years, but population growth means that total emissions have been rising. Reducing Victoria’s greenhouse gas emissions will require major changes in the economy, especially in the energy and transport sectors, which account for approximately 65 per cent and 19 per cent of our state’s greenhouse gas emissions respectively.

Beyond climate change, ‘business-as-usual’ population and economic growth will likely lead to further environmental degradation across a range of areas, including biodiversity, water and land resources, marine and coastal environments and air quality.

For example, over the next 30 years, Victoria is likely to generate over 500 million tonnes of waste, which would fill the MCG around 1,700 times. Of this, around 150 million tonnes, or 500 MCGs, are expected to go to landfill. The less we generate and the more we recycle and recover, the more sustainable our economy and society will be.

Infrastructure has a role to play in making our state more environmentally sustainable. Adopting new technologies or providing more efficient transport networks are just a couple of the ways infrastructure could have less impact on the environment.

Many of the actions that would help to reduce our environmental footprint, such as changing people’s behaviour and getting better use from existing assets, could also help to improve productivity and efficiency, and our material wellbeing.

Victoria’s energy and transport sectors contribute over 80% of the state’s total greenhouse gas emissions

TODAY IN 30 YEARS

Now the fastest growing state in Australia, Victoria’s population sits at around 5.9 million people. Melbourne is growing faster than the regions. Women’s life expectancy is 84.7 years in 2013, while men can expect to live to 80.7 years.

Health care and social assistance is now the biggest industry in Victoria, accounting for 13% 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. 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.

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 THE WAY WE MOVE

CHANGES TO THE WAY WE LEARN

CHANGES TO OUR ENVIRONMENTAL CONCERNS

CHANGES TO THE WAY WE ACCESS GOODS & SERVICES

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 through contacting providers through a phone book.

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.

Source: Deloitte Access Economics and Infrastructure Victoria
THERE ARE MANY POSSIBLE FUTURES.
Future projections about our society, economy and environment are exactly that – projections based on trends. What actually happens may be quite different.

TECHNOLOGY, IN PARTICULAR, HAS HUGE DISRUPTIVE POTENTIAL.
Technological advances over the next 30 years are likely to change Victoria in ways we cannot imagine.

INFRASTRUCTURE PLANNING MUST EMBRACE AND REFLECT OUR DYNAMIC ENVIRONMENT.
Planning for different scenarios is a useful way to deal with this uncertainty.

An uncertain future

Infrastructure Victoria recognises that the future is uncertain. For example, we can be confident there will be more people in Victoria in 30 years’ time, but just how many more, where they will live, and what infrastructure they will need is up for debate. In less than a decade, the projections for Victoria’s population in 2046 have been revised up from 8.0 million to 9.4 million, reflecting higher birth and migration rates.

Similarly, few in 1986 would have foreseen how fundamentally the rise of the internet and mobile devices would change the way our society and economy function today. Driverless cars, drones, 3D printing, home batteries and artificial intelligence are just some of the innovations that may disrupt the way we live and do business in the coming decades.

There is great opportunity in technology for infrastructure, but our existing way of doing things can be a barrier. We need to be more adaptable to seize technological change and use it to our best advantage.

Uncertainty is not an excuse for inaction. On the contrary, it calls for us to clearly articulate what we want our future to be, make decisions based on the available evidence, and be adaptable in the face of change.

In developing the strategy, Infrastructure Victoria will look at different scenarios and tailor recommendations accordingly. The near term is likely to be sharper in focus, with recommendations focused on specific projects and initiatives. The long term will be more open and flexible, with recommendations focused on potential areas for action, such as protection of corridors or identification of ‘trigger points’ when new infrastructure is required.
THE STRATEGY WILL COVER THE WHOLE OF VICTORIA AND ALL TYPES OF INFRASTRUCTURE.

We’re not just interested in Melbourne and we’re not just interested in economic infrastructure.

WE WILL WORK FROM THE GROUND UP.

Infrastructure Victoria will define goals and assess challenges and opportunities before coming up with solutions.

YOUR VOICE WILL BE HEARD.

We want you to speak up to help shape Victoria’s infrastructure future.

Developing the strategy

Whether you live in the centre of Melbourne, a new and growing suburb or a regional area, and whether you spend your days visiting the local library or exporting goods to overseas markets, the strategy will consider infrastructure needs across the board.

The depth of analysis applied to different places and infrastructure sectors will vary according to the scale and importance of the infrastructure need identified, and what role the Victorian Government has in addressing it.

This recognises that responsibility for infrastructure lies with all three levels of government in Australia – local, state and federal. The private and not-for-profit sectors also have a major role in building, funding and operating infrastructure.

A key consideration will be the extent to which Infrastructure Victoria can add value to potentially controversial issues and promote informed debate.

In developing the strategy, Infrastructure Victoria will follow a logical methodology. We will gather evidence, set objectives, identify infrastructure needs (that is, challenges and opportunities that need to be addressed), assess options and make recommendations. We will consider future scenarios to make the strategy flexible and responsive.

Infrastructure Victoria recognises that infrastructure both responds to, and shapes, Victoria’s society, economy and environment, so will take a ‘triple bottom line’ approach to developing the strategy.

Coordination with Plan Melbourne and the Victorian Regional Growth Plans will be important, given that infrastructure and land use influence each other.

Infrastructure Victoria will publish a series of papers in 2016 that will outline key issues, options and possible priorities. We encourage you to take part in the consultations that follow. Difficult choices will need to be made at every stage of the process and we want to hear what you think.

Infrastructure Victoria will publish the strategy by the end of 2016. Within a year, the Victorian Government will respond to Infrastructure Victoria’s recommendations and produce a 5-year infrastructure plan outlining its priority major projects.
A WHOLE OF VICTORIA PERSPECTIVE

- Central city
- Metropolitan Melbourne
- Interface councils
- Regional cities
- Rural and regional Victoria

NINE KEY SECTORS

- Energy
- Water (including waste-water) and waste
- Transport (including public transport, freight, ports and airports, cycling, walking and roads)
- Education and training
- Health and human services (including social housing)
- Justice (including courts, police, corrections and emergency services)
- Culture, civic, sport, recreation and tourism
- Science, agriculture and environment
- Information and Communications Technology (ICT)
BIG NEW INFRASTRUCTURE PROJECTS ARE IMPORTANT.

Major projects, particularly in transport, can be ‘state-shaping.’ In other words, their impact and reach are felt throughout Victoria.

BUT MUCH OF THE INFRASTRUCTURE WE WILL USE IN 30 YEARS’ TIME IS ALREADY IN PLACE TODAY.

Some of Victoria’s assets are reaching the end of their useful life, but many of the roads, railways, schools, hospitals and utilities that we use today will still be there in 2046.

MANAGING DEMAND FOR INFRASTRUCTURE AND USING EXISTING ASSETS BETTER ARE JUST AS IMPORTANT AS BUILDING THINGS.

Infrastructure Victoria will consider a broad range of options to address infrastructure needs.

The strategy is not just about building things

When it comes to infrastructure, people often think about big projects, such as where a new port should be located or whether a new rail tunnel should be built. Such projects are critically important for the state’s long-term prosperity, but infrastructure planning is about more than major projects.

We already have a significant infrastructure portfolio in Victoria and much of it will be there in 30 years’ time. With ongoing fiscal constraints, and the challenge of making our state more sustainable, we will need to do more with what we have and make sure we get the best value out of any new projects. Infrastructure projects don’t have to be big. Sometimes small-scale, well-targeted investments can have the biggest impact.

In developing the strategy, Infrastructure Victoria will identify options to manage the demands put on infrastructure, better use existing assets, and strategically expand and build new assets, in that order.

We will consider all the options, including controversial ones like user charging and relocating or consolidating assets, because everything needs to be on the table to address the level of growth Victoria is facing.

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.
Victoria has dramatically increased its capital spending (largely on infrastructure) in the past 30 years. A lot of this has been funded by an increase in debt – from about $200 per person in 2006 to over $3,000 per person in 2019 (in nominal terms).

In the medium to long term, the state is likely to face significant budget pressures, in particular due to rising health care costs associated with the ageing population.

This trend of increased debt cannot continue indefinitely. If we want to spend more on infrastructure, we will need to make hard choices about how additional revenue could be raised and where spending could be cut. Having new roads might mean paying new tolls. Having more police stations might mean having fewer hospital beds.

These are some of the reasons it is so important to look at non-build solutions like managing demand and getting better use out of the infrastructure we already have.

As much as we would like to achieve everything and address every need, Infrastructure Victoria recognises that this is simply not possible. We need your help to decide the best course for infrastructure in our state over the next 30 years.

Annual Victorian Government capital expenditure has more than quadrupled since the 1990s

How can I get involved?

Throughout 2016 there will be lots of opportunities for everyone to learn about and contribute to the 30-year strategy. We will publish regular updates on our website and run a number workshops and forums – both online and in person – to enable everyone to get involved.

To keep up-to-date and ensure you have plenty of notice about how and when you can get involved, sign up to the consultation register on our website at:


If you have a question you want to ask or an idea you want to share, you can contact us via:

Phone: (03) 9651 9199
Email: enquiries@infrastructurevictoria.com.au

Infrastructure Victoria also provides access to an interpreter service.

We look forward to working with you to create an infrastructure strategy for Victoria.
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 3-5 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.

SOURCES


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