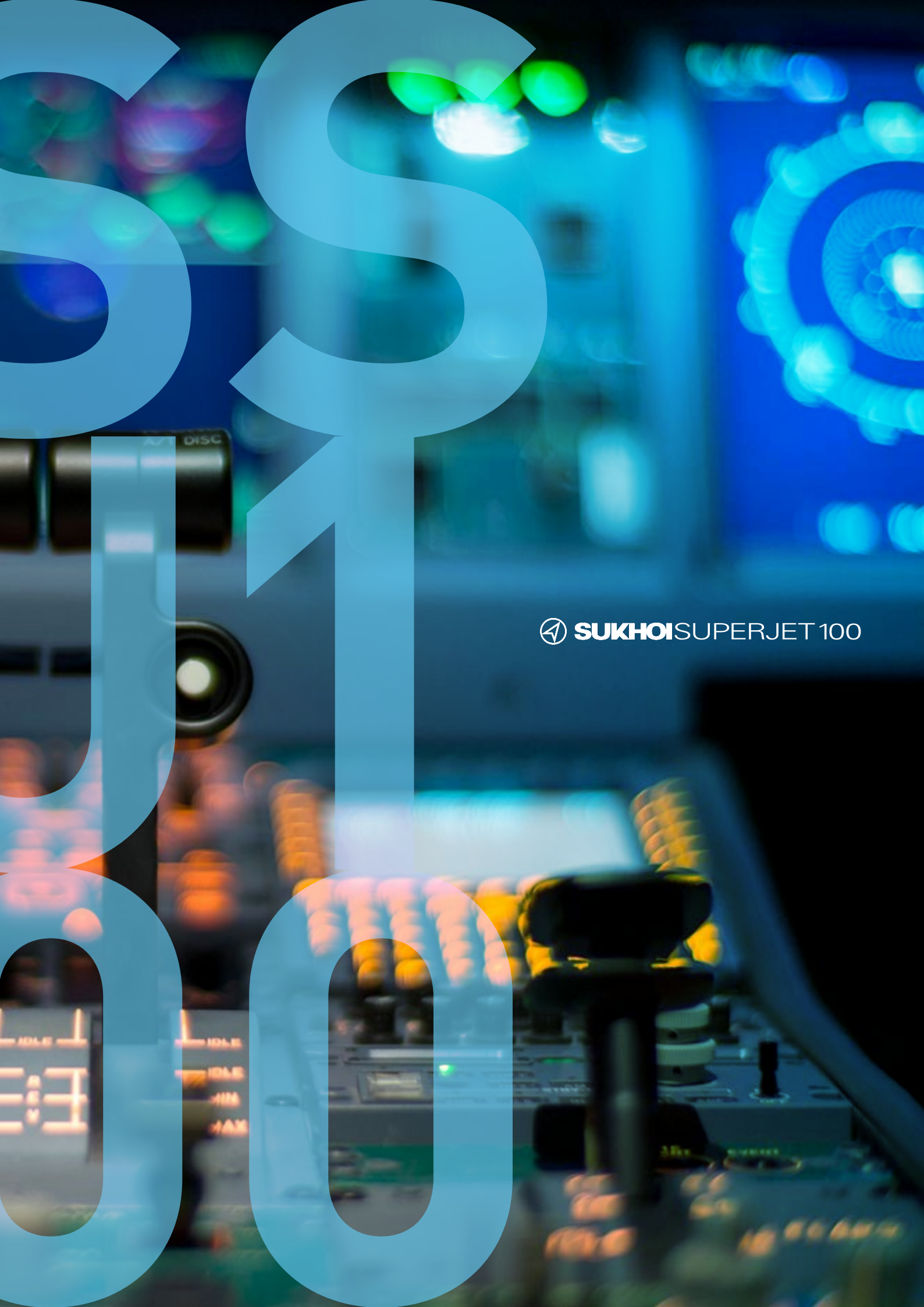

SUKHOI SUPERJET 100

The SSJ100 timeline

SSJ100_
The most reliable full fly-by-wire in its class,
excellence in design –
proven in service:

The SSJ100 – a fusion of Russia's famed aviation design and production skills with the latest systems from the world's leading aerospace suppliers – offers standards of economy, performance, environmental efficiency and passenger comfort never before seen in a 100-seat airliner.

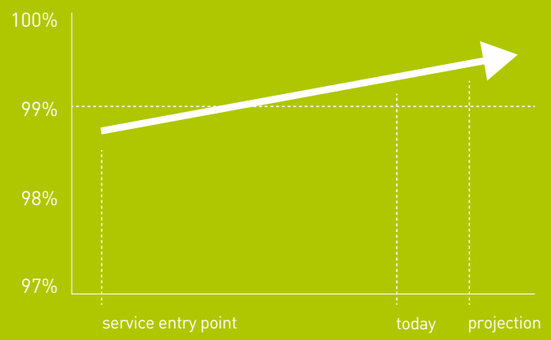
Ease of maintenance has been built into the SSJ100 from the start. The manufacturer's vision of creating an all-new aircraft with engines and airframe designed together has resulted in the SSJ100 offering reduced costs combined with excellent reliability. The SSJ100 uses well-proven state-of-the-art avionics, and is the first aircraft of its size equipped with a full fly-by-wire system to maximize efficiency and reduce running costs.

Partnerships with established maintenance operators have created a global network that integrates perfectly with existing fleet operations at even the remotest airports. The "SuperCare Plan" offers SSJ100 operators an efficient and reliable maintenance service with fixed rates per flight hour.

With big-jet feel in a compact form, the SSJ100 is ideally suited to emerging airline markets, and perfect for operators looking to right-size their fleets.

Excellent dispatch reliability
on a wide range of cycles

99+%



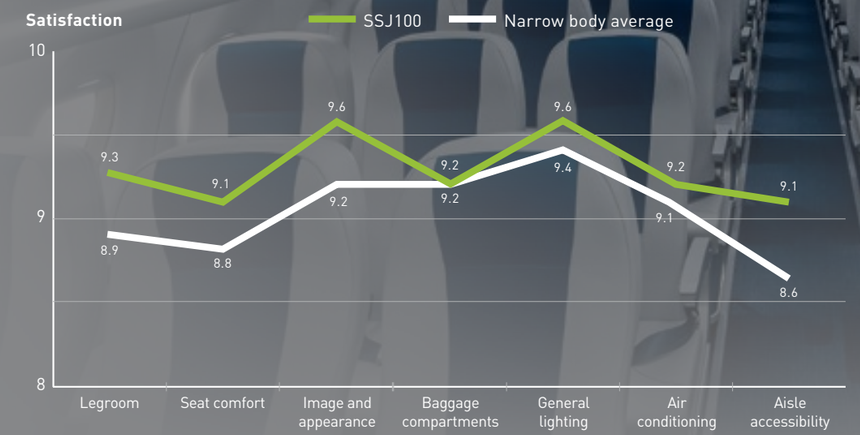
Jose Luis Garza, Chief Executive Officer of Interjet refering to dispatch reliability stated:

"You normally go through a learning curve, we are already there"

The SSJ100 has been successfully operating a challenging range of cycles, from 1 to 3 hour flights, some 13 flights a day all year round.

experience

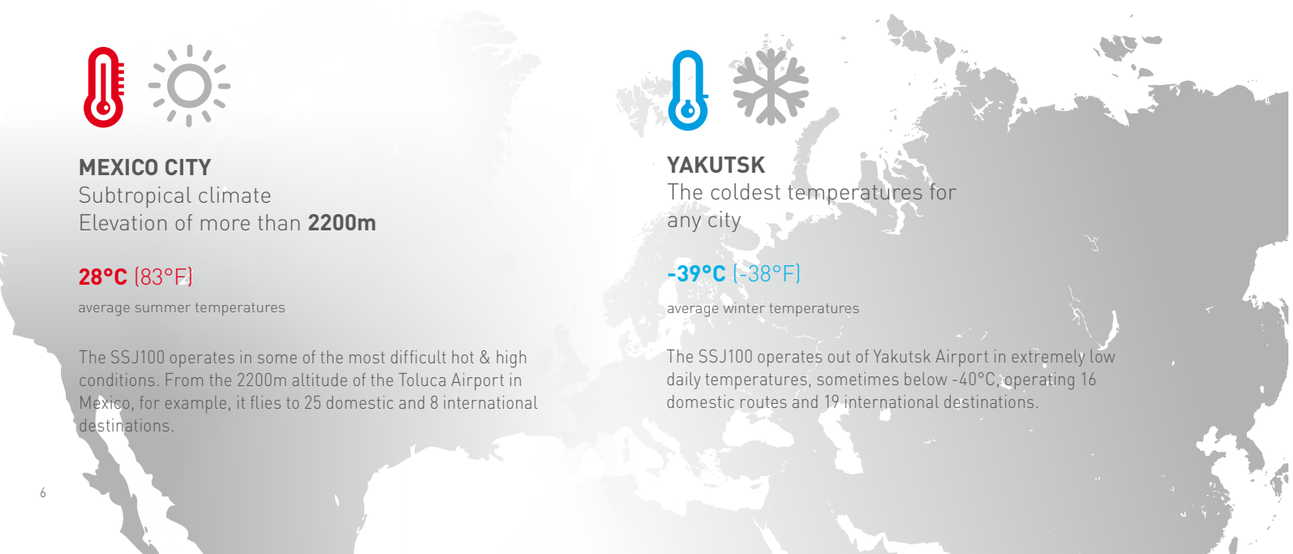
SSJ100 tops comfort in internal survey



Good results in all sectors
An internal survey by one of our customers compared the SSJ100 to other aircraft in its fleet: passengers interviewed found the cabin more comfortable than the competition.

With a slice volume of 0.95m^3, the SSJ100 already fairs better, business and leisure customers asked about other internal features gave the SSJ100 frequently higher marks than the competion, these include leg room, seat comfort, overall odor, baggge compartments.

Tested in **extreme conditions:**



MEXICO CITY
Subtropical climate
Elevation of more than **2200m**

28°C (83°F)
average summer temperatures

The SSJ100 operates in some of the most difficult hot & high conditions. From the 2200m altitude of the Toluca Airport in Mexico, for example, it flies to 25 domestic and 8 international destinations.

YAKUTSK
The coldest temperatures for any city

-39°C (-38°F)
average winter temperatures

The SSJ100 operates out of Yakutsk Airport in extremely low daily temperatures, sometimes below -40°C, operating 16 domestic routes and 19 international destinations.

"This is a fantastic aircraft and we look forward to introducing our customers to its high levels of comfort and efficiency in the coming years" Pat Byrne, Executive Chairman of CityJet

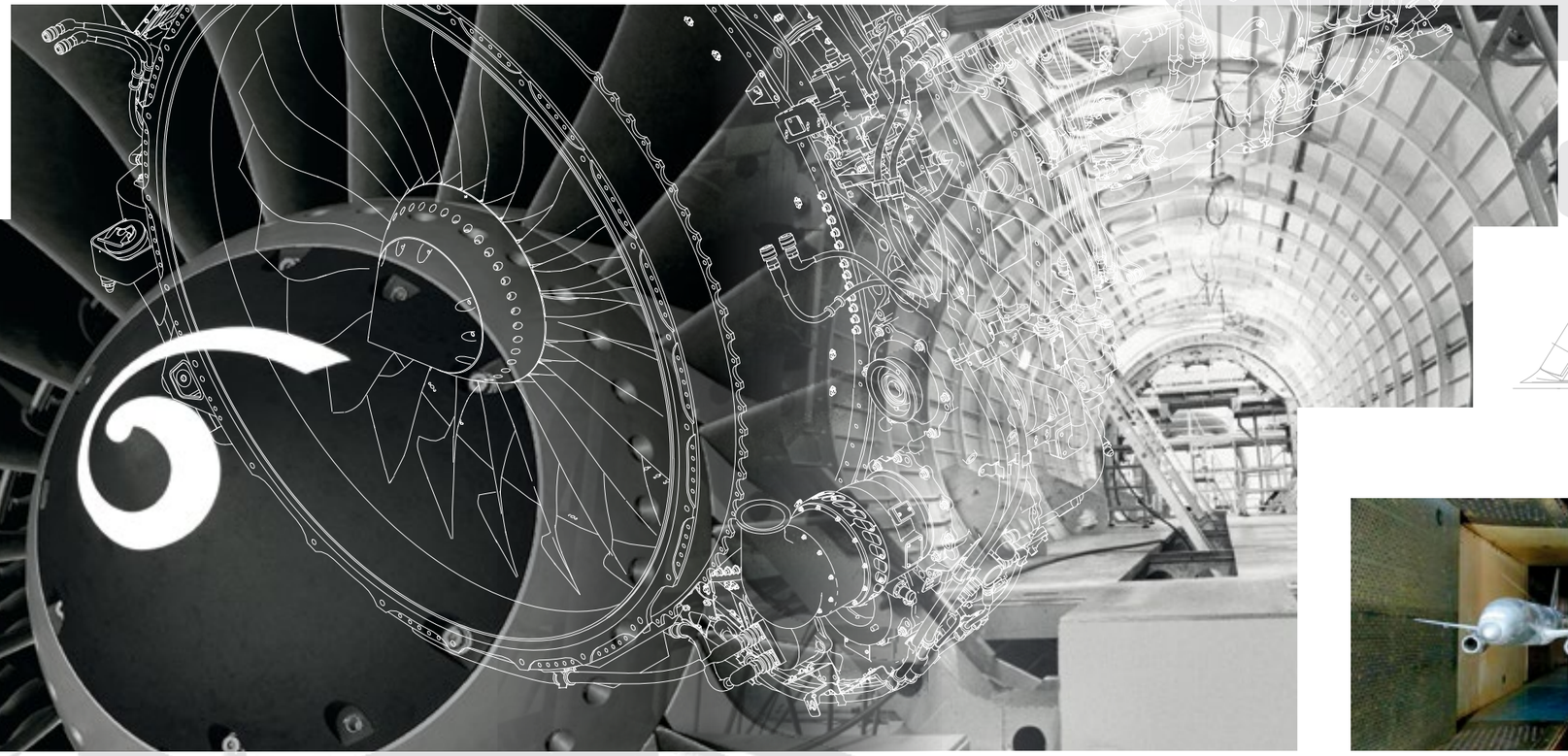
Better than expected fuel consumption

At least 10% less
Clients are reporting an even better consumption rate compared to early manufacturer's projections.

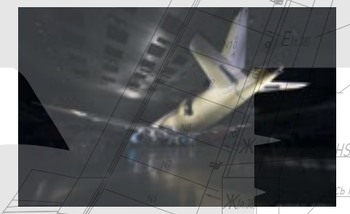
-10%

project

Airframe and engine designed together right from the start. Maximizing performance through engineering synergy



Teamwork
Early in the project Boeing was involved as a consultant for program management. From the outset the SSJ100 was designed to use proven systems, many of which are derivatives of existing off-the-shelf components – a highly cost-efficient approach to aircraft design and construction, with obvious safety benefits.

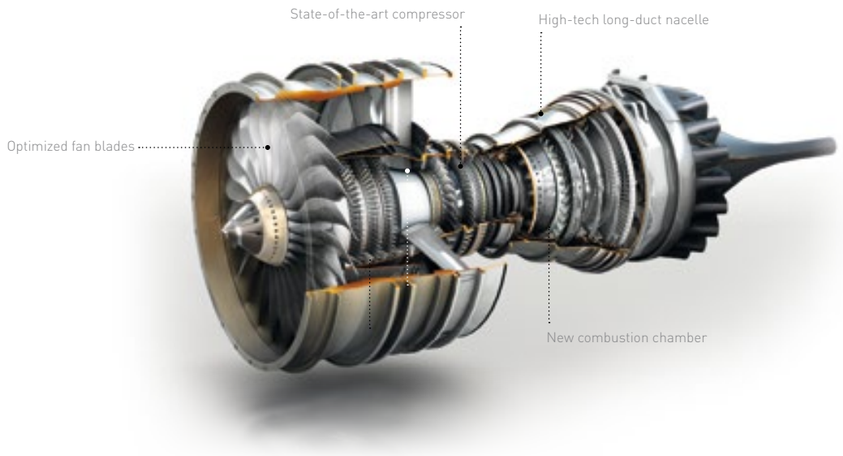


Aerodynamic excellence
For nearly a century, the Central Aerohydrodynamics Institute (TsAGI) in Russia has been a leading research center, recently counting major international manufacturers among its clients. The TsAGI wind tunnel was used to hone the SSJ100's design – minimizing drag, optimizing fuel burn, and perfecting the supercritical wing profile.

Designed to maintain
Catia Human Builder software has been used throughout the design and development of the SSJ100 not only to optimize flightdeck ergonomics but also to simplify maintenance: by designing in accessibility and providing excellent access to all parts of the airframe, the labor required to inspect, check and replace components is significantly reduced.

Russian airframe excellence
Sukhoi is a long-established manufacturer with vast experience in the high-tech production demands of modern aerospace structures. The SSJ100 follows the tradition of Russian airframe excellence, adding state-of-the-art avionics and controls sourced from leading suppliers to produce an aircraft ready to face the world's most challenging operating environments.

Optimized dedicated engine
The SaM146 engine that powers the SSJ100 was created especially for the aircraft and has been designed from the ground up with the demands of a regional jet in mind. This market requires frequent flights and fast turnarounds – a testing environment for an engine, especially when downtime must be avoided. The SaM146 is easy to maintain, and its class-leading fuel burn also contributes to low overall running costs. The engine meets the latest noise regulations and emission requirements.



airflow TsAGI development means less drag and higher performance

lift TsAGI wind tunnel optimized wing profile

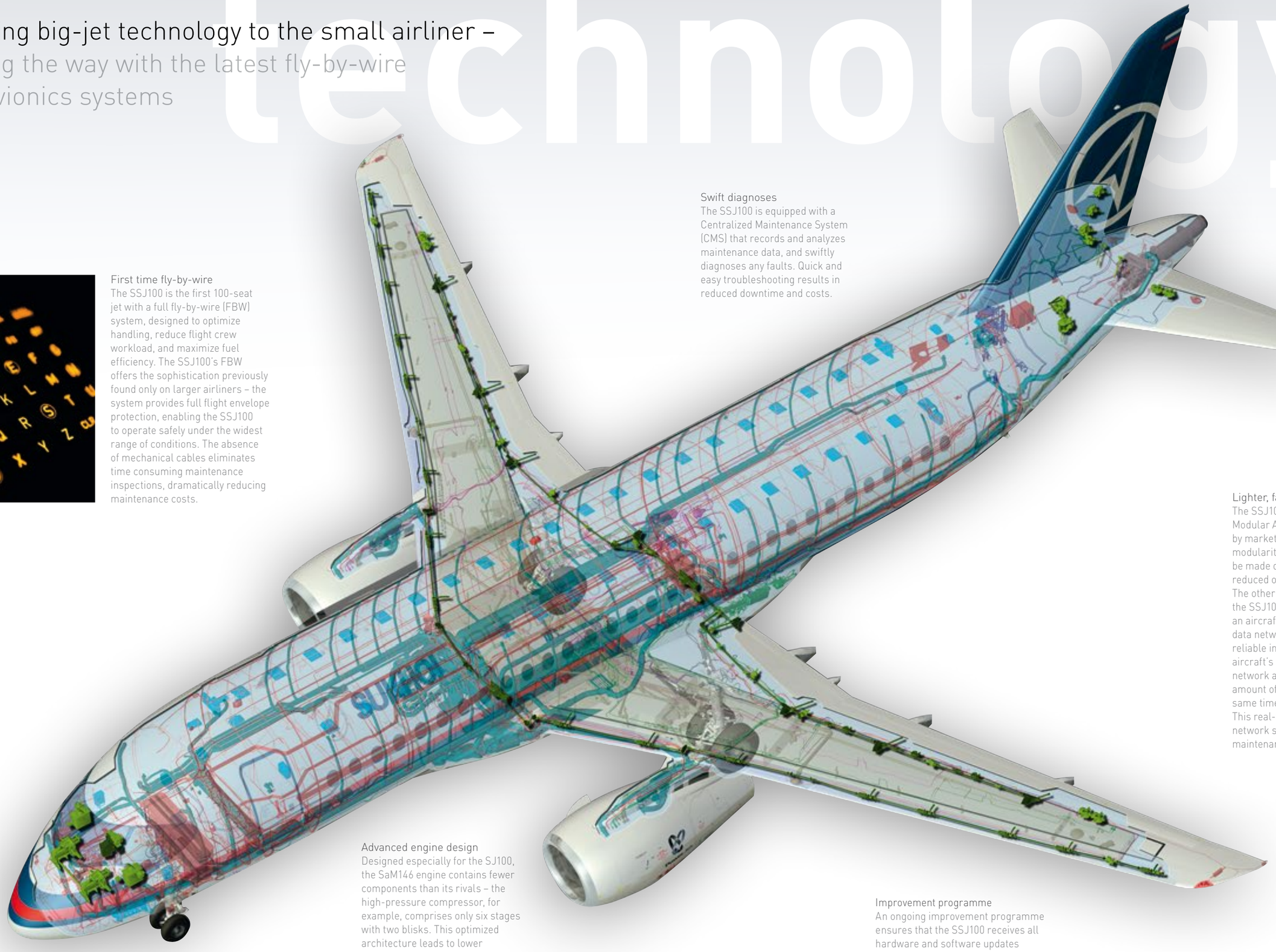
thrust superior performance in “hot & high” conditions

view the SSJ100 cockpit window is one of the widest in its class

Bringing big-jet technology to the small airliner –
leading the way with the latest fly-by-wire and avionics systems

technology

First time fly-by-wire
The SSJ100 is the first 100-seat jet with a full fly-by-wire (FBW) system, designed to optimize handling, reduce flight crew workload, and maximize fuel efficiency. The SSJ100's FBW offers the sophistication previously found only on larger airliners – the system provides full flight envelope protection, enabling the SSJ100 to operate safely under the widest range of conditions. The absence of mechanical cables eliminates time consuming maintenance inspections, dramatically reducing maintenance costs.



Swift diagnoses
The SSJ100 is equipped with a Centralized Maintenance System (CMS) that records and analyzes maintenance data, and swiftly diagnoses any faults. Quick and easy troubleshooting results in reduced downtime and costs.

Lighter, faster communications
The SSJ100 boasts Integrated Modular Avionics (IMA), supplied by market leader Thales. The modularity also allows upgrades to be made quickly and efficiently, with reduced overheads.
The other principal component of the SSJ100's avionics system is an aircraft full duplex switched data network (AFDX), offering fast, reliable interconnection of the aircraft's computer systems. The network architecture reduces the amount of cabling used, while at the same time providing redundancy. This real-time airborne computer network saves both weight and maintenance costs.

Advanced engine design
Designed especially for the SJ100, the SaM146 engine contains fewer components than its rivals – the high-pressure compressor, for example, comprises only six stages with two blisks. This optimized architecture leads to lower weight and reduced maintenance costs. Much of the technology underpinning the SaM146 can now be found in the latest engines entering service today."

Improvement programme
An ongoing improvement programme ensures that the SSJ100 receives all hardware and software updates smoothly and efficiently, with the least possible impact on dispatch levels.

Full fly-by-wire improves safety & makes the SSJ100 lighter and easier to fly

deck

High-feedback side stick
The long-strut sidestick not only offers exceptional comfort through attention to ergonomic detail, but has also been designed to give the pilot new levels of feel and feedback.

Intuitive engine controls
The SSJ100's engines are controlled by active, servo-driven throttles – an established design solution that pilots find intuitiveto use.

Pilot-friendly deck
The crew benefit from a "dark and quiet" flight deck designed after extensive consultation with pilots to give a working environment that offers exceptional ergonomics. Five large switchable LCD screens provide flight data and an interface to the aircraft's state-of-the-art avionics, which include the latest weather radar, navigational and anti-collision devices, as well as an "electronic flight bag" option.

Efficient flight deck-tech
The SSJ100 is the first aircraft of its class to be equipped with a full fly-by-wire (FBW) system, which has been designed to prevent the aircraft from exceeding its flight envelope and includes automatic deployment/retraction functions for high-lift devices and spoilers.
Particular attention has been paid to the operational flight envelope, with control parameters adjusted to improve the feel of the aircraft under all conditions that pilots are likely to experience.
The FBW system also enables the SSJ100 to operate as efficiently as possible, reducing fuel consumption and contributing to the aircraft's remarkably low running costs.

Leading names in world aviation

SSJ100

door height 1.83 m (6 ft)

tail height 10.28 m (33.7 ft)

door sill (full) 2.90 m (9.5 ft)

landing gear — SAFRAN Messier-Bugatti-Dowty

avionics — THALES

Italian designed interiors — pininfarina

powerplant — PowerJet

engine vibration monitoring, TRU — MEGGiTT smart engineering for extreme environments

airborn electrical power supplies, electrical system, wheel brakes and brake control — UTC Aerospace Systems

flight control system, air management — LIEBHERR Aerospace

fuel system, HMI, lights — ZODIAC AEROSPACE

load management unit — Esterline Power Systems Featuring LEACH Products

hydraulic, OBIGGS — Parker

APU — Honeywell

overall length: 29.94 m (98.2ft)

western industrial content more than 60%

SSJ100 technical information

SSJ100

The Sukhoi Superjet 100 has satisfied EASA's latest and most stringent requirements – confirmation of the excellence and reliability of this all-new design

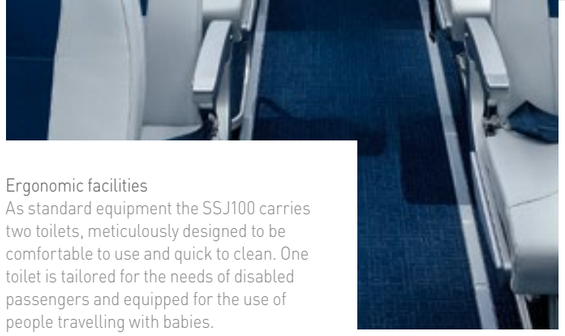
wingspan: 27.80 m (91.2ft)

engines		
type	2 PowerJet SaM146 turbofans	
thrust	15,400–16,100 lbf (68.5–71.6 kN) at NTO	
	17,300–17,800 lbf (77.9–79.2 kN) with APR	

airfield performance		
SSJ100/95B		
takeoff field length (MTOW)	5,679 ft	1,731 m
landing field length (MLW)	5,348 ft	1,630 m
SSJ100/95LR		
takeoff field length (MTOW)	6,732 ft	2,052 m
landing field length (MLW)	5,348 ft	1,630 m

weights		
maximum takeoff weight (MTOW)		
SSJ100/95B	101,150 lb	45,880 kg
SSJ100/95LR	109,019 lb	49,450 kg
maximum landing weight (MLW)		
SSJ100/95B	90,390 lb	41,000 kg
SSJ100/95LR	90,390 lb	41,000 kg
maximum zero fuel weight (MZFW)		
SSJ100/95B	88,185 lb	40,000 kg
SSJ100/95LR	88,185 lb	40,000 kg
maximum fuel capacity		
SSJ100/95B	4,175 US gal	15,805 l
SSJ100/95LR	4,175 US gal	15,805 l

Passenger experience
Passengers will notice the difference as soon as they step aboard – unlike the "tunnel effect" of other aircraft of this class, the spacious and airy cabin of the SSJ100 sets it apart from its competitors.



Ergonomic facilities
As standard equipment the SSJ100 carries two toilets, meticulously designed to be comfortable to use and quick to clean. One toilet is tailored for the needs of disabled passengers and equipped for the use of people travelling with babies.

A sensation of space: 2m+ high cabin

Pininfarina interior (optional)
Leading design studio Pininfarina has created an exclusive interior for the SSJ100. The "Italian team", comprising Alenia Aermacchi, Superjet International and Pininfarina, has developed the initial concept into a production reality, crafting a cabin for SSJ100 customers who want their aircraft really to stand out from the crowd – modern and elegant, yet at the same time functional and easy to maintain.

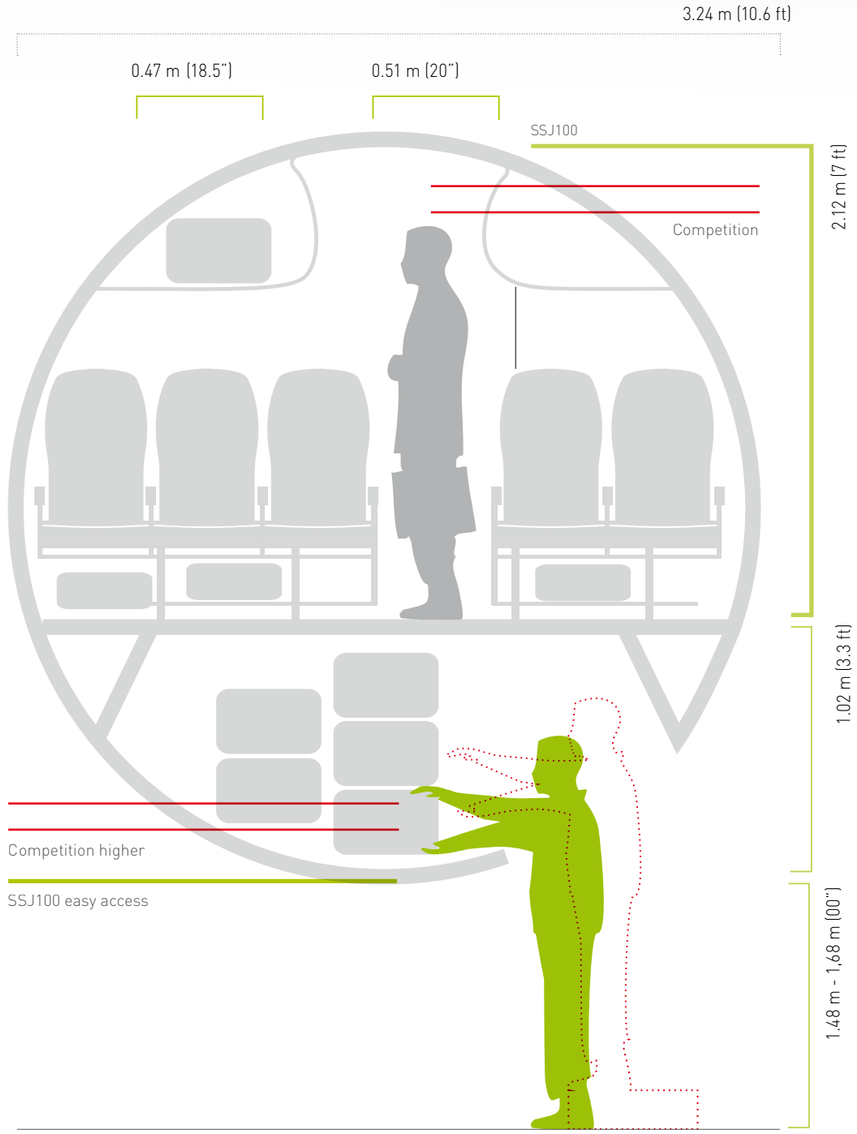
Easy access to overheads
The SSJ100 offers more overhead baggage space per passenger than competing aircraft. The generous lockers are easily accessible – a useful feature if the operating environment prioritizes carry-on luggage, as this facilitates a swift turnaround.

space

Narrow-body space in a compact airliner comfortable for passengers, greater access, so more profit for operators

Wide seats
The seats of the SSJ100 are wider than those of its competitors – the generous size and spacing plus ample legroom offer unsurpassed passenger comfort.

Wide aisle
The SSJ100 has the widest aisle in its class, speeding up boarding and deplaning. The cabin crew can move easily through the cabin, with space to spare for passengers to pass by.



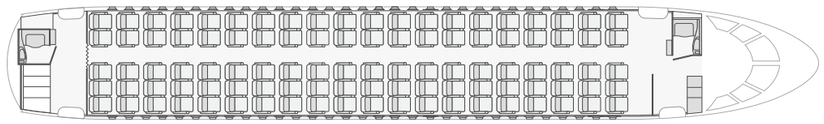
2m+

2m+ high cabin
At over 2 meters high, the cabin of the SSJ100 has more headroom than any of its rivals, adding to the feeling of spaciousness and allowing even the tallest passengers to move around with ease.

First five-seat abreast
The SSJ100 is the first aircraft in its class with five-abreast seating, a configuration that offers more cabin space than any of its competitors. No matter where they sit – even in the middle seat – all passengers enjoy spacious accommodation.

Increased cargo space
The diameter of the SSJ100's fuselage gives the aircraft the largest cargo bay in its class, with a maximum height of over 1 meter, easing the work of baggage handling. Two wide-opening doors give easy access to both the front and rear compartments, enabling rapid loading and unloading – vital for a swift turnaround at busy airports.

Low cargo access
Easy last-minute baggage additions as there is no need for ground support to get access.



Standard single class - 100 seats

economics

Cutting the costs from design to operation. The clean-sheet design of the SSJ100 gives it an economic edge over its rivals, saving money in the air and on the ground

cash operating costs per trip (500 nm)

how we cut costs

reducing weight
The optimized lightweight design of the SSJ100 not only reduces fuel consumption, but cuts en-route charges and airport costs.

engine simplicity
The all-new SaM146 engine has fewer moving parts than its competitors, keeping weight down and simplifying maintenance. There is a high degree of left–right compatibility between the engines, significantly reducing inventory costs. The turbine disks can even be replaced without removing the engine – all features that reduce downtime and save operating costs.

lower fuel burn
The SSJ100's advanced aerodynamic design, including a supercritical wing section specifically designed for this size of aircraft, results in optimized fuel burn in the cruise. Modern engines with latest-generation FADEC contribute to the SSJ100's outstanding fuel efficiency.

lower carbon tax
Environmental concerns worldwide are leading to the introduction of carbon taxes and emissions trading schemes – however these are structured, the lightweight and efficient SSJ100 offers the maximum benefit to its operators.

fast turnaround
A spacious cabin with a wide aisle and generous seat spacing allows passengers to embark and deplane with minimum fuss. Two large cargo bay doors speed up baggage transfer, and single-point refuelling minimizes the time that the SSJ100 needs to spend on the ground between flights.

design to maintain
From the outset, the SSJ100 has been "designed to maintain", with the longest maintenance intervals in its class. Inbuilt advanced diagnostic tools assist engineers with routine servicing.

"right-sizing"
The low operating costs of the SSJ100 make it perfect for operators looking to right-size their fleets to meet changing demands. The SSJ100 is also an ideal supplement to existing fleets, offering passenger comfort similar to that found on much larger aircraft.

performance

Ranging far and wide. Efficient engines in a lightweight airframe extend the range and increase the number of possible routes

max /cruise speed (mach)	time to climb to FL 300	range (B/LR)
0.81 / 0.78	**12 min**	**1645 nm / 2470 nm**

Away from the hub

The rugged SSJ100 is also well suited to short-field operations, and needs a runway width of only 21.4 m (70.21 ft) to turn round.

"Hot and high" performance

Due to its optimized combination of engine and airframe, which results in an excellent thrust-to-weight ratio, the SSJ100 is able to perform very well in extreme "hot and high" conditions.

Going places. The performance of the light and maneuverable SSJ100 and its ability to operate safely and efficiently from small regional airports brings high levels of comfort and sophistication to routes previously served only by more basic aircraft

SSJ100/95 BASIC — **SSJ100/95 LONG RANGE**

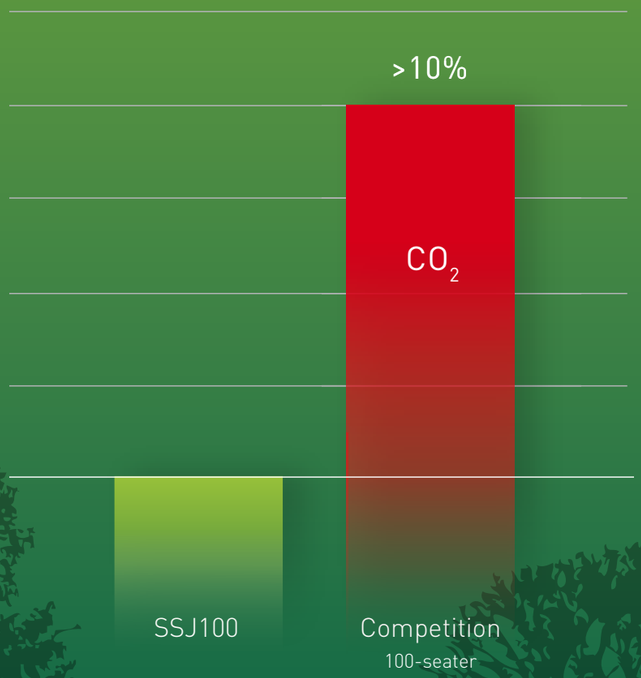
environmental

greener

Flying green makes financial sense – saving money on fuel and saving tax on emissions

reducing environmental impact and saving around 600,000 USD per year*

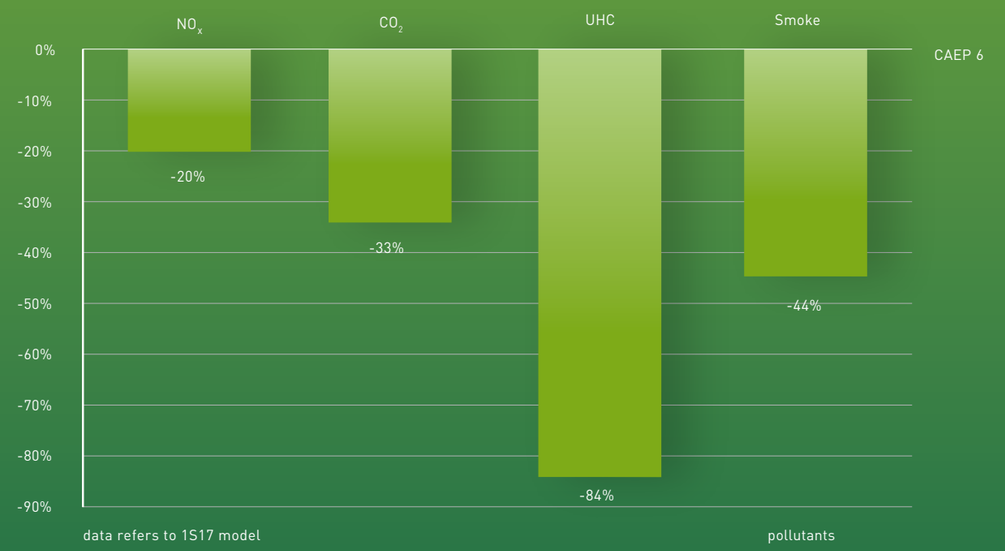
CO_2 /trip



about 1.5 tons of CO_2 less per trip emitted compared to its direct competitor

all atmospheric emissions down

SaM146–Emissions vs CAEP 6



SaM146: CAEP 6 compliant with higher margins
CAEP6 applicable in 2008 to newly certified engine

noise reduction

The high-tech long-duct nacelles carrying the SaM146 engines are designed to optimize acoustic performance, with the result that the SSJ100 meets ICAO Chapter 4 noise regulations – meaning that it is permitted to operate from any airport.

engine emissions

The powerful, compact SaM146 engine – controlled by the latest-generation FADEC system – combines a newly designed combustion chamber with a state-of-the-art high-pressure turbine, resulting in highly efficient fuel burn with emissions that comfortably exceed CAEP6 standards.

air quality

In terms of major air pollutants, the SSJ100 considerably exceeds ICAO CAEP6 standards. The SaM146 engine has been designed to meet anticipated emissions legislation, future-proofing operations of the SSJ100.

* 2500 cycles/year; 500 nm distance; CO_2 trade rate = 30 USD/ton; five-aircraft fleet