

dominKnow E-learning System Replaces “Crude Learning” at Oil Sands Facility

“Spray and pray” approach to classroom learning substituted with on-line learning approach at major oil sands upgrader facility.

Alberta’s oil sands first came to the attention of European fur traders in 1719 when Wa-pa-su, a Cree trader, brought a sample to a Hudson’s Bay Company trading post. Almost three centuries later, the oil sands are now acknowledged to be the world’s second highest proven petroleum reserves behind Saudi Arabia. And the pressure is on to develop these resources for an oil-hungry world that is increasingly interested in Canada’s stable geopolitical environment.

One of the biggest obstacles to successfully exploiting Alberta’s black gold is building a skilled labor force to operate the huge refineries that separate crude bitumen (a semi-solid form of crude oil) from silica sand, clay minerals and water.

At one of Alberta’s largest crude bitumen upgrading facilities, several hundred power engineers and process operators turn diluted bitumen into millions of barrels a year of synthetic oil that in turn is sold to refineries for gas, jet fuel, heating oil and diesel oil.

As construction on this billion-dollar facility was ramping up, the mission was to train teams of operators so the project would be producing revenue as soon as the construction was complete.

Training staff realized they had to take advantage of an online learning system. Though 95% of the facility’s operators had industry experience, it was akin to hiring experienced 747 pilots who suddenly had to qualify to fly an Airbus 340. The traditional ‘spray-and-pray’ approach of classroom learning wasn’t going to work in this situation.

The facility’s training management understood they needed the ability to change or customize e-learning content as processes evolved or changed. Management didn’t want to be beholden to a technology vendor every time they needed to modify content.

It was also important to have a core technology that used an accessible versus proprietary toolset so the training team could manage minor technical updates in-house, and not risk being

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orphaned on a proprietary technology.

dominKnow's Learning Content Management (LCMS) technology fit the bill – including facilities to set student learning objectives, report on progress, track all student activity and conclude with an e-assessment to ensure actual learning has occurred.

dominKnow LCMS runs on standard Windows servers with a few gigabytes of memory and storage. There is nothing exotic that takes a lot of time or money to swap out if the need arises.

dominKnow created easily identifiable Return on Investment (ROI) as well as strategic competitive advantage for this oil sands facility.

The facility overview is the most popular courseware among the dozens of different e-assessments and courses created either by dominKnow's e-learning services division or in-house. More than 500 people have taken the overview course either on-site at the upgrader or at the oil company's head office.

The facility overview course is part of a four-step, six-month validation process. The first step is to establish that academic knowledge is present. The second step is to sketch and describe from memory the oil extraction process. The next step is a walk-through of mechanicals and related safety practices, and the final step is skills demos. E-learning is critical to step one, and sets the foundation for the subsequent steps.

Since the upgrader often hired from related facilities in either oil and gas or fertilizer plants, dominKnow's ability to drive self-paced learning was a real time-saver that also made learning more relevant. Operators don't have to sit in a chair looking at someone's PowerPoint

slides listening to what they already know.

Not to mention that sitting through instructor-led classes offering needless repetition is a very costly proposition. With per person cost runs to \$500 per day, dominKnow cut classroom time in half. If 180 people take a given course, that's an instant savings of \$90,000 on a single course.

In another example, the facility uses a distributed control system that requires knowledge of a particular piece of software. The in-classroom training offered by the technology's vendor clocks in at \$6,000 per seat for every person attending, including travel costs. Instead the upgrader's training team used dominKnow's technology and software, and for a low development cost they had a customized course tailored to the control system's actual use in their facility. The estimated saving is in the neighborhood of \$500,000 on this example.

There's more than money at stake. In a highly competitive environment to get the best people workers would much rather engage in self-paced courseware than sit in a classroom learning what they already know. Fast, efficient e-learning means better morale, better productivity and better safety records. All of this makes this facility a preferred employer in an oil sands environment with thousands of job vacancies."

Contact dominKnow Inc.

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