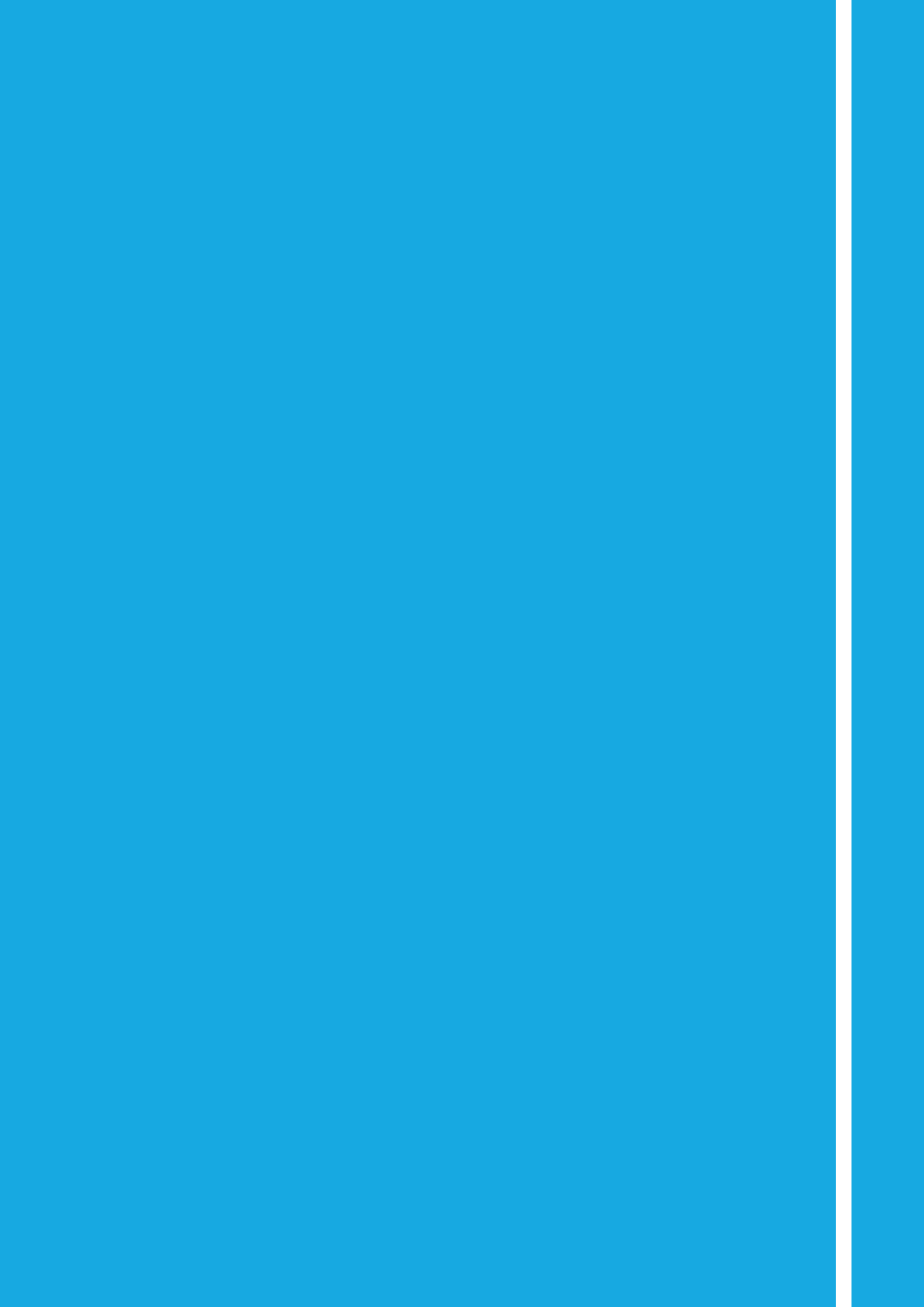




Western Sydney and Illawarra Shoalhaven **Roadmap to Collaboration**

September 2019



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01

THE ROADMAP AT A GLANCE

The Western Sydney and Illawarra Shoalhaven Roadmap to Collaboration is the first step towards unlocking significant growth opportunities for both regions.

Priority areas

The Western Sydney and Illawarra Shoalhaven regions will be transformed over the coming decades due to population growth, a massive infrastructure program and the evolution of local industries and skills.

Due to their geographic proximity and mutual interests across a range of industries, there are significant opportunities to accelerate the development of both regions by coordinating resources and sharing knowledge.

The Western Sydney and Illawarra Shoalhaven Roadmap to Collaboration (Roadmap) identifies the following six priority areas for developing opportunities that are mutually beneficial to both regions:

1. Advanced manufacturing.
2. Education.
3. Freight and passenger transport.
4. Smart City technology.
5. Visitor economy.
6. Western Sydney Airport and Aerotropolis.

Snapshot of regional opportunities

Both regions are characterised by distinct but complementary advantages and opportunities:

Western Sydney

- » Western Sydney Airport—will attract significant infrastructure, investment, knowledge-intensive jobs and boost the visitor economy.
- » Western Sydney Aerotropolis—set to contribute around 200,000 jobs for Western Sydney by establishing a new high-skill jobs hub across defence and aerospace, agribusiness, freight and logistics, advanced manufacturing, healthcare, education and research, and tourism.
- » Western Sydney Aerospace and Defence Industries Precinct—future world-class aerospace and defence industries hub adjacent to the Western Sydney Airport.

- » Western Sydney City Deal—a once in a lifetime tri-partite government agreement to deliver education, business and employment opportunities for the Western Parkland City.
- » North South Rail Link from St Marys to Badgerys Creek Aerotropolis via Western Sydney Airport—Australian and NSW Governments have committed to delivering the first stage, which will support greater regional connectivity and a western economic corridor.
- » University of Wollongong, University of Newcastle, University of New South Wales (NUW Alliance) and Western Sydney University—collaborating with industry and government on future-shaping initiatives, including a proposed multiversity at the Western Sydney Aerotropolis.

Illawarra Shoalhaven

- » Australia's 10th largest city—Wollongong is the region's business and administrative centre and the third largest regional economy in NSW.
- » University of Wollongong—one of the world's top 20 modern universities and a strategically-located asset for the Illawarra Shoalhaven, with a catchment that extends into Sydney, Western Sydney, the ACT and south east NSW.
- » Port of Port Kembla—a regional economic driver and potential location of a future container terminal to augment capacity in Port Botany.
- » Shoalhaven defence cluster—longstanding naval defence sector anchored by the home of Australian naval aviation at HMAS Albatross and Albatross Aviation Technology Park, as well as HMAS Creswell.
- » Diverse advanced manufacturing sector—including metals, chemicals, mining, construction, textiles and food and beverage manufacturing.
- » Strong manufacturing history—transitioning from a focus on traditional manufacturing and industry to new opportunities in ICT and knowledge services; aviation, defence and advanced manufacturing; education and tourism.
- » Princes Highway upgrade program—a series of NSW Government initiatives designed to improve safety, connectivity, capacity and traffic flow.

Action areas

This document distils regional opportunities and provides an overview of the priorities and action areas identified as important for both regions during consultation for the Roadmap. It provides immediate, short, medium and long term proposed actions for consideration.

How this Roadmap document is structured

- » **Roadmap at a glance (Section 1):** Summary of the Roadmap, its priorities and opportunities.
- » **About the Roadmap (Section 2):** Background to the Roadmap and how it was developed.
- » **Context (Section 3):** Overview of both regions and the policies shaping their development.
- » **Priority areas (Section 4):** Explores the six priority areas for collaboration, together with an initial examination of opportunities associated with each.
- » **Governance and implementation (Section 5):** Recommends how the Roadmap will be delivered.
- » **Action areas (Section 6):** Identifies specific actions to foster collaboration between the regions.

02 ABOUT THE ROADMAP

The Western Sydney and Illawarra Shoalhaven Roadmap to Collaboration demonstrates our collective commitment to working together to deliver stronger social, economic and employment outcomes for both regions.

Purpose

Given their geographic proximity, growing populations and complementary industries, there are many untapped opportunities for greater collaboration between the neighbouring regions of Western Sydney and Illawarra Shoalhaven.

Both regions are enjoying sustained population and economic growth as they transition from a focus on traditional manufacturing and industry to new opportunities in ICT and knowledge services; aviation, defence and advanced manufacturing; education and tourism.

The Western Sydney Airport and Aerotropolis, Western Sydney City Deal and opportunities presented through the Port Kembla international trade gateway present once-in-a-lifetime opportunities for growth and collaboration

between the two regions. The University of Wollongong (UOW), and its focus on innovation and smart city technology, is also uniquely placed to act as a catalyst for contributing to and shaping regional transformation.

This Roadmap is a first step towards taking a more collaborative approach to leveraging opportunities in both regions to:

- » promote sustainable growth and prosperity for the people of both regions
- » enable cooperative leadership and management of strategic regional growth and opportunities
- » advocate for cross-regional benefits in shared service delivery, infrastructure investment, and freight and passenger connections.

Inputs

Development of the Roadmap has been informed by:

- » high-level review of policies and strategic documents relating to connections between the Western Sydney and Illawarra Shoalhaven regions

- » Western Sydney and Illawarra Shoalhaven Roadmap to Collaboration Context Report, which confirmed priority areas for further investigation
- » consultation with local councils from Illawarra Shoalhaven and south-west Western Sydney, NSW Government agencies, non-government institutions, the University of Wollongong and regional development organisations.

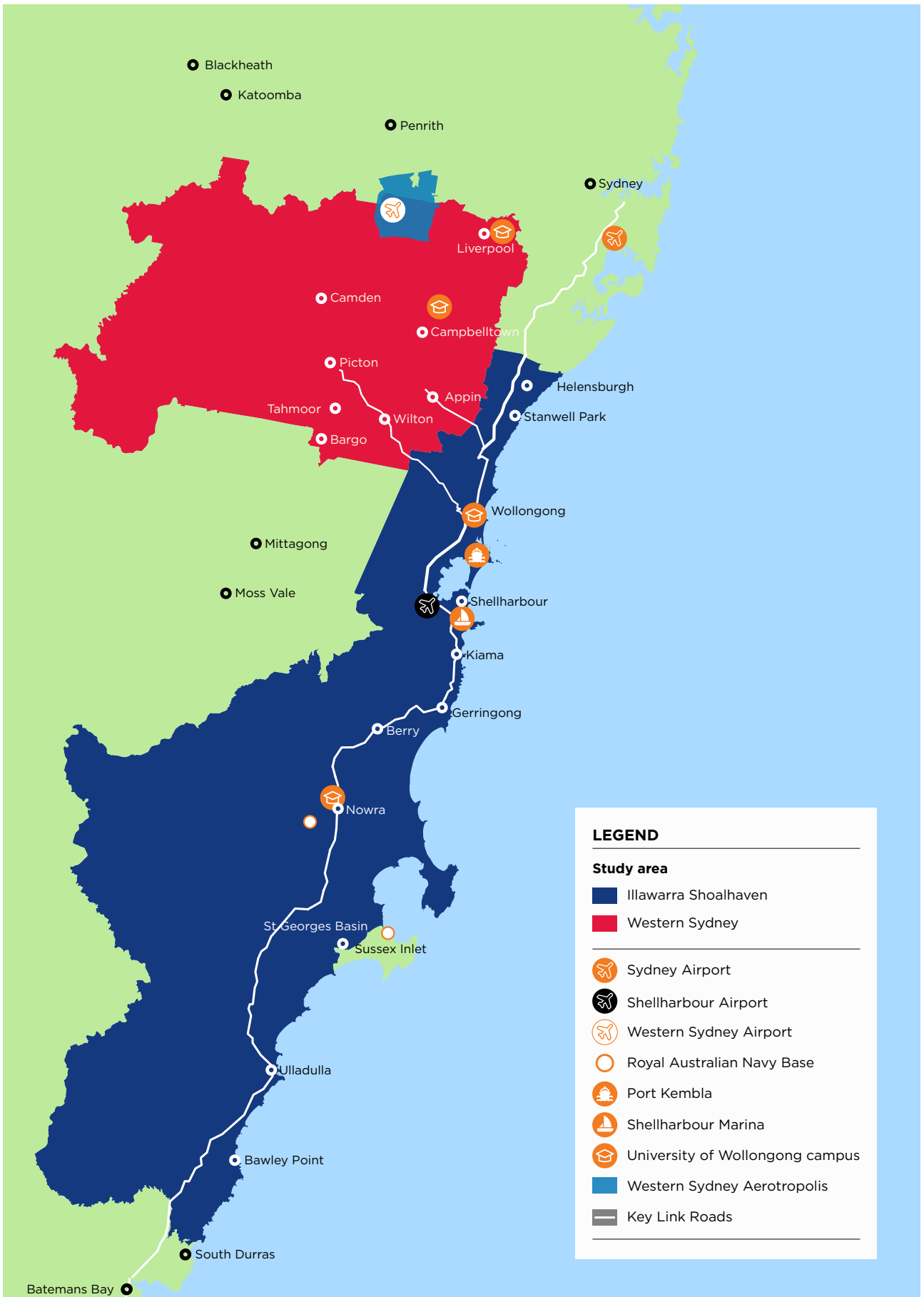


Figure 1: Western Sydney and Illawarra Shoalhaven collaboration area

Roadmap collaboration area

The Roadmap encompasses eight local government areas (LGAs) across Illawarra Shoalhaven and south-west Western Sydney. The LGAs were selected due to their physical proximity and strong existing and future transport connections.

Western Sydney

The south-west Western Sydney region comprises the following LGAs:

- » Camden
- » Campbelltown
- » Liverpool
- » Wollondilly.

Illawarra Shoalhaven

The Illawarra Shoalhaven region comprises the following LGAs:

- » Kiama
- » Shellharbour
- » Shoalhaven
- » Wollongong.

Consultation

This Roadmap document was developed with input from the following stakeholders:

Project Steering Committee

The Project Steering Committee comprises representatives from NSW Government agencies, local councils, Regional Development Australia Illawarra, NSW Ports, the University of Wollongong and Destination Sydney Surrounds South. It was established in December 2018 to guide the development of the Roadmap to Collaboration.

Local councils and cooperative organisations

- » Western Sydney councils: Campbelltown City, Liverpool City, and Wollondilly Shire councils.
- » Illawarra Shoalhaven councils: Wollongong City, Shellharbour City, Kiama Municipality and Shoalhaven City councils.
- » Illawarra Shoalhaven Joint Organisation and Western Sydney Regional Organisation of Councils.

Regional agencies, organisations and networks

- » Department of Premier and Cabinet.
- » Department of Infrastructure, Regional Development and Cities.
- » Department of Planning, Industry and Environment.
- » Destination Sydney Surrounds South.
- » Greater Sydney Commission.
- » Illawarra Business Chamber.
- » NUW Alliance.
- » Transport for NSW.
- » Venues NSW.
- » Western City and Aerotropolis Authority.
- » Western Sydney Airport Co.
- » Western Sydney Business Chamber.
- » Western Sydney City Deal Delivery Office.
- » University of Wollongong.

Snapshot of the regions

Illawarra Shoalhaven

The Illawarra Shoalhaven region is the third largest regional economy in NSW and is strategically positioned next to the rapidly expanding Western Sydney area. Being close to some of the fastest growing labour markets and economies in the country is a distinct advantage for the region.

The region's growth industries include advanced manufacturing, knowledge-intensive industries, construction, tourism, defence and education and training. Development of these industries has seen the region build on its historic strengths in manufacturing and mining and move towards new opportunities.

There is a longstanding naval defence sector at Shoalhaven, anchored by the home of Australian naval aviation at HMAS Albatross and the Albatross Aviation Technology Park as well as HMAS Creswell. Global prime contractors are established at the Albatross Aviation Technology Park, servicing HMAS Albatross and the national defence sector.

The region also boasts a diverse advanced manufacturing sector, including industrial, chemicals, mining, construction, textiles and food and beverage manufacturing. This competitive advantage is bolstered by the presence of the University of Wollongong—one of the world's top 20 modern universities. Companies are able to leverage the University's expertise in advanced process and technology to compete both domestically and internationally.

Port Kembla, located south of Wollongong, is the state's port of growth. It is NSW's largest motor vehicle import hub and grain export terminal and its second largest coal export port. The port is also home to BlueScope, a major manufacturer and exporter of steel products and solutions for global building and construction industries.

The Port of Port Kembla contributes around \$760 million to the State's annual gross domestic product and supports over 5,000 jobs. In the

long term, it is earmarked for a second NSW container terminal due to it being located close to distribution centres, intermodal facilities and population growth areas in south-west Sydney. The port is also well connected to Sydney and regional NSW by road and rail infrastructure.

Summary of regional and strategic advantages

- » Illawarra Shoalhaven contributes over \$18.98 billion¹ to the NSW economy and supports over 23,100 businesses.
- » Australia's 10th largest city—Wollongong—is located in the Illawarra Shoalhaven and is the region's business and administrative centre.
- » Located around 70 minutes south of Sydney and 45 minutes from south-west Sydney by road.
- » Supports a strong business environment buoyed by competitive rents, wages and retention rates and a highly skilled workforce.
- » Contains the Port of Port Kembla, a regional economic driver and potential location of a future container terminal to augment capacity of Port Botany.
- » Home to the University of Wollongong, with its innovation campus and focus on smart city technology and health and wellbeing.
- » Strong defence sector, anchored by facilities at HMAS Creswell, HMAS Albatross and Albatross Aviation Technology Park.
- » The 270-berth Shellharbour Marina at The Waterfront, Shell Cove will provide a significant boost to the region's marine tourism infrastructure by providing a safe harbour and refuelling station for vessels travelling along the South Coast.
- » Significant and growing visitor economy attracted to the region's unspoilt natural landscape, nature-based experiences and marine tourism attractions.

¹ Illawarra Region, June 2018, presented in economy.id.com.au

Western Sydney

Western Sydney is experiencing unprecedented growth and investment, which is underpinned by the Western Sydney City Deal. This once-in-a-lifetime opportunity will help transform the region into one of the country's most prosperous and connected cities.

It will also support the new Western Sydney Airport and Aerotropolis, help create 200,000 new jobs and potentially unlock greater movement in and out of the region as demand for infrastructure, housing and leisure opportunities grows.

The Western Sydney City Deal is a 20-year agreement between the eight councils of the Western Parkland City (including Liverpool, Campbelltown, Camden and Wollondilly), and the NSW and Australian Governments.

As well as facilitating the creation of the Western Sydney Aerotropolis, the Western Sydney City Deal commits to programs which will support the substantial forecast population growth and development in Western Sydney and beyond. Housing development is planned in growth areas in south-west Sydney including the Western Sydney Airport Growth Area, South West Growth Area and Greater Macarthur Growth Area.

The Greater Sydney Commission describes the Western City District as Greater Sydney's parkland city, a place of iconic landscapes, mountains, escarpments, rural hinterlands and rivers. The area's bushland, rivers and natural landscapes are already significant drawcards for international tourism and this trend is predicted to grow.

By 2056, the combined population of Greater Sydney, Newcastle and Wollongong will be around 10 million people. Potential new transport connections—including the Outer Sydney Orbital corridor between Western Sydney, the Central Coast and Illawarra—are also set to enable greater economic opportunities.

Summary of regional and strategic advantages

- » The Western Parkland City has a Gross Regional Product of \$54 billion², and is set to become one of Australia's most connected cities with innovative public transport, aviation and digital infrastructure to promote local employment and education.
- » Australian and NSW Governments have committed to deliver the first stage of the North South Rail Link from St Marys to Badgerys Creek Aerotropolis via Western Sydney Airport, which will support greater regional connectivity and a Western Economic Corridor.
- » Western Sydney Airport and Aerotropolis is expected to attract significant infrastructure, investment and knowledge-intensive jobs.
- » Badgerys Creek Aerotropolis will be a world-class employment sector for jobs in aviation, aerospace, defence industries and advanced manufacturing. Plans include a world-class science, technology, engineering and mathematics focused multiversity, VET facility and high school.
- » Significant opportunity to leverage the Western Sydney Airport and Aerotropolis to grow existing employment sectors, such as aerospace and defence, agriculture, and freight and logistics.
- » Increased flights and services into Western Sydney will make the region even more accessible and attractive to domestic and international visitors, with follow-on benefits to the greater Western Sydney area and the Illawarra Shoalhaven.

² <https://invest.nsw.gov.au/invest/locate/western-sydney/third-city>

Policy context

Illawarra Shoalhaven Regional Plan

The Illawarra Shoalhaven Regional Plan was released in 2015 and establishes the NSW Government's vision for a prosperous, sustainable and resilient Illawarra Shoalhaven region with priority growth areas of tourism; health, disability and aged care; ICT/knowledge services; education and training; aviation, defence and advanced manufacturing and freight and logistics.

Greater Sydney Region Plan: A Metropolis of Three Cities

The Greater Sydney Region Plan: A Metropolis of Three Cities envisions a Western Parkland City as one of the three cities of Greater Sydney, centred around the Western Sydney Aerotropolis located adjacent to the Western Sydney Airport.

It predicts that the Western Parkland City will transform over the next 20 years, drawing on the strengths of the new Western Sydney Airport and Aerotropolis, the first stage of the North South Rail Link from St Marys to Western Sydney Airport and Aerotropolis that will help support a Western Economic Corridor, and an Outer Sydney Orbital motorway linking to Newcastle, Wollongong and Canberra.

Future Transport 2056

Future Transport 2056 is an update of the 2012 Long Term Transport Master Plan. Together with a number of supporting plans, it sets the 40-year vision, directions and outcomes framework for the state's transport system, to guide transport investment over the longer term. It aligns transport planning with land use planning and acknowledges the important role transport plays in land use, tourism and economic development of towns and cities.

There are a number of initiatives in Future Transport 2056 that have cross-regional relevance to the Illawarra Shoalhaven and Western Sydney, including:

- » investigating completion of Maldon Dombarton rail line (10 – 20 years)
- » preservation of a corridor for the Western Sydney Freight Line for potential later infrastructure delivery
- » preservation of a corridor for the Outer Sydney Orbital between Western Sydney, the Illawarra, and the Central Coast for potential later infrastructure delivery
- » progress upgrades of Picton and Appin Roads (0-10 years).

Western Sydney City Deal

The Western Sydney City Deal is a partnership between the Australian and NSW Governments and local governments of the Blue Mountains, Camden, Campbelltown, Fairfield, Hawkesbury, Liverpool, Penrith and Wollondilly.

Partners have agreed to a set of commitments focused on education, business and employment, including initiating an Aerospace Institute, creating jobs via the Aerotropolis and an agribusiness precinct, and delivering the North South Rail Link.

360 Illawarra Shoalhaven Economic Outlook

In 2018, the Illawarra Shoalhaven Joint Organisation, NSW Government and University of Wollongong produced the 360 Illawarra Shoalhaven Economic Outlook, which canvasses the advantages of leveraging connections between the Illawarra Shoalhaven and its surrounds, including Western Sydney.

It considers the economic growth which could result from the Port Kembla Outer Harbour Development, Western Sydney Airport and Aerotropolis, Western Sydney road and rail infrastructure improvements, and improved connections to Metropolitan Sydney.

Illawarra Shoalhaven Smart Region Strategy

The 2018 Illawarra Shoalhaven Smart Regional Strategy is a collaboration between the Illawarra Shoalhaven Joint Organisation, RDA Illawarra and Far South Coast, peak business groups and industry, and the University of Wollongong. It sets out priorities to drive the region as a smart city hub across six pillars of economy, mobility, living, governance, environment and community.

Fast Rail Strategy

The NSW Government's Fast Rail Future for NSW outlines plans for a fast rail network to connect the state, help generate jobs and investment opportunities and stimulate regional growth and opportunity.

It reflects the government's 20-Year Economic Vision for Regional NSW and includes potential routes for further investigation, including from Sydney to Nowra via Wollongong.

A next step will be to prepare a Fast Rail Network Strategy in 2019 to provide a blueprint for how such a network could be delivered.

Shared priority areas

The Roadmap's priority areas for collaboration have been established through research and consultation with government and non-government stakeholders. They are:

1. Advanced manufacturing.
2. Education.
3. Freight and passenger transport.
4. Smart City technology.
5. Visitor economy.
6. Western Sydney Airport and Aerotropolis.

These six priority areas for collaboration between Western Sydney and Illawarra Shoalhaven have been selected on the basis that they present significant opportunities for mutual and ongoing social, economic and employment benefits and are likely to act as catalysts for future stimulation.

A high-level description of these priority areas and associated opportunities is provided in [Section 4: Priority Areas \(p12\)](#).

Specific actions for realising these opportunities are identified in the [Section 6: Action Areas \(p.26\)](#).



04 PRIORITY AREAS

The Roadmap identifies these six priority areas for collaboration between Western Sydney and Illawarra Shoalhaven.

Advanced manufacturing

The Western Sydney and Illawarra Shoalhaven regions are home to strong and rapidly-growing advanced manufacturing and defence industries, which are building on the strengths of traditional manufacturing industries.

Western Sydney

Western Sydney is an important source of growth and innovation in NSW. The region is home to a large number of small and medium-sized enterprises that produce highly innovative products, export globally and are keen to transform their business processes.

The Western Sydney Aerospace and Defence Industries Precinct and Agribusiness Precinct will be developed at the Aerotropolis, and there is potential to establish an advanced manufacturing hub in Western Sydney. The NSW Government has established the Western Sydney Investment Attraction Office to lead a whole-of-government approach to attract and secure national and foreign investment to the Western Parkland City region.

The Western Sydney Aerotropolis will also provide advanced food and beverage manufacturers with an opportunity to be part of the Agribusiness Precinct. This is expected to encourage collaboration between industry and ground-breaking research programs with the latest food and beverage processing technologies and systems.

Illawarra Shoalhaven

The Illawarra Shoalhaven economy is increasingly driven by advanced manufacturing and knowledge-intensive businesses. This is expected to continue due to increased Australian Government defence spending and the presence of two naval bases and other military support facilities in the Shoalhaven. The Shoalhaven Defence Industry Group is supporting the development of defence and related industries in the Shoalhaven, as well as supporting training opportunities in the sector.

The Albatross Aviation Technology Park, located next to HMAS Albatross, houses more than 10 defence and defence-related companies and is expected to continue to generate a significant number of jobs for the region. The defence sector presents a significant opportunity to support and leverage economic growth for the region.

Illawarra Shoalhaven is also home to a number of advanced manufacturers who successfully compete for domestic and international business. These companies are recognised industry leaders such as BlueScope, Bisalloy Steels, David Brown Santasalo, Komatsu, CSR and Ixom.

The University of Wollongong works closely with manufacturing companies to adopt cutting-edge technology and practice in areas such as robotics, automation and advanced materials. It is also actively increasing and improving programs that link researchers

with manufacturing businesses that can commercialise new products and technologies.

The University’s Southern Manufacturing Innovation Group brings together innovative manufacturers in the region with university researchers to exchange ideas and pursue collaborative opportunities.

The University was a founding member of the Defence Materials Technology Centre (DMTC)—a national collaborative research centre partnership of defence industry and research providers which is supported by the Department of Defence. Within the DMTC, the University

draws on its traditional strengths in materials engineering—and particularly steel research—to develop improved armour steels for a range of defence uses on land and at sea.

The Illawarra Shoalhaven’s significant manufacturing and industrial heritage provides the region with a notable head start in capitalising on the next generation of manufacturing centred around advanced manufacturing, the Internet of Things and Internet of Systems, and smart technologies. This provides the region with a significant advantage in the digitisation of manufacturing.

Table 1: Potential collaboration opportunities: advanced manufacturing

Opportunity	Description
Collaborate about opportunities and innovation	<p>Explore the potential for collaboration around advanced manufacturing opportunities arising from establishment of the Western Sydney Aerospace and Defence Industries and Agribusiness Precincts. For example, between the Shoalhaven Defence Industry Group and the Western City and Aerotropolis Authority.</p> <p>Explore the potential for the University of Wollongong to act as an anchor for economic agglomeration and collaboration for both regions.</p>
Develop shared skills and research	<p>Collaboration between Illawarra Shoalhaven and Western Sydney via the University of Wollongong’s Southern Manufacturing Innovation Group to link businesses, address skills gaps in the advanced manufacturing industry and promote advanced manufacturing as a career path.</p> <p>Collaboration between Illawarra Shoalhaven and Western Sydney with the University of Wollongong about advanced manufacturing research (e.g. Australian Institute for Innovative Materials).</p>
Showcase skills	<p>Showcase and promote both regions’ advanced manufacturing industry skills and capabilities at key industry events to grow exports, attract investment and create jobs.</p>
Activate under-utilised land	<p>Complete land use studies across both regions to help identify and activate under-utilised manufacturing and commercial land.</p>
Support global competition	<p>Consider regional opportunities to support start-ups and small and medium-sized enterprises to be globally competitive (e.g. through the University of Wollongong’s iAccelerate Centre and Innovation Campus).</p>

Education

Around the world, universities are becoming increasingly instrumental in helping to shape smart cities. More and more, they are actively working to solve the challenges posed by modern-day urbanisation by creating partnerships, leading research and innovation, and supporting leaders, communities and businesses to take a regional and even international view.

Education opportunities for this Roadmap centre predominantly on the University of Wollongong, which is situated within the Illawarra Shoalhaven but active across both regions.

Western Sydney

The University of Wollongong's new South Western Sydney Campus in Liverpool is that city's first major university campus and builds on existing relationships between the University of Wollongong and south-west Sydney, most particularly Liverpool Council. From 2020, the University will offer its highly regarded Bachelor of Nursing through a co-located Western Sydney Nursing Education and Research Centre.

Skills and education are key commitments of the Western Sydney City Deal. These commitments will be delivered via the Aerospace Institute in the Aerotropolis. The Institute will include a world-class science, technology, engineering and mathematics university, a secondary school and an advanced vocational education and training facility to upskill future workforces.

The University of Wollongong has joined with the University of Newcastle and University of NSW to establish the NUW Alliance, which is collaborating with industry and government on future-shaping initiatives, including the proposed multiversity at the Western Sydney Aerotropolis (in collaboration with Western Sydney University).

Illawarra Shoalhaven

The University of Wollongong is one of the world's top 20 modern universities and is well-known for its focus on innovation and smart city technology. It is a significant and strategically located asset for the Illawarra Shoalhaven, with a local catchment that extends into Sydney, Western Sydney, the ACT and South East NSW.

In recent years, the University has expanded its operations into south-west Sydney through a campus at Liverpool. Beyond that, it is adopting an increasingly 'big picture' approach to supporting and contributing to the economic regeneration and diversification of the Illawarra and broader NSW economy through national and internal partnerships and collaboration.

A key feature of the University is its Innovation Campus, an award-winning research, technology and commercial precinct set on a 33-hectare site in North Wollongong. It encompasses the iAccelerate Centre business incubator and accelerator, which in turn provides a dedicated research, development and business precinct where corporations can co-locate with research institutes and international partners.

Another University of Wollongong initiative, the 'Blue Economy' global challenges program, explores how to maximise the social and economic benefits that can flow to businesses and communities from marine industries on the South Coast of NSW, with a view to protecting important ecosystems and minimising environmental impacts.

The University's significant presence in the knowledge and innovation space are also explored in greater detail in 'Smart Cities' priority below.

Table 2: Potential collaboration opportunities: education

Opportunity	Description
Leverage plans for a multiversity	<p>Leverage plans for the University of Wollongong, University of Newcastle, University of NSW and Western Sydney University to join forces to deliver a world-class higher education and research presence in the Western Sydney Aerotropolis.</p> <p>The four universities will create one campus with strong links to local industry, tailored vocational education and training, and STEM-focused schooling. There is significant potential for collaborations and partnerships between the Illawarra Shoalhaven's significant defence capabilities and future plans for the Aerospace Institute.</p> <p>Establishment of this 'multiversity' presents significant opportunities for cross-regional collaboration.</p>
Develop skills for local jobs	<p>Investigate opportunities to provide training, and/or apprenticeships in both regions to meet future demand in the defence, advanced manufacturing, information technology and tourism sectors (e.g. link with TAFE Skills Exchange to support training delivery and career pathways and VET facility with a focus on construction, aviation and aeronautical engineering in the Aerotropolis).</p> <p>Collaborate with Southern Manufacturing Innovation Group and Shoalhaven Defence Industry Group to identify and address skills gaps in defence and advanced manufacturing and promote both sectors as attractive career paths.</p>

Freight and passenger transport

Improving transport infrastructure and connections between Illawarra Shoalhaven and Western Sydney will be crucial to fully realising opportunities to collaborate between both regions. This priority is identified in many planning and policy documents and was raised consistently in consultations to support the development of the Roadmap.

A number of committed and planned road, bus and rail projects have been proposed to improve transport connections between the regions with a view to reducing congestion, opening up new markets between the regions, and improving access to jobs, education and services.

Western Sydney

With the advent of the Western Sydney City Deal, the Western Parkland City is set to be one of Australia's most connected cities. In an emerging 30-minute city, innovative public transport, aviation and digital infrastructure will help bring people closer to jobs, centres, education and internal opportunities.

As part of the City Deal, the Australian and NSW Governments have committed to delivering the first stage of the North South Rail Link from St. Marys to the proposed Aerotropolis via Western Sydney Airport. Investigations are commencing on the design and business case as part of an integrated planning and city-shaping approach. These investigations will identify and reserve a corridor south to Macarthur, east to Leppington and north to Schofields for delivery in the longer term.

This, along with investigations into the Outer Sydney Orbital, Hume Motorway to the Illawarra connections; Fast Rail, Sydney to Nowra via Wollongong; and the Maldon to Dombarton freight rail line have the potential to provide improved road and rail connectivity between Western Sydney and the Illawarra for both passengers and freight.

Illawarra Shoalhaven

The Port of Port Kembla is a significant strategic advantage for the Illawarra Shoalhaven. It is NSW's port of growth, a key infrastructure asset for the state and an economic driver for the region—and potentially for south-west Sydney. It has been identified by the NSW Government as the location for a future container terminal to augment capacity of Port Botany when required.

It is a key international trade gateway, supporting NSW's motor vehicle, mining, agricultural, manufacturing and construction industries. Most cars purchased in NSW are imported through Port Kembla, as are bulk products and general cargo for the construction and manufacturing industries.

The NSW Government supports the use of rail for the movement of freight. While there is sufficient rail capacity in the short to medium term, freight rail access to Port Kembla is recognised by Infrastructure Australia as a national priority initiative.

Possible investment programs and opportunities include using Port Kembla to serve the freight needs of Western Sydney, particularly given the freight infrastructure being built and planned for the Western Sydney Airport and intermodal terminals.



There is also potential for Port Kembla to grow its role in the bulk construction material space to supply other markets with increased volumes of cement, gypsum, sand and bitumen. The Port Kembla Outer Harbour development could also be used to provide additional land for a container port for future trade, manufacturing and heavy industry jobs growth for the region.

Finally, there are also NSW Government plans for a number of significant regional road and motorway upgrades, via the Princes Highway upgrade program. These include:

- » Albion Park Rail bypass—an extension of the M1 Princes Motorway between Yallah and Oak Flats to bypass Albion Park Rail. The bypass will complete a high standard road between Sydney and Bomaderry (once the Berry to Bomaderry upgrade is complete).
- » Berry to Bomaderry upgrade—an upgrade to the Princes Highway between Berry and Bomaderry will improve safety, road capacity and traffic flow, and reliability.
- » Nowra Bridge project—new four-lane bridge over the Shoalhaven River, upgraded intersections and additional lanes on the Princes Highway to improve traffic flow and ease congestion.

Table 3: Potential collaboration opportunities: freight and passenger transport

Opportunity	Description
Advocate for better regional freight and passenger transport	<p>Opportunity to collectively advocate for better freight and passenger connectivity between the two regions to support economic and population growth, e.g. Fast Rail, Maldon-Dombarton Freight Rail Line, road connection improvements at Picton Road, Appin Road, M1 at Mount Ousley and Heathcote Road, and investigation of the Outer Sydney Orbital, and improvements to F6/M1.</p> <p>Potential for a cross-regional Transport Forum for all Western Sydney and Illawarra Shoalhaven stakeholders to share information about progress and research into freight and passenger transport and potential for a cross-regional advocacy group.</p>
Improve freight rail connections and productivity	<p>Opportunity to work with NSW Government, network owners and freight rail operators to trial higher productivity trains for bulk freight movements to and from Port Kembla and south west Sydney.</p>

Smart City technology

There are significant opportunities for greater collaboration between the regions regarding technology and innovation, particularly noting investments from the Western Sydney City Deal and research being conducted at the University of Wollongong. Key regional characteristics and opportunities in the education sector are outlined below.

Illawarra Shoalhaven

The Illawarra Shoalhaven Joint Organisation's 2018 Smart Region Strategy notes that the region's economy is transitioning away from its historical dependency on traditional manufacturing and mining to a focus on knowledge-intensive industries. It seeks to position Wollongong in particular as an internationally significant regional smart city that is reinventing itself from a city traditionally known for steel and coal to a globally connected trade hub, smart region and leading university city.

The University of Wollongong's SMART Infrastructure Facility brings together experts from fields such as economics, modelling, data analytics and systems engineering to focus on how infrastructure and social behaviour intersect for more liveable cities and regions.

Recognising the need for more integrated approaches to local and regional planning, the SMART Infrastructure Facility has developed 'Vision Illawarra', a web-based regional dashboard created to enable evidence-based planning and integrated development across the Illawarra.

It is investigating how 'smart city' data can help authorities and town planners better understand how resources are used in cities, as well as how traffic and commuters move around the area. It has developed a web-based regional dashboard that provides publicly-available data (e.g. economic, demographic, transport and land use figures) as well as the evolution of utility usage over the last ten years (e.g. water, electricity, wastewater and solid waste).

The Smart Cities, Smart Liverpool, Smart Pedestrian project designed for Sydney's south west, could be a useful cross-regional collaboration that also help the Illawarra Shoalhaven plan for population growth and mobility and tourism.

The involvement of the University of Wollongong in the Roadmap will be a crucial link in fostering collaboration between the regions around the Smart City Program. Such collaboration could provide shared benefits through technological innovation. The Illawarra Shoalhaven, and Wollongong in particular, is well positioned to implement smart city solutions due to its geographic size, strong stakeholder collaboration, fast-growing footprint in the knowledge services sector, and collaborations with the University of Wollongong.

Western Sydney

As part of the Western Sydney City Deal, local government partners will lead the development of a Western City Digital Action Plan in collaboration with the Australian and NSW Governments and industry partners. The NSW Government will also deliver a Smart City Western City Program to enable NSW agencies to embed interoperable smart and secure technology—such as transport and utility monitoring systems—into new infrastructure as it rolls out.

Significant investments in Smart City technology are being made through the Western Sydney City Deal, including a 5G Strategy for the Western Parkland City that will involve partnering with a telecommunications carrier to deliver a trial of 5G technology.

Just as the Illawarra Shoalhaven is establishing itself as a world-leading smart region anchored by the University of Wollongong and with Wollongong as a ‘Smart City’ hub, so too the Aerotropolis will attract infrastructure, investment and knowledge-intensive jobs and provide an anchor for Western Sydney. Common to both precincts are the University of Wollongong and the NUW Alliance.

There is significant potential for the Illawarra Shoalhaven and University of Wollongong to contribute to and potentially partner in these digital and smart technologies to the benefit of both regions.

Table 4: Potential collaboration opportunities: smart city technology

Opportunity	Description
<p>Collaborate through digital and smart technology initiatives</p>	<p>The Western City Digital Action Plan, Smart Western City Program and 5G Strategy will all focus on boosting digital and smart city technology in Western Sydney.</p> <p>Potential for Western Sydney to benefit from Illawarra Shoalhaven’s Smart City Strategy and for both regions to share an innovation and collaboration network.</p> <p>Explore how the Illawarra Shoalhaven can work with the University of Wollongong’s SMART Infrastructure Facility to capitalise on investments through the Western Parkland City’s 5G strategy, noting that smart city programs will rely heavily on 5G-based infrastructure (e.g. autonomous cars, new modes of public transport, smart buildings).</p>
<p>Develop a cross-regional smart city strategy</p>	<p>Investigate feasibility of developing a cross-regional Smart City Strategy with tangible outcomes and a clear vision (e.g. upgrading of ICT infrastructure, improving understanding of transport patterns between regions to inform infrastructure upgrades).</p> <p>This strategy could draw on investigations by the University of Wollongong into how ‘smart city’ data can help local authorities and town planners to better understand how resources are used in cities as well as how traffic and commuters move around the area.</p> <p>This strategy could also draw from the Smart Western City Program, which will enable the NSW Government to embed interoperable smart and secure technology—such as transport and utility monitoring systems—into new infrastructure as it is rolled out.</p>

Visitor economy

The visitor economy is an important economic contributor to both regions, particularly the Illawarra Shoalhaven.

Tourism Research Australia reports that nearly half of the nation's tourism expenditure (46% or \$107 billion) occurs in regional Australia. In addition, regional tourism directly employs over half a million people in tourism related industries, which is more than mining and more than forestry, agriculture and fishing combined.

During consultation for the Roadmap, the visitor economy emerged as one of the key areas for future collaboration between the two regions given their geographic proximity and natural assets. There are significant opportunities to share or leverage infrastructure and activities that support tourism, such as visitor information centres, festivals, promotion, marketing and tourism development.

Regional characteristics and opportunities in the visitor economy are outlined below.

Western Sydney

In the year ending June 2018, there were almost 10 million visitors to Western Sydney¹, more than a quarter of all visitors to Sydney. Most of the visitors were domestic daytrip visitors (72%) followed by domestic overnight visitors (22%). Visiting friends and relatives was the main reason for the visit (47%) followed by business (25%).

While international visitors accounted for just 5% of visitors, they contributed 46% of expenditure. Going to the beach and visiting national parks are the two major drawcards for international visitors. With the advent of the Western Sydney Airport, there is significant scope to build on the number of international visitors to both Western Sydney and Illawarra Shoalhaven and to increase their contribution to the visitor economy of both regions.

The Western Sydney City Deal's \$150 million Western Parkland City Liveability Program will inject significant capital into areas of south west Western Sydney. The Program will be used to fund regionally-focused leisure and visitor

attractions, such as the Billabong Parkland Precinct in Campbelltown. These initiatives will further grow regional visitor attractions in the Western Sydney collaboration area and increase visitation to these areas and beyond.

This investment also provides an opportunity to collaborate and plan for cross-regional events that attract and encourage domestic visitors in both regions. These events could be centred around nature-based, Aboriginal or agribusiness attractions and experiences in both regions.

Western Sydney has a number of natural assets, including the Australian Botanic Garden at Mount Annan in Campbelltown, which have capacity to be linked with tourism experiences in the Illawarra Shoalhaven and promoted to local residents and domestic and international visitors.

Illawarra Shoalhaven

Regional assets such as the Illawarra Escarpment, the Shellharbour Marina at The Waterfront Shell Cove, Wollongong Entertainment Centre, and South Coast beaches are driving growth opportunities in this region's tourism industry through trails and experiences, marine tourism and events-based visitation.

¹ Note that this figure refers to Western Sydney as a whole and not just the collaboration area

The visitor economy is an increasingly important sector for the Illawarra Shoalhaven, particularly the Shoalhaven local government area (LGA). The Shoalhaven is the most visited LGA outside the Sydney CBD.

Destination Sydney Surrounds South (DSSS) notes that there were 11.3 million visitors to the DSSS region in 2016-17, an increase of 8% per year since 2012-13. The total value of the visitor economy in 2016-17 was \$2.28 billion. Domestic short-break visitors are a growing market, up by 25% since 2012 and with 67% of domestic overnight visitors coming from Sydney.

While international visitors generally stay longer than domestic visitors, they currently only account for around 2% of the total visitor market to the South Coast and stay across commercial properties and/or with friends and relatives.

A key to unlocking the value and benefits of a successful visitor economy will be for Illawarra Shoalhaven and Western Sydney to act cohesively and with a common purpose to develop a shared approach to physical and digital infrastructure, destination marketing and product and experience development.

Table 5: Potential collaboration opportunities: visitor economy

Opportunity	Description
Develop two-way tourism and shared resources and infrastructure	<p>Proximity of the Illawarra Shoalhaven’s beaches and national parks to Western Sydney make it ideal for short- and long-stay visitors from Western Sydney and there are significant opportunities to promote and grow this sector across both regions.</p> <p>Opportunity to research, package and promote tourist attractions of both regions together and work together via cross-regional working groups to develop products and infrastructure that benefit the visitor economy of both regions.</p> <p>Both regions can benefit from growing domestic short-stay visitors and markets from Western Sydney to Illawarra Shoalhaven and vice versa.</p> <p>Potential for the Illawarra Shoalhaven Joint Organisation and Destination Sydney Surrounds South to collaborate with south-west Sydney councils who are producing or about to implement tourism strategies and product development.</p>
Increase international and domestic visitation	<p>The opening of Western Sydney Airport in 2026 provides a unique opportunity to promote and grow domestic and international visitation to the Illawarra Shoalhaven and Western Sydney.</p> <p>Growth in the visitor economy will have flow-on benefits to the economies of both regions (e.g. for accommodation providers and transit services).</p>
Capitalise on marine tourism infrastructure	<p>The opening of the Shellharbour Marina and the Waterfront, Shell Cove Precinct in 2020 presents a significant tourism opportunity for both regions.</p> <p>The 270-berth marina will help establish the South Coast as a premier boating destination and provide a platform to develop new marine-based tourism products and experiences for visitors to and from Western Sydney and the Illawarra Shoalhaven.</p> <p>Since 2016, Port Kembla has hosted a number of cruise ship visits, which represents a new potential market for the visitor economy of both regions.</p>

Western Sydney Airport and Aerotropolis

The Western Sydney Airport and Aerotropolis provides a number of economic growth and development opportunities for both the Western Sydney and Illawarra Shoalhaven regions.

Specific advantages around education, advanced manufacturing, tourism and smart cities are also explored in more detail in respective priority area sections.

Western Sydney

The Western Sydney Airport and Aerotropolis is set to contribute around 200,000 jobs in the Western Sydney region by establishing a new high-skill jobs hub across defence and aerospace, agribusiness, freight and logistics, advanced manufacturing, healthcare, education and research, and tourism.

Strategic planning for the greenfield land around the airport will unlock opportunities to deliver new jobs and homes, supported by key infrastructure in the heart of Western Sydney. The Western City and Aerotropolis Authority has been established to plan and develop the Aerotropolis. The Western Sydney Investment Attraction Office has been established to attract international companies to the region.

The Western Sydney Airport and Aerotropolis will provide significant regional stimulus and benefits in terms of broad population growth and employment opportunities as well as specific opportunities for business connections and collaborations with the Illawarra Shoalhaven. There are also plans for a high employment agribusiness precinct to leverage the airport and provide new domestic and export opportunities for NSW farmers and agribusinesses.

Illawarra Shoalhaven

Construction and operation of the Western Sydney Airport and Aerotropolis has the potential to generate opportunities for Illawarra Shoalhaven businesses and workers in the freight and logistics, tourism and construction sectors as movement in and between both regions improves.

There is potential for the proposed agribusiness precinct and agriport west of the Aerotropolis to create domestic and international export opportunities for Illawarra Shoalhaven agricultural and aquaculture products.

An increase in the number of flights and related services into Western Sydney Airport will present opportunities for the visitor economies of both regions, with a likely increase in numbers of domestic and international visitors seeking access to visitor experiences across both regions.

Shellharbour Airport is a significant asset and potential link to the Western Sydney Airport and Aerotropolis. It currently has two runways which support a mix of charter, corporate, emergency services and general aviation users.

Table 6: Potential collaboration opportunities: Airport and Aerotropolis

Opportunity	Description
Collaborate with the defence sector	<p>Investigate potential opportunities between the defence technology sector associated with the Albatross Aviation Technology Park, HMAS Albatross and HMAS Creswell Naval Bases in the Shoalhaven local government area and plans for an advanced defence and aerospace precinct in the Aerotropolis.</p> <p>Promote the Illawarra Shoalhaven's defence cluster and plan for a showcase event to enable Western Sydney decision makers to better understand the existing capacity and opportunities in this advanced sector.</p>
Freight and logistics opportunities	<p>Investigate potential to promote domestic and export opportunities for Illawarra Shoalhaven agricultural and aquaculture products during planning for an agribusiness precinct and agriport west of the Aerotropolis.</p>
Enhance infrastructure	<p>Potential for the Western Sydney Airport and Aerotropolis to provide long-term economic and employment opportunities and accelerate development of critical infrastructure and urban development, will provide additional opportunities for Illawarra Shoalhaven to connect with Western Sydney.</p>
Support the visitor economy	<p>Increasing the number of flights and related services into Western Sydney Airport presents opportunities for the visitor economy of both regions, with a likely increase in domestic and international visitors.</p> <p>Opportunities to link with Shellharbour Airport for faster transport options between the two regions.</p>

05 GOVERNANCE AND IMPLEMENTATION

To ensure regional opportunities are realised, it will be important to maintain strategic oversight of the priorities and actions outlined in this Roadmap and to work positively together to build strong relationships.

Governance and review

A formal governance structure for the delivery of the Roadmap to Collaboration will be determined by the Project Steering Committee in consultation with key stakeholders. There is potential for the Roadmap to be delivered through a number of different mechanisms, including:

Illawarra Shoalhaven Joint Organisation

The Illawarra Shoalhaven Joint Organisation functions are regional strategic planning, inter-governmental collaboration, and regional leadership and advocacy. It already has membership from the four Illawarra Shoalhaven local councils and could accommodate associate membership for the four Western Sydney councils.

Cross-regional working groups

In addition to associate membership by the Western Sydney councils, the Illawarra Shoalhaven Joint Organisation could facilitate cross-regional working groups based on priority areas identified for early delivery.

Western Sydney Regional Organisation of Councils

There is capacity for the Western Sydney Regional Organisation of Councils to take a strategic leadership role on behalf of the Western Sydney region councils via a Memorandum of Understanding (or similar) with the Illawarra Shoalhaven Joint Organisation that confirms priority areas and actions and outlines roles and responsibilities of all signatories.

The Roadmap to Collaboration will be regularly reviewed to ensure it remains relevant and practical to deliver.

Implementation

While the priorities and action areas are the foundation of this Roadmap, it is the sense of common purpose and mutual goals that will lead to positive outcomes. Leadership, collaboration and trust between Roadmap partners will build on strong governance and shared guiding principles to enhance collaboration between the two regions.

The Roadmap has been developed with input from government, non-government, educational and cooperative bodies. Successful implementation will rely on the continued input and support of all levels of government and stakeholders.

As part of delivering the Roadmap, partner agencies and stakeholders developed the following principles to guide delivery of the priorities and actions areas outlined in Section 6:

Table 7: Roadmap to Collaboration principles

Principle	Description
Respectful	We commit to working together in a way that acknowledges the equal standing of both regions while recognising the unique capabilities and opportunities of each.
Collaborative	We will be open and share knowledge, insights and successes about the priorities and actions we have created to support this Roadmap.
Connected	We will strive to promote and enhance cross-regional digital and physical networks and connections.
Cooperative	We will create strong networks, processes and systems to strengthen partnerships and help generate mutually-beneficial outcomes for both regions.

06 ACTION AREAS

This section provides an overview of the priorities and action areas identified as important for both regions during consultation for the Roadmap.

Indicative delivery dates refer to immediate (within the first year), short (1-2 years), medium (3-4 years) and long-term (5+ years) delivery of actions.

Table 8: Priority action areas

Priority	Action area	Indicative date
1. ADVANCED MANUFACTURING		
1.1	Investigate opportunity to expand the scope of the Southern Manufacturing Innovation Group to Western Sydney.	Short
1.2	Identify employment, apprenticeship and training opportunities across aviation, aerospace, defence industries and advanced manufacturing sectors to meet projected future employment demand (e.g. collaboration with schools, VET facilities, Shoalhaven Defence Industry Group and University of Wollongong).	Medium
1.3	Consolidate industrial land-use mapping across the Illawarra Shoalhaven and Western Sydney to plan and accommodate for growth in each area.	Long
2. EDUCATION		
2.1	In association with the University of Wollongong and the VET sector in Illawarra and Western Sydney, investigate regional education and training opportunities and challenges to identify sectors with skills shortages or growth potential.	Medium
2.2	Collaborate with the University of Wollongong and Southern Manufacturing Innovation Group to identify and find solutions to skills gaps in defence and advanced manufacturing sectors in both regions.	Medium

Priority	Action area	Indicative date
3. FREIGHT AND PASSENGER TRANSPORT		
3.1	Illawarra Shoalhaven Joint Organisation to hold a cross-regional Transport Forum with Western Sydney and Illawarra Shoalhaven stakeholders.	Immediate
3.2	Advocate for improved road and rail connections between the two regions, e.g. Fast Rail, Maldon-Dombarton Freight Rail Line, road connection improvements at Picton Road, Appin Road, M1 at Mount Ousley and Heathcote Road, and initiatives such as the Outer Sydney Orbital and F6/M1.	Ongoing
3.3	Continue to support and advocate for the growth of the Port of Port Kembla as an international trade gateway, including through supporting the diversification and growth of Port uses (e.g. LNG, construction material imports, containers) and protecting the Port and its wider connections to Western Sydney from urban encroachment and other incompatible uses.	Ongoing
4. SMART CITIES		
4.1	Illawarra Shoalhaven Joint Organisation to undertake a review of the Illawarra Shoalhaven Smart Region Strategy to support smart city collaboration with Western Sydney.	Short
4.2	Investigate potential for NSW Government or Federal Government funding for a Smart City partnership between Western Sydney and Illawarra Shoalhaven.	Long
5. VISITOR ECONOMY		
5.1	Establish a cross-regional visitor economy working group to drive regional tourism initiatives and collaborative digital destination marketing.	Short
5.2	Conduct an audit of existing visitor economy infrastructure, products and experiences across the Illawarra Shoalhaven and Western Sydney.	Short
5.3	Identify product development opportunities based on 'clustered' tourism experiences (e.g. nature-based tourism, food and beverage experiences).	Medium

Priority	Action area	Indicative date
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6. WESTERN SYDNEY AIRPORT AND AEROTROPOLIS

6.1	Illawarra Shoalhaven Joint Organisation to engage with the Shoalhaven Defence Industry Group and arrange a showcase event in 2020 to promote potential opportunities for collaboration to Western Sydney decision makers.	Short
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6.2	Explore opportunities with University of Wollongong for leveraging the defence technology sector in Shoalhaven (Albatross Technology Park, HMAS Albatross and HMAS Creswell Naval Bases) and plans for an advanced defence and aerospace precinct in the Aerotropolis and Aerospace Institute.	Medium
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6.3	Investigate potential to establish an advanced manufacturing hub in Illawarra Shoalhaven to support the Western Sydney Aerospace and Defence Industries Precinct, Agribusiness Precinct, and infrastructure planned for Western Sydney.	Long
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7. GOVERNANCE AND IMPLEMENTATION

7.1	Agree and institute a governance structure to support implementation of the Roadmap to Collaboration, focused on 2-3 early action areas (e.g. smart cities, advanced manufacturing and tourism).	Immediate
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7.2	Identify regional champions to promote the Roadmap to Collaboration and action areas.	Immediate
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7.3	Continue to build awareness of the purpose and benefits of the Roadmap to Collaboration via regional networks through events, e.g. those hosted by Illawarra Shoalhaven Joint Organisation, Western Sydney Regional Organisation of Councils, Western Sydney City Deal Delivery Office or University of Wollongong.	Immediate
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7.4	Investigate potential connections between the Western Sydney City Deal and collaborative initiatives being delivered through RDA Illawarra and the Illawarra Shoalhaven Joint Organisation.	Short
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The Western Sydney and Illawarra Shoalhaven Roadmap to Collaboration has been prepared in consultation with the following organisations



