



EcoStruxure™ XR Operator Advisor

V2 – Viewer guide

Date: January 2024

Prepared by Schneider Electric Services
Scope: Workforce Empowerment Services

se.com/services

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Safety Information

Important Information

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

 The addition of this symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

 This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in death or serious injury**.

WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in death or serious injury**.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result in minor or moderate injury**.

NOTICE

NOTICE is used to address practices not related to physical injury.

Please Note

Electrical equipment should be installed, operated, serviced and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material. A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation and has received safety training to recognize and avoid the hazards involved.

About the Book

Document Scope

This document describes how to use the EcoStruxure™ XR Operator Advisor. It is recommended that you undertake an EcoStruxure™ XR Operator Advisor training course before using the product.

Read the EcoStruxure™ XR Operator Advisor Quick Start Guide (see EcoStruxure XR Operator Advisor, Quick Start Guide) for an overview of the product before using the EcoStruxure XR Operator Advisor Application.

WARNING

1. Monitoring paths may include communication links. Consideration must be given to the implications of unanticipated transmission delays or failures of the link.
2. EcoStruxure™ XR Operator Advisor must not be used as a primary means of monitoring critical functions or as a documentation repository.
3. Each EcoStruxure™ XR Operator Advisor implementation must be individually and thoroughly tested for proper operation before being placed into service.
4. Allow only authorized personnel with expertise in the design and operation of electrical systems to program, install, alter and apply this product.
5. We strongly recommend uploading the application on the mobile device, to avoid losing the application in case of Server shutdown. **Note that Data Live will no longer appear in off-line mode.**
6. Follow local and national safety codes and regulations standards to perform any electrical work.
7. Ensure to use the right category level of Personal Protective Equipment, according to local and national regulations.
8. When performing an electrical work, we recommend having other person consulting the application.
9. Using EcoStruxure™ XR Operator Advisor must be done with Safety gloves, thanks to the Apple pencil, when the electric work requires wearing them.
10. The application must be audited and compared to the real installation on a regular basis. If any discrepancy is noted, stop using it until correction will be done in the application.
11. Before launching a procedure, ensure that your device battery is sufficiently charged to complete the operation.
12. Ensure that the information to be displayed to the operator is adapted to the size of the display device, especially for smartphones.

Failure to follow these instructions can result in death, serious injury or equipment damage.

 **CAUTION**

1. Use physical tag for product identification in situations where similar equipment and/or environments could result in false scene detection.
2. Attach physical tags firmly to the equipment with sufficient protection against damage or deterioration of the tag.
3. EcoStruxure™ XR Operator Advisor is designed for teaching and training purpose. It is NOT a substitute for hands-on training for the installation, use or maintenance of Schneider Electric equipment.
4. Although reasonable care has been taken to provide accurate and authoritative information, contents provided cannot be considered as contractual.
5. Schneider Electric assumes no responsibility for any consequences arising out of the use of EcoStruxure™ XR Operator Advisor.
6. Before using the equipment (mobile devices, Headset), you MUST read carefully Health & Safety Warnings from Original Equipment Manufacturer.
7. Operation, maintenance and safety procedures experienced in EcoStruxure™ XR Operator Advisor CANNOT be considered as a substitute for local and national safety standards.
8. Schneider Electric cautions you that electrical equipment should be installed, serviced or maintained ONLY by qualified electrical maintenance personnel. Remember that all sources of electrical power must be disconnected prior to visual inspection, tests, maintenance or installation of any electrical equipment.

Failure to follow these instructions can result in injury or equipment damage.

NOTICE**UNAUTHORIZED OPERATOR ACCESS**

- Keep usernames and passwords secret.
- Protect tablet and runtime device access with a password or other security mechanism.
- Do not share access with others.
- Change default passwords upon first connection.
- Regularly update passwords.
- Apply relevant local IT rules.
- Do not save confidential information in post-its or notebooks.
- Do not attach confidential or sensitive user documents in projects.

Failure to follow these instructions can result in equipment damage.

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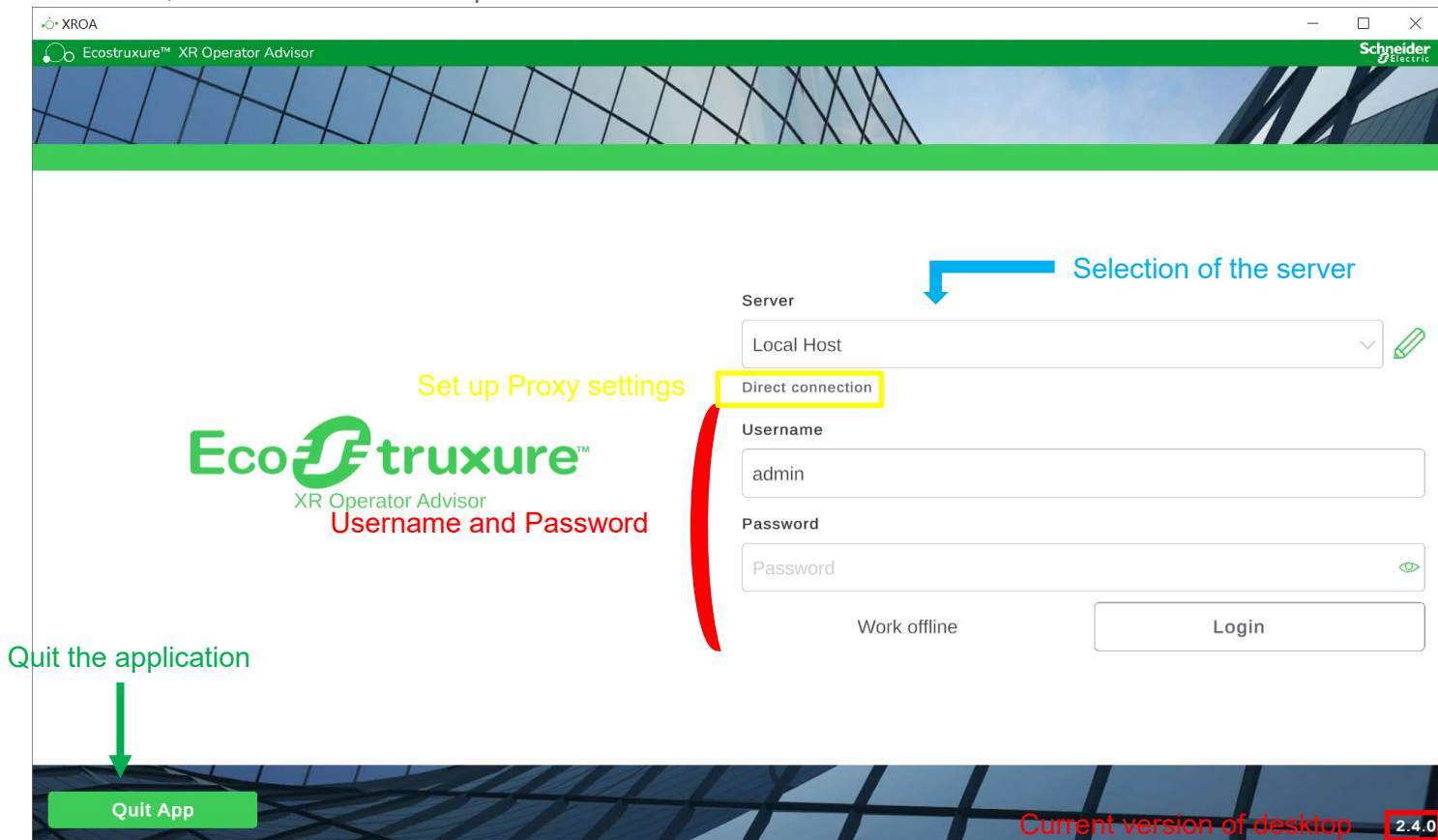
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1.0 Prerequisites

To install successfully all the components of EcoStruxure™ XR Operator Advisor, according to your architecture, please refer to the **Installation Guide** from Schneider Electric.

2.0 Desktop application – Connect to the application

After launching the Desktop application on a PC, the login page opens. This is where the server is selected, and the username and password are entered.



2.1 Select a server

Click on --- **Select your server** --- to select the server you want to connect to in the list. The last choice will remain when re-entering the application.

2.2 Username and password

Usernames and password are provided by a EcoStruxure™ XR Operator Advisor administrator.

2.3 Username and password creation & modification

Usernames and passwords are created & modified by an EcoStruxure™ XR Operator Advisor administrator.

Login by default of the administrator is **admin**.

Password by default of the administrator is given by Schneider Electric.

Password of the administrator must be changed at the first launch of the application.

Administrator can create new users and change user's login & password.

To create a new user:

1. Launch the server application;
2. Open a web browser page;
3. Enter IP address of the server with application port number (example: 127.0.0.1:8174);
4. Login as administrator (login by default = admin, password by default provided by Schneider Electric);
5. Add a new user, define new login & password.

Password must have a minimum of 8 characters, with at least one lower case letter, one upper case letter and one digit number.

To change username or password:

1. Launch the server application;
2. Open a web browser page;
3. Enter IP address of the server with application port number (example: 127.0.0.1:8174);
4. Login as administrator (login by default = admin, password by default provided by Schneider Electric);
5. Edit the user and change login and/or password.

The screenshot displays the 'Manage Users' section of the EcoStruxure™ XR Operator Advisor application. At the top, there is a navigation bar with 'License', 'Users', and 'Log Out' options. Below this, the 'Add new user' section includes an 'Add' button. The main area contains a table of users:

Name	Settings
romgas Rooms Test Rooms V1 MV Switchboard IBERIA Site Cedric Country Italy TestNewVersion NewSite	⋮
jaime	⋮
Egi Country Italy	⋮
Damiano Country Italy	⋮
Giuseppe Country Italy	⋮
Luca Country Italy	⋮
Roberto Country Italy	⋮

An arrow points from the text 'Edit settings of user' to the settings icon (three dots) for the user 'romgas'.

If a user forget his password, the password must be changed by an administrator (See the Login or Password change just above).

Edit the roles:

- Admin: add admin rights to this account.
- Engineer: can Edit, upload 3D model.
- Operator: can Edit.
- Viewer: can only view but not update model.

Edit User

Username

First Name

Last Name

Email

Roles
 X

Add role ▼

Namespaces:

You can show or hide access to certain sites to a user.

Edit namespaces

X

X

X

Add namespace ▼

2.4 Login

Once the server is chosen, and the username and password are entered click on **Login** to connect to the server. Everything done on the server is automatically saved, and any user connected to the same server will be able to see the modifications.

2.5 Work offline

By clicking on **Work offline**, you can enter the software in offline mode. The offline mode is used to work without connection to a remote server. It allows access to the room, as long as it was previously downloaded to the device. Access to live data and other remote servers (for documents, websites) is not possible in offline mode.

2.6 Direct connection

You have the possibility to set up a proxy inside your XROA-Server to allow connection on external server. On the tab "Proxy URL" you can add the URL of your company Proxy that allow you the access to external website and URLs.

← **Edit server** ×

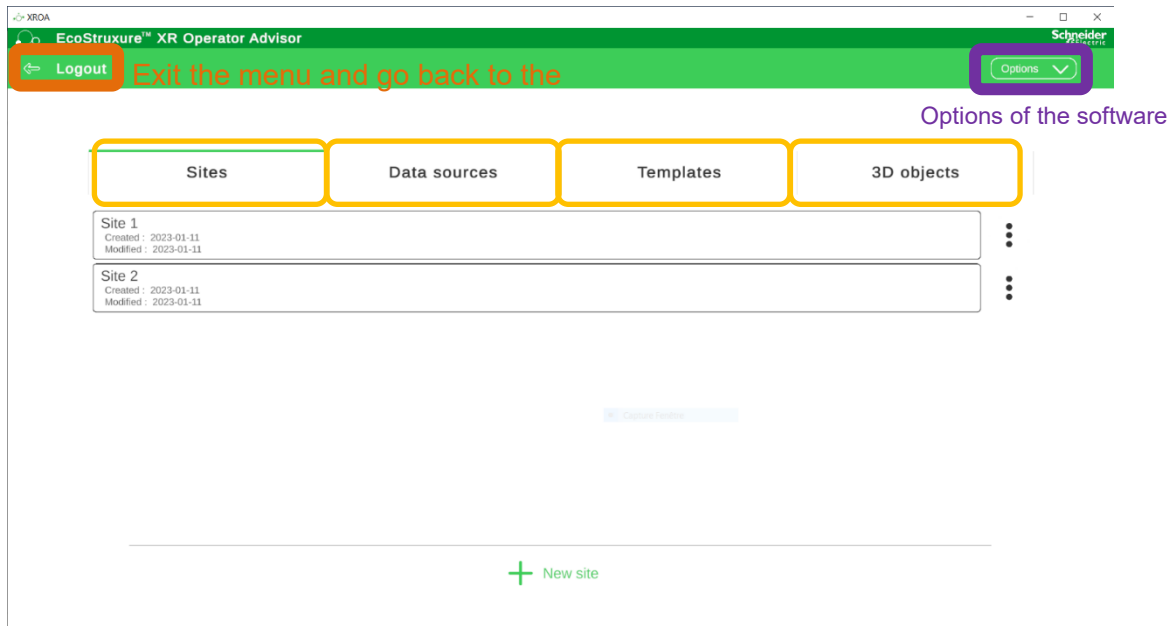
Label

Proxy URL

Validate

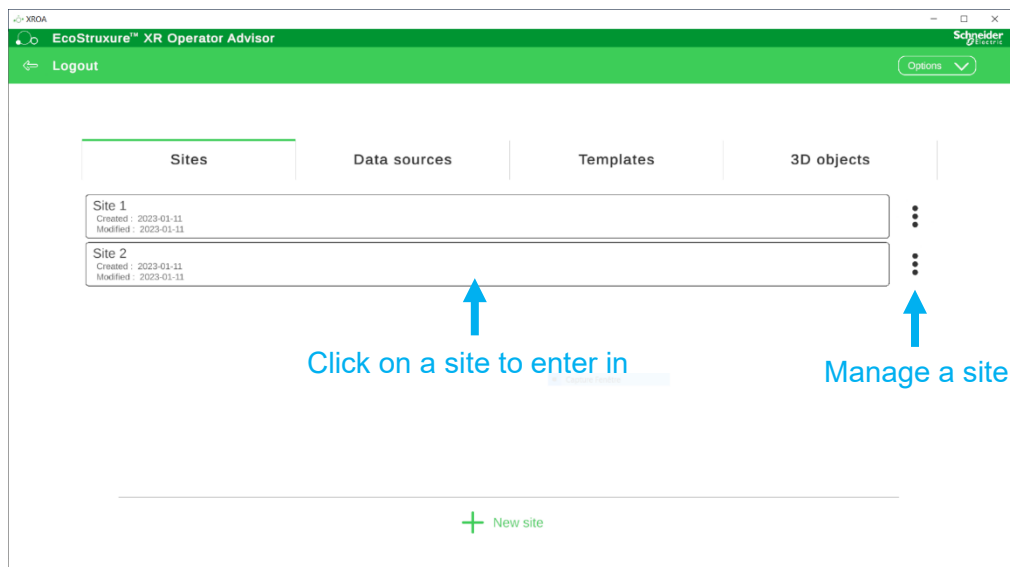
3.0 Desktop application – Menu 1 – Site level

To exit the menu and go back to the login page, click on the arrow on the Top left corner. You have access to the Sites, Data sources, Templates, and 3D objects, each in their own tab.



All the Sites are listed here. You can click on a site to enter it. It will put you at the Room level [Go to 4.0 Desktop application - Menu 2 – Room level].

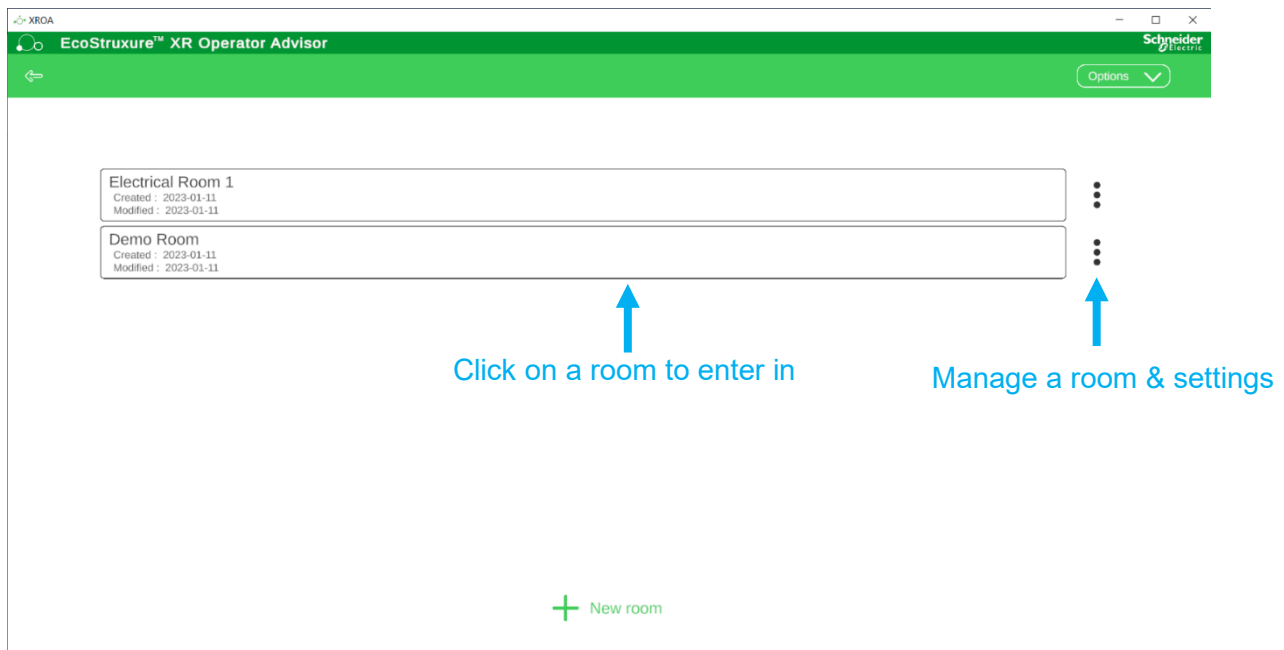
For each site, you have the information about the date of creation and the date of last modification.



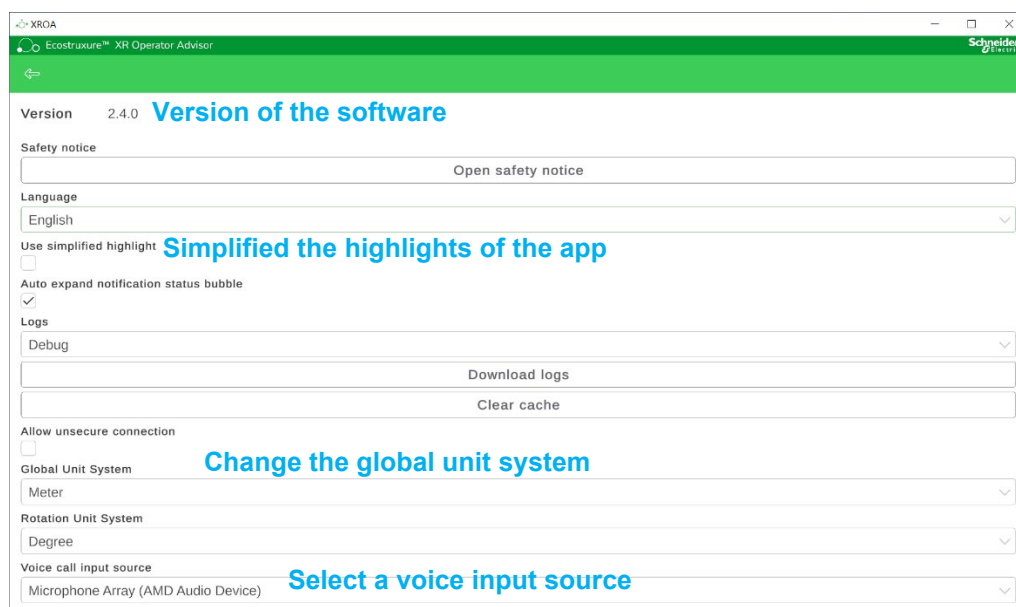
4.0 Desktop application – Menu 2 – Room level

All the Rooms are listed here. You can click on a room to enter it. [Go to **5.0 Desktop application - Navigate in the room**].

For each room, you have the information about the date of creation and the date of last modification.



4.1 Desktop application – Menu 3 – Settings



5.0 Desktop application - Navigate in the room

After entering a room, the user can navigate in the room, either with the mouse or with the keyboard. To exit the room, click on the top right (Exit the configuration).

5.1 Navigate with the mouse

To navigate in the room with the mouse, there are several possibilities:

5.1.1 Mode forward and backward

By scrolling the wheel, you can move forward and backward [not possible to go beyond the walls].

5.1.2 Move up, down, right, and left

While having the wheel pressed, moving the mouse:

- Forwards will translate you up [not possible to go higher than a certain limit];
- Backwards will translate you down [not possible to go below the floor level];
- Left will translate you left [not possible to go beyond the walls];
- Right will translate you right [not possible to go beyond the walls].

5.1.3 Rotate the vision

While having the right click pressed, move the mouse, to rotate and change the angle of vision. This operation is possible in every direction.

5.1.4 Teleport

By having Ctrl + Left click pressed [Left click on the ground where you want to teleport], you can move the mouse to change the angle of vision.

Once you release the key and the mouse click, it will teleport you to this place looking at the angle selected just before.

5.2 Navigate with the keyboard

To navigate in the room with the keyboard, we can use the arrow keys as well as the page up/down keys

To move forward and backward:

- The up arrow to move forward;
- The down arrow to move backwards;
- The left arrow to move left;
- The right arrow to move right;
- The page up arrow to move up;
- The page down arrow to move down.

6.0 Desktop application - Menu bar

The menu bar on the right provides the list of actions possible (launch procedures, create/move/delete an object, create note, etc.).



The menu bar on the right can be open by clicking on this button in the bottom right corner.



To close entirely the menu bar, we can click on the cross button in the bottom right corner.

6.1 Menu bar



Add note

Create a note



Reset origin

Reset the origin



Variables

Display the list of variables



Procedures

Display the list of procedures and launch a procedure [Go to **7.2 Launch a Procedure**]



Procedure Reports

Display the procedure reports [Go to **7.2.2 Procedure reports**]



Documents

Display the list of documents and open a document



Collaboration tools

Open the collaborative tools: Call user, Shared images, pointer



Open/Close the menu

6.2 Add note

A note is an item that can be created by any user (even without edition rights) and seen by every user (from any device).

By clicking on Add note, the window below will appear:

The screenshot shows a 'Note edition' dialog box with the following fields:

- Label:** A text input field with three dots indicating it is empty.
- Initial visibility:** A dropdown menu currently set to 'Visible'.
- Author:** A text input field containing 'Admin Account'.
- Message:** A text input field with three dots indicating it is empty.
- Save:** A green button at the bottom of the dialog.

1. In the field **Label**, create the name of the note (not mandatory);
2. **Initial visibility** can change the visibility in Viewer mode by default:
 - Visible to see the note,
 - Hidden to hide the note.
3. The **Author** is entered automatically as the user;
4. In **Message**, enter the message wanted, this will be what is visible afterwards.

6.3 Reset origin

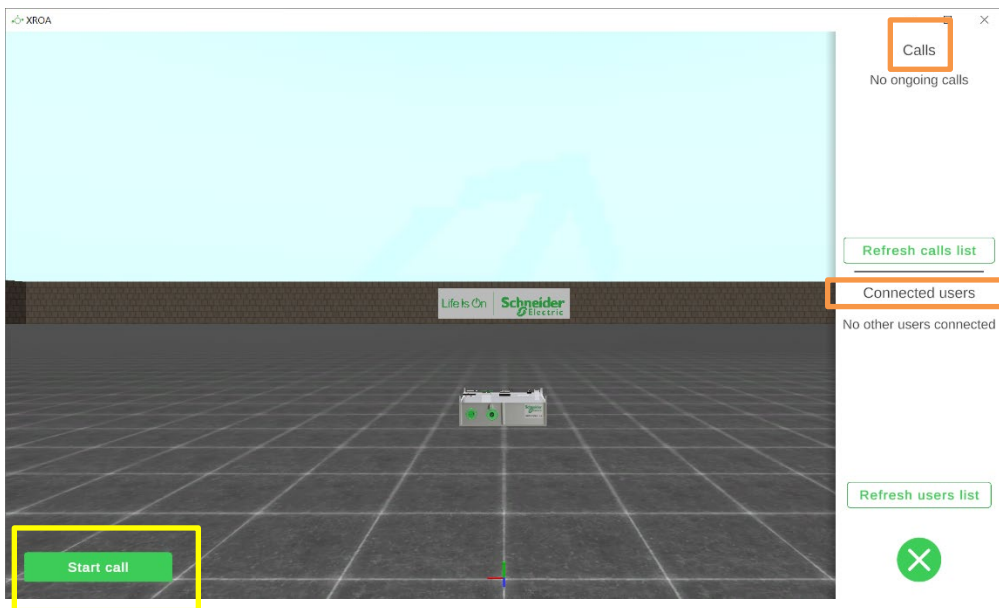
You can reset the origin of room ($x=0$, $y=0$, $z=0$) by selecting this option. It will relocate the three-axis symbol at the selected location.

6.4 Collaboration Tools

When different users are connected to the same server and in the same room they are geolocated. Collaboration tools allows them to interact by starting a call, share images of their personal view and annotate them but also use the pointer to guide.



Call user feature allows you to start a collaborative call with users inside the room.



You can start a call by clicking on the button **"Start call"**. All ongoing calls will be listed on the **"Calls"** part and all users connected also on **"Connected users"**.

- To start a call:

Click on the button "Start call"

Your call is now effective on the list "ongoing calls"



- **To join a call:**
Select the existing call on the list “Calls”



Accept the following pop up

Start call

Do you want to join this call?



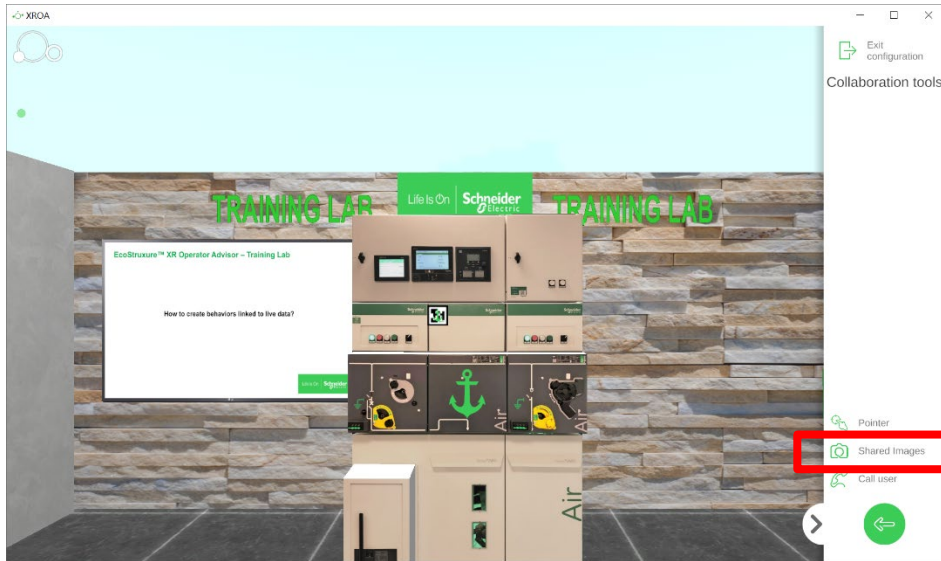
You are now connected with the user that start the call. (if you exit the toolbox your call will be automatically ended)



Click on “Hang up” to exit the call.

Shared Images

Shared images feature allows the operator to directly share his view by taking a picture of it. In that case remote controller can guide him all along the intervention. Once you click on the feature icon you have access to all the pictures taken inside the room.



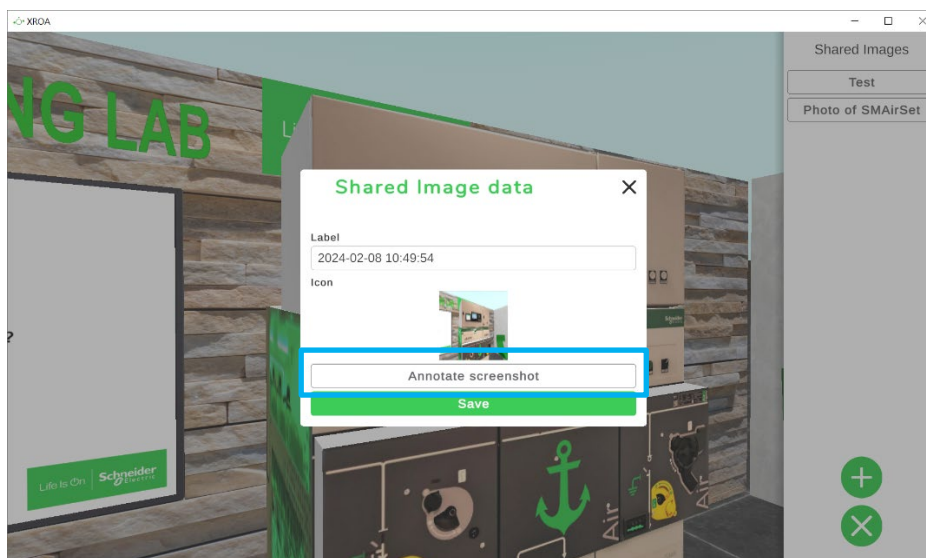
On the menu bar you will find a list of existing shared images that you can consult or modify by clicking on it. You can also add a new shared image by clicking on “+” icon.



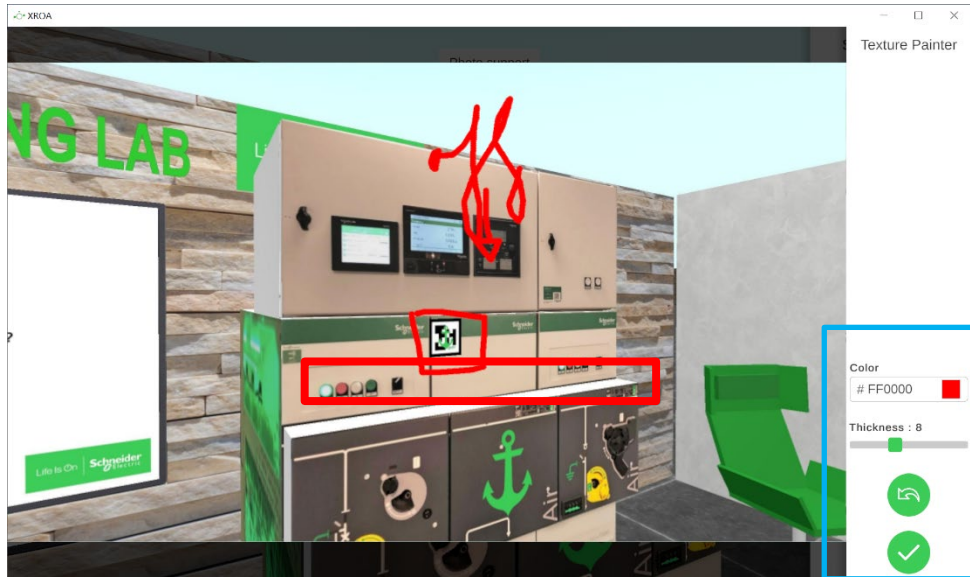
Once you click on the “+” the user interface will change and you can select the point of view where you need support and take a screenshot by clicking on the [camera icon](#).



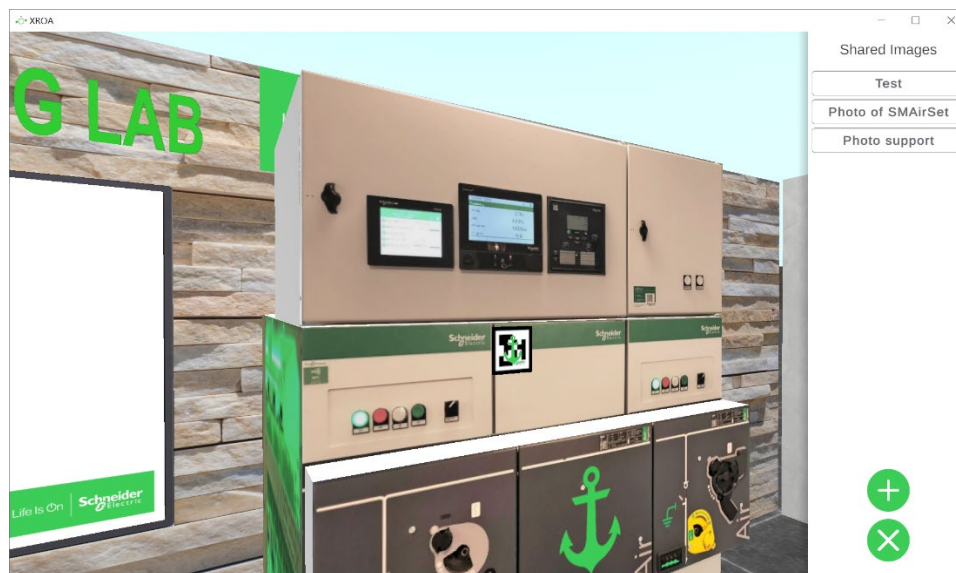
The popup *Shared image data* will appear once your photo is taken. To annotate the screenshot click on [“Annotate screenshot”](#). You can also change the Label of your image to be well organized on your folder.



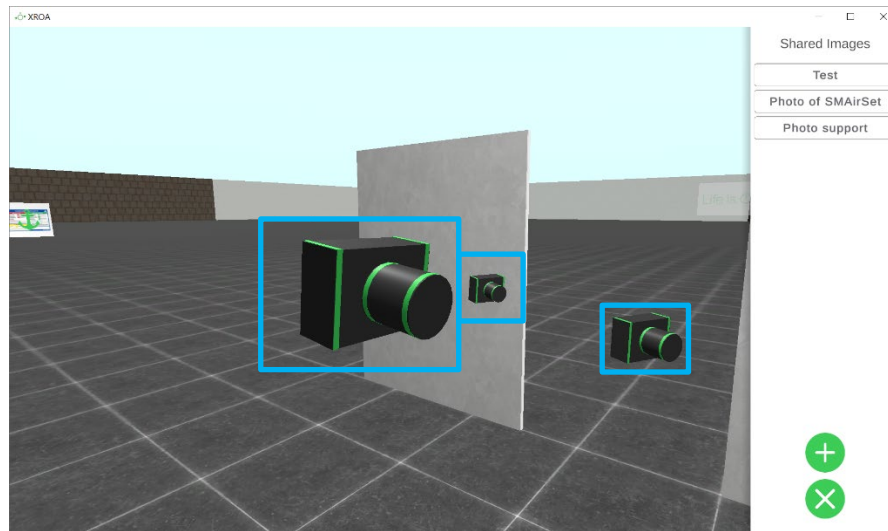
To annotate a screenshot you can [change the settings](#) of the annotation on the right menu bar and directly edit on the screenshot. Once your updates are done you can click on the icon validate to be effective.



Once you have validated all your annotations your shared image will be now effective on the list and you can directly modify it by clicking on it.



You can access to all the Shared Images inside the room by choosing a camera point of view once you activated the Shared Images features. They are represented by a black camera inside your 3D environment. By clicking on it you will directly go to the point of view of the shared image.



Pointer

The pointer can be used to point at a specific place in the configuration. The pointers are visible by every user inside the room (from any device). When two users are connected to the same server and in the same room they are geolocated. Collaboration tools allows them to interact by starting a call, share images of their personal view and annotate them but also use the pointer to guide.

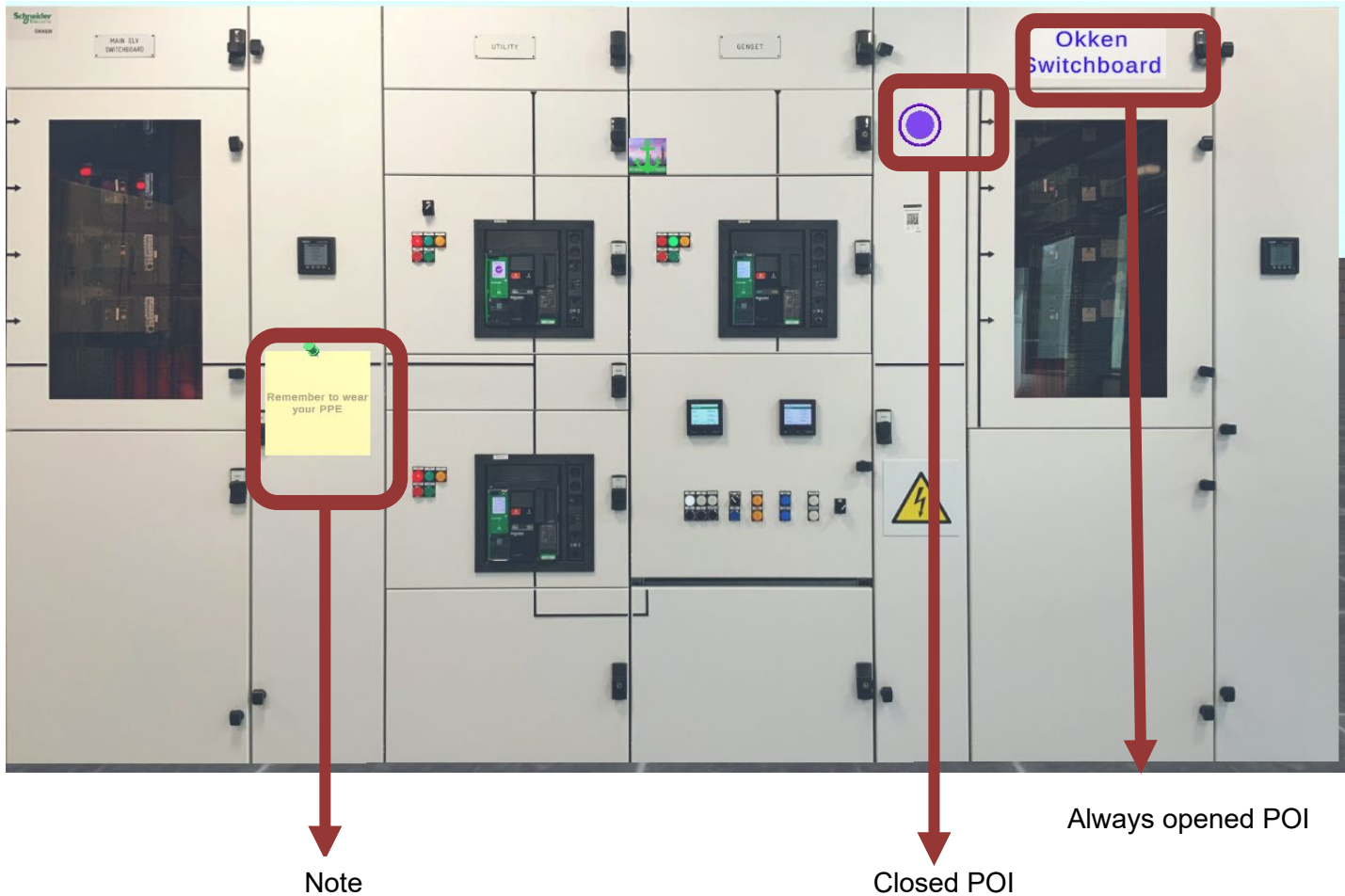
Click on the Pointer, then [left] click wherever you want in the room to point at it. Click again on the Pointer button to remove the pointer.

When you are in pointer mode, you cannot click on an item (open a documentation for example).

To exit the feature, click on the arrow just below the pointer:



7.0 Desktop application – Use the configuration



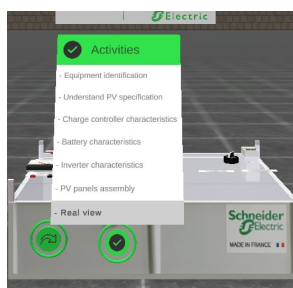
7.1 Interact with a Point of Interest (POI)

The Point of Interests (POIs) are used to display information.

A POI has three states:

- Closed;
- Open;
- Always open.

A POI can contain multiple items inside. To see the different items and interact with them, we need to open the POI.



7.1.1 Closed POI

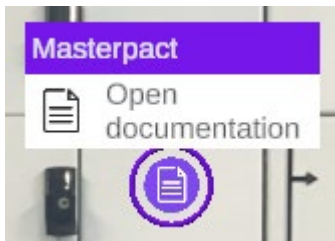
By default, a POI is closed and looks like a double circle with a color and can also have an icon in the middle.



When a user moves the mouse pointer over a POI it will cause the POI to open. Similarly, the POI will close once the mouse pointer is no longer hovering over the POI.

7.1.2 Open POI

To change a POI to remain open even if the mouse pointer is not hovering over it, a user can click on the POI.



The POI will open, show all the associated items it has and will remain opened until a user clicks on the bottom part of the POI (shown as a purple double circle in the image shown).

If an action is linked to the POI item, then the user can click on it to launch the action.

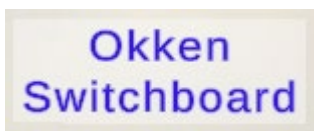
For example: Open documentation of the POI Masterpact will Open a documentation about the Masterpact.

7.1.3 Always open POI

An always open POI cannot be closed.

Same as the classic POI, it can be displayed multiple informations.

For example: An always open POI with one item.

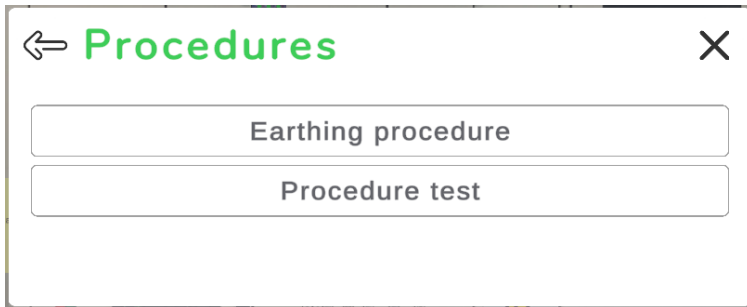


If an action is linked to the Always open POI item, then the user can click on it to launch the action.

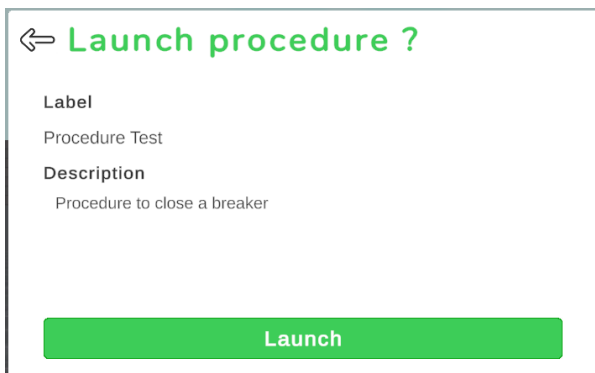
7.2 Launch a Procedure

7.2.1 Procedure launch

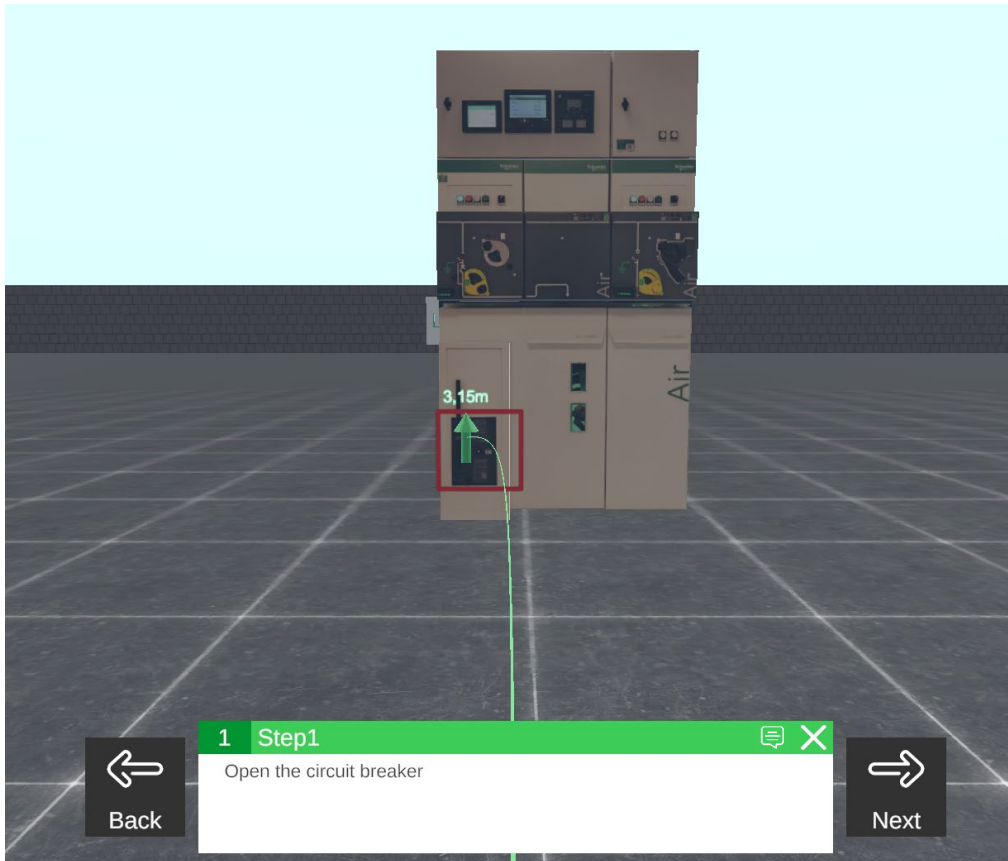
A procedure can be associated to an information inside a POI and it can be launched by clicking on it. Additionally, all the procedures available for the room can be displayed and launched from the Menu bar.



To launch a procedure, click on it from the list. The user can see the name of the procedure as well as the description.

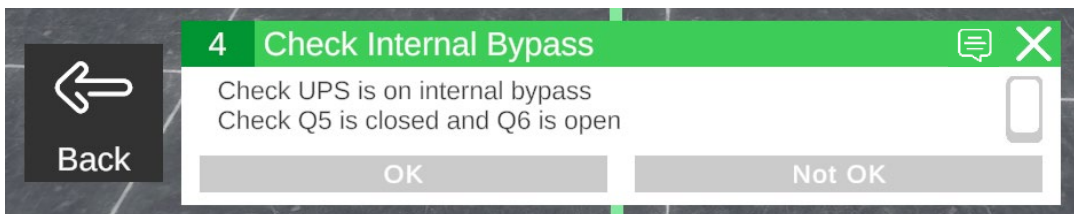


When a procedure is initiated, interface will display a dialog box that describe each step and provide instructions:



An arrow will guide the user to where the step should take place. After doing the instruction of the step, click on Next to go to the Next step.

A step can include a question or multiple choices.



In that case, there is no Next button, and the user needs to select an option to move forward. The next step may differ according to the user choice.



The user can add a comment to the step by clicking on the comment bubble next to the cross. The comment added will be visible in the procedure report.

Add a comment ✕

Comment

Breaker is missing an etiquette

Save

7.2.2 Procedure reports

At the end of the procedure, the window for the procedure report opens.

Procedure Report ✕

User
admin

Step Report

Step 1	11/01/2023 16:24:00	00h04m43s
Step 2	11/01/2023 16:28:44	00h00m01s
Step 1	11/01/2023 16:28:46	00h00m01s
Step 2	11/01/2023 16:28:48	00h00m47s

Comment

...

Save procedure report with comment

It includes:

- The name of the User that has launched the procedure.
- The report of all the steps in the order they have been taken.
- The duration of each step as well the date and hour
- The possibility to add a general comment to the procedure.

- Each step can be clicked on to see the details (step report), comments added during the following of the step, the time when the step started, the time taken to accomplish it.

Step Report

Label
Step 2

Start time
11/01/2023 16:28:48

Duration
00h00m47s

Comment
Breaker is missing an etiquette

Previous **Next**

- The user can navigate between the steps with the previous and Next button
- The user can then Save the procedure report.

All the procedure reports created can be found again on the computer if they have been saved or directly in the application by clicking on the item Procedure reports in the Menu. You can export the procedure reports in different formats: .pdf ; .csv ; .word.



Procedure Reports

Procedure Reports X

Procedure Test		⋮
11/01/2023 16:24:00	admin	⋮
Procedure Test		⋮
11/01/2023 16:36:08	admin	⋮

8.0 Augmented Reality devices

To use the solution in Augmented Reality (in front of the real equipment), you need to use an Augmented Reality device.

To know if your device is compatible with EcoStruxure XR Operator Advisor, check the List of recommended devices.

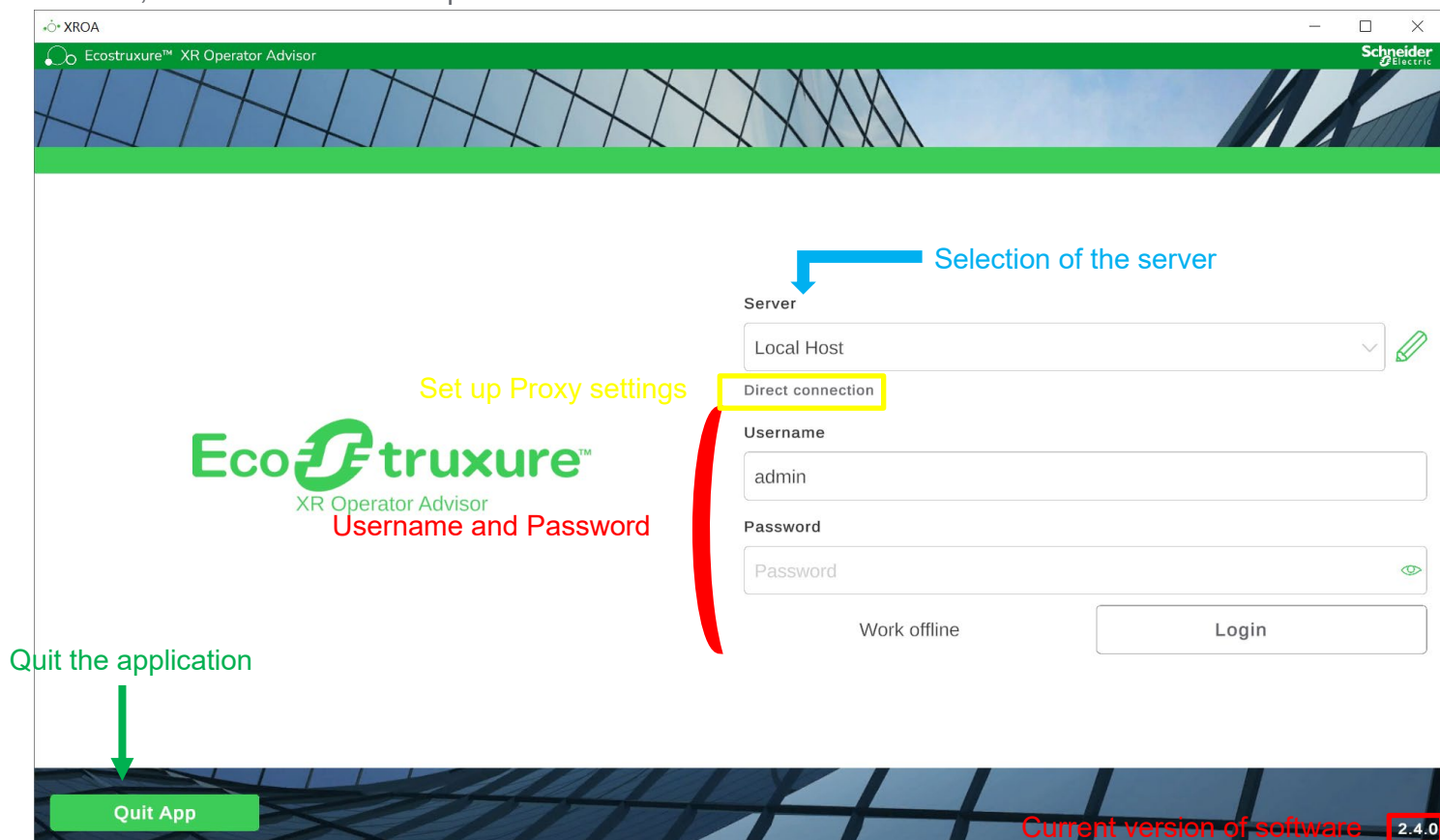
The application launched on an Augmented Reality device will be referenced as AR application.

The screens might differ depending on the type of device used (smartphone vs tablet vs AR glasses), but the general commands are the same.

9.0 AR application – Connect to the application

If it is the first time launching the application, it might ask some permissions:
 Permission to use the camera → This permission is needed for the application to work.

After launching the application on an AR device, the login page opens. This is where the server is selected, and the username and password are entered.



9.1 Select a server

Click on --- **Select your server** --- to select the server you want to connect to in the list. The last choice will be kept when re-entering the application.

9.2 Username and password

Usernames and passwords are provided by Schneider Electric.

9.3 Login

Once the server is chosen, and the username and password are entered, click on **Login** to connect to the server. Everything done on the server is automatically saved, and any user connected to the same server will be able to see the modifications.

9.4 Direct Connection

You have the possibility to set up a proxy inside your XROA-Server to allow connection on external server. On the tab "Proxy URL" you can add the URL of your company Proxy that allow you the access to external website and URLs.

← **Edit server** ×

Label

Proxy URL

10.0 AR application – Menu 1 – Site level

To exit the menu and go back to the login page, click on the arrow on the Top left corner. You have access to the Sites and Data sources, each in their own tab.



Options of the software

Sites	Data sources
Rooms Test Created : 2022-07-06 Modified : 2022-07-06	
Rooms V1 Created : 2022-07-06 Modified : 2022-07-06	
MV Switchboard Created : 2022-08-16 Modified : 2022-08-16	
Labo Created : 2022-08-22 Modified : 2022-08-22	
Site Lio Created : 2022-10-14 Modified : 2022-10-14	
Site for tests Created : 2022-10-25 Modified : 2022-10-25	

+ New site

Here are listed all the Sites. You can click on a site to enter it. It will put you at the Room level [Go to **4.0 Menu 2 – Room level**]. For each site, you have the information about the date of creation and the date of last modification.



Sites	Data sources
Rooms Test Created : 2022-07-06 Modified : 2022-07-06	⋮
Rooms V1 Created : 2022-07-06 Modified : 2022-07-06	⋮
MV Switchboard Created : 2022-08-16 Modified : 2022-08-16	⋮
Labo Created : 2022-08-22 Modified : 2022-08-22	⋮
Site Lio Created : 2022-10-14 Modified : 2022-10-14	⋮
Site for tests Created : 2022-10-25 Modified : 2022-10-25	⋮

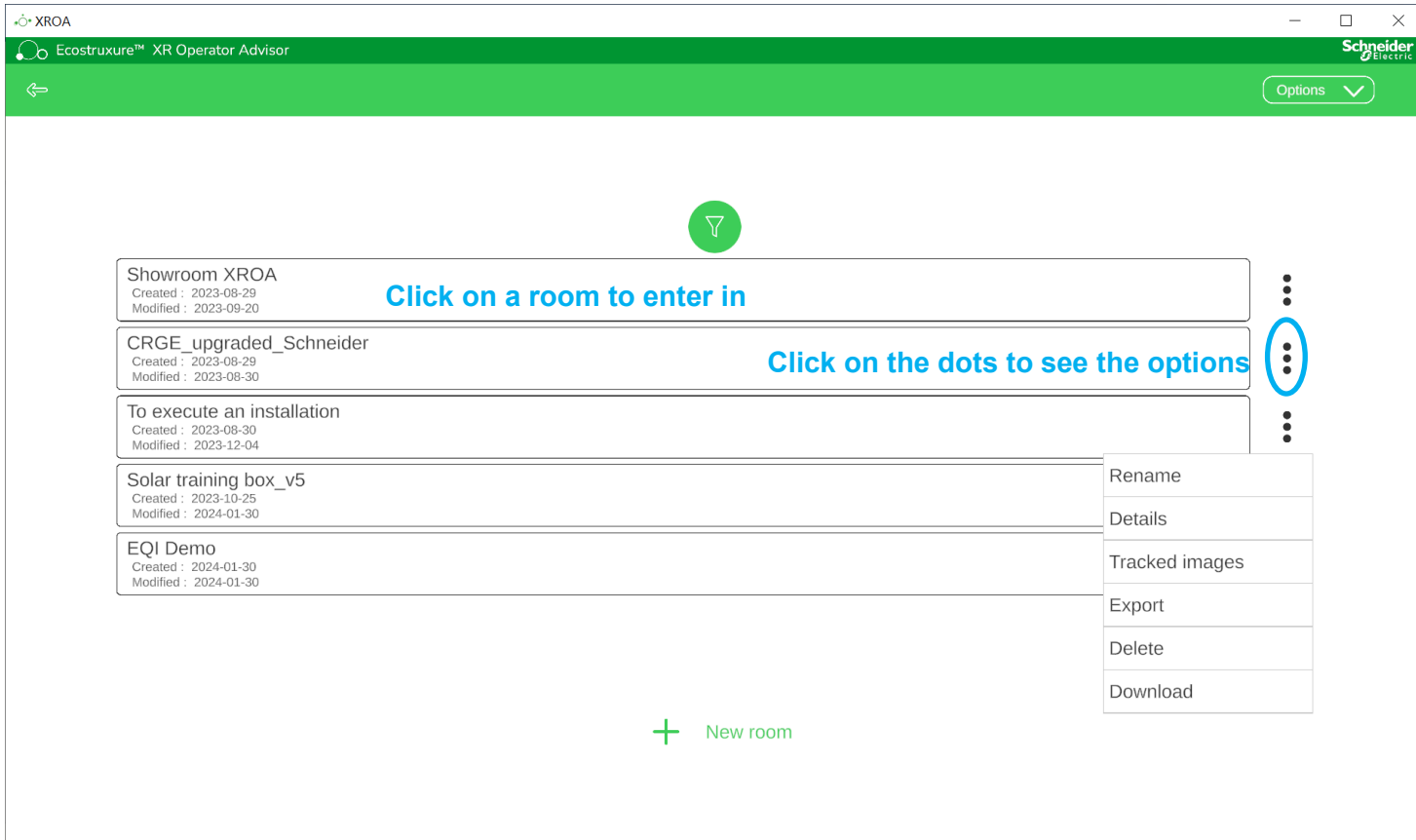
↑ Click on a site to enter it

+ New site

11.0 AR application – Menu 2 – Room level

Here are listed all the Rooms. You can click on a room to enter it. [Go to **12.0 AR application - Navigate in the room**].

For each room, you have the information about the date of creation and the date of last modification.



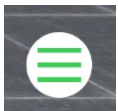
12.0 AR application - Navigate in the room

After entering a room, we can navigate in the room.
To exit the room, click on the top right (Exit the configuration).

With the AR application, to navigate in the room, we need to move inside the room directly with the device in hands/on the head for smart glasses.

13.0 AR application - Menu bar

The menu bar on the right provides the list of actions possible (launch procedures, create/move/delete an object, create note, etc.).











The menu bar on the right can be open by clicking on this button in the bottom right corner.



To close entirely the menu bar, we can click on the cross button in the bottom right corner.

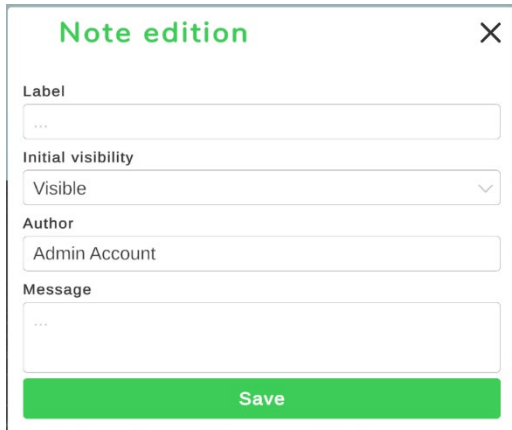
13.1 Menu bar

	Add note	Create a note
	Reset origin	Reset the origin
	Variables	Display the list of variables
	Procedures	Display the list of procedures and launch a procedure [Go to 14.2 Launch a Procedure]
	Procedure Reports	Display the procedure reports [Go to 14.2.2 Procedure reports]
	Documents	Display the list of documents and open a document
	Collaboration tools	Open the collaborative tools: Call user, Shared images and Pointer.
		Open/Close the menu

13.2 Add note

A note is an item that can be created by any user (even without edition rights) and seen by every user (from any device).

By clicking on Add note, the window below will appear:



The screenshot shows a dialog box titled "Note edition" with a close button (X) in the top right corner. The dialog contains the following fields:

- Label:** A text input field with a placeholder "...".
- Initial visibility:** A dropdown menu with "Visible" selected and a downward arrow.
- Author:** A text input field with "Admin Account" entered.
- Message:** A text input field with a placeholder "...".

A green "Save" button is located at the bottom center of the dialog.

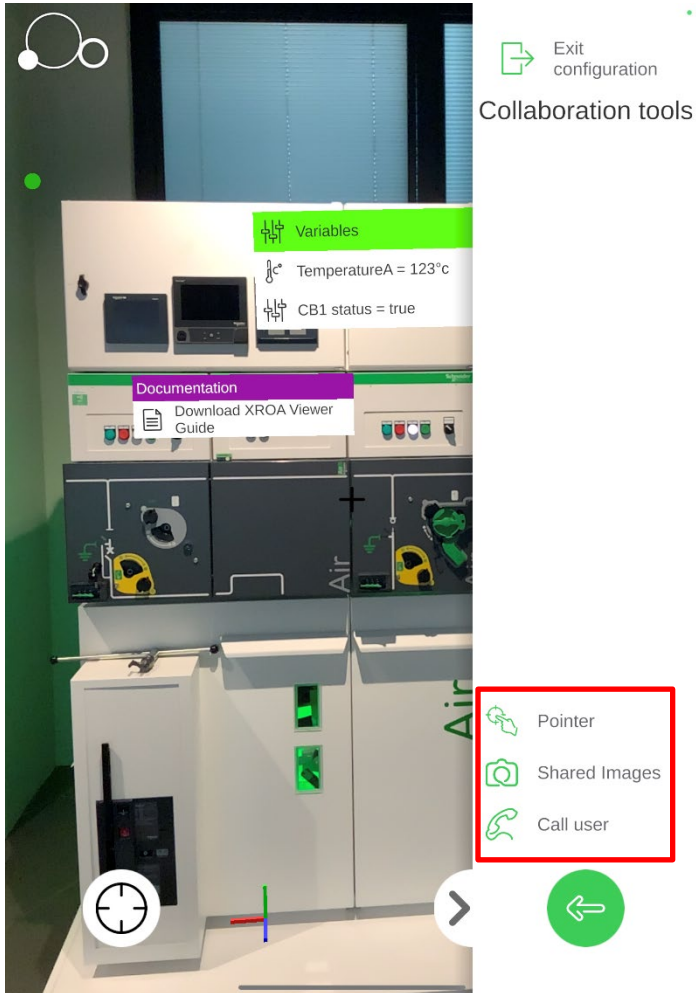
1. In the field **Label**, create the name of the note (not mandatory);
2. **Initial visibility** can change the visibility in Viewer mode by default:
 - Visible to see the note,
 - Hidden to hide the note.
3. The **Author** is entered automatically as the user;
4. In **Message**, enter the message wanted, this will be what is visible afterwards.

13.3 Reset origin

You can reset the origin of room ($x=0$, $y=0$, $z=0$) by selecting this option. It will relocate the three-axis symbol at the selected location.

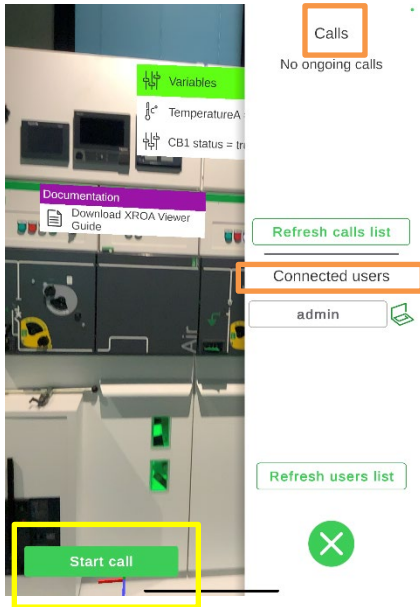
13.4 Collaboration tools

When different users are connected to the same server and in the same room they are geolocated. Collaboration tools allows them to interact by starting a call, share images of their personal view and annotate them but also use the pointer to guide.



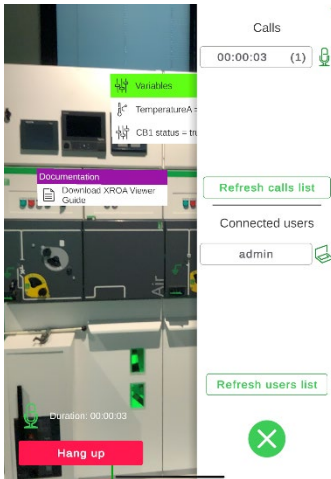
Call user

Call user feature allows you to start a collaborative call with users inside the room.

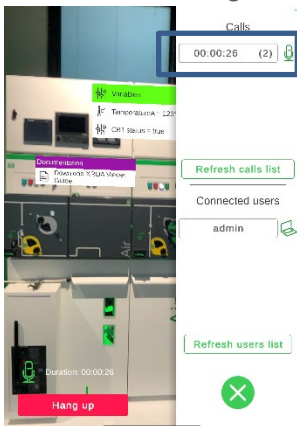


You can start a call by clicking on the button **“Start call”**. All ongoing calls will be listed on the **“Calls”** part and all users connected also on **“Connected users”**.

- **To start a call:**
Click on the button “Start call”
Your call is now effective on the list “ongoing calls”



- **To join a call:**
Select the existing call on the list “Calls”

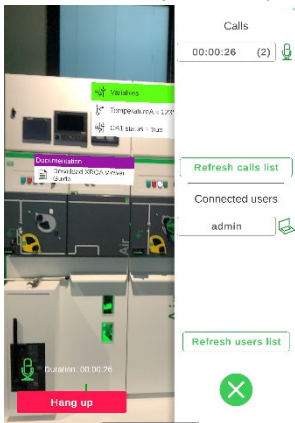


Accept the following pop up

Start call

Do you want to join this call?

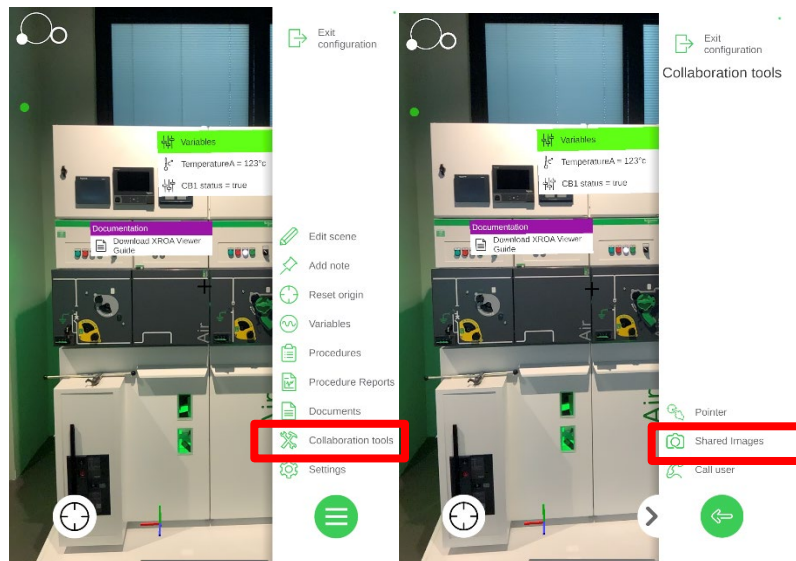
You are now connected with the user that start the call. (if you exit the toolbox your call will be automatically ended)



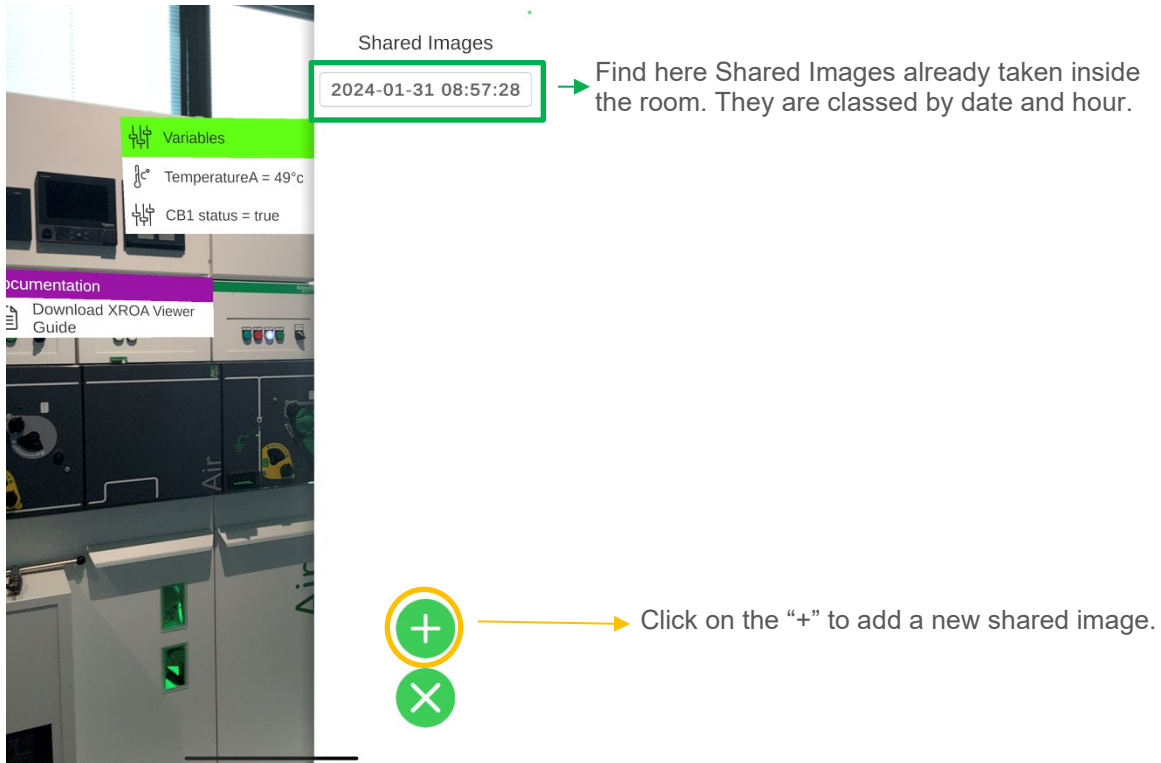
Click on “Hang up” to exit the call.

Shared Images

Shared images feature allows the operator to directly share his by taking a picture of it. In that case remote controller can guide him all along the intervention. Once you click on the icon you have access to all the pictures taken inside the room.



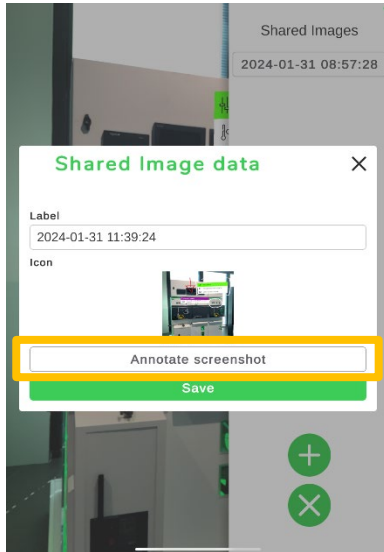
- To share an image with other users connected to the same server inside the same room:



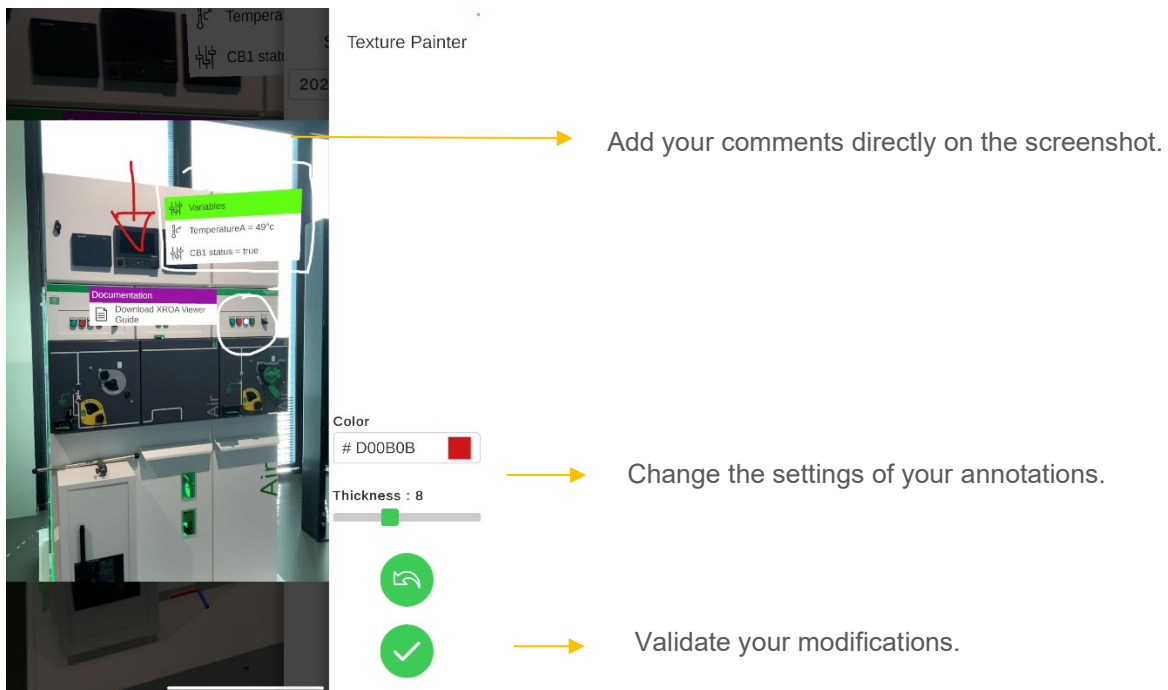
At this step chose the point of view of your image:



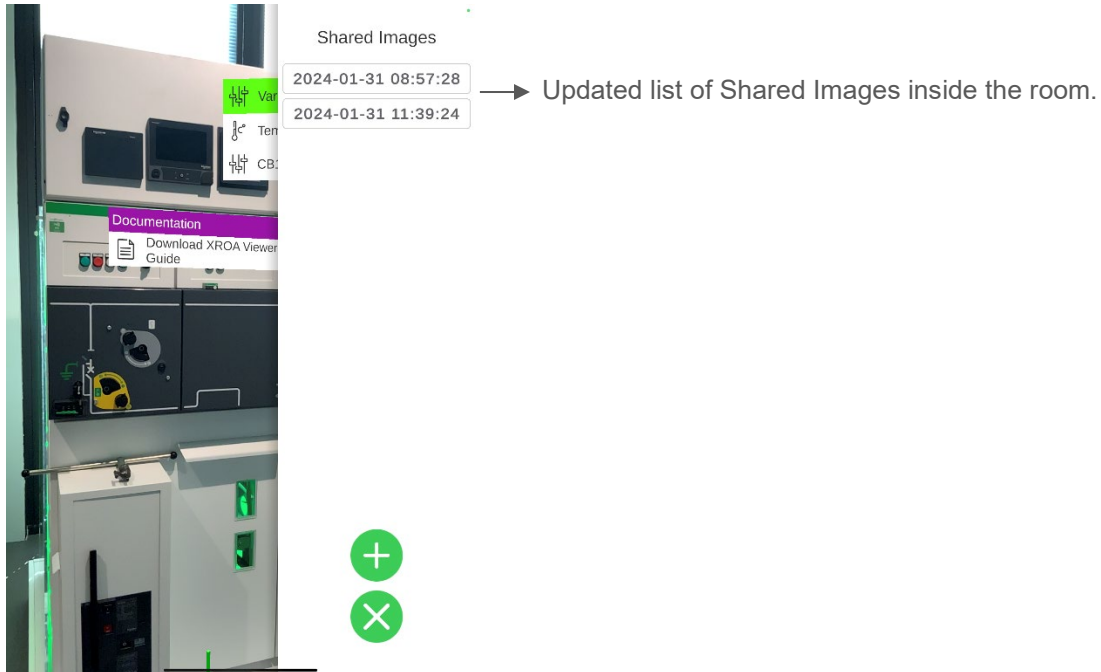
You have now the capability to “Annotate” a shared image to give additional details or guidance to an operator/advisor connected to the room.



By clicking on “Annotate screenshot” a pop up will appear on which you have the image taken and an other UI to choose the settings of your annotation. Add your comments directly on the picture and save to be effective.



Your shared image with your annotations is now live on the list of Shared images available in this room. An operator or advisor can consult it and also modify it.



Pointer

The pointer can be used to point at a specific place in the configuration. The pointers are visible by every user inside the room (from any device). When two users are connected to the same server and in the same room they are geolocated. Collaboration tools allows them to interact by starting a call, share images of their personal view and annotate them but also use the pointer to guide.

Click on the Pointer, then [left] click wherever you want in the room to point at it. Click again on the Pointer button to remove the pointer.

When you are in pointer mode, you cannot click on an item (open a documentation for example).

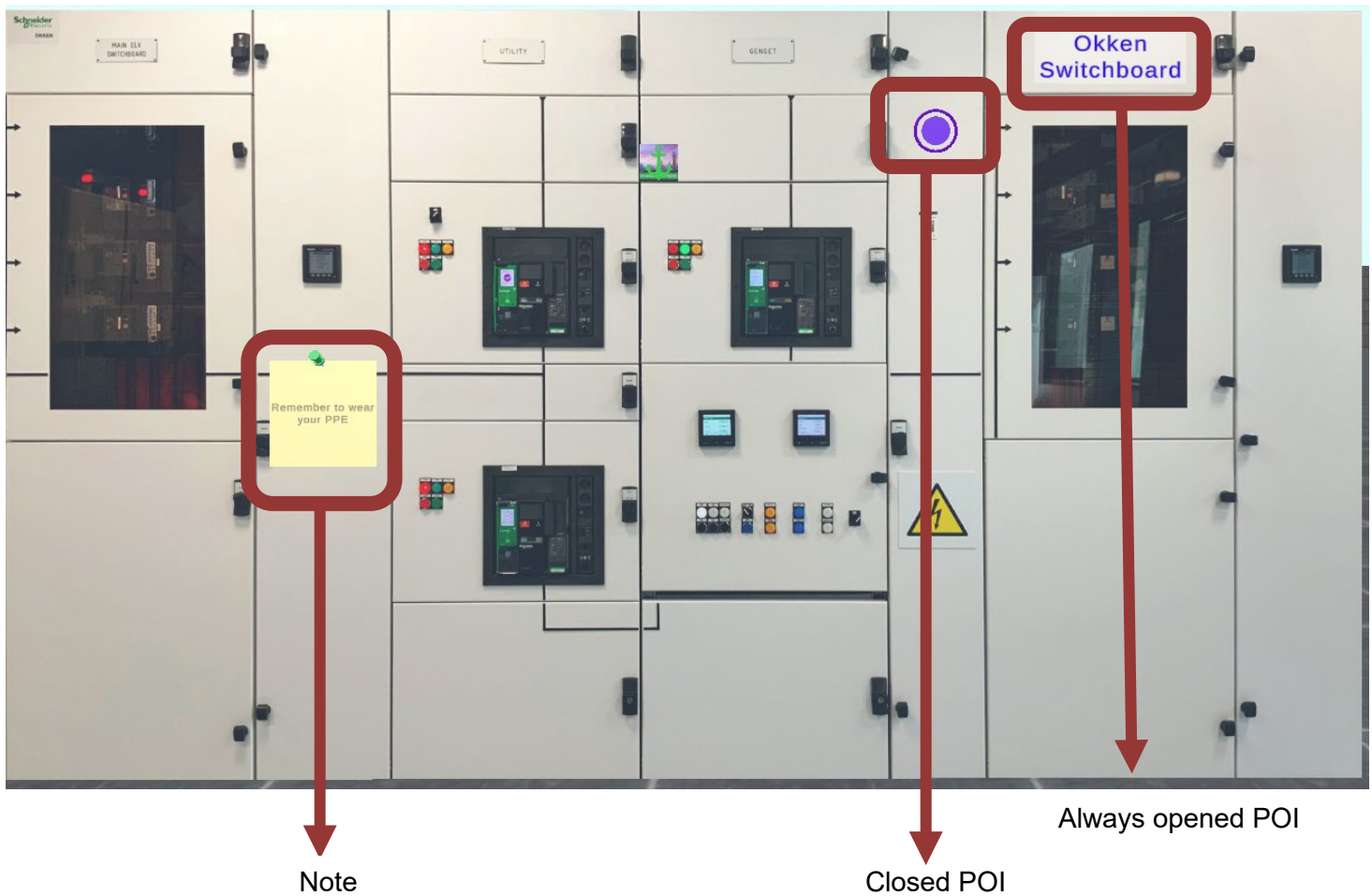
To exit the feature, click on the arrow just below the pointer:



14.0 AR application – Use the configuration

The menu bar on the right provides the list of actions possible (launch procedures, create/move/delete an object, create note, etc.).

The commands explained here apply for smartphones and tablets.



14.1 Interact with a Point of Interest (POI)

The Point of Interests (POIs) are used to display information.

A POI has two states:

- Closed
- Open
- Always open

A POI can contain multiple items inside. To see the different items and interact with them, we need to open the POI.

14.1.1 Closed POI

By default, a POI is closed and looks like a double circle with a color and maybe an icon in the middle.



To open a POI, we have several ways:

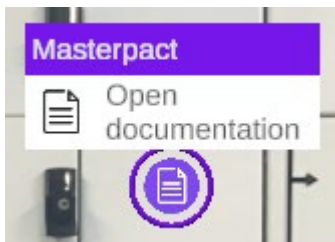
When the target (the center of the screen) is on a POI, the POI will open itself, and closes itself when the target is no longer on it.

14.1.2 Open POI

To make it open for a longer time, two options:

- Click with the finger on the POI, the POI will open
- Place the target (the center of the screen) on top of the POI. Then, click on the target button on the bottom right

The POI will open, show all the associated items it has and will remain open until a user clicks on the bottom part of the POI (shown as a purple double circle in the image shown).



If an action is linked to the POI item, then the user can click on it to launch the action.

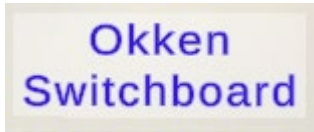
For example: Open documentation of the POI Masterpact will Open a documentation about the Masterpact.

14.1.3 Always open POI

An Always open POI is a POI that is always open. We cannot close it.

Same as the classic POI, it can be display multiples informations in the POI.

For ex: An always open POI with one item



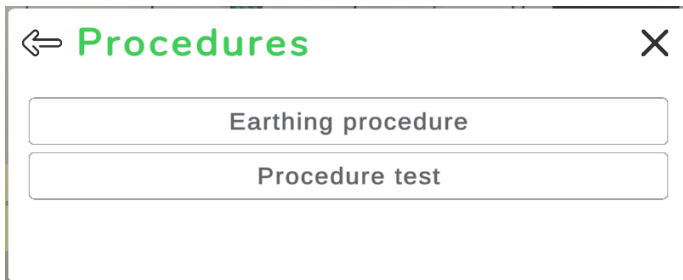
If an action is linked to the Always open POI item, then the user can click on it to launch the action.

14.2 Launch a procedure

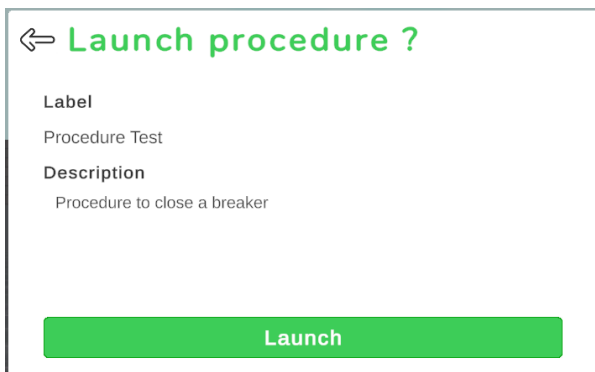
14.2.1 Procedure launch

Some procedures can be launched directly from an information inside a POI.

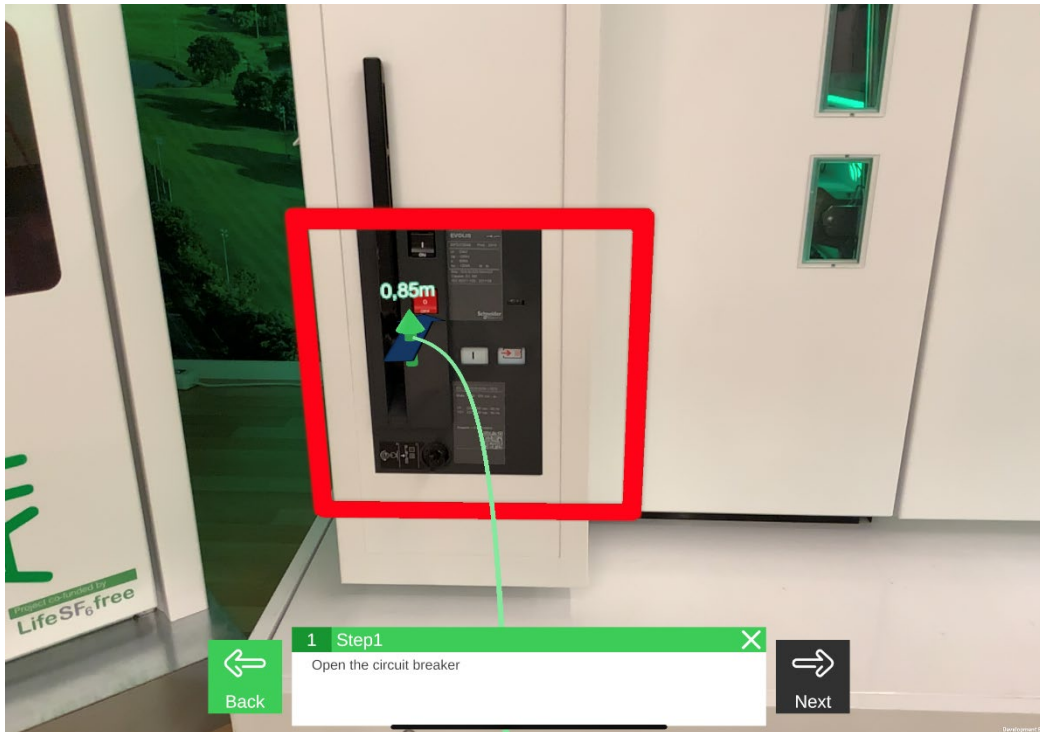
But we can also find all the procedures available for the room in the Menu bar, by clicking on Procedures.



To launch a procedure, click on it from the list. The user can see the name of the procedure as well as the description.

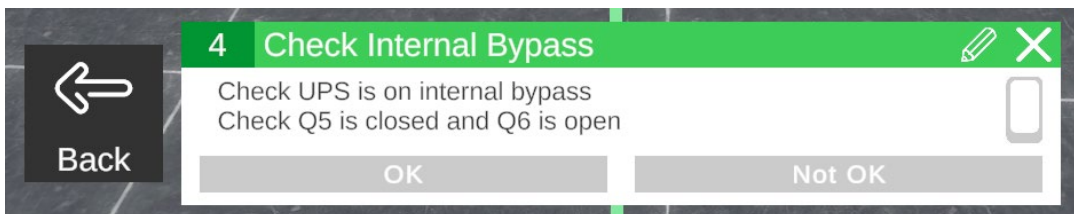


When a procedure is initiated, the interface will display a dialog box that describe each step and provide instructions:



Then an arrow will guide the user to where the step should take place. After doing the instruction of the step, click on Next to go to the Next step.

A step can include a question or multiple choices.



In that case, there is no Next button, and the user needs to select an option to move forward. The next steps may differ according to the user choice.



The user can add a comment to the step by clicking on the comment bubble next to the cross. The comment added will be visible in the procedure report.

14.2.2 Procedure reports

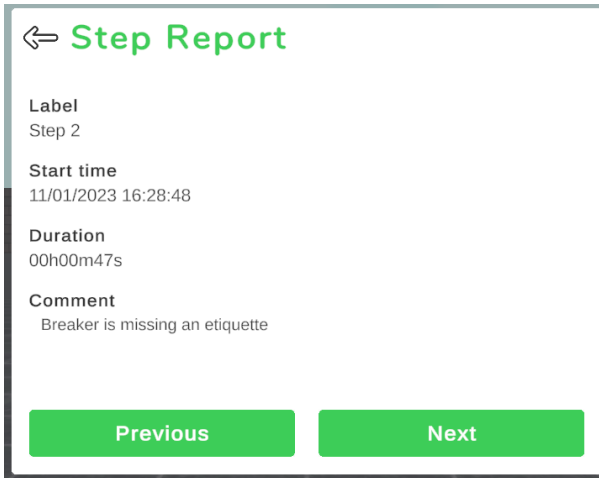
At the end of the procedure, the window for the procedure report opens.

Step	Date and Time	Duration
Step 1	11/01/2023 16:24:00	00h04m43s
Step 2	11/01/2023 16:28:44	00h00m01s
Step 1	11/01/2023 16:28:46	00h00m01s
Step 2	11/01/2023 16:28:48	00h00m47s

It includes:

- The name of the User that has launched the procedure.
- The report of all the steps in the order they have been taken.
- The duration of each step as well the date and hour
- The possibility to add a general comment to the procedure.

- Each step can be clicked on to see the details (step report), comments added during the following of the step, the time when the step started, the time taken to accomplish it.

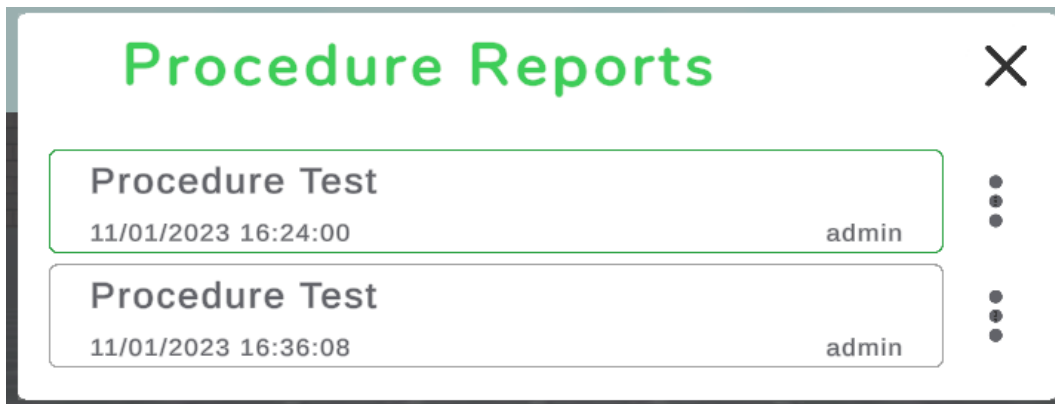


- The user can navigate between the steps with the previous and Next button
- The user can then Save the procedure report.

All the procedure reports created can be found again on the device if they have been saved or directly in the application by clicking on the item Procedure reports in the Menu. You can export the procedure reports in different formats: .pdf ; .csv ; .word.



Procedure Reports



15.0 Interaction between users

It is possible to have interactions between various users connected to the same server and present in the same room.

The users can see each other via their avatar (small robot head).



The color of the eyes depend on the device type: purple for connection from PC (Desktop app) and red for connection from a mobile device (AR app).

It is also possible to share information with the laser pointer or through notes, as explained in sections 6.0 and 13.0.

Glossary

3D Model: Virtual representation of the electrical installation It is the Virtual Reality part of EcoStruxure™ XR Operator Advisor

POI or Point of Interest: any types of data that customers want to display in EcoStruxure™ XR Operator Advisor, in Augmented Reality or in the 3D Model. It can be labels, images, process variable, data from a SQL database, documents (electrical diagrams, web pages, videos)

Operator Guided Procedures: Procedures are displayed step-by-step to the customer to make them learn them / follow them.

Viewer: customers will use Viewer the Augmented Reality application on their tablets, smartphones, and glasses; the Virtual Reality application on their PC and/or laptop.

Editor License: in option, customers can decide to create, modify, and update its application. **The Builder** is the Editor tool of EcoStruxure XR Operator Advisor.

AR application: Augmented Reality Device application (app for the smartphone, tablet, HoloLens v2)

se.com/services

Life Is On



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