BUSINESS AVIATION MARKET OUTLOOK

Presented by:
Michael Holland
Manager
mholland@icfi.com

Aerospace Raw Materials Conference
April 24, 2012   Pittsburgh, PA
Agenda

- Trends Driving Business Aviation
  - Production Forecast
  - Raw Material Forecast
Business Aviation Has Proven to be a Cyclical Industry Over the Past Two Decades

Business Jet Industry 20-Year Deliveries

1991–2000
3,600 Units

2001–2010
6,400 Units

Where will the business aviation market go from here?

Source: Bombardier
There Are Four General Trends That Are Impacting Demand for Business and General Aviation Aircraft

1. Economic Recovery
2. Growth in Emerging Markets
3. Introduction of New Models
4. Public Policy & Regulation

Source: ICF Analysis
Production of Business Jets is Generally Tied to GDP Growth

**U.S. GDP Growth**
1980–2016

**U.S. Manufactured Business Jets Delivery**
1980–2010

Source: U.S. Dept. of Commerce / GAMA / IMF
In Addition Business Aviation is Highly Correlated to Corporate Profits

Further economic recovery will stimulate demand

* 2011 based on 12-month total for Q3 2011
Source: Roland Vincent Associates
Developing Markets Currently Have Very Small Business Aircraft Fleets That Will Grow

**BGA Fleet Per Capita**

**CHINA:**
- ~150 business jets
- ~1,000 total private aircraft (vs. 220K in the US!)

Source: Booz & Company
But the Vast Majority of BGA Aircraft Will Still Go to North America and Europe Over the Next Decade

Regional 10 and 20 year Delivery Outlook
Units, Calendar years, 2011–2020 and 2021–2030

Source: Bombardier
In the Next Few Years, New Models Are Entering Service – Such as G650

- G650
- Legacy 500
- Learjet 85
- Other models are entering service by 2014 such as Legacy 450/500 / Learjet 85 /
- 2012
- 2014
- 2016
- 2021
- New VLJ / Light Jets such as Hondajet
- Global 7000 entering service in 2016 and 8000 in 2017

Source: ICF Analysis, Gulfstream, Honda, Bombardier
Finally, Public Policy & Regulation Can Have a Huge Impact on Business Aviation Growth

<table>
<thead>
<tr>
<th>Region/Country</th>
<th>Policy &amp; Regulatory Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>• Government policy on dividend taxes, depreciation rates, changes in capital gains, even the ‘Buffet Rule’ all have the potential to adversely impact business aviation</td>
</tr>
</tbody>
</table>
| Western Europe   | • Proposed higher wealth taxes would curtail business aircraft demand  
                    • More stringent emissions taxes would also impact BGA                                           |
| China            | • Growth is highly dependent on liberalization of skies by the People’s Liberation Army who currently control 80% of Chinese airspace  
                    • Addition of 50 to 100 new airports will help stimulate BGA demand but support services (MRO, FBO, training) must be upgraded |

Source: ICF Analysis
Agenda

- Trends Driving Business Aviation
- Production Forecast
- Raw Material Forecast
BUSINESS AVIATION PRODUCTION FORECAST

The BGA Fleet Comprises 57% Jets and 43% Turboprops – Cessna & Hawker Beechcraft Account for 51% of the Fleet

2011 BGA Fleet By Size Category

- Light Jets: 6,750 (22%)
- Midsize / Medium: 6,175 (20%)
- Heavy / Long Range: 3,886 (12%)
- VLJ: 885 (3%)
- Turboprops: 13,424 (43%)

31,120 Aircraft

2011 BGA Fleet By Aircraft OEM

- Cessna: 7,821 (33%)
- Hawker Beechcraft: 8,014 (33%)
- Learjet: 2,230 (9%)
- Gulfstream: 1,739 (6%)
- Bombardier: 1,826 (8%)
- Pilatus: 1,047 (4%)
- Dassault: 1,383 (7%)
- Other: 1,826 (8%)

Source: ACAS
North America Generates About Half of the Production Demand for Business Aircraft

- Over 50% of deliveries occur within North America
- Peak deliveries occur in 2018
- Cyclical economic downturn built into forecast

Source: ICF SH&E
The Business Aviation MRO Market in 2012 is Worth $9.8B

2011 BGA MRO Spend ($B) By MRO Category

- Component: $2.8 (28%)
- Engine: $2.4 (25%)
- Airframe: $2.2 (22%)
- Mods: $2.5 (25%)

Source: ICF SH&E
Agenda

- Trends Driving Business Aviation
- Production Forecast
- Raw Material Forecast
Business Aviation is Approximately 10% of All Aerospace Raw Material Demand

2012 Aerospace Raw Material Buy Weight*  
1.15 B Lbs

2012 BGA Raw Material Buy Weight* Composition  
115 M Lbs

* Fundamental Mill Demand; Maintenance, repair and overhaul (MRO) excluded from total, estimated to add 7% to total;

Source: ICF SH&E
Overall, Business Aviation Raw Material Demand Will Grow at 2.8% Over the Next Decade

2012 – 2021 Business Aviation Raw Material Total Buy Weight*
By Material Type

- Raw material demand will peak in 2017 & 2018 with production rates
- Growth in composite usage not as dramatic as air transport market

Source: ICF SH&E
Key Messages

- The shape of the business market rebound will be driven by economic recovery, emerging regions, new models & policy/regulations

- Business & general aviation production will grow at 3.8% CAGR over the next decade

- Raw material demand from business aviation is approximately 115 million pounds in 2012

Source: ICF SH&E
Thank You

ICF SH&E’s Advisory Services Include:

- Aerospace Manufacturing Strategy
- Customer Satisfaction & Retention
- MRO Market Research & Analysis
- Cost & Performance Benchmarking
- M&A Commercial Due Diligence
- Strategic Sourcing Support
- Supply Chain Management
- LEAN Continuous Process Improvement
- Safety & Compliance Audits