UNITED ROBOTICS GROUP
the CobiotX company

USER MANUAL

uServe

Service robot for serving and clearing

Product	uServe
Covers	uServe
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WHAT HAS CHANGED SINCE VERSION 1.1

This edition describes the robot as we ship it today: with **uGo** as the application on the screen at the robot, and with the **uSuite** as the cloud for fleet, jobs and service. The chapters on registering a robot account, creating maps and the on-robot application have been rewritten from scratch and are illustrated for the first time. Safety, structure, technical data, troubleshooting and maintenance are unchanged in substance.

Authoring and approval

Step	Function	Date
Written by	Product Management and Service	30.08.2026
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Approved by	Quality Management Representative	30.08.2026

Change log

Version	Date	Description of change
1.1	15.01.2025	Previous edition of the series.
2.0	30.08.2026	Operating chapters rewritten around uGo and the uSuite. First edition with screenshots. Company address corrected.

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1 Safety and usage notes

Please avoid the following. Where they occur, the operator bears the associated costs, legal responsibilities and risks.

- Using, maintaining or storing the product other than as described in this manual, where this causes malfunction or damage.
- Damage from external influences such as incorrect supply voltage, high temperature, ingress of water, mechanical damage, heavy oxidation, rust or burnt circuit boards.
- Damage caused by human action, such as injury from blocking the robot's path or damage from tipping the robot over.
- Use of software that has not been released by us, where this causes malfunction, damage or infection.
- Improper use such as immersion in liquids, damp, mould, or damage by insects or animals.
- Faults or damage caused by force majeure such as fire, earthquake or flood.
- Dismantling the robot or the charging station without our consent. Unauthorised dismantling voids the warranty.
- Use in hazardous environments, for example at high temperatures, under high pressure, or in flammable and explosive areas.
- Use outdoors.
- Use in unsupervised areas or at the edge of stairs and escalators. The robot may fall and cause injury.
- Operation near minors without supervision by a responsible adult.
- Placing parts of the body or objects underneath the chassis.
- Transporting liquids in open containers. There is a risk of spillage, short circuit and scalding.

Notes for day-to-day handling

- As a first-time user, make yourself familiar with the structure and the functions of the robot.
- At first commissioning our staff set up the connection and record the map. Please contact service if you have questions.
- The robot can be fitted with a SIM card so that the connection to the uSuite holds without Wi-Fi. It is available separately.
- Do not pull the robot while it is driving.
- Do not push the switched-on robot against its direction of travel.
- Do not press or push the robot by force.
- If the robot stops in the wrong place, end the job first and only then push it back onto its route.
- Do not cover the sensors while the robot is switched on and moving.
- If the screen stops responding or the robot behaves unexpectedly, press the emergency stop button on top of the robot.

Safety labels

Caution, laser radiation	Direct or scattered laser light can cause serious injury to eyes or skin. Avoid looking directly into the beam.
Caution, crushing hazard	Moving parts can cause crushing or injury. Keep hands and fingers away from the mechanical parts.

Where the product is used

The product is suited to hospitals and laboratories, to production and warehousing, to office buildings and to comparable environments. It plans its own route, locates itself precisely, avoids obstacles and transports material. It is operated through the large screen at the robot, through the uSuite, or through whichever extensions your organisation has booked.

Transport and storage

Secure the robot for storage and transport in its packaging or in a transfer crate. Take measures against damp and shock and secure it for the journey. The product contains lithium batteries and must be transported in accordance with local regulations for lithium batteries.

If the robot is not used for a longer period, charge it to about 50 per cent and store it in a dry place between −20 °C and 65 °C. Any deviation from these transport or storage conditions must be agreed with us beforehand.

Maintenance and after-sales service

If a fault cannot be cleared with the measures in this manual, please contact service. Have the following details ready – they are on the robot's type plate and in the uSuite.

Product name and model	on the type plate
Serial number	on the back of the robot and in the uSuite
Symptom	what the robot does or fails to do, and what the screen says
Time	when it last occurred
Location	building and floor, so the case is assigned to the right unit

> **NOTE**
> Reports raised from the uSuite already carry these details. A case created there reaches service with unit, location and history – which shortens handling considerably.

2 The robot at a glance

Structure

uServe consists of chassis, tray tower and operator screen. This manual covers: uServe.

Technical data

Dimensions L×W×H (mm)	580×490×1290
Unladen weight (kg)	66
Maximum payload (kg)	40
Distance between levels (mm)	200
Speed	0.3 to 1.2 m/s, adjustable
Ingress protection	unit IP43, battery IP66
Permissible gradient	up to 8°
Minimum passage width (mm)	700
Battery	18 Ah, at least 10 hours of continuous operation, 4 hours charging time

The unit as delivered always takes precedence. Where your configuration differs from the table, the delivery note applies.

The charging station

The indicator light at the top right of the charging station shows its state.

Blue	The charging station is starting up.
Red	The charging station is switched on, the robot is not docked.
Green	The robot is docked and charging.

The charging station is connected to an ordinary 220 V socket. A charging cable for manual charging is located on the back. If charging repeatedly fails, measure the open-circuit voltage of the socket with suitable equipment.

Switching on and off

Main switch. The main switch between the battery and the other assemblies sits underneath the robot. It must be on; two beeps confirm this.

Switching on. Press the round silver power button above the chassis. A beep confirms the start.

Switching off. Hold the same button for five seconds. A beep confirms the shutdown.

> **DO NOT SWITCH OFF AT THE MAIN SWITCH**
> Do not switch the robot off at the main switch during operation. A forced shutdown can corrupt files. The main switch is intended for storage and for service, not for the end of the shift.

Emergency stop

In an emergency press the red button on top of the robot. The robot stops immediately and enters the emergency stop state; the wheels are then released and the robot can be pushed by hand. To release it, turn the button in the direction of the printed arrows.

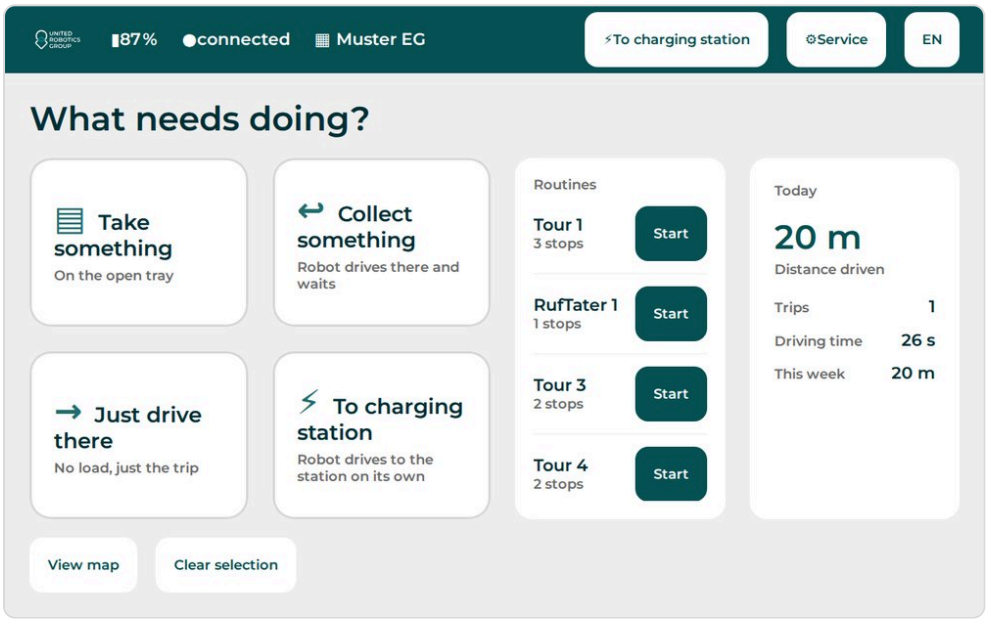
> **AFTER RELEASING THE EMERGENCY STOP**
> If the robot was pushed while in the emergency stop state, it no longer knows for certain where it is. It reports this on the screen and has to be located again. How to do that is described in the chapter on the technician page.

3 uGo – the screen at the robot

uGo is our application on the screen at the robot. It has two sides: the **operator side** for day-to-day work, which anyone may use, and the **technician side** for setting up, which is protected by a service password. The illustrations in this chapter show the operator side at the resolution of the screen at the robot.

Reading the status bar

The bar along the top appears on every page and answers the three questions that come first in daily work: is there enough battery, is the connection to the chassis up, and which map is the robot working on. To its right sit the shortcut to the charging station and the language selector.

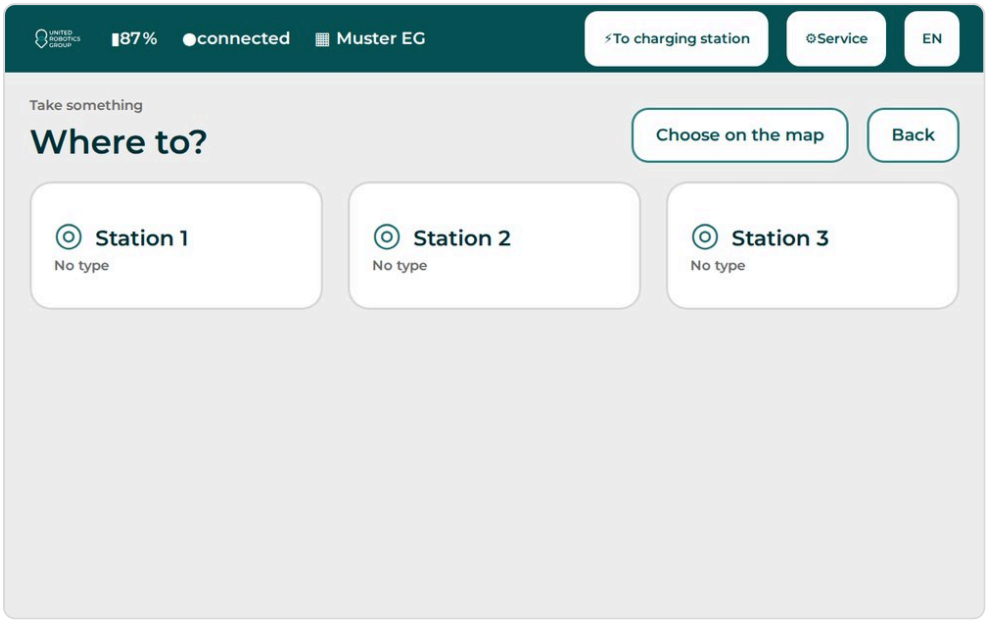


The home screen with the status bar. On the left battery, connection and the loaded map; on the right the shortcut to the charging station and the language selector.

Issuing a job

The home screen asks what is to be done. Which tiles appear depends on how the robot is built – a unit without a tray does not show the tile for bringing something.

1. **Choose the kind of job.** Bring something, collect something, just drive there, or go to the charging station.
2. **Choose the destination.** The robot shows the stations of the loaded map.
3. **Confirm.** The robot sets off and switches to the journey page.



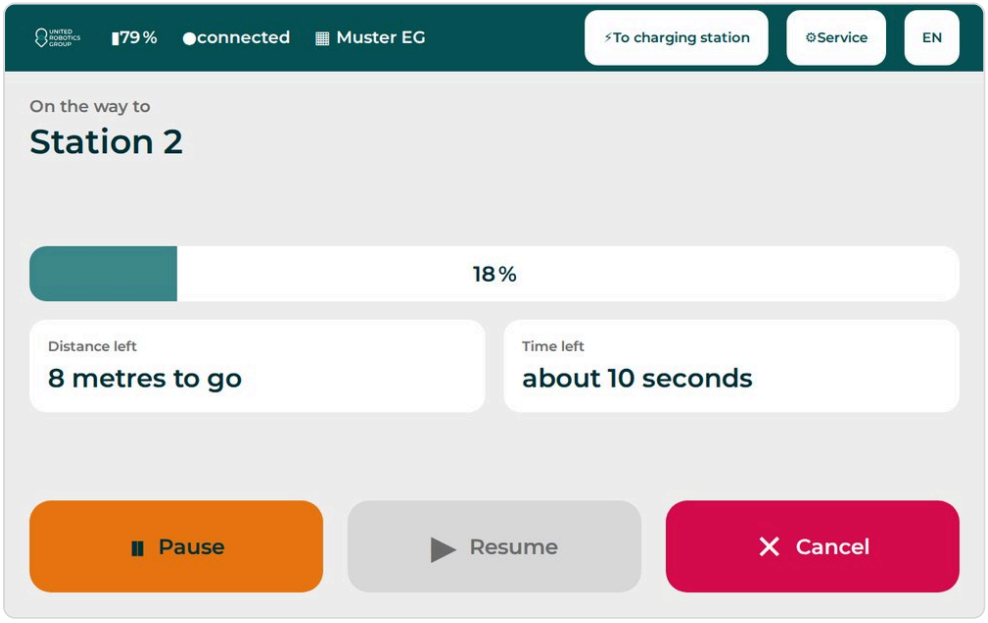
Once the kind of job is chosen, uGo shows the stations of the loaded map.

HOW YOU KNOW IT WORKED

How you know it worked: the journey page appears with the destination name, a progress bar, the remaining distance and the remaining time.

During the journey

The journey page shows where the robot is heading and how far it still has to go. Three buttons are available: **Pause** halts the journey and allows it to be continued, **Continue** resumes it, **Cancel** ends the job.



The journey page: destination, progress, remaining distance and remaining time.

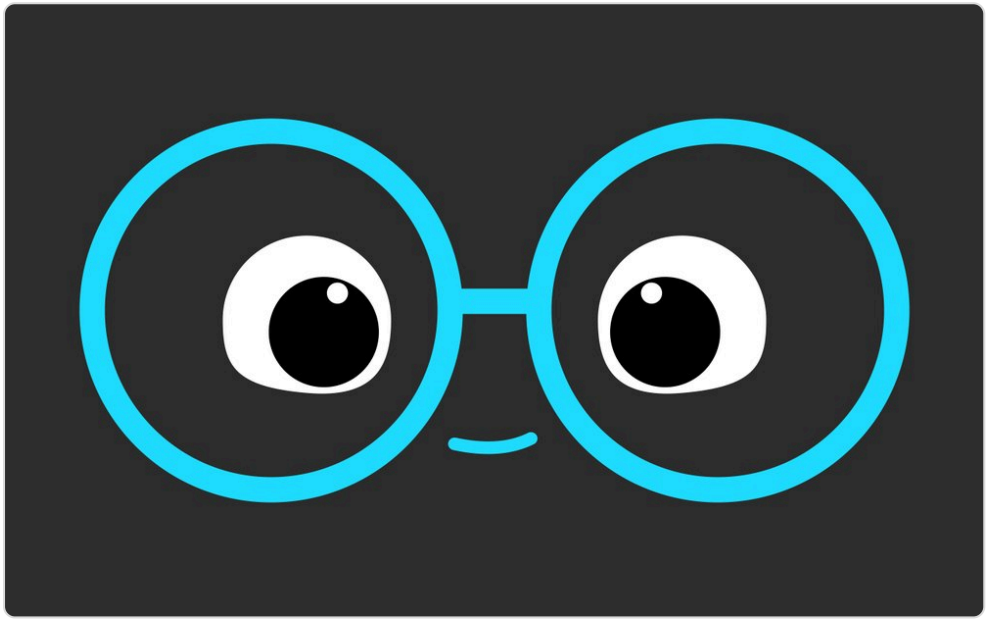
PAUSE IS NOT EMERGENCY STOP

Pause brings the robot to a controlled halt and keeps the destination. The emergency stop disconnects the drives and discards the job. For anything that is not an emergency the rule is: pause first, then act.

The face

As soon as the robot sets off, and whenever nobody has operated it for a while, the face takes over the whole screen. That is intended: a robot driving down a corridor should look approachable and not like a screen with a progress bar. The face watches what the robot does – it smiles when a job is accepted, and the eyes follow when it turns.

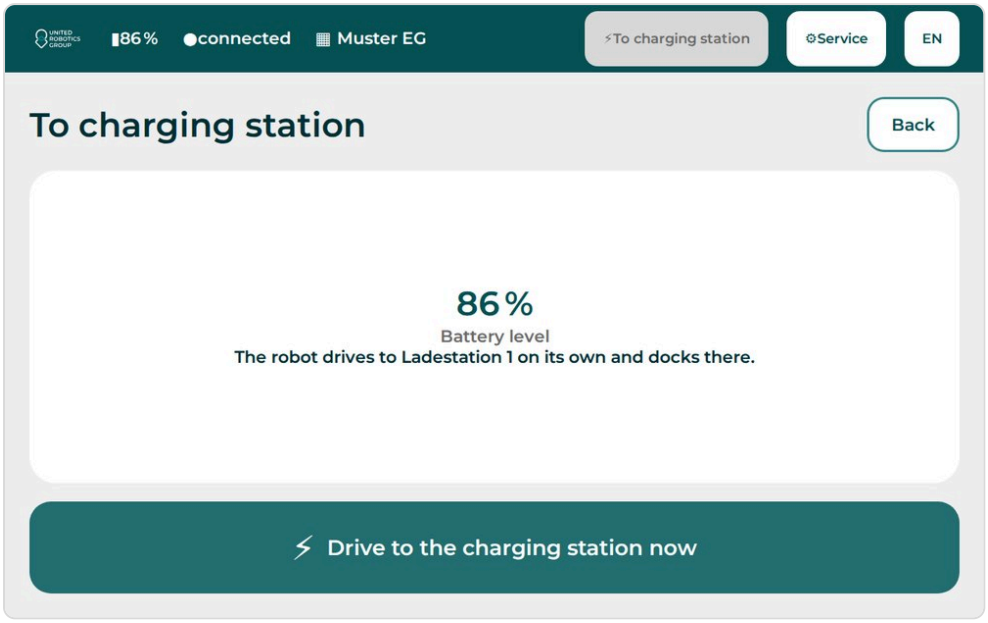
Touching the screen brings the controls back. The journey page with progress and remaining time is then shown again. This is the single most frequently asked question in daily work: the robot has not crashed, it is only looking.



During the journey and at rest the robot shows its face. Touching the screen brings the controls back.

Sending the robot to the charging station

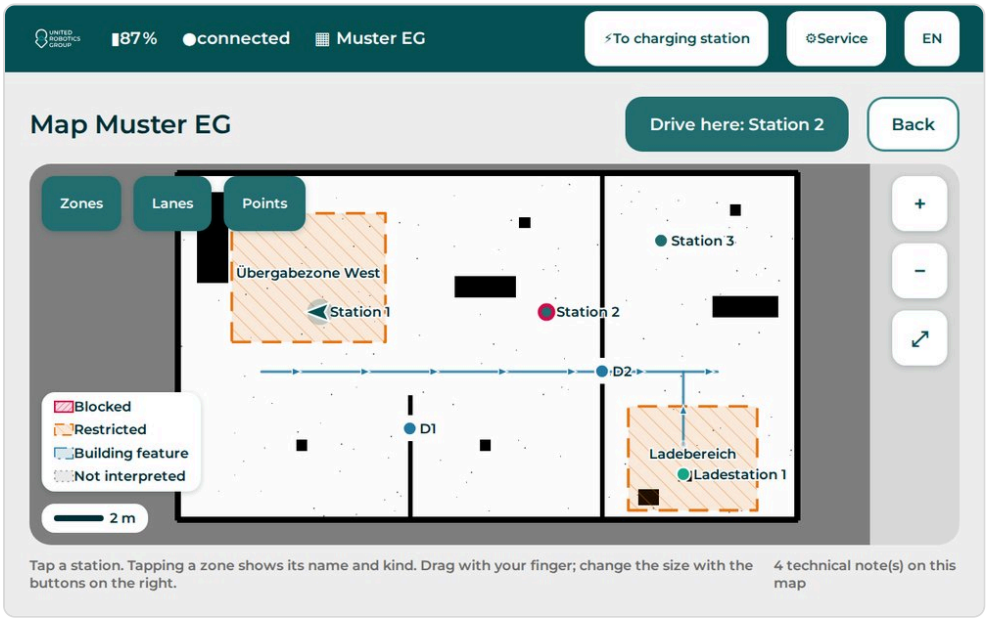
The robot drives to the charging station by itself when the battery runs low. You can send it there at any time using the tile or the shortcut in the status bar. When it is on the station, the page shows the charge level and lets you send it out again.



The robot is on the charging station and can be sent out from there.

Looking at the map

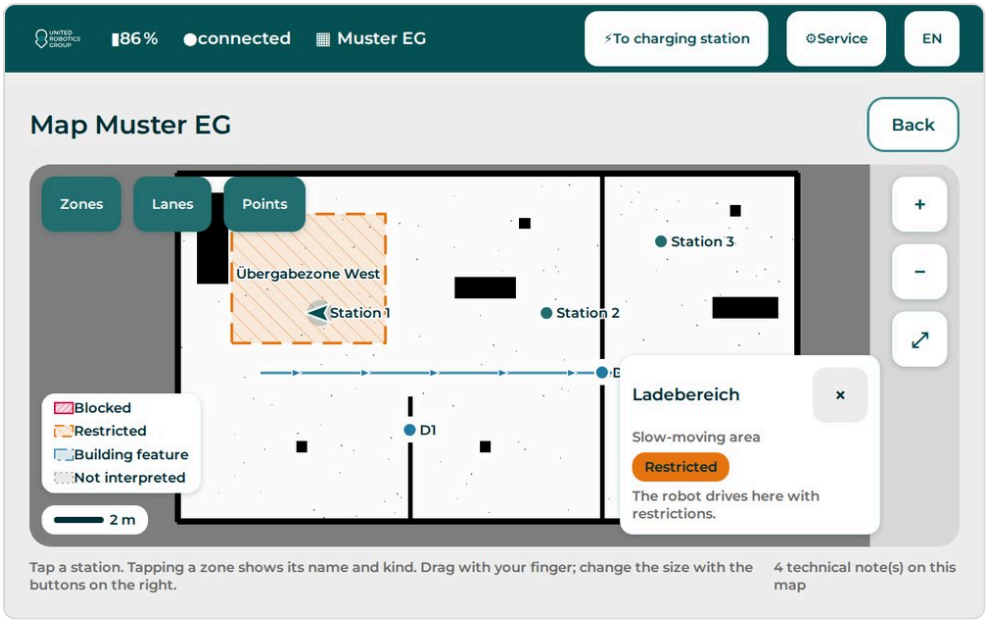
The map view shows the floor plan, the stations and the point where the robot currently stands. Tap a station to see its name and orientation. The view is for looking; the map itself is changed on the technician side.



The map view with its stations. A station that is tapped shows its name and orientation.

Zones on the map

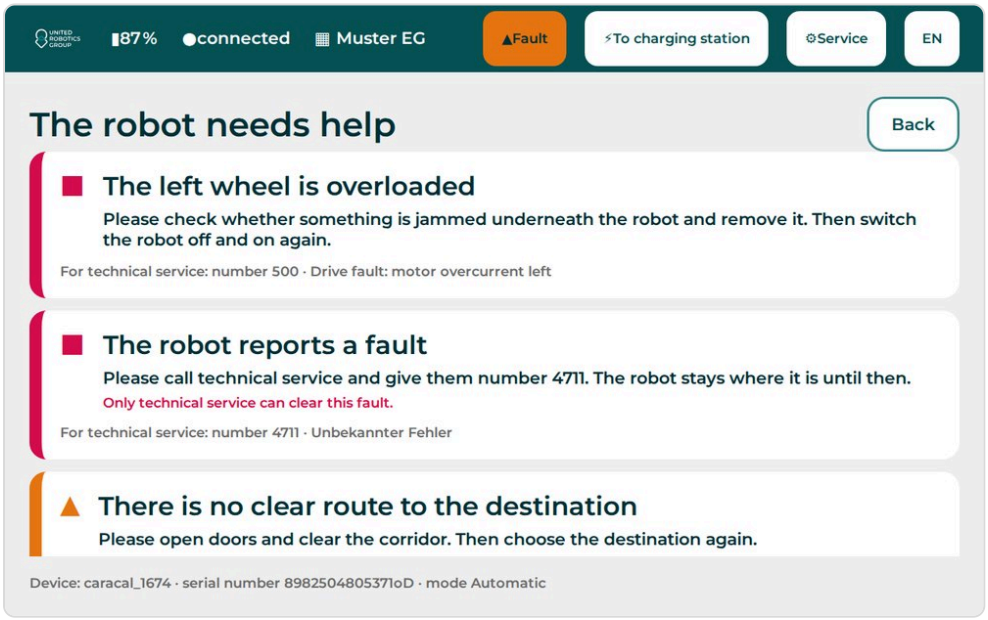
Areas on the map are coloured according to their meaning: the robot must not enter blocking zones, it drives more slowly through slow zones, and functional zones belong to a task such as charging. If a robot regularly stops at the same place, the zones are the first thing to look at.



Zones are coloured according to their meaning.

When the robot reports a fault

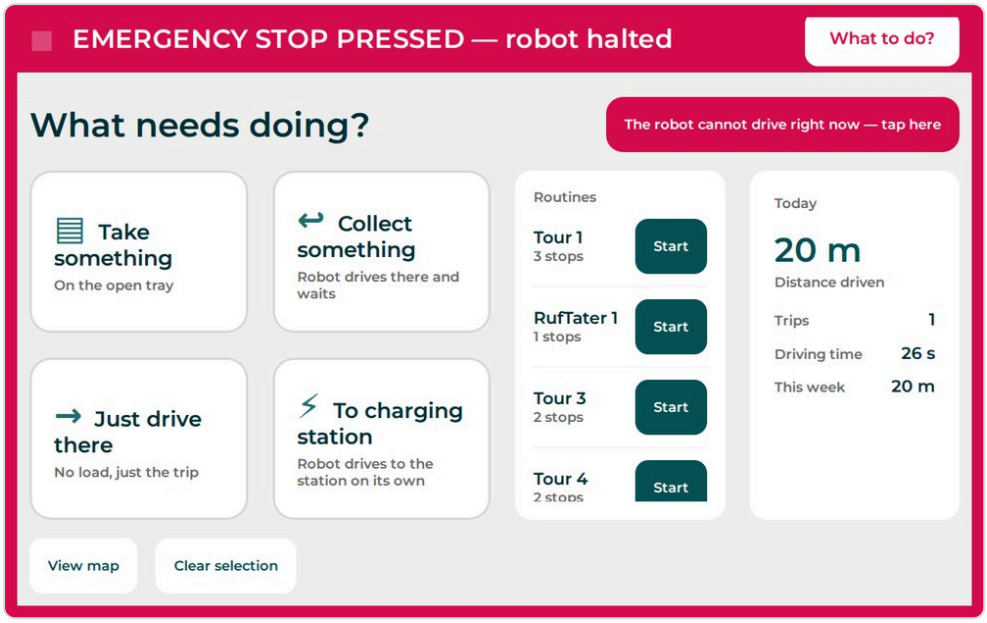
When the robot reports a fault, the screen names it in plain language and says what to do. You can clear the most common cases yourself: remove an obstacle, release the emergency stop, locate the robot again. If the message persists after the second attempt, it belongs in a case in the uSuite.



A fault message in plain language, with a note on what to do.

Emergency stop on the screen

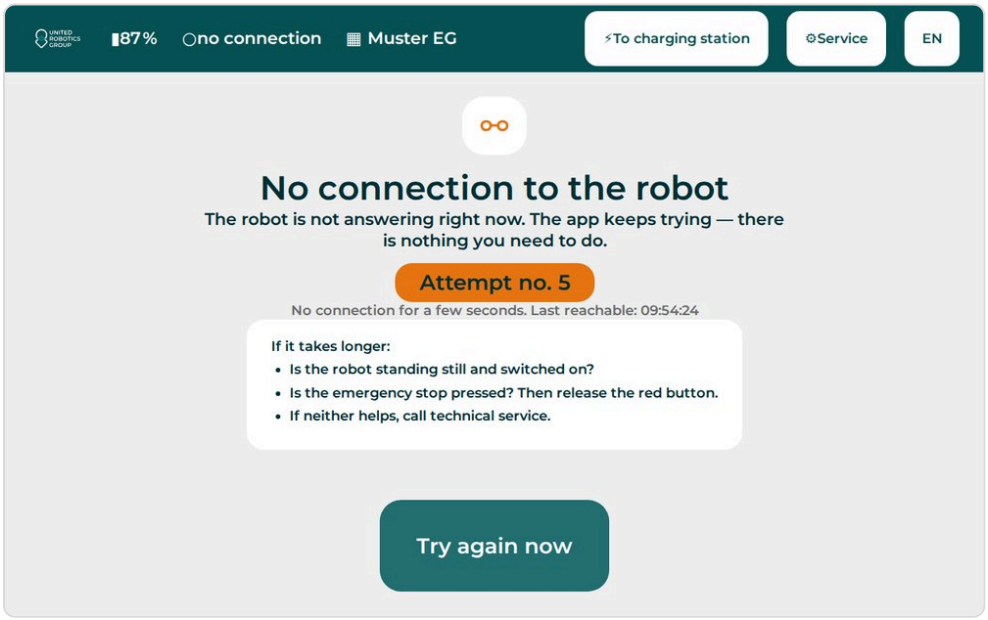
While the emergency stop is pressed, the screen says so explicitly and points out that the wheels are released. Only once the button has been released does the robot accept jobs again.



While the emergency stop is pressed, the screen says so explicitly.

When the connection is missing

If the connection between screen and chassis breaks, uGo says so openly and shows since when. The screen does not invent values while it hears nothing. If the connection breaks during a journey, the robot stops and waits until it is back.



Without a connection to the chassis, uGo shows since when it has been missing instead of carrying on with old values.

4 Setting up map, stations and zones

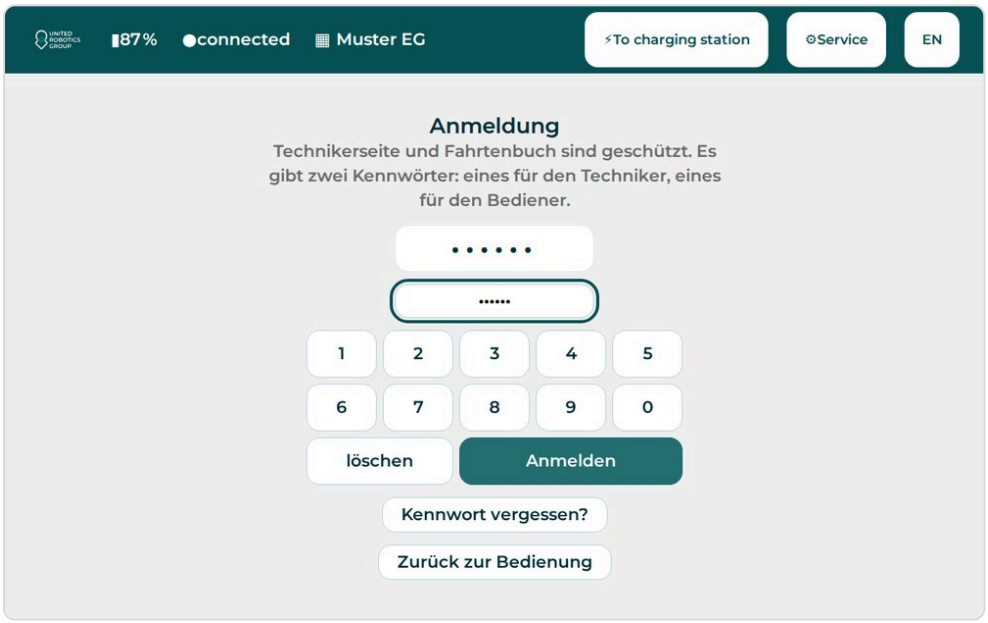
This chapter is addressed to trained technical staff. The technician side of uGo is protected by a service password because maps can be overwritten and driving commands issued here. It is not needed in normal operation.

BEFORE EVERY DRIVING COMMAND

Driving commands from the technician side move the robot immediately. Make sure beforehand that nobody is in its path and that the emergency stop is within reach.

Signing in

The technician side asks for the service password. It is issued per site and belongs in your password management, not on a note stuck to the robot. After five failed attempts sign-in throttles. Anyone locked out gets back in through „Forgotten your password?“ and the reset code – no sign-in is required for that.



Sign-in has its own numeric keypad, because in kiosk mode an on-screen keyboard is not guaranteed to appear. Typing on an attached keyboard works just as well.

Checking the state

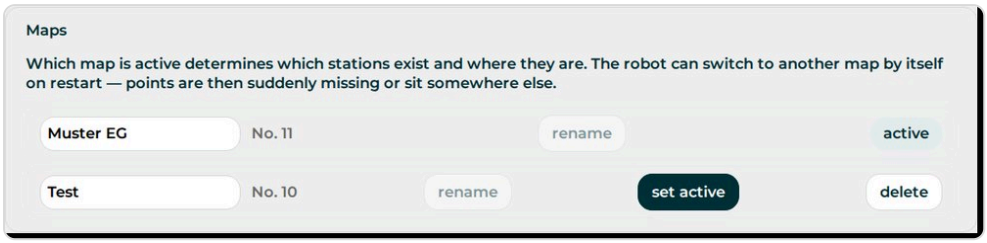
The state panel shows at a glance which map is loaded, where the robot stands, whether localisation is reliable, which operating mode it is in, whether the emergency stop is pressed and whether a journey is running. Check this panel before any intervention – it answers most questions before they are asked.



The state panel. „Localisation“ says how confident the robot is about its position.

Choosing the map

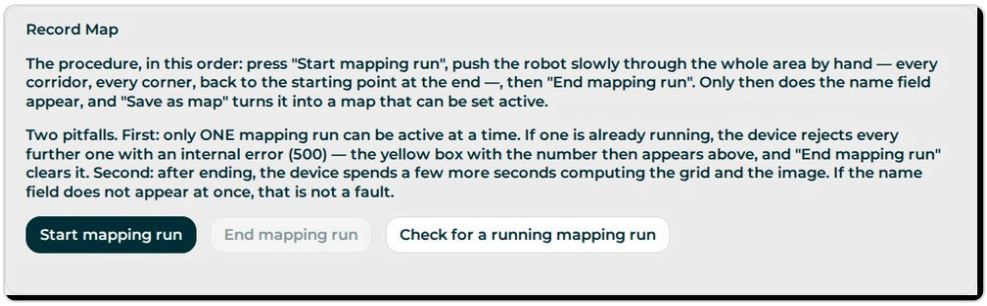
A unit can hold several maps – one per floor. Exactly one is active. After a change of map the robot no longer knows where it is: **locate it immediately afterwards.**



The maps on the unit. The active map is marked.

Recording a map

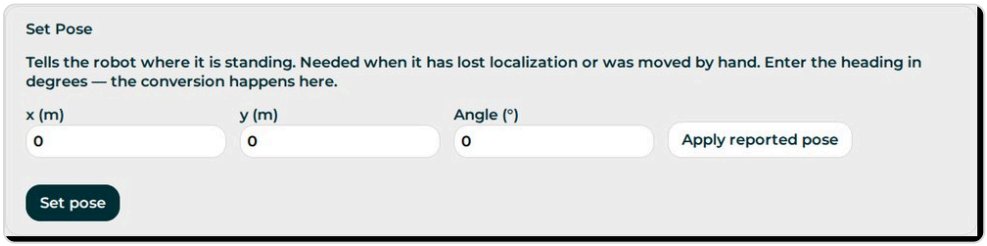
Start the mapping run, drive over the area and end the recording. Drive along every route the robot is to use later, and close the loop. On saving, the recording becomes a named map.



Start the mapping run, drive it, end it and save.

Locating the robot

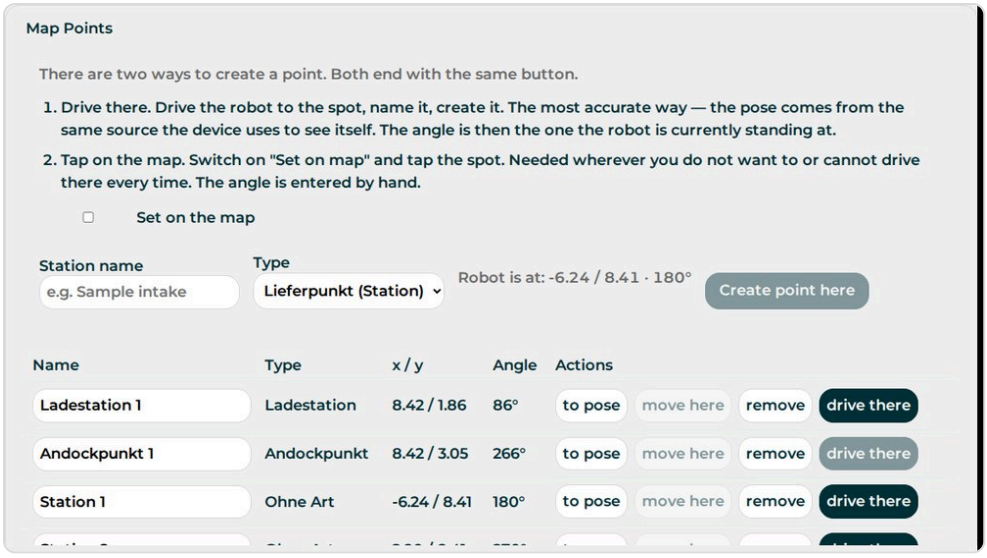
This is the single most important step in the whole chapter. The robot has to know where it stands on the map. Locate it **after every change of map**, after every push while in emergency stop, and whenever the state panel reports localisation as unreliable. The most dependable reference is the charging station, because its position on the map is fixed. You have succeeded when the direction arrow on the map matches the actual orientation.



Setting the position by hand: x, y and angle – or adopting the reported position.

Creating stations

There are two ways, and both end with the same button. Either drive the robot to the spot and adopt its position – the most accurate way, because the position comes from the same source the unit uses to see itself. Or tap the spot on the map and enter the angle by hand; this is needed wherever you cannot or do not want to drive there every time. Keep a clear radius of 30 cm around every station.



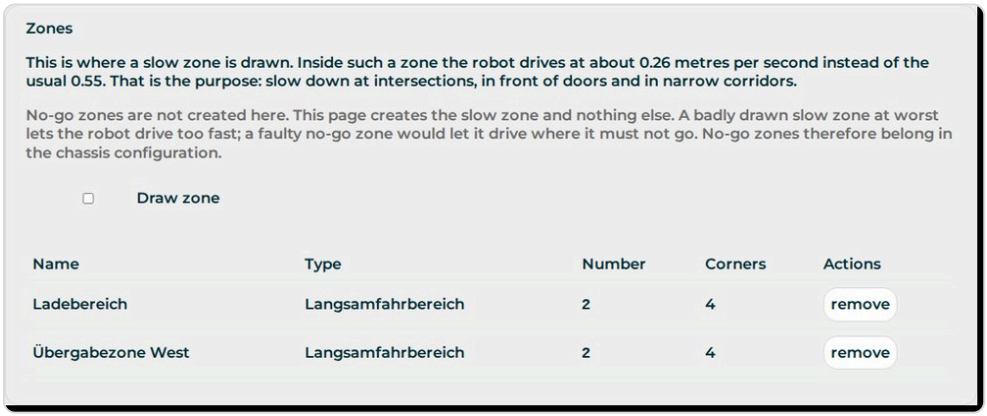
The points of the map with their kind. A charging station and its docking point always belong together.

Creating a charging station

Dock the robot, choose the kind „charging station“ and create it. The docking point is created automatically 0.9 m in front of it and has to be checked. Reload the map afterwards – otherwise the chassis does not know the new station.

Drawing zones

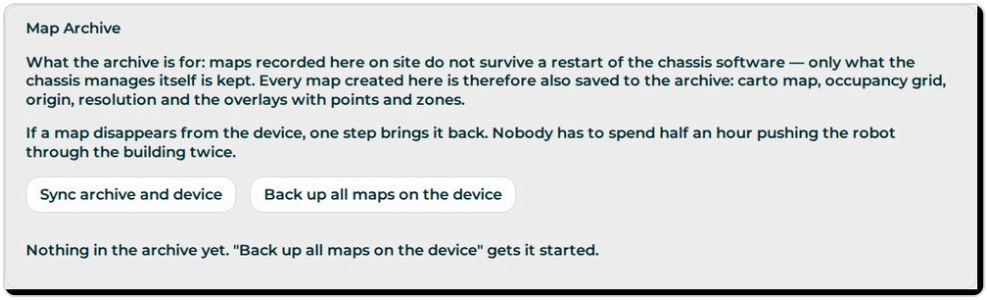
Draw the area corner by corner. Only the **slow zone** is created on this page: inside one, the robot drives at about 0.26 m/s instead of the usual 0.55 m/s. That is the purpose – to slow down at junctions, in front of doors and in narrow corridors. **Blocking zones are deliberately not created here.** A badly drawn slow zone at worst lets the robot drive too fast; a faulty blocking zone would let it drive where it must not go. Blocking zones therefore belong in the chassis configuration.



The zones of the map. Only the slow zone is created here.

Backing up and restoring maps

Every map can be backed up and restored. Back up before every larger change. An overwritten map costs an afternoon of re-teaching; a backup costs nothing.



The map archive on the unit.

Driving manually

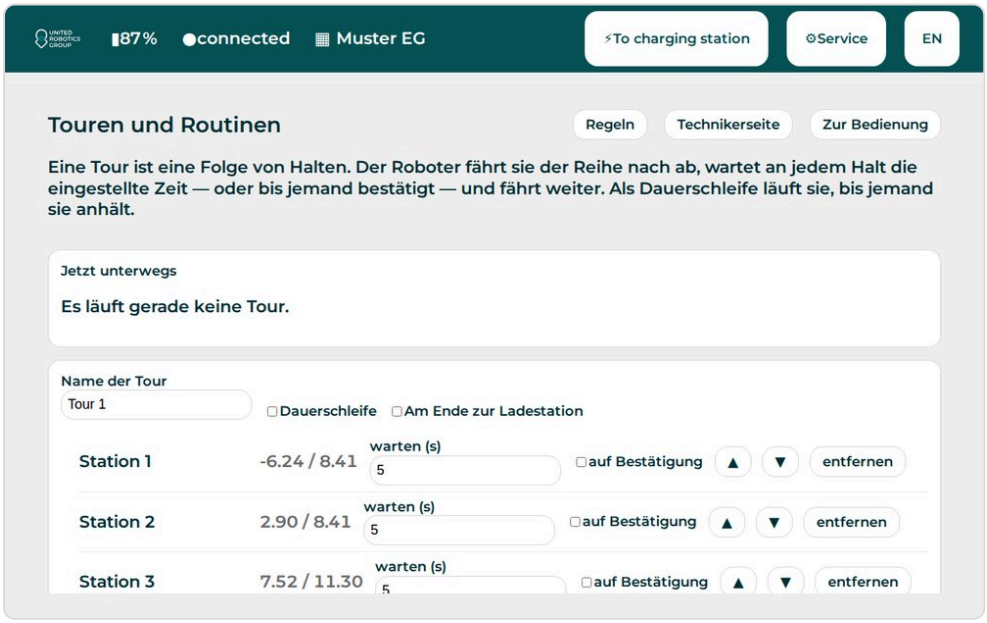
For setting up, the robot can be moved from the technician side. This is the one point in this chapter at which the robot moves immediately – see the warning above.



Driving commands from the technician side.

Tours

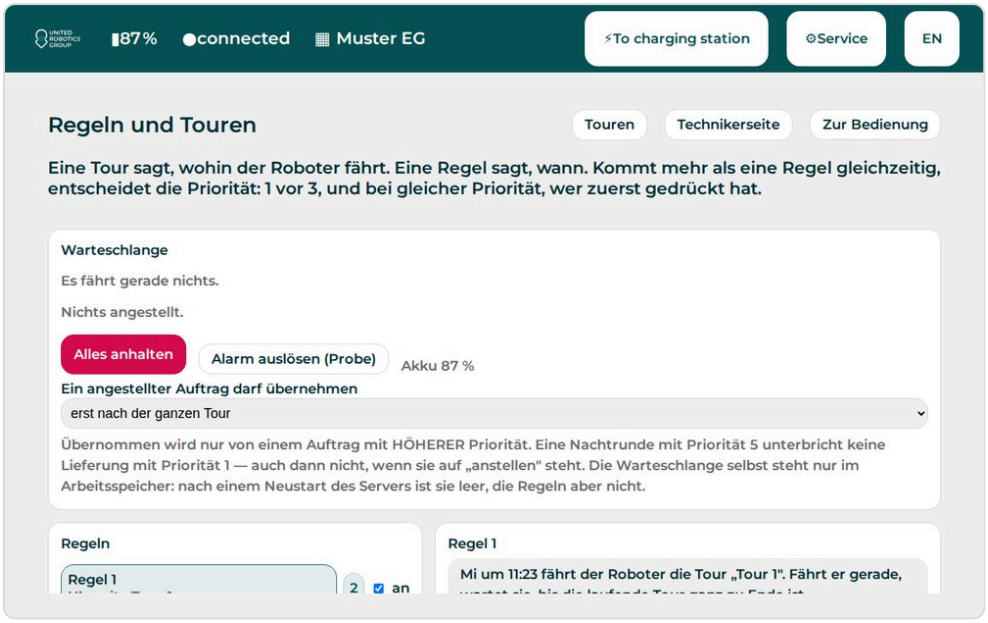
A tour is a sequence of stops. The robot drives them in order, waits at each stop for the time set – or until somebody confirms – and moves on. As a continuous loop it runs until somebody stops it.



Assembling a tour from stops. Points that are no longer on the active map are marked as such explicitly.

Rules

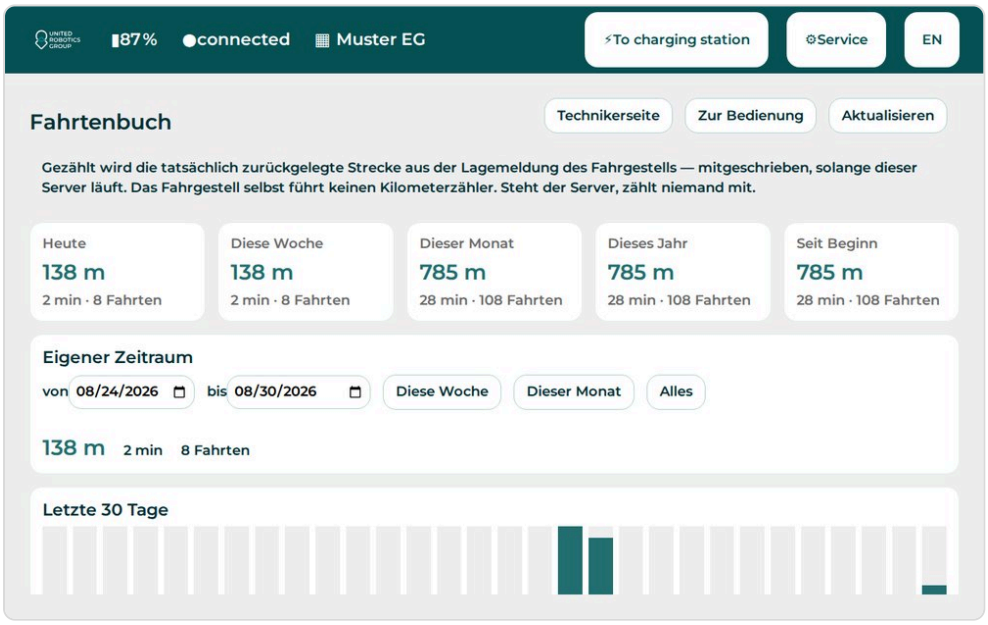
A rule says when a tour starts by itself – at a time of day, on particular days, or in response to a call button.



When a tour starts by itself.

Journey log

The journey log shows what the robot actually drove. It is the first place to look when somebody asks why a job did not arrive.



The journey log of the unit.

5 uSuite – fleet, cases and service

The uSuite is our cloud. It shows your units, carries the cases and holds the unit file. Access is granted; there is deliberately no self-registration. Request it through your contact or through service.

Fleet	All units of your organisation with state, battery, last report and location. A unit that stops reporting stands out here before anybody misses it.
Cases	A fault becomes a case with a number, a deadline and an owner. You see the history, can add notes and can close the case when it is done.
Unit file	Manuals, quick guides, test records and reports sit with the unit and with the unit type. You will find this manual there too, always in its current edition.
Maps	The floor plan lives in the cloud, not only on the robot. When a unit is replaced, the new one retrieves the state of the site instead of somebody re-teaching it.
Updates	The robot fetches its own update, at the charging station and never in the middle of a job. If it does not come back up healthy within a minute, it returns to the previous version by itself and reports that.
Remote support	No unit listens on the internet. The connection is opened from the inside out, only during a support session, and it can only read. For your IT department the whole sentence is: outbound 443, nothing else.

WHERE YOUR DATA SITS

The uSuite is operated in Europe, data centre Frankfurt. You see your organisation; we see no more than we need for service – and what we see is stated in the application, not in a contract annexe.

6 Troubleshooting

Observation	What to do
The robot will not switch on	Switch on the main switch underneath first, then the power button above the chassis.
The robot will not charge	Check that the charging station's mains cable is plugged in and that the station has power. Check that the robot's charging contacts make proper contact. Check that the robot's main switch is on.
No network connection	The Wi-Fi or mobile signal is too weak. Check that the robot is within coverage and restore the connection in the settings.
Localisation is lost	Push the robot to the charging station and locate it there again. The charging station is the most reliable reference because its position on the map is fixed.
The robot cannot get past	Clear temporary obstacles in front of the robot and at the destination and continue the job. If that does not help, restart the robot.
A job is aborted	Follow the note on the screen, clear the stated cause and issue the job again.
The robot does not move	The emergency stop is pressed – turn it out in the direction of the arrows. After switching off, check whether dirt or hair has wrapped around the wheels. If localisation is lost, locate the robot again at the charging station.
The robot always stops at the same place	Check in the map view whether a blocking or slow zone lies there, and check that the passage meets the minimum width from the technical data.

7 Inspection and maintenance

Regular maintenance keeps the robot available, extends its service life and reveals problems before they turn into downtime. The visual check belongs in the daily routine; the remaining work once a month.

Visual check	Check the housing for damage, scratches and deformation, and that nothing foreign is attached. Check that the emergency stop button, the collision protection and the remaining safety devices are intact and effective.
Wheels	Regularly clean hair, dust and grease from the drive and castor wheels. Check them for wear and damage and replace them where necessary.
Laser scanner and sensors	Dust the laser scanner carefully. Do not rub hard and do not use corrosive cleaners – both impair measuring accuracy. Check the remaining sensors for cleanliness and function.
Charging system	Check the charging station and the charging interface for oxidation, damage and loose fit. Check the station's output voltage and current against the specification; an unstable charging voltage damages the battery.
Cleaning the outside	Wipe the outer surfaces with a soft, lint-free cloth and a neutral cleaner. Do not use corrosive agents or hard objects. Take care not to cover sensors, cameras and the laser scanner while cleaning.
Battery	Charge as specified by us and avoid overcharging and deep discharge. Check the charge level regularly so that charging happens in good time.
Wearing parts	Replace heavily worn parts such as wheels and bumper strips promptly.

QUALIFIED PERSONNEL ONLY

Work on the motor and drive, inspection of internal assemblies, cables and connectors, internal cleaning and hardware upgrades are reserved for qualified personnel. If unusual noise or overheating occurs at the motor, stop the robot immediately and contact service.

SOFTWARE

The robot fetches its updates through the uSuite by itself, at the charging station. You do not have to install anything. If units behave differently from one another, check in the uSuite whether they are all on the same version.

CONTACT

Service and faults: support@unitedrobotics.group
Sales and enquiries: health@unitedrobotics.group
Extensions: through your contact or through the uSuite