AVEVA™ Pipeline Training Simulator 2020

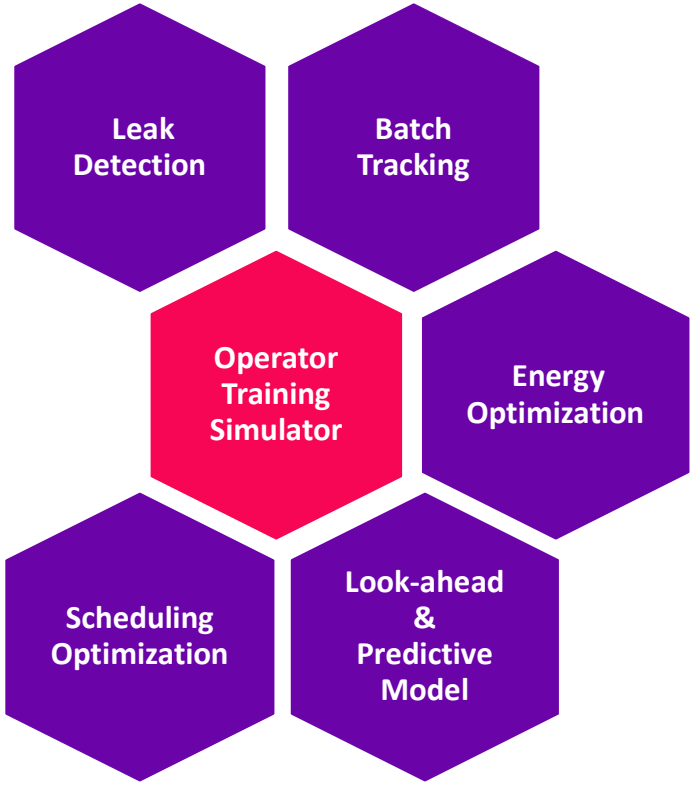
Pipeline Simulation Product Introduction *(What is it?)*

Overall Functionality

SIMSUITE

- High Fidelity Hydraulic Pipeline Model
- Gas, Liquids & Two-phase
- Steady State & Transient Conditions
- Compatible with all SCADA technologies

Product Applications



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AVEVA™ Pipeline Training Simulator

Main Components and Features

- Operator HMI
- SCADA System
- Virtual Pipeline & Control System
- Applications:
  - Instructor Station
  - Qualification Information System (QIS)
  - Scenario Navigator
  - Scenario Composer
  - Logic Template Editor
- **DYNSIM Integration \ PLC Simulation**
- Advanced Applications – Leak Detection

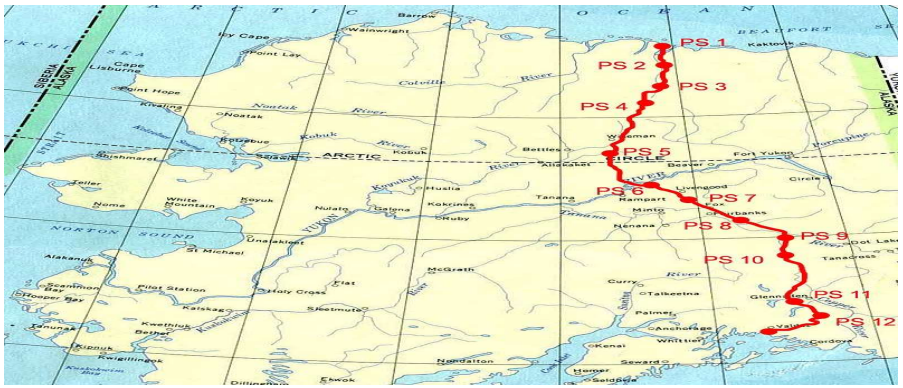


AVEVA Pipeline Operator Training

Customized Training Simulator

Alaska is one of the most environmentally sensitive areas in North America

- Alyeska Pipeline (operator of the Trans-Alaska Pipeline) uses SimSuite OTS to train their operators
- High fidelity hydraulic simulation of pipeline
- Replica logic of control system for most realistic behavior
- Power simulation of pump station generation facilities



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Trans-Alaska Pipeline

Description: 800 miles in length running from North Slope of Alyeska to Valdez Marine Terminal (USA)

Pipeline has transported 17 billion barrels of heated crude oil

Universal Trainer

Generic Pipeline Operator Training

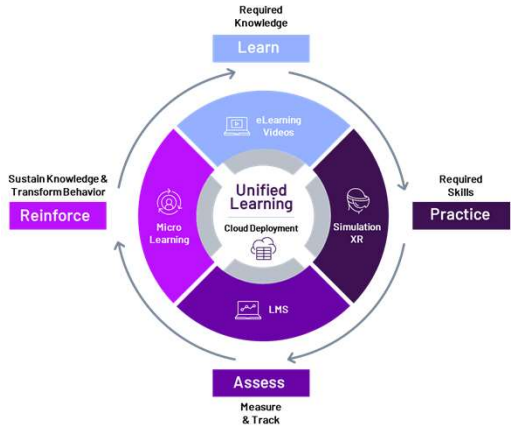
Major Features

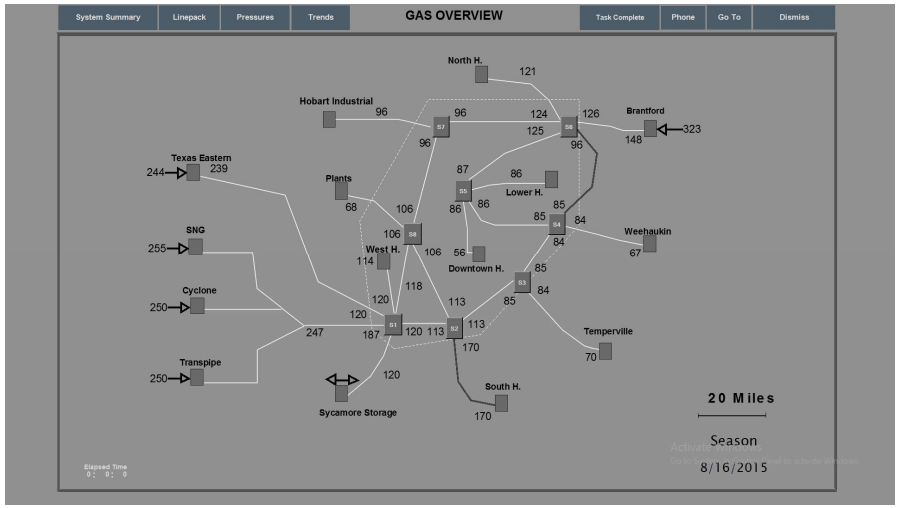
- Pre-packaged, generic training simulator
- 3 Pipelines – Products, Crude, & Gas (Preconfigured)
- Full functionality of customized trainer including complete OASyS SCADA interface

Value Proposition

- ✓ Low cost, entry level solution
- ✓ Helps end-users meet DOT reqs. for operator qualification
- ✓ Delivered quickly on a single virtual machine
- ✓ Cloud enable offering, subscription base *(March 2021)*
- ✓ Combined with Unified Learning Offering *(March 2021)*

AVEVA Connect





Gas Distribution Network SCADA Overview

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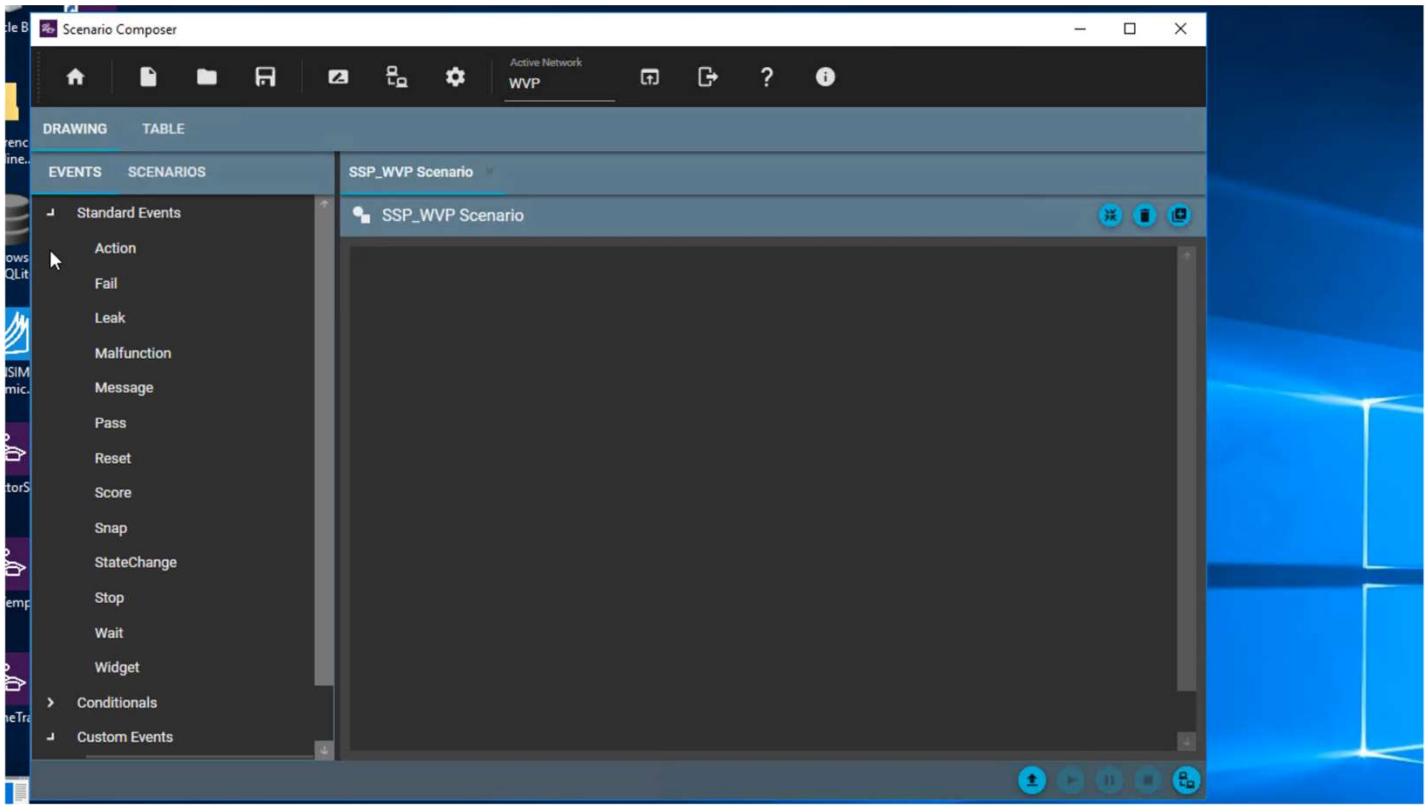
Scenario Building

Scenario Composer

- Graphical scenario building interface
- Create parallel or branched event streams on a single flowsheet
- Hierarchical scenario building with scenarios as custom events
- Conditional logic for event flow control or gating score changes
- Embedded simulation launch control for scenario testing



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Questions

What additional events do you need for the Scenario Composer?

Current Events:

1) Action: Set a model or logic value
2) Pass\Fail: Pass or Fail the Trainee
3) Leak: Insert a leak in a section of pipe
4) Malfunction: Set a model malfunction
5) Message: Send a live message to a trainee
6) Snap/Reset: Snap or Reset to a saved model condition.
7) Score: Add or remove grade points
8) State Change: Check that model value has changed.
9) Widget: Add a button for external actions
10) Wait: Add a timer between Events
11) Pulse: Set a value for a length of time (Future)

Please answer using the chat

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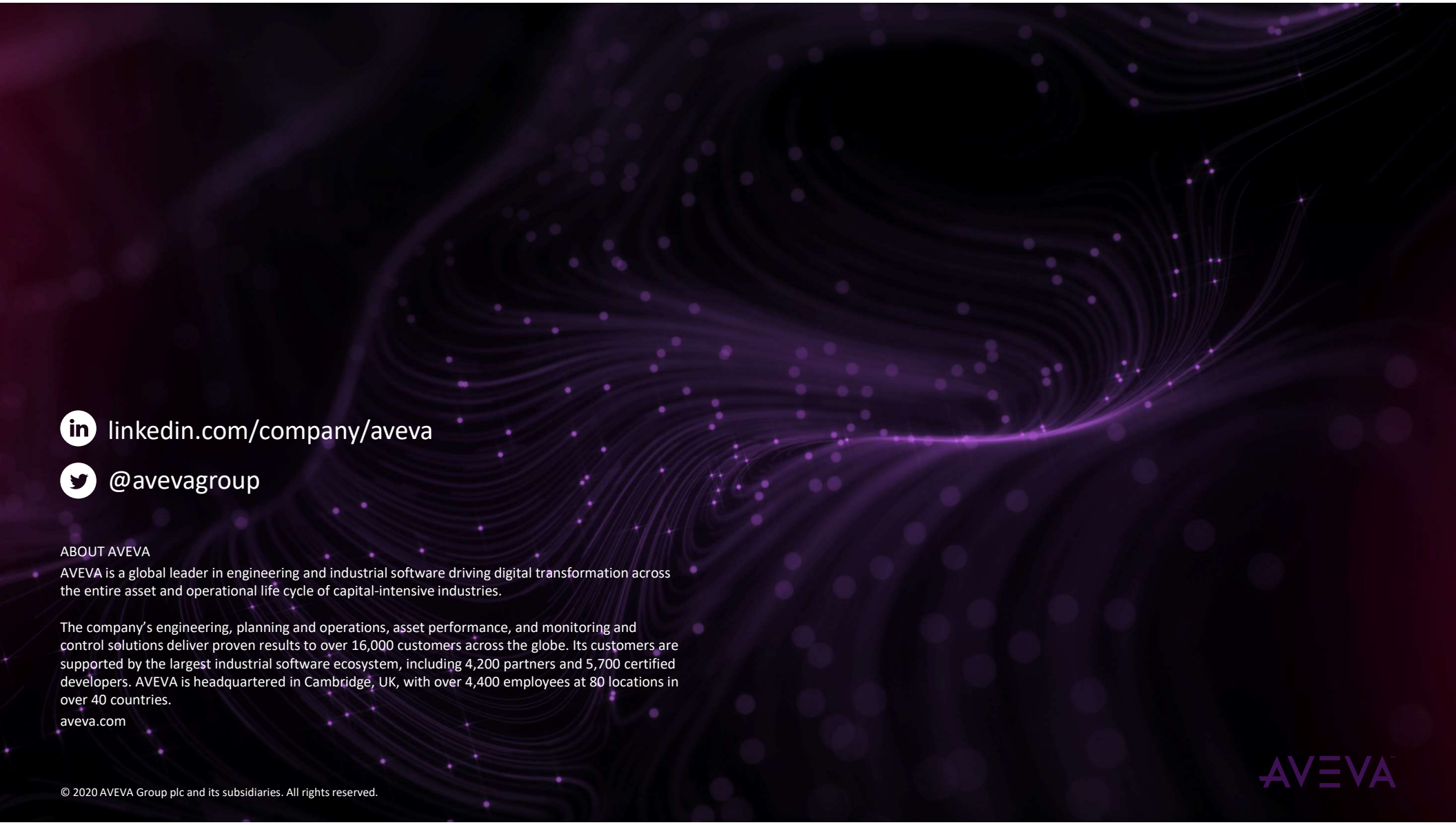

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The company's engineering, planning and operations, asset performance, and monitoring and control solutions deliver proven results to over 16,000 customers across the globe. Its customers are supported by the largest industrial software ecosystem, 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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