



© G. Pease/Getty Images

situation seriously, but without undue panic. Orders in hand at Boeing and Airbus give each company four to five years of production work.

Safran CEO Jean-Paul Herteman does not underestimate the difficulties facing the air transport industry, but he still believes the outlook is positive. "We know that we're in growth businesses, and we are confident in the outlook for our markets. Few sectors have posted the same sort of growth over the last thirty years, and demand for air transport is still far from being saturated, especially in emerging countries." Furthermore, Safran can count on its cutting-edge technologies, an efficient organization and solid market positions to help guarantee future success. ■

LIGHTER, GREENER AND LESS FUEL-HUNGRY AIRPLANES

Airlines were hard hit in 2008 by skyrocketing oil prices and the air transport crisis and are implementing new practices to reduce fuel consumption and generate savings. The main measure taken by the industry is fleet reorganization. They have mothballed the oldest planes in their fleet and replaced them by more recent models. For instance, Northwest Airlines replaced its DC-10s by the Airbus A330, reducing fuel consumption by 38%, and replaced its DC-9s by the Airbus A319, for a 27% improvement in fuel burn. Airlines are eagerly awaiting the next generation of even more fuel-efficient

airplanes and engines. Saving weight has also become a primary objective. At Northwest, for instance, shaving a few dozen kilos from each airplane will generate about \$400,000 in annual savings across the fleet. In consequence, seats, serving carts and beverages have all gone on diets – even the amount of water stored in the toilets has been reduced. Engineers have also gone through the flight deck with a fine-tooth comb: some airlines even want captain and co-pilot to share a single set of flight manuals, which would save about 7.5 kilos. Outside the aircraft, keeping engines clean also helps reduce fuel consumption by cutting drag. Southwest cleans their engines daily, resulting in estimated jet fuel savings of \$1.6 million from April to June 2008.

BUSINESS AVIATION. Well established in the business aircraft market, Safran Group companies are keeping pace with changes in this market while bolstering their own positions.

NEW BIZJETS ON THE HORIZON



© Cessna

Safran companies equip three Cessna bizjets, including the Citation X.

After two good years for business aircraft, a slowdown in orders is looming because of the global financial crisis. For the moment, however, this slowdown primarily concerns entry-level aircraft. Historically, crises in this sector don't last more than three or four years, with a drop in sales the first year, then a strong recovery as soon as companies once again report higher earnings. "The 'concept buyers'* seem impervious to the crisis for now, and

they are continuing to place orders for high-end bizjets," observes Loïc Nicolas, business jet marketing manager at Snecma (Safran Group).

The United States still accounts for half of the total sales volume in this sector, but in recent years demand has been driven by companies from Europe, now convinced of the benefits of having a bizjet, namely flexibility, speed, efficiency and discretion. "With a business jet," continues Nicolas, "you go where you want, when you

want, and without losing time at the airport!"

These advantages are beginning to win over a new generation of clients from emerging countries, especially the so-called "BRIC" bloc, or Brazil, Russia, India and China. The opening of these new business aviation markets is benefiting the leading manufacturers, namely Cessna, Gulfstream, Hawker Beechcraft, Bombardier, Embraer and Dassault Aviation. It's also good news for Safran, since nearly all Group



Interior of the Dassault Falcon 2000EX, a bizjet with products from five Safran companies.

© Dassault Aviation-B. Shannon

AN AVALANCHE OF NEW MODELS

The latest NBAA (National Business Aviation Association) industry trade show, held in Orlando, Florida last October, showcased a multitude of new aircraft projects. Like the auto industry, the main trend seems to be renewing the range via the introduction of models offering greater comfort and higher performance.

Cessna, traditionally focused on entry-level and mid-range products, will enter the super-midsize class with its new Columbus. Market leader Gulfstream, a high-end player, has launched the Gulfstream 650, claimed to be the largest, most prestigious business jet ever made. It will be joined by the Gulfstream 250, another super-midsize model, which will be built in Israel. Learjet, a subsidiary of the Bombardier group of Canada, will round out its range, already considered the largest in the market, with the Learjet 85. Embraer, the Brazilian newcomer, already has four development projects under way, namely the Phenom 100 and 300 and the Legacy 450 and 500. The battle for supremacy in the business aviation market has only begun...

MORE

www.safran-group.com, Aircraft Applications
www.le-webmag.com, Civil Aviation



All wiring on the brand-new Embraer Phenom 100 is by Labinal.

© Embraer

companies work with these manufacturers.

A new engine from Snecma

Safran's latest ace in the hole for this booming market is made by Snecma, and is called "Silvercrest". This new engine family is designed for super-midsize and large business jets, characterized by wide cabins and long range. "These engines are rated at 9,500 to 12,000 pounds of thrust, and will offer a significant improvement over the current generation in terms of performance, fuel consumption, environmental-friendliness and reliability," says Laurence Finet, Silvercrest program director at Snecma. In fact, the core demonstrator was successfully ground-tested in early 2008.

Fellow Group company Microturbo

is also working on tomorrow's bizjet programs. For example, it has developed a new auxiliary power unit (APU) purpose-designed for business aircraft, the e-APU. This new APU develops 15 to 90 kWe of electrical power, enabling



Snecma's planned Silvercrest engine.

© Snecma

it to feed tomorrow's increasingly power-hungry business jets.

Contracts for Safran

Virtually all Safran companies can supply systems or equipment for business aircraft. Most recently, Messier-Bugatti was selected by Bombardier to provide all of its landing and braking systems for the company's latest Learjet 85 business jet. Aircelle will provide the nacelles and thrust reversers for this aircraft. Labinal, the world leader in aircraft wiring, was selected by Embraer for its new Phenom 100, and it won Hawker Beechcraft's Gold Supplier and Supplier of the Year awards.

No matter what products are involved – from landing gear and brakes to wiring and avionics, to filtration and ventilation systems – Safran is seeking to establish a position as a tier 1 systems integrator,

capable of offering turnkey package solutions to its customers (see article on page 32). ■

* Concept buyers: new buyers who are primarily interested in the image projected by an aircraft, rather than how well the aircraft's performance matches their needs.

FACTS & FIGURES

• 15,000 business aircraft now in service worldwide. 14,000 new bizjets should be delivered in the next ten years, in a market worth some \$250 billion.

• \$60 million: the price of the largest business jets, more than a regional jet, and very close to the price of a small commercial jet.