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Pratt & Whitney Canada merges e-learning with traditional classroom delivery to satisfy surge in training demand

Pratt & Whitney Canada Corp. (P&WC), based in Longueuil, Quebec, is a world leader in aviation engines powering business and regional aircraft, and helicopters. The company also offers advanced engines for industrial applications. With 42,000 engines in more than 190 countries, P&WC's operations and service network span the globe.

In a typical year, more than 2,700 customers complete courses in four P&WC customer support training centers located around the world. For almost 40 years, this aviation engine manufacturer had been meeting its customer training needs almost entirely through instructor-based programs. However, company growth and plans to introduce several new engine models were making it difficult and costly for the company to meet new demands for training. Faced with this challenge, Charles Methot, Manager of Customer Training for P&WC, had to find a way to provide more training, and quickly. "One of the major challenges we were facing was having enough instructors ready to deliver the training," says Methot. "It takes at least six months for new instructors to achieve the required competency to teach our courses."

Methot needed an alternative instructional vehicle to meet the rising demand for his department's services, while continuing to deliver the high standard of training his organization had become known for. To handle the increased training load, P&WC decided to go the e-learning route.

Methot had several items on his wish list. First and foremost, he was looking for an integrated learning management system (LMS) and learning content management system (LCMS) to ensure fast and seamless implementation of e-learning courses. Secondly, he wanted a Web-based delivery tool that required minimal training for content developers and instructors, and one that would allow them to incorporate new training material easily. Thirdly, P&WC wanted to incorporate live monitoring of student progress for both off and on-line training. Last but not least, Methot states, "In our change management approach, we wanted a system and an interface that was very intuitive for students."

After looking at several best of breed options, P&WC chose a LMS provided by GeoLearning Inc., a leader in Managed Learning Services and hosted learning and performance platforms based in Des Moines, and an LCMS by dominKnow Inc., a learning systems provider based in Perth, Canada. "With dominKnow, once we had selected the product there was rapid deployment. We had access to the system in three weeks," states Methot.

According to Methot, there are several 'must have' features in the dominKnow LCMS: online and offline capabilities and searchable knowledge repositories that allow learners to find the learning content they need, when they need it; workflow management tools that facilitate instructional design and content writing processes with task and project

management capabilities; and templates that allow instructors to create tests with questions such as true/false, fill in the blank, multiple choice, multiple image select, pull-down and drag and drop matching. As well, instructional design reports help instructors analyze test results to assess which training modules are most effective and which ones need to be modified. Students who fail to answer a test question successfully can link back to a specific learning object to review the information and enhance their knowledge.

"One of the most powerful features", states Methot, "is the reusable learning object model." This enables P&WC's developers to use, re-use, and re-purpose existing content and helps to ensure consistency and accuracy of information. "Each learning object can be categorized in terms of its applicability for different courses," says Methot. "When a change is made to a learning object, the object is automatically updated in all courses.

"With regards to training," states Methot, "for the content experts, very little training was needed and the transition was relatively smooth. On the part of the students, there was no training at all."

P&WC Customer Training developers create and update their own e-learning content easily with dominKnow's authoring tool. They can generate learning content by importing existing content from Microsoft Word and PowerPoint documents, HTML pages, PDF files, Macromedia Flash files and even podcasts, and re-purpose that content into easily accessible, reusable learning content. "Our source data is rather complex," says Methot. "We have 3-D models, animation, and VRs, so everything is done internally and finally assembled in the LCMS."

In addition to creating online course content, Methot states that, "We have started using the LCMS to create training manuals used in the instructor-led courses. We take full advantage of the fact that the LCMS is a web-based system with the data in a central location. With dominKnow, we can work individually, or collaboratively, in a dynamic design environment, regardless of where we are in the world. The instructors who give customers onsite training at various companies have the ability to update training manuals and e-learning courses even if they're remote—without having to deal with complicated access protocols. Basically, the

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LCMS quality assurance and tracking tools such as check-in/checkout, access protocol and approval features, allow all of us to work live without stepping on each other's toes." Furthermore, P&WC has been able to incorporate live monitoring of student progress because dominKnow's LCMS is fully integrated into GeoLearning's LMS. "With this system in place," states Methot, "we know exactly where each student is in their progress, which learning objects they are working on. As well, we are able to monitor their test questions and results."

Presently, P&WC offers twenty-two different instructor-led courses spanning all engine models and four online training courses. Previously, a typical P&WC course consisted of one event delivered by an instructor over a five-day period. Now, students complete the first two levels on two of the engine models through e-learning. Each level takes four hours to complete. The third level requires hands-on training with the engines and takes three days with an instructor. "The need for an instructor in a typical course has gone from five days to three days, with the prerequisites for level one and two completed online," states Methot—a 40% savings that allows Methot to introduce new and additional training to satisfy his company's growing demand. "In addition," Methot says, "customers can save up to US$2,500 per student in transportation expenses and associated costs."

Since P&WC launched its blended learning program (e-learning and intructor-led courses) in March 2006, 867 students have completed e-learning courses, and 847 more students have started or registered for e-learning courses. According to Methot, "There's a high satisfaction level with our new e-learning delivery. We monitor student feedback, and take their suggestions into account. In a course completion survey, 86% of the users were 'delighted' or 'satisfied' when asked for their overall opinion of the completed online training". As a result of customer feedback, Methot foresees an increase in the use of e-learning, "The plan is to implement blended learning programs on all engines in the future."

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