

# Taking Flight

Opportunities in China's Booming  
Aviation Industry



Australian Government  
Austrade



# INTRODUCTION

## SPEAKERS

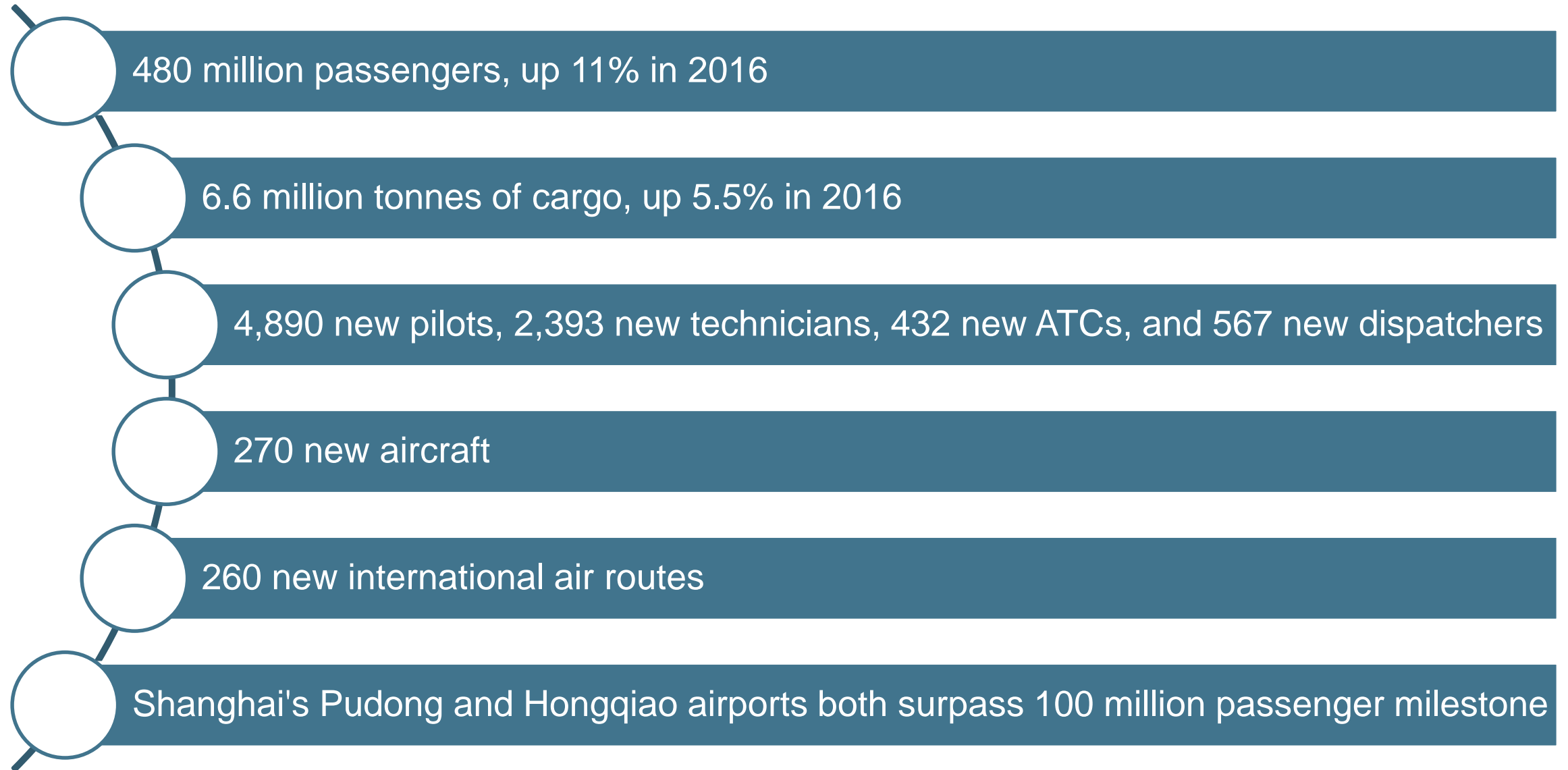
Matthew Brent, Trade Commissioner,  
Australian Trade and Investment Commission, Beijing

Roger Yuan, Business Development Manager  
Australian Trade and Investment Commission, Beijing

## PURPOSE OF PRESENTATION

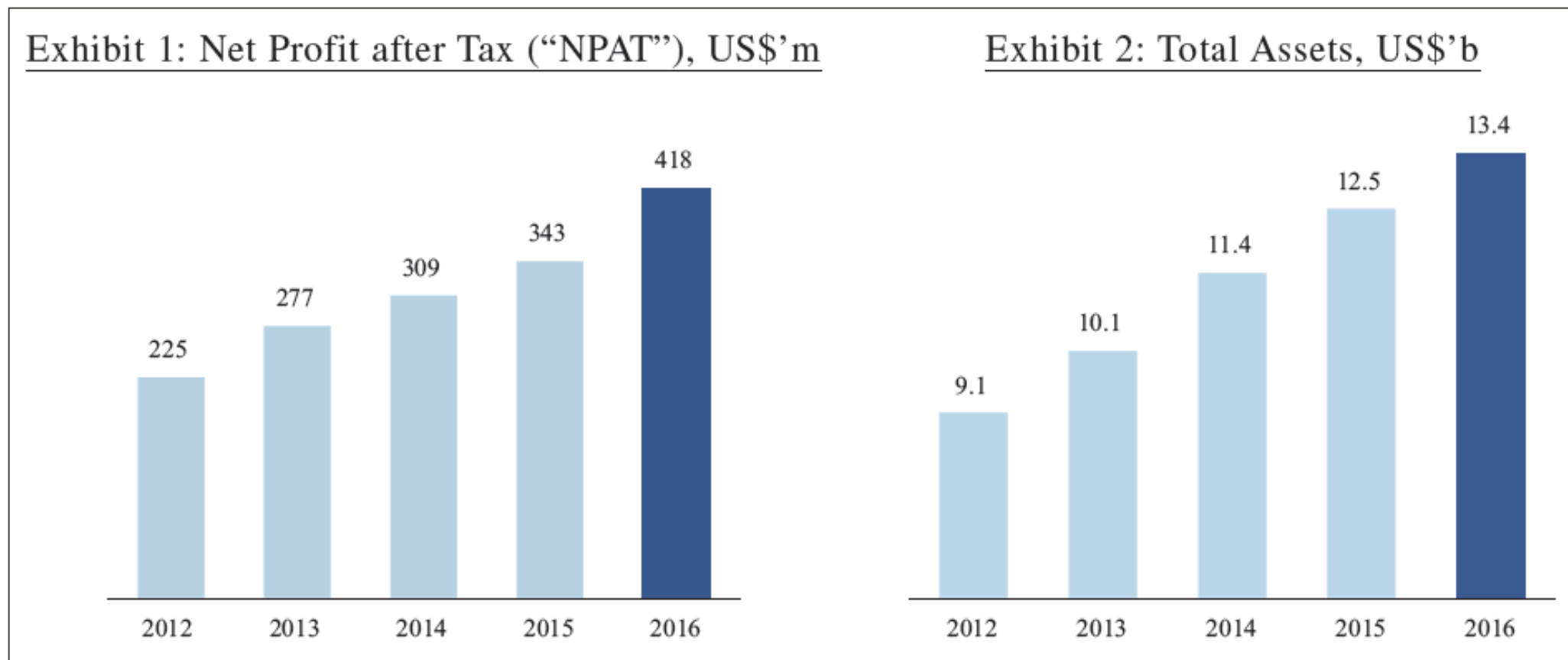
1. Provide insight into key opportunities within China's aviation industry
2. Field interest for upcoming aviation mission

# CHINA'S AVIATION SECTOR: RAPID GROWTH & STRONG FORECAST DEMAND



# CHINESE AVIATION: A VIEW FROM THE BANKING SECTOR

## BOC AVIATION 2016 ANNUAL REPORT



Source: Bank of China Aviation Ltd, “Sustainable Growth: Annual Report 2016,” pg 2. <https://www.bocaviation.com/~media/2017IR/Annual%20Reports/20170426ANNUALREPORT.ashx>

# CHINA IS PLANNING FOR A BIGGER AVIATION SECTOR

## AIRPORT DEVELOPMENT PLAN

- 218 civil airports in the PRC as of December 31<sup>st</sup> 2016
- 44 new airports to be built, 40 to be extended over the 13<sup>th</sup> 5-year plan (2016-2020)
- Major airport projects:
  - New international airport in Beijing;
  - Expansion of Zhengzhou's freight handling capacities in central China;
  - Internationalisation of domestic hubs such as Harbin, Chongqing and Xi'an

# **OPPORTUNITIES**

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**1 - GENERAL AVIATION**

**2 - COMMERCIAL AVIATION**

**3 - JOINT PROGRAMS**

**4 - TECHNOLOGY PROVIDERS**



# GENERAL AVIATION

The page features several decorative lines. A horizontal line underlines the title. In the bottom right corner, there are three curved lines in shades of blue and teal that sweep upwards and to the right, creating a modern, abstract design.

## HEADLINE FIGURES

- Currently 364 GA companies in China (as of Oct 2016)
- 2185 registered GA aircrafts; projected 77,000 GA flying hours in 2017 (up 8.8% year-on-year)
- 3000m altitude limitation now more flexible
- Lower barriers to GA market entrance
- General Aviation Industry Zones:
  - 36 currently in operation;
  - 38 further zones approved, 22 of which are already under construction
- By 2020, China plans to have more than 5000 GA aircraft and 500 GA airports
- ‘Aviation Towns’ with Chinese characteristics



# GENERAL AVIATION: OVERVIEW

## NEW AIRCRAFT, NEW AIRLINES



China Aviation Daily, "2015年中国通航企业和飞机数量同比增速放缓", January 12, 2016. <http://news.camoc.com/list/333/333620.html>

# GENERAL AVIATION: MARKET STRUCTURE & KEY PLAYERS

- GA market dominated by several larger companies:
  - Beidahuang General Aviation Co. (北大荒);
  - China Zhonghaizhi Corp (中海直);
  - Reignwood Star Co Ltd.
- Feedback from the market suggests that apart from the agricultural sector, GA companies have historically struggled to make a profit
- Smaller GA businesses (approx. 30%) only have enough resources for 1-2 jets

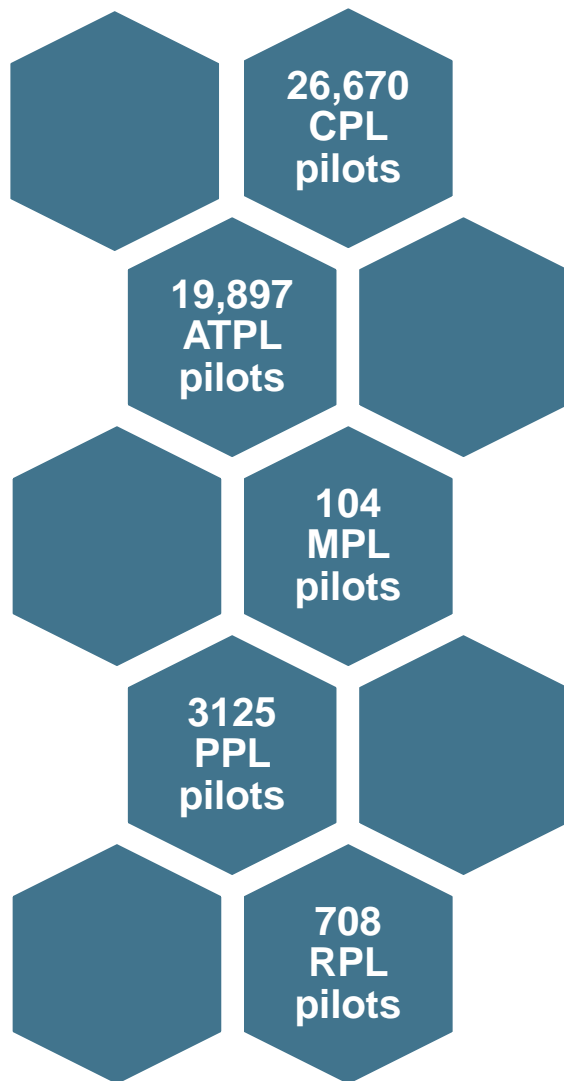
# GENERAL AVIATION: REGULATIONS & OPPORTUNITIES

- Air resources face restrictions, and there is extensive use of airspace by the military
- Only approximately 50% of registered GA pilots find work domestically
  - Less than 100 new GA pilots demanded per year,
  - But still demand for highly-skilled pilots in specific industries
- Most major GA companies have their own recruitment channels
- **Key regulations:**
  - CCAR 91 (jets, air balloons, etc.)
  - CCAR 135 (jets below 5700kg)
  - CCAR 121 (jets above 5700kg)

# COMMERCIAL AVIATION

The image features a minimalist design with a white background. At the top left, the text 'COMMERCIAL AVIATION' is written in a bold, black, sans-serif font and is underlined. A thin, dark blue horizontal line extends from the end of the underline across the top of the page. In the lower half of the image, there are several decorative, thin, light blue lines that curve and flow across the page, creating a sense of movement and depth.

# COMMERCIAL AVIATION: PILOT TRAINING OVERVIEW



## EXISTING PILOTS & COACHES

- 50,504 registered pilots (Dec 2016) – up 10.9% from 2015
  - 47,501 fixed wing aircraft pilots; 2400 helicopter pilots
- Currently 16,900 co-pilots and 14,396 pilots flying with Chinese airlines worldwide
- 6,044 pilot coaches working in China (Dec 2016)
  - 21.64% in pilot training schools and GA companies; 78.35% in CA companies

## FUTURE PROSPECTS

- China will need an additional 111,000 new pilots by 2035 (Boeing)
- Air traffic over China set to quadruple in the next two decades (Airbus)

Source: Annual Report of Chinese Civil Aviation Pilot Development 2016, CAAC

# COMMERCIAL AVIATION: PILOT TRAINING OVERVIEW

<b>Chinese Pilot Trainees</b>	<b>2012</b>	<b>2016</b>	<b>Growth</b>
Total	3656	4694	28.39%
China	1960	2226	13.57%
Overseas	1696	2468	45.51%
Australia	199	449	150.75%
Canada	143	437	205.59%
United States	1331	2416	81.57%

Source: Annual Report of Chinese Civil Aviation Pilot Development 2016, CAAC, p 57-58

## REGULATORY CONSIDERATIONS FOR AUSTRALIAN SERVICE PROVIDERS

- **CCAR-141**
  - 4480 pilot trainees in CCAR 141 approved schools worldwide
  - Currently 27 overseas and 20 domestic schools approved for CCAR-141
  - Only three CCAR-141 approved schools in Australia: 655 trainees (capacity: 710)
- On-going discussions on foreign partnerships between airline companies, local schools, and CAAC
- IELTS requirement for a student visa for aspiring Chinese pilots (5.5)
- Established competition (Canada, US)

# COMMERCIAL AVIATION: REGULATIONS & MARKET ENTRY

## OPPORTUNITIES

- CCAR-141: partnering with Chinese airlines
- Smaller Chinese airlines in search of training partners and facilities
- Excess demand for flight schools as local training facilities faces air restrictions
- JV with local Chinese schools and companies; train locally for first year then send to Australia for a period of time
- Investment interest into Australia's aviation sector



# COMMERCIAL AVIATION: MARKET STRUCTURE & KEY PLAYERS

## AIRLINE COMPANIES: THE BIG FOUR

Airline	Airline Alliance	Fleet Size	Destinations	Base	Annual Net Profit 2016	Net Profit Growth 2016
Air China	Star Alliance	384	201	Beijing Capital Airport	\$978m USD	0.4%
China Southern Airlines	Sky Team	700+	208	Guangzhou Baiyun International Airport; Beijing Capital International Airport	\$734m USD	30%
China Eastern Airlines	Sky Team	462	217	Pudong International Airport; Hongqiao International Airport (Shanghai)	\$635m USD	-0.73%
HNA Group	N/A	181	110	Haikou Meilan International Airport (Hainan)	\$446m USD	3.3%

# COMMERCIAL AVIATION: MARKET STRUCTURE & KEY PLAYERS



## DOMESTIC PILOT TRAINING SCHOOLS

- Civil Aviation Flight University of China (CAFUC; 中国民用航空飞行学院) in Guanghan, Sichuan:
  - 90% of all civil aviation pilots and 50% of air traffic controllers
  - Currently over 16000 students, including more than 1700 pilot trainees
  - Access to five airports for training: Xinjin, Guanghan, Luoyang, Mianyang, and Suining
- Common issues for domestic schools:
  - Restricted flight hours
  - Take-off and landing approval

# COMMERCIAL AVIATION: MARKET STRUCTURE & KEY PLAYERS

## RELATIONSHIP WITH HIGH SPEED RAIL (HSR)

- China's HSR network is the largest in the world:
  - Domestic operating length: approx. 19,000KM (2016) – 60% of world total
  - 2.5 billion passengers in 2015 (up 10% year-on-year)
  - New tech: max speed of 350km per hour undergoing tests (300km/h currently common)
  - Flagged for continued growth under 13<sup>th</sup> 5 year plan
- Considered a substitute passenger service, sometimes even up to 800KM travel distance

# JOINT PROGRAMS

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# JOINT PROGRAMS: OVERVIEW, MARKET STRUCTURE & KEY PLAYERS

University	CCAR-141	Location	Total Students
Beihang University	Y	Beijing	28,000
Civil Aviation University of China	Y	Tianjin	22,000
Civil Aviation Flight University of China (CAFUC)	Y	Chengdu	16,000
Zhengzhou University of Aeronautics	N	Zhengzhou	28,000
Nanjing University of Aeronautics and Astronautics	N	Nanjing	21,000
Shenyang Aerospace University	N	Shenyang	20,000
Nanchang Hankong University	N	Nanchang	18,675

## MARKET CHALLENGES

- IELTS score can be challenging for some Chinese students
- Existing cooperation with universities in North America and Europe
- For some students, there is a perception of high quality career outcomes associated with US and UK institutions
- Tuition and visa fees remain key issues for Chinese families interested in Australian courses
- Internships and flight practice opportunities in strong demand

## SINO-FOREIGN JOINT EDUCATION PROGRAMS

- **Four One Thirds Rule**
- Tuition fees for students based on running costs of cooperatively run institutions and programs – ie not for profit
- Joint programs at undergraduate level approved by the PRC Ministry of Education (MoE); secondary education and VET programs approved at provincial level
- For more information:
  - › <https://internationaleducation.gov.au/International-network/china/PolicyUpdates-China/Pages/Policyupdates.aspx>



## OPPORTUNITIES

- Increasing number of Chinese institutions approved for aviation-related courses by the Ministry of Education (MoE)
- Aviation management, airport management, and aeronautical engineering programs
- Increasing demand for English aviation textbooks

# AVIATION TECHNOLOGY

The image features a minimalist design with a white background. In the top left, the text 'AVIATION TECHNOLOGY' is written in a bold, black, sans-serif font and is underlined. A thin, dark blue horizontal line extends from the end of the underline across the top of the page. In the bottom right corner, there is a decorative graphic consisting of several thin, light blue lines that curve and flow across the page. Additionally, a rounded rectangular shape is partially visible in the top right corner, defined by a thin, light blue line.

# AVIATION TECHNOLOGY: OVERVIEW

## OPPORTUNITIES

- China's import market for aircraft parts and components exceeded \$2.19 billion USD in 2016
- Examples of local innovation:
  - C919 – first Chinese-built passenger jetliner, took flight May 5 2017
- Support for next generation aviation equipment and local R&D flagged in 13<sup>th</sup> 5 year plan
- Smart solutions and software
- For information regarding defence equipment exports, please refer to:
  - › <http://www.defence.gov.au/exportcontrols/>

## INDUSTRIAL COMPANIES

- Majority of major aerospace technology firms are SOEs, including:
  - Aviation Industry Corporation of China (AICC) – 158<sup>th</sup> in Fortune 500 (2017)
  - China Aerospace Science and Technology Corporation (CASTC)
  - Aircraft Maintenance and Engineering Corporation (AMEC)

# MISSION DETAILS: SEPTEMBER 2017

## ITINERARY OUTLINE

### **Shanghai: 17-18 September (arrive PM Sunday 17 September)**

- Business breakfast in Shanghai (tentative)
- Australian Capability Showcase
- Group Visit to Shanghai based Aviation facility
- High Speed Rail from Shanghai to Beijing

### **Beijing: 19-20 September**

- Aviation Trade Show
- Australian Capability Showcase
- Australian Embassy Briefing
- Pinggu Aviation Town Visit

### **Chengdu: 21-22 September:**

- CAFUC Guanghan Training School
- Sichuan Airlines Meeting
- *Possible* Chengdu Tianfu Airport Tour

**(Mission concludes in Chengdu from early PM Friday 22 September)**

# AVIATION TRAINING TO CHINA – MISSION DETAILS

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**Date:** 18-22 September 2017

**Locations:** Shanghai, Beijing and Chengdu

- You will receive further information early next week, including a link to a registration page
- The mission cost is a total of **AUD\$3,220 per company**. Should a company wish to send more than one delegate an addition cost of AUD\$1,825 per delegate would apply to cover direct costs.

# HOW TO ASK QUESTIONS

1. Select "Chat" function

2. Select "Host & Presenter"

3. Type your question here

3. Press 'Send'

The screenshot shows a meeting interface with a chat window. At the top, there are icons for 'Participants' and 'Chat'. Below the 'Participants' section, the 'Speaker' is identified as 'Panelist 1', specifically 'Ying Richter (Host)'. Underneath, the 'Attendee' is 'Anna Smith (me)'. The chat window is open, showing a 'Send to:' dropdown menu set to 'Host & Presenter'. A text input field is empty, and a 'Send' button is visible to its right. At the bottom right, a 'Connected' status with a blue dot is shown. Four blue arrows point from the text instructions on the left to the corresponding UI elements: the 'Chat' icon, the 'Host & Presenter' dropdown, the text input field, and the 'Send' button.

# THANK YOU FOR JOINING US

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## Q & A

**For more information, please contact:**

- Matthew Brent, Trade Commissioner, Austrade Beijing, [Matthew.Brent@austrade.gov.au](mailto:Matthew.Brent@austrade.gov.au)
  - Roger Yuan, Business Development Manager, Austrade Beijing, [Roger.Yuan@austrade.gov.au](mailto:Roger.Yuan@austrade.gov.au)
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