EcoStruxure Augmented Operator Advisor

EcoStruxure™ Augmented Operator Advisor

Solution for industrial augmented reality applications

schneider-electric.com

Life Is On | Schneider Electric

Quick access to product information

Get technical information about your product

Each commercial reference presented in a catalog contains a hyperlink. Click on it to obtain the technical information of the product:

– Characteristics, Dimensions and drawings, Mounting and clearance, Connections and schemas, Performance curves
– Product image, Instruction sheet, User guide, Product certifications, End of life manual

Find your catalog

> With just 3 clicks, you can reach the Industrial Automation and Control catalogs, in both English and French
> Download Digi-Cat with this link

• Updated quarterly
• Embeds product selectors and configurators, 360° images, training centers,
• Optimized search by commercial reference

Select your training

> Find the right Training for your needs on our Global website
> Locate the training center with the selector tool, using this link

Life Is On | Schneider Electric

General contents

EcoStruxure Augmented Operator Advisor
Solution for industrial augmented reality applications

EcoStruxure™ Augmented Operator Advisor

EcoStruxure Augmented Operator Advisor

EcoStruxure Augmented Operator Advisor puts real-time information at your fingertips, whenever and wherever it is needed. The custom application improves operational efficiency with augmented reality, enabling operators to superimpose current data and virtual objects onto a cabinet, machine, or plant. This software combines contextual and local dynamic information for mobile users, enabling them to experience a fusion of the physical, real-life environment with virtual objects.

EcoStruxure™ Architecture

Reduce machine downtime

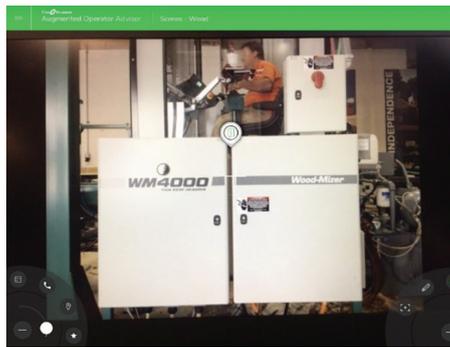### Reduce downtime

EcoStruxure Augmented Operator Advisor reduces downtime by opening electrical cabinet doors virtually and diagnosing the device status instantly in real-time without the need for lockout or electrical qualifications.

Closed electrical cabinet

Virtually-open electrical cabinet

+ Real-time data through augmented reality

Schneider Electric

EcoStruxure Augmented Operator Advisor
Solution for industrial augmented reality applications

Decrease search time information

Speed-up operation and maintenance

EcoStruxure Augmented Operator Advisor speeds up the efficiency of operations and maintenance by offering immediate access to relevant information in the field like real-time data, machine history, user manuals, instructions, diagrams, etc.
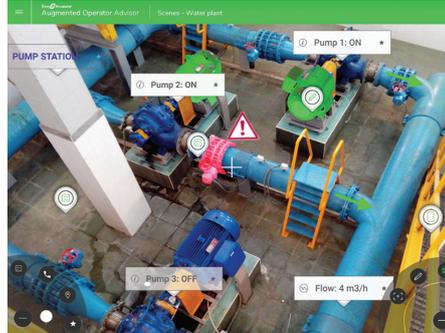
Overall view of the industrial site
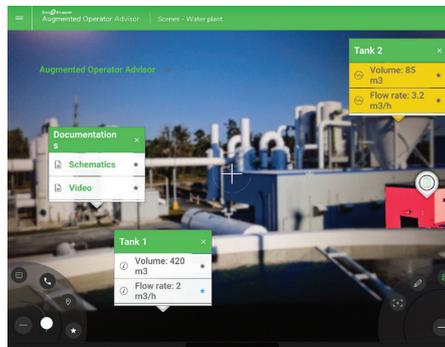
Outside the industrial site

Fewer human errors

EcoStruxure Augmented Operator Advisor enables technicians to locate the right equipment and guides them step-by-step to complete the procedures.

Guided and facilitated interventions
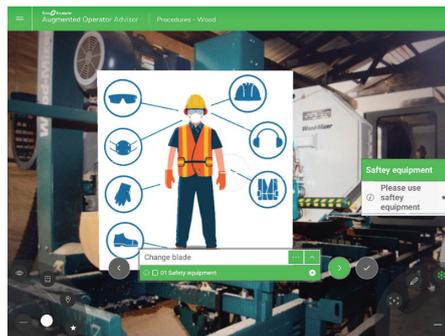
Standard operating procedure

[EcoStruxure Augmented Operator Advisor](#)
[Click to view video (1 min 10 sec)](#)

Procedure augmented with images/video

✚ Instant diagnosis and contactless maintenance

EcoStruxure Augmented Operator Advisor
Solution for industrial augmented reality applications

EcoStruxure Augmented Operator Advisor

EcoStruxure Augmented Operator Advisor application interface

Presentation

EcoStruxure Augmented Operator Advisor uses augmented reality technology to optimize the operation and maintenance of industrial sites and equipment.
It works as follows:

1 The advisor takes photos of the machines or electrical cabinet of the site and creates a project with the builder.
2 The advisor adds point of interests, documents, videos and variables which will be displayed on the tablet.
3 The operator points a tablet camera at the site or the monitored equipment.
4 The Advisor App uses special image comparison techniques to match the visible scene in the field of view of the tablet camera with previously stored photos of the same scene.
5 The Advisor then overlays points of interest markers on the live scene visible on the tablet.
6 The operator taps the point of interest markers to display a wide variety of information like process variables, documents, Web pages, videos, etc.

EcoStruxure Augmented Operator Advisor is delivered in two business models:
■ Project mode where customized projects are developed in-house and delivered to the customers end users.
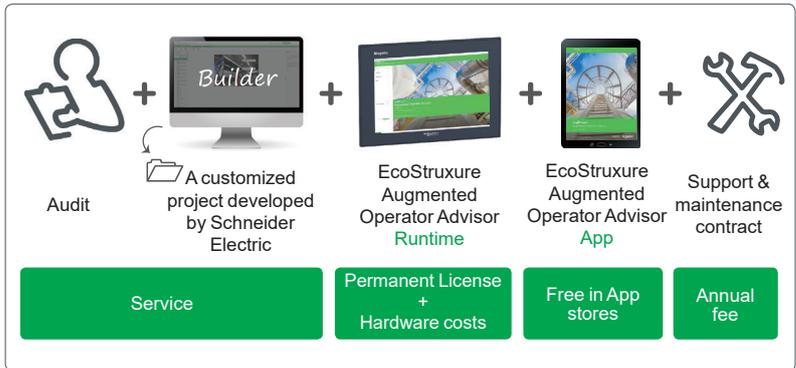
■ Do-it-yourself mode where projects are developed by the customers (Machine builders) themselves.

Schneider Electric

EcoStruxure Augmented Operator Advisor
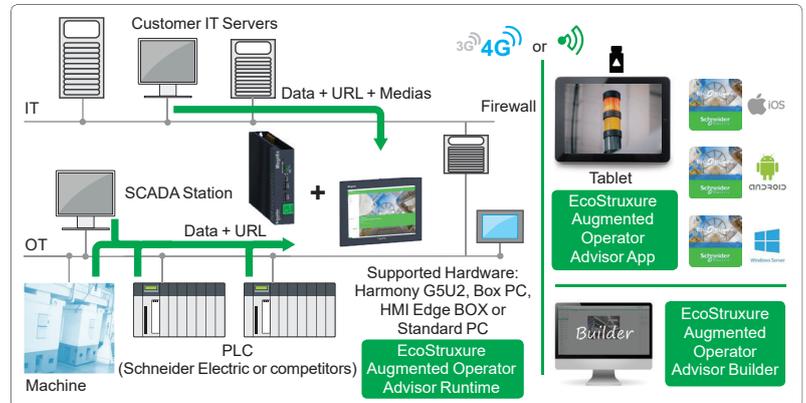## Solution for industrial augmented reality applications

EcoStruxure Augmented Operator Advisor is made up of the following components:

EcoStruxure Augmented Operator Advisor Architecture

■ EcoStruxure Augmented Operator Advisor Builder:
This is a Web-based application where the user creates projects. It is used to:
□ Organize and structure the areas, scenes, subscenes, and points of interest in a project
□ Create and position the points of interest on photographs
□ Define what happens when the operator taps the point of interest
□ Build procedures *(1)* to explain a set of tasks the operator must carry out

The built project must be uploaded to the device where the EcoStruxure Augmented Operator Advisor Runtime software is installed.
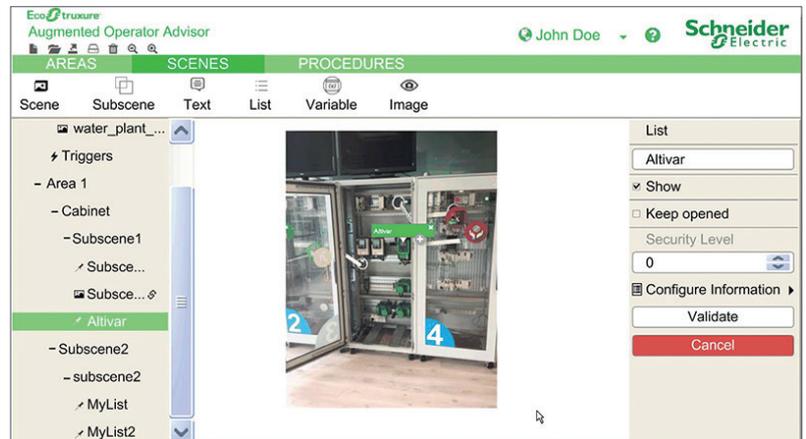
EcoStruxure Augmented Operator Advisor Builder

(1) Procedures are only available with particular license types.

Note: *To view real-time values of process variables produced by the equipment being monitored, Node-RED or EcoStruxure Operator Terminal Expert applications should be installed.*

EcoStruxure Augmented Operator Advisor
Solution for industrial augmented reality applications

Architecture (continued)

■ EcoStruxure Augmented Operator Advisor Runtime software *(1)*:
This is a server-based Windows software installed on a Harmony *(2)* or a standard Windows PC to execute the projects. It gathers together all the required information and sends it to the tablet to be displayed in the points of interest by the EcoStruxure Augmented Operator Advisor App. It also manages the database containing the photographs of scenes and equipment of the uploaded project.

□ With Runtime Export of Notes, you can see the list of all notes created by the operators in the App. Operators create their own notes in scenes or sub-scenes when running the App on their tablet device and this information can be used to make improvements to the project. The export of notes to a .CSV file allows them to be archived and used as part of a wider system.
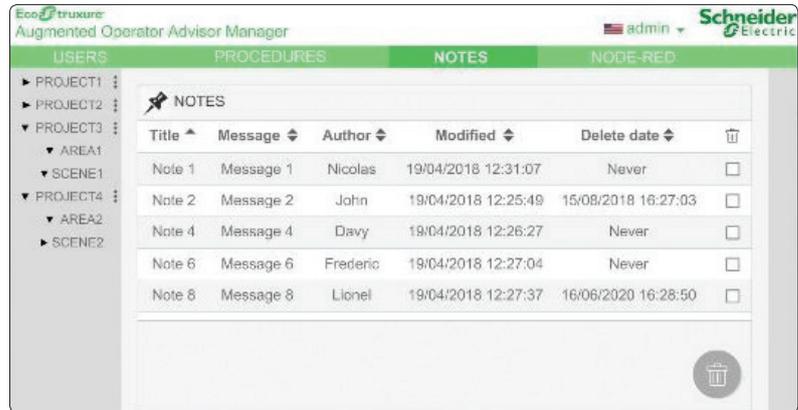
□ With Runtime Procedure History, you can see a report of all procedures followed by the operators in the App. The details like name and version of the project, date and time when the procedures were followed, name of the user who followed the procedure and the individual steps taken can be seen. The export of procedure history to a .CSV file allows them to be archived and used as part of a wider system.

(1) Both EcoStruxure Augmented Operator Advisor App and EcoStruxure Augmented Operator Advisor Runtime should be connected to the same WiFi network or 3G/4G mobile network to be able to communicate with each other.
(2) Harmony HMIG5U2 Open Box PC or Harmony iPC.

Note: *To view real-time values of process variables produced by the equipment being monitored, Node-RED or EcoStruxure Operator Terminal Expert applications should be installed.*
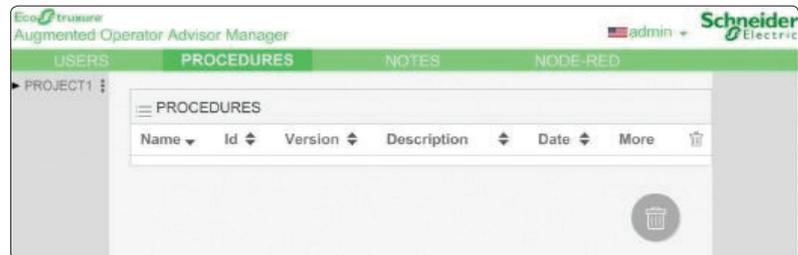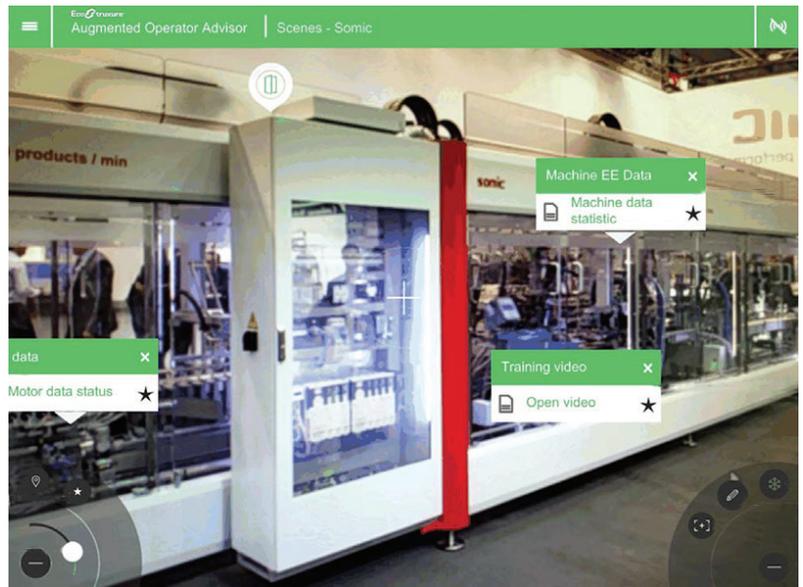
Schneider Electric

EcoStruxure Augmented Operator Advisor
Solution for industrial augmented reality applications

■ EcoStruxure Augmented Operator Advisor App *(1)*:
This is an application running on a tablet computer that views reality and compares it to photographs of scenes stored in the EcoStruxure Augmented Operator Advisor project. When the scene being viewed by the camera and the stored image match, the user interface controls and points of interest associated with the scene are displayed. The App is available in English, French, German, Italian, Spanish, Simplified Chinese, Japanese, and South Korean languages.

EcoStruxure Augmented Operator Advisor App

□ Customised App Theme *(2)*: The application can be modified to show a customised corporate identity using a theme file. The application remains in the Schneider Electric App Store accounts, which means that the customers will maintain their applications up-to-date and will not have to manage the mobile software.

(1) Both EcoStruxure Augmented Operator Advisor App and EcoStruxure Augmented Operator Advisor Runtime should be connected to the same WiFi network or 3G/4G mobile network to be able to communicate with each other.
(2) This feature is not available in all countries. Please contact your local Schneider Electric sales office for more information.

Note: *To view real-time values of process variables produced by the equipment being monitored, Node-RED or EcoStruxure Operator Terminal Expert applications should be installed.*

EcoStruxure Augmented Operator Advisor
Solution for industrial augmented reality applications

References

The EcoStruxure Augmented Operator Advisor App can be freely downloaded from the App store on iOS, Android and Windows. The Advisor App can be used permanently during 42 days of free trial version to evaluate the entire solution in your environment.

The EcoStruxure Augmented Operator Advisor Builder software can be accessed from the link *www.schneider-electric.com/ecostruxure-augmented-operator-advisor* to create Augmented Reality projects. The online license must be activated from the EcoStruxure Augmented Operator Advisor Builder itself.

The EcoStruxure Augmented Operator Advisor Runtime software can be freely downloaded from the link *www.schneider-electric.com/ecostruxure-augmented-operator-advisor* to execute projects on PC without activation code (42 days trial).

Also, the free trial version (42 days trial) allows you to evaluate the complete solution (Builder, RunTime, and App) in your environment. There is no limitation on the number of areas, points of interest, and procedures. You can purchase licenses and activate the software at any time during the trial period.

EcoStruxure Augmented Operator Advisor Builder software

Description	Paper license type	Compatible Web browsers	Reference
Augmented Operator Builder Essential	Single 1 year license	□ Google® Chrome™ (version 69 or higher) □ Microsoft® Internet Explorer™ (version 11 or higher)	**AOABS3CZSSXMZZ**
Augmented Operator Builder Performance	Single 1 year license	□ Mozilla® Firefox™ (version 63 or higher) □ Microsoft® Edge™ (version 15 or higher)	**AOABM3CZMSXMZZ**

EcoStruxure Augmented Operator Advisor
Solution for industrial augmented reality applications

EcoStruxure Augmented Operator Advisor Runtime software			
Description	**Paper license type**	**Compatible HMIs**	**Reference**
Augmented Operator RT Essential Level 1, Single-area projects and up to 20 points of interest by project	Single permanent license	Harmony HMIG5U2 Open Box Harmony *i*PC: HMIBSU, HMIBMI, HMIBMO, HMIBMU, HMIBMP, HMIPSP/ Industrial PC, and Standard Windows PC	**AOARS1CZSSPMZZ**
Augmented Operator RT Essential Level 2, Single-area projects and up to 50 points of interest by project	Single permanent license		**AOARS2CZSSPMZZ**
Augmented Operator RT Essential Level 3, Single-area projects and unlimited number of points of interest by project	Single permanent license		**AOARS3CZSSPMZZ**
Augmented Operator RT Performance Level 1, Single-area projects and up to 20 points of interest and 10 procedures by project	Single permanent license		**AOARM1CZMSPMZZ**
Augmented Operator RT Performance Level 2, Single-area projects and up to 50 points of interest and 20 procedures per project	Single permanent license		**AOARM2CZMSPMZZ**
Augmented Operator RT Performance Level 3, Single-area projects and unlimited number of points of interest and procedures by project	Single permanent license		**AOARM3CZMSPMZZ**
Augmented Operator RT Multi-Area, Multi-area projects and unlimited number of points of interest and procedures by project	Single permanent license		**AOARX3CZXSPMZZ**

Schneider Electric

Life Is On | **Schneider** Electric

Learn more about our products at
www.schneider-electric.com/ecostruxure-
augmentedoperator-advisor

Design: Schneider Electric
Photos: Schneider Electric