



**Aerospace Industrial Development Corporation** 

**Presented by: Nan-Juh Lin, President** 

Date: November 23, 2017





- I. Global Market Outlook
- **II.** Business Status
- **III. Endeavors & Prospects**



### I. Global Market Outlook

### 1. Attractiveness of Taiwan aerospace industry

Based on 2017 "Aerospace Manufacturing Attractiveness Rankings" report released by PwC ranked Taiwan sixth within the top ten countries ranked highest for aerospace attractiveness.

Top 10 countries by rank for aerospace attractiveness

Country	Overall Rank	Cost	Labor	Infra- structure	Industry	Geo- political Risk	Economy	Tax Policy
United States	1	11	2	6	1	2	16	36
Switzerland	2	18	9	11	18	5	7	18
United Kingdom	3	23	16	5	4	7	28	10
Australia	4	13	11	20	16	1	17	25
Canada	5	24	8	13	8	13	26	17
Taiwan	6	7	6	17	22	18	14	30
Hong Kong	7	16	18	1	18	39	20	3
Japan	8	8	3	10	6	10	12	70
Denmark	9	5	13	8	51	25	15	7
Germany	10	19	7	6	5	4	38	48

Note: The calculation of country rankings combined a total of 33 metrics into seven categories: cost, labor, infrastructure, industry, geopolitical risk, economy, and tax policy.



#### 2. Defense Industry

# New Generation Fighters

- AircraftDevelopment
- Co-production

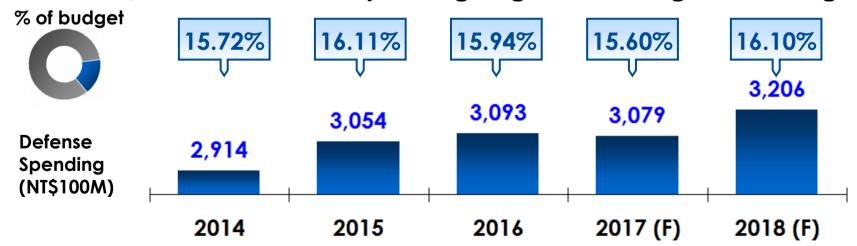
#### Performance Upgrade

- Modification
- Service Life Extension

# Logistics & Maintenance

- AircraftCommercialMaintenance
- GOCO

#### 《Ratio of defense spending to government general budget》



Source: Directorate General of Budget, Accounting and Statistics, Executive Yuan, R.O.C., AIDC compiled



### 3. Commercial Aviation Industry

### Boeing

The Next 20 Years

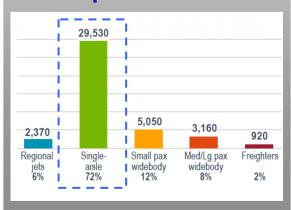
(>30 seats)

New Airplane Deliveries

41,030

**Market Value** 

US\$6.1 Trillion



#### Airbus

The Next 20 Years

(>100 seats)

New Airplane Deliveries

34,899

**Market Value** 

US\$5.3 Trillion



#### **Bombardier**

The Next 20 Years

(60~150 seats)

New Airplane Deliveries

12,550

**Market Value** 

US\$820 Billion

Segment	Deliveries	Revenue (billions of \$)	Revenue share
Large regional aircraft	5,750	240	30%
Small single- alsle aircraft	6,800	580	70%



### 3. Commercial Aviation Industry

#### **Business Jet**

The Next 10 Years (by Honeywell)

New Deliveries 8,300

Market Value US\$249 Billion



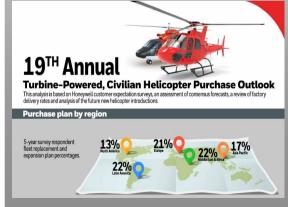
### Civilian Helicopter

The Next 5 Years

(by Honeywell)

New Deliveries 3,900~4,400

The Most
In-Demand Area
Latin America



### **Aero Engine**

The Next 15 years

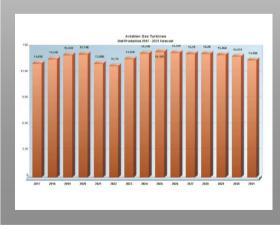
(by Forecast International)

**New Deliveries** 

221,720

**Market Value** 

**US\$1.2** Trillion

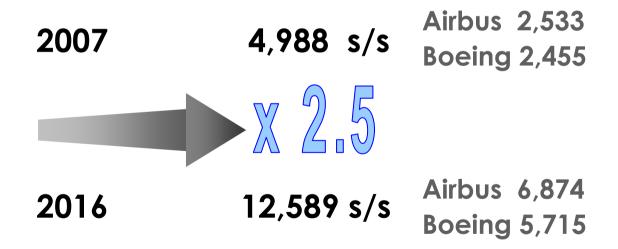




### 3. Commercial Aviation Industry

Backlog grew by 250% in the last 10 years. Current focus is on improving productivity and turn backlog into revenue.

《Order backlog grew by 250% in last 10 years》



Source: Airbus and Boeing Official Website, AIDC compiled



## **II. Business Status**

### 1. Defense business updates

(on major projects)

**◆Advanced Jet Trainer and Military Aircraft Upgrade** 

**AJT** 



IDF Upgrade



F-16A/B Upgrade



#### **♦ Military Aircraft MRO**

**UH-1H Helicopter** 



**IDF Maintenance** 



Air Force Academy A/C Maintenance GOCO



#### **♦ Military Engines**

TFE-1042 Applied on the IDF



F124



Applied on M346 Advanced Trainer by Leonardo-Finmeccanica (Italy)



- 1. Defense business updates
  - **◆**Advanced Jet Trainer (AJT) Program
  - (1) Contract duration: 2017-2026



- (2) Current progress: as scheduled
- (3) Production Planning: Expand domestic outsourcing of full process parts and tool design and manufacture, and assist domestic suppliers in process planning and tool design review to ensure the compliance with drawings and spec., and perform concurrent engineering per engineering design progress.



- 1. Defense business updates
  - **♦** Advanced Jet Trainer (AJT) Program
  - (4) Material Supply
    - a. In support of "jet trainer, local production" policy, AIDC held 3 supplier solicitation conventions during April 25-27, 2017, 607 persons from 332 companies were in attendance.
    - b. Major systems contracts (e.g. engine, flight control computer) signed, suppliers committed to meeting maiden flight schedule.
    - c. Provide assistance to domestic candidate suppliers for aerospace accreditation in order to expand supplier pool, status as below:





### 2. Commercial Aviation business updates

Airframe

(on major projects)





Airbus Single-Aisle A320
Aft Belly Fairing Composite Panels



**Boeing Single Aisle 737 MLG Door/ Pressurized Door** 



Marine One Sikorsky S-92 Cockpit



Airbus Giant A380 HTP Tip



Boeing Dreamliner 787 HT Leading Edge



Bombardier BizJet CL350 Empennage

#### **♦**Next-Gen Aircraft







A320neo



**B737MAX** 



- 2. Commercial Aviation Business Updates
  - (1) Increase revenue by expanding volume of on-hand orders and ratio of manufacture; explore composite parts and components business through connection with global aerospace market.
  - (2) Respond actively to the expectation of aerospace giants, improve costs and implement intelligent manufacturing to enhance productivity.

Boeing's expectation from suppliers

Airbus' expectation from suppliers



Source: Boeing 2017 Supplier Summit, Airbus 2017 Global Supplier Conference, AIDC compiled



### 2. Commercial Aviation business updates

Aero Engine

Kang-Shan Complex (47.44 Acres) Aero Engine Factory(AEF)



**♦**Popular Aero Engine

Pratt & Whitney Honeywell



F100



**GE Aviation Top 2 Supplier in Asia** 



Rolls-Royce
Long-Term
Supply Chain Partner



Trent 800



**Trent 1000** 

#### **♦**Next-Gen Aero Engine

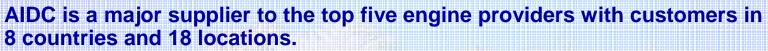








(on major projects)



- **◆Major customers of defense business include RoCAF, NCSIST and ITEC.**
- ♦ Major customers of commercial business include GE, Rolls-Royce, Honeywell, P&W, Safran, KHI, and IHI.





#### 3. Latest Development

(1) 2017 Taiwan Aerospace Composites Forum

Given composites are widely used in aircraft design and manufacture, AIDC constructed TACC to pursue the business and organized the first composites forum in Taiwan to enable the exchange between experts from oversees and domestic suppliers.



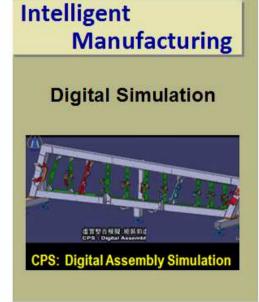


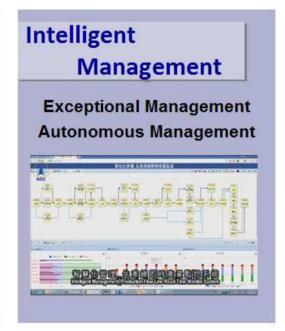


### 3. Latest Development

- (2) Developed "iAIDC Intelligent Manufacturing Platform"
  - ◆ Objective: Enhance productivity, quality and flexibility to reduce costs and improve competitiveness.
  - Benefits: Earn recognition from international customers, and establish a leading position in intelligent and highvalue aerospace technology in Taiwan.
  - **◆ Implementation directions:**









### 3. Latest Development

(3) 2017 Taiwan Aerospace Industry & Policy Forum AIDC received positive feedback from 2015 and 2016 forums. This year's forum will bring together specialists and leaders of the aerospace industry to explore global industry trends in an effort to upgrade Taiwan's aerospace industry.

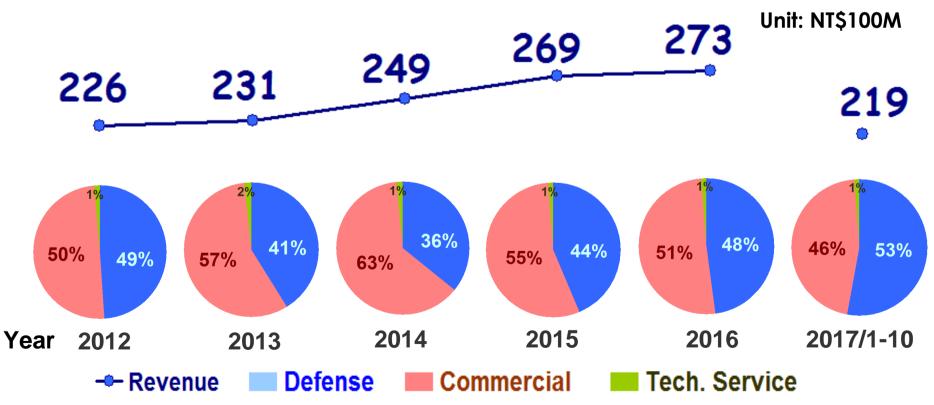




#### 4. Financial Review

#### (1) Recent revenue

AIDC maintains military and commercial businesses in parallel development, that may compensate possible risks in either sector and help to secure steady growth.





#### 4. Financial Review

#### (2) Income statement

Affected by exchange rate, drop in helicopter market demand and CFM56 engine being replaced by Leap engine, AIDC's 2017 cumulative revenue saw a minor decline. Growth is expected following accreditation of Leap parts and other new products and processes.

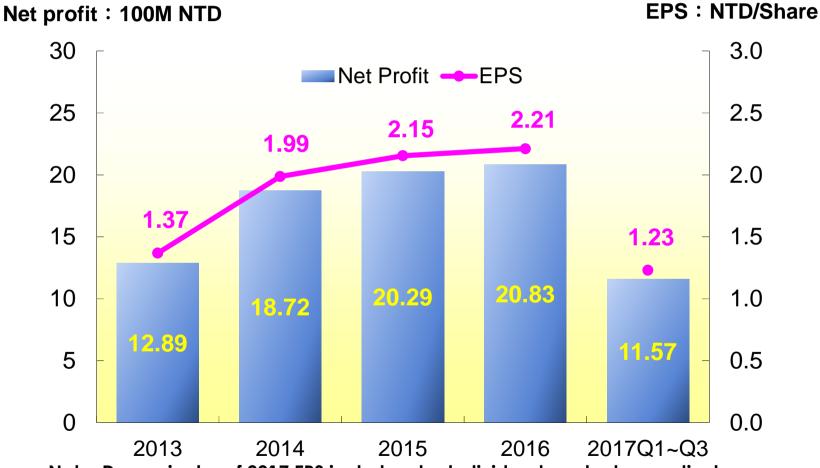
Unit:100M NTD

ITEM		Q	3		Q1~Q3				
		2017		2016		2017		2016	
Sales	70	100%	66	100%	194	100%	204	100%	
Cost of Goods Sold	60	85%	57	85%	167	86%	174	85%	
<b>Gross Profit</b>		15%	10	15%	27	14%	31	15%	
Operating Expenses	3	4%	3	4%	8	4%	8	4%	
<b>Profit From Operations</b>	8	11%	7	11%	19	10%	22	11%	
Non-operating Income	0	0%	-2	-3%	-4	-2%	-4	-2%	
<b>Profit Before Income Tax</b>	8	11%	5	8%	15	8%	19	9%	
Income Tax Expenses	2	2%	1	2%	4	2%	4	2%	
Net Profit		9%	4	6%	12	6%	15	7%	



#### 4. Financial Review

### (3) Net Income and EPS



Note: Denominator of 2017 EPS includes stock dividend, and retrospectively adjusted from 2013 to 2016.



# **III. Endeavors & Prospects**

- 1. Despite unfavorable factors such as global instability, decline in the oil price and aircraft replacement transition, the aerospace industry sees a stable growth in the next 20 years with the new aircraft orders on hand.
- 2. AIDC will meet the challenges in 3 aspects: Achieve "Autonomous defense, Local production of our aircraft" mission; Integrate industry supply chain; and Implement intelligent manufacturing.
- 3. AIDC stock was selected among "TWSE Corporate Governance 100 Index" and ranked in top 20% Corporate Governance Evaluation TWSE listed company for 2 consecutive years.

AIDC has established an effective corporate governance structure to increase transparency, ensure the rights and interests of investors.



**TWSE Corporate Governance 100 Index** 

**AIDC** 





# III. Endeavors & Prospects (cont'd)

4. AIDC was ranked 117th in "2016 Taiwan's Top 2000 Enterprises Survey" and 27th in "2017 Excellence in Corporate Social Responsibility in large enterprise category" published by the CommonWealth Magazine.



Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
AIDC Ranking	201	200	184	151	188	173	155	145	140	120	117

Source: Commonwealth Magazine, No. 622, May 11, 2017

5. AIDC is committed to adhering to its business creed of integrity and is dedicated to continued improvement and upgrade to be in line with the global aerospace community.

-Thank You-