AVEVAWORLD

PARIS

AVEVA WORLD
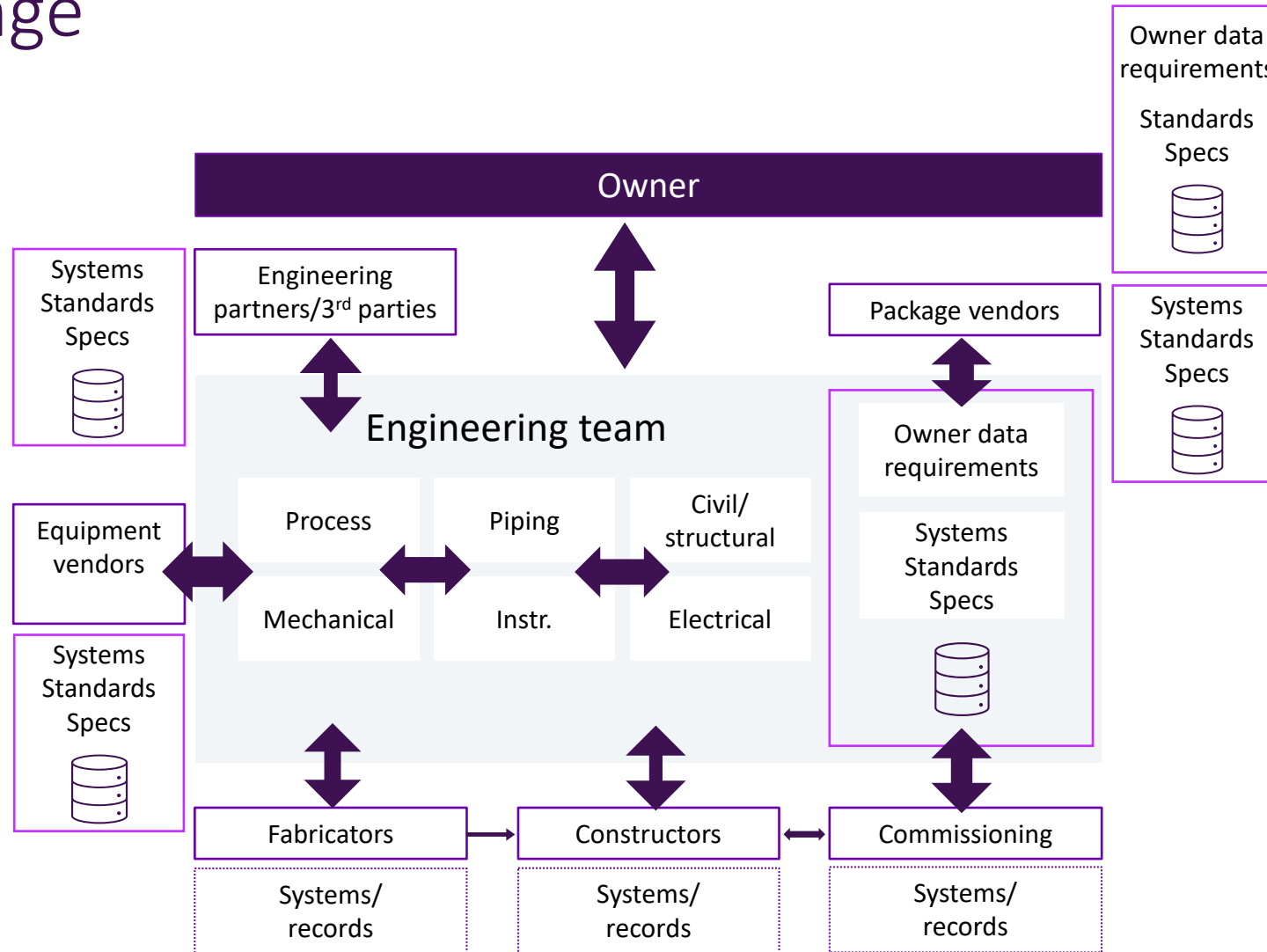## PARIS

OCTOBER 2024

Unified Engineering 3.0

The Green Hydrogen Story

Brian Hughes & Marcel Proesch
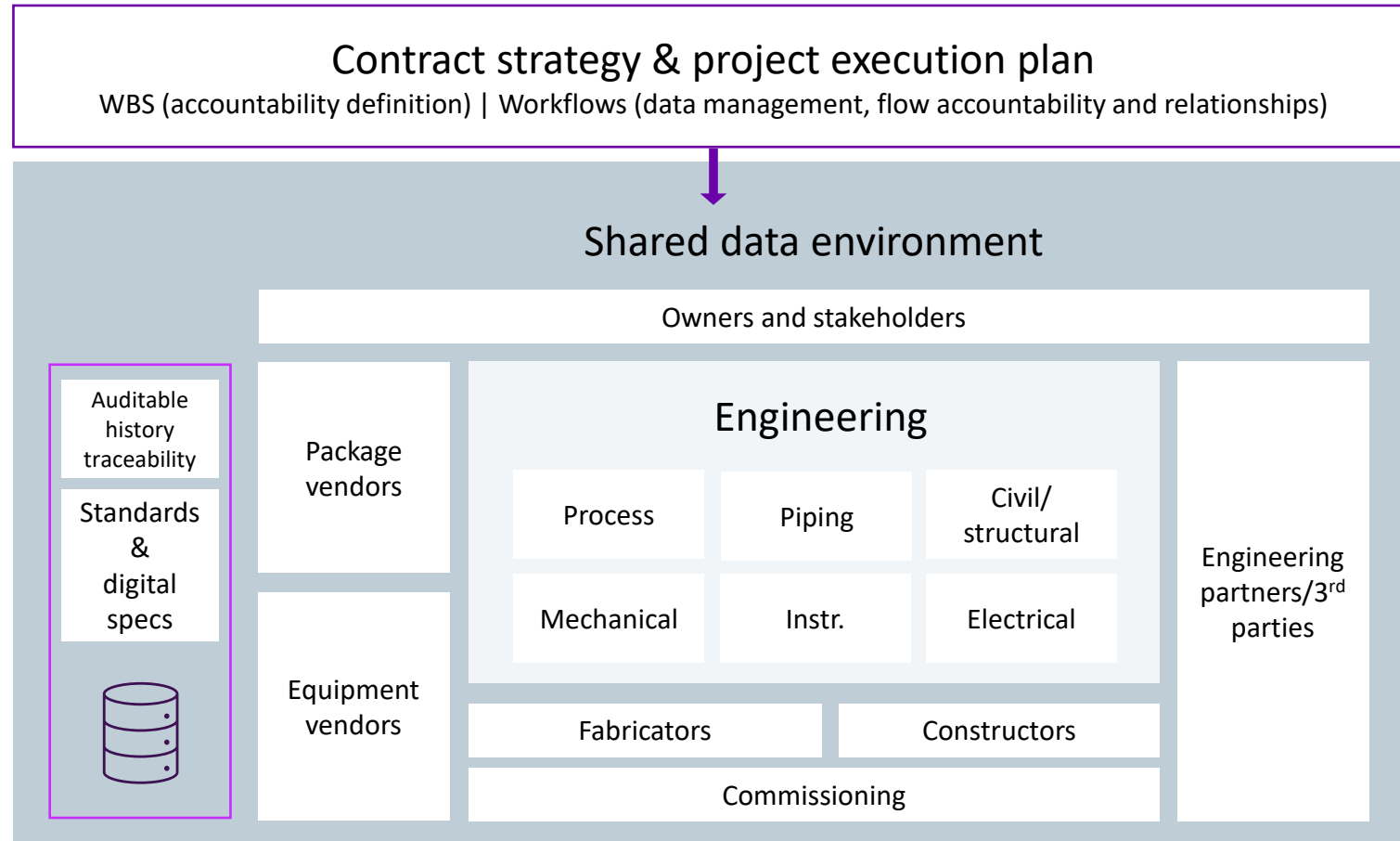
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The Challenge

Engineering 3.0

Disconnected systems, teams and project data

The Challenge

Contract strategy & project execution plan
WBS (accountability definition) | Workflows (data management, flow accountability and relationships)

Shared data environment

Owners and stakeholders

Auditable history traceability

Standards & digital specs

Package vendors

Equipment vendors

Engineering

| Process | Piping | Civil/ structural |
| Mechanical | Instr. | Electrical |

Fabricators

Constructors

Commissioning

Engineering partners/3rd parties

Engineering 4.0

Connected systems, teams and project data

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The Challenge

Collaboration challenges for current solutions

Multiple technologies drive incremental cost and have performance limitations

Significant time and cost for both setup and maintenance require experienced resources

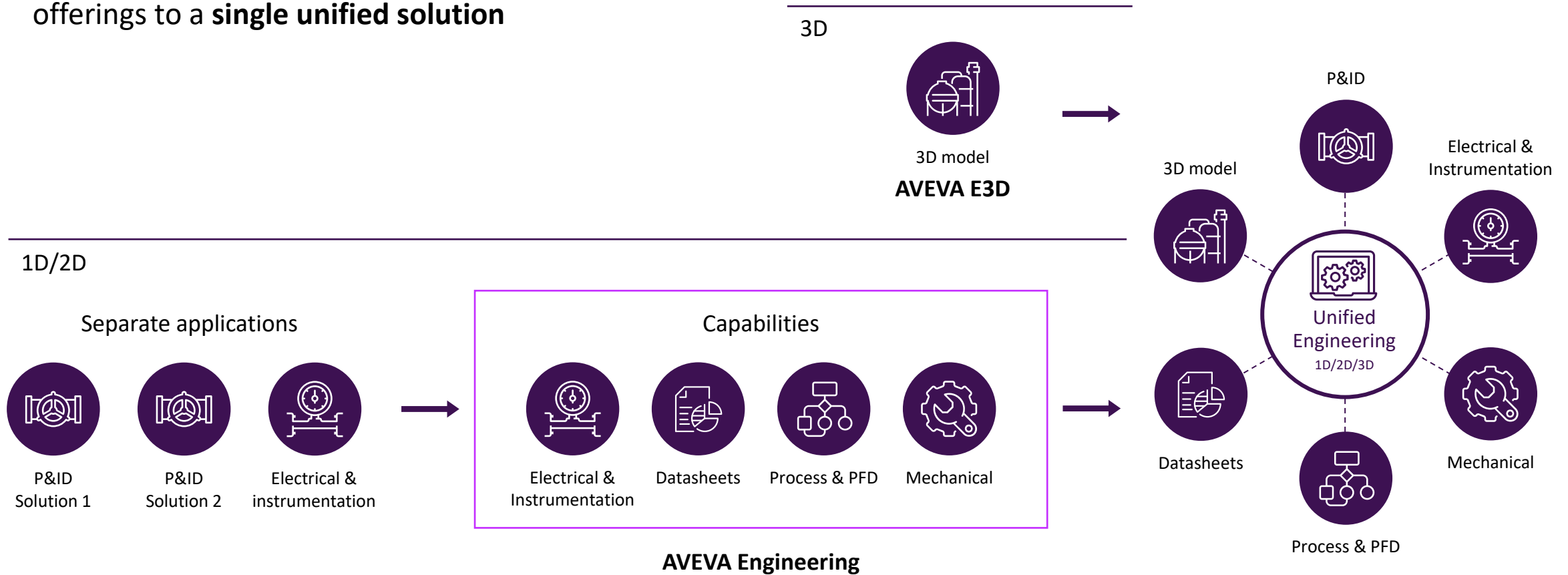IT security and data access controls demands limit extent of data sharing and collaboration

Brittle configurations that cannot be adjusted as projects, facilities, and businesses mature
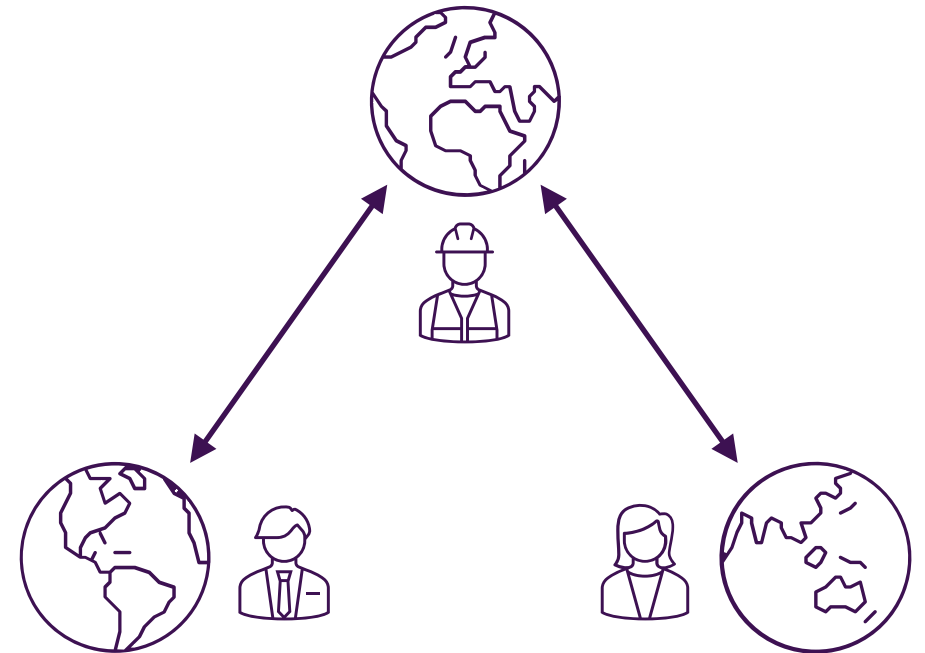
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AVEVA™ Unified Engineering

Evolution to a single unified solution

Evolving from separate commercial and technical offerings to a **single unified solution**

3D

3D model
AVEVA E3D

1D/2D

Separate applications

P&ID
Solution 1

P&ID
Solution 2

Electrical &
instrumentation

Capabilities

Electrical &
Instrumentation

Datasheets

Process & PFD

Mechanical

AVEVA Engineering

P&ID

Electrical &
Instrumentation

3D model

Unified
Engineering
1D/2D/3D

Datasheets

Mechanical

Process & PFD

AVEVA

AVEVA™ Unified Engineering 3.0

Process engineer

SIMULATE
set parameters for high wind case

RELEASE TO ENGINEERING
design cases

Iteration process

Mechanical engineer

IMPORT
design cases update functional item & PFD

UPDATE
functional item datasheet

CREATE
standby pump and update PID

Seamless solution integration

Electrical engineer

UPDATE
KOL, cable sizing, cabling

UPDATE
cable length from 3D

Seamless solution integration

Design engineer

UPDATE
major equipment, piping, cabling

Data in context

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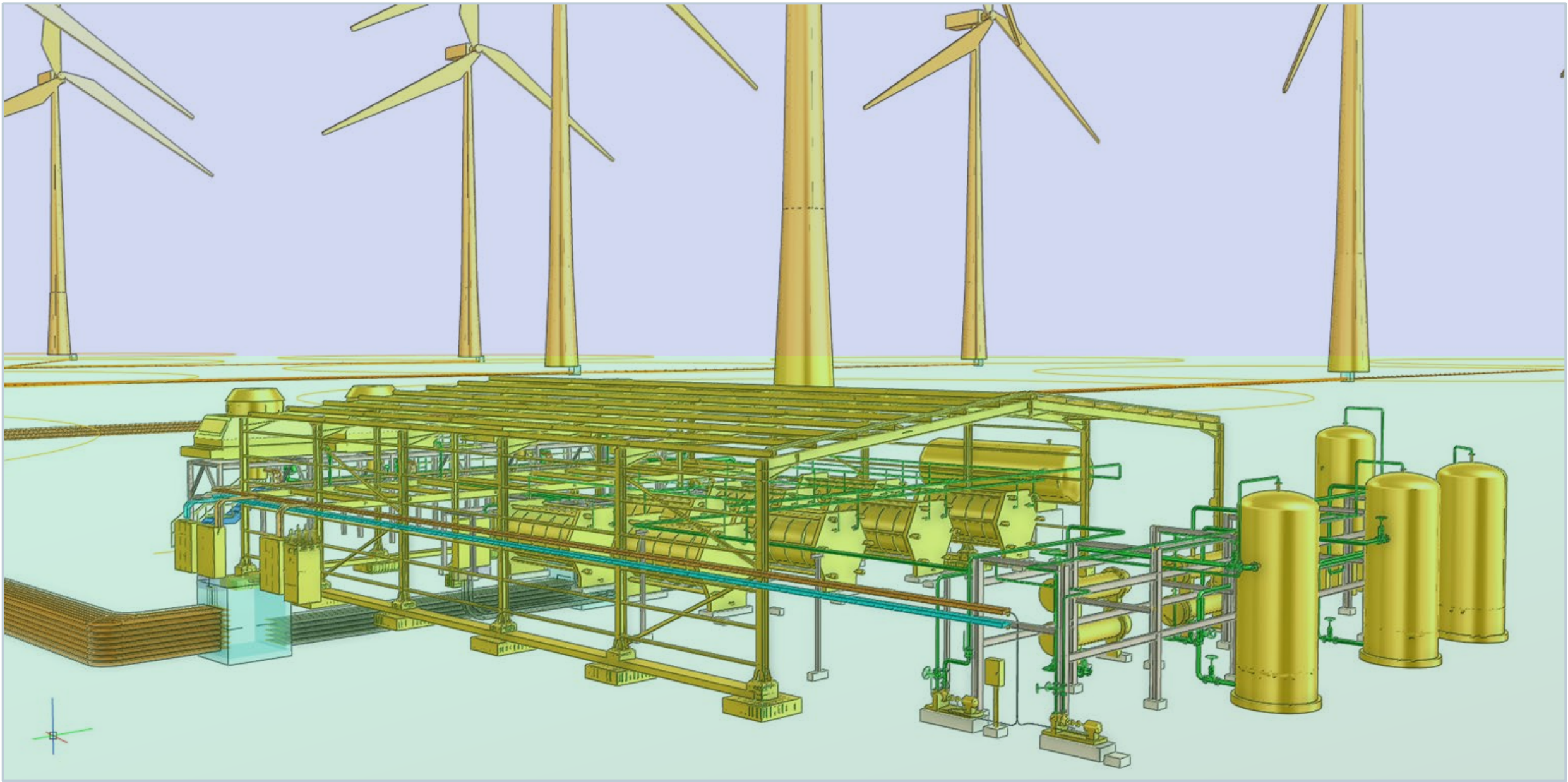
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AVEVA™ Process Simulation

Simulate high wind case and publish to engineering
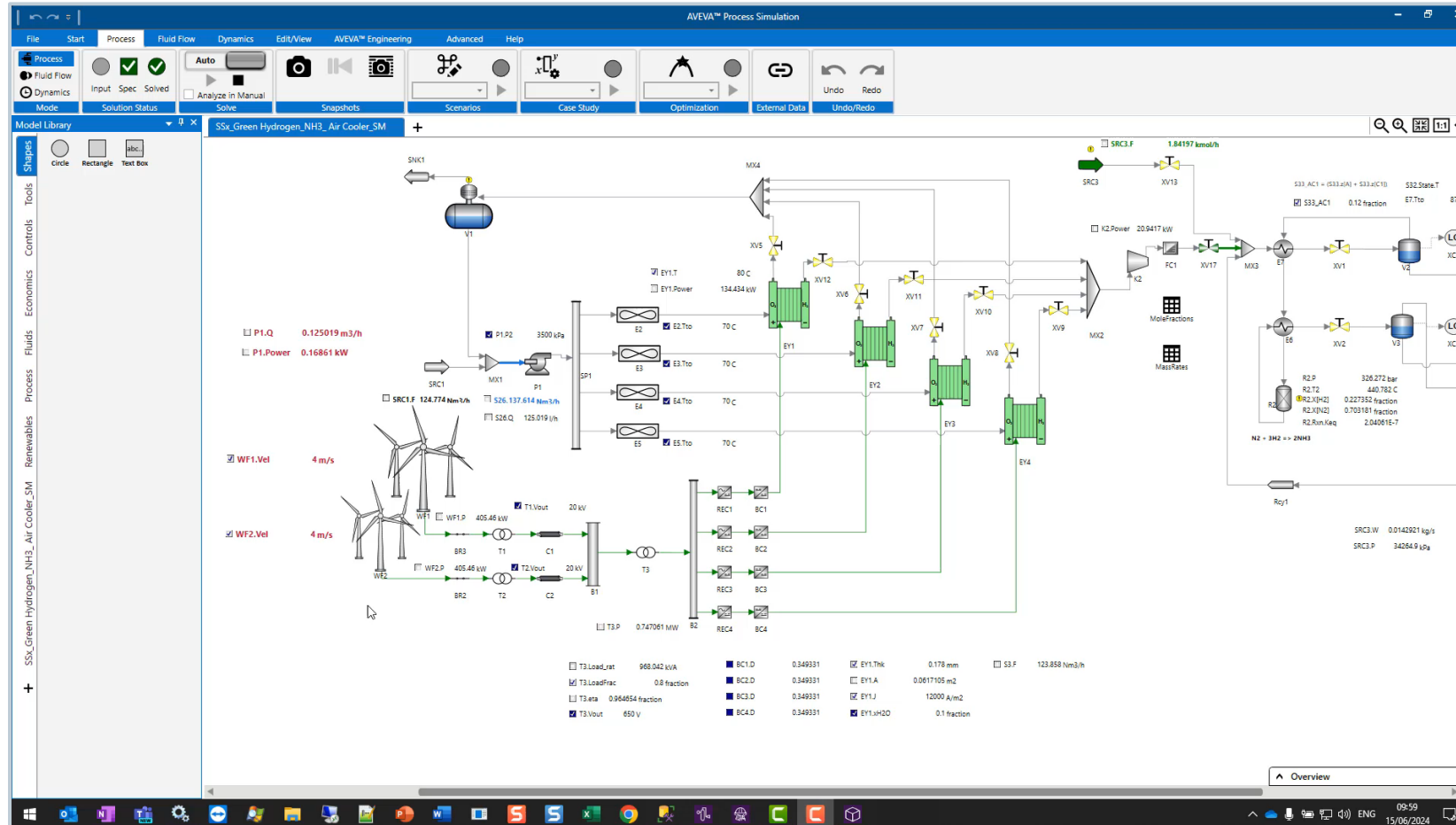
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Import simulation case and update functional item on PFD
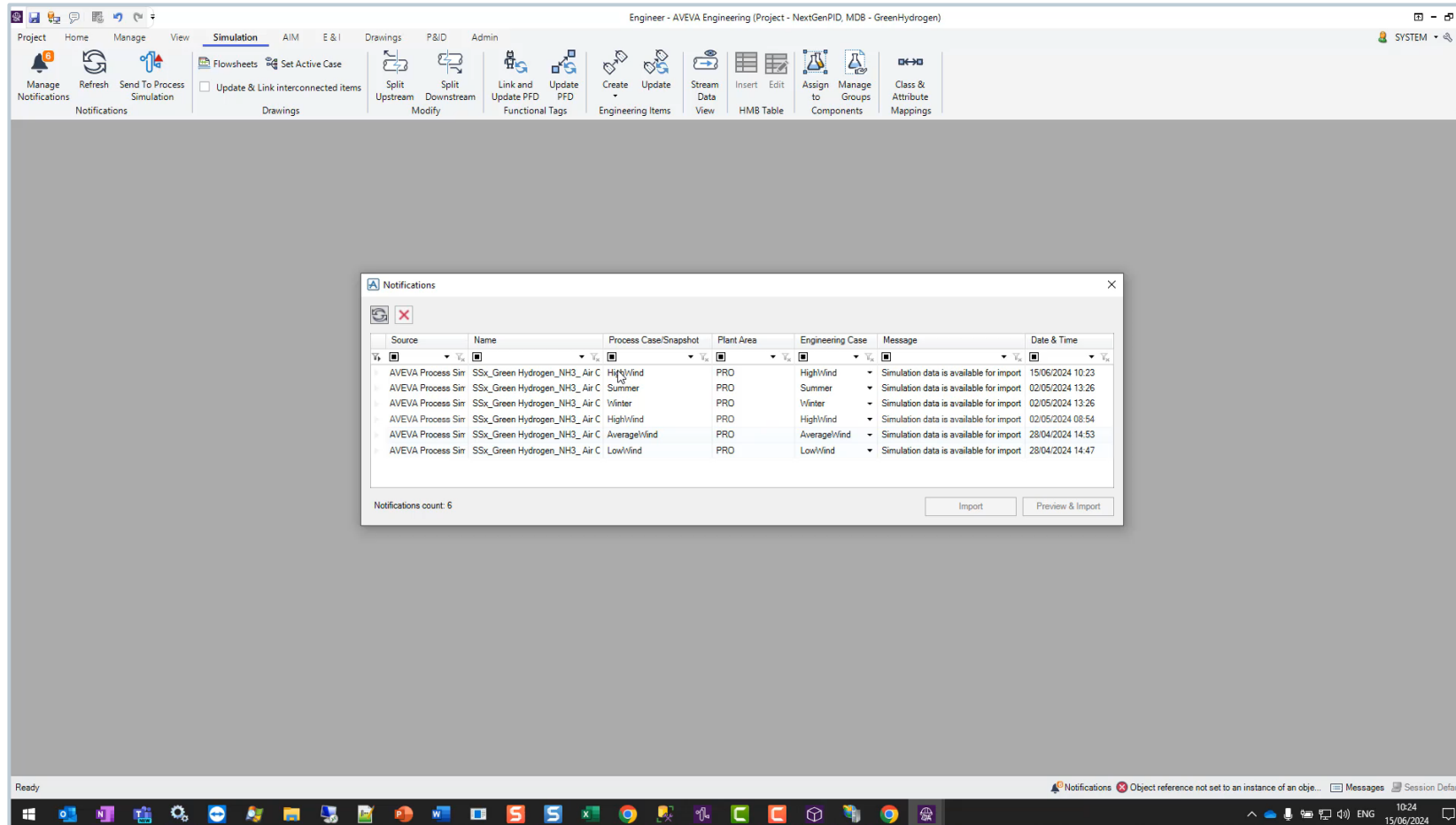
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Define governing case
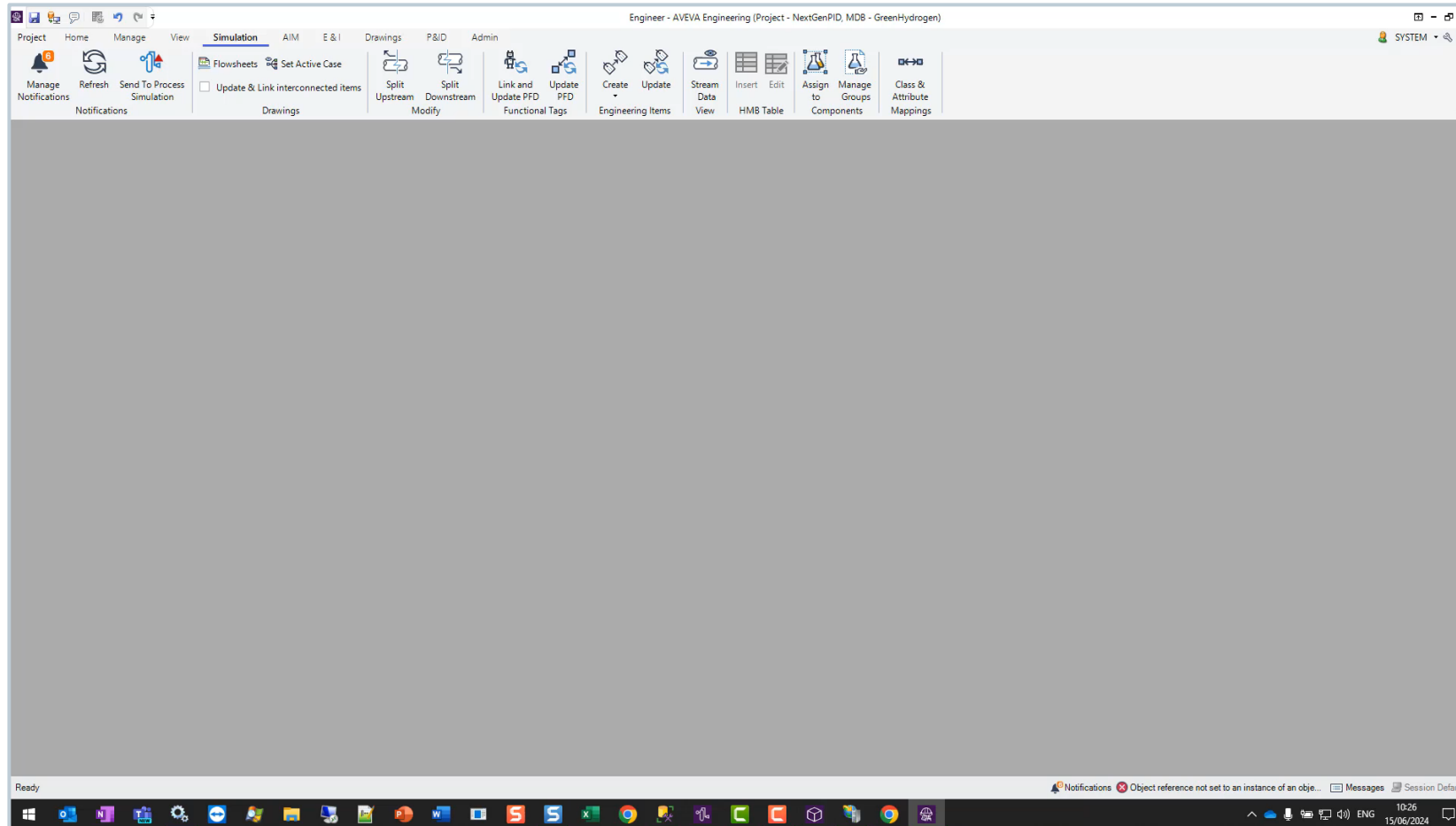
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Update engineering items on P&ID

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Duplicate feedwater pump

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Update P&ID

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Add labels to the equipment bar on P&ID

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Update KOL drawing
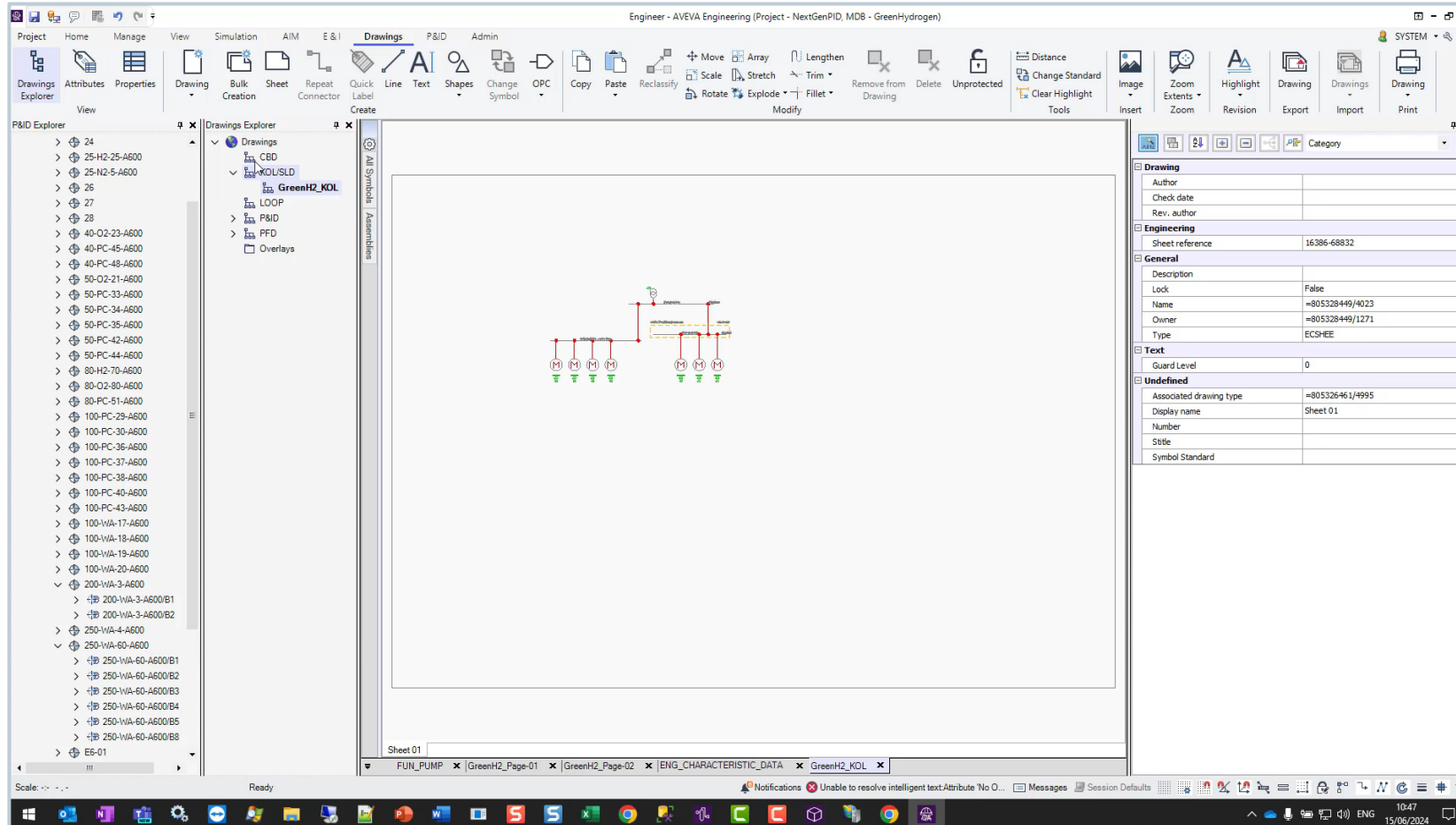
AVEVA™ Engineering

Create cable sizing and power cable

AVEVA™ E3D Design

Copy existing feedwater pump and modify connected piping
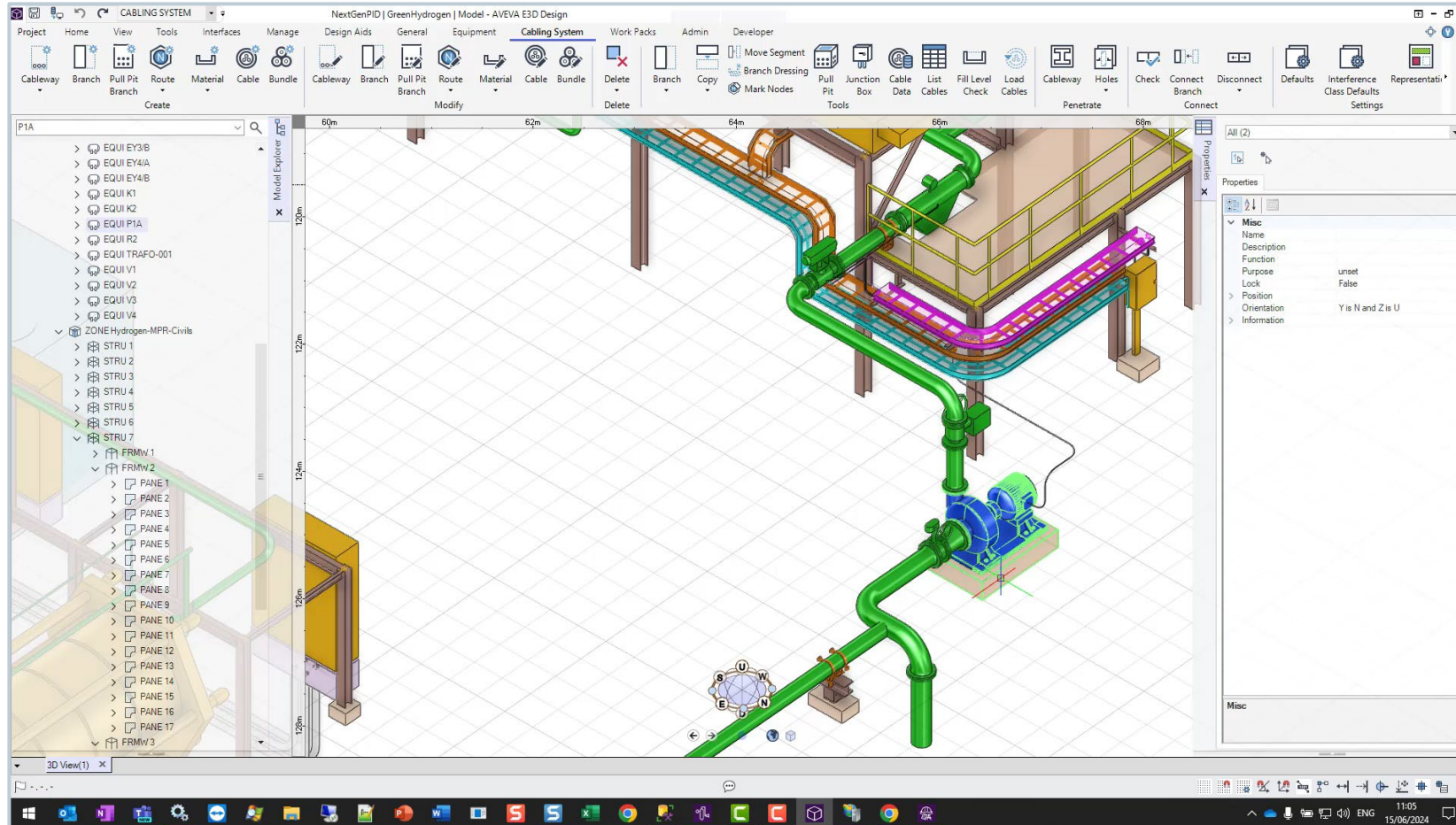
AVEVA™ E3D Design

Import cable by compare and update and route cable
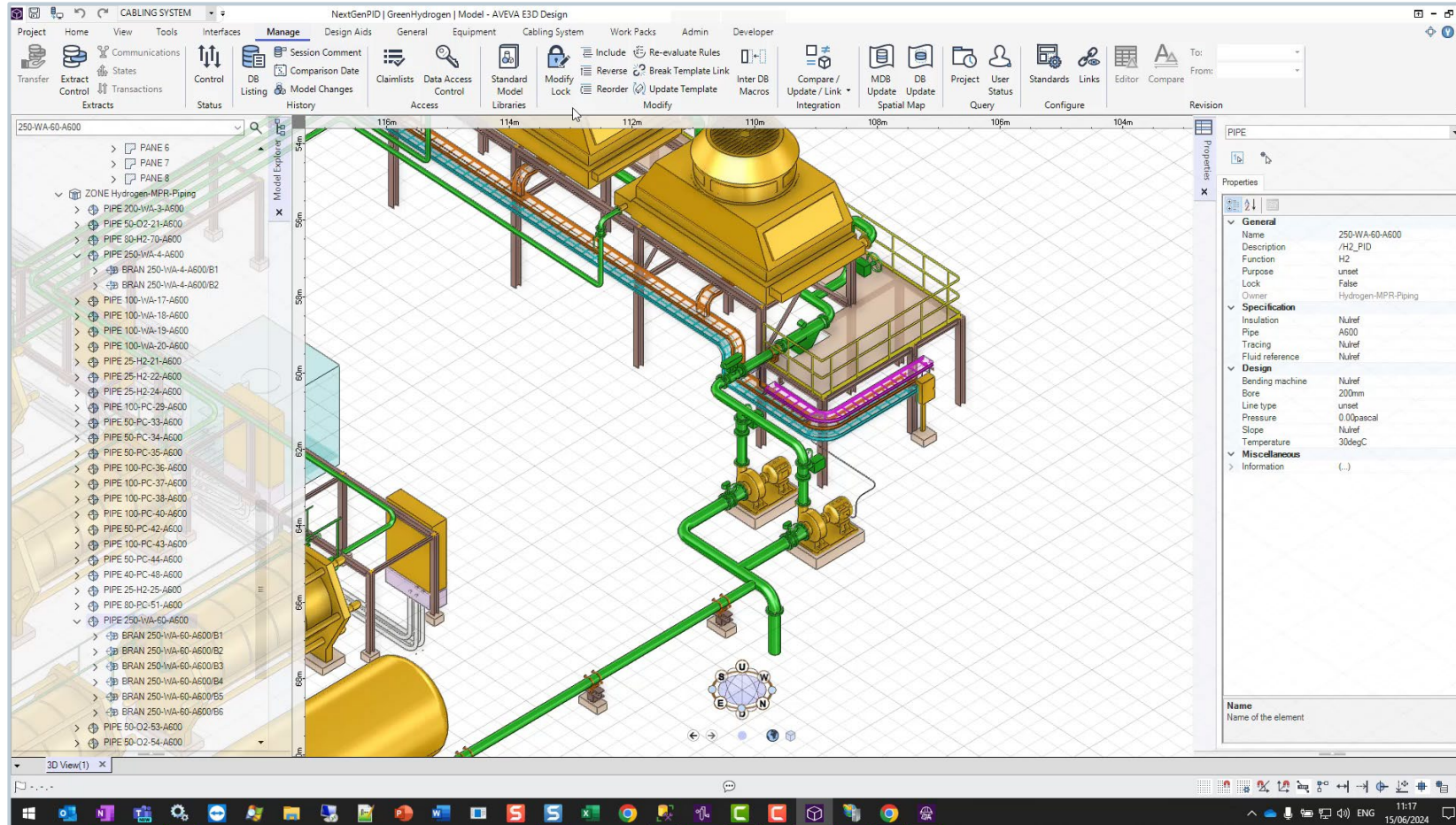
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Import length by compare and update from AVEVA E3D Design

AVEVA™ Engineering

Review the flow control loop

AVEVA™ Unified Engineering 3.0

Process engineer

SIMULATE
set parameters for high wind case

→

RELEASE TO ENGINEERING
design cases

Iteration process

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Seamless solution integration

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Data in context

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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.

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