DIGITAL

Innovation Experience 2019
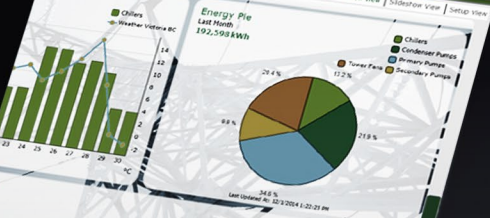
Inspiring your digital transformation in HVAC and Refrigeration

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Simplified machine service & maintenance

Innovation Experience 2019, Venice, September 25th

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Four development pillars

More products

More services

More digital solutions

Better systems

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Digital transformation brings greater operational efficiency

20–50%
reduction
in time-to-market

45–55%
optimized use of
expertise and
know-how

3–5%
increase in
productivity

30–50%
reduction
of machine downtime

Source: McKinsey, 2016

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Smart Maintenance

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The time spent on a maintenance operation in the industry is frequently divided as follows:

50%
Finding documentation

50%
Fault resolution

Augmented Reality allows to optimize both normal and extraordinary routine operations, making them safer and more effective

Requests on Maintenance

The benefit of using A/R

Reduced machine downtime
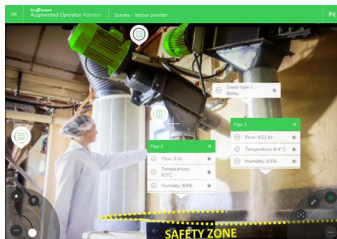
Optimization of average maintenance time
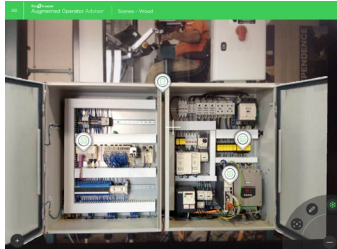
Decreased search time failure

Guided and facilitated intervention

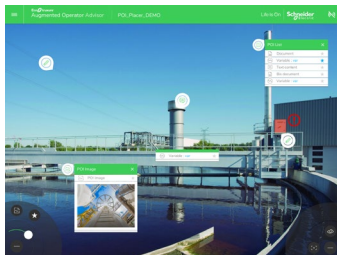# Different examples of use of Augmented reality

In front of a machine or a production line
Immediate access, in real time, to relevant information in the field for operations and maintenance: machine history, variables of process, documents (products, installations, instructions, electrical diagrams, etc.)

In front of an electrical cabinet or an hidden part of a Machine
Fast diagnosis without lockout or electrical qualifications, through the virtual doors opening the cabinet: device status, variable values (current, power, speed, etc.), documents (products, installations, manuals, electric diagrams, etc.)

For an overall view
Simultaneous view of reality and data. Safe and quick detection of anomalies (alarm display, significant process variables) and access to KPIs (display parameters and key information, production progress, performance indicators, etc.)
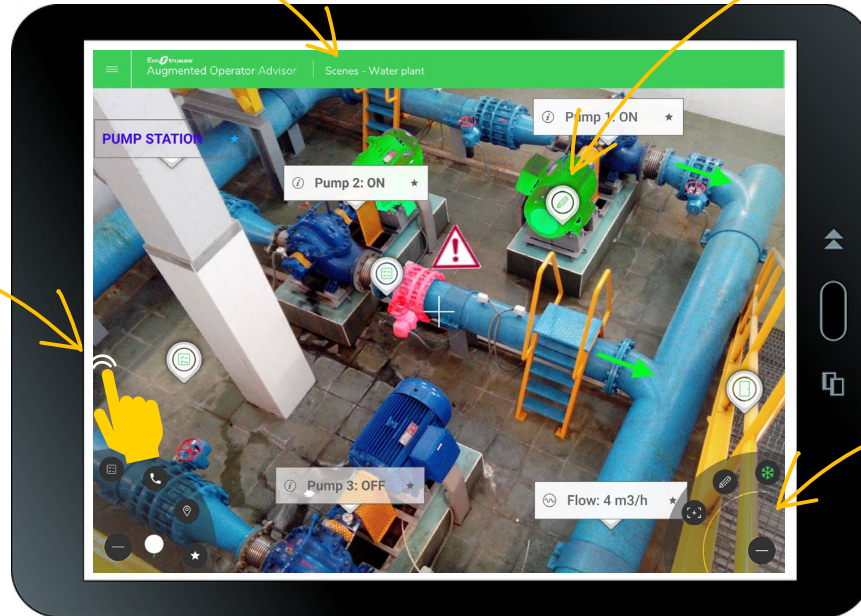
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EcoStruxure Augmented Operator Advisor
The Schneider Electric answer

Information banner

Point of interest (POI)*

*POI opportunities: **list** (Label, Images, Process variable, Data from a SQL database, Documents: pdf files, Electrical diagrams, Web pages, Videos), **image**, **variable** or **text** to display directly on the screen

Global pumps documentations

📄 Motor datasheet ★

📄 Pump datasheet ★

Purge the air in the pump ★

Point of interest List
(up to 5 information)

Shortcut menu

EcoStruxure
Augmented Operator Advisor   Scenes - Water plant

PUMP STATION

Pump 1: ON

Pump 2: ON

⚠

Pump 3: OFF ★

Flow: 4 m3/h

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HVAC

Compressor rack

Eco Struxure™
Innovation At Every Level **for Machines**

Apps, analytics, and services

Edge control
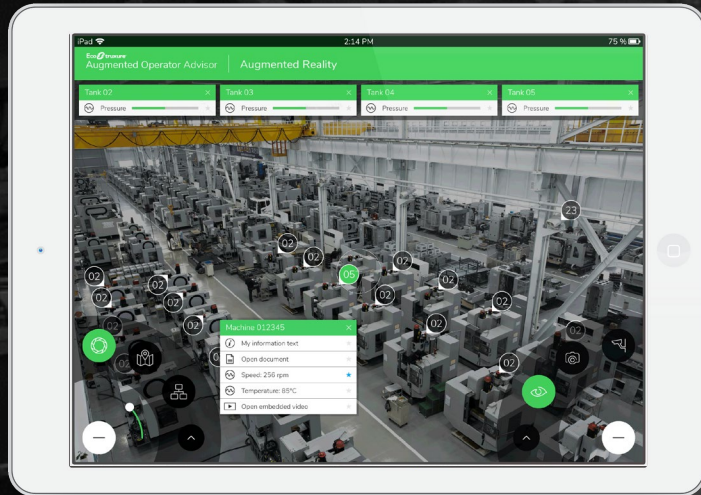
Node-RED

Connected products

EWCM900 Pro

M172

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somic
Engineered to perform

EcoStruxure Augmented Operator Advisor

50% increase in speed

40% energy efficiency

"For more than 10 years, Schneider Electric´s integrated servo drives have been the foundation of our modular system and engineering concept."

Manfred Bonetsmüller, CEO, SOMIC Verpackungsmaschinen, Amerang

Smart services

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The four main drivers of digitization in industry

CONNECTIVITY | **MOBILITY** | **CLOUD** | **ANALYTICS**

IMPROVE THE USE OF YOUR RESOURCES

BE MORE AGILE AND MAKE DECISIONS FASTER

CREATE NEW DIGITAL OPPORTUNITIES

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IoT is more accessible than we think

~10% of data are utilized today

Unlimited benefits of connecting the connected, from…

reactive to
proactive

onsite to
mobile and remote

site by site to
enterprise

limited to **a new scale of computing and artificial intelligence**

Benefits of Connected assets and Smart Services

Benefits for OEM

Anytime, anywhere, and unique access to all machine data

Improved customer satisfaction through better and faster service

Differentiation by offering new services and platform with my machines

Higher machine availability thanks to analytics

Benefits for End User

Faster service, reduced machine downtimes and improved performance

Better tracing of operations and activities performed on their machine

One click Access to documentation, important data and support experts

Planned maintenance operations and improved maintenance quality

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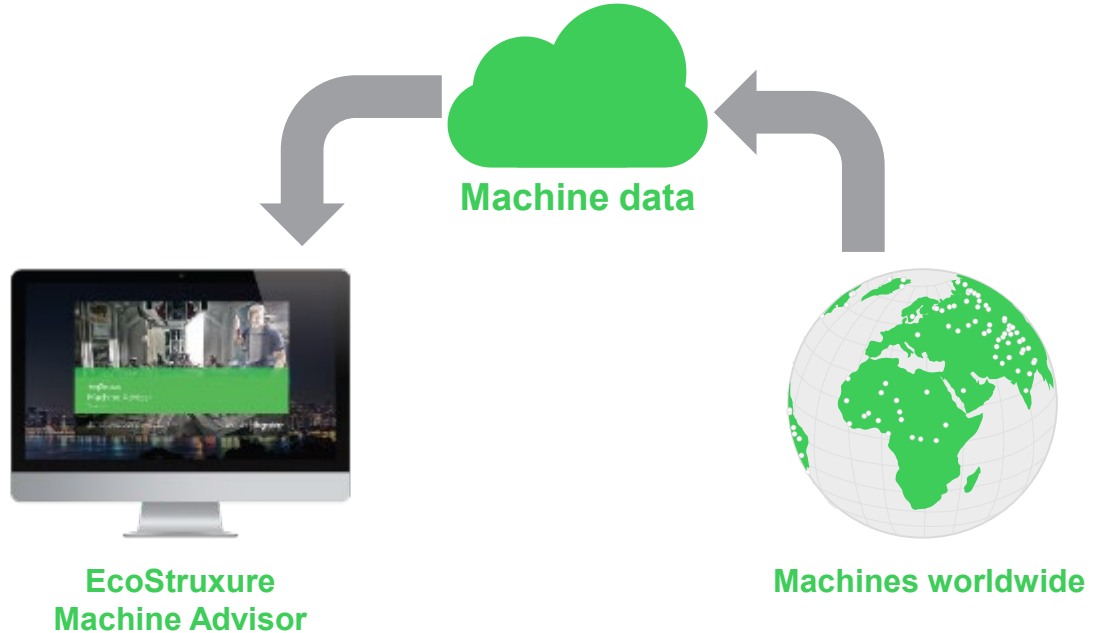
EcoStruxure Machine Advisor
The Schneider Electric answer

EcoStruxure Machine Advisor is the new digital cloud-based services platform.

It enables machine builders to provide new services to machine operators for each installed machine in any production site worldwide.

The Machine builder can support now the machine operator by creating optimum framework conditions for a perfect and reliable operation of machines.

Machine Advisor offers a service to evaluate the asset's health and to give access to the machine performance.

Machine data

**EcoStruxure
Machine Advisor**

Machines worldwide

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Smart services

EcoStruxure Machine Advisor – Overview

Track

Track is a repository service to get access to the machine's documentation and history: e.g. bill of materials, manuals, maintenance log, and task management.

Monitor

Monitor is a cloud based service to evaluate asset's health and to give access to the machine performance data (KPIs, dashboards), sending notifications and alerts in case of need.
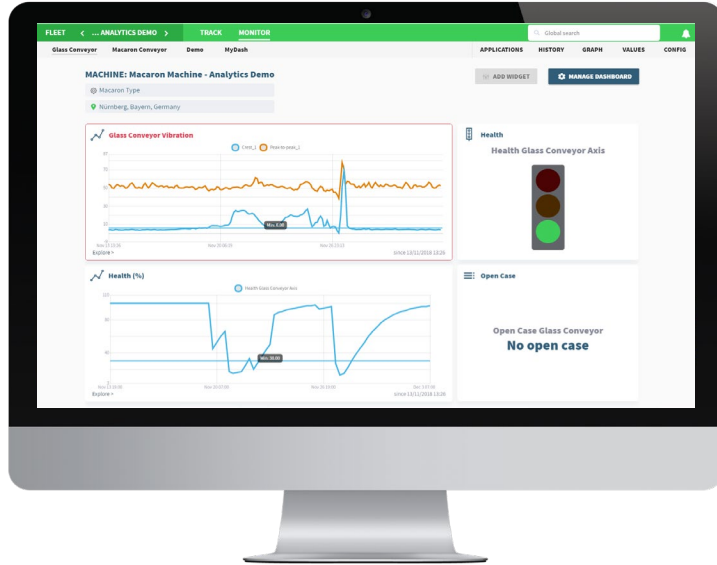
Fix

Fix is a service to facilitate maintenance operations with the help of step-by-step procedures and remote experts leveraging augmented reality.

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Smart services

EcoStruxure Machine Advisor – Monitor – Health Application

Machine Monitoring – Health Application

Increases the machine availability thanks to anomaly detection by analytics

Inputs up to 10 machine parameters according to your pain points to the Health algorithm e.g. pressure, temperature, speed, current …

The algorithm will be teached for a certain time with "good data" to make the algorithm aware of the normal production conditions.

As an output you will get the health status and an alert, if there are anomalies in the data.

Gives notification in case of asset anomaly detection

You will get notified about asset health cases via email, to react and keep the machine running.

Learn more on the subject

of maintenance & services

Today and tomorrow:

- At the Innovation Hub, live demo of EcoStruxure Augmented Operator & EcoStruxure Machine Advisor

- In the EcoStruxure Machine Advisor workshop

Checking EcoStruxure Augmented Operator use case and customers stories, using the links ➡️

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