AVEVA™ XR for Training

Prepare your operators through immersive plant training

AVEVA XR for Training is a 3D immersive training tool that connects control room operators and plant personnel in a high-fidelity virtual simulation of your process plant. AVEVA XR for Training allows operators to train in a virtual environment identical to the control room. This provides a realistic learning environment, which prepares personnel to act appropriately in any situation. The immersive training system helps capture knowledge from experienced operators and instill best practices across the workforce, increasing efficiency and reducing costly errors or safety issues.

Overview

It is very difficult to realistically simulate operational procedures, accidents, or a safety event in an actual plant. Operators train from workbooks, slideshows, and on-the-job events. This can result in inexperienced or out-of-practice operators who are not fully prepared to run a plant in any situation, placing a company's people and profit at risk. AVEVA XR for Training creates an immersive virtual training environment to empower process industries to train and certify operators effectively and efficiently. It provides a complete plant crew training system, capturing best practices, infrequent procedures, and other operations as well as creating a system of record for continuous improvement. Operators can experience real-life operating scenarios and learn by practicing them in a safe training environment. Learning managers use AVEVA XR for Training for operator familiarization, safety scenario practice, knowledge capture, procedural training, and team training to improve operations and safety in the plant and throughout the enterprise.

Business value

- **Operator proficiency.** Improve operators' ability to respond quickly and correctly to emergency situations.

- **Cost of training.** Save 30 to 40% on time and costs for on-the-job training

- **Best practices.** Provide a realistic environment to practice operating procedures and rarely performed but safety-critical tasks.

- **Start up and shut down.** Reduce the time of start-up when recovering from a planned or unplanned shut down by 15 to 20%.

- **Team training and communication.** Maximize collaboration between the control room and the field.

Emergency preparedness training in a VR environment

AVEVA XR for Training features

AVEVA XR for Training offers a dynamic virtual reality experience that culminates generations of design and operator training simulations.
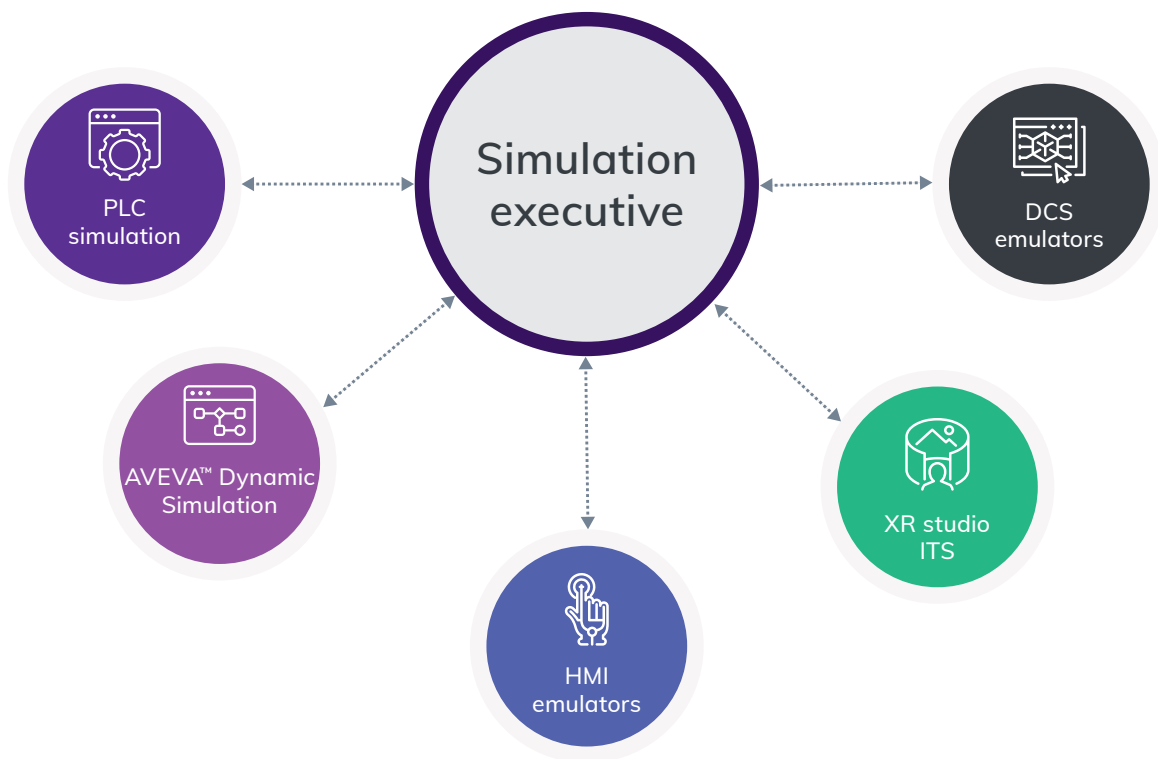
- Stereoscopic 3D visualization using any modern VR hardware
- Interaction using any modern input device (gamepads, gloves, gesture recognition)
- High-fidelity dynamic simulation
- Connection and interaction with mobile devices

System architecture

AVEVA XR for Training's modular architecture allows you to link to major distributed control systems (DCS), as well as complete operator training simulators. The simulation executive transfers data between the 3D virtual environment, the dynamic process simulation, and any third-party software or data source required for the overall solution. This environment allows for a multifunctional scalable technology. The basic architecture which brings about the virtual reality experience of AVEVA XR for Training consists of:

- A 3D field virtual engine
- Operator consoles with replicated control room HMI
- Control system emulation
- Dynamic process simulation
- An instructor station managing the training event
- A simulation executive processing communication between all system elements

These tools create a system that replicates the look, feel, and behavior of a real plant so that learning managers can build training events for the scenarios that matter most. Immersive training increases the operator's basic understanding of the processes, equipment, and procedures necessary for safe and reliable operations.
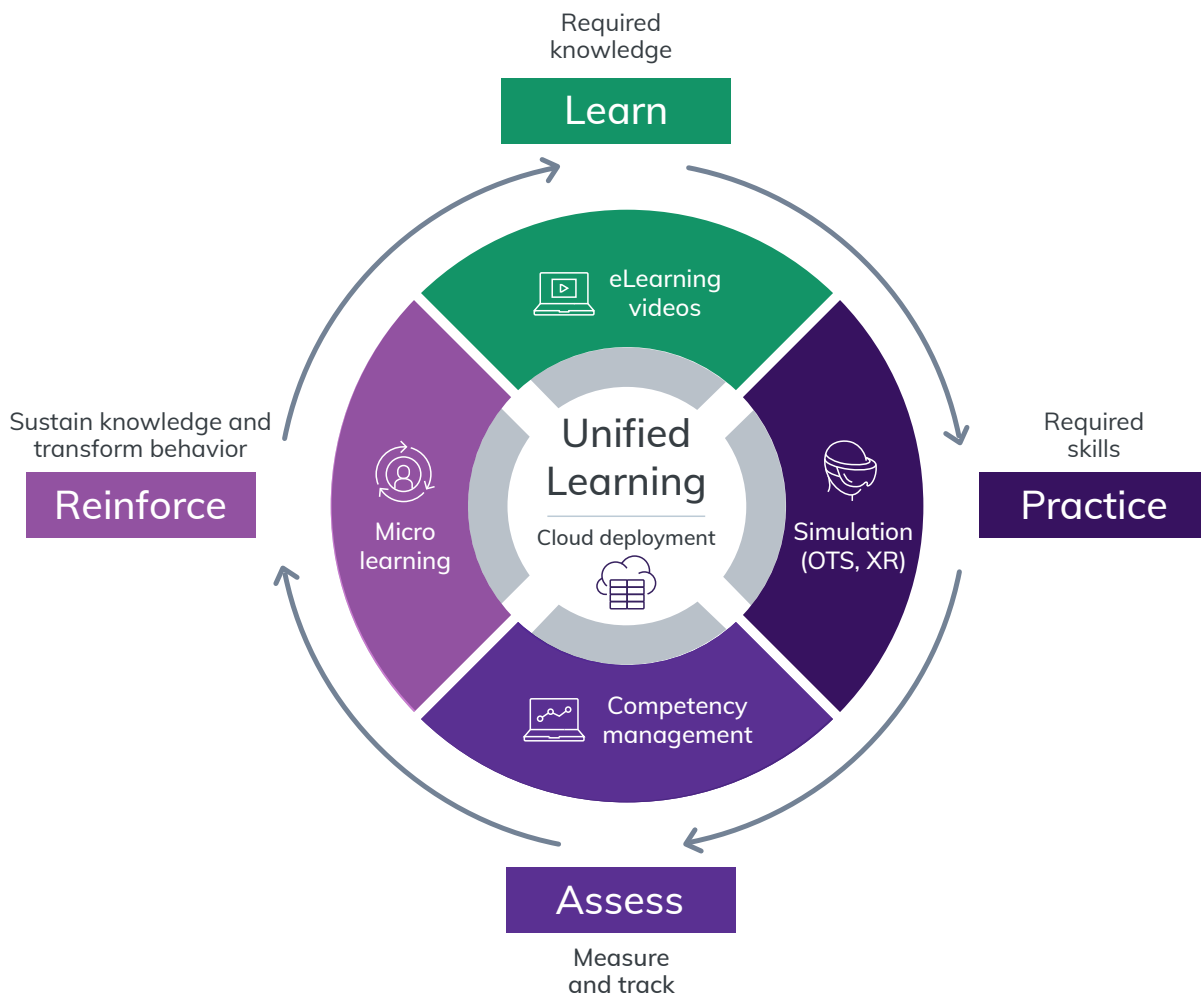
AVEVA™ Unified Learning

AVEVA Unified Learning is a cloud-based training hub that can integrate multiple technologies into a scalable industrial learning solution that addresses all four stages of the learning cycle: learn, practice, assess, and reinforce. AVEVA Unified Learning provides cloud access to our vast portfolio of training and simulation applications including AVEVA XR for Training. It creates a cohesive learning experience that can blend ready-to-use options with tailor-made solutions. AVEVA XR for Training sits within the practice and assess stages of the learning cycle, where workers can practice running a virtual plant in a safe controlled environment and later be tested with built-in assessments that are integrated with the XR models.

AVEVA Unified Learning transforms organizational performance and lowers total training costs.

Training for offshore in the onshore VR training room

It is an integrated and scalable training solution that combines the flexibility of cloud deployment and subscription-based pricing to support an enterprise-wide multi-site continuous learning organization.

The AVEVA advantage

AVEVA drives digital transformation for industrial organizations. AVEVA XR for Training is a key part of the AVEVA industrial software ecosystem and benefits from portfolio-wide infrastructure.

AVEVA™ Unified Engineering

AVEVA Unified Engineering is the new standard for capital project engineering and design collaboration. It integrates all process simulation and engineering (1D, 2D, and 3D) data in a single data-centric hub on AVEVA's secure cloud environment. Bi-directional information flow creates the ability to execute concurrent, multi-discipline engineering for greater control across the entire project. Data from AVEVA Unified Engineering can significantly lower the development time for XR environments.

Learn more: AVEVA Unified Engineering

AVEVA™ XR for Design Review & Commissioning

AVEVA XR for Design Review empowers your teams and lowers the time, cost, and risk of capital project engineering. Being able to step inside the 3D plant model in a seamless way and review the ergonomic design in a collaborative VR environment enables better decisions and significant cost avoidance.

Learn more: Extended reality, virtual reality, augmented reality | AVEVA

AVEVA™ XR for Operations & Maintenance

AVEVA XR for Operations and Maintenance unlocks the potential of your assets and empowers your team with AR, MR, and VR capabilities. An XR-based visual digital twin connected to real-time information and digitized maintenance steps enables better work execution to prevent costly failures, reduce downtime, and focus on shaping what's next.

Learn more: AVEVA™ XR for Operations and Maintenance

AVEVA™ Connect and AVEVA Flex

AVEVA Connect is our common cloud platform, providing a central location to securely access the broadest and deepest industrial software-as-a-service (SaaS) portfolio. AVEVA software in the cloud drives sustainable growth for our customers, enabling you to transform faster, reduce costs, and easily scale.

Learn more: AVEVA Connect

Achieve faster return on investment and remove traditional barriers to software adoption with a flexible subscription program. The AVEVA Flex subscription program combines any mix of cloud, hybrid, and on-premises solutions with streamlined license purchase, usage, and management.

Learn more: AVEVA Flex

For more information on AVEVA XR for Training including customer success stories, please visit:
AR/VR Immersive Training Systems by AVEVA
Shell Operations Mastery Project by AVEVA
How BASF prepares new operators for a sustainable chemicals industry