

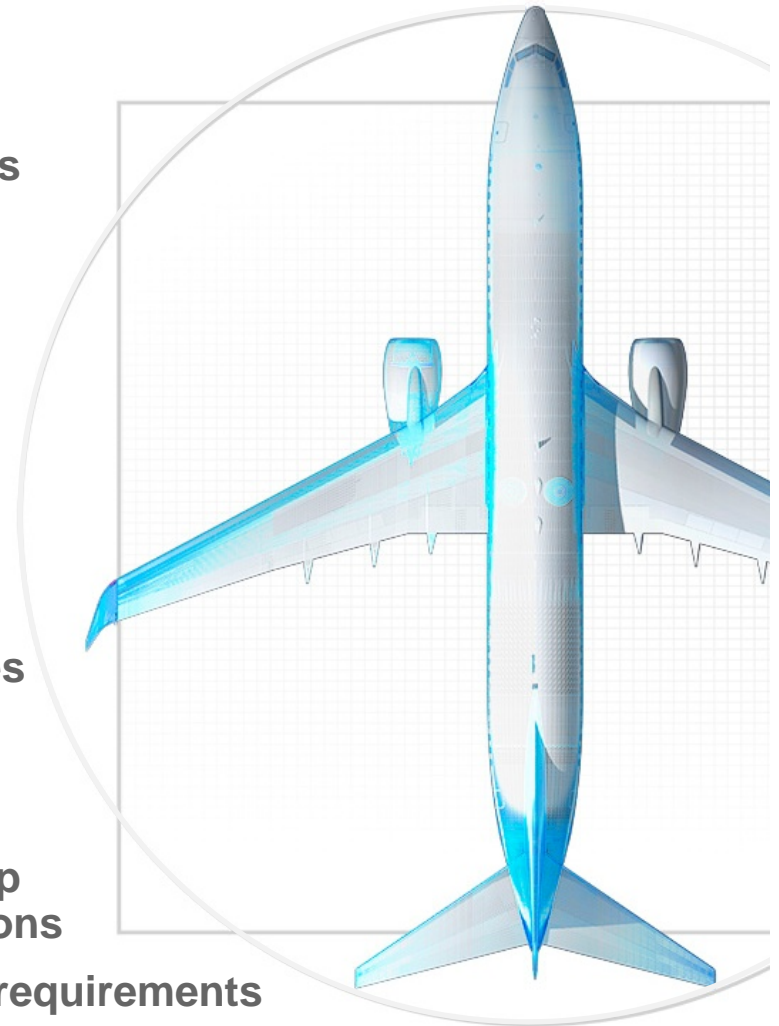


# Global Design and Manufacturing

**Terry Beezhold**  
Chief Program Engineer, 777X  
Airplane Development, Boeing Commercial Airplanes

# What We Do Today

- **Design, assemble and support commercial jetliners**
  - Boeing 7-series family of airplanes leads the industry
  - Commercial Aviation Services offers broad range of services to passenger and freight carriers
- **Design, assemble and support defense systems**
  - World's largest designer and manufacturer of military transport, tankers, fighters and rotorcraft
  - Global Services & Support provides services to government customers worldwide
- **Design and assemble satellites and launch vehicles**
  - World's largest provider of commercial and military satellites; major service provider to NASA and prime contractor for the International Space Station
- **Integrate and support large-scale systems; develop networking technology and network-centric solutions**
- **Provide financing solutions focused on customer requirements**
- **Develop advanced systems and technology to meet future customer needs**



**Connect and protect people globally**

# Boeing Commercial Airplanes

- 2013 revenues of \$53.0 billion

- Headquartered in the Puget Sound region of Washington state

- Approximately 80,000 employees

- Offering a family of airplanes and a broad portfolio of aviation services for passenger and cargo carriers worldwide

- Boeing airplanes represent three quarters of the world's fleet, with nearly 12,000 jetliners in service

- Approximately 70 percent of Boeing Commercial Airplane sales (by value) go to customers outside the United States



The industry's source for customer-focused solutions


# A Day In The Life Of Boeing Commercial Airplanes



- ***Today....***there will be more than 4 million people flying on Boeing airplanes
- ***Today....***there will be more than 30,000 departures of Boeing aircraft
- ***Today....***Boeing aircraft will travel more than 38 million miles (that's going to the moon and back more than 80 times)




# One Boeing, A Global Enterprise



**21,000** Suppliers/Partners  
more than **1M** Employees




**12,000** Jetliners in  
Service Worldwide



**50+** International  
University Relationships



**150** Countries with  
Global Customers



**65+** Countries with  
Boeing Employees



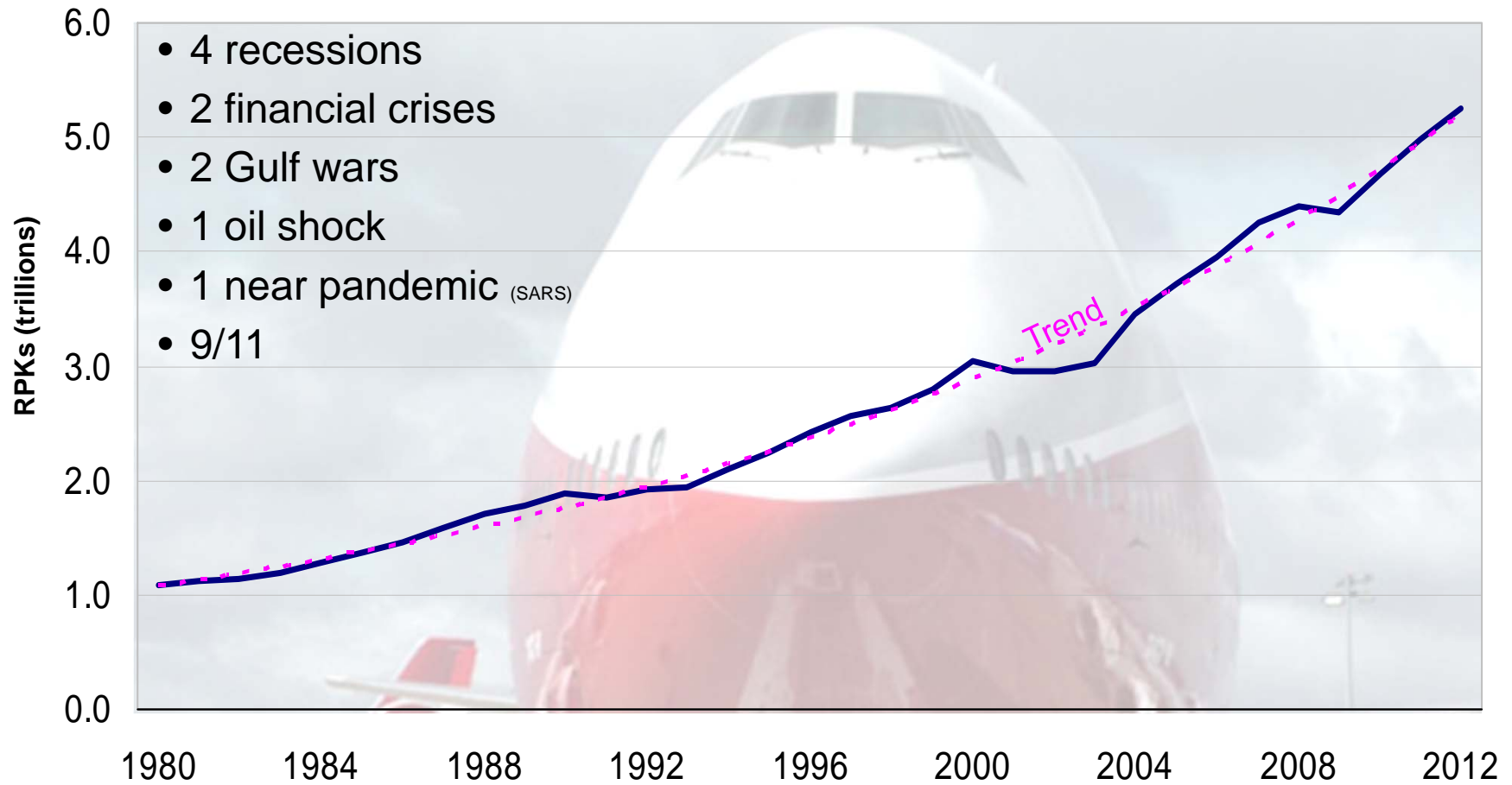
**6** R&D Centers  
**16** Consortia  
**22** Joint Research Centers



**\$40M / 660+** Charitable  
Grants Outside the U.S.  
**51** Countries

World wide reach

# World Air Travel Has Grown 5% Per Year Since 1980



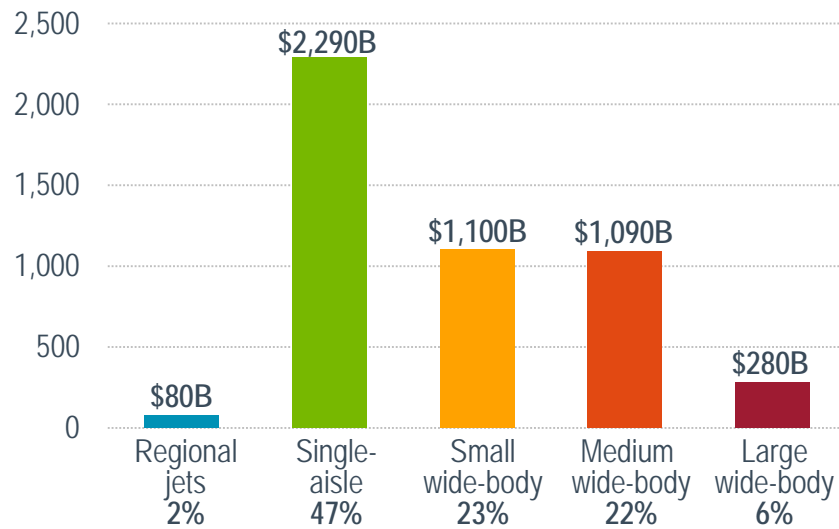
RPKs = Revenue Passenger Kilometers  
Source: ICAO scheduled traffic



## Airlines Will Need More Than 35,000 New Airplanes Valued At \$4.8 Trillion

### Market value: \$4.8T

2013 - 2032

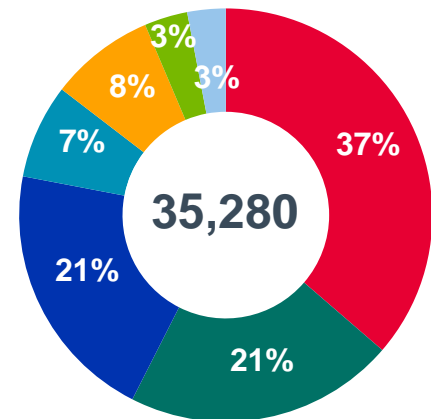


### New airplane deliveries by region

2013-2032

#### Region Airplanes

Asia Pacific	12,820
Europe	7,460
North America	7,250
Middle East	2,610
Latin America	2,900
C.I.S.	1,170
Africa	1,060
<b>World Total</b>	<b>35,280</b>



# Commercial Aviation – An Economic Engine

**\$2.2 trillion**  
of global  
economic impact

**3.5%**  
of global GDP  
supported

**Over 50 million**  
jobs supported by  
aviation worldwide

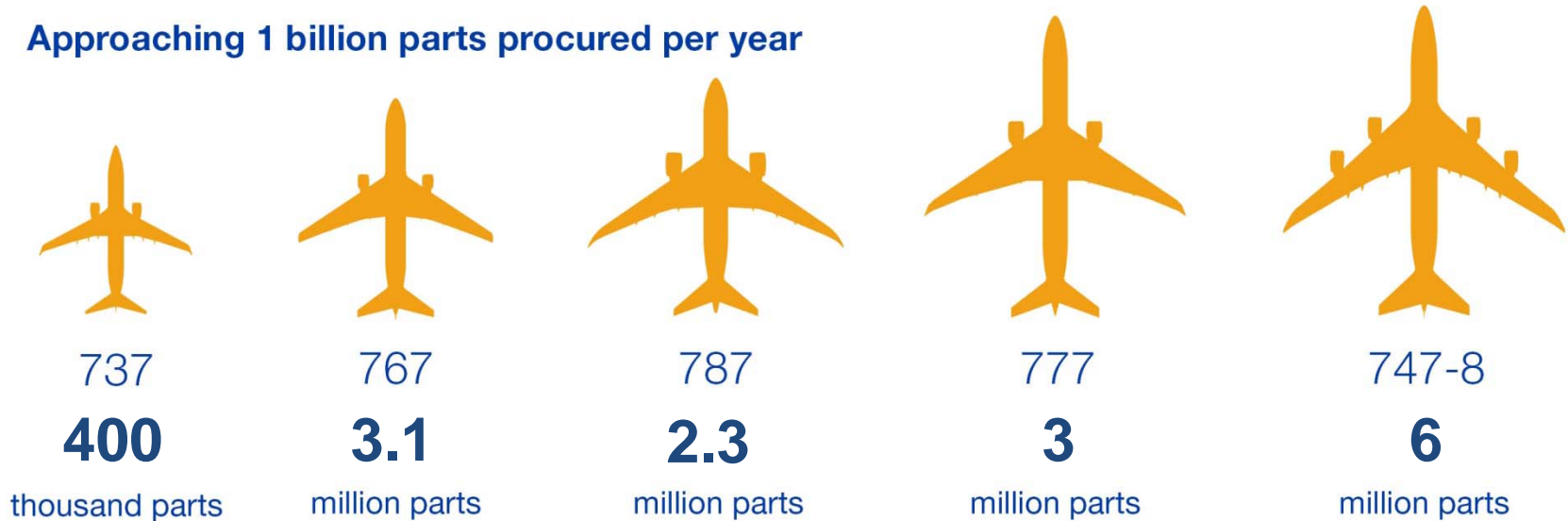


*Source: "Aviation: Benefits Beyond Borders" report,  
Air Transport Action Group (ATAG), March 2012*

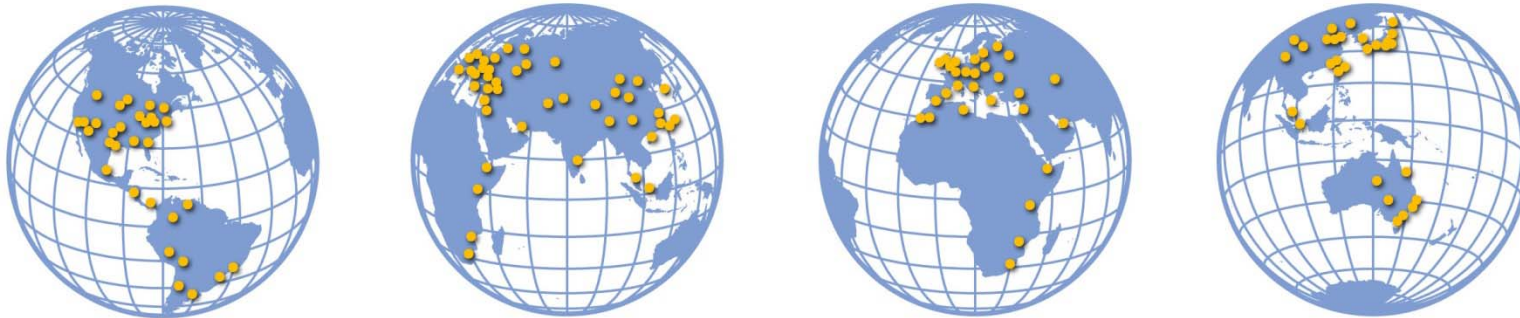


# Boeing Commercial Airplanes Global Supply Chain

Approaching 1 billion parts procured per year



**\$35 Billion** spend • **5,400** factories • **500,000** people



*Commercial Airplanes data only*

# International Collaboration

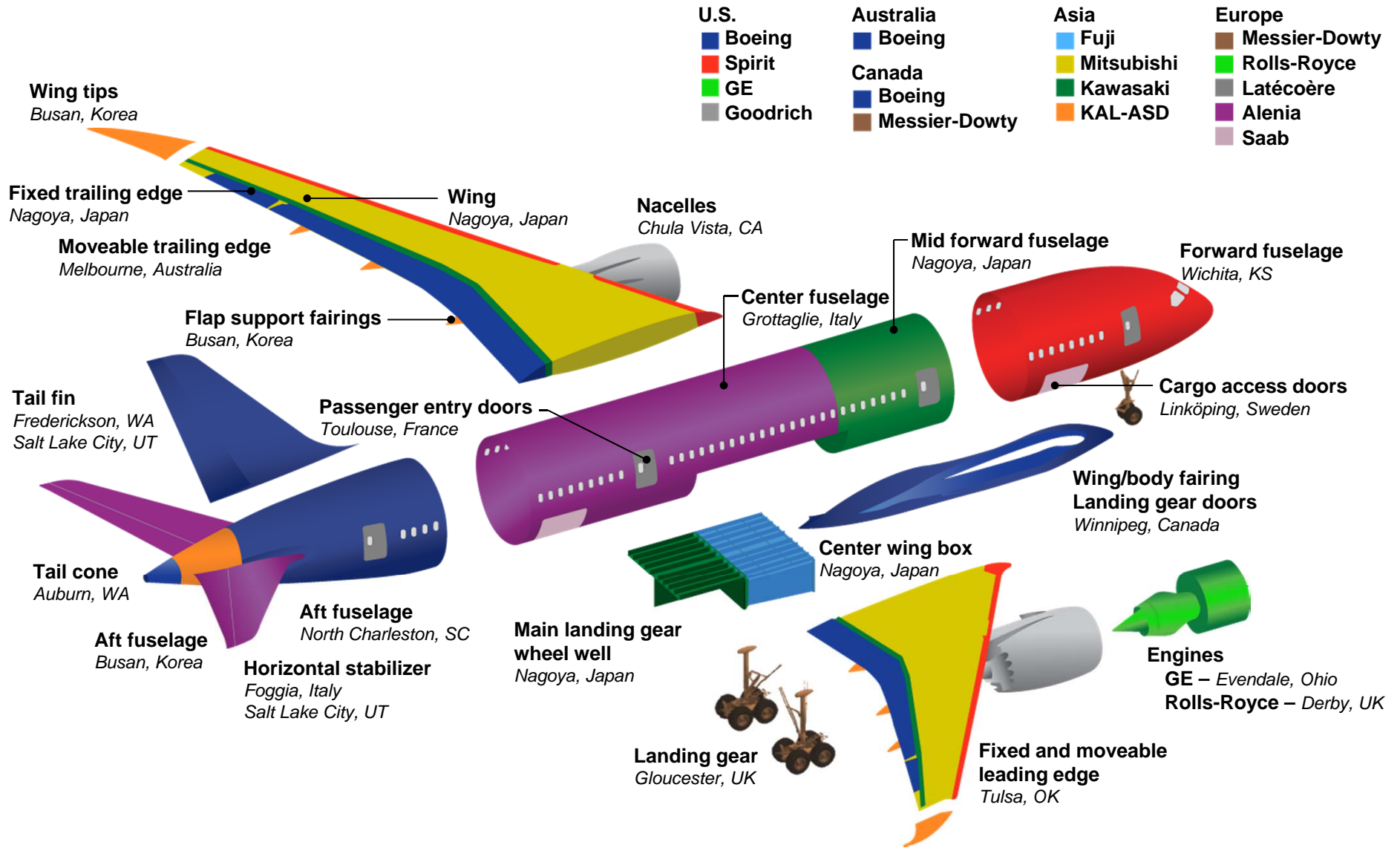
- **Japan – 60 years**
  - Commercial and defense customers
  - OEM, Supply Chain, Environment, Research
- **China – 40 years**
  - #1 BCA international market
  - OEM, Supply Chain, Environment, Research
- **United Arab Emirates – 20 years**
  - Commercial and defense customers
  - Supply Chain, Environment
- **Russia – 20 years**
  - Commercial customers, Ti supply
  - Space, Engineering, Services
- **Brazil – Increasing engagement**
  - Commercial customers
  - OEM, Environment, Research



# Innovation for the future



# Global Partners Bring the 787 Together



# The Challenge, Global Integration

- Single, integrated management system
- Common engineering tools and methods
- Single, integrated manufacturing schedule
- Long-term capacity planning



One world, one team, one plan

