

CHINA FOCUS

Issue IV / 2015

Clear Skies for China's Aerospace Industry

The Chinese government has made developing its domestic aerospace industry a top priority in its initiative to move up the value-chain in the 12th Five Year Plan. Indeed, the statistics are staggering: with 70,000 flights a week operating to, from or within Mainland China accounting for 10% of total global air traffic, there is significant demand for new technology and infrastructure, creating opportunities for innovative

foreign companies, OEMs, and suppliers to fill the gaps. With their advanced technological know-how and higher grade materials, international players continue to have a competitive advantage over their Chinese counterparts. In this issue of China Focus, we give you insight into the many opportunities that exist in China's aerospace market.



In this Issue:

- **Ready for Takeoff: Opportunities for Foreign Companies**
- **Sky-High Ambitions for China**

Ready for Takeoff: Opportunities for Foreign Companies

While the Chinese government has invested heavily in building up its aerospace capabilities, there have also been a number of domestic trends that have contributed to this sector's rapid growth, including the overall higher living standard and availability of disposable income. China Focus interviews aerospace expert Michael Santo, Board Member of Fiducia's German partner h&z, on what opportunities these changes present for foreign companies operating in China.

What trends have contributed to the growth of the Chinese aerospace industry?

In the 12th Five Year Plan, the Chinese government determined the building up of a strong domestic aerospace industry as a political goal. As a result, there has been increasing government support for initiatives in this sector, showing real ambition to strengthen the aeronautic industry. Recently developed national champions such as AVIC and COMAC are the first success stories in this rapidly developing sector.

However, from a production perspective, it is still difficult for Chinese manufacturers to cover the entire supply chain, leaving room for innovative suppliers to fill the gaps. Especially when it comes to standards, for example standard 10019 (RPAS), technical know-how from foreign companies is needed to improve product quality and meet safety

requirements. This provides interesting opportunities for foreign companies to enter the Chinese market.

Given China's size, air traffic is increasingly gaining importance for Chinese travellers. With more available income locally and growing international and domestic tourism, the industry has positive growth potential. Hence, this also leads to growth in other areas: a prime example is the number of new airports in China, which has increased significantly over the past years with more to come. This provides additional opportunities for foreign companies to offer their expertise in fields such as airport surveillance, ground support, and airport infrastructure and management.

What implications does this have?

In order to ensure smooth development from the government's perspective, the authorities must take into consideration a number of new

requirements that accompany these trends. This includes the freeing of airspace from military restrictions and efficient air traffic management to ease congestion. These are still very real problems that any China traveller knows all too well.

From a company perspective, it is critical to gain a foothold at an early stage of market development since most companies only achieve ROI after longer investment periods of 10-15 years. For investing companies, it is important to recognise a long-term approach for the development of their China business. Liebherr Aerospace or MTU, for example, have chosen a good strategy for providing world-class standards and qualified people.

Do foreign companies have a technological edge over their local competitors?

Foreign companies, especially those already working in large commercial aircraft programmes of Boeing and Airbus, usually



Beijing Capital International Airport is the second busiest airport in the world

“China has one major advantage over others: its size!”

- Michael Santo, huz

provide cutting-edge technology and are operating on a technological and process efficiency level Chinese companies cannot yet compete with. This also holds true for companies with experience in high-speed or highly delicate processes, especially for large commercial aircraft programmes. Foreign investors are likely to find opportunities by providing engines, hydraulics, and electronics, as well as engineering and training services. Obviously this is less the case for producers of standardised parts.

Is China catching up?

On the one hand, the few major global players that exist in key areas have already built up deep competencies coupled with highly cost-efficient structures. The resulting high rate of change and flexibility will be very difficult to replicate in just a few years. On the other hand, Chinese suppliers are still at an early stage in the supply chain and are just starting to grow both in terms of development and scale. To develop a full national industry, China still needs 10-20 years of persistent growth and technological input. The technologically highly sophisticated aero engine sector proves to be the area where catch up will be the most difficult.

However China has one major advantage over others: its size!

What hurdles exist for foreign companies planning to enter or expand in the Chinese aerospace market?

Due to the strategic importance of the aerospace industry, foreign investors still need a JV as a minimum requirement to enter the Chinese market. As a result, many foreign companies will not invest since they want to protect their intellectual property. In addition, their investment decisions are often restricted by their international owners and clients. Therefore, most players will continue to develop and produce overseas, unlike in other industries. If the government wants to attract new technology and innovation from abroad, they need to show more commitment towards foreign investors. On the manufacturing side, the private sector development still lags behind. The over-regulation in the aviation sector has become a bottleneck to the market and risks hampering industry growth.

What has the government done to ensure technical safety standards? Do these meet European standards?

Due to know-how transfer from the foreign countries, most standards in China are

virtually identical to EU or US best practices. Key is the supervision of these standards, which depends on the enforcement by the Chinese authorities. In general the government maintains tight regulations and controls in the aerospace industry. This is clearly evident from the state's control of the air space and air traffic management, as well as the consolidation of the industry players to only 4 for governance purposes.

In the end, consumer trust in the industry is critical; if you look at recent examples such as the Tianjin explosions, it is clear that the government will be very careful about “opening the skies”. As this process could still take some time, we can expect further delays at China's airports. ☹



Michael Santo is a Member of the Board at the consulting firm h&z, Fiducia's longstanding partner in Germany. A studied industrial engineer, Michael worked in both the defence sector and in civil aviation, and gathered a wealth of knowledge and experience in the air force, as well as in management positions in the aerospace industry.

How Fiducia Can Help

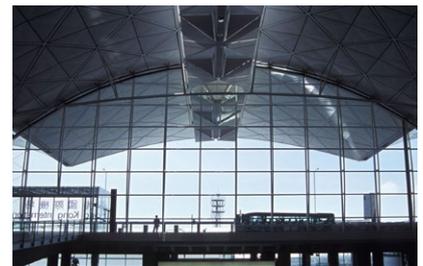


Whether you are already well established in China, or are considering entering the market, you can benefit from our 33 years of experience, providing services in:

- ▶ business consulting
- ▶ corporate establishment
- ▶ tax advisory
- ▶ accounting & payroll
- ▶ audit
- ▶ recruitment

to international investors and SMEs in Greater China. For more information email us at contact@fiducia-china.com

Key Figures



- ▶ **17%** China's share of the global airplane market, representing USD 870b in the next 20 years.
- ▶ **+500%** growth of China's business jet fleet from 300 units in 2013 to 1,800 units in the next 20 years.
- ▶ **+500k** pilots that will need to be developed and trained in the next 20 years.
- ▶ **+30%** increase of the number of airports from 175 to 230 in the last 5 years.

Sky-High Ambitions for China

Within the next 20 years, China will need over 6,000 new airplanes, valued at USD 870b and representing 17% of worldwide demand. Chinese policy-makers have recently regarded the commercial aviation industry as an important driver of economic growth and technological development. The 12th Five-Year Plan (2011 - 2015) has demonstrated the government's ambitions, with a quick ramp-up of the Chinese space program and strengthening of the aeronautical industry.

In contrast, the recently published EUCC position paper indicates over-regulation of the industry and burdensome approval processes as a major obstacle to industry growth. In addition, the involvement of multiple government agencies results in different understandings, inefficient work, and unnecessary costs. The government is likely to address these issues in the upcoming Five Year Plan.

Stimulating Market Development: Rise of the Middle-Class and Opening Up the Hinterland

Since 2010, the number of airports in China increased from 175 to 230, with an additional 84 airports being built or expanded in the next five years. This is a consequence of Chinese passengers' rising need and ability to travel, resulting in the world's highest air-traffic increase of over twice the global average. Not only will this development foster the expansion of airline transportation and general aviation, but also it will open up the more rural side of China to the rest of the country and to the world – two areas strongly encouraged by the government. Hints that this trend will be further reinforced in the upcoming 13th Five-Year Plan (2016 - 2020) contributed to reinforcing OEMs' projections that China's demand for aircrafts would surpass the US' and account for 17% of global deliveries by 2033.

Demand for General Aviation, Business Jets, and Helicopters Boosted by Latest Policy Reforms

One of the main factors that consistently restrained the development of the Chinese commercial aviation industry has been the restriction of airspace allocation between commercial and military usage. Over the

years, this restriction held back investment in the industry and created a great amount of pent-up demand particularly in the general aviation, business jet, and helicopter market. The recent announcement of the Chinese government to reform airspace management presents great growth opportunities in these sectors. Industry experts expect that airspace below 1,000 meters will be opened up for private use by the end of 2015 and airspace below 4,000 meters in 2020. A first indication of the impact of this change can be observed in the booming helicopter sector with a fleet size increase of 30% in 2014, expected to reach a fleet level of 800 helicopters by the end of 2015. This news is a breath of fresh air for business jet manufacturers, who have already been heavily impacted by Xi Jinping's anti-corruption campaign, resulting in state-owned enterprise not being able to purchase business jets anymore. Now, Chinese business leaders and High Net Worth Individuals (HNWI) are expected to be driving the orders. Following this trend, Bombardier and Embraer recently invested in this emerging business line by further expanding their manufacturing operations in China.

Foreign Suppliers Cornerstone to Chinese Ambitions?

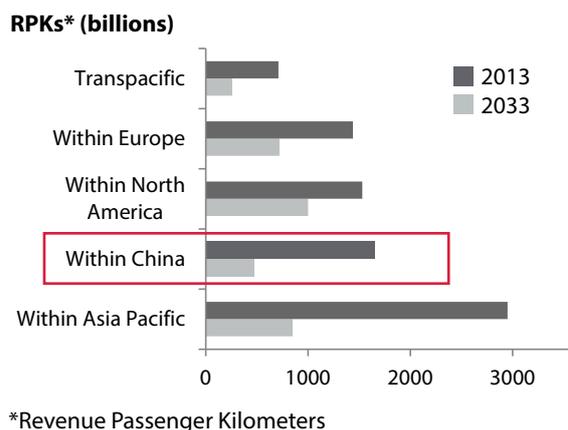
Besides the opportunities in the Chinese market created by governmental policies and accelerating demand, the Chinese aerospace industry faces great challenges: China has already extensively communicated on its intention to become a major international supplier of advanced aerospace components and to deliver the technology for a large self-developed single-aisle jet by 2017, matching international standards set by the US FAA (Federal Aviation Administration), and the EASA (European Aviation Safety Agency). However, for these programmes to be

Integration of Foreign Suppliers in China's C919 Airliner Program



Air Traffic Demand

China's air traffic demand will increase dramatically along with its middle-class purchasing power in the next 20 years



Opportunity: Pilot Shortage



Great opportunities exist for foreign suppliers to provide their solutions for training units in China. The country has been increasingly relying on hiring foreign pilots to fill those vacancies, but this quick-fix is not enough to fill the existing gap: China will need to train 500,000 pilots by 2035. As a consequence, the government has been largely promoting the establishment of training centres and partnerships with international pilot schools.

accepted abroad the industry must develop a better understanding of global requirements, stronger supplier integration, and after-market support capabilities. To address these challenges, local authorities have been providing incentives to foreign enterprises, OEMs and suppliers alike, to enter China by assigning large civil orders to them.

China has already demonstrated its capacity to attract and develop key suppliers and manufacturers providing state-of-the-art technology. By now, all of Boeing's commercial aircrafts contain components and modules manufactured in China, while Airbus is assembling aircraft parts in Tianjin. However, in situations when China is not able to attract companies with specific know-how, state-owned enterprises such as AVIC and COMAC have been directly importing grey-matter into the country, with the ever increasing trend of hiring costly foreign experts for R&D- and technology driven roles.

A Bumpy Flight for New Entrants?

In specific sectors, it is necessary for a foreign enterprises entering the market to identify a Chinese partner to cooperate with in order to obtain the right to invest and manufacture in China. Finding the right match can be difficult

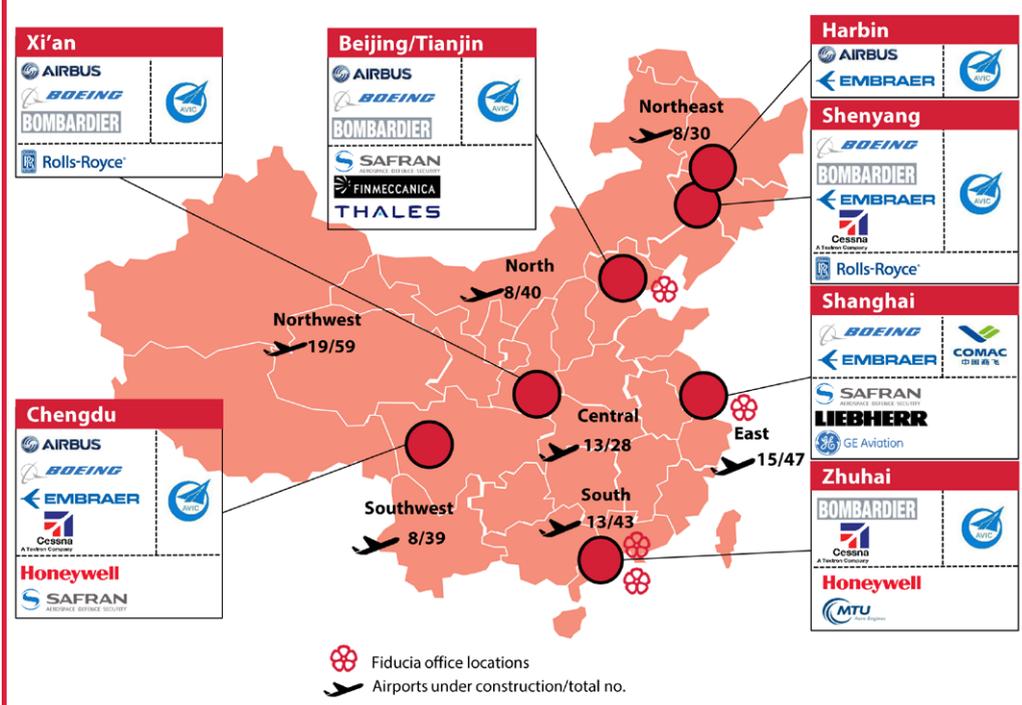
and we recommend conducting proper due diligence on a partner's background before engaging in any binding agreements.

The bureaucratic procedures required for foreign investors in China, either through a Joint-Venture or through a Wholly Owned Foreign Entity (100% Foreign owned structures), can be very tedious and complex and should be properly handled right from the start to avoid any possible liabilities. According to the Notification on Foreign Investment to China Civil Aviation, the maximum foreign investment in Chinese airlines is capped at 35%; with foreign investment in the airport or terminal operation capped at 49%.

In addition, foreign corporations should be aware that protecting their intellectual property is paramount to their success. China IP protection is possible and should be one of the first issues to consider when approaching the market. IP risk is high when it comes to protecting intangible assets, but it is manageable by adapting your strategy to local laws and practices rather than relying on how it's being done "back-home".

To find out more about China's aerospace market and how to grow your business in this sector, email us at contact@fiducia-china.com

China Aerospace Industry Clusters



Publisher: Fiducia Management Consultants
 Editor & contact for press and article reprints:
contact@fiducia-china.com

Please contact us for a list of sources.

All liabilities excluded. This publication is based on information obtained from sources (government, business associates, companies, publications, news) we believe to be reliable. However, Fiducia Management Consultants does not take any responsibility as to its accuracy, completeness or correctness.

Copyright © 2015 Fiducia Ltd. All rights reserved. Protected by copyright laws.

Hong Kong Office:

15/F OTB Building,
 160 Gloucester Road,
 Wanchai, Hong Kong
 China

Tel: +852 2523 2171

Shanghai Office:

Unit 2107-2110, Central Plaza,
 227 Huangpi North Road,
 Shanghai 200003
 China

Tel: +86 21 6327 9118

Shenzhen Office:

1308 Di Wang Commercial Centre
 5002 Shen Nan Dong Road
 Shenzhen 518008
 China

Tel: +86 755 8329 2303