



Aerospace Resource Guide

A Reference for U.S. Exporters

2014–15 Edition
Revised





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2014–15 Edition (Revised)

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Introduction

What Can the U.S. Commercial Service Do for You?

The U.S. Commercial Service (CS) is the export promotion arm of the U.S. Department of Commerce's International Trade Administration. Our global network of more than 1400 trade professionals is located throughout the United States and in U.S. Embassies and Consulates in more than 70 countries. Whether you are looking to make your first international sale or expand to additional markets, we offer the expertise you need to connect with lucrative opportunities to increase your bottom line.

Our Services

The Aerospace Team works directly with industry to provide you with information you need to grow your business and ensure that the aerospace industry remains a cornerstone of the U.S. economy. We create these guides to provide valuable market intelligence relevant to your company's export goals. Learn more about how we can help you at [export.gov/industry/aerospace](https://www.export.gov/industry/aerospace).

To begin your relationship with CS, first contact your local U.S.-based trade specialist. Their names can be found on the following pages, as well as at [export.gov/usoffices](https://www.export.gov/usoffices).

On behalf of the Aerospace Team, we hope you find this guide a useful tool for developing and executing your international business strategy. Please contact us directly if we can be of further assistance. Your feedback on the guide is always appreciated.

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Market Intelligence

- Analyze market potential and foreign competitors
- Obtain useful information on best prospects, financing, laws, and cultural issues
- Conduct background checks on potential buyers and distributors

Trade Counseling

- Develop effective market entry and sales strategies
- Understand export documentation requirements and import regulations of foreign markets
- Navigate U.S. government export controls, compliance, and trade financing options

Business Matchmaking

- Connect with pre-screened potential partners
- Promote your product or service to prospective buyers at trade events worldwide
- Meet with international industry and government decision makers in your target market(s)

Commercial Diplomacy

- Overcome trade obstacles to successfully enter international markets
- Benefit from coordinated U.S. government engagement with foreign governments to protect U.S. business interests
- Access U.S. government trade advocacy for your foreign government procurement bids



Aerospace Exports Overview

The U.S. Aerospace sector covers a wide range of manufactured goods including aircraft parts, general aviation aircraft, rotorcraft, business jets, large civil aircraft and products relating to the commercial space sector, including launch vehicles and satellites. While U.S. manufacturers are highly competitive in each of these sub-sectors, each group has its own top markets globally, its own best prospects and its own market access challenges. Many U.S. aerospace companies split their business between civil use products and defense products. Generally speaking, as the U.S. defense budget has declined, U.S. aerospace manufacturers have seen an increasing need and utility in finding foreign markets to maintain their sales volume and production rates. Their product portfolio has also trended towards the civil side and away from defense products (though defense remains a critical element of the business model). For example, in 2009 U.S. aerospace production was fairly evenly split with defense related goods accounting for 41 percent of production and civil goods accounting for the other 59 percent. By 2013, defense goods accounted for only 29 percent of U.S. aerospace production with civil goods capturing the other 71 percent.

Overall U.S. aerospace exports reached USD 128.74 billion dollars in 2013, up 8.6 percent from the previous year's total of USD 118.52 billion. U.S. aerospace exports have been experiencing a steady increase over the past several years, up almost 37 percent since 2009. The top U.S. export markets in 2013 were China, the United Kingdom, France, Japan and Canada.

Top destinations by sub-sector will vary from the list above. For example, aerospace parts will naturally flow more to markets with mature manufacturing sectors (e.g. the EU markets and Brazil), while large civil aircraft exports are spread more robustly to any markets with airlines. General aviation products also enjoy wider distribution, though factors such as overall GDP, adequate infrastructure and access to MRO facilities are important. Exports of air traffic management equipment, particularly advanced, next generation equipment are expected to increase as more countries come into line with regulations agreed upon by the United Nations International Civil Aviation Organization. While satellite exports tend to go more heavily to higher income markets many smaller countries see the utility in owning satellites covering region to provide satellites communication, broader television and internet coverage and military capabilities.





Industry Briefs

Civil Aircraft Parts

Prepared by Fred Elliott, International Economist • fred.elliott@trade.gov • (202)-482-1233

Summary

Manufacturers of civil aircraft parts provide products to manufacturers of complete civil aircraft; airlines and other aircraft operators; and aircraft maintenance, repair, overhaul (MRO) shops. The aircraft parts industry is tiered, with some parts passing through many hands, and national borders, before reaching an airframe manufacturer in a major subassembly.

While other types of airframe producers, such as the regional jet manufacturers Bombardier (Canada) and Embraer (Brazil), cannot be discounted, manufacturers of large civil aircraft (LCA) are especially significant drivers for the demand of civil aircraft parts. The U.S. Department of Commerce defines LCA as jet transport aircraft of 100 seats or more or equivalent cargo capacity. The primary manufacturers are Boeing, Airbus and Bombardier (the latter of which is producing a 110–130 jet airliner yet to be delivered). While both Boeing and Airbus each produce some aircraft parts, both manufacturers emphasize their roles as integrators, seeking to reduce their production of aircraft parts, as well as shrinking the number of their direct suppliers. Boeing and Airbus increasingly rely on their first tier suppliers to assist in product design, as well as in contracting with second and third tier suppliers.

There is no authoritative data on the size of the U.S. or global market for civil aircraft parts. However, it is clear that civil aircraft parts account for a significant proportion of total U.S. aerospace exports. In 2008, the most recent year for which data is available, the value of exported U.S. civil aircraft parts (at USD 23.3 billion), excluding parts for aircraft engines, was more than twice the value of U.S. exports of business jets and general aviation aircraft, military fixed wing aircraft, and military and civil helicopters—combined.

According to Airbus, for the production of its jetliners, it spends 42 percent of its aircraft-related procurement in the U.S.—buying more parts, components, tooling and other material from the United States than any other country. Bombardier states that 53 percent of its U.S. commercial series jetliner will be sourced from U.S. suppliers. The U.S. content of Boeing LCA varies between 75 percent and 95 percent, Boeing states.

U.S. Factors Influencing Competitiveness

There are at least four major domestic factors contributing to the international competitiveness of U.S. manufacturers of civil aircraft parts. First, they benefit from a strong domestic customer base that generates demand for parts related to a wide variety of aeronautical applications. U.S. aircraft parts manufacturers have the experience and technology to satisfy a broad range of demanding requirements (in contrast to manufacturers in other countries with less of an aerospace legacy). Advanced manufacturing technology in the private sector will be complemented by the establishment of a U.S. network of public-private manufacturing innovation institutes, such as the Lightweight and Modern Metals Manufacturing Innovation Institute.

Second, the FAA's rigor in ensuring the airworthiness of U.S. aircraft and parts is second to none in the world. Whereas the quality of aircraft parts manufactured in some countries could be held in question, customers around the globe readily accept U.S. aircraft parts knowing that they have been approved by the FAA.

Third, a particular type of airworthiness design and production approval for parts manufacturers, the FAA "Parts Manufacturer Approval" (or PMA), is virtually unique to the United States. PMA parts are frequently sold in the aftermarket in competition with parts produced by or on behalf of a Type Certificate holder. Manufacturers of PMA parts may offer customers significant price discounts. Because PMA authority does not exist in jurisdictions like those in Europe, U.S. PMA manufacturers face no competition from in-country PMA producers (at least for now).

A fourth possible advantage for U.S. parts manufacturers is prospective. In February 2014, the FAA issued a Notice of Proposed Rulemaking that would, if adopted, permit Production Approval Holders (PAHs) to issue export certificates of airworthiness, (FAA form 8130-3). PAHs include manufacturers of aircraft parts that produce under PMA and other types of FAA approvals. Currently, many U.S. aircraft parts manufacturers pay a fee to an FAA designee to receive an export certificate of airworthiness. This places them at a disadvantage vis-à-vis European and Canadian manufacturers who are able to issue on their own authority – and without paying any fee – counterpart forms used in their countries. Adoption of the proposed rule would put U.S. manufacturers on a more level playing field.

International Factors Impacting Competitiveness

Overseas challenges to the competitiveness of U.S. manufacturers of civil aircraft parts include subsidies, "localization" requirements, and questionable airworthiness approval procedures.

Subsidies: Some competitors of U.S. civil aircraft parts manufacturers are subsidized. For example, the federal government of Belgium, in coordination with Belgium's three regional governments, subsidizes Belgian manufacturers that supply parts to Airbus. The French government, through OSEO (the state-backed company that provides financial support to innovative small and medium sized enterprises), provides "reimbursable advances" to assist

French manufacturers. In 2010, OSEO announced €80 million in reimbursable advances over two years for French small and medium-sized enterprise subcontractors and suppliers of large aerospace firms. Zodiac Aerospace received €230 million in reimbursable advances during the August 2008 to August 2009 period. In 2009, Latécoère received €50.4 million in reimbursable advances. In 2011, Figeac Aero received €10 million and Slicom received €1 million.

Localization requirements: Several governments have formal policies aimed at the creation of a vibrant, domestic aerospace manufacturing industry. When purchasing major aerospace products, such as LCA to be operated by state-owned or state-controlled airlines, these governments may seek to encourage foreign airframe and aircraft engine manufacturers to establish in-country manufacturing sites, purchase aircraft and engine components from in-country suppliers, or transfer technology to in-country organizations. Such measures may or may not be explicit. The most explicit of such measures, government mandated offset requirements, have been applied to military aircraft procurement for decades. It appears there may be interest by some governments to apply offset requirements to civil aircraft purchases, with the effect of requiring airframe manufacturers to source components from in-country suppliers (and not U.S. suppliers).

Airworthiness approval procedures: Some manufacturers of parts approved by the FAA for airworthiness with a Supplemental Type Certificate (STC) or PMA have encountered difficulties in obtaining validation of the FAA approval from foreign civil aeronautical authorities. These difficulties include protracted periods of time to process validation applications and questionable requests for detailed design specifications. In addition, small and medium-size U.S. parts manufacturers have expressed concern with what they perceive to be unreasonably high fees charged by the European Aviation Safety Agency to validate FAA airworthiness approvals.

Exchange rates may affect U.S. manufacturers' competitiveness positively or negatively. With respect Airbus, likely the single largest foreign customer of U.S. civil aircraft parts, fluctuations in the euro/dollar exchange in recent years have worked to the advantage of U.S. exporters. From December 2000 to December 2013, the value of one euro in U.S. dollars rose from USD 0.897 to USD 1.370 – an appreciation of 52 percent. The appreciation of the euro vs. the U.S. dollar is particularly important for U.S. civil aircraft parts suppliers since Airbus has traditionally denominated its LCA sales in U.S. dollars. The purchase by Airbus of euro-denominated parts from European suppliers is now disadvantageous given that Airbus would have to convert weakened U.S. dollars (received from the sale of its LCA) to euros to do so.

Recent Trends

The pace at which aerospace manufacturing involves transnational inputs continues unabated. Manufacturers of complete civil aircraft around the world source components and materials from suppliers representing dozens of countries. The manufacturing of some aircraft parts is placed in some countries in response to government influences, including financial support and localization pressures.

Forecast Trends

The largest two manufacturers of civil aircraft, Boeing and Airbus, are likely to continue their demand for large quantities of civil aircraft parts well into the future. At the end of 2013, the combined backlog (i.e., unfilled orders for new jetliners) for both manufacturers was 10,639 aircraft. By comparison, during 2013, both manufacturers delivered 1,273 jetliners. U.S. producers of aircraft parts, especially those prepared to accept at least some costs in designing and developing parts for specific aircraft platforms, likely will have significant opportunities for export and domestic sales in the future. Demand for aftermarket parts will naturally follow aircraft sales, growing or shrinking accordingly as national fleets expand or contract. Based on that, recent trends would indicate that the Middle East and Asia (in particular China) will be growing markets of opportunity for aftermarket/repair aerospace parts.

General Aviation

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Summary

General aviation refers to all nonmilitary and nonscheduled commercial flight; however, for the purposes of this report, general aviation aircraft will be limited to business jets, turboprops, and piston fixed-wing airplanes. Global general aviation (GA) manufacturers shipped 2,2561 units in 2013, up 4 percent over 2012.

Change in shipments, 2012–13

- Piston aircraft: up 25 units/2.8 percent
- Turboprops: up 61 units/10.4 percent
- Business jets: up 6 units/0.9 percent

Shipments were up in all three industry segments, though the biggest increase was in turboprops. Three quarters of the increase in turboprops came from Beechcraft. However, while the statistics seem to be improving, the financial health of many GA manufacturers is still in question.

Domestic analysis

The United States is typically the world leader in general aviation, both in terms of production and in terms of customer demand. Though there has been increased international competition, particularly in business jets, U.S. manufacturers still account for over 70 percent of general aviation airplanes sold. Total shipments by U.S. firms were up nearly 100 units in 2013.

Much of that improvement, however, was due to increased sales in the domestic market rather than an increase in exports. North America represented over half of all deliveries in 2013 and deliveries to North American clients increased in all three market segments. Although 43 percent of U.S.-produced general aviation aircraft were exported in 2013, exports actually declined both as a percentage (down 5 percent) and by numbers of units (down 29 units).

A notable trend not captured in the data is the activity of the Chinese. Chinese firms have acquired or invested in several U.S. general aviation aircraft firms. After reorganizing its aerospace industry in 2008, China announced its interest in entering the general aviation industry and has sought to do so by acquiring foreign firms and encouraging foreign firms to set up production facilities in China. Potential implications for the industry, including impact on the global supply chain, remain to be seen.

International Analysis

A decade ago, the share of general aviation aircraft going to North America was closer to 70 percent and many manufacturers concentrated most of their sales efforts on the U.S. market. During 2004–08, there was a sharp rise in the international market, and U.S. exports rose from 333 to 1,161 aircraft. Even at that point, however, North America still represented 60 percent of global demand, since the global boom also included a U.S. boom.

After the economic downturn in 2008, shipments to North American clients decreased dramatically and to date are only at half of pre-downturn levels. Today, North America represents just over 50 percent of global demand, with slight variations amongst the three business segments.

Shipments to global customers have not increased dramatically since the downturn (see below) but have become relatively more important to global manufacturers looking to diversify their customer base. General aviation manufacturers believe that developing a client base outside North America will be critical for future sales growth and are devoting significant resources to developing the regulatory environment and infrastructure to support growth in foreign markets, particularly in China and the rest of Asia-Pacific.

Regional Deliveries of All General Aviation Aircraft, 2008–11

Region	2008	2009	2010	2011	2012	2013
North America	2,457	1,260	955	1,059	1,075	1,216
Europe	780	511	394	294	392	334
Latin America	315	182	240	208	250	253
Asia	252	200	271	282	329	311
Middle East/Africa	165	117	156	107	118	142

Trends

According to GAMA data, Asia-Pacific has been the second-largest market for turboprops for the past four years. Europe’s market share declined overall for the second year in a row, but it was still the second-largest market for both new business jets and new piston aircraft. Going forward, Honeywell, which produces an annual forecast for business jets, predicts that the North American market will continue to strengthen relative to other markets, accounting for 61 percent of demand over the next four years². Latin America and Europe are expected to be the next largest markets, accounting for 18 and 12 percent of demand, respectively.

UN import data corroborates the information provided by industry, with more country specificity. The United States is by far the largest importer of airplanes between 0 and 15,000 kg; in 2012, U.S. imports of USD 3.353 billion were 5.7 times that of the next largest importer, Brazil (USD 535 million).³ The rest of the global top 10 importers were Canada, China, South Africa, France, India, Germany, Switzerland, and Russia, in that order.

75 percent of all U.S. exports went to 12 markets: Brazil, Canada, France, China, Germany, Austria, South Africa, Switzerland, Argentina, Mexico, Indonesia, and Colombia, in that order. Just the first 5 markets represented 51 percent of U.S. exports. Brazil was by far our biggest market at USD 481 million, representing an 82 percent market share in this HS category.

Air Traffic Management Products

Prepared by Jonathan Alvear, International Trade Specialist • jonathan.alvear@trade.gov • (202)-482-4125

Summary

Air traffic management products encompass the suite of technologies necessary for the orderly management of air traffic within specific airspace (for example, the Continental United States). These technologies range from traditional radars, communications systems, and instrument landing systems to state-of-the-art satellite navigation systems, aviation data management systems, advanced surface movement guidance and control systems, and air traffic flow management systems. The market for this sector varies depending on the development of the aviation systems in specific countries as well as the presence (or lack thereof) of native producers of the technology. Familiarity and expertise with these systems also is a determining factor. Current legacy systems are commonly regarded by the aviation community as at or over capacity—future growth in air traffic will have to be met by updated technology. To facilitate this process, the U.N. International Civil Aviation Organization (ICAO) has established roadmaps and common requirements for future equipage that promote system interoperability. These requirements will lead to orderly progression of procurement projects as countries act to acquire and adapt upgrades to existing infrastructure.

U.S. Factors Influencing Competitiveness

Research and development in air traffic management technology in the U.S. is largely driven by the Next Generation Air Transportation System (NextGen) program managed and funded by the Federal Aviation Administration. Now in the implementation phase, the goal of NextGen is to direct the transition from legacy systems to satellite-based navigation and advanced data communications. This implementation has been hampered by the overall budget hurdles the FAA has had to maneuver while seeking reauthorization. That being said, the transition to NextGen is widely viewed as necessary in order for the U.S. National Airspace System to maintain its status as the gold standard for air traffic management.

International Factors Impacting Competitiveness

The only competing system that is on the level of NextGen is EU's Single European Sky ATM Research (SESAR) undertaking. While the systems are comparable, NextGen and SESAR are not fully interoperable. This fragmentation of ATM standards raises the possibility of safety issues and suggests potential market access issues both in Europe and elsewhere (the EU has actively encouraged the adoption of SESAR standards in third party markets). Some companies have raised concerns with a lack of transparency in the development of SESAR standards, raising the issue of potentially preferential treatment for those companies (primarily but not exclusively European) that invested in SESAR projects in their early stages.

Recent Trends

ICAO, the U.N. body that establishes standards and recommended practices for global aviation, formally endorsed its Aviation System Block Upgrade (ASBU) roadmaps for modernization of the global aviation system at its 38th Assembly in the fall of 2013. The ASBUs address specific performance improvement areas—including airport operations, globally interoperable systems and data, optimum capacity and flexible flights, and efficient flight paths. Despite this endorsement by ICAO members, a number of countries raised concerns about their ability to fund these procurement projects. Nevertheless, many countries have started to implement the ASBUs. Leading countries at this time include (but are not limited to): Brazil, India, the United Arab Emirates, and Germany.

Forecast Trends

As ASBU compliance plans are rolled out, there will be opportunities for U.S. companies to help individual air navigation service providers plan and design needed improvements, obtain new technology, redesign airspace, and build the data systems necessary to manage the new operational environment. The issue of fragmenting standards may become a limiting factor if efforts to harmonize standards do not keep pace with technical improvements. As well, creative engagement of public and private capital sources most likely will be necessary to finance system upgrades in specific regions (such as sub-Saharan Africa).

Commercial Space

Prepared by Kim Wells, International Trade Specialist • kim.wells@trade.gov • (202)-482-2232

Summary

The commercial space sector includes the manufacture and launch of communications and imaging satellites and equipment, and the services/data that the satellites provide. The Satellite Industry Association reports that U.S. companies captured 44 percent of the USD 189.5 billion global satellite industry revenues in 2012. Global revenues have tripled since 2001. While the number of commercial satellites launched annually (approximately 20) has remained fairly constant for the past 10 years, the revenue from those satellites' services has grown at approximately 5–6 percent per year for the past several years, reaching USD 93.3 billion in 2012. Higher subscription rates for satellite broadband services, satellite radio and satellite television services have driven this growth. Additionally, higher demand for high definition television channels—especially in the United States—have driven increased purchases in ground equipment/receivers and services revenues. Providing images of the Earth from satellites is a small portion of the services sector, but one that is growing quickly as new applications for the images and data are developed. Imaging services are provided solely by Digital Globe, who supplies data to news outlets, governments and private customers, mainly in support of mapping, resource identification, and infrastructure growth.

U.S. companies captured nearly 60 percent of the global USD 14.6 billion satellite manufacturing market in 2012, and appear poised to maintain this market share. U.S. satellite manufacturing is dominated by a handful of large companies, including Lockheed Martin, Space Systems/Loral, Boeing, Orbital Sciences and Ball Aerospace. Although the number of satellites manufactured was steady, the revenues from those products increased due to new innovations in satellite technologies, power, and electric propulsion.

Launch vehicle manufacturing and services are provided in the U.S. by a similar group of companies: mainly Boeing, Lockheed Martin, Orbital Sciences and SpaceX. The strong majority of U.S. launch revenue is derived from launches of U.S. Government satellites, but SpaceX's entry (and Lockheed Martin's Atlas' reentry) into the international commercial market is reestablishing the United States as a commercial provider. Several smaller, more entrepreneurial firms are seeking to enter the commercial market, especially for commercial human spaceflight: Sierra Nevada, Blue Origin, and Virgin Galactic, and others.

U.S. Factors Influencing Competitiveness

Until this past year, U.S. export control policy and regulations have discouraged the ability of U.S. satellite manufacturers to win international competitions. Similarly, foreign satellite customers sought to launch their satellites overseas in order to avoid dealing with perceived difficult regulations. However, changes made to these policies and regulations are creating new interest in U.S. manufacturers and launch services providers. Commercial satellites and most of the related components will soon be licensed by the Commerce Department, rather than the State Department, which should create an easier process for both the manufacturers and customers. As this process is implemented, it should also help improve foreign customers' perceptions of the ease of doing business with U.S. providers, leading to increased export sales.

In November 2013, President Obama signed a new National Space Transportation Policy, which highlighted the importance of promoting the use of U.S. commercial space transportation for government launches, including for human spaceflight. The policy also addresses new opportunities for commercial satellite operators to "host" U.S. Government payloads on their satellites, and recognizes the importance of maintaining a strong, technologically advanced industrial base. This policy built upon similar pro-commercial provisions of the 2010 National Space Policy.

For images and data obtained from commercial remote sensing satellites imaging data, the two major U.S. data companies recently merged into one—Digital Globe. Digital Globe uses its own satellites, as well as partnerships with foreign satellite operators to provide images of the Earth that are used for applications in the mapping, mining, infrastructure, and services industries. The applications for this data have seen strong growth, as users become more aware of the value of near real-time images from space.

International Factors Impacting Competitiveness

Foreign government involvement in the space sector, including government subsidies to develop space technologies, negatively impacts the ability of U.S. companies to compete overseas. However, advanced U.S. technologies and components are regularly in demand for foreign projects, as long as export control regulations permit goods to be transferred overseas. Governments in India, Japan, Korea and Europe work side-by-side with industry counterparts, but often rely upon U.S. components. While China is quickly developing expertise in launch services, satellite manufacturing and space exploration, U.S. companies are not permitted to work with China due to ongoing Tiananmen Square sanctions. Unfortunately, the low cost of launch services from both China and India (resulting from government involvement in the program), hurts the ability of Western providers (U.S. and Europe's Arianespace) to compete.

As mentioned, smaller countries like Korea and Taiwan desire to develop space technology and enter the commercial space market. These countries are often seeking not only foreign products, but also assistance with manufacturing and technology development. These opportunities are widely spread throughout satellite, component, propulsion, R&D and other portions of the aerospace sector.

Recent Trends

In a significant change from past practices, NASA has started to use commercial launch providers to deliver cargo to the International Space Station (ISS), and hopes to use commercial providers to deliver astronauts to the ISS in the near future. Two U.S. companies—Orbital Sciences and SpaceX—continue to demonstrate the capability to provide cargo delivery and are working towards the needed certification for human spaceflight. While that progress continues in the government market, other companies have made significant advancements towards allowing private sector citizens to experience spaceflight as well. Virgin Galactic, with its SpaceShipTwo vehicle, has completed three successful test flights, and hopes to have its first private launch in 2014. A number of other potential providers are seeking entrance into this future market as well, but with unclear start dates.

The need for ever-increasing amounts of bandwidth appears insatiable. Both government and private sector demand for digital services from satellite continued its strong growth over the past several years. Increasing opportunities for data streaming, video on demand, and high-definition services will continue to feed this demand for the foreseeable future.

Although the trend for satellite manufacturing has leaned towards larger, more powerful satellites, smaller countries have begun seeking their own regional, mid-size satellites for communications. This has created a bigger market for mid-size satellite manufacturing, as well as a shift away from the larger satellite services providers like Intelsat and SES. It also potentially opens the market for a wider range of U.S. launch providers. Growth in both areas will continue to have a positive impact on satellite manufacturing for several years.

Forecast Trends

In the future, commercial human spaceflight is expected to grow in both the government and commercial sectors. As Virgin Galactic's Spaceline and other ventures become operational, the space tourism market will experience initial growth, which will hopefully bring future costs down so that a greater number of customers may afford these launch services.

The demand for satellite services is expected to continue strong growth as the need for digital services expands. Sales will be found globally as underserved markets begin to acquire satellite services coverage and traditional markets upgrade their capabilities. Ever increasing demand for high definition broadcasting, satellite radio, and broadband internet requirements will fuel this growth. Growth in satellite imaging is also expected to continue to increase as the quality of the images continues to be clearer and users identify new applications for the data.

A mix of demand for large, powerful communications satellites as well as medium-sized, more regionally focused satellites will continue to encourage growth and competitiveness for the satellite manufacturing sector. This in turn, will create opportunities for the launch services sector, as well.

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Australia

Summary

Australia is as large as the continental U.S., but has 1/15th the population. An extensive network of airports services major cities, regional centers, island resorts and remote mining communities. In addition to civil aviation services carrying fare-paying passengers between these airports, there are also recreational, tourism, freight, charter, agricultural, training, executive jet, private/business use, aeromedical, fire-fighting, space and border patrol activities. This excludes extensive military usage.

There are 15,219 aircraft on Australia's civil aviation register of which 11,520 are powered aircraft; 2,089 are helicopters; 1,229 are gliders; and 381 are lighter than air. There are over 700 design, maintenance, maintenance training, parts manufacturing and parts distribution organizations.

Australia has extensive manufacturing, repair and maintenance capacities including sizeable investments by Boeing, Raytheon, Northrop Grumman, Lockheed Martin and BAE Systems. Boeing Australia is Boeing's largest operational footprint outside the U.S.; the U.S. is both the largest supplier (USD 212 million) and Australia's largest export market (USD 657 million) for aviation products (item code 88).

QANTAS is Australia's largest commercial carrier with Virgin Australia its key domestic competitor. International services include the world's longest direct commercial service—Sydney to Dallas-Fort Worth.

Market Entry

A Free Trade Agreement has been in place since January 2005 and a Bilateral Aviation Safety agreement came into effect on 28 November 2006. Under this agreement Australia accepts certain FAA approvals and the U.S. imports certain aeronautical products designed and manufactured in Australia.

Statistics

Capital: Canberra
Population: 23,459,600
GDP: USD 1.52 trillion
Currency: Australian dollar (AUD)
Language: English

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Current Market Trends

Australian imports (item 88) declined to USD 216 million in 2013. The United States dominate with approximately 50 per cent market share. The helicopter fleet is huge and growing. UAVs are appearing, especially in agriculture. Australia's high labor costs and strong currency are a challenge to Australia's domestic industry capabilities and repair and maintenance services for example are increasingly performed overseas.

Current Demand

Over the next 10 years, QANTAS has committed to about AUD 17 billion for more fuel efficient, next generation aircraft such as the Airbus 380 and the Boeing 787 Dreamliner. In 2012 Australian airports facilitated 1.43 million aircraft movements and 141 million passenger movements. A second major airport was announced for Sydney in April 2014. Construction will commence in 2016.

Best Prospects

- Helicopters
- Unmanned aerial vehicles (UAVs)
- Parts
- Repairs and maintenance.

Helicopters

Australia has a large civil helicopter fleet exceeding 2000, ranking sixth worldwide and equivalent to about $\frac{3}{4}$ that of Canada. When added to New Zealand's fleet of about 900, the regional fleet of 3,000 ranks in the top 3 internationally. Bell and Robinson are established brands. Helicopters are well suited to support remote oil, gas and mining projects as well as island tourist resorts, aeromedical and rescue services. Large cattle stations use helicopters for mustering.

Competitors

- Airbus (large passenger aircraft)
- Embraer (smaller regional passenger aircraft)
- Eurocopter (helicopters)
- Asia and New Zealand (offshore maintenance)

Barriers

There are no barriers per se to importing aircraft into Australia from the U.S. However, there are aircraft standards covering local manufacture, importation, operation, and maintenance.

Trade Events

Rotortech

Sunshine Coast, Queensland

Largest helicopter event in Southern Hemisphere.

Australian Airports Association National Conference and Exhibition

November 23–27, 2014 • Gold Coast, Queensland • aomevents.com/aaa2014

Asia Pacific's leading aviation conference/exhibition.

Australian International Airshow

February 24–March 1, 2015 • Geelong, Victoria • airshow.com.au

Largest air show in the Southern Hemisphere. Biennial event; alternates with Singapore Air Show.

Trade Associations

- Aerial Agricultural Association of Australia Ltd., aerialag.com.au
- Aircraft Owners and Pilots Association of Australia, aopa.com.au
- Airservices Australia, airservicesaustralia.com
- Australian Airports Association, airports.asn.au
- Australian Helicopter Industry Association, austhia.com
- Aviation/Aerospace Australia, aviationaerospace.org.au
- Aviation Maintenance Repair and Overhaul Business Association Inc, amroba.org.au
- Civil Aviation Safety Authority, casa.gov.au
- QANTAS, qantas.com.au
- Recreational Aviation Australia, raa.asn.au
- Regional Aviation Association of Australia, www.raaa.com.au
- Space Industry Association of Australia, www.spaceindustry.com.au

Austria

Summary

The Austrian market for civil aviation aircraft amounted to USD 897 million in 2012 and is expected to grow by 15 percent in 2013. Austrian aircraft and parts imports in 2012 amounted to USD 1.6 million. With domestic-based manufacturing limited to one company, Diamond Airborne Sensing GmbH, the vast majority of the market is served by imports.

The major aircraft suppliers to Austria in 2012 were the United States with 26.7 percent, Canada with 20.2 percent, Germany with 14.6 percent and France with 7.0 percent.

The Austrian general aviation market is characterized by imports. Diamond Airborne Sensing GmbH is the sole Austrian manufacturer, and it produces only small craft. The Federal Statistical Office gives only import/export figures for civil aircraft and related parts and equipment. No official aircraft production figures are available. The Austrian market for civil aviation aircraft amounted to USD 897 million in 2012 and is expected to grow. Market demand estimates are based on sales figures obtained from the Civil Aviation Office and Diamond Airborne Sensing.

Diamond Airborne, Sensing in Wiener Neustadt, produced out 59 single-engine and twin-engine two-seater and four-seater propeller-driven avgas aircraft in 2012. Approximately 95 percent of Diamond's production is exported worldwide. In 2013, the firm increased its production in volume by almost 50 percent compared to the previous year. Diamond uses diesel engines from the Austrian firms Austro Engines and Rotax. Suppliers for avionics are the U.S. firm Bendix King and Garmin.

Statistics

Capital: Vienna
Population: 8.4 million
GDP: USD 399.6 billion (2011)
Currency: Euro (€)
Language: German

Contact

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An average annual growth rate of 15 percent is projected for the Austrian civil aircraft market. It should be noted that the accuracy of estimated growth rates are problematic because of the possibility of large one-time orders that greatly skew the statistics.

Aircraft leasing companies have become major factors in the industry as aircraft development and production costs escalate. For the airlines, leased aircraft offer the advantages of low capital investment and greater flexibility in adjusting to changing market conditions.

The Austrian Airlines Group (AAG) has a fleet of 7 Airbus 319, 16 Airbus 320, 6 Airbus 321, 6 Boeing 767-300 ER, 5 Boeing 777-200 ER, 14 Bombardier Q 400, 15 Fokker 100 and 6 Fokker 70. AAG is a 100 percent subsidiary of Deutsche Lufthansa AG.

Niki Luftfahrt GmbH, a member of Air Berlin has a fleet of 4 Airbus A321, 12 Airbus A320 and 7 Embraer 120 Brasilia.

InterSky based in Bregenz has a fleet of 2 ATR 72-600, 3 Bombardier Dash 8Q 300 and one Embraer E190.

Austria imported 7 single-engine aircraft up to two tons, 10 twin-engine aircraft over 20 tons and 5 helicopters in 2013.

The principal end-users of civil aviation aircraft, parts and equipment are in the Austrian Airlines Group, as well as other charter airlines. Emergency medical services and the police use civilian helicopters. The market for corporate fleets and business charter operators appears saturated because of the low prices for flights available commercially. However, industry experts forecast a growth for this sector in 2014.

In the very important category of single aircraft up to 2 tons, U.S. aircraft are dominant. The largest share of this market is held by Piper, Cessna and Beech Aircraft. A strong competitor is Diamond. In 2013, 660 light aircraft (up to 2 tons), 148 aircraft up to 5.7 tons, 114 twin-engine aircraft over 5.7 tons, 212 twin-engine aircraft over 20 tons and 156 helicopters were registered in Austria. The segment over 20 tons had the highest import increase. Private Austrian pilots register their aircraft for business use to gain tax advantages. Other end-users are air taxi and charter services.

Market Entry

Austrians are generally well disposed toward Americans. Following a few general rules of Austrian etiquette will help maintain this positive feeling. Appointments should be made either by telephone or in writing well in advance, and prospective buyers or distributors should be given the option of determining the date and place of the meeting. Prompt response to letters and emails is very important. Some local firms have reported negative experiences in trying to contact U.S. firms, having to go through too many organizational layers and sometimes never getting a response at all. The exporter who can communicate in

German will be much rewarded, even though most Austrians speak English. Austrians tend to place more emphasis on quality than price, especially for larger purchases. The quality of a product should therefore be its main selling point. Austrians are generally looking for long-term business relationships rather than immediate sales and profit. Hard selling is generally counterproductive.

Current Market Trends

There is a trend to invest in smaller more fuel efficient jet aircraft such as the Embraer, Falcon, Cessna Citation. and Gulfstream to achieve operational efficiency and meet market demand.

Current Demand

Demand for additional new passenger aircraft is slightly declining due to the economic downturn, with the exception of replacements. Both the Austrian Airlines Group and the general aviation operators will be replacing some aircraft in the next few years. While the occupancy rate is still high, the yield is bad due to the high fuel costs and landing fees. However, demand for cargo aircraft is increasing. There is also a high demand for aircraft parts, avionics and engine parts.

Barriers

Aside from high fees charged by Austro Control, there are no barriers in this market.

Trade Associations

- Austro Control, austrocontrol.com
- Federal Economic Chamber—Aviation Department
- Civil Aviation Authority—Federal Ministry of Transportation, Innovation and Technology, www.bmvit.gv.at/en

Belgium

Summary

Belgium's Aerospace Market is a blend of civil and military. The Belgian Ministry of Defense, now some distance from the great recession, is preparing to purchase additional equipment. Its F-16s are soon to be replaced with a new, next generation aircraft. Belgium's vibrant aerospace industry, serving both the military and civilian markets, is looking for new technologies, such as composites and manufacturing technologies that will help it maintain their edge.

The Belgian defense industry is fully privatized and centered on the manufacturing of components, subassemblies, and small arms rather than full weapon systems and platforms. As a small nation, Belgium cannot maintain a large defense industry based on internal requirements. Instead, the Belgian defense industry relies on the import of components and subcontractor work on major defense programs. Procurement methods and procedures for the Belgian Ministry of Defense (MOD) are similar to ones used the U.S. Department of Defense.

There is a central procurement office for high value items. Belgium is also the site for NATO headquarters and the Supreme Headquarters Allied Powers Europe (SHAPE), both of which offer significant procurement opportunities for large and small U.S. companies.

Belgium's defense force has an air, sea and land component in addition to a medical branch. As the defense force is small, it often cooperates with the Netherlands and Luxembourg both when procuring high-dollar equipment and operationally/exercises. Belgian defense's area of expertise is demining, with an emphasis on sea.

Market Entry

When selling to Belgium, many U.S. SMEs opt to work with a defense consultant. There are a handful of Belgian defense consultants that have segmented the

Statistics

Capital: Brussels
Population: 11 million
GDP: USD 506.5 billion
Currency: Euro (€)
Language: French, Dutch, German

Contact

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market vertically. These consultants have a gentleman's agreement whereby they respect each other's market segment. The in-country Commercial Section maintains good contacts with these Belgian defense consultants.

Most of the consultants are retired military. They maintain good contacts within the Belgian defense establishment and will often work with the relevant officer drawing up the procurement specifications. When the RFP is released, the consultant will cut all formal and informal ties with the Belgian MoD and advise the company they represent on how to enter a successful and competitive bid. This is a common practice in Belgium.

Belgian defense consultants are typically compensated by a commission—the percentage varying depending on the size of the contract. However, for larger contracts that take several years to see through, a retainer may be negotiated. Larger companies should also consider setting up an EMEA office in Belgium. Many large U.S. defense companies have elected to do so, due to Belgium hosting several EU and NATO institutions and the EDA (European Defense Association). Locating in Belgium gives better access to these institutions.

U.S. companies seeking to sell military equipment to Belgium are advised to start with the Office of Defense Cooperation (ODC) and the U.S. Commercial Service. Together, these offices are well versed in the Belgian military environment and procurement procedures.

Current Market Trends

Belgium's soldiers, as elsewhere around Europe, are aging, with the average soldier being 43 years old. Furthermore, due to the recession, Belgium's defense structure has been shrinking down to 32,000 people from 40,000 in 2006. This has limited the deployability of Belgium's defense forces and kept Belgium's presence in Afghanistan and Lebanon to 500 people.

Belgium, streamlining its forces, no longer has a separate army, navy and air force but rather has a unified defense entity with a land, sea and air component served by a joint medical component. Belgium is specialized in demining and continues to cooperate on various levels with the Dutch defense, particularly with regards to naval power.

Belgium is also developing a "BEST" soldier or future soldier program integrating the latest technologies. This includes improved and smart textiles; enhanced, integrated and scalable communication; personal optics and global positioning.

Current Demand

In addition to FN Herstal, the well-known Belgian small arms manufacturer, Belgium has a vibrant aerospace and defense industry, with many SMEs producing components for various aircraft and offering various MRO services. The companies are highly competitive and, in view of the current high energy and labor costs, are often looking for new cutting-edge

technologies to maintain their competitive edge. They focus on advanced, small-batch production capabilities in both metallurgy and composite materials.

Best Prospects

Belgian defense procurement remains modest, even for a country of its size. However, Belgium has a fairly vibrant aerospace and defense industry, particularly in terms of advanced product engineering and manufacturing. There are three trade associations, Agoria, Skywin (French-speaking), and Flanders Aerospace Group (FLAG, Dutch-speaking) that encompass and represent most of Belgium's Aerospace and Defense sectors. Skwywin and FLAG have an aerospace slant to them. U.S. companies interested in the Belgian market should consider supplying the industry with cutting edge technologies giving an edge over competition. Sectors include software, display, CNC and composite sub-component manufacturing,

Helicopters

Belgium currently has twenty Agusta A-109s and three Sikorsky Sea Kings. Aging, they are slated to be replaced by 2018 with NH-90s. Belgium's vibrant Aerospace industry hosts, per capita, a high number of specialized engineering and manufacturing companies. Many of these parts and services are destined for the helicopter industry and supply manufacturers worldwide including Agusta, Eurocopter, Bell Helicopters (Textron), and Sikorsky (UTC).

Competitors

A listing of all the major competitors is available on the Flemish and Walloon Aerospace and Defense Associations website.

The following are notable companies: BARCO, ASCO, SABCA, SABENA Technics, UTC, Sonaca, and FN Herstal. Many of the above companies produce Aerospace components, assemblies, sub-assemblies and provide MRO services. Historically the technology transfer related to Belgium's F16 purchase has bolstered this segment of the industry.

Barriers

For a briefing on defense related business in Belgium and current political issues, we urge all U.S. suppliers of defense equipment and services to contact the U.S. Embassy in Belgium, in particular the ODC and U.S. Commercial Service offices, prior to contacting any Belgian government agency.

While Belgian industry remains relatively free of government control, there is influence exerted by both the Belgian parliament and the regional governments of Flanders and Wallonia. Suppliers of defense related products, equipment and services should remain well aware of Belgian procurement plans well before the publication of the actual RFQ's: changes in technical requirements or any alteration of the RFQ becomes impossible once the RFQ

is published. Non-compliance can lead to administrative elimination from competition. Therefore, the importance of local representation cannot be understated.

Recent EU legislation indirectly forbids offsets. However, it is clear that restriction has simply caused them to be relabeled as “industrial sharing,” though the term “offset” is still openly used. The prohibition has made the aerospace and defense business in Belgium much more opaque. In the past, the ministry of economic affairs, once the gatekeeper to the Belgian market, required 100 percent offset explicitly engineered into all relevant bids. Currently it appears that Belgium still expects industrial sharing (offsets) however, how this is to be conveyed or negotiated and to what percentage remains unclear.

Trade Events

NATO Information Assurance Symposium (NIAS)

September 17–19, 2013 • Mons, Belgium • nias2013.com

This year the NATO Information Assurance Symposium will focus on the threats and security issues that NATO will face in the era of cloud computing.

Trade Events

NATO Information Assurance Symposium (NIAS)

September 16–18, 2014 • Mons/Bergen, Belgium • nias2014.com

Focus on the threats and security issues that NATO will face in the era of cloud computing.

Trade Associations

Flemish Aerospace Group (FLAG)

flag.be

An association of aerospace companies located in Flanders/Belgium. Approximately 70 members who are active in most aeronautical sectors. Capabilities range from concept, design, and certification to manufacturing and customer support, as well as training and exploitation.

Skywin Walonia

www.skywin.be/?q=en

A group of companies, training centers, and research units engaged in public and private partnership around common and innovative projects. Skywin's objective is the creation of jobs in Walloon Aerospace companies. Skywin Wallonia represents approximately 6,400 jobs and €1 billion in revenue, and exports 90 percent of its products.



Brazil

Summary

The aerospace industry is one of the most important industries in Brazil and offers excellent opportunities for U.S. suppliers in this sector. Over the last 10 years, Brazil has been one of the top 10 destinations for U.S. exports of manufactured aerospace products, and in 2012, U.S. exports of aerospace products to Brazil achieved USD 6.8 billion.

The industry is led by Embraer, the world's third largest aircraft manufacturer. In 2013, Embraer delivered 215 aircraft, which consisted of 90 commercial jets, 119 business jets, and 6 military aircraft. The other key player is Helibras, the Brazilian subsidiary of Airbus Helicopters. Every year the company delivers around 36 helicopters produced in Itajuba, State of Minas Gerais.

Brazil also offers excellent opportunities for general aviation aircraft suppliers. According to the Brazilian Association of General Aviation (ABAG), Brazil has the second largest executive aircraft fleet, and the third largest helicopter fleet in the world. In 2012, general aviation fleet grew 6.7 percent compared to 2011, reaching a total of 13,965 aircraft.

Market Entry

Companies interested in supplying to the OEMs must undergo a strict qualification process of the company, product, and technology, but they will find excellent opportunities once they have been qualified. Embraer imports annually over USD 2 billion of aircraft components to support its Brazilian operations, and is always open to developing new suppliers with recognized technology and qualifications in the aeronautic industry. Having a local agent familiar with the way these OEMs operate, and who would make periodic visits, would facilitate access to the right people within those companies. Reaching directly the Tier 1 and Tier 2 suppliers would also be a way to be successful in Brazil.

Statistics

Capital: Brasília
Population: 198,292,000
GDP: USD 2.5 trillion
Currency: Real
Language: Portuguese (Brazil)

Contact

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Suppliers of parts and products for aircraft maintenance and repair will be more successful having a well-informed local agent, or a stocking distributor. However, when signing an agent or distribution contract with a Brazilian firm, it is important to use the services of local law firms that are familiar with Brazilian legislation. Commercial distribution contracts are regulated by general Brazilian commercial laws and not by specific legislation; however, there is a specific legislation that regulates the relationship between a foreign company and Brazilian agents or sales representatives. Based on this legislation, when a representation contract is broken, the monetary compensation owed by the U.S. party usually favors the local agent.

Current Market Trends

The Brazilian government, industries, universities and research centers are strengthening their efforts to expand the Brazilian aerospace industry and technology. The world's leading aircraft manufacturers Boeing and Airbus are also contributing to this development by choosing the São José dos Campos Technology Park as the site for their research and technology centers. In 2013, Boeing decided to install its sixth advanced research center outside the United States at the São José dos Campos Technology Park located in the city of São José dos Campos, heart of the aerospace industry in Brazil. According to local press, Boeing's research center will focus its work on sustainable biofuels for aviation, advanced traffic management, advanced metals and biomaterials, and technology for support and services. The European group Airbus also announced that they will set up installations at the São José dos Campos Technology Park, and is planning to set up a number of the group's research projects there.

Research for innovative technologies is being carried out by the Institute for Technological Research (IPT) that is planning to inaugurate the Laboratory of Lightweight Structures in São José dos Campos. With investments of approximately USD 20 million funded by the National Bank for Economic and Social Development (BNDES), the Funding Authority for Studies and Projects (FINEP), the IPT and the City of Sao Jose dos Campos, the laboratory is being equipped with technological tools which are unprecedented in Brazil.

Projects on structure research are also being carried out by the University of Sao Paulo (USP), Campinas State University (UNICAMP), São Paulo State University (UNESP) and other universities. The IPT, the ITA, the São Carlos School of Engineering, and Embraer are working on the development of processes for automated lamination on aircraft structures, composite technology, and advanced metallic aircraft structures.

Current Demand

The worldwide trend on airlines replacing some larger equipment with smaller jets that can fly more efficiently should keep Embraer as the leader in this market segment, continuing to offer good opportunities to U.S. aircraft parts and component manufacturers. In general, Embraer imports about 50 percent of components from U.S. suppliers.

The upcoming 2014 FIFA World Cup and the 2016 Olympic Games are affecting positively the demand for executive aircraft and helicopters.

Best Prospects

Aircraft parts and components.

Helicopters

According to the Brazilian General Aviation Association, Brazil has the third largest helicopter fleet in the world. In 2012, there were 1,893 registered helicopters, mostly concentrated in the State of Sao Paulo (690), Minas Gerais (219), and Rio de Janeiro (422). More than one third of the fleet is less than 5 years old.

Helibras, the Brazilian subsidiary of Airbus Helicopters has been producing helicopters in Brazil since 1978 and is taking a position as a world class helicopter manufacturer. Helibras has delivered more than 500 helicopters to the Brazilian civilian, military, and law enforcement markets.

Competitors

Other U.S. and some European companies are active within this market.

Barriers

Aeronautical products must meet the Brazilian aeronautical requirements and obtain the certification issued by ANAC (Agencia Nacional de Aviação Civil), the Brazilian agency responsible for the regulation and the safety of civil aviation. The certification is the recognition that the design of a product is in accordance with the airworthiness requirements adopted by the country.

Embraer requires every supplier to be registered to AS9100 series by an accredited Certification/Registration Body indicated by the International Aerospace Quality Group (IAQG), and distributors must be registered to AS9120. For tooling suppliers, Embraer requires suppliers to be registered to ISO9001 by an accredited certification/registration body.

Trade Events

Airport Infra Expo and Aviation Expo

São Paulo, Brazil • airportinfraexpo.com.br

Annual show for suppliers of products and services for airports. Topics include commercial aviation information technology, operations, passenger handling, and supply chain.

Business Aviation Conference and Expo (LABACE)

August 12–14, 2014 • São Paulo, Brazil • abag.org.br/labace2014

The southern hemisphere's largest business aviation event.

Latin America Defense and Security (LAAD)

April 14–17, 2015 • Rio de Janeiro, Brazil • laadexpo.com

Held every two years. Brings together Brazilian and international companies specialized in supplying equipment, services, and technology to the armed forces, police and special forces, security services, consultants, and government agencies.

Trade Associations

- Brazilian Association of Aerospace Industries (AIAB), aiab.org.br/english
- Brazilian Association of General Aviation (ABAG), abag.org.br
- Brazilian Association of Defense and Security (ABIMDE), abimde.org.br?lang=en

Bulgaria

Summary

The total market for aviation, runway systems and air traffic control equipment and services in Bulgaria until 2015 is estimated at approximately USD 200 million.

The growth in this market is influenced by the ICAO, IATA, IASA, EASA, Eurocontrol, ECAC, Open Sky, Common European Sky, and Functional Airspace Block agreements and requirements for sustainable development, quality improvements, safety, and security upgrades and compliance to international standards.

The end user market includes five international airports, the Aviation Administration (CAA), the Air Traffic Services Authority (ATSA), 20 major licensed air operators and services companies licensed to provide ground-handling activities.

Airports with international status are: Sofia, Varna, Bourgas, Plovdiv and Gorna Oryahovitza. The overall tendency is to prepare all of them for privatization by means of concessions. Bourgas and Varna have undergone this procedure and are now run under concession by Fraport Twin Star Airport Management.

Since the end of May 2012, Sofia Airport is certified according to ISO requirements receiving both ISO 9001:2008 (Quality management) and ISO 14001:2004 (Environmental management) certificates.

Sofia Airport's future infrastructure plans include the construction of new taxiways, aiming at aircraft movement optimization and reducing taxiing time after landing and before take-off, the extension of the apron area, the delivery and installation of two additional passenger boarding bridges, and some interior re-organization, such as Terminal 2 passenger gallery extension and building new bus exits, increasing the space for commercial purposes.

Statistics

Capital: Sofia
Population: 7.3 million
GDP: USD 51 billion
Currency: Lev
Language: Bulgarian

Contact

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Plovdiv Airport and Gorna Oryahovitzha Airport are on the Ministry of Transport's plans for privatization through concessions (www.mtitc.government.bg/?setlang=en).

There are two active domestic airports, Primorsko (on the Black Sea coast) and Lesnovo (close to Sofia). They are owned by the private company Albena JSC and are managed by its daughter company, Intersky JSC. Both airports operate charter flights, mainly during the tourist season.

At the end of 2012, the Air Traffic Services Authority (ATSA) commissioned the new air traffic control tower and is looking at upgrading its navigation equipment in view of the new Functional Airspace Block Agreement's (FAB) development plans.

The Bulgarian aviation market is supplied almost entirely by imports.

Market Entry

The Bulgarian Civil Aviation market abides by EU procurement law as well as the basic operational principles of ICAO, IATA, IASA, EASA, Eurocontrol, ECAC, Open Sky, Common European Sky and Functional Airspace Block agreements.

A basic applicable market entry strategy is through an authorized agent or distributor.

The national air carrier, Bulgaria Air, has strategic partnership agreement with Lufthansa Technik, which plays a critical role in performing its investment plans for upgrade and modernization.

The latest available statistics show that there are 20 licensed air operators in Bulgaria. The total number of aircraft is 60 and all of them have valid "CofA" (Certificate of Airworthiness) code. The total number of large aircraft (over 5,700 kg) is 38 with a valid "CofA" code. The total number of small aircraft (below 5,700 kg) is 13 with a valid "CofA" code. Separately there are 55 light jets up to 5.7 tons, 30 percent of which are second hand.

The fleet consists of the following type and category by alphabetical ranking: Airbus 319, 320, ATR, BAe-146, Boeing 737, BE20, Cessna, CE-550, CL60, CL64, L-410, MD 80, Enstrom 480B, and Embraer.

Current Market Trends

In 2013, two brand new passenger terminals were completed at Varna and Bourgas airports with capacity to accommodate 1.8 million and 2.7 million passengers, respectively. Also completed was the rehabilitation of Varna's airport runway and the adjacent taxiways, construction of a new ATC and a new cargo building, and the extension of the water supply and treatment system.

Since August 2013, all passengers at Varna airport arrive at the new passenger terminal. The total investment of the concessionaire at the airport terminal and related infrastructure is over

75 million lev. The new passenger terminal at Varna Airport covers an area of about 20,000 square meters with 25 check-in counters.

In 2011, Plovdiv Airport underwent upgrades and modernization and reached capacity of approximately 100,000 passengers. This number will probably increase as the airport's policy has been to attract low cost carriers and serve as an "optional receiving airport" to Sofia airport in cases of bad weather.

At present Sofia's airport has spare capacity in terms of existing terminal buildings and runway, but as demand grows there will be a need to increase that capacity. Terminal (passenger and cargo) capacity is likely to run out before the runway capacity. This project will increase the annual capacity by 200,000 passengers from the current 2.6 million. It is a self-financed project which is worth 2.0 million levs.

The overall number of passengers at Sofia Airport in 2012 was approximately 3.2 million, increasing to 3.5 million passengers in 2013. Overall cargo traffic amounted to 6.3 tons and 1.6 tons of mail.

In 2013, Sofia airport completed a USD 3.5 million tender for the upgrade of its checked and carry-on baggage scanners. Another tender is expected to be initiated for the old terminal, which is home to the low-cost air carriers.

The Gorna Oryahovitza airport is on the list for of concessions, while Rousse airport might be transferred for further decision on its ownership status to the regional government. One seasonal airport, located at the Black Sea coast, Balchik Airfield, was incorporated in one pool with Sofia Airport and both will be prepared for concessions as well.

Intersky, the daughter company of "Albena" JSC recently announced investment plans for each of its two domestic airports, Lesново (close to Sofia) and Primorsko (at the Black sea coast) of approximately 2.5 to 3.0 million BGN for the extension of the existing runway at Primorsko Airport to allow for larger aircraft of 5.7 tons to land. Lesново Airport is trying to find a reasonable solution to the adjacent urban infrastructure before continuing with its extension design plans and upgrade.

As a rule, BulATSA is upgrading its ATC equipment on a regular basis. At the end of 2012, the Air Traffic Services Authority (ATSA) commissioned the new air traffic control tower. At the end of 2013, ATSA opened a tender for the upgrade of its radar and its navigation equipment in view of the new Functional Airspace Block Agreement's (FAB) development plans.

Helicopters

Bulgaria's helicopter fleet consists of large helicopters (over 3,175 kg) type Mi-8, six of which have a valid "CofA" code. There are a total number of three small helicopters (below 3,175 kg) type BO105 and SA 365N1 with a valid "CofA" code.

Several private operators purchased Gulfstream, Augusta, Enstrom and Bell helicopters, which depending on the onboard equipment can be used for different purposes like agriculture, firefighting, etc.

Current Demand

Demand is estimated to be highest for airport baggage handling and screening equipment, ground handling equipment and services, air traffic control equipment and related services, for services related to airport operation activities, to cargo handling outsourcing and management, runway systems improvement, and safety and security equipment.

Competitors

Major competitors include but are not limited to Smith-Heimann (Germany), Nuctech (China), Thales (France); Indra (Spain); Selex (Italy); Eldis (Czech Republic), Airbus, and Thales (France).

Barriers

The Bulgarian civil aviation market is governed by the ECAC, ICAO, IATA, IASA, EASA, Eurocontrol, Open Sky and Common European Sky agreements and requirements for sustainable development, quality improvements, safety and security upgrades and compliance to international standards.

These agreements refer to the applicable and required certificates of conformity (documents required by the beneficiary authorities, evidencing U.S. companies' certificate of good standing, certificate of tax clearance, and proof of solvency); and food and film safety certificates (required for scanning and X-ray security equipment).

Trade Events

HEMUS

May 2016 • Plovdiv, Bulgaria • hemusbg.org/index-en.html

Biannual exhibition. Organized jointly by the Bulgaria's Defense Ministry and the Ministry of Economy, Energy, and Tourism.



Canada

Summary

Canada has the world's fifth largest aerospace industry, with Montreal being one of the world's three largest aerospace hubs, along with Toulouse and Seattle. The industry generates over USD 22 billion a year, of which 80 percent of its production sold internationally largely to the U.S. and Europe.

Canada has a very mature and diverse aerospace industry, with production in almost every aerospace sub-sector. In 2011, the breakdown of Canada's aerospace sub-sectors was: 42 percent of production was aircraft and aircraft components; 31 percent maintenance, repair and overhaul (MRO); 11 percent engines and engine parts; 7 percent avionics and electrical systems; 4 percent simulation and training; 4 percent other. As a whole, the Canadian aerospace industry invests USD 1.5 billion into research and development every year, the highest investment levels of any Canadian industry. Unlike the United States, Canada's aerospace industry is predominantly civil aircraft manufacturing (77 percent of production). The aerospace industry is concentrated in the provinces of Quebec (68 percent) and Ontario (29 percent); secondary aerospace centers include Winnipeg and Halifax. The aerospace sector in Quebec is dominated by OEMs and Tier 3 and Tier 4 companies, with a small presence of Tier 1/System Integrators. In contrast, the Ontario aerospace sector is comprised of a few OEMs, but possesses a great number of System Integrators, Tier 1 and Tier 2 companies.

The Canadian aerospace industry is dominated by a few large players; the top 19 companies account for 87 percent of the country's production. The largest companies include Bombardier (aircraft), Pratt and Whitney Canada (engines), CAE (flight simulations), Magellan (aerostructures), Vector Aerospace (MRO), Héroux-Devtek (landing gears), Bell Helicopter Textron (helicopters), Northstar (components), Avcorp Industries (aircraft design and fabrication).

Statistics

Capital: Ottawa
Population: 34.88 million
GDP: USD 1.825 trillion
Currency: Canadian Dollar
Language: English, French

Contact

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Market Entry

Canada is potentially the easiest market for U.S. aerospace exports in the world due to a plethora of bilateral agreements between Canada and the United States. These agreements include: the North American Free Trade Agreement (NAFTA), the North American Defense Production Sharing Agreement, Canada's ITAR Exemption (Section 126), and a U.S.-Canada Bilateral Aviation Safety Agreement that streamlines regulatory requirements such as Canadian airworthiness approval for U.S. aircraft parts. Moreover, geographic proximity, and similar language and business culture have also played a large role in U.S. aerospace companies' resounding success in this market. As a signatory to the WTO Agreement on Trade in Civil Aircraft, Canada is committed to free trade principles for civil aircraft and aircraft parts.

Current Market Trends

Continued Supply Chain Integration

Due to Canada's aerospace market being predominantly civil aircraft manufacturing, Canadian aerospace companies are ahead of the curve in implementing lean manufacturing and supply chain principles to offset cyclical uncertainties in civil aviation. Canadian OEMs work with increasingly fewer suppliers, preferring to partner with large system integrators to offset risks and costly management of large aircraft platforms. These systems integrators work with the OEMs in providing support with design, delivering sub-assemblies, and managing complex supply chains. U.S. firms need to be mindful of this reality and seek opportunities at various levels of the supply chain.

Green Aviation

Canada's support for research and development of new technologies is very strong. Some recent hot areas include: new materials (composites), de-icing technologies, engine capabilities in extreme weather, fuel efficiencies and noise reduction. U.S. companies with technologies lending themselves to these areas, including greener manufacturing processes such as additive manufacturing, should do well in Canada's market.

Growing Need and Demand for Unmanned Aerial Vehicles

Another trend is Canada's increased demand for unmanned aerial vehicles (UAVs) to survey its large territory. Canada will be a hot market for these technologies, and many Canadian companies are actively engaged in creating and testing these cutting edge technologies and products. Due to Transport Canada being a little further advanced than the FAA in approving the use of UAVs, many UAVs are already being used in Canada in everyday commercial applications (agriculture, transportation, safety and security) and law enforcement.

Current Demand

U.S. aerospace companies are welcome in Canada, and U.S. technology is highly sought after. In general, most Canadian companies purchase over half of their supplies from U.S. companies,

and a vast majority of Canadian aerospace companies consider the United States as their number one partner and customer. Canada and the United States have highly integrated supply chains; an aircraft part crosses our common border approximately seven times before it is finally assembled on an aircraft.

According to Boeing's Market Forecast ([bit.ly/ZE3t3j](https://www.boeing.com/resources/boeingassets/pdf/76712mainmain.pdf)), the world's increased demand for travel over the next 20 years will create a need for 34,000 more planes worth over USD 4.5 trillion. They also estimate that 68 percent of the aircraft needed will be single-aisle aircraft, precisely the same category of planes Canada holds a considerable global market share in.

Best Prospects

Canada is a world leader in regional aircraft, flight simulators, small gas turbine engines, robotics and satellite technologies, aircraft maintenance, repair and overhaul, and landing gear systems. Best prospects include: aerostructures, aircraft and engine parts; maintenance, repair and overhaul; composite materials and green aircraft technologies; cyber and space technology; C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance); synthetic training and simulation for all civil and military aircraft; development of virtual battle space; electronic warfare.

Helicopters

Canada's helicopter market is focused on the production of civil rotorcraft, and the maintenance of civil and military rotorcraft. The two helicopter-producing OEM companies in Canada are Bell Helicopter Textron Canada (BHTC) and Eurocopter Canada Ltd. (ECL). BHTC, headquartered in Mirabel, QC, designs, manufactures and provides after sales support for all Bell commercial models (except the Bell 525). ECL, headquartered in Fort Erie, provides a broad range of services; it performs completions for export markets, develops options and manufactures composite components for the EC group.

Competitors

U.S. companies entering this market will face competition from local Canadian, U.S. and European companies. While there are a number of other countries seeking to capture business opportunities in Canada such as Mexico and China, and their exports to Canada are growing rapidly, the U.S.' share of total foreign exports to this market dwarfs all others by a substantial margin (over 40 percent). Nonetheless, U.S. companies need to demonstrate financial soundness, ability and willingness to take on risk, continuous improvement and innovation, persistence, competitive pricing and willingness to create and commit to long term partnerships with Canadian customers to do well.

Barriers

There are no barriers of entry for U.S. companies exporting aerospace goods to Canada.

Trade Events

The Canadian Defense Security and Aerospace Exhibition (DEFSEC) Atlantic 2014

September 3–5, 2014 • Halifax, NS • defsecatlantic.ca

A dynamic trade show and platform for business networking.

Canadian Aerospace Summit

November 18–19, 2014 • Ottawa, ON • aerospacesummit.ca/en

Canada's leading national aerospace event. Over 800 attendees and 100 exhibitors.

Aeromart Montreal

March 31–April 2, 2015 • Montreal, QC • bciaerospace.com/montreal

Business and partnership development opportunities in the North American aerospace market. Business platform for manufacturers, tier 1 suppliers, subcontractors, service providers, and clusters from around the world.

China

Summary

China is the world's second largest and one of the world's fastest growing civil aviation markets. The industry has grown at double-digit rates for several years. Industry forecasts expect growth to remain strong over the medium term, averaging 7 percent over the next 20 years. Commercial opportunities in the civil aviation market include final assembly and tier-one suppliers, small niche parts manufacturers, airport design and construction companies, general aviation, and more.

As stated in China's 12th Five Year Plan, China plans to build 56 new airports, re-locate 16 airports, and renovate/expand 91 airports with investment totalling USD 68.5 billion during the 2011–15 period. By the end of 2013, the total number of civil airports in China was 193. China will have more than 230 airports by 2015, accessible by 83 percent of the population, including 3 national hubs, 5 regional hubs, and 24 medium hubs.

The commercial air fleet will grow along with the number of airports, up from 2,888 aircraft in 2011 to an estimated 4,500 by 2020. China's top three airlines, i.e., Air China, China Southern, and China Eastern, are now among the world's top 10

Statistics

Capital: Beijing
Population: 1,370,536,875
GDP: USD 9.4 trillion
Currency: RMB
Language: Mandarin Chinese

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carriers. Boeing's Current Market Outlook forecasts that China's airlines will add over 5,580 new transport airplanes valued at USD 780 billion (RMB 4.72 trillion) during the next 20 years.

China has become an integral and growing part of the global aviation supply chain for a wide variety of aviation products and services and is making progress on its plans to enter the large commercial airplane manufacturing market. The increase in the number of airports and aircraft will require new infrastructure, aircraft engines and parts, pilots, controllers, communication/navigation/surveillance systems and other equipment presents significant business opportunities for U.S. exporters.

Market Entry

In July 2012, China's "State Council Opinions on Promoting Civil Aviation Development" set several key development targets for the industry including a transport growth rate of 12.2 percent for 2011-2020, an improved safety record, general aviation growth of 19 percent, and increased access to air services for more of the population. China's civil aviation system is forecasted to be as large as the U.S. system in approximately two decades.

Meaningful cooperation between the U.S. and Chinese governments on aviation is essential to realizing these business opportunities. The U.S. Federal Aviation Administration (FAA) and the Civil Aviation Administration of China (CAAC) continue to enjoy a close partnership that has benefited both sides for many years. The US-China Aviation Cooperation Program (ACP) brings together U.S. industry and government agencies from both countries—CAAC, FAA, the U.S. Trade and Development Agency (TDA), and the U.S. Transportation Security Administration (TSA) in a unique and active forum for bilateral cooperation.

Efforts to reduce constraints on the healthy and sustainable development of civil aviation in China have been largely successful, however, significant challenges remain. Further efforts are needed to open up and modernize China's airspace system, reduce inefficiencies and congestion, realize environmental benefits, and accommodate growth.

U.S. firms without an existing China presence may want to consider hiring a local distributor or representative. This partner generally helps establish access to decision makers and gain timely commercial information about the market. They also traditionally leverage personal connections to promote the U.S. product and develop sales leads. While this is a common global practice, successful exporters comment on the need to invest significant time and attention to maintaining and managing relationships with Chinese partners. Some U.S. firms decide to enter into a Joint Venture (JV) relationship with Chinese partners, exchanging technological know-how for market access. This should only be done after significant due diligence and cost/benefit analysis.

U.S. firms often use training programs to establish productive partnerships with Chinese clients. Industry associations such as the US-China Aviation Cooperation Program (ACP) can serve as valuable vehicles for U.S. firms to leverage similar opportunities.

Current Market Trends

Aircraft Parts: Manufacture and Repair

Aircraft Parts (USD)			
	2011	2012	2013
Total world trade volume	66 billion	80 billion	86 billion
Imports from the U.S.	6.4 billion	8.36 billion	12.6 billion
Percent change of U.S. imports	7.3	7.99	10.93

Source: Global Trade Atlas

China's import market for aircraft parts and components exceeded USD 1.7 billion in 2011 and 2012, an increase of over 21 percent compared with year 2010. China's demand for aircraft parts can be attributed to a number of factors, including an increasing capacity utilization rate, the age and expansion of China's aircraft fleet, and domestic aircraft production and assembly.

As of 2011, China had a civil aviation fleet of 2,888 aircrafts with an average age of 6.35 years, and as the fleet continues to age, it will require parts and equipment for routine maintenance and repair. Though there are a number of major domestic aircraft and parts manufacturers scattered throughout China, the sector is still underdeveloped, creating a strong demand for reliable imported products and technologies to ensure quality standards. Boeing predicts that in the next 20 years China will need 5,580 aircraft valued at USD 780 billion.

China's domestic aircraft parts and assembly manufacturing sector is also growing. In addition to approximately 200 small aircraft parts manufacturers, there are also a number of regionally-based major manufacturers concentrated in Shanghai, Chengdu, Xi'an, Jiangxi and Shenyang. China's domestic manufacturing base is developing, as reflected by the commitments of large aircraft and engine manufactures to expand procurement in China over the long term. However, most highly technical and sophisticated parts and assemblies will continue to be imported until production quality meets international standards. At the present time, domestic manufacturers do not have the ability to produce all of the qualified materials and parts.

Airports

China currently has 193 civil aviation airports, including the world's second busiest in Beijing, with plans to expand aggressively to more than 230 by 2015. The expansion will place 83 percent of China's population and 96 percent of its GDP within 100 kilometres (roughly 60 miles) of the nearest airport, greatly enhancing the potential for aviation growth.

The airport system at present is highly concentrated, with top airports suffering from major congestion. The top three airports, Beijing, Shanghai and Guangzhou, account for 1/3 of all traffic, while the top 14 airports handle 2/3 of total traffic nationwide. Local industry estimates indicate that 40 of China's airports are already at or near capacity, with another 29 expected to

reach this limit within the next two years. To relieve congestion, China opened 19 new airports over two years from 2009–11.

International companies will have opportunities to participate in both the airport design and in the infrastructure construction. Qualified companies can bid for design, consultation, surveillance, management, and construction of designated civil airport projects. However, the chances for international leading design and construction companies to win the bid are limited, unless partnering with qualified Chinese domestic design and construction companies. So far, the Beijing Capital Airport, Shanghai Pudong Airport, Shanghai Hongqiao Airport, Shenzhen Huangtian Airport, and Guangzhou's new Baiyun Airport are all designed by international companies with local Chinese partners.

Ground service is another area in which foreign companies can actively participate. Beijing Capital Airport, Guangzhou Baiyun Airport, and Chengdu Shuangliu Airport have all established joint ventures with foreign partners (Singapore, Indonesia and UK) in ground services. Shanghai Airport Ground cooperated with Cargo Warehouse and Lufthansa set up a joint venture. China Air Oil Supply Corporation (CAOSC) has established many joint ventures with foreign companies to provide airport oil supply services.

General Aviation (GA)

In China, the airspace is tightly controlled by the Chinese military and the airspace class system does not segment out its GA air activities. Strict military control over roughly 70 percent of all Chinese airspace is the largest single factor limiting growth of this industry. GA is still underdeveloped in China regarding GA aircraft numbers, GA professionals and GA facilities.

However, a welcome change came in November 2010 when civilian and military authorities issued a joint reform document calling for liberalization of low altitude airspace under 4,000 meters (13,000 feet), setting the goal of opening up airspace below 1,000 meters by 2015 and airspace below 3,000 meters by 2020. Implementation of the reform will roll out in three stages, starting with an Experimental Phase in Guangzhou and Shenyang. The policy outlines a national rollout by 2015, and a final deepening and consolidation by 2020.

Since then, GA has been developing at a fast pace with new players coming to this market and the more involvement of local governments. GA has big potential market driven by the state and local economy development plan, the public demand for business jet, and the need for public services and individual recreations.

China currently has 123 operators registered with the Civil Aviation Administration of China (CAAC), the main stakeholder formulating policies and regulations concerning the safety and economics of GA in China. However, about 80 percent of Chinese operators have only 2 or 3 aircraft thus struggle to achieve operating scale and profitability. In addition, GA aircrafts are very costly to use in China due to airspace access, flight approval procedures, and operation

charges such as airport charges, plus maintenance services. All of these factors contribute to low profitability for Chinese operators.

GA deregulation will accelerate in the following 3-5 years. China is gradually opening its low altitude airspace, which will trigger the booming of this industry. According to CAAC's official source, GA aircraft operations hours will increase to 300,000 hours in 2015 from the current 140,000 hours, with an annual growth rate of 16 percent. The GA fleet size will reach over 2,000 GA aircraft in 2015 from the current 1124 GA aircraft.

Current Demand

According to the Civil Aviation Administration of China (CAAC), as of 2013, there were 193 civil airports operating in China, rising to more than 230 by 2015.

Airports in China, historically under military or dual military/civil control are transferring management to all civilian control. In March of 2004, CAAC granted authority to local municipal or provincial governments to own and run airports in their administrative areas, which enables faster decision making for airport projects, which in turn allows financing to be secured more effectively.

Airports across China have been and will continue to be built and upgraded to international standards. According to the China Civil Aviation, China's yearly demand for ground support equipment is estimated to be USD 644 million: USD 242 million for new airports, USD 161 million for replacing old equipment, USD 161 million for airport upgrading/expanding projects, and USD 80 million for military airports. Hence, we will continue to see a steady demand for airport ground equipment these few years.

The central government has already shown a strong demand for general aviation aircraft in areas such as Public Security, Rescue and Salvage, Agriculture, Forestry, Firefighting, Meteorology, Surveying and Mapping, Sports, Tourism and Business Aviation industry. China is estimated to require 1,000 new general aviation aircraft during the period 2012–15.

The number of corporate jets in China, according to CAAC recent news, would be around 400 units by year 2017 and possibly up to 1,100 units by year 2023. The growth in the corporate jet market runs parallel with china's economic development. With a large number of Chinese firms gaining status on the world stage, the wealth is reflected in corporate perks such as having fleets of corporate jets.

With the further opening up of airspace, we will see a sharp increase in demand for general aviation which in turn leads to greater demand for more airports, airport services, aviation systems, MROs, etc. in various cities and towns.

Best Prospects

- Air Data and Inertial Reference System (ADIRS)
- Airfield buses
- Automatic Flight Control System (AFCS)
- Auxiliary power unit, door system
- Avionics
- Bearings
- Baggage sorting systems and handling equipment
- Baggage x-ray machines
- Crew seats
- Composite Materials
- De-icers/ Refuellers
- Electric power system
- Emergency evacuation equipment
- Engine vibration monitoring system
- Flight Data Recording System
- Flight Control Actuation System
- Flight deck control suite
- Fire fighting vehicles
- Fire protection equipment
- Food loaders
- Fuel hydraulics
- Fuel System
- Fuel Tank Inserting System
- High Lift System
- Hydraulic System
- Integrated flight deck panel
- Integrated Supervise and Control System
- Interior components
- Landing gear
- Lighting equipment
- On-board Maintenance System
- Oxygen fuelling vehicles
- Radio remote control apparatus
- Runway friction testers
- Pilot training
- Signalling and Safety equipment for airfields
- Telecommunication and Navigation System
- Towing tractors
- Turbofan Engines
- Windshield heater control and wiper system
- Windshields and opening windows

Helicopters

China will further open up its low-altitude airspace (below 1,000 meters) across the board by 2015 to unleash a vastly untapped general aviation market, valued at trillions of Chinese Yuan. With the rise of the General Aviation market here, China could become the fastest-growing helicopter market in the world. It is both exciting and challenging. In China, two-thirds of the country is covered by hard to reach mountains and high plateaus.

In 2008, an earthquake in the Sichuan region of China resulted in many casualties, and Chinese officials cite the failure of emergency teams to reach inaccessible areas as the reason. This has convinced China's leaders that they must dramatically increase their helicopter fleet.

For a country similar in geographical size to the United States, China operates comparatively few helicopters, most of which are built abroad, with the rest built locally under license. But with demands growing in both military and civil sectors, change is on the horizon for China's relatively small helicopter industry. The main civil helicopters are supplied by Airbus Helicopters, Sikorsky Aircraft Corporation, Bell Helicopters, AgustaWestland Helicopters, Russian Helicopters and Robinson Helicopter Co.. The local suppliers are Changhe Aircraft

Industry Corporation and Harbin Aircraft Manufacturing Corporation. In 2012, Chongqing Helicopter Investment Co. Ltd acquired Enstrom Helicopter Corporation and entered the Chinese market.

As of October 2013, there were 381 civil helicopters in China. Over the next 10 years, China's civil helicopter needs are expected to rise up to about 1,500 helicopters. China has realized the importance of helicopters for disaster relief work and medical rescues, and the country has become a bright spot in the struggling helicopter industry.

The Chinese government has also loosened its control on helicopter manufacturing to allow local private firms and foreign companies to cooperate in developing and manufacturing civil helicopters. The growing Chinese economy provides a huge potential market for helicopters of all classes.

Competitors

The size and growth of China's market has attracted nearly all major international manufacturers and service companies. Traditionally, domestic Chinese firms can not match foreign technology, and compete only on price and network (access to decision makers). Joint venture programs and aggressive research and development investment is narrowing this gap in certain product categories.

The quality of most Chinese-produced airport equipment is not up to international standards yet. With few exceptions, technical airport ground equipment for operations into the next millennium still needs to be imported. Chinese companies are catching up fast to localized lots of the equipment. At present, there are over 20 Chinese companies in airport ground support equipment production focusing mostly on low-end equipment. In the short term, Chinese companies will not be able to pose any challenge in areas where U.S. firms are the suppliers.

Foreign companies are a major source for highly technical airport ground equipment supply; most of the non-U.S. foreign suppliers are European or Japanese companies. Although European and Japanese firms take some share of the market, they do not constitute a significant threat to U.S. firms at this time. Nonetheless, U.S. firms' retention of the current market superiority will require continued development and introduction of ever-newer technologies.

European Union companies are the main competitors of U.S. aircraft-related exporters. China is aggressively seeking new technology and many manufacturers from the European Union countries have promised technology transfers in their negotiations. Technology transfer usually serves as an advantage in obtaining a contract from the Chinese government.

Barriers

International companies will have opportunities to participate in both the airport design and in the infrastructure construction. Qualified companies can bid for design, consultation, surveillance, management, and construction of designated civil airport projects. However, the chances for international leading design and construction companies to win the bid are limited, unless partnering with qualified Chinese domestic design and construction companies. A recent collaboration by UK-based engineering company Atkins and China Southwest Architectural Design and Research Institute Corporation (CSWADI) won them the contract for the conceptual planning and terminal design of the Qingdao airport in the Shandong province of China. The contract covers all design aspects of the airport development project including master-planning, transport planning, airfield design, water engineering and landscaping. The airport is expected to be completed in 2017.

In addition, U.S. firms without a significant on-the ground presence often face additional challenges building relationships, obtaining timely market information, and gaining access to decision makers.

There are several other obstacles to doing business in China. Laws and regulations are not as transparent as that of developed countries. Industry is often not given sufficient opportunities to fully express their opinions when law or regulations are being drafted. The Chinese face three key challenges that threaten to limit the industry's growth: inadequate infrastructure, overly restrictive airspace, and limited skilled human resources.

Air Traffic Control (ATC) has been a crucial barrier hindering the development of Chinese civil aviation. The authorities have started to attach great importance to increasing airport and air-route capacities in high traffic areas.

CAAC began implementing its new airspace Reduced Vertical Separation Minimum (RVSM) system in November 2007 to satisfy the growing demands of the aircraft operations without adding new air routes. By fulfilling RVSM, the number of China's airspace cruise altitude layers increased to thirteen. This improved the capacity and utilization rate of China's airspace, promote reduced flight flow and flight delays. Before its implementation, China only used seven altitude layers of airspace, making for a very low use rate for a capital airport.

Facing the rapid development of civil aviation, China is experiencing a dramatic shortage in pilots, mechanics, inspectors, air traffic controllers and maintenance engineers. Currently, seven domestic universities are authorized to train pilots, and three are authorized for controller training. Also, Chinese Southern Airlines has established a flight college in Australia and Airbus has set up a simulator training center in Beijing. CAAC estimates that during the 12th Five Year Plan period (2011–15) Chinese aviation industry needs an additional 16,500 pilots, 50,000 mechanics, and 4,000 air traffic controllers.

Trade Events

International Flight Conference General Aviation Products Expo 2014

August 27–31, 2014 • Shenyang, China

The only state-approved trade event in northeastern China, and one of the biggest international general aviation expos in China. Covers production, operation and maintenance, airport management, aviation school training, and other industry topics.

AvioniChina (China International Conference and Exhibition on Avionics and Testing Equipment)

September 2014 • Xi'an, China • avionichina.com

Avionics products, system and test equipment technology, and infrastructure.

Inter Airport China 2014

October 15–17, 2014 • Beijing, China • interairportchina.com

China International Aviation and Aerospace Exhibition (Airshow China or Zhuhai Airshow) is the only international aerospace trade show in China endorsed by the Chinese central government. It features the display of real-size products, trade talks, technological exchange and flying display.

China Aerospace Manufacturing Summit 2014

November 2014 • Shenyang, China • bit.ly/2014avic

Organized by the societies of China Top FIVE Aerospace Provinces. Co-organized by AVIC Shenyang Aircraft Industry (Group) Co., Ltd. and AVIC Shenyang Liming Aero Engine (Group) Co., Ltd.

China Aerospace and Aviation Technology Show (CAATS) 2014

November 4–8, 2014 • Shanghai, China • www.caats.com.cn/en

Air Show China 2014

November 11–16, 2014 • Zhuhai, China • www.airshow.com.cn/en

China International Aviation and Aerospace Exhibition (Airshow China or Zhuhai Airshow) is the only international aerospace trade show in China endorsed by the Chinese central government. It features the display of real-size products, trade talks, technological exchange and flying display.

China Commercial Aircraft Summit 2015

April 2015 • Shanghai, China • www.opplandcorp.com/aero/en

China's global aerospace landscape, aircraft manufacturing, and subcontracting event.

China Helicopters Expo

September 2015 • Tianjing, China • helicopter-china-expo.com

Trade Associations

Government Authorities

- Civil Aviation Administration of China (CAAC), www.caac.gov.cn
- Air Traffic Management Bureau, www.atmb.net.cn/eng_index.aspx
- Center of Aviation Safety Technology, castc.org.cn

Airlines

- Air China, www.airchina.com.cn/en
- China Eastern Airlines, en.ceair.com
- China Southern Airlines, csair.com/en
- Spring Airlines, china-sss.com
- Hainan Airlines, global.hnair.com
- Sichuan Airlines, www.scal.com.cn
- Xiamen Airlines, www.xiamenair.com
- Shenzhen Airlines, global.shenzhenair.com
- Chengdu Airlines, chengduair.cc
- Tibet Airlines, www.tibetairlines.com.cn

Aircraft Manufacturers

- Aviation Industry Corporation of China (AVIC), bit.ly/avic-pres
- Commercial Aircraft Corporation of China (COMAC), english.comac.cc
- AVIC Commercial Aircraft Co.

MRO Facilities

- Aircraft Maintenance and Engineering Corporation (AMECO), www.ameco.com.cn
- Shanghai Technologies Aerospace Co. (STARCO), staero.aero/starco.html
- Guangzhou Aircraft Maintenance Engineering Co. (GAMECO): www.gameco.com.cn
- Taikoo Aircraft Engineering Company Limited (TAECO): www.taeco.com
- MTU Maintenance (Zhuhai): mtuzhuhai.com/en
- GE Engine Services (Xiamen)
- Sichuan Snecma Aero Engine Maintenance Company Ltd. (SSAMC), snecma.com?lang=en

Aircraft Trading Companies

- China Aviation Supplies Corporation (CASC), www.casc.com.cn/eng

Other

- CAAC news, caacnews.com.cn
- Civil aviation industry analysis report, bit.ly/10kub4X
- China Civil Aviation Report, uniworldusa.com

Colombia

Summary

The aerospace industry has had significant growth in Colombia in the last decade for two main reasons. The government invested heavily in military equipment which proved to be effective during the recent internal conflict. Also, as a result of political stability, significant economic development has begun in the civil aviation industry, with strong growth close to 11 percent in 2013. The Colombian government has increased investment in aeronautical infrastructure due to the increasing demand on airport traffic from passengers and cargo both domestically and internationally. This is a market with very good prospects for U.S. companies, with projected growth over the next five years. In terms of passengers transported, Colombia grew four times faster than the global growth rate, and three times more when compared to Latin American growth.

Market Entry

Distribution

A reliable distributor or representative is crucial to entering the Colombian market. Colombian law does not require foreign firms to secure local representation for private sector sales. However, Colombians prefer to deal with companies that have a local representative to ensure access to after-sales services. The one exception to this law is for sales to the government, which does require foreign bidders to have legal representation in Colombia.

Regulation

Colombia's Civil Aviation Agency (AEROCIVIL) is the government entity responsible for the regulation and control of the aeronautic and airport infrastructure. Recently, the Colombian Agency of Infrastructure (ANI) was appointed to administrate the concession process of the modernization of four airports.

Statistics

Capital: Bogotá
Population: 46 million
GDP: 380.5 billion
Currency: Peso
Language: Spanish

Contact

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Given the tremendous opportunities for U.S. exporters in Colombia, it is appropriate that on October 21, 2011, President Obama signed the United States-Colombia bilateral trade agreement (U.S.-CTPA) following its approval by the U.S. Congress. On May 15, 2012 the FTA agreement entered into effect.

Current Market Trends

The aviation industry in Colombia is growing at a rate greater than 10 percent per year and it is expected to continue as such in the future. This high growth trend is introducing a new dynamic to sub-sectors such as aircraft parts, MRO services, avionics, aeronautical infrastructure equipment and others. The Colombian government is updating its airport infrastructure with concessions packages through ANI. The government is also working to update current airport infrastructure by passing a Public Private Partnership (PPP) law that allows international companies to invest through build-operate-transfer concessions that will expand infrastructure investment to levels not seen in Colombia since the 1950s. Bogotá recently inaugurated its new Airport (New El Dorado), now ranking third in passenger movement and first in cargo (in Latin America). Medium size cities such Cali, Medellín, Cartagena and Barranquilla are in the process of updating their terminals through concessions. Smaller cities such as Neiva, Armenia and Popayan are in the process to enter concessions for renovations.

Current Demand

The aviation industry in Colombia is growing at a rate greater than 10 percent per year. In 2009, the country was handling 15.6 million passengers, while in 2013 it reached 28 million. The projections are that Colombia will grow to around 35 million passengers by 2016. Seventy percent of cargo and passenger operations occur at El Dorado Airport in Bogotá, which is the second busiest airport in South America overall and the busiest airport for cargo shipments. El Dorado airport is growing rapidly, moving one million tons per year. In 2012, the airport reached close to 700,000 tons in cargo.

Best Prospects

Colombia's small Low Cost Airline penetration rate should lead to opportunities for rapid growth in both the domestic and international markets. The country's expanding middle class has a need for low fares that VivaColombia and low cost U.S. Airlines are starting to exploit.

The dynamic market has paved the way for opportunities in other sub sectors such as aircraft parts, MRO services, avionics, aeronautical infrastructure equipment, and more.

Competitors

All major aviation industry companies have their products in Colombia. Competition is tough and demand is continuing to grow. Companies that belong to subsectors such as aircraft parts,

MRO services, avionic parts and services, and military equipment are competing for a market share in Colombia. Price and quality of service play a major role in the market.

Colombia signed an open skies agreement with the United States that entered into effect in January 2013 which will increase competition for the market. Markets still waiting to be developed are private helicopter and small general aviation.

Barriers

The Colombian government continues to struggle in its management of concessions. This poses a real risk to subcontractors in terms of delays and predictability. For years, the government exclusively managed Colombia's airports. The government built and developed infrastructure for the needs of a closed economy. In the mid-1990s Colombia began a slow process of opening its economy to the rest of the world, causing greater demand on the obsolete airport infrastructure. The Colombian economy is expected to continue growing in the coming years (4.5 percent in 2014), creating more demand on airport infrastructure as a result of an increase in passenger and cargo traffic. One challenge will be aeronautical infrastructure, managed by AEROCIVIL, matching the same level of technological sophistication as the investments made in the physical infrastructure of the airports. AEROCIVIL is planning to upgrade the current navigation system to the new CNS/ATM which stands for Communications, Navigation and Surveillance Systems for Air Traffic Management. The system uses digital technologies, including satellite systems, and varying levels of automation to achieve a seamless global Air Traffic Management system. This is an ambitious program with the latest Airport technology that will ensure safer aircraft traffic control.

Trade Events

Expodefensa

October 29–31, 2014 • Bogotá, Colombia • expodefensa.com.co/?stridioma=en
Colombia's only defense and security show. Organized by the Ministry of Defense, High Technology Corporation, and Corferias.

Feria Aeronáutica Internacional

Medellin (Rionegro) • f-aircolombia.com.co
The most important Air Show in Colombia. Organized by the Colombian Air Force. Includes military and civil aircraft.

Czech Republic

Summary

The Czech aviation industry is reclaiming the position that it lost in the early 1990s. In 2013, the industry grew by 16 percent and further growth is expected in 2014. Revenues of Czech aerospace producers reached USD 1.2 billion in 2013. Four successful companies include:

- Aero Vodochody, has been successfully cooperating with leading aerospace manufacturers such as Sikorsky Aircraft Corporation, Alenia Aeronautica, Embraer, Bombardier, EADS, and Boeing. Historically the largest producer of military jets in the former Eastern Bloc countries, the company is partnering with several air forces, particularly with the Czech Air Force.
- Avia Propeller sells aircraft propellers and propulsion systems to fifty countries in five continents.
- Letov, from the Latecoere group, is producing parts for Airbus A380 and A400M, as well as composite parts for Boeing B787.
- GE Aviation Czech sold its first five turboprop engines to China.

The aerospace industry is concentrated in two areas, Prague (Central Bohemia), and Southern Moravia.

The financially-troubled national air carrier Czech Airlines (CSA) had been seeking a strategic investor for many years. CSA was a part of Cesky Aeroholding, a holding company composed of Airport Prague, CSA, CSA Technics, CSA Handling and CSA Services. In June 2013, Korean Air bought a 44 percent stake in CSA for a relatively low USD 3.7 million. The Korean flag has been rewarded by growth of over 200 percent in the number of passengers transiting in Prague. In December 2013, Korean Air used an option of purchasing an additional 34 percent share from Cesky Aeroholding, which was subsequently sold to Travel Service, a private Czech air carrier. Working together with Travel Service, Korean Air wishes to make Prague Airport its European hub. The entry of Travel Service into CSA will provide Korean Air with connections to approximately forty new destinations in Europe, to which

Statistics

Capital: Prague
Population: 10.5 million
GDP: USD 196 billion
Currency: Czech Crown
Language: Czech

Contact

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their passengers will be able to fly after their transfer at Airport Prague, thereby diversifying the airport from serving mostly short-haul airline services to a long-haul traffic hub.

CSA operates Airbuses and ATR propeller aircraft. Travel Service, a private carrier, operates a fleet of eleven Boeing 737s and signed a contract for two more Boeing planes, including the country's first Dreamliner.

Market Entry

The Czech Republic is committed to a free market and maintains a generally open economy, with few barriers to trade and investment. Membership in the European Union means that tariffs and standards, as well as most procedures, must conform to EU norms. The importer usually handles customs formalities.

Tariff rates on U.S.-origin goods are contained in the EU's Common External Tariff schedule. Details are available through the EU or through the Czech Directorate of Customs/Ministry of Finance (www.mfcr.cz/en).

Current Market Trends

As commercial jet check-in procedures become ever more complicated, private business jet travel is grabbing a larger share of the market. To meet the demand, several Czech-based operators have been adding biz-jets to their fleets and U.S. companies should keep an eye on this growing market. As of now, four private operators dominate the market with Bombardier, Learjet, Embraer Legacy, Gulfstream, Cessna Citation and Nextant 400XT aircraft. Bell helicopters dominate the market for emergency medical services and the police.

Current Demand

- Military helicopters
- Drones
- C-130J (longer-term)

Helicopters

The Czech Army operates an aging fleet of helicopters: 43 Russian MI helicopters (29 MI-24 and MI-35, and 14 MI-8 transportation helicopters), and 10 Polish Sokol. The Czech Defense Ministry disseminated a RFI to manufacturers of helicopters and expects responses at the end of May 2014. The approximately USD 100 million tender for supplying five helicopters in the first round will be issued next year. The plan is to tender for twenty helicopters in total to replace the aging fleet of Polish Sokol and Russian MIs.

On the horizon, 2020 and after, the Army will be tendering two transportation aircraft of the C-130 J category.

Competitors

Major competitors include Airbus, Embraer, Bombardier, and Smiths-Heiman.

Barriers

Excise taxes are imposed on fuels and lubricants. The rate is determined by the type and quantity of the product and must be paid within 10 days after being notified by the Customs Office of the tax amount due.

As a member of the European Union, the Czech Republic implements the Common External Tariff on Imports from non-EU and non-EFTA countries by charging 10 percent on CIF.

U.S. companies exporting into the Czech Republic from outside the European Union are required to present:

- A commercial invoice
- A bill of lading
- A shipper's export declaration for items requiring an export license or valued above USD 2,500) and a declaration of conformity (issued by importer)

Trade Events

CIAF

June • Hradec Kralove, Czech Republic • airshow.cz

A traditional airport setting where European aviation professionals, potential buyers, and press come to see, try, and buy the latest products and services.

European Helicopter Show

June • Hradec Kralove, Czech Republic • eurohelishow.com

A traditional airfield setting where helicopter operators and private users will have the opportunity to fly into a 3-day trade event. An excellent platform to exhibit and network in a relaxed trade atmosphere.

Denmark

Summary

In Denmark there are 12 major publicly available airports, and over 70 independent airfields. Copenhagen Airport is the largest Danish and Scandinavian airport with more than 24 million yearly travelers and is classified as a European hub airport. Air traffic management in Danish airspace is carried out by Naviair, which has functioned as an independent state-owned company since October 2010.

Besides the Scandinavian flag carrier for Denmark, Sweden and Norway—the SAS Group—the Danish Civil Aerospace industry is quite fragmented, with a number of smaller companies depending on a few large contracts. They each cater to the dependencies of major individual companies in relation to transportation of personnel and freight, for instance in connection with the offshore oil industry.

In 2012 the Danish civil aerospace industry employed more than 45,000 people and it is estimated that the Danish supplier-market for the airports and airlines creates value at close to USD 975 million. This includes areas such as ground handling, catering, fuel, etc.

Market Entry

The import climate of Denmark is open to U.S. products and is governed by fair business conduct. In order to save costs, the major buyers in the Danish civil aviation market usually prefer to deal directly with the aircraft and aircraft parts and equipment manufacturers. Since it is important to know when a major purchase may take place, a local network of business contacts is often necessary. This may be achieved by using local consultants or setting up a sales office. During the sales process it can advantageous for the exporter to assist in dealing with certification procedures and prepare the appropriate documentation including manuals and pilot instructions.

Statistics

Capital: Copenhagen
Population: 5,569,077
GDP: USD 208.5 billion
Currency: Danish Krone (DKK)
Language: Danish

Contact

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Current Market Trends

Recently, Denmark's overall market for aircraft has been on the decline. From 2010 to 2013 the number of registered aircraft went from 1,152 down to 1,069. This is the result of a decrease in the number of aircraft in all sizes as well as helicopters. The market's largest categories are airplanes with 1–2 or 3–5 seats accounting for 73.9 percent of the market.

In 2014, Copenhagen Airport was named the sixth best airport in Europe by Skytrax World Airport Award. The airport alone employs more than 22,000 people. It is the largest hub airport in northern Europe and passenger numbers have grown steadily over the past years. In 2013 Copenhagen Airport reported a passenger increase of 3.1 percent and a passenger volume of more than 24 million people. The airport handles 60 scheduled airlines and has room for over 100 airplanes, making it the main actor of the Danish civil aerospace industry.

Within the past few years the emerging UAV industry has enjoyed an increased focus and a dedicated test-center has been created at the Hans Christian Andersen Airport. The test-center allows for UAV operators to securely test and monitor their vehicles within a defined aerial framework.

Current Demand

In Denmark, there is a close link between the market demand for aircraft and aircraft parts and the amount of airline passenger traffic. The main airline in the Nordic region is SAS; they are the largest single buyer of U.S. aircraft and parts. In addition to SAS, you find Thomas Cook Airlines Scandinavia A/S. The airline focuses on charter flights. SAS is currently in the middle of renewing their air fleet, introducing 37 new airplanes over the coming six years, while Thomas Cook Airlines Scandinavia A/S is having 12 new airplanes delivered up until 2014.

Best Prospects

With Copenhagen Airport being the single biggest workplace in Denmark, and one of the largest airports in Europe, best prospects may be found within airport and ground support equipment, aircraft and engine parts, maintenance and spare parts as well as aviation services. The Commercial Service office at the U.S. Embassy in Copenhagen can help evaluate market potential, facilitate meetings with potential business partners and offer a number of other services to U.S. firms looking to enter the market.

Helicopters

The helicopter subsector is one of the smaller subsectors within the Danish aerospace industry. In 2013 there were 126 Danish registered helicopters on the market. This is a 5.9 percent decrease from 2010, a slightly lower decrease than the overall 7.2 percent decrease in the number of registered aircraft in the entire industry.

There are 28 Helidecks in Denmark, 16 for access to off shore oil rigs, 5 hospital decks, 3 for off shore windmill farm access and 4 that are either large private platforms or attachments to

airports. The Danish buyer profile is a mix between public and private institutions as well as private enterprises and personal usage.

There are currently no firms in Denmark producing helicopters; however the Danish firm Terma is a key supplier of equipment ranging from radomes for ALQ-162 jammers to drive panels for the AgustaWestland EH-101.

Competitors

In relation to airlines, the largest competitor within the Danish Civil Aerospace industry is the Scandinavian flag carrier for Denmark, Sweden and Norway—the SAS group. While the SAS Group is the largest player on the market, there are a number of smaller firms also competing on the market for private sales, and smaller contracts.

Barriers

In Denmark the EU directives dictate the regulative framework the market participants have to follow and often supersedes national legislature. This ensures common standards in relation to areas such as market entry, passenger rights and safety procedures. Like most countries the civil aviation industry in Denmark is subject to very fierce price competition, which drives margins down.

Trade Associations

Erhvervsflyvningens Sammenslutning—Danish Aviation Association (ES-DAA)

es-daa.dk

Promotes the interests of its members as a part of the commercial and technical areas of Denmark's aviation industry. ES-DAA represents the Danish chapter of the European Council of General Aviation Support (ECOGAS).

Finland

Summary

The Finnish aviation market is quite small, with imports of aircraft, spacecraft, and parts related parts valued at USD 271 million in 2011, and more specifically, aircraft parts valued at USD 167 million in 2011. However, the share of U.S. imports (48 percent) increased in many product categories with a total increase of six percent. The best prospects for U.S. companies include propellers, rotors, landing gear and their parts, and airplane parts in general (CN88330).

Market Entry

Finland's import climate is open and receptive to U.S. products. The major buyers in the market usually prefer to operate directly with aircraft, part, and equipment manufacturers—personal contacts are important and highly appreciated.

Current Market Trends

Finnish aviation operators have been facing operational challenges in a fiercely competitive business environment. However, Finnish aviation companies continue to be forerunners and innovators in offering environmental friendly solutions for the aviation industry. For example, jet engine cleaning solutions for cleaner engine components, faster cleaning processes, and reduced failure rates. For more information, visit ce4mro.com.

Current Demand

In 2011, U.S. imports of aircraft parts, including propellers, rotors, landing gear and their parts was 48 percent followed by France with 30 percent, Sweden with nine percent, and UK with four percent. However, in 2013, civilian aircraft, engines, equipment, and parts imported from the U.S. totaled USD 177 million.

Statistics

Capital: Helsinki
Population: 5.4 million
GDP: USD 259.6 billion
Currency: Euro (€)
Language: Finnish, Swedish

Contact

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Best Prospects

The Finnish Aeronautical Association (FAA), established in 1919 is the national and central organization of sport aviation in Finland. The sphere of activity of FAA includes 10 different air sport disciplines: powered flying, gliding, experimental flying, ultralight flying, hang gliding, paragliding, parachuting, ballooning, ascending parachutes and aeromodelling. FAA has over 260 member organizations (clubs) and about 10,000 members. The clubs are evenly distributed all over Finland.

The market for sport aviation equipment, including aircraft weighting under 2000 kg/ 4,400 lbs and helicopters is fairly small. Most of the aircraft and helicopters in the market are aged, but renewed and kept in good condition through maintenance.

Competitors

Finavia is a state owned commercial enterprise that maintains the Finnish airport network and the air navigation system. Finavia's airport network consists of 25 airports. The volume of air traffic by number of air transport passengers has been increasing steadily for a couple of years. However, the most recent total number of air transport passengers reported by Finavia was 19 million passengers in 2013, a decrease of 0.9 percent from 2012.

The number of civil aviation operators in the market is fairly small. Finnair Technical Service, the national airline's maintenance department is the largest single buyer of U.S. aircraft parts when it comes to commercial aircraft and component repair and overhaul. Some airlines operating in the Finnish market include SAS Group's Blue 1, and Norwegian, an intra-European commuter airline. Other operators include air taxi and business jet service providers.

Barriers

No major trade barriers. The Finnish aviation legislation was updated in 2005. The updated Aviation Act regulates aviation in Finland, governs Finnish aircraft operating abroad, and implements EU directives concerning the safety of third-country aircraft.

Trade Events

Tour de Sky International Air Show 2014

August 9–10, 2014 • Oulu, Finland • tourdesky.fi

Finland's the biggest aviation event. Organized by the Finnish Aeronautical Association (FAA) in cooperation with the Finnish Air Force.

Trade Associations

- The Finnish Aeronautical Association (FAA), ilmailuliitto.fi?mid=421

France

Summary

Reported revenue for the French civil aerospace industry in 2012 grew to €31.4 billion (GIFAS), out of total non-consolidated aerospace and defense aerospace revenues of €42.6 billion, a strong 18 percent leap over 2011.

Orders in 2012 in the civil sector totaled €49.9 billion, notably from recent programs such as the A320 Neo and the Leap engine. The civilian sector represents 74 percent of turnover and 84 percent of exports.

The space sector also grew in 2012, with a turnover of €5.2 billion for the commercial sector, out of a total of €6 billion.

Aerospace is one of the most dynamic areas of the French economy, and one of the few creating new jobs in an otherwise morose economy. Other than the United States, France is the only country to have the full range of industry and technical knowledge needed to design and build an aircraft or satellite from start to finish.

As of April 2013, the number of Airbus aircraft on order stood at 4,973, representing seven to eight years of output. Airbus had a gross global market share of 41 percent in value terms in 2012.

Market Entry

Five aircraft manufacturers account for the majority of the French market: Airbus (large commercial aircraft), Airbus Helicopters (formerly Eurocopter, light-to-heavy helicopters), Dassault Falcon Jet (high-end business jets), ATR (passenger and cargo turboprop aircraft for regional transport), and Daher Socata (light aircraft and business turboprops). With the exception of Daher, these manufacturers are owned in part or entirely by the same parent company, Airbus Group. Created in 2000 and called EADS until very recently, this consortium dominates the civil aviation market.

Statistics

Capital: Paris
Population: 65 million
GDP: USD 2.6 trillion
Currency: Euro (€)
Language: French

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Selling to these aircraft manufacturers entails undergoing a vendor/product qualification and assessment process. The Safran and Zodiac Groups are among Europe's major equipment suppliers; working through one of their many North American entities is one way of making the process easier. Other major players include Thales, Liebherr Aerospace, Daher Group, Latécoère, Aerolia, Sogerma, AFI EandM, Sabena Technics, etc. The list is very long.

AS9100 and NADCAP would be considered minimum requirements for doing business in the aerospace supply chain in France.

Due to the breadth and depth of France's aerospace industry, many U.S. manufacturers opt to use the services of a distributor or agent to reach out to the many potential customers doing business here. It is generally considered difficult to break into the business (with some exceptions based on product type) without local representation that can interface with the various layers of engineers, purchasers and supply chain quality managers. It is normal business practice in France for manufacturers' representatives to work on retainer only or a mixed retainer/commission fee; rarely will an agent accept a commission only contract to develop new business. U.S. firms must thus be prepared to invest significantly in their business development process over a sometimes extended period before generating any orders.

Current Market Trends

France's aerospace industry manufacturers derive nearly three-quarters of their revenues from civilian sector programs, the majority of which are destined for export. This large export market is due to the sustained interest in Dassault Falcon Jet, Airbus Helicopters and Airbus commercial aircraft, which have all successfully captured global market share. However, Airbus continues to decrease its number of suppliers overall, preferring to work directly with a handful of major tier 1 partners and referring all other potential suppliers to its supply chain at the appropriate level.

Sourcing in the U.S. dollar zone and low cost countries continues to be a strong tendency, driving demand for U.S. components.

Current Demand

France has for some time been the United States' largest customer in the aerospace market, representing around 8 percent of U.S. aerospace exports. France has also been the single largest supplier to the U.S. aerospace market, with about a quarter of aerospace imports originating from France.

The Airbus Group Global Sourcing Network alone spent USD 14 billion in 2012 for sourcing turnover in the U.S., most of which was for Airbus commercial aircraft. Airbus Group aims to increase sourcing spending to 40 percent outside of Europe by 2020. Airbus Group currently has several hundred suppliers in more than 40 U.S. states. Their U.S. sourcing office in Herndon, VA (eads.nasupplier@airbus.com) should be a first stop for potential U.S. suppliers.

Best Prospects

There are strong ongoing opportunities for U.S. suppliers of parts, components and assemblies of civil aircraft. Airbus spends billions of dollars every year in the U.S. on its supply base. The best prospects for U.S. firms in this market continues to be those associated with the manufacturing of new aircraft or engine models, or in very technical products such as composites. LEAP (which will be replacing the CFM56 program/LEAP-1A to power the Airbus A320neo, LEAP-1B to power the re-engined Boeing 737MAX, LEAP-1C for the COMAC C919) and the LEAP engine nacelle (for which Aircelle/Safran has been selected) are still at the engineering and supplier selection stage. ATR, Airbus Helicopters and Dassault are all launching (or considering launching) new aircraft models. It is important to keep in mind that beyond French-made aircraft, French equipment suppliers are also working globally, on projects for Bombardier, Embraer, Sukhoi, Avic, Agusta Bell and all the major U.S. aircraft manufacturers.

Helicopters

France's helicopter market is dominated by Airbus Helicopters, the world's leading rotorcraft manufacturer. Headquartered in Marignane, France, Airbus Helicopters is composed of three entities: Airbus Helicopters (the parent company), Airbus Helicopters Deutschland (the German subsidiary), and Airbus Helicopters España (the Spanish subsidiary).

AH had an excellent year in 2012, reporting an increase of 15 percent in revenues to reach €6.3 billion in turnover. 475 aircraft were delivered during the year, with orders for a further 469 aircraft, valued at €5.4 billion.

As part of the Airbus Group, Airbus Helicopters participates in the Group's Global Sourcing Network to locate and assess suppliers.

Several helicopter fleet operators such as Heli-Union, Inaer, Hélicoptères de France, and Airtelis offer services to the public, hospitals, fire services, mountain rescue and industrial sectors.

Competitors

Because of the proximity of Airbus, Dassault, Airbus Helicopters and other aircraft manufacturers, France has a long-established and sophisticated aircraft supplier network. The French government encourages prime contractors to support local SMEs to maintain jobs and technical know-how in France. However, aerospace is a truly globalized industry; major assembly lines are maintained in France, supplied by parts and components which come from around the world. The aircraft manufacturers operate sourcing offices internationally.

Barriers

French aerospace companies are seeking to subcontract in order to manage costs and because the ramp-up in production has left many of them needing to find extra capacity to meet

obligations. With new projects in various stages of development, the French market provides opportunity to the most competitive U.S. aerospace firms. However, entering the French market requires patience, investment, innovative products and competitive pricing.

Trade Events

Aeromart Toulouse 2014

December 2–4, 2014 • Toulouse, France • bciaerospace.com/toulouse

Aeromart, run with the support of Airbus and its supply chain, is the leading global aerospace venue for pre-planned face to face meetings. Aeromart offers outstanding networking opportunities to manufacturers, tier 1 suppliers, subcontractors, service providers and clusters from around the globe.

Trade Associations

- French Aerospace Industry Manufacturers' Association (GIFAS), www.gifas.asso.fr/en

Germany

Summary

In 2012, the German aerospace industry reported revenues of EUR 28.4 billion, representing a growth of 10.5 percent over 2011 (EUR 25.7 billion). It was the first time in four years that the industry achieved double-digit growth. Since 2009, it had already seen solid growth rates between 4.1 percent (2011 over 2010) and 4.7 percent (2010 over 2009). Due to its technological know-how and its strong innovative capacity, the German aerospace industry also has a significant effect on other industrial sectors. The number of direct employees in the German aerospace industry currently stands at 100,700, up 3.4 percent to from 97,400 in the previous year. The share of university graduates is 50 percent. Another 900,000 jobs are supported throughout the supply chain of the aerospace industry. Some 250,000 people are working in the air transport sector. Research spending is significantly higher than in any other industry, amounting to EUR 4.4 billion or 15.7 percent of the overall revenues in 2012.

Market Entry

Market entry in the aerospace industry can be achieved through getting access to the suppliers of the Airbus Group and Boeing. Airbus expects to source 40 percent outside of Western Europe by 2020. Global sourcing is one of the group's leading long-term objectives as part of its updated Vision 2020. An integrated Airbus Global Sourcing Network (GSN) has been created to foster the globalization of its sourcing footprint. The GSN central team is based in Toulouse and Ottobrunn and operates Country Sourcing Offices in three strategic countries (China, India, USA). Country Focal Points are Brazil, Japan, Korea, Malaysia, and Mexico. For U.S. aerospace manufacturers, the first point of contact is the joint U.S. Sourcing Office that was set up by Airbus North America in November 2010 to enhance the group's procurement in the United States. The major German Tier I suppliers and systems integrators, such as Diehl Aerosystems, Liebherr-Aerospace Lindenberg, MTU Aero Engines and Premium AEROTEC, as well as some of the foreign Tier 1 suppliers with

Statistics

Capital: Berlin
Population: 81.7 million
GDP: USD 3.601 billion
Currency: Euro (€)
Language: German

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locations in Germany, such as Rolls-Royce Deutschland, can be approached directly. Which strategy is preferable in each case depends on the overall situation and the product a company has to offer.

Current Market Trends

The latest available market data published by the German Aerospace Industries Association (BDLI) are for 2012. The 2013 figures will be announced on April 29, 2014. Based on the European Central Bank's average annual exchange rate of 1.2848 EUR-USD, the 2012 revenues of EUR 28.36 billion generated by the German aerospace industry translate into USD 36.44 billion. The revenues break down as follows: aerospace systems, USD 21.86 billion or 60 percent; engines, USD 5.47 billion or 15 percent; equipment, USD 8.02 billion or 22 percent; material technologies and components, USD 1.09 billion or 3 percent. The exports reported by the 200+ BDLI member companies amounted to 60 percent or USD 21.86 billion of the overall revenues, a slight decrease from 2011. According to the trade values for aircraft, spacecraft and parts thereof (HS product code 88) as provided by the European Union Market Access Database (MADB), imports from the United States to Germany reached USD 3.18 billion, marking a 40 percent growth over 2011 (USD 2.26 billion). Germany is a leading export destination for U.S. aerospace products. The overall extra-EU27 imports to Germany were USD 4.35 billion, boosting the U.S. share from 54 percent in 2011 to 73 percent in 2012. The intra-EU27 imports to Germany amounted to USD 20.72 billion.

With the structure of the European aerospace industry in mind, mainly the flow and aircraft parts between the Airbus sites in Germany, France and the UK, it is easy understand that the intra-EU27 imports to Germany were more than four times higher than the extra-EU27 imports and averaged at 65 percent of the local production. Without France (USD 13.62 billion) and the UK (USD 5.37 billion), the intra-EU27 imports to Germany were only USD 1.73 billion in 2012. It is noteworthy that the 2012 export values reported by the German Federal Statistical Office (DESTATIS) divert from the BDLI values by almost 100 percent, resulting in exports worth USD 43.27 billion. The 2012 export values reported by MADB are even higher (USD 45.84 billion), but they are approximate enough for giving a good representation of Germany's overall aerospace exports.

The 2012 import values reported by DESTATIS and MADB balance out the picture, with USD 23.59 billion USD 25.07 billion respectively. The difference between the BDLI and DESTATIS figures may be due to intra-company trade between the French and the German production sites of the Airbus Group. However, according to the BDLI member firms the import share has been around 55 percent of the revenues for the last couple of years. Applied to the 2012 revenues, this would equal USD 20.07 billion, resulting in a difference between exports and imports of USD 1.82 billion and translating into a market size of USD 34.66 billion (total production plus total imports less total exports). If this model is used for the DESTATIS figures—while deducting Germany's aerospace trade with France and the UK—it would result in a much smaller market size of USD 21.99 billion. Since the DESTATIS exports of USD 43.27

billion are higher than the total production of USD 36.44 billion, this report assumes that the BDLI figure does not cover the entire revenues in the HS product categories 8801-8804.

Another difference is between HS and NAICS. According to NAICS: 3364 for aerospace products and parts manufacturing, U.S. exports to Germany amounted to USD 5.71 billion in 2012 and USD 5.87 billion in 2013, turning Germany into the sixth-largest U.S. aerospace export destination (up from #7 in 2012).

The structure of the German aerospace market becomes clear by looking at the size and revenue distribution of businesses. There are only 8 companies with over 2,000 employees but they employ 61 percent of the workforce (61,425) and generate 66 percent of the revenues (USD 24.09 billion). Another 16 companies with 501 to 2,000 employees employ 20 percent of the workforce (20,260) and generate 15 percent of the revenues (USD 5.48 billion). Thus, some 20 percent of the companies make up 80 percent of the market. Among these companies are the above-mentioned OEMs, Tier I suppliers and systems integrators. They are also the companies with sufficient purchasing capacity to buy from U.S. aerospace manufacturers. Obviously, smaller manufacturers also buy U.S.-made aerospace technology, yet in smaller quantities. The German aerospace market is mostly driven by civilian aircraft orders. That means the orders first go to Airbus and then feed the entire inter-connected supply chain. The U.S. content in Airbus' aircraft is already high. For some models, such as the A380 with the Engine Alliance GP7200 turbofans by General Electric and Pratt and Whitney, it's arguably higher than 50 percent. The new A350 XWB also boasts a high U.S. content. For example, the center fuselage sections and wing spars will be made by Spirit AeroSystems in North Carolina. The forward and the rear fuselage sections will be added at the Airbus facility in Hamburg. Through Airbus and its suppliers, the German aerospace industry is already buying a vast array of aircraft parts from U.S. aerospace manufacturers, including structural parts, raw material, avionics, and equipment. Among the more than two dozen U.S. Tier I suppliers are such major firms as Alcoa Mill Products, Coast Composites, Fairchild Controls, Honeywell, Teledyne, and Vought Aircraft Industries. Several hundred further suppliers are spread across 40+ States. The trend towards U.S. procurement is set to increase and it's not limited to the OEM-level. German Tier I suppliers also have a vested interest to improve their costs by purchasing from the dollar zone. However, getting access to the supply chain depends on varying factors and can be hard for new suppliers—from the United States or elsewhere.

Air Traffic

In December 2013, the 22 German international and 16 German regional commercial airports recorded some 13.5 million passengers. This represents a growth of 2.2 percent over December 2012. In total, some 202 million passengers were counted at German airports from January to December. Domestic traffic was down by 3.6 percent, while European traffic grew by 2.5 percent. Intercontinental traffic saw a slight increase of 0.4 percent but fell behind the expectations. The number of commercial aircraft movements was stable with 152,000

departures and landings in December, but decreased by 2.6 percent to 2.2 million compared to the previous year.

Air freight grew for the third consecutive month to 361,000 tons, 2.1 percent more than in December 2012. Overall, air freight remained stable, with 2 million tons of outbound cargo and 2.3 million tons of inbound cargo in 2013. Despite the positive trends since April 2013, the conditions for air traffic in Germany continue to be volatile and are influenced by the political-economic development in Europe. The German airports are represented by the Association of German Commercial Airports (ADV, adv.aero/english). Air traffic figures and rankings are published by ADV on a monthly basis. The annual figures for 2013 are included in the monthly report for December 2013 (bit.ly/Top4Ocl). The report is only available in German but a breakdown of the passenger numbers by airport is included on page 9. On the following page of this report is a map of the international airports in Germany.

Current Demand

Current demand for U.S. aerospace technology in Germany is largely dictated by the order intake from Airbus and to a much smaller degree from Boeing with its 70 to 80 suppliers in Germany. This trickles down to the German Tier 1 suppliers, such as Diehl Aerosystems, Liebherr-Aerospace Lindenberg, MTU Aero Engines and Premium AEROTEC, depending on their work shares in the respective aircraft programs. The resulting demand for aerospace technology from Tier 2 and Tier 3 suppliers is hard to measure but the below-listed revenue figures may provide a clue, as do deliveries and orders. In 2013, Airbus delivered 626 aircraft to 93 customers, took in 1,503 net orders and recorded a year-end backlog of 5,559 aircraft. Of the delivered aircraft, some 493 were A320s, equaling a production rate of 42 per month, 108 were A330s and 25 were A380s. The strong commercial momentum will lead to a production rate increase to 46 aircraft per month in the second quarter of 2016. The ramp-up of production capacities has a direct influence on the current and future demand for aircraft parts to be used by Airbus and its suppliers in Germany as well as in other European countries.

Demand coming from German airport construction projects is closely monitored by the U.S. Commercial Service. Opportunities are relatively scarce compared to growth markets such as China and India. The saga of Berlin Brandenburg Airport Willy Brandt (BER) deserves a separate report. Located adjacent to the current Schoenefeld Airport south of Berlin, BER is intended to become the single commercial airport serving the German capital, Berlin, and the surrounding state of Brandenburg, an area with a combined 6 million inhabitants. With a projected annual passenger number of 27 million, it would become the third largest airport in Germany. Originally planned to be opened in June 2012, the project has been plagued by a series of uncharacteristic delays due to poor construction planning, management, and execution. Until February 2014, it had been hoped that a partial opening would be possible this year, allowing 10 take-offs and landings per day. The current status is that the airport will remain closed until 2016. This latest delay adds another year to a string of setbacks. It is blamed on several reasons, including the unplanned reconstruction of the northern runway due to stricter rules for noise

protection. BER-CEO Hartmut Mehdorn criticized in a letter to the State of Brandenburg that the air transport authorities are complicating the situation.

Another project that looks more promising is the third runway of the award-winning Munich Airport. In June 2012, it was voted down in a city-wide referendum. With roughly 33 percent voter turnout (enough to make a quorum under Bavarian law), the results were 54 percent having voted against to 45 percent having voted for the new runway project. Decisions about the airport's future must be made by the German federal government (Bund), the Bavarian state government and the City of Munich. On February 19, however, the Bavarian Administrative Court turned down 17 cases filed against the building of the new runway, rejecting the results of the referendum. Legally, there should be no further hurdles for starting the project which is an important signal for the future development of Munich Airport and the region as a whole. While the third runway project has been revitalized, a satellite extension to Terminal 2 was begun in 2012 and is due for completion in 2015.

Best Prospects

While it's possible for U.S. firms to supply aerostructures on an OEM level, getting access to the supply chain on the first, second or third tier should be faster. OEMs and systems integrators constantly screen the market for capable suppliers. The overall best prospects include everything from commercial, business and GA aircraft, aircraft and engine parts, airborne equipment and systems, aircraft interiors, pilot controls and avionics, as well as composite materials, structural components, and forgings and fasteners. Potential suppliers should be AS9100-certified and/or NADCAP-accredited. Entering the market requires a long-term approach.

Helicopters

According to the German Federal Aviation Office (LBA), there were 769 registered helicopters in 2013. In terms of production, Airbus Helicopters (formerly Eurocopter) is the dominant player in the market. The company is headquartered Marignane, France, and has sites in Donauwörth and Kassel, Germany. Donauwörth, the German head office, is home to the final assembly process for the EC135, EC635, EC145; blades manufacturing for the combat helicopter Tiger; testing, research and prototyping; as well as the Systems Support Center for helicopter fleet of the German Federal Armed Forces, including the transport helicopters NH90 and CH-53. In 2013, Airbus Helicopters saw slower commercial momentum but took in 422 orders, down from 469 in the previous year. Some 33 orders were for the civil workhorse Super Puma. Deliveries amounted to 497, up 4.6 percent from 475 in 2012. The revenue split was 55 percent civil and 45 percent defense. Airbus Helicopters employs some 23,000 people worldwide, of which 5,800 are based in Donauwörth and 150 are based in Kassel. U.S. exports in to Germany the HS customs categories for helicopters under 2,000 kg (8802.11) and over 2,000 kg amounted to USD 17 million in 2012, while German imports to the United States reached USD 133 million. This huge imbalance might be due to revenue allocation inside Airbus Helicopters, which may impact the trade figures. However, the German aerospace magazine, *Aerokurier*,

confirmed that the demand for new helicopters in Germany was somewhat limited in 2013, both on the civil and the defense side. The German Air Force operates some 60 Sikorsky CH-53 and 3 Cougar AS532 helicopters. The most notable current programs are the Tiger (UHT), made by Airbus Helicopters, and the transport helicopter NH90, made by NH Industries (NHI). In March 2011, the German MoD agreed with the manufacturers to reduce the orders from 122 to 82 NH90s and 80 to 57 UHTs as part of the reorientation plan for the armed forces. Some 18 of the NH90s will be converted to the maritime variant Nato Frigate Helicopter (NFH). The German Helicopter Association (DHU) provided the following breakdown of non-military helicopters by application areas: Federal and State police (120), air rescue (110), offshore and wind farms (10-15), personal transport/two-engine VIP (70), aerial work (130). The U.S. content on Airbus Helicopter models is substantial but not as high as the content on commercial aircraft. Honeywell Aerospace, for example, is listed as an engine supplier. The EC135 uses collision avoidance systems from Avidyne, full authority digital controls from Goodrich Engine Control Systems, engine air filters from Pall, and rotor drives from UTC Aerospace Systems. Last not least, a quick glance at the UH-72A, Airbus Helicopter's EC145-based, U.S.-built solution for the U.S. Army utilizes systems, components and hardware from numerous U.S. suppliers, including CAE, Goodrich, Keith Products, NORDAM and Sikorsky.

Competitors

Airbus Group (formerly EADS)

Hamburg, Germany • airbus.com

On the OEM level, the Airbus Group is the main competitor of Boeing Inc. Legally headquartered in Leiden, Netherlands, Airbus is the largest aerospace company in Europe and the second largest worldwide. The company develops and markets civil and military aircraft, as well as communications systems, space technology and defense-related systems. The 4 Airbus divisions Airbus (commercial aircraft), Airbus Defense and Space (formerly Cassidian), Airbus Defense and Space (formerly Astrium), Airbus Helicopters (formerly Eurocopter), all have sites in Germany (29 in total). In 2013, Airbus generated revenues of EUR 59.3 billion compared to 56.5 billion in 2012, representing an increase of 5 percent. The order intake increased by 67 percent from EUR 131 billion in 2012 to EUR 219 billion in 2013 (based on list prices). The order backlog grew from EUR 566.5 billion (December 2012) to EUR 687 billion (December 2013). As of December 31, 2013, the Airbus Group (back then still EADS) employed a workforce of 144,061 people worldwide compared to 140,405 in the previous year. The headquarters were consolidated in Toulouse, France. Through abandoning the previous structure with Munich and Paris as dual centers of power, further weight was shifted to the French side. Which long-term effect this will have on the German production sites remains to be seen.

Diehl Aerosystems

Überlingen, Germany • diehl.com/en

One of five corporate divisions of the Nuremberg-based Diehl Group, a family-run enterprise

with 14,300 employees and revenues of EUR 2.8 billion in 2012. Diehl's aviation activities are consolidated in four business units: Diehl Aerospace, Diehl Aircabin, Diehl Comfort Modules, and Diehl Service Modules. In 2012, the division had 3,700 employees and generated a turnover of EUR 800 million. The annual report for 2013 will be published in June 2014.

Liebherr-Aerospace Lindenberg

Lindenberg, Germany • liebherr.com/ae/en-gb

A division of the family-run Liebherr Group, which generated revenues worth EUR 9.1 billion with 37,801 employees in 2012, up from EUR 8.3 billion with 35,333 employees in 2011. The division develops, manufactures and maintains aircraft air management systems, flight control and actuation systems as well as hydraulic and landing gear systems. Besides the division headquarters in Lindenberg, they also have a site in Toulouse, France. Liebherr-Aerospace achieved revenues of EUR 1,032.6 million up from EUR 913.4 million in 2011, together with Liebherr's Transportation Systems division.

MTU Aero Engines

Munich, Germany • mtu.de/en

Germany's leading engine manufacturer and the largest independent provider of commercial engine maintenance services worldwide. Revenues posted in 2012 were EUR 3.4 billion, up from 2.9 billion in 2011. The current workforce is estimated to be at 8,500 people. On the civil aircraft engines side, MTU is mainly a partner or risk-revenue sharing collaborator to Pratt and Whitney (PW1000G 15 percent, PW2000 21.2 percent, PW4000G 12.5 percent, etc.), but also to Engine Alliance (GP7000), General Electric (GE90), and to International Aero Engines (V2500). The 2013 figures will be announced in May 2014.

Premium AEROTEC (PAG)

Augsburg, Germany • premium-aerotec.com/en

A leading aerostructures supplier and a fully owned subsidiary of the Airbus Group with sites in Augsburg, Nordenham, Varel (Germany) and Brasov (Romania). The company manufactures fuselage components for the following civil aircraft programs: Airbus A320 (super shell, fuselage sections 15/17/19), A330/A340 (fuselage sections, floor beams, and titanium components), A380 (fuselage shells, floor structure, wing components), A350 XWB (fuselage sections 13/14/16/18, pressure bulkhead, floor structure, wing components), and Boeing 787 (aft pressure bulkhead). The company has more than 7,000 employees and generated revenues of EUR 1.5 billion in 2012.

Barriers

Germany's regulations and bureaucratic procedures can be a difficult hurdle for companies wishing to enter the market and require close attention by U.S. exporters. Complex safety standards, not normally discriminatory but sometimes zealously applied, complicate access to the market for many U.S. products. U.S. suppliers are well advised to do their homework

thoroughly and make sure they know precisely which standards apply to their product and that they obtain timely testing and certification.

Trade Events

AIRTEC 2014

October 28–30 • Frankfurt, Germany • airtec.aero

Targeted aerospace event designed to connect buyers and technology experts from OEMs and primes with manufacturers from the entire supply chain. Also includes by an international aerospace congress. 2014 targets include are 650 companies and 10,000 meetings.

Aircraft Interiors Expo 2015

April 14–16, 2015 • Hamburg, Germany • aircraftinteriorexpo.com

World's largest exhibition for airline interior design and airline cabin systems engineering. Product types include cabin management systems, fasteners, finishing, flooring, galleys, in-flight entertainment, interior paints, lighting, seating, repairs, safety, wiring, and more. In 2013, show attracted over 500 exhibitors from 26 countries and 9,000 visitors from 90 countries.

AERO 2015

April 15–18, 2015 • Friedrichshafen, Germany • aero-expo.com

General aviation. Includes business jets, single and twin-engine aircraft, light aircraft (UL, VLA, LSA), motor gliders, kit planes, helicopters, propulsion systems, components, avionics, and more. In 2013, attracted 600 exhibitors from 30 countries and 35,000 visitors from 40 countries.

inter airport Europe 2013

October 8–11 • Munich, Germany • interairport.com/europe

World's leading exhibition for the airport industry. Equipment, technology, and services for ground handling, terminal operations, airport IT, and airport design. In 2013, attracted 640 exhibitors from 37 countries and more than 11,900 visitors from over 110 countries.

Trade Associations

- German Aerospace Industries Association (BDLI), bdli.de
- German Airport Technology and Equipment, gate-alliance.de
- HANSE AEROSPACE e.V., hanse-aerospace.net/en
- ALROUND (Association of Aerospace-oriented SMEs in Germany), alround.de
- German Helicopter Association (DHU), dhv-org.de

Hungary

Summary

The civil aviation sector in Hungary is growing. There are 15 civilian airports out of which two have international aviation rights. Most regional airports require both infrastructure and technical modernization and need to be equipped to respond to international standards of safety and security. Airport security is managed by the National Transportation Authority (NKH) in Hungary (www.nkh.hu). There is strong interest by airport operators to purchase security equipment in the near future, including body scanners and explosive detection systems.

Hungary enjoys a relatively strong international passenger base of users travelling mainly between Hungary and Germany, Austria, The Netherlands, UK, Italy, the Scandinavian countries, Greece and Turkey. Roughly 70 percent of international passengers visit the country for tourism and recreation. In 2013, tourism in Hungary increased at 6.7 percent. Airports that are expected to experience significant traffic growth in the near future are Budapest Liszt Ferenc International Airport, Debrecen International Airport, Gyor-Per Airport, Heviz-Balaton Airport and Pecs-Pogany Airport. Regional airports in Hungary will be given a special role in the Hungarian transportation development programs, as these airports will receive EU funding in the new European Union financial period.

The number of passengers passing through Liszt Ferenc International Airport in Budapest reached 9.2 million in 2013. Low-cost airlines carried 52 percent of the airport's passengers in 2013, up from 26 percent in 2012. A logistics center and a hotel is planned to be built near the airport.

Hungary does not have a national air carrier. MALEV went into bankrupt in February 2012. Most of the routes were taken over by low cost carriers that experience significant market penetration, including WizzAir, Ryanair, EasyJet and Germanwings. It is also anticipated that in the future major European routes will be predominantly served by these low cost carriers.

Statistics

Capital: Budapest
Population: 9.9 million
GDP: USD 130 billion
Currency: Hungarian Forint
Language: Hungarian

Contact

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Hungary is member of the International Civil Aviation Organization (ICAO) since 1963, the European Organization for the Safety of Air Navigation (EUROCONTROL) since 1992, and European Aviation Safety Agency (EASA) since 2004.

Market Entry

Market entry to Hungary is relatively easy. Aside from EU regulations, there are no country-specific business barriers in place at the moment. For updated information it is recommended to verify any information with the Aviation Directorate of the National Transportation Authority (nkh.hu/en/aviation).

The Hungarian market is open to U.S. companies. However, local representation when working in Hungary is recommended. U.S. companies that have successfully entered the market do so by either establishing a local office or developing local representation agreements.

Current Market Trends

Hungary presents a number of promising opportunities for U.S. companies in the subsectors of security, safety, airport development, air traffic control and airspace management systems.

Current Demand

There are a number of requirements for procurement of security equipment. Further acquisition needs of body scanners, explosive detection systems, security management systems and cargo security will be internationally tendered, as Hungary needs to comply with EU regulations. Győr-Per Airport is planning taxiways expansions, constructing a new landing system and build new hangar and foyer.

Competitors

European companies remain the strongest competitors in the Hungarian market. Historical ties with Germany and Austria, geographical proximity, and knowledge of EU regulations provide some advantages to European competitors. However, there is strong interest in working with U.S. firms.

Barriers

Airlines must have the capacity to fulfill European requirements and their certification in the European market, EASA. The reliable and recommended solution in such cases is to create a partnership with a local company.

Trade Events

Kecskemét Air Show

Kecskemét Air Base, Hungary • airshowinfo.hu/en

India

Summary

The India aviation industry is currently the ninth largest, handling 121 million domestic and 41 million international passengers. India has 5 domestic airlines—Air India is the national carrier owned by the government of India, and the rest (Indigo, Jet Airways, Spice Jet and Costa) are owned by the private sector. More than 85 international airlines (either individually or through code-share) fly to and from India to over 40 destinations.

All of India's major cities are linked with efficient air connectivity, but it is still a challenge to fly to smaller cities and towns. Local and regional aviation infrastructure lacks funding, modern airports, and skilled workforce availability.

The Indian government has introduced several policies and regulatory reforms for the development of the aviation industry by inviting private sector participation and investments. About 236 million domestic passengers and 85 million international passengers will be handled by India airports by 2020, making the country the third largest aviation market in the world.

The Indian Aviation Industry accounts for only 1.5 per cent of the GDP, but it plays a significant role in the country's overall economic development. The industry has undergone a new wave of expansion driven by low-cost carriers, modern airports, foreign direct investments in domestic airlines, and regional connectivity.

The Ministry of Civil Aviation (MoCA) is responsible for formulation of national policies and programs for the development and regulation of the Civil Aviation sector in India.

MoCA exercises administrative control over various autonomous organizations such as the Directorate General of Civil Aviation (DGCA), Bureau of Civil Aviation Security (BoCAS), Indira Gandhi Rashtriya Udan Academy (IGRUA), National Aviation Company of India Limited (NACIL), Pawan Hans Helicopters Limited and Airports Authority of India (AAI).

Statistics

Capital: New Delhi
Population: 1.2 billion
GDP: USD 1.779 trillion
Currency: Indian Rupee (INR)
Language: Hindi, English, others

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The Ministry of Civil Aviation has approved an outlay of USD 1.6 billion for FY14 for the development of airport infrastructure, and allows up to 49 percent Foreign Direct Investment (FDI) in the India's commercial aircraft operations.

Market Entry

Opportunities for U.S. aviation companies in the Indian Aviation industry are abundant:

- As an engineering, procurement and construction (EPC) company for Airports.
- As a maintenance, repair, and overhaul (MRO) operator.
- As a training institute/university to train personnel in ground handling, inflight crew, engineering services, etc.
- As a lessor for commercial and general aviation aircraft.
- As an airport operator (enter into a joint venture with private firms (GVK, GMS, Reliance etc.), AAI and a state government to operate, maintain and develop the airport.
- As a general aviation operator to provide regional connectivity for passenger movement and also to address medical emergencies and promote tourism.
- As a supplier of construction and installations tools, passenger and cargo handling, rescue and emergency systems, airfield equipment and services, disaster management and system integration.

Current Market Trends

The Indian civil aviation industry is among the top 10 in the world with a size of approximately USD16 billion. Indian currently has 400 commercial aircraft, which are projected to increase by 1000 in 4–5 years.

India's general aviation fleet size is currently at 690 and is expected to reach 2000 by 2020.

The air freight/cargo sector in India has been growing at a compounded annual growth rate of 11.36 percent from 2006–11, and it is expected to maintain a further growth rate of 10 percent yearly by 2014. During the last five years, the cargo handled at Indian airports recorded Compounded Annual Growth Rate (CAGR) of 10.9 percent with international cargo accounting for two-thirds of the total cargo handled mainly at Mumbai, Delhi, Hyderabad, Bangalore and Chennai. Cargo handling capacity has been rising from half a million tons (in 2011) to 3.3 million tons in 2013.

Opportunities in the Maintenance, Repair and Overhaul (MRO) exist for servicing of up to 1,000 commercial aircraft and 690 GA aircraft. Both Boeing and Airbus have decided to invest in new MRO facilities. Industry sources estimate that establishing a world class MRO will require an investment of over USD 250 million, and the sector is estimated to grow at 10 percent annually and reach USD 1.3 billion by 2020.

(USD millions)	2013	2014	2015
Total Market Size	12,400	16,400	20,000
Total Local Production	328	435	540
Total Exports	225	450	675
Total Imports	1,000	1,200	1,600
Imports from the U.S.	7,500	8,000	12,000

Current Demand

Demand for Maintenance, Repair and Overhaul MRO activities is one of the major drivers in the Commercial Aircraft market in India. The MRO market in India is expected to grow at a rapid rate as the market witnesses several growth opportunities, as there are several MRO projects under development in the country.

Aviation training is another focus area, which is attracting interest from global institutes to partner with local Indian institutes/universities in offering their programs and setting up of aircraft simulators.

Competitors

- Aviation manufacturers such as Embraer, Airbus and Bombardier have presences in India and are strong competitors to U.S. manufacturers offering commercial aircraft to the local India carriers.
- The market also has presence of Canadian and European firms offering Aviation related services and equipment for airport infrastructure and development.

Barriers

In February 2014, The FAA (Federal Aviation Administration) downgraded India Aviation to Category 2 rating for safety deficiencies identified by the ICAO. A Category 2 rating indicates that a country lacks laws or regulations necessary to oversee air carriers in accordance with international standards and has resulted in restrictions for Indian carriers (Air India, Jet Airways) to increase flights (Newark), partner with U.S. airlines or use planes other than those they are already flying.

Other barriers include:

- Lack of transparency and long delays for getting approvals for land acquisition or environmental clearances for airport infrastructure.
- Lack of skilled workforce.
- Lack of regional connectivity.
- Success on government tenders is based on L1 criteria (the lowest bidder).
- Scarcity of MRO (Maintenance Repair and Overhaul) facilities.
- High import duty on import of business aircraft and spare parts for maintenance.
- High duty/taxes on ATF (Aviation Turbine Fuel) and such taxes vary by states.
- Underdeveloped Air Traffic Management and Air Navigation System.

Trade Events

India Aviation 2016

Hyderabad, India • india-aviation.in

Ireland

Summary

Ireland's aerospace industry has over 160 companies with around 5,500 employees. Maintenance, Repair and Overhaul (MRO) with 4,000 employees is the largest sub-sector, while 900 work in manufacturing, 500 in services and 100 in space activities. National aviation policy is set by the Department of Transport, Tourism and Sport (DTTAS) and the state aviation agencies that fall under its aegis including the Irish Aviation Authority (IAA), Dublin Airport Authority (DAA), Shannon Airport Authority (SAA), and the Commission for Aviation Regulation (CAR). The Irish air travel market is dominated by Aer Lingus and Ryanair. Ireland has three state-owned airports (Dublin, Cork and Shannon) and five regional airports (Donegal, Kerry, Sligo, Waterford and West Ireland Knock) providing scheduled air services. The state-owned airports account for 96 percent of passenger traffic with Dublin being the nation's primary airport.

Market Entry

Partnering is a key factor for success across sectors of Irish industry. Irish end-users prefer international suppliers to have Irish-based representatives/partners to guarantee fast after-sales service and support allied to local market knowledge. Most suppliers to the Irish aerospace sector have a local agent/representative.

Current Market Trends

The Irish aerospace industry is largely MRO-based with the largest center being around Shannon airport. Current MRO activity encompasses airframe maintenance, specialist restorations of critical parts of aircraft engines and components, manufacturing and services ranging from seat fabrics and mobile access towers (ref: Aircraft and MRO firms operating in Ireland). Ireland is also home to a number of international firms in aircraft and aircraft engine financing.

Statistics

Capital: Dublin
Population: 4.6 million
GDP: USD 217.8 billion
Currency: Euro (€)
Language: English, Irish (Gaelic)

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The Irish Aviation Authority (IAA) is the commercial semi-state company responsible for air traffic management and related services in Irish-controlled airspace and safety regulation of the civil aviation industry in Ireland. The IAA operates one of the most advanced air traffic management systems in Europe. In May 2011, the IAA successfully implemented its new COOPANS system which equips air traffic controllers with improved functionalities while maintaining maximum levels of safety and increasing capacity to improve customers' demands. The IAA also maintains the civil aircraft register for Ireland.

Aer Lingus operates long (North America) and short-haul services to/from Ireland while Ryanair operates an extensive short-haul network from 53 bases in 28 countries throughout Europe. The Air France/KLM-owned airline CityJet operates short-haul services from Dublin to London City Airport and Paris-CDG. Since March 2012, the Aer Lingus Regional Service to the UK and France is operated on a franchise basis by Stobart Air (formerly Aer Arann)

Ireland is a leading center for aircraft leasing. Nine of the top 10 global leasing companies currently operate in Ireland, with operations spanning the industry value chain, from sales to asset management and technical services. Activities undertaken include sales, remarketing and lease placement, financing operations, acquisition and management, transaction negotiation, execution and deal structuring and technical services including Irish aircraft registration. Irish-based companies own or manage 19 percent of the 18,000+ commercial craft flying worldwide.

In December 2012, the Irish government announced a new ownership and operating structure for Shannon Airport. As widely anticipated this new ownership structure for Shannon will endeavor to create a commercially focused airport that can grow passenger, business jet, cargo and aircraft maintenance business. In conjunction with this announcement, the government also launched a consultation on Ireland's national aviation policy with the intention of publishing a new policy in 2014.

Current Demand

Sluggish passenger growth caused by the poor economic climate across Europe and Ryanair's attempted acquisition of Aer Lingus since 2007 caused the deferral of fleet expansion procurements by Aer Lingus and Ryanair. Following rejection of its latest acquisition proposal by EU competition authorities in February 2013, Ryanair quickly moved to confirm a USD 15.6 billion order with Boeing for delivery of one hundred and seventy five (175) 737-800s through 2018. In addition, Ryanair is reportedly evaluating Boeing's Next Generation 737-Max aircraft for a further 125-plane order. Aer Lingus fleet upgrade is more medium-term with the planned procurement of nine Airbus A350 aircraft in 2014 being deferred until 2016.

The DAA will be undertaking refurbishment work at Dublin Airport's Terminal 1 facility in 2013/14. In addition, the planned development of an international aviation services center at Shannon Airport should offer opportunities in that region.

All government organizations namely DTTAS, DAA, SAA, IAA and CAR must comply with European Union and Irish government public procurement regulations. Consequently, all relevant procurements falling within these guidelines are listed in the Irish government's eTenders public procurement portal. The notice search facility on this portal offers excellent insights on the procurement practices of these aviation agencies as interested U.S. suppliers can research details of previous, current, and most importantly, future procurements.

Competitors

The Aer Lingus fleet consists solely of Airbus aircraft while Ryanair's fleet is all Boeing. Aer Lingus has a short-haul fleet comprised of A319, A320 and A321 planes while its long-haul fleet is exclusively A330 aircraft. In 2014, Aer Lingus outsourced its Shannon transatlantic service to Air Contractors who utilize Boeing 757-200 aircraft on the route. Ryanair's fleet consists solely of 303 Boeing 737-800s as a result of a contract agreed in 2001.

The Air France/KLM-owned airline CityJet operates two aircraft types across its European network—the Avro RJ85 and the Fokker 50. Aer Arann's 15-plane fleet comprises four ATR 42, nine ATR 72 and two Dornier 328 turboprop aircraft. The List of commercial operator aircraft in Ireland contains more detailed information on Irish commercial aircraft.

The IAA's CAIRDE 2000 Air Traffic Management (ATM) system is based on the Thales Eurocat 2000 ATM system.

Barriers

There are no barriers to importing aerospace equipment into Ireland, but exporters selling aerospace-related products and equipment in the EU must conform, where applicable, to the WEEE and RoHS directives. An aircraft operator involved in commercial air transport must be the holder of a valid Air Operator Certificate (AOC) issued by the Irish Aviation Authority and a valid Air Carrier Operating Licence (ACOL) issued by the Commission for Aviation Regulation.

Trade Events

There are no significant Irish trade events in the aerospace sector. DAA and IAA executives attend international aviation conferences such as ATC Global and Passenger Terminal Expo to learn of the latest developments. Irish agents and distributors would also visit international exhibitions to identify and source the latest innovative products.

Trade Associations

- Federation of Aerospace Enterprises in Ireland, faei.ie



Italy

Summary

With a turnover of 20 billion USD and a workforce of over 50,000, the Italian aerospace industry ranks seventh in the world and fourth in Europe. It represents Italy's largest manufacturing sector in the field of high-tech integrated systems. Five regional players and over 300 SMEs stand out at the national and international level, both in civil and military fields. The key players are Finmeccanica, its subsidiaries, a wide network of small- and medium-sized enterprises (SMEs), research centers and universities. Italy is well integrated in international projects and has primarily fostered relationships with non-European partners.

The Finmeccanica Group (30 percent ownership by the Italian government) has a leading role in the aerospace, defense and security sectors. Finmeccanica holds a 50 percent share in Agusta Westland (AW), the world's second biggest producer of civil helicopters, and controls Alenia Aermacchi. Alenia, which restructured in 2012 to streamline its business, manufactures products for military and commercial aircraft, military trainers, turboprops, aero structures, advanced mission systems, unmanned aerial systems (UAS), parts, subassemblies and provides maintenance services. Avio Aero—founded by Fiat and now owned by GE Aviation—is one of the oldest companies operating in the aerospace industry worldwide, a leading manufacturer of aircraft and naval engines and a leader in space propulsion. Another important player is Piaggio Aero Industries that designs, develops, constructs and maintains aircraft, engines and aircraft structural components.

According to the Italian Aerospace Industry Federation (AIAD), 75 percent of its members are SMEs and about half of these have fewer than 100 employees. These firms are concentrated in several clusters located in Piedmont, Lombardy, Lazio, Puglia, Campania and Umbria. This network represents a key industry component characterized by a highly skilled workforce. About 25 percent of these firms are located in the Campania cluster (29 major companies plus 130 sub-suppliers). The Piedmont cluster is a production and scientific pole whose focus is technological

Statistics

Capital: Rome
Population: 61 million
GDP: USD 2.0 trillion
Currency: Euro (€)
Language: Italian

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innovation. Turin Polytechnic University and other specialized research centers provide design and research and development services.

Italian technological and manufacturing know-how includes: fixed wing (Alenia), rotating wing (AW), propulsion, software, fuselage components, design and assembly of parts (in aluminum, titanium and composite materials), metallurgy, mechanics, electro-mechanics, electronics, manufacturing and processing of plastics, rubber and all high-performance materials for complex applications.

The main civil industrial programs and partnerships in which the Italian industry participates include:

- Boeing 787 Dreamliner—Alenia North America and the Boeing Company set up the joint venture “Global Aeronautica” to produce the 787 Dreamliner, a mid-sized, wide-body, twin-engine jet airliner. Alenia produces composite fuselage and horizontal stabilizers for the B787. Fuselage parts are integrated in the industrial complex in Grottaglie prior to shipment to the Boeing assembly facility in Everett, WA.
- Airbus—Alenia Aermacchi is a partner in the European Aeronautic Defense and Space Company N.V. (EADS), now known as Airbus Group. It produces aero structures for the A321, A330 and A340–500/600, and supplies fuselage parts for the A380. In an equal-share joint venture with Airbus Group, Alenia Aeronautica owns ATR that dominates the regional turboprop market.
- Superjet 100—in partnership with the Russian company Sukhoi, Alenia has developed an advanced environmentally-friendly regional jet. Finmeccanica owns 25 percent of Sukhoi’s civil division.
- ATR—the Airbus and Alenia Aermacchi joint-venture hold four-fifths of the turboprop market worldwide. The turboprop market has gained importance due in part to rising fuel costs. Alenia is involved in the production of ATR-42 and ATR-72 tails and fuselages.
- Falcon—Alenia Aermacchi produces nacelles and the rear section for the Falcon series of business airplanes.

U.S. companies remain leaders in terms of the strength of aircraft manufacturers and also in the supply of aircraft parts. In Europe, more than 70 percent of aircraft related imports originate from the United States, and 30 percent of these imports are parts and components. U.S. exports of civil aircraft, engines and parts to Italy totalled USD 885 million in 2013. U.S. suppliers should continue to benefit from this competitive advantage.

Market Entry

The best market entry strategy is the identification of Tier 1 companies that integrate components, assemblies and subassemblies with their own in order to provide comprehensive solutions to the most relevant players in Italy. U.S. producers should be aware that prime contractors will look for certified components before including new companies to preferred suppliers list.

Market access in this industry is rooted in strong relationships with key players. Distribution practices and industrial competence play a fundamental and very delicate role in the aerospace industry. U.S. companies that do not wish to operate with a direct presence should have an agent or distributor that is well introduced and knowledgeable.

Financing and trade practices adhere to normal Italian business standards. The majority of financial transactions are handled through private agreements and banking institutions. Italian firms sometimes find U.S. supplier payment terms too rigid, leading to a loss of business to other suppliers. Financing is considered as much a competitive factor as the product itself, the delivery date, or after-sales service. While some U.S. manufacturers request payment upon receipt of the goods, more successful sellers offer terms allowing settlement of the account from 60 to 120 days following the invoice date, which is the most common practice in Italy. More information regarding the business climate can be found in the Country Commercial Guide (bit.ly/YO9nU3).

The European Aviation Safety Agency (EASA) based in Cologne, Germany, has responsibility for aircraft and parts certification as well as the design and maintenance standards for aircraft and parts certification. The Italian civil aviation authority (ENAC), has oversight of civil aviation including certification and control authority.

Current Market Trends

The tendency during the last several years has been the creation of inter-regional clusters in order to streamline the supply chain to match activities with the expertise of Italy's research centers and universities. Inter-regional clusters have been formed by the Campania and Puglia regions, and by Campania, Puglia and Piedmont.

Italian industry policy will continue to aim to strengthen its stake in the civil market, particularly since it must lessen the dependency on the defense market that has been reduced due to budget constraints. The partnership with Sukhoi is an example of Italy's goal to become an important player in the civil aviation market. Another trend of Italian aviation companies is the establishment of production sites in North Africa and global sourcing.

The Italian airport sector underwent significant regulatory developments in 2013, and the Italian Ministry of Infrastructure is soon to present its national airport strategy whose objective is to rationalize the airport system and strengthen competitiveness by providing a development framework to reboot the sector. Increased investments are expected in Milan and Rome. A major expansion plan—Fiumicino Due—managed by Aeroporti di Roma (ADR) S.p.A. is part of the City of Rome's strategic growth plan to develop and implement an efficient infrastructure network. The project will run through 2044 and involves private investments of over USD 22 billion to increase airport capacity through the construction of a second terminal equipped with a new runway. Investments are also expected in the Northeast where plans are underway for the integration of the Venice and Verona airport systems.

Alitalia, Italy's main air carrier, underwent a modernization process between 2009–12; its fleet of 130 aircraft is now arguably the youngest worldwide. Long-haul routes are serviced by Boeing 777 and Airbus A330 models. On medium-haul routes, service is provided by the Airbus A321, A320 and A319. Service on the regional routes is provided by the Embraer 175 and 190. Alitalia's low cost carrier (LCC) Air One brought its fleet of 9 Airbus A320 aircraft to the table when the airlines were merged in 2012. Alitalia's fleet should be based on only 4 types of aircraft by the end of 2014 resulting in a more efficient use of resources, lower fuel consumption and lower CO₂ emissions.

The next 20 years are expected to bring additional mergers and acquisitions and increased collaboration with alliance partners around the world. Large Middle East carriers have captured significant long-haul share from European network carriers by providing one-stop service from Europe to markets such as India, Australia, and Southeast Asia. These carriers are also changing the way that they compete for European business: by entering an alliance, by acquiring an equity stake in a European carrier, or through cooperative agreements with non-European partners.

Current Demand

Europe's large installed base of almost 4,400 airplanes will increase demand for replacement airplanes over the next 20 years. Major factors influencing airplane retirements include age and parking duration, airplane usage, operator's geographical location, flight hours and cycles, and technological advancement. European airlines forecast acquisitions of 7,460 new airplanes valued at USD 530 billion. The increase of LCCs brought about by European liberalization will increase the need for intermediate twin-aisle jets, which will dominate new deliveries.

Business aviation is an important segment in point-to-point air travel and has seen rapid growth in recent years, with a concentration in 6 European countries including Italy which holds about 10 percent of the market share. The increase in demand for regional and national flights in Italy has been influenced by the dissatisfaction of many business users with the state-owned railway service.

Environmental impact is a key industry issue. New lighter, more aerodynamic planes using satellite-linked avionics will reduce fuel consumption and noise. The ambitious goals involve materials, power, fuel, "smart wings", cockpit advances and independent energy sources for equipment. In Europe, the EU Emissions Trading System (EU ETS) regulates emissions control. In March 2014, the Council of the EU and European Parliament reached an agreement to limit aviation coverage of the EU ETS to emissions from flights within the European Economic Area (EEA) for the period from 2013 to 2016. The EU will review the scope of the EU ETS in 2017 following the ICAO assembly scheduled for 2016.

Developments in the area of unmanned aerial vehicles (UAV) are making this a promising sector with multiple applications. In Italy the first commercial permit was authorized in April

2012. Civil drones are increasingly being used in Europe, in countries such as Sweden, France and the UK, in different sectors, but under a fragmented regulatory framework. In December 2013, the European Council asked the Commission to develop a regulatory framework for safely introducing RPAS into European civil airspace beginning in 2016.

Best Prospects

The main segments offering the best prospects for U.S. manufacturers include aircraft and engine parts, airport and ground support equipment, pilots and nav aids, composite materials, maintenance and spare parts.

Helicopters

AW is a global player in the helicopter market with a wide range of commercial and military rotorcraft. It operates globally in the vertical lift market through a number of joint ventures and collaborative programs with major European and U.S. helicopter manufacturers such as Boeing and CAE. Its latest research project, Project Zero, is an unmanned, all-electric rotorcraft designed to hover like a helicopter and convert to a fixed wing aircraft in forward flight that was unveiled at the Paris Air Show last year. The project brought together several partners including Wind River, a wholly owned subsidiary of Intel Corporation headquartered in Alameda, CA, and world leader in embedded software for intelligent connected systems.

Competitors

The European aerospace industry is more integrated than any other industry by cross-border ownerships and manufacturing networks. European companies have been quite successful during the last decade and gained market share globally in large civil aircraft and helicopter markets. Europe has a considerable market for turboprop aircraft, and Piaggio Aero is an important market player. Piaggio plans to move all production—including the Avanti II twin turboprop—to its new industrial plant in Villanova d'Albenga.

Europe leads in the civil helicopter market with Eurocopter and AW. AW's international network of collaborations has allowed the Anglo-Italian Group to broaden its product range thus opening up new markets. The Group has developed a holistic approach from product definition, to the sales process, to aircraft delivery, training, maintenance and spare parts support. AW develops all avionics resulting in added flexibility and cost containment.

Business and General Aviation, the segment with the smallest aircraft, is dominated by U.S. and other North American manufacturers. However, the French firm Dassault plays a relevant role with about 20 percent market share. In General Aviation, Europe holds about a third of the relevant market with 3 firms; Piaggio Aero (Italy), Pilatus Aircraft (Switzerland), and SOCATA (France).

Avio Aero is the prime producer for the engines market. Smaller, technology driven firms that currently contribute to European excellence in the market sometimes face competition from

emerging countries. For the Italian aerospace industry, this means North African manufacturers that are becoming prominent on the lower end of the supply chain.

U.S. manufacturers have virtually abandoned the market for small, single engine aircraft, leaving the French to dominate this sector of the market, with the Germans specializing in turbo engines. However, U.S. know-how remains unparalleled, and there is still a broad range and a fairly large number of U.S. aircraft in use. U.S. companies producing light aircraft, jet engines and piston and turboprop engines of innovative design have good opportunities in this expanding market. Key factors that drive success are after-sale service (possibly in Italy) and the medium to long term financing (generally 36 to 60 months) at competitive rates. Aeronautical financial services companies can provide leasing terms that respond to the needs of the market.

Current Demand

The European region will invest 800 billion USD in new airplanes. About half will be in the single-aisle segment (390 billion USD), 43 percent in the twin-aisle segment (340 billion USD), just 1 percent in RJs (10 billion USD) and the remaining 8 percent (60 billion USD) in large aircraft like the 747 and A380. Single-aisle airplanes will dominate new airplane deliveries over the next 20 years due to short haul travel in Europe and the increase of low cost carriers brought about by European liberalization. Liberalization, as well as fragmentation and new mid-size, long-range airplanes such as the 787, the 777-200LR and 777-300ER, will increase the need for intermediate twin-aisle jets. Two hundred large airplanes will be delivered, mostly to replace older aircraft.

Airbus estimates a need for 28,200 new airplanes (for passengers and cargo) between 2012 and 2031 with an investment of 4 trillion USD of which 1.7 trillion for twin-aisle airplanes and 1.6 trillion for single-aisle airplanes.

Airplane retirements and replacements are among the major factors driving demand. Forecasts indicate that, in the next 20 years, over 3,800 airplanes will be removed from service in Europe and be replaced by new airplane. Major factors influencing airplane retirements include age and parking duration, airplane usage, operator's geographical location, flight hours and cycles, and technological advancement. Key issues include the need to cut fuel costs, reduce emissions and noise levels, all of which can be obtained by replacing older planes with newer generation aircraft.

Business aviation is an important segment in point-to-point air travel and has seen rapid growth in recent years. Business aviation is concentrated in 6 European countries including Italy which holds about 10 percent of the market share. The increase in demand for regional and national flights in Italy has been influenced by the dissatisfaction of many business users with the state-owned railway service.

The general aviation industry has defined roadmaps to reduce aircraft environmental impact by 50 percent. New lighter, more aerodynamic planes using satellite-linked avionics will reduce fuel consumption and noise. The ambitious goals involve materials, power, fuel, “smart wings,” cockpit advances and independent energy sources for equipment.

In October 2011, Alenia Aeronautica announced the 2012–20 corporate strategy with a 3.9 billion USD (1.3 billion USD for the civil sector) investment plan for the development of a new regional aircraft and innovative unmanned aerial vehicles (UAV).

Barriers

The main issue that U.S. components manufacturers face in Italy (and Europe as a whole) is strong competition due to the competence of Italian industrial players. However, the U.S. benefits from its leading position in the industry and openness by Italian SMEs to U.S. solutions. The key is to form strategic partnerships.

Trade Events

Aerospace and Defense Meetings Torino

November 18–19, 2015 • Turin, Italy • bciaerospace.com/turin

Trade Associations

- Federazione Aziende Italiane per l’Aerospazio, la Difesa e la Sicurezza (AIAD, Italian Federation of Aerospace, Defense, and Security Industries), www.aiad.it/en/homepage.wp
- Torino Piemonte Aerospace, torinopiemonteaerospace.com
- Lombardy Aerospace District, aerospacelombardia.it
- Lazio Aerospace Technology District, lazioconnect.it/en
- Campania Aerospace, www.campaniaaerospace.it
- Apulia Aerospace District, apulianaerospace.eu
- Enac—the Italian Civil Aviation Authority, bit.ly/enac-icaa

Japan

Summary

Japan offers a lucrative market for imported aircraft, aircraft parts, and engines. U.S. firms have an overwhelming presence in the market due to long-standing relationships, some spanning over 50 years, with domestic manufacturers and trading firms. U.S. firms are presented with opportunities in the market as the domestic industry undertakes international projects, develops transport and patrol aircraft for defense, and develops small jets and small jet engines for civil aviation. U.S. firms that are new to the market should consider partnering with trading firms that are knowledgeable in aircraft industry networks.

Market Entry

Specialized trading firms market imports to domestic end-users including manufacturers, airlines, private users, law enforcement, defense, and other government agencies. Many U.S. manufacturers also have partnerships with their Japanese counterparts. New-to-market firms should consider partnering with trading firms knowledgeable in aircraft industry networks.

Current Market Trends

In the civil aircraft market, Japanese manufacturers such as Mitsubishi Heavy Industries (MHI), Kawasaki Heavy Industries (KHI), and Fuji Heavy Industries (FHI), supply about 35 percent of the content for the Boeing 787. The launch customer, All Nippon Airways, received the first 787 from Boeing in September 2011. Production is expected to increase.

Mitsubishi Heavy Industries established Mitsubishi Aircraft Corporation (MJET) in April 2008 to undertake the design, type certification, procurement, sales and marketing and customer support of Mitsubishi Regional Jet (MRJ). MJET announced in October 2007 that it selected Pratt and Whitney to supply Geared Turbofan engines for the aircraft. This next-generation engine will make the planes

Statistics

Capital: Tokyo
Population: 127,253,075
GDP: USD 4.729 trillion
Currency: Yen
Language: Japanese

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20-30 percent more efficient and about 15 percent cheaper to operate than conventional regional jets. Other U.S. manufacturers such as Parker Aerospace (hydraulic systems), Hamilton Sundstrand Corporation (electrical power system), and Rockwell Collins (flight control system) are also MRJ suppliers.

Current Demand

(USD thousands)	2011	2012	2013
Total Market Size	12,748	15,021	15,717
Total Local Production	13,777	12,829	13,576
Total Exports	9,222	10,048	9,980
Total Imports	8,193	12,240	12,121
Imports from the U.S.	6,010	8,832	8,350

Source: Total local production—Ministry of Economy, Trade, and Industry; Total exports, total Imports, and U.S. imports—Ministry of Finance

Best Prospects

The Society of Japanese Aerospace Companies' forecast for the next 5-6 years is bright. Japanese firms participate in various programs with Boeing and Airbus, which have many backorders. Defense procurement is considered to be limited due to budget constraints in the defense sector. Other international joint development projects and the national development of military and commercial aircraft and engines have set the stage for further growth in the market. This will present a favorable environment in the coming decade for U.S. firms.

Helicopters

Japan's civil helicopter market has seen a continuous decline in the past decade due to decreasing demand for transport helicopters and dust cropping operations. The industry expects potential growth in such areas as emergency medical services or the so-called the Doctor Heli program and disaster relief operations at the outbreak of a major earthquake or other natural disasters. Japan's Ministry of Defense, as the largest helicopter operator in Japan, operates helicopters for search and rescue operations at the time of natural disasters including major earthquakes.

The three indigenous manufacturers, MHI, KHI, and FHI, supply approximately 90 percent of their helicopter production to the Japanese Defense Agency, independently and in partnership with U.S. manufacturers such as Sikorsky, Bell and Boeing. In the civil helicopter market, all major manufacturers have established their presence in Japan. Eurocopter, Bell, Robinson, Sikorsky, MD, and some other makers have successfully formed partnerships with local agents to market their products in Japan.

Competitors

According to the Ministry of Finance, in 2013, imports of aircraft products amounted to USD 12.1 billion. Among them, U.S. aerospace products accounted for 68.9 percent. U.S.-made aircraft, aircraft engines, and parts and supplies enjoy an overwhelming presence in the market. However, for new-to-market manufacturers this may pose a competitive challenge.

Barriers

Generally, Japan does not levy import duties on aircraft or aircraft parts. The Civil Aircraft Agreement Product Coverage lists about 250 items that are duty-free provided they are for use in civil aircraft or ground flying trainers or for incorporation therein, in the course of their manufacture, repair, maintenance, rebuilding, modification or conversion.

Overall, U.S. suppliers have ample opportunities to tap into the market as Japanese manufacturers expand their horizons through partnerships with foreign firms and as they also develop domestic aircraft and engines.

Trade Events

Japan Aerospace International Exhibition

October 2016 • Tokyo, Japan • japanaerospace.jp/eng

This biennial show is organized by the Tokyo metropolitan government and Tokyo Big Sight.

Trade Associations

- The Society of Japanese Aerospace Companies (SJAC), www.sjac.or.jp/en_index.html
- Japan Business Aviation Association (JBAA), jbaa.org/english/index_e.html
- Japan Helicopter Society, helijapan.org

Kazakhstan

Summary

Kazakhstan is an emerging aerospace hub for markets in Central Asia. Since independence in 1991, aviation in Kazakhstan has made significant progress. Aviation sector growth of 15 percent is expected for 2014, following 16 percent growth in 2013.

Currently, there are 20 active airports in the country. Of 15 airports licensed for international flights, 10 have been qualified under ICAO standards: Astana—IIIA and Almaty—IIIB categories of ICAO; Atyrau—II category; Pavlodar, Chimkent, Karaganda, Zhezkazgan, Aktobe, Ust-Kamenogorsk, Kyzylorda—I category. The national registry of the Republic of Kazakhstan includes 798 aircraft, with an average age of about 21 years. Kazakh companies lease 27 aircraft.

Kazakh airlines provide flights to 18 foreign countries. There are 24 foreign air companies from 19 countries proposing regular passenger flights to Kazakhstan. Currently, flights are performed by 54 airlines.

Up until 2016, USD 540 million will be allocated to 7 airports for reconstruction and purchasing special equipment. Also, an IATA e-freight project is planned to be undertaken until 2015.

The Baikonur Cosmodrome (Space Launch) is located approximately 2,100 km (1,300 miles) southeast of Moscow. It was founded in 1955. Baikonur has been the launch site for Soviet, and later Russian, human spaceflight programs, geostationary satellites launches and scientific missions to the moon and planets.

On 2 June 2005, Baikonur celebrated its 50th year anniversary. Baikonur is a large Y-shaped complex that extends about 160 kilometers (100 miles) east to west and 88 kilometers (55 miles) north to south.

Statistics

Capital: Astana
Population: 17,186,000
GDP: USD 232.5 billion
Currency: Tenge
Language: Kazakh, Russian

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Market Entry

There are many opportunities for U.S. companies as Kazakhstan is well positioned geographically, located in the north end of Central Asia and just south of Russia. This puts its Almaty and Astana hubs in perfect position to connect Central Asia as well Russia. Kazakhstan is projected by IATA to be the world's fastest growing passenger market over the next five years. As its main long-haul hub of Almaty is located in the far eastern corner of Kazakhstan, Kazakh airlines are also well positioned to tap into the fast-growing market connecting the Far East, including neighbouring China, with Central Asia. Almaty also happens to be located almost exactly halfway between Europe and Far East.

Air Astana has been by far the most successful carrier in Central Asia, growing rapidly and profitably since launching in 2002. The carrier, which is 51 percent owned by the government with the remaining 49 percent stake held by BAE Systems, has been profitable every year since 2004. Air Astana currently operates a fleet of 27 aircraft across a network of 27 international and 12 domestic destinations.

Current Market Trends

One of the major priorities for aviation in Kazakhstan is to develop international routes and domestic flights by increasing safety, quality and efficiency of transport as a result of modernization and re-equipment of the fleet. This will encourage further development of flights, the increase of subsidized routes and will attract foreign companies as well as solve the problems of public demand for air transportation. Within the scope of preparing for EXPO-2017, millions of U.S. dollars will be spent to expand and develop airports and aircraft, through replacement or new purchases. U.S. companies should consider the Kazakh aviation business as it developing rapidly.

Kazakh air companies are trying to address the critiques noted by ICAO (International Civil Aviation Organization) and thus ease restrictions on flights to the Eurozone. These restrictions are constraining factors for Kazakh and foreign airlines. After the ease of restrictions, new routes to European countries will be opened; by 2017 there will be 20 new international flights from both Astana and Almaty. Also by 2017, all the leading airports of Kazakhstan should pass the international standards required by ISAGO audit.

Current Demand

There is demand for all types of aviation. Aviation is used for patrolling forests; aerial photography operations; aerial chemical works; power transmission lines flyby; in the oil and gas sector; for sanitary works; for servicing the offshore drilling rigs in Caspian Sea; for training, sport and cultural events, as well as for personal flights. One of the priorities has been to buy more modern planes with a better safety record from Bombardier, Boeing, Airbus and Embraer.

Best Prospects

Until July 1, 2014, Belarus and Kazakhstan are exempted from paying duties on imported aircraft and spare parts. This decision was made by the Commission of the Customs Union. According to the commission's decision, import customs duties are not applied to civilian passenger aircraft, imported before July 1, 2014 to Belarus and Kazakhstan.

The Commission also facilitates the export of aircraft, engines and spare parts outside the customs territory of the CU for their repair and maintenance, including major repairs and modernization, under the condition of their re-importation not more than six months later. In addition to aircraft, Kazakhstan needs spare parts and maintenance services.

Helicopters

Aerial work is performed by 77 helicopters. Work for servicing the offshore drilling rigs is performed by 6 western-made helicopters of Eurocopter type. Work on forest patrolling annually involves about 20 aircraft, including helicopters: Ми-8, Ми-2, as well as western-made aircraft such as Agusta Westland, BELL, МД-500, etc. Work on flyby of power transmission lines and gas and oil pipelines is basically performed by helicopters: Ми-8, Ми-2, as well as Agusta Westland and Eurocopter. For sanitary aviation, in a number of regions, Ан-2 planes and Ми-2, Ми-8 helicopters are on call.

Kazakhstan has signed a Memorandum of Understanding with Airbus Military Company in the sphere of technical maintenance of military transport aircraft. Eurocopter has provided the initial EC130 T2 to a customer in Kazakhstan, introducing this enhanced version of its single-engine EC130 helicopter to the Commonwealth of Independent States (CIS) and further expanding the company's presence in a region where demand for rotorcraft is rapidly growing. Eurocopter also has developed a strong partnership with Kazakhstan—establishing Eurocopter Kazakhstan Engineering in April 2011 at Astana International Airport for helicopter assembly and customization, along with maintenance, support and training services. This is the only factory in the CIS that assembles EC 145 helicopters and has the first training center in the Russian language.

Competitors

In a relatively short period of time, Air Astana has built up an impressive regional network that positions it well for growth in the Central Asia and CIS regions. Competition is also starting to increase as more carriers become tuned into the opportunities in Kazakhstan and Central Asia.

Air Astana has so far benefitted from not having any particularly strong local competitors. Foreign carriers, however, have been gradually pursuing expansion in the Kazakhstan market. Russian carriers, which account for about one-third of foreign carrier seat capacity in Kazakhstan, pose the biggest threat.

Major international companies include Russian based United Aircraft Corporation, which has resumed flights to Kazakhstan after several years of interruption, Ilyushin Aviation Complex, Tupolev, Yakovlev, Mikoyan, MI Helicopters, Irkut Corporation, Sobol, Sokhol; Airbus Group (Netherlands registered), BAE Systems (UK), Bombardier (Canada), Airbus Helicopters/ Eurocopter (France) and Brazil's Embraer.

The Eurasian Economic Community is looking at establishing a common market which would allow carriers to operate freely around region, following the EU model. If implemented, the Kazakhstan domestic market would be open to carriers from other Eurasia Economic Community countries, which include Russia, Belarus and Kazakhstan. Potentially Russian carriers would also be able to operate seventh freedom international flights from Kazakhstan.

Trade Events

TransitKazakhstan

Almaty, Kazakhstan • transitkazakhstan.kz

Annual international exhibition of transportation and logistics.

Kazakhstan Defense Expo (KADEX)

Astana, Kazakhstan • kadex.kz

International exposition of arms and military equipment. First air show in Astana. Organized by the Ministry of Defense of the Republic of Kazakhstan, RSE Kaspex, and Astana Expo.

Trade Associations

- Kazakhstan Ministry of Transport and Communications, mtc.gov.kz/en



Korea, Republic of

Summary

Korea is the 11th largest market for U.S. aerospace exports, representing 68 percent of Korea's total aerospace imports in 2013. While imports are a significant portion of Korea's aerospace products, with President Park's new administration stressing "creative economy," Korea is putting more importance on developing and exporting its indigenous technologies. Korea has ambitious plans to raise aerospace production from USD 2 billion (2009) to USD 20 billion by 2020, and raise exports to USD 10 billion, or 3 percent of global market share. The industry plan aims to take Korea from 16th place—to the world's seventh largest aerospace producer. Korea's aerospace industry is driven by Korea Aerospace Industries (KAI) and Korean Air, one of the largest commercial airliners in Korea. KAI and Korean Air are the leading companies who do part assemblies for Boeing and Airbus.

Market Entry

Many U.S. firms have a sales representative or agent in Korea. Partnership with a local agent is advised for new-to-market firms, and especially for firms targeting Korea's law enforcement, defense, and government entities. It is important to visit the Korean market to understand the business culture before appointing the appropriate agent who has the appropriate depth of knowledge and wide networks in the market. However, Korea's major private aerospace companies including Korean Air and KAI, prefer to deal directly with foreign suppliers.

All of U.S. aerospace exports are duty-free as of March 15, 2012 and as a result of the implementation of the Korean-U.S. FTA (KORUS).

Current Market Trends

In 2013, total U.S. aerospace exports to Korea exceeded USD 3.2 billion (including aerospace products in the defense sector). A large portion of aerospace imports of Korea is for acquiring commercial aircraft and their parts and components, which

Statistics

Capital: Seoul
Population: 49 million
GDP: USD 1.198 trillion
Currency: Korean won
Language: Korean

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accounts for over 91 percent of total aerospace imports. The U.S. is the leading country where Korea secures these aerospace items, accounting for 75 percent of total aircraft, parts and component imports in 2013.

With the Korean government choosing the aerospace industry as the next growth engine, Korea's indigenous aerospace industry includes the production of military helicopters, supersonic training jets, UAVs, MRO parts and components for both Boeing and EADS-Airbus for example. Korea's local production of aerospace products continues to grow at USD 3.6 billion in 2013 while exports grew to USD 1.7 billion in 2013. Some of the recent major exports are sales of supersonic speed trainer jet T-50s (16 units, USD 0.4 billion) to Indonesia in 2011, KT-1 trainer jets and KA-1 combat jets (20 units, USD 0.2 billion) to Peru in 2012, T-50IQ trainer and combat jets (24 units, USD 1.1 billion), and FA-50 light combat jets (2 units, USD 0.4 billion) to Philippines in 2013.

Two major commercial airliners, Korean Air and Asiana Air, continue to dominate Korean commercial airline market with dramatic growth shown in low-cost carriers (LCCs) with 76.8 percent of annual growth (in number of passengers) in recent three years. These two major commercial airliners are also the major buyers for the foreign aerospace suppliers.

Current Demand

Top U.S. aerospace exports to Korea include: complete commercial aircraft, commercial aircraft engines, equipment and parts, military aircrafts and their parts and components. The U.S. continues to be the dominant foreign suppliers of aerospace/defense products and services with dominant import market share. This trend will continue for several years and especially with Korea's recent decision to purchase next generation fighters and other defense aircrafts, increasing demand on MRO services related to these aircraft models is expected in the future. From 2014, 10,000 lb LCH (Light Civil Helicopter) and LAH (Light Armed Helicopter) project would officially be launched and the plan is to co-develop LCH/LAH by 2020 with one of the foreign helicopter manufacturers and currently major foreign helicopter manufacturers have shown interest in this project.

For commercial airliners, media sources disclosed that Korean Air will acquire 64 new aircraft (including 10 B787-9 Dreamliners, four A380, and 10 CS300s) by 2018; Asiana Air will acquire eleven new aircraft (including eight A380s, one A330, and two A321s) by 2017, and three LCCs will acquire two to six aircraft in 2014.

Best Prospects

- Aircrafts and aircraft upgrades
- MRO/Parts and components
- Avionics
- Unmanned Aero Vehicle systems

Helicopters

According to the Ministry of Land, Infrastructure, and Transportation's 2011 data, Korea has total of 212 commercial helicopters. Among these, 110 are operated by the government and 102 are operated by private companies. For the last 15 years, Korea has been importing around 10–11 commercial-use helicopters annually and this number continues to increase every year. In 2011, based on Frost and Sullivan's research data, the following companies have dominated Korea's commercial helicopter market: Russian Helicopter (32.08 percent), Bell Helicopter (18.82 percent), Eurocopter (17.45 percent), Sikorsky (10.85 percent), and Augusta Westland (6 percent). As shown in this market share data, Korea imports helicopters are mainly from Russia, the U.S., and Europe, however, Korea is putting great effort in developing and utilizing its indigenous helicopter.

The Korean Helicopter Program was one of the largest government projects aimed at developing a Korean Utility Helicopter. With three years of investment and development, Korea succeeded in introducing its first indigenous helicopter, Surion, in 2009. Surion will be used by Korean military and law enforcement organizations. It is expected to be adopted by fire departments and Korea's Forest Service and continues to seek opportunities in the commercial sector. Korea's LCH/LAH project is the next biggest rotor-wing development project and the project is drawing considerable attention from major foreign rotor-wing manufacturers.

Competitors

In total value, U.S. aerospace sales constituted about 68 percent of Korea's total aerospace imports in 2013. Other major suppliers of aircraft and parts are France, UK, Russia, Israel, Canada, and Germany. Recently, with the Korean government putting more focus on indigenous technology development, some of the major Korean aerospace companies are rising as competitors to U.S. companies.

Barriers

There are no major trade barriers to U.S. products and services in aerospace/commercial sector. However, the Korean government's strong drive on indigenous technology development and locally manufactured product export can be a threat to U.S. products and services penetrating Korean market.

Trade Events

Korea Aerospace and Defense Exhibition (Seoul Air Show) 2015

October 20–25, 2015 • Seoul, Korea • seoulairshow.com/eng

Biannual international aerospace and defense exhibition.

Trade Associations

- Korea Aerospace Industries Association, aerospace.or.kr/dbhome/user/aeroe

The Netherlands

Summary

The Dutch civil aviation industry is transparent, making it relatively easy to identify the key players. Nevertheless, U.S. companies should consider working with a local representative in order to take advantage of upcoming opportunities in a timely manner. Although competition is strong, U.S. suppliers with advanced technology and a good price/quality ratio can expect to do well in the Netherlands.

Market Entry

It is important to work with a local partner or to consider opening a local sales office. A reputable agent with good contacts can provide important and timely information, which is often not readily available through public sources. In addition, in light of complicated tender and import procedures, it can be challenging to beat the competition and sell effectively without a competent agent. Companies choosing local representatives can expect to benefit from their knowledge of the market, local technical expertise, existing customer base, local marketing and sales experience, and services such as installation, maintenance, training, and after-sales service.

The Dutch are receptive to U.S. made aviation products, which are well known for their innovative quality. Price, quality and after-sales service are the dominant purchasing factors in addition to compliance to EU regulations.

Current Market Trends

Aviolanda, formerly known as Maintenance Valley, was established to support and stimulate the national aircraft maintenance, repair and overhaul (MRO) sector. This initiative aims to take the Netherlands to the top as a center for state-of-the-art industrial maintenance, logistical processes, and repair in both civil and military aviation. Aviolanda is based on one of the largest military air force bases in the Netherlands and the adjacent civilian premises where Stork Fokker has one of

Statistics

Capital: Amsterdam
Population: 16.9 million
GDP: USD 696.3 billion
Currency: Euro (€)
Language: Dutch

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its large manufacturing plants and aircraft service centers. In addition to the air force base, the military premises include the Royal Netherlands Air Force's training institute, the logistics center, and it the meteorological service. Various ongoing projects at Aviolando include:

3i

Integrated coastal zone management via increased situational awareness through Innovations on unmanned aircraft systems. This program stimulates the use of UAVs over sea and aims to develop a prototype for this purpose. Value: €3.7 million. Estimated project completion date: September 2014. More information is available at 2seas-uav.com.

Business Accelerator (BAC)

Stimulates innovations in the field of electrical systems, corrosion treatment, and composite maintenance and avionics.

Unmanned Aircraft System Knowledge Center

At the moment, there is limited use of unmanned Aircraft Systems in the Netherlands although the necessary knowledge is prevalent on the market. The knowledge center aims to cluster this know-how, which can be tapped into when demand increases. It drives innovation and development in the fields of MRO; electronics; assembly; development and production of parts; training and education; certification; logistics; knowledge dissemination; and publicity.

Current Demand

The demand for U.S. civilian aircraft, engines, equipment, and parts have fluctuated throughout the years, as seen in the table below. The rise in statistics reflect aircraft and parts replacement. The decline in exports represent economic downturns or a period immediately following a major purchase/replacement.

U.S. Exports to Netherlands			
(USD thousands)	2011	2012	2013
Civilian aircraft, engines, equipment, and parts	1,767,861	1,274,008	1,296,149

Source: 1.usa.gov/Tav01e

Due to economic conditions and the rising cost of new aircraft, private owners and airlines are less inclined to replace their fleet. Instead, they tend to choose for aircraft life extension through major maintenance and repair work.

Best Prospects

Innovative, high tech products that will help the Dutch maintain and improve its competitive position has great potential. The Dutch are looking for innovation and development in the fields of MRO, specifically the areas of electronics; assembly; development and production of parts; training and education; certification; logistics; knowledge dissemination; and publicity.

Innovations in the field of electrical systems, corrosion treatment, and composite maintenance and avionics will also be well-received.

Helicopters

Although the Netherlands is not a helicopter OEM market, there is some helicopter activity. There are six heliports across the country in the cities of Rotterdam (Maasvlakte Heliport), Emmen, Maastricht, Amsterdam, Ede, and one is under construction in The Hague (Ypenburg).

The greatest helicopter growth is expected in the area of law enforcement. Currently, the national police fleet is comprised of six Eurocopter EC-135 and two AgustaWestlands. The ANWB Medical Air Assistance (a subsidiary of the Dutch traffic, transport and roadside assistance organization ANWB) owns and operates all six trauma helicopters, which are of the Eurocopter EC-135 model as well.

The civil helicopter market is comprised of several commercial helicopter operators:

- Heli-jet—organizes and operates helicopter and private jet flights
- Heliflight—helicopter flights, charters, film and photography work, and tours.
- [Helicopters.nl](#)—tours, flight lessons, and VIP transportation
- Heliholland—helicopters tours, training and lessons, maintenance, and all forms of transportation
- Helicentre—training and lessons and business flights and tours
- Heliair—tours, lessons, photography
- Prince Helicopters—tours, video and photography, pipeline control, lessons

A list of key Dutch helicopter systems manufacturers is available on request.

The fleet of Dutch defense helicopters is comprised of 29 Apaches, 17 Chinooks, 17 Cougars, and 4 Alouettes to form a fleet of approximately 80 helicopters.

Competitors

Strong competition can be expected from Western European companies. Key players in the Netherlands include:

- Fokker Services—Specialized in MRO of commercial, private and military aircraft.
- World Class Aviation Academy—Training institute in the field of aircraft maintenance
- Stork Fokker Elmo—Design, manufacturing and support for the electrical wiring interconnection systems (EWIS) for aircraft, aero-engine and defense system applications.

Visit the Netherlands Aerospace Group website ([nag.aero/en](#)) for a detailed list of competitors in the Netherlands.

Barriers

There are no trade barriers against U.S. products and services.

Trade Events

ATC Global 2015

March 10–12, 2015 • Amsterdam, Netherlands • atcglobalhub.com/index.php/en

The largest air traffic management exhibition in the international marketplace.

Trade Associations

- Netherlands Aerospace Group, nag.aero/en
- NIDV HeliPlatform, bit.ly/nidv-heli
- National Aerospace Laboratory, nlr.nl

New Zealand

Summary

New Zealand's USD 990 million aviation sector is a significant contributor to New Zealand's economy. (2013 data; source: NZ Statistics) Besides a strong history of agricultural aviation, New Zealand's exporters of perishable products such as seafood and flowers rely on the aviation sector for shipping their products to international markets. Tourism, another key sector is also reliant on the aviation sector. More than 8.4 million passengers travel on the main airlines' domestic services and 3.7 million visitors (99 percent of all travelers to New Zealand) arrive on international air carriers. In New Zealand there are about 9,000 active pilots and 3,830 aircraft representing approximately 500 models.

U.S. aircraft represent more than 50 percent of New Zealand's aircraft fleet (both fixed wing and helicopters). The composition of the fleet means U.S. aircraft parts are required by overhaul and maintenance providers. On January 2014, the Royal New Zealand Air Force signed a multi-million contract for 11 Beechcraft T-6 trainer aircraft. The first aircraft is due in New Zealand in September, 2014. U.S. imports of aircraft and aircraft parts totaled USD 386 million in 2013.

Most of New Zealand's 800 aviation and related companies are small and privately owned. An exception is Air New Zealand with a majority shareholding held by the New Zealand government. Pacific Aerospace, based in Hamilton, New Zealand is the only commercial manufacturer of aircraft.

Market Entry

- New Zealand's Civil Aviation Authority (www.caa.govt.nz) oversees aviation security regulations across the industry.
- Goods must comply under the Consumer Guarantees Act, 1993 and Fair Trading Act, 1996 (bit.ly/nzfairtrade).
- The majority of goods imported in New Zealand are tariff-free. New Zealand Customs offers an online Working Tariff Document (bit.ly/nzworkingtariff).

Statistics

Capital: Wellington
Population: 4.4 million
GDP: USD 169.68 billion
Currency: New Zealand Dollar
Language: English

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- All goods imported into New Zealand attract a 15 percent Goods and Services Tax (GST)
- There are no importing licensing requirements
- New Zealand measurement is metric
- New Zealand electricity supply is 230 volts, 50 hertz

Current Market Trends

- Aviation safety is the leading issue.
- Local producers rely on efficient and competitive air cargo services.
- Fuel efficiency is important—New Zealand is geographically isolated from its key markets.
- Air travellers are both aging and becoming heavier.

Current Demand

Airfare competition on New Zealand's domestic routes has made flying more affordable which is creating an expansion in the domestic market. On international routes, mid-2014 Air New Zealand will be the first airline to receive the new Boeing Dreamliner. Domestic and international commercial air will spur demand for aircraft parts and accessories as part of a regular maintenance safety program.

Best Prospects

- Aviation engines and components
- Parts for gliders and hang gliders

Helicopters

Per capita, New Zealand is reputed to have more helicopters than other country. CAA's aircraft register records 804 helicopters. Helicopters mobility over this country's rugged topography makes them ideal for using in New Zealand's agriculture, film, outdoor sports and tourism sectors.

For more information, please visit bit.ly/nzheliassoc.

Competitors

Although the United States is New Zealand's lead source for aircraft and aircraft parts, U.S. companies face competition from leading European brands and domestic manufacturers. In 2013, French product was the leading import source for aircraft and aircraft parts. Air New Zealand operates 20 Airbus A320 of which seven Airbus are less than two years old.

Barriers

There are no trade barriers against U.S. products and services.

Norway

Summary

In 2013, Oslo Airport Gardermoen was the largest airport in the Nordic region measured by the amount of traffic. The airport is owned by Avinor, a state-owned commercial enterprise that operates 46 airports in Norway, including 12 in cooperation with the Norwegian Armed Forces. Avinor operations also include air traffic control towers, control centers and technical infrastructure for aircraft navigation. Avinor was established as a fully State owned Limited Liability Company in 2003, and the ownership is administrated by the Norwegian Ministry of Transport and Communications.

Statistics provided by the Confederation of Norwegian Enterprises (NHO), department of civil aerospace, shows that around 70 percent of people traveling by air in Norway do not have any other travel arrangement opportunities. 34 percent of the tourists traveling to Norway come by air. The Norwegian aerospace industry employs close to 61,000 people and the value system paying over USD 1.56 billion in taxes. In 2011, there were 33 million airline travels in Norway, and over 200,000 international flights connect Norway to 130 airports in 35 countries around the world.

Market Entry

Norway, like most countries, is a member of the ICAO (International Civil Aviation Organization), and therefore the country also adjusts to the regulations of technical standards provided by the ICAO. Norway is not an EU member, but the country commits to the EU regulations through the EEA (European Economic Area), which also connects and commits Norway to act in line with the EASA standards (European Aviation Safety Agency). In addition, the EU regulations are harmonized with national regulations of the aerospace industry, but a large part of the civil aerospace industry is regulated internationally.

Statistics

Capital: Oslo
Population: 5.1 million
GDP: USD 515.8 billion
Currency: NOK
Language: Norwegian

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Current Market Trends

In 2012, Oslo Airport was the largest airport in the Nordic region when measured by traffic. Due to increased volume of travelers through Oslo, the process of expanding the airport's capacity to handle 28 million passengers per year started in 2011, and the expansion is expected to be completed in 2017.

Current Demand

Norwegian Air Shuttle announced in January 2012 the largest order ever made by a European airline company, ordering in total 222 planes from Boeing and Airbus. The planes will be delivered starting in 2016.

Scandinavian Airlines System has had a challenging time over the last few years trying to compete with the low-price carriers operating in the Scandinavian market. However, it would seem that the company has stabilized.

Best Prospects

In February 2014, Norwegian Air Shuttle announced they had ordered an additional four new Boeing 787-9 Dreamliners. That makes 14 wide-body aircrafts in total, three of which are already in service. Norwegian currently operates 89 jet aircraft, of which 76 are 737-800s, 10 are 737-300s and three are 787-8 Dreamliners. The company has opted to modernize the fleet with state-of-the-art Boeing 737-800 aircraft. A total of 73 such aircraft will be delivered from 2008 to 2014.

Scandinavian Airlines recently released information that they are looking to upgrade and renew its ageing fleet. In the summer of 2013 SAS announced they had made a deal with Airbus, ordering 12 new planes with a value of 3.3 billion dollars.

Helicopters

There is a high demand for offshore helicopter service; the offshore industry transports personnel to the offshore oil rigs and more than 30,000 flights are made each year. Some of the largest operators here are Bristow, CHC Helicopter Service AS, and Norsk Helicopter AS. Sikorsky has a significant share of the market for helicopters offshore, having 32 S-92s currently operating offshore Norway. In September 2013, Sikorsky Aircraft Corporation in cooperation with the U.S. Company FlightSafety International opened a Helicopter Simulator Learning Center at Stavanger Airport, Sola. The establishment is equipped with an S-92 Level D Full Flight Simulator, and it is considered to be one of the most advanced simulators available to the civil industry today.

The Norwegian Military ordered 14 NH-90 helicopters back in 2001; the delivery was planned in two steps, first delivery of 6 helicopters in 2011, and the rest within 2016. So far NHIndustries has only delivered three helicopters.

In December 2013 the Norwegian government selected AgustaWestland's AW101 as the NAW SARH. The contract included 16 new SAR helicopters with an option for further 6, and ensures that the Sea King will be phased out across the country by the end of 2020.

Competitors

- Norwegian Air Shuttle, norwegian.no/en
- Scandinavian Airlines, sas.no/en
- Widerøe, wideroe.no/en
- Ryanair, ryanair.com

Barriers

Few major barriers exist. However, one such is a regulation regarding usage of foreign crew when established with a HQ in Norway. Norwegian Air Shuttle is the fastest growing airline company in Norway, and is rapidly expanding its intercontinental flight offerings. The company wants to keep its HQ in Norway, but use foreign cabin crew in order to be price competitive on the international market along with other low cost airlines. The Norwegian government recently did not approve the use of foreign crews, and the company has therefore decided to move parts of the company abroad.

In general, it is important to mention that the environmental focus of the nation reflects in the initiatives made by the airports, and three of the largest airports in Norway have signed the Airport Carbon Accreditation with the Airport Council International, and will work towards becoming carbon neutral. The industry in total accounts for 2.1 percent of today's national greenhouse gas emissions in Norway.

Norway has strict regulations on travel miles programs, but in 2013 the airline companies were allowed to start crediting travelers with mileage when traveling domestically.

Trade Events

No major local shows take place in Norway, but the Norwegian industry players usually attend the Paris Air show and the Farnborough Air Show in the UK.

Trade Associations

- Norwegian Aerospace Industry Cluster (NAIC), www.fsi.no/eng



The Philippines

Summary

The Philippine government has awarded over USD 1 billion in aerospace-related projects from October 2013 to April 2014. These include signing a public private partnership deal for the operations and expansion of the second largest airport in the country, and the purchase of lead-in fighter trainer jets, search and rescue helicopters, combat utility helicopters, attack helicopters, and aircraft rescue and firefighting (ARFF) vehicles. Apart from these, the Philippines regained its Category 1 rating from the Federal Aviation Administration (FAA).

Market Entry

The best way to market aerospace products and services to the private and public sectors is through agents and distributors. Republic Act 9184 (RA 9184), or the Philippine Government Procurement Law, dictates that companies interested to bid on government projects must be 60 percent Philippine owned. The distributor/agent must be familiar with local regulations, have access to key customers, and have the capability to provide after-sales support. However, in the case of aircraft and engine sales to Philippine airlines, the customers prefer to deal directly with the manufacturers.

Current Market Trends

On April 9, 2014, the Federal Aviation Administration (FAA) announced that the “Philippines complies with international safety standards set by the International Civil Aviation Organization (ICAO) and has been granted a Category 1 rating.” This is a significant development in the Philippine civil aviation industry. The return to Category 1 will pave the way for aggressive expansion in the Philippines’ civil aviation industry. To date, Philippine Airlines (PAL) only flies to the U.S. West Coast. PAL announced its intention of adding more U.S. routes once the country regained its Category 1 rating. PAL bought 64 new aircraft in 2013, however, it is expected that they will still need additional wide bodies to service their new U.S. routes.

Statistics

Capital: Manila
Population: 97.35 million
GDP: USD 258.5 billion
Currency: Philippine Peso (PHP)
Language: Filipino, English, others

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There were indications that Cebu Pacific was pursuing the possibility of flying to Guam before the category downgrade. It is likely that the company will re-visit its plans to fly to the U.S. now that the Philippines has regained its Category 1 status.

Current Demand

The Department of Transportation and Communications (DOTC) signed the contract with the Filipino-Indian consortium, GMR Infrastructure of India and Megawide Construction Corporation, for the Mactan-Cebu International Airport (MCIA), a public private partnership (PPP) deal on April 22, 2014. The contract includes the operations of MCIA for 25 years beginning on October 2014 and the construction of a brand new terminal by 2018. The GMR-Megawide Consortium submitted the winning bid of USD 327 million for this project. This is on top of the USD 397 million to be spent on the construction of a new passenger terminal building. The DOTC has lined up several other airport development projects including a USD 163 million budget terminal for the Clark International Airport. The feasibility study for the master plan and design is ongoing and is expected to be completed by the third quarter of 2014. The Civil Aviation Authority of the Philippines (CAAP), an attached agency of the DOTC, awarded an aircraft rescue and firefighting (ARFF) vehicle contract worth over USD 30 million. More projects related to upgrading airport security equipment are expected later in the year and through 2016.

Best Prospects

- Aircraft re-fleeting and upgrade of commercial airlines.
- Airport ground support equipment for the planned airport expansion projects in Mactan-Cebu, Clark and smaller regional airports.
- Airport security equipment including screening equipment for both passenger and cargo, and closed-circuit television (CCTV) cameras, and perimeter intrusion detection system (PIDS).
- Rotary wing aircraft for multi-role use (search and rescue, VIP).
- Aircraft used for maritime surveillance missions.
- Light lift and medium lift aircraft.

Helicopters

Helicopter sales in the Philippines are growing. The Department of National Defense (DND) signed contracts for the purchase of search and rescue helicopters, lead-in fighter trainer jets, combat utility helicopters and refurbished UH-1H from October 2013 to April 2014. They are expected to continue buying more air assets to improve their maritime surveillance and defense capabilities. The private sector is also actively buying new rotary wing aircraft to be used by oil and gas and mining companies, as well as religious groups.

Competitors

The United States, while having an excellent reputation for quality and reliability, is facing very stiff competition from European and Asian companies. Airbus dominates the large commercial jet market. AgustaWestland has supplied the DND's requirements for search and rescue and attack helicopters. Eurocopter is competing aggressively for other search and rescue helicopter requirements. Construcciones Aeronáuticas SA (CASA) of Spain and Indonesian Aerospace (PT Dirgantara Indonesia) are very active in pursuing the light and medium lift aircraft projects of the DND.

Barriers

A barrier in doing business with the Philippines is the eligibility requirements for government procurement. Of particular concern is a "Certificate of Reciprocity" that states that the United States allows Philippine companies to participate in procurement activities for the same requirements. The U.S. Commercial Service in Manila can work with U.S. companies in meeting this requirement.

Trade Events

Asia Defense and Security (ADAS) Show 2014

July 16–18, 2014 • Pasay City, Philippines • adas.ph

Defense, security, and disaster management. Supported by the DND and the DOTC.

Poland

Summary

Poland's civil aviation sector continues to undergo many changes. The liberalization of Poland's air transportation industry and implementation of the "open skies" agreement as of May 1, 2004 has created a new operating environment, which promises vastly increased competition.

The number of passengers passing through Polish airports has been growing significantly over the last few years—nearly 20.5 million in 2010, and 25.2 million in 2013. An average growth rate of 5.5 percent per year is expected over the next several years. The Polish Civil Aviation Office predicts that the total number of passengers served by Polish airports will reach almost 40 million in 2020 and 59 million in 2030.

Growth in the number of passengers has mostly attributed to low cost airlines, and regional airports have noted a much higher passenger growth rate than at the Chopin Airport in Warsaw.

Poland's national airline (LOT) is owned by the State Treasury of Poland and LOT employees. The Polish government is reported to have plans to privatize LOT.

LOT has been experiencing severe financial problems. For several years, LOT delayed its restructuring program; as a result, LOT reported a few years of significant annual losses. In December 2012, the Polish government introduced changes to the management of the airline and announced plans to cut the number of employees, as well as the number of connections. At the same time, the government decided to subsidize the airline with USD 125 million. The financial results for 2013 were much better, showing a small profit of USD 8.6 million, which includes an undisclosed amount of compensation that the carrier received from Boeing following the three-month grounding of Boeing 787 planes in 2013.

Poland's current airport network consists of one central airport (Warsaw Frederic Chopin) and one regional central airport (Krakow Balice), as well as 11 smaller

Statistics

Capital: Warsaw
Population: 38.3 million
GDP: USD 516 billion
Currency: Polish Zloty (PLN)
Language: Polish

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regional airports, sporting and training airports owned by the Polish Aeroclub, a number of post-Russian military airports, and a few facilities owned by manufacturing enterprises. In 2012, two new regional airports were opened—in Modlin near Warsaw and in Lublin.

The Civil Aviation Office (ulc.gov.pl) is the primary Polish civil aviation authority, and falls under the authority of the Ministry of Infrastructure and Development.

The last 10 years has shown visible advancement in the general aviation sector in Poland. Thanks to a new aviation law introduced in 2003, pilots have found the qualifying process much simpler and the registration of general aviation aircraft has become even easier. Over the last few years, the main area of growth has been in the use of more affordable aircraft, such as ultralight aircraft. Recent notable developments for small aircraft include the introduction of advanced avionics (including GPS) and composite materials to make small aircraft lighter and faster. Ultralight and homebuilt aircraft have also become increasingly popular for recreational use, since they are much less expensive than certified aircraft.

The aerospace industry has long been an important sector of the Polish economy dating back to the beginning of the 20th century. Major production plants such as PZL Swidnik, PZL Warszawa, PZL Mielec, and PZL Rzeszow were established before World War II and continued to expand during the Cold War period due to close cooperation with the Soviet aerospace industry. The end of the Cold War brought about a rapid decline in the industry as orders from former Eastern bloc countries dried up. Skilled aerospace employees were laid off by the thousands. The situation began to improve in the late 1990's. Significant growth of production in this sector resulted from cooperation with some of the world's largest aerospace companies. The sector grew rapidly from 2003 until today with major investors like Pratt and Whitney, Goodrich, Sikorsky, General Electric, and Agusta Westland.

Currently, there are approximately 70 aviation companies in Poland employing over 22,000 people. Ninety percent of Poland's aerospace production is exported.

Poland is known for the production and servicing of:

- Light sport, passenger, agricultural, and training aircraft
- Helicopters
- Gliders
- Parts and accessories

Much of the country's production activity is concentrated in the South-Eastern part of Poland. Many small and medium-sized companies were established there in the vicinity of the existing indigenous producers of aerospace equipment, such as PZL Swidnik, PZL Mielec (currently owned by Sikorsky), and PZL Rzeszow (currently owned by Pratt and Whitney).

U.S. manufacturers are well represented in Poland and include such firms as Sikorsky, Pratt and Whitney, Goodrich, Raytheon, and Lockheed Martin.

Market Entry

U.S. companies interested in the Polish market should consider cooperation with Dolina Lotnicza (Aviation Valley, dolinalotnicza.pl)—a “cluster” of suppliers in the southeastern part of Poland. This organization has proven to be very effective in reaching out to the industry in Poland and abroad.

Networking opportunities within the supply chain arise from initiatives of the Dolina Lotnicza, as well as individual events organized by large aerospace investors in Poland, such as Pratt and Whitney and Sikorsky.

For smaller U.S. companies, however, the initial route to market will still typically involve the appointment of a suitably qualified agent, representative or distributor.

Current Market Trends

The most important trends observed in the civil aviation sector include the growing number of passengers of low cost airlines, and a growing number of passengers at regional airports (versus Chopin Airport in Warsaw).

As regards general aviation, a growing number of people are interested in obtaining a pilot’s license. The qualifying process became much simpler and the registration of general aviation aircraft has become easier. These pilots are potential buyers of new general aviation aircraft, parts, and navigation aids.

Current Demand

The Polish Ministry of Infrastructure and Development posted a detailed description of projects carried out at major Polish commercial airports (bit.ly/S4g8jC).

The biggest and most important buyers of commercial aircraft are LOT Polish Airlines (lot.com) and EuroLot (eurolot.com).

There are also small local companies in Poland offering cargo flights and aero-taxi flights as well as airport services providers who might be interested in purchases. The current list of companies holding AOC, AWC, and AHAC certificates is available from the Civil Aviation Office at bit.ly/S4gZ3W.

PZL Mielec, PZL Swidnik, EADS PZL Okecie, and other smaller aircraft producers would likely be interested in purchases of various types of parts and equipment.

Best Prospects

- Airplanes
- Avionics
- Aircraft parts and components
- Maintenance parts
- Fuel efficiency
- Noise and emission reduction technologies
- Safety and security equipment

Helicopters

There were 196 civilian use helicopters registered in Poland at the end of 2012. Private/company-use helicopters are dominated by Robinson R44 and Eurocopter EC120 and EC130. Bell, a more sophisticated and more expensive aircraft, is less popular with only 10 aircraft registered currently in Poland.

The major civilian user is the Polish Medical Air Rescue (lpr.com.pl), which currently has Eurocopter EC 135, MI-2, and Piaggio 180 Avanti aircraft in its fleet.

Poland has a long tradition of manufacturing helicopters. The two main Polish aircraft producers were privatized in the last few years becoming part of global firms like Sikorsky and Agusta Westland.

- WSK PZL Swidnik (pzl.swidnik.pl)—production of helicopters, gliders, industrial cooperation (Aerospatale, Airbus, Eurocopter, Agusta-Bell, Cessna). In 2010, PZL Swidnik was acquired by Agusta Westland. The company offers mainly military helicopters (SW-4, W-3, AW-149), but SW-4 and W-3A are offered as civilian helicopters.
- PZL Mielec (pzlmielec.pl/en)—design and testing, production of aircrafts (Skytruck, Bryza, Dromader, Iskierka), industrial cooperation (SPIRIT Aerosystem, PrattandWhitney Canada, SAAB Aerostructur, SAAB, Westland and Stemme). After the aquisition of PZL Mielec by Sikorsky, the facility underwent modernization to support international BLACK HAWK helicopter production. PZL Mielec is today building and exporting the world-renowned S-70i Black Hawk for international customers.

Main Competitors

The biggest competition comes from EU countries, mainly Germany, France, Italy, and Spain. This is the case with aircraft, parts, airport equipment and services. Other significant suppliers come from Brazil (Embraer aircraft) and Canada (Bombardier aircraft).

Barriers

Poland has the same duty schedule as the European Union. For the majority of aerospace products, there are no custom duties. The schedule is available at bit.ly/euduties.

There is a 23 percent VAT tax in Poland, based on CIF value of the product.

Trade Associations

- Aviation Valley—Association of Group of Entrepreneurs of Aviation Industry, aviationvalley.pl
- Polish Aeroclub, aeroklub-polski.pl

Romania

Summary

Romania's aerospace market is a mixture of civil and military. Starting with 2014, opportunities for foreign aircraft and parts manufacturers are related to the Fighter aircraft program: Present and future, multi-annual military expenditure will be focused on replacing the aging fleet of MiG-21 aircraft. To comply with NATO standards, the Romanian Air Force has bought 12 refurbished Air Force F-16 Block 25 fighters, totaling some USD 1.3 billion.

By 2020, Romania needs to comply with NATO standards and requirements, in terms of the Army Logistics modernization, especially to cover electronic warfare programs and replace the current obsolete multi-role platforms. A major task for the Romanian Air Force is to provide a significant amount of modern airlift capacity to NATO/ally troops.

Romania's aerospace industry already operates in both the civil and defense markets and is important for maintaining Romania's strategic defense capability. The civil aviation sector is growing. With 16 civilian airports, Romania has significant infrastructure capacity given current air traffic demand; however, airports still need to be modernized and equipped to respond to international standards of safety and security. There are a number of opportunities for procurement of security equipment. The Ministry of Transport (MoT) has recently updated the airports' security modernization program, in which U.S. companies played an integral role.

TAROM is Romania's flag carrier and serves an estimated two and a half million passengers a year. However, Romania has recently experienced significant market penetration from low-cost carriers (higher than 40 percent), including Wizz Air, Blue Air and Carpatair. TAROM continues to be the only carrier providing services to approximately 10 destinations in the country, in addition to multiple destinations overseas. It is anticipated that, in the future, routes will be predominantly served by low-cost carriers. Moreover, TAROM is considering

Statistics

Capital: Bucharest
Population: 21.3 million
GDP: USD 184 billion
Currency: Lei
Language: Romanian

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updating and standardizing its fleet. Together with the Ministry of Transport, the company is working on a business strategy of using single-type modern and economical planes.

The Romanian Air Traffic Services Administration (ROMATSA), a self-financing public enterprise under the authority of the Ministry of Transport, plays a leading role in Romania's aviation sector and is one its most regarded stakeholders, working closely with the Ministry of Transport, civil aviation, the military, airlines and airspace users.

Romania has agreed to make numerous technological improvements—i.e., implementing the Single European Sky ATM Research Program (SESAR) technologies and optimizing Air Traffic Control Centers—in order to create a seamless and unified European and global air traffic control network. As part of this program, Romania joined with Bulgaria in 2004 to create a Functional Airspace Block (FAB) called the Danube FAB.

Romania is also developing an aircraft parts manufacturing and MRO industry. Companies such as Aerostar currently work in the civil sector producing landing gear and wing assemblies and providing MRO services. This sector is expected to provide good opportunities for U.S. firms interested in the market.

Market Entry

The Romanian market is very open to U.S. companies. However, local representation is strongly advised when working in Romania. U.S. companies that have successfully entered the market do so by either establishing a local office or developing local representation agreements. There is high interest from Romanian counterparts to develop such relations.

U.S. companies seeking to sell military equipment to Romania are advised to start with the Office of Defense Cooperation (ODC) and the U.S. Commercial Service. Together, these offices are well versed in the Romanian military environment and procurement procedures.

Current Market Trends

The Aerospace and Defense (AandD) sector is made up of several medium to large enterprises across a diverse range of specialty and technical businesses that form part of the critical supply chain to the prime companies and assembly operations. The Romanian Ministry of Defense (MoD) allotted more than 35 percent of the total defense budget to major procurement and modernization programs, which cover: armored vehicles on wheels and tracks, missile systems and rockets, radars for low and medium altitude, C4I systems, and trucks. Even if a significant increase in the Romanian Army Logistics modernization rate, related to the urgent needs to comply with NATO standards and requirements, was planned for the upcoming years, the scarcity of the defense budget has limited acquisitions.

Key Romanian aerospace and defense players include:

- Aerostar SA Bacau—aircraft and parts manufacturer, which created a joint venture with Stork Fokker Aesp to produce mechanical aircraft components.
- IAR SA Brasov—Puma helicopter MRO, which in 2002 created a joint venture with Eurocopter (France) to maintain and repair the PUMA, a troop carrier and a tactical support helicopter. IAR also created a joint venture with and Elbit (Israel) in 2004 to produce SOCAT, an upgraded line of PUMA.
- MFA Mizil—specialized in maintenance and repair of chain track armored vehicles.
- Romaero SA—a Bucharest-based aircraft company, assigned by the Romanian government as the National Center for C-130 Platform Repair and Maintenance Works, meant to bolster NATO's strategic airlift capability. This year Romaero celebrates 20 years of collaboration with the Boeing Company.
- Romarm SA—the national group of companies manufacturing a variety of products, including armored vehicles, air defense systems, infantry weapons, ammunition, artillery systems, rockets, powders, and explosives.
- Romtehnica SA—a state-owned company and major supplier of consultancy and trading activities with foreign companies on behalf of the MoD.

Romanian companies are vying for potential subcontracting work that may integrate them long-term into the aerospace business. The industry supplies the Boeing 700 series, the Airbus 300 series, and the domestic light aircraft industry. Airport security is managed at a high level by the MoT and implemented at the airport level. There is strong interest by Romanian authorities at both levels to procure security equipment in the near future, including body scanners and explosive detection systems.

While air traffic has steadily increased, forecasts predict further higher traffic demand driven by economic growth in the region, growing ties with the EU, and traditional European tourism and business travelers. Romania enjoys a strong international passenger base of users traveling primarily between Romania and Germany, Austria, the U.S., Israel, Italy, Greece and Turkey. It is estimated that about 60 percent of international passengers visit the country for tourism. Airports that are expected to experience significant traffic growth in the near future are Bucharest, Cluj, Timisoara, and Constanta.

ROMATSA is the national certified Air Navigation Services Provider (ANSP), designated for the provision of Air Traffic Services (ATS), Communication, Navigation and Surveillance (CNS), Aeronautical Information Services (AIS), Aeronautical Meteorological Services (MET), and Civil Military Coordination. Search and Rescue (SAR) coordination is provided by the Search and Rescue Coordination Centre located at ROMATSA headquarters in Bucharest. ROMATSA also has oversight of air traffic management facilities throughout the country.

Romania has been a member of the International Civil Aviation Organisation (ICAO) since 1965, the European Organization for the Safety of Air Navigation (EUROCONTROL) since 1996, and European Aviation Safety Agency (EASA) since 2007.

ROMATSA aims to develop a long-term modernization program of surveillance systems for air traffic services with the technical assistance of Exelis Inc., a specialized U.S. company. Technical assistance for the “Romania: Aviation Surveillance Modernization” has been provided under a U.S. Trade and Development Agency (USTDA) grant awarded to ROMATSA in 2012. In accordance with the terms of reference for this technical assistance, a U.S. company developed high-level operational and technical recommendations regarding networked surveillance, communication, and navigation in Romanian airspace that support Local Single Sky Implementation (LSSIP) in line with the ATM Master Plan and developments within the Single European Sky for safe and effective implementation of the Danube FAB. This effort has produced a series of related reports that identified the critical elements of a detailed long-term development plan for future network surveillance and data communications, including a preliminary assessment of developmental and environmental impacts.

TAROM is planning to develop its fleet by using single-type modern and economical planes. Reducing operating costs with more modern planes is one of the carrier’s priorities. After finalizing the future business strategy, TAROM and the MoT will decide which aircraft will be used. TAROM is currently negotiating with both Boeing and Airbus about fleet renewal and maintenance costs. At present TAROM’s fleet includes four A318, four Boeing 737-700, a Boeing 737-800, four Boeing 737, two Airbus A310s and nine ATR aircraft.

Current Demand

There are a number of requirements for procurement of security equipment. Further acquisition needs of body scanners, explosive detection systems, security management systems and cargo security will be internationally tendered, as Romania complies with EU regulations.

There are a number of requirements for specialized training and consulting in several areas:

- Environment—key airlines, the MoT, and other stakeholders are working on developing procedures and programs to reduce CO₂, optimize environmental management systems and deal with issues such as bird strikes. Specialized assistance and training would be needed in this area.
- Romania’s accident investigation sector is now developing. As required by EU regulation, Romania has established an independent accident investigation body. Consulting services in the area of institutional strengthening and training could be required.
- A new training center developed by ROMATSA has been certified to provide specific training programs for air traffic controllers and aeronautical meteorologists. Specialized consulting services for curriculum development and training would be required.
- Training associated with next generation technologies and air traffic management will also be required.

Best Prospects

Romania presents a number of opportunities for U.S. companies in the subsectors of security, safety, environment, aircraft MRO and air traffic control and airspace management. Opportunities for foreign aircraft and parts manufacturers are related to the fighter aircraft program comprising 12 refurbished Air Force F-16 Block 25 fighters.

ROMATSA's plan for modernization would require the implementation of modern airspace management technologies, including ADS-B, WAM, Mode-S radar sensors, and specialized software. Training associated with next generation technologies and air traffic management would also provide opportunities to U.S. firms

Helicopters—Civil Market

The major players are Airbus Helicopter, AugustaWestland, Bell Helicopter, and Robinson. The Romanian market is an acquisition cost driven market, traditionally tied with Airbus Helicopter, not very active for the moment but with good perspectives. Utility aviation is dominated by the obsolete Ka 26 used for agricultural spraying, offering an opportunity for a different model with low operational and maintenance costs. Issues facing acquisition of helicopters include: lack of financial resources, absence of medium helicopter capabilities, as well as certification of new types and models.

Helicopters—State-Owned Market

The Ministry of Interior, Aviation Inspectorate, and the Ministry of Defense participate in this sector. The first structure's fleet is composed of a few remaining Mi-17 and a fleet of exclusive Airbus helicopters. The second agency needs to replace the older Alouette 3 models used for cadet training and similar missions for light helicopters, and Puma models, close to the end of their lifecycle. The MoD represents a large market but has been dominated by Airbus Helicopter for a decade. The use of European funds also means there may be political pressure to acquire European products. The main candidates for potential tenders are Bell Helicopter, Enstrom Helicopter, and Sikorsky, but they will need government support/approval and assistance to compete with Airbus Helicopter.

Competitors

European companies remain the strongest competitors in the Romanian market. Historical ties with Romania, geographical proximity and knowledge of EU regulations provide some advantages to European competitors. However, there is strong interest in working with U.S. firms.

The main international AandD companies in the Romanian market are Alenia, Boeing, BAE Systems, Caterpillar Perkins, EADS (Airbus Group), ELBIT, Eurocopter, General Dynamics, Honeywell, IMI Israel, ITT, Iveco, Kollmorgen, Krauss Maffei, Lockheed Martin, Mercedes, Raytheon, Renault, Reihnmetall, SELEX Communications, and Thales.

Barriers

Airlines must have the capacity to fulfill European requirements and their certification in the European market EASA. The reliable and recommended solution in such cases is to create a partnership with a local company.

Trade Events

Expomil

September 2015 • expomil.ro/home

Since 1999, this semiannual exhibition has enrolled in the international circuit of military services and national defense events.

Trade Associations

- Association of Romanian Aeronautical Companies (OPIAR), opiar.ro/index1.html
- Romanian Business Association of the Military Technique Manufacturers (PATROMIL), patromil.ro



Singapore

Summary

The Asia Pacific aerospace industry has made remarkable strides over the past decade given the positive economic growth across the region. Singapore has become an industry leader by carving out its own niche market within the Asian aerospace industry. Singapore has become the region's aerospace hub, a leader in aerospace maintenance, repair, and overhaul (MRO) services, and has promoted significant investment in research and development. Given Singapore's strong position in the industry, and as it is home to many aviation base operations, incentives for U.S. firms to enter the Greater Asia aerospace market have increased.

Market Entry

Many U.S. exporters use agents or distributors to serve the Singapore and other markets in Southeast Asia. Finding prospective partners presents no problem. Singapore firms are aggressive when it comes to representing new products and usually respond enthusiastically to new opportunities. Most Singapore companies are open to joint venture proposals and many are interested in manufacturing under license.

Shipments to Singapore are generally made under letters of credit and sight drafts, depending on the exporter's preference and the extent of past dealings with the purchaser. Standard credit terms are 30 to 90 days. The foreign departments of most major banks are well equipped to provide service and advice on matters of foreign trading and credit.

Quotations should be on a CandF basis whenever possible. The prices given may be either in Singapore or U.S. dollars. Exporters making quotations in Singapore dollars should consult their banks for the prevailing exchange rate. Singapore uses the metric system, so it is often beneficial for price/quantity quotations to be prepared accordingly.

Statistics

Population: 5.2 million
GDP: USD 345.56 billion
Currency: Singapore Dollar (SGD)
Language: English (official);
Mandarin, Malay, Tamil

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Current Market Trends

Despite the potential of the Asia Pacific region, several multinational manufacturers are limiting their presence in emerging markets in the region. This is because of the complexity of the aerospace manufacturing market, its regulatory issues, quality and safety requirements, and low manufacturing volumes. Other issues that have deterred OEMs from entering the industry include supply chain and operational inefficiencies and high component costs. Technology, price and after-sales service are the main selling factors in Singapore. However, prospective exporters to Singapore should be aware that competition is strong and that buyers expect good after-sales service.

Current Demand

Singapore's aerospace industry revolves around MRO activities. With the expected growth in air traffic in the region, the demand for MRO services will also increase. MRO services will continue to support Singapore as the regional MRO services hub in an attempt to supply the increasing demand.

Singapore has become the region's MRO Hub as a result of the government of Singapore's specialization initiatives within the aviation industry during the 1990s. Emphasis on specialization has produced a significant level of aerospace research and development in Singapore and spurred growth of the aviation industry in the region. Major aerospace companies that have research and development facilities in Singapore include Boeing, Thales, Rolls-Royce, GE and ST Aerospace.

Singapore also has an established OEM market that is supplemented with an international supply chain for the aerospace industry. As a result, the OEM sector experienced close to a 14 percent compounded annual growth rate over the last decade. Products designed and manufactured in Singapore include: engine casings, engine gears, and valves to seat actuators, electrical power systems and galley equipment.

One of the recent positive developments within Singapore's aerospace industry has been the announcement of the Air Cargo Express (ACE) Hub in Changi Airport's free trade zone. Singapore is now the fourth busiest air cargo hub in Asia and the regional air cargo hub growth will only strengthen its position.

In order to support the future development of Singapore's aerospace industry, a new aerospace park is being developed at the Seletar Aerospace Park (SAP) which will host a variety of aerospace activities including research and development and MRO services. The SAP is expected to contribute USD 3.0 billion value-added activities annually and create 10,000 new aerospace-related jobs by 2018.

Best Prospects

Singapore is the regional leader in aerospace maintenance, repair and overhaul. Hence, sales prospects for products and services related to aircraft repair and overhaul, such as repair equipment for landing gears and engines and fuel systems, and avionics systems are likely to remain strong over the next few years.

Helicopters

As one of the world's busiest airports, Singapore is well positioned to expand its market share in the business aviation, regional training and asset management.

Competitors

The aerospace manufacturing industry is facing strong competitive forces, and is forcing industry players to adjust their outlook for long-term growth. Rising oil prices has caused Western suppliers to look toward lower cost regions such as the greater Asia-Pacific region. Singapore's connectivity and infrastructure make it an ideal location for aerospace companies to setup regional headquarters and distribution centers in the Asia-Pacific region.

Most major aerospace and aircraft parts and service providers are represented in Singapore. Some of the major aerospace corporations located in Singapore are: Rolls-Royce, GE Aviation, Boeing, Pratt and Whitney, Lockheed Martin, Raytheon, Lufthansa Technik, Messier-Dowty, Nordam, Rockwell Collins and Honeywell, as well as Embraer, Thales, and EADS. Embraer chose Singapore as its regional logistics and spare parts hub, and rotatable support to their regional airline customers.

Rolls-Royce has established in Singapore its first hollow titanium wide chord fan blades (WCFBs) manufacturing facility outside the UK.

Singapore has expanded its manufacturing capabilities in high-precision aircraft component and systems, and now boasts a complete range of MRO capabilities for both passenger and freight aircraft. Singapore companies have also been successful in building on their capabilities in maintenance, and overhauling, and high-precision engine components and systems, and have substantial research and development investments in repair development and engineering design.

Barriers

There are excellent opportunities for U.S. firms to sell aviation equipment and systems to Singapore as the country is virtually a free port. There are no duties, taxes or tariffs for aviation related equipment from the U.S. The challenge is in competing with suppliers from around the world on prices and product quality.

Currently, U.S. companies that wish to establish MRO facilities require approval from the U.S. Transportation Security Administration's (TSA) Large Aircraft Security Program (LASP).

All imported goods for local consumption are taxable under the Goods and Services Tax (GST), which is levied at 7.0 percent. Goods kept in the Free Trade Zone are not subject to GST, but will be charged if they are later released for local consumption.

The electrical power supply specifications in Singapore are 230 volts, 50 cycles, single phase and 415 volts, 50 cycles, 3-phase. U.S. equipment for use in Singapore must conform to these electrical requirements.

Internationally recognized standards, such as those approved by the Federal Aviation Administration, are fully acceptable in Singapore. Questions relating to aviation standards and regulations should be directed to the Civil Aviation Authority of Singapore (caas.gov.sg).

Trade Events

Singapore Air Show 2016

February 16–21, 2016 • Singapore • singaporeairshow.com.sg

Best practices and market ideas for the aerospace industry. Additionally, Unmanned Systems Pavilion and Land Defense Pavilion to showcase advanced products and services.

Trade Associations

- Association of Aerospace Industries (Singapore), aaais.org.sg

Slovak Republic

Summary

In 2013, Slovak commercial air transport was available regularly from Bratislava and Košice, seasonally from Žilina, Poprad—Tatry with a newly opened terminal, and Piešťany international airports. VIP WINGS, as the primary domestic carrier, ceased its operations in November 2013, following the trend of the famous national carrier Sky Europe and other Slovak airlines.

Most international commercial service was provided by Travel Service, Ryanair, Norwegian Air Shuttle, UT Air and EL AL, CSA/Air France/ Delta Airlines/Alitalia/Aeroflot/KLM, Lufthansa/Austrian Airlines and Eurolot. The primary international destinations were Alicante, Alghero, Barcelona, Bari, Bologna, Birmingham, Bristol, Brussels, Burgas, Copenhagen, Dublin, Edinburgh, Gerona, Gdansk, Kiev, Las Palmas, Liverpool, London, Malaga, Manchester, Milan-Bergamo, Moscow, Oslo, Palma de Mallorca, Paris, Pisa, Prague, Rome, Stockholm, Tel Aviv, Trapani, Vienna, and Warsaw.

Summer charter flights to Turkey, Greece, Egypt, Bulgaria, Spain, Tunis, Italy, Morocco, Israel and Portugal were operated by Sayegh Aviation Europe, Air Explore, Air Cairo, Air Arabia, AMC Airlines, Arkia Israeli, Astra Airlines, BH Air, Bulgarian Air Charter, Free Birds Airlines, Nouvelair Tunisie, Onur Air, Tunisair, Sky Airlines and Shyphax Airlines. Lately, Czech Airlines opened new connections twice daily from Bratislava to Košice and Prague.

Winter charter flights were operated mostly by Russian and Ukrainian airlines: Nordavia, Orenburg airlines, Red Wings, Wind Rose, Yamal Airlines and Holidays Czech Airlines.

Commercial air transportation in Slovakia is hampered by the close proximity (30 miles) of Bratislava to the Vienna International Airport and the availability of long-haul flights from there.

Statistics

Capital: Bratislava
Population: 5.41 million
GDP: USD 99 billion (2012)
Currency: Euro (€)
Language: Slovak

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In 2013, Slovak airport companies and air control service providers received State budget subsidies totaling EUR 8,282,844 (USD 11.4 mil) from the Ministry of Transport, Construction, and Regional Development of the Slovak Republic. This support is intended for airport security, control and dispatch of flights exempt from consideration payments and for safe and secure operation, administration, maintenance and investments in airport infrastructure.

Market Entry

Market entry to Slovakia is easy. Aside from EU regulations, there are no country specific business barriers in place at the moment. For updated information it is recommended to verify any information with the two most important aviation institutions—Ministry of Transport, Construction and Regional Development of the Slovak Republic and the newly established Transport Authority, which was established by merging three authorities as of January 1, 2014: Civil Aviation Authority of the Slovak Republic, State Navigation Administration and Railway Regulatory Authority.

Current Market Trends

The total amount of passengers traveling through Slovak airports decreased in 2013 by 3 percent in comparison to 2012, down to 1,660,277 passengers.

There has been a constant annual decrease of the amount of passengers since 2008. This decrease varies across the airports; Bratislava's amount of passengers has dropped by 3 percent in 2013, Žilinas by 76 percent, Poprad-Tatry's by 19 percent and Sliač's by 12 percent. On the other hand Košice airport has grown by 1 percent annually and Piešťany by 81 percent.

All Slovak airports strive to:

- Minimize the impact of the world economic situation and retain business clientele
- Make more remote regions accessible in order to enable the development of tourism and enhance the local economy's performance
- Optimize the costs and find financial resources, preferably EU funds, to invest in ongoing projects
- Continue to implement Safety Management Systems and to continuously improve the quality management system according to standard STN EN ISO 9001/EN ISO 9001:2000, STN EN ISO 14001/EN ISO 14001:2004 (EMS) and OHSAS 18001/EN:1999 (OSH)

Current Demand

Year 2011 was historically successful at Bratislava airport; when compared to year 2010 the volume of carried cargo grew by 16 percent up to 20,530 tons while international cargo grew by 38 percent. This major increase was caused mainly due to DHL's complementary Leipzig-Bratislava-Sofia scheduled route from Brussels to Bratislava. DHL carries 97 percent of the cargo of Bratislava airport. In 2012, cargo at Bratislava airport grew by an additional 10

percent up to 22,571 tons compared to FY 2011. Year 2013 saw a decline of cargo by 6 percent compared to 2012, down to 21,271 tons.

DHL is building a new logistics hall by the Bratislava airport to serve as a distribution node combining the airline and land logistics for Central Europe. Amazon was set to build a logistics center in Brno with Bratislava as a backup plan. Recently Brno has dropped the investment for the third time making Bratislava one of the primary candidates.

There are ongoing bilateral talks on airport services and possible investments with China, Sri Lanka, UAE, Russia, Qatar and South Korea. Ryanair suggested moving its base to Bratislava airport, which would represent EUR 150-200 mil investment and would significantly improve the amount of passengers travelling through the airport.

Best Prospects

Bratislava Airport shows the biggest potential for cargo due to its cheaper prices and excellent location on the crossroads of highways connecting major European cities Vienna, Budapest, and Prague (Brno).

The priority of Košice Airport is to open a direct flight connection to Germany while carrying on with its Green Airport Project that started in 2013, with the installment of three photovoltaic devices. The airport offers its existing infrastructure for cargo and aircraft maintenance to potential partners. Management is also considering building a new aircraft maintenance and repair hangar.

Piešťany Airport is looking for a strategic partner who would at the same time become a shareholder. The privatization's main goal is to invest into the airport's infrastructure according to the study done by University of Žilina and to continue the airport's operation. Privatization should ideally be concluded by the end of 2014, mid 2015 at the latest.

Sliac Airport plans a reconstruction and completion of a small private jets hangar. The airport is looking for a partner for cargo and regular flights to major European airports. After introduction of a regular line the airport wants to procure a new fuel cistern and a new fire truck. With a new partner the airport is also planning to build a new terminal and parking lots.

Žilina Airport plans to establish regular flights and in cooperation with University of Žilina broaden the flight training portfolio. The airport is also looking for a strategic partner—air carrier with airplane of roughly 70 seats to fly to a major European airport. There is an ongoing investment of a logistics park, thus the airport seeks a strategic cargo flight partner. Planned investments involve runway enlargement by 656 feet (from 1,150m to 1,350m).

Helicopters

There are 10 licensed heliports on top of existing 29 airports. The number of registered helicopters is around 120. Air Transport Europe, based in Poprad, is the only major helicopter operator in Slovakia. ATE operates the air ambulances using approximately seven Italian

helicopters Agusta 109, one Eurocopter AS 355N and two Russian heavy-duty helicopters Mi 8. Air emergency medical services operate on eight heliports across the country.

There are also a few of the Bell helicopters in operation in Slovakia (types 429 and 206), ultralight helicopters Mosquito XE, CH 7 KOMPRESS, CH 7 CHARLIE and CH 77, Mi-8AMT and Mi-171. Ten companies currently operate helicopter flights in Slovakia. Slovakia provides helicopter training facilities and several helicopter service stations.

- List of companies operating helicopter flights: bit.ly/S4I7Qe
- List of companies servicing helicopters: bit.ly/1nasIJR
- List of air emergency medical services heliports: bit.ly/1jPgjWW

Competitors

The top two scheduled transport air carriers in 2013 were Ryanair and Czech Airlines, while the nonscheduled air carriers were Travel Service, Central Charter Airlines Slovakia (Sam air) and Nesma Airlines.

The three biggest air craft producers and repair facilities by turnover are TOMARK, s.r.o. (division TomarkAero), Letecke opravovne Trencin, a.s. and AERO SLOVAKIA a.s. Smaller producers worth mentioning are AeroPro, Aerospool, Plaspol and Avama

The Civil Aviation Authority of the Slovak Republic also provides lists of:

- Registered aircraft and operators: bit.ly/11wD23A
(Note: OPERA JET is an exclusive representative of Gulfstream Aerospace Corporation from Savannah, GA for Slovakia, the Czech Republic, Hungary, Bulgaria and Romania.)
- Companies registered to provide other civil aviation services (cargo, mail, catering, cleaning, air field): bit.ly/13jplsQ
(Note: REKMA TRADING is an authorized distributor of U.S.-based companies CRAFTCO Inc. from Chandler, AZ, International CHEM-CRETE Corporation from Richardson, TX and Keizer-Morris International from North Branch, MI.)
- Aerial work operator permit holders: bit.ly/17H8QXk
- Air operator certificates holders: bit.ly/11htel8
- Approved maintenance organizations: bit.ly/17H8QXk

Barriers

According to aviation professionals, political influence and interference in the Slovak air transport market remain the biggest barriers to entry.

Trade Events

Slovak International Air Fest (SIAF) 2014

August 30–31, 2014 • Sielnica, Slovakia • siaf.sk/en

Organized by the Slovenská letecká agentúra, Ltd under the auspices of the Slovak Ministries of Defense, Interior, and Transportation. Demonstrations of civil and military aviation, as well as acrobatics. SIAF 2013 welcomed over 100,000 visitors who came to see over 100 aircraft and helicopters from 14 countries.

Trade Associations

- Association of aviation producers of the Slovak Republic, bit.ly/173TFpL
- Aviation Amateurs Association of the Slovak Republic, laa.sk
- 35 Slovak aviation clubs and organizations, bit.ly/11i72PO



South Africa

Summary

The South African aerospace sector has been well developed by U.S. players; the best growth prospects are in the region, especially in those commodity-driven economies of the continent that are enjoying robust business travel as well as exploration and extractive business activities.

Market Entry

The South African commercial and general aviation environment is a mature market with a low entry threshold. The muted growth prospects in South Africa are more than off-set by the upbeat prospects in most of the continent. The South African defense environment is difficult to navigate for new-to-market entrants and requires a judicious selection of local partners that meet supplier criteria set by defense procurement agency Armscor.

Current Market Trends

Growth of commercial and general aviation in Southern Africa is slowing down. High operating costs and a sluggish economy are taking their toll on discount airlines and general aviation. The biggest growth can be expected in other sub-Saharan African states as they ramp up their capacity to meet consistent growth in passenger travel, air freight, and utility transport. South Africa is the MRO and marketing hub for most of sub-Saharan Africa; many South African MRO service providers enjoy certification by African Directorates of Civil Aviation. The right Johannesburg-based partner can develop the rest of the region for U.S. principals.

The prospects for defense-related procurement are muted, largely due to current fiscal constraints, but remain likely in the medium term in tactical lift, border and maritime surveillance and certain UAV applications. South Africa's airport developments have been completed for the foreseeable future. In 2010–11, the 10 most important airports in South Africa (excluding Lanseria International Airport)

Statistics

Capital: Pretoria
Population: 52 million
GDP: USD 600 billion
Currency: South African Rand
Language: English, others

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had 4,760,000 annualized aircraft movements. The country's air transport sector has been forecast to grow to USD 455 million by 2016.

Current Demand

Due to a shortage of skilled technicians and a low throughput from training institutions there are definite opportunities in training systems to upgrade the pool of skilled workers in the aviation sector. There is also demand for commercial and general aviation solutions:

- Engine Management Systems
- Precision Tooling
- Maintenance, Repair, and Overhaul (MRO) Certification
- Flight Training Systems

Best Prospects

The single most important aviation procurement for 2014 will be an expected upgrade of the national carrier South African Airways (SAA) fleet. Additional best prospects include:

- Ground Support Equipment
- UAVs
- Passenger Transport Vehicles
- Cargo De-Grouping and Logistics
- Air Traffic Control
- Instrument Landing Systems

Competitors

European, Brazilian, and Canadian suppliers are well established in South Africa. Used lifter aircraft from Russia and the Ukraine dominate the discount lifter business in Africa.

Barriers

There are few barriers to entry; FAA Certification of systems is often a sufficient criterion to ensure acceptance in South Africa and in the region. Limited U.S. government export controls are in place.

Trade Events

Aviation Outlook Africa 2014

July 1–2, 2014 • Johannesburg, South Africa • terrapinn.com

US-SA Border Surveillance Technology Cooperation Symposium

September 16, 2014 • Pretoria, South Africa

Africa Aerospace and Defense (AAD) 2014

September 17–21, 2014 • Pretoria, South Africa • aadexpo.co.za

Spain

Summary

Spain's aerospace sector is an approximately USD 8.2 billion industry (the fifth largest in Europe) and employs more than 45,700 people. Looking at specific sectors, 70 percent of sales can be attributed to systems and frames, 11 percent to engines, 10 percent to equipment, and 9 percent to space. In previous years, 30 percent of Spanish aerospace imports came from the U.S. (USD 436.6 million in 2010). Spain's aerospace industry is primarily located in Madrid (57 percent employment), Andalusia (21 percent employment), and the Basque Country (11 percent employment). Spain's most important aerospace companies are world leaders in the manufacturing of small and medium-sized aircraft, aircraft gas-turbine engines, flight simulators, and aircraft and engine maintenance. The aerospace industry dedicated 15 percent of sales to research and development in 2010.

Currently, Spain has 61 airports and around 60 private aerodromes. According to Airbus' forecast, air traffic in Spain will almost double by 2030 and Spanish airlines' will need some 400 new passenger aircraft over the next 20 years. The total market value for the renewal and eco-efficient expansion of the Spanish passenger aircraft fleet is estimated at USD 45 billion.

The savings bank, Caja Madrid, recently merged with Valencia's savings bank Bancaja and others, forming Bankia. Bankia holds approximately 12 percent of the shares of International Consolidated Airlines Group, S.A., which is the company that was created when Iberia and British Airways merged in 2011. It is now the largest single shareholder of the airline company.

The landmark agreement on Cooperation in the Regulation of Civil Aviation Safety between the European Union and the United States that took effect in May 2011 will increase safety, create opportunities for businesses and boost trade

Statistics

Capital: Madrid
Population: 47 million
GDP: USD 1.4 trillion
Currency: Euro (€)
Language: Spanish

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in aeronautical products and services, while also diminishing cumbersome technical and administrative procedures for the recognition of certificates on both sides of the Atlantic.

Recently, due to stiff competition from low-cost airlines like Ryan Air and new high-speed trains like the AVE, Iberia decided to create a low-cost option for its customers called Iberia Express. The focus of the new project will be on destinations within Spain and Europe. The move, however, has been opposed by many pilots and cabin crew members who fly and operate Iberia planes and periodic strikes have impacted Iberia's operations. The new section of Iberia started operations on March 25, 2012.

Market Entry

Foreign firms doing business in Spain enjoy free movement of capital in a market economy where business profits can be transferred without restrictions. In general, foreign products are imported by an irrevocable letter of credit; other forms of payment, however, can be negotiated when a continued relationship between exporter and importer/ distributor exists. U.S. exporters are advised that market access will be most successful when forming partnerships with Spanish aerospace firms. Current Dollar/Euro exchange rate favors U.S. exporters to Spain, as U.S. products are cheaper than their European competitors.

Current Market Trends

In the sector of Airplanes and other Aircraft greater than 2,000kg and less than 15,000kg, U.S. imports fell approximately USD 44 million from 2009 to 2010. Despite this slight decrease, U.S. exports in this sector still account for 36 percent of the total market share. Markets not dominated by U.S. exporters during 2010 were airplanes and other aircraft larger than 15,000kg, helicopters and parachutes and parts thereof. In these markets, U.S. exporters captured between 2 and 18 percent market share, respectively, facing stiff competition from Italian and French exporters.

Madrid's Barajas airport serves as Europe's gateway to Latin America. In the past decade, air traffic at Barajas has doubled and Spanish airlines have been forced to upgrade their ageing fleets to meet increased demand. This new development will lead to a sharp rise in demand for spare parts.

The Spanish government's Strategic Plan for the Aeronautical industry 2008–16 aims to reinforce traditional technologies, to diversify its scope to innovative areas such as UAVs and other propulsion systems, and to reinforce the subsystem and auxiliary industry. For example, UAVs have become popular as tools for Spain and its fight against forest fires. Spain has one of Europe's largest air-firefighting units due to the high number of forest fires each year. In the strategic plan, Spain plans to increase the industrial sector's aggregate turnover to 1 percent of GDP in 2016. This would give Spain tremendous priority in the EU. In order to achieve this goal, the sector is expected to grow by 13 percent annually.

Current Demand

Best Prospects

- Avionics equipment
- Computerized numerical control (cnc) machinery and software
- Ground support equipment
- Landing gear
- Aviation fuel
- Pre-assembled components and parts

There is an increasing demand for air transport companies that offer:

- Executive flights
- Air ambulance
- Medical flights
- Corporate flights
- Air cargo
- Aerial photography
- Charters
- Registration and licensing
- Maintenance service.

Helicopters

With the establishment of Airbus Helicopters' (formerly Eurocopter) third and final assembly line in Albacete, the helicopter industry shows a promising future for Spain. From 2011–20, the helicopter industry is expected to have one of the highest growth rates of the aerospace sector, for both civil and military. The market, however, is dominated by five main contractors: Boeing and Airbus control more than 50 percent of the market.

In value, the military market supersedes the civil (74 percent vs. 26 percent). Units sold, however, favor civil markets overwhelmingly (64 percent vs. 36 percent). Eurocopter has a significant hold for all helicopter related activities ranging from production to maintenance. In January of 2014, Spain became the world's leading EC135 helicopter operator for military use, provided by Airbus.

Competitors

Iberia, Spain's largest passenger airline and market leader for travel between Europe and Latin America. The company that resulted from the merger of Iberia and British Airways, International Airlines Group (IAG) has reported a solid set of results in its first year as a combined entity of British Airways (BA) and Iberia (IB), with a net profit of Euro 555 million (USD 745.5 million) and an operating profit of Euro 407 million. Iberia operates a leading maintenance company, Iberia Mantenimiento. Currently, it is ranked ninth in the world in maintenance and engineering. It is the second aeronautical company in Spain based on revenue and staff, and the first company in high tech, repair and modification of aircraft.

European Aeronautic Defense and Space Company (EADS) was officially rebranded on January 2, 2014, to join Airbus Group, which now consists of Airbus, Airbus Defense and Space, and Airbus Helicopters. Airbus' facilities based in Getafe, Puerto Real and Illescas produce important parts for various Airbus models. These sites use groundbreaking technologies, such as automatic tape layering, resin transfer molding and fiber placement.

Alestis Aerospace, a Seville-based aerostructure supplier and manufacturer of composite materials was established in 2009 from the merger of several small aeronautic companies around Spain with support from the regional government of Andalusia. Spain's financial crisis and credit crunch compelled the company to file for bankruptcy in 2012 alarming companies such as its largest customer EADS that depend on Alestis for composite ribs, panels and skins for the Airbus 320, A380 and the A350 project. In early 2013 the company was restructured and laid off 234 Spanish workers.

Aernnova activities involve all areas from conceptual design to testing, certification, production, and product support of large aero structures and aircraft interior components, both in light alloy and composite materials. In addition to its headquarters in Vitoria, Aernnova has a subsidiary in Mexico and an engineering center in Michigan.

ITP is present mainly in the aircraft gas-turbine engine industry, where it is involved in research and development, design and maintenance. In 2009, ITP's sales exceeded USD 700 million, a noticeable jump from previous years.

Air Europa has been a member of the Sky Team alliance since 2007. Air Europa currently flies to Spain, Europe, North Africa, the Caribbean, and South America. It is currently the third largest airline in Spain, after Iberia and Vueling.

Vueling Airlines began operations in 2004 at its main operations base in Barcelona. In July 15, 2009, Vueling and IBERIA low-budget carrier, Clickair, merged. Since this merger, Vueling has become the second largest Spanish carrier: in 2012, Vueling flew more than 14 million passengers, a 20 percent increase from the previous year. As of April 23, 2013 International Airlines Group (IAG) acquired Vueling. Despite now reporting to IAG, Vueling continues to be a standalone company.

Gestair Group is a private aviation innovator in pioneer and the biggest player in the Spanish corporate aviation industry. It boasts of a fleet of over 30 airplanes but it operates a total of 81 (including private jets owned by Spanish and international individuals).

Aciturri Group is one of the leaders in the Spanish aeronautic sector, thanks to contracts with Boeing and Airbus. The group is made up of Mecanizados Ginés, Spasa (aeronautics industry), Castle Aero and Index (engineering services). Due to the cohesiveness of the four companies, Aciturri is able to provide high quality and comprehensive services to the market.

Trade Events

Aviation Week MRO Europe

October 7–9, 2014 • Madrid, Spain • events.aviationweek.com

The latest in manufacturing, service, and aerospace technology; components, parts, and equipment. Attended by specialists, airline executives, and military leaders.

SAE Design, Manufacturing and Economics of Composites Symposium

June • Madrid, Spain • sae.org/events/dtmc

The economics of composites, as well as the practical application of manufacturing composites from the aerospace, automotive, commercial vehicle, wind energy, rail, and marine industries.

Aerospace and Defense Meetings Sevilla 2016

June • Sevilla, Spain • bciaerospace.com/sevilla

Bi-annual show for the aerospace and defense industries. In 2012, 300 companies from 25 countries participated in 6,000 one-on-one meetings.

Trade Associations

- Spanish Association of Defense, Aeronautics, and Space Technology Companies (TEDAE), en.tedae.org

Sweden

Summary

The Swedish aerospace industry is considered strategically important and over the years Sweden has built an internationally recognized world-class industry. Leading companies within this sector include Saab and the Swedish Space Corporation. The Swedish Aerospace industry employs some 12,000 people with an estimated annual turnover of some SEK 22 billion (USD 3.3 billion).

Strong market potential exists for U.S. suppliers with quality products in most areas of aircraft, avionics, supply of technology, as well as aircraft parts and components. Exporting U.S. products to the Swedish market is a straightforward process as there are no trade barriers or market impediments

In 2013, Swedish imports of aircraft, spacecraft and parts was estimated at USD 450 million while exports were estimated at USD 1,043 million. U.S. parts and components are frequently used in the production of Swedish aerospace products and U.S. suppliers clearly dominate the import market.

Market Entry

Manufacturers sometimes employ agents/distributors to represent them. However, Sweden's major buyers often prefer to operate without going through a middleman, in order to save on costs. For early information on sales opportunities many exporters employ local consultants to report on market trends and demands. In the sales process, it is common that the exporter offers to assist in the required certification procedures and prepares the appropriate documentation including manuals, pilot instructions.

Current Market Trends

Sweden is dependent on air travel connections both domestically and globally. With faster and safer aircraft, new airline alliances, more airports, increased

Statistics

Capital: Stockholm
Population: 9.6 Million
GDP: USD 555 billion
Currency: SEK
Language: Swedish

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competition and attractive prices, air traffic has become a common mean of transportation and the market is likely to show a steady growth also during the coming years.

Current Demand

The market demand for aircraft and aircraft parts is closely linked to the volume of airline passenger traffic. Following a decrease of 9 percent in 2009, the business travelers have returned, shown in an increased travel between the major cities Stockholm, Gothenburg and Malmo. In total, there were 32.4 million passengers in scheduled and charter traffic at Swedish airports during 2012, with Stockholm-Arlanda and Gothenburg-Landvetter seeing the largest volume of traffic.

The largest single buyer of U.S. aircraft and parts is the SAS Group, which is the main airline in the Nordic region. In addition to SAS, there are several airlines operating in Sweden: TUI Fly Nordic, Malmo Aviation, Novair, West Air Sweden, NextJet and Norwegian.

2011 market share in domestic traffic (latest figures available) includes:

- SAS—42 percent
- Malmö Aviation—19 percent
- Norwegian—16 percent
- Other—23 percent

Helicopters

There are some 26 civilian helicopter companies active in Sweden. Bell, Agusta, Eurocopter, Hughes, Sikorsky, Aerospatiale, and others have a total fleet of about 150 helicopters. They offer services varying from shuttle traffic to reindeer mustering, from power line inspections to agricultural and flight training and air ambulance services. The companies vary in size, all from small companies with only 3–5 employees up to as many as 80 employees.

Competitors

Most of the major international manufacturers of aircraft and parts are represented in Sweden. The Swedish aerospace industry is well developed and is active in research, development and production in most aerospace segments, including engine production, avionics, space applications, and communications and positioning systems. Although the Swedish aerospace industry can be seen as a competitor, it is also a major buyer of U.S. products.

The U.S. was the largest supplying country in 2013 with 36 percent of the imports (USD 161 million), followed by the UK (USD 77 million) and the Australia (USD 48 million).

Barriers

Exporting U.S. products to Sweden is a straightforward process as there are no trade barriers or market impediments.

There is no customs duty for most civil aircraft and parts. A small duty applies for some accessories, e.g. parachutes incur a duty of 2.7 percent.

In order to be registered in Sweden, new aircraft need to be approved and certified by the European Aviation Safety Agency (EASA). The requirements are similar to those in the U.S.

Trade Events

There are no major local events in Sweden. However, Swedish industry specialists visit large international shows such as the Paris Air Show in France, Farnborough Air Show in the UK, the NBAA show in the U.S., and the EBACE show in Switzerland are also popular.

Switzerland

Summary

The total Swiss market demand for civilian aircraft and parts, including components and avionics, was valued at USD 1.402 billion in 2013 and is expected to grow of 2–4 percent in 2014. U.S. exporters, OMS, and business providers garnered a market share of 31 percent of the overall import market in 2013.

Market Entry

Having one of the most liberal and competitive economies in the world, Switzerland is a highly sophisticated, technologically advanced, quality-conscious, and competitive market and operates under the precept of free enterprise and freedom of trade and commerce. The 1972 Free Trade Agreement between Switzerland and the European Community eliminated customs duties and other trade restrictions for industrial products. The majority of U.S. shipments of goods to Switzerland are assessed a customs duty, which is tied to weight rather than value. Moreover, aerospace technology is subject to the Value-Added-Tax (VAT), which at present is assessed at 8 percent.

Current Market Trends

The Swiss aviation market is characterized by a host of world-renowned suppliers of aircraft, parts and components. Major end-users include aircraft operators, encompassing the country's national flagship carrier SWISS (part of the Lufthansa group), operators of regional and business jets, operators of air taxi services, operators of charter/executive flights, a growing number privately held aircraft, as well as Switzerland's sole aircraft manufacture Pilatus Aircraft Ltd. and RUAG Aviation, a leading supplier, support provider and integrator of systems and components for the civil and military industry. Swiss imports of U.S.-built aircraft, parts, components as well as avionics were valued at USD 697 million in 2013. Many Swiss aerospace companies are end-users of parts and components from an array of U.S. suppliers, some of which have solidified their presence in the market

Statistics

Capital: Bern
Population: 8 Million
GDP: USD 645.6 billion
Currency: Swiss franc
Language: German, French,
Italian, Romansch

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over the past few years. U.S. suppliers should plan to establish long-term relationships with their Swiss partners. U.S. exporters should be prepared to meet Swiss customers' needs. Swiss buyers/end-users are discriminating when evaluating new product offerings and place high emphasis upon excellent quality and sophistication of the hardware and services.

Current Demand

The national flagship carrier SWISS is devoid of U.S.-made aircraft in its present fleet. The decision made several years ago to procure Airbus aircraft for the short and long haul market segments dealt a blow to the U.S. aircraft manufacturers. Nonetheless, U.S. parts, components and avionics and equipment are in strong demand from the country's sole aircraft manufacturer, overhaul, repair and maintenance companies (MROs), and business jet operators. Although difficult to predict due to the aviation industry's volatile nature, industry sources estimate that the Swiss civil aviation market is expected to grow between 2–4 percent in 2014, which is in line with the upturn in air travel.

Helicopters

Switzerland has a limited number of operators of helicopters used for civilian missions. Over 320 helicopters are registered in Switzerland for scenic, VIP and taxi and emergency flights as well as cargo transport missions.

Rega, which provides services to people in distress in Switzerland and abroad, operates 17 rescue helicopters and 3 ambulance jets. The helicopter fleet comprises 6 Eurocopter EC 145 machine and 11 AugustaWestland Da Vinci helicopters.

Switzerland's sole helicopter manufacturer, Marengo Swisshelicopter Ltd., was founded in 2007 for the purpose of developing, producing and commercializing a new concept of light turbine helicopter. The SKYe SH09 is a low-cost, light utility helicopter. The company is seeking to capitalize on the growing light helicopter market and has thus far recorded orders for 48 units.

Competitors

U.S. suppliers, which garnered a 31 percent market share in 2013, will benefit from a higher demand in the months to come as the aviation industry is forecast to improve. While the preponderance of local production output is earmarked for exports, Swiss suppliers contribute approximately 4 percent to the total market demand. Although small in size, Switzerland prides itself in having its own aircraft manufacturing industry. Pilatus Aircraft Ltd. is the country's only aircraft manufacturer.

Barriers

Switzerland's open and transparent market environment, affluence, central location in the heart of Europe, sound economy, and highly developed industrial base represent vital ingredients for U.S. exporters.

For any type of aircraft earmarked for importation into Switzerland, the Federal Office for Civil Aviation (FOCA) requires an Export Certificate of Airworthiness, issued by the last registry country. More information may be found at www.bazl.admin.ch/?lang=en.

Prior to attempting export to Switzerland, U.S. suppliers are advised to contact the Directorate of Defense Trade Controls (DDTC, pmdtc.state.gov) and the Bureau of Industry and Security (BIS, www.bis.doc.gov) to determine which export license regime applies with regard to exporting aircraft parts, components, and avionics.

Trade Events

European Business Aviation Convention and Exhibition (EBACE) 2015

May 19–21, 2015 • Geneva, Switzerland • ebace.aero

A premier marketing event for European business aviation. Held annually.

Tajikistan, Republic of

Summary

Tajikistan is a small aviation market in Central Asia. Three major airline companies are active in the domestic market: state owned “Tajik Air;” and the privately owned “Somon Air;” and “East Air.” Somon Air operates six Boeing aircraft. Tajik Air has a fleet of 36 planes on paper, but operates only 12. The remaining 24 aircraft (TU-134s and Yak-40s) have been put into long term storage. The active Tajik Air fleet consists of the following aircraft: one Boeing 757-200; one Boeing 737-500; one Boeing 737-300; one TU-154M; two AN-28s; one AN-26; one MA-60 and three Mi-8MTV helicopters. Privately owned “East Air” operates two Boeing 737 and two Airbus A320 aircraft. Together, the three carriers transported 847,020 passengers in 2012, 78 percent of whom flew between Tajikistan and Russia.

The Civil Aviation Department within Tajikistan’s Ministry of Transport has yet to resolve internal management issues and establish best-practices. It is therefore not considered a capable regulator of the country’s airline industry. None of the airlines based in Tajikistan have become an International Air Transport Association (IATA) member, but Somon Air is implementing a plan to meet IATA standards.

Tajikistan has airports in four major cities which are capable of servicing Boeing 737 planes: Dushanbe, Khujand, Kulob, and Qurghon-Teppa. Several smaller airports exist, but have not been operational since 1991. All airports have one runway. Dushanbe International airport is capable of operating both passenger and cargo planes.

Market Entry

The aviation market is tightly controlled by Tajik businessmen politically connected to the government. It is important to have a well-connected local partner for effective marketing, sales, and distribution in Tajikistan.

Statistics

Capital: Dushanbe
Population: 8.1 Million
GDP: USD 8.5 billion
Currency: Somoni
Language: Tajik, Russian

Contact

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Current Market Trends

To overcome the country's geographic isolation and poor ground transportation infrastructure, the Tajik government has prioritized the establishment of new international routes and domestic flights. In addition to the three major airlines based in Tajikistan, nineteen foreign airline companies are operating in Tajikistan as of 2014, bringing the number of carriers to 22. These foreign carriers are State Transport Company Rossiya (GTK Russia), Siberia Airlines (aka S7), Orenburg Airlines, Ural Airlines, Tatarstan Airlines, UTair Aviation, Taimyr Air Company, Yakutia Airlines, Airline Donavia, Vim Avia Airlines, Avia Traffic Company, Air Astana (Kazakhstan), Turkish Airlines, Kam Air (Afghanistan), China Southern Airlines, Osmon Air (Iran), Air Arabia, Ukraine International Airlines, and FlyDubai (UAE).

Somon Air began operating in 2008. Since October 2012, Somon Air has cut costs, improved services, adopted international Customer Relationship Management standards, and established a staff training program. Somon Air has Multilateral Interline Traffic agreements with Turkish Airlines, Etihad Airways, Safi Airways, and Nas Air. Somon Air's market share has grown steadily since its founding, reaching 28 percent in 2013. It now operates flights on 24 routes. National airline Tajik Air accounts for 18 percent of the market in Tajikistan, having steadily lost market share to Somon Air. Tajik Air has a codeshare agreement with airBaltic and operates flights on 19 routes. East Air was founded in 2007 and operates flights on 10 routes.

The Tajik government is concentrating its limited resources on projects to upgrade airports to meet international air traffic standards. The Dushanbe International Airport extension project is budgeted at USD 37 million to enhance the runway and apron, and upgrade terminal buildings to handle large, modern aircraft. The Khujand Airport rehabilitation project is budgeted at USD 7.2 million to rehabilitate an emergency runway, install high-intensity lights, and modernize radio and ground control safety equipment, but construction has not yet begun. The Tajik government also plans to upgrade the small airport in Danghara.

Current Demand

Tajikistan's aviation infrastructure is relatively underdeveloped, compared to markets in Kazakhstan, Uzbekistan, or Turkmenistan.

With three main airline companies and four major airports, there is a demand for a wide range of aviation equipment. The aviation market requires aircraft components, software, aviation fuel (a sector monopolized by Russia's GazProm), ground support equipment, and avionics and air navigation equipment. Since 2008, annual demand for air industry services, equipment, and spare parts for planes has varied between USD 4–10 million, depending on where customers are in their inventory life cycle.

Best Prospects

Somon Air hopes to launch an expansion program beginning in 2014, widening its fleet from its current six aircraft to as many as 24 over the course of ten years.

Competitors

Boeing dominates the Tajikistan's aircraft market, but airlines have been in talks with Europe's Airbus, Russia's Suhoi Superjet, and China's MA-60 manufacturers. Somon Air has a USD 2.5 million annual contract with the A.J. Walters firm for parts and maintenance.

Barriers

The primary barriers to market entry are the need for political connections and the potential customers' lack of financial resources for capital investment.

Trade Associations

- American-Tajik Chamber of Commerce, amcham.tj



Thailand

Market Entry

Opportunity for the sale of aviation and airport and ground support equipment in Thailand is high for U.S. companies, since U.S. aviation technology is well received by Thai buyers. Thailand relies on imported aerospace and defense products and is a net-importer of aviation equipment, including aircraft, parts, maintenance services, and airport/ground support equipment.

Current Market Trends

It is expected that the Thai aviation business will continue to grow as a result of an increase in flights and new destinations in order to cope with domestic and international passenger demands, supported by ongoing ASEAN Economic Community (AEC) integration, and the impact of air transport liberalization on airline competition and air passenger traffic. These will eventually spur greater regional air transport.

Current Demand

The current product demand includes aircraft and parts, communication equipment, avionics, associated parts used in maintaining and servicing aircraft, airport and ground support equipment, safety and security equipment and services, passengers and baggage screening machines, ground support vehicles, and air-field lightings. Moreover, there are ongoing expansions of existing airports including the second and third phase expansions of the Suvarnabhumi Airport. A satellite terminal building at the Suvarnabhumi will also be constructed by 2017.

Statistics

Capital: Bangkok
Population: 67.44 Million
GDP: USD 366 billion
Currency: Thai Baht
Language: Thai

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Best Prospects

- Aircraft, communication equipment, avionics, and associated parts used in maintaining and servicing aircraft.
- Airport and ground support equipment including safety and security equipment and services, passengers and baggage screening machines, ground support vehicles, air-field lightings, etc.
- Composite aircraft and unmanned aerial vehicles, (UAV) and associated payloads, equipment and parts.

Helicopters

Helicopters are mostly used in Thailand in the Thai military (particularly Army and Navy) and the Thai police, with some commercial uses in oil and gas industry for offshore crews and supplies transportation. Helicopters market in Thailand had been dominated by Bell helicopter series given long history of Thailand-U.S. military cooperation and transfers of UH-1H helicopters. At present, competition in the Thai helicopter market has intensified. Well-known manufacturers actively competing in the Thai market include Bell Textron, Sikorsky, Airbus Helicopters (formerly Eurocopter), EADS North America, AgustaWestland, and Alstom. Nonetheless, market demand for new helicopters is inconsistent depending on replacement needs, while opportunities for parts and repair services remain relatively high.

Competitors

The Thai aviation industry attracts equipment manufacturers from all over the world. The main suppliers come from the United States, Europe, and Singapore. The United States has been one of the largest suppliers of aviation equipment to Thailand. In recent years, European countries such as France and Sweden have become more prominent and competitive aerospace equipment suppliers to Thailand.

Barriers

Thai buyers are price-conscious, given that the major buyers are mostly government-owned agencies with a limited budget. International bidding competition is common practice for the Thai civil aviation industry. For procurement of replacement parts and supplies, Thai buyers prefer placing orders directly with manufacturers/suppliers.

Trade Events

Defense and Security 2015

Bangkok, Thailand • asiandefense.com

One of the fastest growing military exhibitions in the region. Exhibiting, technical and special seminars/presentations, live demonstrations, and networking. An excellent venue to network with international military officers and delegations, especially from ASEAN countries.

Turkey

Summary

Turkey is an emerging aerospace and defense hub for markets in Europe, the Middle East, Europe, the Caucasus, and North Africa. With a population of nearly 80 million people and given its proximity to developed and emerging markets, and growing economy and population base, Turks have come to rely on domestic and international air service increasingly over the past few years.

Turkey has many airports that are open to domestic and international flights. There are a total of 52 civilian airports in Turkey 24 of which serve for international flights. Istanbul Ataturk Airport serves almost 40 percent of the total air traffic in Turkey. According to the annual report of State Airports Authority (DHMI) operates 44 airports, 30 of which are open to domestic and international flights, including regular and charter.

Compared to a decade ago, there has been a 372 percent increase in domestic passengers, an increase of 77 percent in international passengers, and a total increase of 153 percent (including domestic and international). The overall economy's growth has also boosted the Aviation Industry, which is reflected in skyrocketing total passenger figures. Turkey's strategic location ensures unrivaled advantages in airline, MRO, cargo and air taxi services in the region. The construction of new airports and expansion of the existing ones also provide export opportunities for manufacturers of ground control equipment, safety/security systems, communications equipment, runway and landing lighting and automated landing systems

Market Entry

Entry is as straightforward as in any European market. In conjunction with its January 1, 1996 accession to the European Union's customs union, Turkey has

Statistics

Capital: Ankara
Population: 80 Million
GDP: USD 851.817 billion
Currency: Turkish lira (TRY)
Language: Turkish

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adopted a new import regime. Since April 2004, all electronics need to be CE certified. Most Turkish civil aviation products fall under the CE marking requirement.

All electronic and electrical goods and any product emitting radio transmission frequencies are such items. Software and some mechanical items do not require a CE marking. FAA or ICAO second hand certified parts and re-furbished aerospace parts are allowed and can be used without further regulation or restriction.

The General Directorate of Civil Aviation is the responsible authority for regulating aircraft and related parts use. Among the duties of GDSCA are regulating airworthiness of commercial aircraft that operate in Turkish airspace, collecting relevant documentation and registering aircraft. The standards of International Civil Aviation Organization (ICAO) lay the regulatory framework for aircraft and aircraft parts particularly the ones related to airworthiness. All aircraft and parts should bear type certificates in line with the standards set by ICAO. To operate in the Turkish Airspace, all aircraft must have a valid airworthiness certificate.

Current Market Trends

Construction of new airports and expansion of the existing ones also provide export opportunities for manufacturers of ground control equipment, safety/security systems, communications equipment, runway and landing lighting and automated landing systems. Turkey has many modern airports that are open to international and domestic flights. The major international airports are Atatürk in Istanbul, Antalya, Esenboğa in Ankara and Adnan Menderes in Izmir. In addition to the 52 airports in Turkey, the government intends to construct new airports in Bingöl, Iğdır, Hakkari Yüksekova, Şırnak, Kütahya-Afyon-Uşak, Istanbul, Çukurova and Diyarbakır. The cost for airport modernization and construction is projected around TRY 4 billion.

Current Demand

- Aircraft, aircraft parts (fixed wing and rotary wing)
- MRO services (maintenance, repair and overhaul, including airframe/component maintenance, logistics and/or fleet management options)
- Pilot training, equipment, and software
- Radar and flight control personnel training
- Airport ground support and ancillary systems (integrated computer systems for air traffic control, engineering and operations)
- ILS systems/automated landing systems
- Navigation aids
- Airport security systems

Best Prospects

- Aircraft and aircraft parts
- MRO activities
- Satellites and launch services
- Civil aviation and air traffic control systems
- New airport projects

Helicopters

Within the last decade Turkey has become an important player the helicopter market especially on the military side. In February Sikorsky signed a contract for 109 general purpose utility helicopters worth USD 3.5 billion, which will be utilized by Turkish Armed Forces and some other civilian government organizations. The helicopters will be assembled in Turkey at the facilities of Tusas Aerospace Industries (TAI), which is the leading air platform manufacturer in Turkey. Sikorsky will be supplying TAI components along with other suppliers like Aselsan and Alp Aviation. Upon the completion of this project, Turkey will become a hub for S-70 Blackhawk helicopters.

Other important ongoing projects are TAI's 51 (+41 options) T129 Attack Helicopter development with Agusta Westland, procurement of 15 Bell 429s by the Turkish National Police and procurement of 6 Boeing CH-47 heavy lift helicopters by the Ministry of Defense through foreign military sales.

Civilian helicopters are also on demand for air taxi operations, medical emergency requirements and emergency preparedness reasons.

Competitors

Major international companies include the Netherlands-based Airbus Group (formerly EADS), BAE Systems (UK), Finmeccanica (Italy), Bombardier (Canada) and Brazil's Embraer.

Almost all civil aviation equipment is imported from the United States, Europe or Japan. U.S. air traffic control equipment manufacturers will find traditional rivals in the Turkish market. Companies including Thales and Selex compete for air traffic control and Siemens and Heimann for x-ray technology that can often be found at Turkish airports.

Trade Events

AIREX ISTANBUL AIR SHOW 2014

September 25–28, 2014 • Istanbul, Turkey • istanbulairshow.com

Regional event covering civil aviation and airports.

United Arab Emirates

Summary

The United Arab Emirates (UAE) is a nation of seven emirates centrally located in the Arabian Gulf. In an area of 32,278 sq mi, there are 7 international airports, including a giant new facility, Dubai World Central (DWC), as well as Dubai International Airport (DXB) in the emirate of Dubai. Dubai International Airport's (DXB) passenger traffic for 2013 grew by 15.2 percent as 66.43 million passengers passed through DXB.

Abu Dhabi is also developing a new expansion to its existing airport (AUH); the Midfield terminal (MTC) is due to open in 2017. Abu Dhabi's airport consists of three terminals with a joint handling capacity of around 12.5 million passengers annually. However, with the construction of the iconic new MRC terminal, the airport's capacity will eventually reach 47 million passengers annually.

The UAE is leveraging its geographic location and proximity to international trading routes to play a central role in global travel market. The UAE is the home for two global airlines; Emirates and Etihad, and another two low budget airlines, Fly Dubai and Air Arabia.

Market Entry

Foreign firms seeking to sell into the UAE market must have a form of local presence, such as a local agent/distributor. Selection of the right agent is an important decision, as terminating registered agents is a very difficult process.

Statistics

Capital: Abu Dhabi
Population: 8.5 million
GDP: USD 383.8 billion
Currency: Arab Emirati Dirham (AED)
Language: Arabic (official), English

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Current Market Trends

The UAE aims to be a regional trade hub supporting a strong travel market and intense international business activities.

In terms of fleets, Emirates has more than 100 Boeing 777 and 44 Airbus A 380 that serve 140 destinations. Etihad Airways serves 96 destinations with 83 narrow and wide body aircraft. Fly Dubai has 30 Boeing 737s serving 60 destinations across the Middle East. Private Business jets are also a growing sector in the UAE, and a number of companies compete in this niche, including Royal Jet (royaljetgroup.com), Al Jaber Aviation (www.ajaprivatejets.com), and Rotana Jet (rotanajet.com).

The UAE aims to be an aerospace hub by developing aerospace manufacturing capacity through Strata (strata.ae), an advanced composite aerostructures manufacturing facility that produces high-quality component aircraft products for original equipment.

The Advanced Military Maintenance, Repair, and Overhaul Center (AMMROC, ammroc.ae) is a strategic investment arm of the Abu Dhabi government, and a joint venture with U.S. firms Sikorsky Aerospace Services and Lockheed Martin. AMMROC provides innovative platform solutions for all fixed and rotary-wing aircraft operated by the UAE Armed Forces and other customers in the region.

Y1A is the first launched satellite launched by Yahsat (yahsat.ae), a Mubadala company. It will deliver affordable satellite broadband services to 28 countries in the Middle East, Africa, and southwest Asia.

Current Demand

There is high demand for almost all products and services related to the Aerospace industry; from aircraft to the baggage handling industry to related industries.

Best Prospects

Firms providing best-in-class solutions to aerospace, airport, and air freight customers will find a promising (albeit competitive) marketplace in UAE.

Helicopters

Helicopters are widely used in the UAE for commercial and military applications. The UAE has several types of helicopters: IAR 330 Puma (recently upgraded to IAR 330SM), Sikorsky UH-60 Black Hawk, AH-64A Apache, Chinook, Eurocopter Fennec, and Bell 214.

Horizon International Flight Academy (horizonuae.ae) was built in Al Ain for pilot training in the UAE and the Middle East.

Competitors

The UAE is a very open market. Due to its geographical location and balanced diplomatic ties, competition is from all over the world.

Barriers

As per the Company Formation Law, a foreign partner cannot have more than 49 percent ownership. In the case of agents and distributors, terminating a registered agent is a very difficult process.

Trade Events

Abu Dhabi Air Expo

Late February 2015 • Abu Dhabi, UAE • adairexpo.com

Dubai Airshow

November 8–12, 2015 • Dubai, UAE • dubaiairshow.aero

The biggest aviation event in the Middle East, connecting aviation professionals across all areas of the industry to facilitate successful global trade.

Global Aerospace Summit

Abu Dhabi, UAE • aerospacesummit.com

An invitation-only event for C-level executives, senior decision makers, and government officials involved with the aerospace, aviation, defense, and space industries.



United Kingdom

Summary

The United Kingdom (UK) aerospace industry is the second largest in the world behind that of the U.S. Total UK civil aerospace sales in 2013 amounted to USD 20.2 billion, and the sector had a 17 percent global market share. The UK does not produce any large civil aircraft and 75 percent of domestic production is exported. The UK has a particular reputation as a global center of excellence for the design and production of wings and aero structures, aero engines and aircraft systems (including landing gear). In addition, the UK has a thriving maintenance, repair and overhaul sector, servicing the huge numbers of military and civil aircraft that fly through and from the UK every year. The aerospace industry is a major market for U.S. exports in the United Kingdom.

Market Entry

Entry or expansion by U.S. companies challenging for SMEs and OEMs. Due to a mature and sophisticated supply chain, a U.S. company can expect to commit both time and resources to enter or expand within the UK aerospace market. The UK supply chain employs some 230,000 people directly and indirectly, ranging from very large companies such as OEMs to small businesses making very specialized components. The aerospace supply chain is well-integrated with the primes who are all looking to reduce the number of their suppliers. Developing and increasing the domestic supply chain is a matter of significant interest to the UK government, and in 2013 the Department of Business, Innovation and Skills unveiled a USD 20.2 billion initiative to help give a competitive advantage to UK companies in the aerospace market. In addition, through the Aerospace Growth Partnership, UK industry and government have established a collaborative partnership to increase investment in UK innovation, supply chains and engineering skills, with both UK industry and government committing USD 3.5 billion towards the creation of an Aerospace Technology Institute.

Statistics

Capital: London
Population: 63.7 million
GDP: USD 2.54 trillion
Currency: Pound Sterling (£/GBP)
Language: English

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Current Market Trends

The expected surge of demand for fixed wing aircraft and helicopters is being led by high-growth economies from Asia, the Middle East and South America. UK aerospace companies are actively seeking opportunities in these high-growth markets as their importance in the global supply chain increases. These markets are expected to account for 58 percent of new fixed wing aircraft and 45 percent of rotor craft orders to 2031. With market projections forecasting a requirement for 29,000 new large civil airliners, 24,000 business jets, 5,800 regional aircraft and 40,000 helicopters by 2032, the right prioritization and strategy will be critical in maximizing the opportunities for the UK aerospace industry. Major international OEMs and MRO providers have shifted some activities to these countries or are planning to do so. The UK aerospace sector will also see an increase in the number of partnerships and joint ventures being developed within the sector as organizations seek to shore up their capabilities in new markets. While some of these will be traditional tie-ups between suppliers and integrators, it is expected that there will also be new collaborations forming between the aerospace sector and non-aligned industries such as telecoms or consumer electronics.

Current Demand

The key areas and focus of the UK aerospace market for the foreseeable future include:

- Aerodynamics (e.g., wing design)
- Propulsion (e.g., rotor blades, engine assembly)
- Aero structures (e.g., fuselage and wing assembly)
- Advanced systems (e.g., avionics, undercarriage)

Best Prospects

With current cost pressures in the global market, and in order to achieve greater visibility within their supply chain, OEMs are further consolidating their supplier networks. As UK aerospace organizations become leaner and more cost-efficient, a growing number will move towards “demand-driven” supply chains where all planning, purchasing and replenishment are aligned with actual demand at the furthest point of consumption. Due to the highly developed and competitive aerospace industry within the UK, U.S. suppliers may want to consider collaborating with a larger customer that has established a presence in the UK, which could thereby provide strategic access to the UK and Europe. U.S. companies should also expect to enter the UK market at a lower tier of the supply chain than they might usually enter in the U.S. or globally. Suppliers may also need to consider using a local distributor or agent who has established ties within the market.

Helicopters

The UK's helicopter market is dominated by AgustaWestland and Airbus Helicopters UK. AgustaWestland directly employs 3,280 people, while supporting a further 10,000 jobs in the supply chain including 650 SMEs, serving both commercial and government customers

worldwide. In early 2014, AgustaWestland won two contracts from the UK MOD worth a total of USD 1.25 billion for converting Merlin helicopters for maritime operations to replace Britain's Sea Kings, and to provide support and maintenance for the Apache attack helicopter.

For over 30 years, Airbus Helicopters UK has provided products and services for both the civil and military helicopter markets. With more than 300 civil helicopters customized and delivered in the UK, Airbus Helicopters UK is the leading provider of helicopters in the UK's civil market with a 45 percent fleet share, and it dominates the UK security and emergency services market.

Competitors

The UK has a highly-developed and competitive aerospace industry in which more than 3,000 aerospace companies operate. There are considered to be 6 prime companies in the UK civil aerospace supply chain, namely Rolls-Royce, Airbus, Spirit Aerosystems, Bombardier, AgustaWestland, and GKN. There are around 10 to 20 Tier 1 companies including Marshall Aerospace, Eurocopter, GE Aviation, Meggitt, Honeywell, UTC Aerospace Systems and Cobham. There are some 100 to 200 Tier 2 companies including Ultra Electronics, Firth Rixson, Gardner Aerospace and RLC Group. There are over 800 Tier 3 companies such as Aeromet, Bromford Industries and Avingtrans

Barriers

With such a well-integrated and mature supply chain, new U.S. suppliers must demonstrate a clear competitive advantage if they are to be successful in the UK. With most of the major aerospace manufacturers in the UK looking to simplify their supply chains, there are fewer opportunities to supply and these opportunities will tend to be further down the supply chain. As long as suppliers are compliant with EU regulations/standards, they should not encounter any significant technical barriers to entry.

Trade Events

Farnborough International Airshow

July 14–20, 2014 • London, UK • farnborough.com

One of Europe's largest aerospace exhibitions. 1,500 exhibitors from 40 countries; approximately 350 U.S. exhibitors.

DSEI

September 15–18, 2015 • London, UK • dsei.co.uk

One of the world's largest defense exhibitions. 1,500 exhibitors from 54 countries; 180 U.S. exhibitors.

Helitech International

September, 22–24, 2015 • London, UK • helitechevents.com

One of the world's largest helicopter exhibitions. 230 exhibitors from 50 countries; 35 U.S. exhibitors.

Trade Associations

- ADS Group, adsgroup.org.uk
- British Helicopter Association, britishhelicopterassociation.org

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EXHIBITOR

YOU ARE INVOLVED IN:

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Subsector Reference Chart

Rating Definitions	Commercial Aircraft	Business Aircraft	Helicopters	UAVs, Components, and Payloads	Aircraft and Engine Parts	Aircraft Interiors	Airport and Ground Support Equipment	Aviation Services	Maintenance and Spare Parts	Airborne Equipment and Systems	Pilot and Nav aids	Composite Materials	Spacecraft, Satellites, and Parts	Subcontracting
1 Little to no probability of success for U.S. exporters														
2 More challenges than opportunities														
3 More opportunities than challenges														
4 Very high probability of success for U.S. exporters														
Australia	3	4	4	4	4	3	3	3	4	4	3	3	4	3
Austria	3	3	3	4	4	3	3	3	4	3	3	3	4	3
Belgium	3	3	2	3	3	2	2	2	3	2	2	3	3	2
Brazil	3	3	3	2	3	3	3	3	3	3	3	3	3	3
Bulgaria	2	2	2	3	2	1	3	2	3	2	3	1	1	3
Canada	4	4	3	3	3	3	3	2	4	3	2	4	3	3
China	3	4	3	3	4	3	3	3	4	3	3	3	1	3
Columbia	4	2	3	3	3	2	4	2	4	3	3	3	3	2
Czech Republic	3	4	4	4	3	3	2	3	2	3	2	3	4	3
Denmark	2	2	2	3	3	1	3	3	3	2	2	2	2	3
Finland	1	3	2	2	3	2	3	2	3	3	3	2	1	3
France	3	2	2	2	3	3	2	2	2	3	2	4	3	4
Germany	3	4	3	3	3	3	2-3	2-3	2-3	4	4	3	2-3	3
Hungary	2	2	3	2	3	2	4	3	4	3	4	4	3	3
India	4	4	3	4	4	3	3	3	4	3	3	3	4	3
Ireland	3	2	2	1	3	3	3	2	3	2	3	3	1	1
Italy	3	2	1	2	3	3	2	2	3	2	3	3	2	3
Japan	4	2	3	3	3	3	3	3	3	3	3	3	3	3
Kazakhstan	3	2	3	2	3	1	3	1	3	2	2	1	3	2
Korea, Republic of	4	3	4	2	4	4	3	2	3	3	3	3	2	2
Netherlands	3	3	3	4	4	3	3	3	3	3	3	3	3	3
New Zealand	3	3	3	2	4	3	3	3	4	3	1	2	1	1
Norway	4	3	4	3	3	3	4	3	3	2	2	2	3	3
The Philippines	3	3	4	3	3	3	4	4	4	3	4	3	1	1
Poland	3	3	3	2	3	3	3	3	3	3	3	3	2	3
Romania	3	2	1	3	3	2	3	3	4	3	3	2	3	3
Singapore	3	2	2	3	3	2	3	3	4	3	3	3	2	3
Slovak Republic	1	2	2	1	1	1	2	2	2	1	1	1	1	2
South Africa	4	4	3	4	4	4	4	4	4	4	3	3	3	2
Spain	2	3	2	4	4	3	3	3	4	3	3	3	4	3
Sweden	3	3	3	3	3	2	2	2	3	2	3	2	3	2
Switzerland	3	3	2	3	3	3	3	2	3	3	2	3	4	2
Tajikistan, Republic of	3	2	1	1	2	2	3	2	1	3	3	2	1	2
Thailand	2	1	3	3	3	1	2	1	3	2	2	1	2	2
Turkey	4	4	4	3	4	2	4	3	4	3	4	4	4	2
United Arab Emirates	4	3	3	3	4	3	4	4	4	3	4	3	2	3
United Kingdom	3	3	2	3	2	3	2	2	3	3	3	2	3	2



Resources

export.gov

Locate your local CS office and find information about our international business services. Learn about export basics, including identifying your market, developing an export plan, conducting market research, and more.

Global Aerospace Team (*export.gov/industry/aerospace*)

Information on industry-specific trade events, trade leads, newsletters, and more.

Office of Industry and Analysis (*trade.gov/industry*)

Industry & Analysis' (I&A) staff of industry, trade and economic analysts devise and implement international trade, investment, and export promotion strategies that strengthen the global competitiveness of U.S. industries.

Trade Finance Guide (*export.gov/tradefinanceguide*)

A quick reference for U.S. exporters. Offers the basics of numerous financing techniques, from open accounts, to forfeiting, to government assisted foreign-buyer financing.

A Basic Guide to Exporting (*export.gov/basicguide*)

First published in 1938, the recently-revised Basic Guide is designed to help U.S. businesses, especially small and medium-sized enterprises, face the challenges of today's global economy.

Free Trade Agreements (*export.gov/fta*)

Learn how Free Trade Agreements can help make exporting easier for you.



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About the U.S. Commercial Service Global Aerospace Team

We support the international expansion of the U.S. aerospace industry. Our network of trade specialists is located throughout the United States and in U.S. Embassies and Consulates around the world. We can help you identify and evaluate international partners, navigate international documentation challenges, and create market entry strategies through a wide variety of export-related guidance. We help to expand your international presence using designated trade shows to introduce you to country experts and international buyers.

For more information about how we can help you, please contact one of our trade specialists listed below and at export.gov/usoffices.

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About the Industry & Analysis Aerospace Team

We perform industry analysis, contribute to U.S. trade policy development, participate in trade negotiations, organize trade capacity building programs, and evaluate the impact of domestic and international economic and regulatory policies on the aerospace industry. We work within the U.S. Department of Commerce units and with other U.S. government agencies to develop a public policy environment that advances U.S. competitiveness at home and abroad.

Our team's efforts find success through our strong working relationship with trade associations and individual companies within our sectors. Please contact us regarding any competitiveness issues your company or trade association encounters.

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