AVEVAWORLD

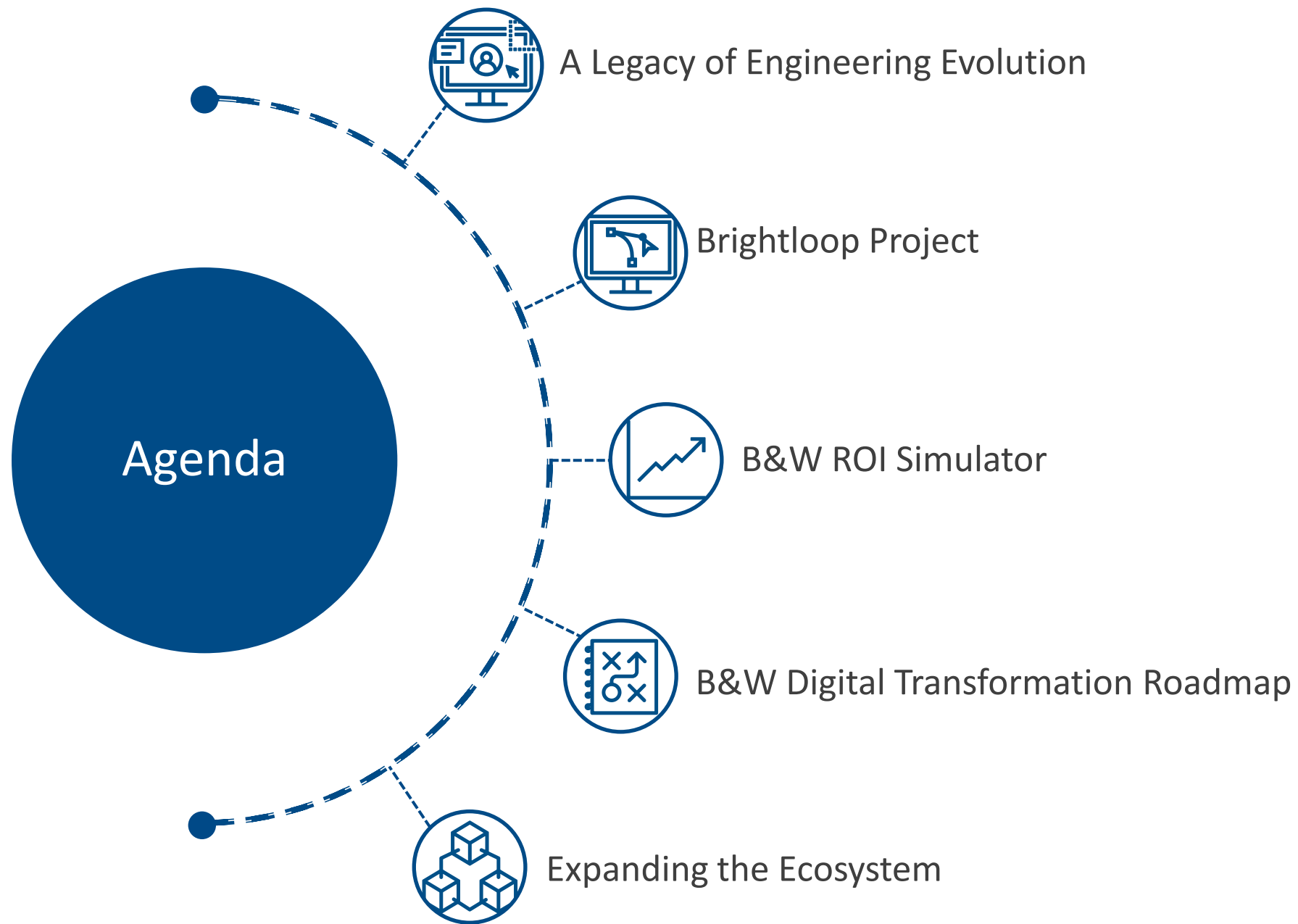# Unlocking ROI
How B&W Achieved Efficiency with AVEVA Unified Engineering

Max Guillois

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Agenda

- A Legacy of Engineering Evolution
- Brightloop Project
- B&W ROI Simulator
- B&W Digital Transformation Roadmap
- Expanding the Ecosystem

B&W: A Legacy of Engineering Evolution

- 160 years with multiple mergers & acquisitions
- 8 Engineering sites, each using different engineering tools
- Unified, digital engineering platform

B&W: A Legacy of Engineering Evolution

Challenges

- Multiple legacy/custom applications in silos
- Limited vendor support for outdated systems
- Difficult management of drawings & documents
- Overlapping maintenance costs & licensing

Objectives

- Consolidate/modernize tools to reduce costs
- Standardize processes on a single platform
- Improve data consistency & collaboration

BrightLoop™ Project

BrightLoop™

Low-carbon hydrogen technology, using chemical looping to produce H_2, steam, or syngas while isolating CO_2 for capture or beneficial use.

AVEVA Pilot & Standardization

Used BrightLoop as the primary testbed to implement, train, standardize, and document AVEVA processes.

B&W ROI Simulator: Measuring Success

- **Multidimensional Metrics**
    - Labor rates
    - License tool costs
    - Admin cost
    - Error saving ratio
    - Time per deliverable (GA drawings, Isometrics, Engineering lists, P&IDs, 3D model, etc)
    - Training costs

- **Output**
    - Scoring card and simulation tool used to:
        - During the proposal phase to compare "Simple Tools vs. AVEVA" scenarios and justify the decision (or not) to use AVEVA on a project.
   - Provide top management with clear ROI insights

B&W ROI Simulator: Measuring Success

Input	User Entry
Total Project Value ($)	$ 50,000,000.00
Contract Type	EPC
No. of P&IDs	150
No. of GA Drawings	90
No. of Isometrics	1500
No. of tags	12000
No. of pipe support	80
No. of Engineering lists	10
No. of Datasheets	50
No. of revisions	4
Offshore Labor %	60%
US Labor %	40%
Full AVEVA Suite or mix (E3D use for 3D modelling, AutoCAD used for P&ID	Full suite
No. of AVEVA E3D Users to Train	20
No. of AVEVA P&ID Users to Train	15
No. of AVEVA Engineering Users to Train	10

Cost Comparison

- AVEVA Tool Cost
- Simple Tool cost
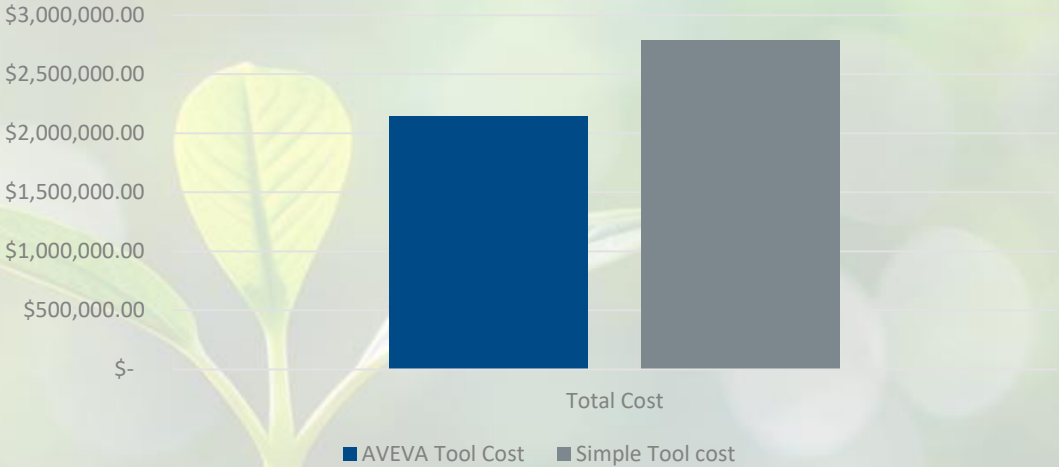
Cost Comparison Details

- AVEVA Tool Cost
- Simple Tool cost
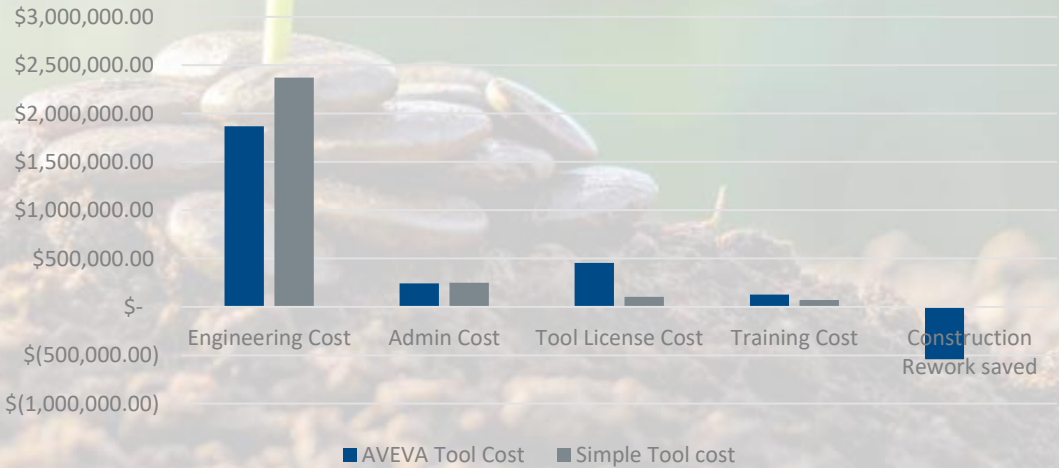
The Digital Transformation Roadmap

2021
- Scope Definition
- Solution Design

2022
- UE Deployment
- Solution Test

2023
- UE Project Configuration
- End User Training (80+)

2024
- Standard Documentation
- Ticketing System
- Company Master Project

2025-28
- P&ID next Gen
- Asset Information Management
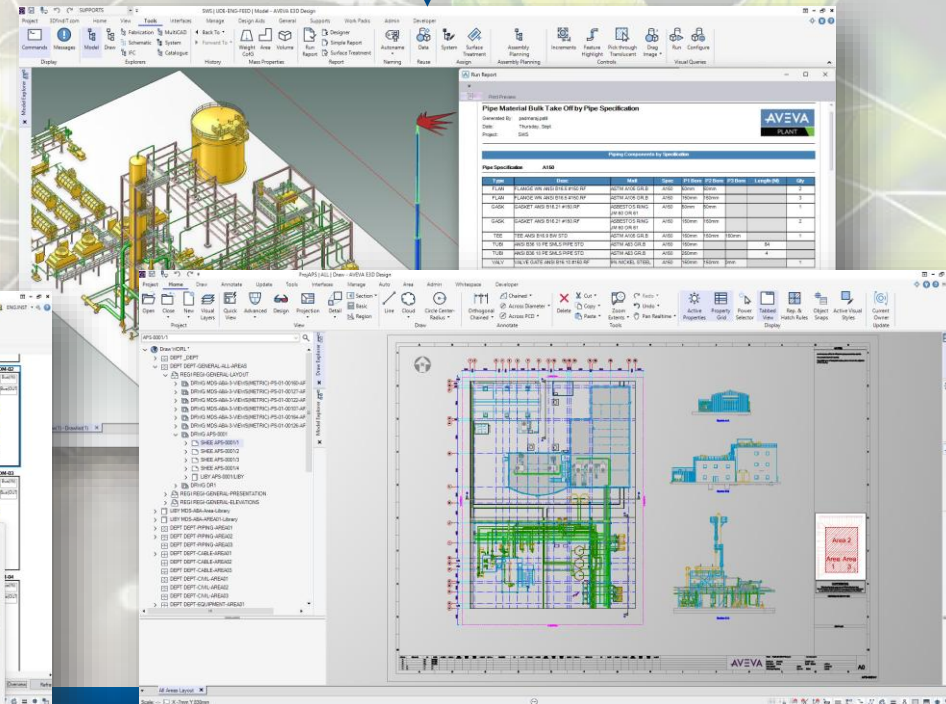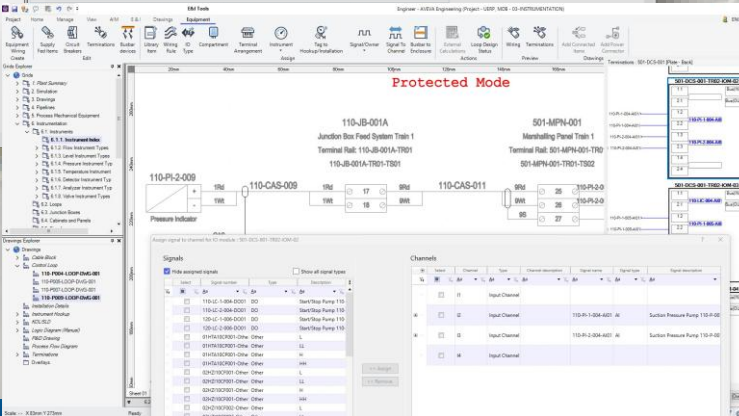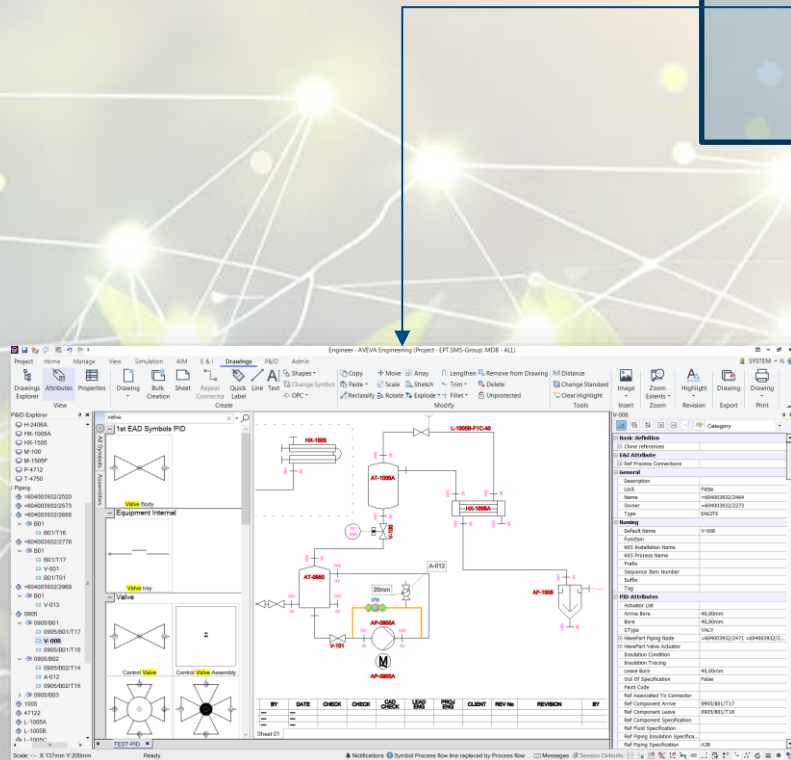- PI System and PI Vision
- Predictive Analytics

Expanding the Ecosystem

Unified Engineering

AVEVA P&ID
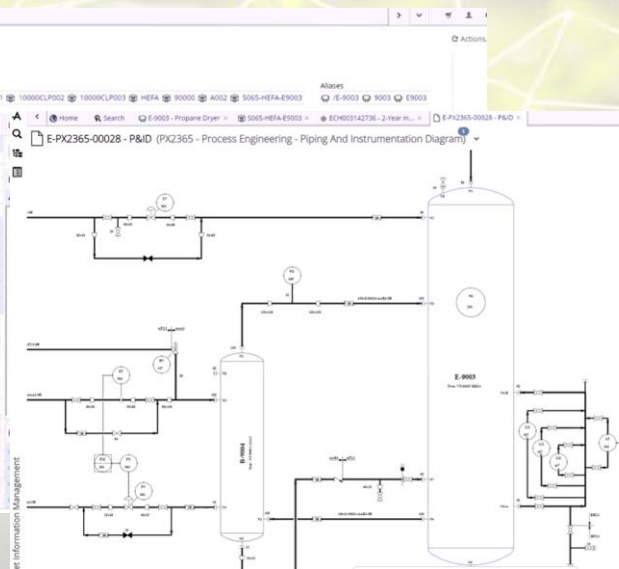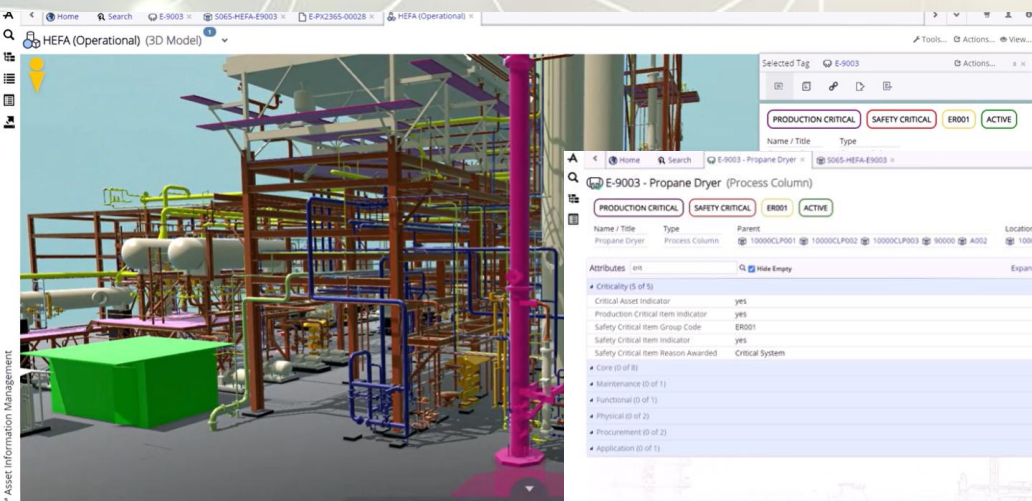
AVEVA Engineering and E&I

AVEVA E3D

Expanding the Ecosystem
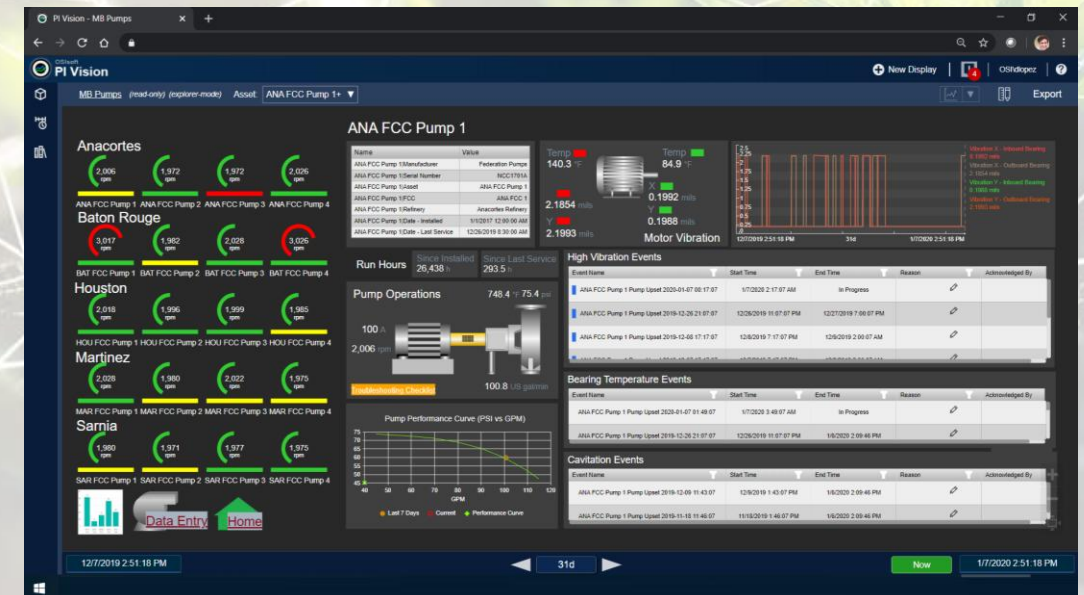
Unified Engineering

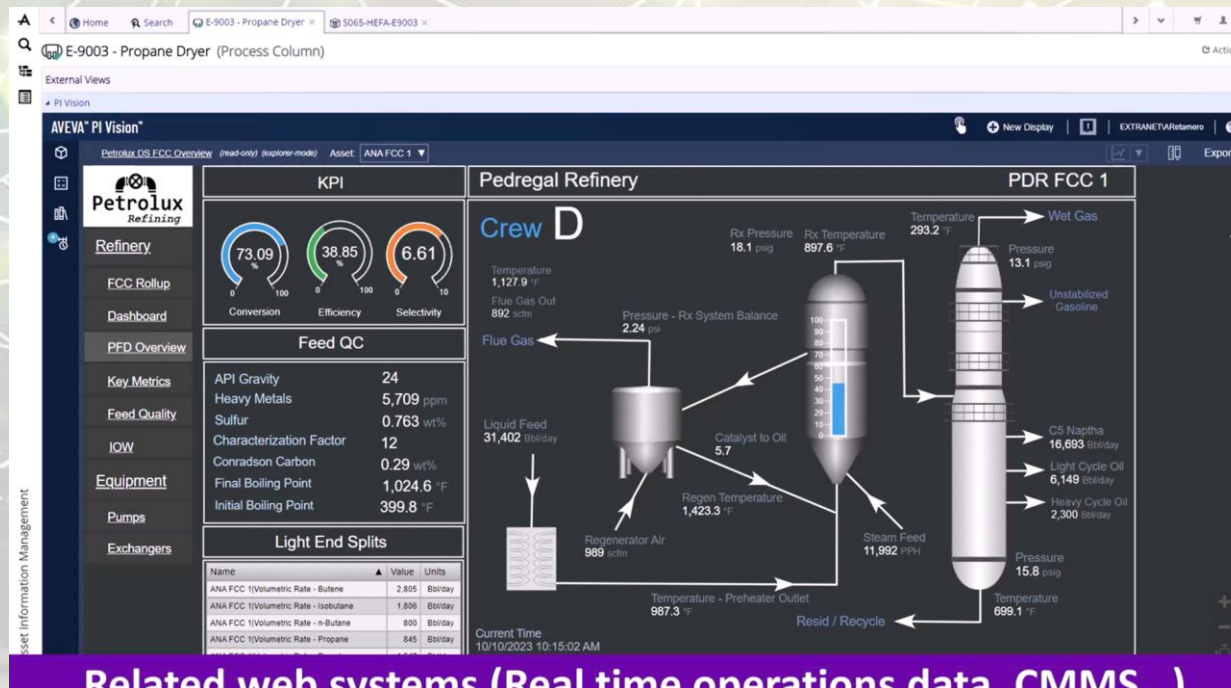AVEVA Asset Information Management (AIM)

Expanding the Ecosystem

Expanding the Ecosystem
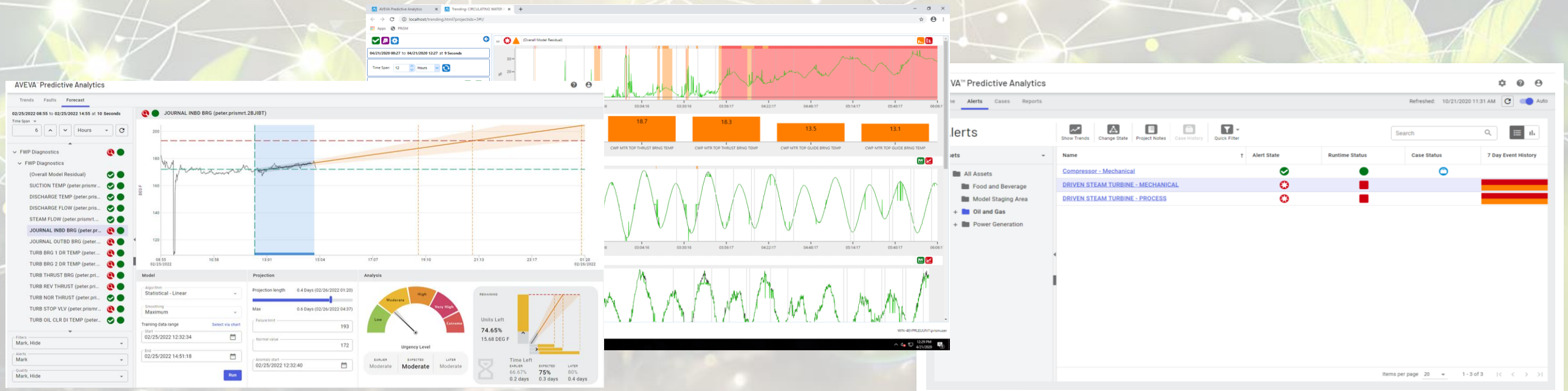
Introducing Focaliti

- **B&W + Focaliti + AVEVA**: A united approach to digital transformation

- **Leverages B&W's AVEVA experience** (Unified Engineering, AIM, ERM)

- **Accelerating innovation** across industries through strategic partnerships

Services

FOCALITI

CONSULTING

- Requirement and Solution Design Definition
- Implementation Plan
- Change Management and Adoption Services
- Business Process Optimization
- Innovation Strategy

DEPLOYMENT AND CONFIGURATION

- Engineering Applications Deployment
- Engineering Applications Implementation
- Legacy System Migration

TRAINING AND DOCUMENTATION

- Engineering Applications Training
- Writing of Unified Engineering Guidelines
- Writing of Requirement documentation

DIGITIZATION AND DIGITALIZATION

- Back-Modelling using laser scans
- P&ID Conversion and Redrafting using AI
- Creation of Data Hub

SUPPORT AND MAINTENANCE

- Provide experts to facilitate adoption
- Performance Monitoring and Optimization
- Continuous Improvement Workshops

B&W Achieved Efficiency with AVEVA Unified Engineering

Challenge

- Multiple legacy/custom applications in silos
- Limited vendor support for outdated systems
- Difficult management of drawings & documents
- Overlapping maintenance costs & licensing

Solution

- Deployed AVEVA™ Unified Engineering as a centralized platform to standardize processes, reduce data handover complexities, and elevate the overall quality of engineering projects.

Results

- **Improved collaboration and data integrity by using a Unified environment.**
- **Eliminated redundant tools and rework, reducing engineering costs.**
- **Unlocked potential new revenue streams by expanding the ecosystem, leveraging standardized processes and a single source of truth.**