

AVEVA PI WORLD

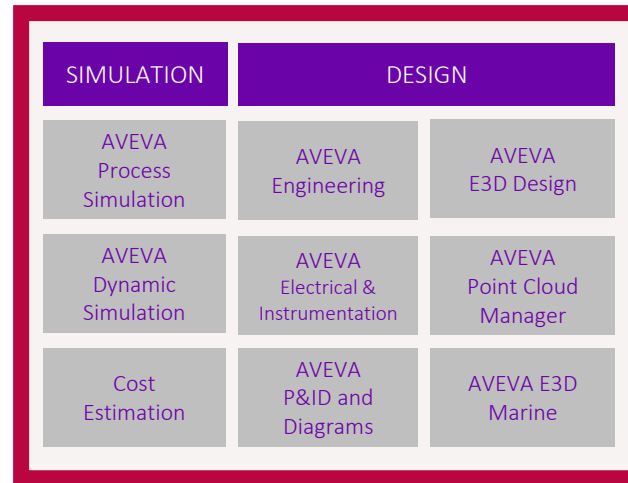
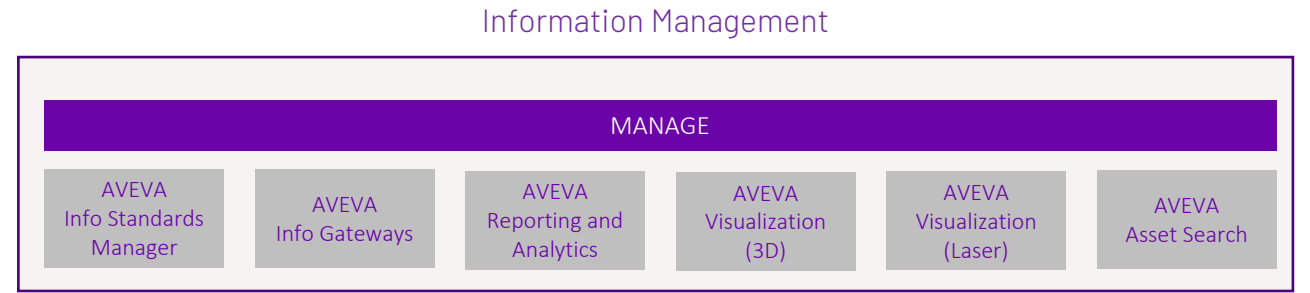
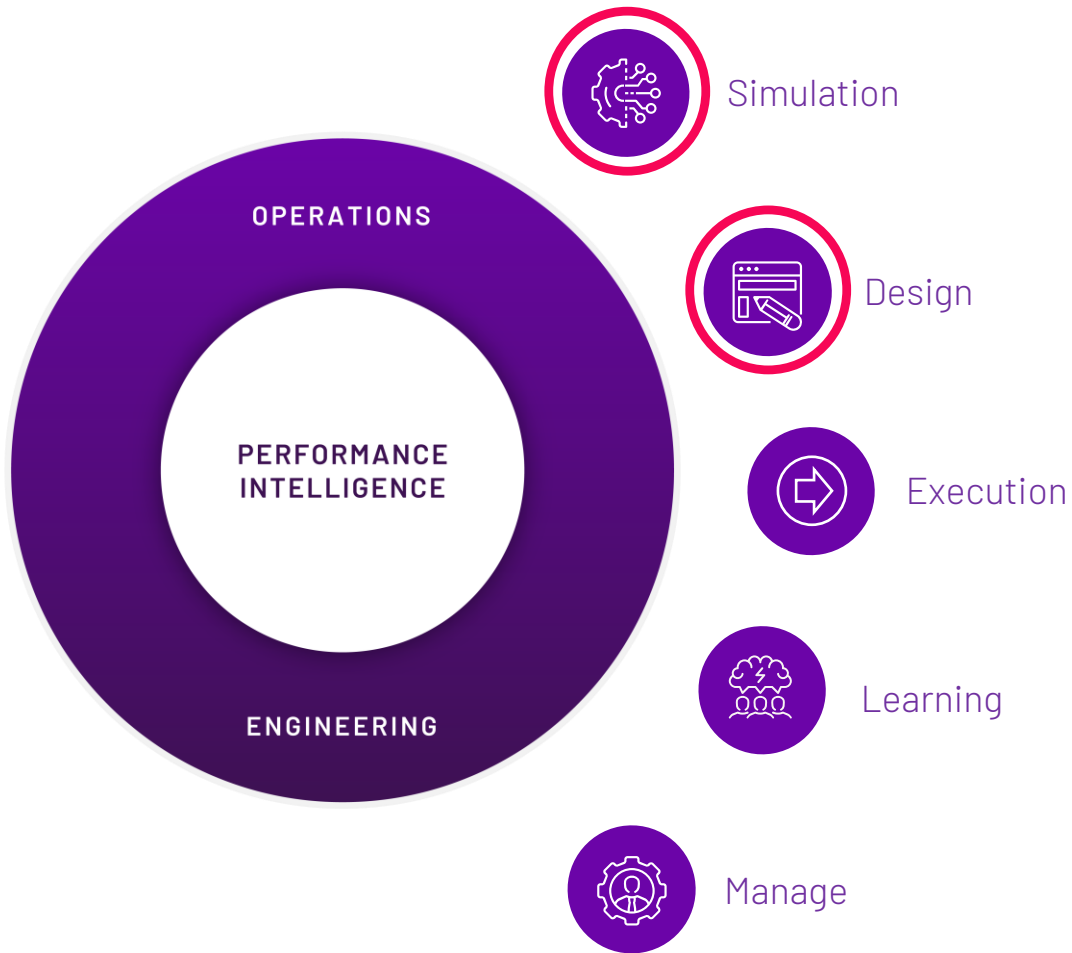
Engineering, design and laser dataset integration with AVEVA™ Engineering, & AVEVA™ E3D Design

Presented By:

AVEVA

AVEVA's EPC 4.0 Suite

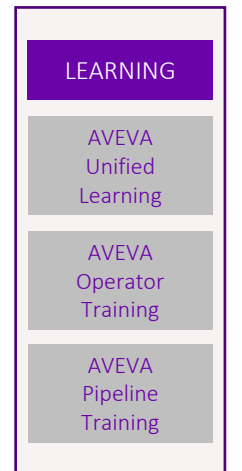
Unifying Data across Simulation, Engineering, Execution and Learning



AVEVA™ Unified Engineering



Unified Project Execution

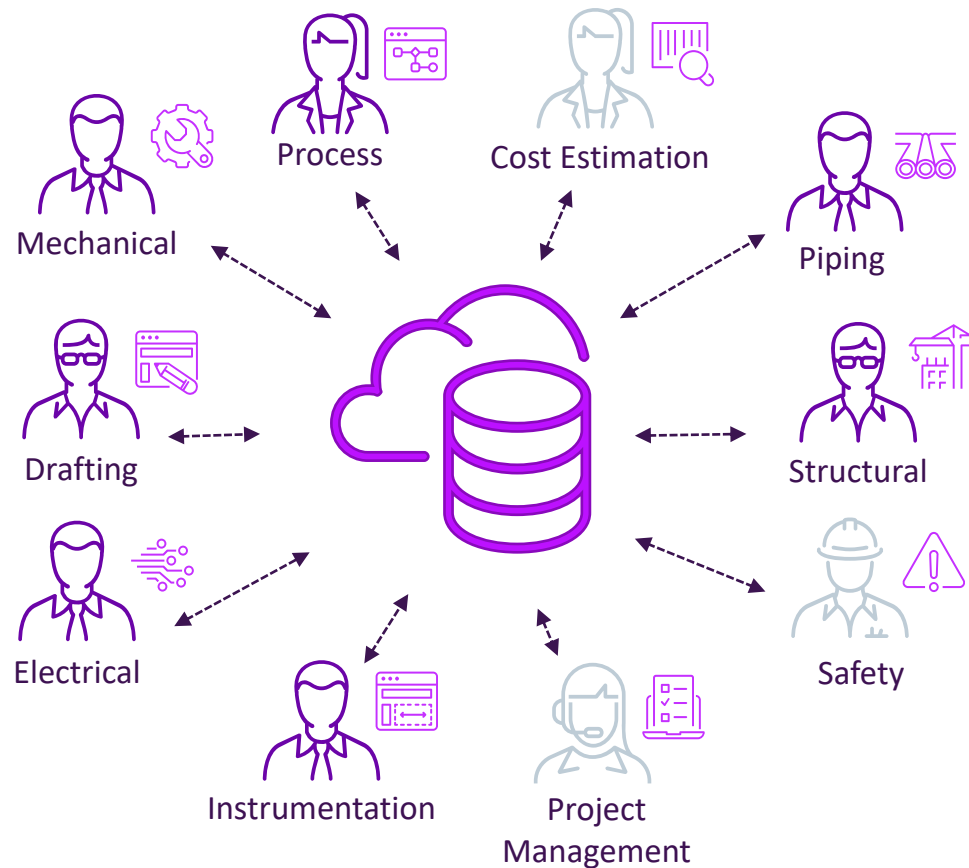


AVEVA™ Unified Learning



AVEVA™ Unified Engineering

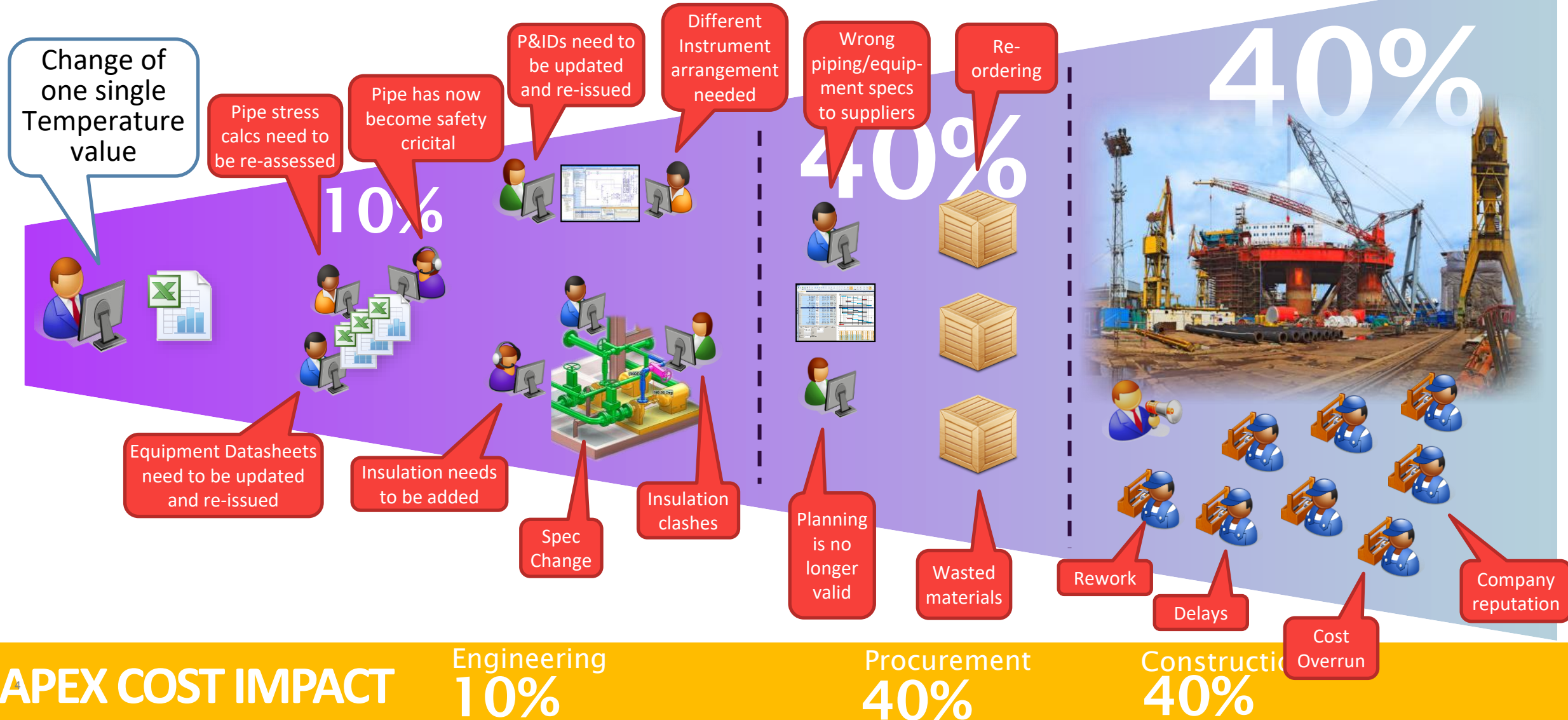
The Unique Value



- **DATA-CENTRIC** multi-disciplinary environment where the simulation data is used as solid foundations during **CONCEPTUAL** and **DETAIL** phase of a project.
- **ACCELERATE** project deliverables production.
- Database-driven solution with **PROVEN** and **SCALABLE** multi-user technology.
- Unique Capability to **VALIDATE** Vendor Data and project changes at any time.
- Full **INTEGRATION** with the Unified Engineering Solution.

Challenge: Transparency & Controlled Change Management

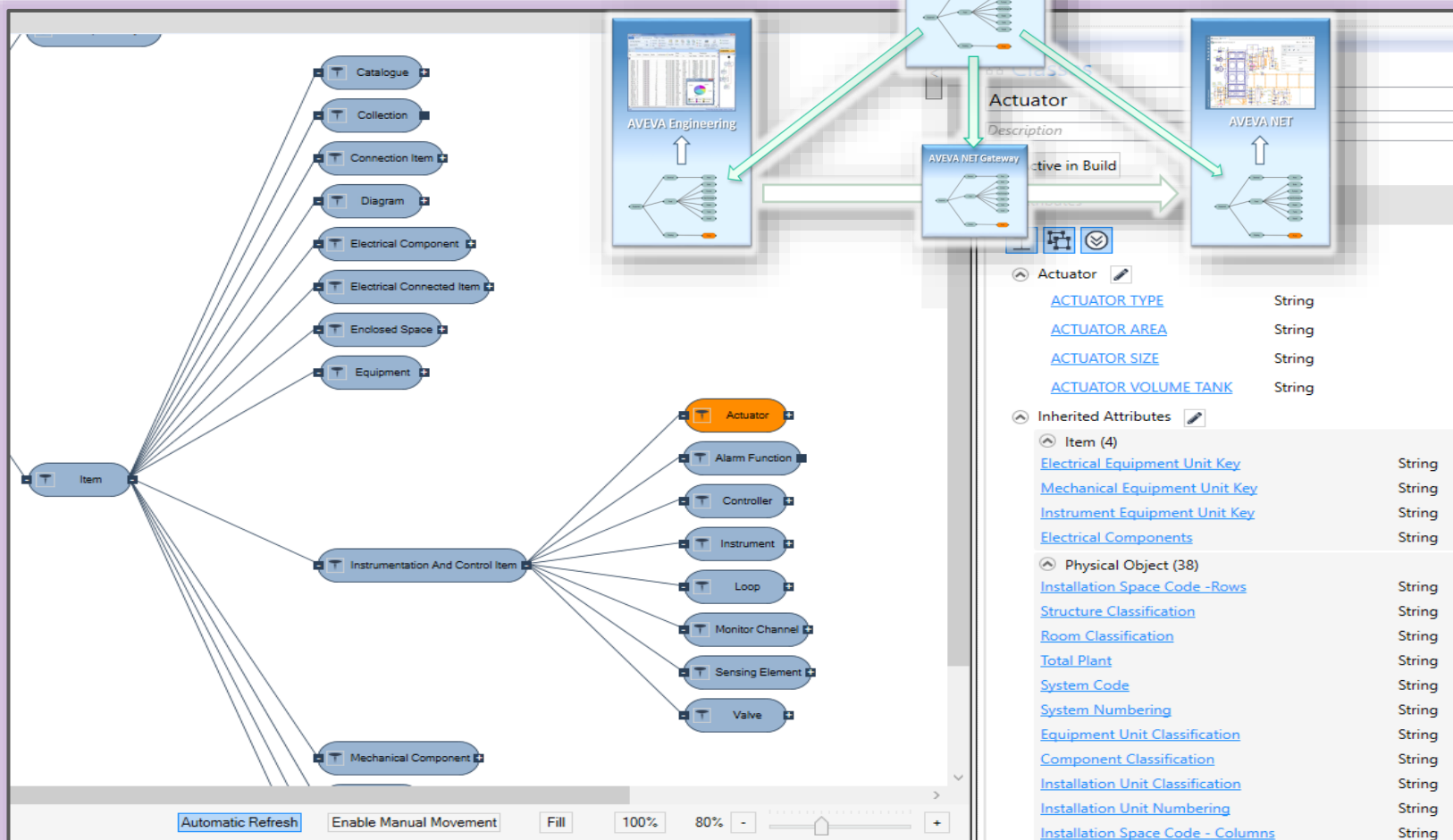
Disconnected systems create value leakage



AVEVA Engineering

AVEVA

AVEVA Engineering Data Model



Conceptual data model

- Intuitive user interface allows the user to create classes, attributes, class associations...
- Integrated with AVEVA Information Standards Manager supporting several standards (ISO 15926, CFIHOS ...)
- Libraries and Vocabularies allow any required customization in the project

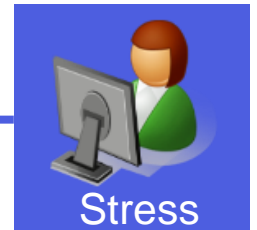
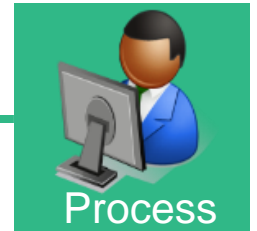
AVEVA Engineering

Line List

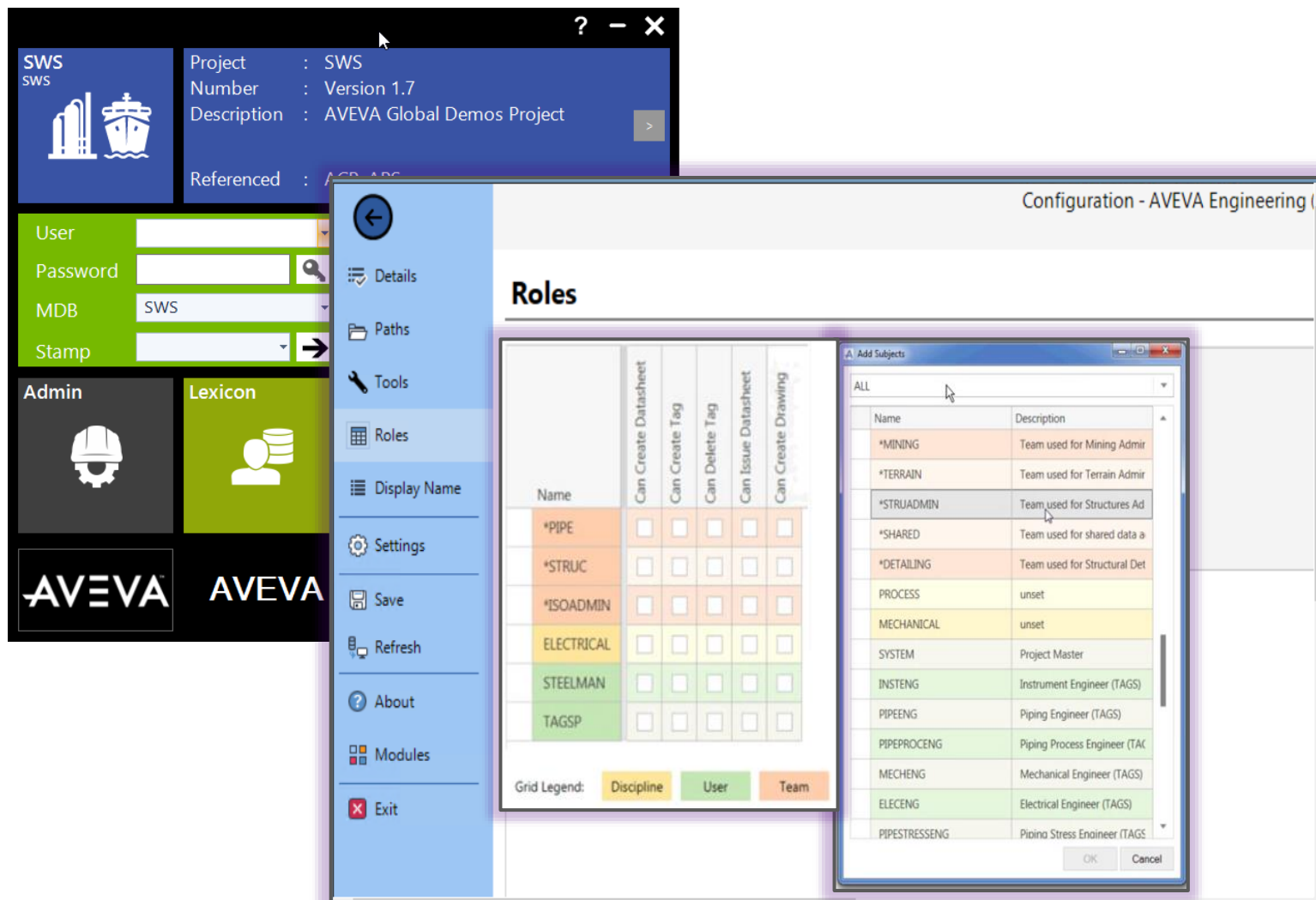
Document Number: 01-IPE-25019039-A



Rev	Line Information							Connections			Operating		Design				Test		Stress Crit.	Pipe Length (mm)	Pipe Weight (kg)	Fluid Phase
	Line Code	Seq. No.	Line Size (mm)	Line Spec	Area	Insul.	Insul. Thk. (mm)	From	To	P&ID	Press. (barg)	Temp. (°C)	Min. Press. (barg)	Max. Press. (barg)	Min. Temp. (°C)	Max. Temp. (°C)	Press. (barg)	Temp. (°C)				
	B	1	100	A3B	01			P1502A	C1101	A1-51-2003	255	135.0	217	255	114.8	258.8	562	284.6	<input checked="" type="checkbox"/>	45103	1281.7	Liquid
	B	2	100	A3B	01			C1101	A-3	A1-51-2003	255	127.5	217	255	108.4	244.4	562	268.8	<input checked="" type="checkbox"/>	10136	383.3	Liquid / Gas
D02	A	3	150	A1A	01			B-2		A1-51-2003	124	127.5	105	124	108.4	244.4	273	268.8	<input type="checkbox"/>	18374	562.1	Liquid / Gas
	B	4	200	A3B	01	K	100	C1101	E1301	A1-51-2003	255	180.0	217	255	153.0	345.0	562	370.5	<input checked="" type="checkbox"/>	5946	345.4	Liquid
D02	B	5	250	A3B	01	K	75	E1301	C1101	A1-51-2003	255	112.5	217	255	95.6	215.6	562	237.2	<input checked="" type="checkbox"/>	9735	565.0	Liquid / Gas
D02	B	7	0	A3B	01			E1302A	D1201	A1-51-2003	248	112.5	210	248	95.6	215.6	546	237.2	<input checked="" type="checkbox"/>	1405	31.9	Liquid
D02	B	9	50	A3B	01			P1501A	C1101	A1-51-2003, A1-51-2004	255	105.0	217	255	89.3	201.3	562	221.4	<input checked="" type="checkbox"/>	47956	463.8	Liquid
D02	B	6	0	A3B	01			C1101	E1302B	A1-51-2003, A1-51-2004	244	112.5	207	244	95.6	215.6	537	237.2	<input checked="" type="checkbox"/>	21927	658.4	Gas
	B	8	0	A3B	01			D1201	P1501A	A1-51-2003	248	105.0	210	248	89.3	201.3	546	221.4	<input checked="" type="checkbox"/>	15215	561.1	Liquid
	B	10	50	A3B	01			B-9		A1-51-2003	30	105.0	26	30	89.3	201.3	66	221.4	<input checked="" type="checkbox"/>	23227	164.1	Liquid
	A	11	80	A1A	01			D1201	A-11	A1-51-2003	45	71.7	38	45	89.3	201.3	99	221.4	<input type="checkbox"/>	16547	254.4	Liquid
	C	12	100	A1A	01	K	40	E1301		A1-51-2003	64	15.0	54	64	12.8	28.8	141	31.6	<input type="checkbox"/>	34409	509.3	Liquid
D02	C	13	100	F1C	01	K	75	E1301		A1-51-2003	56	112.5	48	56	95.6	215.6	124	237.2	<input type="checkbox"/>	32563	279.7	Liquid
	B	14	80	A3B	01			B-14		A1-51-2003	244	105.0	207	244	89.3	201.3	537	221.4	<input checked="" type="checkbox"/>	7537	184.1	Liquid
D02	A	57	150	A1A	01			P1502A		A1-51-2003	19	135.0	16	19	114.8	258.8	41	284.6	<input type="checkbox"/>	17240	695.2	Liquid
	B	57	0	A3B	01			D1201	P1501A	A1-51-2003	248	105.0	210	248	89.3	201.3	546	221.4	<input checked="" type="checkbox"/>	15215	561.1	Liquid
	B	57	50	A3B	01			B-9		A1-51-2003	30	105.0	26	30	89.3	201.3	66	221.4	<input checked="" type="checkbox"/>	23227	164.1	Liquid
	A	57	80	A1A	01			D1201	A-11	A1-51-2003	45	71.7	38	45	89.3	201.3	99	221.4	<input type="checkbox"/>	16547	254.4	Liquid



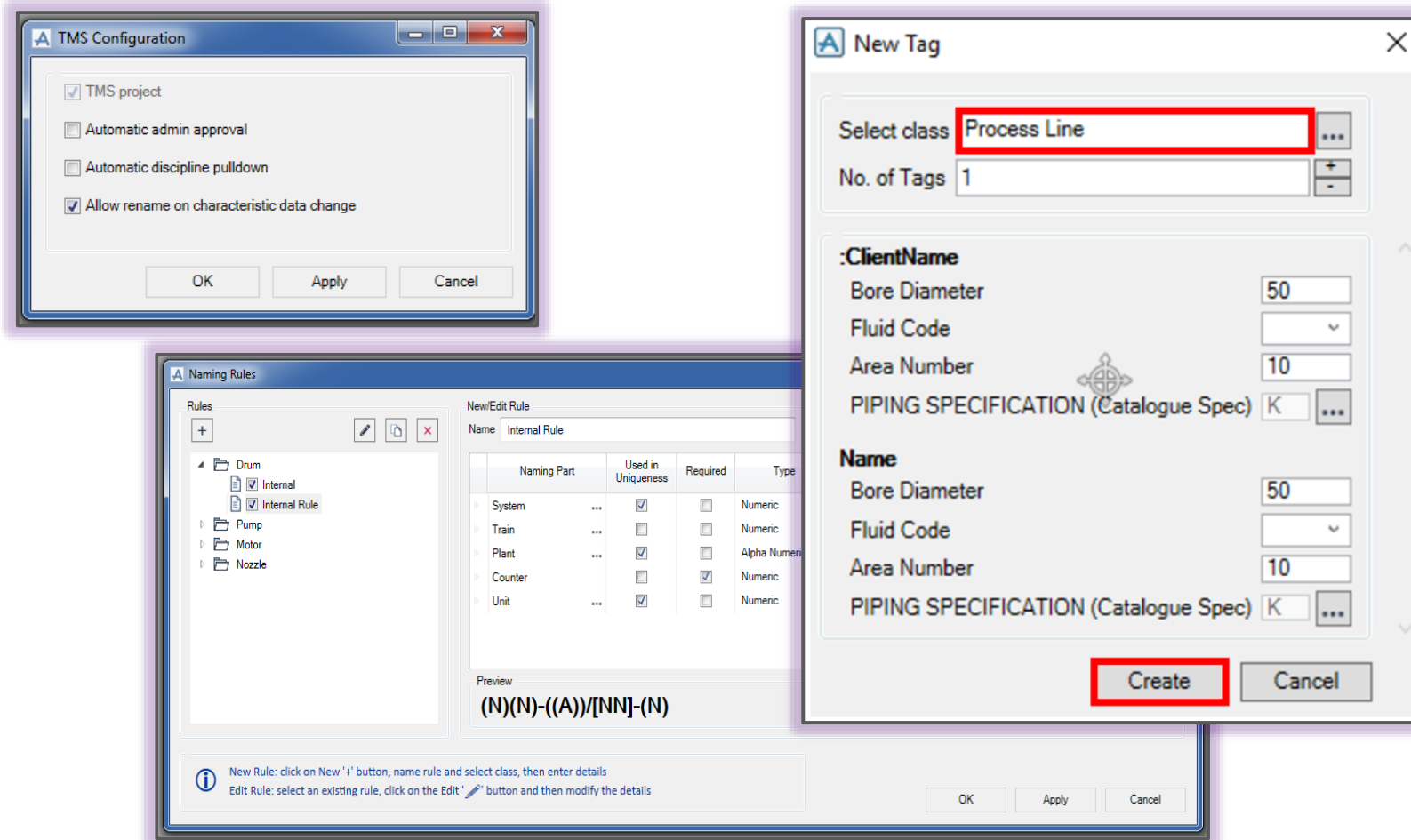
Access Control



Disciplines and Functions

- AVEVA Administration
 - Teams
 - Users
 - Disciplines
 - ACR
 - Windows Authentication
- Access rights management through disciplines and functions
- Hierarchical structure
Discipline / Function / Team / User

Tag Management



Tag Management System (TMS)

- Allows the configuration of any tagging rule for equipment / items / documents / any object in the project:
 - Roles (defines access to Disciplines / Teams / Users)
 - Auto-formatting rules
 - Uniqueness rules
 - Counter reservation
 - Logical delete

Tag Management System

Naming Rules

Rules

- Process Line
 - Process Line - Default Name
 - Process Line - PIP Name
- Nozzle
- Location
- Pump Casing
- Equipment
 - Equipment - PIP Name
 - Equipment - Default Name**
- Pump
 - Pump - KKS Process Name
 - Pump - KKS Installation Name
 - Pump - KKS Location Name

New/Edit Rule

Name: Equipment - Default Name Class: Equipment

Naming Part	Used in Uniqueness	Required	Type	Digits	Fixed	Text if Blank	Separator	Prefix	Suffix	Visible
Tag Letter	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Alphanumeric	2	<input type="checkbox"/>					<input checked="" type="checkbox"/>
Area Number	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Numeric	3	<input type="checkbox"/>					<input checked="" type="checkbox"/>
Counter	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Numeric	2	<input type="checkbox"/>					<input checked="" type="checkbox"/>
Suffix	<input type="checkbox"/>	<input type="checkbox"/>	Alphanumeric	1	<input type="checkbox"/>					<input checked="" type="checkbox"/>

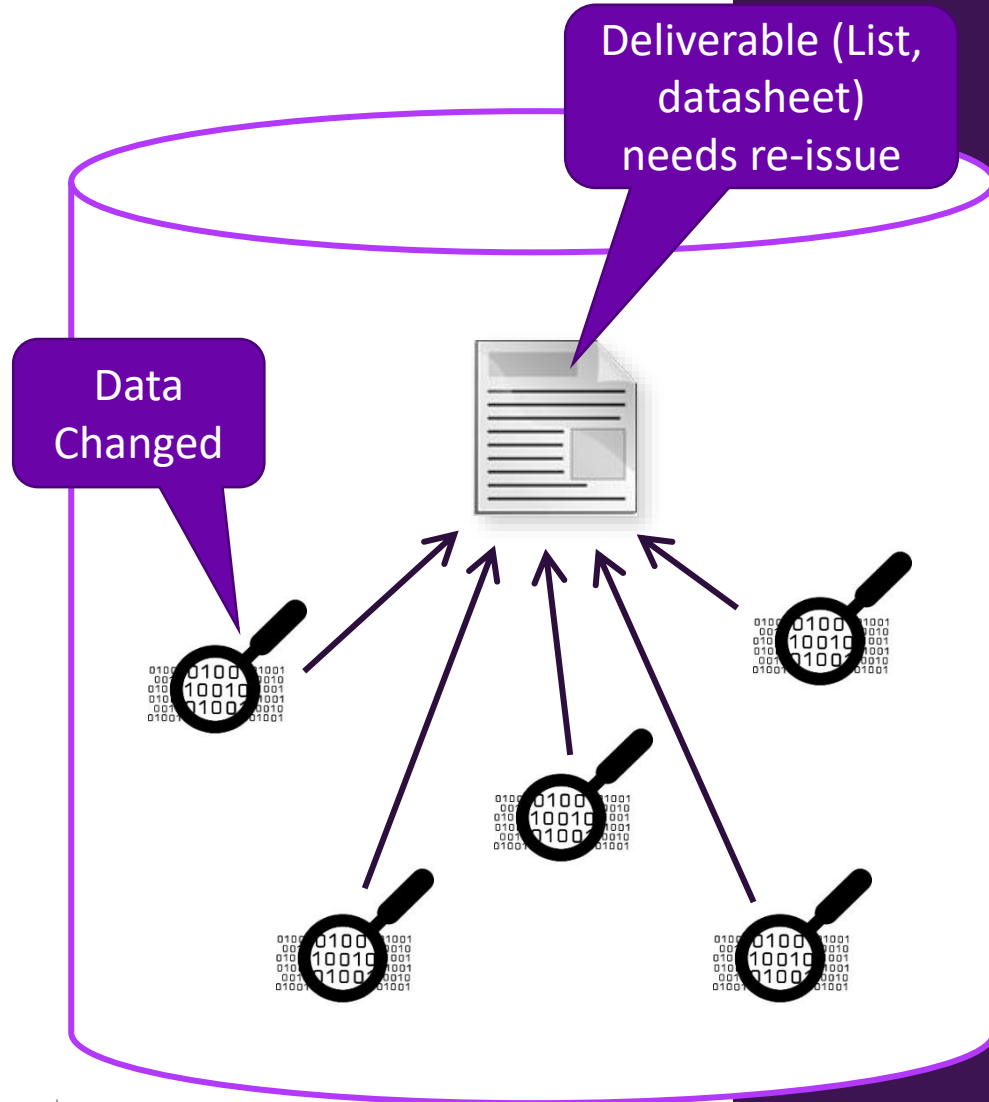
Preview: **AANNNNN(A)** Write Attribute: [NAME (Name of the Element)]

Instructions:
New Rule: click on New '+' button, name rule and select class, then enter details
Edit Rule: select an existing rule, click on the Edit '✎' button and then modify the details

OK Apply Cancel

Change Management

Documents



Document change management

- Document change management with data-document relationship

Change Management

Data

Change management and mark-up

The screenshot displays the AVEVA Engineering software interface. The main window shows a table titled "Process Valves" with columns for Valve ID, Process Line, Location, Process Area, System, and Valve Type. A legend box is overlaid on the table, indicating that green highlights represent "Added Records", yellow highlights represent "Modified Attributes", and orange highlights represent "Deleted Records".

Valve...	Process Line	Location	ProcessArea	System	Valve Type	Pressure	
Line Number	Line Size [mm]		ID	Description			
V100	B-1	100.00	01	BW	Process System B	Check Valve	ANSI B
V103	B-1	100.00	01	BW	Process System B	Butterfly Valve	ANSI B
V104	B-1	100.00	01	BW	Process System B	Butterfly Valve	ANSI B
V105	B-1	80.00	01	BW	Process System B	Butterfly Valve	ANSI B
V106	B-1	100.00	01	BW	Process System B	Ball Valve	ANSI B
V107	B-2	100.00	01	BW	Process System B	Butterfly Valve	ANSI B
V109	A-3	80.00	01	A	Process System A	Gate Valve	ANSI B
V110	B-8	80.00	01	BW	Process System B	Gate Valve	ANSI B
V111	B-8	80.00	01	BW	Process System B	Gate Valve	ANSI B
V112	B-8	80.00	01	BW	Process System B	Gate Valve	ANSI B
V118	B-9	50.00	01	BW	Process System B	Globe Valve	ANSI B
V119	B-9	50.00	01	BW	Process System B	Gate Valve	ANSI B
V120	B-9	40.00	01	BW	Process System B	Gate Valve	ANSI B
V121	B-9	40.00	01	BW	Process System B	Globe Valve	ANSI B
V122	B-9	40.00	01	BW	Process System B	Gate Valve	ANSI B
V123	A-11	80.00	01	A	Process System A	Gate Valve	ANSI B
V124	C-12	100.00	01	C	Process System C	Gate Valve	ANSI B
V127	B-14	80.00	01	BW	Process System B	Gate Valve	ANSI B
V131	A-11	80.00	01	A	Process System A	Gate Valve	ANSI B
V132	A-11	80.00	01	A	Process System A	Gate Valve	ANSI B
V133	A-11	80.00	01	A	Process System A	Gate Valve	ANSI B

- Automatic highlight of all modifications
- Users can find and mark-up all changes made by other users and disciplines
- Available a complete change management history

Change Management

Data



Controlled Object Revisioning

- Enables independent and concurrent work between disciplines with an information exchange control methodology between them
- Changes are tracked based on database revision of objects
- When a discipline publishes a modification, the other disciplines are notified by the notification system
- Changes can be accepted as soon as they are published or at the most appropriated time for the other disciplines

Status Control

The screenshot displays the AVEVA Engineering software interface for 'Tags - AVEVA Engineering (Project:SAM)'. The interface is divided into several sections:

- Top Ribbon:** Contains tabs for 'Project', 'Home', 'Data Management', 'View', and 'Admin'. The 'Data Management' tab is active, showing various actions like 'Promote', 'Demote', 'Edit', 'Remove', 'Highlight', 'History', 'Claim', 'Refresh', 'State', 'Flush', 'Issue', 'Drop', 'Publish to AVEVA NET', 'Compare / Update / Link', 'Excel Import', and 'Excel Export'.
- Table:** A table titled 'Mech Tags (No Sublists)' with columns for 'Tagnum...', 'Identification' (Pre-f, Lett, Numb), 'Description', 'Locatio', and 'ProcessAr'. It lists various equipment tags such as 'C1101 Cracker column', 'D1201 Stabilizer Reflux Drum', and 'P1501B Stabilizer Reflux Pump'.
- Statistical Report:** A section titled 'Statistical Report STVVAL (/TagStatus)' featuring a 3D bar chart. The x-axis is labeled 'Elements' and includes categories like 'Deleted', 'Allocated', 'Issued', 'Approved', 'In Check', 'Working', 'Not Controlled', and 'Unclassified'. The y-axis represents the count, ranging from 00 to 04. The 'In Check' category shows the highest count at 04.
- Graphical View:** A flowchart titled 'Equipment Tag: Tag Item Status' showing the transitions between different status states. The states are 'Allocated', 'Deleted', 'Working', 'In Check', 'Approved', and 'Issued'. Transitions are indicated by arrows of different colors (green, red, black).

At the bottom of the interface, it shows '9 record(s) selected' and a status message: 'Promote status has been changed. Number of changed elements: 1'.

Status Control

- Configuration according to the customer and project workflows
- Custom actions during the transition between of statuses
- Statistics can provide an overview of the project progress

Information Context

The screenshot displays the AVEVA software interface with several key components:

- Process Simulation:** The main window shows a Process Flow Diagram (PFD) with various units and streams. A callout bubble points to it with the text "Editable, Data Centric Drawing PFD".
- 3D Model:** A 3D view of a Centrifugal Pump (CentP1501A) is shown, with a callout bubble labeled "E3D".
- SimCentral:** A window showing a simulation model with a callout bubble labeled "SimCentral".
- Proll:** A window showing a P&ID diagram with a callout bubble labeled "Proll".
- Editable Datasheet:** A window showing a datasheet template for the Centrifugal Pump, with a callout bubble labeled "Editable Datasheet".
- Editable Grid:** A table at the bottom of the interface with a callout bubble labeled "Editable Grid".

Serial No	Revised By	Applied By	Applied Date	Applied Reason

Display Name	Name	Product Total Mass Rate (kg/s)Min	Product Total Mass Rate (kg/s)	Product Total Mass Rate (kg/s)Max	Mixed Product Temperature (degC)Min	Mixed Product Temperature (degC)Max
P-016	P-016		14.18	0.00		
P-022	CentP1501A		14.18			

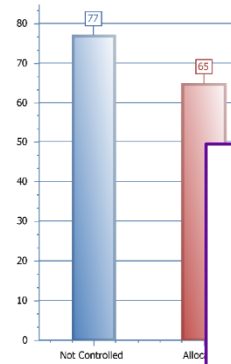
Connected Information

- Visualize the items on:
 - 3D Model
 - P&ID
 - PFD
 - Datasheets
 - Lists
 - Process Simulation

Reports

Tag Item Status Report

All tagged items from project : SAM



By: ed.williams
Date: 01 July 2013

Equipment Design Status Report

All Equipment from project : SAM

Equipment Tag	Design Status Comment
E1301	ReWork
D1201	Re-work Required
C1101	Phase 1 finished
E1302A	Kick off meeting
E1302B	Kick off meeting
P1501A	Release Approved
P1501B	Release Approved
P1502A	Requirements Change
P1502B	Requirements Change
VENTILATION_UNIT1	---

By: ed.williams
Date: 28 February 2013

Line List Overview Report

Line List

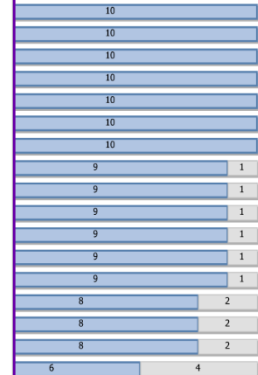
Taken from project SAM

Rev	Line Code	Seq. No.	Line Information				Connections			Operating			Design			Test		Stress Crit.	Stress Prelim.	Fluid Code	Fluid Phase		
			Line Size (mm)	Line Spec	Area	Insul. Thk. (mm)	From	To	P&ID	Press. (barg)	Temp. (°C)	Min. Press. (barg)	Max. Press. (barg)	Min. Temp. (°C)	Max. Temp. (°C)	Press. (barg)	Temp. (°C)						
	B	1	100	A3B	01			P1502A	C1101	A1-51-2003	255	135.0	217	255	114.8	258.8		284.6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	HC	Liquid	
	B	2	100	A3B	01			C1101	A-3	A1-51-2003	255	127.5		255	108.4	244.4		562	268.8	<input type="checkbox"/>	<input type="checkbox"/>	HO	Liquid / Gas
	A	3	150	A1A	01			B-2		A1-51-2003	124	127.5	105	124	108.4	244.4		273	268.8	<input type="checkbox"/>	<input type="checkbox"/>	HO	Liquid / Gas
	B	4	200	A3B	01		100	C1101	E1301	A1-51-2003	255	180.0	217	255	153.0			562	379.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	HO	Liquid
	B	5	250	A3B	01		75	E1301	C1101	A1-51-2003	255	112.5	217	255	95.6	215.6		562	237.2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	HC	Liquid / Gas
	B	7	80	A3B	01			E1302A	D1201	A1-51-2003	248	112.5	210	248	95.6	215.6		546	237.2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	HC	Liquid
	B	9	50	A3B	01			P1501A	C1101	A1-51-2003, A1-51-2004	255	105.0	217	255	89.3	201.3		562	221.4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	HC	Liquid
	B	8	150	A3B	01			C1101	E1302B	A1-51-2003, A1-51-2004	244	112.5		244	95.6	215.6		537	237.2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	HC	Gas
	B	8	100	A3B	01			D1201	P1501A	A1-51-2003	248	105.0	210	248	89.3	201.3		546	221.4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	HC	Liquid
	B	10	40	A3B	01			B-9		A1-51-2003	30	105.0	26	30	89.3	201.3		221.4	<input type="checkbox"/>	<input type="checkbox"/>	HC	Liquid	
	A	14	80	A1A	01			D1201	A-11	A1-51-2003	45	105.0	38	45	89.3	201.3		99	221.4	<input type="checkbox"/>	<input type="checkbox"/>	G	Liquid
	C	12	100	*LIMBOS PEC	01		40	E1301		A1-51-2003	64	15.0		64				141	31.6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	FO	Liquid
	C	13	100	F1C	01		75	E1301		A1-51-2003	56	112.5	48	56				124	237.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	FO	Liquid
	B	14	80	A3B	01			B-14		A1-51-2003	244	105.0	207	244	89.3	201.3		537	221.4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FG	Liquid
	A	57	150	A1A	01			P1502A		A1-51-2003	19	135.0	16	19	114.8	258.8		284.6	<input type="checkbox"/>	<input type="checkbox"/>	HC	Liquid	
	W	13	200	A1A	01				E1302A	A1-51-2003	56	18.8	48	56	15.9	35.9		124	39.5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	W	Liquid
	W	14	200	A1A	01			E1302B		A1-51-2003	56	112.5	48	56	95.6	215.6		124	237.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	W	Liquid

By: ed.williams
Date: 28 February 2013



Overview of completed fields



Key: Fields Complete
 Fields Not Complete

By: ed.williams
Date: 28 February 2013



Integration

Import / Export

- Compare & Update between AVEVA databases and external databases
- Attribute mapping, change highlight and selective update function

The screenshot displays the AVEVA Engineering software interface. The main window shows a 'Valves List' table with columns for Name, Area, System, System Description, Valve Type, Pressure Spec., and Connection Type. Two dialog boxes are overlaid on the table:

- Excel Interface Wizard (Step 3: Column and Attribute Configuration):** This dialog allows for mapping columns from an external Excel file to attributes in the AVEVA database. It includes a table for configuration:

Worksheets	Update	Column	Attribute
SCEQUIPMENT	<input checked="" type="checkbox"/>	Type	TYPE
SCNOZZLE	<input checked="" type="checkbox"/>	ACTTYPE	ACTTYPE
	<input checked="" type="checkbox"/>	Name	NAME
	<input checked="" type="checkbox"/>	Description	
	<input checked="" type="checkbox"/>	Display Tag	
	<input checked="" type="checkbox"/>	Prefix	
	<input checked="" type="checkbox"/>	Letter	
	<input checked="" type="checkbox"/>	Number	
	<input checked="" type="checkbox"/>	Suffix	
	<input checked="" type="checkbox"/>	Area	

Below the table, there are options for 'Element Type: SCEQUIPMENT', 'Show All Worksheets', and 'Select All'.

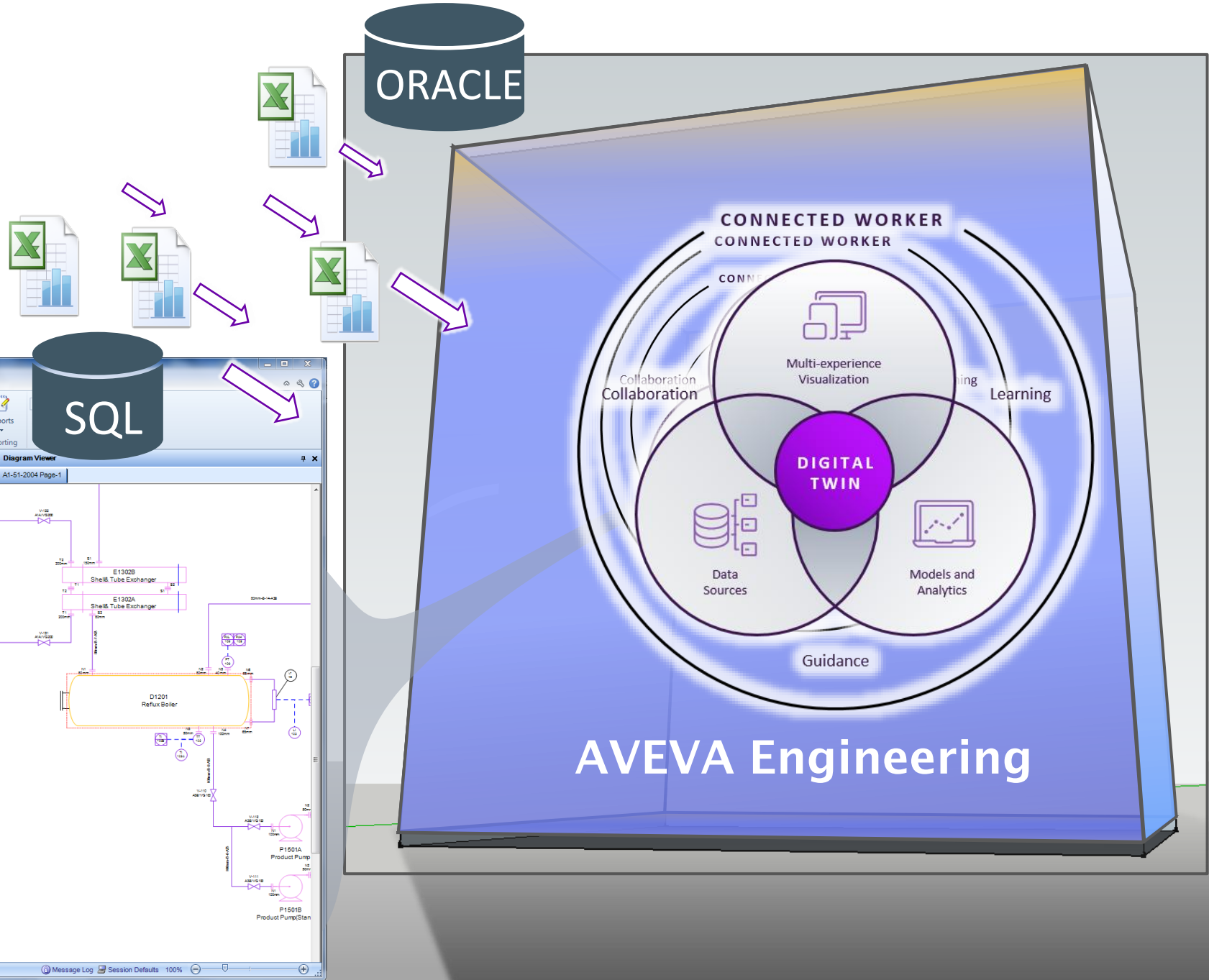
- Accept/Reject Dialog:** This dialog shows a list of items with columns for 'Accepted', 'NAME', 'Matched', 'Changed', 'Differences', 'ACTType', 'Type', 'Lock', and 'Co'. It includes 'Accept All' and 'Reject All' buttons at the bottom.

The background table shows the following data:

Name	Area	System	System Description	Valve Type	Pressure Spec.	Connection Type
V100	01					
V101	01					
V102	01					
V103	01					
V104	01					
V105	01					
V106	01					
V107	01					
V108	01					
V109	01					
V110	01					
V111	01					
V113	01					
V114	01					
V115	01					
V116	01					
V117	01					
V118	01					
V119	01					
V120	01					
V121	01					
V122	01					
V123	01					
V124	01					
V125	01					
V126	01					
V127	01					
V128	01					
V129	01					
V130	01					
V131	01					
V132	01					
V133	01					
V134	01					

Integration

- Using AVEVA Integration Services
- External database (ORACLE / SQL Server and Excel)



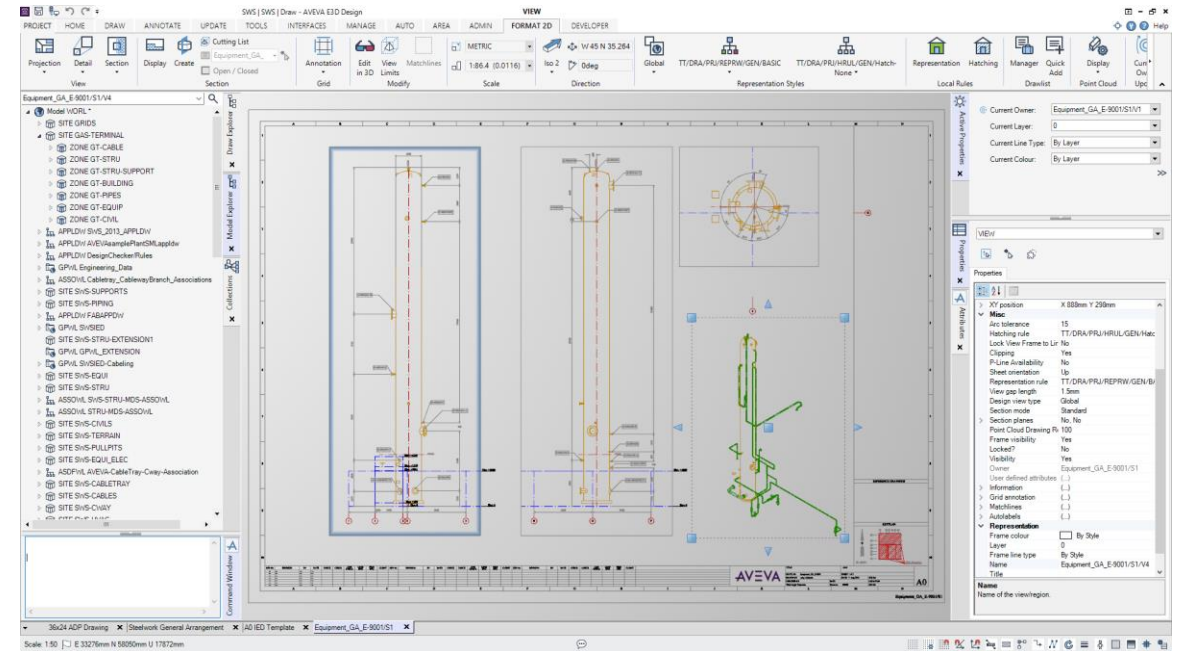
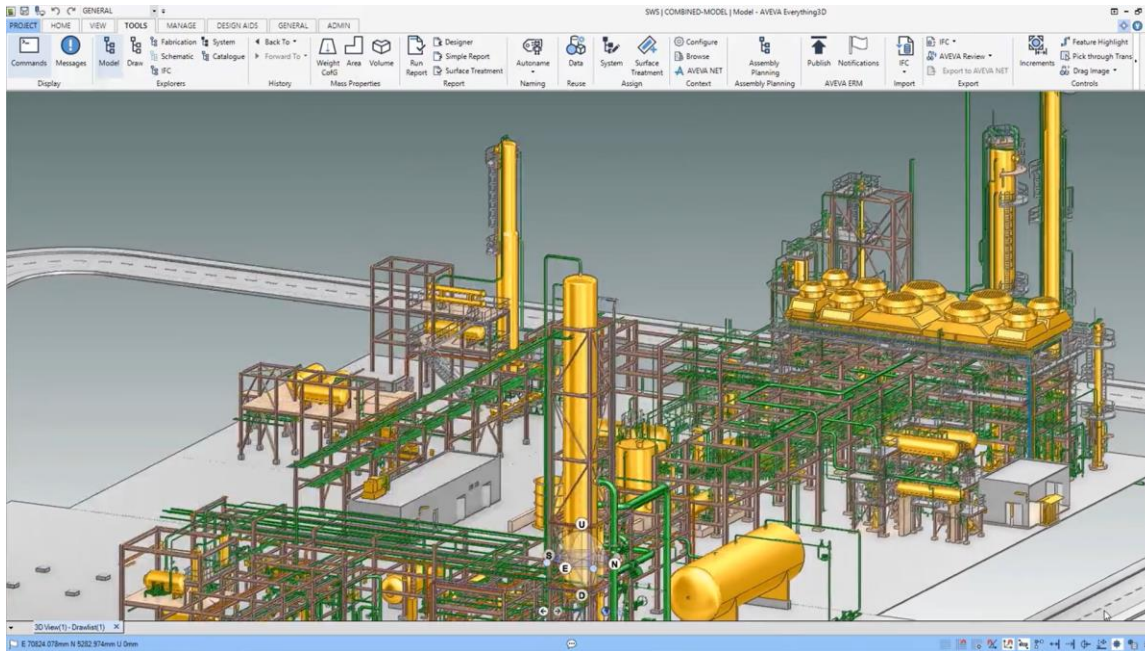


AVEVA™ E3D Design

AVEVA

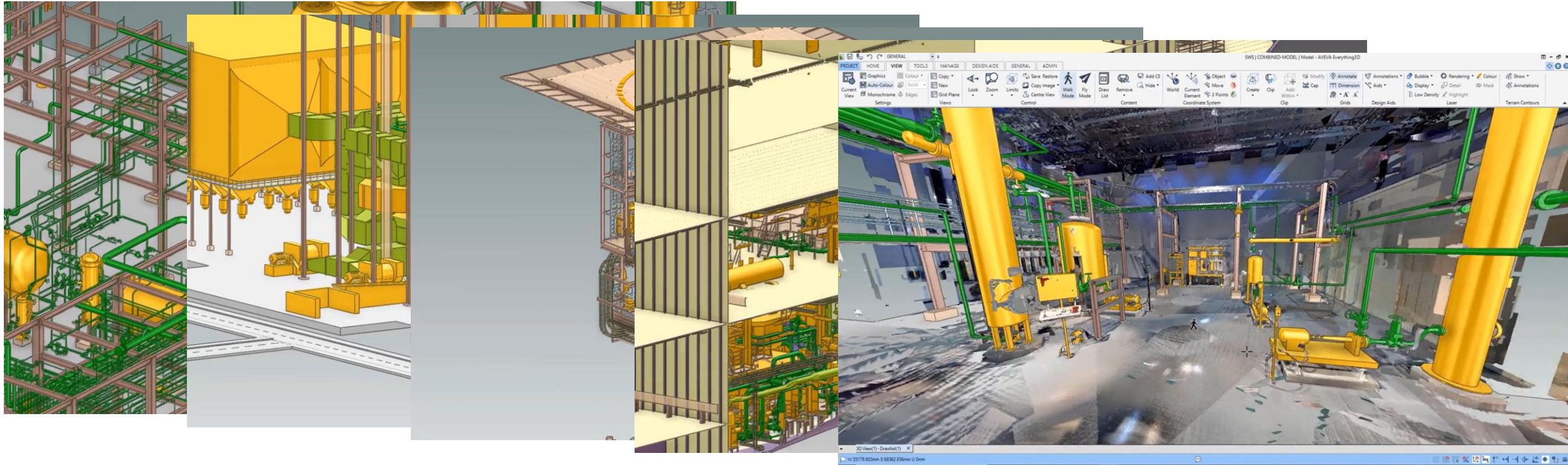
Introduction to AVEVA E3D Design

- AVEVA E3D Design is an advanced 3D design solution for a wide industries layout.
- It enables powerful visualization, clash-free, multi-discipline 3D design, and rapidly generates accurate drawings and reports to reduce costs, timescales and commercial risks of both greenfield and brownfield capital projects.

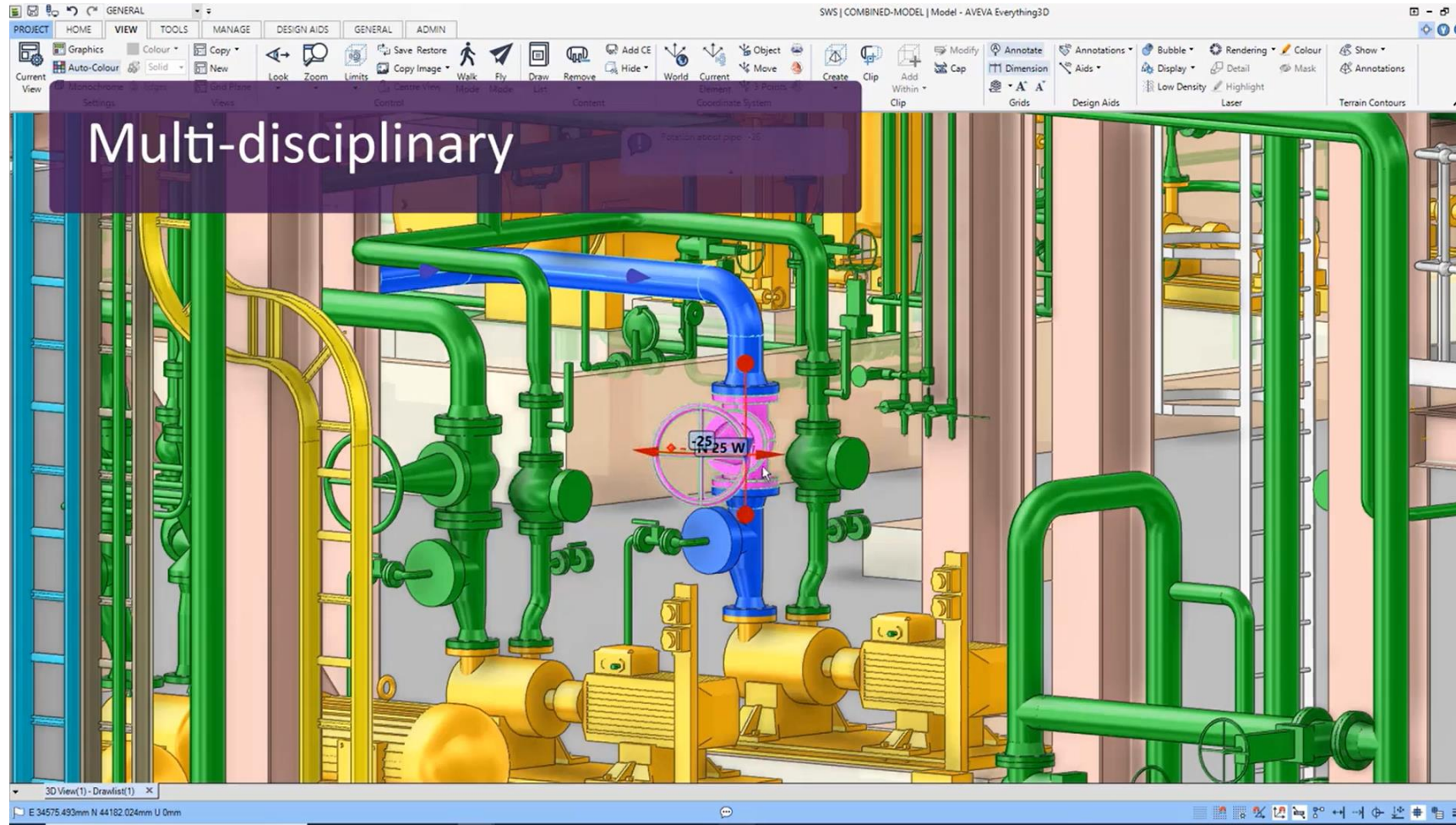


AVEVA E3D Design

- AVEVA E3D Design – the answer to process Plant, Power, Offshore and Marine industries, including brownfield projects of these.



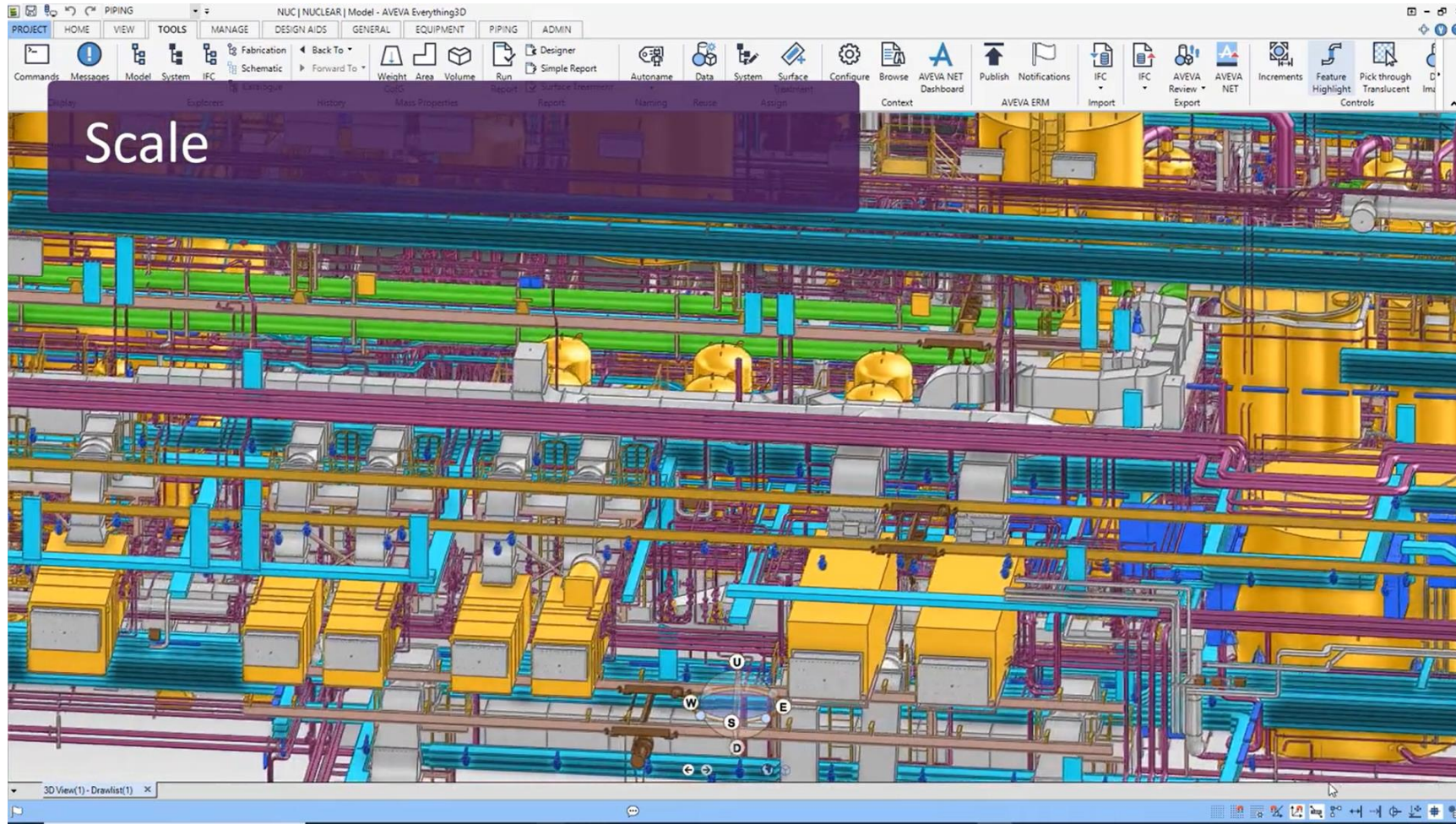
AVEVA E3D Design – Multi-disciplinary design solution



AVEVA E3D Design – Clash-free design



AVEVA E3D Design – Answer to large scale projects

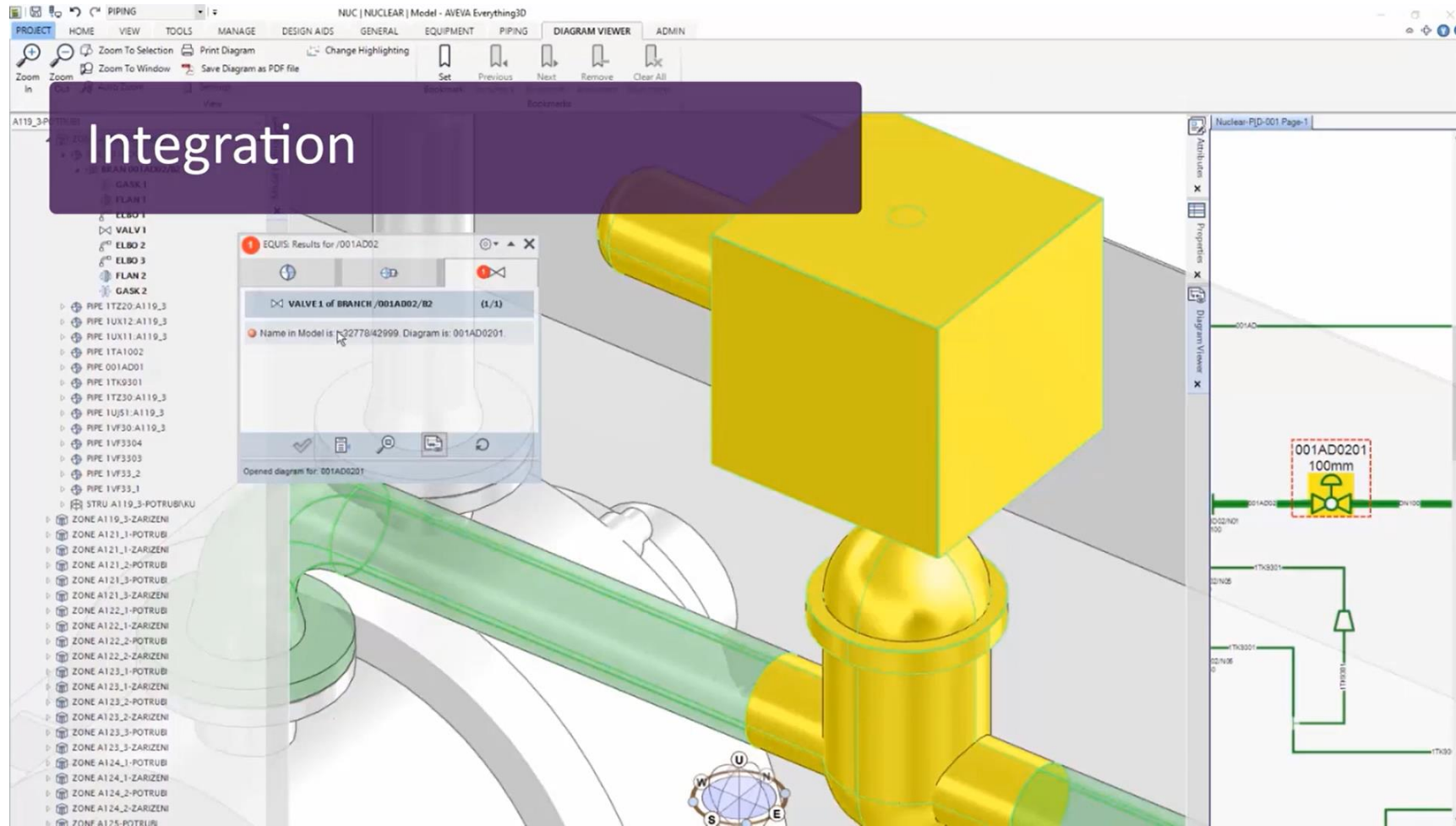


AVEVA E3D Design – Keeping data under the control

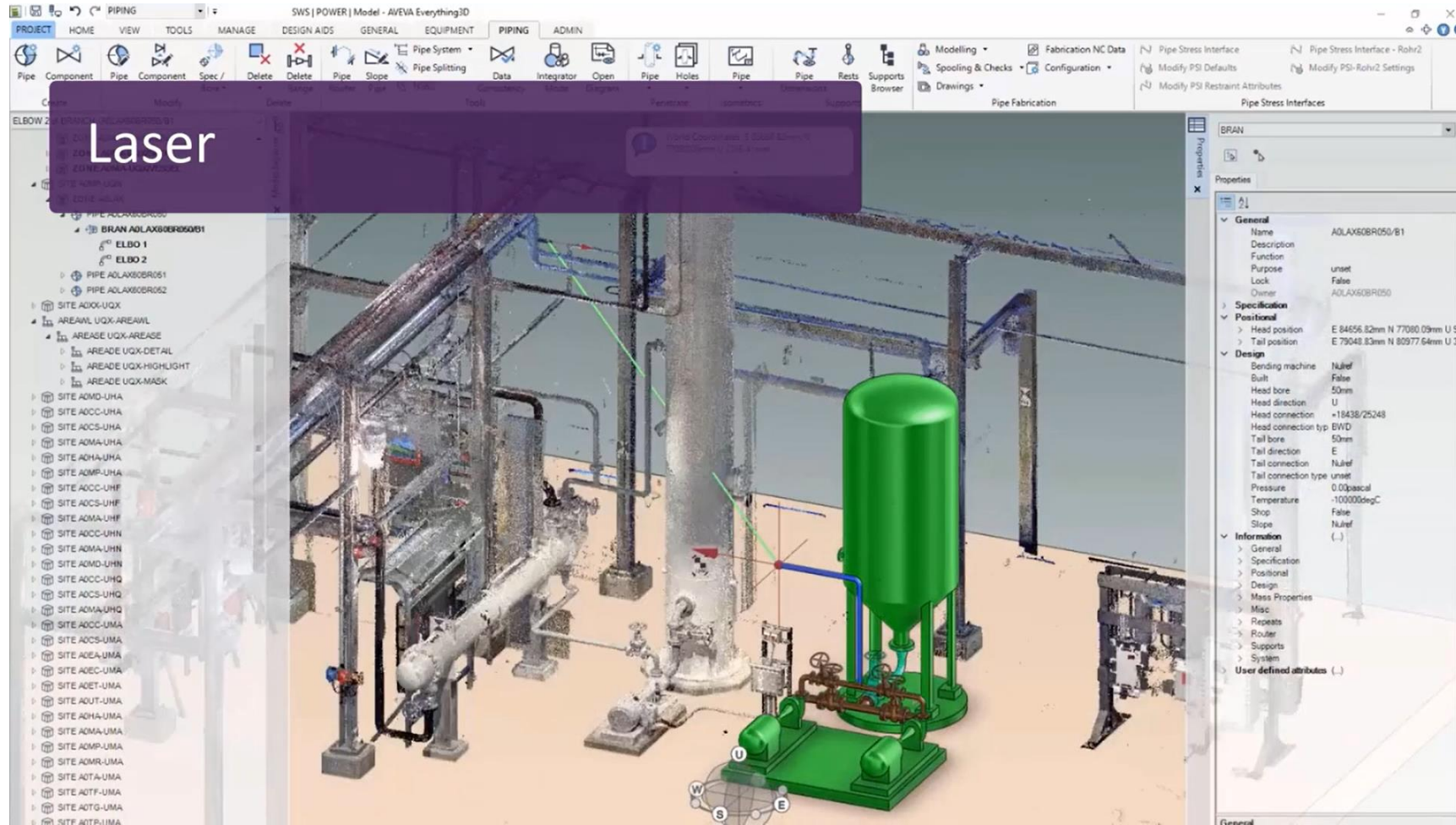
The screenshot displays the AVEVA E3D Design software interface. A large purple semi-transparent box with the text "Change Control" is overlaid on the 3D model of an industrial facility. The 3D model shows various pieces of equipment, including pumps and tanks, connected by a network of green pipes. The software's ribbon menu is visible at the top, with tabs for PROJECT, HOME, VIEW, TOOLS, MANAGE, DESIGN AIDS, GENERAL, and ADMIN. The right-hand side of the interface features a "Model Changes" panel with a tree view of the model's structure and a "Revision" table.

Time	User	Reason	DB Type
18/11/2019 1...	administrator	save work	Design
18/11/2019 1...	administrator	save work	Design
30/03/2020 0...	ed williams	save work	Design
30/03/2020 0...	ed williams	save work	Design
30/03/2020 0...	ed williams	save work	Design
30/03/2020 0...	ed williams	save work	Design
30/03/2020 0...	ed williams	save work	Design
30/03/2020 0...	ed williams	save work	Design
30/03/2020 0...	ed williams	save work	Design
30/03/2020 0...	ed williams	save work	Design
30/03/2020 0...	ed williams	save work	Design
30/03/2020 0...	ed williams	save work	Design
30/03/2020 0...	ed williams	save work	Design
30/03/2020 0...	ed williams	save work	Design
30/03/2020 0...	ed williams	save work	Design
30/03/2020 0...	ed williams	save work	Design
06/04/2020 1...	ed williams	save work	Design
06/04/2020 2...	ed williams	save work	Design
06/04/2020 2...	ed williams	save work	Design

AVEVA E3D Design – Integrated to other AVEVA applications



AVEVA E3D Design – Laser data as part of the new design



AVEVA E3D Design – Powerful reporting solutions

Reporting

AVEVA
Piping Component MTO
Scope : PIPE-15S-FW

Type	Component Description	N.S.	Quantity/Length
CAP	CAP SHORT ANSI B16.9 BIV STD WT ASTM A234 GR WPB	150mm	1
	CAP SHORT ANSI B16.9 BIV XS CARBON STEEL ASTM A234 WPB SMLS	80mm	2
	CAP BIV#3000 CARBON STEEL ASTM A105	25mm	1
ELBO	ELBOW LR ANSI B16.9 BIV STD WT CARBON STEEL ASTM A234 WPB SMLS	150mm	7
	ELBOW LR ANSI B16.9 BIV XS CARBON STEEL ASTM A234 WPB SMLS	200mm	4
FILT	N-TYPE STRAINER ANSI B16.5 CL. 158 RF REFER TO SPEC 4126-195-400-19	50mm	5
	FLANGE WN ANSI B16.5 #150 RF STD WT CARBON STEEL ASTM A105	200mm	2
FLAN	FLANGE WN ANSI B16.5 #150 RF XS CARBON STEEL ASTM A105	200mm	6
	FLANGE WN ANSI B16.5 #150 RF XS CARBON STEEL ASTM A105	50mm	1
GASK	GASK RING B16.5 1.8 THK ORGANIC FIBER/NITRILE BINDER	80mm	1
	GASK RING B16.5 1.8 THK ORGANIC FIBER/NITRILE BINDER	200mm	6
OLET	SOCKLET #3000 CARBON STEEL ASTM A105	80mm x 25mm	2
	WELDOLET STD WT CARBON STEEL ASTM A105	200mm x 225mm	2
PCOM	VENT ORDNM MODULE FOR DETAILS SEE SPEC 4126-190-400-302	150mm x 80mm	2
	VENT ORDNM MODULE FOR DETAILS SEE SPEC 4126-190-400-302	20mm	2
REDU	REDU ECC BIV ANSI B16.9 STD WT CARBON STEEL ASTM A234 WPB SMLS	200mm x 150mm	2
	REDU ECC BIV ANSI B16.9 STD WT CARBON STEEL ASTM A234 WPB SMLS	150mm x 80mm	2
TEE	TEE BIV B16.9 STD WT CARBON STEEL ASTM A234 WPB SMLS	150mm x 150mm	3
	TEE BIV B16.9 STD WT CARBON STEEL ASTM A234 WPB SMLS	150mm x 150mm	1
	TEE BIV B16.9 XS CARBON STEEL ASTM A234 WPB SMLS	50mm x 40mm	2
TUBI	TEE BIV B16.9 XS CARBON STEEL ASTM A234 WPB SMLS	50mm x 50mm	1
	PIPE SMLS BE STD WT CARBON STEEL ASTM A105-B	150mm	65.25m
	PIPE SMLS BE STD WT CARBON STEEL ASTM A105-B	200mm	0.27m
VALV	PIPE SMLS BE XS CARBON STEEL ASTM A105-B	80mm	52.18m
	PIPE SMLS PE XS CARBON STEEL ASTM A105-B	25mm	0.24m
	PIPE SMLS PE XS CARBON STEEL ASTM A105-B	25mm	1
WELD	GATE VALVE FBW THRD #800 CARBON STEEL ASTM A105	20mm	2
	FIELD WELD		

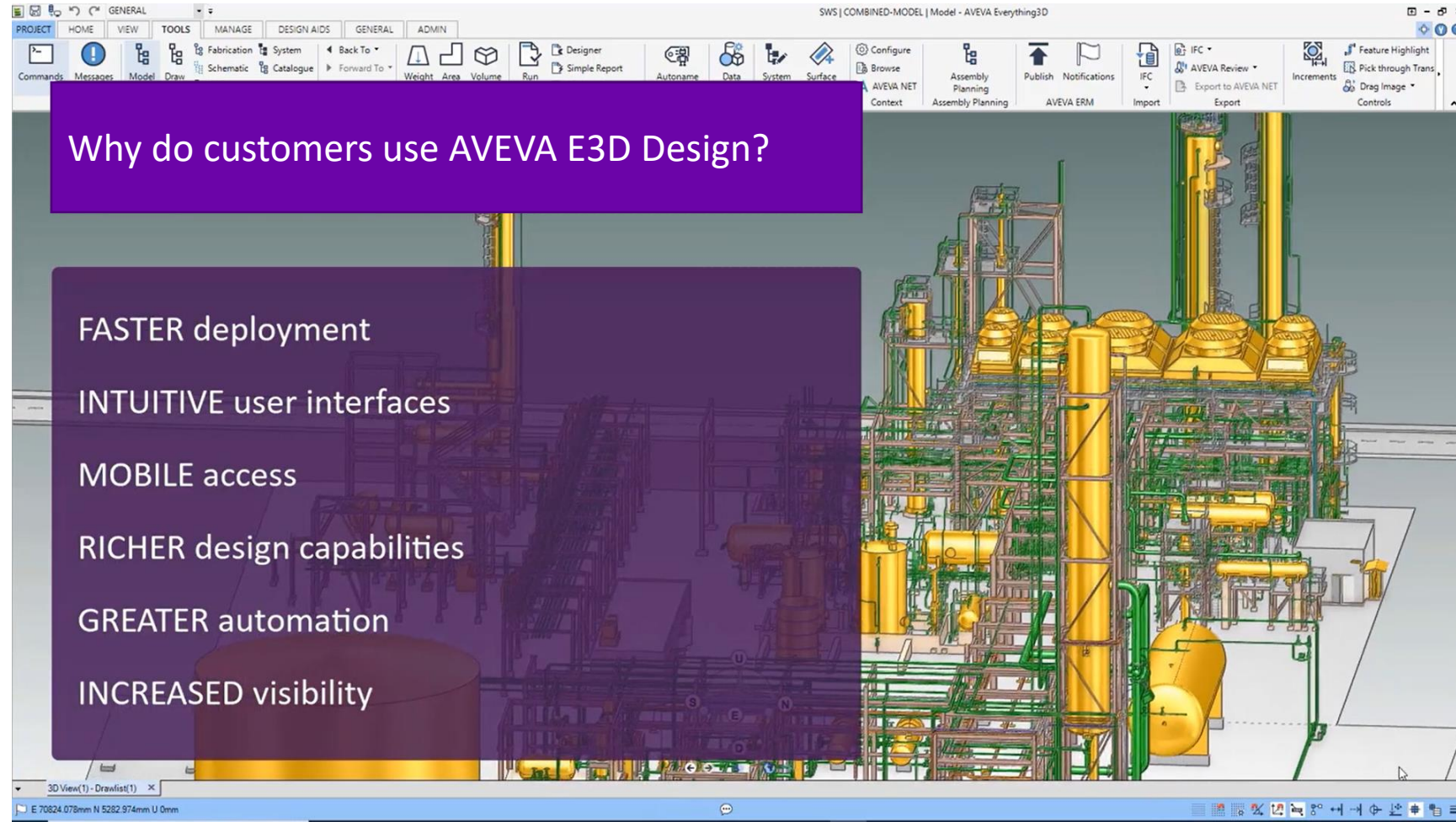
PAGE 1 OF 2



Elev (m)	C of G	
	West (m)	North (m)
-200.910	304.800	103.328
-200.910	309.680	103.328
-200.918	307.249	103.328
-116.720	304.800	103.734
-116.720	309.680	103.330
-116.720	307.088	103.545
-110.540	304.800	103.734
-110.540	309.680	103.330
-110.540	307.088	103.545
-205.360	309.680	103.330
-205.360	304.800	103.330
-205.360	307.249	103.330
-110.540	292.990	104.037
-114.200	292.990	104.037
-108.100	294.205	102.568
-112.368	292.990	104.037
-110.540	295.530	104.037
-114.200	295.530	104.037
-108.100	294.205	102.568
-111.377	295.232	103.696
-110.540	298.400	104.037
-114.200	298.400	104.037
-112.370	298.400	104.037
-110.540	301.140	104.036
-114.200	301.140	104.037
-112.367	301.140	104.036
-112.637	301.334	103.718

Page 1 of 1

AVEVA E3D Design – answers customers' challenges

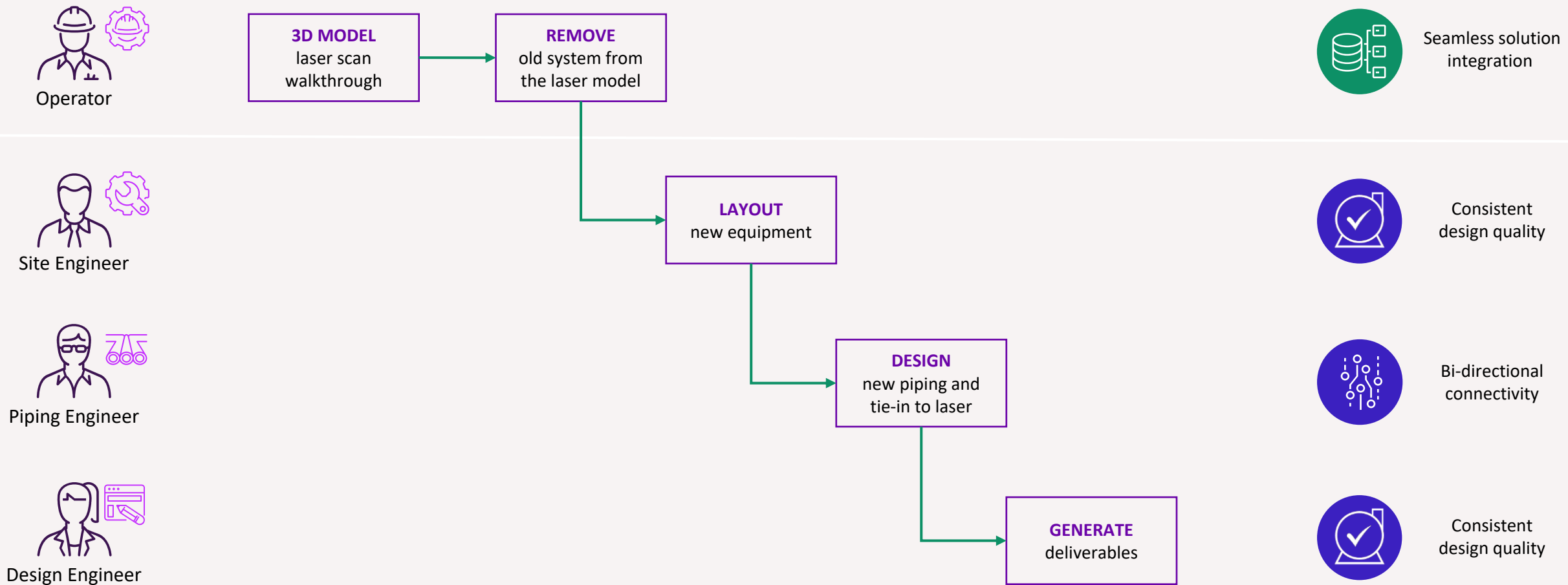


Why do customers use AVEVA E3D Design?

- FASTER deployment
- INTUITIVE user interfaces
- MOBILE access
- RICHER design capabilities
- GREATER automation
- INCREASED visibility

Detailed Design - Brownfield

Brownfield detailed design



Speaker name

Speaker title

- Company
- email@company.com

Speaker name

Speaker title

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 HVALA
 FААFETAІ
 ESKERRIK ASKO
 HVALA
 TEŞEKKÜR EDERİM
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 DI OU MÈSI
 ĎAKUJEM
 GRAZZI
 ПΑΚΚΑ ΠΕΡ
 SIPAS JI WERE
 TERIMA KASIH
 UA TSAUG RAU KOJ
 TI БЛАГОДАРАМ
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 KÖSZÖNÖM
 GO RAIBH MAITH AGAT
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 TAK DANKE
 MAHADSANID
 DANKJE
 АЇЎ
 SALAMAT
 MAHALO IĀ 'OE
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AVEVA, a global leader in industrial software, drives digital transformation for industrial organizations managing complex operational processes. Through Performance Intelligence, AVEVA connects the power of information and artificial intelligence (AI) with human insight, to enable faster and more precise decision making, helping industries to boost operational delivery and sustainability. Our cloud-enabled data platform, combined with software that spans design, engineering and operations, asset performance, monitoring and control solutions delivers proven business value and outcomes to over 20,000 customers worldwide, supported by the largest industrial software ecosystem, including 5,500 partners and 5,700 certified developers. AVEVA is headquartered in Cambridge, UK, with over 6,000 employees at 90 locations in more than 40 countries. For more details visit: www.aveva.com