



Service above
and beyond

Functional Check Flight (FCF) Training

Build confidence. Reduce risk. Support airplane acceptance
and safe return to service.





BACKGROUND

A requirement for enhancing safety and reducing risk

Functional Check Flights (FCF), also referred to as Maintenance Check Flights (MCF), are conducted primarily to accept initial airplane deliveries. Newly built airplanes undergo multiple test flights and aircrews need to be proficient in identifying any issues prior to acceptance. FCFs are also conducted following significant maintenance, modification, or storage events to verify airplane performance before return to revenue service. These flights are non-routine by nature, often performed outside normal operational envelopes, and require a high level of technical knowledge, discipline, and crew coordination.

Over the years, the industry has experienced accidents and serious incidents during FCF and MCF operations, highlighting the unique risks associated with these flights. In response to these events, industry stakeholders and regulators have emphasized the need for structured processes, trained crews, and standardized execution.

In 2011, the Flight Safety Foundation (FSF) dedicated its annual safety summit to examining and reducing FCF mishaps. Following this summit, aviation authorities and regulatory agencies issued guidance documents outlining expectations and best practices for the planning and execution of FCFs. These regulators consistently stress

that only trained, qualified, and authorized crews should conduct such flights.

To address the industry recommendations, Boeing developed the Functional Check Flight Course to support operators in building and strengthening their internal FCF programs. Drawing on Boeing's extensive engineering flight test, production flight test, and operational expertise, the course provides operators with practical knowledge, disciplined procedures, and risk-mitigation techniques aligned with original equipment manufacturer (OEM)-recommended practices.

Built on Boeing's extensive testing and expertise, this course provides operators with the knowledge, procedures, and risk-mitigation techniques to safely and successfully perform FCFs.

WHY IT MATTERS

Standardized programs for highest-risk procedures

Airplane acceptance flights are among the highest-risk and least-routine operations an operator performs. These flights occur at critical transition points—such as initial airplane delivery, post-modification, or following extended maintenance—when airplane systems, configurations, and performance characteristics may differ significantly from normal line operations. The margin for error is reduced, requiring crews to validate airplane readiness while managing unfamiliar conditions.

Elevated operational risk

Industry data and findings from the FSF indicate that FCFs and MCFs carry elevated operational risk, especially when conducted without:

- Structured and standardized training programs
- Clearly defined procedures and crew responsibilities
- Formal preparation for non-normal, non-routine, and unexpected scenarios

Boeing FCF training: addressing the challenges

To mitigate these risks, Boeing developed FCF Training to help operators:

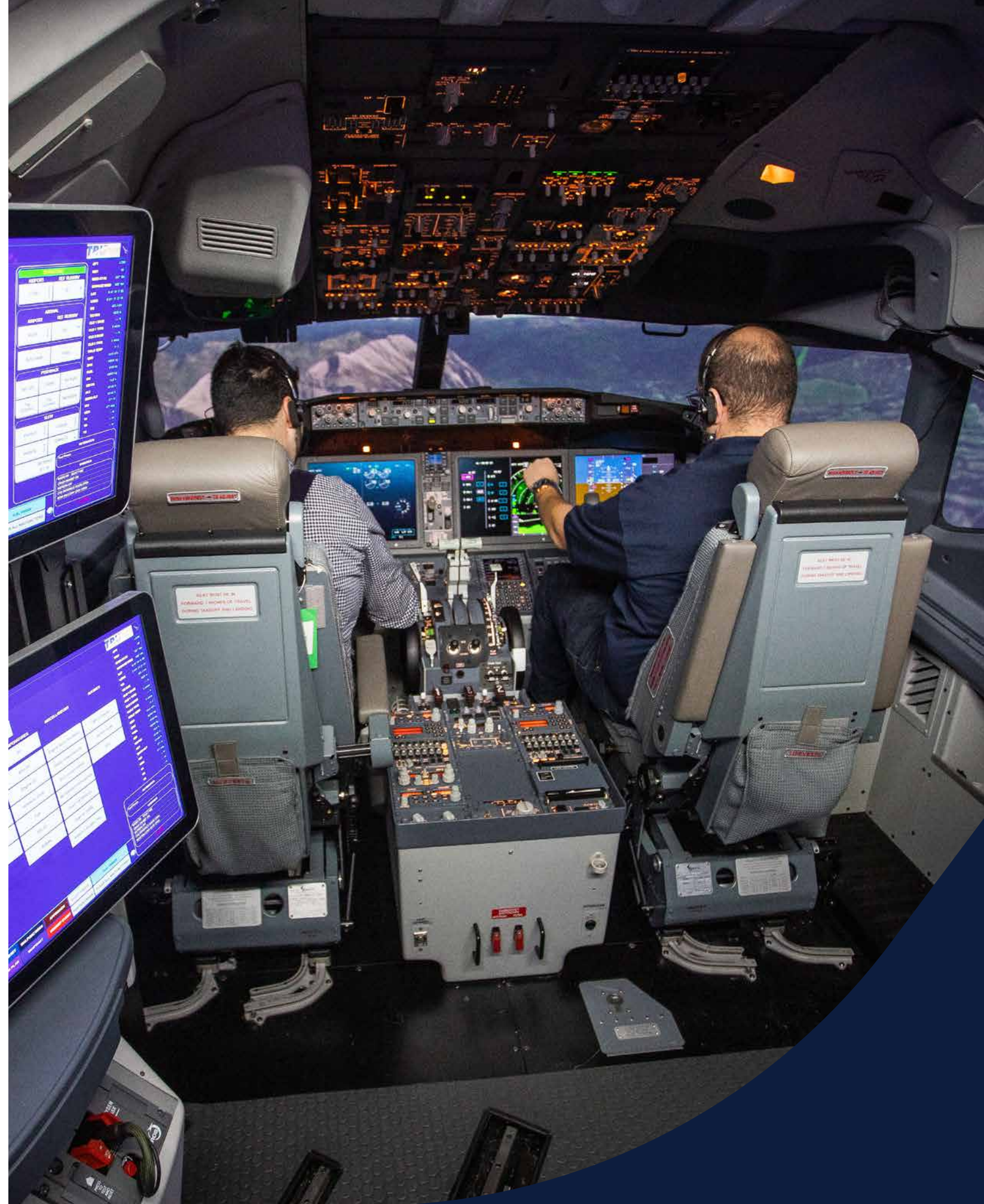
- Standardize internal FCF and MCF programs across fleets and regions

- Reduce variability in execution, communication, and decision-making
- Enhance risk mitigation through structured preparation and scenario-based training
- Apply OEM-recommended practices informed by real-world flight test and operational experience

Benefits of a standardized approach

A standardized approach enables operators to move beyond reliance on individual experience toward a disciplined, repeatable framework. This improves safety, consistency, and confidence during the most critical process of accepting a new airplane and post-maintenance operations.

Traditional line-operations experience alone is not sufficient for these flights. The risk profile is fundamentally different.



SCHEDULE

Course overview

FCF course is a five-day specialty training program delivered by current and qualified Boeing Flight Test pilots and systems operators. The course is designed to provide operators with the knowledge, skills, discipline, and operational framework required to safely conduct FCFs within their own organizations

This is not a regulatory “check-the-box” course. Instead, it is a practical, operationally-focused program that helps airlines:

- Reduce post-maintenance flight risk
- Standardize FCF execution
- Strengthen crew decision-making
- Improve coordination between flight, maintenance, and engineering
- Retain certification and authorization between the operator and their regulator

Each simulator session includes **approximately four hours of FFS time plus 1.5 hours of pre- and post-flight briefing.**



Course curriculum (five days)

Day 1 | Classroom Academics

- FCF purpose and scope
- Operational and safety background
- Regulatory expectations and operator responsibility
- FCF planning methodology
- Risk assessment and mitigation
- Crew roles, responsibilities, and discipline
- Crew Resource Management (CRM) principles specific to FCF operations

Day 2 | Preflight and Ground Checks

- Airplane configuration review
- System setup and verification
- Ground check philosophy
- Maintenance coordination and documentation

Day 3 | In-Flight Checks

- Structured execution of FCF profiles
- System performance verification
- Handling qualities evaluation
- Automation and mode awareness

Day 4 | Continued Flight Checks and Non-Normals

- Expanded FCF sequences
- Non-normal and degraded system scenarios
- Decision-making under uncertainty

Day 5 | Student-Led FCF Scenario

- End-to-end FCF planned and executed by students
- Instructor observation and coaching
- Post-flight debrief and lessons learned

BENEFITS

The most comprehensive FCF program for Boeing airplanes

Why Boeing?

There are many FCF courses out there, so what makes Boeing so unique? Because you have the opportunity to train with the organization that designed, built, and tested the airplane you are flying. Only Boeing's FCF training program brings together the knowledge, real-world experience, and expert instructors to deliver the most comprehensive training available.

- OEM-developed FCF methodology
- Instructors with real flight test and FCF experience
- Training built on industry safety recommendations
- Proven global delivery capability

Key benefits for operators

- Reduces risk during post-maintenance and non-routine flights
- Establishes standardized FCF discipline across crews
- Enhances safety culture and operational confidence
- Accelerates development of internal FCF departments
- Leverages OEM knowledge from Boeing Flight Test professionals
- Enhances coordination between flight operations, maintenance, and engineering

Train with the organization that designed, built, and tested the airplane.



Experienced instructors

Boeing Flight Test Pilot and System Operator instructors are former airline pilots, test pilots, military aviators, and aviation training specialists who combine decades of operational experience and CBTA coaching techniques. Each instructor is OEM-qualified and undergoes continuous standardization to ensure global consistency in evaluation and delivery.

Boeing instructors pedigree

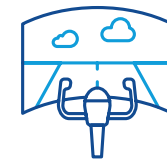
Boeing instructors are former airline pilots, military aviators, and aviation experts, bringing real-world experience into the classroom.



Aviation Experience:

~10,000+ hours

Director of Flight Operations, Chief Pilots, Line Training Captains, Line Check Captains, Flight Technical Pilots, Type Rating Examiners/Simulator Instructors, Professional Flight Engineers, and Senior Aircraft Maintenance Technicians



Primary Role:

- Facilitator
- Integrator/Mentor
- Human Factors
- Threat Error Management
- Safety Management Systems
- Competency-based Training



Goal:

Provide you with industry leading training, enabling your career success



DETAILS

Course objectives, methodology, and requirements

Who should attend

This course is ideal for:

- Designated FCF pilots
- Test, acceptance, and delivery crews
- Flight operations leaders establishing or expanding an FCF department
- Maintenance and engineering personnel involved in post-maintenance return-to-service
- Operators introducing new airplane models or major modifications
- Civil Aviation Authority regulators wishing to establish regulatory policy for FCF or MCF programs for airlines and airplane operators.

Prerequisites

- Participants must be type-rated and current on the applicable airplane type.
- No prior student preparation is required as all course materials are provided on day one.
- A dedicated simulator operator is not required; Boeing instructors operate the FFS while delivering instruction.

Objectives

By the end of the course, participants will be able to:

- Define the fundamentals of an internal FCF program
- Plan and execute FCFs using structured risk mitigation
- Apply Boeing-recommended FCF procedures by airplane model
- Evaluate airplane systems performance methodically
- Manage non-normal indications during non-routine operations
- Demonstrate disciplined Crew Resource Management (CRM) in high-workload environments
- Conduct a student-led, end-to-end FCF scenario

Delivery and methodology

- Classroom instruction and FFS sessions
- Scenario-based training reflecting real-world FCF challenges
- Boeing instructors operate the simulator—no dedicated simulator operator required
- Reference documents tailored to the airplane model used during training
- Strong emphasis on safety, CRM, risk mitigation, and FCF discipline

Class size and participant profile

- **Minimum/Maximum:** One to three students
- **Typical crew:** Two type-rated pilots
- **Third seat:** May be occupied by a pilot, engineer, systems operator, maintenance, or technical personnel

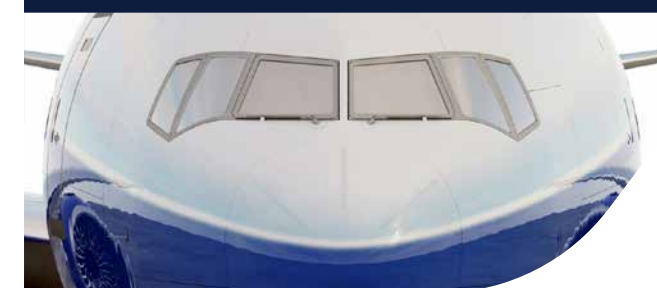
All course materials are provided on day one—no prior preparation required.

Airplane coverage

The FCF Course is available across multiple Boeing airplanes, including:

- 737 NG and 737 MAX
- 747 (non-model specific)
- 767 (non-model specific)
- 777
- 787

Training may be conducted at Boeing training locations or at the customer's facility, with classroom and simulator arrangements coordinated through the operator.



Course objectives, methodology, and requirements (cont.)

Key requirements

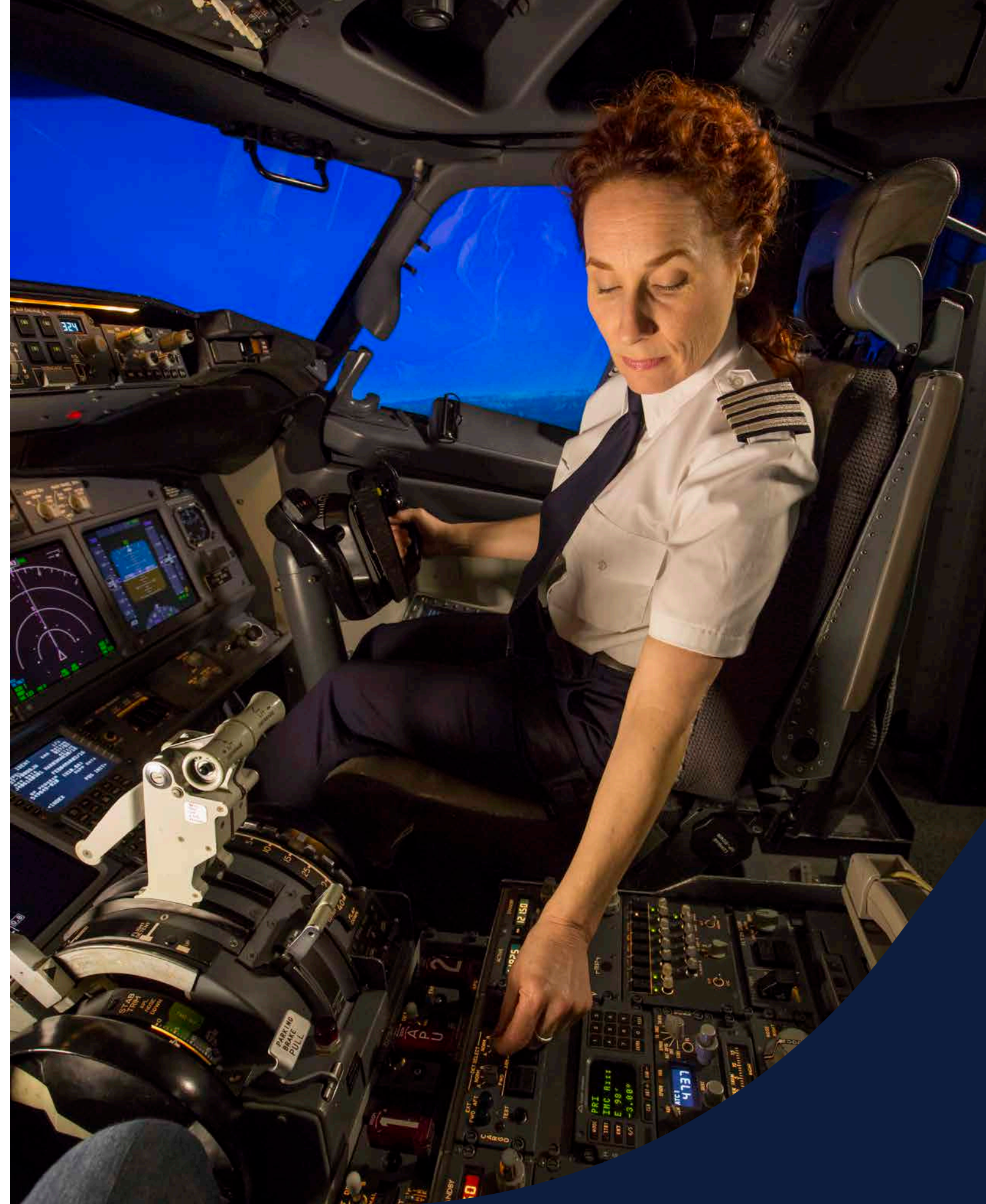
- **Contract requirements:** All travel costs, including visas, must be included in the customer contract; no travel rebill is available.
- **Instructor training/qualifications:** visas are required for instructor travel and sufficient lead time is necessary.
- **Limited instructor resources:** Scheduling coordination must be done through the BTEFCFLoadTeam@exchange.boeing.com
- **In-airplane FCF assistance:** Boeing pilots and systems operators can provide in-airplane FCF assistance on a case-by-case basis via separate contract.

Regulatory and certification considerations

- This course is not designed to meet specific FAA, EASA, or other regulatory certification requirements
- Authorization and qualification remain between the operator and their regulator
- The course provides training records and a Certificate of Completion for participants

Optional services

- In-airplane FCF assistance by Boeing pilots and systems operators
 - Available on a case-by-case basis under separate contract
- Dual-course delivery for multiple airplane models (subject to scheduling and instructor availability)



REGISTRATION

Spots are limited; sign up today

Contact your Boeing Flight Training representative

or submit an inquiry to begin planning your FCF training here:

trainingservices@boeing.com

Pricing and scheduling are provided upon request once:

- Training location
- Airplane model(s)
- Number of courses
- Preferred dates





Service above
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Boeing Global Services Marketing

P.O. Box 3707
Seattle, WA 98124-2207

services.boeing.com

