

STEP-BY-STEP IMPLEMENTATION GUIDE

# Getting started with Blyott

Q1-2023



# Requirements for a successful implementation



1

## Include all stakeholders

Talk with all the different stakeholders from the beginning. Their buy-in's are crucial!



2

## Managing expectations

Explain what to expect related to e.g. location accuracy and delays.



3

## Define relevant use cases

Discuss with all the different stakeholders their challenges and relevant use cases.



4

## Gathering of information

Make sure all the required information is received and double-checked.



# Step 1: include all stakeholders



1

## Medical Staff

No time wasted in searching for assets results in more time for "patient care".



2

## Biomedical Management

No time wasted in searching for assets which requires maintenance. Better insights in utilisation of assets.



3

## Facility Management

Real-time overview of all assets in use and in maintenance. Process flows optimisation.



4

## Financial Management

Better insights in utilisation leads to less investments in assets. Less loss and theft of assets.

# Step 2: managing expectations - questionnaire

Questions	Answer Examples	Why?
1) What is the total surface area of the site?	e.g. 60.000 m2	<i>Required for estimating the expected location accuracy (in m).</i>
2) Total number of Bluetooth locators (e.g. Wi-Fi AP's with built-in BLE)?	e.g. 600	<i>In this example we have 1 Wi-Fi AP per 100m2. This translates into an expected location accuracy of +- 6m.</i>
3) In case of Wi-Fi AP's with built-in BLE: manufacturer and model type?	e.g. Aruba 630 Series	<i>In this example we know that we can use the existing Wi-Fi infrastructure and that no Proxy Locator is required.</i>
4) How many individual rooms are at the site? In how many rooms higher location accuracy will be required?	e.g. 3.000 and 300	<i>In order to know if the ML option is required and in which rooms to place additional "ML Tags" for increased accuracy.</i>
5) How many beds are at the site?	e.g. 600	<i>In order to estimate the total number of assets (and BLE tags). On average, hospitals have +- 10 floating assets per bed.</i>
6) Is single-sign-on required?	e.g. YES	<i>We can now include the optional "Active Directory" module.</i>
7) Is integration with 3rd part applications required?	e.g. YES	<i>We can now include the optional "Rest API" module.</i>
8) Are alerts to 3rd party applications or via E-mails required?	e.g. YES	<i>We can now include the optional "WebHooks" module.</i>



# Step 3: define the relevant use cases <sup>(1/2)</sup>

## How a hospital uses Bluetooth asset tracking

In just a matter of weeks, a large hospital in Belgium went live with the Blyott indoor tracking solution using its existing Wi-Fi + BLE infrastructure.



### Real-time overview of mobile assets

Staff can see where thousands of assets (beds, pumps, mattresses) are located in the hospital.



### Improve efficiencies

Indoor localisation in combination with “Big Data” analytics help hospitals understand certain flows and solve bottlenecks.





# Step 3: define the relevant use cases (2/2)

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## CASE STUDY

### AZ Maria Middelaes saves valuable time with Blyott's location tracking solution

He who seeks, finds, so the saying goes. Ultimately yes, but in the meantime you can waste a lot of valuable time and money with all that searching. Certainly in a hospital environment, where human lives are at stake, investing in good location-based tracking technology is essential. "In Blyott, we found the ideal technology partner to advise and support us with this," says Peter Dierickx, IT & Facilities Director at the Belgian hospital AZ Maria Middelaes.

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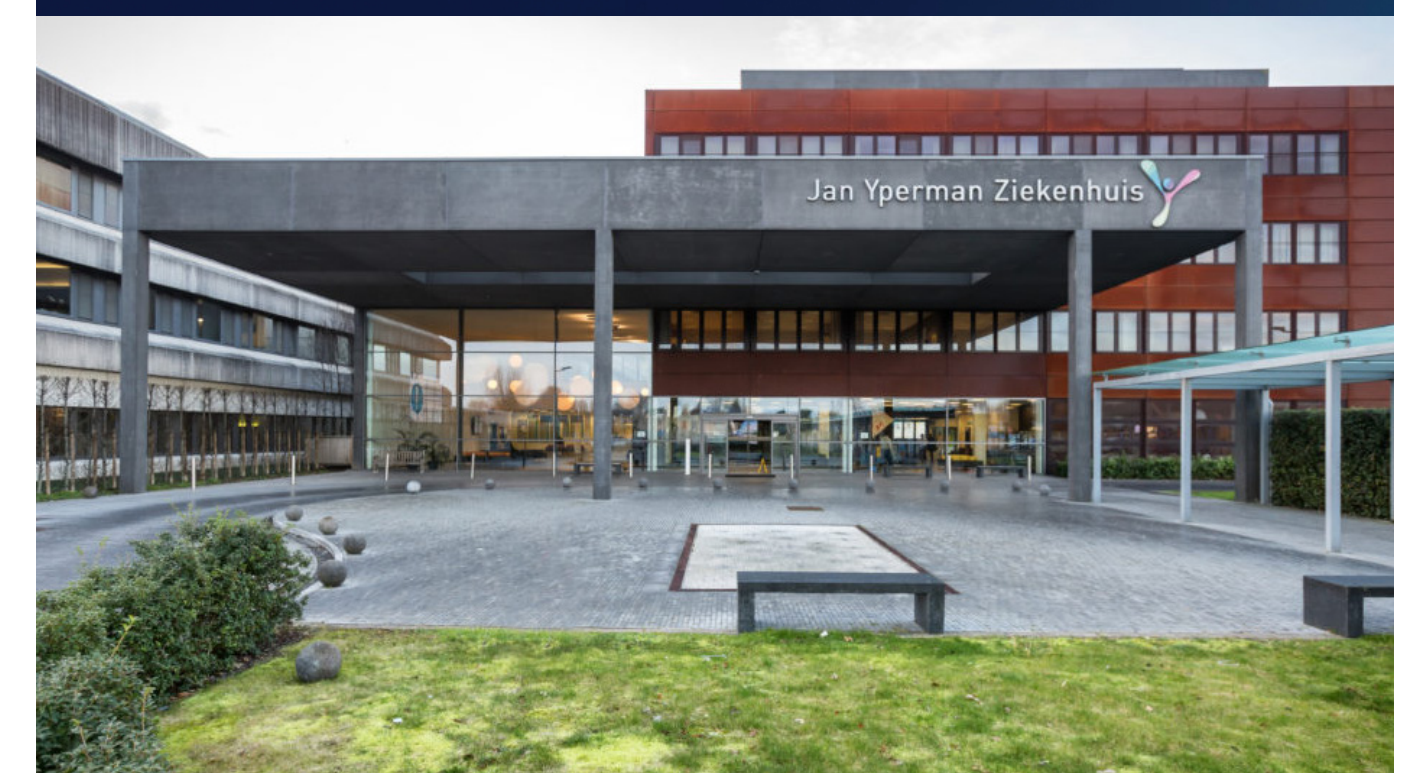
## CASE STUDY

### Bravis Hospital implements innovative track-and-trace system with Blyott

Thanks to Blyott, Bravis Hospital (NL) now has an accurate picture of where blood and tissue samples and other biomaterials intended for research are located. Blyott developed an app that allows Bravis to track the movement of containers not only within the hospital but also during transport between the various outpatient clinics, operating rooms, medical imaging facilities, laboratories, pathology departments, and pharmacies. The app is also equipped with a sign-off module and monitors the temperature of the containers.

[www.blyott.com](http://www.blyott.com)

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## DUTCH PIONEER

### Real-time location tracking makes the difference at Jan Yperman

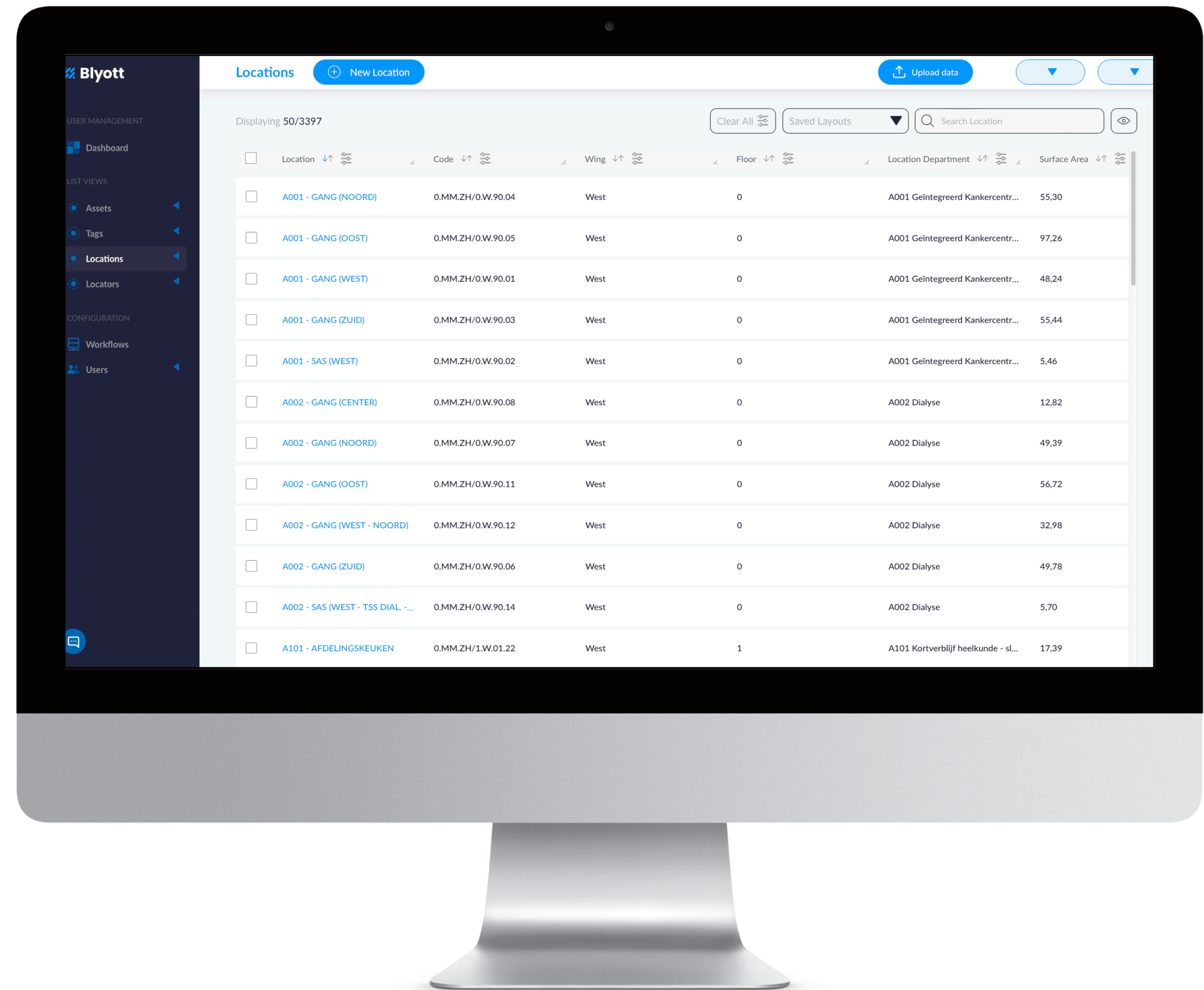
Real-time location tracking of medical materials and machines is more than just convenient for a hospital. At Jan Yperman Hospital in Ypres, Belgium, analysis of the data collected in the process allows for the best possible purchasing and maintenance policy, in addition to more efficient logistics flows.

[www.blyott.com](http://www.blyott.com)



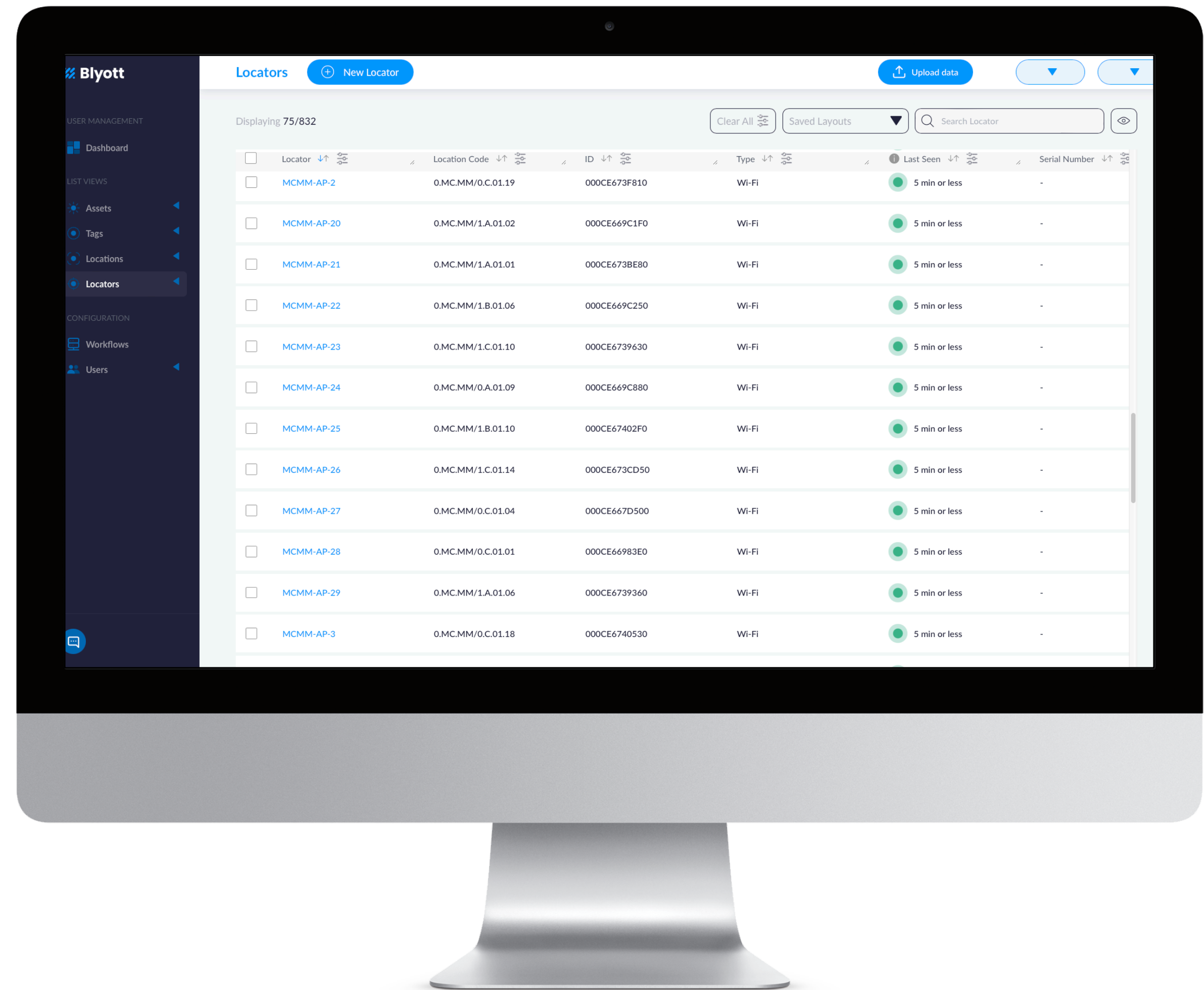
# Step 4a: gathering information - locations

- Blyott does not work with “indoor maps” but with “locations”.
- We need a detailed list of all the locations in a hospital, with extra information like e.g. m2, type of room (e.g. storage), department, ...



## Step 4b: gathering information - locators

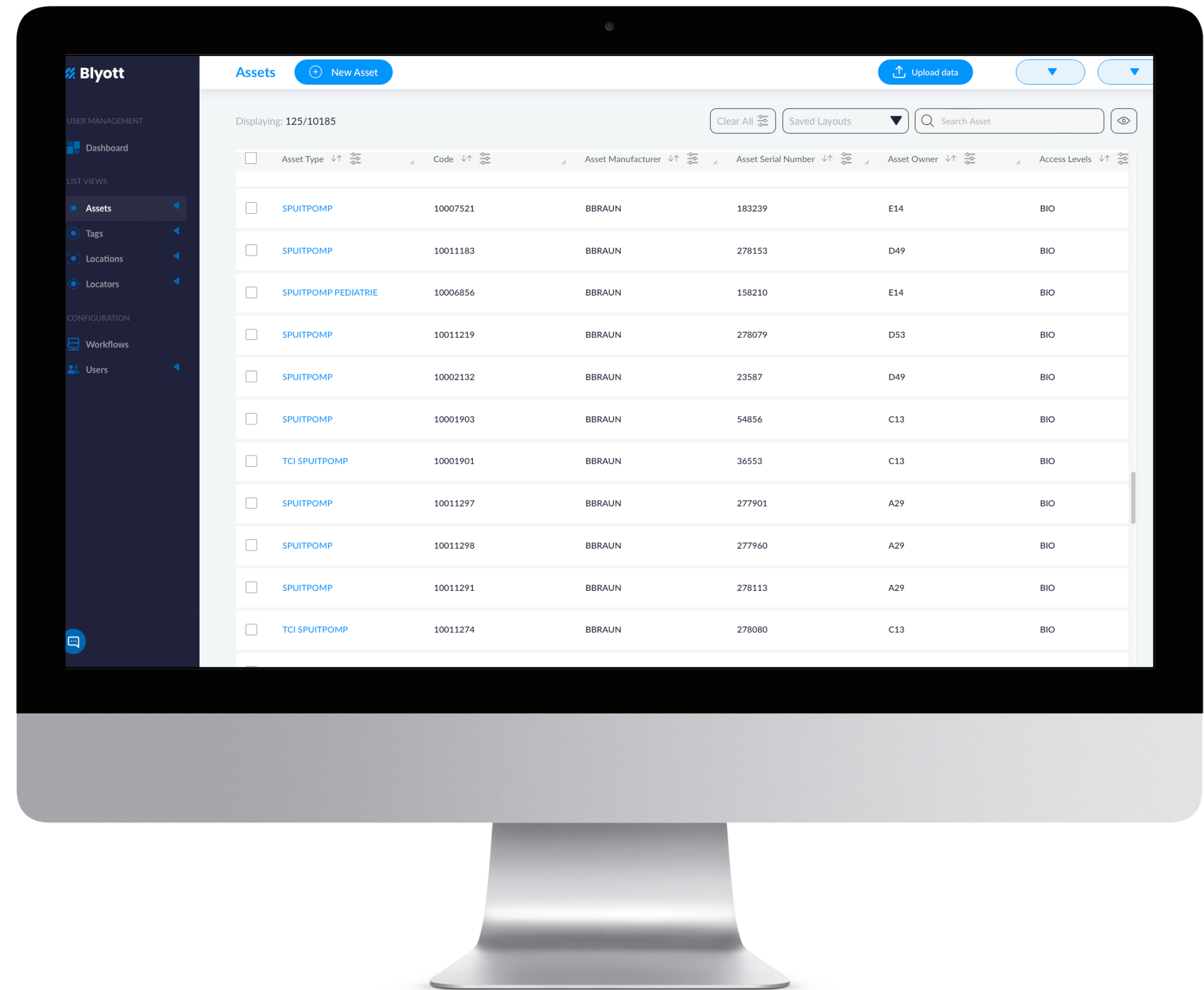
- Blyott needs a list of the MAC addresses of all BLE locators (e.g. Wi-Fi AP's with built-in BLE) and the locations where these locators are installed.
- If a locator is installed in a (long) corridor, link the closest room location to this locator.





## Step 4c: gathering information - assets

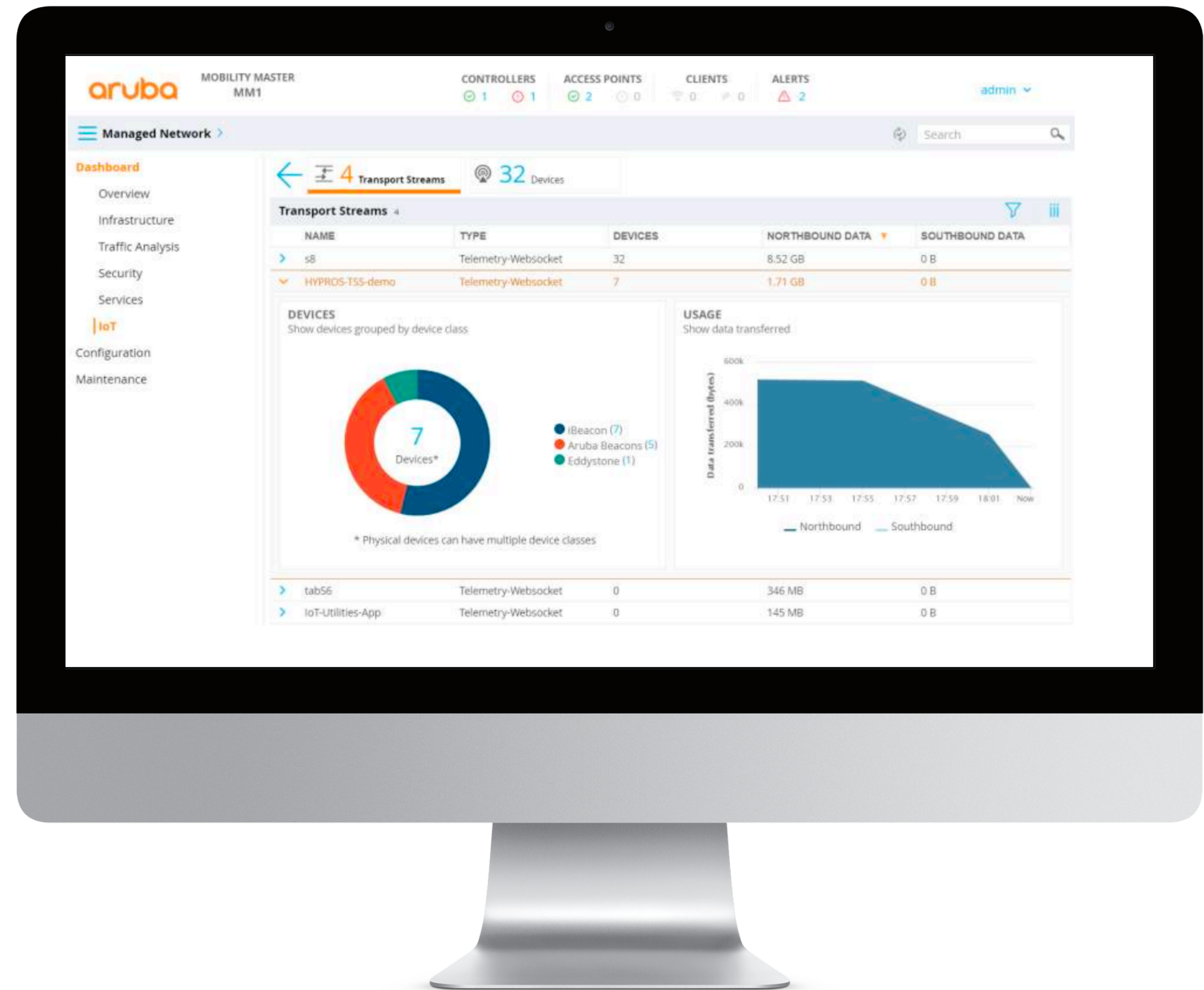
- Blyott needs a list of all assets the hospital wants to tag in the future.
  - Please include as much data as possible, e.g. manufacturer, department, ... .
  - This info is not needed if the hospital plans to upload this data to the Blyott cloud using Rest API's. Data can also manually added when a BLE tag is linked to an asset.
- ➡ Please contact [support@blyott.com](mailto:support@blyott.com) to receive our latest Excel onboarding template; our team will help with filling out this template and uploading it to the Blyott cloud.



# Step 5: Linking the locators to the Blyott cloud (1/2)

## 3 Potential Scenario's:

- 1) Blyott Fixed Locators  
These will only need power and network connectivity and will automatically connect to the cloud. Wi-Fi credentials need to be agreed upon in advance.
  - 2) Wi-Fi AP's w/o Proxy Server  
This set-up requires a one-time configuration on the WLAN controller.
  - 3) Wi-Fi AP's with Proxy Server  
This set-up requires the installation of the Proxy Server software on a VM at the hospital.
- ➔ All 3 scenario's will require specific ports to be opened on the hospital firewall.  
Contact [support@blyott.com](mailto:support@blyott.com) for more information and help.

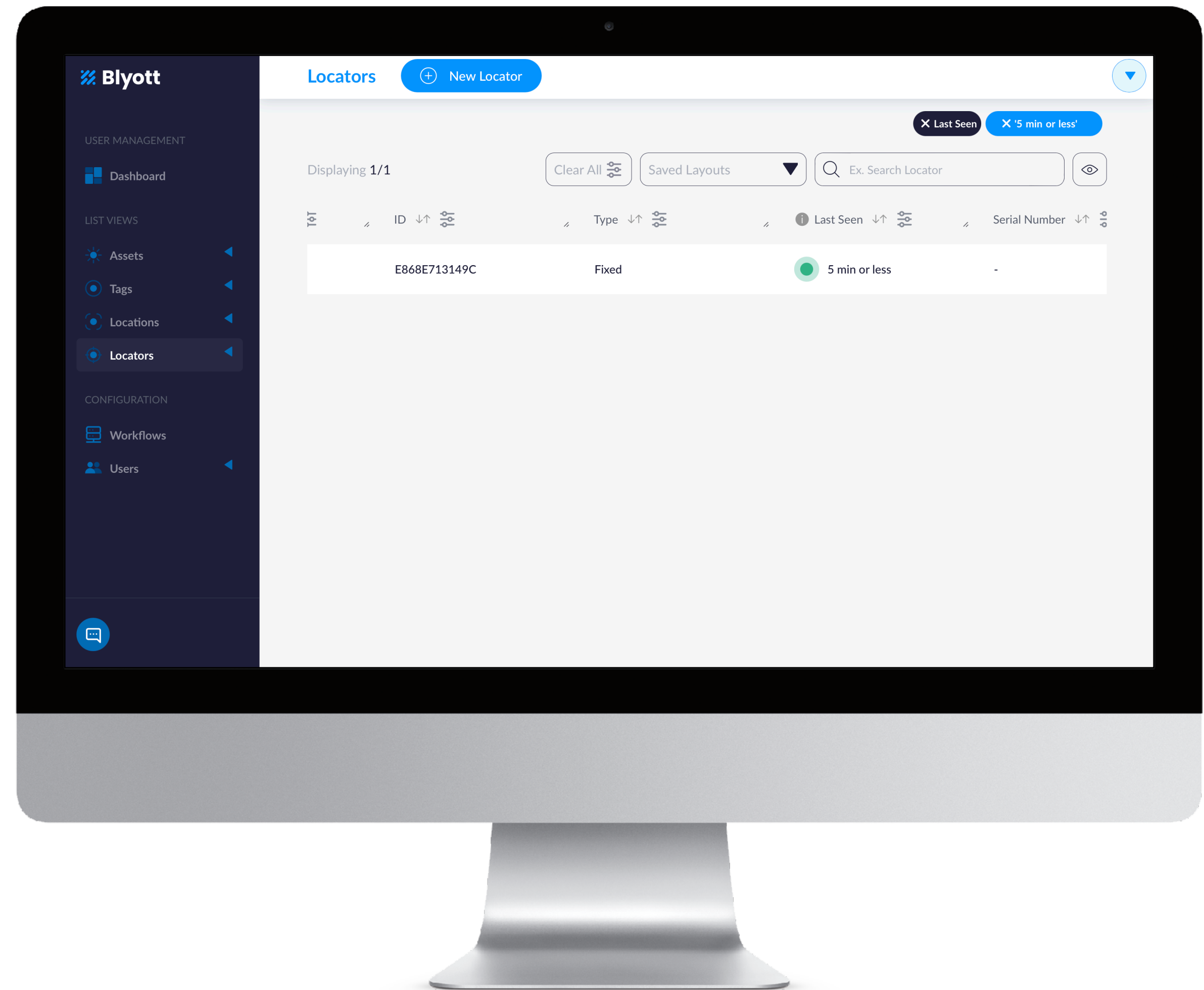




# Step 5: Linking the locators to the Blyott cloud (2/2)

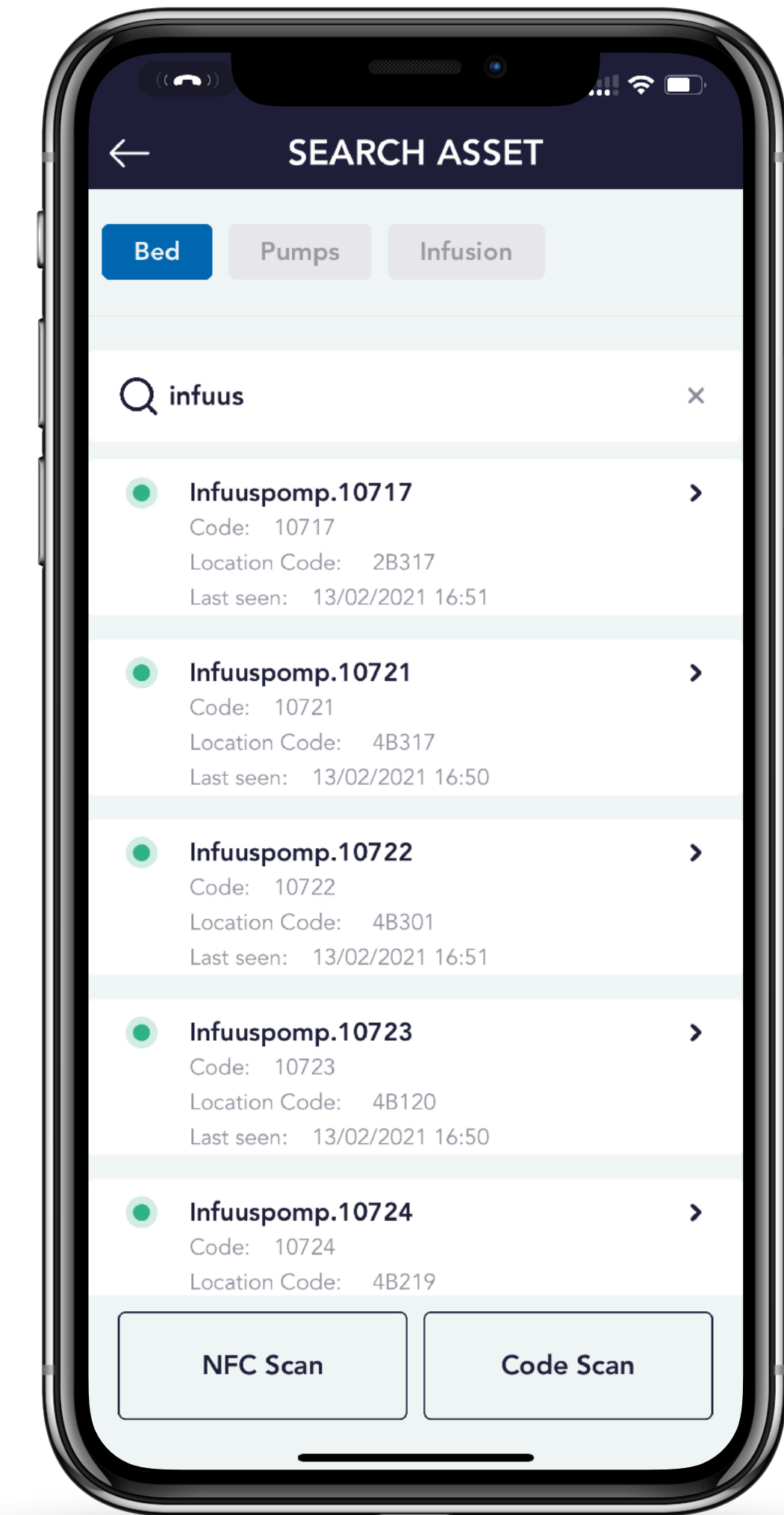
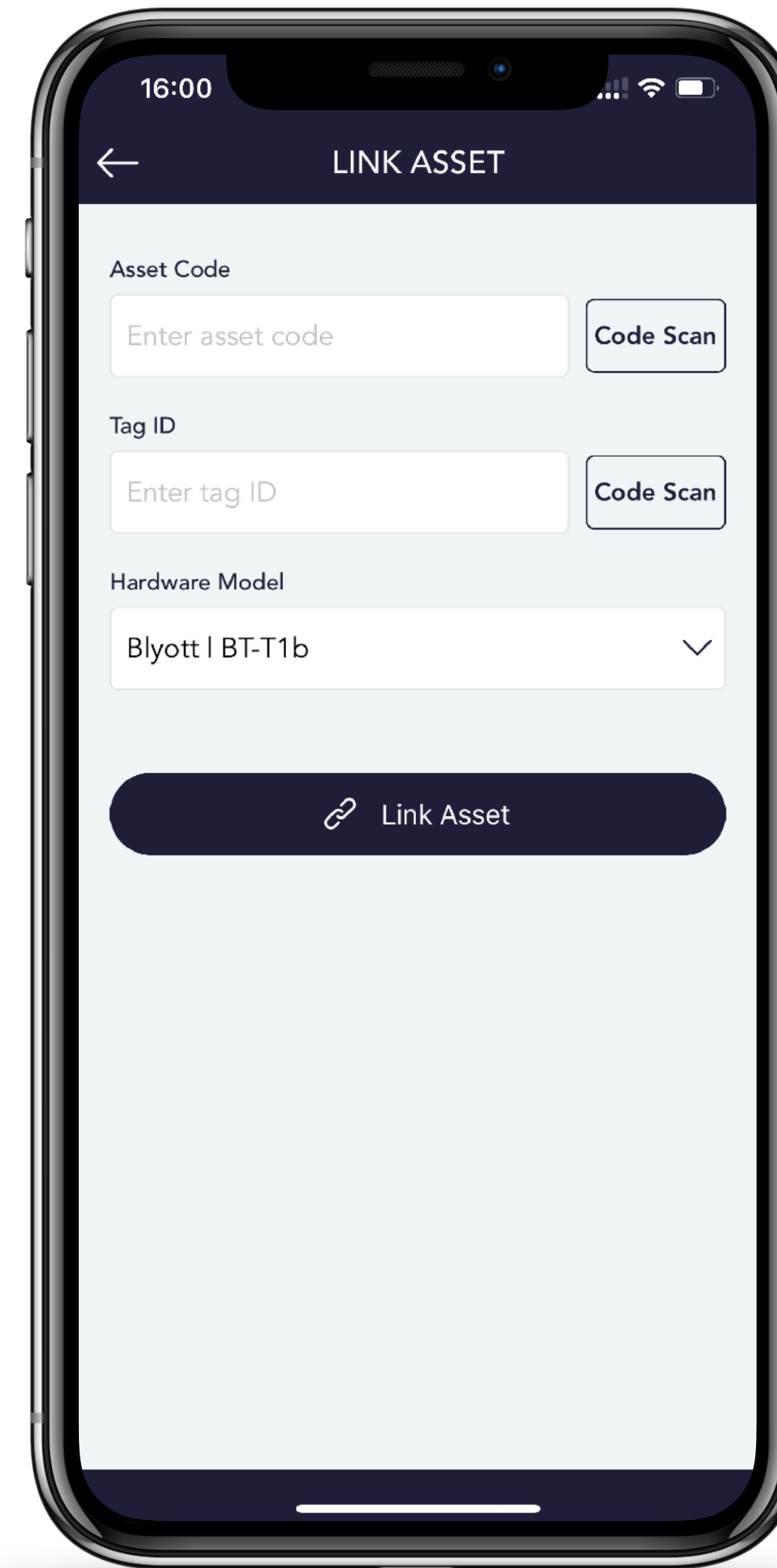
## Scenario 1: Blyott Fixed Locators (BT-L1)

- ▶ Power on the device via PoE or USB; USB power adaptor is not included.
- ▶ Connect the device to the internet via either Ethernet (recommended) or Wi-Fi (only 2.4Ghz).
- ▶ In case of connection via Wi-Fi: create a new Wi-Fi network on your router with the following settings: SSID = "Blyott" and WPA2 password = "BlyoTT:2200!"
- ▶ Make sure ports TCP/UDP 123 (e.g. pool.ntp.org), 443 (<https://api.blyott.com> and <https://portal.blyott.com/login>) and 8883 (MQTT to [tcp://aroncdz10y0su-ats.iot.eu-west-1.amazonaws.com:8883](https://aroncdz10y0su-ats.iot.eu-west-1.amazonaws.com:8883)) are open on your firewall or router.
- ▶ You can check the connection status per device via the Blyott portal or via the LED's on the device: Left "Green" = power, Middle "Green" = connected to Blyott, Right "White" = sending data via Ethernet to Blyott (blinking = via Wi-Fi).



## Step 6: Linking BLE tags to assets

- Download our Mobile App
  - ▶ Available in both the Apple App Store and the Google Play Store under the “Blyott” brand-name.
  - ▶ To log-in: use your existing Blyott credentials.
- Link Asset to Tag
  - ▶ Take a Bluetooth tags and fix the tag on an asset, e.g. Bed 001.
  - ▶ Click “Link Asset” in the mobile app. Scan the QR-code of the tag (= Tag ID). Scan the Barcode of the asset (or enter e.g. bed001 manually) (= Asset Code). Click the “Link Asset” button.
  - ▶ The tag is now linked to the asset. You can now search for your assets by clicking the “Search Asset” button.



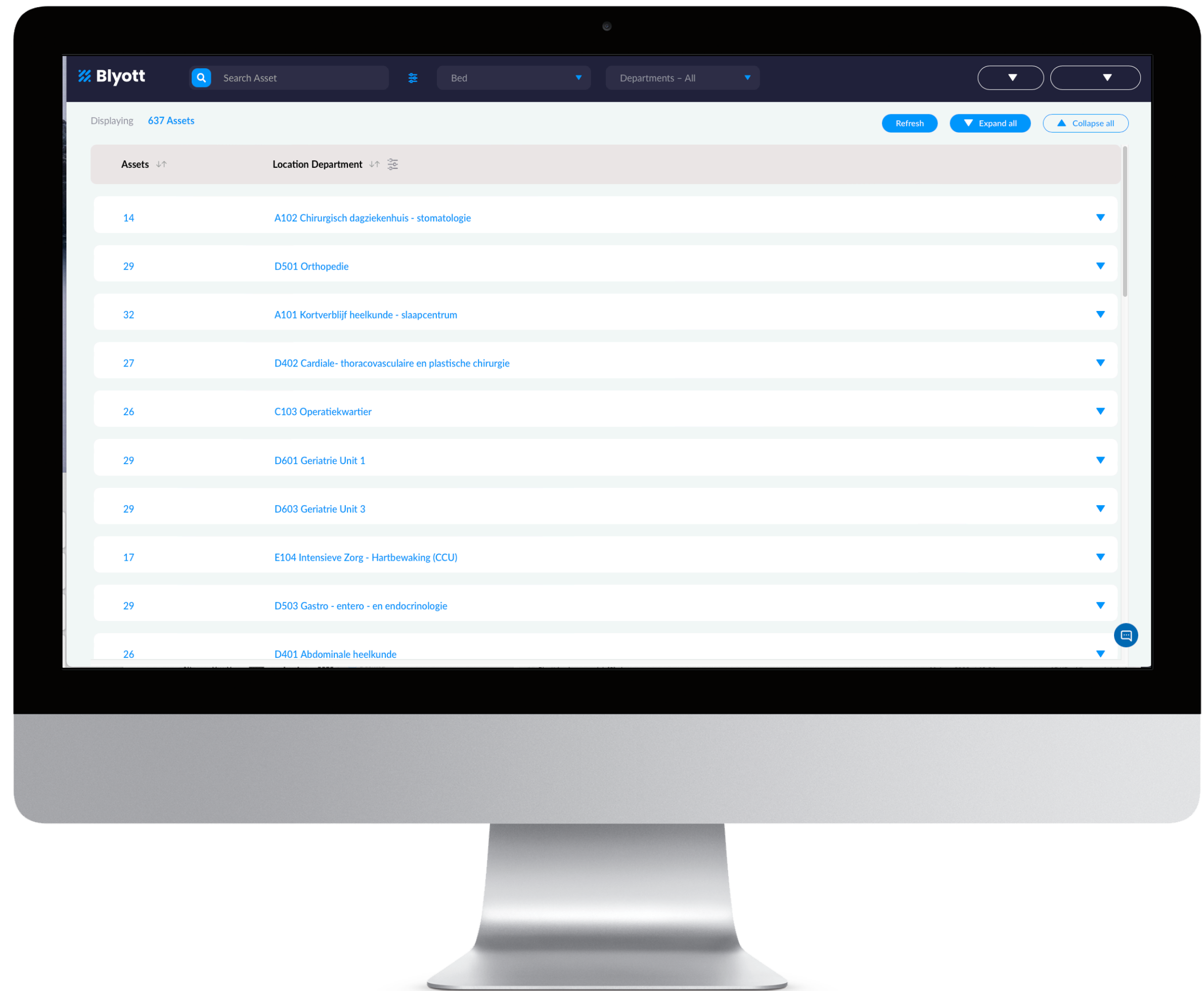


# Step 7: Configure the Search Portal

Blyott has 2 user levels and interfaces:

- 1) Admin Level & Portal  
Administrators can create users, assets, locators, locations; admins have access to the standard Blyott portal.
- 2) User Level & Search Portal  
Standard users are redirected to the search portal. Here they can only look-up location information of assets they have been given access to. The administrator can configure this search portal.

➡ Contact [support@blyott.com](mailto:support@blyott.com) for more information and help in setting-up the search portal.



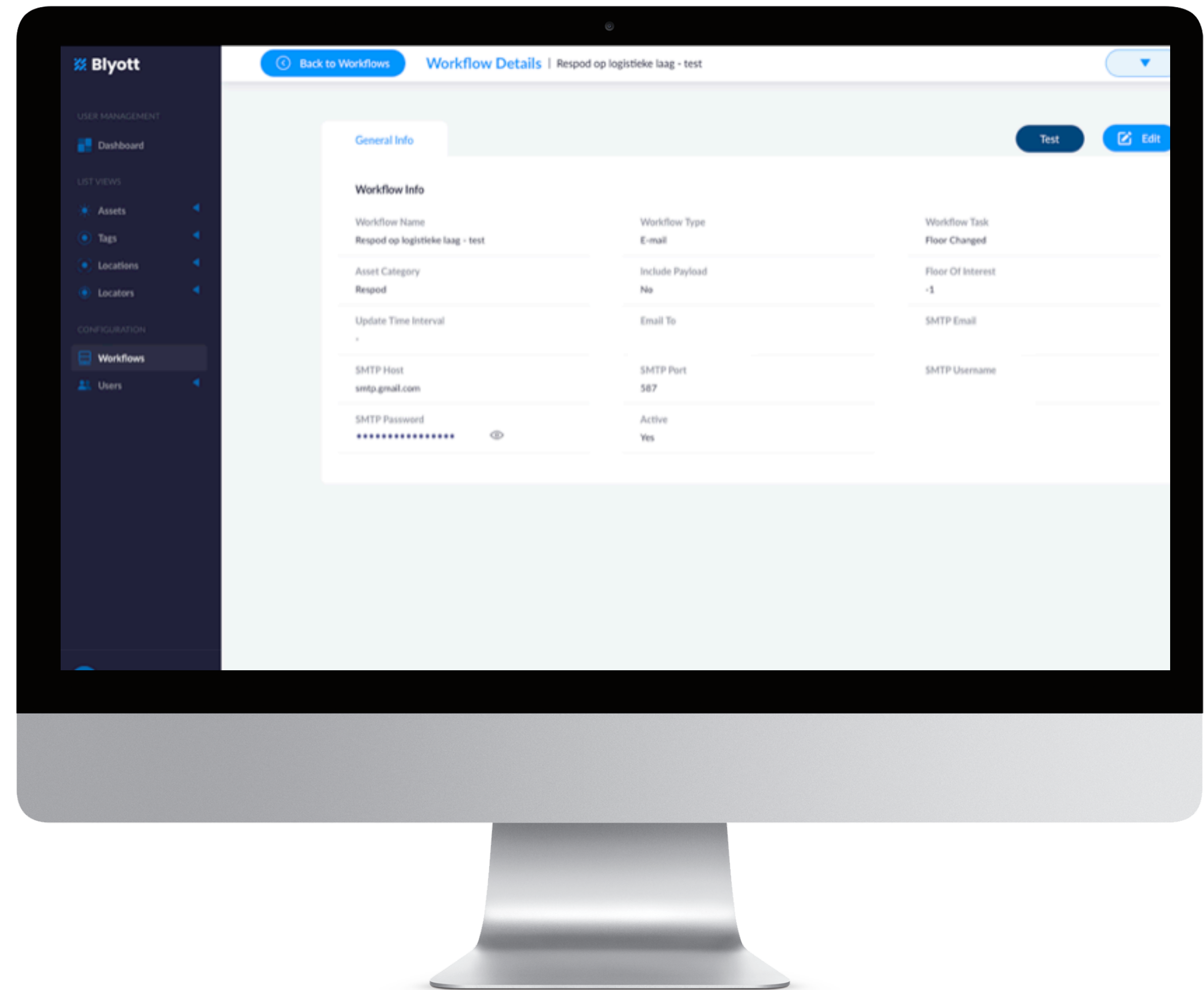
# Step 8: Configure the required workflows

Workflows are alerts Blyott can send via E-mail or to other 3rd party applications. Workflows are assigned to an asset (or group of assets).

## A few examples:

- 1) Battery Level  
Notify the technical department if the battery level of a tag drops to <20%.
- 2) Temperature Level  
Notify the pharmacy if the temperature of a fridge was >6°C for longer than 5 minutes.
- 3) Lost Equipment  
Notify the nursing department if equipment arrives in an area where it should never be (e.g. parking).

➡ Contact [support@blyott.com](mailto:support@blyott.com) for more information and help in setting-up the workflows.



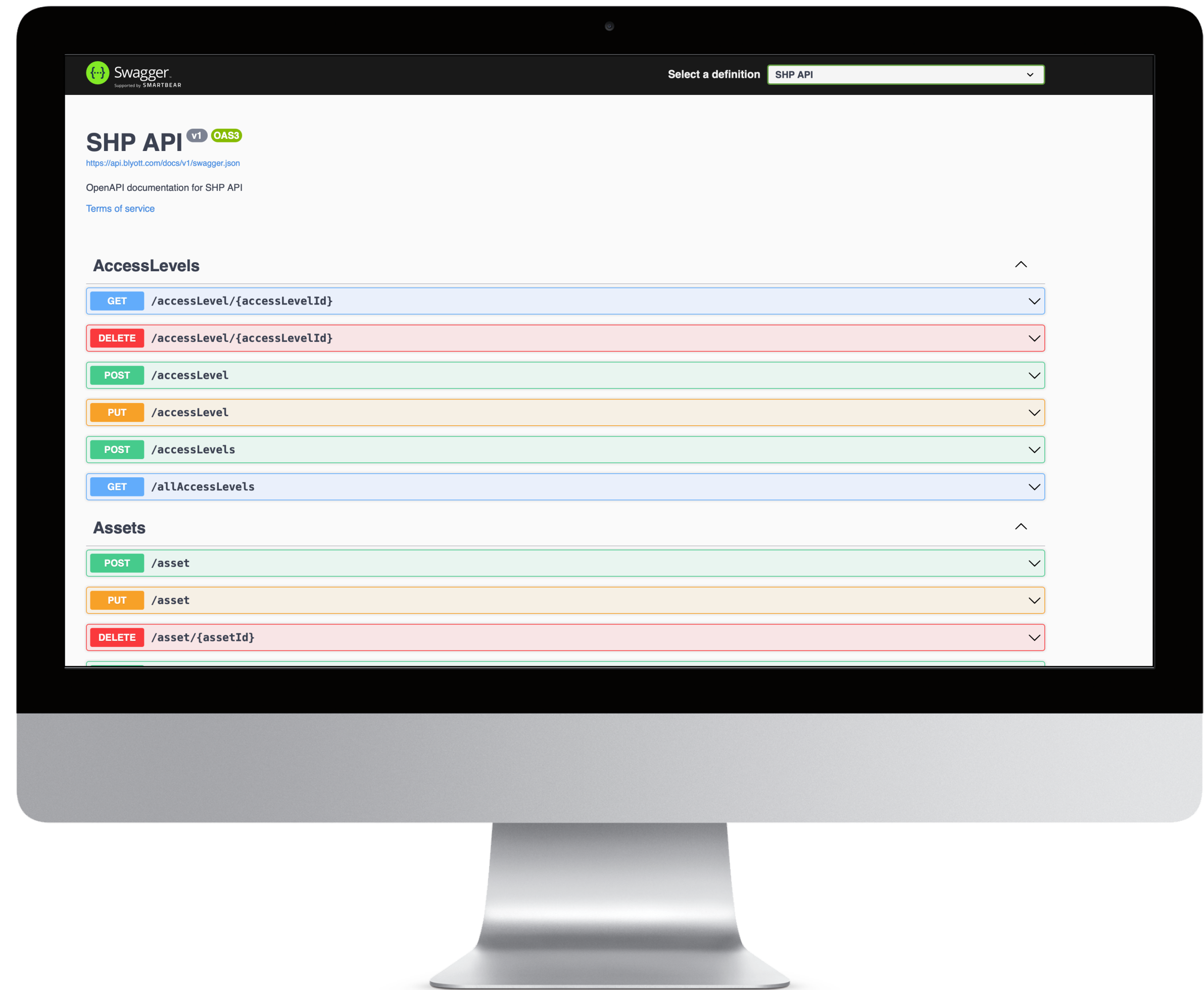


## Step 9: Configure the required Rest API calls

The Blyott Rest API's are based upon a "pull" mechanism: an instruction is sent to the Blyott platform, an answer is sent in return.

This makes it easy for any application to integrate with Blyott. Integration examples are e.g. Planon, SAP, Topdesk and Ultimo.

➔ Contact [support@blyott.com](mailto:support@blyott.com) for more information and help in setting-up Rest API calls.

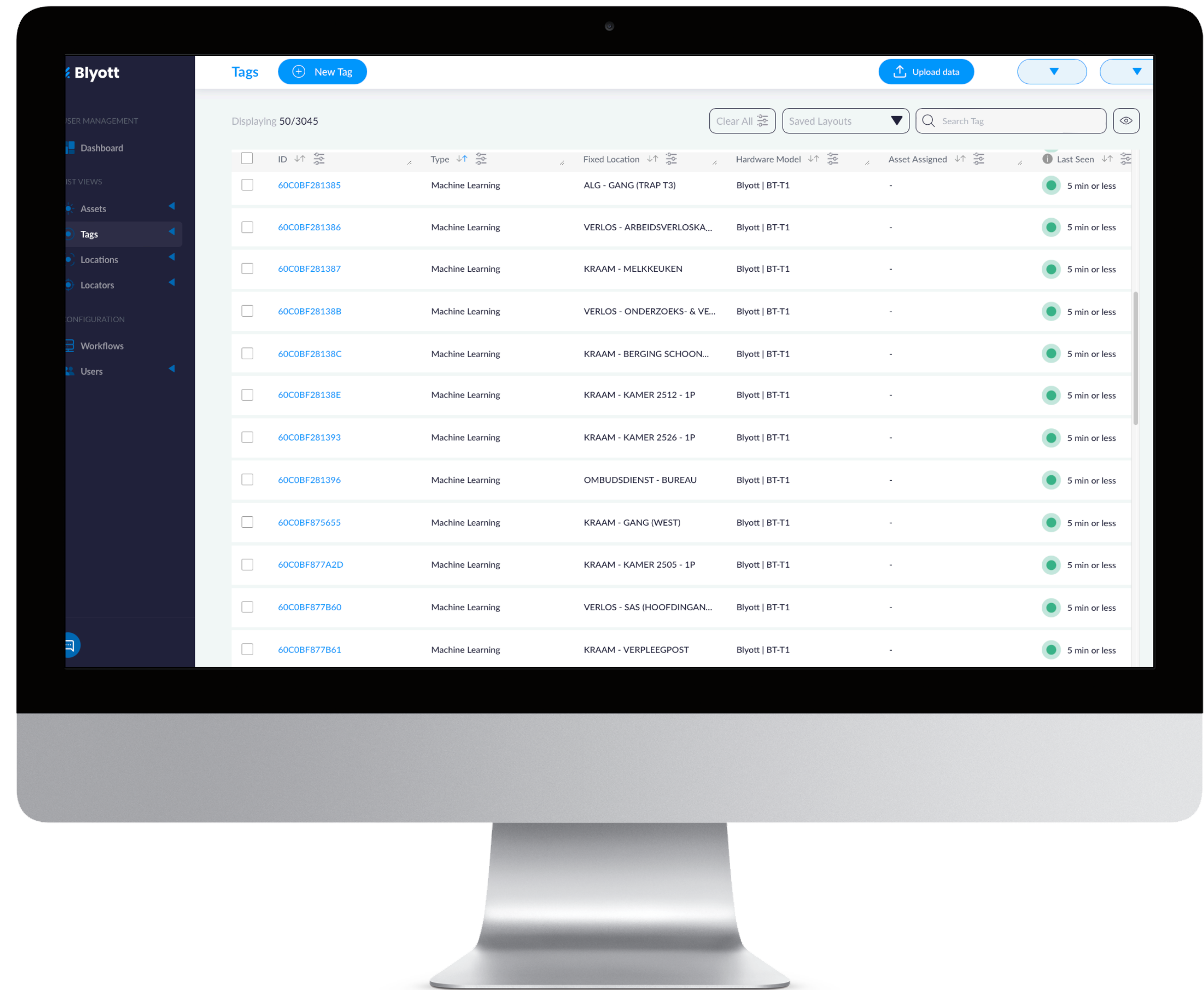


# Step 10: fine-tune location accuracy <sup>(1/2)</sup>

To further improve location accuracy, Blyott works with “Calibration” and “ML” tags.

Any Blyott Bluetooth tag can have one of the following settings:

- 1) Mobile  
Standard setting.  
To follow moving assets.
- 2) Fixed  
For tags linked to assets which are not supposed to move. These tags are always linked to a room. Alerts can be generated when tags start moving.
- 3) Calibration  
For tags used for calibrating the Blyott environment. These tags are always linked to a room.
- 4) ML (machine learning)  
For tags used in those locations where higher “room level” accuracy is needed. These tags are always linked to a room.





# Calibration Tags

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In order to fine-tune the location accuracy based upon a standard RSSI (signal strength) algorithm. The calibration tags in combination with this algorithm will "smooth" all received data in order to e.g. minimise "location hopping".

It is recommended in every Blyott set-up to always include calibration tags. You will need 5% - 10% of the total number of locators. These tags must be installed in those rooms where there are locators.

The average location accuracy that can be obtained with calibration tags is 5m-7m (with 1 locator per 100m<sup>2</sup> on average).



## Step 10: fine-tune location accuracy (2/2)

# Machine Learning Tags

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In order to further increase location accuracy based upon an ML (machine learning) model. The ML tags in combination with this model are used for training a "location pattern". The pattern of standard mobile tags is then compared with the trained pattern of the ML tags to predict the location.

ML tags are only needed in those areas where higher accuracy is needed (e.g. patient rooms). On average and dependant on the room size, 1-2 ML tags are needed per room.

The average location accuracy that can be obtained with ML tags is 3m-5m (with 1 locator per 100m<sup>2</sup> on average).

# Step 11: order Blyott training sessions

Have you gone in with Blyott's system? Congratulations. Of course, it is important that Blyott is carried by the whole team. Get to know our onboarding sessions and engage everyone on the workflow, with training sessions going from basic to deep dive.

## BLYOTT TRAINING SESSIONS

### **Demo Kit Onboard (2 Hours)**

A short session to ensure that your entire team knows how to access and use their Demo Kit and all associated tools.

### **Standard Onboard (4 Hours)**

Content of the Demo Kit Onboard.  
+  
Introduction to all associated tools and all standard platform content.

### **Advanced Training (6/8 Hours)**

Content of the Standard Onboard.  
+  
Presentation of Machine Learning and Workflows  
This session can also be an add-on (2 hours) to people who had already attended the Standard Onboard.

### **Add-On or New Feature Training (3 Hours)**

A webinar for existing clients, by invite.  
This session will be organised when new features are created and released.

*All sessions are up to 5 people and should be scheduled at least 2 weeks in advance. Session times are approximate, depending on trainee, customer needs and explanation of the content.*



# Step 12: order Blyott support services

Have you gone in with Blyott's system? Congratulations. Our support service is always ready for you, in the near or distant future\*. Support credits allow you to take advantage of this assistance. You can use credits for the following services.

- 1 9-5 CET Monday to Friday Support
- 2 Ticketing (and email)
- 3 Full ticket tracking via web portal
- 4 Live Chat
- 5 Urgent Phone Support
- 6 Help Centre Documentation
- 7 Access to product manuals / PDF files
- 8 Priority Support for Blocker Incidents
- 9 Pre-scheduled video calls with support (up to 30 mins) to assist with difficult tasks
- 10 Assistance with 'tenant onboarding' and setup
- 11 Assistance importing bulk data

*\*Support is provided from Monday to Friday (9.00 am- 5.00 pm) as per agreement and does not include 'nearshore' public holidays. A list will be provided.*

Want to know more? Contact us!

# Video tutorial 1: We Are Blyott





# Video tutorial 2: Blyott & Big Location Data



# Video tutorial 3: Location Accuracy





# Video tutorial 4: Blyott & Rol



# Big Savings Happy Staff

THANK YOU FOR YOUR ATTENTION  
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