

# **Goodrich Turkish Technic Service Center: Industrial Cooperation in Aerospace MRO**

**Paul Farsetta**

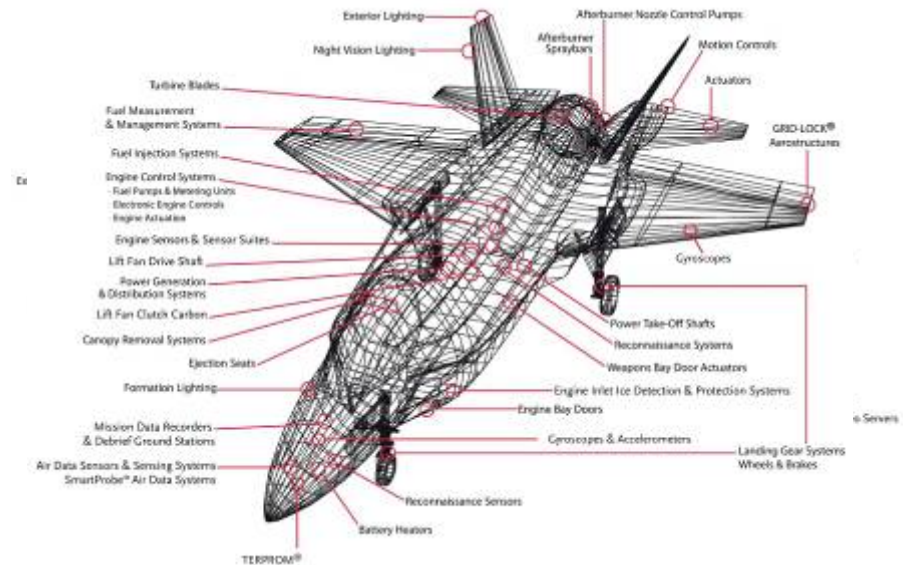
**Vice President and General Manager  
Aftermarket Services, Goodrich Aerostructures**

**Board of Directors  
Goodrich Turkish Technic Service Center (GTTSC)**

**Nov 1<sup>st</sup> 2011**

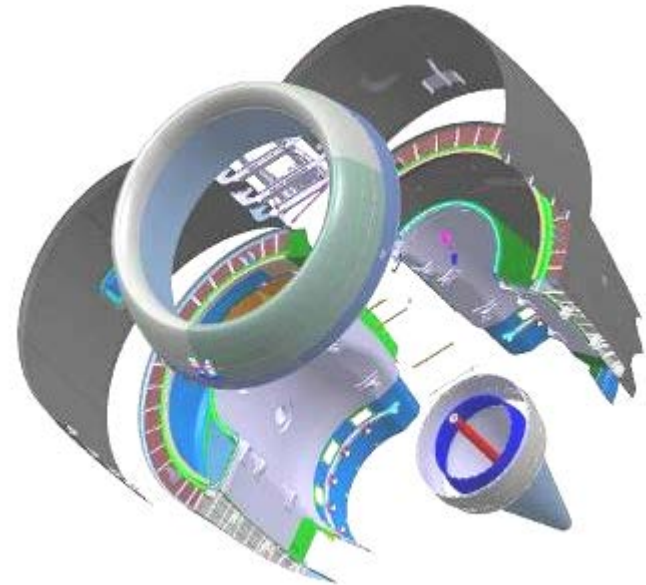
- **Goodrich Overview**
- **Aerostructures and Nacelle Systems**
- **Goodrich Strategy**
- **Why Turkey?**
- **Start up Comparisons**
- **Future Outlook**

- One of the largest worldwide aerospace and defense suppliers
- Large installed base on modern fleets drives aftermarket sales
- Significant and rapidly growing defense and space presence
- Proprietary flight-critical systems and products
- Operating history of 140+ years
- 2010 sales – \$7 billion
- 27,000 employees at more than 80 locations worldwide



**Goodrich is uniquely positioned for sustainable long-term growth**

- **Largest components on the aircraft**
- **Acoustically engineered composite structure**
- **Exposed to environment, heat, vibration, noise**
- **Goodrich is the market leader in nacelle technology**



**Nacelles are complex and their size introduces unique logistics challenges**

## OE Manufacturing



**Chula Vista, CA**  
1,440K sq. ft.

**Riverside, CA**  
1,170K sq. ft.

**Foley, AL**  
207K sq. ft.

**San Marcos, TX**  
160K sq. ft.

**Mexicali, MX**  
350K sq. ft.

**Tianjin, China**  
195K sq. ft.

**Jacksonville, FL**  
110K sq. ft.

## Engine/Nacelle Integration



**Toulouse, FR**  
250K sq. ft.

**Hamburg, GR**  
32K sq. ft.

**Everett, WA**  
140K sq. ft.

**Montreal, Canada**  
22K sq. ft. (planned)

## Aftermarket Support, MRO



**Singapore**  
530K sq. ft.

**Prestwick, UK**  
250K sq. ft.

**Toulouse, FR**  
20K sq. ft.

**Foley, AL**  
200K sq. ft.

**Dubai, UAE**  
35K sq. ft.

**Tianjin, China**  
50K sq. ft. (leased)

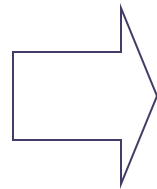
**Sao Carlos, BZ**  
10K sq. ft.

**Istanbul, Turkey**  
43K sq. ft.

**The industry's leading capability and capacity (approximately 5.1M sq. ft.)**

### 'Speed and Ease'

- Large nacelle components are difficult to transport around the world



- Aerostructures has developed a global network of MRO facilities and inventory locations



**9 MRO facilities**

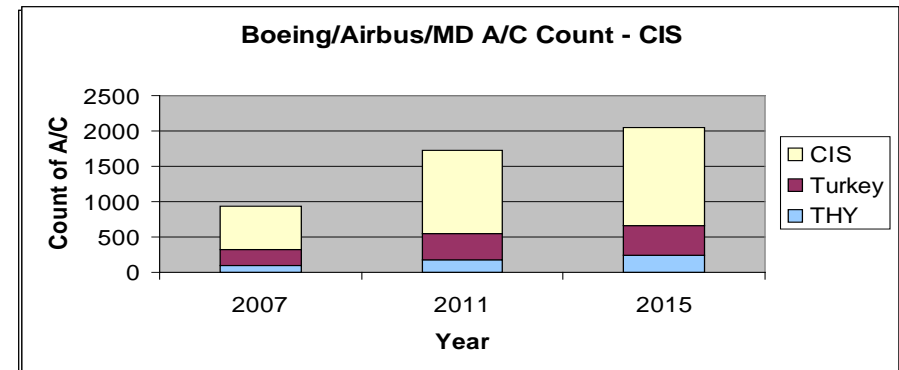
**1,500,000 ft<sup>2</sup> of dedicated nacelle MRO capacity**

**Global presence**

**Access to over \$1.2B in inventory**

**Locally available inventory is critical to our Speed and Ease strategy**

- Turkish Airlines – Largest airline in the region
- Stability and growth potential
- Location relative to emerging markets
  - Improve revenue per aircraft in the region



**GTTSC is beneficial for Turkey, Goodrich and our customers**

- **Turkey/Turkish Technic**
  - 43,000 sq ft.
  - 15 employees; workforce prepared to grow to 100+ by 2015
  - Enhance Turkish Technic's position as an integrated service provider
  - Immediate access to high value inventory and proprietary repair processes
- **Goodrich**
  - Incremental revenue from aircraft/engine maintenance in the region
  - Complements existing strategy
  - Stable skilled/educated workforce
- **Customer**
  - Reduced shipping times and costs
  - Enhanced MRO network
  - OEM quality maintenance





## Degree of Difficulty to Establish MRO Operations

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**Tax and Customs**

**Intellectual  
Property**

**Human  
Resources**



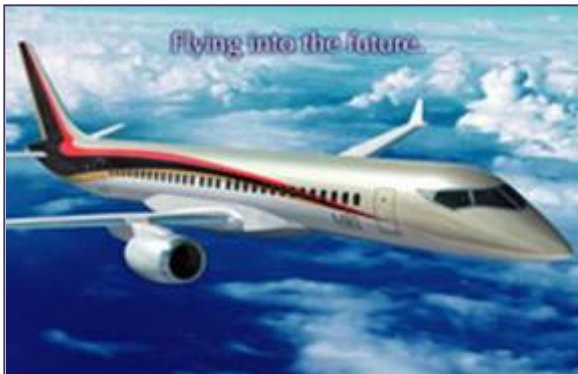
**Boeing 787**



**A320 NEO**



**Airbus A350 XWB**



**Mitsubishi Regional Jet**



**Bombardier CSeries**



**C-5**

**Goodrich's content on new programs secures long term success**

**Thank You!**  
**teşekkür ederim**

**Paul Farsetta**

**Vice President and General Manager**  
**Aftermarket Services, Goodrich Aerostructures**

**Board of Directors**  
**Goodrich Turkish Technic Service Center (GTTSC)**