



# Fact Sheet

Boeing Commercial Airplanes  
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## One Boeing, One Team: Collaboration Drives Excellence, Results

Boeing is the world's largest aerospace company and the leading manufacturer of commercial airplanes and defense, space and security systems. For nearly 100 years, Boeing and its people have been responsible for some of history's most stunning and world-changing aerospace and scientific achievements. The company's success and reputation lies in the experience, expertise and creativity of its employees and the resources at its disposal. Here's a snapshot of the resources that Boeing brings to bear to solve technical challenges, manage the business and pursue new opportunities.

### **TECHNICAL FELLOWSHIP**

*The Boeing Technical Fellowship is a network of talent with deep expertise in a wide range of fields. Fellows are deployed to solve technical, engineering and scientific challenges across the company.*

Number of Boeing Fellows	2,158
Composition	Senior Technical Fellows – 61 Technical Fellows – 522 Associate Technical Fellows – 1,575
Technical Fellow numbers by business unit	Boeing Defense, Space & Security – 982 Engineering, Operations & Technology – 684 Boeing Commercial Airplanes – 492
Disciplines represented	13+

### **EDUCATIONAL PROFILE**

*Boeing boasts one of the world's most diverse and educated workforces in the aerospace industry.*

Number of degrees held by Boeing employees	Nearly 150,000
Boeing employees with at least one degree	92,800 – 53 percent of the total Boeing workforce based on employment as of 12/31/2012
Number of science, technology, engineering, and mathematic degrees	64,443
Materials science	2,505
Electrical engineering	6,798
Number of institutions from which employees have earned degrees	Nearly 2,000 schools worldwide

## **TECHNICAL PRINCIPALS**

*Similar to Technical Fellows, Technical Principals are a collection of recognized experts in technical, scientific and engineering-related fields.*

Number of Technical Principals	191
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## **MANUFACTURING CERTIFICATION**

*Employees working in Boeing factories and laboratories and in company operations are required to complete extensive skill, safety and regulatory training.*

Number of certificates held by Boeing employees	Enterprisewide – 2,109,252 Commercial Airplanes – 1,375,116 787 working groups – 411,217
Certificate types and codes	Commercial Airplanes – 1,478 787 working groups – 878
Number of certificate holders	Enterprisewide – 142,790 Commercial Airplanes – 73,297
Number of working groups	787 – 24

## **SKILLS AND EXPERIENCE**

Engineering employees	Enterprisewide – 48,247 Materials science – 42,141 Electrical engineers – 5,860  Commercial Airplanes – 18,242 Materials science – 131 Electrical engineers – 2,063
Manufacturing-coded employees	Enterprisewide – 45,782 Commercial Airplanes – 31,547
Average years of service	Engineering-coded employees – 16.7 years Manufacturing-coded employees – 13.1 years

## **FLIGHT TEST AND EVALUATION**

*Boeing flight test personnel rigorously test Boeing aircraft to ensure safe and efficient operations and to demonstrate that its airplanes perform as designed.*

Flight test personnel	2,700
Pilots	114 (engineering and production) 67 support Commercial Airplanes operations
Years of collective experience	Engineering pilots – 760+ years Production pilots – 380+ years

## **PATENTS**

Number of <u>active patents</u> held by Boeing worldwide	11,000; 1,000 have been filed on the 787 Program
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### **MOSCOW DESIGN CENTER**

*Boeing expands its resource network through the engineering design center based in Moscow, Russia. The center is focused on cooperative projects and collaboration with Russian research institutions and companies.*

Number of personnel	1,200
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### **WORLDWIDE CUSTOMER SUPPORT**

*Boeing provides the most extensive and responsive array of services and support to help its customers remain profitable and healthy. Boeing employees stand ready to support customer needs 24/7.*

Field service representatives	BCA – 330 based in 60 countries BDS – 357 worldwide
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### **BOEING FLIGHT SERVICES**

*Boeing provides comprehensive flight, maintenance and crew safety training that has been accepted by more than 100 regulatory agencies and more than 400 customers worldwide.*

Training campuses	19 located on six continents
Simulators	80+, including eight 787 suites
Instructor pilots	400+, averaging 30+ years of experience each
Maintenance training instructors	100+, averaging 17 years of experience each

### **AIR SAFETY**

*The Boeing Air Safety team works with regulatory agencies and industry working groups and stands ready to support technical and incident investigations.*

Commercial Airplanes Air Safety personnel	70
Air Safety investigators	11
Years of collective experience	Air Safety – 2,070 Investigators – 27+ years average per person

### **TEST AND EVALUATION LABORATORIES**

*Boeing conducts a rigorous test program to verify and validate that the company's products and services operate as designed and meet regulatory and customer requirements. Data also is used to further refine product designs and resolve technical challenges.*

Number of test environments	250, located at more than 60 sites in 23 states
Number of employees dedicated to testing	6,500
Types of test environments and laboratories	Wind/icing tunnels; antenna and radiofrequency ranges; lightning, propulsion and acoustic labs; flight simulators

**BOEING DESIGNATED EXPERTS**

*Boeing designated experts are employees who have been certified and identified as having deep expertise in specified areas. They share knowledge and consult with teams to solve technical problems.*

Number of Boeing designated experts	Enterprisewide – 3,100 9,000 discrete areas of expertise All 11 engineering functions represented
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**BOEING COMMERCIAL AIRPLANES SENIOR ADVISORY GROUP**

*Seven retired executives and technology leaders provide valuable experience-based perspective and counsel to teams designing and manufacturing the world’s most advanced airplanes. They are recognized throughout the aerospace industry for their leadership and expertise.*

Collective Boeing experience	230+ years
Academic achievement	9 degrees in a range of engineering disciplines
Industry awards and accolades	46
Industry and government councils served	10

**STRATEGIC BUSINESS RELATIONSHIPS**

*Boeing maintains technical, industry and civic relationships that provide the company with an expanded network of resources, expertise and information it uses to augment its internal network and support the business strategy. Many Boeing leaders serve these organizations in a range of capacities.*

Memberships and affiliations	<ul style="list-style-type: none"> <li>• AIA, Aerospace Industries Association of America</li> <li>• AIAA, American Institute of Aeronautics and Astronautics</li> <li>• IRI, Industrial Research Institute NAE, NRC and NSF, national academies and councils</li> <li>• CSSP, Council of Scientific Society Presidents</li> <li>• SAE, Society of Automotive Engineering (aerospace)</li> <li>• NAA, National Aeronautic Association RAeS, Royal Aeronautical Society</li> <li>• RTCA, Radio Technical Commission for Aeronautics</li> <li>• NAM, National Association of Manufacturers</li> <li>• SETP, Society of Experimental Test Pilots</li> <li>• IFALPA, International Federation of Airline Pilots’ Associations</li> <li>• EAA, Experimental Aircraft Association</li> <li>• Museum of Flight</li> <li>• Wings Club</li> <li>• ATA, Air Transport Association</li> <li>• IATA, International Air Transportation Association</li> <li>• ISTAT, International Society of Transport Aircraft Trading</li> <li>• FAI, Federation of Aeronautique Internationale</li> <li>• GAMA, General Aviation Manufacturers Association</li> <li>• NBAA, National Business Aviation Association</li> <li>• EAA, Experimental Aircraft Association</li> </ul>
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## MILITARY SERVICE

Military veterans employed by Boeing	Enterprisewide – 24,500 Hired in the past two years – more than 3,600
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