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Aerospace Industrial Development Corporation Date: October 13, 2015



I. Markets

### **II. Operations and Financial Status**

### **III. Objectives**

### IV. Q & A



### I. Markets - Defense Segment

### **1.Defense Business**

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- 70% of ROC Air Force trainer will reach their maximum lifespan within the next 10 years (e.g. F-5 fighter and the AT-3 Advanced Trainer have been in service for 30 years.) ROCAF plans to procure 66 advanced trainers with 69 billion NT dollars between years 2017 and 2022.
- The ROC military weapon system establishment plan includes IDF upgrade, F-16A/B upgrade and related manufacturing, assembly and maintenance.
- The voluntary military service policy and projects of streamlining armed forces structure and organization will encourage the MND to release business such as military aircraft commercial maintenance and GOCO.

### I. Markets - Defense Segment

<sup>AIDC</sup> 2. Business Updates



	IDF Mid-Life Upgrade Program for ROCAF
	Contractor Logistics Support for ROCAF's IDF Fleet
	Maintenance
	Contractor Logistics Support for ROC Army's UH-1H
Military	Helicopter Fleet Maintenance
Business	Contractor Logistics Support for F-16 Radar Repair
	Aircraft Engine Repair Project for ROCAF
	GOCO Program for the 2nd Air Force Logistics Command
	GOCO Program for aircraft of the ROC Air Force Academy
	Aerial Target Towing Services

# F-16A/B Radar Repair

2nd AFLC GOCO







#### IDF Fighter Commercial Maintenance

**Army UH-1H Helicopter** 

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TFE-1042 engine (IDF)



Air Force Academy A/C Maintenance GOCO



Aerial Target Towing Services

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### I. Markets - Defense Segment

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### 2. Business Updates (Cont.)

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- IDF Performance Upgrade : Delivery on schedule.
- The Advanced Trainer project: ROCAF held a meeting in June to release the required performance specifications of the new trainer. AIDC has submitted its proposal and related materials accordingly.
- F-16 Performance Upgrade: In preparation as planned.

### **1. Commercial Aviation Industry**

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(1) Global air transportation continues to grow:

- Two major causes for growth: macroeconomics growth and the value of service which touches passengers.
- While global economy continues to grow, both Airbus and Boeing predict the same trend in global air transportation by a growth rate at 4.6%~4.9% annually in the RPK in the next 20 years with gross value of 4.9~5.6 trillion U.S. dollars.

### ◆ <u>Major Causes for More Air Transportation</u> ◆ <u>Air Transportation Outlook in 20 Years (2015-2034)</u>



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### I. Markets - Commercial Aviation

### 1. Commercial Aviation Industry (Cont.)

### (2) Emerging Markets Lead the Growth

In the emerging markets, the Asia Pacific region tops the global demand for new airplanes with a significant 40% rise. Single aisle airplane is the most thriving demand.

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With China offering a great market, Airbus built its single aisle airplane assembly line for A320 in Tien-Ching in 2008. Boeing has also confirmed plans to build plants in China for B737 assembly and delivery.





### 1. Commercial Aviation Industry (Cont.)

(3) Engine requirements will definitely grow in tandem with the demand of new airplanes.

According to Teal Group, there would be a demand of approximate 120 thousand aero engines in a total amount of 480 billion U.S. dollars.



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### I. Markets - Commercial Aviation

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Commercial Aviation Industry (Cont.)
(4) Green engine is the mainstream of the market



1. Commercial Aviation Industry (Cont.)

AIDC

(5)The influences of lower fuel prices differ in cases

The fuel expense used to take up 30%+ of operational cost for airliners. With fuel prices going down since June 2014, the observations are:

- Demand of commercial airplanes remains : Lower fuel prices reduce costs and increase profits for commercial airliners, which could be invested in more new airplanes or uplifting fleet efficiency.
- Less demand on Commercial Helicopters : Based on Honeywell's recent release of the outlook of commercial helicopters for the next five years (2015-2019), its market is declining due to less offshore drilling activities result in low oil prices. Future demand is pending on the fluctuation of oil prices.



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### I. Markets - Commercial Aviation

1. Commercial Aviation Industry (Cont.)

## (6)The pressure for cost down from the leading global commercial aircraft makers continues.

Boeing's "Partnering for Success" policy is pressing its suppliers to go further in cost down; Airbus demands its A320 suppliers to drop prices by 10% by Y2019. Global suppliers are facing severe challenges on the issue.

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In addition to meeting the precise requirements for quality and on-time delivery, cost down has become one of the major issues in new business opportunities and new contract negotiations.



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### I. Markets - Commercial Aviation

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### 1. Commercial Aviation Industry (Cont.)

### (7) Merger and Acquisition

While military aircraft makers are experiencing much pressure owing to the reducing defense budgets in the US and Europe, commercial aircraft builders enjoy growth in emerging markets. They expand production capacity through acquisitions to boost revenues. Mergers and acquisitions are also seen in the military aircraft segment for survival or expansion.

**Compiled by AIDC** 

ltem	Time for the news released	Description
Alcoa bought Firth Rixson, Tital, RTI	Nov. 2014 ~ Mar. 2015	Alcoa, an aluminum producer, bought Firth Rixson, a maker of jet engine parts; Tital, a leading company for titanium and aluminum alloy investment casings; RTI International Metals Inc., a titanium supplier. The acquisitions contribute to the capacity expansion of Alcoa's engine parts production.
ockheed Martin Jul. 2015		Lockheed Martin and Sikorsky are deeply affected by the US defense cuts in budget. The acquisition would broaden the oversea market for Sikorsky- produced Black Hawk helicopter and lower LM's dependence on its F-35 fighter business.
GKN bought Fokker	Jul. 2015	GKN purchased Dutch aerospace firm Fokker Technologies to increase its involvement in Airbus and Boeing commercial programs and strengthen its ability in negotiations.
Solvay purchased Cytec	Aug. 2015	Belgium-based chemicals company, Solvay bought U.S. counterpart Cytec Industries Inc. to become a major player in the production of light-weight materials for airplanes and high-end cars.
Berkshire Hathaway to buy Precision Castparts	Aug. 2015	With a positive attitude toward aerospace industry, Warren Buffett 's investment firm Berkshire Hathaway has agreed to buy aircraft components manufacturer Precision Castparts Corp. (PCC), of which 75% revenue of 2014 generated from aerospace business.

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### 1. Commercial Aviation Industry (Cont.)

- (8) Aircraft orders in Paris Air Show 2015
  - A total amount of airplanes ordered in the show was 1223 aircraft, slightly exceeding that of 2014 which was 1,210 a/c, with a value of 69 billion U.S. dollars, of which 446 a/c were firm order while in 2014 firm orders were 552 a/c.
  - Single-aisle passenger airplanes made up 68% of the total orders. Airbus exceeded Boeing in the order tally in this segment.
  - The order tally of Airbus and Boeing together was 902 aircraft, 74% of the total orders. Boeing surpassed Airbus in the wide-body commercial airplane segment while Airbus toped Boeing in the narrow bodies. The backlog would take 7 years to digest.
  - The Pacific Asia had the strongest demand for air transportation, followed by Europe, South America and the Middle East.



### AIDC 2. Programs

	CL-300 Program
	MRJ-70/90 Program
	S-92/H-92 Programs
	Bell M429 Program
Commercial	Spirit B737 FLE/B777 FL
Aircraft	Alenia Aermacchi B787 Program
	Airbus A321/A320 Program
	737/B747 MLGD/Pressurized Door Program
	CSeris Empennage Program
	NIPPI A380 H/S Tip Program

**GEnx Engine Parts** 



Comn

Engir

R&R Trent XWB Engine Parts

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	GEAE Programs					
	P&W F-100 Program					
	Rolls-Royce V2500 Program					
ne	Honeywell AS-907 Program					
	ITEC F124/M346 Program					

#### Boeing B787 H/S Auxbox

#### **Boeing B737max MLDG**

#### **MRJ ODM/OEM**



Airbus A320 Parts







**Bell M429 Parts** 



## II. Operations and Financial Status <sup>2634</sup>

## **1. Income Statement**

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### Unit: NTD in Millions

ITEM	Q2				Q1~Q2			
	Y2015		Y2014		Y2015		Y2014	
Revenue	6,921	100%	5,395	1 <b>00</b> %	12,761	100%	10,962	100%
Cost of Goods Sold	6,016	87%	4,382	81%	11,089	87%	9,403	86%
Gross Profit	905	13%	1,013	19%	1,672	13%	1,559	14%
Operating Expenses	259	4%	229	4%	450	4%	423	4%
Operating Income	646	9%	784	15%	1,222	9%	1,136	10%
Non-operating Income	(115)	-2%	(320)	-6%	(181)	-1%	(160)	-1%
Pre-tax Income	531	8%	464	9%	1,041	8%	976	9%
Income Tax Expenses	86	1%	47	1%	173	1%	137	1%
Net Income	445	6%	417	8%	868	7%	839	8%
EPS(NT\$)	0.49		0.46		0.96		0.92	







**EPS in NT\$/share** 



Note : 2010-2012 ROC GAAP were observed; the IFRS was adopted since 2013.

## II. Operations and Financial Status <sup>2634</sup> 4. Top 10 Customers



## II. Operations and Financial Status <sup>2634</sup>

## AIDC 5. Fixed Assets Investment

The Fixed Assets Investment for FY2015 is mainly focused in the establishment of the Engine Case Machining Center (ECMC), TACC #19 facilities, and the Maintenance Hanger for the F-16A/B Enhancement.

- With the main beam in place on August 10, 2015 for the ECME, this facility will start production in the 1Q of FY2016 capable of producing casing in the size of 200cm in diameter, which will meet the business demand for Rolls Royce Trent XWB and elevate AIDC's core capabilities.
- The TACC-19 had its Ground Breaking on April 21, 2015 and will be ready for test run in 2Q of FY2016. As the key 1st tier supplier for Air Bus, our purpose of building this facility is to produce Airbus A320 Belly Fairing.
- The construction contract for the F-16A/B maintenance hanger has been signed and the construction is estimated to be completed in FY2017. This facility will be used to conduct the F-16 configuration modification program and the following maintenance.



## 6. Recent Achievements

**2015.03** 2014 APAC(Asia PACific) Supplier Performance Improvement Award from Honeywell.

**2015.05** Award of General Manufacturing & Fabrication Growth Excellence Award from General Electric. This is the 4th award from GE in the last 5 years.

**2015.05** Performance Excellence Award from Boeing. AIDC won this award consecutively in the last 4 years.



## **III. Objectives**

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- 1. After several transitions in the nature of our business body, AIDC is now an important part in the global aviation supply chain both for civil aircraft and aero engines. AIDC continues to enhance operational efficiency and flexibility in response to the global aviation industry's current deployment of supply chain in the emerging markets.
- 2. Revenue up to September 2015 is 20 Billion NT dollars as expected. To cope with rising international competition, the new civil aircraft projects, and possible future government regulations for salary raise, AIDC continues to invest in core technology R&D, Lean production, supply chain enhancement. With better integration of resources and Taiwan suppliers, we aim for cost effectiveness while maintaining decent profits. Our objective is to surpass the revenue of 2014.



## **Q & A**

