



HOW BUSINESS FLIES



PROPULSION SYSTEMS

Safran Aircraft Engines

Safran Nacelles

Safran Transmission Systems

ELECTRICAL POWER SYSTEMS

Safran Electrical & Power

Safran Power Units

LANDING AND BRAKING SYSTEMS

Safran Landing Systems

AVIONICS SYSTEMS

Safran Electronics & Defense

CABIN INTERIORS & SEATS

Safran Cabin

Safran Passenger Solutions

Safran Seats

ONBOARD SYSTEMS

Safran Aerosystems

SAFRAN OVERVIEW

SAFRAN IS AN INTERNATIONAL HIGH-TECHNOLOGY GROUP, OPERATING IN THE AVIATION (PROPULSION, EQUIPMENT AND INTERIORS), DEFENSE AND SPACE MARKETS. ITS CORE PURPOSE IS TO CONTRIBUTE TO A SAFER, MORE SUSTAINABLE WORLD, WHERE AIR TRANSPORT IS MORE ENVIRONMENTALLY FRIENDLY, COMFORTABLE AND ACCESSIBLE. SAFRAN HAS A GLOBAL PRESENCE, WITH 84,000 EMPLOYEES AND HOLDS, ALONE OR IN PARTNERSHIP, WORLD OR EUROPEAN LEADERSHIP POSITIONS IN ITS CORE MARKETS. SAFRAN UNDERTAKES RESEARCH AND DEVELOPMENT PROGRAMS TO MAINTAIN THE ENVIRONMENTAL PRIORITIES OF ITS R&T AND INNOVATION ROADMAP.

 more than
84,000
EMPLOYEES
WORLDWIDE

 in
30
COUNTRIES

 **€24.6**
BILLION IN SALES
generated in 2019

#1 WORLDWIDE AEROSPACE:

- ENGINES FOR SINGLE-AISLE COMMERCIAL JETS (in partnership with GE)
- HELICOPTER ENGINES
- LANDING GEAR
- WHEELS AND CARBON BRAKES¹⁾
- AIRCRAFT WIRING SYSTEMS
- HELICOPTER FLIGHT CONTROLS
- NACELLE SYSTEMS FOR BUSINESS JETS
- CABIN INTERIORS FOR REGIONAL AND BUSINESS AIRCRAFT
- EVACUATION SLIDES AND OXYGEN SYSTEMS

7%
OF SALES INVESTED
IN R&D

Safran applies a strategy based on innovation and continuous improvement in competitiveness, working closely with our suppliers and partners to address today's economic, societal and environmental challenges.

¹⁾ Mainline commercial jets with more than 100 seats.

SAFRAN IN BUSINESS AVIATION FROM NOSE-TO-TAIL

WITH DECADES OF EXPERIENCE IN AVIATION, SAFRAN MASTERS THE TECHNOLOGIES THAT MAKE AIRCRAFT OF ALL SIZES FLY— FROM LARGE AIRLINERS TO HELICOPTERS AND BUSINESS JETS.



GREEN INNOVATION

By investing in integrated propulsion systems, “more electric” aircraft, and operational fuel efficiency (software and consulting), Safran meets the market’s current and evolving requirements in terms of reliability and environmental standards.

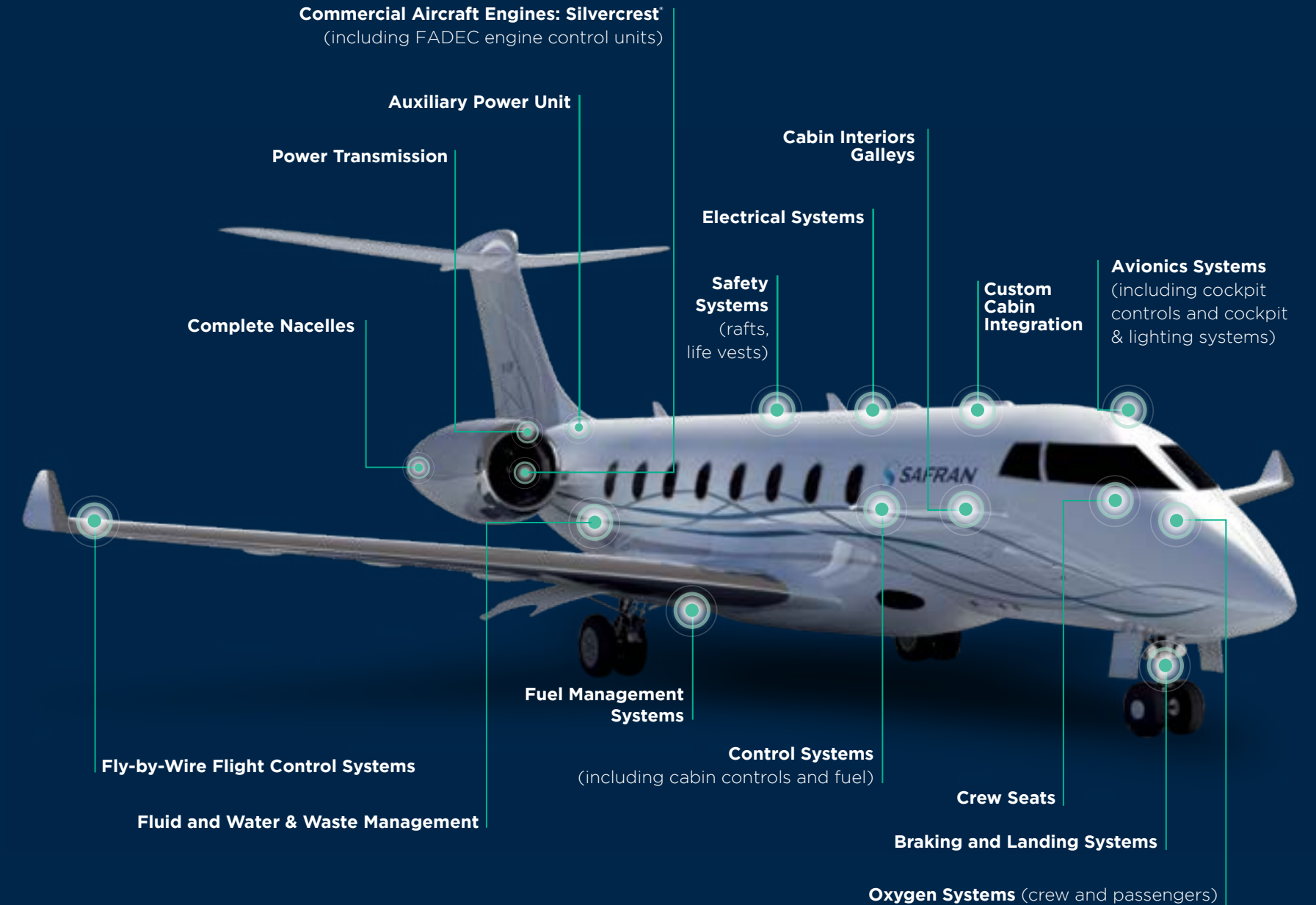


CUSTOMER SUPPORT GUARANTEED

Safran has a global customer service network that provides after-sales and customer support, as well as maintenance, repair and overhaul services for its business aviation customers.

AN UNMATCHED OFFERING FOR BUSINESS AVIATION

Business jet manufacturers can rely on Safran for their equipment needs ranging from engines, nacelles, thrust reversers, power transmissions, auxiliary power units, electrical power management systems, to landing gear, wheels, brakes, navigation systems, flight monitoring solutions and flight controls.





PROPULSION SYSTEMS POWERING BUSINESS JETS

SAFRAN PROVIDES BUSINESS AIRCRAFT MANUFACTURERS WITH ENGINES AND NACELLES SEPARATELY OR AS AN INTEGRATED PROPULSION SYSTEM.

ENGINES

Our technological excellence results from decades of experience as an engine manufacturer. We cover the entire lifecycle of business jet engines from design, development and testing, to production, sales and support.

#1 WORLDWIDE IN ENGINES

for single-aisle commercial jets
(in partnership with GE)

110 YEARS OF AIRCRAFT ENGINE EXPERTISE

NACELLES

Safran is one of the main worldwide integrators of aircraft engine nacelles for the business jet market. The nacelle is a major system that uses high technology equipment to reduce fuel consumption, improve performance and facilitate maintenance on the engines. With the use of composite materials or material alloys, extensive acoustic treatments as well as aerodynamic design, the nacelle is lighter and reduces engine noise emission.

#1 WORLDWIDE FOR NACELLES on top-of-the-line business jets

MORE THAN 30 YEARS OF EXPERIENCE in manufacturing nacelles

INTEGRATED PROPULSION SOLUTIONS

With these combined capabilities, Safran is pioneering a new generation of integrated propulsion systems for business jets with enhanced performance, reliability, cost-effectiveness and environmental-friendliness.

POWER TRANSMISSION SYSTEMS

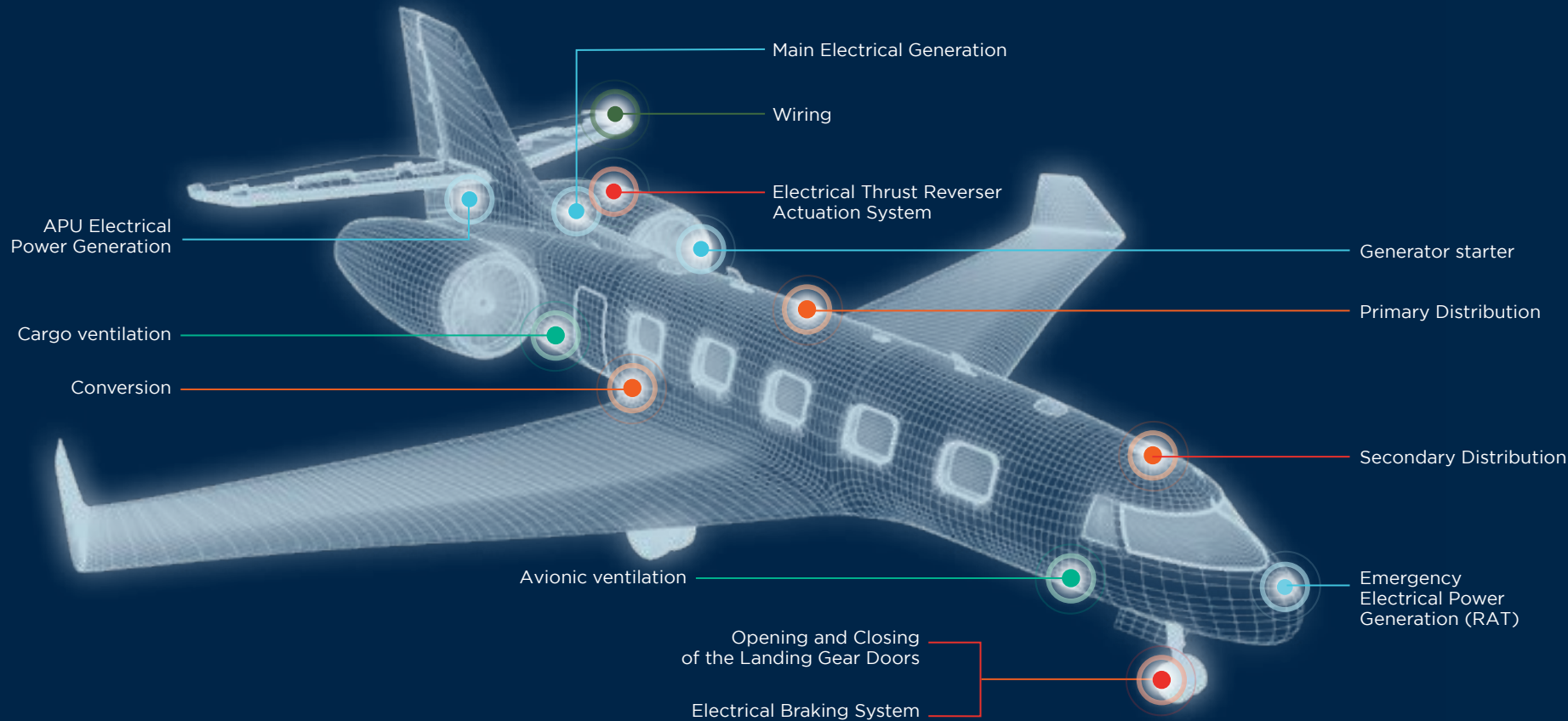
Safran produces mechanical power transmission systems that ensure optimized size, weight and cost of the overall system. The power transmission system transfers mechanical power from jet engine to aircraft and engine equipment, including starter, electrical power generator and fuel pump, that are essential for successful operation.

CUSTOMERS:

- Bombardier
- Dassault Aviation
- Embraer
- Gulfstream
- Textron Aviation
- Boeing

ELECTRICAL POWER SYSTEMS

INNOVATING FOR “MORE ELECTRIC” BUSINESS AIRCRAFT



- POWER & DATA GENERATION
- PRIMARY & SECONDARY DISTRIBUTION
- ELECTRICAL EQUIPMENT
- WIRING
- VENTILATION

INTEGRATED SOLUTIONS AND SERVICES

ALL ONBOARD ELECTRICAL FUNCTIONS

As a recognized expert in aircraft electrical systems, Safran covers all onboard electrical functions, including generation, distribution, conversion, electrical wiring interconnection systems, load management, systems integration, filtration, and ventilation.



“MORE ELECTRIC” AIRCRAFT

We are fully committed to developing electrical aircraft systems and equipment to meet the economic and environmental challenges facing our customers. Our consolidated offering positions us as a world leader in power systems for “more electric” aircraft.



AUXILIARY POWER UNITS

Safran has engineered a full range of power units for business aviation. The SPU300 is a state-of-the-art power source designed for long range, high performance business jets. The SPU150 is the definition of reliability and cost effectiveness for the midsize to super midsize segments. The eAPU has been designed to meet the highest requirements of “more electric” aircraft.



#1 WORLDWIDE
IN AIRCRAFT ELECTRICAL
INTERCONNECTION SYSTEMS

#2 WORLDWIDE
IN ELECTRICAL
POWER & DATA GENERATION

A WORLD LEADER
IN APUS FOR BUSINESS JETS,
HELICOPTERS AND MILITARY
AIRCRAFT

CUSTOMERS:

- Bombardier
- Dassault Aviation
- Embraer
- Textron Aviation



LANDING AND BRAKING SYSTEMS INTEGRATION

HELPING BUSINESS JETS TAKE OFF AND LAND

AS A WORLD LEADER IN THE DESIGN, DEVELOPMENT, MANUFACTURE AND SUPPORT OF AIRCRAFT LANDING AND BRAKING SYSTEMS, SAFRAN BRINGS OVER FIVE DECADES OF EXPERIENCE TO BUSINESS JET PLATFORMS.

Combining advanced engineering, integrated systems technology and in-depth service experience, we deliver cost-efficient solutions to the world's leading business jet manufacturers. Our offering includes landing gear, landing gear extension and retraction systems, monitoring systems, steering systems, braking systems, and wheels and brakes integration.

- CUSTOMERS:**
- Bombardier
 - Daher
 - Dassault Aviation
 - Gulfstream
 - Piaggio

Our focus is to ensure that the future generation of landing and braking systems are not only reliable and easy to maintain, but lighter, quieter, more cost-efficient and robust, ultimately providing overall value across the full lifecycle of a business jet program.

** Mainline commercial jets with more than 100 seats.*



PROVIDING SUPPORT TO MORE THAN **5,700 BUSINESS JETS** in service



WORLD LEADER IN AIRCRAFT LANDING SYSTEMS



PIONEER AND WORLD LEADER IN CARBON BRAKES*



AVIONICS SYSTEMS

INNOVATING FOR ENHANCED FLIGHT SAFETY

SAFRAN'S COMPREHENSIVE AVIONICS OFFERING COVERS FLIGHT CONTROL SYSTEMS, ENGINE CONTROL SYSTEMS, FLIGHT DATA MANAGEMENT SYSTEMS AND NAVIGATION SYSTEMS.

FLIGHT CONTROL SYSTEMS

From throttle control assemblies and actuators to sensors, illuminated switches, and instrument panels and displays, we develop and produce an advanced range of flight control systems.

ACTIVE SIDE STICK UNIT

By electronically connecting the aircraft's side sticks, this innovation will provide pilots with tactile feedback and greater situational awareness.



ENGINE CONTROL SYSTEMS

As an expert in automated engine control systems, we have partnered with **BAE Systems** to create **FADEC International**. This joint venture provides **FADEC (Full Authority Digital Engine Control)** units for enhanced safety, reliability and engine performance.

FLIGHT DATA ANALYSIS

With Cassiopée, we offer a full, integrated range of equipment for the acquisition, management, recording and analysis of flight data **to enhance safety and maintenance.**

NAVIGATION SYSTEMS

Navigation systems play an important role in flight safety. With **SKYNAUTE**, we offer the most cost-effective, reliable and compact inertial navigation system, ideal for business jets.



#1 WORLDWIDE IN ENGINE CONTROL UNITS
for commercial aircraft,
in partnership with BAE Systems



PIONEER IN FLIGHT DATA MANAGEMENT SYSTEMS AND AERONAUTICAL MAINTENANCE SUPPORT

- CUSTOMERS:**
- Bombardier
 - Cessna
 - Daher
 - Dassault Aviation
 - Embraer
 - Gulfstream
 - Textron Aviation



CABIN INTERIORS & SEATS

MAXIMIZING COMFORT AND FUNCTIONALITY

SAFRAN PROVIDES COMPLETE, LUXURIOUS INTERIORS FOR SMALL AND LARGE BUSINESS JETS, INCLUDING THE MOST COMFORTABLE SEATING SOLUTIONS.

COMPLETE CABIN INTERIORS

Safran's composite technology is paired with finishing expertise in upholstery, paint and decor to wrap the business jet interior in high-performance luxury. With full in-house design, certification and engineering capability, we are the trusted partner to meet any exacting demand. The product line includes ceilings, sidewalls, passenger service units, lighting, cockpit doors, cargo compartments and flight deck liners.

MONUMENTS AND GALLEY APPLIANCES

Safran offers advanced and lightweight monuments with beautiful finishing, including exotic woods and inlays as well as sleek, modern finishes. The product line includes lavatories, galleys, divans, closets, slide ledges and tables. For a culinary experience, we offer ovens, microwaves, espresso and beverage makers that meet the unique needs and standards of business jet owners and operators.

COMPOSITES & COMPONENTS

Safran offers an array of components to support in-house completion centers. Processes & products include crush core press, layup, vacuum forming, articulating tables, solid surface counters and shaped composite panels up to 120" long.

PILOT SEATS

Based on our long experience in seating solutions, we design and produce pilot seats for business aircraft. Through the use of innovative and proven materials, we provide maximum flexibility, enabling optimal use of space while fully meeting the needs of the cockpit. Our technical seats offer comfort, design and high quality.

CUSTOMERS:

- Bombardier
- Honda
- Gulfstream
- Embraer
- Dassault Aviation



#1 WORLDWIDE
IN CABIN
INTERIORS
FOR REGIONAL AND BUSINESS
AIRCRAFT

ONBOARD SYSTEMS

IMPROVING BUSINESS JETS PERFORMANCE

A KEY INTERNATIONAL PLAYER IN ONBOARD SYSTEMS, SAFRAN DESIGNS AND MANUFACTURES HIGH-TECH SOLUTIONS FOR BUSINESS JETS.



OVER
7,000
BUSINESS JETS
EQUIPPED WITH OUR WATER
& WASTE MANAGEMENT SYSTEMS

WATER & WASTE MANAGEMENT SYSTEMS

With over 50 years' experience in pioneering integrated water & waste systems, Safran is the world's leading supplier, designing and manufacturing a wide range of reliable, innovative, and cost-effective products. Specializing in water & waste systems design, integration and manufacturing, it is the only supplier to have integrated and installed complete aircraft water & waste systems. We supply our customers with innovative solutions and ideas for business aircraft – from complex full water & waste systems through to equipment and supporting technology.

FUEL TANK INERTING SYSTEMS & FUEL MANAGEMENT SYSTEMS

Safran has been a world leader in management systems for over 60 years. We design and manufacture inerting systems that reduce the risk of combustion of flammable materials stored in a fuel tank by injecting inert gas. Our modelling and test installation capabilities enable us to assist our customers from system specification to certification. Safran also provides fuel management systems and sub-systems, in particular for gauging, tank filling, and engine supply.

SAFETY SYSTEMS

Safran is a world leader for safety equipment, with a long experience in designing and producing rafts, life vests and associated equipment.

OXYGEN SYSTEMS & OXYGEN MASKS

Safran designs and manufactures oxygen systems and oxygen masks for pilots. Exploiting its innovation, design, simulation, and testing capabilities, Safran can supply its customers with advanced safety systems, guaranteeing unrivalled performance and helping to optimize operating costs.



CUSTOMERS:

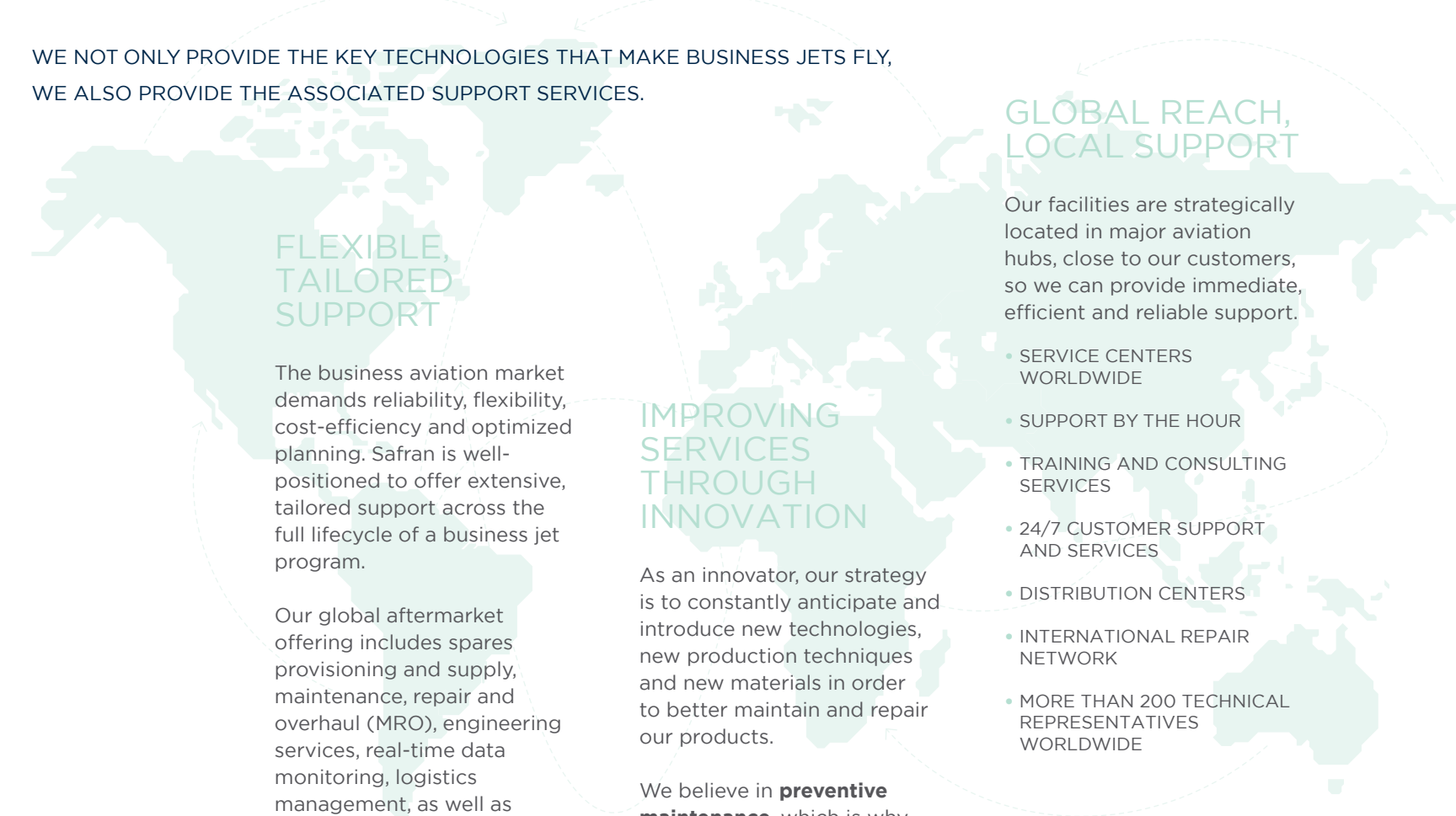
- Bombardier
- Gulfstream
- Boeing
- Textron Aviation
- Dassault Aviation
- Embraer



CUSTOMER SUPPORT

PROVIDING COMPREHENSIVE WORLDWIDE CUSTOMER SUPPORT

WE NOT ONLY PROVIDE THE KEY TECHNOLOGIES THAT MAKE BUSINESS JETS FLY, WE ALSO PROVIDE THE ASSOCIATED SUPPORT SERVICES.



FLEXIBLE, TAILORED SUPPORT

The business aviation market demands reliability, flexibility, cost-efficiency and optimized planning. Safran is well-positioned to offer extensive, tailored support across the full lifecycle of a business jet program.

Our global aftermarket offering includes spares provisioning and supply, maintenance, repair and overhaul (MRO), engineering services, real-time data monitoring, logistics management, as well as on-site and technical support and training.

IMPROVING SERVICES THROUGH INNOVATION

As an innovator, our strategy is to constantly anticipate and introduce new technologies, new production techniques and new materials in order to better maintain and repair our products.

We believe in **preventive maintenance**, which is why we leverage our expertise in data analytics to conduct diagnosing and forecasting on the condition of business aircraft.

GLOBAL REACH, LOCAL SUPPORT

Our facilities are strategically located in major aviation hubs, close to our customers, so we can provide immediate, efficient and reliable support.

- SERVICE CENTERS WORLDWIDE
- SUPPORT BY THE HOUR
- TRAINING AND CONSULTING SERVICES
- 24/7 CUSTOMER SUPPORT AND SERVICES
- DISTRIBUTION CENTERS
- INTERNATIONAL REPAIR NETWORK
- MORE THAN 200 TECHNICAL REPRESENTATIVES WORLDWIDE

**POWERED
BY TRUST**

[safran-group.com](https://www.safran-group.com)

