

Liverpool: the gateway to Sydney's Aerotropolis





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A second airport for Sydney

Western Sydney Airport (WSA) will be one of Australia's most significant pieces of infrastructure. More than just meeting Sydney's growing passenger demand, WSA will improve accessibility of aviation services to Sydney's population, and the connectivity of Australian industry to global markets.

WSA is positioned to become far more than an 'overflow' airport that only services the low-cost leisure market. Its 24-hour operations will:

- ensure that WSA quickly becomes a nationally significant airfreight hub; and,
- attract full-service airlines looking to capitalise on the need of business travellers for more convenient overnight connections to Asia and beyond.

Over time, the airport will become one of Australia's most significant airports, driven by Western Sydney's growing population and economy (now the third largest in Australia), Sydney's overall position as Australia's most populous city and largest international trade hub, and an increasingly capacity-constrained Kingsford Smith Airport (KSA).

It is expected that slots at KSA will be fully allocated by around 2030.¹ The WSA site on the other hand will have the flexibility for further expansion in response to passenger demand over time. Within 50 years it is expected to accommodate 82 million passenger movements per year – double the number that KSA does today and more than Heathrow Airport in London.

WSA is expected to provide significant economic benefits, with 11,000 direct jobs generated by its construction, 28,000 direct and indirect jobs created by the early 2030s and nearly 120,000 in the long term.²

It will also be the cornerstone for further investment in transport infrastructure, to enable accessibility to the airport from within the region and from the rest of Sydney. The confluence of additional transport infrastructure and business investment will in turn open up further commercial and residential development opportunities in the areas around WSA.

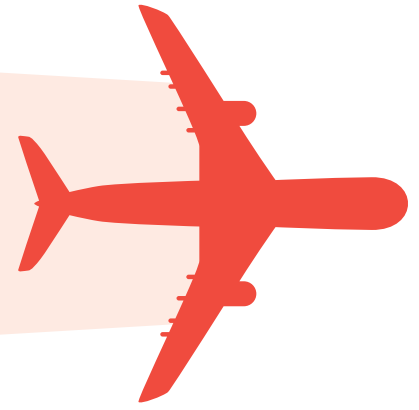
With the right combinations of investment and planning outcomes there is the potential for an 'aerotropolis' to form: a metropolitan subregion whose infrastructure, land use and economy are centred on an airport.

This paper is extracted from a PwC report commissioned by Liverpool City Council – to view the report in full, visit www.pwc.com.au/cities/sydneysaerotropolis

¹ The Commonwealth and NSW Governments 2012, *Joint Study on aviation capacity in the Sydney region*

² Commonwealth of Australia 2017, *Jobs for Western Sydney: Building Western Sydney Airport*, p.2

The Badgerys Creek aerotropolis



There are great hopes for what the new airport will achieve for Western Sydney; it is often referred to as a ‘once-in-a-generation opportunity’ to transform the region.

Many airports around the world exist on the periphery of cities, reflecting traditional approaches to airport planning and development. And while these traditional airports stimulate economic productivity at a state and national level, there is no guarantee of more localised benefit.

Distance from existing economic centres can mean airports operate in isolation without fostering a great deal of additional activity around them. Opportunities are therefore limited for local residents who may already be in a disadvantaged position with a clustering of low-cost housing in areas exposed to high levels of noise.

This is a second-best outcome that we should all plan to avoid. The aim is to maximise the economic benefits in Western Sydney, and the local areas around the airport in particular, by fostering an ‘aerotropolis’.

The aerotropolis concept, or ‘airport city’, is defined by John Kasarda as: ‘an urban form whereby cities are built around airports, speedily connecting time-sensitive suppliers, manufacturers, distributors and business people to distant customers, clients and marketplaces’.³

Kasarda also defines the aerotropolis more generally as ‘a metropolitan subregion whose infrastructure, land use and economy are centred on an airport’.⁴

The aerotropolis concept hinges on the notion that mutually reinforcing benefits can be generated by a successful airport and the development of the areas surrounding it. To be viable, airports must be close to a strong regional economy whose population will use the airport. Equally, the airport also provides new opportunities to grow that economy through airport-related employment, support industries and opening doors to other sectors that benefit from enhanced connectivity to other domestic and international markets.

A number of international airports have realised the compounding benefits of creating developments to house aviation-enabled businesses such as logistics and distribution, manufacturing, hotels, and conference venues in one discrete area. Incheon Airport in Seoul and Dallas Fortworth International Airport in Texas have become major economic hubs through the successful implementation of this strategy, demonstrating the mutually reinforcing benefits generated by an airport and the development of its surrounding areas.

There is a common ambition across all levels of government for the new airport to drive the development of an aerotropolis. For example, the NSW Premier, Gladys Berejiklian, has stated that:



“We want Western Sydney Airport to be about much more than just building an airport – we want it to be a fully integrated economic precinct that will deliver jobs and opportunities for the people of Western Sydney and across NSW.”

³ John Kasarda 2017, Aerotropolis, available at <http://www.aerotropolis.com/>

⁴ John Kasarda 2015, *A Western Sydney Aerotropolis: Maximising the benefits of Badgerys Creek*, p.9

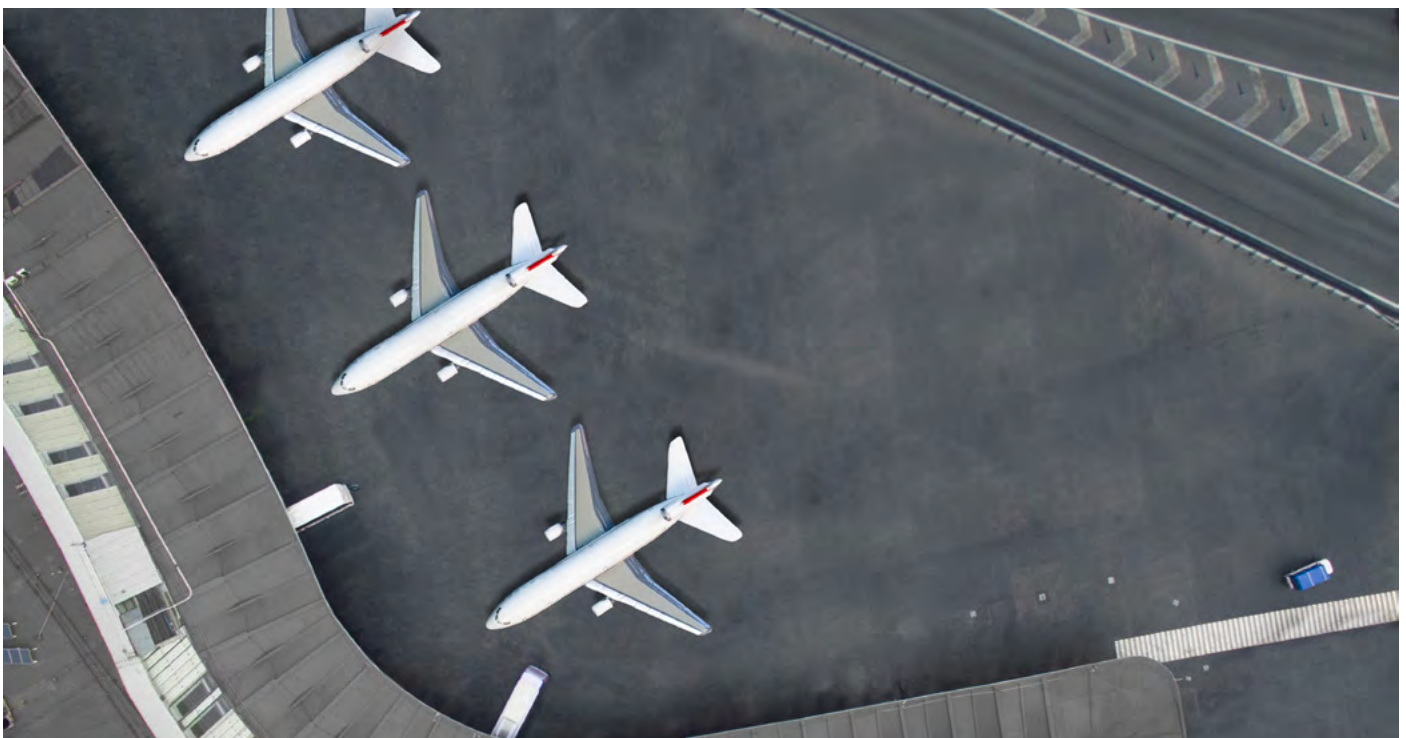
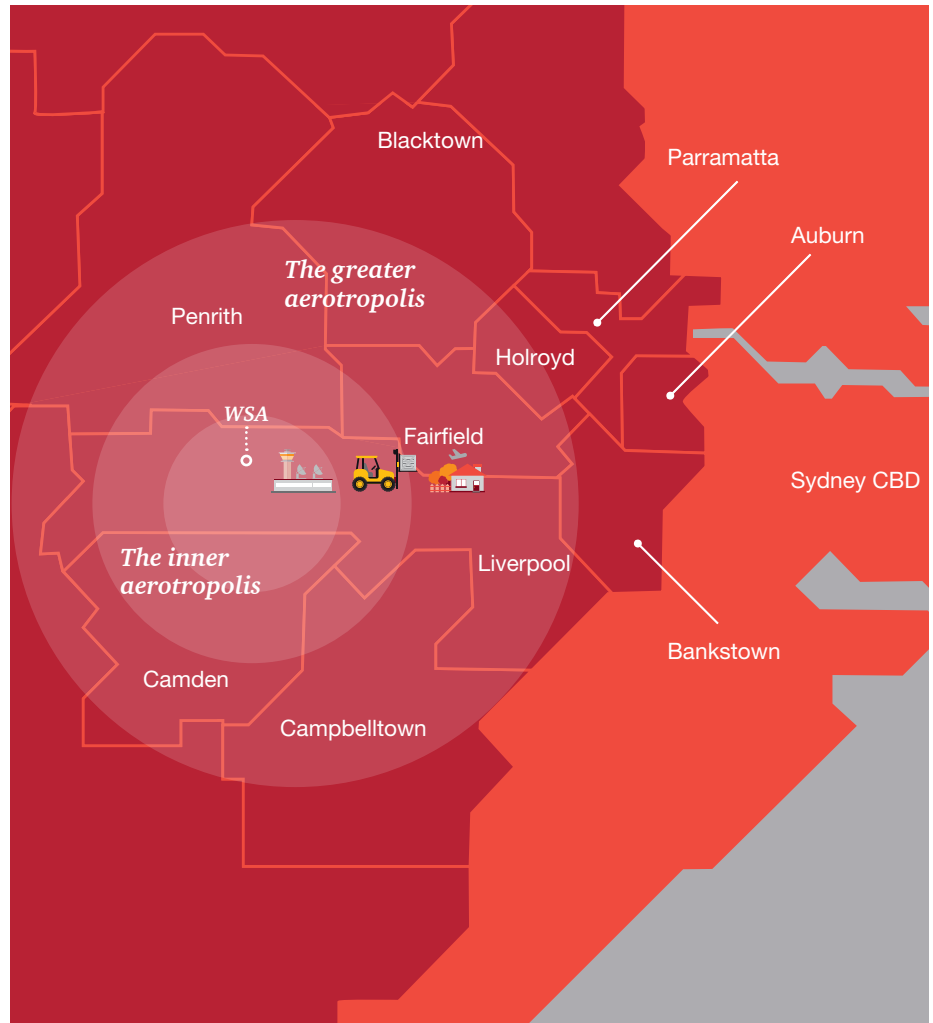
Similarly, the Greater Sydney Commission envisages a third Western city, with the airport being at the centre of its development.

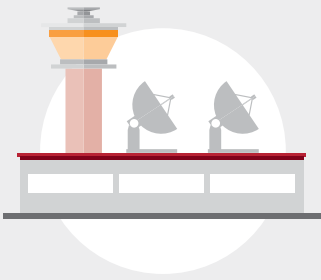
To help unlock the economic potential of the airport, the State Government is building significant transport infrastructure and is aiming to facilitate additional investment in industrial and residential development in the areas surrounding WSA. The forthcoming City Deal and designation of the Western and South West Priority Growth Areas lay the planning policy framework to coordinate and optimise this investment.

A vision for the aerotropolis

We envision the aerotropolis encompassing the geographic radius generally north, east and south of the airport (figure 1). This area is made up of different components, beginning with WSA itself, expanding out to the 'inner aerotropolis', and further out to the 'greater aerotropolis'.

Figure 1: The Western Sydney Airport aerotropolis





Western Sydney Airport

- WSA's **24-hour operations** will attract a range of domestic and international passenger airlines and dedicated airfreight carriers.
- WSA has the opportunity to embrace **modern sustainability solutions and other technological innovations** to create an airport that is appropriate for Western Sydney's future as a smart city.



The inner aerotropolis (0 - 10kms)

- The enhanced connectivity and efficiency offered by a 24-hour airport also opens up the opportunity to **attract time-sensitive, aviation-enabled sectors** to locate near the airport. The first 5kms around the airport need to be reserved for industrial or environmental use, acting as a **physical buffer** between the airport and residential areas and helping to protect its curfew-free operations.
- **Employment opportunities** arising from the airport and the businesses establishing around it should attract new residents who want to live near work. Growing population density (at least 5kms away from the airport) will in turn open up other opportunities for businesses that need to locate where people live.



The greater aerotropolis (10 - 25kms)

- The surrounding 'edge cities' of Liverpool, Penrith, Fairfield, Campbelltown and Camden have key roles to play in helping to support the growth of the aerotropolis as they offer **centres of economic activity** not in existence around the airport site.
- Through enhanced **urban planning** of the edge cities, smart, vibrant, liveable communities can be created that attract a new generation of businesses and workers to live, work and play in the aerotropolis.
- WSA is expected to provide a significant boost to Western Sydney's **visitor economy**. New attractions and a focus on developing Western Sydney's supply and quality of accommodation will help to ensure that flows of passengers through WSA translate into greater overnight stays.

Liverpool's role as the leading edge city

The land in and around Badgerys Creek is primarily of rural-residential use. While industrial development is expected to form around the airport early on, it is likely that for some time this won't be supported by other commercial activity characteristic of a fully-fledged aerotropolis, such as professional and administrative services, retail and accommodation. This provides a vacuum that the edge cities in the greater aerotropolis can and should fill – none more so than Liverpool.

The importance of Liverpool is evident in the following features of the city — it:

- offers the largest commercial hub of the edge cities proximal to WSA. It has a defined central business district (CBD), with great potential to add to its existing stock of commercial and office spaces.
- is well-situated roughly midway between WSA and the Sydney CBD, offering an obvious hub from which businesses and people can access the city and the airport.

- is also situated at roughly the midpoint between WSA and the existing KSA, potentially offering a convenient base from which companies can maintain freight operations across the two airports.
- already has a diverse mix of strong industries including manufacturing, health, education and public administration, and a young, well-educated, ethnically diverse population.

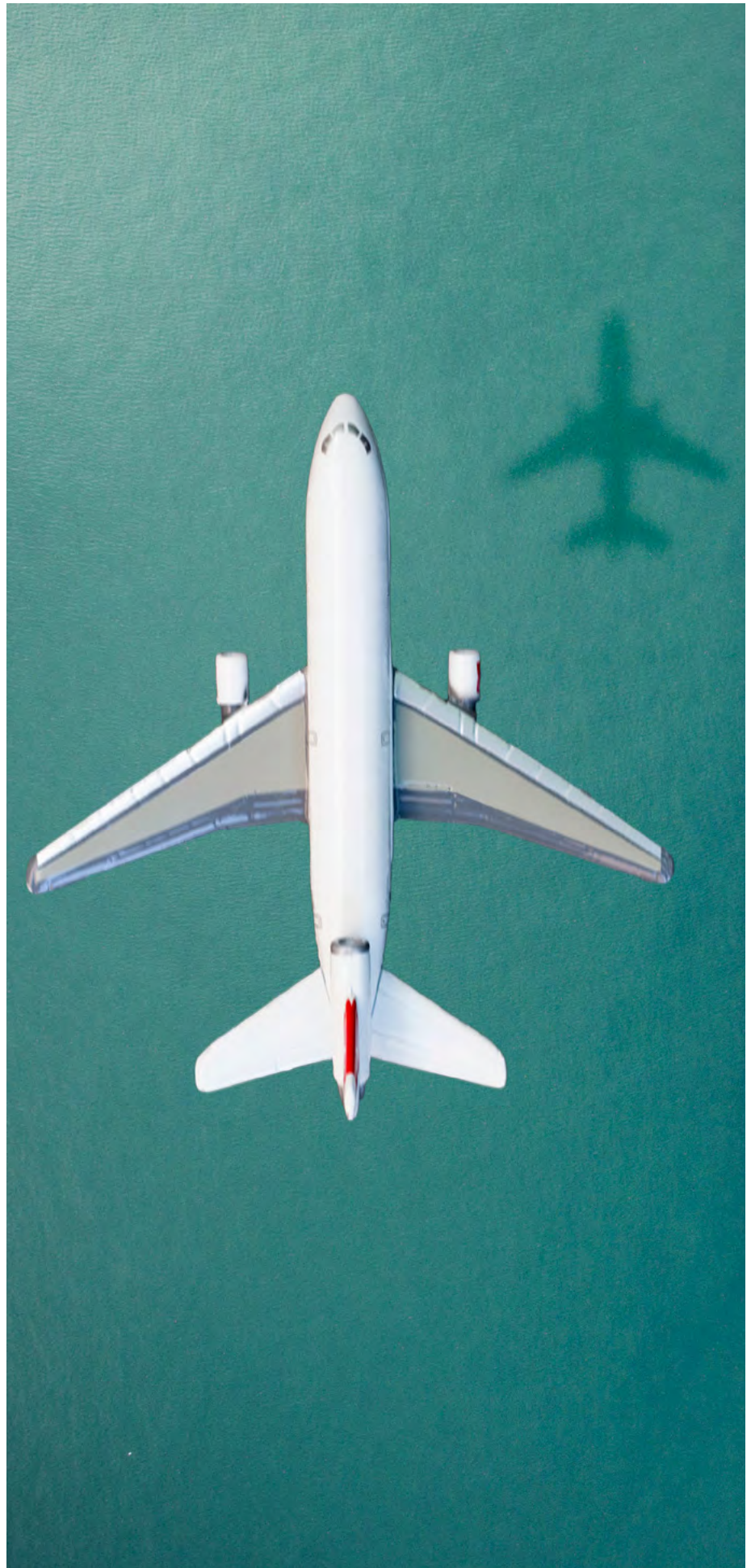
Leveraging these advantages, Liverpool has the opportunity to be the:

- CBD or the main ‘edge city’ of the aerotropolis, where airport-related businesses set up their Western Sydney (or even Sydney) offices/headquarters. That Western Sydney Airport Corporation (WSA Corp) has already done this provides confidence for others to follow.
- place to stay for incoming tourists and business people. While there may be a number of transit hotels that set up near (or at) WSA, Badgerys Creek is sufficiently remote that travellers will be more inclined to stay somewhere like Liverpool that’s closer to other amenities.

Liverpool City Council has an important role in supporting WSA and the aerotropolis. Given that the airport site and a large portion of the Western Sydney Priority Growth Area falls within its Local Government Area (LGA), the Council will influence the nature of development around the airport as a regulator of land use and as the State Government’s and WSA Corp’s key council partner.

To ensure the success of the aerotropolis, and so that Liverpool can unlock the opportunities WSA provides, Liverpool City Council needs to ensure that:

- it advocates for good rail and road connectivity between the airport and Liverpool, and between Liverpool and the Sydney CBD. New rail connections are a priority, although stations on the lines can be developed over time as needed, rather than as an initial investment.

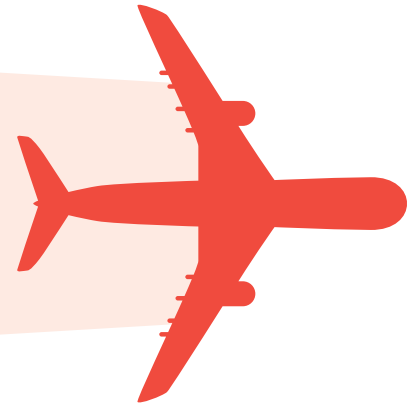




- the land around WSA is protected and developed to promote the new industries setting up around it.
- residential development around WSA does not compromise and constrain WSA's ongoing capacity to be a 24-hour airport. Conversely, the Liverpool City Council will need to have a say in how the airport operates as a 'good neighbour', to ensure its residents are sufficiently protected from any adverse impacts of WSA's operations and industrial activity around it.
- businesses are given the confidence, and incentivised where appropriate, to locate to the aerotropolis early on. To assist this, the Council should:
 - advocate and support the development of targeted government incentives, such as a 'virtual investment attraction mechanism' to attract to the aerotropolis new investment in targeted industries.
 - establish a business forum to provide a bond between Council and aerotropolis businesses, and to provide greater confidence for potential investors.
- the Liverpool CBD and George's River precincts are enhanced to ensure that Liverpool is perceived as great place to live, visit, work and play. Sustainability principles should be an embedded characteristic in this, and all, development.
- residents are skilled for the jobs of the future that will accompany the development of the aerotropolis.

If implemented, these actions will increase the likelihood that WSA is itself a success and that the broader potential benefits of an aerotropolis are also realised.

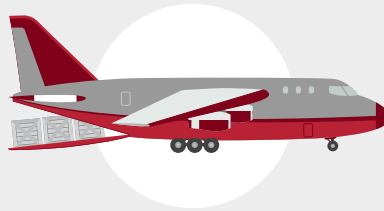
Key opportunities



Key sectoral opportunities

One of WSA's most significant advantages is that it will be curfew-free. The possibility for 24-hour connectivity to domestic and international markets opens up the opportunity to attract a number of sectors to locate around WSA.

Logistics and distribution



Australia's airfreight task is expected to more than double by 2030, driven by growth in e-commerce and international trade.

Many airports around the world are creating adjoining logistics centres, to grow secure their positions as major cargo hubs including Incheon, DFW Airport and Melbourne Airport.

As a 24-hour airport that can support Australia's growing airfreight task, WSA is primed to attract complementary logistics and distributions businesses to locate around it. Despite KSA being Australia's international airfreight hub, a lack of appropriate and affordable land options around the airport has resulted in major logistics companies being scattered across the city without any concentration in a particular area.

Distance from KSA, and increasing congestion around it, is increasing industry costs and inefficiency. One of KSA's strategic priorities is to work with the Government to find road transport solutions to help alleviate the issue.

With Australia's airfreight task expected to more than double by 2030 and a significant share of airfreight movements expected to occur out of WSA, attracting the logistics sector to WSA should be a priority.⁵ Creating a logistics hub around the airport would support the further growth of airfreight at WSA, generate significant employment opportunities and would facilitate improvements in productivity and competitiveness within the logistics sector itself.

As an example of the potential employment opportunities, Melbourne Airport and the site around it is now one of the biggest employment clusters outside of Melbourne's CBD. It is estimated that of the 14,300 jobs directly generated by the airport precinct, around one-quarter are related to non-aviation activities such as logistics and distribution.

⁵ Department of Infrastructure and Regional Development 2013, *Trends: Infrastructure and Transport to 2030*

Advanced food manufacturing and exportation



Rising overseas demand, particularly from Asia, for premium Australian perishables (like meat, seafood and dairy products) is the key driver of Australia's outbound airfreight, comprising approximately 60% of volumes. Perishable food exports are currently worth around \$20 billion to the Australian economy.⁶

Demand will continue to grow, with the number of middle-class consumers in the Asia-Pacific region forecast to grow from 525 million in 2009 to approximately 3,228 million by 2030.⁷

International investment in Australian food manufacturing is rising, with investors seeking to capitalise on growing demand for the 'clean, green and safe' brand of Australian food, and our existing industrial capabilities.

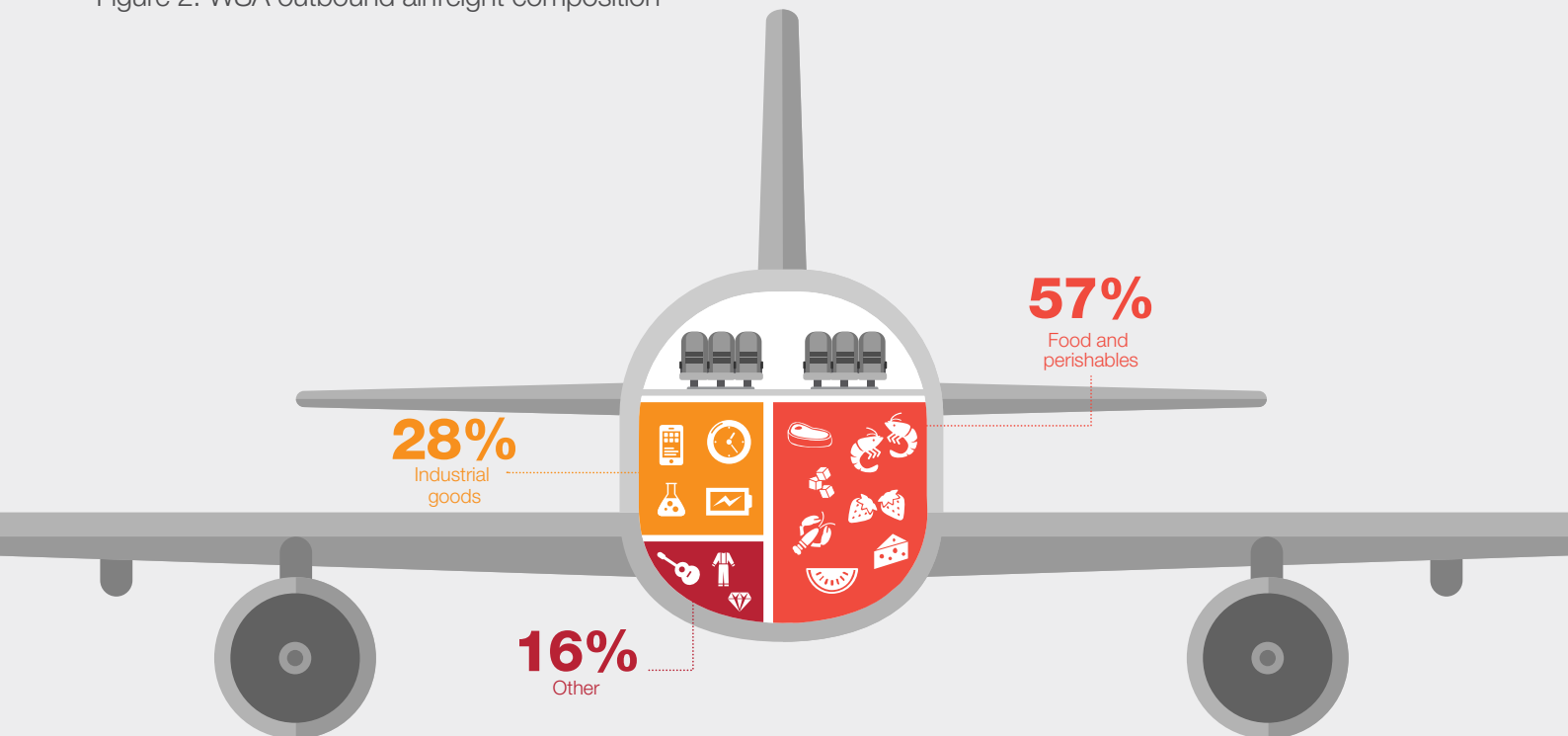
Providing that 24-hour operations are assured, WSA is expected to attract greater air freight activity by enabling more efficient access for food producers to overseas markets. Perishable foods need fast, direct transport into overseas markets that only airfreight can offer.

As Australian food producers are competing in premium markets, the higher margin on these perishable goods is able to justify the increased cost involved with airfreighting them.

Furthermore, as food supply chains evolve and become increasingly disintermediated, there is potential for clustering and aggregation of food manufacturing and value-add processing to be established near the airport. A dedicated food precinct near the airport could offer significant efficiencies to companies, from cutting down transportation, and by offering proximity to and collaboration with other parts of the supply chain (figure 3).

Any improvements to supply-chain efficiency will be a vital element in ensuring the long-term competitiveness of Australia's food exports.

Figure 2: WSA outbound airfreight composition⁸

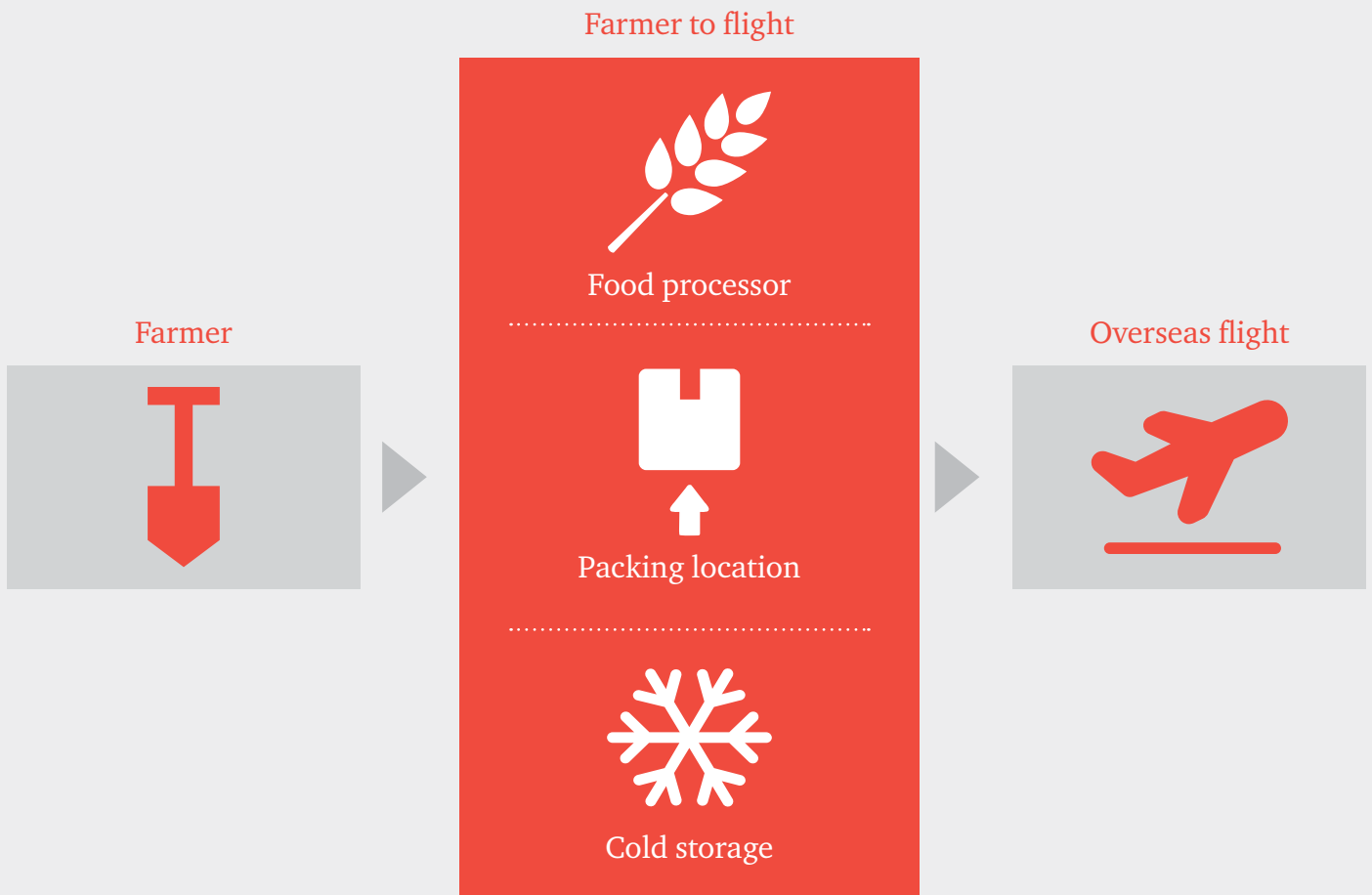


Source: Transport for NSW, NSW Air Network

^{6&7}. Austrade 2015, *Investment opportunities in Australian agribusiness and food*

⁸. https://infrastructure.gov.au/transport/freight/frieght-supply-chain-submissions/Australian_Airports_Association.pdf

Figure 3: Paddock to plane - simplified food supply chain in the aerotropolis



Medical technologies



The CSIRO has identified the opportunity and importance of Australia taking a larger share of the global medical technologies and pharmaceuticals (MTP) industry, which is expected to grow to almost \$3 trillion globally by 2025.

Growing Australia's industry would benefit the economy through more cost-effective provision of health services, as well as through the flow on effects of successful industry like greater jobs and potential exports.

Key sub sectors include smart devices, implants and bionics; and manufacturing high-value pharmaceuticals.

Against this backdrop, a health and education precinct is emerging in Liverpool, through partnership and collaboration amongst its leading health and education institutions including South Western Sydney Local Health District, Liverpool Public Hospital and NSW Health Infrastructure to name a few.

This alliance of organisations is significant as individually they are already providing world-class care, education and research. The objective is for the precinct to become a hub for development of health-related technology such as robotics and advanced materials including medical devices, prosthetics and pharmaceuticals.

Whilst proximity to WSA isn't a key enabler of a thriving medical technology sector, it provides the additional efficiency benefit of reduced ground transport requirements when importing or exporting equipment or supplies. Proximity to the Moorebank Intermodal Terminal may also provide greater efficiency for interstate distribution. Improvements to the road and rail network within the region will also provide more efficient distribution to other health centres in Penrith and Campbelltown.

Defence and aerospace



The NSW Department of Industry wants to develop a defence and aerospace hub near the airport, as part of the State Government's plan to grow the industry in NSW. Part of the Government's plan is to improve the commercialisation of the industry and the export potential of companies, an objective that should be supported by the establishment of such a hub at WSA.

The defence industry is already at an advantage in NSW, with the largest number of defence bases and capabilities of any state or territory. Today it employs around 26,500 people in NSW, including in many regional areas. Its investments and expenditure amounted to \$7.9 billion in 2014-15.

The WSA defence and aerospace hub envisaged by the NSW Government will seek to attract small, medium and large businesses specialising in the manufacture and maintenance of aircraft, equipment and systems. A thriving defence and aerospace industry doesn't necessarily rely on proximity to an airport; by clustering activities in the WSA aerotropolis would support the industry's growth objectives by:

- providing companies with links to new export partners and markets;
- enabling better connections between prime contractors and original equipment manufacturers;
- opening up training and skills development opportunities; and
- enhancing potential for collaboration on innovation and research through Liverpool's universities and other R&D institutions.

Forming the precinct hinges on getting the right anchor tenants. The NSW Department of Industry has received the commitment of Northrop Grumman to build a \$50 million Electronic Sustainment Centre of Excellence to support electronic warfare equipment and advanced electronics. Northrop Grumman will also aim to forge relationships with universities to train highly-skilled technicians:

“It really makes sense for us ... we've got this \$50 million investment in electronics repair capability; we wanted that to be in a location that made sense from a supply chain point of view, from the point of view of having great workforce availability, university proximity and that new defence industry precinct, the university precinct out there at Badgerys Creek that's being developed, it just seems perfect for us to be able to do that, so we stepped up and said we would be a foundation tenant at that location.”

Ian Irving,
CEO, Northrop Grumman



Tourism



WSA is expected to provide a significant boost to Western Sydney's visitor economy. Currently, the dominant purpose for visiting Western Sydney is to visit family and relatives (VFR) (see Figure 4).

The opening of the airport may also increase the share of international and domestic passengers visiting for the purpose of 'holiday', particularly given WSA is expected to initially mainly cater for lower-cost leisure travellers.

The VFR market comprises 45 per cent of international visitors and almost half of domestic visitors to Western Sydney.

Growing the overnight visitor economy

A key objective of the NSW Government's *Western Sydney Visitor Economy Strategy for 2017/17 – 2020/21* is to increase the proportion of visitors who stay overnight. Greater numbers of domestic and international passengers flowing through Western Sydney has the potential to boost overnight stays, if visitors can be encouraged to make Western Sydney part of their plans.

The importance of one of the opportunities identified by the strategy, is to develop touring routes and packages. Such packages could bundle tours to key natural attractions such as the Blue Mountains and Work Heritage Areas, as well as visits to the region's new recreational offerings (e.g., the new Worlds of Wonder, Featherdale Wildlife Park etc.).

While many of these new attractions exist outside Liverpool's LGA, it has the opportunity to capitalise on growth in visitation by growing its accommodation sector. There may be a number of transit hotels that eventually set up near or at WSA, however Badgerys Creek is sufficiently remote that travellers (particularly the VFR market) will be more inclined to stay somewhere that's close to other amenities and importantly, close to their friends and relatives.

Sporting facilities and events

Visitor economy growth will also be reliant on attracting new events to the region, such as major sporting events.

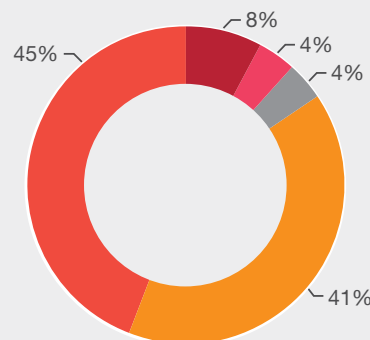
One of Liverpool's existing advantages to be leveraged is its equine industry, based around the Australian Turf Club's racetrack at Warwick Farm and the new Inglis Riverside Stables complex being developed after moving from its current home at Randwick. The complex is being developed into a major lifestyle destination. In addition to providing the premier venue for Sydney's horse sales, the \$140m development will also include a hotel, restaurants, bars and a day spa.

The combination of these assets could significantly enhance visitation to Liverpool, with visitors ranging from domestic and international industry participants (horse owners, trainers, breeders and buyers) to occasional racegoers.

With the expansion of the A-League on the horizon, an ambitious yet conceivable idea could be to create a new multi-purpose sporting facility to house a new A-League football team in Liverpool.

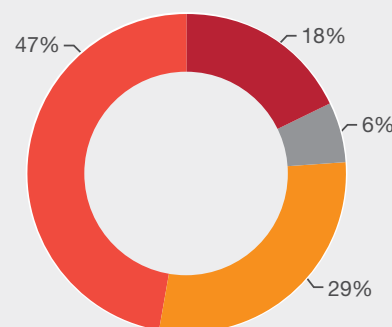
Figure 4: Purpose of visit – visitors to Western Sydney

Purpose of visit – International Visitors



Visitors Share	2016
Holiday	41%
Visiting friends and relatives	45%
Business	8%
Education	4%
Other	4%

Purpose of visit – Domestic Visitors



Visitors Share	2016
Holiday	29%
Visiting friends and relatives	47%
Business	18%
Education	n.p.
Other	6%

Legend: Holiday (orange), Visiting friends and relatives (red), Business (dark red), Education (pink), Other (grey)

Source: Destination NSW 2017, *Western Sydney Visitor Economy Strategy 2017/18 – 2020/21*

A smart airport for a smart city

The collective planning visions for Western Sydney, as found in the NSW Government's *Metropolitan Plan* and the Australian Government's *Smart Cities Plan*, envisage a smart city that is more connected, more innovative and more sustainable. WSA will be a nationally significant piece of infrastructure and the cornerstone of future infrastructure and investment in Western Sydney. And whilst the airport's early operations may experience moderate patronage and activity, in decades to come it will be a major international airport that is similar in size to Sydney Airport's present-day operations.

Sustainability

WSA has the rare opportunity to be able to cost-effectively incorporate sustainability from the design phase, right through to construction and operations. It is recommended that WSA look to procure a large portion of its energy supply from renewable sources, rather than just aiming to optimise energy efficiency. This would be a prudent measure to help futureproof against rising energy needs as the airport's operations grow. It will also help to minimise the financial risks associated with changing energy market dynamics and potentially stronger government regulation on the horizon to address climate change.

This could be achieved through on-site generation – like Brisbane and Adelaide Airports – or through a power purchase agreement with a large-scale solar farm (perhaps one built near WSA).

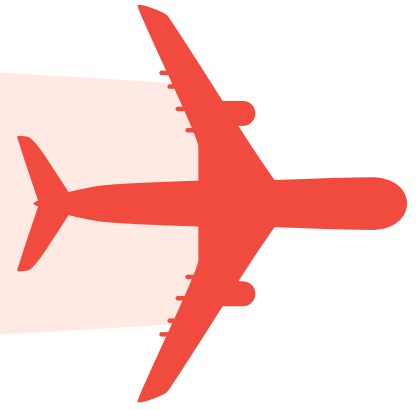
Innovation

Driverless vehicles offer good potential for use in airports. They offer greater safety and fuel efficiency and airport precincts offer a confined zone for operating and maintaining. Driverless vehicles are being trialled at several airports around the globe including Adelaide and Heathrow Airport.

With WSA's opening almost a decade away, it is not difficult to envisage a scenario in which driverless vehicles are used throughout and around the airport site. Indeed, the NSW Government will investigate the potential for a connected and autonomous vehicles (CAVs) zone near the aerotropolis, to enable piloting of CAV technology.



What needs to happen



Connectivity

Airport access

The success of WSA as a second airport, and the aerotropolis as a whole, depends on efficient transport connections to and from WSA.

Longer travel time to an airport not only reinforces perceptions of distance and inconvenience but also adds to a passenger's travel costs, diminishing an airport's appeal – a key cause of the failure of Canada's Mirabel Airport.

In the early to medium term stages of the airport's operations, a large portion of WSA's passenger market and workforce is likely to come from Western Sydney. Hence, the first priority must be integrating the airport with the aerotropolis and other regional cities of Western Sydney.

So far the Australian and NSW governments have committed to funding a \$3.6 billion roads package – *the Western Sydney Infrastructure Plan* – to support the integration of WSA with the region. The package includes the construction of the new M12 Motorway, upgrade of the Northern Road and Bringelly Road to a minimum of four lanes each.

Six rail route options that would link WSA to different parts of Western Sydney are being investigated through an Australian and NSW Government Joint Scoping Study on the rail needs for Western Sydney (see Figure 5). The need to investigate these six options has been reaffirmed in the NSW Government's transport strategy – *Future Transport 2056* – released in October 2017. The strategy recognises that one or more of the rail links will be required, subject to business case development, to support rail service needs arising within the next 10 years (i.e., in line with the opening of WSA).

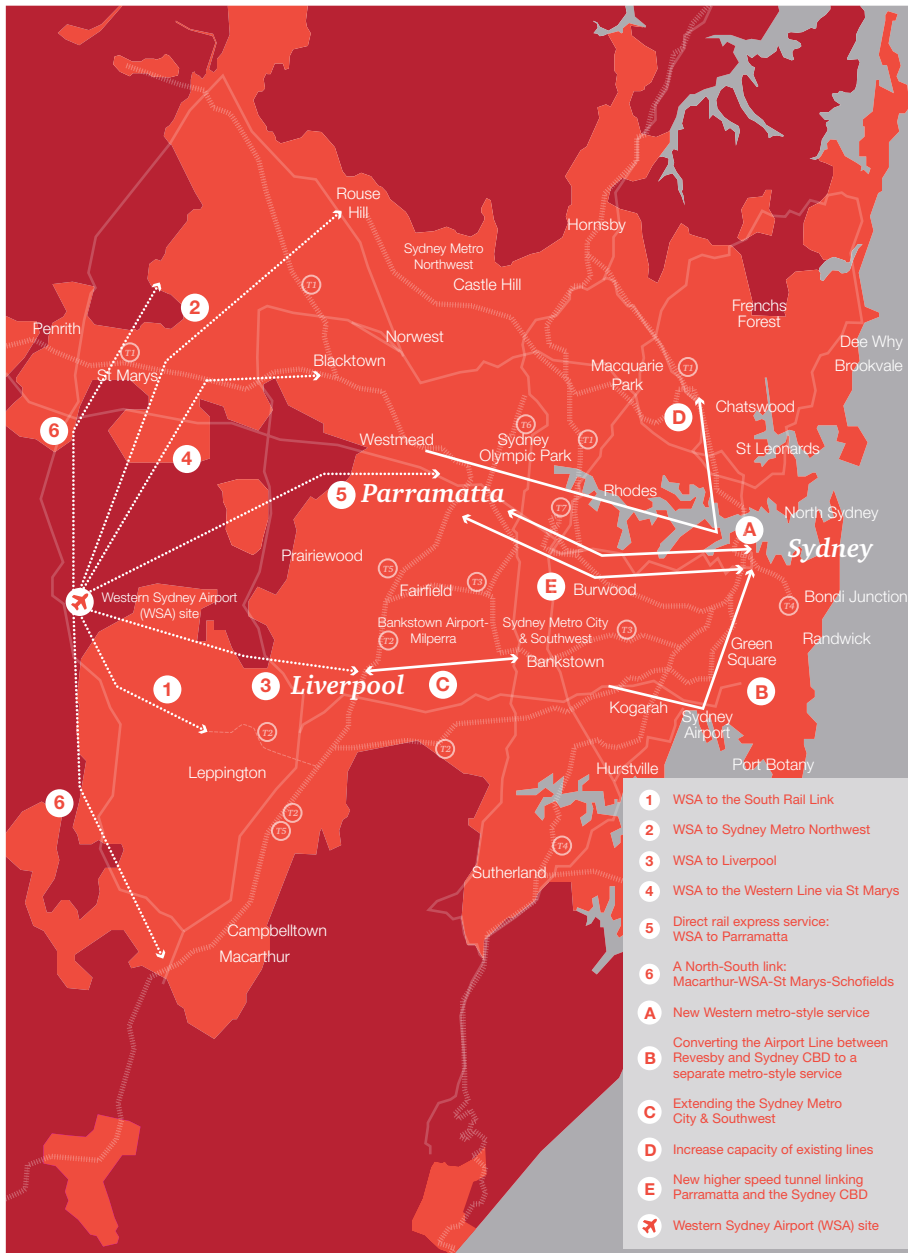
The combination of the roads package and extension of the South West Rail Link, if approved, would provide good airport accessibility to major population centres in Penrith to the north and Campbelltown and Camden to the south. The combination also provides a good multi-modal solution to help ease congestion of traffic flowing to the airport.

The options that would best support development of the aerotropolis, and that of Liverpool, are 'Option 1' and 'Option 3'.

Connecting the airport to Leppington, via Bringelly, offers a number of advantages to the Liverpool LGA, to Western Sydney and to Sydney as a whole — it provides:

- a simple rail connection from the airport through the South West Growth Centre, where a large proportion of the airport's workforce and users are expected to live.
- an easy link from the airport to Liverpool, which currently offers the closest business hub, as well as being on its way to developing the premier health and education precinct in Western Sydney. Linking the airport to Liverpool also offers the best potential for a more direct connection from the airport to the Sydney CBD and KSA.
- good scope for a more immediate connection between Liverpool and KSA. In this respect, it may be an appropriate initial response, with a direct connection a complementary subsequent.

Figure 5: Route options being considered as part of the Western Sydney rail scoping study



Source: Department of Infrastructure and Regional Development 2017, Western Sydney Rail Needs Study: Route Options

Connectivity to the rest of the city

In the medium to long-term, connectivity to the Sydney CBD will become increasingly important to WSA's ability to capture demand unmet by Sydney airport and to attract a growing number of businesses and workers to Liverpool. Businesses considering locating to Liverpool will need efficient access to suppliers and customers beyond the region, and need confidence that the area will be desirable for the workers they will need to attract.

The average rail journey between Liverpool and the CBD is 60 minutes. These long commute times limit opportunities for Liverpool's residents and, if they persist, will constrain its potential as the aerotropolis' leading 'edge city'.

Route options that link Western Sydney to the Sydney CBD are also being considered by the Western Sydney rail scoping study. Liverpool City Council should advocate for 'Option C' to link Liverpool to Bankstown, which would build on the connectivity provided by an airport to Leppington and/or airport to Liverpool link.

The combination of these options would provide the following advantages:

- fast journey times between Liverpool and the CBD.
- connections between the airport and the Sydney CBD in a simple manner that leverages the existing network.
- the easiest link between WSA and Sydney Airport, which would be further enhanced by pursuing 'Option B' to create a metro-style service linking the South West to KSA and onto the CBD.

In the medium- to longer-term, the following additional options would further secure Liverpool's position as the key gateway city between the airport and the rest of Sydney:

- providing more direct links from Liverpool to Parramatta and other regional cities to better improve connectivity between Western Sydney's major centres and broaden the airport's immediate catchment area.
- creating a high-speed rail service connecting Liverpool to the CBD via the East Hills line, which could reduce the journey time to around 30 minutes.

It may also be appropriate in the longer term to consider a fast rail link between WSA and the Sydney CBD as WSA migrates from a predominantly low cost operator airport to full service carriers with a focus on business passengers.

Coordinated planning

The success of the WSA aerotropolis requires coordinated planning:

- around the airport, in order to enable large-scale industrial precincts to develop around the airport.
- beyond the airport, in order to:
 - pursue good urban design to attract other businesses and workers to Liverpool.
 - realise tourism opportunities by enhancing Liverpool's existing assets and developing new attractions.



Around the airport

Planning for the airport's surrounding land uses is ongoing but a number of Federal and State Government policies have begun to formalise the vision for land use in the areas around the airport, setting the stage for future development in infrastructure, industrial and commercial activity and homes. The key policy initiative is that of the Western Sydney Airport Priority Growth Area (WSPGA), enveloping the entire north, east and southern sides of the airport site.

As a large share of the WSPGA falls within the Liverpool LGA, the Council will be able to work with State Government on ensuring an optimal strategy is developed. It must also set out a sufficient physical buffer between the airport and the surrounding residential areas (i.e., at least 5km from the airport) to safeguard WSA's curfew-free status. Beyond getting zoning right, the NSW Government and the Liverpool City Council will also need to work with institutional developers who have the capacity to develop land into specialised sector-specific precincts and bring the right tenants to them.

Where further supply of housing is needed, higher density options need to be considered to avoid the sprawling form of urban development that is currently seen in parts of Western Sydney and only serves to create further distance from transportation and other social infrastructure.

Beyond the airport: Liverpool's place potential

The Liverpool city centre in particular has the opportunity to position itself as the CBD of the aerotropolis. It is located in a strategic position, at roughly the mid-point between the airport site and the Sydney CBD. This is a great advantage considering businesses who may want to establish offices close to the airport but still be located within a major commercial and retail centre.

A key component of Liverpool's current strategy to attract businesses and people is to improve the city's amenity and liveability. The Australia Government's *Smart Cities Plan* recognises the centrality of these factors to a city's success, noting that:

“ To succeed in the 21st Century economy our cities need to be productive and accessible, but they also need to be liveable with a clear focus on serving their citizens. Great cities attract, retain and develop increasingly mobile talent and organisations, encouraging them to innovate, create jobs and support growth.”

Australian Government's *Smart Cities Plan*

The Council is working on revitalising its city centre, which includes a proposal to alter zoning in the city centre to permit increased mixed-use development. Continued progress on this strategy is needed to ensure that Liverpool City is seen as the natural commercial hub adjoining the WSA.

While tourism is a potential beneficiary from the development of WSA, many of the existing and proposed Western Sydney tourist facilities sit outside Liverpool. Nevertheless, Liverpool can benefit by becoming the 'edge city' and the natural Western Sydney locus if it can truly be seen to be an attractive and engaged environment with the appropriate facilities. To do this, a range of issues need to be addressed, including:

- activation of the Liverpool CBD as a vibrant, green, engaged and walkable precinct.
- the development of a medium-term strategy to attract additional hotels and conference facilities to Liverpool.
- the implementation of the George's River Master Plan with visitors in mind (not just residents).
- capitalising on the co-location of the Warwick Farm racecourse and the new Inglis Riverside Stables to develop further enterprises related to the equine industry.

Attracting investment

While there is good potential for new sectors and businesses to thrive, a challenge will be kick-starting investment and getting enough businesses to take a leap of faith early on in the life of the aerotropolis. Greater business engagement is required to build understanding of the area's future investment potential. Targeted incentives may also be needed to attract specific sectors which present the greatest opportunities for the area.

Kick-starting investment

Incentive mechanisms to attract businesses to the aerotropolis need to do the job of luring existing enterprises to relocate to the area, as well as stimulating investment in new and advanced sectors.

Rather than the traditional business park model of a free trade zone (FTZ) as employed at or adjacent to other airports internationally, what could be considered is a 'virtual investment attraction mechanism'.

This could be structured to apply to companies:

- which wish to undertake demonstrably new investment in Australia;
- in selected priority industries;⁹ and,
- with the incentives time-limited.



Image supplied by Liverpool City Council

9. Seoul's Incheon Airport, for example, offers incentives to companies in manufacturing, logistics and R&D



Image supplied by Liverpool City Council

Such criteria would ensure that incentives would only be available for investment that would otherwise be unlikely to occur.

The key to achieving these benefits is through incentivising new businesses, leading to investment in facilities, technology, innovation and people. These incentives could include, for example:

- the reduction or elimination of customs duties and GST.
- reduced taxation obligations.
- better taxation incentives.
- employee hiring incentives.
- lighter touch compliance regimes.
- the opportunity to work with the Liverpool City Council in public private partnerships (PPPs) to accelerate development.

What would separate this approach from most traditional FTZs is that eligible companies would need to operate on agreed secure sites, but would not have to operate with other firms in a single zone.

If eligible firms are strategically located around and next to WSA then such an incentive mechanism could provide a significant economic benefit and, by helping to kick-start investment in the aerotropolis, would provide a needed boost to Australia's trade facilitation performance. In turn it would facilitate innovation, productivity growth, increased production, domestic employment and international competitiveness of domestically produced goods.

A key objective should be to encourage investment in sectors that governments are actively trying to promote and that are aviation oriented/may benefit from proximity to WSA, to:

- encourage robust and diversified industries.
- develop domestic markets by attracting companies dedicated to research and development.
- stimulate manufacturing innovation and renewal.

The sectoral opportunities identified in this report could be suitable candidates for incentives. However, incentives could be tiered, reflecting varying levels of desirability and ease of attraction. For example, logistics companies are more likely to locate close to WSA and domestic investment and foreign direct investment in Australian food and agri-business is growing strongly. Only moderate incentives should be offered to provide enough inducement for companies to actually move their operations to the WSA aerotropolis. The defence industry on the other hand is one that the NSW Government is actively seeking to grow and which may require higher incentives to attract world-class investment of a sufficient scale.

Building broader business confidence

The forthcoming City Deal, designation of the priority growth areas around the airport and the announcement of potential investment incentives will all go some way to providing the right signals to business of Governments' intentions for the region.

A number of large organisations are already making plans that will determine the location of their business operations at around the time of WSA's opening. A much clearer picture is needed of the development and investment potential, and an idea of which other businesses will be locating near the airport.

An aerotropolis investor summit will be held in 2018, however a more regular forum for business engagement is required to generate ideas and possible collaboration. In this regard, we suggest that the Liverpool City Council should establish a regular business forum to provide a bond between Council and aerotropolis businesses, and to provide greater confidence for potential investors as to other organisations' plans.

Training and skills requirements

Around 60 per cent of Liverpool City resident workers travel outside of the area to work. There are different reasons for this, such as misalignment of available opportunities and skills and transport limitations. A key driver of this people movement is that the number of jobs available in Liverpool is three-quarters the number of employed residents.

The airport is expected to support almost 28,000 direct and indirect jobs by 2031, five years after the airport opens. The hope is that the airport generates not just more jobs to address this divide but also generates a larger share of quality jobs for Western Sydney residents.

Liverpool benefits from several high quality educational and training institutions including Liverpool Hospital, the Liverpool TAFE, Western Sydney University and University of Wollongong. Liverpool's educational institutions may need to augment their education and training offerings to align to the skills requirements of Western Sydney's future economy, factoring in both the likely continuation of current industry trends (i.e., growth in healthcare, social assistance and education), as well jobs in new sectors brought about by WSA. These are expected to include jobs across engineering, agri-business, medical science, digital technology, professional services, logistics and administration.



Image supplied by Liverpool City Council



Image supplied by Liverpool City Council

As the region's population grows, and skills and development requirements increase, the market may grow to a sufficient size to accommodate an additional university in Liverpool.

The airport itself could be the location for a TAFE 'skills exchange program', which allows workers to be taught skills on the job. Such programs are already being rolled out across projects such as the Western Sydney Stadium construction, Parramatta Square and Northern Road upgrade. These programs are showcasing how new infrastructure programs can mobilise talent efficiently and provide good test cases for the roll-out of similar programs for WSA's construction and ongoing operations.

Liverpool City Council's role in maximising the value of the aerotropolis

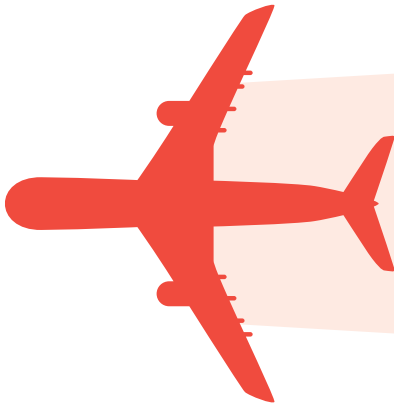
Drawing on the opportunities and the needs identified, we suggest that the Liverpool City Council has clear tasks to undertake to maximise the value of the aerotropolis, with respect to:

- land use planning and urban design
- transport infrastructure
- private sector and institutional engagement

If implemented, these actions will increase the likelihood that WSA is itself a success (i.e., enduring good connectivity and the maintenance of WSA as a 24-hour airport) and that the broader potential benefits of an aerotropolis are also realised (i.e., new investment delivered and opportunities for employment maximised).

Furthermore, they should ensure that Liverpool is seen as:

- the CBD of the greater aerotropolis, where airport-related businesses set up their Western Sydney, or even Sydney, offices/headquarters.
- the place to stay for incoming tourists and business people. Liverpool needs to be seen as the town adjoining the airport to which it just makes sense to go.



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