15-16 MAY 2025

AVEVA DAY

BRISBANE

Engineering Breakout session

Scott Robertson, Manager Engineering Portfolio APAC

Shelly Mao, Senior Principal Solution Architect

Richard Cross, Rio Tinto (Teams)

Cristian Santos Medina, Engineering Solution Consultant

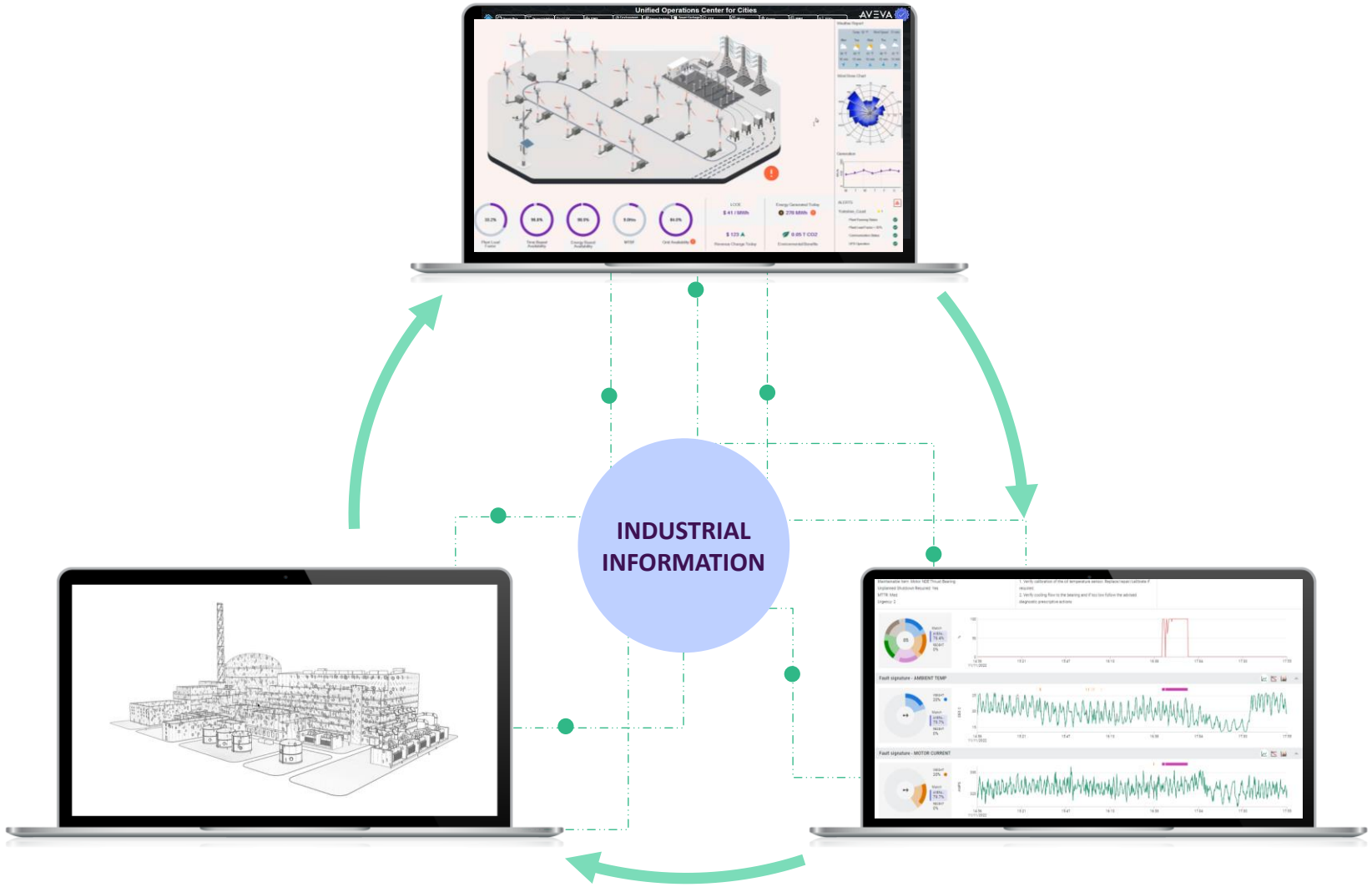
David Such, Manager of Service and Presales

Agenda

Start	End	Title of Presentation	Presenter	Company
2:00	2:05	Introduction	Scott Robertson	AVEVA
2:05	2:20	Be AI Ready with Digital Handover	Shelly Mao	AVEVA
2:20	2:40	Rio Tinto leveraged Asset Information Management to support their Capex projects	Richard Cross Principal Advisor - Engineering Systems	Rio Tinto
2:40	2:50	Unified Engineering Introduction (1D, 2D, 3D all on one database)	Scott Robertson	AVEVA
2:50	3:10	AVEVA's Next Generation P&ID and E&I Demonstration	Cristian Santos Medina	AVEVA
3:10	3:15	Introducing Ai in E3D Design	Cristian Santos Medina	AVEVA
3:15	3:25	Engineering data in Connect Visualization Services (CVS)	David Such	AVEVA
3:25	3:30	Wrap up	Scott Robertson	AVEVA

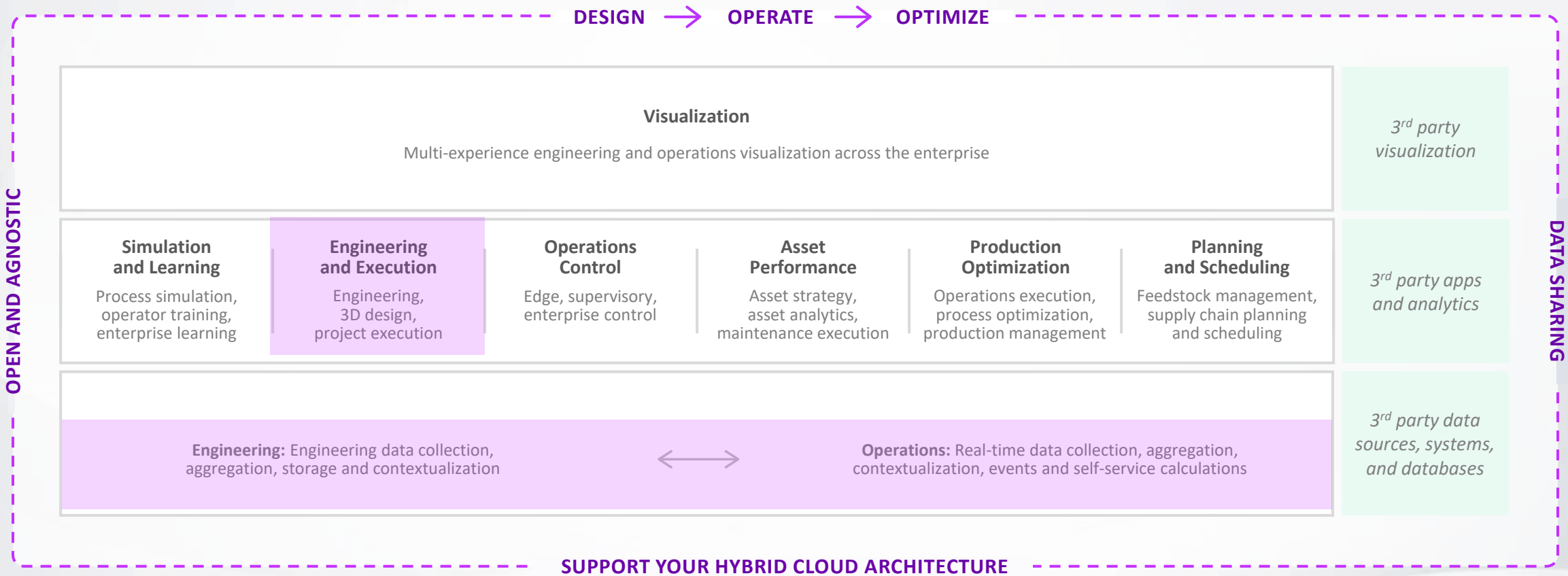
Frictionless exchange of information fuels innovation and confidence

Industrial information is at the heart of the living digital twin



AVEVA Engineering Within the AVEVA Portfolio

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



MAY 2025

Be AI Ready with Digital Handover

Shelly Mao, Services Senior Principal Solution Architect

MAY 2025

Be AI Ready with Digital Handover

Shelly Mao, Services Senior Principal Solution Architect

Agenda

1. Primary Industry Drivers and Key Trends
2. How AI will shape the future of engineering
3. Key enablers for AI-driven engineering
4. Common Challenges with Digitization & Digitalization
5. Steps to Data Centricity and be AI Ready

5 Primary drivers shaping the industry

1. **Sustainability Demands**
   Growing pressure from customers, regulators, and investors to act sustainably
2. **Cost Challenges**
   Economic viability remains the top hurdle for sustainability projects
3. **Energy Shift**
   Accelerating investment in efficiency, hydrogen, CCUS, and renewables
4. **Focus on Existing Assets**
   Most near-term efforts target carbon reduction in current facilities
5. **Rising Complexity**
   Projects require deeper expertise and more precise planning

Why a digital strategy and collaboration matter

> “EPCs can mitigate these factors by creating a digital strategy and collaborative solutions for better project estimation, improved project planning, and enhanced quantification of the business impact of design decisions during engineering.”

A Collaborative Sustainability Solution for EPCs and Asset-Owners by Peter Reynolds, published on APRIL 4, 2024, from ARC Advisory Group

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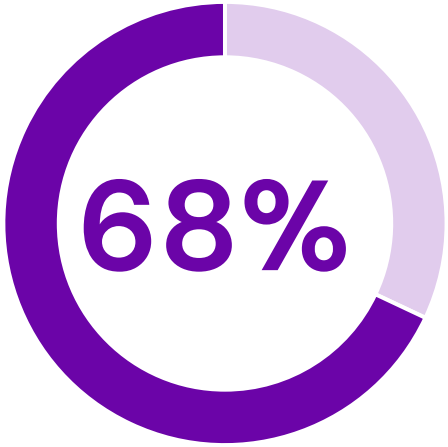
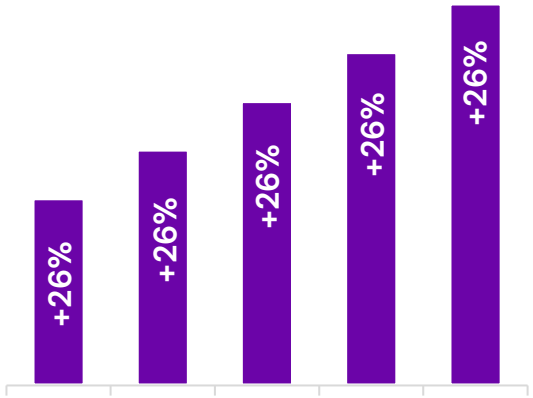
Industry is in a race to break down silos

Organizations are strugllling to leverage existing data



of the data available to enterprises is unleveraged

And volume of valuable, rich data keeps increasing



new data created each year is growing at a compound rate of 26%

A connected data ecosystem adresses the issue

of global organizations will have a digital ecosystem by 2025, capitalizing data 10% more efficiently

1, 2 The Seagate Rethink Data Survey, IDC, 2020
3 Future of Industry Ecosystems, ICD, 2024

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Key trends shaping the industry

Data lakehouse is the paradigm for enterprises

74%

companies have implemented a data lakehouse[1]

unifies disjointed big data architectures

Interoperability is a top concern

OT ⟷ IT

unlocks seamless data collaboration & innovation

Governance is a critical enabler for AI

39%

have successfully scaled data-driven initiatives[2]

effective governance & improving data quality are top issues[3]

1 Laying the foundation for data and AI-led growth, MIT Technology Review
2 WEF Data Excellence - Transforming Manufacturing
3 MIT Chief Data Officer and Information Quality Survey

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How AI will shape the future of engineering

Enhanced integration

More embedded in standardization, design and operational tools to boost performance and precision

Entire Lifecycle Support

Support the entire project lifecycle, from design to ongoing operations

Greater User Accessibility

AI becomes more user-friendly and accessible to engineering teams

Predictive Insights

Improved project planning, resource allocation, and risk management

Automation & Efficiency

Reduced manual work and speed up project execution.

Evolving Regulations

Ensure safe, ethical, and standardized AI implementation

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The need for strategic solutions

> “To navigate the complexities of AI integration, engineering sectors should adopt a multi-faceted approach emphasizing collaboration, innovation, and strategic planning.”

Harnessing AI in Engineering: A Strategic Imperative for Modern Infrastructure by Jim Frazer, published on June 13, 2024, from ARC Advisory Group

3 key enablers for AI-driven engineering

Governance

1

Prioritize treating data as a core asset, ensuring it's structured, accessible, and ready for AI insights.

Treat Data as a Strategic Asset

2

View data as a long-term resource, unlocking continuous value beyond project completion and powering future AI innovation.

Adopt a Collaborative Engineering Platform for AI Readiness

3

Implement a collaborative platform to enable seamless data flow, real-time collaboration, and alignment for leveraging AI-driven insights across teams.

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4 common challenges with digitization & digitalization

Unreliable Insights

AVEVAWORLD

EVONIK VIDEO LINK

Physical Asset → Digital Asset → Digital Intelligence

ISO BIM

1) ISO standards highlight challenges related to
   - Lack of **standardization**
   - **Information accuracy**, **completeness**, and **consistency**
   - **Inconsistent** data **formats** and **naming** conventions
2) Unclear Information Management (IM) **Strategy**
3) Lack of **integration**, **collaboration**, and training
4) Handover **delays**

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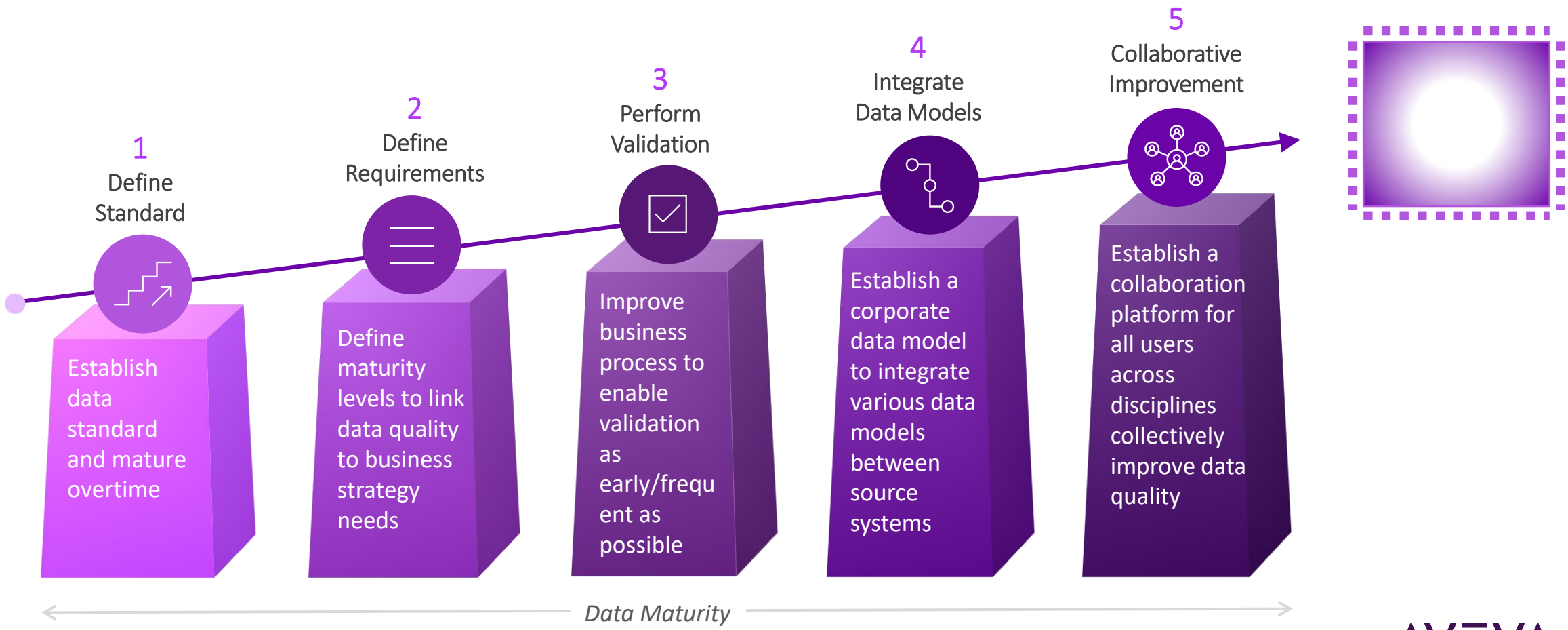
5 foundational steps to prepare data for AI adoption

Starting from Improving Project Data Quality + Digital Handover



Benefits of going digital from day 1

Benefits Both Project Execution Phase + Operations

Entire Lifecycle Management

Reliable data flows continuously across the project lifecycle for all stakeholders.

Validation and Compliance Reporting

Supports regulatory compliance and accurate sustainability reporting.

Informed Decision-Making

Enables data-driven, sustainable, and efficient decisions.

Risk Reduction

Minimizes risks of data loss and errors in handover processes.

Efficient Resource Utilization

Optimizes resources, cuts waste, and boosts efficiency.

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Shelly Mao

Data-Centricity

LEAD TECHNOLOGY
EVANGELIST

Senior Principal Solution Architect
APAC Cloud Practice Lead

AVEVA

MAY 2025

Rio Tinto leveraged Asset Information Management to support their Capex projects

Richard Cross Principal Advisor - Engineering Systems

MAY 2025

Unified Engineering 3.0 Introduction

Scott Robertson, Manager Engineering Portfolio APAC

Over 95%

of major projects are delayed or over budget.

Just 31%

come within 10% of cost baselines

Only 25%

come within 10% of original deadlines

Accenture

Engineering errors in the design phase add on average a

14.2% increase

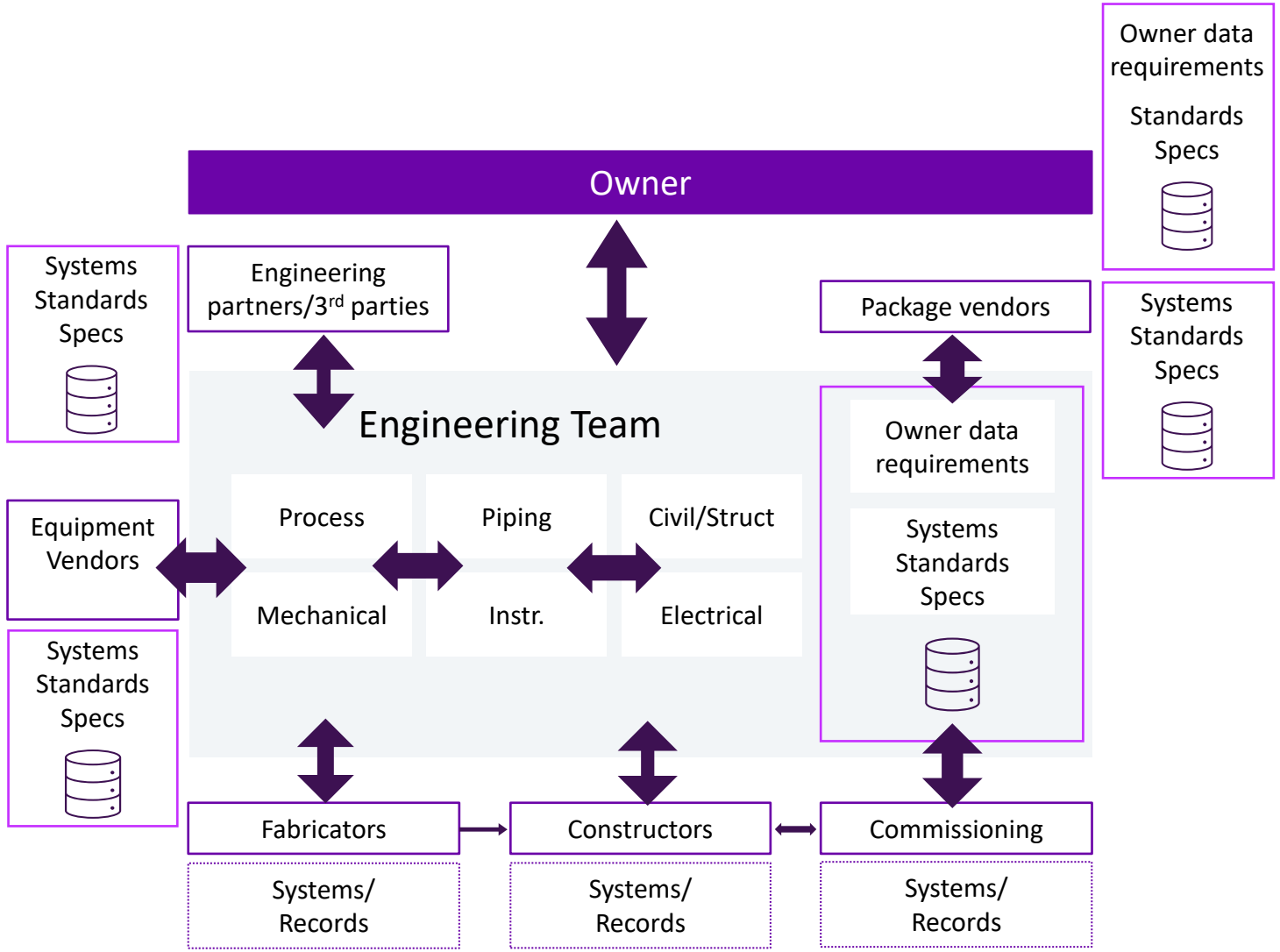
to Total Installed Cost (TIC) of projects

McKinsey & Company

AVEVA Unified Engineering

A single engineering and design project solution

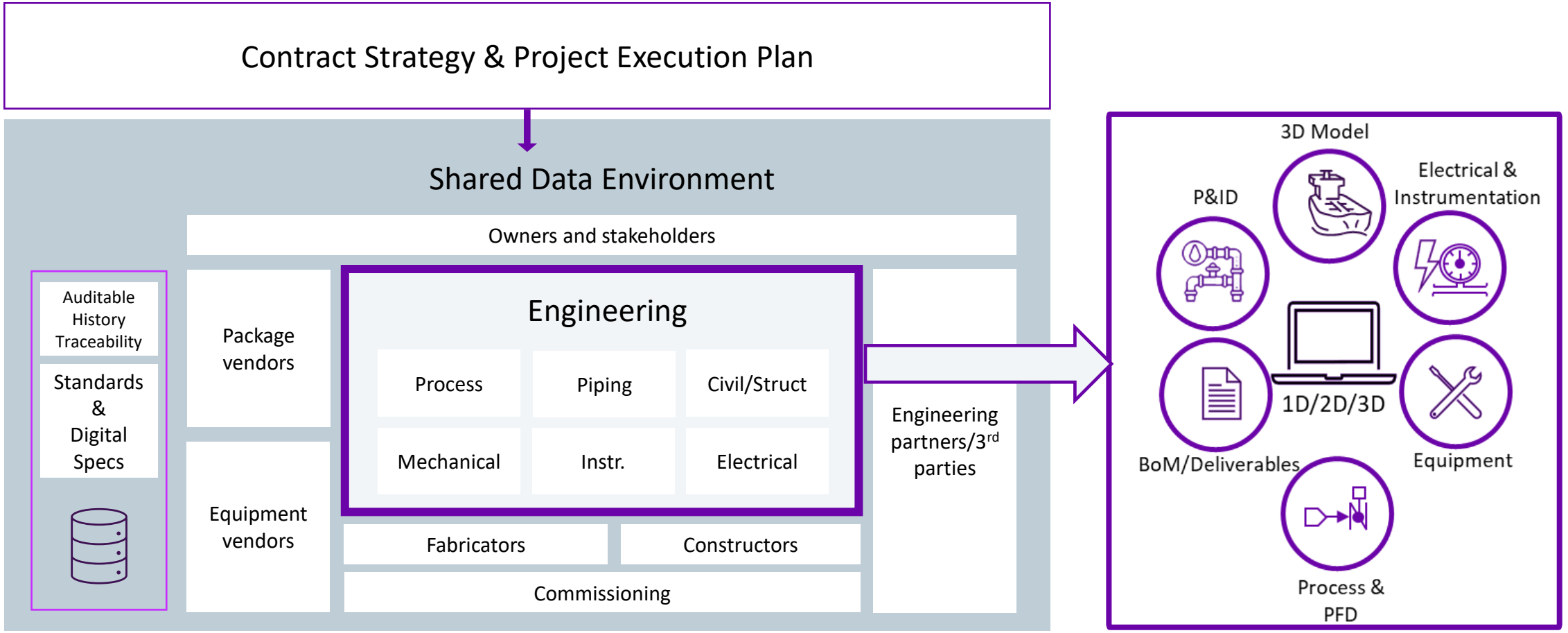
The challenge



Engineering 3.0

Disconnected systems, teams and project data

Unified Engineering



DABACON

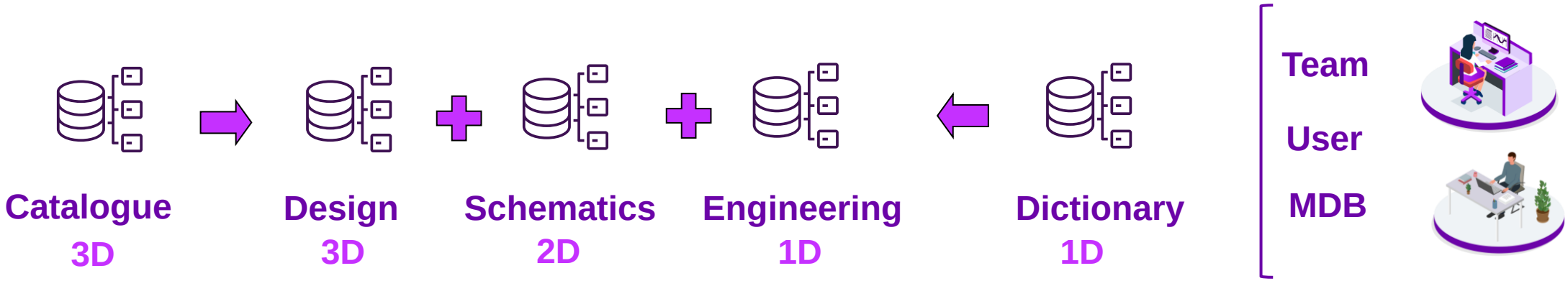
Engineering 4.0

Connected systems, teams and project data

What is DABACON?

Data**ba**se **Con**structor is an object orientated database system structure.

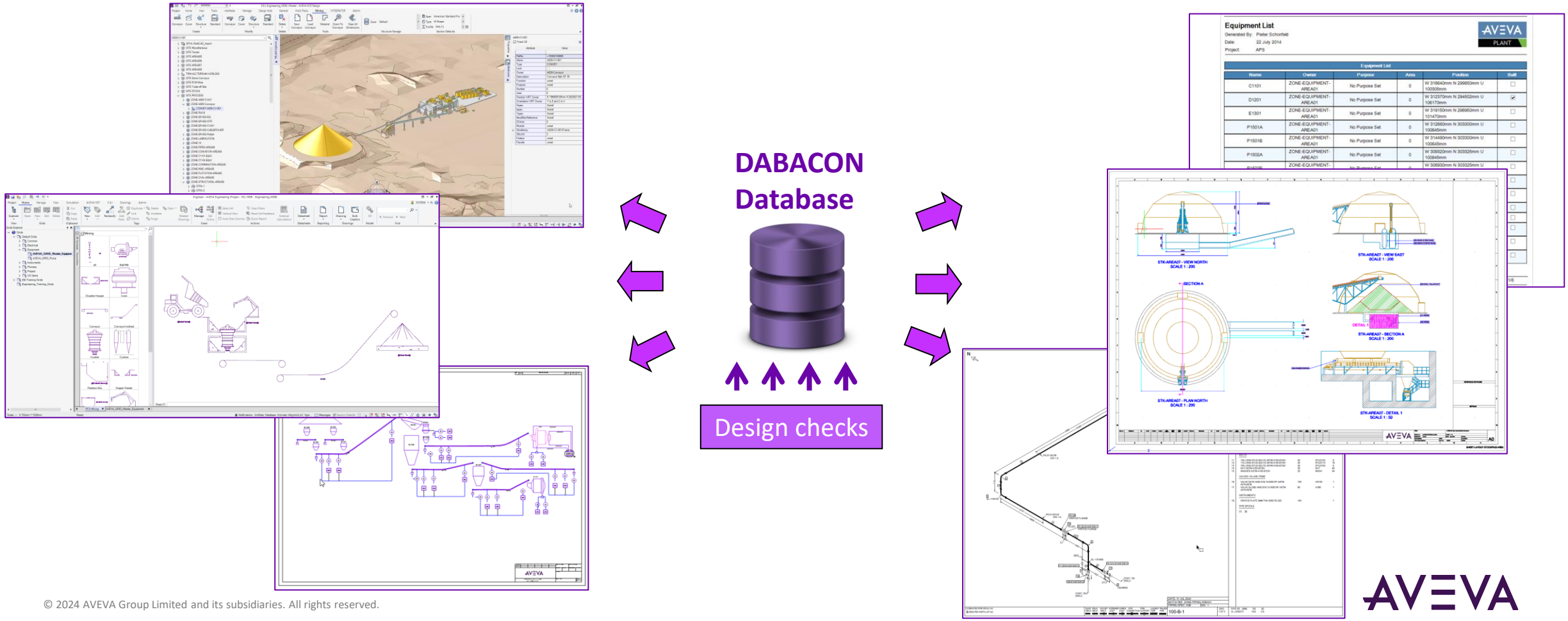
All data in an AVEVA DABACON database is stored in elements. Every element has a type, for example BOX. The type of element determines the attributes available on the element.
Each DB type allows a different set of element types. Every element may have a number of attributes, for example NAME.



AVEVA E3D One centralised database

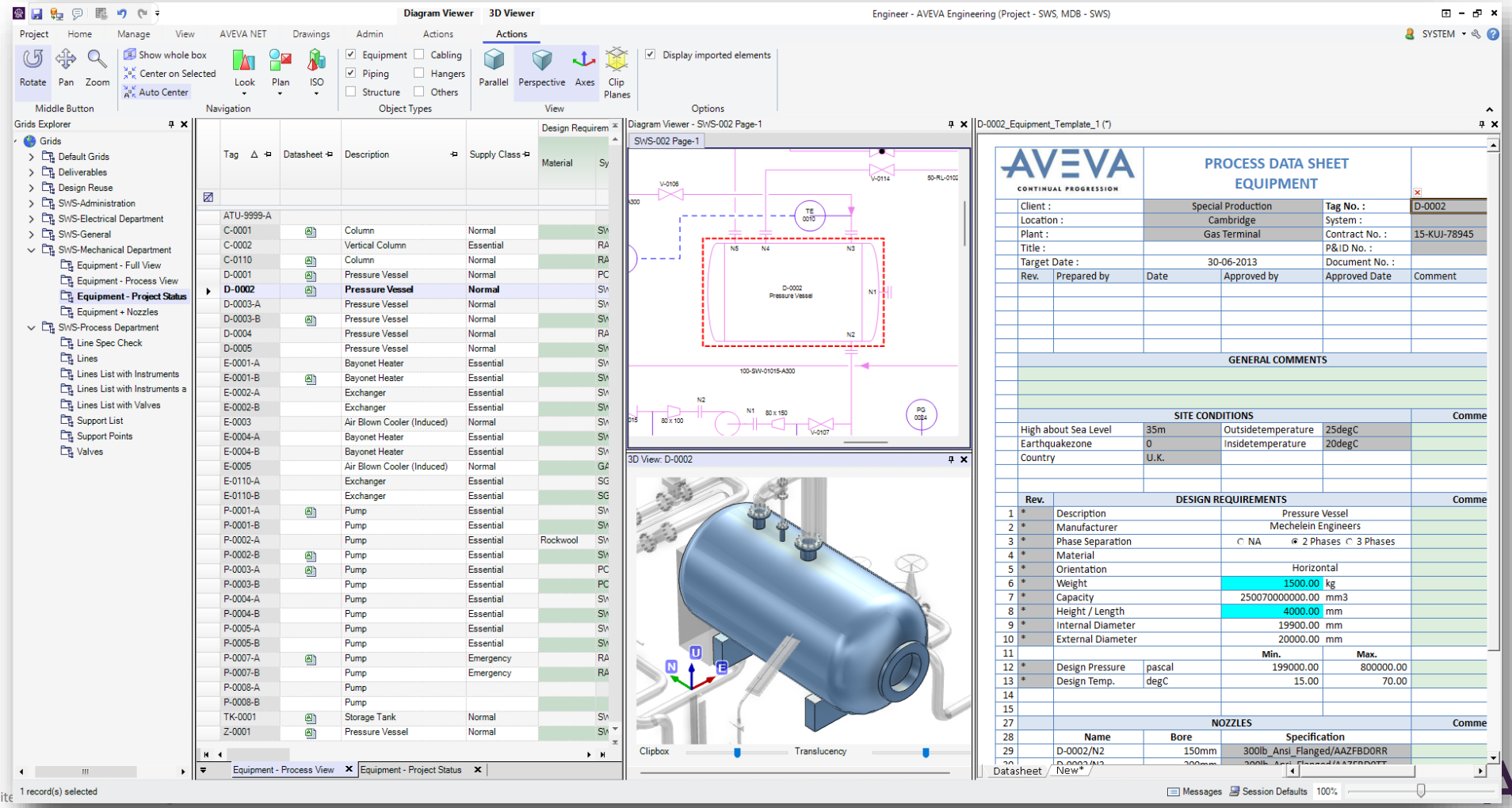
Improved Quality - Automated deliverables generation

Database-driven drawing production achieves consistency between drawings, reports and design data



How much time and effort would you save if you could…

- Etap > Engineering > Line list > SLD > 3D
- Process simulation > P&ID > Line List > Pipe spec > 3D > Iso> spool



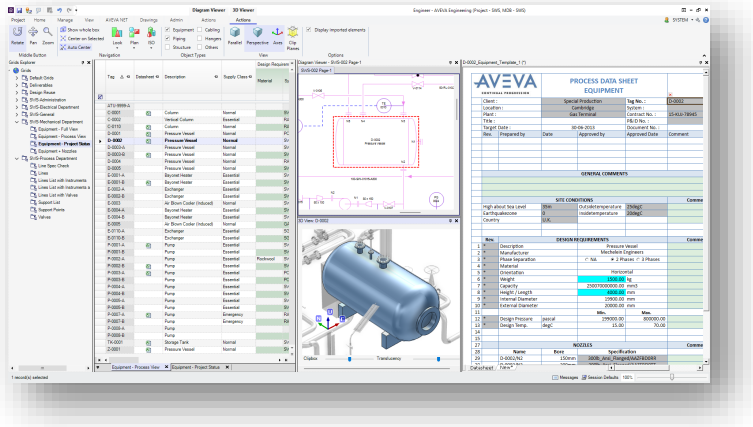
Unified Engineering Licence model (1D, 2D)

Data-centric, multidiscipline, global engineering and design solution

AVEVA Unified Engineering

1D capabilities

- Engineering data model
- Process and mechanical datasheets
- Electrical and instrumentation datasheets
- Engineering lists (line list, valve list, cable schedule, etc.)



Unified Engineering Licence model (1D, 2D)

Data-centric, multidiscipline, global engineering and design solution

AVEVA Unified Engineering

2D capabilities

- PFD / P&ID
- Instrumentation
- Electrical
- Piping isometrics
- Layout / arrangement drawings

1D capabilities

- Engineering data model
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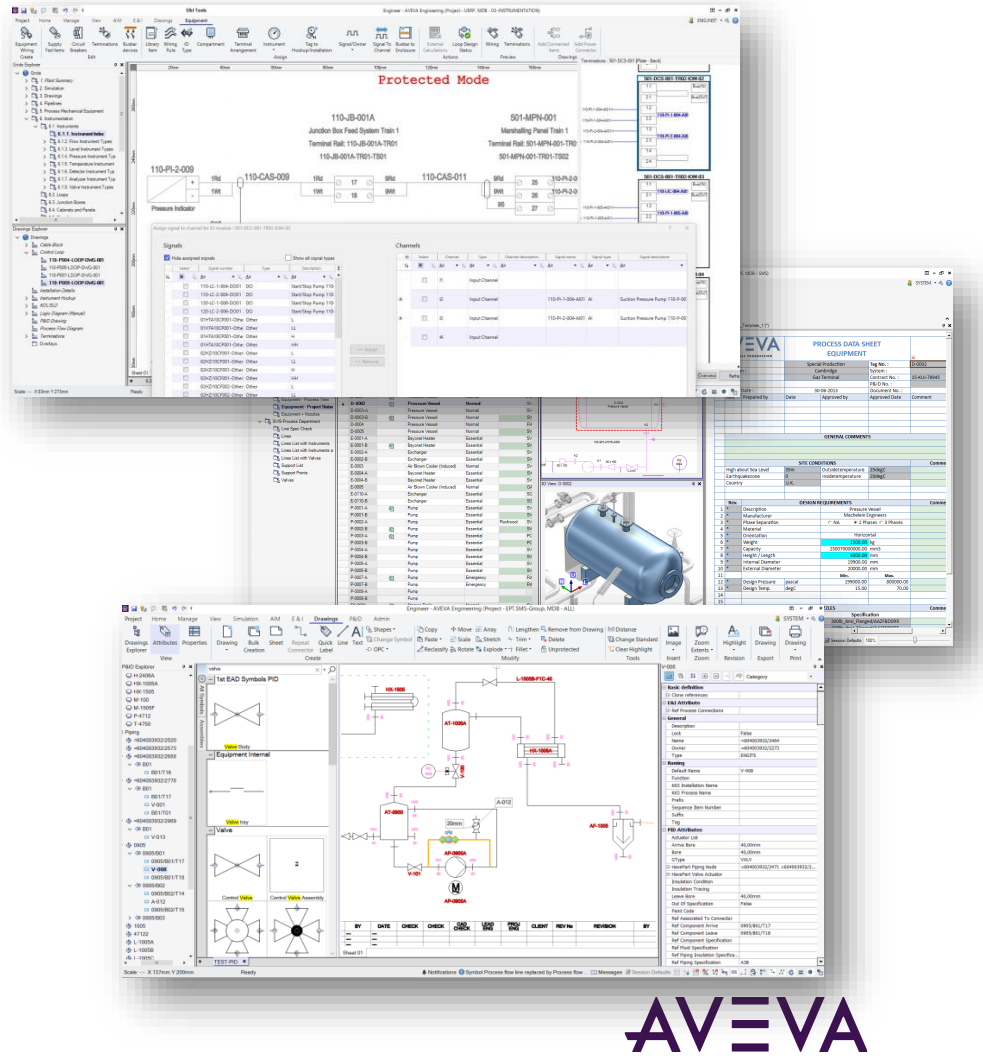

Unified Engineering Licence model (3D)

Data-centric, multidiscipline, global engineering and design solution

AVEVA Unified Engineering

3D capabilities

- Multidiscipline 3D modelling
- Piping
- Equipment
- Structures
- HVAC
- Cable routing
- Supports

2D capabilities

- PFD / P&ID
- Instrumentation
- Electrical
- Piping isometrics
- Layout / arrangement drawings

1D capabilities

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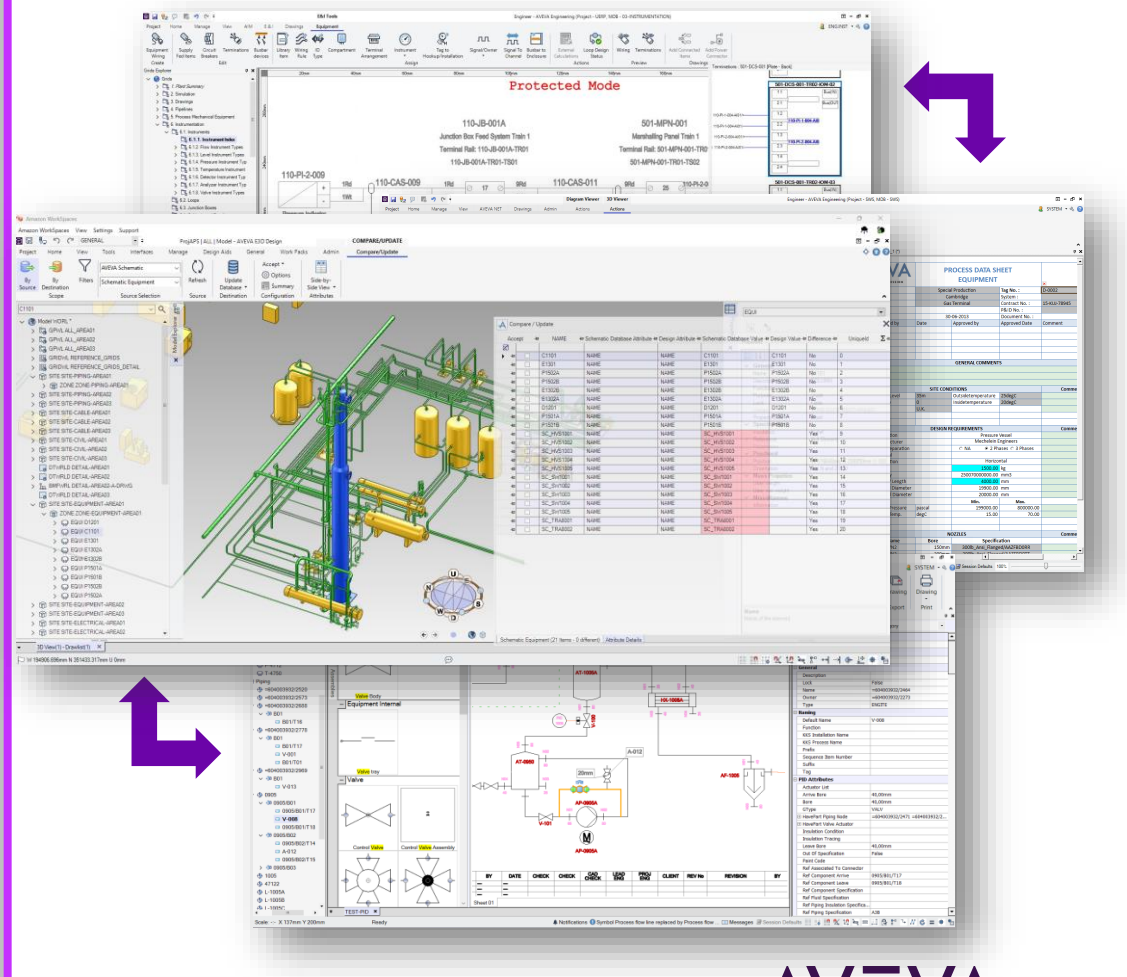
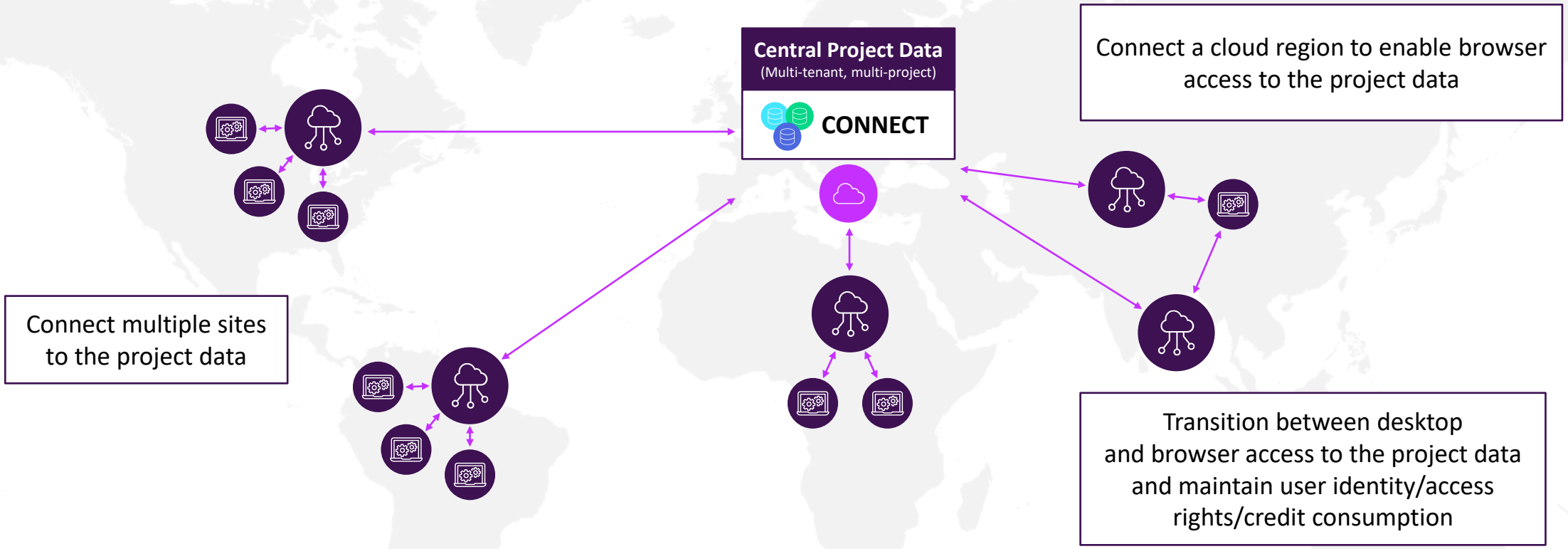


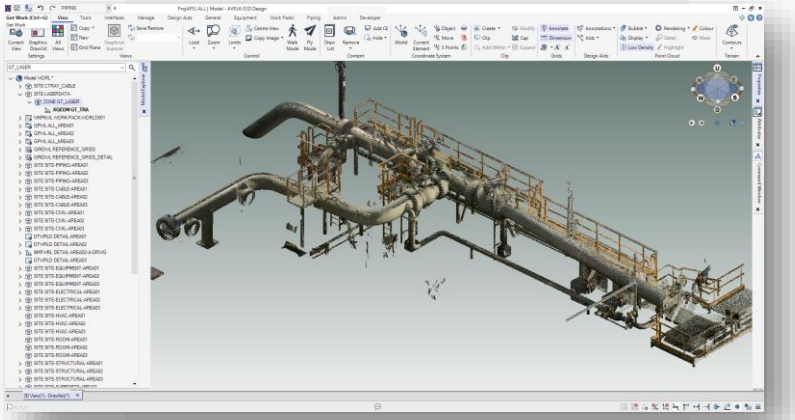
High-level features and capabilities

Global is going

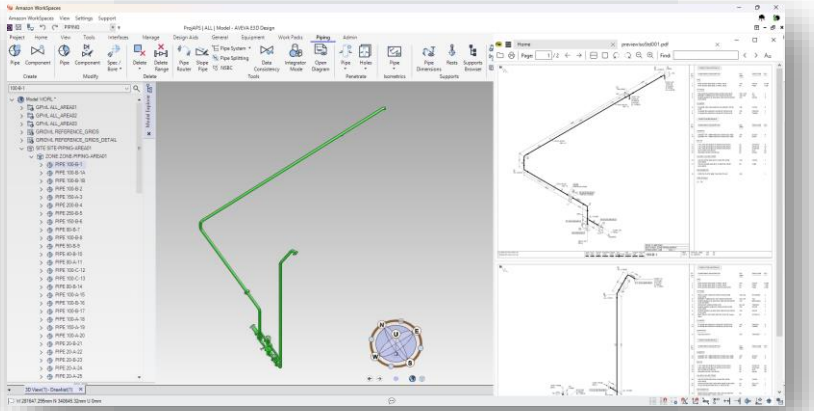


High-level features and capabilities

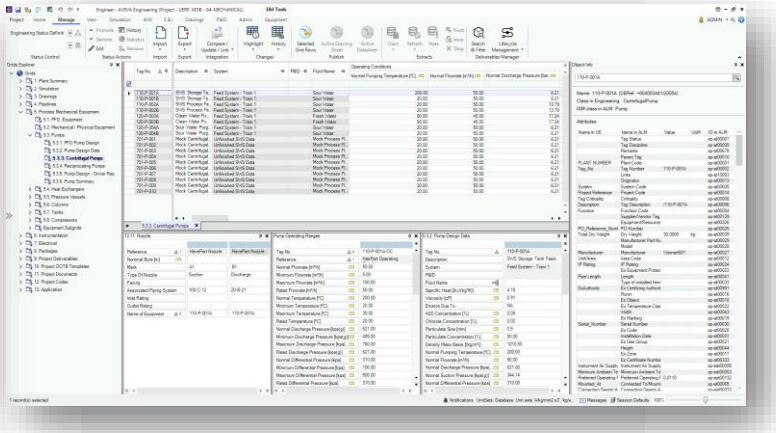
Improve engineering efficiency and deliver better project outcomes



Make efficient use of personnel



Develop scalable, sustainable digital business practices



AVEVA Unified Engineering

Business value with project data in the Cloud

Accenture	Bilfinger Tebodin B.V.	KBR
Estimated 50% savings in combined model review generation unscheduled time Estimated 70% saving in the creation and modification of project work templates	Set-up a multi-location, cross-region, cross-organizational project in hours Execution of newly set-up, multi-location project was conducted with no additional administration or maintenance	Quick, easy, secure set-up and execution on multi-site, multi-organizational projects

3D Design

Market-leading, technologically advanced 3D design software for continuous plant applications

Efficient User Interface

Intuitive, easy to use. Graphical modelling

Highly Integrated

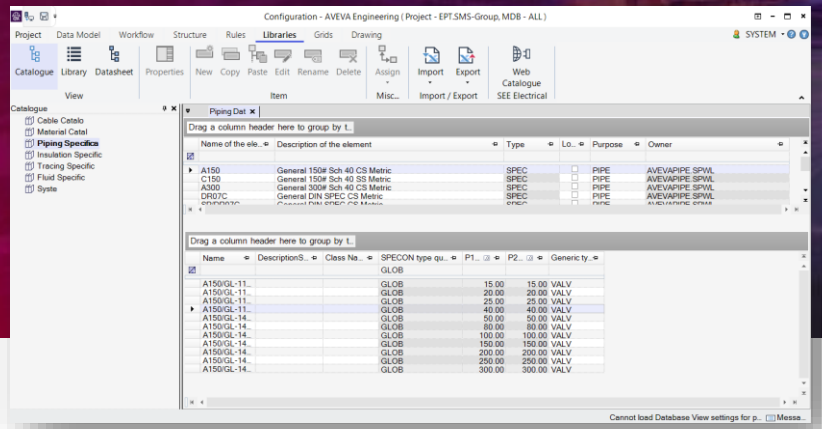
Intelligent data directly integrated with schematic tools, as well as laser scan data

Multi-discipline

Support modelling, cable routing management and modelling, catalogue driven HVAC

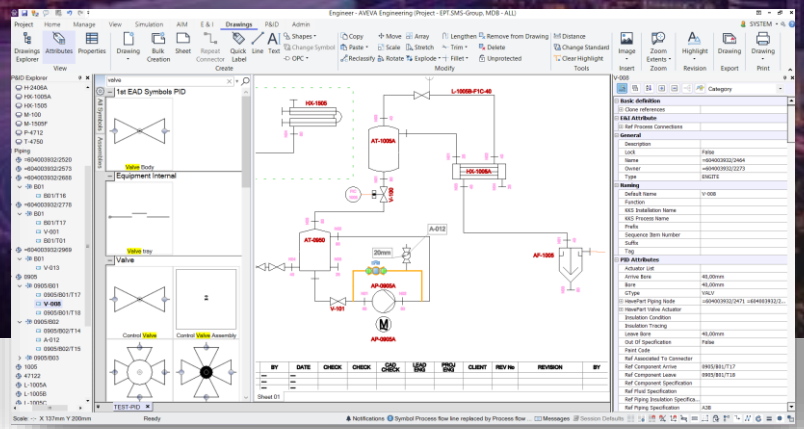
AVEVA engineering and schematics tools

Collaborate across engineering disciplines within a single data-centric solution for 1D, 2D design and engineering tools



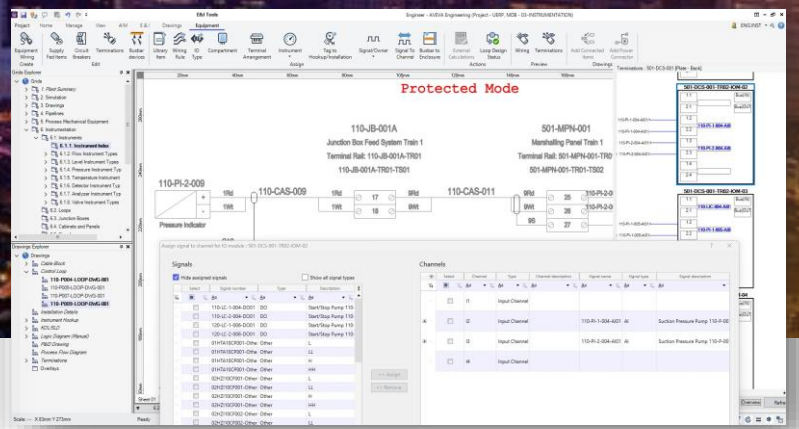
Datasheets and Lists

1D data including schedules and specifications



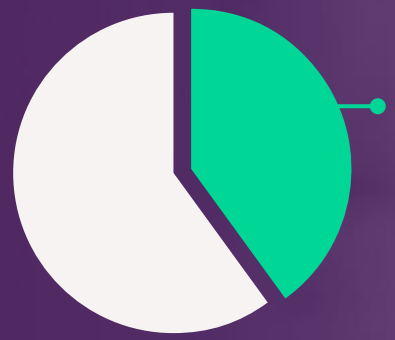
Process and Mechanical

Smart PFD (functional) & P&ID (physical)



Electrical and Instrumentation

Load lists, diagrams, cables schedules etc.



Digital technologies, when applied comprehensively and efficiently, can

reduce overall project costs by as much as 45%

McKinsey & Company

Let’s talk more about where you’d like to see improvements in your business.

MAY 2025

Unified Engineering

Next Generation P&ID and E&I Demonstration

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MAY 2025

Wrap Up

Scott Robertson

AVEVA's Next Generation P&ID and E&I Demonstration

Unified Engineering for Mining

For your company

2 hours

Held In Person

AVEVA Perth Office

Maximum of 6 people

NOT a Training session

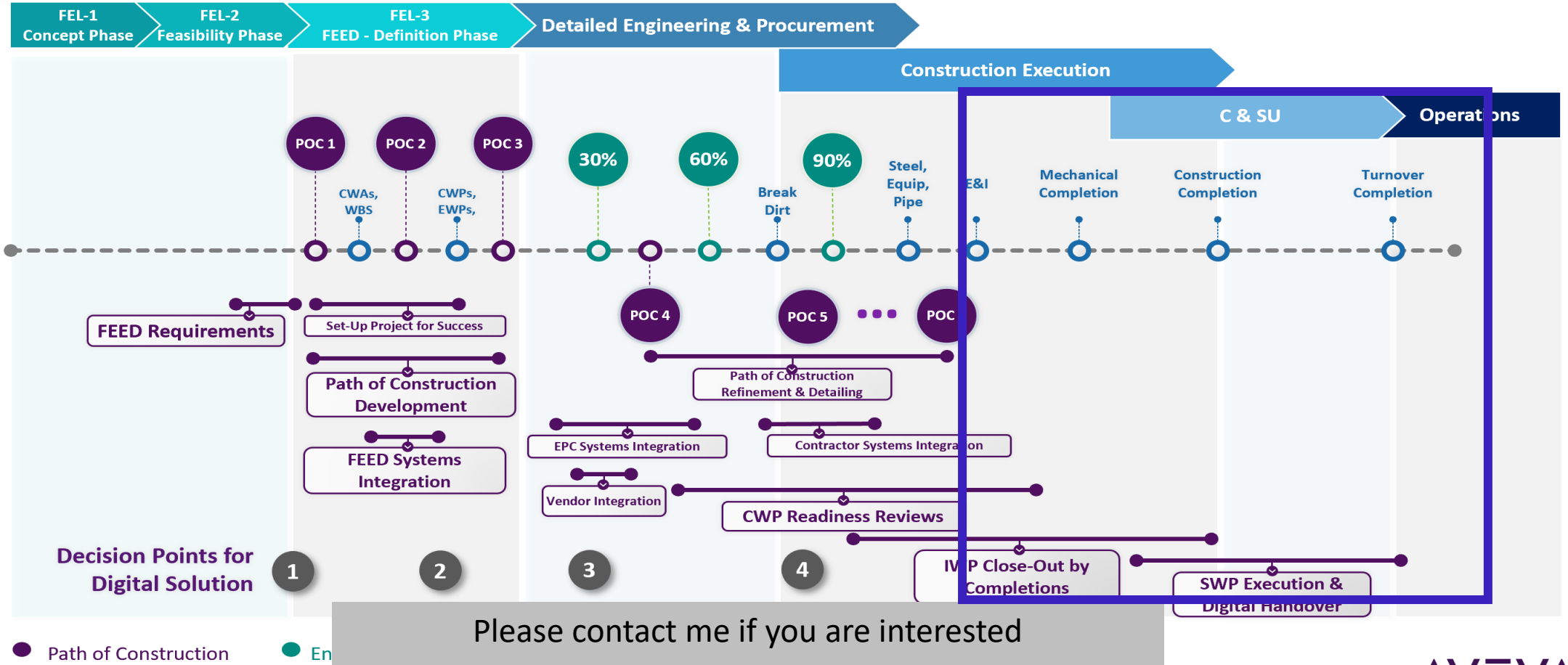
Please contact me if you are interested

Scott.Robertson@AVEVA.com

Workpacks Commissioning Australian Launch

Perth
Tuesday 17
June

Project Timeline & AWP Execution



Please contact me if you are interested

Scott.Robertson@AVEVA.com

AVEVA

AVEVA Engineering User Groups

Unified Engineering
Unified Project Execution
Engineering Information Management
Engineering Information in Operations
AWP

We have rooms offered by

- Worley
- Rio Tinto
- Deloitte

We NEED

- Your involvement
- Your Stories

Please contact me if you are interested in participating

Scott.Robertson@AVEVA.com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MILAN 2026
May 18-21, 2026 | Allianz MiCo

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AVEVA DAY

BRISBANE

The Industrial Intelligence Event 2025

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ABOUT AVEVA

AVEVA is a world leader in industrial software, providing engineering and operational solutions across multiple industries, including oil and gas, chemical, pharmaceutical, power and utilities, marine, renewables, and food and beverage. Our agnostic and open architecture helps organizations design, build, operate, maintain and optimize the complete lifecycle of complex industrial assets, from production plants and offshore platforms to manufactured consumer goods.

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. The company is headquartered in Cambridge, UK.

Learn more at www.aveva.com

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