Images: With permission Sling Aircraft

PROUDLY SOUTH AFRICAN TAKING ON THE WORLD

By Chris Buchanan

Homegrown Sling Aircraft is acknowledged as a South African success story for aircraft design and development capability.

Co-founders Mike Blyth and James Pitman have based their development of the range on the heart of the aircraft, the Rotax engine, as well as the increasing demand in international markets, particularly the US.

In the Smoke On...Go! Talk Show series brought to you by Pratt & Whitney Canada, Sally Fleck sat down with James for a fascinating insight into how this aircraft manufacturer has captured global attention through development by flying the aeroplanes and understanding their capabilities.

The story starts with serial entrepreneur and natural pilot Mike Blyth who, when he got a tip that microlight aeroplanes would be the next best thing, learned to fly a trike and, in 1995, was crowned world microlight champion in a prototype of his own design.

He obtained the southern African distribution rights for Rotax, which were highly popular engines with kit builders. But when less expensive light sport aircraft with better performance entered the South African market from Europe and Australia with fitted engines, the demand for Mike's Rotax powerplants tapered off. His successful microlight design and nose for a business idea sowed the seed for a light aircraft into which he could install his engines and sell the complete package.

It also opened up a new opportunity to sell the engines internationally. As the South African Rotax agent he could only sell the engine locally, but fitted into an airframe would open up a global market. "So the real root of our business is Mike addressing the shifting global market for his engines and his desire to develop a light aircraft because of his creative urges," says James.

The final motivation came in a regulatory change in the US with the establishment of the LSA regulated category – and, where America leads, the rest of the world follows.

All dressed up

James had been an attorney his entire professional career, eventually quitting his practice and joining mining exploration company Euromin. After a year and two days at the company it was sold, and dollar-based share options turned him from "indigent" to someone with substantial capital within a day. His love of flying and adventure saw him gravitate toward his old friend and the business of building an aeroplane.

"There is some truth in the excitement around my and Mike's meeting. Our first real engagement was at a party at his house and it was a dress-up party. I came dressed up as a sexy woman and Mike, as it turned out, was also dressed up as a sexy woman – so it was a match made in heaven!" James says he and Mike don't have the same personalities and carry complementary characteristics which have made for a really great partnership.

This relationship of close to 20 years in the Sling business – consisting of flying the first prototype, taking it to Oshkosh, flying around the world, developing the full range of aircraft, expanding their production facility and keeping adventure at the core – is winding down and James takes on a poignant tone.

"In some way the timing of this conversation is quite apt because I think we've reached the end of an extended development phase of our business and, to some extent, Mike is taking the opportunity to withdraw a little bit from the day-to-day activities. I think he wants to enjoy his life and so there're some changes going on."

Success through necessity

The initial target date for a flying prototype was late 2006 but James says that in a start-up aviation business the early phase eats up a lot of capital in the development, building and flying the prototype and often going two rounds with a development, as well as a production, prototype. Depending on the complexity and the design of the aeroplane, there's a

significant amount of time before you can deliver your first product and start generating revenue.

James and Mike eventually flew the first prototype on 18 October 2008. The early plan was to primarily design the aeroplane and outsource the hard work but they couldn't find the people or businesses to do the work quickly enough, at a high enough quality, consistently enough and at the right price.

"We've become a business – through necessity, mostly – that owns a lot of the value chain in our aircraft. So we do our own upholstery, we make our own aluminium components, we do the composites ourselves, we paint the aircraft ourselves, we do the wiring ourselves and make the Perspex canopy ourselves, which is quite unlike the typical situation in Europe and the States as well."

James says it's been a great business model because they control the quality, the timing and they make the money on every component.

Somewhere in-between

Being uncertified aeroplanes, Sling operates within very different regulatory categories around the world evolving the business into two distinct components. According to James they operate in a shifting deregulated space between completely unregulated and fully certified aircraft.

"The manner in which we can exploit that," says James, "is by selling quite simple two-seater aeroplanes flying, what we call RTF – ready to fly. But in some countries around the world, the more complex four-seaters can't be sold as flying aircraft – they must be sold as kits."

Sixty percent of everything they manufacture is sold into the US market and the balance goes to 32 countries around the world.

The biggest challenge for James, identified and highlighted by Elon Musk, is not the design and development of the product, it's in the production. "We've discovered that more difficult than designing a beautiful aeroplane that does everything we want it to do is to produce that aircraft and deliver it to a customer in the required numbers, at the required quality and within the required timeframe."

Around the world in 40 days and nights

In 2009 the production prototype of Sling 2, ZU-TAF, built in response to the LSA category as a simple, inexpensive aircraft including other governing criteria such as a maximum all-up weight of 600kg and a VH of less that 125 knots, was flown to Ohkosh to show to the world.

It took nine days and, in doing so, covered some of the longest straight-line flights of a plane of that size, ever. Instead of coming straight home they went the long way around the world, completing legs of up to 24 hours at a time. To do this they needed ferry tanks pushing the all-up weight of the aircraft to 900kg, more than 50% overweight.

Those 40 days and 40 nights taught them that the aircraft was far more capable and able to be flown at 700kg.

Lengthening of the fuselage and wings, and adding a turbocharged engine and two more seats, laid the platform for the Sling 4.

The Rotax factor

James says they have a very close relationship with Rotax because Mike had been the engine's agent and they had chosen the Rotax as it's widely used in this class of aeroplane with extremely high quality, reliability, fuel efficiency and modern innovation.

"Over the years Rotax has developed better and better versions of the engines we started out with. Those new, more powerful and more fuel-efficient engines created the opportunity for us to develop our four-seater into a much more substantial aeroplane."

As Rotax introduced the 915 and 916 so, too, has Sling upgraded the Sling 4 to culminate in the TSi delivering 160hp, a cruise speed at altitude of 145 knots, burning 30*l* of car fuel an hour, and is a high quality and high performance aeroplane.

The Sling story gets more fascinating with the development of the High Wing and more adventures which are at the core of how these intrepid entrepreneurs live and run their business. To listen to the full interview, scan the QR code on this page.