

# Buy right

THERE HAS NEVER BEEN A BETTER TIME TO BUY YOUR OWN BUSINESS JET – BUT SEEK EXPERT ADVICE TO AVOID EXPENSIVE PITFALLS, SAYS **GREG THOMAS**, CEO OF PRIVATAIR

**BUY LOW, SELL HIGH.** The golden rule of stock pickers works just as well in the context of any asset trading, and business jets are no exception. Generally it is difficult to judge what stage of the market we are in, but it is pretty safe to say that now is the best time to buy a business jet in recent memory. Aircraft inventory (officially listed for sale) is currently 25 per cent of the total business jet fleet and there are probably more aircraft for sale that are not yet officially listed. Buyers, on the other hand, are few and far between. Prices are rock bottom for used aircraft, while the healthy order books for new aircraft at the manufacturers have seemingly evaporated overnight. A little over a year ago it was impossible to buy a new aircraft from a manufacturer for at least four years. Now the pile of whitetails is getting embarrassing. (A whitetail is an aircraft which has no customer – the term comes from the commercial airliner world, where, traditionally, aircraft in production, assigned to customers, have the aircraft tails painted in the livery of the customer at an early stage in production – unsold aircraft tails remain white.)

PrivatAir has long been involved in buying and selling aircraft, a highly specialised arm of aviation services. The purchase of an aircraft can be a bewildering process, full of potential pitfalls for the unwary. It involves appraising particular aircraft and handling pre-purchase inspection supervision. The PrivatAir team's role may include checking for bogus parts or ensuring that maintenance records are complete and accurate. They can examine

pictures taken by a boroscope camera, inserted deep into the engines. They can also advise on registering the aircraft in a particular jurisdiction, as there are differences between regulators in the US (the FAA) and Europe (EASA/JAA) that demand different technical requirements, when it comes to the configuration of aircraft. The rules are such that if an aircraft was originally delivered for use in the US and you want to use it in Europe, it will require expensive technical modifications. It may even be impossible to import to Europe. The reverse is also true. This is important since 80 per cent of the world's business jet fleet is in the US and this is where most of the used inventory is to be found. PrivatAir has a team of specialists available around the clock, who can look into every aspect of the purchase and are also able to provide expert advice on finance, choosing lawyers and tax experts.

A temptation, when buying a business jet, is to go for the cheapest capital cost on entry, so people are attracted by the smallest, oldest aircraft they can find. This has two hidden dangers – old aircraft, although cheap to buy, are much more expensive to maintain. In addition, small aircraft have similar annual running costs to larger ones, since a large element of this is the cost of crew. In the current buyer's market it is well worth looking at a bigger, more up-to-date aircraft.

*For unbiased advice, contact PrivatAir Sales at [sales@privatair.com](mailto:sales@privatair.com) or call us on +41 (0)22 929 6730*



# FLYING BY THE SUN

*Pioneering aircraft the Solar Impulse aims to fly around the world on the sun's power alone, reports Greg Thomas*

SINCE ANCIENT TIMES man has dreamed of harnessing the sun's power. Now Bertrand Piccard is the most recent in a line of pioneers trying to use solar power to carry a man in flight without fossil fuels. Piccard was one of the two pilots of the *Breitling Orbiter 3*, the first hot-air balloon to go around the world without stopping. Now he has a new project.

In 2010, the 100th anniversary of Swiss Aviation, a most remarkable aircraft will take off from the Swiss airport of Payerne. The *Solar Impulse's* mission will be to circumnavigate the globe powered only by the energy of the sun. The aircraft will have a wingspan of 61 metres, the upper surface of the

wing being covered in thousands of solar cells. These will power four super-efficient propeller motors. Not only this, they must also charge up several large-capacity batteries during daylight hours to power the plane after the sun goes down.

The *Solar Impulse* is the latest in a long line of solar-powered aircraft. Most research previously has focused on unmanned vehicles for use in various roles within Earth's atmosphere but also for exploring the surface of Mars. All of these vehicles are typified by a combination of the use of lightweight materials, large areas of solar panels to capture the sun's energy, big batteries to store that

power and highly efficient propeller propulsion systems.

Manned solar-powered flight was pioneered by Paul MacCready with his *Solar Challenger* which successfully crossed the English Channel in 1981, taking off from Corneille-en-Verin Airport, north of Paris, and landing at RAF Manston in the UK five hours and 23 minutes later. The *Solar Challenger* was a derivation of the *Gossamer Penguin* which had been piloted by MacCready's 13-year-old son, the first ever solar-powered pilot.

Now Bertrand Piccard wants to take the challenge a step further by flying around the world. This feat has been achieved with unmanned

aircraft – in 2005, Alan Cocconi of AC Propulsion succeeded in flying an unmanned aeroplane with a five-metre wingspan for 48 hours non-stop – but never yet with a manned solar-powered aircraft.

Together with André Borschberg the CEO of the project, an engineer and former fighter pilot, Piccard has set up an impressive 150-person project team to execute the dream. The major challenge is to optimise all elements of the aircraft's design, from energy capture and transforming that energy into propulsive power, to creating the best lift and drag characteristics for the airframe, to minimising the weight of the aircraft

and its contents. Sometimes trade-offs have to be made. For example, the 200m<sup>2</sup> of solar panels are not the most efficient for energy capture but they are extremely lightweight and so offer the optimal weight-to-efficiency ratio. No element escapes attention: even the pilot's clothing is made of special lightweight materials.

The big challenge is to successfully recharge the batteries each day to store enough energy to carry on flying through the night. Encountering a headwind after dark is a worry. 'It could make the night much longer and cause you to run out of energy before sunrise, which would be a disaster,' says Borschberg. Success means a flight plan

that ensures that 'every morning you are in sunshine'.

The pilot will have a parachute as a safeguard together with some very impressive flight-management computer technology which will constantly monitor the performance of each of the critical elements of the aircraft. The *Solar Impulse* will probably follow a route around the world close to the path Piccard took in the record-breaking *Breitling Orbiter 3* balloon, going from the United Arab Emirates to China, then Hawaii, across the southern US, southern Europe and back to the UAE.

Although the aircraft is expected to be capable of flying non-stop around

the globe, Piccard will in fact make five long hops, sharing flying duties with Borschberg. Oddly, given the technological challenge, the weak link in all of this is actually the pilot, who cannot endure for more than four or five days. Currently the aircraft technology cannot carry two pilots and until that time the aircraft will have to stop.

'The real success for *Solar Impulse* would be to have millions of people following the project, being enthusiastic about it, and saying: "If they managed to do it around the world with renewable energies and energy savings, then we should be able to do it in our daily life,"' says Piccard.

*Solar Impulse* is being sponsored

by a large group of companies and organisations, including the International Air Transport Association (IATA). At its annual meeting in Kuala Lumpur in June, the trade group pledged to cap emissions from aviation by 2020. A solar-powered airliner is still a distant dream, but IATA knows that pushing the boundaries of technology will be necessary to help make air travel more environmentally friendly.

Aviation has come a long way in the last 106 years since the Wright brothers first flew in a lightweight propeller-driven aircraft. PrivatAir and its team wish Piccard and Borschberg the best of luck in their pioneering efforts!

*Greg Thomas is CEO of PrivatAir*

# PrivatAir – for high flyers

OFFERING JET CHARTER AND PRIVATE AIRLINE SERVICES, PRIVATAIR HAS BEEN AT THE FOREFRONT OF LUXURY AVIATION FOR MORE THAN THREE DECADES



**PRIVATAIR HAS BEEN** at the forefront of private aviation for over three decades, providing the world's most demanding travellers with a comprehensive range of capabilities, delivered to the very highest standards of safety and personal service.

Since its creation in 1977, the company has grown from being the corporate aircraft fleet of the Latsis Group, a global conglomerate whose operations extend across numerous industries including oil refining, yachting, banking and construction, to a world-renowned full-service commercial VIP aviation operator.

Today, PrivatAir is one of the private aviation industry's longest-standing and most prestigious operators. Its global operations include both jet charter and private airline services.

## **PRIVATE CHARTER**

PrivatAir's charter services enable you to travel in total privacy, into and out of more than 5,000 airports around the world. For over 30 years, the company has set the industry standard in operating aircraft of the highest quality and providing outstanding levels of service to our customers.

Whether it's chartering a Beechcraft 200 for a weekend family shopping break, or a 50-seat VIP-configured airliner for a three-week, round-the-world trip, PrivatAir offers unrivalled international coverage, sourcing the best aircraft to match each passenger's individual requirements. As such, our services are regularly sought by governments, royalty, celebrities and business executives the world over.

## **PRIVATE AIRLINE SERVICES**

After pioneering the all-business-class concept in 2002, PrivatAir now operates business-class-only flights on behalf of a select number of commercial airlines who wish to offer an exclusive service on key routes. PrivatAir also provides regularly scheduled corporate shuttle flights for companies that frequently need to send their employees or clients to a particular destination.

## **KEY MILESTONES**

1977 founded as the corporate flight department of the Latsis Group.  
1979 acquired its first Boeing 737.  
1989 acquired its first Boeing 757 and Gulfstream IV.  
1995 received its Swiss Air Operator Certificate from the Federal Office of Civil Aviation.  
1998 became the first commercial

operator to place an order for the Boeing Business Jet (BBJ).  
1999 became the world's first airline whose quality system fulfils ISO 9002 certification norms for all departments.  
1999 became the only commercial operator with three Boeing BBJ ultra-long-range executive aircraft.  
2001 gained ETOPS and FAA approval to operate direct routes across the Atlantic and Pacific Oceans and unlimited operations to the US.  
2002 launched its first transatlantic all-business-class route.  
2003 created PrivatPort with Swissport to work in the executive jet-handling business at Geneva airport.  
2003 gained JAR-145 approval from the German civil aviation authority.  
2003-2005 added further all-business-class services.  
2006 sold two BBJs and acquired a Boeing 767 for private-charter use.