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From Concept to Handover

A full edge-to-edge demonstration of AVEVA's Engineering capabilities

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AVEVA

Typical Project Breakdown

Mega Projects

(Rice Global E&C Forum 2017)

- **98% of Projects run over budget**
- Average cost increase is 80% over original quoted value
- Average schedule delay = 20 mos.

Cost of Rework **5.4% of total construction cost**

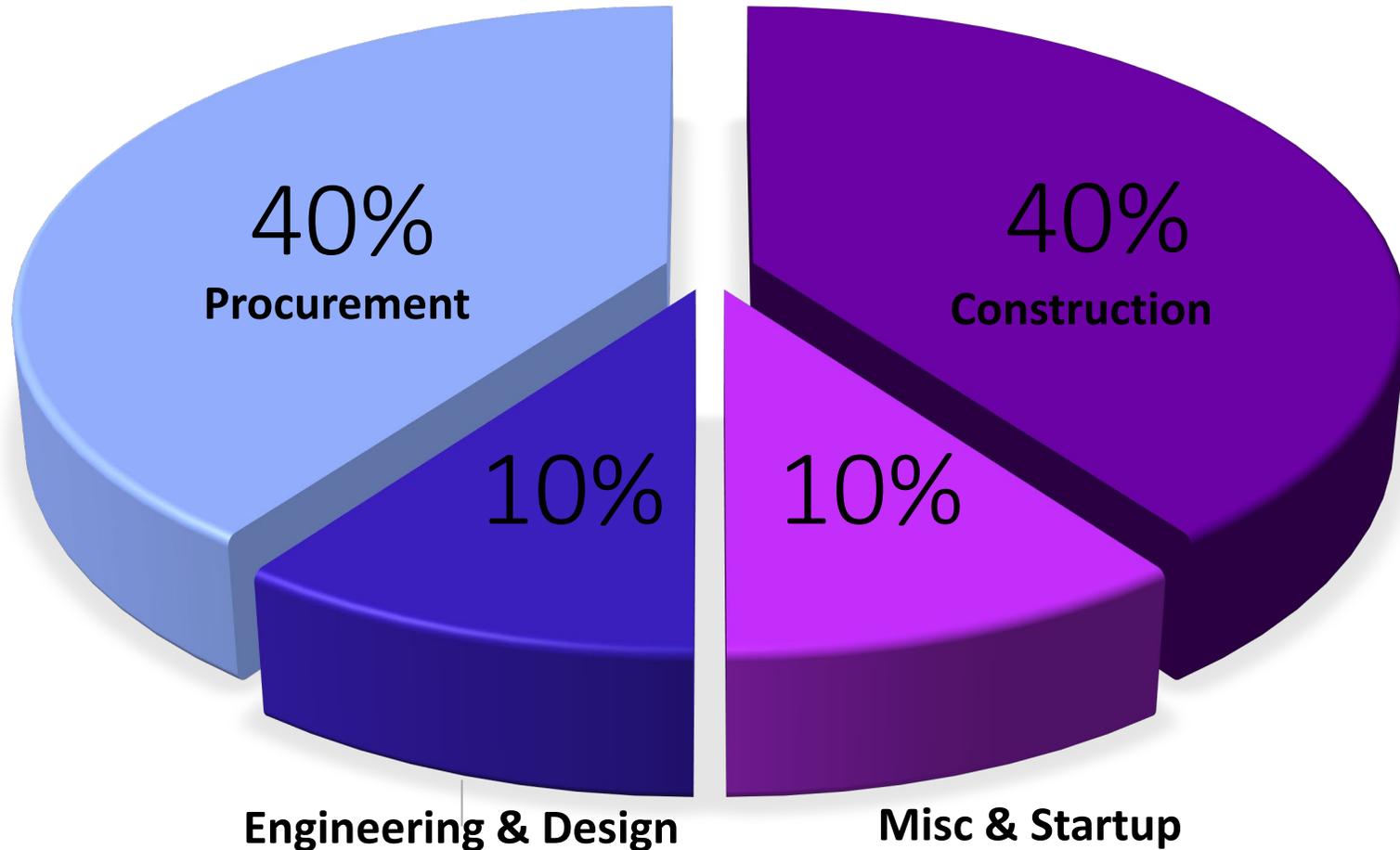
Leading cause = Design Errors/
Omissions! (Hwang et al. 2009)

Cost of Engineering Errors

(Love et al. 2014)

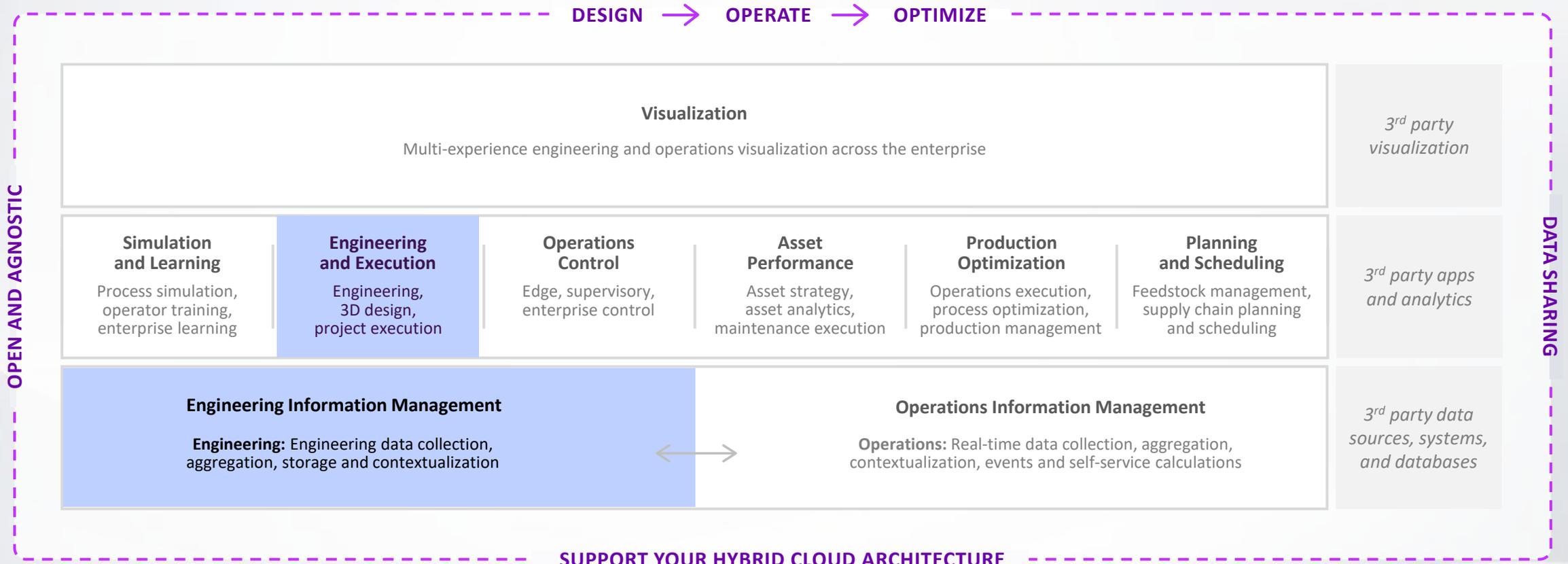
14.2% of Contract Value

Direct & Indirect



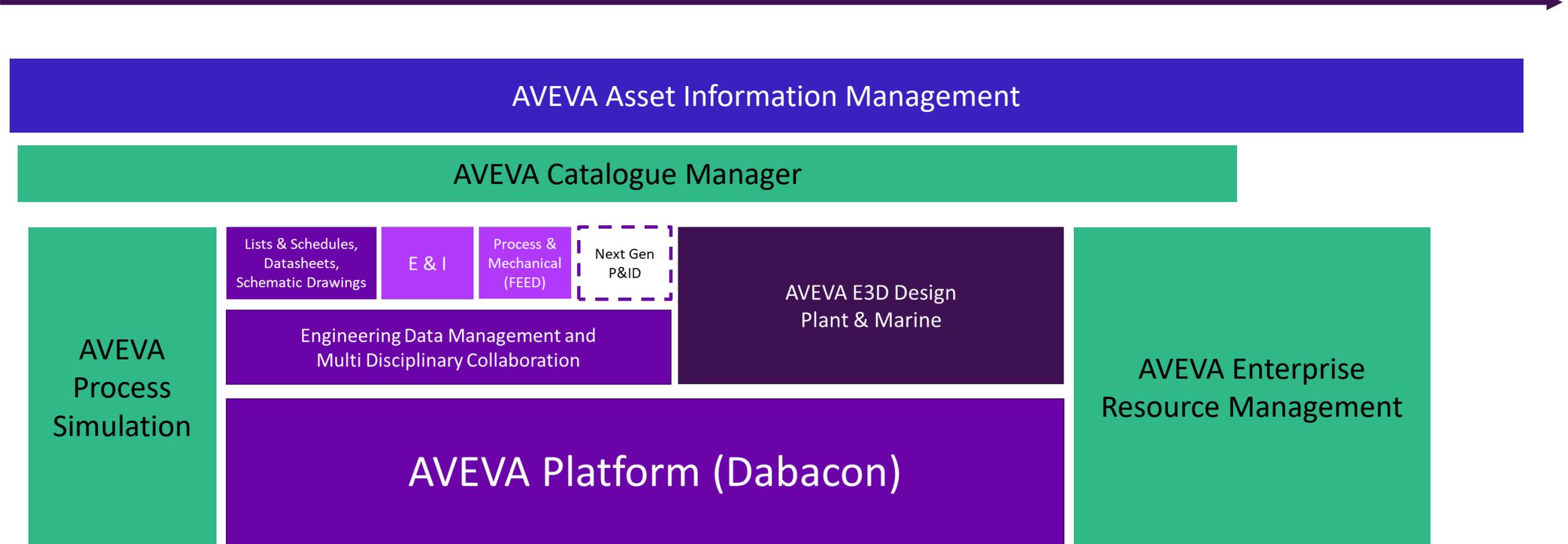
Delivering a complete digital thread, purpose-built for industry

Accelerate time to value with flexible, scalable, and trusted industrial hybrid SaaS solutions



Scope of End-to-End Demonstration

Project execution timeline



Session 1 (45min)

FEED + Detail Design

- 5' Introduction
- 30' Demo
 - AVEVA Asset Information Management
 - AVEVA Process Simulation
 - AVEVA Engineering
 - AVEVA Diagrams
 - AVEVA E3D Design
- 10' Q&A

Session 2 (45min)

Detail Design + Execution

- 5' Introduction + recap of Session 1

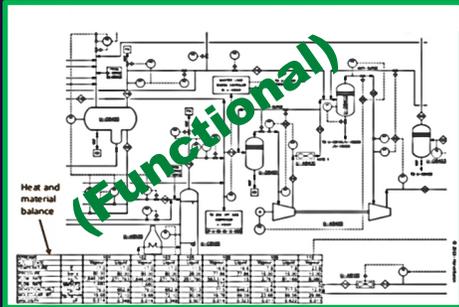
- 30' Demo
 - AVEVA Engineering
 - AVEVA Enterprise Resource Management
 - AVEVA Enterprise Resource Management Mobility App
 - AVEVA Asset Information Management

- 10' Q&A

Capturing the Evolution & Change

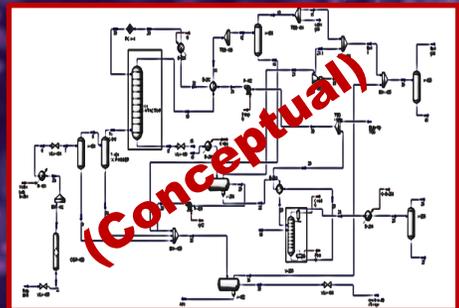
Conceptual (BFD) → Functional (PFD) → Pseudo-Physical (P&ID) → Physical (3D)

Process Flow Diagram

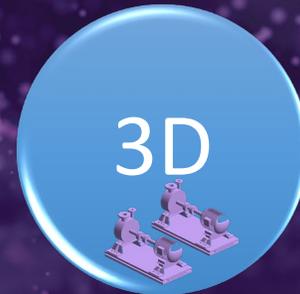


Component flows, compositions,
T&P For multiple cases

Unit Operation Diagram (Simulation)

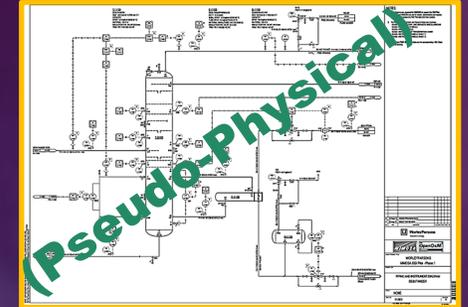


Temp 90 °C to 120 °C
Ball to Globe Valve



Summed Flowrates, Corrosion,
Heat & Pressure

P&IDs



ΔP Calcs Pipe/Wire \varnothing & True
Length, bends & components
based on Cats & Specs

3D



Questions?

Please wait for the microphone.
State your name and company.



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Thank you!

AVEVA WORLD

From Concept to Handover

Part 2

A full edge-to-edge demonstration of AVEVA's Engineering capabilities

Presented By: Dan Stephenson & Mary Fernandez

AVEVA

Dan Stephenson

Sr. Technical Consultant

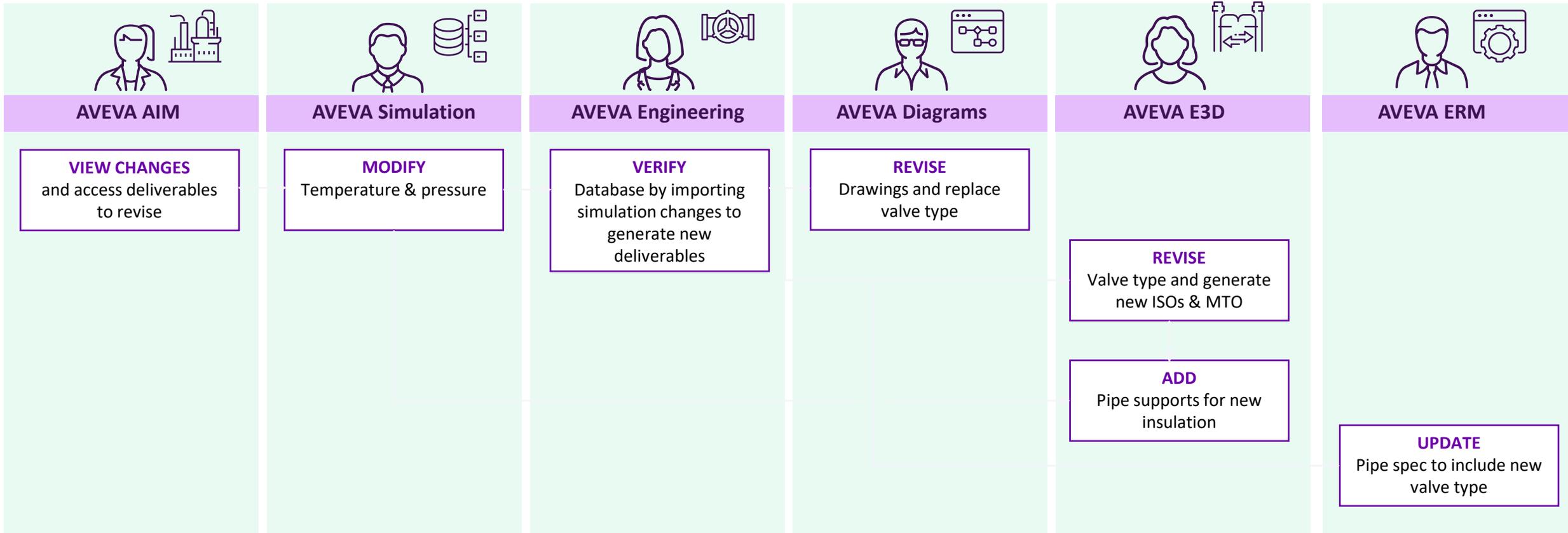
- Dan.stephenson@aveva.com

Mary Fernandez

Technical Consultant

- Mary.fernandez@aveva.com

Session One Summary



Full project visibility



Consistent design quality



A single source of truth



Bi-directional connectivity



Easy integration between tools



Iteration management

AVEVA

Engineer - AVEVA Engineering (Project - SWS-MDB-LOE-ENG-FEED) Diagram Viewer 3D Viewer

Project Home Manage View Simulation AVEVA NET Drawings Admin Actions Actions

Explorer Datasheet Report Diagram 3D Tag Properties Document Properties Document Packs

Document Properties: New Horizontal Move to Previous Column Filtering Column Summaries Show Units in Headers Show leading slash Metadata Values Clear Attribute Metadata Datasheets

Linked Documents: New Vertical Move to Next Multi-select Filter Style Column Sorting Wrap Text in Headers Show logically deleted Feedback Colour

Tabbed View Short Title Grouping Panel Column Pins Show Units/Label

Window Tab Group: Diagram Viewer - SWS-001 Page-1 3D View: 80-PC-01014-A300

Grid Options

3D Object Name Actual Type Size Gap

3D Object	Name	Actual Type	Size	Gap
	150-LS-01017-A300	Pipe	150	
	150-SG-01016-A600	Pipe	150	
	150-SH-01016-A300	Pipe	150	
	150-SH-01033-A300	Pipe	150	
	200-GA-01006-A300	Pipe	200	
	200-GA-01006-A300	Pipe	200	
	200-DD-01038-A300	Pipe	200	
	200-SH-01001-A300	Pipe	200	
	200-SH-01004-A300	Pipe	200	
	200-SH-01005-A300	Pipe	200	
	200-SH-01011-A300	Pipe	200	
	200-SH-01018-A300	Pipe	200	
	200-SH-01019-A300	Pipe	200	
	200-SH-01026-A300	Pipe	200	
	200-SH-01037-A300	Pipe	200	
	200-SH-01040-A300	Pipe	200	
	200-SH-01041-A300	Pipe	200	
	250-SH-01010-A300	Pipe	250	
	250-SH-01039-A300	Pipe	250	
	400-SG-01001-A600	Pipe	400	
	400-SG-01002-A600	Pipe	400	
	400-SG-01003-A600	Pipe	400	
	400-SG-01004-A600	Pipe	400	
	400-SG-01005-A600	Pipe	400	
	400-SG-01007-A600	Pipe	400	
	50-LA-01005-A300	Pipe	50	
	50-LC-01000-A300	Pipe	50	
	50-PL-01023-A300	Pipe	50	
	50-SG-01010-A600	Pipe	50	
	50-SG-01013-A600	Pipe	50	
	50-SG-01015-A600	Pipe	50	
	50-SG-01020-A600	Pipe	50	
	600-SG-01006-A600	Pipe	600	
	600-SH-01022-A300	Pipe	600	
	600-SH-01024-A300	Pipe	600	
	80-RA-01029-A300	Pipe	80	
	80-RA-01029-A300	Pipe	80	
	80-SG-01009-A600	Pipe	80	
	80-SG-01011-A600	Pipe	80	
	80-SG-01014-A600	Pipe	80	
	80-SG-01017-A600	Pipe	80	
	Pipe 1 of ENGGRP 12 of E.	Pipe		
	Pipe 2 of ENGGRP 12 of E.	Pipe		
	80-PC-01014-A300	Pipe	80	
	50-PC-01013-A300	Pipe	50	

1 record(s) selected

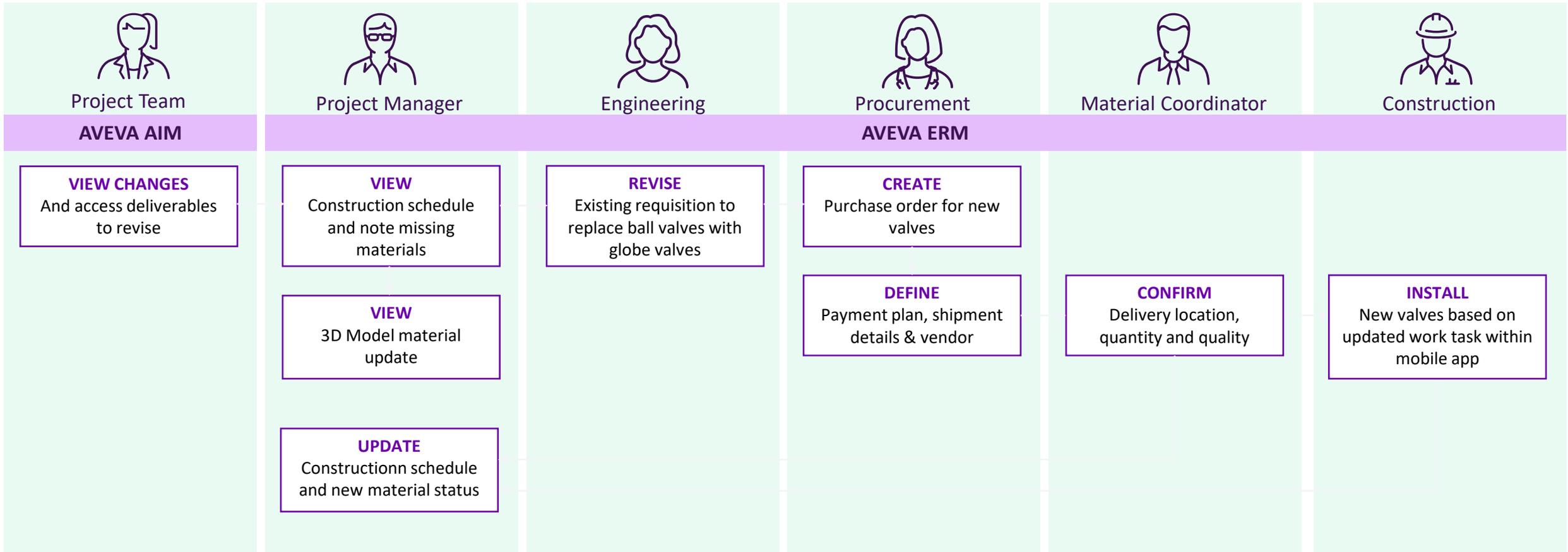
Diagram Viewer - SWS-001 Page-1

3D View: 80-PC-01014-A300

Clipboard Transparency

Notifications Get Work completed Messages Session Defaults 100%

Session Two Summary



Questions?

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Thank you!

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ABOUT AVEVA

AVEVA is a global leader in industrial software, sparking ingenuity to drive responsible use of the world's resources. The company's secure industrial cloud platform and applications enable businesses to harness the power of their information and improve collaboration with customers, suppliers and partners.

Over 20,000 enterprises in over 100 countries rely on AVEVA to help them deliver life's essentials: safe and reliable energy, food, medicines, infrastructure and more. By connecting people with trusted information and AI-enriched insights, AVEVA enables teams to engineer efficiently and optimize operations, driving growth and sustainability.

Named as one of the world's most innovative companies, AVEVA supports customers with open solutions and the expertise of more than 6,400 employees, 5,000 partners and 5,700 certified developers. With operations around the globe, we are headquartered in Cambridge, UK and listed on the London Stock Exchange's FTSE 100.

Learn more at www.aveva.com