



Instructions For Use For

# Activity Tracker

en-GB English

Applicable for versions 3.0 to 3.1

Physical Instructions For Use are available upon request, please contact LIO.

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## Symbols Used In These Instructions And On Product Labels

	Read the instructions for use		Caution
	Manufacturer		

## Instructions For Use For Activity Tracker



**Carefully read all instructions prior to use. Observe all warnings and precautions noted throughout these instructions. Failure to do so may result in incorrect activity alerts or misunderstanding of the platform status or alerts.**

These instructions for use are for the Activity Tracker, which is a collection of product modules within the LIO platform. For instructions on how to use other product modules within the LIO platform, refer to the instructions for use for those product modules.

Before using the Activity Tracker, you must first be trained in its use. The Activity Tracker training will be made available by your organisation.

## Product Description

Activity Tracker analyses data to detect specific activities and locations of an individual within the room it is installed in, and can provide notifications based on this data to be used in risk management and care planning. It is for use in hospitals, general care and secured environments for individuals 12 years of age or older, who do not require critical care. It should not be used as the sole method for assessing an individual's health and safety.

The Activity Tracker is not intended to be used as a surveillance tool, and you must use the functions to view the video in accordance with your organisation's privacy and security policies.



## Warnings

The Activity Tracker must not be used in bed spaces that contain or may contain:

- Domestic animals,
- A shower or significantly sized water feature.

It is not intended to be relied upon to notify care professionals of any immediate health or safety hazards, risks of harm or health of the individual.

The Activity Tracker is only intended to alert you to specific activities and locations of an individual (depending on local configuration) and must not be used as the sole basis for making any decisions or recommendations relating to clinical diagnosis, individual care or treatment.

Always revert to your local Standard Operating Procedures (SOPs) for establishing health and safety of individuals.

It is essential that you engage with the individuals under your care and other interested parties to ensure that they fully understand the capabilities, limitations and the intended use of the platform.

## Cautions

The Activity Tracker may not give alerts or show warnings in the following circumstances:

- If another individual is present (including hidden from view, for example by sheets)
- If the subject is a large distance away from the camera
- In individuals with low perfusion, anaemia, poor circulation or blood volume deficiency
- Other sources of movement or vibration are present - Clothing or fabric e.g. curtains, loosely fitted clothing, air mattresses or CPAP machines
- When individuals are talking or are displaying a non-typical breathing pattern ( e.g coughing, and sleep apnoea) or controlling their breathing
- Large airflows through the room (e.g. fans)
- If the camera sees any of the following:
  - The image is heavily saturated due to exceptionally bright illumination,
  - Sources of flashing or variable light, including other Near Infrared illumination (e.g. CCTV, TV, etc) or
  - Other moving patches of light and shadow (e.g. sunlight)
- When the individual is obscured (e.g. in a blind spot, covered by excessive bedding, or otherwise not viewable to the camera.)
- If there are changes to the room layout (e.g. moving beds by more than 50cm)
- If a second individual enters and leaves a preoccupied room when the first individual is in a blindspot e.g. In Bathroom

## Limitations

The Activity Tracker may take up to 40 seconds to confidently update the status of a room—for example, to confirm that a room is 'Empty' after an individual leaves. During this period, the room tile will continue to display 'In Room'.

The Activity Tracker cannot verify a person's identity, so if there is a second individual in the room, the Activity Tracker may misinterpret their movement as the original individual's, and display inaccurate room states.

From time-to-time the platform may restart. This is expected behaviour and rooms will display 'Connection Lost'. Platform restarts typically take 1 minute but can take up to 3 minutes. During the platform restart, users should expect the room to be unavailable. If the LIO platform is unavailable, please refer to your local Standard Operating Procedures.

## Maintenance

In the event of failure of any part of the LIO platform, contact LIO.

Only LIO or LIO trained maintenance personnel may make modifications to the platform. If you are in doubt whether changes could affect the device, you should contact LIO who can advise.

Do not relocate any equipment that has been installed for the LIO platform, or change any security or access arrangements to the equipment without first informing LIO.

If components within the sealed housing are directly exposed to liquids, vapours or dust then they may be damaged and cease to operate correctly. If this happens, stop using the platform and contact LIO.

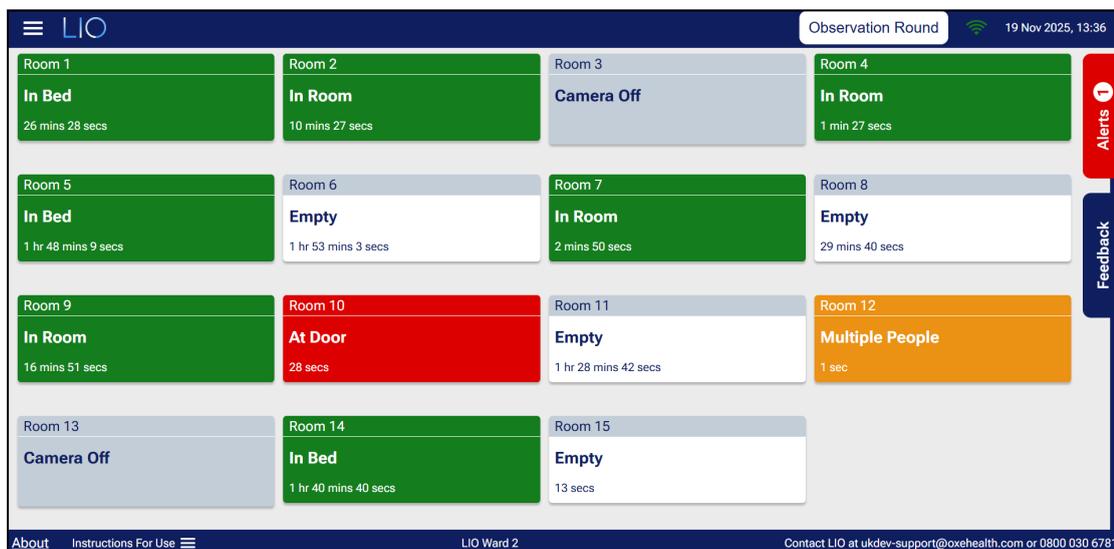
When cleaning the housing unit or touch screen devices, do not use solvent based, ammonia, caustic or abrasive cleaners or abrasive cleaning materials on the clear front panel of the housing unit or on touch screen device displays. These substances can scratch or cloud the surface, impairing visibility of the individual and potentially reducing the device's reliability and measurement accuracy.

## The Activity Tracker

The platform provides reports and room states based on an individual's location and movement within the room.

### The Overview Screen

Each room or bed space installed with the platform is denoted by a tile on the Overview Screen (see below). Depending on the number of rooms/bed spaces and layout chosen, you may need to scroll down to see all of the tiles. The tiles will change states and colour, depending on what the Activity Tracker determines is happening.



## The Room Dashboard

Each room or bed space has its own Room Dashboard that can be accessed by selecting the respective room tile on the Overview Screen. Here you will have access to additional platform features including reports, Take Vital Signs and other features depending on platform configuration.

**Activity Report**

Note: The below previews do not include all report information. For full information, click on view report.

**Alerts**

Time	Type
22:01	Out Of Bed
10:20	In Bathroom
10:14	Multiple People

**Summary**

Activity	Average
In Bed	14h 46min
In Bathroom	2.5x
Multiple People	1.5x

**Room**

**In Room**  
4 mins 28 secs

Occupied by: Benjamin Rehman

Pause Camera for 15 mins

Patient Configuration

**Vital Signs**

Take Vital Signs

To restart room and reset room state

Refresh Room

**Vital Signs Trends**

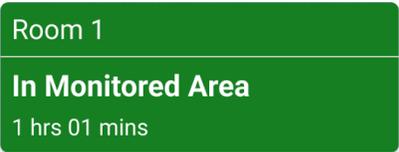
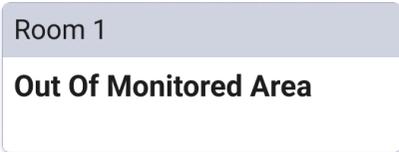
## Room States including Safety Notifications (Warnings and Alerts)

Room states are displayed on the Overview Screen on both fixed screens and tablet devices. Room states will vary depending on configuration. Please refer to your organisation’s leadership team for a detailed list of which room states are active, including their timings.

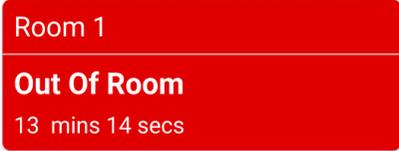
The platform provides safety notifications through activity-based warnings and alerts informing you of activity that may indicate an individual needs assistance. These room states will be displayed as the following:

- Warnings: Orange and visual only.
- Alerts: Red and audible, repeatedly sounding “Alert” until a user manually resets. Alerts also appear on the Alerts Tab and Room Dashboard. If the room tile is already showing an alert, no further alerts of the same type will sound. If you choose to reduce the volume (partially or totally) on the touch screen monitor, then it is your responsibility to return it to its previous level at an appropriate time. Mobile devices will automatically revert the volume to 75% every 60 seconds if changed.

Details for each room state are provided below:

Room State	Description	Room State	Description
	<p>The Activity Tracker detects the room is occupied.</p> <p>Currently only available in single occupancy rooms.</p>		<p>The Activity Tracker detects the bed is occupied.</p> <p>Available in both single and semi-private rooms.</p>
	<p>The individual is in view of the camera.</p> <p>Due to the size and shape of the room, certain areas are not fully visible to the camera.</p> <p>Predetermined safety notifications may be available.</p>		<p>The individual is not visible to the camera.</p> <p>Due to the size and shape of the room, certain areas are not fully visible to the camera.</p> <p>Safety notifications will not be available.</p>

Room State	Description	Room State	Description
<div style="border: 1px solid #ccc; padding: 5px;"> <div style="background-color: #e0e0e0; padding: 2px;">Room 1A</div> <div style="padding: 2px;"><b>Not In Bed</b></div> </div>	<p>The Activity Tracker does not detect the bed space is occupied.</p> <p>Only available in semi- private rooms.</p>	<div style="border: 1px solid #ccc; padding: 5px;"> <div style="background-color: #e0e0e0; padding: 2px;">Room 1</div> <div style="padding: 2px;"><b>Empty</b></div> <div style="padding: 2px;">6 hrs 38 mins</div> </div>	<p>The Activity Tracker detects that the room is empty.</p> <p>No safety notifications will be displayed while this room state is displayed unless “Out of Room” alerts have been enabled.</p>
<div style="background-color: #ff9900; color: white; padding: 5px;"> <div style="background-color: white; color: #ff9900; padding: 2px;">Room 1</div> <div style="background-color: white; color: #ff9900; padding: 2px;"><b>In Bathroom</b></div> <div style="background-color: white; color: #ff9900; padding: 2px;">1 min 4 secs</div> </div>	<p>The Activity Tracker detects an individual has entered into a bathroom and is no longer visible to the camera.</p>	<div style="background-color: #ff0000; color: white; padding: 5px;"> <div style="background-color: white; color: #ff0000; padding: 2px;">Room 1</div> <div style="background-color: white; color: #ff0000; padding: 2px;"><b>In Bathroom</b></div> <div style="background-color: white; color: #ff0000; padding: 2px;">13 mins 14 secs</div> </div>	<p>This alert escalates from an In Bathroom warning, if the Activity Tracker continues to detect the bathroom is occupied.</p>
<div style="background-color: #ff9900; color: white; padding: 5px;"> <div style="background-color: white; color: #ff9900; padding: 2px;">Room 1</div> <div style="background-color: white; color: #ff9900; padding: 2px;"><b>Blindspot</b></div> <div style="background-color: white; color: #ff9900; padding: 2px;">1 min 4 secs</div> </div>	<p>The Activity Tracker detects an individual has entered into a blindspot and is no longer visible to the camera.</p>	<div style="background-color: #ff0000; color: white; padding: 5px;"> <div style="background-color: white; color: #ff0000; padding: 2px;">Room 1</div> <div style="background-color: white; color: #ff0000; padding: 2px;"><b>Blindspot</b></div> <div style="background-color: white; color: #ff0000; padding: 2px;">1 min 4 secs</div> </div>	<p>This alert escalates from a Blindspot warning, if the Activity Tracker continues to detect the blindspot is occupied.</p>
<div style="background-color: #ff9900; color: white; padding: 5px;"> <div style="background-color: white; color: #ff9900; padding: 2px;">Room 1</div> <div style="background-color: white; color: #ff9900; padding: 2px;"><b>At Door</b></div> <div style="background-color: white; color: #ff9900; padding: 2px;">1 min 4 secs</div> </div>	<p>The Activity Tracker detects the area near the door is occupied.</p>	<div style="background-color: #ff0000; color: white; padding: 5px;"> <div style="background-color: white; color: #ff0000; padding: 2px;">Room 1</div> <div style="background-color: white; color: #ff0000; padding: 2px;"><b>At Door</b></div> <div style="background-color: white; color: #ff0000; padding: 2px;">13 mins 14 secs</div> </div>	<p>This alert escalates from an At Door warning, if the Activity Tracker continues to detect the area near the door is occupied.</p>

Room State	Description	Room State	Description
 <p>Room 1 <b>Leaving Bed</b> 1 min 4 secs</p>	<p>The Activity Tracker detects an individual making rising movements which indicate they are preparing to get out of bed.</p> <p>If an individual remains on the edge of the bed, you may see a Leaving Bed warning on the room tile.</p>	 <p>Room 1 <b>Out Of Bed</b> 3 mins 6 secs</p>	<p>The Activity Tracker detects the individual has left the bed space.</p>
 <p>Room 1 <b>Multiple People</b> 1 min 4 secs</p>	<p>The Activity Tracker detects that there are multiple people in the room.</p>	 <p>Room 1 <b>Out Of Room</b> 13 mins 14 secs</p>	<p>The Activity Tracker detects an individual has left the room via the main door.</p>
 <p>Room 1 <b>In Cell</b> 6 hrs 38 mins</p>	<p>The Activity Tracker detects the cell is occupied.</p> <p>Currently only available in Custody Settings.</p>	 <p>Room 1 <b>No Activity</b> 3 mins 6 secs</p>	<p>The Activity Tracker detects a room is occupied but no activity (gross or fine movement) can be detected for longer than 50 seconds.</p> <p>Only available in Seclusion, HBPOS, S136 and custody settings.</p>
 <p>Room 1 <b>Connection Lost</b></p>	<p>No room states including safety notifications will be displayed while this error state is displayed.</p>	 <p>Room 1 <b>System Error</b> Click for more information</p>	<p>The Activity Tracker is unavailable. Vital Signs are still available.</p> <p>No room states including safety notifications will be displayed while this error state is displayed. Please contact LIO.</p>

Room State	Description	Room State	Description
<div style="background-color: #f4a460; padding: 5px;">Room 1</div> <div style="background-color: #f4a460; padding: 5px;"><b>Camera Paused</b></div> <div style="background-color: #f4a460; padding: 5px;">1 min 4 secs</div>	<p>The camera has been turned off for a timed period, by a user. The room will automatically resume, once the pause duration ends.</p> <p>No room states including safety notifications will be displayed while this room state is displayed.</p>	<div style="background-color: #d9d9d9; padding: 5px;">Room 1</div> <div style="background-color: #d9d9d9; padding: 5px;"><b>Camera Off</b></div> <div style="background-color: #d9d9d9; padding: 5px;">1 hrs 01 mins</div>	<p>The camera has been turned off, access to reports and Digital Observations remains available.</p> <p>No room states including safety notifications will be displayed while this room state is displayed.</p>
<div style="background-color: #d9d9d9; padding: 5px;">Room 1</div> <div style="background-color: #d9d9d9; padding: 5px;"><b>Blind running</b></div>	<p>This room is in testing.</p> <p>The platform is not available for staff to use.</p>	<div style="background-color: #d9d9d9; padding: 5px;">Room 1</div> <div style="background-color: #d9d9d9; padding: 5px;"><b>Acquiring</b></div> <div style="background-color: #d9d9d9; padding: 5px;">6 hrs 38 mins</div>	<p>The Activity Tracker is detecting the status of activity within the room.</p> <p>No room states including safety notifications will be displayed while this room state is displayed.</p>
<div style="background-color: #d92728; color: white; padding: 5px;">Room 1</div> <div style="background-color: #d92728; color: white; padding: 5px;"><b>Interfered With</b></div> <div style="background-color: #d92728; color: white; padding: 5px;">13 mins 14 secs</div>	<p>The platform has been interfered with.</p> <p>No room states including safety notifications will be displayed while this error state is displayed.</p> <p>Please contact LIO.</p>		

## IMPORTANT

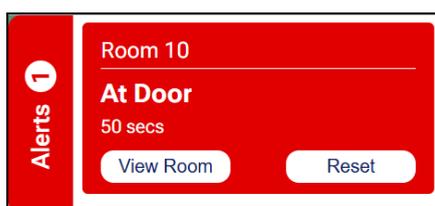
The Activity Tracker may interpret movement of a second individual as that of the first individual. For instance, if a second individual enters the room or stands in the doorway while the first individual is situated in the bathroom or blind spot, the Activity Tracker may display an inaccurate room state when the second individual leaves the room or door area. Do not rely on the 'In Bathroom' and 'In Blindspot' room state if a second individual has approached the door or entered the room.

## Responding to Alerts

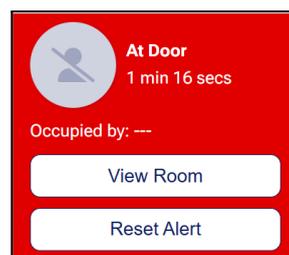
Active alerts are displayed in the Alerts Tab on the Overview Screen or on the Room Dashboard.

Users are able to either:

- Select 'Reset', to silence and reset the alert across all devices.
- Select 'View Room' to display a 15-second live, blurred (by default) video feed. If selecting this option ensure the screen is not visible to anyone else and ensure that you observe all of your organisation's safety, privacy and security policies and guidelines. You can close this view at any time by selecting Reset Alert.



*Alerts Tab*



*Room Dashboard*

## Replaying an Alert

If enabled, 10 minutes of blurred video footage is available following each alert (5 minutes before and 5 minutes after an alert is displayed), for up to 12 hours. This can be accessed through the Room Dashboard.

To replay an alert, select the relevant play icon, and select 'Create Video'.

Alerts		
Time	Type	
22:01	Out Of Bed	▶
10:20	In Bathroom	▶
10:14	Multiple People	▶

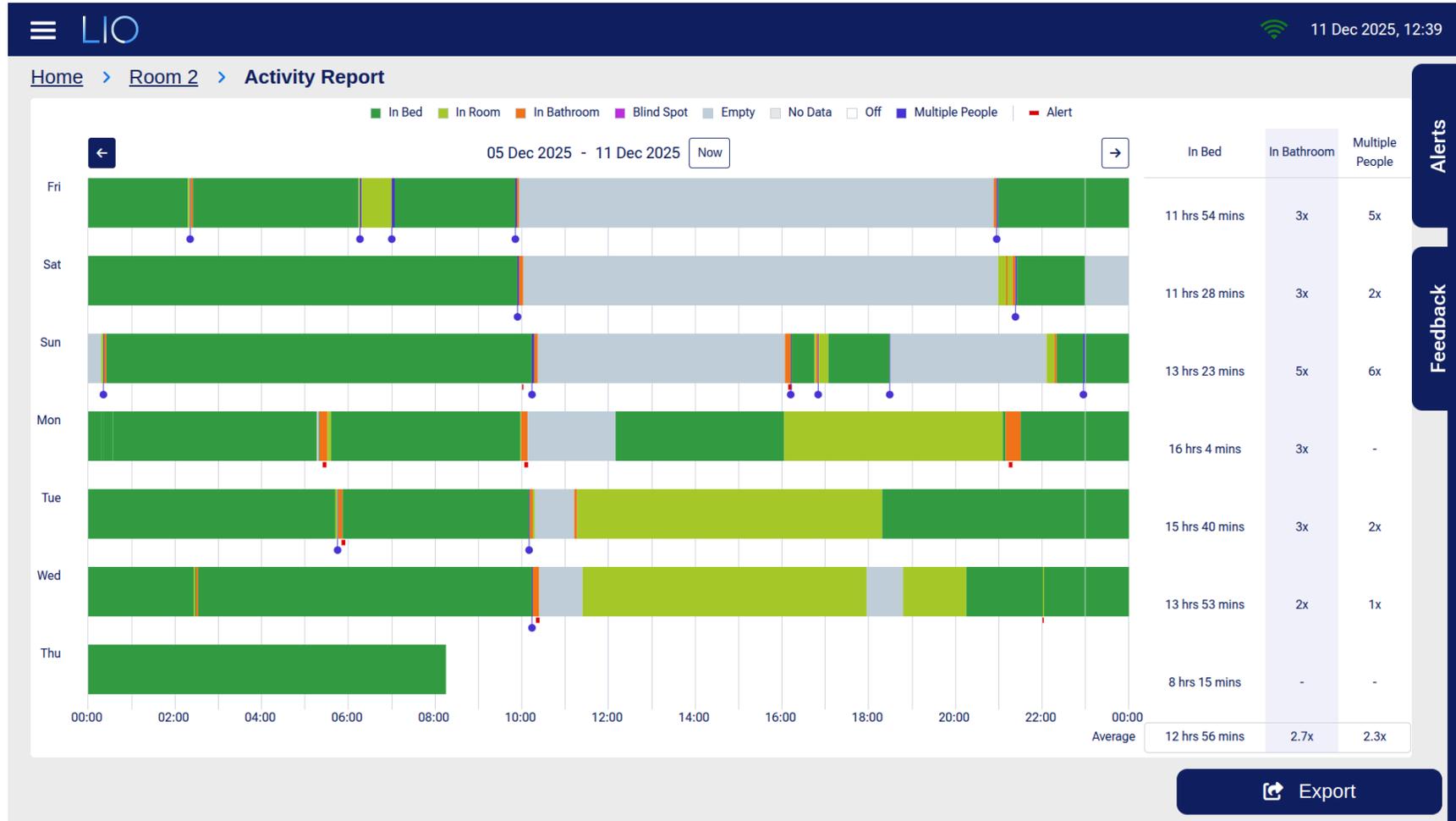
You can use the on-screen icons to play, rewind, or fast forward the video. When viewing this, ensure the screen is not visible to anyone else and ensure that you observe all of your organisation's safety, privacy and security policies and guidelines. Select Home when you are finished.

## Viewing A Report

Each room has its own Room Dashboard which is accessed by selecting the respective room tile on the Overview Screen. This displays a preview of the room's reports. To access the full report use the arrow in the top right of each report preview.

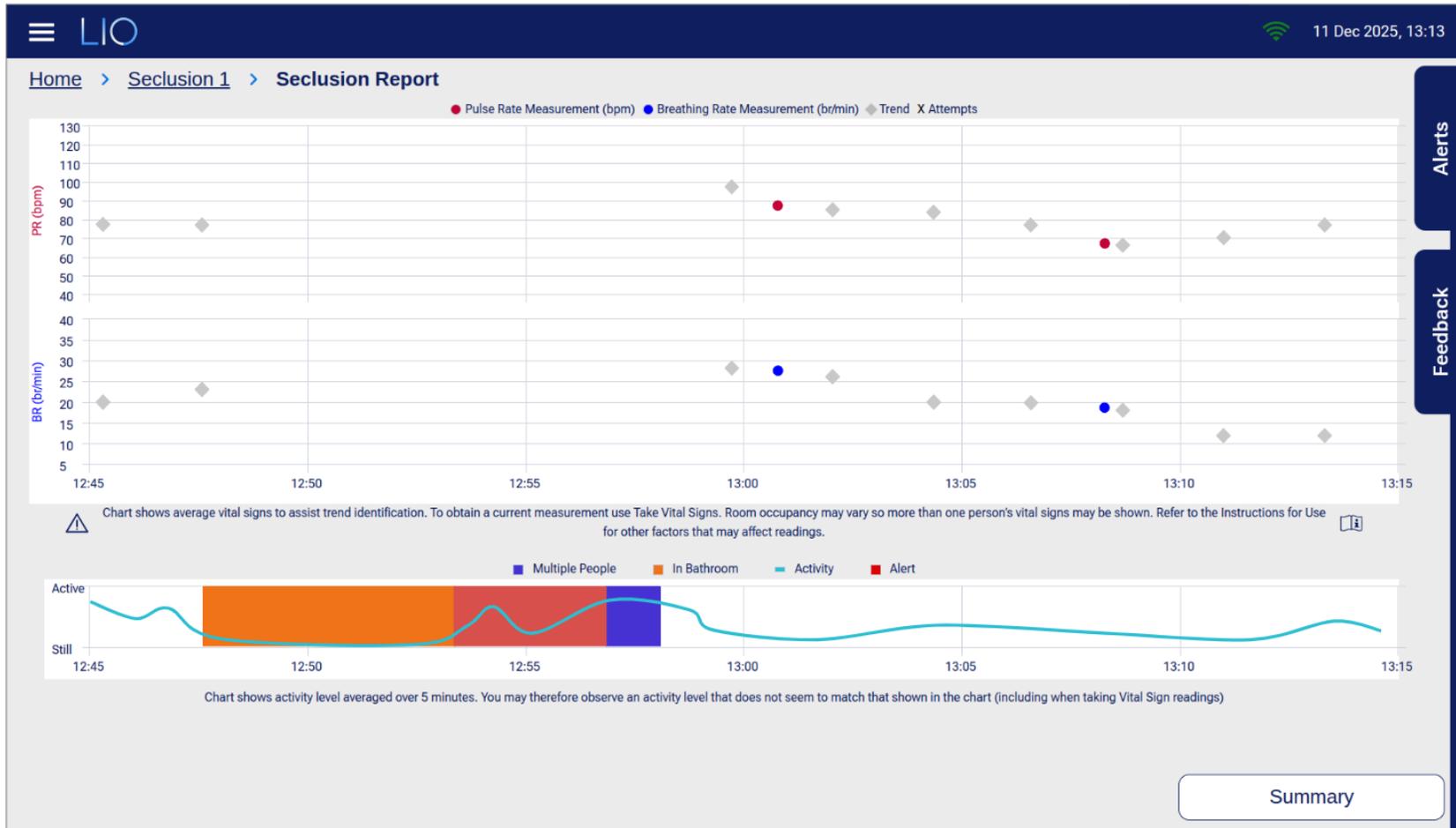
## The Activity Report

The Activity Report includes a timeline of room states and notifications as well as a set of daily key statistics, for the current reporting period (7 days). To view the previous weeks, select the back arrow symbol at the top left, select the forward arrow symbol at the top right of the report to move forward.



The Seclusion Report (available for Seclusion, HBPOS, S136 and Cells only).

The Seclusion Report must be manually started and stopped, by selecting the start/stop report button on the room tile. This report contains information from the Vital Signs Medical Device, as well as data from the Activity Tracker. For more information on the Vital Signs Medical Device, please refer to the LIO Vital Signs Instructions for use.



## Exporting Reports

You can export a report for a single room or a number of rooms over a selected date range.

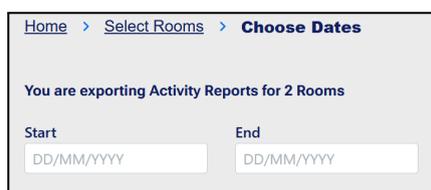
**Step 1:** Select the chosen report in the menu that can be found at the top left of the Overview Screen.

**Step 2:** Select the rooms you wish to export data for then select 'Choose Dates'.



**Step 3:** Enter the time frame for the export using the Start and End date dropdown boxes on the screen then select the 'Choose Recipient' button.

The maximum date range is 14 days. If invalid dates are selected, an error message will be displayed and the Choose Recipient button will continue to be inactive.



**Step 4:** Enter the email address you wish to send the report to, your reason for exporting and then select 'Confirm Export'.

A summary of the export is displayed on the right of the Choose Recipient screen which shows the following:

- **Exporting** - The type of report being exported;
- **For** - The rooms selected and;
- **Time period** - The time frame selected.

The export options can be edited by selecting the edit icons within the Summary section. Selecting an edit icon will return you to the respective **Select Rooms** or **Select Dates** screen.

You can also export a single room report by navigating to the full report and selecting the 'Export' button.

Home > Select Rooms > Choose Dates > **Choose Recipient**

**Email**  
 Recipient's email

**Reason For Export**  
 ⚠ Do not include personally identifiable information, e.g. names, dates of birth, etc.  
 Type your reason here...  
 Characters remaining: 255  
This email will also be sent to the following default recipients for audit purposes: ben.underwood@liohealth.com.

**Summary**

**Exporting**  
Activity Report

**For**

**Time Period**

**Alerts**

**Feedback**

### Step 5: Select Confirm Export.

If there are any issues with exporting a report, an error message will be displayed. If this issue persists, please contact LIO.

### IMPORTANT

Do not include any personal identifying information in the **Reason For Export** section, e.g. names, date of births.

Limitation on email size means that users should limit the number of rooms to export to no more than 15 rooms for 10 days or in other words, 150 room-days of information in one export.

### User Auth

User Auth is a security feature that requires you to sign in with your organisational single sign on account to access specific features of the platform. Please refer to your organisation for a detailed list of which features require User Auth.

### Signing In and Out

You can sign in via the User Icon or via selecting a protected feature. You will be prompted to 'Sign In' via your organisation's single sign on page, and once completed, you will be redirected back to the platform.

You can sign out at any time, by selecting the sign out button via the User Icon. You will also be signed out after a configured period of inactivity or the maximum session timer expires. If you encounter any issues with User Auth, please contact your organisation's IT team



User Icon

## Recent Incident Review

If enabled, the platform provides immediate access to blurred video data for staff. This data is available directly from a platform device for up to 4 days.

To access this data, select the menu icon at the top left of the Overview Screen. Then select 'Recent Incident Review'. You can sign in using either User Auth or entering the configured 4 digit PIN. You must complete the mandatory details including the room, start date, time and length of footage you would like to review. Then select 'Confirm Details'.

You can use the on-screen icons to play, rewind, or fast forward the video. When viewing this, please ensure the screen is not visible to anyone else and ensure that you observe all of your organisation's safety, privacy and security policies and guidelines. Select Home when you are finished. Once selected, you will need to repeat the process to view the video again.

## Pausing A Room

To pause a camera, select the pause camera button. If paused, platform access and data for that room are unavailable. No room states including safety notifications will be displayed while this room state is displayed.

The duration of the pause may not be 15 minutes as the default pause duration can be changed via the Settings page by selecting the up and down arrows. The room will automatically resume once the pause duration ends.



Pause Camera for 15 mins

You can cancel the pause duration by selecting the 'Cancel Pause Camera' button shown below.



Cancel Pause Camera

You are able to extend the pause duration by selecting the 'Extend Pause' button shown below.



Extend Pause 15 mins

## Refreshing a Room

If the Activity Tracker has incorrectly determined the location of the occupant or other individuals in the room, you are able to restart the platform by selecting the 'Refresh Room' button on the relevant room's Room Dashboard.



To restart room and reset room state

Refresh Room

Whilst it is restarting you may see 'Connection Lost' and 'Acquiring' before the Activity Tracker determines a new room state. It is recommended that you verify the room state is correct after this process.

This feature is not intended to be used on a regular basis, and if you believe that the room states are consistently incorrect, please contact LIO.

### Enabling and disabling the Platform

To enable or disable the platform within a room, select the Settings button located in the menu icon that can be found in the top left corner of the screen.

This screen shows the on or off status for each room, which is operated as follows:

 A screenshot of a user interface for 'Room 1' showing a green toggle switch in the 'on' position.	The platform (including the camera) is on, meaning the software is running, receiving and processing video.
 A screenshot of a user interface for 'Room 1' showing a blue toggle switch in the 'off' position.	The platform (including the camera) is off, meaning the software is not running, receiving or processing video.

### Contacting LIO

LIO has a dedicated customer support team who are available 24/7, 365 days a year.

If you have any issues or questions about the platform, you can contact LIO via the following methods.

### Feedback Form

Select the Feedback tab in the top right corner of the screen. Complete the relevant fields with your information, issues, suggestions, or questions then select 'Send'. If you prefer not to send feedback, select 'Clear' to return to the Overview screen.

#### CAUTION

Do not include any person identifying information when contacting LIO , e.g. names, date of births.



## Manufacturer

### **Oxehealth Limited**

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