

PERFORMANCE

Asset performance is about maximizing the performance of plant assets to get the best possible Return On Capital Employed (ROCE).

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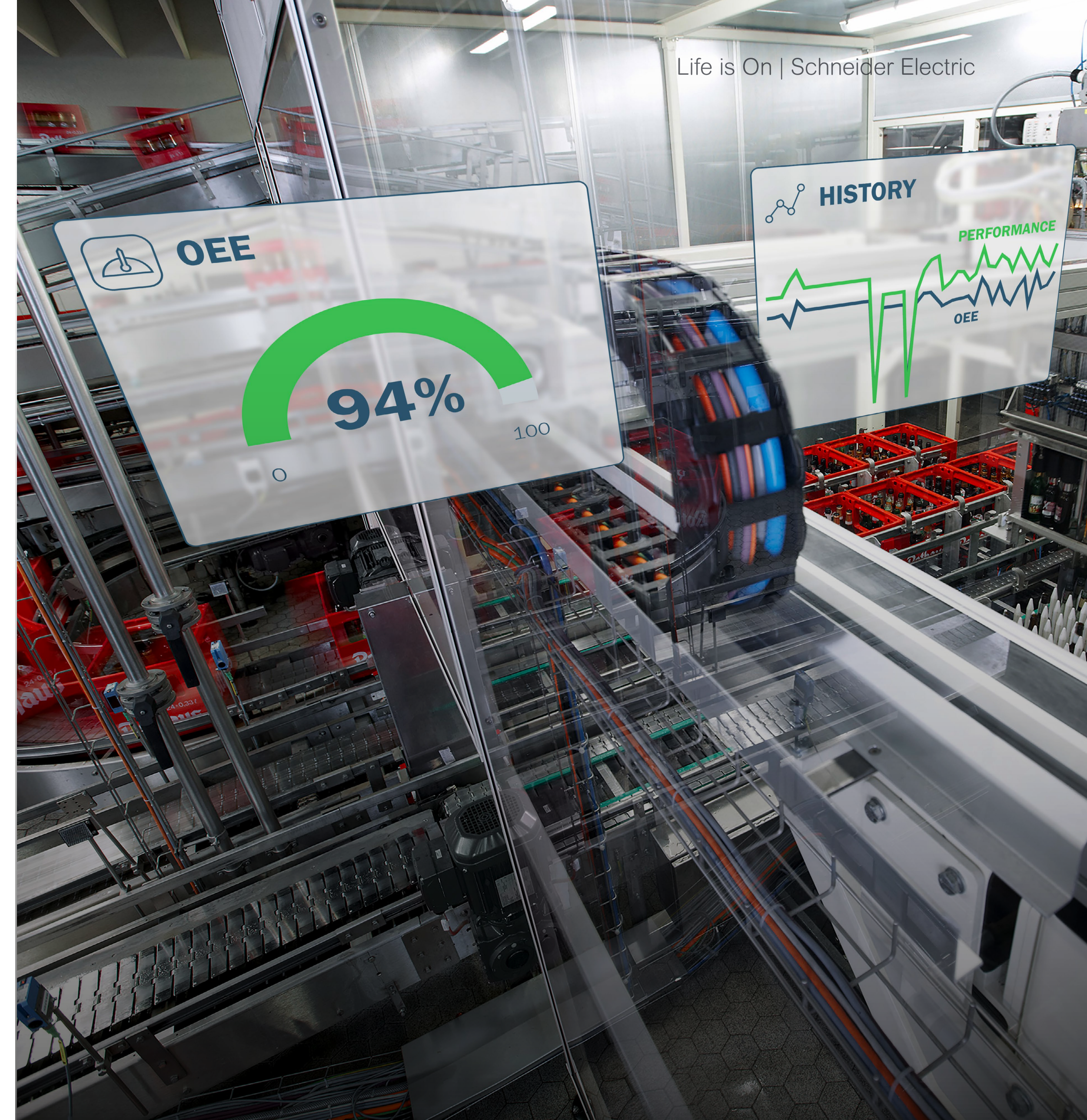
Life Is On

Schneider
Electric

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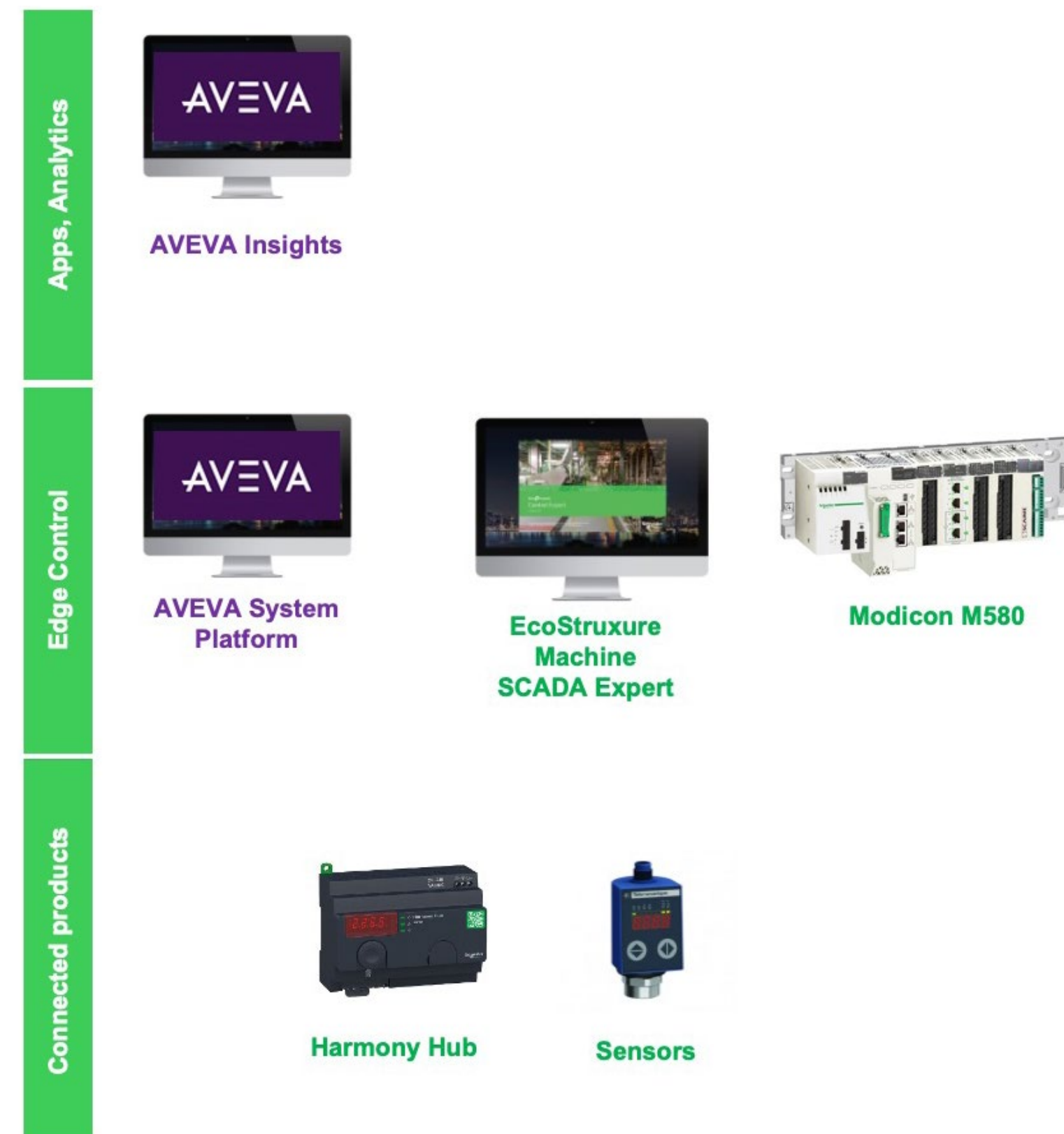
The image features a close-up, shallow depth-of-field photograph of several rolled-up documents or scrolls. The scrolls are the primary focus, with their edges and the texture of the paper visible. They are arranged in a slightly overlapping manner, creating a sense of depth. The background is heavily blurred, showing the silhouettes of a building with tall, thin structures, possibly a church or a government building, against a soft, warm light that suggests a sunset or sunrise. The overall color palette is muted, with soft blues, greys, and warm, golden-brown tones.

- Do you need a cloud based conditional maintenance solution based on asset/line health monitoring and alerts?
- Do you want to leverage an automated, rules based condition monitoring system to provide early warning notification and diagnosis of equipment issue before failure?
- Do you want a web thin client interface to organize alert information to identify systems that are in an abnormal state?
- Would you like alerts & notifications by mail: by criticality, duration, frequency and statistics?
- Do you need an online maintenance report: capability to describe maintenance actions, spare parts, pictures... completed by CMMS tools?



Assets or Line condition monitoring and alert

Solution architecture



Condition based maintenance to monitor health status of assets to prevent downtime and production issues

Why it matters?

- Helps to avoid unplanned downtime and loss of production capacity
- Early detection of equipment issues to help avoid breakdown and associated costs
- Schedule maintenance to minimize impact on production activities
- Extend asset life
- Optimize maintenance efforts avoiding scheduling unnecessary routine maintenance operations
- Improve visibility of equipment status
- Elevate the assets knowledge base
- Helpful to synchronize maintenance activities with manufacturing production planning

Water Distribution & treatment, Ashland City, Oregon

Customer challenge

- Responsible for water source, treatment, and distribution for 21,000 residents along the Oregon-California border
- 7 MGD, 70 miles of water lines, 5 pump stations, 29 pressure reducing stations, 925 fire hydrants, and over 6700 individual services and meters.
- Needed a mobile solution that would give water technicians in the field real-time information to monitor the system without laptops and VPNs

The solution

Utilized AVEVA Insight to make data from historian and SCADA system instantly available to field technicians

Results

- Reduction in man-power needed to support water operations
- Field technicians now have timely access to information regardless of location
- Automated system notifications, including on mobile devices
- System access control / security built-in, with no additional overhead required

Enabling field technicians with
real-time information & asset
alerts

- Do you need to manage and remotely diagnose or maintain assets?
- Do you want to securely connect to advanced asset performance solutions?
- Do you need to reduce downtime and travel costs?
- Do you want to enable maintenance teams to make the right decision remotely?



Secure remote maintenance operations

Solution architecture



Reduce downtime and travel costs with secure connect solution. It uses Schneider Electric software to access HMIs, PLCs, or drives, giving you a cybersecure tool to diagnose and troubleshoot equipment as if you were on site.

Why it matters?

- Component of secure IT infrastructure that provides confidence to allow asset connectivity
- Complete Cybersecure automation system is easy to configure based on IIoT Box and M580
- Easy step to start your digitization journey - even for existing installations.
- Enable new engineering and maintenance models
- Help maintenance teams make the right decisions remotely.
- Possible to access remote expertise without IT department assistance.
- Travel cost reduction and rapid access to remote, on-line support

Pet food production machinery OEM

Secure remote maintenance operations

Customer challenge

The customer needed access to all the insights required for machine supervision. This required advanced local HMI capabilities with high-quality graphics, traceability combined with direct remote access to the machine, including its controller for remote diagnostics and troubleshooting.

The solution

We deployed EcoStruxure Secure Connect for secure remote access and graphing EcoStruxure Machine SCADA Expert for complete local supervision, including high-quality graphs and traceability features.

Results

- Remote access to the M340 controller at the customer facility
- Ability to perform configuration, commissioning, calibration, online diagnostics analysis etc., remotely from the OEM's computers (e.g. back at their offices)
- Reduced downtime and associated costs
- High-quality graphs and insights available to support process optimization and traceability requirements for the CPG segment

[Learn more](#)

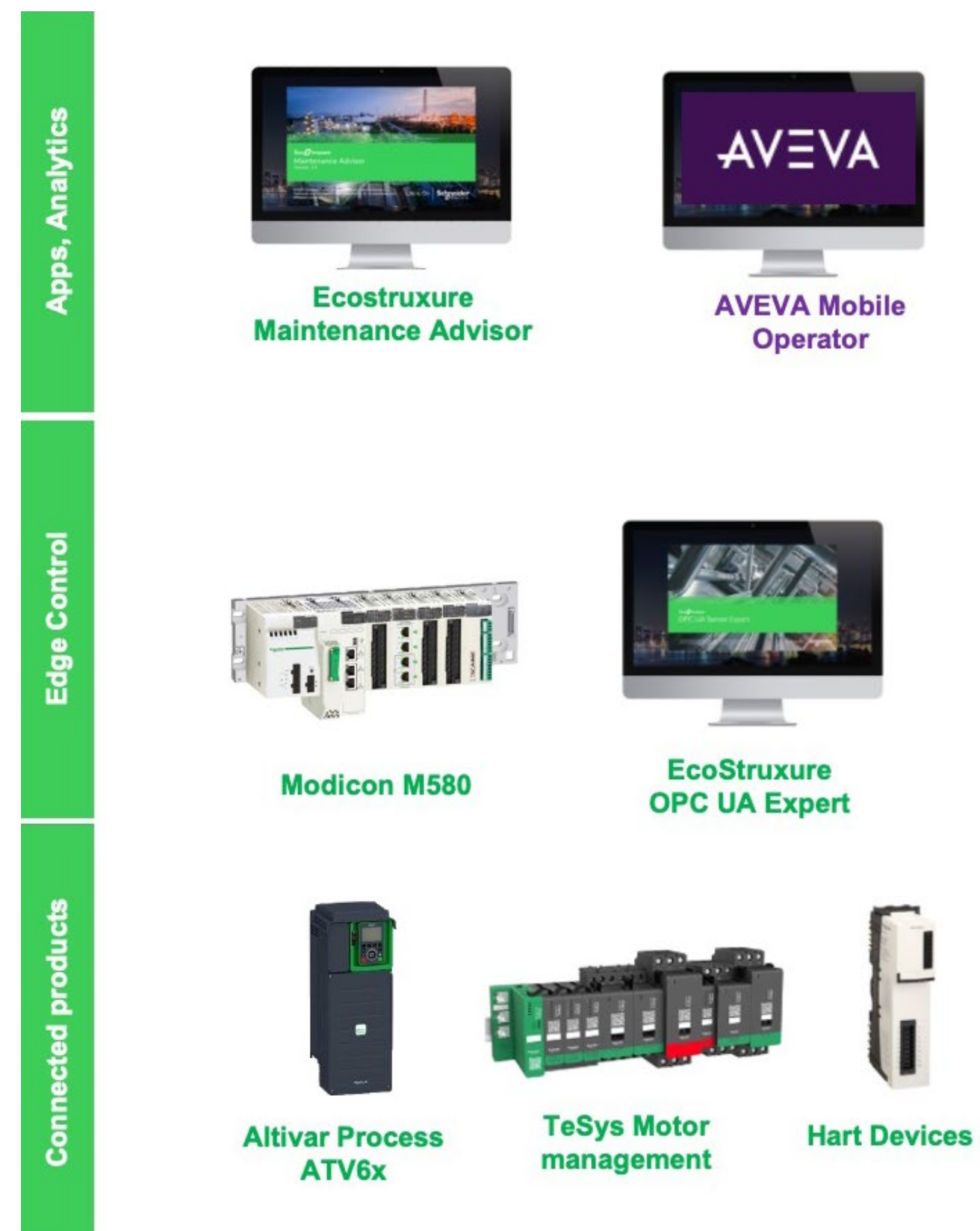
A complete solution consisting of training, support, hardware, and software was delivered to a happy customer.

- Do you need real-time automated condition monitoring which provides early warning and insight into emerging abnormal conditions helping to avoid unscheduled slowdowns and shutdowns?
- Do you need access to your plant's assets which is secure, transparent and vendor agnostic?
- Do you want to enable predictive maintenance which extends the lifetime of your assets?
- Do you need to streamline maintenance processes and eliminate paperwork by integrating maintenance and work order/ work flow systems?



Condition-based maintenance and decision support

Solution architecture



Digital platform for predictive maintenance and decision-support which helps enable profitable operations.

Why it matters?

- Improved plant availability / uptime - through accurate, early insight into emerging abnormal asset conditions
- Lower Total Cost of Ownership (TCO) with more effective use of Operations and Maintenance (O&M) resources and funding.
- Reduce OPEX (Operational Expense) by reducing maintenance costs via predictive maintenance
- Improved workforce productivity through mobility and insight driven decision support tools.

Reliance

Condition-based maintenance and decision support

Customer challenge

Reliance wanted to improve reliability and availability at a very large installation with over 22,000 Fieldbus Foundation tags across 3,500 segments and 16,000 Hart devices.

The solution

Instrument Asset Management System to support numerous field devices. The system made it possible to remotely perform configuration, commissioning, calibration, online diagnostic analysis, and repair/replace functions for field instruments.

Results

- Early warning/impending failure alerts to drive intervention before downtime occurred
- More efficient use of maintenance resources
- Reduced unplanned downtime

[Learn more](#)

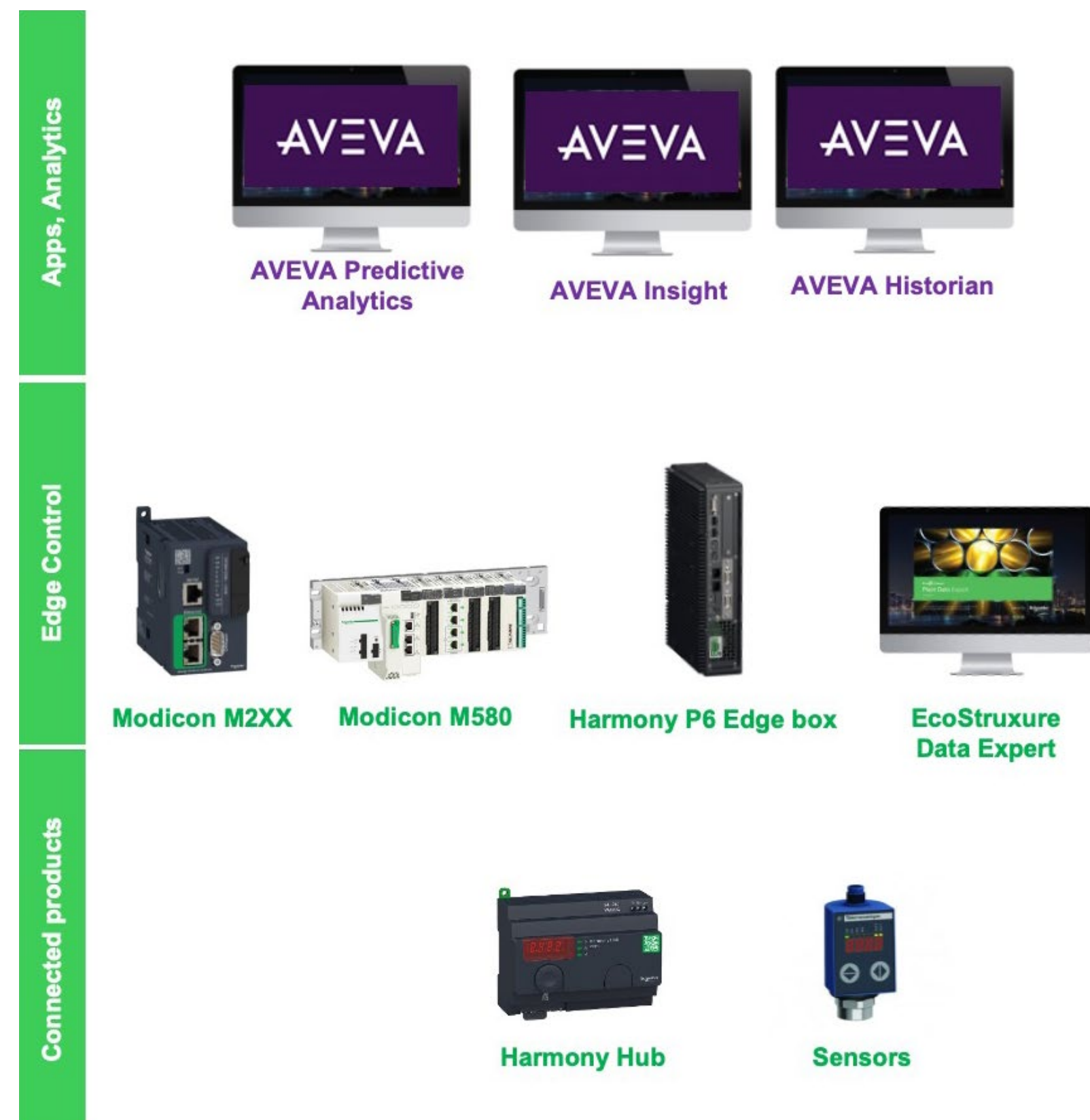
The largest oil refinery and petrochemical complex in the world.

- Do you need to keep your assets operating at peak performance?
- Do you want to develop normal operational profiles for assets based on their individual operating histories?
- Do you want to compare known operational profiles with real-time operating data to detect early warning signs of pending equipment failure?
- Do you need real-time updates of how well a plant or system is functioning?
- Do you need advanced analysis capabilities including problem identification and root cause analysis?



Critical equipment predictive maintenance

Solution architecture



Predictive maintenance solution based on analytics and machine learning: real-time sensor data are collected and compared to a nominal signal model to determine when subtle deviations from expected equipment behaviour occur then alert staff.

Why it matters?

- Avoid unplanned downtime and loss of production capacity
- Early detection of equipment issues to avoid disaster and the resulting costs
- Schedule maintenance intervention at the right time.
- Reduced impact on operational plans and optimize maintenance efforts
- Synchronize maintenance activities with manufacturing batch plans
- Improved visibility of equipment health
- Elevate asset knowledge base

EDF Group

Critical equipment predictive maintenance

Customer challenge

As the national electricity producer and distributor in France, EDF's challenge was avoiding turbine catastrophic failure. They needed to improve power generation reliability.

The solution

AVEVA Predictive Analytics to analyze equipment health and performance so EDF's modern power plants can archive thousands of signals that are used by a range of tools.

Results

- Savings from downtime avoidance due to early warning = 1.5 million Euro
- Mobile Operator Rounds fully deployed at 12 facilities

[Learn more](#)

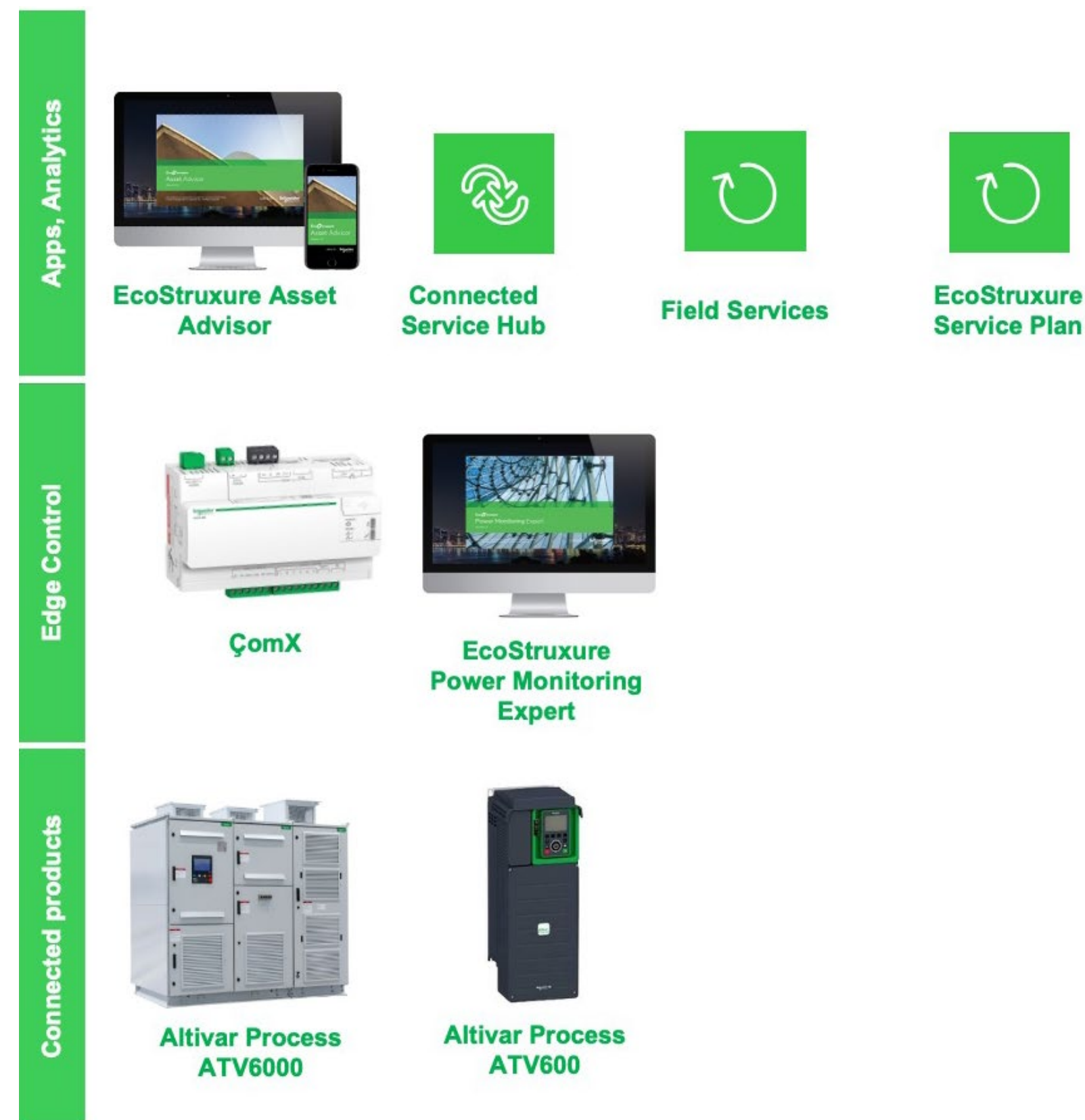
Serving 39.1 million customers globally with a generating capacity of 653.9 TWh.

- Do you need continuous monitoring of asset health as well as asset environment impact?
- Do you need advanced analytics combined with vendor expertise to optimize the use and maintenance of equipment?
- Do you need non-intrusive digital architecture according to cybersecurity standards (IEC62443)?
- Do you want to ensure maximum efficiency of critical drives?



Critical drives and rotating equipment maintenance services

Solution architecture



Ensure maximum efficiency of critical drives by combining digital technologies with vendor expertise and artificial intelligence.

Why it matters?

- 24/7 remote assistance, with experts who can consult in asset management (Connected Service Hub: CSH)
- Empower operators to make decisions supported by holistic analysis of equipment performance
- Benefit from asset connectivity with protection from unauthorized external access

[Learn more here](#) about how this asset performance solution works or [read the brochure](#).

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