Goals
- Provide OLEUM with dynamic simulators that accompany a variety of training courses for the Boardman Initial Training Path.
- Prepare the replacement of existing generic simulators.
- Establish a modern OTS solution that can be in place for 15 years or more.
- Provide a scalable training simulator upon which new models, users, and geographical regions can be progressively introduced.

Challenges
- The typical training instructor has limited skill sets to update and maintain a complex simulator system.
- The average training simulator can only train one trainee or set of trainees at a time.
- A lack of physical resources and localized training programs often require on-site dedicated instructors.
- Typical simulator has a time zone/access limitation/resource availability that limits on-demand use of the system.
- There was no central file system integrated with a simulator system.

AVEVA Solution
- Operator Training Simulators (OTS)
- DYNSIM Dynamic Simulation (Powered by SimSci)
- InTouch HMI

Results
- OLEUM is now able to train up to 2000 trainees per year.
- Cloud OTS has reduced operator training time from months down to weeks.
- Rather than training one batch of operators at a time, OLEUM can train a series of batches at once (through self-training and instructor-led training).
- The high cost of maintaining a typical simulator is now zero.
- With cloud access, the cost of travel logistics for trainees is now zero.
- The high upfront cost of owning a simulator can now be distributed annually.
Background

La Mède, France – Total is the world’s 4th-ranked international oil and gas company and the world’s second largest LNG producer. Total has been producing biofuels for more than 20 years and stands today as the leading distributor in Europe.

OLEUM, a division of Total Group, is the European training center for Oil & Petrochemical industries. OLEUM is the first European training center to offer tailor-made training courses in an industry-scale processing plant. There are two pedagogical plants: one located in Dunkirk in the north of France in a former refinery, and the second near Marseille on the industrial operated platform of La Mède.

“The La Mède facility hosts Total’s second OLEUM training center, which is one of the world’s few such facilities based in a real industrial complex. The center can train up to 2,000 people a year on a range of technical courses, and as its OTS solution, Total worked with AVEVA to set up all the alarming functions, design the OTS operator interface, and deliver its offerings in a cloud environment.”

Luc Seyfried,
Chief of Project Formation, Total Refineries

In 2015, Total announced plans to transform its La Mède refinery into a unique facility in France, dedicated to promising growth sectors for the group and the region. Most notably, the facility will host France’s first world-class bio-refinery to meet the growing demand for biofuels.

The OLEUM training centers in Dunkirk and La Mède enable trainees to experience all technical courses in a full-scale unit under safe, healthy and controlled conditions. In these unique facilities, they use AVEVA OTS to learn operating procedures, routine checks, first-level maintenance, fault diagnosis and rectification, pre-alarm recording and triggering, degassing, assembly and disassembly gestures, and also the Boardman competencies used control panel rooms.

“We designed a technical training offer for Total, combining classical methods, combining practice on real size units, coaching on process unit. All this embedded with the same teaching team.”

Stéphane Rémy,
Head of Industry Learning Solutions,
Total Learning Solutions

The La Mède OLEUMs center will also provide a digital demonstration platform to experiment Group digital projects under real operating conditions in Total’s industrial environment.

OLEUM Combines Teaching Expertise with Life-Size Technical Platforms
In Search of a Modern, Flexible, Economical OTS Solution

In preparation for the replacement of existing Total RC generic simulators—for which support concluded in summer 2018—OLEUM went in search of an OTS solution that would reduce demand on CAPEX and OPEX, expand Total’s training offerings, provide a scalable training simulator, enable the corporation to train operators off-site, and supply modern training offerings for the next 15 years.

That’s why Total selected AVEVA’s OTS solution. It was the first cloud-based OTS ever delivered by AVEVA, and the first solution integrated with Total’s corporate Learning Management System. In AVEVA OTS, Total OLEUM found a modern, scalable, flexible and economic solution that would expand its ability to train operators all across the corporation without having to spend millions of euros on travel logistics.

Beyond economic savings, the AVEVA OTS is helping to solve many of the challenges faced by Total:

- While the typical time to train an operator used to be months, it now takes days thanks to OTS cloud access and self-guided training options.

- Typically, a simulator is used to train one batch of operators at a time. Now a series of batches of trainees can train at once using self-training or instructor-led training modules.

- While the upfront cost of owning a simulator is normally very expensive, those constraints on OPEX can be planned for and distributed annually.

- With a cloud-based solution, the cost of travel to gather trainees from all across France is now zero.

- Normally, the resources required to prepare training material are quite limited, whether by physical location or capacity. With the scalability and accessibility of cloud OTS, those limitations are all but eliminated.

“I strongly believe using OTS is really improving our operation excellence. Increasing the competency of the people, is reducing the, the, the risk and the risk, reducing the risk of having accidents. And it seems that AVEVA was the only one who’s having the, the, the answer for this requirement.”

Eric Scappazzoni,
Manufacturing & Projects Division, Total
CUSTOMER CASE STUDY
TOTAL OLEUM

Benefits of AVEVA OTS for Total OLEUM

While Total continues to expand its use of AVEVA OTS, the corporation has already realized early returns on its investment, such as:

- The ability to train up to 2,000 operators each year
- The capacity of 500,000 metric tons per year of HVO
- More efficient engineering, with an easier way to validate simulators
- Increased operator training efficiency, going from months to weeks
- Faster commissioning of simulator models
- Perfect solution for standardization of training materials
- Easier solution to implement changes and re-work of models
- Secure web interface
- Very minimal IT involvement, resulting in IT maintenance savings
- Real time support of simulator
- The cloud-based solution leaves no hardware footprint

“The future of OLEUM today depends on our ability to innovate, and we are convinced that the best way to innovate today is to work with partners. And of course with AVEVA we developed new training solutions regarding cloud solutions for dedicated process simulators for our business unit.”

Stéphane Rémy,
Head of Industry Learning Solutions,
Total Learning Solutions

About AVEVA

AVEVA is a global leader in engineering and industrial software driving digital transformation across the entire asset and operational life cycle of capital-intensive industries. The company’s engineering, planning and operations, asset performance, and monitoring and control solutions deliver proven results to over 16,000 customers across the globe. Its customers are supported by the largest industrial software ecosystem, including 4,200 partners and 5,700 certified developers. AVEVA is headquartered in Cambridge, UK, with over 4,400 employees at 80 locations in over 40 countries.

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