

PEOPLE



FACE THE FACTS WITH...

MARC PARENT

CAE, a global leader in simulators and training, recently completed an 18-month restructuring. Marc Parent, the company's newly appointed group president responsible for Simulation Products as well as Military Training and Services, talks to *Colin Baker* about the company's key initiatives and plans for the future.

Q: In 2005, CAE embarked on a six-year, C\$650 million (\$560 million) R&D programme. What can we expect to see as a result of this?

A: Simulation technology leadership has been and will continue to be one of CAE's fundamental competitive discriminators. Our 'Project Phoenix' programme is the single largest integrated R&D effort in CAE's history. The simple goal is to ensure that CAE maintains its world-wide leadership in simulation. We will be continually developing new simulation technologies, such as solutions for the military that significantly enhance the use of simulation for mission rehearsal.

We'll also develop technologies for adjacent and emerging markets, such as homeland defence. Finally, we are revolutionising the design process for simulators to shorten the time to market so we have R&D initiatives aimed at core simulation technologies, such as visuals and motion systems.

Q: How is CAE faring in the market for Boeing 787 and Airbus A380 simulators?

A: CAE has a long history of building prototype simulators for new aircraft. For example, we're currently designing the first-ever simulator for China's new ARJ21 regional aircraft.

However, building the prototype doesn't necessarily give you a tremendous advantage every time you compete, and not building the prototype doesn't necessarily put you at a serious disadvantage. Airbus selected CAE to design the first simulators for the A380 and we're under contract to provide five A380 simulators: two each for Airbus and Emirates and one for Qantas.

We did not win the initial

Boeing 787 prototype, but we have launched development internally and have a close working relationship with Boeing. A number of long-time CAE customers have committed to the 787 so we're actively pursuing 787 simulator bids as well as training service opportunities.

Q: In recent years, CAE has made rapid inroads in the civil aviation training sector through organic growth, acquisitions and joint ventures. Is that going to continue at the same pace? What proportion of your business is made up of training?

A: Fortunately, we have close customer relationships with many airlines and are listening closely to their training requirements.

We've established Customer Advisory Boards so we're meeting regularly with key customers and prospects. CAE is relocating 28 simulators within our global network of more than 20 training centres, as well as adding capacity to serve market demand.

We're receptive to meeting market demand in a variety of ways, including partnerships and joint ventures. Right now approximately 47% of CAE's C\$1.1 billion (\$971 million) in annual revenue is generated through training services in both commercial and military markets.

Q: The Chinese, Indian, and Middle East markets are becoming increasingly important for aviation in general. What is CAE doing to respond to this and grow in these markets?

A: CAE already has a strong presence and proven track record in China, India, and the Middle East. We're unique in our ability to provide turnkey training solutions to airlines in these regions, from the world's most advanced simulators and training devices to flight training and pilot provisioning services.

In China, we have a joint venture training centre in Zhuhai with China Southern that has been very successful, and we're currently expanding capacity with a new six-bay facility. In the Middle East, we teamed with Emirates to jointly operate Emirates-CAE Flight Training (ECFT) in Dubai to serve commercial and business aviation customers. In India, over two-thirds of the installed base of flight simulators were built by CAE and a number of Indian airlines currently train at ECFT.

Q: Which emerging military programmes around the world have you got your eye on? To what extent are you involved in the UAV market, and what are the main challenges in this sector?

A: The NH90 helicopter has been successful and so far only Germany has taken a decision on training. CAE is part of a consortium that will build NH90 simulators and then provide the training services for Germany. We anticipate other nations will decide on their NH90 training solutions over the next of couple years.

In the US, we are watching the US Air Force's combat search and rescue helicopter procurement and the combined Air Force/Army joint cargo aircraft programme very closely. We're also pleased to see Canada making a significant investment in new military aircraft and we anticipate training opportunities to result.

CAE has run the US Air Force's Predator UAV training programme since 1998 so we have a range of experience delivering classroom, simulator, and actual flight instruction for UAVs. We're also partnering with UAV manufacturers such as Israel Aircraft Industries to embed simulation capabilities. The fact is that unmanned systems will play an increasingly important role on future battlefields and simulation

technology will play a key role in preparing military forces for this network-centric environment.

Q: What will be the main changes in your business sector over the next 5-10 years and how are the needs of your customer changing?

A: Our civil airline customers still face intense competitive pressures and will continue to focus on costs. At the same time, safety is the top priority and CAE is well-placed to offer simulation equipment as well as safety training services.

We see our customers challenged to recruit and train pilots so we expect our pilot provisioning services to expand. New training approaches such as the Multi-Crew Piloting License (MPL) will also bring changes. On the military side, forces now almost always operate in joint- and multinational coalitions and the requirement is to 'train like you fight.' So we'll see more emphasis placed on joint training and mission rehearsal, and simulation will be at the heart of delivering these capabilities.

Q: CAE recently underwent a management reshuffle. What does that mean for you, the company, and your customers?

A: Our restructuring initiatives, which are now complete, were designed to make CAE more competitive, increase efficiencies, and allow us to better respond to market and customer requirements.

We've consolidated manufacturing, engineering, programme management and global procurement to maximise synergies between our civil and military businesses. For example, we've been able to reduce cycle times on simulator builds.

I now have responsibility for the design and development of all simulation products for CAE, as well as our military business while my colleague Jeff Roberts heads CAE's civil and business aviation training initiatives. CAE has turned the corner and is now setting a chart for growth.

"We're receptive to meeting market demand in a variety of ways, including partnerships and joint ventures."

Marc Parent

PEOPLE

Cook brings Cobham execs together for strategic summit

Colin Baker

Diversified UK-based supplier Cobham held a meeting for 80 of its top executives the day before Farnborough opened – the first time the company has held such an event.

Chief executive Allan Cook is using the airshow to develop his strategy of making the whole bigger than the parts and getting different sections of the company to work together more effectively.

"The meeting was not just about where we are today," says Cook. "I explained to them what I saw as our future. I think we have an exciting future. We have got the people, we've got the products and we have got the services. We are aiming to get the best of Cobham right across each division,"

he says, pointing to the company's motto of "Six divisions - One standard."

Since he took the helm in 2001, Cook has moved to a flatter structure, moving the company from 80 separate units to five technology divisions and one service division. These cover air refuelling and auxiliary mission equipment, antennae, avionics and surveillance, defence electronic systems, life support and flight operations and services.

Focused

Cook makes it clear that the company will increasingly be focused on defence and the US market. Looking at the defence sector, Cook comments: "During the past year, there have been three important announcements," pointing to the increase in the US defence

budget, the quadrennial defence review and the UK defence industrial strategy.

Around half of all revenue now comes from the US, compared with 30% when Cook took over in 2001. "If you are involved in the military side of the business, that is where the growth is. France is flat, Italy is flat, in Germany defence spend is falling. The two markets that are growing are the US and UK." In the longer term, he also sees growth coming from India, Pakistan and South Korea.

UAVs will also play a key role in the future of Cobham, Cook says, noting that the firm is working on a number of autonomous air refuelling projects in this field.

Cook argues that Cobham is well-positioned to take advantage of the move towards network-



Allan Cook: focusing Cobham on defence and the US market.

centric operations, as set out in the quadrennial defence review. "Three parts of our business are involved in network-centric operations – antennae, avionics and defence electronic systems. They will have a major part to play."

He also points to this as a good example of the cooperation across different divisions that he is promoting, and makes the same argument in regard to the A\$1billion (\$750 million) deal to supply Bombardier Dash-8s to the Australian coastwatch programme for maritime surveillance. The 12-year contract was won by Cobham-owned

Surveillance Australia, but will incorporate components and communication equipment from other Cobham divisions.

Cook is also proud of the way different Cobham divisions collaborated on the Virgin Atlantic Globalflyer that set a record for the longest flight in history earlier this year – which finished a few miles from Cobham's Dorset HQ.

In the meantime, Cook makes it clear that more disposals and acquisitions can be expected. The group disposed of countermeasures business Precision Antennas and telecom equipment provider Atlas Composites

over the past year, and has purchased Aerodata Flight Inspection and the outstanding minority interest in Flight Precision Limited. "We are constantly evaluating our portfolio," says Cook.

Commercial airspace has fallen to below 10% of revenue. "It is clear we see military and defence as being a more important part of the business," he says. Cook is committed to increasing R&D spend, aiming to bring it up from 5% of revenues to 7% in the next two-to-three years. In absolute terms, this will be an increase of 25% on the current level of around £50 million per year.

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PEOPLE

Not content with providing the keystone for a brand-new mode of air transport, Pratt & Whitney Canada president Alain Bellemare tells *Brendan Gallagher* he's also got his eye on the A320/737 replacement market.

JUST RIGHT VERY LIGHT

A lesser man than Alain Bellemare might now wish he'd never uttered the words "eight-hour engine". When he first committed P&WC to turning out one PW600 a shift on the new moving line at Montreal Longueuil, little could he have known the subject would fixate interviewers for years to come.

And overshadow a string of developments by one of the world's most versatile engine-makers.

Fortunately, the bounce and good humour that helped propel him to the top of the corporate heap by his early 40s are still evident as he fields yet another question about the powerplant family for the leading Very Light Jets (VLJ).

"The new line is up and running, and we're delivering engines," he says. "We still need to do some fine-tuning because we're at the early stages of production ramp-up. But as soon as the volume is up, we'll be there with the eight-hour engine."

Eight isn't the only magic number on Bellemare's mind. The compact, constantly active PW600 line is actually the last link in a chain of suppliers that the company has been instilling with a new way of working. The P&WC president values his vendors, but he's also glad there aren't many of them.

"The main lesson we've learned from early PW600 production is that having a much lower number of key partners than usual makes a big difference," he says. "It's much easier to work with a limited number of integrators. We can communicate with them better, ensuring they do the right things to ramp up their capacity, put the right quality processes in

place, and give their people the right training."

Bellemare makes no bones about his conviction that the PW600 family – the 610 for the Eclipse 500, the 615 for the Cessna Citation Mustang, the 617 for the Embraer Phenom 100 – is an enabler without which the VLJs and the much trumpeted air-taxi market would not exist. "The PW600 is a game-changer in its technology, sourcing, assembly and, above all, its potential to enable a whole new market."

When it comes to VLJs in general and air taxis in particular, Bellemare is a believer. "Look at the order book," he insists. "It's clear that the general-aviation market is placing firm orders in significant quantities. The market is definitely developing in line with the forecasts and with our expectations."

Challenging

The men from Montreal have long voiced their support for the air-taxi concept and are following through not just with the PW600 but also in other practical ways. "We've always said making air-taxis work was going to be more challenging than the owner-operator VLJ market," says Bellemare. "So we're working closely with Pogo and DayJet in the USA and JetBird in Europe – they sought our input into their business models and we are passing on the operating and support lessons we have learned over the years."

P&WC marketing vice-president Keyvan Fard spells out the specifics. "We emphasised to them the need to focus on the main part of their business, which

is carrying passengers," he says. "We can help them do that by managing the engines. Maintenance, reliability, parts supply, spare engine supply – we can take on all that."

Fard also believes that P&WC's intimate knowledge of demanding regional and business-jet operations can help to give the air-taxi companies a smooth climb-out from Day 1.

"Our operational insights should allow them to avoid the day-to-day issues and ensure that they have a reliable product," he says. "It's vital that they be efficient from the start, to win the confidence of passengers and keep them coming back."

Finally, the P&WC management team is encouraged by the sheer variety of air-taxi business and operating models now in development.

"DayJet's is closest to the taxi concept, JetBird is looking at branded point-to-point charters, Pogo has yet another model," says Fard.

"The three operators are also addressing three different regional customer bases – in the US north-east and south-east, and in Europe. We don't know yet which one will be most successful. But we do know there's a need for point-to-point services and they are going to happen."

While the PW600 family grabs the limelight, P&WC is getting on in its far-sighted way with an array of other programmes that range from still more derivatives of the evergreen PT6A turboprop to powerplant concepts for a new military heavy-lift helicopter and even the much-discussed replacements for the Boeing 737 and Airbus



A320 air transport narrow-bodies.

Executive turboprop manufacturer EADS Socata is boldly promoting its TBM 850 as a more economical alternative to the VLJs, declaring that the new aircraft has for all practical purposes abolished the speed differential that gives the little jets their key advantage. The key to the improved performance is the PT6A-66D. Developed at the request of EADS Socata, this variant produces a flat-rated 850shp (630kW), some 150shp more than the -64 powering the TBM 700. Features include single-crystal compressor blades, allowing higher turbine temperatures, and a new first-stage compressor design and gearbox.

Comments Bellemare: "Some people say that all we have done is cannibalise our own market in the VLJs, but I think there's plenty of room for different kinds of aircraft addressing different customer niches and markets."

Other new PT6 activities under way include the PT6A-66B for the Piaggio Avanti II, plus a number of developments still to be announced. "In the coming years you'll probably see three or four new PT6 programmes," Bellemare predicts. "Two are similar in scale to the -66D, the others larger and aimed at a different market."

Outlook

While the PT6 flies on, the outlook has until recently looked bleak for the bigger PW127 and PW150 and the air transport turboprops that they power.

"We've always said there would be a niche for turboprops because they provide fuel economy the jets can't match," says Bellemare. "Now look at what's happening. The manufacturers are talking about building 50-100 aircraft a year."

P&WC is convinced that the turboprop resurgence is no flash in the pan. "The improvement in this market

will be sustained because the price of fuel is high and isn't going to fall significantly in the medium term," says Bellemare.

Not that P&WC has lost interest in powering a regional jet – far from it. Although the company has yet to secure a launch platform for its PW800 10,000-20,000lb-thrust (45-90kN) turbofan, Bellemare remains convinced of the eventual need for an engine in this range. The only uncertainty, he believes, has to do with the sector that will need it first.

"At this point we're just continuing to build on PW800 and Advanced Technology Fan Integrator (ATFI) demonstration work."

The resulting engine could power the next generation of regional jets, though Bellemare has his caveats. "The market for 50-seater RJs is almost gone, and while the 70-seater market is very active there's no new platform on the horizon," he points out. "So the potential applications are migrating towards the upper end of the RJ market, aircraft with 90 seats and beyond."

"There will eventually be a need for a new generation of single-aisle airliners powered by an engine rated at around 30,000lb," he says. "Pratt as a group has that smack in the middle of its objectives. We're spending a lot of time and money on technology demonstration to ensure we're ready for a commercial launch when the time comes."

"We still need to do some fine-tuning because we're at the early stages of production ramp-up. But as soon as the volume is up, we'll be there with the eight-hour engine."

Alain Bellemare