

A NEW GLOBAL SOFTWARE LEADER

Your Digital Transformation Partner

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AVEVA

AVEVA Overview

Largest Software Provider
for Industrial Automation



Industrial **Software and Solutions** focused on improving return on capital and increasing profitability for leading companies across the **industrial manufacturing** and **infrastructure** markets.

Focusing on **production operations** and **asset life cycle management** from **Edge** to the **Enterprise**

Deployed in
100,000
sites

Monitor
20 billion
industrial parameters

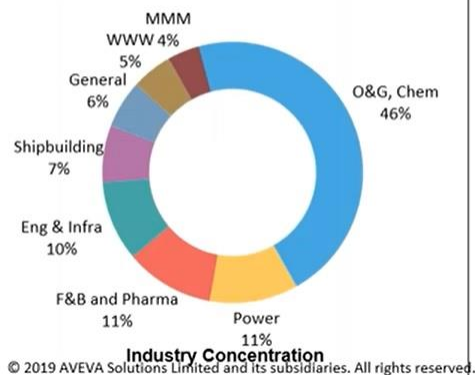
Process
10 trillion
industrial transactions per day

Storing and managing
12,000 TB
of information per year

Wonderware

SimSci

Avantis



4400 people
10+ R&D centers
22+ project centers

> 1000 total capacity in R&D
16% of sales on R&D
> 85% of R&D spend on NextGen programs

4200 SI partners
5700 certified developers
160 technology partners

AVEVA

Engineering Information Management
Operations Information Management
Enterprise Asset Management
Predictive Asset Analytics

AVEVA NET
Wonderware
Avantis
PRISM

ASSET
PERFORMANCE

ENGINEER
PROCURE
CONSTRUCT

MONITOR
& CONTROL

HMI /
SCADA
IOT
Platform

InTouch, Citect,
Edge

System Platform

AVEVA

OPERATE
AND OPTIMIZE

PLAN AND
SCHEDULE

Feedstock
Management;
Planning and
Scheduling

Spiral

SimSci Process Engineering
PDMS, E3D Engineering Design
ERM, Procon Procurement, Construction
SimSci Process Simulation

Wonderware MES Manufacturing
Execution;
SimSci Production
Optimization

Edge to Enterprise Visibility

AVEVA Cloud: secure, cloud solution for development, collecting, storing, and visualization.

System Platform: responsive, OMI visualization; enables Enterprise-wide standardization.

InTouch HMI: Used in 1/3 of industrial facilities worldwide; remote web based browser support.

AVEVA Edge: small footprint, full featured HMI for embedded and OEM applications.

AVEVA IoT View: Linux-based Edge Management; IIoT and cloud ready.

Enterprise

**AVEVA
Cloud**

Multi-site

**AVEVA
System Platform**

Plant

**AVEVA
InTouch HMI
or CITECT**

Line

**AVEVA
Edge**

Edge

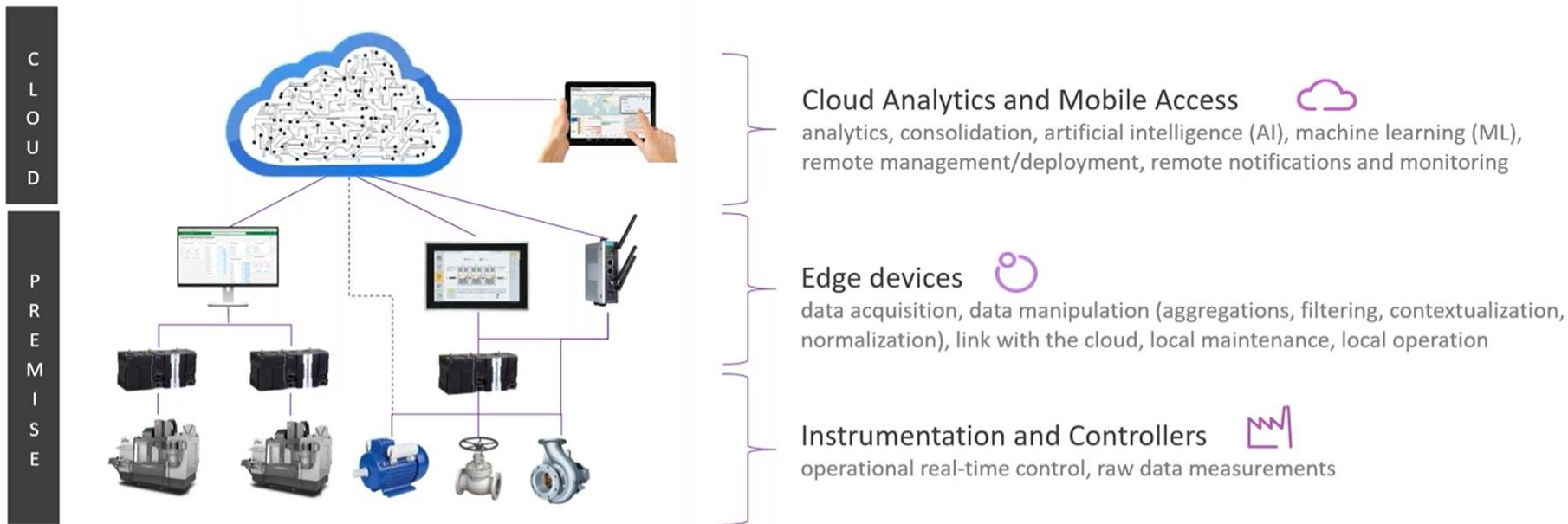
**AVEVA
IoT View**



AVEVA

Industrial Internet of Things (IIoT) / Industry 4.0

Main components



AVEVA INSIGHT

🔍 water

Saved Content

📄 name includes water

🔑 keywords includes water

Data

ADD ALL

name includes water (2)

Tracker-WaterTreatment-PostProcessed-r...

Tracker-MountainWaterTreatment-1 (1)

sourced from water (84)

ValleyWaterTreatment (80)

MountainWaterTreatment (4)

locations includes water (84)

/Valley Water (80)

/Mountain Water (4)

SUGGESTED CONTENT (4)

DASHBOARD

Mountain Clearwell Cycles



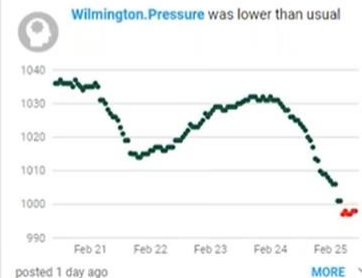
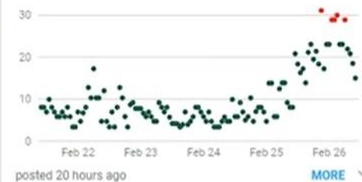
Valley Clearwell Quality



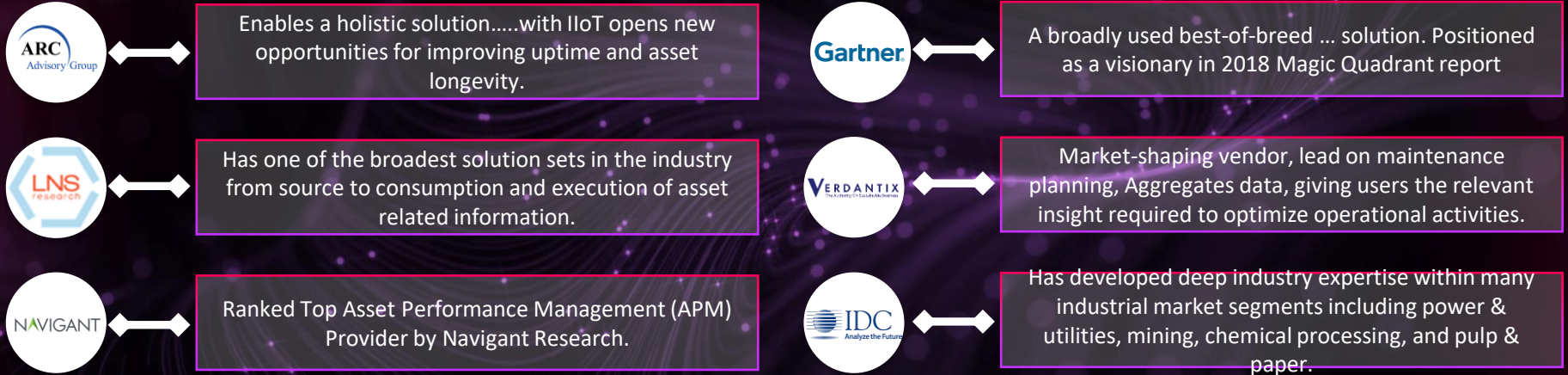
Clearwell pH - Map



Intelligent search... lets you find data easily

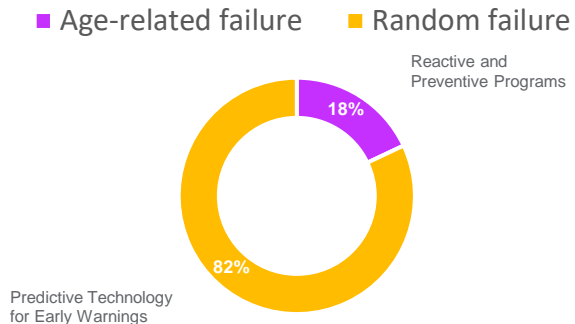


Recognized APM Industry Leader



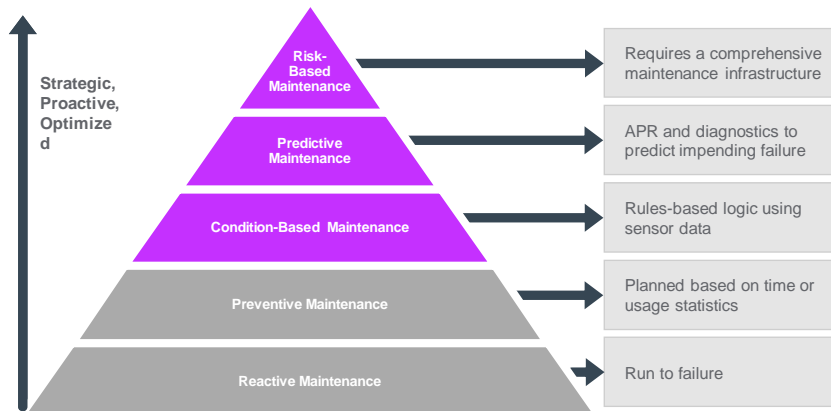
Connect the Asset Strategy to Corporate Objectives

Failure Patterns

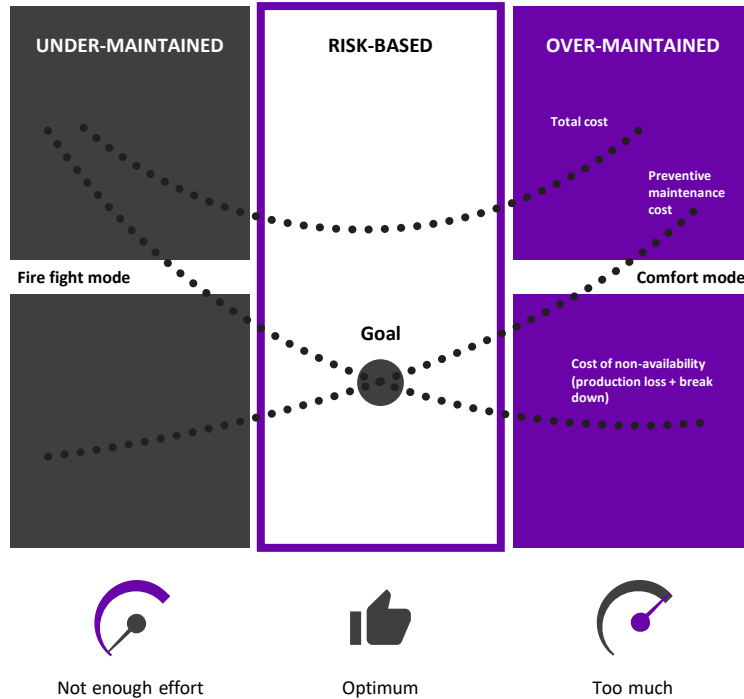


ARC STUDIES SHOW ONLY 18% OF ASSET FAILURE IS AGE-RELATED. BASED ON THESE DATA, PREVENTIVE MAINTENANCE PROVIDES A BENEFIT FOR JUST 18 PERCENT OF ASSETS, AND MONITORING FOR PREDICTIVE MAINTENANCE IS A RECOMMENDED OPTION FOR THE REST.
WWW.ARCWEB.COM/LISTS/POSTS/POST.ASPX?ID=260

It's a Journey

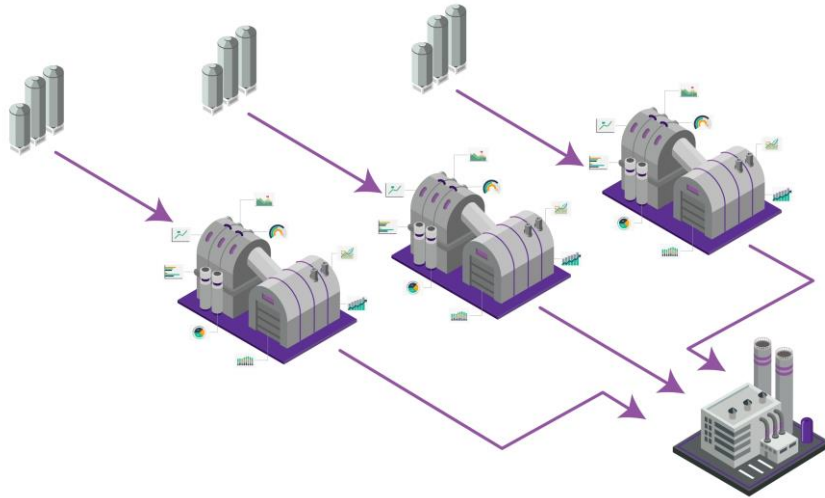


Assets are the Heart of the Business



- Insight into risks - Balance between financial operational and safety risks
- Ever-changing legislation - Complying with environmental and social requirements
- Sharing knowledge - Implement best practices globally
- Continuous improvement – to drive maximum return on industrial assets

Apply the analytics to improve maintenance and operations of the assets



Historical

What Happened

- Assessment and exploration of historical operational data
- Trends, KPIs, Dashboards to present abstracted views

Historical Domain

Real-Time

What's Happening

- Processing of real-time operational data
- Rule based inference for causal analysis

Real-Time Domain

Predictive

What If

- Comprehensive model based assessment of operational data ranges to determine potential outcomes.
- Deterministic or non-deterministic models
- Open-loop simulations

Science Domain

Prescriptive

What to do

- Systems that synthesize, predict and provide scenario-based guidance
- Deterministic or non-deterministic models or learning elements
- Closed-loop algorithms

Artificial Intelligence Domain

03. Solution

Analyze

Duke Energy – Leverages IIoT and Predictive Analytics to Reduce Failures

Challenges

- Avoid catastrophic failures at power plants. Duke Energy had a transformer failure that cascaded into other transformers and two turbines, causing over \$10 million in damages
- Data analysts at Duke Energy were typically spending 80% of their time collecting the data and only 20% of their time analyzing it
- Inconsistent diagnosis and limited risk assessment

Solution

- To fill the time gap between inspections, engineering determined that online continuous monitoring was needed
- PRISM Predictive Asset Analytics was deployed as part of Duke Energy's SmartGen program

Results

- Empowering people with early warning notification of equipment problems
- Optimizing assets with low-cost sensors and connectivity for high-fidelity data access enabling predictive maintenance
- Improving operations with contextualized insights

"Early warning identification and diagnosis of equipment problems with predictive asset analytics results in over 65M+ in savings."



Savings of
\$34.5 million
single early warning catch



Serving
7.2 Million
customers



Generation capacity
58,000 MW

Pepsi Bottling Ventures of Idaho

Pepsi bottling plant achieve significant improvements in changeover performance and quick project payback

• Goals

- Improve changeover performance by accurately identifying constraints and bottlenecks
- Facilitate better decision making through consistent and reliable data
- Understand payback metrics and justify future projects requiring capital investment

Challenges

- The new plant required the integration of new and legacy equipment
- Downtime data was recorded manually, and this tracking system did not include recently installed equipment
- A lean headcount meant that engineers' time was at a premium

Results

- Reports and trending capabilities of AVEVA solution enabled cross-functional teams to review performance data in consistent, reliable and easily shared formats
- Cause of downtime in changeover process identified, leading to 50% reduction in changeover time and additional savings in raw materials and packaging
- Plant has achieved an overall 10% increase in line efficiency
- Total payback for investment took less than one year with over \$78,500 in annual savings

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“ We have to make the right decisions everyday because it has a huge impact on our bottom line. AVEVA's solutions help us make those decisions. ”

*Scott Jamison
Vice President of Engineering
Pepsi Bottling Ventures*



10% increase
in line efficiency



50% reduction
in changeover time





Over \$78,500
in annual savings

AVEVA

Introduction to AVEVA Flex

One AVEVA Flex Program - 3 Different Options

Subscription Access	AVEVA Flex Credits 	Enterprise Subscriptions 
A-la-carte access to individual solutions in our software portfolio	Consumable credits that can be redeemed for a variety of subscription tiers	Customised subscription solutions tailored to large multi-site enterprise deployments
<ul style="list-style-type: none">✓ Available in 1, 3 or 5 year terms✓ Standard Support included in every subscription, with Premium or Elite Customer FIRST support also available✓ Selected via subscription configurator precisely configure the product size needed✓ Useful if the customer is only focused on specific products with limited budget	<ul style="list-style-type: none">✓ Available in 1, 3 or 5 year terms✓ Standard Support included, with Premium or Elite Customer FIRST available✓ Subscribe to consumable credits that can be redeemed for product licenses✓ Ability to activate / deactivate licenses as needed and morph usage across the portfolio as needs evolve✓ Key for digital transformation	<ul style="list-style-type: none">✓ Negotiated deal, 3-5 years✓ Premium or Elite Customer FIRST & Customer Success Manager✓ “All you can eat”, but restricted to a set of named sites and a limited set of products✓ Cloud fees and 3rd party royalty costs are not included✓ Large account Customer FIRST conversion✓ Displace / lock-out competition

Special support for our partners



AVEVA

Access our entire Monitoring and Control
Portfolio eLearning free of charge

AVEVA InTouch HMI, formerly Wonderware
AVEVA System Platform, formerly Wonderware
AVEVA Historian, formerly Wonderware
AVEVA Edge, formerly Wonderware
OASyS SCADA
Citect SCADA

Train Anywhere, Anytime



