# AVEVAWORLD

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# **AVEVAWORLD**

APRIL 9, 2025

## AVEVA<sup>™</sup> Unified Engineering Migration Strategy

### Seamlessly migrating your legacy E&I and P&ID data to AVEVA Unified Engineering

Eric CARNET, Engineering & Schematics Portfolio Manager, AVEVA

Mariusz MAJEWSKI, Engineering & Schematics Portfolio Manager, AVEVA



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#### AVEVA WORLD 2025

# Agenda

Seamlessly migrating your legacy P&ID data to AVEVA Unified Engineering

Moscone West Center San Francisco

### Standardisation is the Key for success

### Migration process overview

Migration process step by step Migration process tests & results Migration process export facilities Migration process import facilities Migration process demo

Migration strategy additional possibility – AI/ML Legacy P&ID recognition

AVEVA

### Eric CARNET

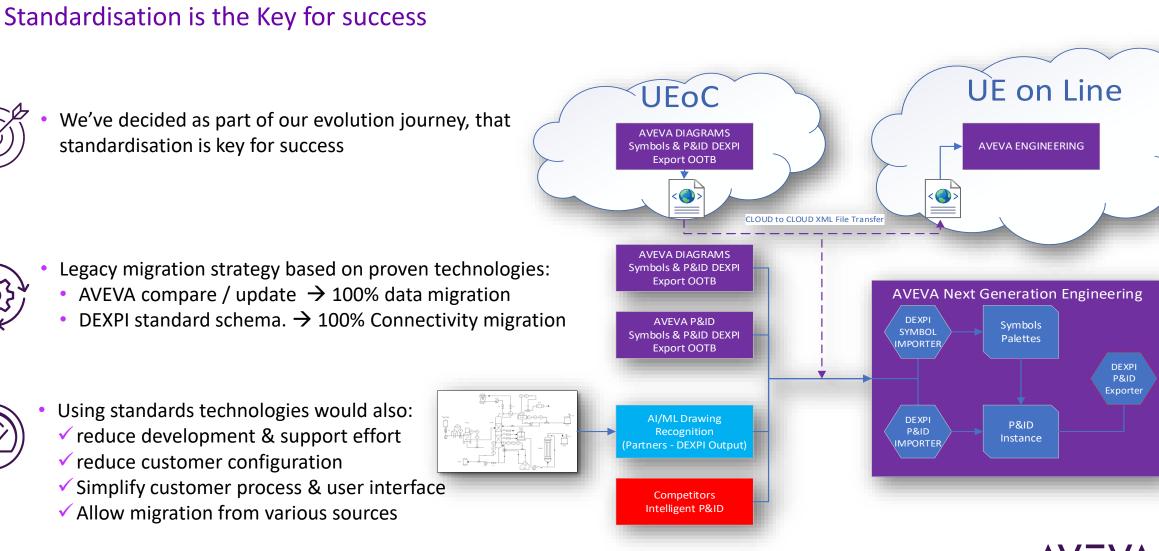
Engineering & Schematics Portfolio Manager

#### AVEVA

eric.carnet@aveva.com



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### AVEVA Unified Engineering: Legacy P&IDs migration strategy

#### Migration process overview



- **Export from legacy (or 3<sup>rd</sup> Parties)** 
  - AVEVA P&ID and AVEVA diagrams have symbols and instance export facilities supporting multiple DEXPI schema (3.3.3 & 4.0.1)
  - AI/ML P&ID recognition and competition may support different DEXPI version so please refer to their products documentation.

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### Migration process overview

	Export
Configu	iration
	•

යි Home	
X Naming rules	Naming rules
Rule sets	9. Search
Scopes	Search
Seq. reservations	Name Name
	1part

#### Configuration

- We have implemented facilities into AVEVA Engineering configuration module to allow classes and attributes mapping using mapping form to facilitate data migration.
- As symbols are assigned to classes in conceptual model, mapping DEXPI classes with conceptual classes will map symbols.
- Some improvement are ongoing development as you would see in the next slides.

#### Tag format

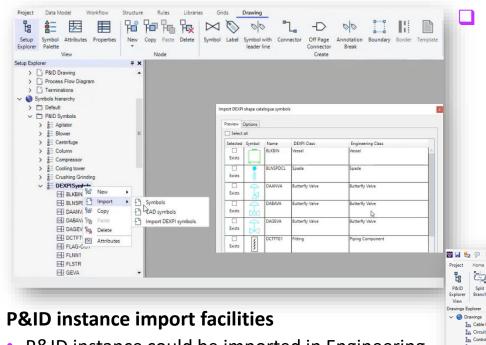
 Tag format and attribute used on the tag need to be defined and mapped into NAM and Project to allow ENGITEM creation during P&ID Instance import step.

			Class mapping			
	DEXPI Schema		DEXPI Schema URI		Engineering Tag	
٣		$\star \ \overline{\tau}_X$		$\star  \mathbb{T}_X$		• T <sub>2</sub>
	PipingNetworkSystem		PipingNetworkSystem		Piping Network System	
	ELECTRIC		ELECTRIC		Signal Line	
	PipingNetworkSegment		PipingNetworkSegment		Piping Network Segment	
	CenterLine		CenterLine		Piping Connection	
	Vessel		Vessel		Vessel	
	Pump		Pump		Pump	
	FlowController		FlowController		Flow Controller	
	FlowIndicator		FlowIndicator		Indicating Instrument	
	FlowTransmitter		FlowTransmitter		Flow Transmitter	
	LevelAlarmControlElement		LevelAlarmControlElement		Level Indicator	
	PressureIndicator		PressureIndicator		Pressure Element	
	GlobeValve		GlobeValve		Globe Valve	
	Butterfly Valve		Butterfly Valve		Butterfly Valve	
	Spade		Spade		Spade	
	Nozzle		Nozzle		Nozzle	
	MeasuringRelay		MeasuringRelay		Measuring Relay	
	Fitting		Fitting		Piping Component	



# Export Configuration Import

Migration process overview

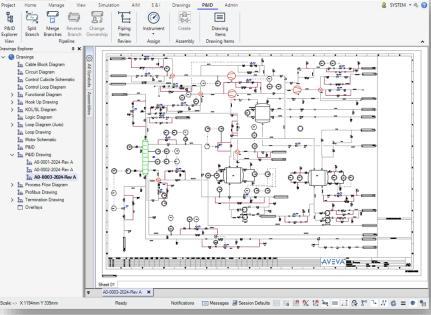


- P&ID instance could be imported in Engineering module
- We support DEXPI Schema 3.3.3, 4.0.1 and 4.1.1.
- Import facilities could manage, single or bulk import and import for creation and/or upgrade (import to replace existing drawing)

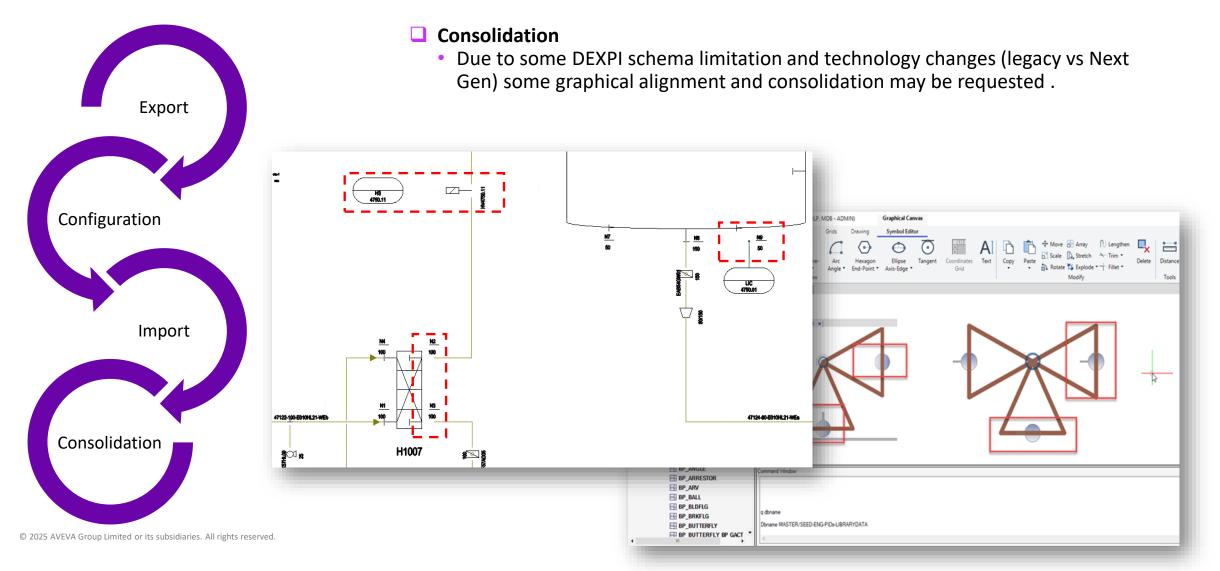
#### Symbols import facilities

 UE P&ID discipline includes OOTB Import facilities for symbols import in configuration module

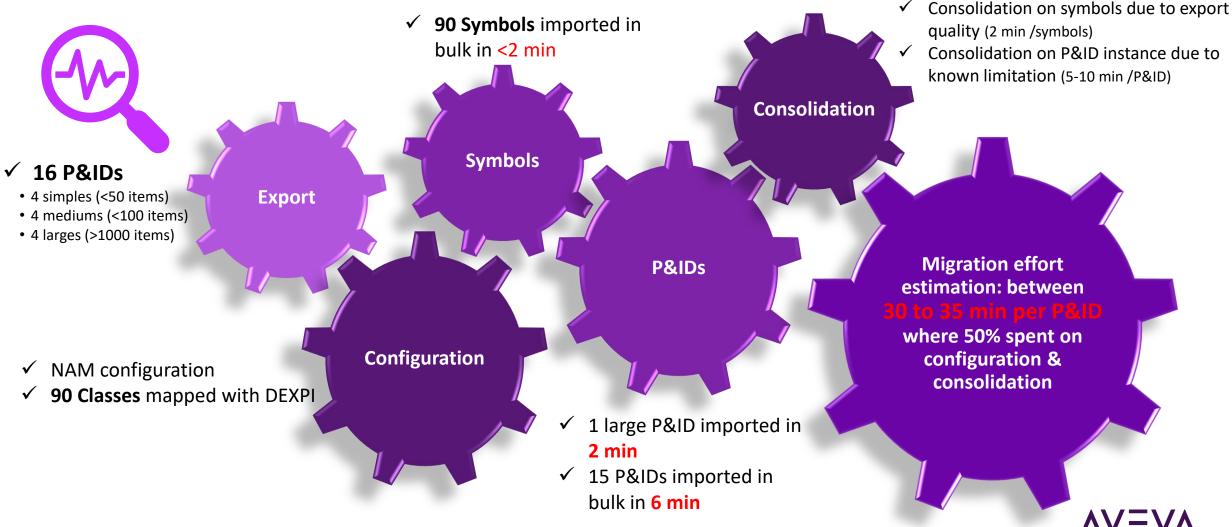
ring (Project - ATP, MDB - UDE-ENG



#### Migration process overview



#### Migration process tests & results



### Migration Process Export facilities



EXPOR	T FACILITIES	AVEVA DIAGRAMS	AVEVA P&ID	COMMENTS
	3.3.3	<b>Ø</b>	<b>Ø</b>	
DEXPI SCHEMA	4.0.1	<ul> <li>Image: A start of the start of</li></ul>		
	4.1.1	8	8	
	Stencils			Only if using DEXPI
Cumhala	Graphics			CAD & DEXPI
Symbols	Insertion Pt			Only if using DEXPI
	Connection Pt			Only if using DEXPI
P&ID	Instance	<b>Ø</b>		CAD = Dumb overlay
	Bulk			Only if using DEXPI
	Revision	8	8	
Configuration	Project settings	8	8	
	User list	8	8	
	Naming Rules	8	8	
	PBS	8	8	

### Migration process import facilities



Import FACILITIES		UE3.0	UE3.1	COMMENTS
	3.3.3	Ø	0	
DEXPI Schema	4.0.1	<b>v</b>		
	4.1.1			Not officially supported
	Stencils			Only if using DEXPI
Cumpholo	Graphics			CAD & DEXPI
Symbols	Insertion Pt			Only if using DEXPI
	Connection Pt			Only if using DEXPI
P&ID	Instance	<b>v</b>		CAD = Dumb overlay
	Bulk	<b>v</b>		Only if using DEXPI
	Revision	8	8	
Special object	Custom Line type	8	8	DEXPI Schema limitation
	Smart Shape	8	8	DEXPI Schema limitation
	Area Shape	8	8	DEXPI Schema limitation
	OPC			only if using 4.1.1
	secondary Shape			Request Specific mapping

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#### Migration process demo



AVEVA

### Migration strategy additional possibility – AI/ML Legacy P&ID recognition

- With all the tools available and performant on market, we've decided not to reinvent the wheel and to partnership with AI/ML service companies.
- P&ID recognition using AI/ML are more and more performant and can rapidly convert dumb CAD drawings and to follow our strategy to success we've requested DEXPI file as output of AI/ML Tools



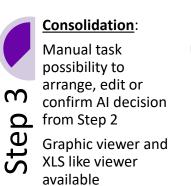
**Tool** configuration: Prep AI/ML learning Customer symbols libraries

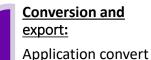
P&ID recognition: AI/ML scan all drawing and identify symbols, connectivity and text Average result 70-80% completion

Could have 90% on some very simple drawing like PFD

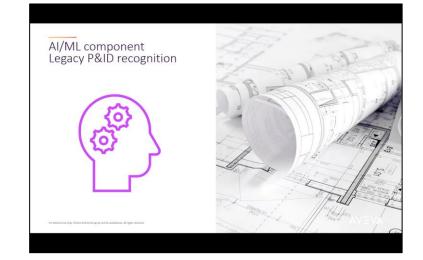
Input format supported:

PDF, JPEG, DWG ...





all extracted data & graphics into a DEXPI file to be Ω Ð used by AVEVA Ť Next Generation S Engineering





#### AVEVA WORLD 2025

# Agenda

Seamlessly migrating your legacy E&I data to AVEVA Unified Engineering

Moscone West Center San Francisco

### AVEVA Electrical and AVEVA Instrumentation

End of Sales and End of Life announcement Do I need migration?

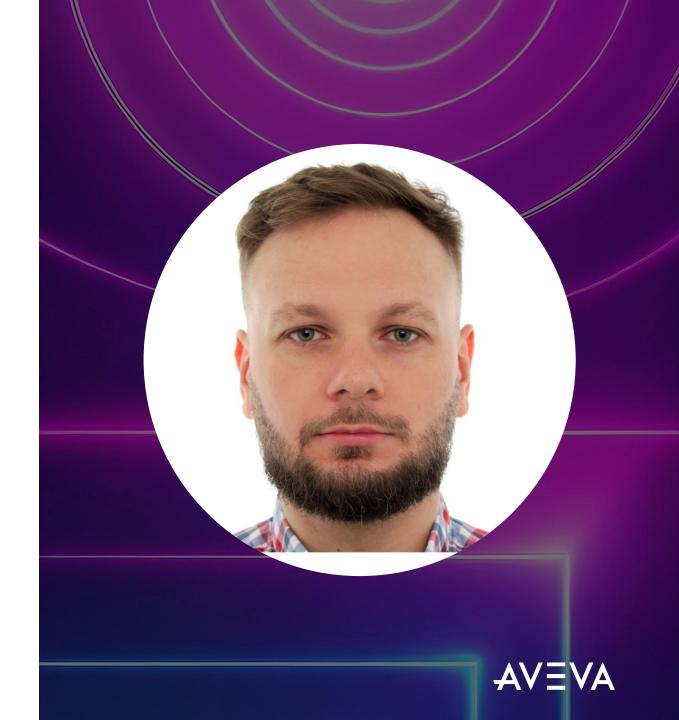
### Migration steps

### Mariusz Majewski

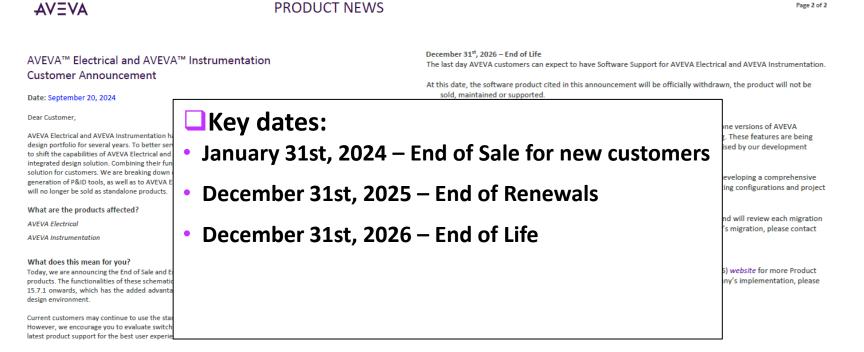
Engineering & Schematics Portfolio Manager

#### AVEVA

mariusz.majewski@aveva.com



#### End of Sales and End of Life announcement



Please contact your AVEVA sales representative to learn more about these updates to AVEVA Electrical and AVEVA Instrumentation.

#### Key dates

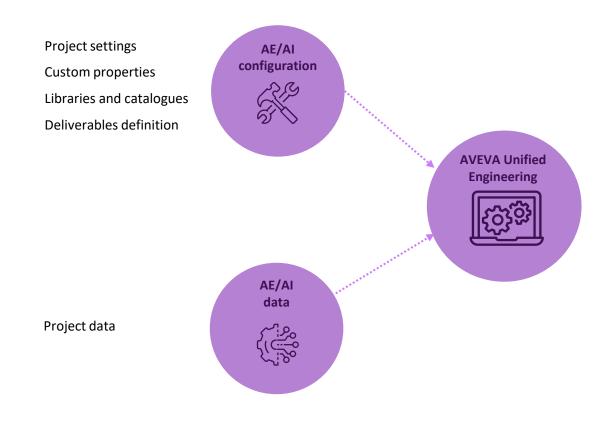
January 31<sup>47</sup>, 2024 - End of Sale for new customers AVEVA Electrical and AVEVA Instrumentation are now in a Limited Support Phase. No new features will be added to the products

December 31<sup>47</sup>, 2025 – End of Renewals This is the last day that a customer may renew their existing licence(s) however, any renewed contract's length cannot exceed the End-of-Life date (below).

aveva.com



### Do I need migration?



#### **Pre-migration process:**

- Assessment of current needs and objectives

#### **Migration process:**

- Migration of configuration
- Migration of data (if applicable)

#### Benefits of the migration:

- Enhanced data management: Flexible data model, controlled object revisioning
- Access to advanced features: Drawing engine, Datasheet reports, all new features from Unified Engineering
- Improved collaboration and holistic engineering
- Future-proofing

### Configuration migration process overview – connect projects

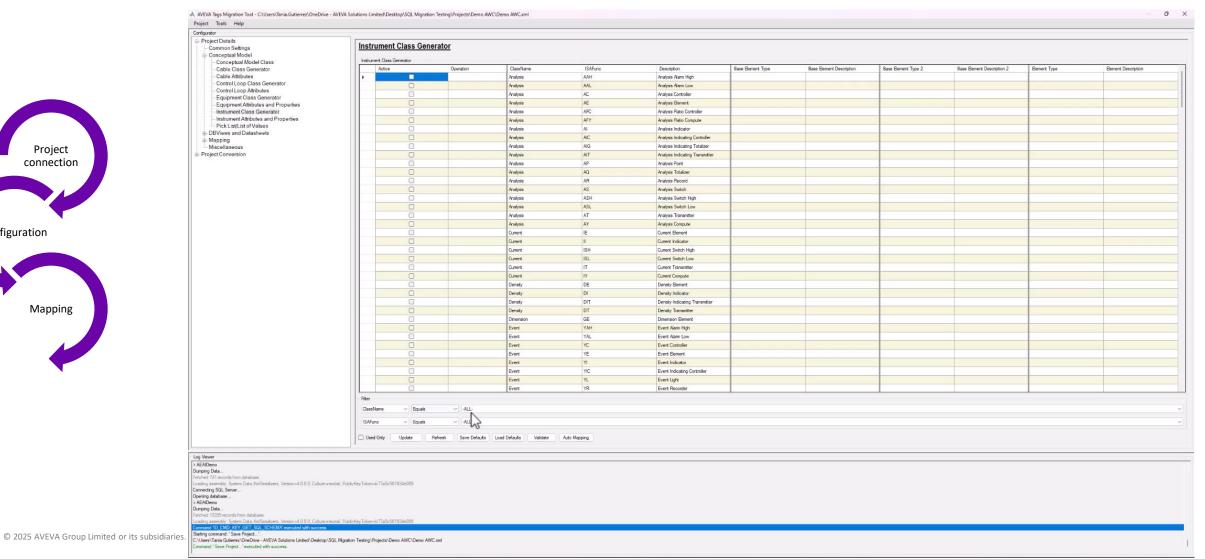
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	Project Tools Help		
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	Log Vewer		Start new project
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	Cancelled by user Starting command: 'New Project'.		project
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© 2025 AVEVA Group Limited or its subsidiaries.	Starting command: 'New Project'.		

### Configuration migration process overview – configure models

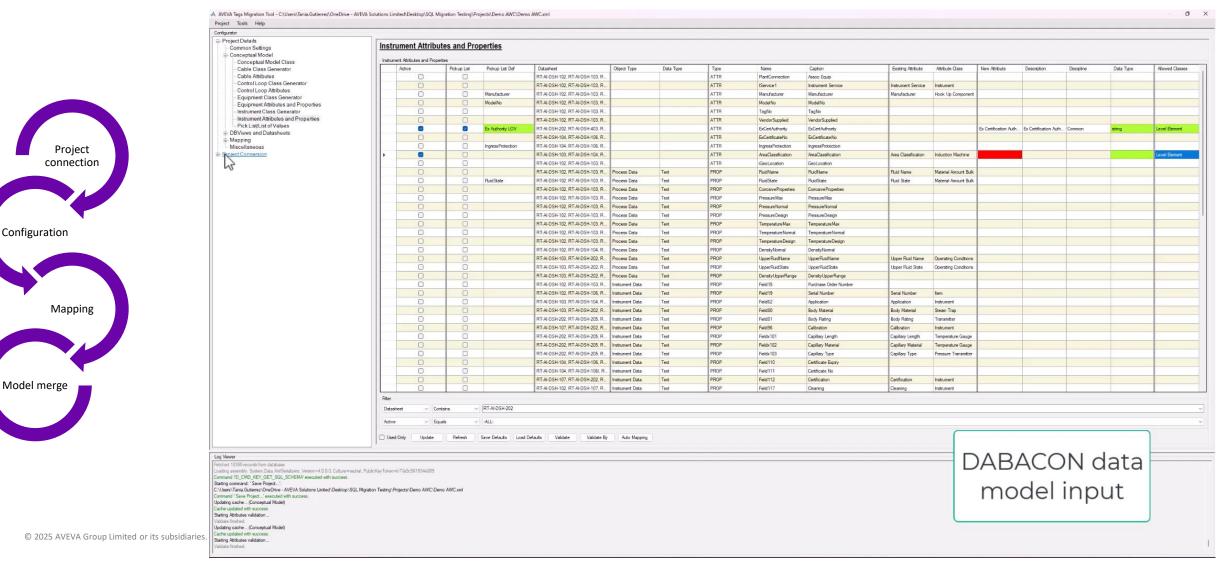
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Project connection Configuration	Conceptual Model ⇒ Project Details ⇒ Conceptual Model ⇒ DRVvex and Catasheuts ⇒ Mapping → Miscolineous ⊕ Project Conversion	Common Settings       Database Surve       Saver Name       Actions       Mater Poped       Preter:       MB:       ADMN       Ordados:       Database:       Database:       Database:       MB:       /ADMN       Ordados:	Eignowing Project Project User Base-ord: Cotions	
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#### Configuration migration process overview – data model mapping and translation

Configuration



#### Configuration migration process overview – model merge



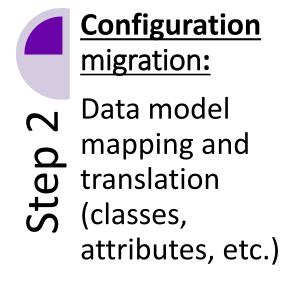
### **Migration Process facilities**

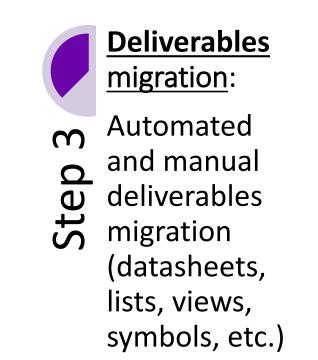
	Features	AVEVA Electrical and AVEVA Instrumentation	Comments
Classes		۲	
Data model	Attributes		Common data model for both disciplines in Unified
	Properties	0	Engineering
	List of values		
	Datasheet	۲	Manual adjustment may be needed
Dolivorablac	Lists	8	Technology change, DBView is an option
Deliverables	Symbols		CAD import with manual adjustment
	Drawing templates		CAD import for templates
	Project settings		
User li	User list	8	AD need to be setup
Configuration	Naming Rules	8	NAM naming has to be configured and mapped
	Libraries		Excel export, not all
	Objects and data instances		XML schema required
Project data	Drawing instances	0	Only Hookups and Installation details
	Revision	8	

### Migration strategy workflow summary

- E&I tools don't have common data exchange schema like DEXPI require building custom conversion schema
- Currently we connect only with AVEVA Electrical and AVEVA Instrumentation, in future we may connect to other data sources

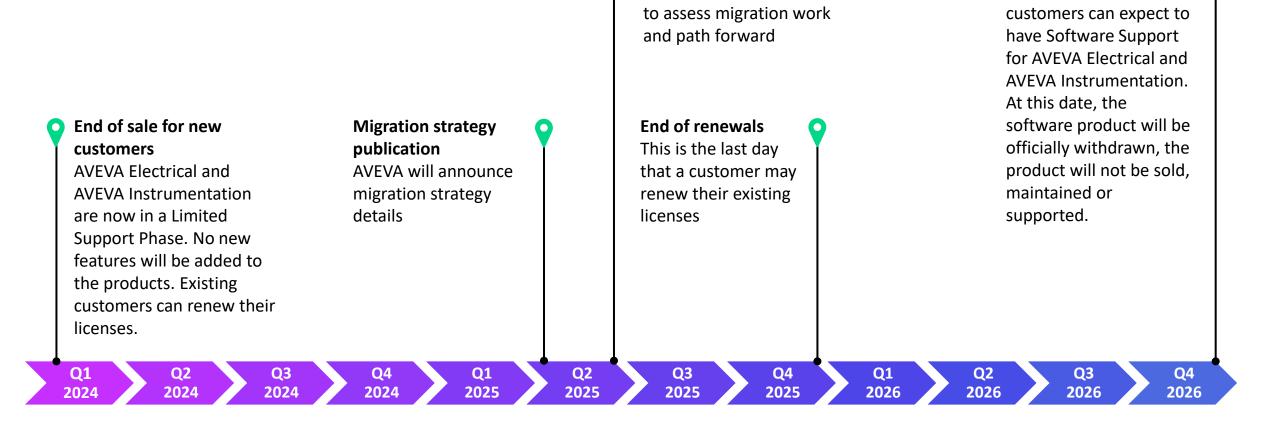








### Timeline



**Migration work starts** 

AVEVA will help customers

End of life

The last day AVEVA

### Recommended sessions

Saipem : From EPC DIGITAL PLATFORM to AI for Engineering Wednesday, 9<sup>th</sup> April 25 @ 2:15 PM Room 2005/2007

#### Engineering and Capital Projects Improvements – Community session

Thursday, 10<sup>th</sup> of April 25 @ 10:00 PM Room 2009/2011



### Visit us!

Stop by these booths in the innovation zone for demos and additional information:

**Extend value through AVEVA Unified Engineering - Booth 56** Get a deep dive on AVEVA Unified Engineering and AVEVA Deliverables Management

**Engineer the plant of the future – Booth 47** 



### Questions?



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

### Please remember to...

Navigate to this session in the mobile app to complete the survey.

Visit us!

# Thank you!





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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 <u>www.aveva.com</u>

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