

Boeing in Northern Europe

The Boeing Company enjoys a mutually beneficial business and industrial partnership with the many countries that form the company's Northern Europe region. They are the Baltic countries, the Benelux countries, the Nordic countries, Austria and Switzerland. This region, with its large commercial airplane fleet and strong defense sector, is of high importance to Boeing. Over the years, Boeing has developed many long-lasting relationships with industry, academia and government in Northern Europe.

Boeing Northern Europe is led by Matthew Ganz, president of Boeing Germany and Northern Europe and vice president of European Technology Strategy.

Boeing in Austria

The Vienna-based Austrian Airlines Group, including Austrian Airlines, Lauda Air and Tyrolean Airways, is part of the Lufthansa Group and the Star Alliance. Its fleet includes Boeing 737-800, 777-200ER and 767ER airplanes.

Boeing enjoys a long-standing supplier relationship with Fischer Advanced Composite Components (FACC) AG, based in Ried im Innkreis. FACC provides large composite parts for Boeing 737, 747, 757, 767, 777, 787 Dreamliner and P-8 Poseidon airplanes.

Boeing in the Baltic Countries

Boeing has a number of important commercial airline customers in the Baltic region. Latvian airline airBaltic operates direct flights to destinations in Europe, the Middle East, Russia and the Commonwealth of Independent States (CIS), employing a fleet that includes 737-500s and 737-300 airplanes. Estonian Air is also a valued 737 operator.

On the defense side, Estonia and Lithuania are members of the 12-nation Strategic Airlift Capability (SAC) consortium that acquired three Boeing C-17 Globemaster III advanced airlifters in 2009.

Boeing in the Benelux Countries

Boeing in Belgium

Boeing has approximately 22 employees in Belgium and an office in Brussels as well as valuable customer and supplier partnerships. Brian Moran is the Brussels-based Boeing president for the European Union (EU) and NATO Relations.

Belgium-based commercial airlines operating Boeing airplanes include Jetairfly, which operates Next Generation 737-700s and -800s and 767-300ER airplanes, and cargo carrier TNT Airways, with a fleet of 737s Freighters, 747-400 ERFs and Boeing 777 Freighters.

Boeing also has a long and productive supplier relationship with ASCO Industries, based in Zaventem, Belgium. ASCO provides Boeing with machined metal components such as 737 flap tracks and slat tracks. It has provided a variety of sheet metal parts over the years and is actively involved with Boeing on nearly every commercial airplane program, including the 787 Dreamliner.

The Belgian armed forces have purchased the Joint Direct Attack Munition (JDAM) guidance kit and Harpoon missiles. They also participate in the NATO Airborne Warning and Control System (AWACS) program.

Belgian supplier partner Thales Belgium provided the digital audio system and radio control units for the NATO AWACS program. Another Belgian supplier, Société Anonyme Belge de Constructions Aéronautiques (SABCA), worked with Boeing on the NATO AWACS program, manufacturing fairings for the electronic support measures system.

Boeing in the Netherlands

Boeing has partnered with the Netherlands and with Dutch industry for seven decades. In the 1930s, Royal Dutch Airlines — known by the Dutch acronym KLM, for Koninklijke Luchtvaart Maatschappij — became the first airline outside the United States to fly a Douglas airliner. Boeing supports more than 2,750 jobs in the Netherlands; this includes around 350 Boeing employees as well as employment with Boeing's immediate suppliers and through the supply chain, in addition to other employment resulting from these activities. The offices are placed at a number of locations as well as at its 68,000-square-foot (6317-square-meter) Spare Parts Center near Amsterdam's Schiphol Airport.

Boeing Commercial Airplanes in the Netherlands

KLM-Royal Dutch airlines, part of the Air France-KLM Group, is the world's oldest international airline. In 1960, KLM entered the jet age with the purchase of the DC-8. Today, the KLM fleet includes Boeing 737, Next-Generation 737, 747, 777 and MD-11 models. In partnership with Air France, KLM has one of the largest fleets of 777s in the world, and in late 2011, the group finalized an order for 25 787s. It also operates the world's largest 747 Combi fleet. Boeing and KLM Engineering and Maintenance cooperate in offering a component service program to the Next-Generation 737 by using the Boeing Spare Parts Center near Schiphol Airport, which provides fast access to critical parts and offers airlines cost savings that can equal 30 percent of their component repair and inventory costs. KLM is also a member of the Sustainable Aviation Fuel Users Group, of which Boeing is a co-founder.

Air France-KLM Cargo and Martinair Cargo make up the dedicated air cargo business of the Air France-KLM Group. The Air France-KLM fleet includes 777 Freighters and 747-400 ERFs. Martinair Cargo operates MD-11 Freighters.

Transavia, branded as transavia.com, is a Dutch low-cost airline that offers charter flights and scheduled flights to summer and winter holiday destinations around Europe and to the Mediterranean. Transavia was founded in 1965 as Transavia Holland and is a wholly owned subsidiary of KLM and a member of the Air France-KLM Group. It operates as an independent member within the group. Transavia operates an all-Boeing fleet of 737-700s and 737-800s, all of which are equipped with aerodynamic performance-enhancing blended winglets. In April 2012, Transavia took delivery of its first ever Next-Generation 737-800 with the Boeing Sky Interior. The airplane was the 25th Next-Generation 737 delivered directly to the airline by Commercial Airplanes.

Boeing Defense, Space & Security in the Netherlands

The Defense, Space & Security business unit has a long record of working closely and successfully with the Dutch military customers and the country's defense industry. Boeing and the Royal Netherlands Air Force (RNLAf) achieved many firsts; for example, the RNLAf was the first international customer of the Apache AH-64D, which has supported several Dutch missions around the world. The Netherlands armed forces have also purchased Apache helicopters and upgrades, Chinook helicopters, Apache and Chinook support services, Harpoon missiles, Joint Direct Attack Munition (JDAM) guidance kits, the Joint Helmet Mounted Cueing System (JHMCS), KDC-10 tankers, NATO AWACS, Small Diameter Bombs and Insitu ScanEagle unmanned vehicles.

In 2016, the Netherlands ordered an additional 12 Chinooks. The aircraft will be delivered in 2020. The Netherlands is a member of the 12-nation Strategic Airlift Capability (SAC) consortium. It is also one of the 15 countries involved in the NATO AWACS program, with a fleet of 17 Boeing AWACS E-3A aircraft and three trainer airplanes.

Boeing Partners and Suppliers in the Netherlands

Dutch suppliers make valuable contributions to Commercial Airplanes products. Avio-Diepen has a supply chain solution agreement with the Boeing Commercial Aviation Services organization as part of Boeing's Integrated Materials Management (IMM) initiative. KMWE Precisie performs 737 commercial airplane avionics work for Boeing supplier Hamilton Sundstrand. TenCate Advanced Composites has a long-term supply agreement with Boeing for various composite material parts on the 787 program. Luchtverkeersleiding Nederland (LVNL), the Dutch air traffic control authority, provides studies of environmental issues at Schiphol Airport such as noise and air quality. The Dutch National Aerospace Laboratory (Nationaal Lucht en Ruimtevaartlaboratorium, or NLR) does performance studies and tests for Commercial Airplanes.

Defense, Space & Security values the ability of the Dutch defense industry to meet the stringent quality, schedule and delivery requirements of the U.S. government. Military contracts between Boeing and the Netherlands armed forces include industrial participation requirements that have resulted in many successful supplier relationships with Dutch companies and public agencies.

In September 2011, Boeing and AAR Aircraft Component Services-Amsterdam signed a letter of intent to cooperate on component maintenance, repair and overhaul (MRO) capabilities to support Royal Netherlands Air Force (RNLAf) rotorcraft operations.

Boeing Technical Partnerships in the Netherlands

Boeing values Dutch technical expertise and works in partnership with Dutch companies to develop new technology that often results in technology transfer to Dutch industry. Examples are high-speed machining technology transfer with the VDL Enabling Technologies Group, Thales Nederland and DutchAero; integrated electronic technical manual development and upgrades with Tedopres International; and composites design and manufacturing technology with Kok & Van Engelen. In addition, Boeing subsidiary Jeppesen supplied its Total Airspace and Airport Modeler software package to the Dutch consultancy firm To70 for use in capacity studies of airport planning and management.

Boeing also has a number of technical partnerships with Dutch universities, research institutes and governmental bodies to develop innovative aerospace technology and improve world aviation infrastructure. These include the Dutch National Aerospace Laboratory (NLR), the Netherlands Organisation for Applied Scientific Research (TNO), Delft University of Technology (TU Delft) and the University of Twente in Enschede.

Boeing Fokker Aerostructures, a division of Fokker Aerospace; TenCate Composites, a division of the multinational Royal TenCate, based in Almelo; and the University of Twente are partners in the ThermoPlastic Composite Research Centre (TPCR), which conducts research and development in thermoplastic composite materials.

In June 2010, the RNLAf made aviation history when a Boeing AH-64D Apache operated by the RNLAf became the first military rotorcraft in the world to fly using a blend of sustainable biofuel and standard aviation jet fuel. Boeing, which is engaged in sustainable biofuel research around the world, supported the Apache flight and the RNLAf through preflight planning, testing and technical consultation. The company also supplied technical support to a KLM-Royal Dutch Airlines biofuel flight aboard a Boeing 747 in November 2009.

This commitment to the environment reached new heights in March 2013, when a KLM Boeing 777-200 airplane flew roundtrip from Amsterdam Airport Schiphol to John F. Kennedy International Airport in New York. It was the first of a series of "Optimal Flights," rolling all of Boeing's current flight efficiency projects together to create the most environmentally progressive flight possible. Each flight is powered in part by sustainable aviation biofuel. Boeing is working with KLM and a sustainable biofuel provider to commercialize jet fuel sources to increase supply and lower cost.

The flights also feature new smart technology that uses advanced digital aviation, navigation and air traffic management concepts to increase efficiency and reduce fuel consumption. Boeing, KLM and international partners, including the NLR, TU Delft and

the Schiphol Group, will use the data from Optimal Flights to establish new operational procedures and recommendations.

Boeing and its Dutch partner, the Rotary Wing Training Center (RWTC), officially opened a state-of-the-art CH-47 Chinook helicopter maintenance training facility near Royal Netherlands Air Base Gilze-Rijen in April 2012. The RWTC is a subsidiary of the Netherlands' World Class Aviation Academy (WCAA). The training — which began at the center in March with the Royal Netherlands Air Force — includes current technical information and courseware tailored for CH-47 mechanics, technicians, pilots and crew members.

Global Corporate Citizenship in the Netherlands

Everywhere in the world where it does business, Boeing provides human and financial resources to strengthen local communities, working with in-country partners through the company's Global Corporate Citizenship program.

In the Netherlands, Boeing partners with Lego, Twente Branding, Saxion University of Applied Sciences and the University of Twente on the RED Engineers Challenge. Teams of primary school students compete against each other with miniature technology prototypes (e.g., wind turbines, cars) that they design, build and test themselves. Boeing provides the materials for the challenge. Through lectures and broadcasts, the University of Twente teaches and mentors the students how to design and build their projects. The aim of this activity is to introduce children to engineering, technology and renewable energy sciences as well as to build critical soft skills such as teamwork and communication. Since 2013, more than 100 schools and 2,500 students have participated in the challenge.

Boeing in Luxembourg

Boeing Commercial Airplanes has long enjoyed valued partnerships in the Grand Duchy of Luxembourg. The LuxairGroup, including Luxembourg Airlines and Luxair Tours, operates 737-800 and 737-700 airplanes. In October 2011, air cargo carrier Cargolux Airlines took delivery of the first Boeing 747-8 Freighter. The airline operates nine 747-400 Freighters and seven 747-8 Freighters, with six more of the new-generation airplanes on order.

In addition, Luxembourg's aerospace industry provides parts and components for Boeing products through a variety of Boeing suppliers, including Alenia, General Electric and Rolls-Royce.

Luxembourg is also a valued satellite customer. In a partnership that spans more than four decades, Boeing has built more than 50 communications satellites for Intelsat S.A., with offices in Luxembourg and Washington, D.C. Currently, Boeing is providing nine 702MP (medium-power) satellites to Intelsat, the leading provider of satellite services worldwide.

Boeing also maintains a 25-year relationship with Luxembourg-based SES. A Boeing 702HP (high-power) satellite — SES-9 — was successfully launched in March 2016 and will expand direct-to-home broadcasting and other communications services to the fast-growing markets of Northeast Asia, South Asia and Indonesia as well as maritime communications for vessels in the Indian Ocean. This is the 11th spacecraft that SES ordered from Boeing. The 12th satellite, SES-15, is currently in production and is scheduled for delivery in 2017.

Boeing in the Nordic Countries

Boeing and the Nordic aerospace industry have a mutually beneficial business and industrial partnership that began decades ago. Boeing has more than 330 employees in the region and fully owned subsidiaries located in Göteborg, Sweden; Copenhagen; and Hafrsfjord, south of Stavanger, Norway.

Boeing in Denmark

Boeing Commercial Airplanes in Denmark

Det Danske Luftfartselskab A/S (Danish Air Lines), formed in 1918, joined with Norwegian and Swedish national airlines in 1946 to create Scandinavian Airlines System (SAS), now SAS Group, based in Stockholm. SAS is the national airline of Denmark, Norway and Sweden and operates three primary hubs at Copenhagen-Kastrup Airport, Stockholm Arlanda Airport and Oslo Gardermoen Airport. Its fleet includes 737-400, -500, -600, -700 and -800 airplanes and MD-81/82 aircraft.

Boeing Defense, Space & Security in Denmark

Since June 2011, Defense, Space & Security has secured contracts totaling more than \$49 million from sales and services related to weapons and space programs.

In 2012, Denmark became a partner nation of the U.S. Air Force's Wideband Global SATCOM (WGS), the Department of Defense's (DOD) highest-capacity communications satellite system. Four other partner nations — Canada, Netherlands, Luxembourg and New Zealand — executed similar agreements to gain global access to the WGS system.

WGS provides modern MILSATCOM wideband services to meet a variety of civilian and military missions, minimizing cost by leveraging the existing infrastructure of compatible wideband ground and user terminals. Existing international partners have recently demonstrated how quickly existing equipment can be used to access the WGS system.

Boeing Supplier Partnerships in Denmark

On June 7, 2012, Boeing accepted delivery of the first Aluminum Launch Support Structure (ALSS), produced by supplier Danish Aerotech A/S for ship-based deployment of the Harpoon weapon system. Based in Karup, Denmark, Danish civil

defense and aerospace company Aerotech received the contract, valued at nearly \$1.5 million, from Boeing in 2010.

In 2010, Boeing purchased 18 Harpoon missile simulators from Terma, and in 2009, Boeing assisted Terma in receiving a contract for their electronic warfare suite to be installed on the Chinook helicopters bought by Canada from Boeing.

Boeing continues to work with Danish companies of all sizes on a variety of industrial projects that will provide long-term sustainable growth and open new markets for world-class Danish aerospace products.

Boeing Technical Partnerships in Denmark

The Boeing 787 Dreamliner provides passengers with better flight experiences in part because of the findings of a two-year study on cabin environment conducted by Boeing with the Technical University of Denmark (Danmarks Tekniske Universitet), based in Lyngby, Denmark. Researchers conducted the study in a simulated cabin environment and discovered that humidity was not the key factor in passenger comfort; rather, it was air purity. As a result of this research, the 787 was engineered with a much more advanced air-filtration system than originally planned.

In October 2011, Boeing became a tier 1 member with a seat on the board of the Danish Advanced Manufacturing Research Center (DAMRC), which Boeing also helped launch in September 2009. The intent of the DAMRC is for member companies to collectively work together to improve their manufacturing capabilities. The DAMRC currently has 20 members from industry, academia and local governments. On Nov. 16, 2011, Boeing expanded its partnership with the DAMRC, becoming a full participating member and offering the DAMRC access to a worldwide network of research and development consortia affiliated with Boeing.

Global Corporate Citizenship in Denmark

Through its Global Corporate Citizenship program, Boeing worked together with science teachers at Risbjergskolen, a school located in Hvidovre, south of Copenhagen, as well as with school leadership and the Norwegian nonprofit organization FIRST Scandinavia to add the Norwegian “NewtonRoom” concept to the school’s curriculum. The room provides middle school children with state-of-the-art laboratory equipment and exciting simulated situations to get creative with science.

Boeing in Finland

Boeing Commercial Airplanes in Finland

Commercial Airplanes customers in Finland include Finnair and Blue1, both owned by the SAS Group. Finnair, founded in 1923, includes four 757s in its fleet. Blue1 operates nine 717-200s.

Boeing Defense, Space & Security in Finland

In 1992, Boeing sold Finland 64 F/A-18s with a 100 percent industrial participation obligation. Final assembly of 57 of the 64 F/A-18s was performed in Finland by Patria Aviation. In August 2000, this highly successful partnership was completed five years ahead of schedule and has served as a model for industrial cooperation programs.

In December 2016, Boeing completed an upgrade program that includes air-to-ground weapons, interoperability, advanced communications and integrated enhanced cockpit displays. The upgrade includes work from two Finnish suppliers, Patria and Insta.

This plan supports the goals of the Finnish government to have autonomy and self-sufficiency for their F/A-18C aircraft, to help Patria further enhance their capability of supporting the F/A-18C aircraft and to help Insta achieve in-country support capability for the new systems that were incorporated into the F/A-18C aircraft.

The Super Hornet is currently a contender in Finland's HX Fighter Replacement Program. The Finnish Air Force is looking at replacing its fleet of F/A-18C aircraft, and contract award is expected in 2021.

Finland is also a member of the SAC C-17 consortium.

Boeing in Iceland

Boeing Commercial Airplanes in Iceland

Iceland's flagship carrier, Icelandair, operates an all-Boeing fleet of Next-Generation 737s and 757-200s and -300s in its international network. Icelandair placed an order for 16 737 MAX in February 2013.

Bluebird Cargo began flight operations in March 2001 with a single Boeing 737-300 Freighter aircraft. Today, Bluebird Cargo operates four 737-300 and one 737-400 Freighter aircraft.

Boeing in Norway

Boeing Commercial Airplanes in Norway

Norwegian Air Shuttle ASA, based in Oslo, is Scandinavia's largest low-fare airline company and the third largest low-cost airline in Europe. Norwegian operates 65 737-800 and three 737-300 airplanes. In January 2012, Norwegian announced a firm order for 100 fuel-efficient 737 MAX airplanes and 22 Next-Generation 737-800s. Norwegian has also ordered eight 787-8s for its planned long-haul operations. Norwegian is also a Boeing GoldCare customer, with a 12-year agreement that covers the airline's future 787 Dreamliner fleet. In July 2012, Norwegian Air Shuttle became the largest customer for the Boeing landing gear exchange program, with a new service contract covering an additional 15 Next-Generation 737s.

Boeing Defense, Space & Security in Norway

In a public statement on November 25, 2016, the Norwegian government announced its decision to procure five P-8A Poseidon aircraft to replace their aging fleet of P-3 aircraft and three DA-20 Jet Falcons. The U.S. Congress officially received notice on December 20, 2016, that the State Department had approved the sale, which will be executed through the Foreign Military Sales process.

The P-8 captures the benefits of being a military derivative of the Next-Generation 737-800 and provides extremely high reliability; it can fly higher, farther and faster than other maritime patrol aircraft and can detect, track and report on more targets.

Norway is a member of the SAC consortium and also one of the countries that participates in the NATO AWACS program with a fleet of 17 Boeing AWACS E-3A radar aircraft.

Under the Norwegian Industrial Cooperation policy, Boeing is committed to meeting its obligations and will build on its existing work with the Norwegian defense industry to cultivate long-term, sustainable business partnerships that will extend the benefits and support economic growth throughout the country.

Global Corporate Citizenship in Norway

In partnership with the nonprofit FIRST Scandinavia, the Norwegian Aviation Museum and the Bodo Council, Boeing established the Newton Flight Academy in 2016. Children and visitors alike are able to enjoy, explore, build, test and fly in state-of-the-art simulators. They can fly, try out the role of an air traffic controller, learn how pilots plane their flights, communicate with the tower, navigate in the air and much more. The project aims to bring more students to choose an education in science, technology, engineering and mathematics (STEM).

Boeing in Sweden

Boeing Commercial Airplanes in Sweden

SAS Group is based in Stockholm. SAS was formed in 1946 when the national airlines of Sweden, Norway and Denmark began operating together on international flights. Its inaugural flight was on Sept. 17, 1946, when a newly acquired DC-4 flew from Stockholm to New York.

SAS is positioned as the “world’s first green airline” and has established itself as a leader in environmentally sound operations by using innovative technology and processes to minimize fuel burn and emissions. It is also a member of the Boeing-founded Sustainable Aviation Fuel Users Group, which is chartered to enable commercial use of renewable fuel sources that can reduce greenhouse gas emissions while lessening commercial aviation’s exposure to oil price volatility and dependence on fossil fuels. SAS’s environmental commitment has made SAS a good customer for the

Boeing 737 models. The SAS Group fleet includes 737-400, -500, -600, -700 and -800 airplanes and MD-81/82 aircraft.

Boeing Defense, Space & Security in Sweden

Sweden is a member of the SAC consortium that acquired three Boeing C-17 Globemaster III advanced airlifters in 2009.

Boeing Partnerships with Swedish Industry

Saab Aerostructures is designing and manufacturing large cargo doors, bulk cargo doors and access doors for the 787 and will build the doors at its base in Linköping, Sweden. CTT Systems AB of Nyköping will provide 787 cabins with its Zonal Drying System to regulate humidity and control condensation for increased passenger comfort.

Boeing in Switzerland

Geneva-based PrivatAir operates business charters and all-business-class flights in conjunction with Lufthansa. Its fleet includes Boeing Business Jets and 757-200 and 737 airplanes. PrivatAir has two 787s on order.

In March 2013, the Lufthansa Group and Swiss International Air Lines (SWISS) announced a commitment for six 777-300ER (Extended Range) airplanes. The airplanes, valued at \$1.9 billion at list prices, were selected for the airline's long-haul fleet renewal.

Jet Aviation in Basel is a factory-approved service center that has completed many projects for Boeing 737, 757, 767, 747SP and 747-400 airplanes, including highly customized VIP interiors delivered to Boeing Business Jet customers.

The F/A-18 Hornets flown by the Swiss Air Force are undergoing a modification program called Upgrade 25, including a new digital-radar warning system, new cockpit displays, an upgraded digital recorder, an advanced targeting infrared pod, an upgraded GPS and armament computer memory upgrades.

RUAG Aerospace in Emmen is the main source for Boeing F/A-18C/D spares, wedges and related parts used at the Structural Repair Facility in Mesa, Arizona. It has been honored as a Boeing Supplier of the Year for its outstanding on-time delivery and quality performance.

In March 2011, Boeing joined with the École Polytechnique Fédérale de Lausanne to create the Sustainable Biomass Consortium, a research initiative focused on increasing alignment between voluntary standards and regulatory requirements for biomass used to create jet fuel and bio-energy for other sectors. This consortium aims to harmonize sustainability standards for biomass-based fuels.

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