

# NORTH AMERICA<sup>186</sup>

Air transport supports 7.3 million jobs and \$844 billion in North American economic activity. That is 4.3% of all employment and 4.2% of all GDP in the United States and Canada in 2016.

Every person directly employed in the aviation sector and in tourism made possible by aviation supported another three jobs elsewhere in North America. Similarly, \$2.90 of economic activity was supported elsewhere in North America for every \$1 of gross value added directly created by the air transport sector.

The aviation sector in North America directly employed an estimated 2.4 million people in 2016. A sub-sectoral analysis of these workers suggests that:

- » **553,800 of them (22.5% of the total) were employed by airlines or handling agents** as, for example, flight crew, check-in staff, maintenance crew, or head office staff;
- » **93,000 (4%) had jobs with airport operators** in, for example, airport management, maintenance, and security;
- » **1.2 million (50.5%) worked on-site in airports** at, for example, retail outlets, restaurants, and hotels;
- » **525,000 (21.5%) were employed in the manufacture of civil aircraft** (including systems, components, airframes, and engines); and
- » **39,700 (1.5%) worked for air navigation service providers** in, for example, air traffic control and engineering.

Airlines, airport operators, retailers and other on-site businesses at airports and air navigation service providers and civil aircraft manufacturers also contribute to GDP in North America. In 2016, the operations of these businesses directly generated a \$286 billion contribution to GDP.

The aviation sector's spending with suppliers is estimated to have supported a further 1.9 million jobs and a \$228 billion gross value added contribution to GDP. In addition, wage payments to staff – by the aviation sector and businesses in the aviation sector's supply chain – supported 1.5 million more jobs and a \$181 billion gross value added contribution to GDP.

The aviation sector also facilitates a substantial amount of tourism in North America. This stimulates still more economic

activity, as tourists spend their money with restaurants, hotels, retailers, tour operators, and other providers of consumer goods and services. In 2016, spending by foreign visitors who flew to North American countries supported an estimated 1.5 million jobs and a \$150 billion contribution to GDP.

In total, accounting for the sector's direct impact, its supply chain impact, its wage expenditure impact, and the impact of tourism made possible by air transport, the aviation sector supported an estimated 7.3 million jobs and an \$844 billion contribution to GDP in North America in 2016.

Air travel in North America is expected to continue to grow at about 2.7% per year over the next two decades. This increase will, in turn, drive growth in the economic output and jobs that are supported by the air transport industry over the next 20 years. Oxford Economics forecasts that by 2036 the impact of air transport and the tourism it facilitates in North America will have grown to support 10.4 million jobs (42% more than in 2016) and a \$1.5 trillion contribution to GDP (an 80% increase).

In the United States, the focus needs to be on the implementation of the NextGen air traffic control system, which will move air traffic management in some of the busiest skies in the world from ground-based radar to satellite navigation. Some of the planned programmes are already in place, but more needs to be done. Once fully implemented, NextGen is expected by the Federal Aviation Administration (FAA) to deliver \$134 billion in direct airline, industry, and passenger benefits by 2030. The efficiency savings especially could be vast. CO<sub>2</sub> emissions are forecast to be reduced by 52.6 million tonnes by 2030.

*Note: In the United States, the FAA collects economic impact data with which these numbers are aligned. The FAA assessment further evaluates the much wider economic activity that is supported by air transport, including general aviation and the domestic tourism markets, which this report does not include. Accordingly, with these wider catalytic impacts included, the total number of jobs supported by civil aviation in the US alone is around 10.6 million, with a contribution to GDP of around \$910 billion at 2016 prices<sup>187</sup>.*

**939 million**  
passengers

**1.9 trillion**  
RPKs

**180**  
airlines

**2**  
air navigation service providers

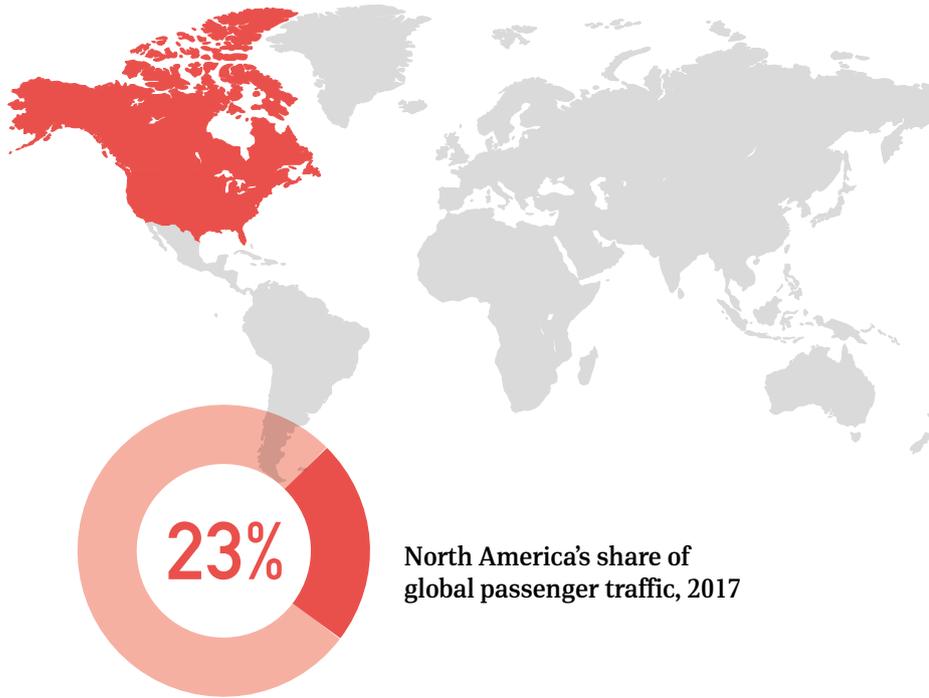
**19.2 million**  
tonnes of freight<sup>167</sup>

**10,179,000**  
flights

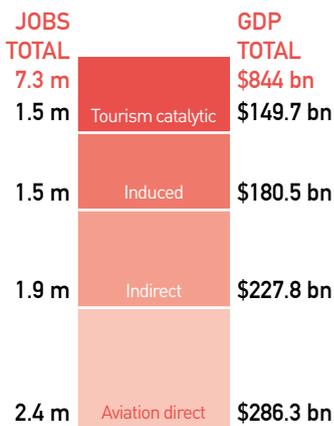
**879**  
commercial airports

**8,347**  
aircraft in service

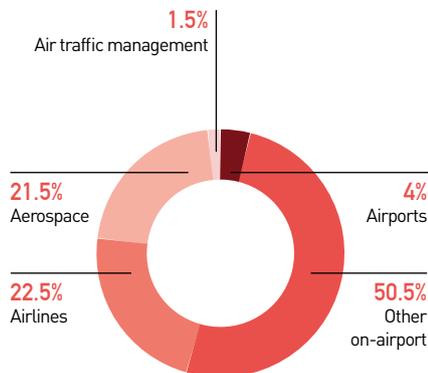
**83%**  
average regional load factor



Total jobs and GDP supported by air transport in North America



Direct jobs generated by air transport in North America



## Business aviation's niches

Business aviation, widely recognised as an effective business tool for companies requiring fast and secure flight services, plays a less-publicised but vital role in emergencies, humanitarian support and relief efforts around the world. Its flexibility allows it to mobilise on short notice, provide aircraft types suited for specific missions and operate into airports that are inaccessible to others. Other missions are uniquely tailored to business aviation's capabilities, such as the transport of persons with highly contagious diseases.

Phoenix Air Group, a US company, is the only business operator worldwide with the capability to transport patients with a highly infectious disease in an intensive care unit.

A cooperative effort between the US Centers for Disease Control, Department of Defense and Phoenix Air in 2007 led to the development of the Airborne Biological Containment System, a customised, negative-pressure isolation unit designed and certified to be used in the company's modified Gulfstream G-III aircraft. The unit isolates the contagious patient from the flight crew and medical professionals on board while allowing for the provision of intensive care.

In August 2014, at the height of the Ebola epidemic in western Africa, the US Department of State turned to Phoenix Air for assistance, as two American aid workers had contracted Ebola in Liberia and were near death. Phoenix Air deployed one of its specially equipped aircraft and flew them to a hospital in Atlanta, where both ultimately recovered. During the outbreak, Phoenix Air used its containment unit to transport 41 patients to hospitals in the US and Europe.

The success led to the development of a multi-patient transport unit, the Biological Containment System, which has the capacity to transport four highly contagious patients and six medical attendants inside a B747-400 cargo aircraft or military transport.