

Logistics and shipping



Did you know... Cargolux handled the transport of the Solar Impulse. The long-range experimental solar-powered aircraft was disassembled and loaded into the nose of a Cargolux Boeing 747 before taking off on its pioneering round-the-world flight from Abu Dhabi in March 2015.

Forging ties for international reach

The logistics industry is undergoing major changes as companies seek global solutions to ship products worldwide. In Luxembourg we are setting the standard among logistics providers with sustainable, high value-added logistics services. Luxembourg offers **world-class distribution facilities** and is an **internationally-recognised logistics hub**.

At the core of major logistics decisions

Luxembourg lies at the heart of Europe's strongest consumer markets and is close to major production centres, right on the main North-South and East-West highway and train corridors. The country focuses on using a multimodal approach to offer logistics solutions that combine all modes of transport via well-developed air, road, rail and waterway infrastructure. Connected via reliable and scheduled rail connections to major ports of the North Sea, Baltic Sea and the Mediterranean Sea, Luxembourg serves as an extended gateway for goods travelling into and out of Europe.

Luxembourg is **Europe's 7th largest cargo** airport and home base of Cargolux, Europe's leading all-cargo carrier. With its annual handling capacity of 1.2 million tons, this well-equipped, modern air-freight facility ensures secure, efficient and **fast ground handling**. Goods can move from jumbo wide-body freighter aircraft on the tarmac all the way through customs at record speed. **Trucks can be quickly on the road and reach neighbouring capitals in less than eight hours**.

Over the last decade, Luxembourg has developed leading expertise in the handling and storing of multiple products such as valuable goods, pharmaceuticals, high-tech products, live animals or perishables.

Leading logistics and supply chain expertise

Major logistics service providers such as Atlas Air, Arthur Welter, Cargolux, CFL Multimodal, China Airlines, CLdN, Dachser, DB Schenker, DHL, Expeditors, Fedex, Hasenkamp, Jost Group, Kuehne+Nagel, Lufthansa Cargo, LuxairCARGO, Luxport, Mars Logistics, Panalpina, Qatar Airways, SL Logistics, SDV, TNT, Transalliance, UPS, Wallenborn, Yangtze River Express and Yusen Logistics, to name but a few, are active in Luxembourg. As a result, a broad range of international companies have European distribution centres in Luxembourg or are managing their supply chain functions out of the Grand Duchy.

Going paperless

The Luxembourg Customs Administration has implemented, in cooperation with the European Commission, a paperless trade and customs environment, enabling effective control while reducing trade transaction costs. Moreover, Luxembourg has been an IATA certified e-freight location since 2008.

Airlinks to all continents

The global network of Cargolux and other freight carriers (e.g. China Airlines, Silk Way West Airlines and Qatar Airways) as well as Panalpina's Controlled Air Freight Network, offer multiple destinations out of Luxembourg on a daily basis.

1st

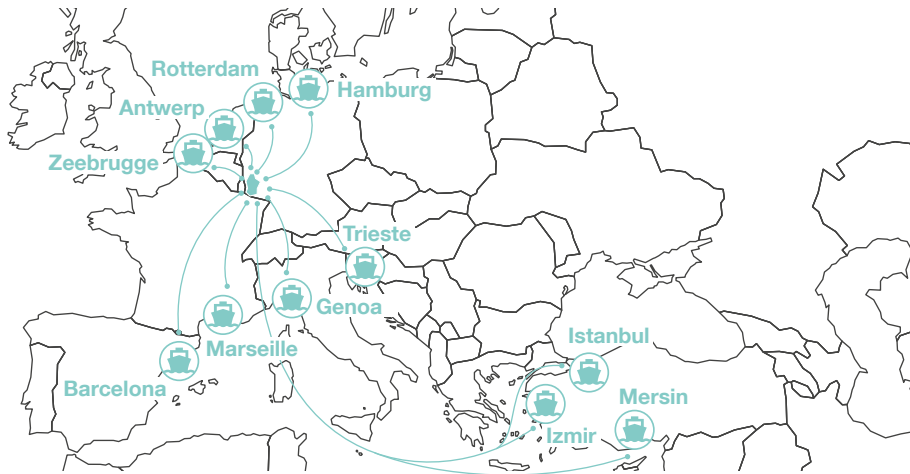
Luxembourg is ranked 8th globally for logistics performance and is No. 1 for international shipments and timeliness.

Source: 2014 Logistics Performance Index.



With a dedicated team based in Luxembourg, Amazon manages out of the Grand Duchy its European Fulfilment Network, a logistics network composed of 28 centres in Europe.

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Connections for multimodal transport

CFL Multimodal, the logistics operator and combined transport operator of the Luxembourgish National Rail group (CFL), simplifies **train-to-truck transport**. Containers, swap bodies and trailers are shifted onto trains for their journey by rail to a wide range of European cities and ports.

Inland navigation provides another competitive and environmentally-friendly mode of transportation. Connected to rail and motorway networks, the **riverport of Mertert** offers tri-modal waterway – oriented transport logistics to other inland and North Sea destinations – a solution used mainly for dispatching and receiving steel and iron, fuels, construction materials, fertilisers and containers.

Sustainable shipping

Luxembourg has become a sought-after location for the maritime sector. In October 2015, out of a total of 227 ships registered in Luxembourg, 218 are flying the Luxembourg flag and 9 a foreign flag.

Ship owners specialise in areas as diverse as the **transportation of bulk liquids, offshore oil and gas marine services, dredging and land reclamation**, and are encouraged to renew their fleets on a regular basis and invest in new vessels. Luxembourg-registered vessels operating all over the world are known for their high quality and an average age of 9.6 years.

Shipping companies choose Luxembourg for many reasons. With access to a single window for maritime affairs, they know where to turn to get things done quickly and efficiently – especially when it comes to registering new ships. While the process is convenient, ship owners understand that owning and operating a fleet requires complex **multidisciplinary expertise in accounting, audit, insurance, finance, law, ICT and satellite services** and they must have the information they need to comply with strict regulations wherever their ships operate. Maritime companies that set up in Luxembourg also appreciate being able to find the highly skilled, multilingual staff they need to manage bookings and work with international clients.



The Jan De Nul headquarters in Luxembourg host a training centre and simulator for dredging operators. As dredging operations require the use of very sophisticated equipment representing a very high value in capital, it is unthinkable to train the crews directly at sea. That is why they get familiarised using a simulator in Luxembourg.

227

ships are registered in Luxembourg.

Trailblazer



ACHIEVING PERFECTION IN NICHE LOGISTICS SERVICES

As an intercontinental hub for logistics value-added services, the Grand Duchy helps to ship special goods and merchandise safely while minimising risk.

Luxembourg is proud to be leading the way in pharmaceutical Good Distribution Practice (GDP) certification. It is the **first airfreight gateway to be fully GDP certified according to WHO and EU GDP guidelines.**

Alongside fully GDP certified logistics providers such as Arthur Welter, DB Schenker, Expeditors, Kuehne+Nagel, Panalpina, SDV and Wallenborn, Cargolux and LuxairCARGO have also decided to go through this certification process, making them,

350_m

At lux-Airport, the maximum distance from the cargo centre to the furthest aircraft parking space is 350 metres.

respectively, the first cargo airline and the first airport handling agent in the world to become fully GDP certified.

ENSURING THAT TEMPERATURES REMAIN CONSTANT

One of the greatest challenges for the safe shipment of these goods is **ensuring that temperatures remain constant.** When goods arrive at the Luxembourg airport, trucks only have to travel a short distance to reach the LuxairCARGO Pharma & Healthcare Centre. Thanks to this sophisticated logistics set-up, time and temperature sensitive products can be shipped from a pharmaceutical plant in Germany to a distribution site in the Midwest of the United States in only 36 hours without any changes in temperature.

Luxembourg is breaking new ground with the **first-ever GDP-certified trade route.**

A memorandum of understanding was signed in 2015 between airport operators **Hong Kong Air Cargo Terminals** and Luxembourg airport. The goal is to maintain GDP standards for all healthcare-related shipments that travel between the Hong Kong and Luxembourg airports. ●

HORSE-POWER: SPECIAL HANDLING

Every year Cargolux flies up to **3,000 horses** in next-generation horse stalls loaded onto its Boeing freighters. With a single racehorse worth up to \$5 million, horses are precious cargo that require very special attention. Noah's Ark of the skies does not only include live animals, as high-end car manufacturers regularly airfreight **racing cars** boasting 750 horsepower. ●

LE FREEPORT

Located adjacent to the Air Cargo Terminal of Luxembourg airport, Le Freeport provides a sophisticated, **highly secured logistics facility for managing and storing art, fine wines, jewels, precious metals, cars and other valuable goods.** With its **state-of-the-art climate-control system,** Le Freeport Luxembourg offers optimal storage conditions. Valuable goods can be

delivered straight from the tarmac to the storage room with no road transport involved, significantly reducing transfer costs and the risk of loss or damage, while offering a high degree of accessibility and security. To ensure **strict control and oversight,** goods can only be introduced into Le Freeport through specialised forwarders who are licensed by the Luxembourg Customs authorities. Goods that arrive through the airport

and are stored at Le Freeport are suspended from VAT and customs duties, while those that exit Le Freeport must be declared to Customs. Officials are physically present at the facility and have the right to inspect goods at anytime. All service providers working within Le Freeport must also comply with stringent regulations on antimoney laundering and combating the financing of terrorism. Le Freeport is well suited

for the **storage of valuable works of art** and is particularly interesting for art collectors and museums of neighbouring countries. While remaining in the VAT suspension regime, works of art stored at Le Freeport can be displayed in museums or art fairs under a temporary admission and importation system. ●

Trailblazer



IMPROVING THE EFFECTIVENESS OF WORLDWIDE RAPID RESPONSE

When disaster strikes, every minute counts. Luxembourg is helping to provide faster connectivity and improved coordination for a more efficient humanitarian response – all with one goal in mind: saving more lives.

SATELLITE-BASED TELECOMMUNICATIONS

In 2011, Luxembourg launched **emergency.lu**, a public-private partnership that offers a satellite-based telecommunications platform allowing rapid response to natural disasters and humanitarian missions.

Two hours after an alert is given, teams are airborne. Once they are on the ground, it typically takes less than an hour to connect a telecommunications terminal to an inflatable antenna for a satellite connection. Working in close collaboration with the United Nations World Food Programme, emergency.lu draws on the expertise of three Luxembourg-based companies – Hitec Luxembourg, SES and Luxembourg Air Ambulance (LAA). Ericsson Response is also involved in the project and serves as technical partner.

HAITI

Immediately after the January 2010 earthquake, Haitian President Préval was standing in the ravaged streets of Port-au-Prince holding his cell phone, which he was unable to use to call for

help. Effective aid deployment was impossible because all telecommunications were down. Following Haiti, Luxembourg understood that a solution had to be developed to restore telecommunications within several hours of a major natural disaster in order to improve aid coordination and save lives.

Thanks to emergency.lu, aid workers can now register their phones and laptops on the system to communicate and improve the delivery of critical services.

TRANSPORTATION DURING EBOLA OUTBREAK

Luxembourg Air Ambulance is a non-profit founded in 1998 that operates **rescue helicopters and ambulance aircraft** worldwide, saving human lives and preserving people's health. In 2015, LAA put new medical equipment for the transportation of patients with highly infectious diseases into operation. This medical evacuation module can be used to transport Ebola patients safely, while ensuring that the crew and the airplane don't come into contact with the pathogen. The development of this special isolation ward for the Learjet 45 XR took several months and covered all medical and aeronautical requirements. Pilots, medical staff and ground handling staff were also required to take a special training course in cooperation with Doctors Without Borders. Cargolux operated several flights to Monrovia during the Ebola crisis and provided medical supplies during critical times. ●

emergency.lu

The entire service chain – including air transport, satellite infrastructure, terminals and related services – is funded by Luxembourg and provides:



FAST TRACK DIAGNOSTICS

Fast Track Diagnostics (FTD) is one of the leading global suppliers of real-time PCR multiplex **testing for infectious disease detection**. Rare infections such as Ebola can quickly spread and become a general health hazard. The FTD test is simple to use and minimises uncertainty in the diagnosis. ●

ADVANCED MATERIALS TO PREVENT CONTAMINATION

DuPont Tyvek® protective clothing – produced by DuPont de Nemours Luxembourg – is designed to keep wearers safe by repelling liquids and aerosols while remaining permeable to both air and water vapour.

Due to its outstanding qualities, it was the **personal protective equipment chosen for the workers dealing with the aftermath of the nuclear disaster in Fukushima, Japan**. Healthcare workers and

other involved in fighting the deadly Ebola virus rely on **Tychem®**, another DuPont brand that includes an entire line of **protective garments and accessories that helps prevent contamination**. ●