



Boeing in Brazil

Boeing and Brazil enjoy a deep and mutually beneficial relationship. Boeing aircraft have been flying in the Brazilian skies for nearly a century—our first delivery to Brazil was a biplane fighter aircraft with wooden wings in 1932.

GOL Airlines is the largest operator of Boeing aircraft in Latin America, including the super efficient 737. Starting with sustainable aviation fuels (SAF), Boeing has worked with Brazilian partners on a number of important collaborative projects, and continues to drive for a more sustainable future by investing in effective SAF production, fleet technology and operational capabilities.

## **OUR COMMITMENT AND PARTNERSHIP**



Date of first aircraft delivery to Brazil (F4B-4 fighters)



Years of Boeing satellites in service to Brazilian operators



2,105

Expected demand from Latin America and the Caribbean over the next two decades



230+

Boeing commercial aircraft deliveries in Brazil to 13 operators since 1960



Students impacted by STEM-focused programs



2024

First internship program of Boeing in Brazil begins in 2024

### INVESTMENTS

Boeing's investments in Brazil have helped grow the local aerospace sector, creating jobs and driving innovation for mutual benefit.



In initiatives driving social economic and environmental benefits within Brazilian communities developing feedstock for SAF



Boeing Research and Technology facility in Sao Jose dos Campos. Brazil, opened in 2014



**Boeing Engineering** and Technology Center in Brazil. inaugurated in 2023

# **BOEING IN BRAZIL**

# Sustainable Aviation Fuels

Boeing is supporting innovative solutions for Sustainable Aviation Fuel (SAF) in Brazil. Partnering with the State University of Campinas, UNICAMP, Boeing created a database called—SAFMaps which stakeholders can use to understand the sustainability of the most promising feedstock in specific areas of Brazil. Additionally, in collaboration with the Roundtable on Sustainable Biomaterials, Boeing is investing \$2 million on initiatives that maximize social, economic and environmental benefits to local communities engaged in developing feedstock that can be used for SAF production. Boeing participated in discussions that established RenovaBio — Brazil's biofuel legal framework that creates a carbon credit market with defined goals for execution.

In 2011, Boeing began its first Brazilian environmental initiative, the Roadmap for Sustainable Aviation Biofuels. The goal of this initiative was to conduct a national assessment of technological, economic, and sustainability challenges and opportunities linked with the development and commercialization of sustainable biofuel for aviation in Brazil.

# **Boeing Commercial Airplanes**

In 1960, Boeing delivered its first commercial airplane to Brazil—a 707 to VARIG. Since then, Boeing has delivered more than 230 commercial airplanes, including cargo planes, to 8 operators.

Boeing's two largest commercial customers in Brazil are GOL Airlines, the 13th-largest 737 operator in the world, and LATAM Airlines Brazil, part of the Santiago, Chile-based Group, which operates 777s and 767s. Brazil's commercial aviation market accounts for about 40 percent of the overall market for Central and South America.

# **Boeing Global Services**

Boeing has worked in close partnership with its Brazilian airline customers to bring product improvements and services to their fleets. Examples include the Short Field Performance package for the Next-Generation 737, the Boeing Sky Interior, spare-part pilot projects with GOL and the airplane performance monitoring and consulting solution and toolbox remote for GOL.

# Boeing Defense, Space and Security

Our first deliveries to Brazil were 14 biplane fighter aircraft called the F4B-4 in 1932. Other Boeing products acquired by the Brazilian military and government include Harpoon missiles; 737-200 commercial jetliners as presidential transport airplanes in 1975; and A-4 Skyhawk light attack bombers delivered to the Brazilian Navv in 1997.

Boeing has also been involved with the Brazilian satellite communications industry since its inception in the early 1970s. In 1974, Boeing heritage company Hughes built a ground station in Tanguá for Embratel. Then, from 1982 until 1998, Embratel ordered a total of six satellites—two 376 satellites (designated Brasilsat A1 and A2) plus an operations control center in Guaratiba, and then four more powerful B-series satellites. All B-series satellites were in orbit by 2000; all are still active except B1.

# Boeing Research & Technology

Since 2014, Boeing Research & Technology (BR&T-B) has achieved 35 patent-pending inventions, with 17 of them granted. BR&T-B has developed an algorithm for flight management computers (FMC) to continuously track the optimal cruising altitude, resulting in a fuel consumption reduction of 1% to 3% for medium and long-haul flights. Collaborating with local entities, airlines, agencies, R&D institutes, and universities, BR&T-B has made advancements in research related to autonomous flight, airspace optimization, fleet operations, next-generation metals, metal and composite recycling, aeroacoustics, biofuels, remote sensing, crowd behavior, and cabin comfort.

# **Boeing Global Engagement**

Engineering and Technology Center The Boeing Brazil Engineering and Technology Center is part of a global network of 15 hubs working on advanced engineering and technology that drives aerospace innovation.

Boeing engineers based in Brazil support the company in various areas of aviation engineering, including support for current and future programs.

# **FLEET AND SERVICES**

# **Commercial**



#### **LATAM Brazil**

In service: 767-300ER (13), 777-300ER (10), 767-300F (3)

On order: 777F (1)

#### Gol

In service: 737-700 (23), 737-800 (95), 737-8 (9)

On order: 737 MAX (100+)

#### Azul

In service: 737-400F (2)

# Sideral Air Cargo

In service: 737-300 (1), 737-300C (2), 737-300SF (3), 737-400SF (7), 737-500 (2)

#### **Modern Logistics**

In service: 737-300SF (2), 737-400SF (2)

# **Defense & Space**



#### Air Force

In service: Harpoon missiles

Retired: KC-137 Tanker (4)

## Navy

In service: A-4M Skyhawk (12 in operation, 13 retired) ScanEagle

#### Satellites

(6 retired)

# **Services**



#### Various airline customers:

Jeppesen Distribution Manager (JDM Pro)

AerData Engine Fleet Planning and Costing (EFPAC)

Airplane Health Management

Maintenance Performance

Spare Parts Packages and Support

# A HISTORY OF PARTNERSHIP

1932

Boeing delivers first F4B-4 fighter jets to the Brazilian Armed Forces

1960

First 707 commercial airplane delivered to VARIG

1985

First satellite launched for Embratel

2000

Boeing's sixth Brazilian satellite launched in orbit

2014

BR&T Brazil center established

2018

GOL takes delivery of its first 737 MAX 8, total MAX orders reach 135 aircraft

2020

Boeing supported Educando's STEM Brazil outreach to train 2,240 teachers in 317 new schools in the States of Amazonas, Minas Gerais and Paraná.

2021

Boeing begins development of SAFMaps—a database aimed to assist stakeholders in visualizing the potential availability of feedstock for SAF production in Brazil

2023

Boeing Brazil Engineering and Technology Center official opening