
AVEVAWORLD

PROCESS
AUTOMATION
SOLUTIONS

A deep dive into PI System Governance: the Standard Data Model

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AVEVA World 2025

EMPLOYEES

1,600

1.65 M
HOURS OPERATED/YEAR

70
OFFICES

19
COUNTRIES

3,340
EXECUTED PROJECTS/YEAR

PROCESS AUTOMATION SOLUTIONS

We engineer a sustainable future in
automation, digitalization and optimization

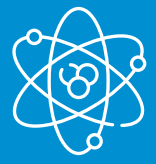
REVENUE

320 M
IN USD

290 M
IN EUR

KEY INDUSTRIES

CHEMICALS + ENERGY



PHARMA + BIOTECH

FOOD + BEVERAGE

SERVICE PORTFOLIO

- **Optimization**
- **Automation**
- **Digitalization**

yazzoom
creating value from data
a PA Company

Odyssey
Validation Compliance
a PA Company

ADVANCED APPLICATIONS
a PA Company

ITACA
ENGINEERING
a PA Company

IPCOS
a PA Company

BLSG
a PA Business Unit

inimco
a PA Company

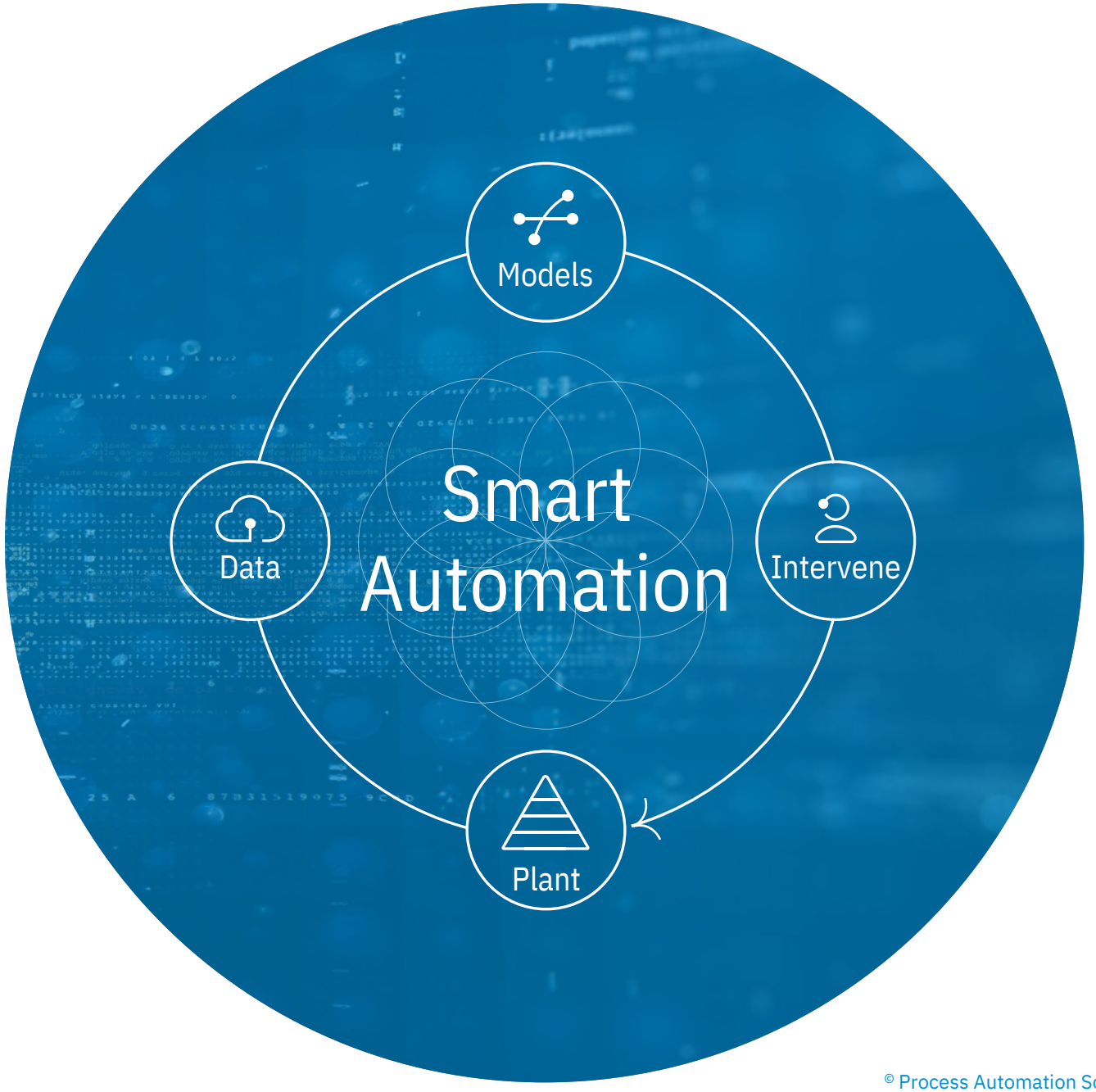
IAP
INDUSTRIAL
AUTOMATION
PARTNERS
a PA Company

HSG
a PA Company

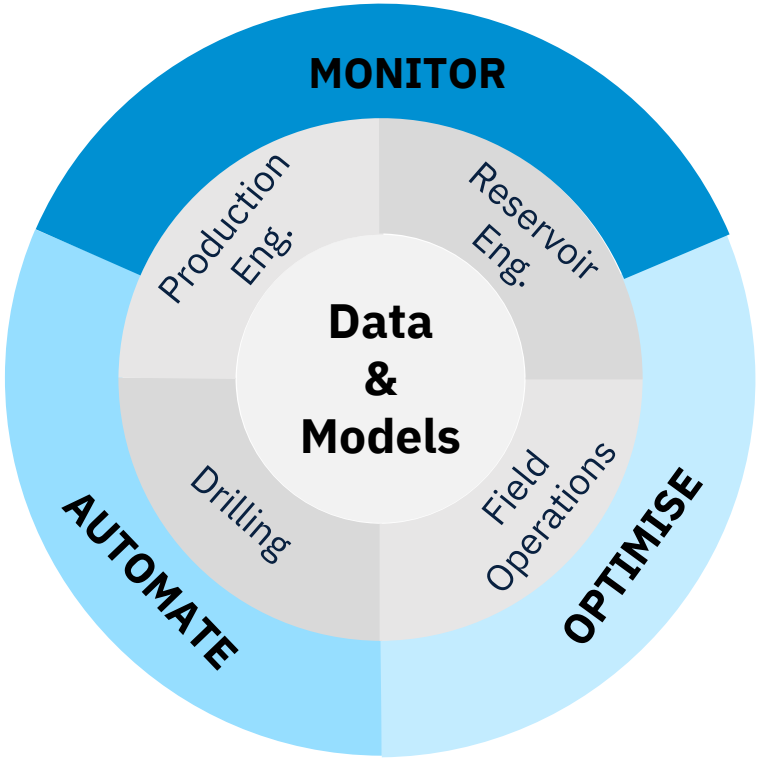
ARGUS
a PA Company

cim
a PA Company

Plant Optimization increasingly driven by Data



Surveillance & Optimization through process understanding

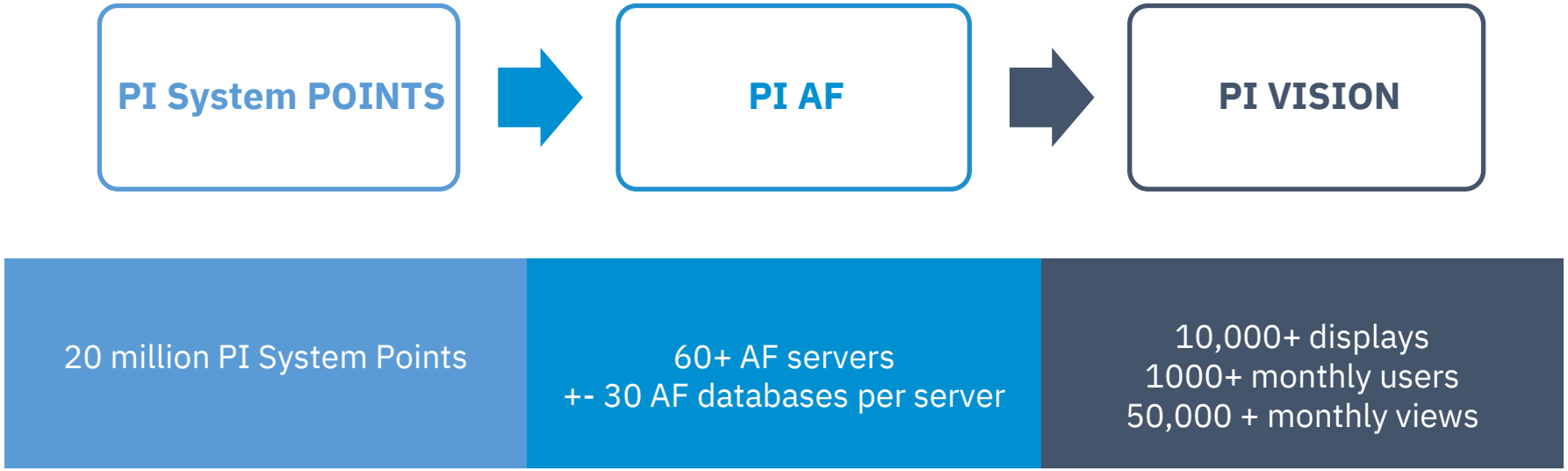


MONITOR	• Production and Injection Surveillance • Operating Envelopes Management • Exception-Based Surveillance • Flow Assurance • Asset Performance & Compliance • Emission Reporting
AUTOMATE	• Autonomous Field Operations • Allocation & Deferment • Production Tracking & Loss Management • Well Test Capturing
OPTIMISE	• Production optimization & Forecasting • Opportunity Management • Planning & Integration

Outline

- Company introduction
- **PI System Governance Framework**
- Standard Element Templates
- Standard Element Organization
- Typical Approach

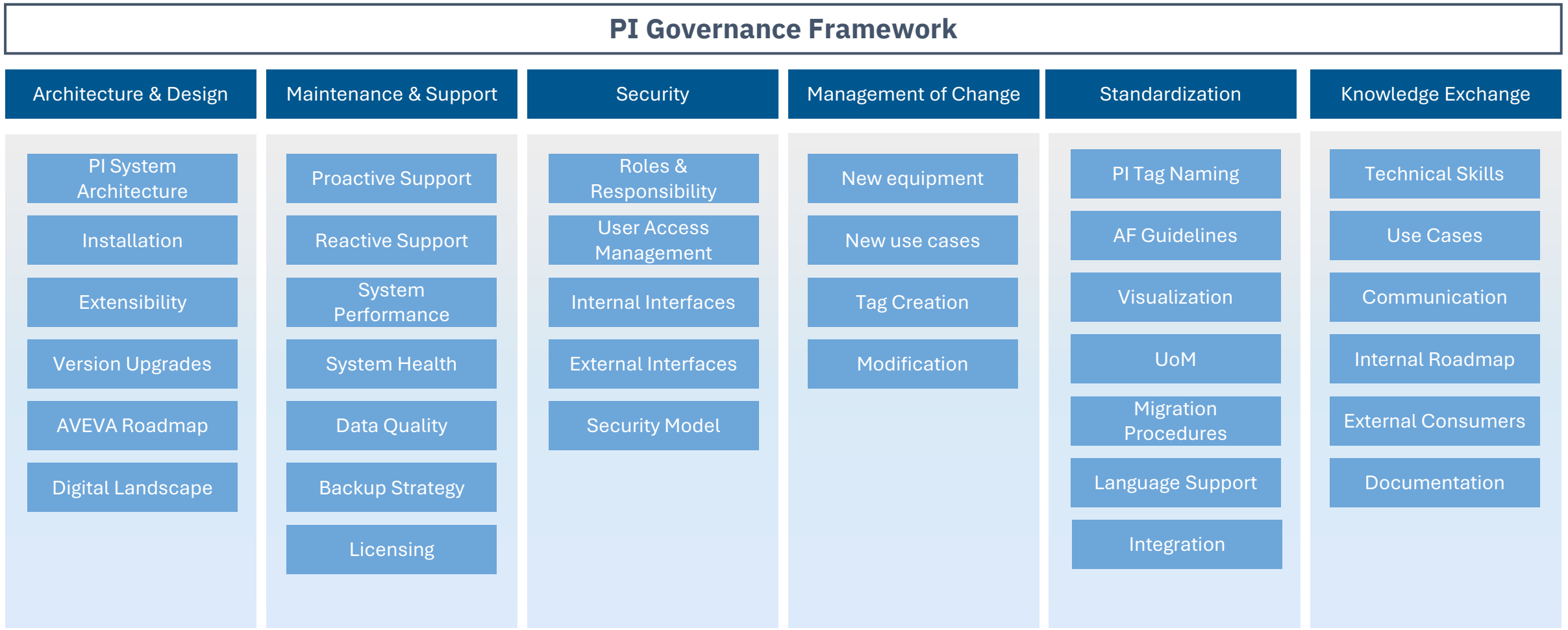
The situation - part 1



PI Governance Framework

- The PI Ecosphere is involved in all aspects of our operations, and provides data in real-time
- It is a living thing: it’s constantly growing and changing
- Business processes are crucial to manage the PI ecosphere to ensure the data is utilized to its full potential

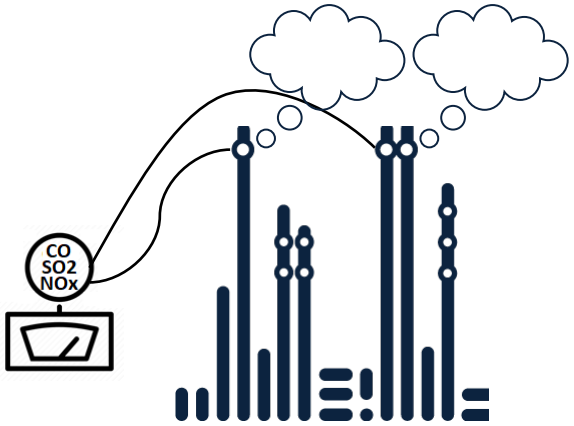
PI Governance Framework



The situation - part 2

Management: Build an application to generate the monthly emission report

1	Models Analysers	Manufacturer documents
2	Creates PI Calc. tags	No AF
3	Uses central Template	Standard attributes



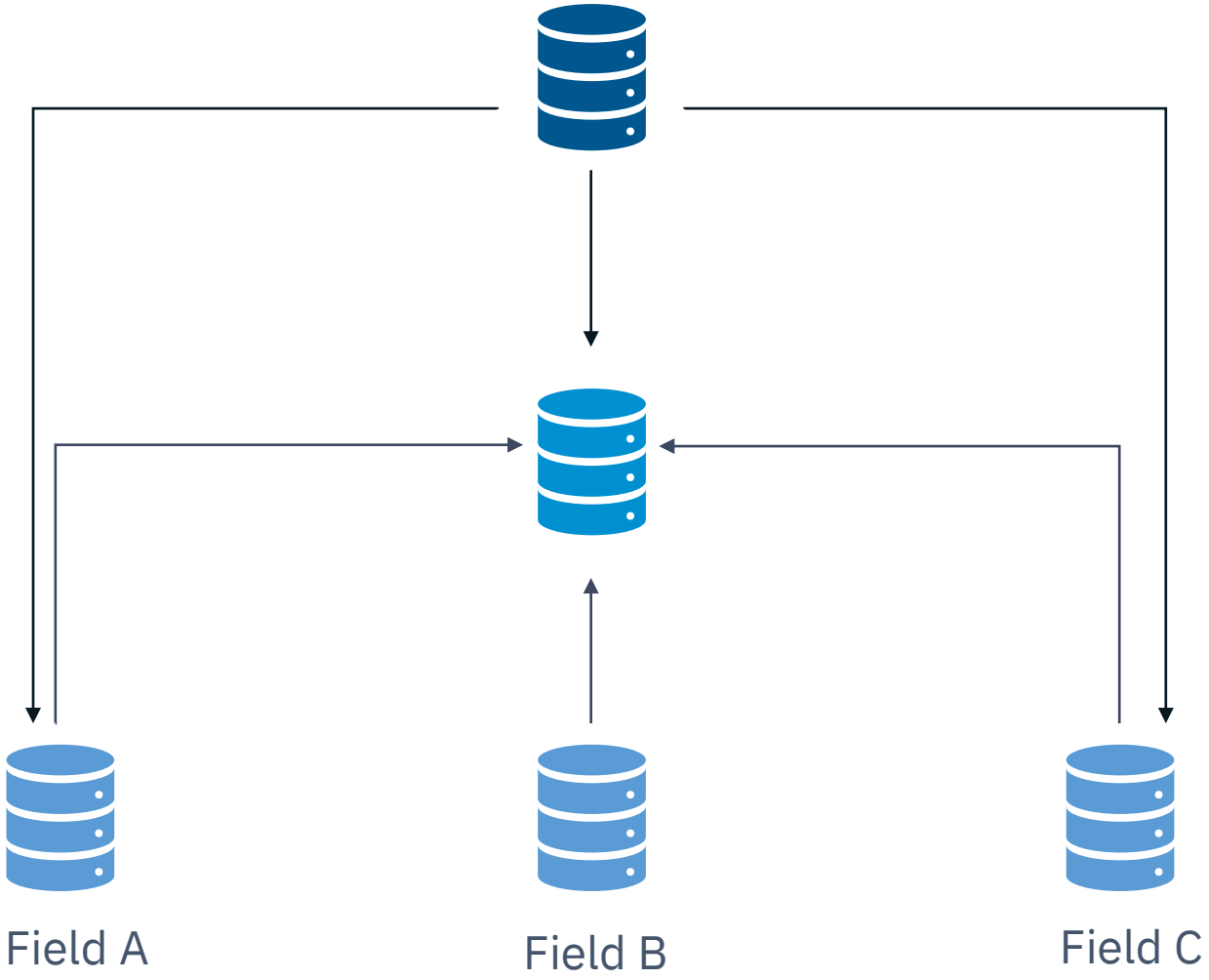
Why strategize towards global standardization ?

- Each Use-Case builds their own database, with their own standard
- Difficult to support and maintain when you're not familiar with the database
- Users don't know which database to use…
- Difficult to automate internal PI processes (but also external interface processes)

There is need for global standardization

- Introduce standard templates that can be used by everyone (same starting point)
- Group similar use-cases on same AF database
- Re-use of standard PI Vision displays

AF Database Strategy



Standard Library	• Default global templates • UoM library
Consolidated AF Database	• Standard library (replicate) • Field specific templates • Field specific element & attributes • Rollup element & attributes
Field-Specific Database	• Standard library (replicate) • Field specific templates • Field specific element & attributes

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AF Standard Templates

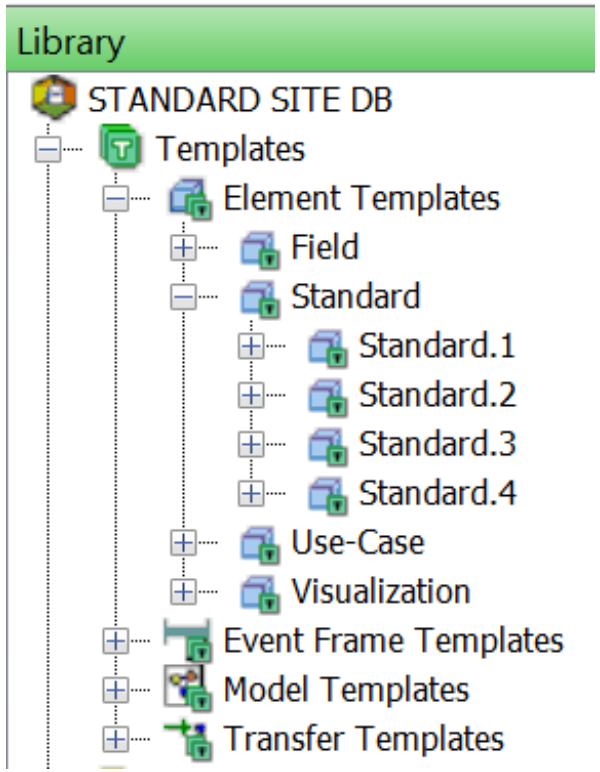
Standard templates

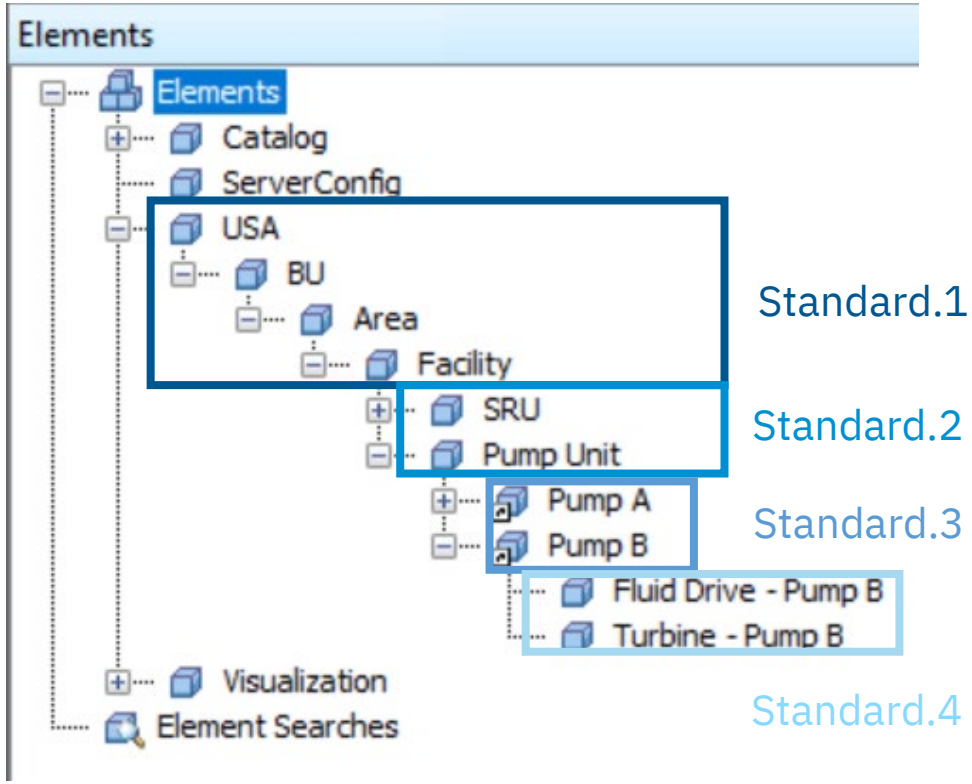
- Standard.1: Structure Templates
- Standard.2: Process Unit Templates
- Standard.3: Equipment Templates
- Standard.4: Building Block Templates

Field-specific templates

Use-case templates

Visualization templates





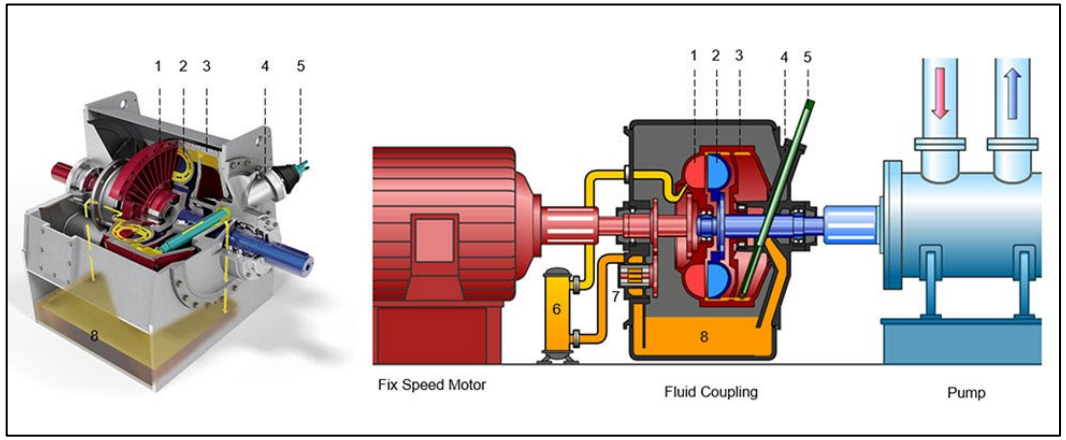
AF standard Templates Standard. 4: AF Building Block

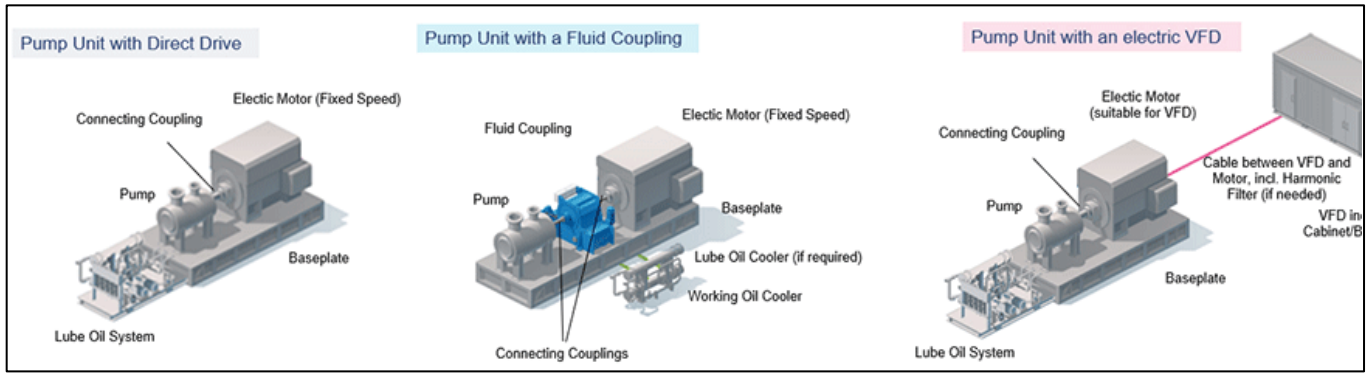
Dynamic building blocks to reduce the amount of templates

Store information on the physical location

- how to map IOT Vibration sensors on critical equipment ?
- Use generic components

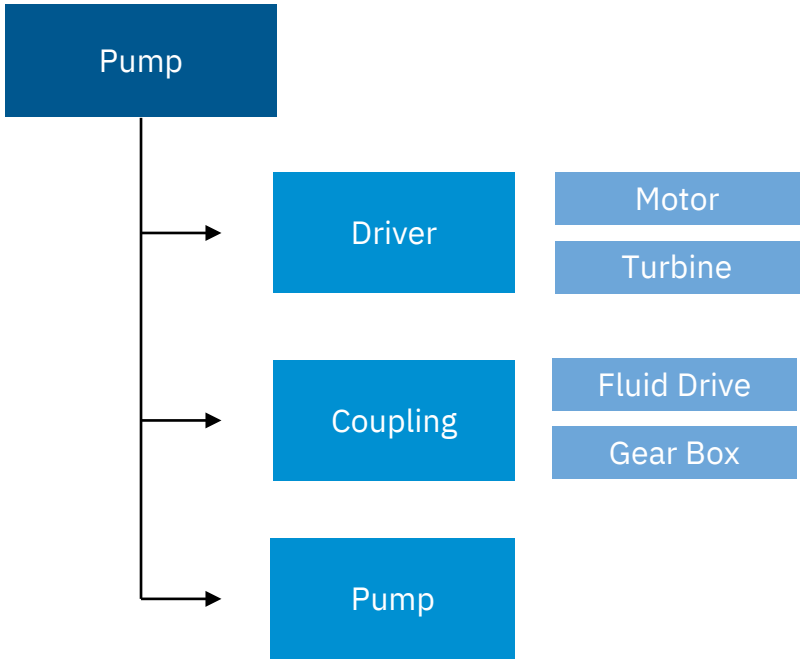
Example: Pump

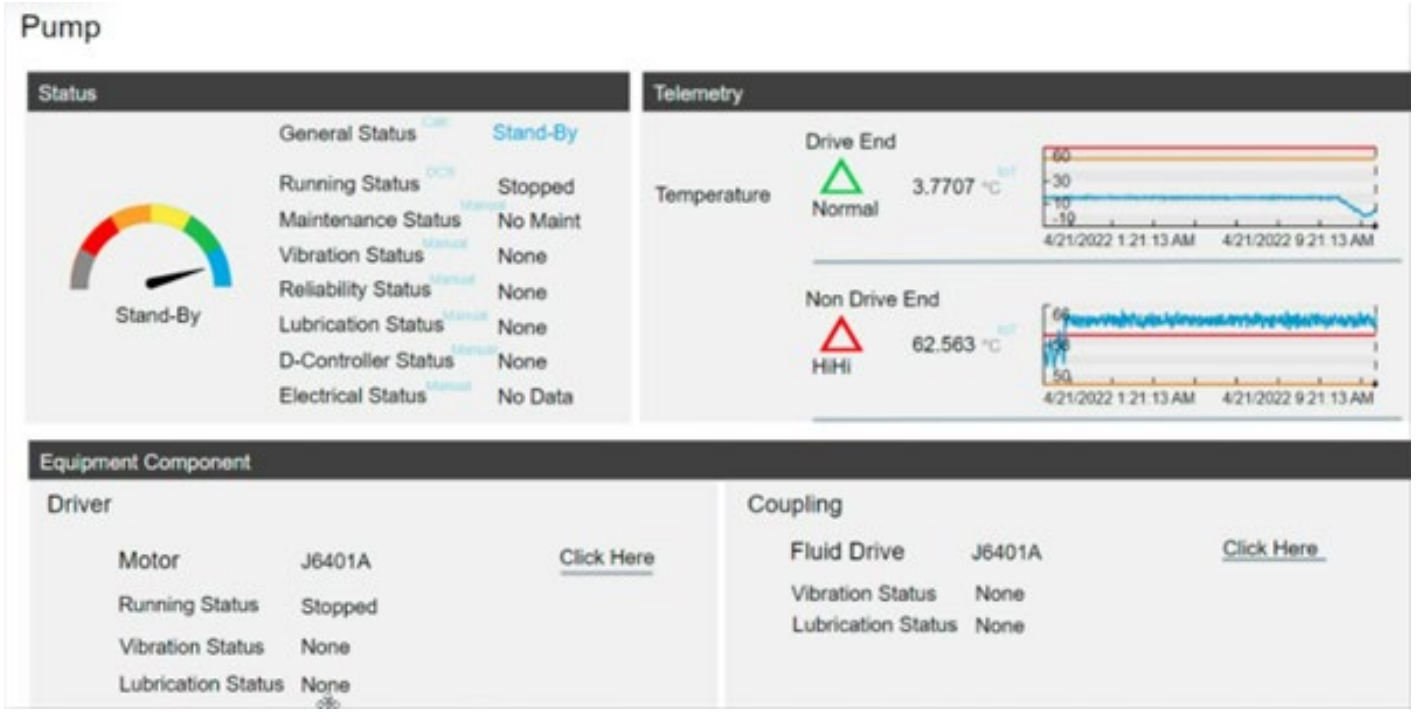




AF standard Templates
Standard. 4: AF Building Block

- Expose information to equipment level if important (i.e. Running Status)
- Single PI Vision display for Pump equipment, use of collections for building blocks





AF Standard Templates

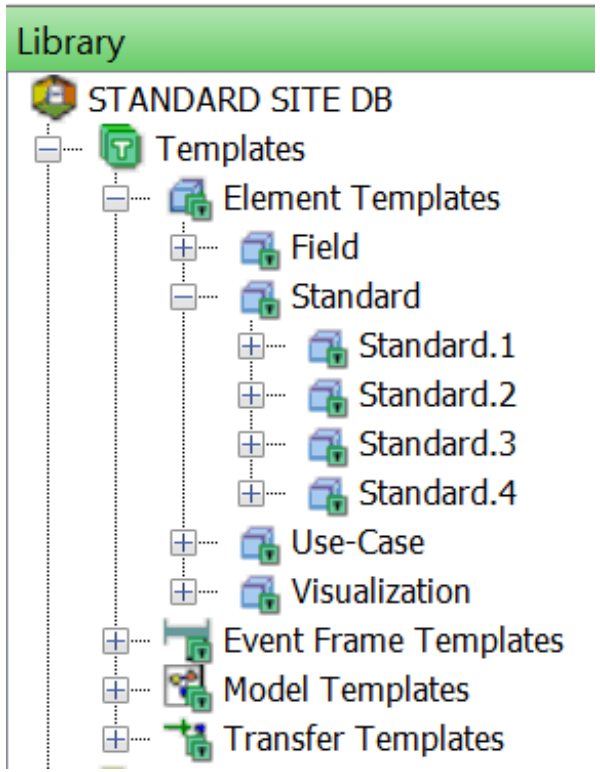
Standard templates

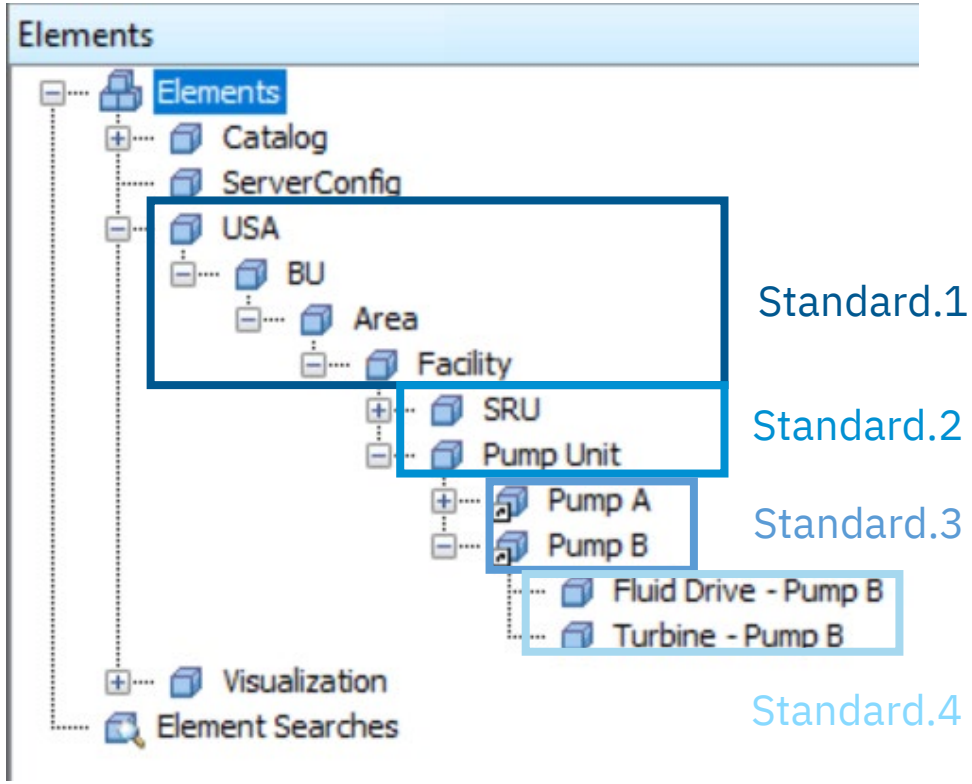
- Standard.1: Structure Templates
- Standard.2: Process Unit Templates
- Standard.3: Equipment Templates
- Standard.4: Building Block Templates

Field-specific templates

Use-case templates

Visualization templates





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- **Standard Element Organization**
- Typical Approach

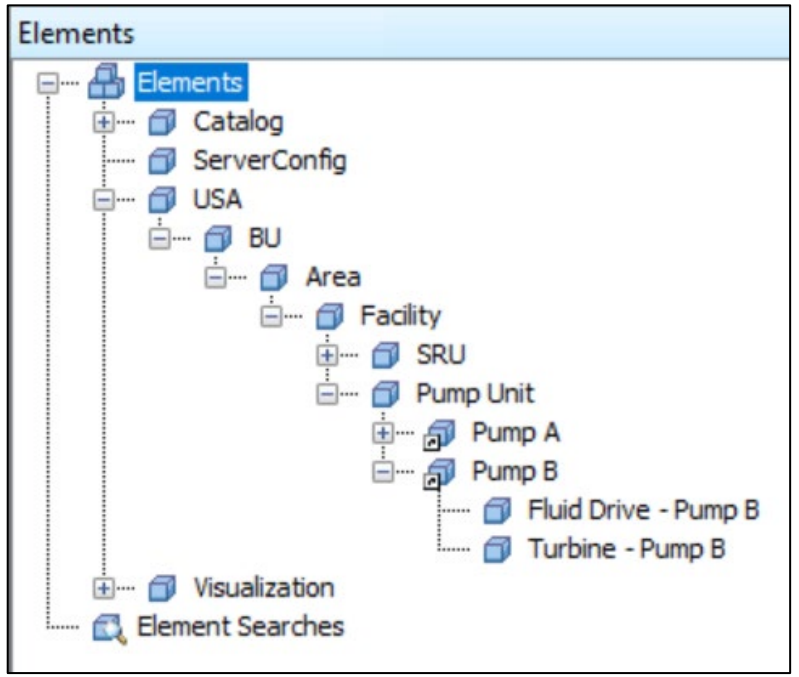
AF Elements

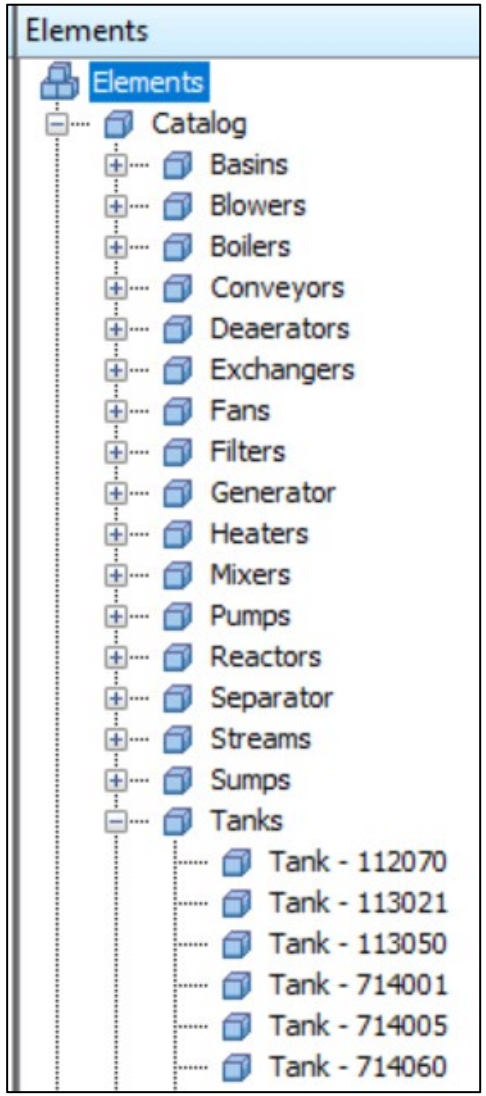
Catalog
- Equipment elements grouped by type

Server Config
- PI DA configuration

Use-case Trees
- Specific use-case tree view

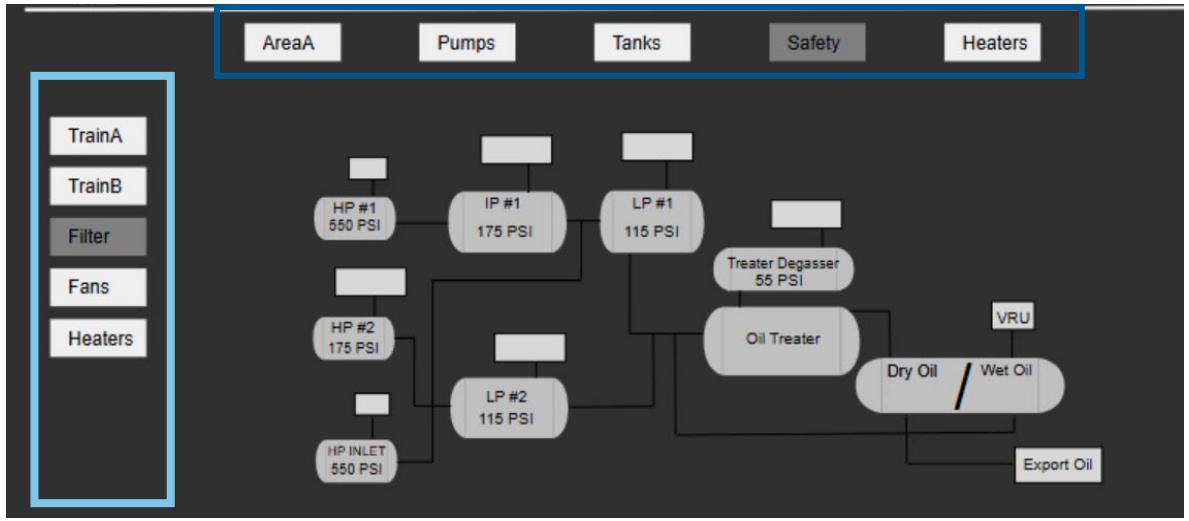
Visualization
- PI Vision navigation

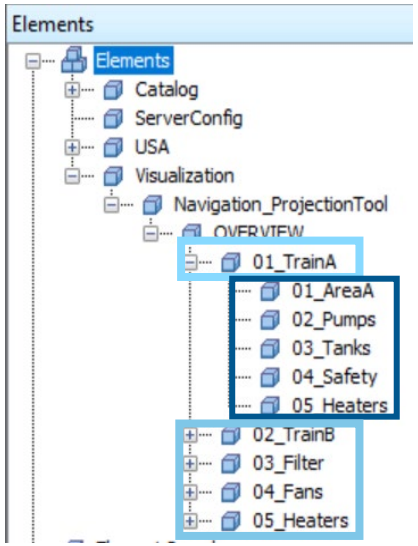




Visualization

- Manage URLs in PI-AF for bigger use-cases
- One central place for URLs instead of manual URL configuration in PI Vision
- Dynamic collection, sorting, easy migration from DEV to PROD…





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- **Typical Approach**

Typical Approach & Benefits

START	Start with a single use-case for each of the assets: Standard AF Database
SECURITY MODEL	Ensure security model is in line with the new way of working
ADD USE-CASES	Continuously add more use-cases and equipment to this Standard AF Database, while keeping the standard element templates in sync
SYNCHRONIZE	Think about an AF Synchronization Tool to help manage the complexity and configuration
LOOK & FEEL	Define a PI Vision Display standard for a uniform look and feel
STANDARTIZE	Define standard equipment displays

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SOLUTIONS

Soon we will become

Orise™