



USER GUIDE INDOOR & OUTDOOR ASSET TRACKING SOLUTION KIT

Enabled through High-End Technology

Thank you for choosing the Seamless Indoor-Outdoor Asset Tracking Solution Evaluation Kit by Favendo & Actility!

This guide explains step-by-step what you need to do to get the solution installed and up and running at your site.

The advantage of this evaluation kit is that you hardly must execute any technically tasks yourself. Favendo takes care of this as a service for you.

Part of the solution is that each user gets their own dedicated tracking environment as a cloud solution. We will set this up for you.

Preliminary information: Due to the configuration of the Favendo hardware and the creation of the dedicated tracking environment, there may be a short delay before all hardware components of the kit arrive at your site.

Let's start!

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A. Introduction

This User Guide is intended for buyers of Favendo's & Activity's Indoor & Outdoor Asset Tracking Solution Kit who now wish to install it for tracking purposes (on their premises) to track assets both indoors and outdoors in order to improve operational efficiency as well as reduce search time and costs.

This document will help you to install, set up and test the solution as autonomously as possible. All the necessary steps are explained below in chronological order.

B. Summary

Before we start describing the steps in details, we will give you a short summary of the steps to be taken in general to gain the wished-for results.

Step 1 – Description of the included hardware and software components of the kit to give you a better overview of how the solution is structured and what functions the single components provide.

Step 2 – Some communication between you and Favendo is needed to pre-configure the Beacons and set-up your individual tracking environment.

Step 3 – Get to know the interface and functions of the Asset Tracking Viewer (ATV) and check out the positions of the Anchors.

Step 4 – Mount the Beacons on site according to their labels and the positions shown in the ATV.

Step 5 – Search for specific assets by using the search bar on the top of the ATV or just control their movements.

If you need assistance with one or more of these steps, please contact:

Support hours	Company	E-mail
Mon - Fri, 9 am - 5 pm (Office hours) On Bavarian Business Days!	Favendo GmbH An der Spinnerei 15 96047 Bamberg	support@favendo.com

1) Hardware & Software Components

The following hardware (HW) components are included in the kit:

Hardware		
Item	Description	Picture
Device- Abeeway Smart Badge	<p>Portable, multi-mode tracker in ID card format with embedded sensors that combine GPS, low-power GPS, Wi-Fi Sniffer, BLE and LoRaWAN TDoA geolocation technologies.</p> <p>Ideal for tracking, zone monitoring/geofencing and employee tracking, easy to use and provides single button access to a wide range of functions that can be personalised to your needs, such as panic/SOS button. A zoning function can signal danger zones with an 80 dB buzzer.</p>	
Device- Abeeway Compact Tracker	<p>Designed for harsh indoor and outdoor applications. Compact and robust housing that allows seamless asset tracking in any industrial environment.</p> <p>It is lightweight, dust and waterproof (IP68), suitable for use in hazardous areas (ATEX certified). Equipped with various sensors, i.e., a temperature sensor, a 3D motion sensor, and a magnetic switch, making it suitable for various indoor and outdoor industrial environments.</p>	
Favendo Anchors (Beacons)	<p>The bluloc Blackwell case is dust and splash proof, flame resistant, and can be customized if needed. Every bluloc Blackwell is equipped with an extremely-powerful and highly sensitive bluetooth transmitter for the best tracking and positioning results and a powerful Lithium Battery that lasts up to four years with minimal maintenance.</p> <p>Removable & flame-resistant base plate with four screw holes for fixed mounting onto any surface.</p>	
Ufispac Enterprise Indoor Gateway for EU868	<p>This Picocell gateway is the perfect solution for Home Area Network or when local coverage is needed. The V1.5 LoRaWAN gateway provides an intuitive web and application interface for an easy installation, flexible backhaul options - Ethernet, Wi-Fi, LTE (Optional) with failover mechanisms for higher resilience, IPSEC support to ensure backhaul communication security, RF Channel Scanning & Listen before talk capabilities, hidden 4G dongle slot.</p>	

<p>Abeeway data charging cable</p>	<p>The magnetic USB cable is an accessory of Abeeway Smart Badge. It can be used for charging or interacting with the tracker via USB interface. It connects to the computer with USB port and to the tracker via magnetic USB connector.</p>	
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The following Software (SW) components are included in the kit:

- Activity ThingPark Enterprise License and Account
 - Your Activity ThingPark Enterprise account will be created by Favendo and handed over to you after the configuration of the devices is done.
 - If you already have an account, please let us know. We will then send you the information you need to use the kit.
- Activity Abeeway Geolocation Engine Starter Pack or Production License
- Favendo Asset Tracking Viewer (ATV) License
- Setup Location Based Content
 - Setting up the tracking environment
 - Pre-configuring the hardware
 - Testing the hardware
- Test License Favendo Tracking environment (cloud-service)

What else you will need:

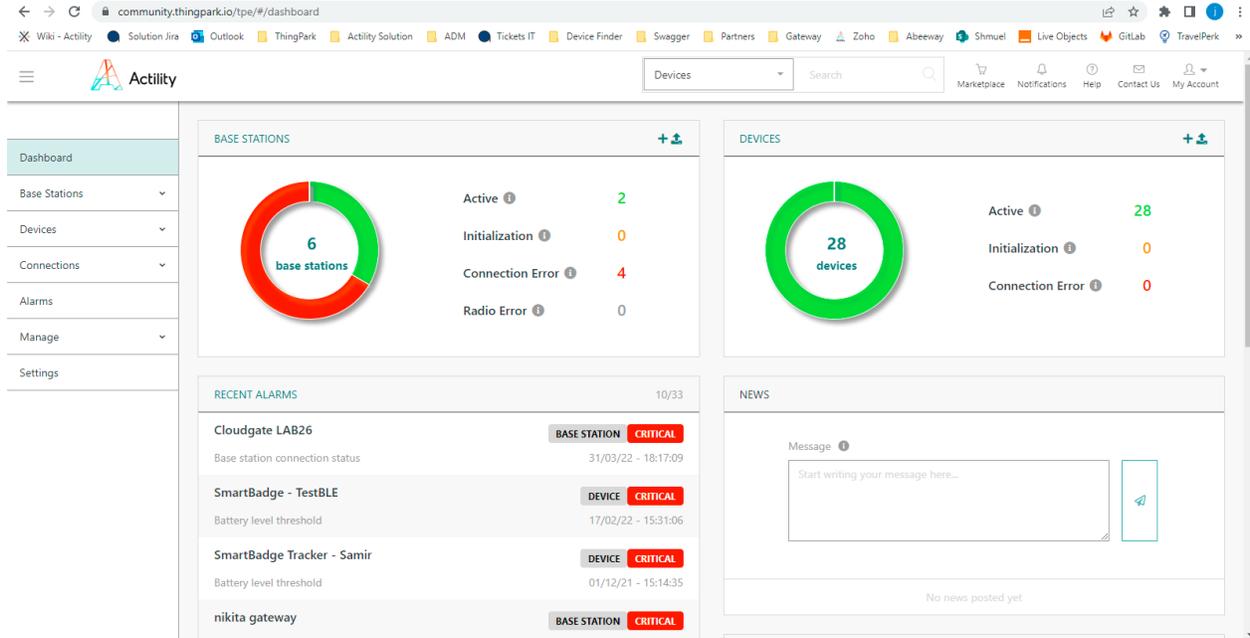
- Internet-enabled device: laptop, desktop PC, tablet, or mobile phone

When you receive the kit, the hardware will be already tested to allow you to start smoothly and immediately with as few steps as possible that you must do yourself to test the seamless indoor/outdoor tracking solution.

2) Visualizing your hardware on ThingPark

On ThingPark, Activity's platform, you will be able to visualize your trackers and gateways as well as the link between your trackers and Favendo's platform.

You have received an email asking you to connect to your account so that you can access our platform:



The screenshot shows the Activity dashboard interface. At the top, there is a navigation bar with the Activity logo and a search bar. Below the navigation bar, there is a sidebar menu with options like Dashboard, Base Stations, Devices, Connections, Alarms, Manage, and Settings. The main content area is divided into several sections:

- BASE STATIONS:** A donut chart showing 6 base stations. To the right, a table lists: Active (2), Initialization (0), Connection Error (4), and Radio Error (0).
- DEVICES:** A donut chart showing 28 devices. To the right, a table lists: Active (28), Initialization (0), and Connection Error (0).
- RECENT ALARMS:** A list of critical alarms with details:

Alarm Name	Category	Severity	Timestamp
Cloudgate LAB26	BASE STATION	CRITICAL	31/03/22 - 18:17:09
SmartBadge - TestBLE	DEVICE	CRITICAL	17/02/22 - 15:31:06
SmartBadge Tracker - Samir	DEVICE	CRITICAL	01/12/21 - 15:14:35
nikita gateway	BASE STATION	CRITICAL	
- NEWS:** A section for posting messages, currently showing "No news posted yet".

In “Base stations” and “Devices”, you will be able to monitor, add and modify your hardware. In “Connections”, you will find the link between ThingPark and Favendo, in which you will see the flow of messages from all the trackers added on this connection. Finally, in “Manage”, you will be able to manage the users and their access to this platform, from viewer to administrator.

In case you need more detailed information about the different Thingpark platforms or the network technology, you can find all required documentation in the [Thingpark documentation portal](#).

3) Configuring hardware & setting up tracking environment

Favendo will pre-configure the hardware, calculate the correct location of the Anchors for indoor tracking and set up the tracking environment.

For this we will need some information about your organization such as:

- Building address,
- Building floorplan in high resolution,
- Areas you want to track,
- Pictures of those areas,
- Type of building,
- Domain name,
- Names of the two assets you want to track (for example “Forklift” and “Pallet”)

A Favendo representative will contact you to request the necessary information. Alternatively, you can contact Favendo via support@favendo.com.

Please note that we have already defined the minimum requirements that your test environment should meet before you place your order. If your test environment doesn't meet these requirements, you might experience some issues while using our indoor-outdoor asset tracking solution.

4) Creating Floorplan with GeoJSON

With the help of the building address and the building floorplan, Favendo will build up the floorplan that you will later see in the ATV, and which represents your indoor tracking area.

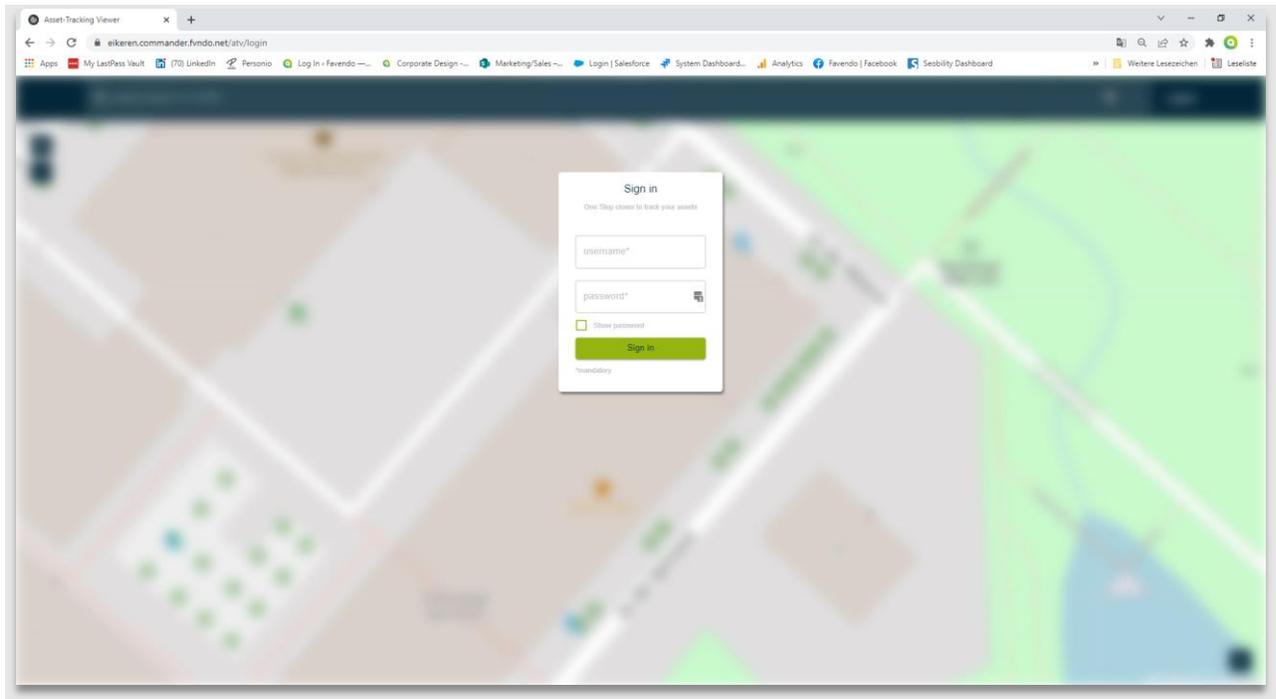
We will then need you to check it.

5) Logging into Favendo Asset Tracking Viewer

After receiving the pre-configured and tested Anchors, you first need to log in to the Favendo Asset Tracking Viewer.

The Favendo Asset Tracking Viewer is a web front-end that can be accessed through a browser on any internet-enabled device. Learn more about it [here](#).

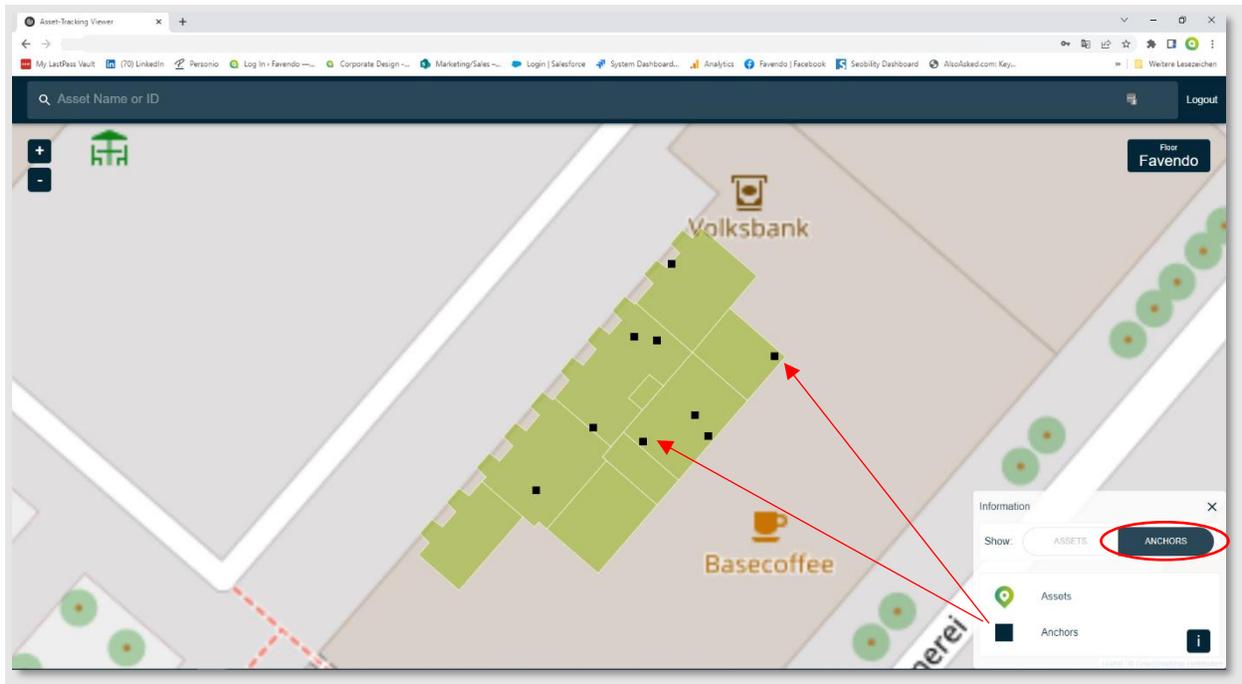
To log in to the Asset Tracking Viewer, click the link in the email containing the login credentials for your personal tracking environment that you have received from Favendo, once your personal tracking environment has been set up. Use the login credentials in the email and click "Sign in". Then open your personal tracking environment.



5.1) Exploring the user interface of the ATV

If the login was successful, you should now see the building plan you sent us in advance in the form of geofences (frame lines that represent your building plan) on a map.

To zoom in and out you can use the plus/minus buttons on the map or in the desktop version simply scroll with your mouse, while you should use 2 fingers in the mobile version to zoom.



By clicking on the “i” on the bottom right-hand side of the screen, the legend will appear. For the next step please make sure that the option to show the “Anchors” is selected.

Within the geofences you will now also see small squares. These are the positions of the anchors for the indoor area.

After we have received all relevant information from you stated under “2) Configuring hardware & setting up tracking environment”, we have calculated the optimal positions of the anchors in your tracking environment based on the spatial conditions and coordinated them with you.

In the next step, you must install these anchors on your site based on their position in the Asset Tracking Viewer according to their labels.

Please note: It is important that you place the right anchors at the right position by making sure that the labels on the anchors and the corresponding one in the Asset Tracking Viewer match. See more information hereinafter.

6) Installing the hardware on site

To install your anchors, you will need:

- Anchors
- Labels on the Anchors
- Building plan with the anchors and associated labels in the Asset Tracking Viewer for orientation purposes

6.1) Matching the labels



To place the Anchors at the correct position, you need to match the labels on the Anchors with the IDs of the Anchors that you can see in the ATV on your floorplan. **Each Anchor has its own predetermined position!**

Please note that if the labels are not matched correctly or the Anchors are mixed up, the tracking result will not be correct in the end!

Therefore, please work very carefully during this step. If you have any questions or if you are having problems with the installation, please contact the support address at the end of the document.

6.2) Mounting the Anchors

After you have matched the Anchors to the correct positions based on the labels, you must now attach the anchors to walls, ceilings or other surfaces inside your premises using e.g., double-sided adhesive tape, cable ties, screws, etc - whatever works best for the conditions on site.

For mounting the Anchors, please refer to our Beacon Deployment Guide. You can find it under the following link: https://www.favendo.com/wp-content/uploads/2020/10/DOC_FAV-BeaconDeploymentGuide_101.pdf

Chapter 5 is especially relevant for you. Chapters 6 and 7 are also interesting to know, but the necessary settings/preparations are already taken over by Favendo in the case of this kit.



Please make sure that the necessary safety regulations for height or possible danger areas are observed!

6.3) Mounting the Trackers

Here you can find some information about the best way to position the trackers on the assets:
https://docs.thingpark.com/thingpark-location/C-Procedure-Topics/DeployTrackers_T/

6.4) Positioning the Gateway

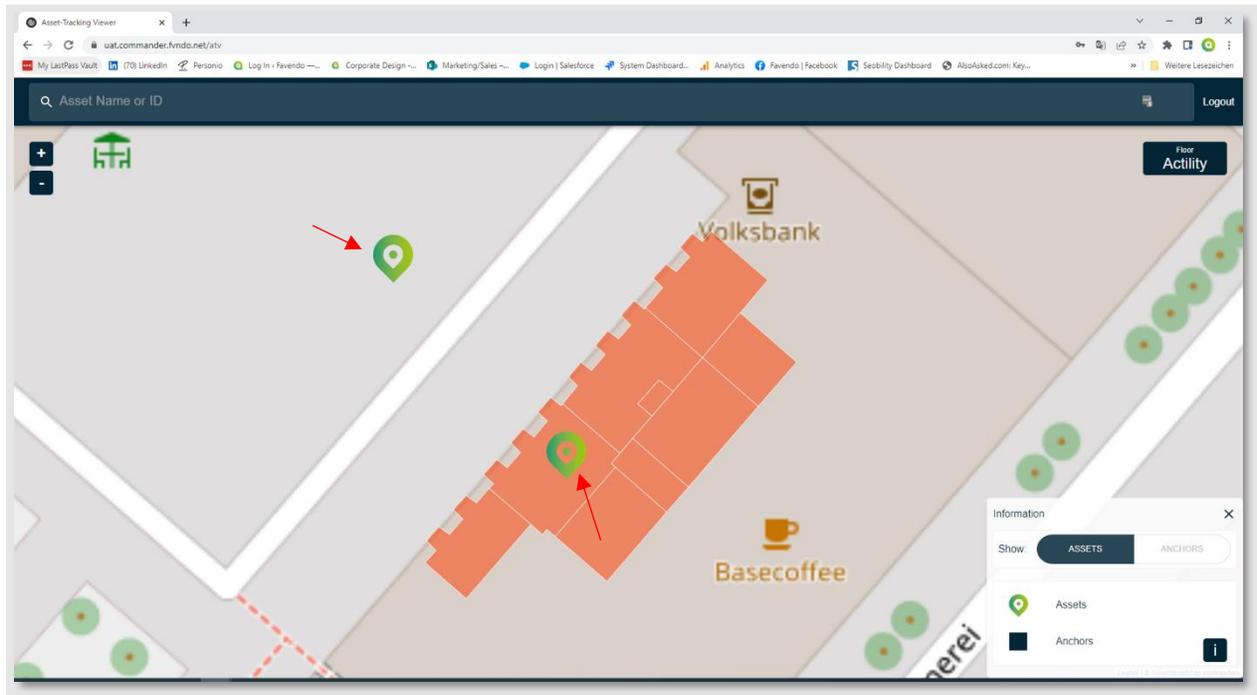
For the best possible positioning results, the position of the gateway is also important. The optimal gateway position always depends on the tracking environment, but normally the gateway should be placed as centrally as possible and in an elevated position within the tracking environment. If possible, even with a line of sight to the trackers.

Please be aware that the position of the trackers will only be transmitted if the trackers are in the range of the gateway.

Therefore, when positioning the gateway, try to find the center of your tracking environment and, if possible, mount the gateway at a certain height, for example, on a pillar.

7) Tracking assets

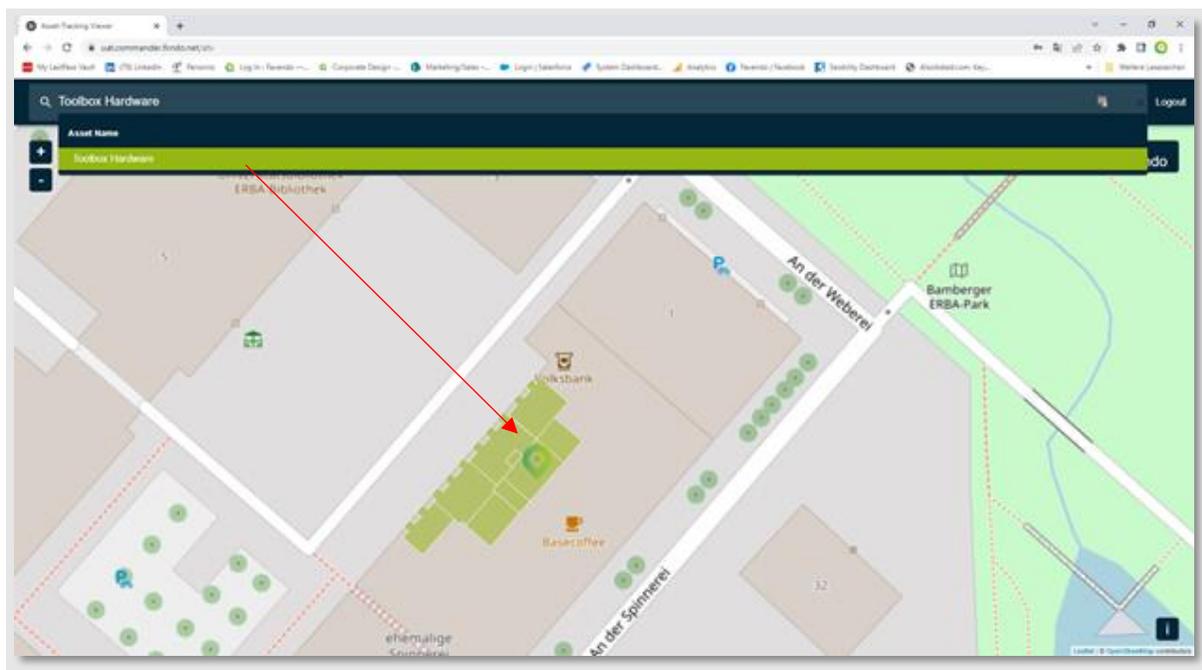
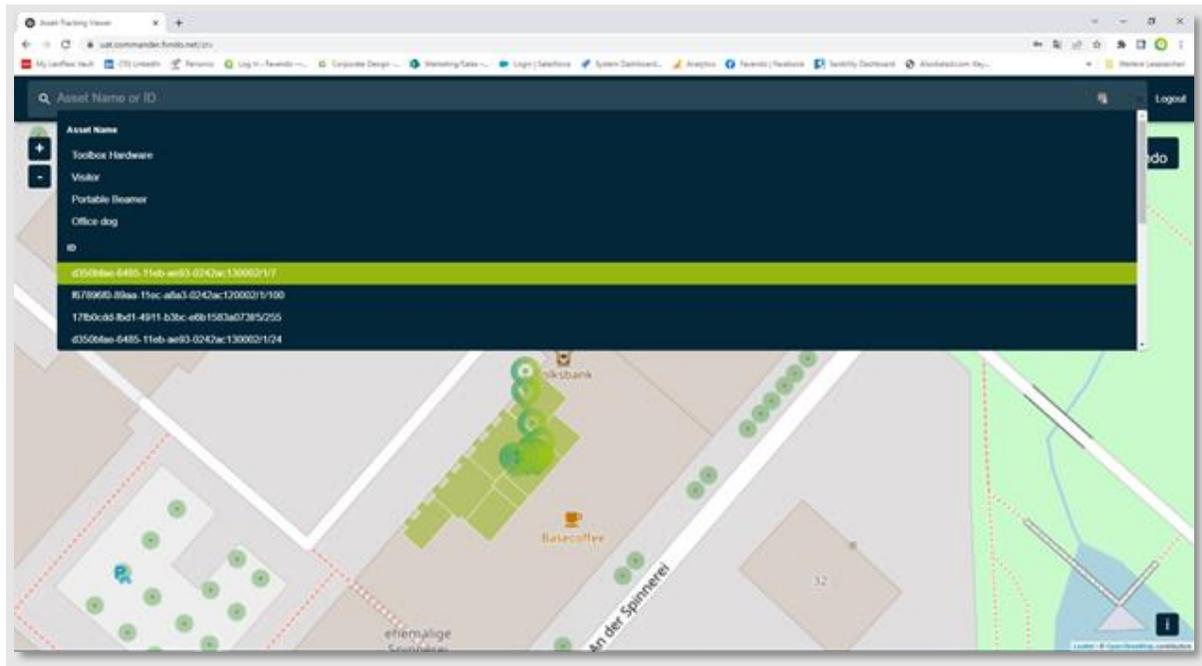
You can log back into your Asset Tracking Viewer via your browser and in which you should now see the assets on the map.



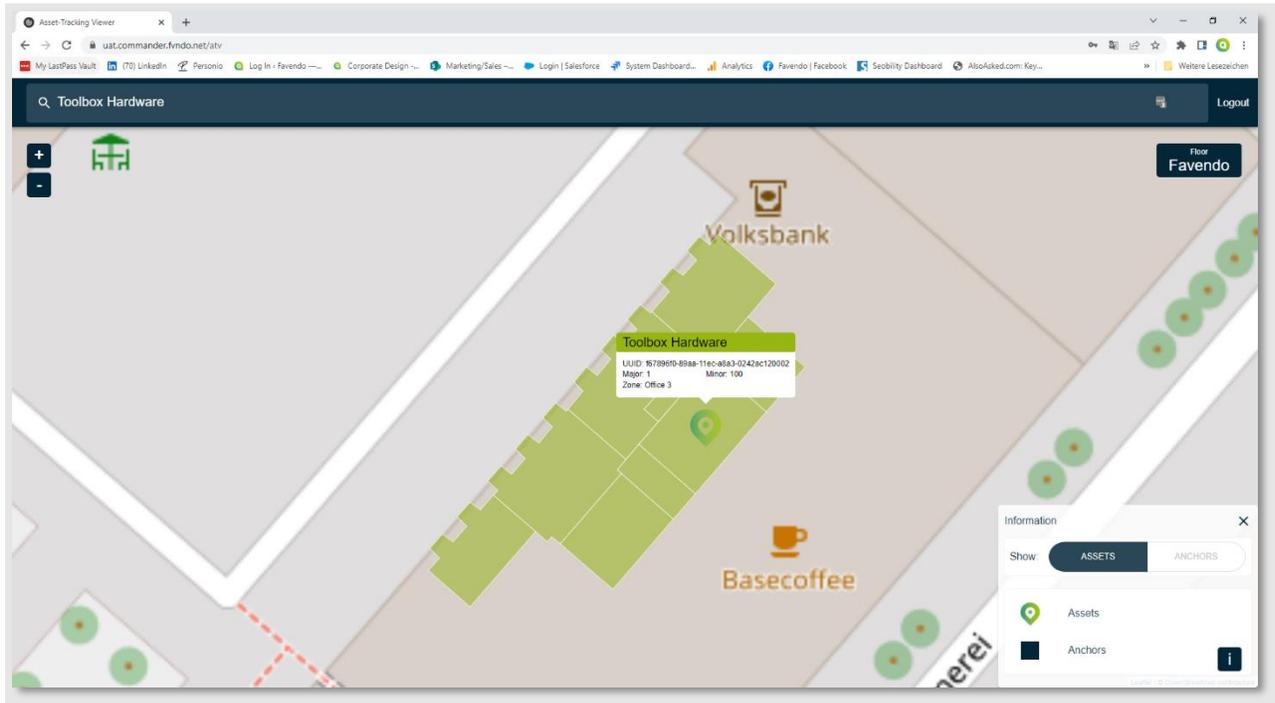
Please note that the update rate of the trackers is set to 60 seconds by default. Meaning that the position of the trackers will be recalculated and updated every 60 seconds.

8) Searching for a specific asset

You can search for specific assets in the search bar using the asset name or the ID of the Abeeway trackers. Simply enter the name or ID in the search bar and either select the correct asset from the real-time suggestion list or enter the full search term and confirm with the enter key.



After you have confirmed, the desired asset will be displayed on the map, while the other assets are hidden.



Click on the marker to display a popup with further information.

Enjoy now your evaluation kit for indoor and outdoor asset tracking solution from Activity, Abeway and Favendo!

C. Support

Feel free to contact us through the following email address if you need support.

Support hours	Company	E-mail
Mon - Fri, 9 am - 5 pm (Office hours) On Bavarian Business Days!	Favendo GmbH An der Spinnerei 15 96047 Bamberg	support@favendo.com

D. Extension of the evaluation kit

We have convinced you and you want to extend your evaluation kit?

Please [contact Favendo](#) and we will be glad to help you with that!