Getting Down to Business

While the business aviation sector has yet to fully recover from its sharp decrease in sales generated by the Great Recession of 2008, innovation remains alive and well in the community's training sector, reports Group Editor Marty Kauchak.

The business aviation learning continuum is unique when compared to other civil sectors. One example is corporate flight departments have a greater demand for high fidelity training scenarios for different airports often on short notice.

Rick Bedard, the director for Training Operations FlightSafety pointed out that one attribute of the airlines is their regular, predictable flight schedules – allowing their flight crews to often repeat the same operations day in and out. "You are not going to get that hot-and-high, or curved approach or GPS approach or some other approach [in the airlines] where you have to then get that programmed right into the system. I hear it directly from our business aviation customers that they want that 'real life' scenario coming into the simulation. Our centers do a phenomenal job in going that extra step to determine: where are you flying, what do you want to do, and then giving you that."

A confluence of other forces is driving an evolution in the community's unique learning programs. The business jet market's modest, sustained recovery from the 2008 recession, primarily in the upper-end, large cabin segment is being matched by the introduction of new and derivative small and mid-sized cabin jets. At the same time there is a steady demand for new accessions into the community's cockpits.

Sheryl Barden, the president and CEO of Aviation Personnel International, told *CAT* on September 19 that based on the projections for additional business aircraft added to the US-based fleet, the demand for additional pilots for this segment of the market is estimated to increase by over 7,500 in the next ten years. The San Francisco-based executive continued: "On the worldwide scope, the demand for additional pilots is estimated to be over 23,000. The need for training will not only mirror this growth but it would be reasonable to expect it to increase at a faster pace as the training for newer, more complex aircraft requires more time to be spent in an initial course."

FlightSafety International is one training and simulation industry company responding to these challenges.

New Instructional Strategy

FlightSafety is migrating learning for upcoming and current production business aircraft away from the traditional system-by-system instructional strategy. Dan MacLellan, the company's vice president of Operations, told *CAT* that his team's Operational Day Flow (ODF) concept for initial and recurrent pilot courses allows learners to "learn by doing." Essentially, aspiring and seasoned business pilots use ODF ground school courseware redesigned on aircraft performance and range, and are then immersed into operationally based scenarios organized by phase of flight.

The ODF trial program was introduced at FlightSafety's Dallas Fort Worth Learning Center for the Dassault Falcon7X long-range business jet course of instruction in 2010. MacLellan referenced that course to point out that instead of tracing the flow of a drop of

The demand for training innovation in this sector is being driven in part by the fielding of new aircraft including the Embraer Legacy 500 midsize jet. Image credit: Embraer Executive Jets.

oil through an onboard fuel system, and completing other learning tasks using graphics and PowerPoint slides, the student now uses simulator-furnished data on learning devices inside the classroom. "You can now fly from the desk," MacLellan emphasized, adding, "and now instead of just talking about a fuel system, we are reviewing it and using it just like we would in the aircraft. You are not talking about pounds of fuel. You are manipulating switches in classroom scenarios in a specific flight."

Steve Gross, the company's vice president for Sales, provided another insight on the level of ODF technology insertion. The company executive added there is a Falcon7X cursor control device at each desk to permit aspiring pilots to better learn and become familiar with the aircraft's advanced avionics suite – paramount as cockpit avionics become more complex.

Since 2010, ODF has rapidly become a foundation for initial and recurrent training for many of FlightSafety's fixed-wing and rotary wing aircraft programs. An ODF program is now part of each FlightSafety learning center's course package. Bedard estimated the ODF instructional strategy supports about 30 percent of the company's business aviation courses.

Similar to the civil airline world, editorial staff have observed in Halldale's sister publications *MS&T* and *MEdSim*, that learners in high risk industries, including those in the aviation business community, are clamoring for technology-enabled instruction when and where it makes sense.

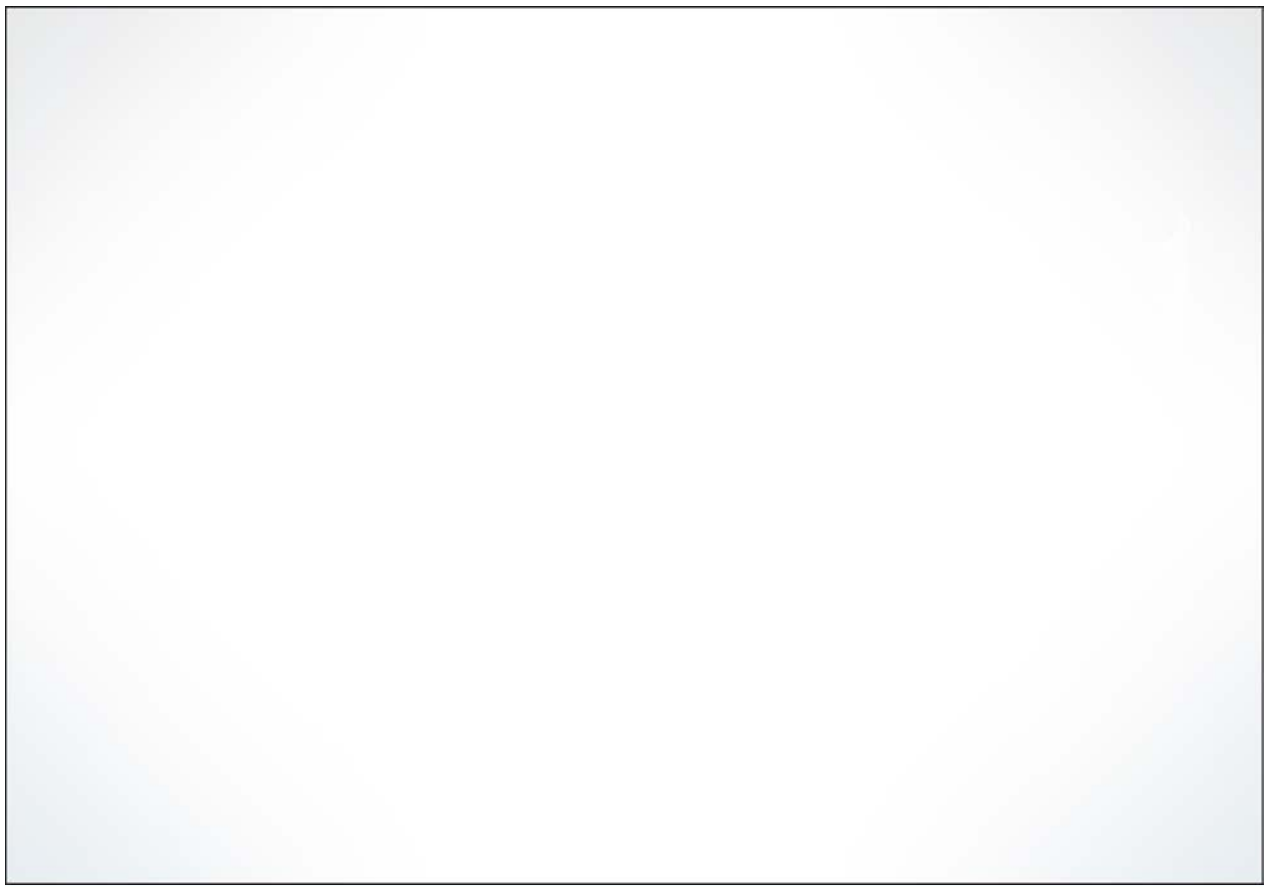
Beyond ODF, FlightSafety is responding to the uptick of smart devices (iPhones, iPads, and others) in the classroom and on the job. "What we're doing now is continuing to align the way we train with how they operate in the aircraft and in the hangar," Bedard said, and continued, "And this is the same type of mobility platforms, tools and applications they use in their every day jobs. We want to make that transparent to them in the classroom." Indeed, Gross pointed out now a learner has the ability to receive "the majority of our training material through an iPad application."

As the iPad is increasingly prevalent on the business aviation flight line, students are able to download their course content before arriving in class and prepare for their lesson.

New Technologies

FlightSafety's VITAL 1100 visual system is one technology from the company's portfolio enabling the learning center network to deliver more precise solutions to its demanding customer base for its dynamic schedules. Gross discussed the importance of the Vital 1100. "We have a customer that wants to come in and do a curved approach down to 200-and-a-half, so that's where this technology is shining for them."

In an effort to further expand the technology envelope in this sector's training programs, FlightSafety has built a center-line, forward facing instructor operating station in the new FS1000 full flight simulator for the Gulfstream G650 twin-engine business jet. The training device was installed to its Long Beach Learning Center this July.



Above
FlightSafety's Operational Day Flow (ODF) concept for initial and recurrent pilot courses allows learners to 'learn by doing' in classrooms such as the one above.
Image credit: FlightSafety International.

"So now the instructor is not sitting sideways looking outward on the left-hand side to see what is going on," MacLellan said, "we have moved the IOS where the instructor is sitting between the students – right where things are happening."

Demand from New Aircraft

The business jet market's modest, sustained recovery from the 2008 recession, primarily in the upper-end, large cabin segment, and the introduction of new and derivative small and mid-sized cabin jets is yet another force driving this community's training expansion and evolution.

In one instance the initial HondaJet light business jet aircraft is preparing to enter service in 2015. To support the entry of the new jet into the business aviation community, FlightSafety is the authorized training provider for the program, and is completing the courseware and full flight simulator for delivery to HondaJet.

FlightSafety is also partnering with Pilatus to deliver the training system for the new PC-24 business jet. MacLellan noted the first PC-24 training program will be at the Dallas FlightSafety Learning Center. The program will be certified by FAA, EASA and other regulatory agencies and will be deployed concurrent with the aircraft's fielding to the community.

A statement from Daniel Bachmann, the manager of communications at Embraer Executive Jets, noted that on this August 12, the Brazilian Civil Aviation Agency (Agência Nacional de Aviação Civil – ANAC) granted type certification for the company's new Legacy 500 executive jet. The first delivery was scheduled as this issue was prepared for publication with up to six aircraft being produced in 2014. Bachmann further added FlightSafety is the provider of training for the new aircraft "and the Legacy 500 training site is St. Louis."

On the Horizon

FlightSafety, in an effort to stay ahead of the business aviation community's increased focus on safety is developing a safety management system (SMS). MacLellan remarked that his team was continuing to collaborate with the FAA on this project. The company expects to be approved as a Part 142 school for safety management systems by this December 31. "We'll be one of the first 142 schools with an SMS-approved program," he added. cat