# Office of Transport Security

## TRANSPORT SECURITY OUTLOOK TO 2025

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The *Transport Security Outlook to 2025: Security Environment Review – October 2017* has been produced as a periodical update to the *Transport Security Outlook to 2025* (the Outlook), which was published in late 2014. This document provides:

- an updated forecast for the Australian transport industry; and
- analysis of the current transport security environment.
Since the publication of the 2014 Outlook, growth across the Australian transport industry has continued, but at lower than expected levels. An analysis of transport industry growth and development provides the following forecast snapshot.

Aviation

Globally, passenger air transport has recorded growth each year since 2010. Passenger traffic is predicted to continue to rise over the medium-term with the average annual growth rate for global aviation travel forecast at 4.9 per cent between 2015 and 2034.

In Australia, high levels of domestic and international passenger growth at major airports are already testing the capacity of airport infrastructure during peak periods. Australia’s three largest airports by passenger movements – Sydney, Melbourne and Brisbane – each set passenger records in the 2015–16 financial year, moving more than 41 million, 33 million and 22 million passengers respectively. In the period to 2030, both domestic and international passenger movements through capital cities are expected to almost double. The largest growth is expected to occur on the Gold Coast (139 per cent), followed by Perth (135 per cent) and Darwin (127 per cent).

Air Cargo Supply Chain

Air freight is a critical component of Australia’s international trade and domestic freight services. While domestic air freight only accounts for a small volume of Australia’s non-bulk freight by weight, it carries a disproportionately large share of freight carried by value. Freight services also play an important role in maximising the commercial value of certain passenger air routes.

Domestically, air freight accounted for 19.1 per cent, or $1.68 billion of the Australian freight forwarding industry’s revenue in the 2015–16 financial year. Internationally, between 2010 and 2030, air freight tasks are also expected to grow by 109 per cent from 0.27 billion tonne kilometres to 0.56 billion tonne kilometres.*

Demand for air freight is forecast to grow as the popularity of just-in-time delivery increases for high-value items such as manufacturing and mining products, medical and scientific supplies and perishables such as food and horticulture.

* One tonne kilometre is equivalent to one tonne moved one kilometre
The Australian freight forwarding industry’s revenue is forecast to grow at a compound annual rate of 2.8 per cent over the next five years, to reach $10.1 billion in 2020-21, up from $8.8 billion in 2015–16.

Despite forecast growth, air freight service providers have struggled in the past five years. Competition with cheaper freight alternatives such as rail and road, with a high exposure to oil prices – as fuel is the major cost of flying – has added pressure to the industry. In addition, increases in the amount of hold baggage space in aircraft available for freight, restricts potential growth in air freight rate.

To counter these pressures and match customers logistical needs moving forward, air cargo providers will continue a transition towards more integrated logistic services, allowing them to provide a full range of transport services in an increasingly globalised industry. Technological advances, such as remotely piloted aircraft systems (RPAS) – or drones – are also likely to play an increasing role in remote freight delivery, particularly for small items.

One of the biggest domestic challenges for express freight is companies’ changing business models. People are now buying items from individual sellers overseas, rather than through traditional business-to-business transactions, potentially limiting the security controls that can be applied to air cargo. Future challenges will include facilitating economic outcomes in a changing marketplace while still maintaining the integrity of supply chain security.

Maritime

Australia’s maritime sector is seeing even larger passenger and cargo ships. International trade is currently underpinned by maritime transport, with over 80 per cent of the world cargo by volume transported by sea and this is forecast to continue to increase. Crucially, Australia relies on sea transport for 99 per cent of its exports.

In 2015, world seaborne trade volumes were estimated to have exceeded 10 billion tonnes for the first time. However, shipment volumes only expanded by 2.1 per cent year-on-year – notably slower than the historical average. Despite this slower growth, continued trade in primary exports, goods and services are still expected to see cargo volumes through Australian ports double by 2040.

The Australian cruise industry is also experiencing high levels of growth. It has recorded annual double digit growth in passenger numbers over the last 10 years, from 221,033 in 2006 to 1,058,781 in 2015, placing it as the fourth largest source market in the world. This growth is projected to continue, with annual passenger numbers forecast to reach two million by 2020.
Patronage of domestic routes by domestic passengers will continue to grow into the future. Expansion of shorter coastal cruises sailing from Australian homeports are expected to continue, offering passengers cruises for lower investment of time and money. Smaller ports will increasingly accommodate more frequent visits from larger international and domestic vessels. As a result, infrastructure investment and growth will continue at a growing number of regional Australian ports.\(^\text{15}\)

**Oil and Gas**

By 2020, driven by Asian demand, Australia stands to become the world’s biggest LNG exporter.\(^\text{16}\) Underlying this, domestic production is forecast to grow by 5.5 per cent per year to 2035.\(^\text{17}\)

The waters off Australia’s North West Coast will continue to see the bulk of LNG production activity. By the next decade, LNG vessel traffic in this area is expected to have increased four-fold. By 2025, LNG projects are projected to add more than $260 billion to Australia’s GDP.\(^\text{18}\) Dampier Port Authority in Western Australia and Darwin Port Corporation in the Northern Territory will continue to play a key role in LNG exports.
The transport security landscape in Australia has shifted in light of the foiled terrorist attack against aviation in July 2017. This disrupted attack highlights the influence and reach of global terrorist groups advocating attacks against Western nations and their interests.

The Islamic State of Iraq and the Levant (ISIL) has increased its global influence in recent years, and despite a shrinking territorial footprint, presents a continuing security challenge.

ISIL’s influence has inspired a number of individuals from around the world to travel to conflict zones in Syria and Iraq. There is also a pool of ideological supporters around the world who have not travelled. ISIL’s propaganda is increasingly encouraging these supporters to undertake attacks in their home countries, rather than travel. ISIL’s ability to encourage, inspire and direct supporters to undertake attacks in their home countries has been repeatedly demonstrated, including in Australia.

Some individuals may seek to return to their countries of origin from Syrian and Iraqi conflict zones with increased capability – either having undertaken terrorist training or formed networks related to terrorism and other unlawful activity. The potential return of some of these foreign fighters to Australia and South-East Asia may present longer term security challenges for the Australian and Asia Pacific region.

Threat Picture

The July 2017 disrupted Sydney attack plot allegedly targeting a passenger aircraft in-flight using an innovatively concealed explosive device represents an unprecedented change to our understanding of transport security in the domestic context. This incident highlights that the threat posed to transport systems by terrorism and other acts of unlawful interference continues to evolve and endure. Terrorist organisations such as al-Qa’ida, ISIL and other affiliated groups would consider Australia as a legitimate target for Islamist extremist terrorism, and the aviation sector in particular will retain its appeal globally as a target for attack.

Further, there has been an increase in the number of individuals inspired to conduct small-scale random acts of violence or terrorism. Mobilisation toward attack planning can occur with little or no direct contact with terrorist groups and can be fuelled by online extremist propaganda encouraging individuals to conduct their own attacks domestically. These threats can present quickly with little or no intelligence forewarning.
The threat posed to transport systems by terrorism and other acts of unlawful interference is likely to adapt and endure.

Not only has the Australian transport sector been the target of terrorist attacks, Australia has been specifically mentioned in Islamist propaganda. While a single piece of propaganda is unlikely to be the sole catalyst for an onshore attack, these publications add to a large and existing body of material that encourages terrorism.

Since the publication of the Outlook in 2014, the Australian Government adopted a five-tier National Terrorism Threat Advisory System and revised the threat level. The National Terrorism Threat level is currently PROBABLE – credible intelligence, assessed by our security agencies indicates that individuals or groups possess the intent and capability to conduct a terrorist attack in Australia.

Attack Methodologies

The July 2017 disrupted Sydney aviation attack plot underscores the enduring appeal of the transport sector as an attractive terrorist target. This incident is the first disrupted terrorist plot against aviation in Australia and indicates a level of extremist support and capability previously unseen in Australia.

Domestically, an attack against publicly accessible landside areas remains the most likely attack scenario for the transport sector. However, terrorists will continue to develop new and novel methods to defeat screening measures and an attack against an aircraft in flight remains a highly desirable terrorist target. To mitigate future attacks, security risk planning will need to consider both complex and sophisticated methodologies as well as basic, low capability attacks.

Since the publication of the Outlook in 2014, terrorist groups have continued to favour low capability attack methodologies. Publicly accessible areas of transport infrastructure and other public crowded places remain attractive terrorist targets, as they are readily accessible and confine large numbers of people within a single space at predictable times. These public areas are likely to remain an attractive target over the forecast period, which will have implications for the wider transport industry.

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Despite the threat to crowded places, aviation targets are still, and will likely continue to be, a focus for some terrorist groups. In July 2017, police disrupted a plot to target Australian aviation in Sydney. Other incidents such as the February 2016 Daallo Airlines bombing in Somalia and the October 2015 downing of Metrojet flight 9268 as it departed Egypt, highlight the enduring appeal of the transport sector as an attractive terrorist target.

Aviation targets are still, and will likely continue to be, a focus for some terrorist groups.

Inbound passenger aircraft originating from countries with heightened threat environments will remain a priority, particularly where there is a high concentration of Australian air carriers and/or Australian passengers. Last Port of Call (LPOC) airport assessments will be important to understand the security arrangements and identify gaps or risks. The alleged use of international air cargo as a vector to import explosive materials into Australia, as seen in the July 2017 disrupted Sydney attack, will continue to present challenges to Australia’s air cargo security regime.

International engagement by Australia’s overseas posts, alongside capacity building with regional partners will continue to be an important risk mitigation measure.

The maritime sector continues to be a potential target for terrorist groups. While there have been few attacks targeting the industry in recent years, the growing cruise industry could see it become a more...
attractive target. Crowds of passengers – generated in the presence of cruise ships – often occur, and some terminals and ports may also provide additional appeal to terrorist groups due to their proximity to targets of iconic or symbolic resonance.

**Technological Opportunities**

The continued use and integration of new and evolving technologies across transport sectors will likely drive change to the threat environment and the security measures used by industry to counter it. Australia will be required to be more responsive to international security requirements as a result.

Attempts to defeat aviation security measures and procedures will continue for the foreseeable future and terrorists will seek to adapt as screening and other measures are updated.

Improvements to information sharing between Government and Industry partners will continue to help build a more complete picture of the security environment, in turn allowing more effective prioritisation of finite security resources.

Improvements will continue to be made in collecting and interrogating security incident and compliance data. This will allow early identification of trends and vulnerabilities, increasing the speed and efficacy of interventions to mitigate terrorist’s evolving attack methodologies.

Those seeking to attack transport systems may use technological developments to defeat screening technologies, such as the evolution of IED designs that are more difficult to detect. Low or no-metal IEDs will continue to be developed and refined and novel methods of concealment will continue to emerge.

The use of Remotely Piloted Aircraft may have security implications for the forecast period as their technological capability and capacity increases.

Attackers are becoming increasingly aware of the potential impact of cyber-operations, which may increase the opportunity for cyber-attacks. However, cyber-attacks are largely still an issue of criminality, with attacks primarily focused on economic disruption and the acquisition of information. Terrorist groups that seek to harm Western interests are unlikely to pose a significant cyber threat. Terrorist cyber capabilities will remain rudimentary and show few signs of improving significantly in the near future. It is unlikely terrorists will be able to compromise a secure network and generate a significant disruptive or destructive effect in the foreseeable future.

Biometric systems and technology provide an opportunity to improve aviation experiences and increase the identity security of our aviation and maritime industries.

As more airlines rely on self-service passenger check in, there will be a heavier reliance on these biometric systems. This could provide opportunities to reduce processes and provide a more streamlined passenger experience. For example, biometrics could reduce identity and boarding pass checks, and improve passenger/bag reconciliation. Similarly, biometric could lead to better integration of security and border management processes at international airports.

OTS and industry may seek to explore opportunities for greater use of self-service passenger or off-airport check-in systems. These systems may assist in facilitating the growing number of passengers and benefit aviation security by reducing crowding in landside areas.

Biometrics can also provide opportunities to enhance current identity processes and strengthen access control. Biometrics will ensure that people with unescorted access to the secure areas of airports, seaports and offshore oil and gas facilities have had their identity positively confirmed and are eligible to access a secure area.
**Additional Resources**

It is important that industry and OTS continue to share a common understanding of the security environment. To support this, industry stakeholders can subscribe to the ASIO Business Government Liaison Unit (BGLU) website, a valuable source of For Official Use Only information. ASIO is the national authority for the provision of advice on terrorist threats and this includes terrorist threats to critical infrastructure; a range of mechanisms (including close liaison with all police jurisdictions and with international partners) can be used to pass advice to critical infrastructure owners and operators when a specific and credible threat exists.

Additionally, OTS produces its own suite of risk products which are tailored specifically for the Australian transport industry and can help inform industry risk management processes. These products include:

- Security Alerts;
- Security Updates;
- Security Planning Information Packs; and

These products can be accessed on OTS’s Information and Analysis GovDex portal. Historical threat and risk products, such as Transport Security Advisories and sectoral Risk Context Statements can also be found here.

Additional guidance material relating to active shooter and IED security for crowded places can be found on the Australian National Security website. These guidelines are produced by the Australia-New Zealand Counter-Terrorism Committee and can be used to inform best practice security measures and responses. ISO31000:2009 is also a valuable source of guidance material for industry conducting risk management processes.

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**Office of Transport Security – GovDex Portal**  
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REFERENCES


5. IBISWorld Pty Ltd, 2016, IBISWorld Industry Report IS2926b: Rail, Air and Sea Freight Forwarding in Australia, IBISWorld Pty Ltd, pp14


7. IBISWorld Pty Ltd, 2016, IBISWorld Industry Report IS2926b: Rail, Air and Sea Freight Forwarding in Australia, IBISWorld Pty Ltd, pp4


17. CSIRO 2013, ICT Pathways in the Minerals and Energy Resources Industries, Background Literature Review, CSIRO, Canberra

18. Based on BITRE data, analysis and projections.

