



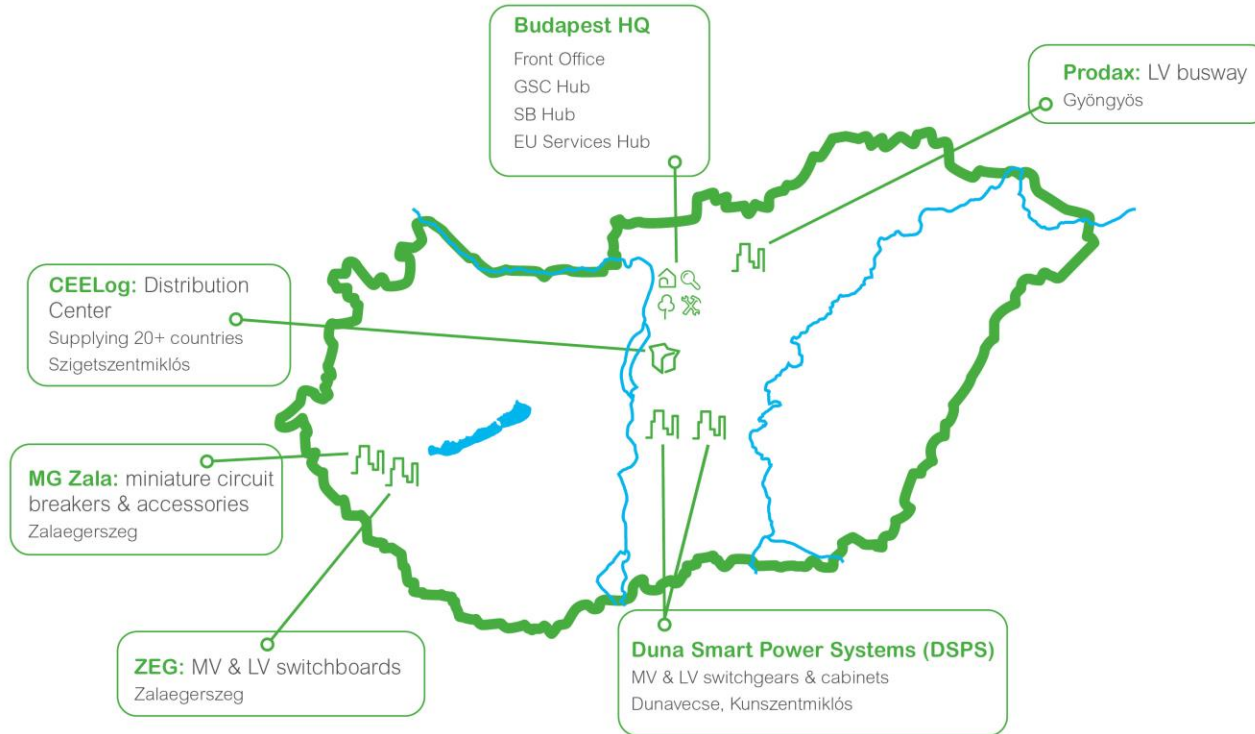
SMART

Schneider Electric in Hungary

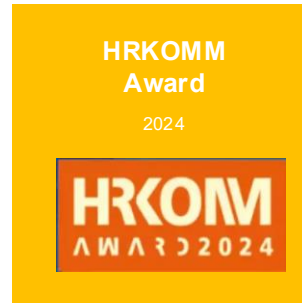
Marton Juhász - Business Leader for IA SW Solutions

Technológiai kollaboráció fontossága a vegyiparban! – Hogyan lehet segítségünkre az MI akár vegyész pályakezdőként

Schneider Electric in Hungary



- Total revenue: 1bn EUR (940M locally)
- Top 5 biggest French company in HU
- Number of employees: 2.300



Life Is On



Schneider Electric Value Prop

Energy Management



Cooling



Data Center Infrastructure Management (DCIM)



Molded-case Breaker



Uninterrupted Power Supply, Single & 3 Phase



Final Distribution



Wiring Devices



Medium Voltage Products & Equipment

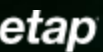
Software, Services & Sustainability



AVEVA



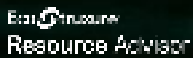
AVEVA PI System



etap



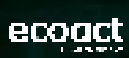
RIB



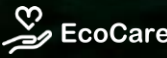
EcoStructure Resource Advisor



ProLeiT
by Schneider Electric



ecoact



EcoCare

Sustainability Consulting

Energy Performance contracting (VPP)

Industrial Automation



Software-defined automation



Triconex Safety



Robotics



Foxboro Distributed Control System (DCS)



Programmable Logic Controllers (PLCs)



Multi-carrier Transport System



Drives & Motion Control



Control & Signaling



Contactors



HMI

DATA CENTERS



COMPASS datacenters



SUPERNAP THAILAND



leading edge



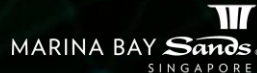
FTI

BUILDINGS



HSBC

Blackstone

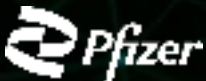


MARINA BAY Sands SINGAPORE



JLL

INDUSTRY



Pfizer



Shell



RioTinto



Nestlé

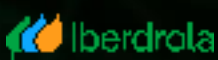
INFRASTRUCTURE



JFK JOHN F. KENNEDY INTERNATIONAL AIRPORT



VEOLIA



Iberdrola



enel



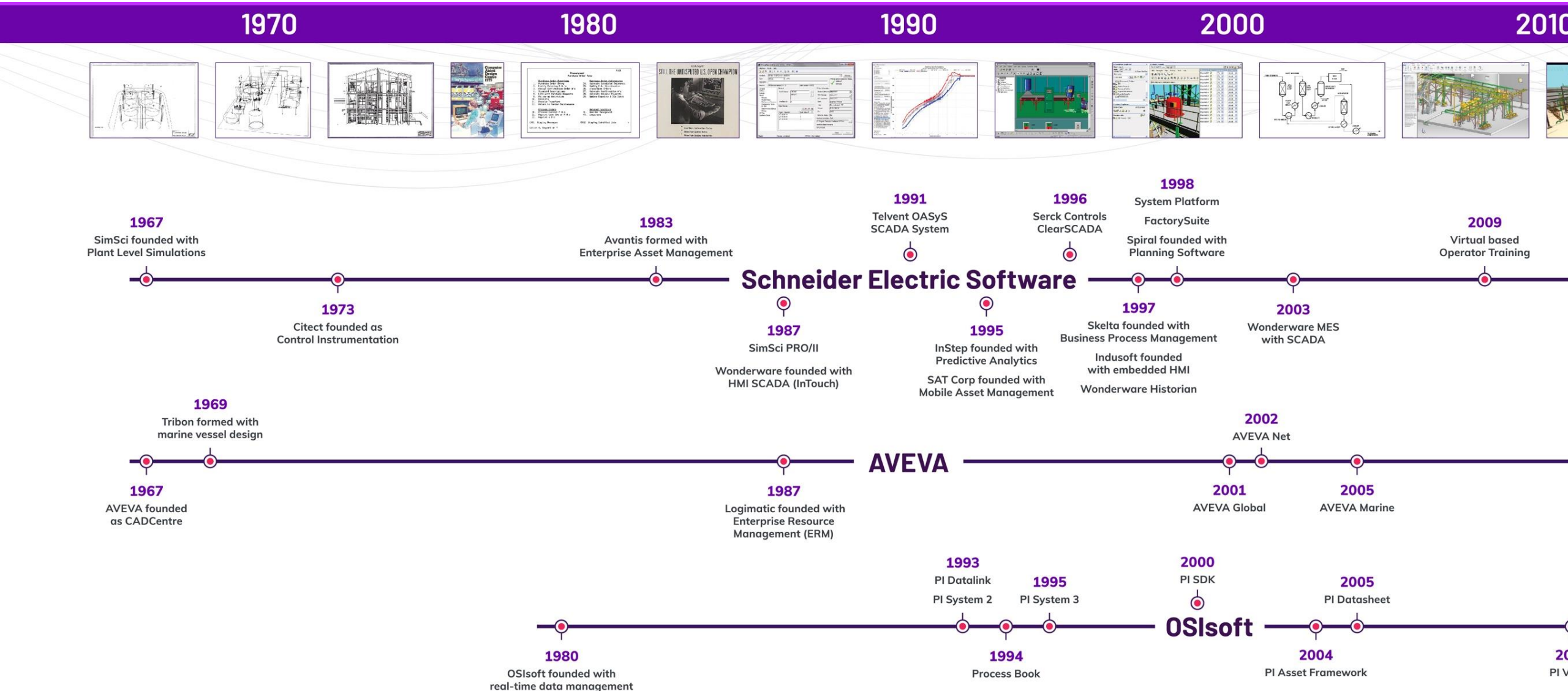
"Radical collaboration demands radical curiosity,,

C.H.-AVEVA CEO

Life Is On

Schneider
Electric

The evolution of AVEVA



AVEVA

Schneider
Electric™

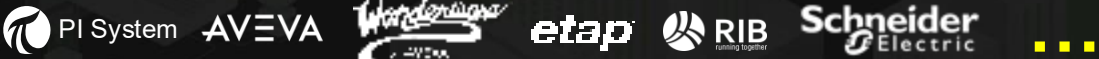
AVEVA

IMPACT

CONNECT

1

Data
Intelligent Twin
Experience
Empowered Ecosystem

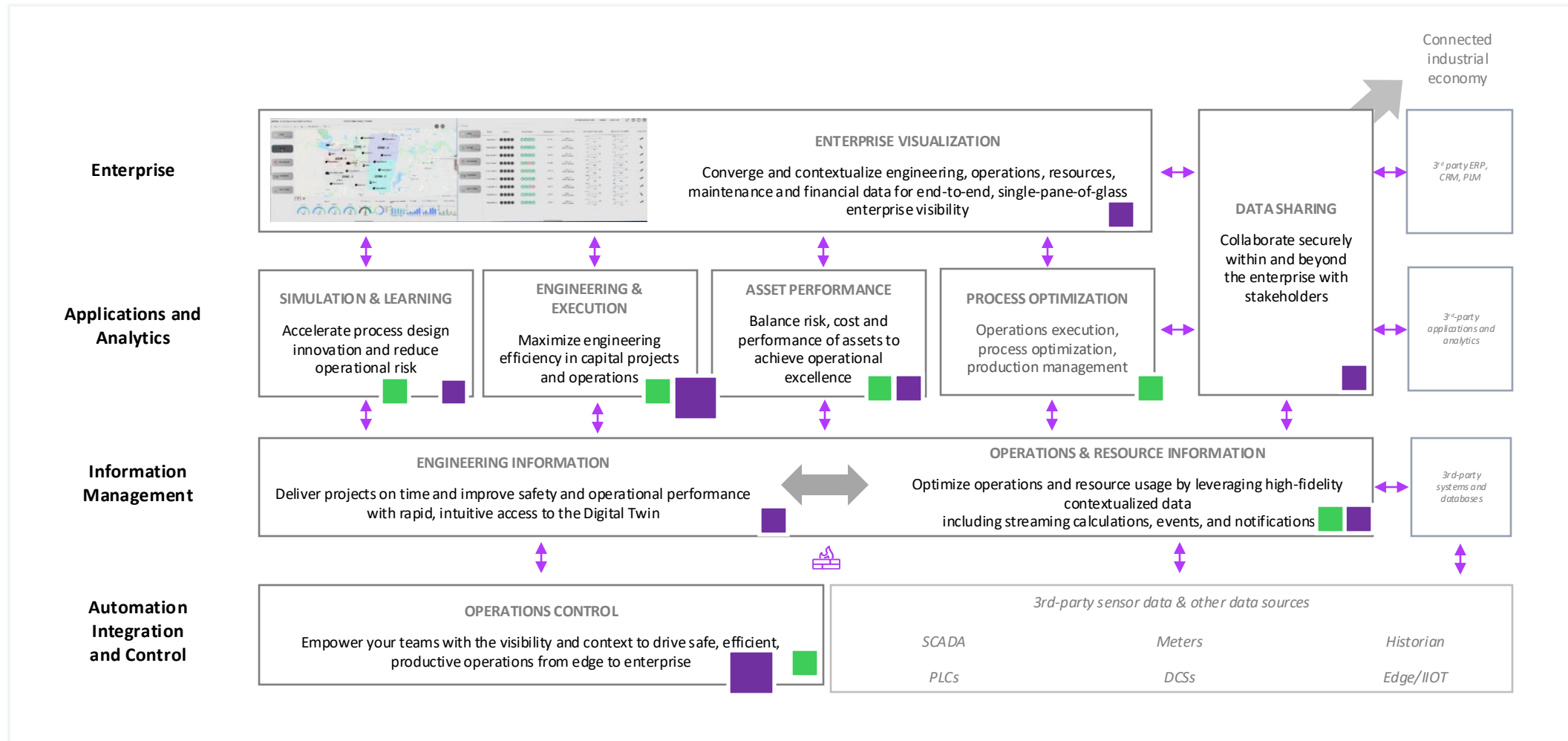


IoT Cloud and On-Premises AI & Cybersecurity	Software, Apps, Analytics and Services
	Edge Control
	Connected Products

Buildings | Data Centers | Industry | Infrastructure

Energy	Automation	Full efficiency Energy and Process
End Point	Cloud	Full transparency Endpoint on the shopfloor to the Cloud
Design & Build	Operate & Maintain	One Digital Twin Across the lifecycle
Site-by-Site	Enterprise	One Data + AI Unified Operations Center
Opportunistic Supply	Sustainable & Integrated Supply	Cleanest & cheapest energy CO ₂ reduction & efficiency

AVEVA & SE: Vision of the digital platform





Design



Build



Operate



Optimize



Design

Build

Operate

Optimize

CONNECT Industrial intelligence platform

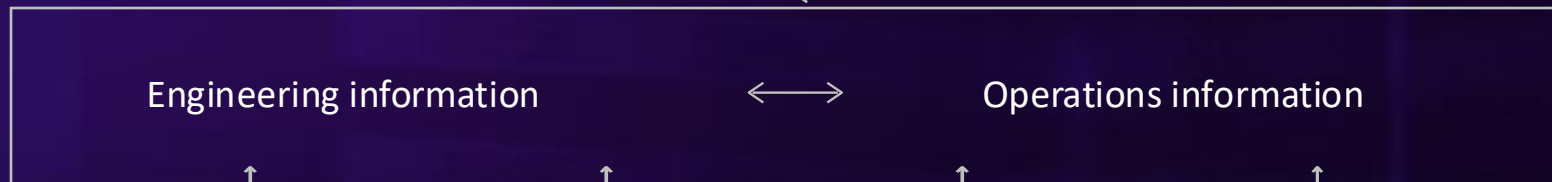
Seamless experience



Applications & analytics



Information



Assets and devices

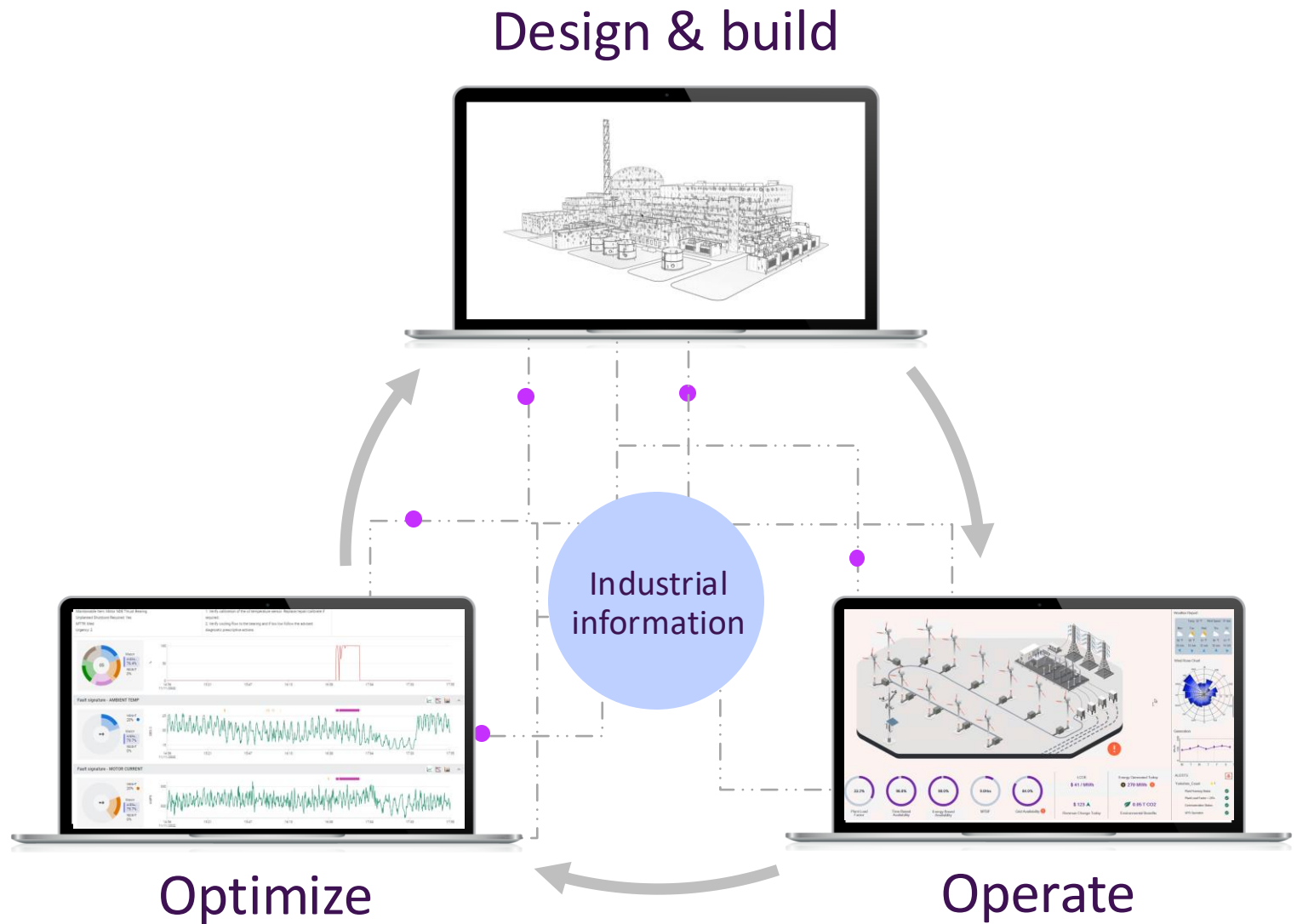


All enabled by an ecosystem of developers and partners

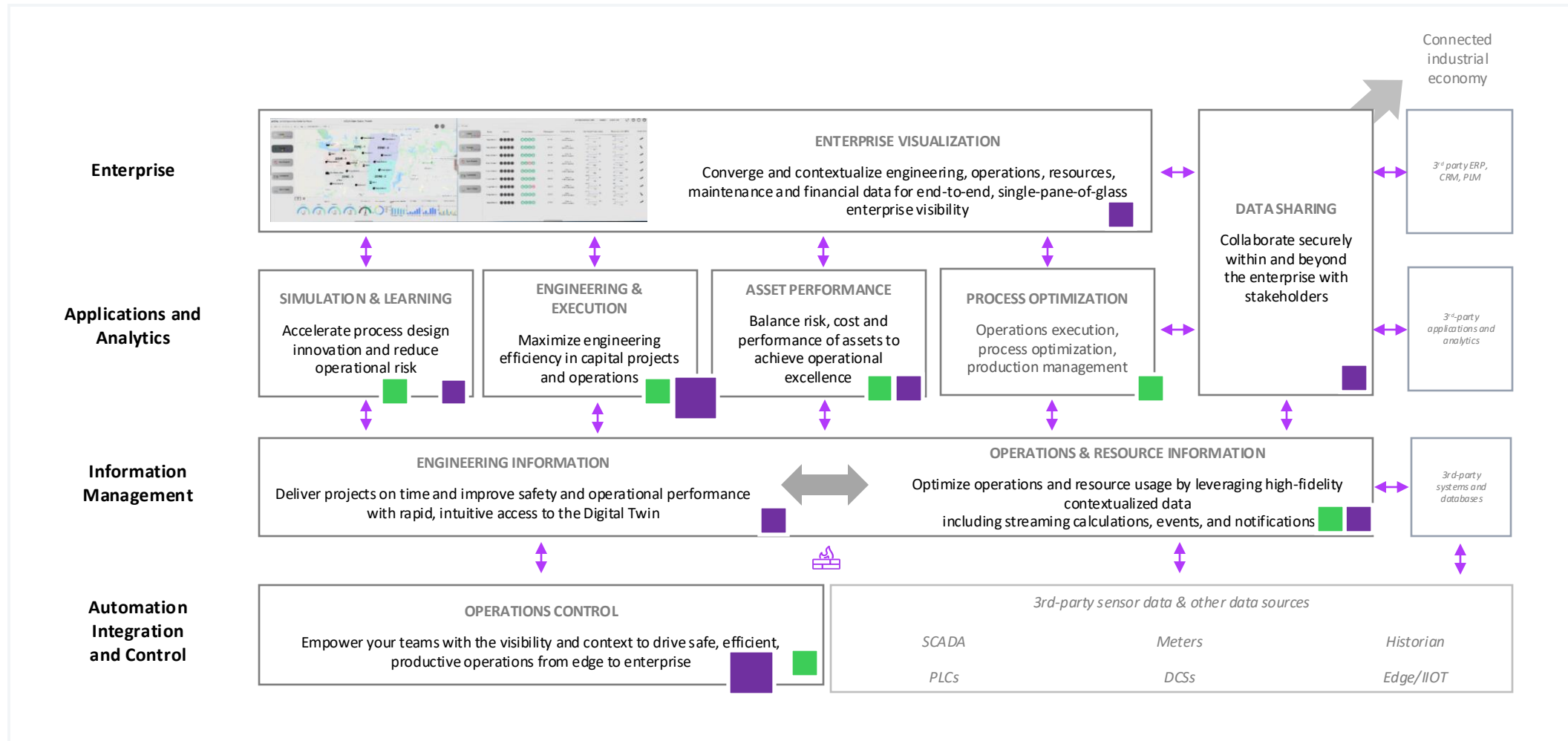
Delivering a seamless
experience from
digital twin to
digital enterprise



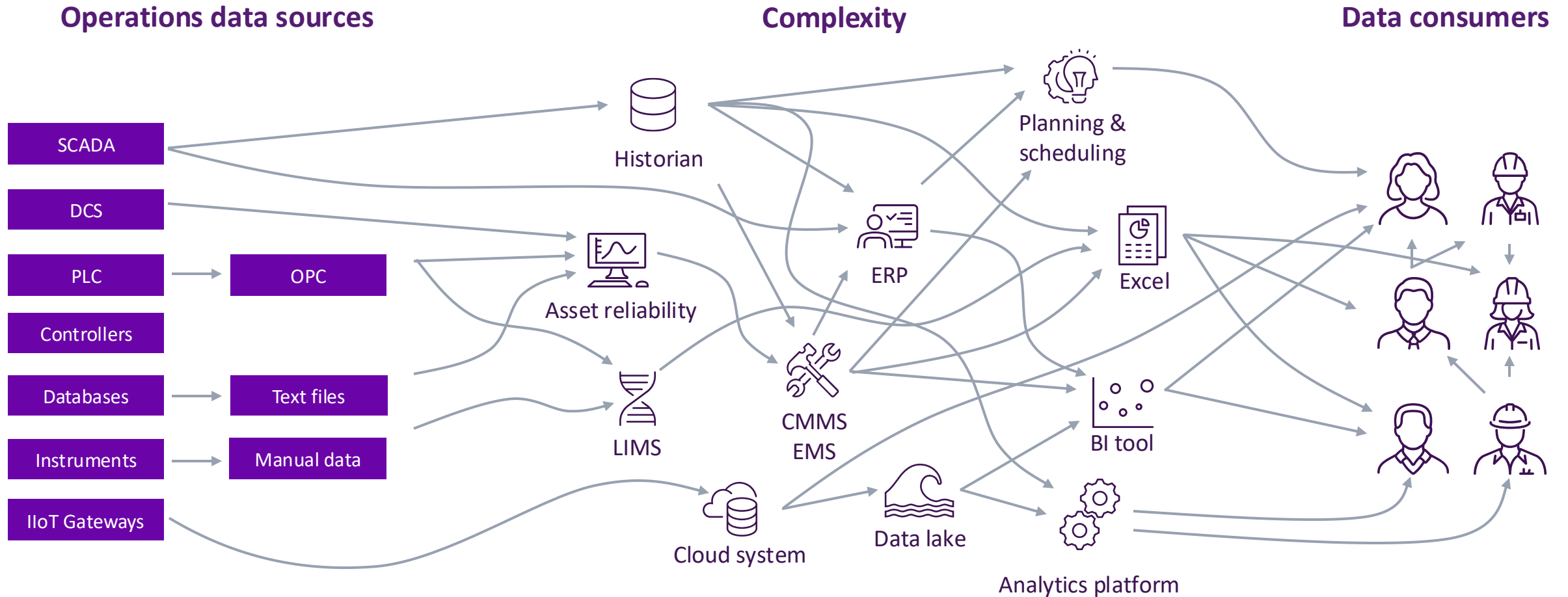
We support customers across the **entire** industrial lifecycle



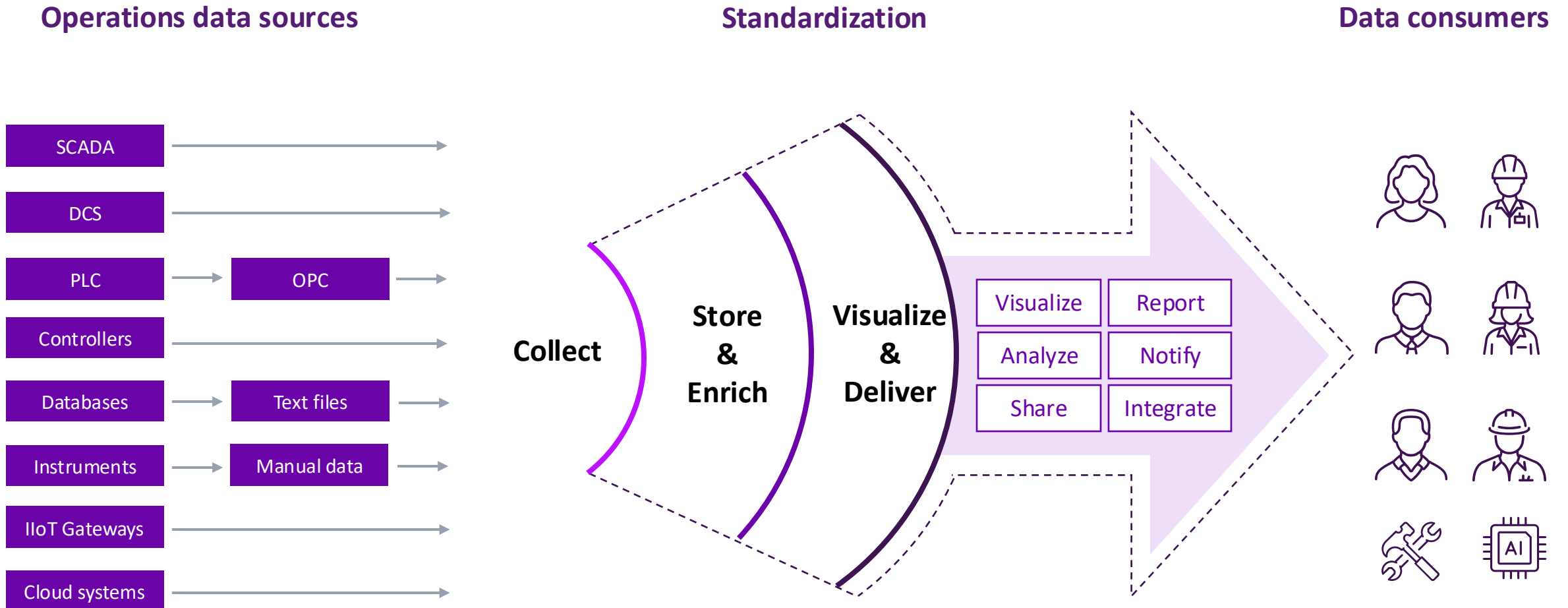
AVEVA & SE: Vision of the digital platform



Managing operations data is complex

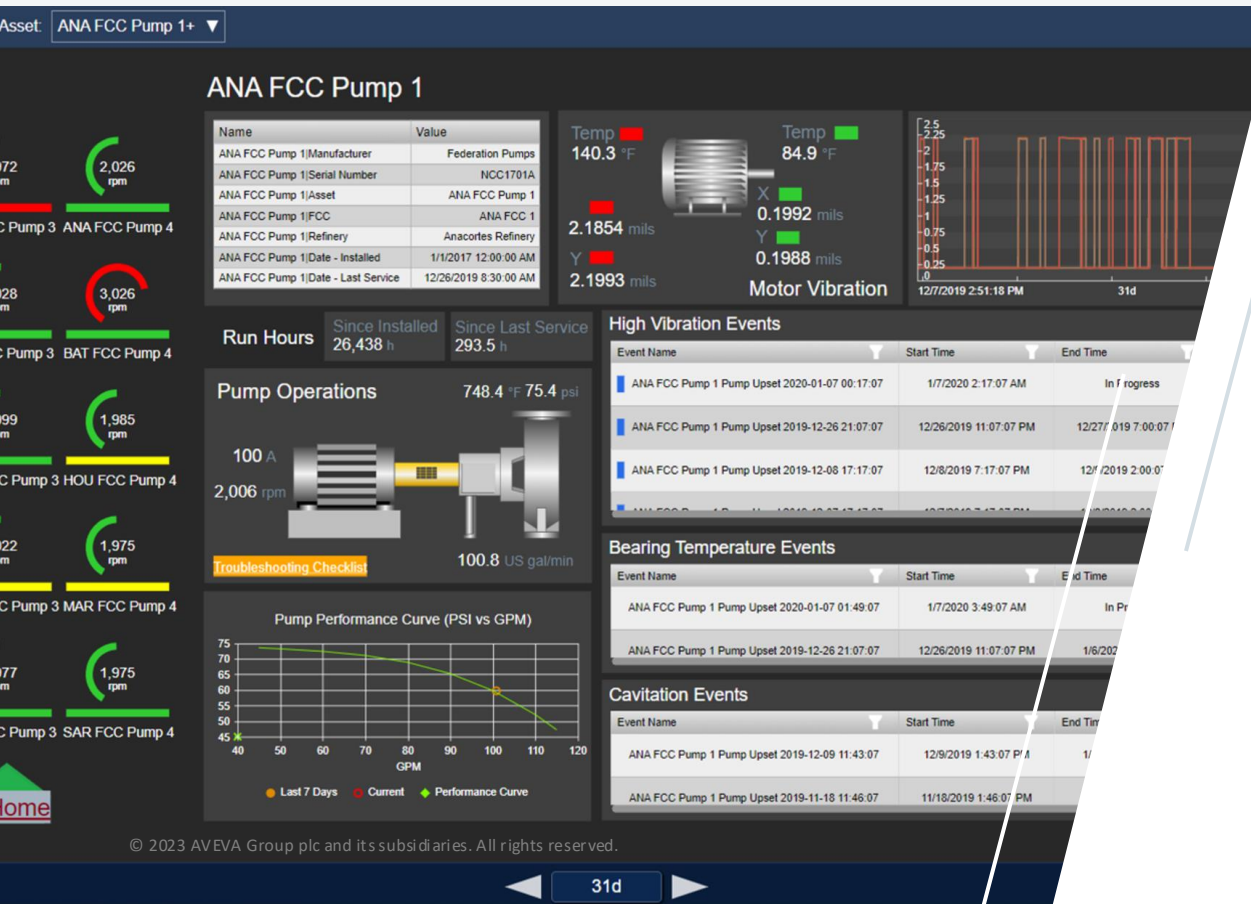


Connect people to data with an infrastructure approach



AVEVA PI System

Enterprise-class information management solution for aggregating, enriching and using real-time operational data.



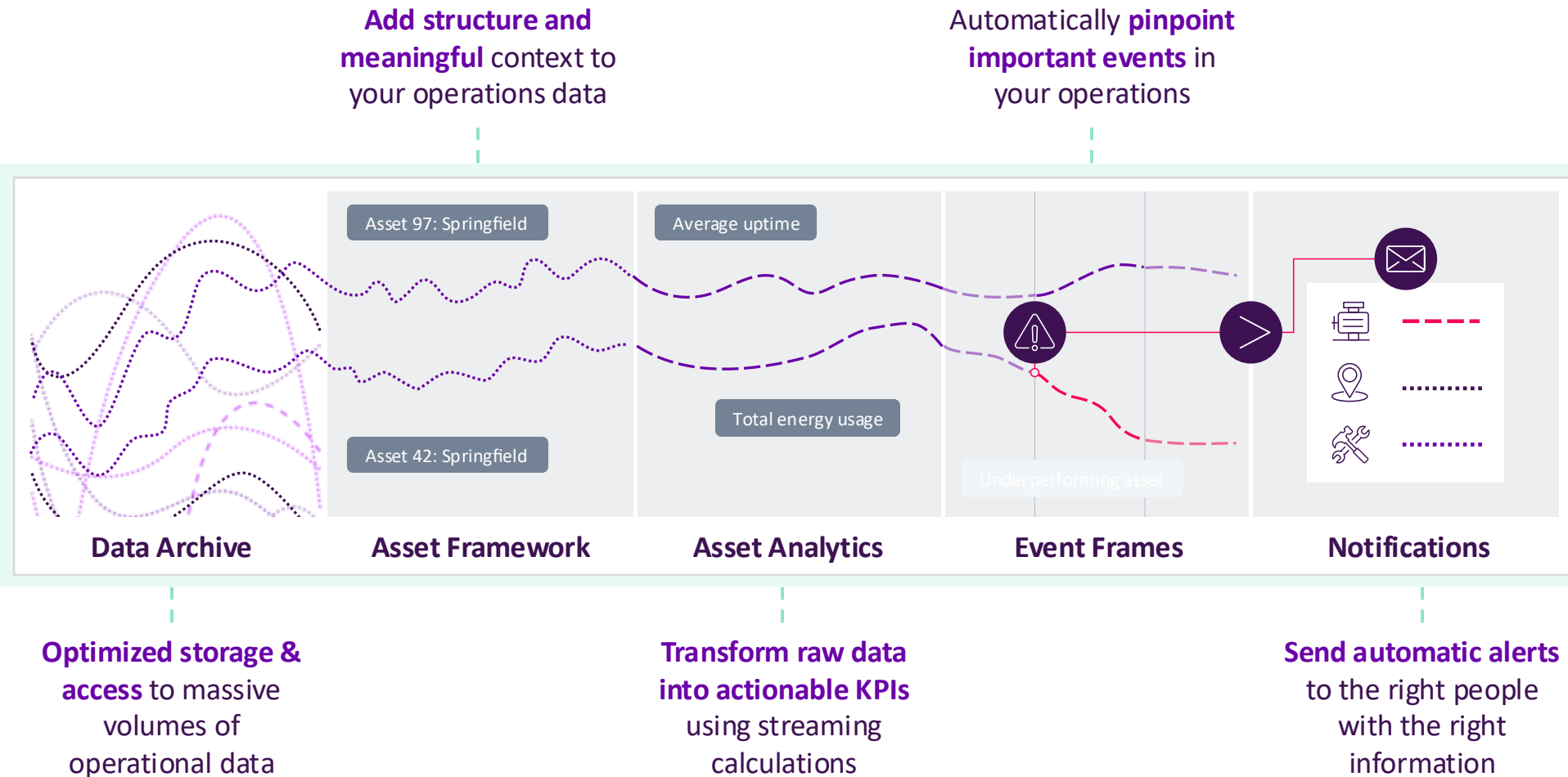
Give operations and enterprise decision makers a **single, trusted data foundation.**

Get code-free and highly configurable access to data and analytics, **without IT assistance.**

Format & cleanse operations data for use in analysis and reporting tools as well as advanced AI.

AVEVA

PI System: Turns data into decision-ready information



Advanced Process Control

Typical benefits from APC



Reduced process variation



Improved product yield



Increased product quality



Increased throughput



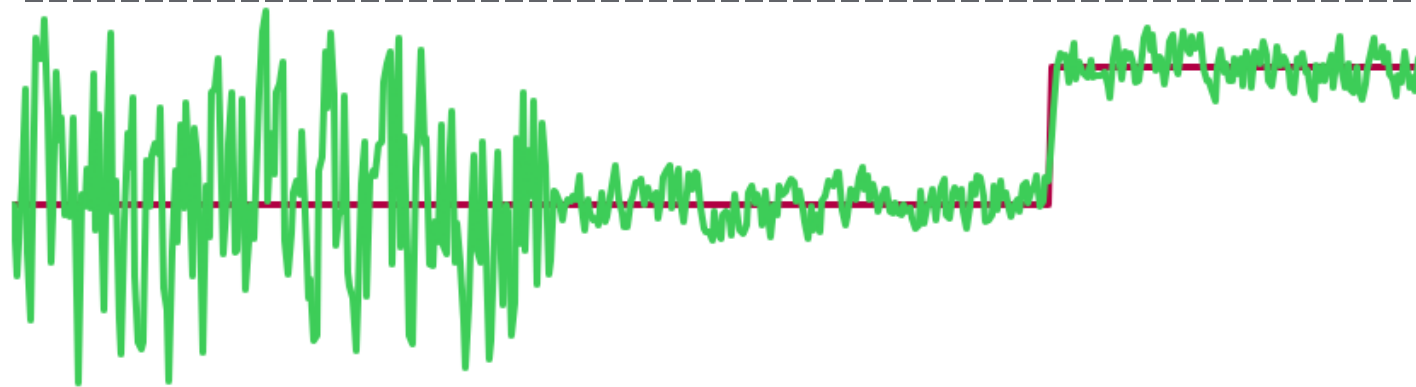
Reduced specific energy consumption



Typical ROI within 1 year

Advanced Process Control

Process constraint – Economic Optimum



Standard control

APC control

APC + Optimizer



Increase process stability



Push variables to its optimum operating point

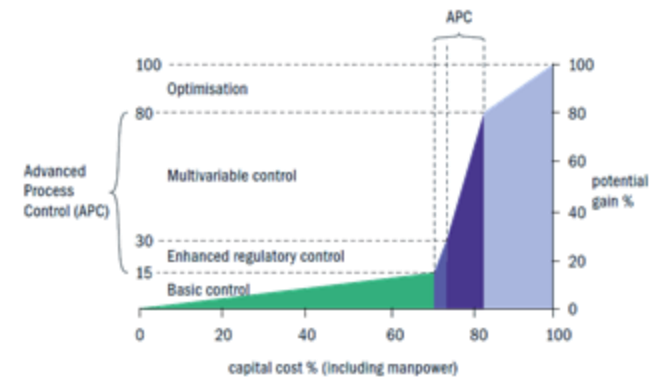
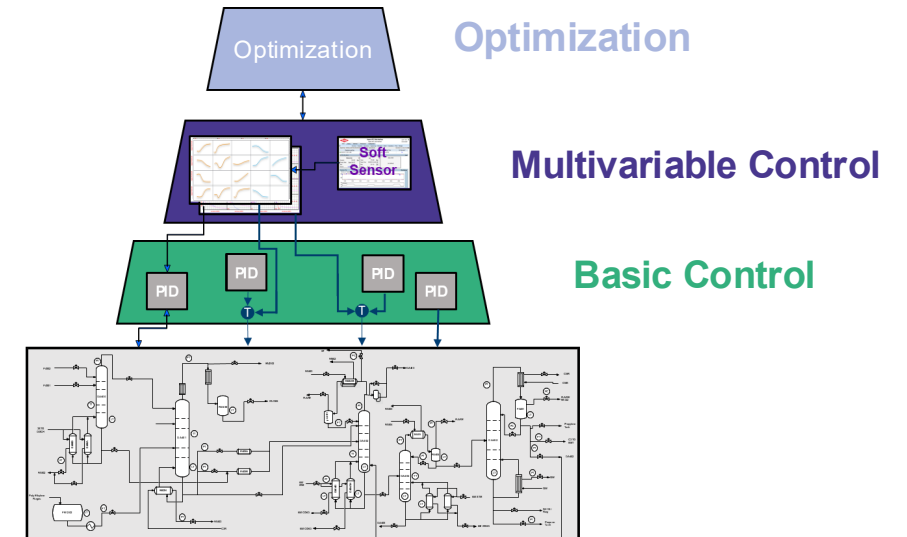


Operators focus on their regular tasks

Advanced Process Control

How does the APC work?

- Works together with the basic control system (DCS) and only bypasses certain PID loops
- Can be activated/deactivated online by the operator through a dedicated screen in the HMI
- Agnostic to DCS manufacturer
- No new hardware required
- No shutdown required
- No *black-box* effect
- Can work together with Real Time Optimization systems (Romeo, AI,...)



Source: Automation Research Council

Advanced Process Control

Driver sets the destination and the navigator calculates the best route

Navigator

Optimización

Driver is still in charge, but adaptive speed, trajectory correction, lights auto, ... makes process more efficient

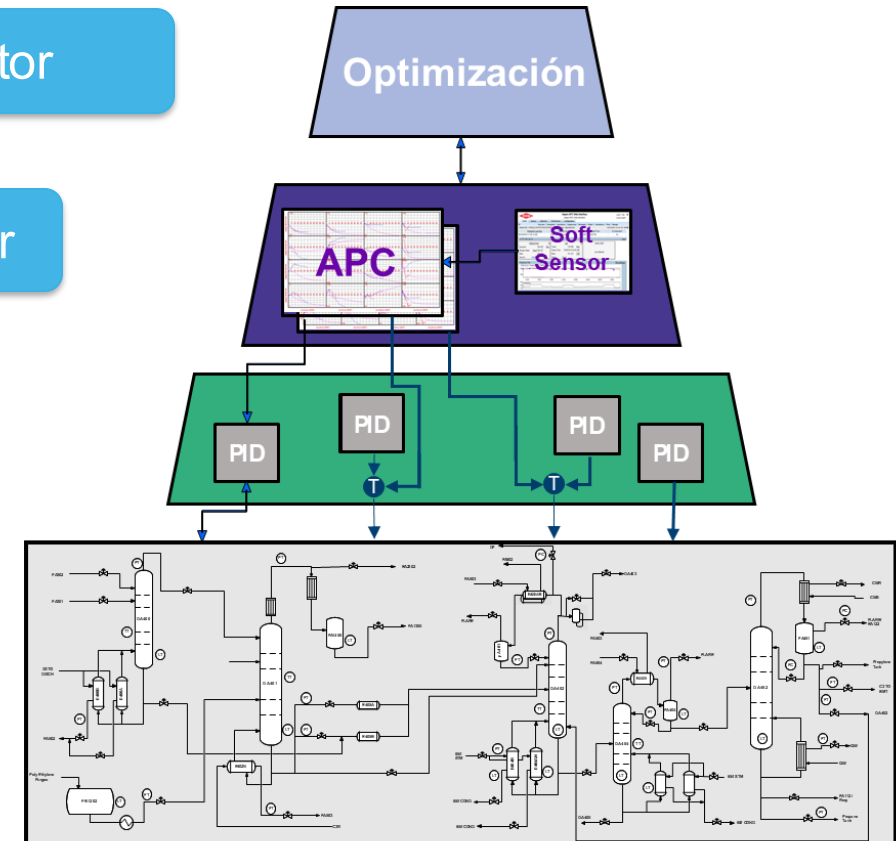
Smart cruise car

Driver sets 90 km/h and the cruise control reaches that speed regardless of the environment

Control cruise car

Driver regulates gas, speed, lights, ...

Driving a 90's car



Chemicals

Cumene



- **CHALLENGE**

- Increase control stability
- Reduce specific hot oil consumption

- **SOLUTION**

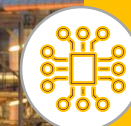
- Implementation of SE APC for cumene, benzene, depropanizer and deethanizer towers

- **BENEFITS**

- APC utilization rate > 90 %
- 5 % reduction of specific hot oil consumption
- Increased plant stability



> 90 % utilization rate



5 % hot oil consumption reduction



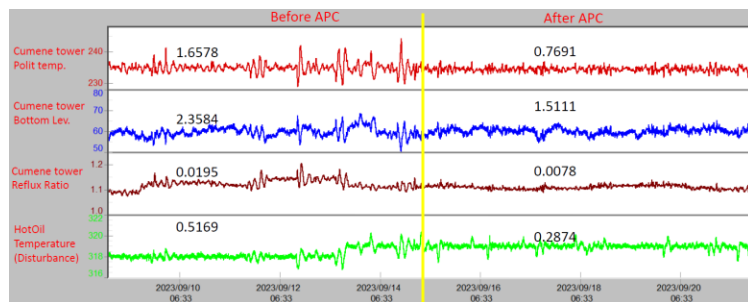
\$ 430k /year savings

Chemicals

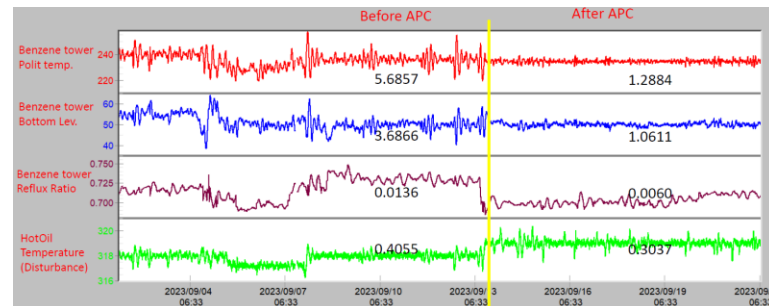
Cumene



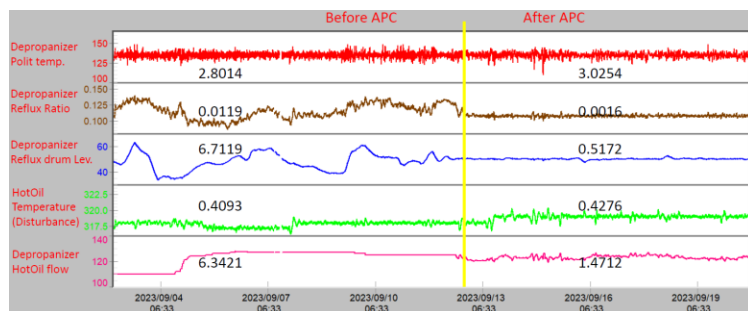
Cumene tower



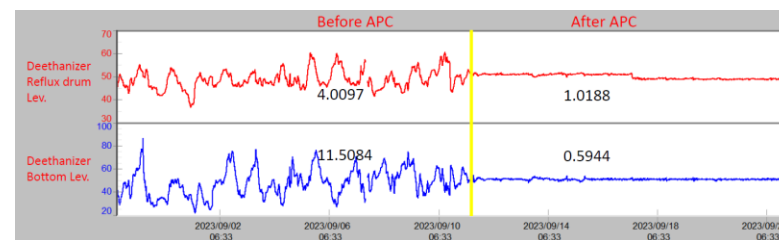
Benzene tower



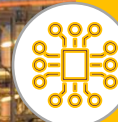
Depropanizer tower



Deethanizer tower



> 90 % utilization rate

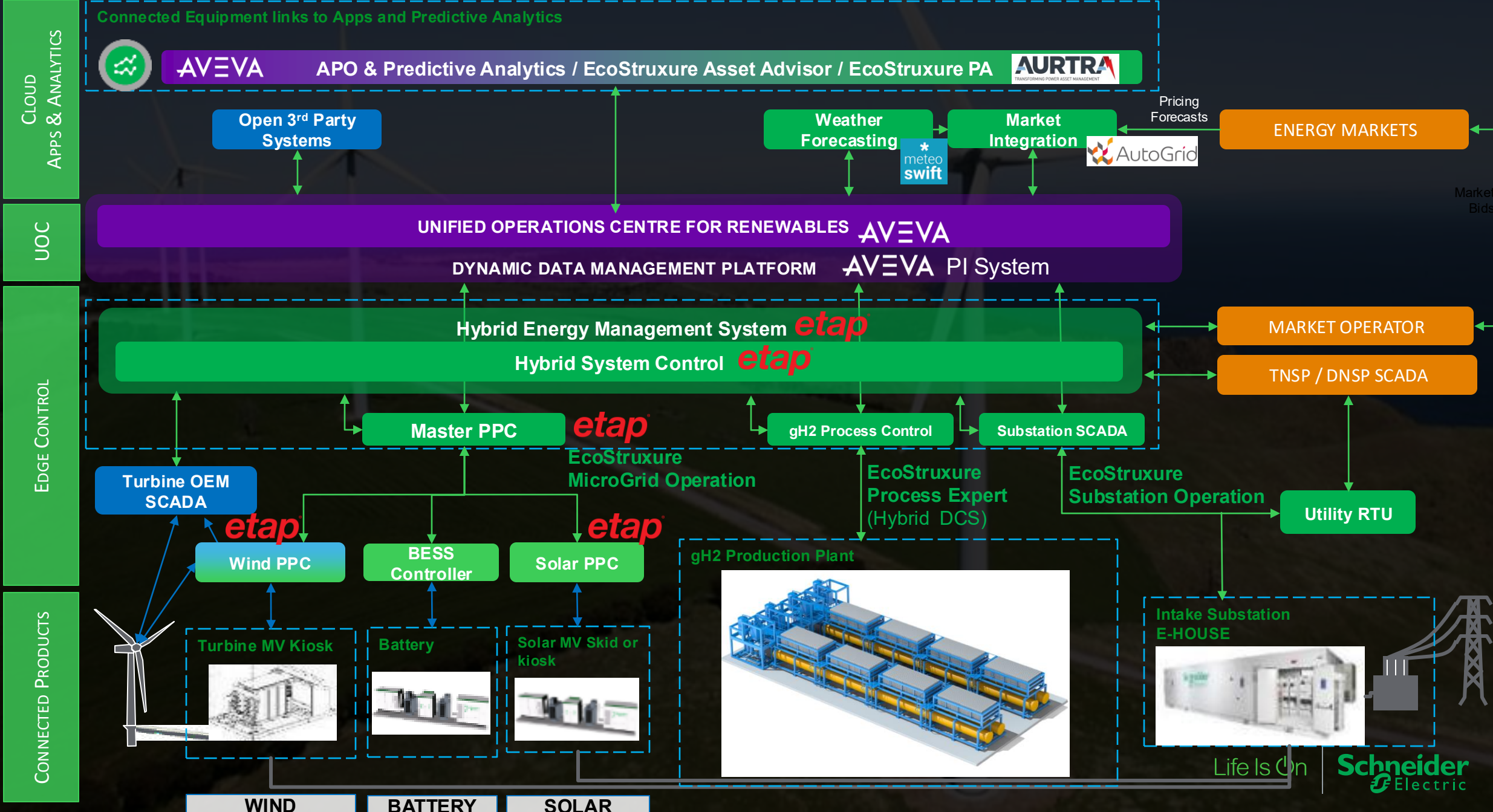


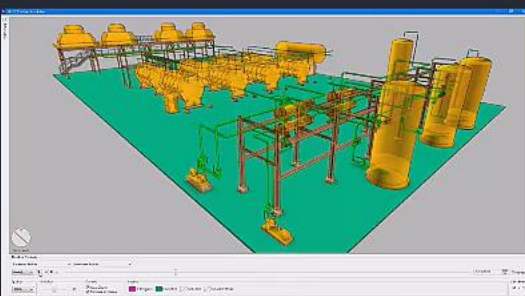
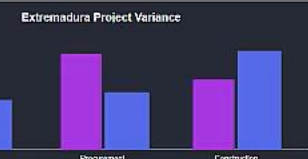
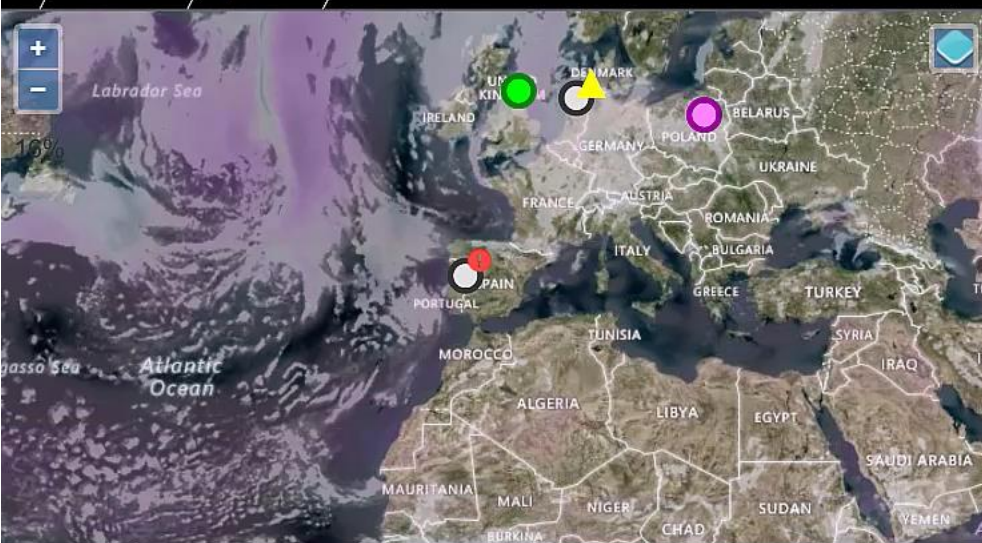
5 % hot oil consumption reduction



\$ 430k /year savings

gH2 Production Complex Solution | A Comprehensive Global Offer to answer the main Challenges of gH2 Production





Saudi Aramco

Saudi Arabia

Optimizing refinery economics through real-time operations digital transformation at the Yanbu refinery

Goals

- Optimize operations by closing the 'plan vs actual' performance gap for production and supply of transportation fuels for western Saudi Arabia
- Close the technology gap between the refinery planning/scheduling and APC systems
- Close the 'plan vs actual' performance gap caused by the technology gap, which can amount up to 10% of the crude margin

Challenges

- Misalignment between planning, scheduling and APC objectives; constraints and targets; and infrequent feedback from actual process conditions and process constraints unaccounted for in real-time

Results

- First refinery-wide real-time optimization (RTO) in the Middle East
- Deployed solution using AVEVA Process Optimization software on an AVEVA PI System infrastructure to provide real-time optimal operating targets for all key process parameters
- **Project payback estimated between 3-6 months, with early results showing quick progress: 6% gap reduction in crude margin, high user acceptance and reduced operator interventions**
- Plans to feed RTO results into the PI System, and develop KPI/benchmarking displays



Industry: Oil and Gas

Solution:

AVEVA™ Process Optimization

AVEVA™ PI System

"We chose to deploy a refinery-wide optimization solution using AVEVA Process Optimization, with an infrastructure built around the PI System. What the system does is that it continuously maximizes the most valuable products as the pricing changes, as the environment changes, and as the crude quality changes, so that we're always running at our optimal performance"

Douglas Raven, Engineering Specialist, Saudi Aramco

LEARN MORE

AVEVA

Life Is On

