

EcoStruxure[™] Asset Advisor for Electrical Distribution

Customer Overview

Presenter name - Date

The impact of failure in the electrical distribution can be huge

What if it could warn you about its condition before it causes a shutdown?



Of Total Business Interruption looses reported is due to fires&explosion

#1 Initiating Causes of fire (22%) in industrial sites come from electrical equipment failure

Source: Allianz Claims 2015 Dashboard; FM global



Of all electrical fires are due to lack proper maintenance

Source: Factory Mutual Insurance Group

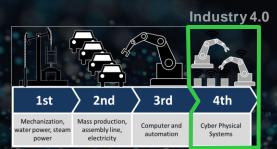


Of production Capacity in the process industries are the average losses due to downtime

25 Million of electrical motors fail each year

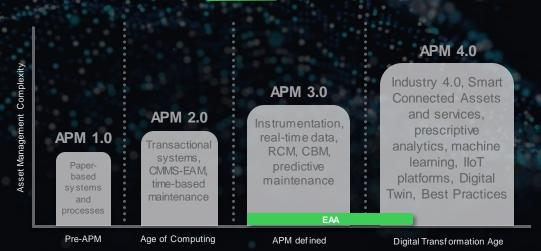
Source: Factory Mutual Insurance Group; Emerson estimate

Industry 4.0 Demands a New Approach to Asset Performance Management



Asset Performance Management is a critical component of your operations strategy

- Cyber-physical Systems
- Internet-of-Things
- Cloud Computing



Enabling an optimized approach to your maintenance strategy

- From reactive toward preventive, condition based and predictive
- Based on the criticality of your assets
- Using prescriptive analytics and machine learning
- Connected products with managed services
- loT platforms supported by end-to-end architectures

Source: APM 4.0: Redefining Asset Lifecycle for Industry 4.0 Insresearch.com

EcoStruxure Asset Advisor for Electrical Distribution

Mitigate electrical failure risk for most critical assets along your entire electrical system, from grid entry downstream to rotating equipment powering your processes

Adding scalable and valuable solutions to your costly problem with unplanned downtime of critical equipment.

By innovative Condition Base Monitoring technologies seamless integrated into Schneider Digital Services and cybersecure IoT architecture, for you to get benefits of predictive maintenance effectiveness.



EcoStruxure Asset Advisor - From data to actionable insights

Cloud based Digital Services enabled by connectivity, sensor technology, and analytics, and supported by experts to provide actionable recommendations to your people on-site... to get best end-to-end service







Connect everything from shopfloor to top floor

COLLECT



Capture critical data at every level, from sensor to cloud.

ANALYZE

Convert data into meaningful analytics

NOTIFY

Notification in case of abnormal behaviour

VISUALIZE

Provide a synthetic view of data

TAKE ACTION



Drive action through real-time information and business logic

EcoStruxure Architecture maximizes the value of data

Transforms **data** from your electrical distribution assets...



...through a cloudenabled predictive analytics & expertise...



... into actionable insights and recommendations from experienced professionals

Life Is On



Mitigate the risk of electrical failure with EcoStruxure Asset Advisor

Digital monitoring that provides data driven services for Electrical Distribution equipment

Anticipate risks in your Electrical Distribution system

- · Overheating leading to fire
- Corrosion on harsh environments
- Unexpected failures
- Insulation issues
- Accelerated aging or degradation
- · High failure rates of rotating equipment

Leverage Schneider Electric expertise and analytics to assess the health of your system from grid to final application of power

- Cloud based monitoring with timely analysis of raw data sampled on field
- 24/7 support from Connected Service Hub experts
- Unlock value of data by smart alarming, indicators and status insights
- Users empowered to schedule the right maintenance at the right time
- · Friendly user interface with customizable widgets and smartphone app
- Centrally monitor diverse assets types, mostly agnostic, and multi-site.

Connect your critical equipment and their IoT sensors

















Life Is On

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EcoStruxure Asset Advisor for Electrical Distribution

Cloud-based digital services for your critical equipment, a scalable offer with 2 levels of services



Connected Service Hub

PREVENTIVE

Anticipate maintenance and manage day to day operations through smart alarming





PREDICTIVE

Manage your critical assets performance and safety through Predictive Analytics



insights reported



Condition Based Monitoring & predictive analytics

Web dashboard

& Mobile Apps

EcoStruxure Asset Advisor for Electrical Distribution services

Two levels of services

Main features	Preventive	Predictive	Customer value
Monitoring			
24/7 Remote as set monitoring	✓	✓	Anticipate failure and manage operational risk
Detection of abnormal conditions	 	✓	Extend lifetime of connected Equipment with continuous monitoring
Alarm/eventmanagement Energy consumption data visualization	✓	✓	Critical is sues addressed faster with smart alarming
Condition monitoring with predictive analytics		✓	Critical is sues addressed earlier with predictive analytics
On-line support	1		
Access 24/7 Connected Services Hub	· ✓	✓	A dedicated number to call and be called 24/7
Remotetroubleshooting	·	✓	Secure operational excellence by reducing downtime risk
Remote expertise		✓	Benefit from expertise from manufacturer
Reporting and consulting	 		I I
Performance reporting	✓	✓	Automated reporting underlying efficiency is sues saved in a document stored on the platform
Customized report with insights from expert	 	✓	Receive insights and recommendations to manage as set lifecycle
Condition based recommendations		✓	Condition based tailored services triggered by Experts

EcoStruxure™ Asset Advisor - Customer Engagement

End-to-end service supported by a cybersecure architecture and experts that provide actionable recommendations

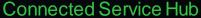






Service platform leveraging Equipment data, Analytics, Asset Knowledge and SE Expertise

Cloud-based Platform





Our agents recommend & coordinate local Service Teams for on-site support

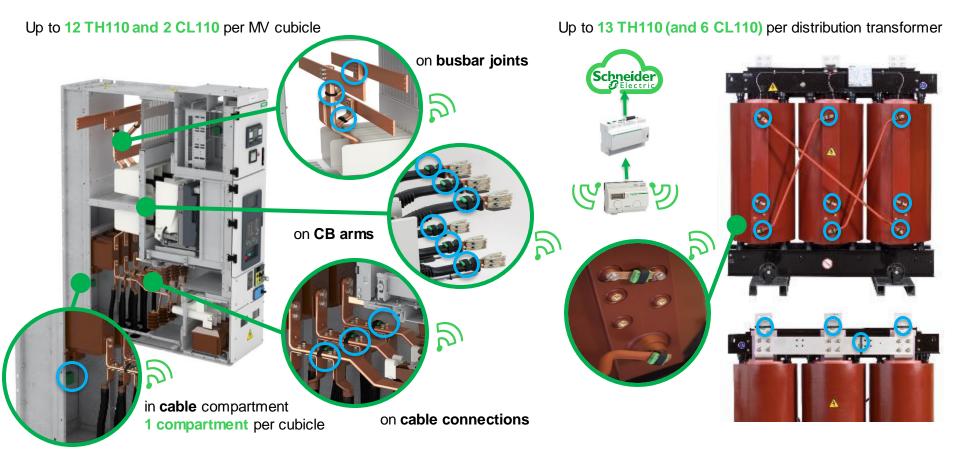
2 service levels: Preventive Predictive

(1) Apply to Predictive level only

Service levels

Thermal monitoring

Installation performed by certified service engineers



Monitor your installations with cutting edge user interfaces



Web dashboard

- Accessible from PC or tablet
- Multi-user rights and access
- 24/7 asset health status monitoring, alarms, alerts, notifications
- Historical data, patterns, trends, events
- · Recommendations depending on issue
- Asset performance Analytics¹
- Condition based recommendations¹





Mobile App

- Mobile App that gives remote access to monitor 24/7 asset health status
- Alerts and alarms are forwarded directly to the mobile App
- Multi-user rights and access



Reports

- Customized reports with insights from our experts¹
- Automated reports on energy consumption and asset condition
- Available on the platform

(1) Predictive level

EcoStruxure Asset Advisor protect infrastructure from cybersecurity risks



- · Only authorized Users, under role based control of rights, log in WebApp or mobile App.
- · App users under traceability controls (access logged, audited) visualize their data only.
- Data Privacy in accordance with GDPR (EU regulation) to ensure customer legal rights.



- · Operation follow cybersecurity Schneider Electric's policies under In-Depth approach.
- · Application and comms stay monitored real-time, protected against malicious attacks.
- Managed Services by Connected Service Hub includes strong users control by cIAM.



- Equipment data is hosted into MS Azure, where partner operation is ISO and CSA certified,
- · Adding advanced firewalling and monitoring features, Incidents Response, Continuity plan...
- · Data segregated into EcoStruxure cloud storage ensuring high availability and integrity.



- Push data to Schneider Electric platform with secure connection-to-cloud.
- · Data encryption under HTTPS or SFTP to prevent data access.
- · Gateway enrollment verification before data moves from gateway to cloud.



- A data logger, with strong security services embedded, installed on customer site.
- In case of PME or SW as gateway, data stored at customer server under their own policies.
- · Both cases, designed following strictly Secure Development Lifecycle.



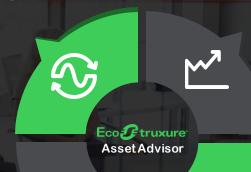
- · Data points are electrical parameters and measurements, customer keeps data ownership.
- Raw data is polled with standard protocols: Modbus, ZigBee...
- One way data flow: Remote control on devices is not allowed from outside.



Mitigate electrical failure risk and reduce downtime by proactively identifying issues inside your equipment

OPERATIONAL PERFORMANCE

- Reduce downtime risk
- Optimum lifetime of connected equipment
- Insights from Connected Services Hub
- Condition based tailored services recommended by Experts (*)



EMPLOYEES PROTECTION

- Minimize risk of electrical issue in your workplace
- Critical issues anticipated faster with smart alarming
- Critical issues anticipated earlier with predictive analytics (*)

PEACE OF MIND

FINANCIAL EFFICIENCY

Improved total cost of ownership

Decreased average failure cost

Optimized maintenance budget (*)

- Unlock the intelligence of your equipment
- 24/7 equipment health remote monitoring
- Access to technical support and expertise from Electrical Distribution Manufacturer

(*) With predictive services





Strong presence in many segments with references cases

- 1. Oil & Gas
- 2. Healthcare
- 3. Consumer Packaged Good
- 4. Mining, Minerals and Metals
- Automotive
- 6. Cloud & Service Providers
- 7. Transportation: Airports













EcoStruxure Asset Advisor for Electrical Distribution

Digital monitoring that provides data driven services for Electrical Distribution equipment

Stay connected to your installation!

Smartphone App and Webdashboard offer live data & alarms, enabling remote monitoring of your assets 24/7



Privileged Access to Connected Services

Increase your installation uptime with intelligent 24x7 monitoring & get privileged access to Connected Services Hub



3

Insight

Gain insight into how well your Electrical Distribution installation operates (receive recommendations & data-driven Intelligence)



4

Expertise

Condition based tailored services with predictive analytics triggered by experts





Preventive services

Predictive services