

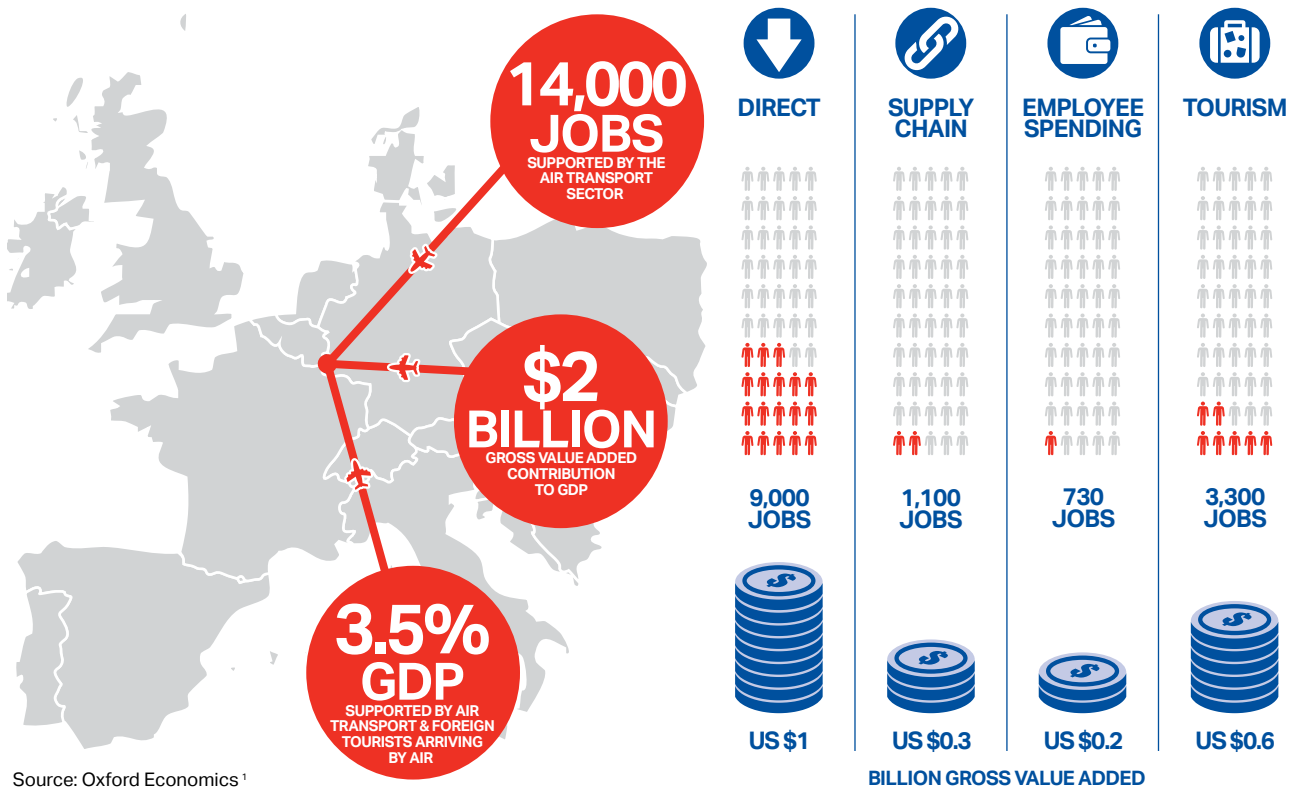


THE IMPORTANCE OF AIR TRANSPORT TO LUXEMBOURG



The air transport sector makes a major contribution to Luxembourg's economy

There are different ways of measuring air transport's impact on an economy. We look at three: the jobs and spending generated by airlines and their supply chain, the flows of trade, tourism and investment resulting from users of all airlines serving the country, and the city pair connections that make these flows possible. All provide a different but illuminating perspective on the importance of air transport.



Source: Oxford Economics¹

The air transport sector supports jobs...

Airlines, airport operators, airport on-site enterprises (restaurants and retail), aircraft manufacturers, and air navigation service providers employ 9,000 people in Luxembourg. In addition, by buying goods and services from local suppliers the sector supported another 1,100 jobs. On top of this, the sector is estimated to support a further 730 jobs through the wages it pays its employees, some or all of

which are subsequently spent on consumer goods and services. Foreign tourists arriving by air to Luxembourg, who spend their money in the local economy, are estimated to support an additional 3,300 jobs. In total 14,000 jobs are supported by air transport and tourists arriving by air.

...and spending

The air transport industry, including airlines and its supply chain, are estimated to support

US \$1.5 billion of GDP in Luxembourg. Spending by foreign tourists supports a further US \$0.55 billion of the country's GDP, totaling to around US \$2 billion. In total, 3.5 percent of the country's GDP is supported by inputs to the air transport sector and foreign tourists arriving by air.

For forecasts of the industry's GDP and jobs contribution over the next 20 years see page 4

Air transport facilitates flows of goods, investment and people



Note: Data relate to all modes of transport / Source: UNWTO, UNCTAD and World Bank²

The most important benefits from air transport go to passengers and shippers and the spillover impacts on their businesses. The value to passengers, shippers

and the economy can be seen from the spending of foreign tourists and the value of exports (though note these figures include all modes of transport). A key

economic flow, stimulated by good air transport connections, is foreign direct investment, creating productive assets that will generate a long-term flow of GDP.

Top five international tourist arrivals (all modes of transport) by country of residence³

1. Belgium
2. Netherlands
3. Germany
4. France
5. United Kingdom

Top five busiest direct flights arrivals

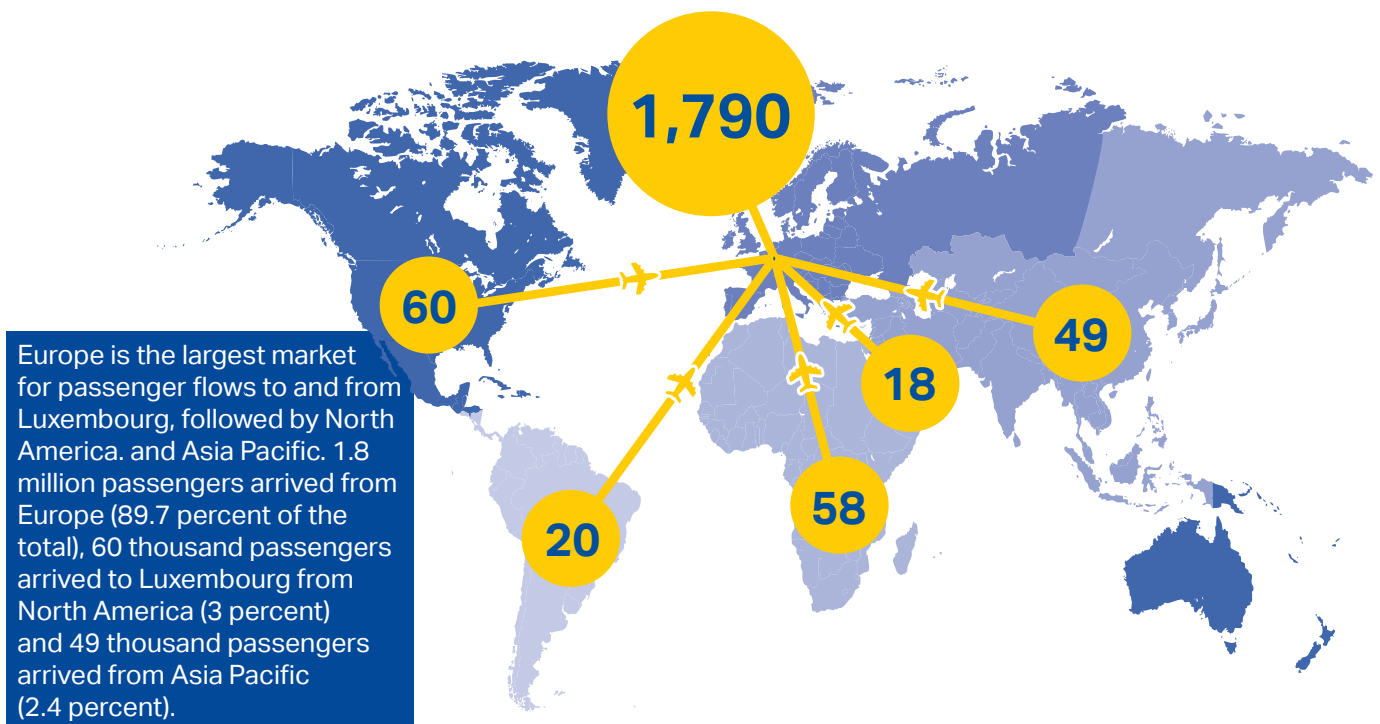
1. Germany
2. United Kingdom
3. Italy
4. Portugal
5. Spain

Top five busiest air cargo routes

1. United States
2. People's Republic of China
3. Brazil
4. Qatar
5. Mexico

Source: UNWTO and IATA²

Annual passenger flows by region (origin-destination, '000s)



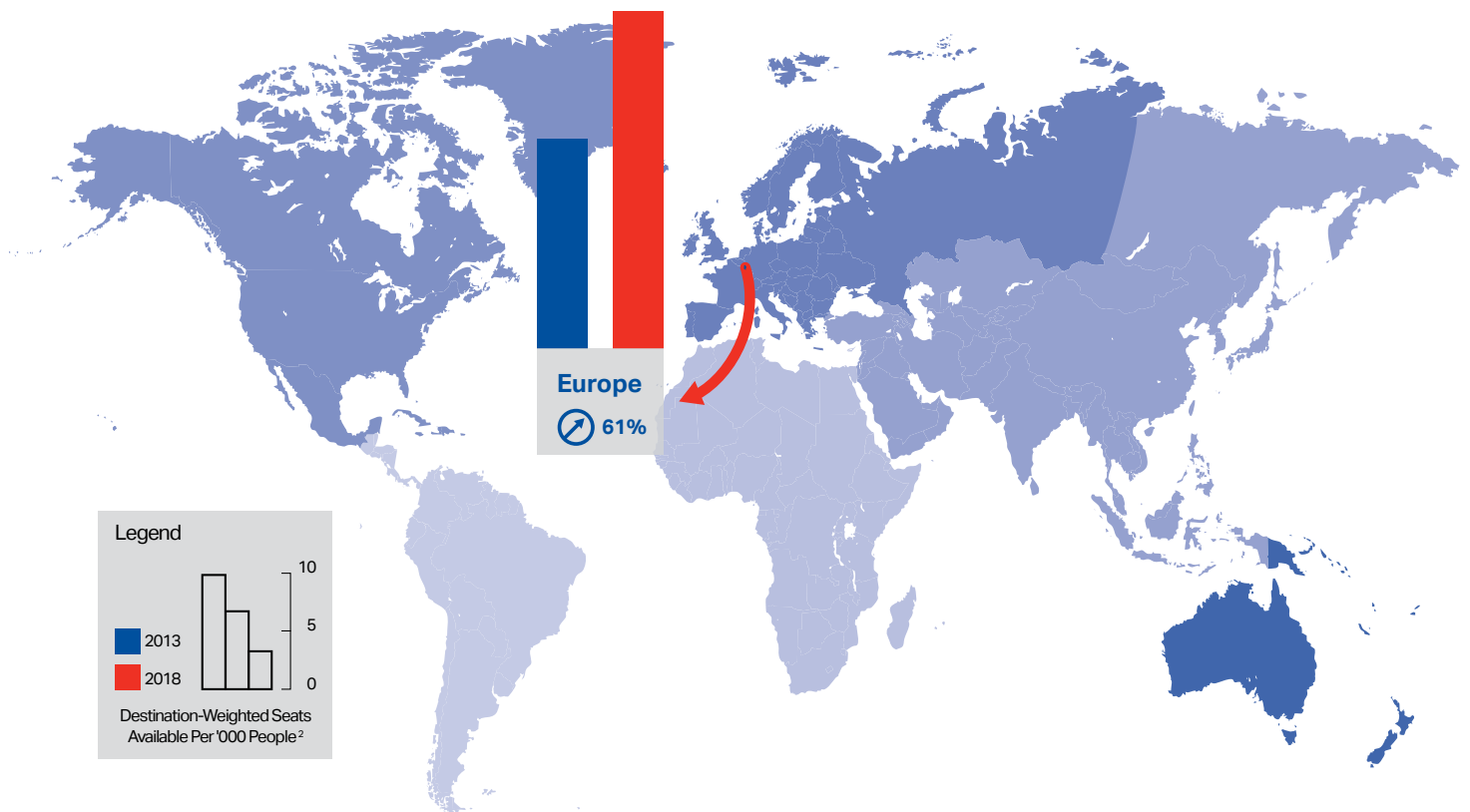
Source: IATA Direct Data Solutions

³ Arrivals of non-resident tourists at national borders or in all types of accommodation establishments, by country of residence.

Air transport connects Luxembourg to cities around the world

Air transport generates benefits to consumers and the wider economy by providing speedy connections between cities. These virtual bridges in the air enable the economic flows of goods, investments, people and ideas that are the fundamental drivers of economic growth.

Map of Luxembourg's air connectivity, by its largest markets (segment basis)⁴

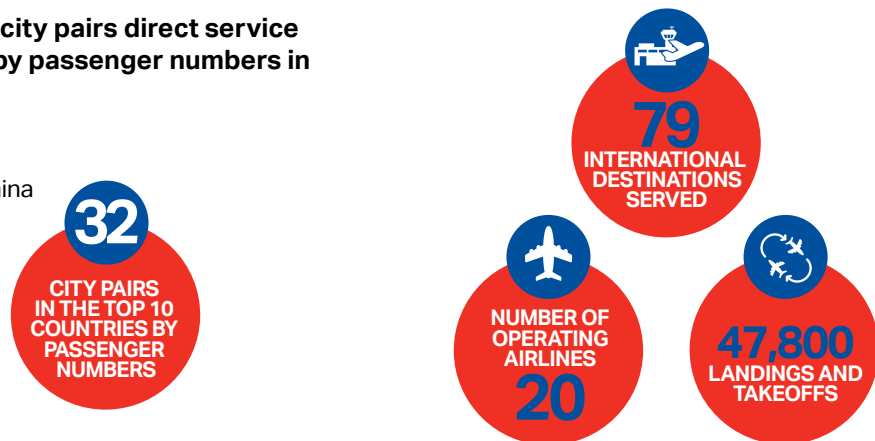


IATA's measure of how well a country is connected to economically important cities around the world is shown above. The map shows Luxembourg's

connectivity at a regional level and how it has evolved.

Number of international city pairs direct service in the top ten countries by passenger numbers in the world

- 0 United States
- 0 People's Republic of China
- 0 Japan
- 5 United Kingdom
- 0 India
- 0 Indonesia
- 13 Spain
- 6 Germany
- 0 Brazil
- 8 France



Source: IATA, Aviation Benefits Beyond Borders 2018 report

⁴ The air connectivity scores reported are total destination weighted seats per 1000 people. IATA developed the Air Connectivity Indicator calculated based on the total route capacity (in terms of seats available) weighted by the destination airport's relative capacity (calculated as the ratio of seats available at that airport relative to the capacity at the airport with most available seats) divided by the population size of the country with a 0.15% of connectivity threshold in 2013.

Ease of travel, cost competitiveness, and trade facilitation are vitally important

If air transport's unique contribution is the bridges it creates between cities, then the flows of goods, people, investment and ideas that stimulate economic development must flow unimpeded to maximise their contribution to consumers and the wider economy. Here we measure how freely goods and people flow across borders.

Passenger facilitation and cost competitiveness

Luxembourg's passenger facilitation (3.2/10) scores below the European average (4.1/10). On the World Economic Forum's Travel & Tourism Competitiveness Index, the country ranks 73rd for visa openness and 12th out of 136 countries for cost competitiveness. In all these scores and ranks, higher is better.



Passenger Facilitation Score⁵
3.2/10



Visa Requirements score⁶
2.4/10



Cost Competitiveness score⁷
9.3/10



Measures of air cargo trade facilitation

Luxembourg's facilitation of air cargo through its customs' and borders' regulations ranks 23rd out of 124 countries in terms of the Air Trade Facilitation Index (ATFI) and 29th out of 135 countries in terms of the eFreight Friendliness Index (EFFI) globally⁸. The Enabling Trade Index (ETI)⁹ ranks Luxembourg 4th out of 136 countries globally for the facilitation of the free flow of goods over borders and to its destination.



Air Trade Facilitation Index (ATFI) score
8.8/10



eFreight Friendliness Index (EFFI)
3.1/10



Enabling Trade Index (ETI) score
5.6/7



Forecast scenarios for passenger traffic, jobs and GDP footprint¹⁰

Air transport market in Luxembourg is forecast under the "current trends" scenario to grow by 20% in the next 20 years. This would result in an additional 400,000 passenger journeys by 2037. If met, this increased demand would support approximately US \$2.4 billion of GDP.

	PASSENGERS	US \$ GDP	JOBS
2017	1.9 m	\$2 bn	13,799
2037	Current Trends	\$2.4 bn	12,487
	Upside	\$2.5 bn	12,824
	Downside	\$2.2 bn	11,278

¹ Source: Aviation Benefits Beyond Borders 2018 report (all currency is in United States dollars at 2016 prices).

² Data relates to 2017.

⁵ Passenger facilitation, one of the Air Transport Regulatory Competitiveness Indicators developed by IATA in 2018, looks at the ease of people moving around the globe and how the governments facilitate this process. It assesses the performance of economies on implementation of open skies agreements, advance passenger information and automatic border control systems and visa requirements.

⁶ Entry visa requirements for a tourism visit from worldwide source markets (10 = no visa required for visitors from all source markets, 0 = traditional visa required for visitors from every source market). Source: WEF, Travel & Tourism Competitiveness Report 2017.

⁷ Based on ticket taxes, airport charges and VAT (10=low cost, 0=high cost). Source: WEF, Travel & Tourism Competitiveness Report 2017.

⁸ The IATA Air Trade Facilitation Index (ATFI) measures the extent to which a country facilitates air cargo through its customs and borders processes and regulations. The IATA E-freight Friendliness Index (EFFI) assesses the actual penetration of electronic transactions and documents in air cargo shipments (Value of Air Cargo 2016 report).

⁹ The Enabling Trade Index (ETI), developed by the World Economic Forum, assesses the performance of 136 economies on domestic and foreign market access; border administration; transport and digital infrastructure; transport services; and operating environment. The ETI is featured in The Global Enabling Trade Report 2016.

¹⁰ Passengers are counted as departures, including connections. The passenger forecasts are based on the IATA 20-year passenger forecast (October 2018). Data on GDP and jobs 2017 are from Oxford Economics. GDP and jobs forecasts are from IATA Economics.

* All data relates to 2018 or most recent unless stated otherwise.