



Cargo and aviation

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Shaping Europe's smartest cargo hub at Amsterdam Airport

Cargo and aviation

There are no more than a handful of airports in the world of aviation that successfully handle both passengers and cargo. Amsterdam Airport Schiphol is one of the airports capable of achieving this. In 2020, all of 1,441,522 tonnes of cargo were transported via Schiphol. Schiphol thus retains third place in Europe, making it one of the leading European cargo airports.

Schiphol



But what does it take to become and stay successful? Schiphol believes that the solution lies in smarter cargo processes. We believe in cooperation with key parties in the chain, such as airlines and handling agents, but also logistics service providers, transport companies and government entities, such as Dutch Customs. Our role as an airport is to inspire and challenge these chain parties (our cargo community) to contribute to a smarter, more transparent and more efficient cargo process, and help

us realise our ambition of becoming Europe's smartest cargo hub. What does it mean to be the smartest cargo hub? A high-performance cargo marketplace is of great significance to the Dutch economy. Efficient cargo processes help goods reach their destination faster, thus promoting the Netherlands as an air cargo hub, creating employment opportunities and boosting Schiphol's international trade function. The value of the cargo transported by air far outstrips that of the cargo transported by sea, by road or by rail. Moreover, air cargo is faster.



The history of cargo

Cargo has always been part of Schiphol's history. The first military flights, on 19 September 1916, transported military cargo. KLM's first civil flight in 1920 also had cargo on board: a stack of newspapers and a letter from London for the mayor of Amsterdam. Today, cargo – along with passenger transport – remains one of the two pillars of Schiphol's Mainport strategy. It started with airmail, newspapers, medicines and flowers. Today, almost every imaginable type of cargo is transported by air, such as flowers from Africa and South America that are flown in to be sold at the Aalsmeer Flower Auction or the large quantities of powdered milk for babies shipped to China because of its high quality.



Cargo today

Air transport is used in particular for goods that need to be moved quickly from A to B. Those goods are often perishable (like vegetables and flowers), or e-Commerce shipments such as mobile phones and consumer electronics. Air transport is also used when time is of the essence, for instance in transporting medicines and organs, urgent deliveries of various components for computers or machines, and for emergency aid when disasters occur around the world. The air cargo market is driven by consumer goods having increasingly shorter life cycles, and the fact that components are increasingly manufactured on different continents and eventually have to be brought together in one place. Businesses specialised in handling goods that are perishable or require urgent processing are established directly behind the cargo aprons at Schiphol. Smooth cargo streams require systems that integrate various data sets to enable constant cargo stream monitoring. Take transport companies who arrive to pick up or deliver shipments: they are unable to do so without the correct paperwork. The shipment must be registered with the logistics service provider, the handling agent and the airline. Subsequently, the shipment must go through Customs before it can be picked up or delivered.

To measure is to know

Now that clients want to know exactly where their shipment is in the cargo chain, data have become increasingly important. Cargonaut and the cargo community liaise closely in this regard. Cargonaut directs information flows for cargo from and to Schiphol, thus providing the logistics chain parties and Customs with complete and reliable information. Cargonaut manages the Schiphol Information Exchange Platform at Schiphol. Partners in the logistics chain and the various chains can

exchange information and share this for reuse. To this end, air cargo carriers, handling agents, forwarders, logistics service providers, Customs and other supervisory bodies work closely together. Based on the available information in the platform, chain parties and software suppliers build their own smart applications to optimise industry processes, such as the cooling of flowers and pharmaceutical shipments during transport to safeguard their quality and shelf life. To enable remote temperature checks for the duration of the journey, that is at every touch point in the cargo chain, Cargonaut and the cargo community are considering developing a system that will allow all parties in the chain to monitor this information and take action when required.

Pax/combi aircraft

Cargo aircraft make up only a small proportion of the total number of air transport movements. In 2020, Schiphol had 227,304 air transport movements; 10.5% of these flights was carried out with a full-freighter aircraft. In these cargo aircraft around 71% of all cargo to and from Schiphol is transported. The rest is transported in the 'belly' of passenger aircraft. Transporting freight by 'belly' – in a passenger aircraft – has seen a strong increase in recent years.

Important markets

Asia is one of Schiphol's important markets. Around 35% of all air cargo volumes travel to and from Asia. In particular the emergence of e-Commerce goods in recent years has contributed to the tremendous growth of cargo being transported to and from China. The most important goods include electronics, fashion items, but also powdered milk and baby food. East Africa and South America are important to the flower sector.





Smart Cargo Mainport Programme

In order to be the smartest cargo airport and to remain the smartest, we have set up the Smart Cargo Mainport Programme (SCMP) together with our chain partners. This groundbreaking programme is intended to optimise the air cargo process. The associated projects will take place in the following three pillars: chain digitisation, optimal landside logistics and fresh innovations. In this way, we will stimulate developments in which data sharing plays an important role, since knowing which cargo will be arriving enables you to design more efficient processes. The landside process is also very important. One example of this is the development of a trucking app, which will allow lorry drivers who are picking up cargo from handlers to know exactly at what time and at which location they need to be ready to load the cargo.

Flowers

Flowers are one of the best known and most appealing of air cargo products. Aalsmeer Flower Auction is the centre of the international flower trade and has become as large and important as it is partly because of Schiphol. More than 35% of the total imports at Schiphol are flowers. Some 60% of all flowers in the global flower trade travel via Schiphol. Many flowers are flown in from East Africa and South America. Some of those are auctioned the same morning at Aalsmeer Flower Auction, and depart again the same day by air to destinations such as North America and Asia. Flower transport reaches a peak in the first quarter, thanks in part to Valentine's Day and International Women's Day, while August is the peak season for the export of bulbs.

Netherlands Food and Consumer Product Safety Authority

Imports of live animals, meat and fish destined for consumption, and goods containing animal products (such as some medicines for humans and animals, as well as semen for breeding horses and bulls, for instance) have to comply with special EU regulations. These types of goods must first be inspected, and those inspections take place in specially designed inspection stations. Schiphol has four such inspection stations. At Schiphol, KLM is the leading airline for the transport of animals such as horses, pets such as dogs and cats, and chicks. Animals travelling by air have their own facility. Special carers travel with important animals, such as racehorses or dressage horses.

In 2016 the Joint Inspection Center began operations, with an ultra-modern ULD scan and radiation portal monitors. Air cargo companies at Schiphol can also purchase their own X-ray machine which satisfies the quality requirements imposed by Customs. This will allow them to scan their own cargo. A Customs analyst in the Joint Inspection Center will watch along remotely in real time. Rhenus Logistics and Fast Forward Freight already have their own scanner. At the entrance to the handling agent zone, radiation portal monitors will be installed. These will also be connected to the Joint Inspection Center.

Transport hub

The air cargo volume at Schiphol comprises three 'flows'. The import flow consists of goods which come to Europe from the rest of the world via the Netherlands. The export flow consists of goods which come from the Netherlands or were produced there. The third flow consists of goods which are brought to the Netherlands from other European countries on lorries and leave the EU from there. This flow of goods from other countries is important for maintaining a good balance between import and export. The Schiphol region is a transportation hub, where flows of goods from all over the world come together before being shipped on again. This makes it particularly appealing for many European distribution centres to base themselves here. In turn, these businesses generate even more transport. Just between Aalsmeer Flower Auction and Schiphol, hundreds of lorries travel back and forth on a daily basis. Other products with a limited shelf life, such as electronics, newspapers or donor organs, also continue their journey from Schiphol by lorry to their final



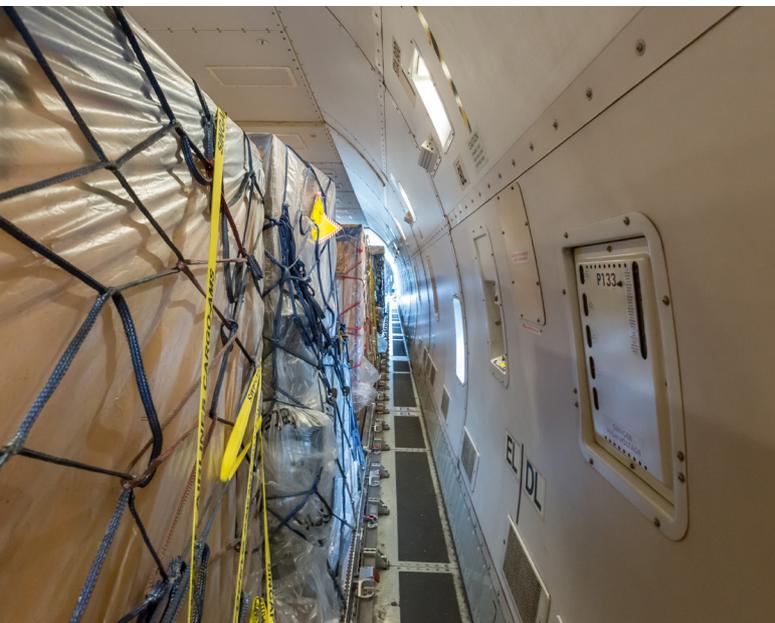
destinations in the Netherlands or elsewhere in Europe. Naturally, there are also flows in the opposite direction, of products being delivered to Schiphol by lorries and loaded onto aircraft. The proximity of Rotterdam harbour makes the Netherlands a magnet for logistics companies. Both the harbour and Schiphol benefit from this. Schiphol has a powerful network of forwarding services and lorry operators. Most of the cargo handled at Schiphol is transfer cargo not intended for the Dutch market, destined for elsewhere. Such transfer cargo strengthens Schiphol's position as a hub.

High accessibility

Schiphol has received many prestigious awards as the best cargo airport in the world and in Europe, due to the quality of its cargo facilities, and the efficient and innovative cargo handling. Schiphol works closely with every partner in the transport chain to deliver the best facilities for every company working in air cargo. The Schiphol South East cargo zone still has enough room for further expansion. The airport has various lorry parks. There are two lorry parks where parking spaces are leased to local carriers on subscription basis. In addition, there is a lorry park where international lorry drivers can park briefly in anticipation of loading and unloading international cargo. There are various facilities for the drivers, including sanitary facilities, a waiting room and Wi-Fi. This lorry park has the potential for further expansion.

An appealing base

One of Schiphol's strengths is the large number of destinations it serves. In 2020, passengers and cargo had access to direct scheduled flights to 316 destinations in 98 countries. Schiphol's excellent network of destinations and flight frequencies encourages international companies to specifically choose the airport region as a base for their EDCs (European distribution centres). More than 50% of Asian and American companies with European distribution centres have chosen the Netherlands as their base.



To a large extent, they make that choice based on the quality of the storage and transshipment facilities at and around Schiphol. Within the airport grounds, directly at the aprons, are the first-line companies of the airlines and the cargo handling agents, who ensure that goods are taken to and from the aircraft on time. Directly behind these first-line companies are ones referred to as second-line companies. These companies, the forwarders, ensure the inward clearance of air cargo by Customs, its packaging and further transport on land. Around the airport grounds, too, there are various business parks for cargo-related businesses. In this way, Schiphol offers companies the space they need for future growth. Schiphol has cargo warehouse space totalling 525,000 m², of which 60% has direct access to the cargo aprons. This makes Schiphol one of the few major airports in Europe that is able to continue offering more space to airlines, forwarders and logistics services providers. Examples include Schiphol Logistics Park across from Schiphol-Rijk and Schiphol Trade Park.



Information

Visit www.schiphol.nl/cargo for more information about cargo at Schiphol.

Key figures for 2020

- **316** direct scheduled destinations
- **98** countries, with
- **120** airlines

- **20.9** million passengers
- **1,441,522** tonnes of cargo
- **1,027,261** tonnes with full-freighter services

- **414,260** tonnes with passenger services
- **754,361** tonnes inbound cargo volumes
- **687,161** tonnes outbound cargo volumes

- **227,304** air transport movements, of which
- **23,782** with full freighters (10.5%)

- 1st in Europe in terms of total air transport movements
- 4th in Europe in terms of passenger transport
- 3rd in Europe in terms of Cargo air transport