



**Regional  
Development**  
*Australia*  
S Y D N E Y

**Submission to the  
Australian Government's *Inquiry into National Freight and  
Supply Chain Priorities* Discussion Paper**

**Summary Report for the Sydney Freight and Supply Chain Workshop facilitated  
by RDA Sydney and the Hargraves Institute**

**Held 20<sup>th</sup> July 2017, Sydney Motorsport Park, Eastern Creek**

*July 2017*

To promote collaborative decision making for the sustainable and just economic development of Sydney, with a focus on employment growth.

## Contents

<b>1. Background on RDA Sydney Position</b> .....	<b>3</b>
<b>1.1 A snapshot of the role Greater Western Sydney plays in freight and supply chain priorities</b> .....	<b>4</b>
<b>1.2 RDA Sydney's Strategic Industries Development around the Western Sydney Employment Area (WSEA) Report</b> .....	<b>5</b>
<b>2. Executive Summary of Workshop Recommendations</b> .....	<b>7</b>
<b>3. Summary of Proceedings for RDA Sydney's <i>Sydney Freight &amp; Supply Chain</i> Workshop ...</b>	<b>11</b>
<b>4. Key Points from RDA Sydney's <i>Sydney Freight &amp; Supply Chain</i> Workshop</b> .....	<b>12</b>

## 1. Background on RDA Sydney Position

Regional Development Australia Sydney (RDA Sydney) welcomes the opportunity to comment on the Inquiry into National Freight and Supply Chain Priorities Discussion Paper issued by the Australian Government.

RDA Sydney is a COAG initiated partnership between the Australian and NSW Governments created to strengthen communities. It is part of a national network of 55 RDA committees made up of local leaders representing government, business, community groups and other key regional stakeholders to provide targeted advice to government on key issues affecting the economic development of regions.

For some time now RDA Sydney has been working with all levels of government, industry groups, business, research and education institutions and community representatives to identify the needs and opportunities of Sydney, and facilitate the development of new ideas, projects and initiatives that create economic, social or environmental outcomes across the Sydney regions.

We progress agendas through the establishment of or participation in interest groups, round table discussions and leadership networks.

Our response to the *Discussion Paper* is underpinned by RDA Sydney's strategic goals of:

- Nurturing innovation and industry development to get the right jobs in the right places
- Seeking to influence government policy to make Sydney a liveable city with affordable housing, amenity and improved well-being and social equity
- Developing and promoting 'Whole of Metropolitan Sydney' integrated planning capacity and tools

On the 20<sup>th</sup> July 2017 RDA Sydney in partnership with the Hargraves institute, NSW Ports, Transport for NSW, NSW Planning, Department of Infrastructure and Regional Development facilitated a workshop on the Sydney Freight and Supply Chain Strategy to discuss and provide input to the National Freight and Supply Chain Priorities and also the NSW government's review of the NSW Freight and Ports Strategy. Feedback from this workshop forms the basis of our submission.

The workshop's main objectives were:

- Identification of the urban freight supply chains and supply chain systems in Sydney particularly in Greater Western Sydney (GWS) as it impacts Greater Sydney and regional NSW as a whole.
- Exploration of the current and future freight system performance that will inevitably occur with projected rapid growth in population and employment in Greater Western Sydney and around a new Western Sydney Airport. This exploration included consideration given to the costs of moving freight along transport supply chains, opportunities for efficiency improvement and reduced costs through improved infrastructure capacity, access, pricing,

competition, technological advances, data acquisition or other investment or regulatory arrangements.

- Discussion regarding the issues and possible solutions with a cross-section of users and providers of freight services, the regulators of freight, the owners and operators of freight infrastructure, and land use and transport planners, consultants, forecasters, researchers and communities engaged with freight development.

Previously, in 2013 RDA Sydney convened the Greater Sydney Freight Forum at which 103 wide ranging industry and government participants provided input into the draft *NSW Freight and Port Strategy*. Feedback, where relevant, from this forum has helped to formulate our response to the Inquiry's *Discussion Paper*.

### **1.1 A snapshot of the role Greater Western Sydney plays in freight and supply chain priorities**

The Greater Western Sydney (GWS) region has emerged as a pivotal hub in the Australian transport and logistics industry due to its strategic location in Sydney and its access to markets along the eastern seaboard and internationally. It is characterized by large companies with extensive transport and distribution networks and companies providing services covering all facets of supply chain management.

Due to the proximity to the M7, M2, M4 and M5 Sydney orbital motorways, GWS is also home to significant warehousing and distribution centres for some of Australia's largest retailers, wholesalers, construction companies and manufacturers looking to move their products to their customers as efficiently as possible. Many of these areas are either in or adjacent to the Western Sydney Employment Area – in particular, Eastern Creek, Ropes Creek, Erskine Park, Minchinbury, Huntingwood, Greystanes, Smithfield, Wetherill Park and Prestons.

The industry in GWS is now well developed with the capability to organise and execute the transport and storage of goods on a national and global level by road, rail, sea and air.

GWS is an important hub in Australia's sea freight network with studies indicating that over 80% of containers imported into Sydney's Port Botany are delivered within 40 kms radius of the Port within the Sydney metropolitan area. The goods associated with those 80% of import containers are either destined for the Sydney market or unpacked at Sydney based distribution centres, repackaged and distributed to regional NSW or interstate.

According to the latest NSW Ports Masterplan 2015, Port Botany is expected to become Australia's largest container port by volume in the next 30 years. Containers are expected to grow from 2.3 million TEU now to between 7.5 million and 8.4 million TEU per year by 2045. The current rail/road intermodal terminals at Cooks River, Yennora, Chullora, Villawood and Minto, will be added to by new intermodal terminals coming online at Enfield, Moorebank, St Marys, with a planned future terminal at Eastern Creek and another adjacent to the Western Sydney Airport at Badgerys Creek. NSW Ports expect the current trends to continue but with an upward trend of containers destined

for Sydney's western and south western suburbs, especially to Blacktown, Fairfield, Holroyd (now Cumberland) and Liverpool due to the availability of large parcels of land and lower costs.

Road transport represents the major mode of transport in GWS due largely to the extensive infrastructure network within the region providing access to intrastate and interstate markets. Major services include long-haul road transport, local distribution and express courier services. With recent technological changes introduced via the internet and digital disruption, there is now a market expectation by customers for real-time online sales transactions, requiring next-day supply chain processes and deliveries. Already, we are seeing major changes in courier delivery processes and last mile deliveries in and around the Sydney metropolitan area.

To reduce congestion there is already a major push by the NSW government, and industry as a whole, to increase the proportion of containers carried from Port Botany by rail from about 12-14% to 40% over the next 15-20 years. As noted in the NSW Ports Strategic Plan a new dedicated Western Sydney freight rail line has been planned for some time running via an extension line west from Yennora to the planned new intermodal terminal at Ropes Creek near Eastern Creek. There also has been discussion in the development of the Broader WSEA Structure Plan Transport Plans prepared by GHD, and in the TfNSW NSW Long Term Transport Masterplan to have a dedicated freight line within the proposed M9 transport corridor running north-south around to an intermodal terminal near the new Western Sydney airport possibly via Leppington or from further south near Camden.

The air freight sector up until recently, has been a much smaller component of the transport industry in GWS. The sector includes air freight operations located by Toll at Bankstown Airport and companies with warehouse and logistics facilities integrated with air freight operations at Sydney's Kingsford-Smith Airport at Mascot. However, with the necessitated growth in next day real-time express deliveries there has been a major growth in international courier and forwarding companies, and third party fulfilment companies setting up in GWS.

## **1.2 RDA Sydney's Strategic Industries Development around the Western Sydney Employment Area (WSEA) Report**

In August 2016 RDA Sydney released its report *Strategic Industries Development around the Western Sydney Employment Area (WSEA)*. The purpose of this report has been to identify and scope with key stakeholders, potential new strategic industry development activities in and around the Western Sydney Employment Area that could be developed, both directly or indirectly, based on existing or future supply chain capabilities and current/future growth opportunities with a new airport planned within the next 10 years.

The Report provides input and recommendations for action that address the issues raised by stakeholders. In relation to freight and supply chain priorities the following next step actions were recommended:

- Support the establishment of an *Air Freight Efficiency Working Group* to make immediate recommendations for streamlining and improving the existing freight system and to develop potential new operations and procedures that could be designed into the new airport.
- Support the design and building of new additional intermodal terminals at Eastern Creek and ultimately at Badgerys Creek alongside the WS Airport.
- The formation of a new TfNSW led *Freight Working Group*, in a similar way to the success resulting from the formation of the Port Botany Landside Improvement Strategy (PBLIS). This TfNSW Freight Working Group would work with NSW Ports, the industry bodies, DoPE, ARTC, local councils and the Greater Sydney Commission to form a new Western Sydney T&L freight and supply chain industry taskforce.

## 2. Executive Summary of Workshop Recommendations

It is with pleasure that RDA Sydney presents this submission in response to the Australian government's *Inquiry into national Freight and Supply Chain Priorities Discussion Paper*, on behalf of all of the 60 wide ranging industry and government participants who attended the Sydney Freight & Supply Chain Workshop on the 20<sup>th</sup> July 2017 at Sydney Motorsport Park, Eastern Creek.

We believe that efficient and effective movement of freight and the distribution of goods and services are critical to the future growth and economic success of Sydney and Australia, as well as the quality of life for residents.

Participants agreed that the *Discussion Paper* was a very good start in having an ongoing dialogue about our national priorities and were keen to provide a metropolitan perspective.

Outlined below is a summary of the key recommendations grouped thematically that we would like you to consider in the final draft. (The following sections of this document provide responses given by participants to specific questions from the *Discussion Paper*):-

### Market Changes/ Supply Chain Transformation

- A better understanding of where the markets are and the pathway of freight so we can put into place strategies that respond to supply chain needs.
- Further understanding and management of the last mile is important, especially as we are facing growth in population, densification and changing purchasing patterns (1 in 5 persons has a delivery per day). What are the transport models for delivery vans into LGAs?
- Visibility of data for informed planning (NSW, Australia overall, neutral body to overcome commercial information barrier).
- Further analysis is required in the management of a broad range of tasks during peak periods e.g. staggering school starting times as they do in Singapore. Focus on the 7-9.30am period – management of tasks.
- Data should be technology 'Agnostic' and useable across multiple systems with incentives for take up.
- Changing nature of distribution platforms e.g. Uber and Amazon. Understanding the dynamics of 'Uberisation' of freight dynamics in the next 5 years.
- Anticipating consumer demand based on demographics – age, cultural etc. There is a need to understand how much space is required for the freight task with high density housing.

### Port Botany and connectivity to Western Sydney

- Port Botany has constraints on its capacity due to residential encroachment, freight in Sydney is usually transported by road thus there is a need to have effective corridors (rail and road) from Port Botany which should include connection to WestConnex.
- Top priority is improving landside cargo efficiency at port.
- Future long term capacity requirements need to be planned now to make it cost effective.
- Need to increase rail capacity through duplication of railway lines to improve slot availability.

- At the port level there are inefficiencies that lead to delays in the port to rail function. Current train turnaround at Port is too slow. There could be dedicated shuttles of freight with specific stevedores.
- There needs to be a centralised coordination function, who can dynamically schedule trains in both directions. The CMCC/TfNSW Rail Operations Coordination Centre was supposed to do this function and whilst they are collecting valuable data, it has not started 'coordinating'. There is a lack of supply of sufficient suitability located and operationally unconstrained employment/ industrial lands, in proximity to Port Botany, to cater for the forecast trade demands of NSW.
- Need a sustainable land use planning solution across Sydney that allows industry to operate and expand in order to increase economic activity and jobs. This is needed in Botany, in the freight corridors and around the intermodal precincts.
- Need a planning regime that recognises and facilitates freight as a priority.
- The planning system needs to recognise that the current operational environment will change (particularly 24/7 operations) and therefore impacts could intensify including amenity impacts on sensitive issues.
- Retention and protection of industrial and employment lands are required including minimum allotment sizes for industrial lands.

#### Kingsford Smith Airport/ Western Sydney Airport

- Lack of larger scale high-tech single common user International Cargo Terminals (CTO) facilities is causing unnecessary double handling and precludes in many cases end-to-end supply chain integration physical and communication system integration between freight forwarders, global CTO operators, and shippers and the airlines themselves. Use of robotics and high speed automatic sorting facilities not being used to the extent it could by comparison to Hong, Kong, Singapore and Dubai's CTOs
- KSA, Federal and NSW governments as part of their respective industry and innovation policies, need to work with SACL, airlines and air freight industry to develop a long term freight strategy for KSA.
- It is essential that the NSW government and Sydney Airport closely engage with federal statutory authorities, CTOs and freight forwarders as part of any long term planning to take into account commercial interests, fundamental operational requirements and to co-ordinate overall road management issues both to and from and around the airport.
- When planning for WSA serious consideration and strategy implementation must be given to freight as well as passenger management.
- We suggest that more regulatory oversight and scrutiny currently be applied to airport owners by the Productivity Commission and Australian Competition and Consumer Commission to ensure better representation.
- CTOs onsite lack bonded storage, staging facilities for building up and breakdown for freight and refrigeration.
- CTO facilities managed by Qantas Freight and Toll Dnata are on short-term leases only, as the land occupied by these CTOs is apparently earmarked by the SACL masterplan for further passenger expansion. Concern is that \$30 million expansion needed for onsite CTO expansion.

- In relation to WSA planning decisions need to be made regarding the reservation of a fuel corridor and rail corridor/s, development of a heavy vehicle strategy including Class 2 Permits and the preservation of the Badgerys Creek Intermodal.
- Plan now for airport for future capacity when WSA is operating 80 million passengers and freight at 2 million tonnes per annum.
- Identify adjacent land to WSA for high tech robotic style agribusiness and manufacturing businesses where reverse fulfilment from Sydney to Asian markets can be supported with new high tech supply chain logistics and efficient airport freight terminal.
- Design the WSA freight airport precinct to fit with other current and planned intermodal, freight precincts and transport links in GWS. Dedicated freight access roads should be considered for WSEA.

### Regulation/ Freight Costs

- Improved 24/7 access to roadways and delivery loading zones. Dedicated freight lanes along major arterials (like T-ways) and rail.
- The differing road permits affecting last mile deliveries, the regulatory burden causes confusion and extra costs within the supply chain.
- The National Freight Strategy to recognise the regulatory constraint of NHVR in not having the authority to enforce common approvals and where there is a business case, to enforce jurisdictions to approve permits.
- The Strategy should also look at ensuring all levels of Government understand the benefits associated with HPVs. This includes the social, economic (including increased productivity and a decrease in physical truck movements) and vehicle enhancements, including less wear and tear, thus less maintenance costs.
- With differing road permits affecting last mile deliveries, the regulatory burden causes confusion and extra costs within the supply chain.
- Price of land in Sydney undermines viability of Intermodal Terminals
- There needs to be recognition of the cost to the whole supply chain when new or increased charges are introduced.
- Road usage charges are currently state-based. This means that out-of-state trucks do not pay usage charges when using NSW roads. There needs to be a more equitable system based on mass and distance charging, similar to the New Zealand system.
- Having a pricing model based on cross mode not load environments (road/rail).

### Planning/ Strategy Development

- Land use planning processes should have compulsory requirements to conduct a risk analysis of any proposal on the impact of freight movements.
- RDA calls on the Strategy to be the one source document within all levels of Government, which dictates both the land use strategies, land transportation strategies (what vehicles can go where) and corridor protection. The Strategy must set the guidelines so other Planning authorities cannot undermine the concepts.
- An integrated transport and land use planning system needs to be in place.

- To achieve an effective freight and supply chain system in Sydney, a broader whole of government infrastructure strategy needs to be developed around a longer term vision that takes into consideration the freight task.
- Streamlined cooperation between agencies – there needs to be a common purpose.
- Protecting existing infrastructure dedicated to the freight task – corridor preservation/ land use planning
- Real options theory needed. An agile planning system that can make changes quickly and as needed, more sophistication about future scenarios required.
- RDA Sydney also calls on the strategy to include the use of planning tools such as the 3D Virtual Sydney model to scenario test potential transport and land use infrastructure projects.

### Transport Infrastructure

- Getting outer Sydney M9 orbital defined and in place early & responsive to needs. Current and future passenger and freight rail needs to be considered together.
- Need to make use of existing capacity of infrastructure
- Dedicated freight lines to both Eastern Creek and Badgerys Creek

### Industry Agglomeration

- There is a need to consolidate industry major freight generation activities into one or several geographically located precincts around major transport corridors, rail access and intermodals. The system is far too fragmented now.

### Community Engagement

- We need a communication strategy targeted for the general public about the necessity of freight and its benefits – ‘Freight is everybody’s business’.
- This has been achieved in isolation (see Abbot Point Case Studies) and the Government needs to reiterate the importance of freight to all Australians.

### Innovation

- Continue to investigate and research opportunities for alternate means of transporting freight for example the use of drones and waterways.
- Further modelling of opportunities using emerging technologies such as smart phone access, telemetry, automated delivery, vehicle connectivity, predictive resource planning, block chain and new technologies for payment, machine learning technologies and autonomous vehicles.
- Adapting existing freight infrastructure by resolving freight data share structures and protocols, identifying otherwise useable but underutilised warehouse space in metro Sydney.

### 3. Summary of Proceedings for RDA Sydney's Sydney Freight & Supply Chain Workshop

On the 20<sup>th</sup> July 2017, RDA Sydney in partnership with the Hargraves Institute held a Freight and Supply Chain Workshop at Sydney Motorsport Park, Eastern Creek with 60 key stakeholders from organisations such as Linfox Australia, Qube, Pacific National, NSW Ports, Moorebank Intermodal, Australian Logistics Council, Road Freight NSW, Sydney Markets, Sydney Airport, Qantas, Cathay Pacific, Sydney Metro Airports, Deloitte, GHD, University of Sydney, Western Sydney University, TAFE and local government representatives from Blacktown, Liverpool and Penrith .

The main initial objective of the workshop was to hear from key Australian and NSW government Transport and Planning agencies and NSW Ports. Mr Alex Foulds, Executive Director, Surface Transport and Policy Division, Department of Infrastructure and Regional Development, initially presented an overview of the *Inquiry into National Freight and Supply Chain Priorities* Discussion Paper. Participants then heard from Mr Damien Colclough, Executive Director Freight Industry, Transport for NSW about their process in reviewing the *NSW Freight & Ports Strategy*. Mr Mick Cronin, General Manager, Strategy & Commercial, NSW Ports then gave an update to the future challenges faced by NSW Ports, followed by Mr Garry White, NSW Chief Planner, Department of Planning and Environment who talked about how freight needs to be included into planning regarding the future of Sydney.

In order to encourage workshop discussion and debate, the participants were broken into relevant groups and given key questions to address in reviewing the *Inquiry's Discussion Paper*. The workshop format was as follows:

#### Session 1 Theme – Freight in Sydney – Is our urban freight system competitive across all modes?

- Group A – Sydney Urban Freight Systems – What is moving where, why and how?
- Group B – Competitiveness in the Australian freight sector

#### Session 2 Theme – National Critical Issues and Emerging Trends

- Group 1 – Urban Growth Pressures
- Group 2 – Airport, Port, Road, Rail, Intermodal Corridor Pressures – Protecting Land, Sea and Air Connections
- Group 3 – End to End Supply Chain Integration and Regulation
- Group 4 – The Air Freight Market
- Group 5 – Changing Technology
- Group 6 - Airport, Port, Road, Rail, Intermodal Corridor Pressures – Protecting Land, Sea and Air Connections

#### Session 3 Theme – Next Steps

All Groups Discussing:

- Capacity Forecasting
- Key Drivers of Change for Use in Scenario Planning
- National Freight Performance Framework

RDA Sydney's Submission to the Inquiry into National Freight and Supply Chain Priorities

## 4. Key Points from RDA Sydney's Sydney Freight & Supply Chain Workshop

The following summary report captures all the key questions, notes from discussions, and the key comments and recommendations from the workshop groups.

### **Session 1 - Group A Sydney Urban Freight System – What is moving where, why and how?**

#### **Questions:**

- a) Identify the major supply chains with respect to import/export, intra/inter domestic or urban freight being transported in and through Sydney. (Group A & B response)

**Workshop participants provided the following response:**

#### **Snapshot of Gateway to IMTs. From and to both Ports and Airport**

Product	1. Import/Export	2. Intra/Inter		3. Urban
FMCG (fast)	✓	✓	✓	✓
SMCG (slow)	✓	✓	✓	✓
Cars	✓	✓		✓
Primary products	✓	✓		✓
Capital equipment	✓	✓		✓
Industrial	✓	✓	✓	
Fresh Food	✓	✓	✓	✓

#### **Imports**

- Metropolitan destinations
  - 80% of imports to Sydney are destined within 40kms of Port Botany, although a component of these may be forwarded to regional areas
  - Main imports are white goods, electronics, building materials, cars (Port Kembla), bulk liquids.
- Rural destinations
  - 20% of imports
  - Same categories as above
- Interstate freight
  - In the context of interstate freight, there is a lot more leaving Sydney than what is coming into Sydney.

## Exports

- From Rural
  - 80% (estimated) but growing. This area is quite important in regards to a National Freight Strategy. With the advent of trade agreements in Asia, especially CHAFTA, exports out of Australia will continue to increase. A once dwindling export market is now being revived thanks to this trade.
  - Main exports are grain, cotton, meat, coal, wool, livestock.
- From metropolitan
  - 20% (estimated)
  - Cereals, building materials, waste paper,
  - Valuable exports via air freight make up 1% of total exports
- In terms of freight, 90% plus of rural exports are transported by rail. Metropolitan exports – majority are by road.

## Inter/Intra Domestic

- Industrial waste fluids
- The location of distribution centres impact on freight movements.
- Comment that sometimes goods that are listed for interstate air freight are actually transported by overnight road freight.

## Urban

- Urban freight is changing, particularly due to increasing population and the growth of online shopping.
- Container/retail sector movements and fuel
- Emerging bulk market – aggregate, waste and construction related materials
- Developments in the CBD and other parts of Sydney (constructions –buildings and roads) are generating new supply chains pre-fabrication construction associated materials that have to be moved in and out in large trucks.
- Intra state – domestic freight
- Waste is an issue, it puts pressure on the supply chain
- Freight vehicle dimensions are smaller for some, metro moves but as a result they travel more often.
- 35,000 freight and servicing vehicle movements per day in Sydney CBD – adding to this is the massive construction task taking place.
- Higher population density places more demand on goods and services. Goods now are being delivered to a mobile phone, wherever the customer is.
- Current supply chains – Freight east ↔ west e.g. going to Eastern Creek Warehouse/Moorebank Intermodal to be distributed to other parts of Sydney or NSW.
- Freight into Port Botany ← Up from Port Kembla
  - Out to Warehouses ↓↓↓↓
  - Distributed
  - By White Vans

## Sydney Airport

- Kingsford Smith Airport (KSA) in Sydney is Australia's leading international airport located 8 km south of Sydney CBD, in the suburb of Mascot. It is the primary airport serving Sydney, and is a primary hub for Qantas, as well as a secondary hub for Virgin Australia and Jetstar Airways with one international and two domestic terminals. Situated next to Botany Bay, the airport has three runways, colloquially known as the east-west, north-south and third runways.
- Sydney Airport is both the longest continuously operated commercial airport and oldest commercial international airport in the world, and the busiest airport in Australia, handling approximately 41,870,000 passengers in 2016, and according to Air Services Australia 326,686 aircraft movements in 2013. It was ranked the 38th busiest airport in the world in 2015.
- Currently serves 46 domestic and 43 international destinations directly.
- The current Sydney Airport Master Plan forecasts: [-Air freight volumes are expected to increase by 85%](#). The Sydney Airport is expected to move an additional 480,000 tonnes of air freight by 2029, increasing from 595,000 tonnes in 2009 to 1,100,000 tonnes in 2029.
- Total air freight is forecast to grow from 615,378 tonnes (2012) to 1,011,312 tonnes (2033) with an average annual growth of 2.4%.
- Majority of freight is shipped in belly-hold of passenger aircraft loose or in unit load devices (ULD) containers but with some international dedicated global freight aircraft.
- With respect to Import /export since 2013, Qantas Freight has operated the main onsite international cargo terminal (CTO) at Terminal 1, with a second CTO at Terminal 3 (previous Australian Air Express), as well as a dedicated Mail Handling Unit (MHU) and Express Handling Unit(EHU). Global ground handling company Dnata (previously Toll /Dnata) operates another onsite CTO in Link Road (adjacent SW of Terminal 1) (see [www.dnata.com](http://www.dnata.com)) Another global ground handling company Menzies Aviation operates another onsite CTO within Terminal 2 (See [www.menziesaviation.com](http://www.menziesaviation.com))
- Offsite there are up to 170 freight forwarders with some of the global companies such as DHL operating three offsite terminals in Mascot.
- Whilst some freight is delivered direct to / from CTOs, the majority of both import and export air freight is consolidated via international freight forwarders within aircraft containers or pallets. Import consolidated freight moves underbond (under control of the Australian Customs and Border Protection Service) and is deconsolidated at licensed premises. Upon statutory release at the consignment level, secondary delivery is arranged to the importer.

**b) From an infrastructure capacity and effectiveness point of view, what major ports, airports, roads, rail or intermodal freight infrastructure are currently employed for these supply chains and how well are they performing? What are the key priority issues?**

**Background**

Current **motorways** providing distribution access are M4, M5, M7, M1 and M2. Parramatta Road, Princes Highway, Hume Highway and Pacific Highway are also used as distribution corridors. Major arterials also play a key role in connectivity and include Pennant Hills Rd, Henry Lawson Drive, Milperra Rd and King Georges Rd. The M4, M5 and M1 are undergoing high levels of construction activity to expand capacity and at this stage contributing to the high level of truck movements and congestion due to the removal of soil and waste from the work sites. The major arterials which feed into the above mentioned motorways are at capacity and it is this on-route step that impacts the movement of goods and people on a daily basis.

**Port Botany** boasts a deep water shipping channel with a short transit to and from berth facilities. The port precinct also comprises bulk liquid and gas storage areas, empty container parks, container packing and unpacking facilities, transport operations, warehousing, Customs facilities and a truck marshalling area.

Infrastructure to and from the port includes road and rail access to all three container terminals and pipeline links to the bulk liquid and gas berths. The port operates 24 hours per day, seven days a week.<sup>1</sup>

**Sydney Airport** is the largest international and domestic air freight hub in Australia. Freight volumes are projected to approximately double by 2033. The vast majority of air freight at Sydney Airport is transported in the cargo hold of scheduled passenger airline services. Exports from Australia are dominated by fresh, chilled or frozen perishables such as meat, seafood, fruit, vegetables, flowers, livestock and manufactured goods. International imports are typically high value manufactured products such as computers and car parts.

According to ARTC's Sydney **Metropolitan Freight** Strategy 'the Metropolitan Freight Network (MFN) is the core of the Sydney freight system. It extends from Lidcombe / North Strathfield in the north to Sefton Park Junction in the west and Marrickville in the south / east. This network is double track and dedicated to freight (though it shares a corridor with passenger trains on the Bankstown line)...The northern line extends northwards from an interface with the MFN at North Strathfield, effectively to Broadmeadow in central Newcastle where it connects to the ARTC Hunter Valley network. This line is dominated by passenger services, particularly as far as Berowra.' The Botany Line connects with MFN at Marrickville, whilst the Western Line interfaces with MFN at Lidcombe, this line also faces limitations as curfews are imposed in peak periods due to passenger rail prioritisation. The Southern Freight Line connects with MSN at Sefton Park Junction and goes beyond Macarthur.

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<sup>1</sup> Port Botany Website <https://www.nswports.com.au/ports-and-facilities/port-botany/>

**Planning is underway** for future freight corridors, including Western Sydney Freight Line, Outer Sydney Orbital and the Western Sydney Fuel Line to service the Western Sydney Airport.<sup>2</sup>

**Intermodals** employed in the freight task in Sydney are Yennora, Enfield, Chullora, Cooks River, Moorebank, Leightonfield and Macarthur.

***Workshop participants provided the following response:***

- The majority of freight is transported by road in the Sydney metropolitan area, the road system is a catastrophic failure which needs to be confronted and resolved.
- We need to understand where the markets and the pathway of freight are so we can put into place strategies that respond to supply chain needs.
- Port Botany has constraints on its capacity due to residential encroachment, as stated previously freight in Sydney is usually transported by road there is a need to have effective corridors (rail and road) from Port Botany which includes connection to WestConnex.
- Further understanding and management of the last mile is important, especially as we are facing growth in population, densification and changing purchasing patterns (1 in 5 persons has a delivery per day).
- There is a need for improved 24/7 access to roadways and delivery loading areas to fulfil the freight task.
- We need to use the infrastructure we have to its full capacity, this includes night time usage rates, dedicated freight lanes for road (like T-ways) and rail.
- Land use planning processes should have a compulsory requirement to conduct a risk analysis of any proposal on the impact of freight movements with an obligation to addressing outstanding issues.
- It is essential that space is preserved for freight e.g. the potential IMT at Eastern Creek needs to ensure land buffer zones and corridors are preserved for future use.
- An example from a participant was UPS which is 6km from Trafalgar Square in London where they use an electric fleet to deliver around London. London's Transport Strategy is called Air Quality Strategy.
- Land banking and corridor protection involves different dimensions, that is, how it is going to be built and managed and what is the broader vision not only for that singular piece of infrastructure but for the whole region.
- When planning for the Western Sydney Airport serious consideration and strategy implementation must be given to freight as well as passenger management.
- To achieve an effective freight and supply chain system in Sydney we need a broader whole of government infrastructure strategy that takes into consideration the freight task. At this stage many of the local government plans do not consider the ramifications of their decision on the movement of freight and people.
- There needs to be a concerted effort made to educate the general public about why it is so important to them that we get the management of the freight task right, otherwise our city will be in gridlock and their desired on-demand buying patterns cannot be achieved.

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<sup>2</sup> Transport for NSW *Freight Report Card A Snapshot July 2017*

### c) What changes will be needed and progressively implemented in order to make these supply chains work better?

#### **Planning**

- Land use planning needs to be supportive of logistics and the role of freight to support future land uses – integrated transport and land use planning needed.
- There is no certainty. Anything can be built with the right pressure from stakeholders, a more integrated and coordinated approach to planning for supply chains is needed.
- Allocating land for specific purpose along train lines, if there is scarcity then government can intervene.
- Corridor optimization.
- Sighting of future IMTs to connect effectively.
- Focus on white van last mile – planning perspective think through solutions e.g. encouraging usage of underutilised infrastructure
- Getting outer Sydney orbital in place early & responsive to needs
- Having institutions and processes in place to deliver when needed. We still need to work out how to make freight more efficient, how to plan the system for that. At the moment there is a fragmented approach leading nowhere.

#### **Regulation**

- There are too many bureaucratic layers now which is only hindering effectiveness.
- B triples vehicles access to motorway
- Freight efficiency is an outcome not a consideration.
- Recognition of government's role and supply chain interventions

#### **Agglomeration**

- Opportunities for business agglomeration are needed, for consolidation of industry in order to achieve more effective freight
- There is a need to consolidate industry major freight generation activities into one precinct. The system is far too fragmented now.

#### **Infrastructure**

- Dedicated freight line to WSA
- Intermodals such as Moorebank are good but certainly not sufficient. We need many more.
- Scalable level of hubs infrastructure are needed in order to support hubs
- The development of demand-management mechanisms
- Using existing infrastructure - example Goulbourn St car park – using as freight port (small scale) then distributed by bikes.
- Dedicated freight lanes along major arterials – like T-ways.

### **Community Engagement**

- Marketing campaign about freight but not about freight – engagement strategy/ Freight is Everybody's Business.
- Using art to humanise freight (works of art needed in major supply chains) e.g. Guido van Helson painted portraits of Manildra locals on the side of freight train wagons.

### **Human Capital**

- Labor access and supply, aging workforce are affecting logistics industry.
- Upskilling to be encouraged, and note numbers and availability of foreign students at WSU.
- TAFE trainees that are licensed in warehousing are in demand.
- WSU – funding cuts – no longer providing courses in logistics – Are we educating the next gen to work through the solutions?
- Productivity - Training for workforce development

## **d) What data gaps are you aware of in relation to Australia's freight and supply chains?**

### **Freight**

- Knowing about the freight, not the vehicle, understanding the freight movement whole journey.
- With Journey and freight fragmented task – there is limited knowledge so we get a lack of supply chain visibility.
- Data compilation in heat maps of freight movements at LGA level.
- Visibility of vehicle movements for industry.

### **Infrastructure**

- Depots in the community: what freight would generate?
- Identify and map choke points
- Causal analysis of bottlenecks
- Customer expectations and views need to be understood.

### **Technology**

- Visibility of data for informed planning (NSW, Australia, neutral body to overcome commercial information barrier). Operational efficiency improvements. Customer service improvements.
- TfNSW evidence based data e.g. Sydney CBD loading zones – white van data what they are doing / 27% sample of CBD loading zones.
- More data is required for last mile urban freight for example the Luxemburg Institute for Science and Technology introduced a Smart Cities Logistics – developed as part of the Last Mile Logistics (LaMilo) project. Currently the tool gathers data relevant to urban freight deliveries for London, Brussels and Luxemburg. See Link: <http://www.lamiloproject.eu/smart-city-logistics/>

## **Session 1- Group B Competitiveness in the Australian Freight Sector**

### **Questions:**

- a) Identify the major supply chains with respect to import/export, intra/inter domestic or urban freight being transported in and through Sydney? (Refer to Group A & B combined response Page?)
  
- b) From an urban freight system capacity and efficiency point of view, how internationally competitive are our major ports, airports, roads, rail or intermodal freight systems and how well integrated are they? Taking each supply chain individually, how well integrated are they and how are they performing? What are the key indicators which tell us this?

### **Background**

**Port Botany** is one of two Australian container ports in the world top 100, however its Port charges are at the higher end of the international scale. It has road, rail and deep water access.

**Sydney Airport** is both the longest continuously operated commercial airport and oldest commercial international airport in the world, and the busiest airport in Australia, handling approximately 41,870,000 passengers in 2016, and according to Air Services Australia 326,686 aircraft movements in 2013. It was ranked the 38th busiest airport in the world in 2015. Currently serves 46 domestic and 43 international destinations directly.

**Workshop participants provided the following response:**

### **Port Botany**

- Our ports are very competitive in terms of technology
- We are not competitive in terms of labour and fuel costs
- A general point is that there needs to be a recognition of the cost to the whole supply chain when new or increased charges are introduced.
- Infrastructure surcharges reduce competitiveness
- Data integration is very limited at present. It is estimated that data entry for a single import container must be re-entered up to 32 times, in disparate systems, during a single freight movement.
- Dominated by Imode (Road) - Does it matter if this is the case?
- Problem is that rail is not efficient; Rail is less competitive due to adhoc organisation – need to increase scheduling
- Companies will continue to prefer road while investment in road infrastructure.
- Underutilising assets

### **Kingsford Smith Airport KSA**

- As an international airport KSA is located in the eastern part of Sydney very close to the CBD, but in many cases a long way from the industrial areas of Sydney and the leading supply chain freight generators.
- By comparison with Melbourne/ Brisbane, distance and time for travel within Sydney, truck congestion and accessibility to Freight terminals are major issues with respect to efficiency.
- Premises for most freight forwarders and third party shippers are located within 5km of airport.
- Access to Cargo Terminal Operators (CTOs) can only be achieved by road (but not semi-trailers)
- Qantas freight services 17 airlines, handling outbound 7500/10,000 Tonnes/week from KSA
- CTOs onsite- lack bonded storage, staging facilities for building up and breakdown for freight and refrigeration.
- With better facilities and efficiencies Melbourne airport exports outbound more perishable food exports (Higher Value) shipments compared with Sydney.
- Lack of larger scale high-tech single common user CTO facilities is causing unnecessary double handling and precludes in many cases end-to-end supply chain integration physical and communication system integration between forwarders, global CTO operators, and shippers and the airlines themselves. Use of robotics and high speed automatic sorting facilities not being used to the extent it could by comparison to Hong Kong, Singapore and Dubai CTOs.
- Recent issues with US TSA Screening individual shipment requirements is placing increasing pressure on the system .The examination of air cargo is the responsibility of approved Regulated Air Cargo Agents (RACAs). These are freight handling forwarding businesses that have both that capacity and capability to examine export air cargo in accordance with the Air Cargo Examination (ACE) program at CTOs or the Enhanced Air Cargo Examination (EACE) program at CTO's offsite.
- Due to the increasing volume of import airfreight and limitations of on-airport space, two cargo terminal operators (CTOs) - Qantas Freight and Dnata - have taken initiatives by successfully introducing "off-airport" CTOs. A by-product of this initiative has been to ease traffic choke points at Sydney Airport with freight forwarders taking delivery of consolidated cargo at off-airport locations in a model that is not too dissimilar to the intermodal terminal concept being promoted in the sea cargo environment.
- CTO facilities managed by Qantas Freight and Toll Dnata are on short-term leases only, as the land occupied by these CTOs is apparently earmarked by the SACL masterplan for further passenger terminal expansion. Concern is that \$30 million expansion needed for onsite CTO expansion – what about the risk? Who will pay?
- Inefficiencies in present KSA cargo facilities and operations system require forwarders to accept freight 5 hours instead of 3 hours.
- Curfew, urban encroachment and noise restrictions do restrict overnight operations at KSA.
- With 24/7 operations at Canberra and Brisbane West – Wellcamp, CTO operations better than KSA with a concierge *end-to-end* approach that is working.
- Current regional aircraft movements at KSA at 10-15%. If more regional flights could go to Bankstown Airport this would free up to 20 more freight aircraft flights per day.
- Currently Qantas freight outbound is filling 75% outbound capacity. Issue is volume not weight. By 2019 volume capacity could be exceeded. In any 40 ULDs 36 low value and 8 high value.

- University of Sydney (USYD) advise that they are keen to develop agricultural export market to Asia with high value processed meat products from Goulburn with new high tech robotic processing plants adjacent near WSA. As is the case with Wellcamp airport these air freight supported supply chains will only work with a very cost effective timely and efficient perishable cargo terminal such as in Changi Singapore.

#### **Bankstown Airport**

- Bankstown airport supports helicopter rescue, flight schools and commercial and regional airline flights. There are with restrictions over number of flight movements and size of planes.
- Toll operates a 24/7 Toll parcel freight terminal.
- Masterplan currently restricts potential growth for regional airline flights.
- Bankstown airport is adjacent to the M5 midway between KSA and the new WSA. There is still significant industry potential adjacent to develop a Bankstown/Milperra strategic growth centre supported by the East Hills rail link to KSA and also new MRT North shore/City Bankstown rail link.

#### **c) What are the key priority issues?**

- Shifting more freight movement to off peak
- Improve productivity through further rationalization of industry
- Top priority is improving landside cargo efficiency at port
- Investment in infrastructure is vital.
- There needs to be streamlined cooperation between agencies when, in the case of infrastructure, several agencies agree to support a new project but then another agency disagrees for its own reasons. There needs to be a common purpose. The majority of examples of this occurring in NSW are within TfNSW and the NSW Department of Planning where issues such as Heavy Vehicle Class 2 permits are allowed through the NHVR, Local Road Owners (such as Bayside Council) and NSW Ports owned roads but denied through the State Agency owned roads.
- NHVR should have the power, where it is deemed to be of 'state significance' (similar to the past State Significance Planning powers that Sydney Ports Corporation held) to override state or local objections, if unfounded.
- Other examples of this occur at last mile delivery points, due to curfews and weight restrictions. This shows misalignments between Federal, State and Local authorities.
- Reducing overhead costs can help to improve productivity of freight infrastructure. Case of Moorebank Intermodal that has plans to be carbon neutral in its energy requirements.
- Leading-edge successful international airports such as Singapore, Dubai, Hong Kong and Incheon are helped and supported by government as a key economic platform and driver for the aims and objectives for growth of the country's national economy. For example current and future plans for Changi airport are built around the future economic plans for Singapore, and include the total experience for passenger and freight customers.
- Lack of long term freight strategy for international airports. KSA, Federal and NSW Government as part of their respective industry and innovation policies, need to work together with SACL, airlines and air freight industry to develop a long term freight strategies for KSA and a future WSA precinct. This strategy needs to be built on the premise that it is in

the national economic interest to have efficient and effective airport infrastructure and operational systems.

- It is essential that the NSW government and Sydney Airport closely engage with federal statutory authorities, CTOs and freight forwarders as a part of any long term planning to take into account commercial interests, fundamental operational requirements and to co-ordinate overall road management issues both to and from and around the airport.
- Air freight and logistics must once again be seen as core business for airports.
- Primary function of airport managers should be to manage their facility as an airport and promote aeronautical operations for the benefit of Australia's economy and population.
- We agree with industry, that that regulators and airport managers alike realise that ground handling and global forwarding businesses like Dnata and others provide aeronautical services that are vital for the community and necessary to ensure the profitability of airline operators.
- We suggest that more regulatory oversight and scrutiny currently be applied to airport owners by the Productivity Commission and Australian Competition and Consumer Commission to ensure better representation.

**d) How important are freight costs and freight movements to business competitiveness? Are regulatory factors affecting productivity for business? How could each of these be improved?**

- Price of land undermines viability of IMTs
- Data sharing across network
- As mentioned above, with differing road permits affecting last mile deliveries, the regulatory burden causes confusion and extra costs within the supply chain.
- The NHVR is either reluctant or does not have the authority to enforce common approvals, still having to go to each road owner for approvals. This process was in place prior to the NHVR and the only change is now, the NHVR acts as the conduit for industry.
- This group called on the National Freight Strategy to recognise this regulatory constraint and to enact the NHVR, where there is a business case, to enforce jurisdictions to approve permits. This was what industry thought would occur with the NHVR, but it has not.
- Freight costs, air freight and logistics must be core business for airports On the basis that there are two clearly identifiable users located on airports, namely businesses that support aeronautical operations and others, we agree with the *Toll Group submission to the Productivity Commission in 2011* that regulators and airport operators alike should support mechanisms that not only monitor, but also enhance the relationship between airport managers and aeronautical businesses and allow for genuine negotiation and dispute resolution.

## **Session 2 – Group 1 National Critical Issues and Emerging Trends – Urban Growth Pressures**

### **Questions:**

With respect to planning and urban growth in Sydney:

#### **a) What are the key issues for the freight industry and freight movement?**

- Cranky residents
- Task of achieving urban growth vs achievement of growth are two different scenarios
- Congestion
- Difficulties getting to work
- Pressure on budget – got to have infrastructure
- WSU bringing campuses closer to infrastructure
- 30 min city concept
- The discussion has been typically been about big icon infrastructure projects like Moorebank, Inland rail or an airport. In many cases for urban freight it's a series of little things that contribute to a bigger vision. This doesn't need to be a minister's statement that they are going to build a xyz, but it needs to be an outcome orientated iconic statement. " We will reduce congestion and improve the efficiency of urban freight by x percent in the next 10 years".

#### **b) With 85% of imported TEU containers consumed within 40km of Port Botany, how can we increase the use of rail by maximizing the efficiency of port to road/rail intermodal terminals?**

### **Background**

The following information was presented at the workshop by the General Manager Strategy and Commercial NSW Ports. It highlights the **current issues** confronted by Port Botany in maximizing the efficiency of port to road/rail intermodal terminals:

1. *Ports and port-related infrastructure (i.e. major roads, freight rail and pipelines) being operationally compromised by sensitive use developments (e.g. residential encroachment) e.g. Warehouses in the Port Air development (Hale St) are restricted from operating 24 hours, 7 days a week including restrictions on truck numbers and frequency; Customs / Border Security development relocating from Denison St; higher density development along rail freight lines and intermodal terminals.*
2. *Caps / limits and restrictions continue to be imposed on port-related infrastructure e.g. Enfield Intermodal Logistics Centre; Moorebank IMT; potential restrictions on road access via Denison St due to Bunnings development.*
3. *Ad hoc Planning Proposals and requests for land use rezonings before broader strategic planning work has been completed e.g. Masters Development; Southern Precinct of the Enfield Intermodal Logistics Centre; Bay and McFall Streets, Botany rezonings including additional container facility restrictions in Three Ports SEPP.*

4. *Road congestion along Foreshore Road (mainly private / light vehicles).*
5. *Lack of supply of sufficient suitability located and operationally unconstrained employment / industrial lands, in proximity to Port Botany, to cater for the forecast trade demands of NSW. This includes allotment sizes e.g. continued subdivision of Ixom (Orica) lands; 124 ha of industrial land rezoned in Southern Sydney Employment Lands Area.*
6. *Industry investment being reviewed due to perceived risks in being able to grow throughput through the Port, including operating restrictions and impediments to road access. E.g. Denison Street Risk Study; Vopak bulk liquids facility.*
7. *Local community and residents are not being informed of the likely amenity impacts associated with living in proximity to ports, intermodal terminals and port-related infrastructure (roads and rail) and are not being required to adequately mitigate against port-related impacts e.g. noise complaints received from residents located 2km from Port.*

The **way forward** in resolving these issues are:

1. *Compromised planning outcomes between industrial and residential uses fails both industry and residents. We need a sustainable land use **planning solution that allows industry to operate and expand** in order to increase economic activity and jobs.*
2. *We need a planning regime that facilitates **freight as a priority**. Freight needs greater recognition in planning at a state and local government level including the Sydney Metropolitan Plan and District Plans.*
3. *The planning system needs to **recognise that the current operational environment will change** (particularly 24/7 operations) and therefore impacts could intensify including amenity impacts on sensitive uses.*
4. ***Retention and protection of industrial and employment lands** are required including minimum allotment sizes for industrial lands.*
5. ***Top down support** with the Department of Planning & Environment is required to achieve these outcomes.*

**Workshop participants provided the following response:**

- Should the cost of goods include a cost of the time based perspective?
- Should there be a 30minute rule applied to the freight task – what is the benchmark? e.g. the time for Woolworths truck from Eastern Creek at night is half the time it takes during the day
- Staggering other tasks e.g. staggering school starting times like Singapore.
- Focusing on the 7-9.30am period – management of tasks
- Keeping freight marginalised will just exacerbate the problem
- Protect intermodal space / protect capacity of existing Ports/ Airports & intermodals (mostly in the eastern city).

**c) How can we better prioritise passenger and freight services in and through Sydney in the most effective manner possible?**

*Unanswered*

**d) How are our cities and supply chains being impacted by changing consumer behaviours such as online shopping?**

- Freight & servicing tasks could be done at a local government or precinct/ building level – Freight Servicing Plan.
- Output based – Business Case / proposal think laterally. (Industry design – ask the tricky questions – and they provide a collaborative model).
- Rail is not an urban freight solution
- Business Improvement Districts (London) reduced number of garbage trucks in the CBD through collective procurement.

**e) How can we improve community engagement – ‘Freight is Everybody’s Business’?**

Freight education process (not using the freight word)

**f) What are the critical last mile issues you face in urban areas?**

- Protecting existing infrastructure dedicated to the freight task – corridor preservation/land use planning.
- Make use of existing capacity (100%) / timing
- Looking at freight efficiency
- Alternative suggestions →drones, waterways, not using roads.

**Session 2 – Group 2 – National Critical Issues and Emerging Trends Airport, Port, Road, Rail, Intermodal Corridor Pressures – Protecting Land, Sea & Air Connections**

With respect to [planning](#), [urban growth](#) and community expectations in Sydney:

**a) What problems do you face, or expect in the future to face, moving freight through airports, land or sea ports in Sydney?**

- Competition with other land use
- Access to airport is difficult
- Councils can restrict movement of freight through their areas

- Curfews
- Congestion – road congestion creates huge problems for fleet planning with huge time variations in travel day-to-day.
- Workforce travelling to the ports/airports creates its own congestion issues. Both Sydney Airport and Port Botany have significant numbers of employees and contractors who need to get to and from work each day, with no real public transport options – in the case of Port Botany.
- Employment lands near the airport/port have reduced greatly and been converted to residential. This means that distribution centres are pushed further away and goods must be transported to these centres. Creates greater congestion.
- Particular issue of congestion around ports, which is bought on by passenger vehicles, not port related vehicles.

**b) With 85% of imported TEU containers being consumed within 40km of Port Botany, how can we increase the use of rail by maximizing the efficiency of port to road/rail intermodal terminals?**

- This is already happening – look at Moorebank!
- Need to increase rail capacity through duplication of railway lines to improve slot availability.
- At the port level there are inefficiencies in the loading process that lead to delays in the port to rail function. The stevedores lo/lo rates are below industry standards and at the same time, utilisation rates (the capacity of the trains in and out) are also below standards. This in affect does not drive stevedores to increase their lo/lo productivity.
- There could be dedicated shuttles of freight with specific stevedores who have vertical integration – Rail Operations Coordination Centre.
- There needs to be a centralised coordination function, who can dynamically schedule trains. The CMCC / TfNSW Rail Operations Coordination Centre was supposed to do this function and whilst they are collecting valuable data, it has not started ‘coordinating’.

**c) How do we protect the major freight corridors and land for future freight infrastructure and adjacent land near ports, airport and intermodals for future freight infrastructure?**

- There needs to be consensus and coordination between the 3 levels of government to designate, plan and protect corridors. This has to also go through all the various departments at each level, who impact freight.
- Unclear how much corridor preservation has already/is happening for the Badgerys Creek and Eastern Creek intermodals.
- Noted that structure plans for priority growth areas will be released in late 2017 and these will contain employment lands and corridors in Sydney.

**d) What actions need to be taken now in planning for a new WSA airport?**

- Fuel corridor
- Rail corridor/s
- Heavy vehicle strategy including Class 2 Permits.

- Preserve site for Badgerys Creek intermodal

**e) How do we further increase Sydney landside TEU container capacity in line with projected major future growth in Greater Western Sydney and accommodating bigger ships?**

- Port Botany is already able to cater for larger ships. However, cranes may need to be retrofitted, to extend further, for loading/unloading.
- Demand for 15,000 TEU ships is not there. That is, we don't have enough imports/exports to warrant larger ships.
- Missing link of port connection in WestConnex. This needs to be there to facilitate increased capacity.
- M9 orbital is important to facilitate container movements that by-pass Sydney.

**Session 2 – Group 3 National Critical Issues and Emerging Trends End to End Supply Chain Integration and Regulation**

**a) How effective are our supply chains at transitioning freight between modes and across boundaries?**

- Current integration is Really Bad!!!!
- Need data standards to enable integration across the supply chain; i.e. mode to mode, carrier to carrier.
- Data integration – public or client focused
- How do we implement a common approach across the community?
- Data should be technology 'Agnostic' and useable across multiple systems
- Incentives for take up

**b) What regulations need to be dealt with in these supply chains?**

- National consistency of regulation of road transport

**c) How many of them could be simplified?**

- Use of Digital technology to reduce compliance obligations, reporting and enforcement

**d) What changes could be implemented to improve the problem of empty containers?**

- Where do we start?
- Containers follow industry – need more exports to back fill
- What industries will be around
- If there is to be a manufacturing/ logistics industry shift from Homebush to further west need to model transport implications.
- What is industry thinking i.e. Location & investment

- Do we need incentives – make land cheaper?
- Identify and nominate areas that will be required for expansion and tell community
- Within a strategic vision build system that has an incremental change focus with - plan do check review.
- Implications of new initiatives/ technology on current transport arrangements – e.g.: 3D printing, new vertical housing arrangements – urban farms, e commerce.
- Need to be able to adjust to changing community environmental expectations
- What will be the impact of ecommerce on transport & logistic demand internationally and domestically?
- IT Megatrends – 30 years is a long time in a rapidly changing world
- Will Australia benefit from the ↑ Silkroad
- Current data sets makes it hard to assess how we are going!

## **Session 2 – Group 4 National Critical Issues and Emerging Trends - *The Air freight Market***

### **a) Are Sydney's airports at KSA and Bankstown appropriately integrated into the surrounding freight networks?**

#### **KSA**

- motorways under pressure for extended peak hour periods AM/PM
- No KSA – 100% accessible by local roads which are congested most of the time. General Holmes Drive, Eastern Distributor and M5.
- No semi-trailer access to onsite CTOs
- Most of the 170 freight forwarders have to operate from relatively small premises within 5 km of the airport at Mascot, Matraville and Botany with limited space.
- Larger global companies such as Toll, DHL and Fed Express have large premises in Western Sydney but need to double handle in gaining access to the onsite airport CTO's
- Unlike Dubai, Hong Kong and Singapore there is no high-tech larger scale common- user CTO terminal

#### **Bankstown Airport**

- Bankstown is strategically located to industry in Western Sydney adjacent to Enfield, Chullora and Moorebank freight precincts
- Bankstown has Toll parcel freight with smaller Turbo prop planes.
- Accommodates limited Regional commercial passenger & freight distribution through charter flight services
- Parcel Freight / Loose

**b) Do they have sufficient landside freight support infrastructure and facilities? How well are they are operating? What are the priority issues?**

KSA (See more extensive comments for Session 1 – Group B (Airfreight))

- No, by comparison to other international airports such as Changi and Hong Kong
- Current 3 CTO's have limited space onsite and too far from airlines, but with insufficient certainty from long term leases to invest in appropriate scaled high technology cargo handling solutions
- CTO's do not have sufficient shipment build-up/breakdown staging, bonded and refrigeration storage facilities 3x 6-7 ULDs → 21 ULDs compared with 100-200 ULD storage in HK and Singapore. ( See later comments in (d) on Pharmaceuticals and perishable foods)

**c) Are there any international examples of where airports are used more effectively in freight networks?**

- Yes -there are for example Hong Kong, Singapore, Dubai, Frankfurt, and Incheon and also Dallas Fort Worth. In each case all of the airport services are more integrated into a total system- seeking value across all aspects with respect to customer experience. Concern raised that Sydney Airport SACL is not looking overall at the systems for the future but only at immediate revenue returns.
- [Hong Kong Air Cargo Terminals Limited](#) (Hactl), Hong Kong's largest independent air cargo terminal operator, manages Super Terminal 1 at Hong Kong International Airport, which is the largest single multi-level air cargo terminal in the world. In 2016, Hactl handled 1.65 million tonnes of air cargo, representing around 40% of air cargo throughput at Hong Kong International Airport. In addition to physical cargo handling, the company also provides an extensive range of value-added customer services, including freighter ramp handling, documentation handling and crew transportation. It serves around 100 international airlines and 1,000 freight forwarders. Jardine Pacific has a shareholding of some 42% in Hactl. In addition, through its wholly-owned subsidiary, Haxis, it operates cross border trucking services to the Pearl River Delta.
- [Changi Airfreight Centre](#) - The Air Cargo Division of the Changi Airport Group manages the Changi Airfreight Centre located in the north of the airport premises, the airport handled 1.81 million tonnes of air cargo in 2012, making it the 7th-busiest airfreight hub in the world and the fifth-busiest in Asia. Due to Singapore's large electronics sector, electrical components constitute a significant part of the total cargo traffic handled at the airport, although it has initiated attempts to diversify into the perishable air cargo market Future-ready Infrastructure
  - Supporting one of the world's busiest airports for international air cargo are dedicated developments that are built with a bright future in mind.
  - Over 70 hectares of Free Trade Zone
  - 3 million tonnes of annual handling space
  - Over 100,000sqm of warehouse and office space
  - 2 runways, each 4km in length
  - 14 dedicated freighter parking bays

- Over 30 remote bays
- A380 and B747-8s ready
- 24 / 7 operations
- Round-the-clock efficient customs operations
- 2 dedicated cool chain handling facilities
- Changi Airfreight Centre
- With Airfreight operations consolidated here, a 24-hour Free Trade Zone allows transshipment cargo to be broken down and reconsolidated with minimal customs formalities.

See <http://www.changiairport.com/corporate/partner-us/cargo.html>

- Dallas Fort Worth International Airport (DFW) has been designated an 'e-airport' having become fully electronic airway bill (e-AWB) compliant as designated by the International Air Transport Association (IATA). To qualify as an e-airport, the majority of airlines and cargo handlers had to adopt e-AWBs. Companies are using technology to streamline documentation and e-AWBs increases speed and productivity, improved security, enhanced customer service and environmental benefits, by replacing 30 different paper forms. See [www.dfwairport.com](http://www.dfwairport.com)

#### **d) Can Australia be making greater use of air freight to meet new market fulfilment opportunities in North Asian markets?**

- RDA Sydney's Strategic Industries Report includes reference to Austrade's latest market reports on e-commerce in China and supportive reports from the Airbus and Boeing indicate the potential future growth in disposal income in China and India, and the current demand online for high value branded products such as pharmaceuticals, food, clothing. International companies are seeking to locate their investment in countries so as to fulfil those markets. Sydney and Australia has an opportunity to win business in those markets, but to do so must have efficient and effective low cost airfreight. Australia has available outbound air freight space.
- In the abovementioned report RDA Sydney interviewed FIAL, Export Council of Australia, food and nutrition product companies, the medical device and pharmaceutical industry associations who all complained about landside costs and inefficiencies, and regulatory costs, with air freight out of Sydney.
- As an example - *Changi Airport joins Pharma. Aero* – an organization focused on improving pharma handling and quality in the air cargo industry worldwide. Founded by Brussels Airport and Miami International Airport, Pharma. Aero aims to achieve a reliable end-to-end air transportation for pharmaceutical cargo by fostering collaboration between CEIV certified airport communities. Pharma. Aero will focus on pharmaceutical shippers and all industry stakeholders who embrace the IATA CEIV programme. Other members who have also joined the organization include Sharjah Airport, Singapore Airlines Cargo, Brussels Airlines and Brinks Life Sciences. Several pharmaceutical shippers such as UCB and Pfizer have welcomed the initiative and will give their guidance and active support in the projects with the other members of the organization.

### **Benefits to the Singapore air cargo industry**

Pharmaceuticals is one of the fastest growing cargo segments at Changi Airport. Between 2010 and 2015, pharma throughput at Changi grew at a CAGR of 13%.

Global spending on pharma cold chain logistics is projected to grow at 8-9% per year, totaling US\$16.7 billion by 2020, according to Pharmaceutical Commerce. Asia is expected to account for the largest regional share growth with more than \$1.2 billion of cold-chain growth through 2019. With more than 6,800 weekly flights connected to over 330 cities in 80 countries, coupled with state-of-the-art temperature-controlled facilities within a 24/7 free trade zone, Changi Airport is well-positioned to be the preferred gateway of pharma cargo in Asia. They are also the first airport in Asia to embark on a community approach for the IATA CEIV Pharma certification, thereby raising the local community's handling standards and capability for temperature-sensitive pharma cargo.

### **e) What changes should be planned for the new airport at WSA to best integrate with the surrounding GWS freight hub, and at KSA and Bankstown to improve inbound and outbound domestic and international freight?**

- Plan now for airport for future capacity when WSA is operating 80 million passengers and freight at say 2 million tonnes per Annum (Changi now).
- Visit overseas airports and get expert assistance from international global forwarding companies in such countries as Singapore, Dubai and Hong Kong in designing the equivalent common user high tech CTO systems and attached quarantine bond stores, refrigeration perishable cargo complexes and adjacent business parks.
- Design this WSA freight airport precinct to fit with other current and planned intermodal and freight precincts and transport links in GWS.
- Identify the necessary Road /rail transport corridors
- Identify future high tech industries that would benefit from new age airport. Masterplan to fit.
- Identify adjacent land to WSA for high tech robotic style agribusiness and manufacturing businesses where reverse fulfilment from Sydney to Asian markets can be support with new high tech supply chain logistics and efficient airport freight terminal.
- Keep abreast of international cargo workshops such as Frankfurt *Air Cargo Innovation Lab 2017* to explore, debate and discuss the latest innovations in the sector and understand what the future of air cargo logistics will look like.

## **Session 2 – Group 5 National Critical Issues and Emerging Trends *Changing Technology***

**a) What emerging technological trends do you think will impact on our current and future supply chains in Sydney?**

**Most Important:**

- Smart phone and mobile computers, universal access to devices. Public and Private.
- Telemetry
- Automated delivery, e.g. Australia Post (i.e. 'last mile' and 'white van' services).
- Vehicle connectivity
- Predictive resource planning (dispatch e.g. know what customers will order in advance). Data sharing protocols.
- Block chain and new technologies for m2m business decisions and payment
- Warehousing robotics and implications for people and jobs
- Distribution platforms e.g. Uberisation and Amazon. Understanding the dynamics of 'Uberisation' of freight dynamics in the next 5 years.
- Machine learning technologies

**Important:**

- Immediacy of information and fulfillment
- Autonomous vehicles and UAV's
- Real-time visibility of vehicles
- Scanning and technology
- Data standards
- VR in cab and warehousing
- Human and machine interface management

**b) When are these impacts likely to be felt and how does Australia's freight infrastructure need to be adapted to make the best use of likely changes?**

- Impacts are being felt now and will continue.
- Adaptions to be made include:
- Resolving freight data share structures and protocols to ensure robust use of these resources.
- Identify useable warehouse space and optimize loading space for operations.
- Vacant and underutilized space exist in metro Sydney.

**c) Do you feel you can make use of the technology you need?**

- Yes, but the internet of things does give predictive fulfillment.
- *Innovation in Unmanned Aerial Vehicles (UAV) and 3-dimensional printing.*
- Trend for their usage is coming but will be in longer term to be taken up more widely.
- 3D printing has specialized opportunities and can provide rapid delivery options e.g. medical treatment and emergency services.

## **Session 2 – Group 6 National Critical Issues and Emerging Trends Airport, Port, Road, Rail, Intermodal Corridor Pressures – Protecting Land, Sea & Air Connections**

With respect to [planning](#) and [urban growth](#) and [community expectations](#) in Sydney

### **a) What problems do you face, or expect in the future to face, moving freight through airports, land or sea ports in Sydney?**

- Capacity: Both ports and airport are going to reach capacity in the foreseeable future, rail operations do not currently have the efficiency. The more cost effective you make the system to the user the better.
- Shipping lines can influence and are a stakeholder but not brought into the discussion.
- Local road infrastructure around the port is not appropriate causing time restraints in operations.
- Ownership needs to exert control over infrastructure. A management model with coordination, with regulatory tools for proper behaviour and delivery efficiencies is much needed.
- Currently there is no relationship between rail operators and stevedores (access, fee) so the market is sorting this out. Getting more volume to the port in a shorter timeframe is needed. There is limited capacity within the port to do that. Infrastructure? Amenity? Road infrastructure?
- There is a lack of ability of users to take volume *en mass*. Inability to plan for the last mile, there is a need for balance between supply chain efficiency and customer demand.

### **b) With 85% of imported TEU containers being consumed within 40km of Port Botany, how can we increase the use of rail by maximizing the efficiency of port to road/rail intermodal terminals?**

- Making rail more cost effective
- Road pricing is needed.
- Co-locating freight and warehousing intermodal terminals. More intermodal capacity needed close to the roads.
- A direct rail, getting rail access to Eastern Creek (dedicated freight)
- Getting shipping lines on board to drive the empty containers market to rail.

### **c) How do we protect the major freight corridors and land for future freight infrastructure and adjacent land near ports, airport and intermodals for future freight infrastructure?**

By planning land acquisition explicit for freight

**d) What actions need to be taken now in planning for a new WSA airport?**

Planning for freight considerations, planning for infrastructure, drawing on the lessons learnt, or from the mistakes made at KSA in terms of constraints and restrictions.

**e) How do we further increase Sydney landside TEU container capacity in line with projected major future growth in Greater Western Sydney and accommodating bigger ships?**

The question is, is the system able to carry increased volumes? The port operates 24/7 but not the rest of the systems. The answer is rail as it has the capacity to move containers faster.

## **Session 3 – All Groups Next Steps Capacity Forecasting, Key Drivers for Use in Scenario Planning and National Performance Framework**

### **Capacity Forecasting**

**With all three levels of government assessing the capacity of the future ports, airports and intermodal terminals for Greater Sydney to meet freight demands over the next 20 years, what data and/or additional insights should be considered in this assessment?**

#### **Existing Resources**

- Freight within NSW Govt *Future of Transport* review
- Simon Vaux TfNSW putting a panel digital engineering platform together to get a transport view – base level infrastructure mapping – repository of existing files
- Greater Sydney Commission *Directions for a Greater Sydney 2017-2056* taking into consideration population growth, the development of three cities and the objective 30 minute travel time.
- Passenger and freight rail need to be looked at together
- RDA Sydney's Report around *Strategic Industries development around the Western Sydney employment Area 2017*
- Use of Virtual Sydney 3D model to overlay current and potential future land use and transport master planning scenarios for Greater Sydney – Sydney plus Port Kembla and Newcastle
- Blacktown 2036 – Transport modelling exists. 20 year infrastructure plan being developed hard & arduous task to access different agency plans.
- Western Sydney University – capacity research existing, long term what if scenarios; exploring demand patterns/growth
- GHD – Opal- trends/growth – what is the freight equivalent?

#### **Points to Consider in Assessment**

- No common platform to share tracking freight
- Toll routes you can track commercial vehicles
- B to C – How many parcels per person (every 5<sup>th</sup> person at this stage)
- Large parcel companies could provide data/forecasts
- White van monitoring
- Heavy vehicle monitoring easier
- It is being done but all doing it separately
- Need explicit Govt & commercial collaboration about what is needed
- What is the measurement of success for freight / what is needed? How do you measure success?
- Important to try continually to analyse possible future megatrends e.g. possibility of drone deliveries; autonomous vehicles.
- Anticipating consumer demand based on demographics – age, cultural issues etc.
- Timing , planning ,development, implementation of new passenger and freight rail around infrastructure around Sydney
- Take into consideration futurists as to growth scenarios.

- Influence of IRR return on PPP infrastructure investment
- Freight growth will be lumpy but estimated overall to be 1.8% versus population approx. 1.3%
- What are the transport models for delivery vans into LGAs?

## Drivers of Change

### **What factors and potential key drivers of change in freight and supply chains should be considered in any scenario planning analysis?**

#### **Future Trends**

- Population growth and change movements, with housing locations and densities and jobs growth areas.
- Export volumes and market trends for freight movements in Australia, capacity to have and develop high value export products (Toowoomba airport example).
- Changes in order, size and frequency.
- Predictive purchasing trends and time poor consumer patterns for fulfillment.
- Increasing work from home options for people.
- Opportunities with blockchain technology to improve freight movements and forecasting.
- Blockchain Data 61 – physical, communication, financial transactions (either public or private).
- \$\$ distance/time will drive mode

#### **Future Planning Considerations**

- Understanding appropriate zoning/ land needs
- Minimising environmental impact of vehicles noise, air quality – what about congestion?
- Minimum non- residential space in CBDs
- Intermodal road / rail access
- Co-location F/Fs Customs freight forwarders/ customs near CTOs airport
- Multipurpose facilities – CTO, Bond, Perishable goods
- International air freight restrictions/regulations e.g. TSA
- Rail terminal port efficiency
- Viability and use of common industry digital platform – m2m IoT
- Distribution Centres close airport
- Command info/tracking of vehicles / trains e.g. TfNSW vehicle app.

#### **Scenario Planning**

- Inputs based on today's technology or is it based on technology in 5 or 10 years-time?
- The need to understand how much space we need for freight task with high density housing.

## **National Freight Performance Framework**

### **Discuss and identify options for regulatory change and investment to improve performance, productivity and efficiency of freight and supply chains in Australia?**

'The framework needs to be unpacked in greater detail - who is it for? The government so as to build more infrastructure, business as to what they should achieve, or is it to decide whether to apply a tax or incentive?'

#### **Road Charges**

- Peak period pricing - time of day tolling, per km tolling; option of alternative routes during peak periods.
- Differential lane charging e.g. USA model (some cities)
- Road usage charges are currently state-based. This means that out-of-state trucks do not pay usage charges when using NSW roads. There needs to be a more equitable system based on mass and distance charging, similar to what New Zealand

#### **Infrastructure & Time of Operation**

- Possibility of dedicated freight lanes that may increase freight capacity on roads.
- Private equity funding for infrastructure
- How to incentivize productivity improvements for investment in infrastructure?
- Change of time of operations for freight and vehicles.

#### **Tracking**

- Use of GPS tracking for all vehicles to monitor freight movements and congestion
- Increased visibility of freight movements and commodities across the whole supply chains important to streamline movements and increase productivity.

#### **Planning and Future Changes**

- Future planning and reserves for transport corridors and buffer zones
- First of all there is a need to know more about the population characteristics, the forecast economic growth, the emerging markets, the forecast exchange rate and what will be the major economic drivers, vehicle technologies in the future, energy issues, climate change, environments, how energy feeds into cost structures. So a more sophisticated, agile planning about future scenarios are badly needed to be able to plan for supply chains.
- Online shopping in and out is increasing and causing changes and pressures (more backloading and very fragmented online distribution as people return as many goods as they buy).
- You don't need to be where your customers are. The big question is, how can you develop a planning framework that delivers projects where capacity constraints emerge?
- Real options theory is needed. An agile planning system that can make changes quick and as needed, more sophistication about future scenarios, what futures are there?
- Huge variations in the economy can change future scenarios.
- Increased visibility will also assist agencies in future capital and maintenance planning.

- Key issue is private investment in needed freight infrastructure being stalled. Frustrated or lost entirely due to red tape and government hurdles. Private investment needs to be facilitated by all levels of government, planning processes coordinated between Fed/state/local, and development of complimentary infrastructure/ road upgrades funded by governments to secure the private investment. If governments seek to transfer all infrastructure costs which deliver broader benefits anyway to the broader community, economy – purely to private investors, it will make the private projects unviable.
- We need to encourage ‘futuristic’ visioning & solutions. If need be engage a ‘futurist’ specialist.

### **Stumbling Blocks**

- Labour conditions and hours of work etc.
- Uncoordinated and changing planning covenants
- How can competitors collaborate for benefit of freight system improvements (?ACCC)
- Safety and environmental impacts
- Missing the macro strategy! Needs more analysis of trend impacts on freight/planning i.e. e-commerce.

### **Discuss how a possible baseline and ongoing monitoring of freight and supply chain system performance could be developed to measure success of reforms?**

- Baseline traffic survey
- Uniform/centralised GPS monitoring of all vehicles could feed data into this baseline
- Road scenario planning
- Network pricing needed
- Technology - driverless vehicles will come into play soon, we need to work out the ability of the infrastructure to manage that.
- Fundamental long-term demographic, economic and technological shifts.
- Customer behaviour
- Affordability
- Quality of life and future lifestyle changes
- Need an audit of available data to identify needs and identify gaps.
- What is worth measuring and who will pay for it?
- Overseas models for logistics measurement and efficiencies through an ‘Institute of Logistics’ – there is one in Holland.
- Define objectives adequately
- Cost, robust measurements performance management process need to be put in place to measure efficiencies.
- Having a pricing model based on cross mode not load environments (road rail)

### **Air Freight**

- With regards to air freight IATA have a lot of comparisons and statistical information <http://www.iata.org/publications/store/pages/world-air-transport-statistics.aspx>
- [Cargo IQ is an international cargo organization See http://cargoiq.org/](http://cargoiq.org/)

Cargo iQ members work together to define the processes behind the air transport of cargo to measure success and continuously improve the value of airfreight for customers.

- 82 members worldwide including airlines, forwarders, GHAs, IT companies and airports
- 10 million A2A shipments measured in 2015
- 5.5 million D2D shipments measured in 2015
- 900,000 A2A and 500,000 D2D shipments measured monthly
- International Airports such as Changi airport have their advertised KPIs for freight
- International Airport operator Dnata and Menzies have their operating systems which can measure many CTO KPIs - by shipment : wgt, early, late
- AQIS - Have internal measurement KPIs

### **Government**

- Pricing framework that is applied on a consistent manner. A regulatory framework around it.
- Local and state governments need to work together on the freight system.
- Need to be considered: what is essential infrastructure, and what is not?
- Government to measure its own performance (network policy)
- Different government roles on local issues is problematic

### **What are your views on the potential need for a national freight performance framework and likely key indicators?**

- Agreed!
- KPIs include:
  - Productivity
  - time
  - Fuel usage/efficiency
  - Particular consideration of autonomous vehicle and the impact of these on increasing productivity.
  - Improved safety
  - Freight tonnage indicators
- Flexibility in Planning/regulatory – Electric Vehicles
- Application of Policy /regulations flexible but consistent
- Activate use of rail through legislation
- Waterways