

Building Momentum

State Infrastructure Strategy 2018-2038

Summary

February 2018

Chairman's foreword



It is with great pleasure that I provide the State Infrastructure Strategy 2018-2038 to the NSW Government on behalf of Infrastructure NSW, in accordance with the *Infrastructure NSW Act 2011*.

Dear Premier,

On behalf of the Board of Infrastructure NSW, I am pleased to present the State Infrastructure Strategy 2018-2038 (2018 SIS). As required by the *Infrastructure NSW Act 2011*, this 20-year strategy sets out Infrastructure NSW's independent advice on the current state of the State's infrastructure and the needs and priorities over the next 20 years.

NSW currently has the largest state infrastructure building program in the nation, supported by the strongest state economy and significant capital funding commitments – including \$30 billion in the Restart NSW fund generated over the past five years from asset recycling and other sources, including over-budget tax receipts. These Restart NSW funds are earmarked for essential new economic and social infrastructure.

Infrastructure NSW is proud to have played our part in helping the Government to deliver its infrastructure program. By providing advice and fulfilling two further roles – delivering designated projects through Projects NSW and providing external review of all major projects under the Infrastructure Investor Assurance Framework – we have provided vital support to the Government in selecting and overseeing the effective delivery of the State's substantial project pipeline.

Unlike the two prior strategies, the 2012 SIS—First Things First – and the 2014 SIS Update, this strategy looks beyond existing infrastructure backlogs and current projects and identifies the policies and strategies needed to maintain the State's leadership in providing highly productive infrastructure in a timely manner to meet the needs of a growing population and a growing economy.

This forward-looking emphasis is reflected in the title of this strategy: *Building Momentum*.

The 2018 SIS focuses on the three essential ingredients for economic prosperity – population, productivity and participation – with a particular focus on making NSW enterprises more productive and encouraging workforce participation (especially by women and older citizens) by providing infrastructure that creates convenient and time-efficient access to jobs. With the State expecting significant population growth over the next 40 years, improving economic productivity and liveability will require the Government to make smart choices about how its limited funds are allocated to maximise social and economic benefits.

Accordingly, this strategy is less a list of projects – recognising that the State already has a healthy pipeline of capital works – and more a set of policies and strategies required to make more efficient use of existing and new infrastructure and to deploy digital technologies to optimise efficiency, reduce maintenance and manage peak demands while delivering essential infrastructure in the most cost-efficient way.

This strategy also emphasises the importance of 'joined-up' planning and delivery of infrastructure. When combined with the *Greater Sydney Region Plan*, *Regional Plans* across the State, *Future Transport 2056* and regional economic development strategies, this strategy gives the Government for the first time a fully integrated land use and infrastructure plan. This is a landmark achievement. Joined-up planning is essential to encourage and attract private sector investment alongside public investment to build the State's infrastructure momentum.

While a framework for integrated planning across the State now exists, and while some government agencies are well advanced in detailing strategies for the next 20 years and beyond, this strategy recommends that more work be done over the next year or so to bring the State's planning up to

the desired level in relation to water, energy, health, justice and tourism. By 2020, the Government should aspire to have in place a comprehensive suite of sectoral strategies that will be fully consistent with and complementary to this 2018 SIS.

In closing, I thank my colleagues at Infrastructure NSW – ably led by CEO Jim Betts – for their preparation of this strategy, as well as the many expert advisors who have contributed to it.

I commend the strategy to the Government.

Yours faithfully,



Graham Bradley AM

Chair
Infrastructure NSW

Overview

Context

NSW has the largest infrastructure program and the strongest economy in Australia. A key factor in the State’s recent success has been its focus on infrastructure investment, job creation and accelerated housing supply.

NSW’s population is forecast to increase from 7.7 million people today to over 12 million by 2056 – an additional four million people needing two million more homes. NSW will face a tightening fiscal position as its share of Commonwealth Government revenue declines and its ageing population increases the demand for health and other services.

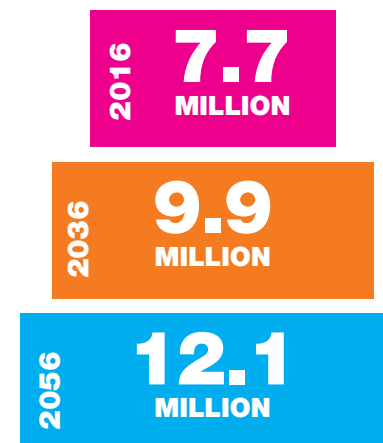
To meet these challenges, this 20-year State Infrastructure Strategy makes recommendations for each of NSW’s key infrastructure sectors – transport, energy, water, health, education, justice, social housing, culture, sport and tourism. If accepted, Infrastructure NSW’s recommendations would have a substantial, highly positive impact on the State’s future: growing the NSW economy by increasing productivity and participation, and generating significant additional employment.

Even greater benefits can be generated if the Government is able to free-up new sources of funding – for instance, from user charges or further asset recycling.

The State Infrastructure Strategy 2018-2038 is about more than big projects. It focuses on continuing to get the basics right, adopting a place-based approach to infrastructure planning and delivery in which resilience,

better asset management and the impact of new technology all play key roles. It also recognises the importance of making the most of existing assets through partnerships and shared uses, innovative service delivery models and the use of digital technologies.

The NSW population will grow from:



Source: NSW Department of Planning and Environment 2016; The Centre for International Economics 2018

Strategic directions

The Strategy sets six cross-sectoral strategic directions, each designed to achieve ‘more with less’ from the State’s large infrastructure program and asset base.

- 1. Continuously improve the integration of land and infrastructure planning** so that population growth does not erode the amenity and character of our suburbs, towns and communities. Integrated

planning will ensure that capital investment plans are linked to and keep pace with land use plans for housing and jobs in priority locations.

2. **Plan, prioritise and deliver an infrastructure program that represents the best possible investment and use of public funds.** This includes improvements to major project planning approval processes, considering further asset recycling initiatives and better communicating the Government's intentions so that the business community can invest with confidence.
3. **Optimise the management, performance and use of the State's assets** to strengthen the management of the \$300 billion+ of infrastructure assets that NSW already owns, make the most of these assets and ensure they are appropriately maintained, repurposed and upgraded.
4. **Ensure NSW's existing and future infrastructure is resilient to natural hazards and human-related threats** by embedding consideration of risk and resilience into all project business cases, capital asset planning and assurance processes, and requiring agencies to undertake rolling assessments of the vulnerability of assets to natural disasters and human-related threats.
5. **Improve statewide connectivity and realise the benefits of technology**, ensuring that NSW becomes a leader in the adoption and use of digital technology. All new and significantly upgraded assets will be connected or connectable by 2020, a new policy will guide investment in the Internet of Things and a centralised repository of government data will be accessible by everyone under open data provisions.

6. **Drive high quality consumer-centric services and expand innovative service delivery models in infrastructure sectors** by being innovative in buying services and delivering new assets, and harnessing the skills of the public, private and not-for-profit sectors to get best value from public investment.

Geographic directions

This Strategy recognises that different parts of NSW face different opportunities and needs. Infrastructure NSW's recommendations reflect this diversity by setting geographic directions for infrastructure planning, investment and policy:

- **Regional NSW needs** to be supported by good transport links to key markets by leveraging Inland Rail and upgrading east-west links. Better digital connectivity is needed to enable regional business to compete and to improve basic services like health, education and a reliable supply of drinking water.
- **Sydney's long-term future** is a metropolis of three cities – a vision articulated in the *Greater Sydney Region Plan*, which Infrastructure NSW supports.

Traditionally, investment has focused on Sydney's east. As major infrastructure networks are completed in the Eastern Harbour City, such as WestConnex and Sydney Metro, investment needs to shift westwards: first to the Central River City

around Parramatta and ultimately to the emerging Western Sydney Airport and employment centres of the Western Parkland City.

Infrastructure directions

Infrastructure NSW's overarching message is that good projects come from good plans.

While some sectors – notably transport – have highly developed, prioritised long-term plans, other agencies have some way to go. This deficit in planning needs to be rectified as a matter of urgency if the cross-sectoral and geographic directions in this Strategy are to be implemented effectively.

Independent analysis indicates that, if accepted by the Government, the recommendations in the State Infrastructure Strategy 2018-2038 would increase the size of the NSW economy and generate additional jobs.

Infrastructure NSW's recommendations will boost the NSW economy by

\$11B in **2036** and **\$45B** in **2056**

Source: The Centre for International Economics 2018

Executive summary

Introduction

NSW is changing. The way our infrastructure is planned, delivered, managed and maintained needs to change too. The *State Infrastructure Strategy 2018-2038: Building Momentum (the 2018 SIS)* recommends reforms, policies and projects that respond to NSW's changing economic, social, technological and environmental outlook and build on the benefits already delivered by the largest infrastructure program in Australia.

The 2018 SIS provides the NSW Government with advice about infrastructure policy and investment priorities designed to boost the State's economic prosperity and global competitiveness while meeting the challenges of population growth and ensuring that cities, towns, suburbs and communities across NSW continue to be great places to live and work.

The 2018 SIS endorses and supports the land use directions set out in the *Greater Sydney Region Plan* and the plans for regional NSW prepared by the Department of Planning and Environment. For the first time, NSW has a fully integrated long-term, statewide strategic plan for land use and infrastructure, with a clear focus on investing in the right infrastructure, in the right place and at the right time to deliver maximum value and benefits.

The 2018 SIS contains 122 recommendations spanning NSW's key infrastructure sectors of transport, energy, water, health, education, justice, social housing, culture, sport and tourism. These recommendations identify capital investment, policy

initiatives, planning reforms and regulatory changes that are achievable, affordable and evidence-based, and that deliver the highest economic, employment and liveability benefits to the people of NSW.

If accepted, Infrastructure NSW's project and policy recommendations are estimated to increase Gross State Product to over one per cent, or \$11 billion in 2036 and by over three per cent, or \$45 billion in 2056. If the recommended development of an integrated system wide transport pricing road map proceeds to implementation, the total estimated increase to Gross State Product would be nearly three per cent, or \$26 billion, in 2036 and five per cent, or \$67 billion, in 2056.

Unlike previous strategies, the benefits of the 2018 SIS recommendations arise largely through improved productivity and the recommendations with the greatest impacts are targeted at getting better outcomes from existing infrastructure.

Implementing the 2018 SIS would make NSW a better place to live with significantly expanded employment opportunities, lower travel times and improved health, education and other services. Across NSW, there would be an additional 26,000 jobs by 2036 and a further 159,000 jobs by 2056.

Infrastructure NSW's recommendations represent independent advice; they do not constitute NSW Government policy. Consistent with the terms of the *Infrastructure NSW Act 2011*, the Government will respond to Infrastructure NSW's advice in a separate, public document.

The 2018 SIS builds on its two predecessors. It recognises that NSW now has an ambitious infrastructure pipeline through to the mid-2020s. There is no immediate need to 're-invent' this pipeline. Rather, the focus of this Strategy is on building the momentum established since 2012 and continuing to strengthen infrastructure planning, procurement, management and performance to ensure the State's assets are flexible, enduring and resilient. The Strategy recognises that government alone cannot afford to build its way out of increasing demand for infrastructure and services: the key is investing in well-targeted infrastructure that is integrated with land use planning, while also extracting more value from existing assets. The Strategy also identifies and prepares for the next wave of investment that will keep NSW in a competitive position within the Asia Pacific region.

Setting the scene

NSW has the largest infrastructure program and the strongest economy in Australia. State-led infrastructure investment has been a key driver of economic and employment growth, and a core contributor to strong investor confidence and rising living standards.

Over the next 40 years, the State will face a series of structural changes, including population growth, an ageing population, a fast-growing young population and changes to the composition of the State's industries and economy.

At the same time, a fiscal gap is emerging where the revenue the NSW Government receives is declining while the demand for services continues to grow. These changes will create challenges and

opportunities, with significant implications for the planning, delivery and operation of economic and social infrastructure.

Supporting growth

NSW's population is forecast to grow from about 7.7 million today to over 12 million by 2056. Greater Sydney is expected to accommodate 80 per cent of this population growth. This larger population will require around two million more houses and more supporting infrastructure and services, such as schools, health services, transport, energy and water.

With an ageing population that is living longer, workforce participation is expected to decline significantly (from 64 per cent today to 59 per cent in 2056) and the demand for health services is expected to increase. A fast-growing young population will require more investment in modern education and vocational training infrastructure.

Employment is forecast to grow from 3.8 million jobs today to 5.7 million jobs in 2056, an increase of nearly two million jobs. While there will continue to be job opportunities in sectors like primary exports, services and tourism, increasingly jobs will move to knowledge-based industries like advanced manufacturing, international education and research, creative industries, finance and professional services. These industries will need to be supported by infrastructure that enables them to grow and compete internationally.

The digital economy will continue to grow, with digital technologies transforming almost every aspect of our daily lives and the way businesses and governments

operate. Demand for ubiquitous, reliable and fast connectivity will increase. The massive growth in data means that it is becoming a vital infrastructure asset in its own right – one that is critical to developing innovative new services, improving current services and increasing the productivity and performance of assets.

Setting new strategic geographic directions

The NSW Government has set a new vision for growing Greater Sydney based on a metropolis of three cities: the established Eastern Harbour City, the developing Central River City and emerging Western Parkland City centred around the new Western Sydney Airport. Each city will have its own unique identity and endowments, and the infrastructure needed for each must be planned to optimise its liveability, productivity and sustainability.

Infrastructure NSW endorses the concept of the three cities as the foundation for Greater Sydney's future land use. By 2036, over 50 per cent of Sydney's population will live west of Parramatta. People in new and existing suburbs will need access to high quality, infrastructure-enabled public services. As far as possible, jobs will need to be located close to where people live, minimising their need to commute across town.

For regional NSW, the Government has set a new vision for a 'hub and spoke' model, designed to provide equitable, better and more efficient services to communities across the state through a connected network of regional centres. Again, Infrastructure NSW supports these geographic directions as the basis for optimal and productive land use, economic and infrastructure planning.

Managing the fiscal gap

If current trends continue, the Government will face a major gap between what it receives in tax and other revenues and what it spends on public services and infrastructure. This fiscal gap will be driven in part by NSW's ageing population that will result in lower tax revenues over time as people retire and higher expenses, particularly in the health sector. The NSW Government also has to contend with a declining share of Commonwealth revenues from GST and National Partnership Agreements.

The 2018 SIS identifies steps the Government can take to close this gap, but not all available options are easy. The challenge is to find new and better ways of delivering and paying for the infrastructure and services the community expects, while exercising careful judgement about the major projects in which the Government chooses to invest.

The response

NSW's future prosperity depends on its ability, and willingness, to get the maximum economic and social benefit from existing and new infrastructure assets. To do this, good practices need to be applied to infrastructure planning, assessment, procurement, construction and management:

- to meet rising demand for public services
- to support longer term plans for jobs and housing prepared by the Greater Sydney Commission and the Department of Planning and Environment
- to anticipate and respond to megatrends, including taking advantage of opportunities generated by technological transformation and managing threats such as climate change.

The 2018 SIS sets out six overarching strategic directions, described below, to instil best practice approaches across NSW's infrastructure sectors.

It then sets out the infrastructure needs and priorities for each of NSW's major geographic regions, acknowledging their unique endowments and identifying the priority initiatives and investments that will enable them to meet their goals for liveability and economic development. These geographic directions build on the Government's recently adopted land use plans for jobs and housing.

The cross-cutting strategic and geographic directions then inform Infrastructure NSW's policy and investment recommendations for each infrastructure sector. These recommendations are contained in each of the chapters in the 2018 SIS, and listed again in Appendix 1.

Strategic directions

The following strategic directions will provide long-term value by embedding good practice across the infrastructure lifecycle.

1. Continuously improve the integration of land use and infrastructure planning

Infrastructure planning at the local level will be improved through growth infrastructure compacts and strategic business cases that link population and jobs growth in priority locations to agencies' long-term Capital Investment Plans, as well as acting ahead of time to protect key infrastructure corridors and provide better quality data and information to the housing industry to boost investor confidence. (Chapter 2)

2. Plan, prioritise and deliver an infrastructure program that represents the best possible investment and use of public funds

Further improvements will be made to major project planning approval processes and procurement to get worthwhile infrastructure built more quickly and cost-effectively than in the past. Opportunities will be explored to unlock new or improved sources of funding and the potential for further asset recycling initiatives will be considered over the next five years. (Chapter 3)

3. Optimise the management, performance and use of the State's assets

A revised asset management policy, supported by a new assurance model, will help agencies across NSW's public sector to lift their performance in managing the more than \$300 billion of infrastructure assets that NSW already owns, making the most of these assets and ensuring they are appropriately maintained, repurposed and upgraded. (Chapter 4)

4. Ensure NSW's existing and future infrastructure is resilient to natural hazards and human-related threats

The resilience of vital State assets will be improved by better coordination between agencies, sharing of information and infrastructure-specific risk assessment tools and guidance. Resilience considerations will be embedded into project business cases, capital asset planning and assurance processes, and agencies will be required to undertake rolling, periodic assessments of the vulnerability of their assets to natural disasters and human related threats. (Chapter 5)

5. Improve statewide connectivity and realise the benefits of technology

Targets will be set for digital connectivity and existing state-owned telecommunications assets and purchasing power will be harnessed to improve connectivity across NSW. More open approaches to data management will be pursued and risk-based cybersecurity protections for infrastructure adopted. A new policy framework will guide investment in and maximise the benefits delivered by the Internet of Things. All new and significantly upgraded state-owned assets will be connected or connectable by 2020. (Chapter 6)

6. Drive high quality consumer-centric services and expand innovative service delivery models in infrastructure sectors

The best skills in the public, private and not-for-profit sectors will be harnessed by applying the *NSW Commissioning and Contestability Policy* to existing public services, while continuing to innovate in the procurement and delivery of new public assets and services. Government agencies will identify and proactively support opportunities for streamlined regulation to enable new markets and innovative products to develop. (Chapter 7)

Geographic directions

Past infrastructure plans have tended to be divided along sectoral lines – such as transport, health and education – reflecting the ‘silos’ into which most governments divide themselves.

The 2018 SIS adopts a different approach, considering the infrastructure needs of cities and regions based on their unique characteristics and the likely impact of combined investments across sectoral boundaries. Infrastructure and land use are not the only drivers of economic outcomes.

The regions listed below will only achieve their full potential if infrastructure and land use planning are supported by targeted policies in areas such as skills development and industry attraction.

The key geographic responses are outlined in Chapter 8 and summarised below.

<p>NSW Gateway to Australia and to international markets</p>	<ul style="list-style-type: none"> • Improve access to NSW’s international gateways. • Facilitate investment in all levels of high quality digital infrastructure. • Facilitate investment in secure, reliable, affordable low emissions, energy efficient infrastructure.
<p>Regional NSW Strengthening growing regions with new jobs</p>	<ul style="list-style-type: none"> • Improve east-west connections to markets and access to international gateways. • Provide connections to and from Inland Rail. • Ensure water supply and wastewater treatment to enable industry and population growth. • Provide health infrastructure upgrades to align with settlement patterns and population. • Ensure education infrastructure and technology are comparable to that in Greater Sydney.
<p>Western Parkland City Developing a new city built on new knowledge industries</p>	<ul style="list-style-type: none"> • Prioritise intercity road connections to support access and provide a north-south mass transit connection. • Provide a freight network to support a growing city. • Provide health, education and social infrastructure to support population growth. • Facilitate high quality digital connectivity infrastructure as part of all developments. • Protect and enhance the South Creek catchment.
<p>Central River City Supporting an emerging administrative capital</p>	<ul style="list-style-type: none"> • Improve intercity and intracity transport connections and improve north-south transport connections. • Provide better cultural and recreational infrastructure. • Improve walking and cycling connections. • Facilitate high quality digital connectivity infrastructure as part of all developments. • Provide more education learning spaces.
<p>Eastern Harbour City Strengthening global headquarters for Australia’s top businesses</p>	<ul style="list-style-type: none"> • Improve access to international gateways. • Improve mass transit connections to the CBD, especially from the west and south east. • Improve active transport. • Improve cultural infrastructure and institutions. • Provide more education learning spaces.

Sector-based infrastructure directions

Building on these strategic and geographic directions, Infrastructure NSW has analysed the policy and investment options available to the NSW Government across the key infrastructure sectors. In doing so, it is mindful that the NSW Government has finite resources. Not all worthwhile projects and programs being contemplated by the NSW Government will be affordable, even over the 20-year term of this SIS. The NSW Government has a legislated commitment

to maintaining the State's AAA credit rating, which is based in large part on its ability to keep public debt within acceptable parameters.

Accordingly, the 2018 SIS presents the NSW Government with choices as to the priority investments it can make. Infrastructure NSW offers the NSW Government evidence-based advice on the choices it should make, tied to clearly defined economic and social objectives. Not all these choices are straightforward. But the choices the NSW Government

faces will be easier, and the list of affordable projects will be longer, if it can unlock extra funding. Potential funding sources include the Commonwealth Government, more widespread user charging, the sale of state-owned assets and greater private sector investment.

Chapters 9 to 15 provide directions for the infrastructure sectors. The table below summarises Infrastructure NSW's key recommendations for each infrastructure sector.

Transport

Strategic objective:

Ensure the transport system creates opportunities for people and businesses to access the services and support they need

Summary of key recommendations:

- Support the development of a three-city metropolis for Greater Sydney by investing in transport infrastructure that provides high frequency and high-volume access to, and connectivity between, each of the three cities, while enhancing local amenity.
- Invest in transport infrastructure that is integrated with land use to create opportunities for agglomeration and enhance productivity, liveability and accessibility, in support of the policy goal of a '30-minute city'.
- Support the development of regional hubs by enhancing their accessibility and connectivity via major north-south and east west links.
- Encourage travel patterns that are tailored to the capacity of the network and help to manage congestion with mobility pricing reform and demand management initiatives.
- Re-allocate road space in key commuter corridors to give priority to the most productive and sustainable transport modes, improve the integration of services across modes, remove network bottlenecks and upgrade operational systems and infrastructure.
- Overcome local constraints on the regional road and rail networks that limit the use of high productivity freight vehicles and rail freight.
- Further develop the Sydney rail network with new rail links and system-wide upgrades. Develop extensive on-road rapid transit networks and active transport links to support the mass transit system. Plan and deliver critical links in the motorway network that will serve Sydney well into the future and link key centres across Greater Sydney.
- In the Western Sydney Parkland City, give priority for the next 20 years to establishing a high quality, on-road rapid transit system and planning and preserving future infrastructure corridors. Investment in rail-based mass transit should commence as a staged investment from 2036 onwards unless co-investment from the Commonwealth Government and the private sector enables it to proceed earlier.
- Complete missing links in the regional network, creating travel time savings and safety benefits that increase productivity.

Transport

- Equip the transport system for emerging technology with investments in connectivity and digital infrastructure, and establish regulatory and governance settings that will encourage innovation and ensure the benefits of new technology can be fully realised.
- Develop and protect freight and service networks by improving road and rail access for goods and services to local, national and global markets, leverage the Commonwealth’s Inland Rail investment and address existing inefficiencies and pinch points.
- Improve the resilience of the system to reflect its critical operational role, including during periods of acute and sustained shock.

Energy

Strategic objective:
Encourage private sector investment to deliver secure, reliable, affordable, low emissions energy supply

- Summary of key recommendations:**
- Implement the Council of Australian Governments (COAG) Energy Council-endorsed recommendations emerging from the Energy Security Board and the Finkel Review and ensure, through leadership and close monitoring, that energy market actions meet NSW consumers specific needs and circumstances.
 - Avoid funding new generation capacity or introducing schemes that send distortionary price signals that discourage or prevent private sector investment.
 - Review the benefits of moving the State transmission and distribution reliability standards to a national framework.
 - Accelerate the NSW Government’s Strategic Release Framework for Coal and Petroleum Exploration, where necessary.
 - Review local planning rules and the electricity supply regulatory framework to promote new technologies and energy infrastructure.
 - Accelerate national and state regulations for consumer protection and safety.
 - Develop regional economic growth programs to support skills development and industries affected by the energy transition.
 - Promote demand management and nationally harmonised, market-based schemes for energy efficiency.
 - Strengthen and expand the coverage of national energy efficiency standards for all building and infrastructure developments.
 - Strengthen and promote the use of the NSW Government Resource Efficiency Policy to drive down Government’s energy costs.

Water**Strategic objective:**

Support the growth, productivity and liveability of metropolitan and regional communities by ensuring that water security, quality and wastewater services protect public health and the environment

Summary of key recommendations:

- Assess the climate science capability required for water resource management and for infrastructure investment decision-making.
- Develop a NSW Water Statement to provide transparency about the management and control of the State's water resources.
- Identify investment options in the priority catchments of Gwydir and Macquarie.
- Develop regional water strategies for the priority catchments of Richmond and Bega.
- Develop a risk-based approach to identify priority infrastructure projects that protect drinking water safety in regional NSW towns.
- Finalise the Hunter regional water strategy to achieve longer-term water security for the region, including the Central Coast, and review water sharing arrangements.
- Prepare a strategic business case to connect Lostock and Glennies Creek dams.
- Prepare a strategic business case for a potable water pipeline connecting Singleton to the Hunter Water network.
- Develop a 20-year Strategic Capital Plan for Sydney's water and wastewater systems for consideration by the NSW Government and inclusion in Sydney Water's Pricing Submission to the Independent Pricing and Regulatory Tribunal.
- Complete the South Creek Corridor Strategic Business Case.
- Develop options for the augmentation of Sydney's water supply, including the findings of the South Creek Strategic Business Case, and provide advice to the NSW Government.

Health**Strategic objective:**

Plan and deliver world-class health infrastructure that supports a 21st century health system and improved health outcomes for the people of NSW

Summary of key recommendations:

- Develop a 20-year Health Infrastructure Strategy that incorporates flexibility, enables system integration, innovation and technology, to inform investment in future-focused infrastructure.
- Assess ageing health assets to determine whether they are fit-for-purpose, explore the potential to develop greenfield sites and consider divesting assets that are not fit-for-purpose for future care models.
- Consider investment in infrastructure for health benefits as part of an integrated health and town planning strategy, such as walking and cycling infrastructure and parks and recreation facilities.
- Deliver the current *eHealth Strategy 2016-2026*.
- Periodically refresh the eHealth Strategy to support an ongoing investment in technology-enabled health care including: mobile health; cognitive technologies; and virtual healthcare delivery.
- Include an assessment of strategic assets and asset management as part of the Health Infrastructure Strategy.
- Consider public private partnerships to finance health infrastructure and clinical care delivery, where they deliver value and improved clinical outcomes for the community.

Education**Strategic objective:**

Deliver infrastructure to keep pace with student numbers, and provide modern, digitally-enabled learning environments for all students

Summary of key recommendations:

- Fully fund and implement the *School Assets Strategic Plan*.
- Progressively upgrade all existing permanent learning spaces to Future Learning environments over the long term.
- Assess the impact of operational policies and procedures on infrastructure requirements.
- Identify how the functional limitations of demountable classrooms can be addressed, potentially through modified designs, or a retrofitting or replacement program.
- Routinely assess the vulnerability of the Department of Education's assets to the impacts of climate change, natural disasters and human-related threats, and identify cost-effective adaptation and mitigation measures.
- Embed consideration of joint and shared used, partnership, and place-making opportunities in Schools Community Planning.
- Ensure skilled resources are dedicated to promoting and facilitating joint and shared use opportunities.
- Prepare a *School Energy Strategy 2018 – 2030*.
- Prepare a *School Digital Transformation Strategy 2018 – 2025*.
- Prepare a business case for a *Connecting Metropolitan Schools program*.
- Support the non-government school sector to meet its growth challenges and to identify, and where possible, remove barriers to that sector growing its student share.
- Prepare and implement a 20-year TAFE NSW Infrastructure Strategy.

Justice**Strategic objective:**

Adopt a more integrated approach to strategic asset planning, asset management and service delivery across the Justice Cluster

Summary of key recommendations:

- Complete a review of asset management across the Justice Cluster by mid-2018.
- Drawing on the asset management review, develop a 20-year Justice Infrastructure Strategy by the first quarter of 2019.
- Prepare business cases by the end of 2018 to address court capacity in the Sydney CBD, South West Sydney and key locations in regional NSW.
- Prepare a business case and undertake site investigations and related community consultation by the end of 2018 to address the requirement for additional long-term prison bed capacity in Greater Sydney.

Culture, sport and tourism**Strategic objective:**

Deliver world-class institutions to maintain strong cultural and sporting sectors and support the visitor economy

Summary of key recommendations:

- Publish and implement a NSW Government response to the recommendations of the 2016 Cultural Infrastructure Strategy.
- Develop a Sport Infrastructure Strategy and a whole-of-sector investment framework.
- Deliver community sport infrastructure programs and complete final business cases to inform investment in major stadia.
- Develop a Tourism Infrastructure Strategy to guide investment that will support the new Regional Economic Development Strategies and visitor economy targets.
- Prepare a strategic business case to assess options for providing additional cruise berthing capacity in Sydney.
- Encourage the Commonwealth Government to review regulatory settings to improve aviation operations in Sydney.

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