User manual
MTinfo 3000 web

DualInventive
Transforming Rail Safety

DUAL INVENTIVE | BELGIËSTRAAT 5 | 5061 KG OISTERWIJK

Telephone: +31 (0)13-5339969
Email: info@dualinventive.com
Website: https://dualinventive.com/en/

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TABLE OF CONTENTS

1 Version History 6

2 Preface 7
2.1 Purpose user manual 7
2.2 Users 8
2.3 Reading guide 8
2.4 Abbreviations 8

3 Technical specifications 10

4 Terms of use 11
4.1 Terms of use 11
4.2 Instructions for first use 12

5 Project users and tasks 13

6 Using MTinfo 3000 14
6.1 Overview of functions 14
6.2 Icons and actions 16
6.3 Getting started 17
6.3.1 Two-Factor authentication 19
6.3.2 Password reset 21
6.4 Dashboard 22
6.5 Service messages 24
6.6 Creating and managing companies 27
6.6.1 Step 1 - Info 28
6.6.2 Step 2 - Rights 29
6.6.3 Step 3 - Forms 30
6.6.4 Company editing 31
6.7 Creating and managing users 32
6.7.1 Step 1 – Info 34
6.7.2 Step 2 - Roles 34
6.7.3 Employee who leaves the company 36
6.8 Creating and managing user rights roles 37
6.9 Search and view projects 40
6.10 Create projects 42
6.10.1 Setup projects 42
6.10.2 Design projects 46
6.10.3 Plan projects 51
6.10.4 Verification and validation 59
6.10.5 Release, return and close projects 61

7 Switch protection zones 66
7.1 Step 1 - Protection zone 67
7.2 Step 2 - Switch 68
7.3 Web application – Single zone switching 70
7.4 Web application – Multiple zone switching 74

8 Reports 80
8.1 Periodical reports 80
8.1.1 Step 1 - Report info 82
8.1.2 Step 2 - Users 83
8.1.3 Step 3 - Devices 84
8.1.4 Step 4 - Display 85

8.1.5 Step 5 - General 86
8.2 One-time reports 87
8.3 Download reports 89

9 Additional functions 91
9.1 Real-time status 91
9.2 Adding data to devices 92
9.3 Templates 95
9.3.1 Step 1 - General 96
9.3.2 Step 2 - Questions 97
9.4 Project documentation 99
9.4.1 General 99
9.4.2 Documents through the app 100
9.5 Project log 101
9.6 Knowledgebase 102

10 System Maintenance and System Health 105

11 Appendix ZKL 3000 RC 106
11.1 Explanation real-time status ZKL 3000 RC 106

12 Appendix RDI 3000 108
12.1 Explanation Real-time status RDI 3000 108

13 Appendix Notification Messages 110
13.1 General 110
13.2 Notifications ZKL 3000 RC 111
13.2.1 Errors and Notifications 111
13.2.2 Text Notifications - Reminders 113
13.3 Notifications RDI 3000 114
13.3.1 Errors and Notifications 114
13.3.2 Errors and Notifications - reminders 116
13.4 Notifications RSS 3000 116
13.4.1 Errors and Notifications 116
13.4.2 Errors and Notifications - Reminders 117

LIST OF FIGURES

Figure 1 Landing page MTinfo 3000 17
Figure 2 Sign up 17
Figure 3 Log in 18
Figure 4 Login prompt after session has expired 18
Figure 5 Account authentication 19
Figure 6 Email with verification code 19
Figure 7 Forgot password 21
Figure 8 Request Password reset 21
Figure 9 Reset password 22
Figure 10 Password reset successful 22
Figure 11 Dashboard 23
Figure 12 Sample notification email of return project 24
Figure 13 Sample SMS Notification 24
Figure 14 Sample Reminder SMS Notification 24
Figure 15 Security Notification Sample 25
Figure 16 Security Notification Sample 25
Figure 17 Search companies 27
Figure 18 Creating companies - info 28
Figure 19 Creating companies - rights 29
Figure 20 Creating companies - forms 30
Figure 21 View company 31
Figure 22 Edit company page 32
Figure 23 Edit company page 32
Figure 24 Search users 33
Figure 25 Creating users - info 34
Figure 26 Adding users - roles 35
Figure 27 View user 36
Figure 28 Creating user roles 37
Figure 29 Creating a user role – step 1 38
Figure 30 Creating a user role – step 2 39
Figure 31 Search project 40
Figure 32 View project 41
Figure 33 Setup project - project info 43
Figure 34 Setup project - users 44
Figure 35 Setup project - tasks 45
Figure 36 Design project - devices 46
Figure 37 Design project - protection zones 48
Figure 38 Design project - setup 49
Figure 39 Design project - message 50
Figure 40 Save design 51
Figure 41 Plan project - switch users 52
Figure 42 Plan project - protection zones 53
Figure 43 Plan project - instruction app 54
Figure 44 Plan project - documents 55
Figure 45 Plan project - access levels 56
Figure 46 Plan project - devices 57
Figure 47 Save planning 58
Figure 48 View project - verify and validate 59
Figure 49 Check design 60
Figure 50 Release - start 61
Figure 51 Release - finished 62
Figure 52 Release – warning service date of a devices expires 63
Figure 53 Return - start 64
Figure 54 Return - finished 64
Figure 55 Close 65

Figure 56 Switching protection zone(s) - protection zones 67
Figure 57 Switching protection zone(s) - switch 68
Figure 58 Warnings 68
Figure 59 Error 69
Figure 60 Search project page 70
Figure 61 Project view page 71
Figure 62 Switch protection zone page 71
Figure 63 Switch devices page 72
Figure 64 Switch successful message 73
Figure 65 Switch error/warning message 73
Figure 66 Device error/warning message 74
Figure 67 Project view page 76
Figure 68 Switch protection zone 76
Figure 69 Switching devices page 77
Figure 70 Switch successful message 78
Figure 71 Switch error/warning message 78
Figure 72 Device error/warning message 79
Figure 73 Reports - periodical 81
Figure 74 View report - report info 82
Figure 75 View report - users 83
Figure 76 View report - devices 84
Figure 77 View report - display 85
Figure 78 View report - General 86
Figure 79 Reports - once 87
Figure 80 View report - one-time report 88
Figure 81 Reports - download 89
Figure 82 Download report - select users. 90
Figure 83 Real-time location and data 92
Figure 84 Dashboard - asset management 93
Figure 85 Edit device 93
Figure 86 Search templates 95
Figure 87 Creating templates - general 96
Figure 88 Creating templates - questions 97
Figure 89 Project documentation - general 99
Figure 90 Project documentation - through the app 100
Figure 91 Project log 101
Figure 92 Dashboard page 102
Figure 93 Knowledgebase space 102
Figure 94 Upload documents page 103
Figure 95 Uploading documents 103
Figure 96 Uploaded documents 104
Figure 97 Knowledgebase space 104
Figure 98 Real-time status ZKL 3000 RC 106
Figure 99 Real-time status RDI 3000 108
Figure 100 Notification logic diagram 110

1 VERSION HISTORY

Version number	Date	Change log
1.6	16.05.2023	Addition: Identity provider
2.0	08.09.2023	Addition: Notifications and remote switching, knowledgebase description, mobile phone number note, Disclaimer Improvements: Screenshots, System Health chapter, RDI RTS explanation
2.1	22.09.2023	Addition: Notification
2.1.1	02.10.2023	Addition: 2FA & Password reset
2.1.2	26.10.2023	Modification: Asset management Screenshot, Notification logic diagram Deletion: Excel as a reporting option
2.2.0	16.01.2024	Addition : Time zone feature (Screenshots), List of Figures Modification: Rebranded, Terminology (‘Alerts’ replaced as ‘Notifications’)

2 PREFACE

The MTinfo 3000 IoT platform has been developed in line with the rail and information standards EN 50126, EN 50128, EN 50129, ISO 9001, ISO 14000 and ISO 27001 for maximal safety and security. As well as having its own private cloud, which can be accessed via the internet, MTinfo 3000 also offers worldwide secure mobile communication with systems in the field. The platform also complies with all privacy standards according to the new European legislation. The platform has Safety Integrity Level 4 (SIL 4), which is the highest available standard in the market for managing railway safety plans.

Please read this manual carefully. For MTinfo 3000 to be used safely and correctly, it's important that you fully understand and follow each step accordingly. Always keep this manual to hand, so you can use it at any time.

This manual is also available on https://www.dualinventive.com/en/downloads.

If you encounter any ambiguities while using MTinfo 3000, please report them via info@dualinventive.com or by telephone. Your feedback is important to us.

To support the use of MTinfo 3000, resources have been made available by Dual Inventive which can be found on our website https://dualinventive.com/en/.

No rights can be derived from the information in this user manual. The reproduction or distribution in printed, written and/or audio-visual form is prohibited, unless Dual Inventive has permitted this beforehand.

Dual Inventive has originally written this manual in English. If anything is unclear or deviates from the original in a translated version, the original English document is leading.

2.1 Purpose user manual

The purpose of this user manual is to instruct the user on the correct and safe use of MTinfo 3000. The platform is the web interface for various Dual Inventive products, for example ZKL 3000 RC and RDI 3000. New products are under development and will be added to MTinfo 3000.

This user manual contains instructions regarding the:

- setup of safety plans;
- planning of safety plans;
- remote switching of protection zones; A protection zone is a group of one or more devices that always switch together. It is possible to use multiple Dual Inventive products, named devices, in the same protection zone and to manage them simultaneously. Multiple protection zones can be created, giving the project planner operational flexibility. As you will see in the main menu, MTinfo 3000 has many functions and possibilities. For more information you can always contact us;
- real-time monitoring of safety devices;
- generating reports.

How to use MTinfo 3000 is similar for Dual Inventive's safety products. If any product specific information is applicable, see the appendix for that product in this manual.

2.2 Users

Typical users of MTinfo 3000 are:

- the work planner who prepares safety plans and assigns the locations for installing devices on the railway track;
- the installer, the track worker who installs devices on the railway track;
- the operator, the track worker who switches devices on the railway track.

The work planner will frequently use MTinfo 3000. The installer and operator will frequently use the MTinfo 3000 app. Users can be named in accordance with their assigned task in MTinfo 3000, for example: Project Designer, Project Planner, Project Validator, Project Verifier, etc.

Every user of MTinfo 3000 must meet the following requirements:

- certified to work with MTinfo 3000;
- authorised by the user company administrator for the needed access and user rights for MTinfo 3000.

After certification, the user receives a personal MTinfo 3000 account. See 4.1 for the terms of use.

2.3 Reading guide

To alert the reader to safety issues and important information, the following symbols and terms are used in this manual:

SYMBOL	MEANING
	WARNING Indicates a hazardous situation which could result in death or serious injury and/or damage to the product or the surrounding area if the safety instructions are not followed.
	NOTE Provides important information.
	NOTE Refers to a document.

2.4 Abbreviations

ABBREVIATION	MEANING
SIL	Safety Integrity Level
RDI 3000	Remote Detonator Installer 3000
ZKL 3000 RC	Line Blockage System 3000 Remote Control

Table 2-1: Abbreviations

NOTE
The figures in this manual show examples of several devices and projects in a figurative sense.

3 TECHNICAL SPECIFICATIONS

MTinfo 3000 is an online application that does not require any software to be installed on your computer. After registration, authorisation and authentication, MTinfo 3000 can be used on any computer with an internet connection.

The minimum requirements are:

SPECIFICATION	VALUE
Internet	• Broadband
Computer	• Processor at least 1.5 GHz • Internal memory at least 2,048 MB • Video card at least 512 MB • Screen resolution of at least 1,366p by 768p
Web browser	• Google Chrome latest version (recommended) • Microsoft Edge latest version
Recommended software	• Adobe Acrobat as PDF reader to view reports • Google Earth (for projects 'GPS-Track')

Table 3-.1: Minimum requirements

NOTE
If the requirements for the needed software and hardware are incorrect or absent, Dual Inventive is not responsible for the consequences.

4 TERMS OF USE

DANGER
Please read all terms of use and instructions for the first use carefully before using MTinfo 3000. Ensure that you fully understand the principles of MTinfo 3000 and how it works practically. When precautionary measures and safety instructions are not properly followed by the user there is a risk of electrocution, fire or even death due to the railway environment.

4.1 Terms of use

1. You may only use MTinfo 3000 when:
   - you are trained and certified to work with the applicable Dual Inventive products;
   - you are authorised by the user company for the right access and user rights;
   - the products are certified for the deployment area.
2. Dual Inventive creates a user account for the company. This user account is the company's administrator and is the nominated contact person for your company. The administrator is responsible for creating and managing users and their respective rights for using Dual Inventive product(s), in such a manner that misuse is avoided.
3. As a certified user, you are responsible for:
   - the received user rights, username and password and/or PIN code;
   - keeping the password and/or PIN code secret;
   - working safely with Dual Inventive products.

WARNING
Always respond to service notifications from devices when something is not working correctly.

4. There are certain situations where you may be prevented from switching protection zones. For more information about these situations, refer to the applicable user manual of the Dual Inventive product.
5. Used hardware, software settings, firewalls etc. could limit the connection to MTinfo 3000. When you encounter any issues, please discuss it with your IT staff.
6. See Table 3-.1 and visit https://dualinventive.com/en/ to find out which browsers and devices are supported by MTinfo 3000 and the app. If needed, request support from Dual Inventive.
7. Ensure you have the right SIM card inserted into your mobile phone. The system links your mobile phone number with your assigned user account.
8. Ensure your mobile phone is in good working condition. You should be able to send and receive messages via MTinfo 3000.
9. When entering a user into MTinfo 3000, ensure that the correct language is activated. If needed, users can change the language.

10. User must set their preferred time zone under 'My profile' in MTinfo 3000. This will be automatically applied as default across various functionalities in MTinfo 3000.
11. If you have lost login details and/or PIN codes, immediately contact the company administrator within your organisation to block the account to avoid misuse. If internet is available, please go to MTinfo 3000 and change the password and PIN code to avoid misuse.
12. While preparing projects, make sure to have internet connection.
13. Assign at least two users per project who are authorised for setting-up, releasing and returning projects. MTinfo 3000 offers the possibility to grant several users the rights to manage projects.
14. If a scheduled user is ill or absent, contact the person with rights for the project planning. Change the project planning according to the procedure. Schedule another or second user.
15. If the location of a device must be changed, contact the person with rights for the project design. Change the project design according to the procedure.
16. Check the connection with MTinfo 3000 if it cannot be reached. If a device is not present in MTinfo 3000, the project cannot be released.

4.2 Instructions for first use

1. Ensure that the software on your computer is kept up-to-date, including your web browser, Google Earth and PDF reader.
2. Follow the applicable, local regulations before entering the worksite.
3. Always take care of your own safety within the track environment, following the current applicable legislation.
4. Always use a secure connection with MTinfo 3000. The connection is safe to use when the web address is preceded by https://.

5 PROJECT USERS AND TASKS

MTinfo 3000 utilises a role-based access control system. Project users are created by the company's administrator (see 6.6). For each project, MTinfo 3000 tasks are assigned to right-bearing project users. The order of the project tasks is not fixed.

Table 5-1 shows an overview of the MTinfo 3000 tasks:

TASK	EXPLANATION
Setup	Creating projects and assigning tasks to project users. Assign tasks to at least two project users. This way, more than one person can always change the project.
Design	Creating protection zones and assigning devices to protection zones.
Verify design	Verification of the project design. Do not assign this task to a project user who is also responsible for the design.
Validate design	Validation of the project design. Do not assign this task to a project user who is also responsible for the design or design verification.
Plan	Assigning switch users to protection zones. This means linking switch users to protection zones and determining the time frames for switching protection zones.
Verify planning	Verification of the project planning. Do not assign this task to a project user who is also responsible for the planning.
Validate planning	Validation of the project planning. Do not assign this task to a project user who is also responsible for the planning or planning verification.
Release	Release the project to be able to use it. Devices will be reserved to the project.
Return	Return the project so the protection zones no longer can be switched. The devices are no longer reserved to the project.
Closing	Close the project to archive it. A closed project can never be released again, but it can still be viewed or duplicated.

Table 5-1: MTinfo 3000 tasks

6 USING MTINFO 3000

This section provides an overview of the MTinfo 3000 functions. How to use them is explained in section 6.10 to 9.

This section explains the basic features of MTinfo 3000:

- Icons and actions
- Signing in
- Dashboard
- Service messages
- Creating and managing companies
- Creating and managing users
- Search and view projects

6.1 Overview of functions

The MTinfo 3000 functions are divided in three main sections:

- Creating projects: setup, design and plan projects;
- Managing projects: release, return and close projects;
- Switching protection zones.

Additional functionalities in MTinfo 3000 are:

- Creating and managing various types of reports;
- Viewing the real-time status of devices;
- Adding data to devices;
- Managing documents within projects;
- Logging users and tasks within projects.

NOTE
The functions within MTinfo 3000 that a user can access depend on the rights assigned to them.

Several MTinfo 3000 functions consist of multiple steps. Some of these steps are optional.

Table 6-1 shows an overview of the MTinfo 3000 functions and their steps:

SECTION	FUNCTION	STEP	•	OPTIONAL
6.10.1	Setup project	1.	Project info	
		2.	Users	
		3.	Tasks	
6.10.2	Design project	1.	Devices	
		2.	Protection zones	
		3.	Setup	
		4.	Message	X
6.10.3	Plan project	1.	Switch users	
		2.	Protection zones	
		3.	Instruction app	X
		4.	Documents	X
		5.	Access levels	X
		6.	Devices	X
6.10.4	Validate and verify			
6.10.5.1	Release			
6.10.5.2	Return			
6.10.5.3	Close			
7	Switching	1.	Protection zone(s)	
		2.	Switch	
8	Reports	1.	Report info	
		2.	Users*	
		3.	Devices	
		4.	Display	
		5.	General	
9.1	Real time status			
9.2	Adding data to devices			
9.3	Templates	1.	General	
		2.	Questions	X
9.4	Documents	1.	General	
		2.	Documents through the app	
9.5	Project log			

Table 6-1: MTinfo 3000 functions

*Some reports also have the step Projects.

6.2 Icons and actions

MTinfo 3000 uses a set of recurring icons for actions. Table 6-2 explains the icons:

	EXPLANATION
	Back to the Dashboard.
	Create a new item (project, user, company, etc.).
	Cancel or close an item. The item will not be saved.
	Download a report or document.
	Duplicate an item.
	Return to the user overview.
	Return to the user roles
	Generate a report.
	Check and approve or reject the performed step.
	Personal MTinfo 3000 profile.
	Save an item.
	Show the project overview.
	Switch protection zones.
	Close a project. See all closed projects.
	Show the reports overview.
	View the real-time status of devices.
	Show the assigned tasks.
	Start an assigned task.
	Upload files.
	Delete selected items.
	Go to the next step.
	Go back to the previous step.
	Edit an item.
	Add comments.
	Search for an item.
	Warning for unwanted conditions.

Table 6-2: Explanation of icons

6.3 Getting started

To use MTinfo 3000, go to the landing page and sign in:

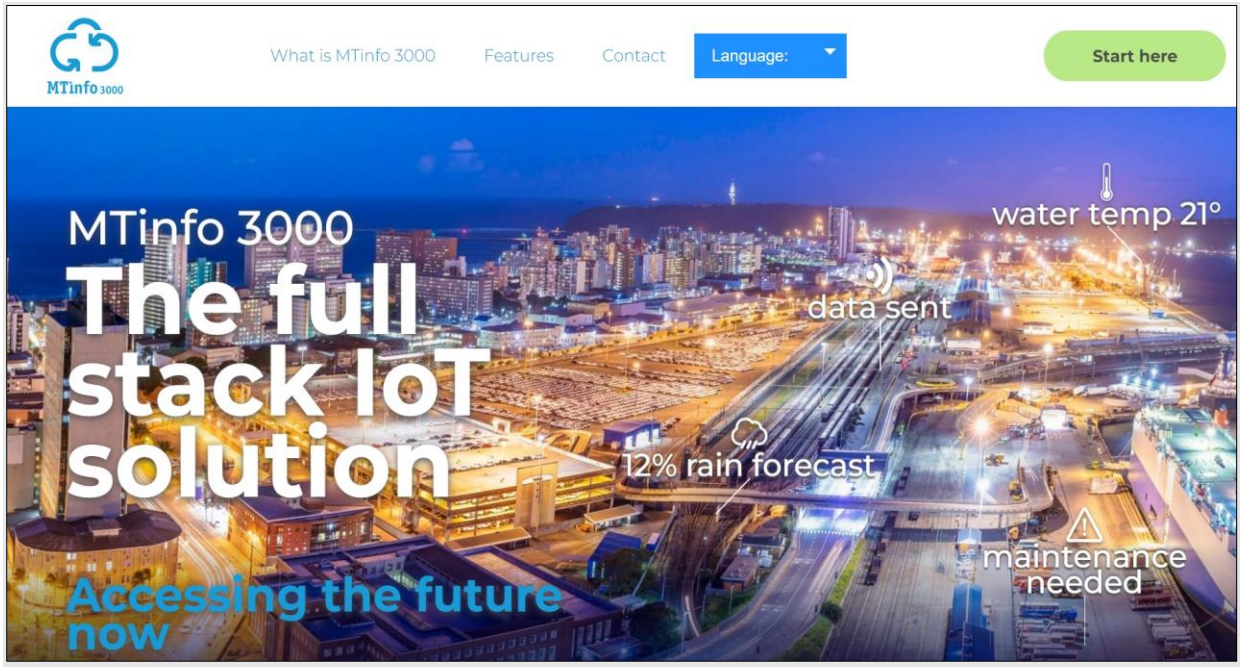


Figure 1 Landing page MTinfo 3000

1. Go to https://www.mtinfo3000.com/landingpage/
2. Click 'Start here' in the upper right corner.

The window for signing in appears:

Figure 2 Sign up

Figure 3 Log in

If you were already logged in, you get the option to login automatically with the same credentials or to login using another account.

3. Enter your Username, Company code and Password.
4. Click 'Accept agreement', read the 'IoT SaaS Terms of Use MTinfo 3000' and accept them.
5. Sign in.

NOTE

If you are logged into MTinfo for more than two hours and if you try to logout, you will have to enter your password to login again.

Figure 4 Login prompt after session has expired

6.3.1 Two-Factor authentication

The Two-Factor Authentication is enabled when you sign in from a new or untrusted device. Follow these steps for account authentication:

- The following window appears for account authentication:

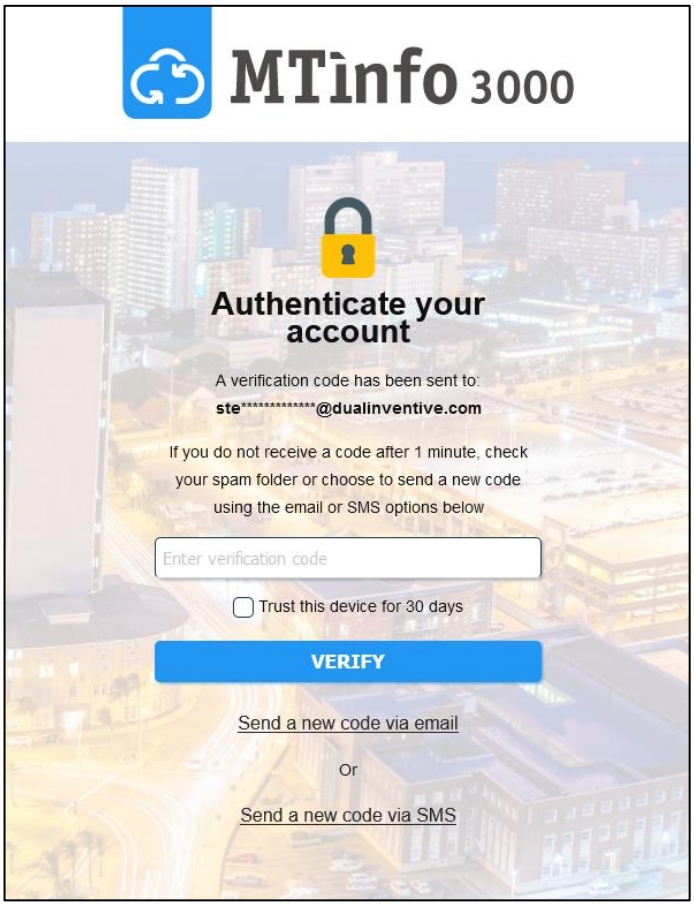


Figure 5 Account authentication

Figure 6 Email with verification code

- Copy the verification code and enter it into the authentication window.

- Optionally, You can check the 'Trust this device for 30 days' box. When you do this, you won't have to log in to your account again for the next 30 days on this web browser and your current device.

NOTE

It is not recommended to check this option for public devices.

- Click on 'Verify'.

NOTE

You have 10 attempts to enter a valid verification code. If your last attempt fails, you will be temporarily blocked from using Two-Factor authentication for 15 minutes.

6.3.2 Password reset

If you can't sign in because you have forgotten your password, you can reset it.

Follow these steps for Password reset:

- Click on 'Forgot your password' in the sign-in window.

Figure 7 Forgot password

- The following window appears to request a password reset:

Figure 8 Request Password reset

- Enter your username and company code.
- Click on 'Submit'.

NOTE

Ensure there are no typos, and the correct username & company code are entered to receive the password reset email.

If you don't receive an email, you may have entered an incorrect username or company code.

- Go to your email address to find the **MTinfo 3000 password reset link** sent to you.
- Click on the link in the email. The following window will open in your browser:

Figure 9 Reset password

- Insert a new password with minimum of **10 characters.**
- Repeat the same password for confirmation.
- Click on 'Submit'. If you see the following window, your password has been successfully reset:

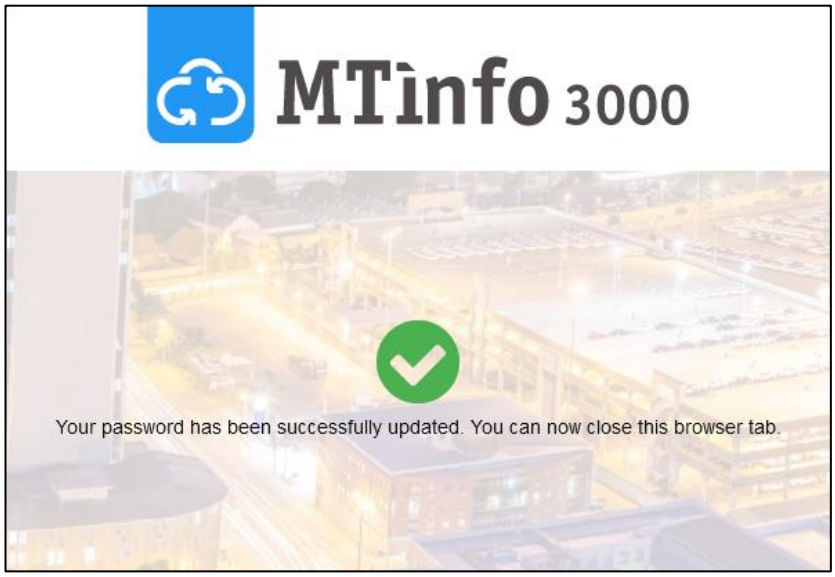


Figure 10 Password reset successful

- You can now sign in to MTinfo 3000 using your new password.

6.4 Dashboard

After signing in, you will see the dashboard:

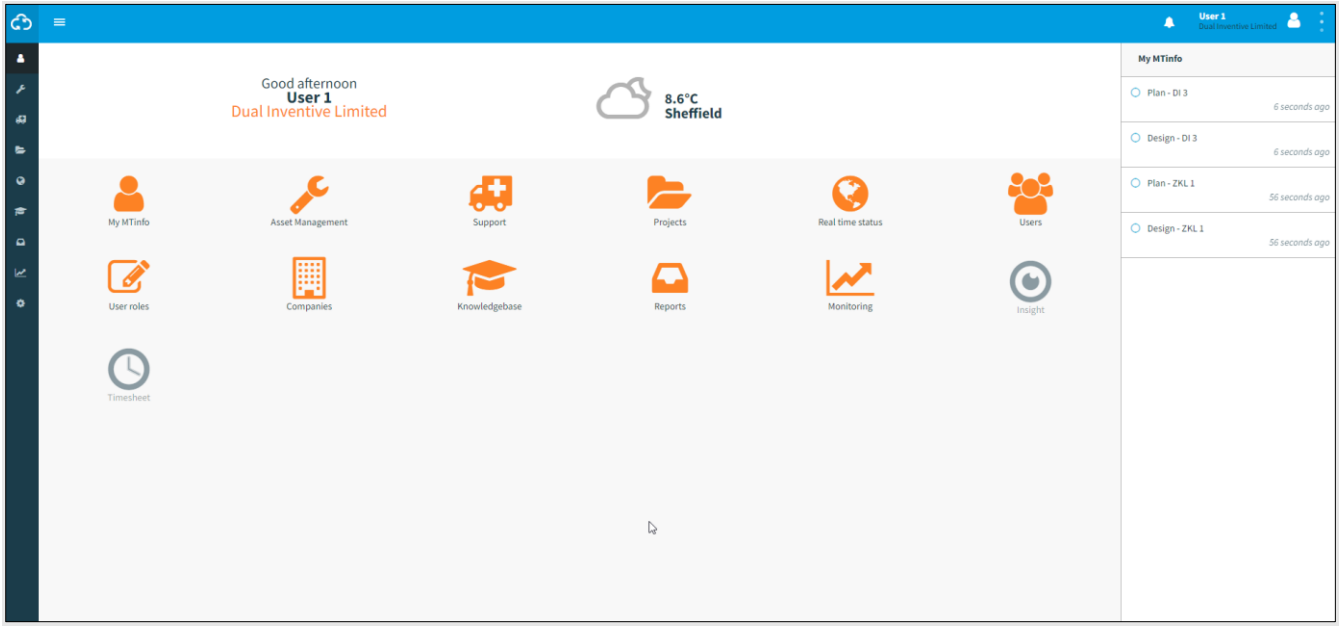


Figure 11 Dashboard

From the dashboard, you can navigate to projects, reports, devices, change settings, etc. The applicable functions will be discussed in the next sections of this manual.

The upper right corner of the Dashboard has the following functions:

- The button User/Company Name, gives you access to:
  - My profile;
  - My company;
  - Privacy statement;
  - Contact us;
  - Logout.
- The blinking ellipses at the top right corner (⋮) indicates a good internet connection. A blinking exclamation (!)indicates no internet connection;
- Displaying banners, notifications and tasks.

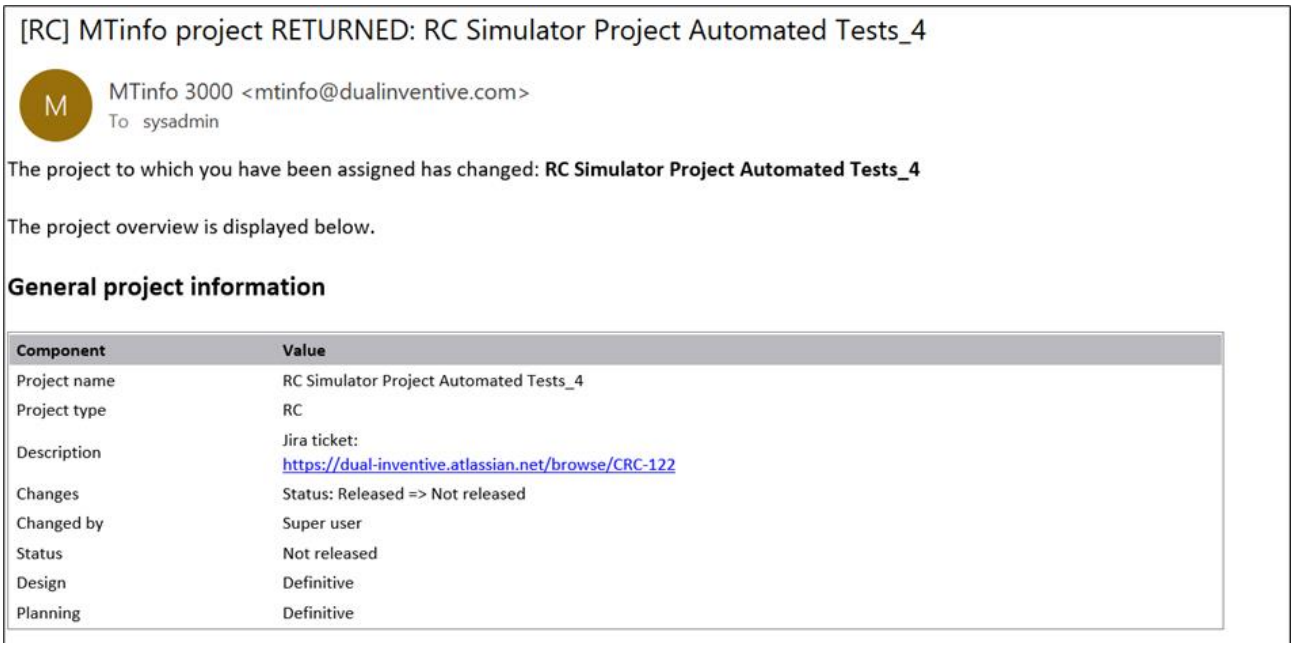
On the left side, you see a menu with several functions. This menu is always available on the individual screens of MTinfo 3000. You can hide (🡐) or display (≡) this menu.

On the right side, you see My MTinfo. This menu shows an overview of the assigned tasks in MTinfo 3000.

6.5 Service messages

Users can receive the following service messages from MTinfo 3000:

1. emails regarding project release and return notifications.



[RC] MTinfo project RETURNED: RC Simulator Project Automated Tests_4

M MTinfo 3000 <mtinfo@dualinventive.com>
To sysadmin

The project to which you have been assigned has changed: **RC Simulator Project Automated Tests_4**

The project overview is displayed below.

General project information

Component	Value
Project name	RC Simulator Project Automated Tests_4
Project type	RC
Description	Jira ticket: https://dual-inventive.atlassian.net/browse/CRC-122
Changes	Status: Released => Not released
Changed by	Super user
Status	Not released
Design	Definitive
Planning	Definitive

Figure 12 Sample notification email of return project

2. critical service notifications via text message (SMS). Examples of these critical notifications are:
   - Detection not OK;
   - Back-up or main battery status;
   - Device is offline;
   - Device Maintenance.

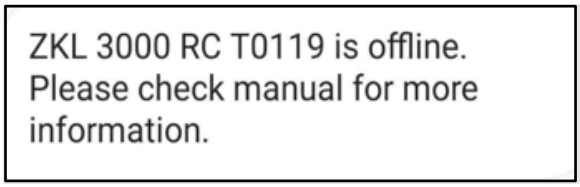


Figure 13 Sample SMS Notification

3. reminder functionality for the following notifications, for example:
   - Device offline, when the device is in an activated protection zone;
   - Detection not OK, when the device is in an activated protection zone.

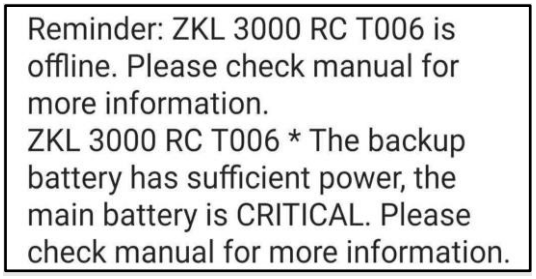


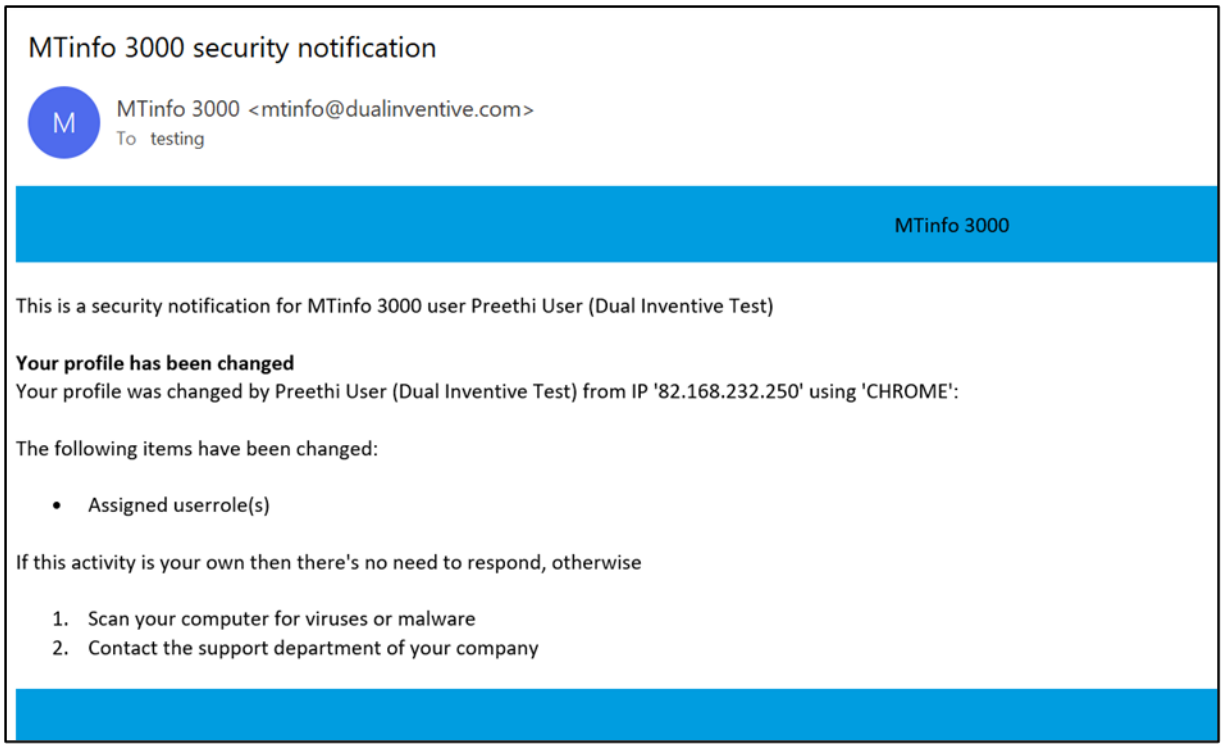
Figure 14 Sample Reminder SMS Notification

NOTE

For more information on Notifications and Notifications reminders please refer to **13 APPENDIX notification messages:**

Notifications ZKL 3000 RC for ZKL devices
Notifications RDI 3000 for RDI devices
Notifications RSS 3000 for RSS devices

4. security warnings (in case rights have changed or a user logs in from a different IP address);



MTinfo 3000 security notification

M MTinfo 3000 <mtinfo@dualinventive.com>
To testing

MTinfo 3000

This is a security notification for MTinfo 3000 user Preethi User (Dual Inventive Test)

Your profile has been changed
Your profile was changed by Preethi User (Dual Inventive Test) from IP '82.168.232.250' using 'CHROME':

The following items have been changed:

- Assigned userrole(s)

If this activity is your own then there's no need to respond, otherwise

1. Scan your computer for viruses or malware
2. Contact the support department of your company

Figure 15 Security Notification Sample

5. (Periodic) reports were generated and documents that are filled in by/for project users.

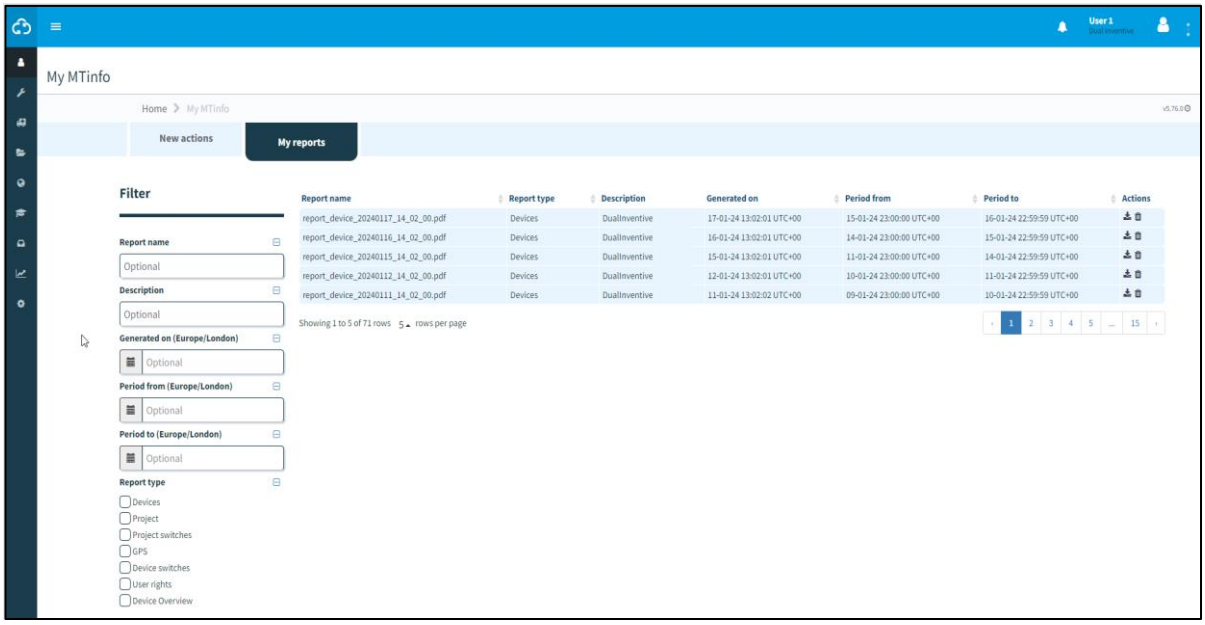


Figure 16 Security Notification Sample

NOTE
Emails regarding projects can be turned off under My profile (Receive project emails: No).
Services notifications are safety related and cannot be turned off.

NOTE
A notification is a message, or a reminder of a message send by MTinfo 3000 to a users' mobile device (tablet, phone). A reminder for a critical notification is an extra service to help the user but it is explicitly not a mitigation of an identified risk.

WARNING
SMS messages will not be delivered to the user if a wrong telephone number is registered or when the user blocks the sender's phone number MTinfo 3000.
Verify if you have entered your correct telephone number and do not block the sender.

6.6 Creating and managing companies

If you have the assigned rights, you can create and manage companies.

1. Go to the Dashboard (Error! Reference source not found.) and click Companies.

The page Search companies appear:

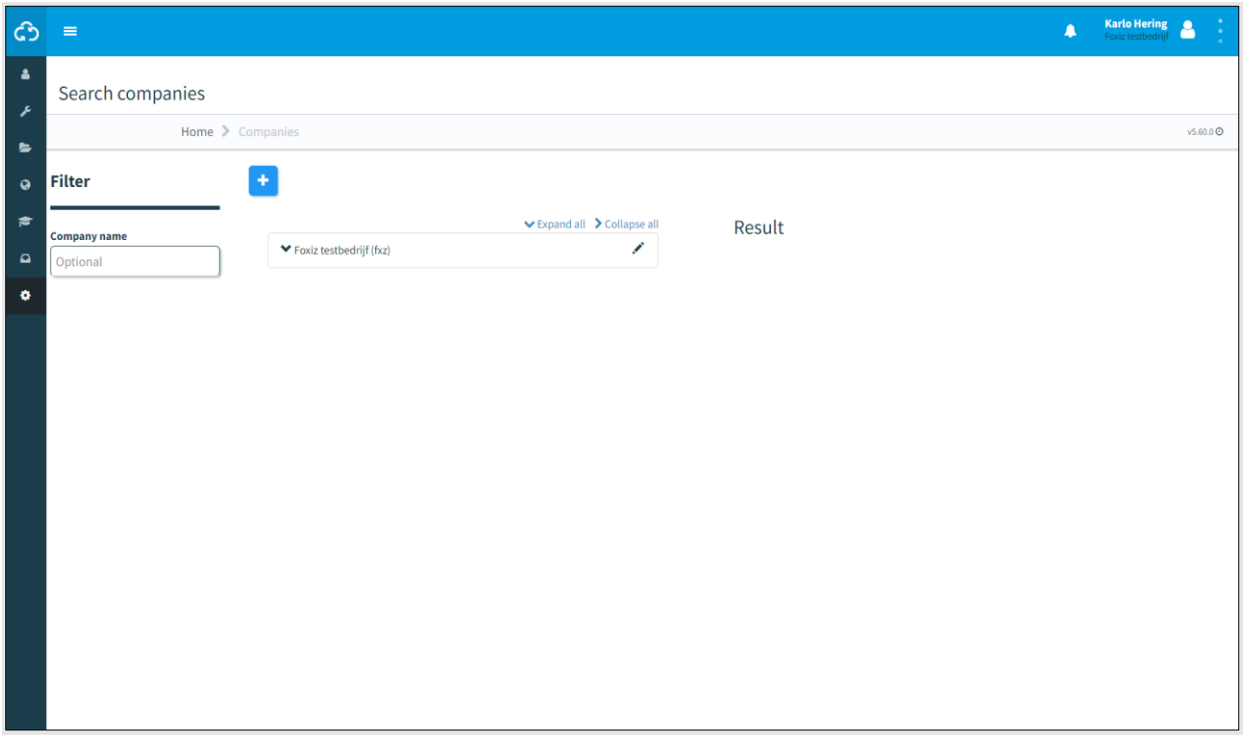


Figure 17 Search companies

2. Click the icon to start creating a new company within the parent company.

Follow steps 1 to 3 to create a new company.

6.6.1 Step 1 - Info

In step 1 of creating companies, add the required company information.

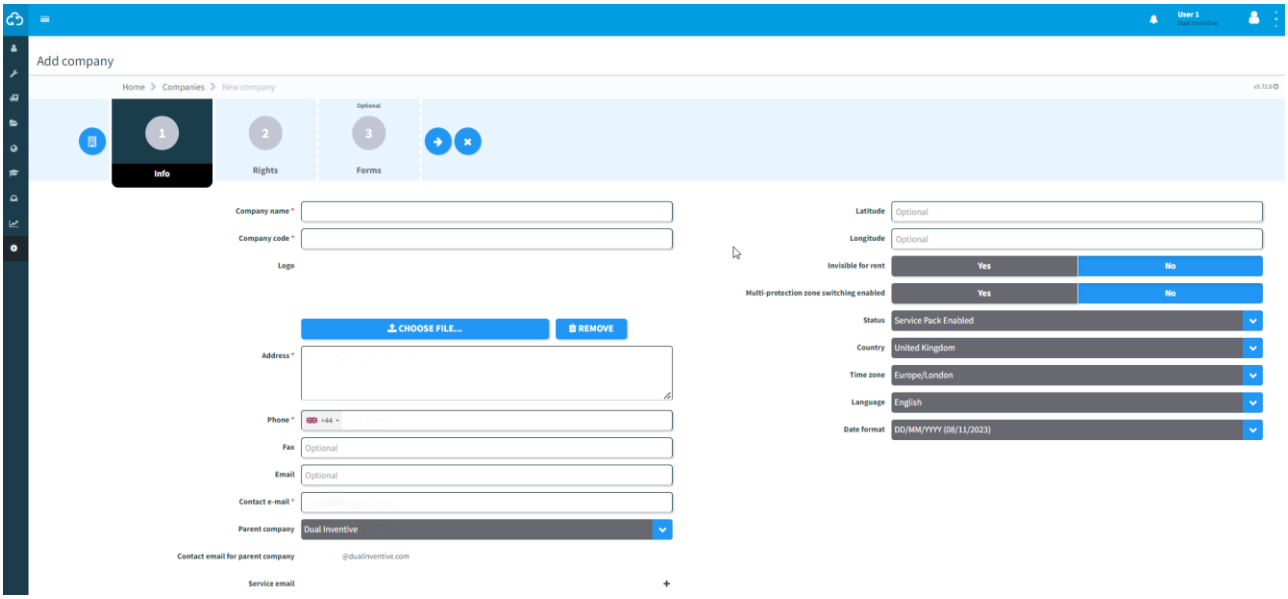


Figure 18 Creating companies - info

1. Fill out the required fields.

   Note: select the country code of the telephone number.

2. Fill out the optional fields.

3. Upload optionally files (max. 8 MB).

4. Go to step 2.

6.6.2 Step 2 - Rights

In step 2 of creating companies, select the available rights.

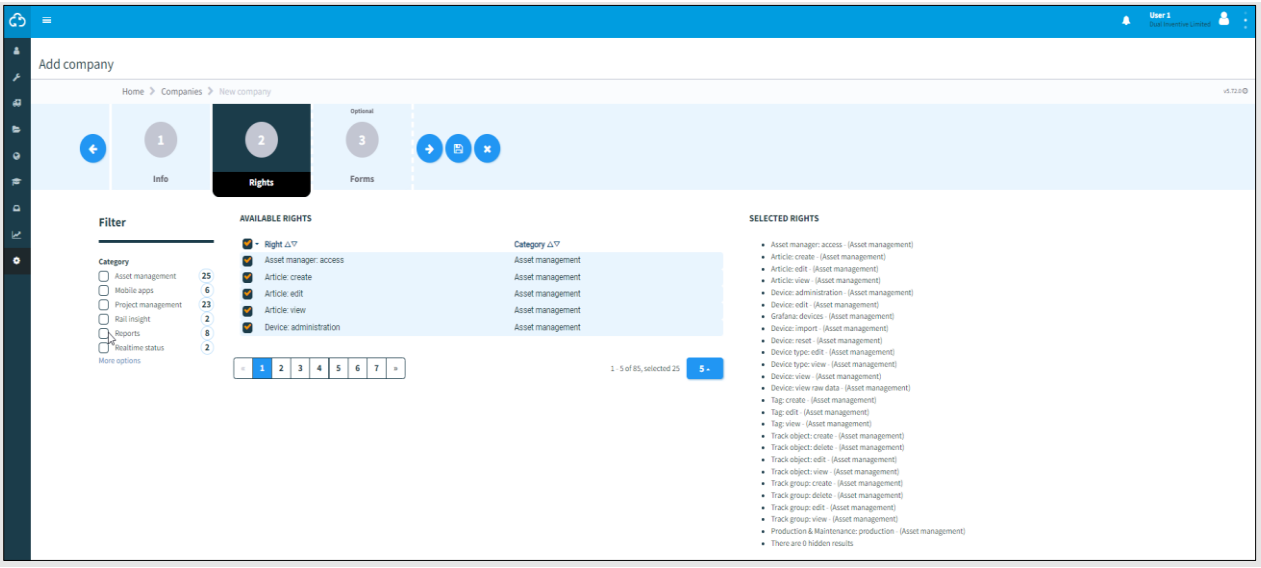


Figure 19 Creating companies - rights

1. Select the available rights.
2. Go to step 3.

6.6.3 Step 3 - Forms

In step 3 of creating companies, select forms. This is an optional step. Before you can select forms, templates must be created (see 9.3).

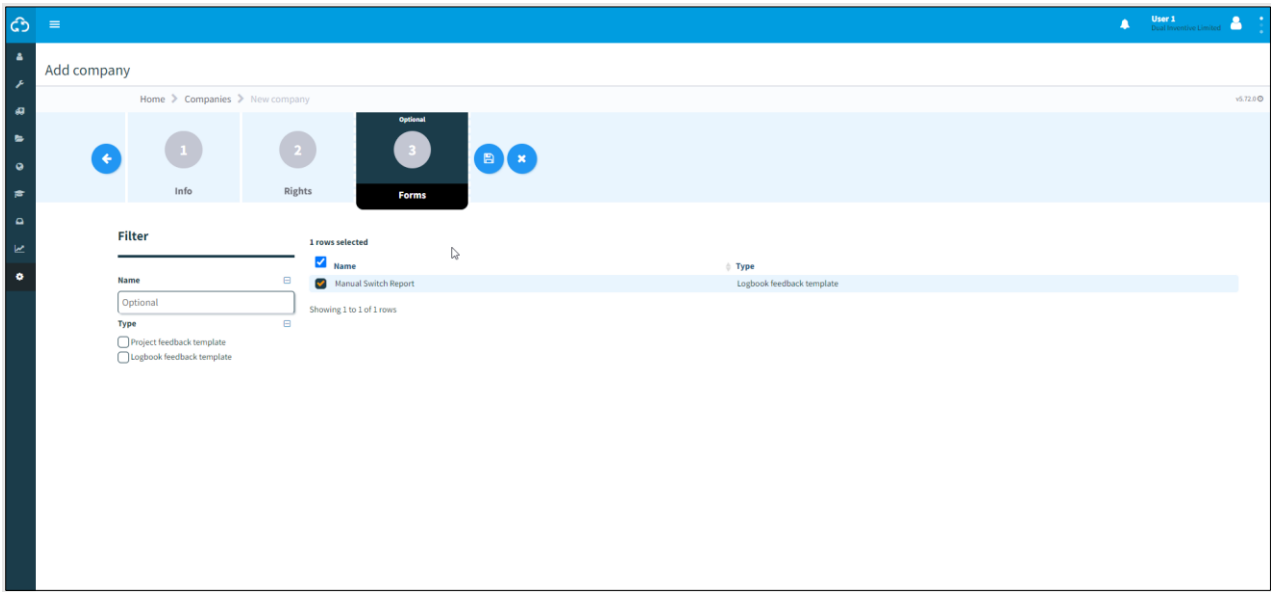


Figure 20 Creating companies - forms

	1.	Optional: select one or more forms.
←	2.	If needed: change any entered data of step 1 and 2 before saving the company.
💾	3.	Save the company.
✖	4.	If needed: cancel the company at any point. The entered data will not be saved.

After saving the company, the page View company appears:

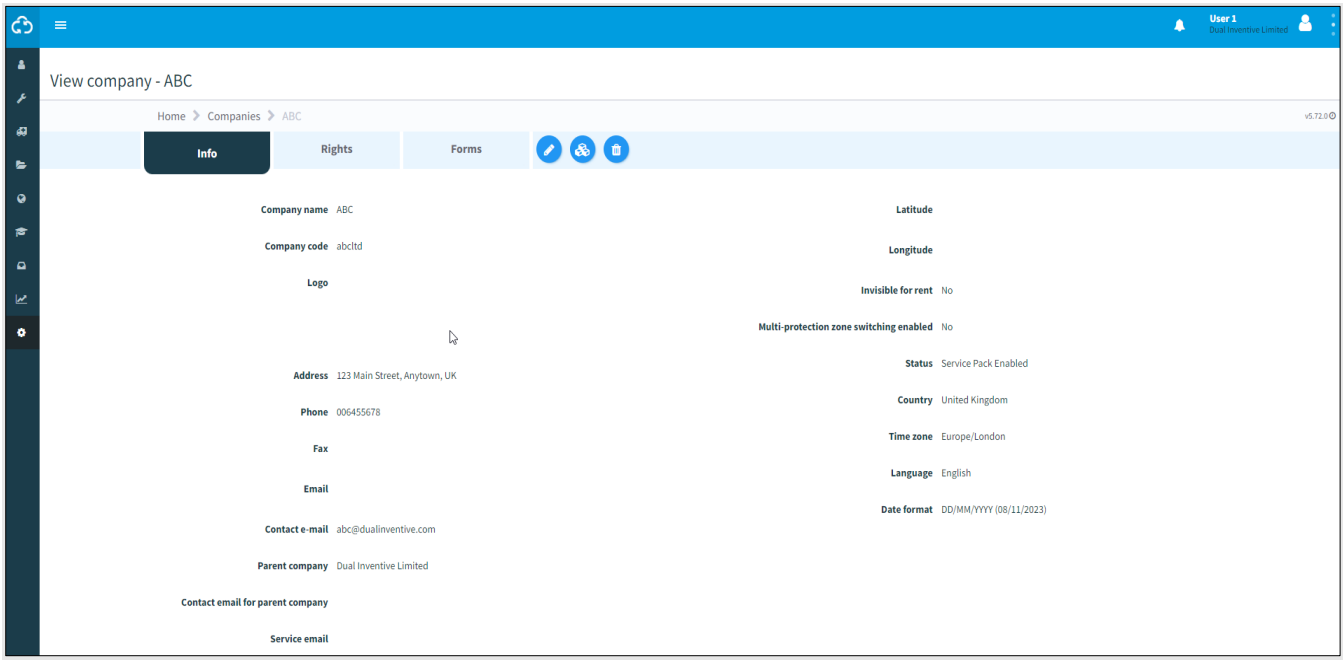


Figure 21 View company

From this page, you can manage companies:

1. If needed, edit company information. Select the applicable tab Info, Right or Forms to edit.
2. If needed, change the user roles.
3. If needed, delete the company.

6.6.4 Company editing

After creating the company, you can edit it. This process is almost identical to that of creating a company. The notable exception is that you can set up a contact, to whom any support questions will be sent via email. You can select any user, that exists within the created company, that has the *User: administration* right.

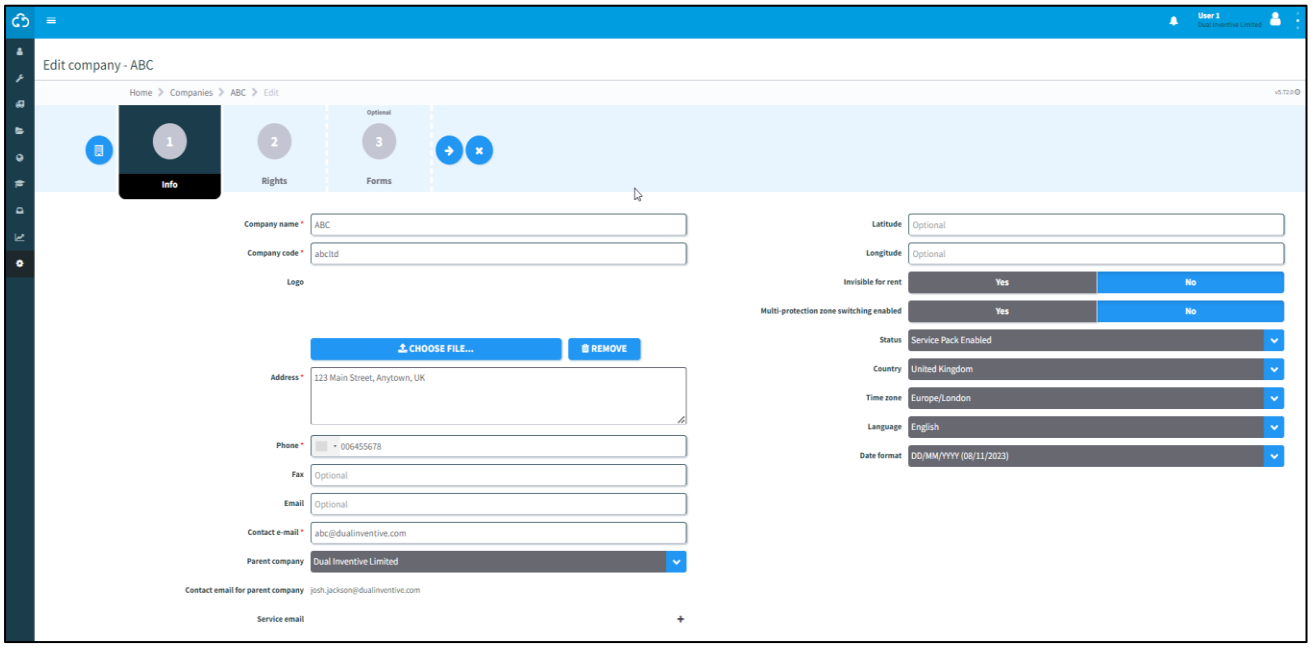


Figure 22 Edit company page

If left blank, any support question will be sent to Dual Inventive.

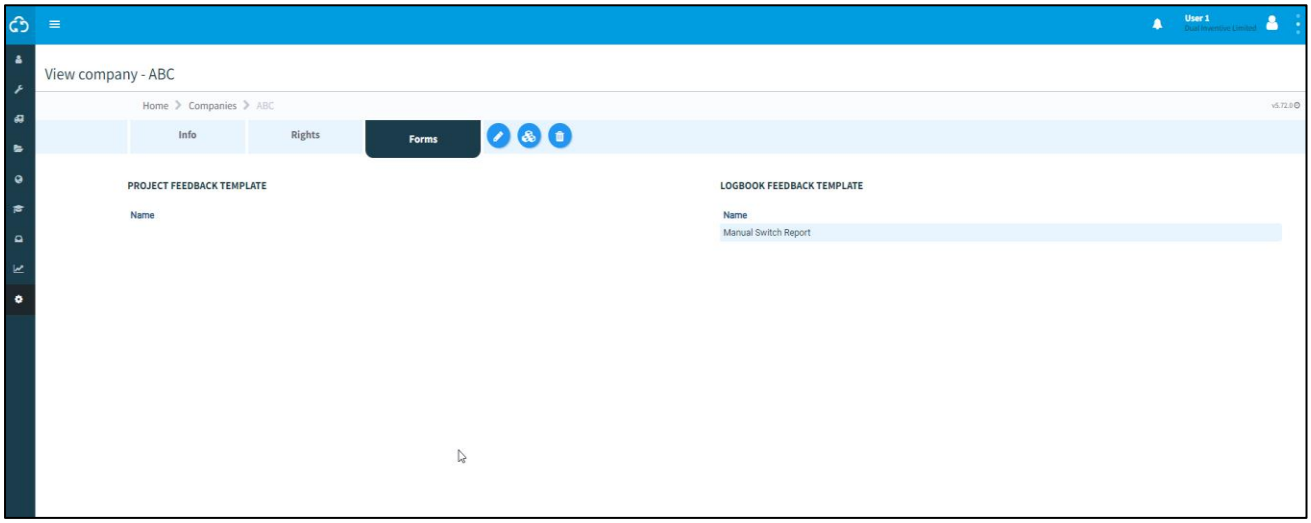


Figure 23 Edit company page

6.7 Creating and managing users

Before you set up a project, first you must create new users.

1. Go to the Dashboard (Error! Reference source not found.) and click Users.

The page Search users appear:

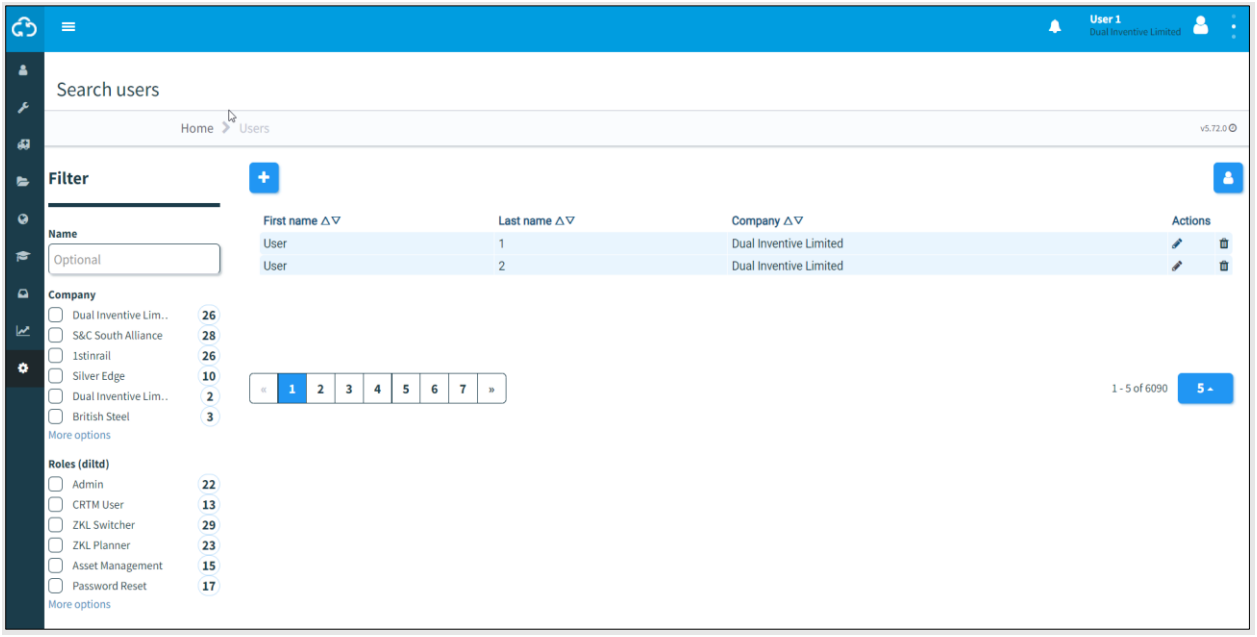


Figure 24 Search users

+	2. Click the icon to start creating a new user.

Follow steps 1 and 2 to create a new user.

6.7.1 Step 1 – Info

In step 1 of creating a user, add the required user information.

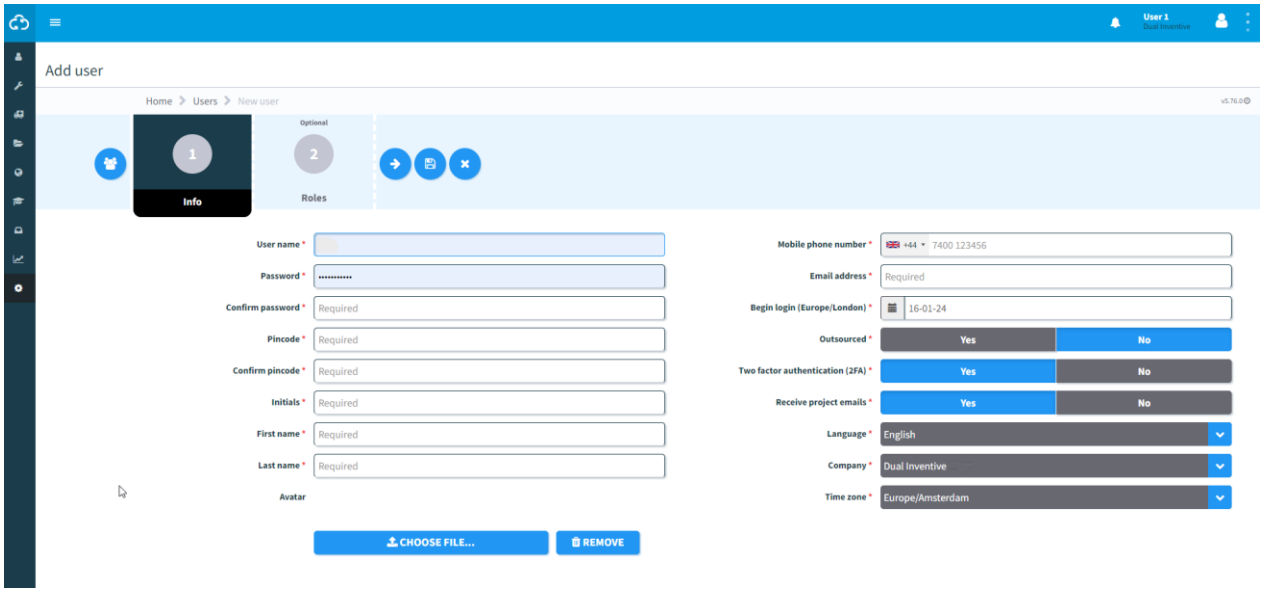


Figure 25 Creating users - info

1. Fill out the required fields.
   Note:
   spaces are not allowed in username
   the password must have minimal 10 characters;
   the pin code must have at least 2 unique digits;
   the phone number must have at least 7 digits;
   select the country code of the phone number;
2. Fill out the optional fields.
3. Upload optionally files (max. 8 MB).
4. Go to step 2.

NOTE

- Some steps or fields in MTinfo 3000 are not required and do not have to be filled out to go to the next step. Required fields are marked with a red asterisk (*) and must be filled out to continue. If you forget a field or do not comply with requirements, a pop up will appear showing what needs to be done.
- User must set their *preferred time zone* which will be automatically applied as default across various functionalities in MTinfo 3000.
- Use *a uniform time zone* for all users in a project to avoid errors that may arise during project planning and switching.

6.7.2 Step 2 - Roles

In step 2 of creating a user, select one or more user roles.

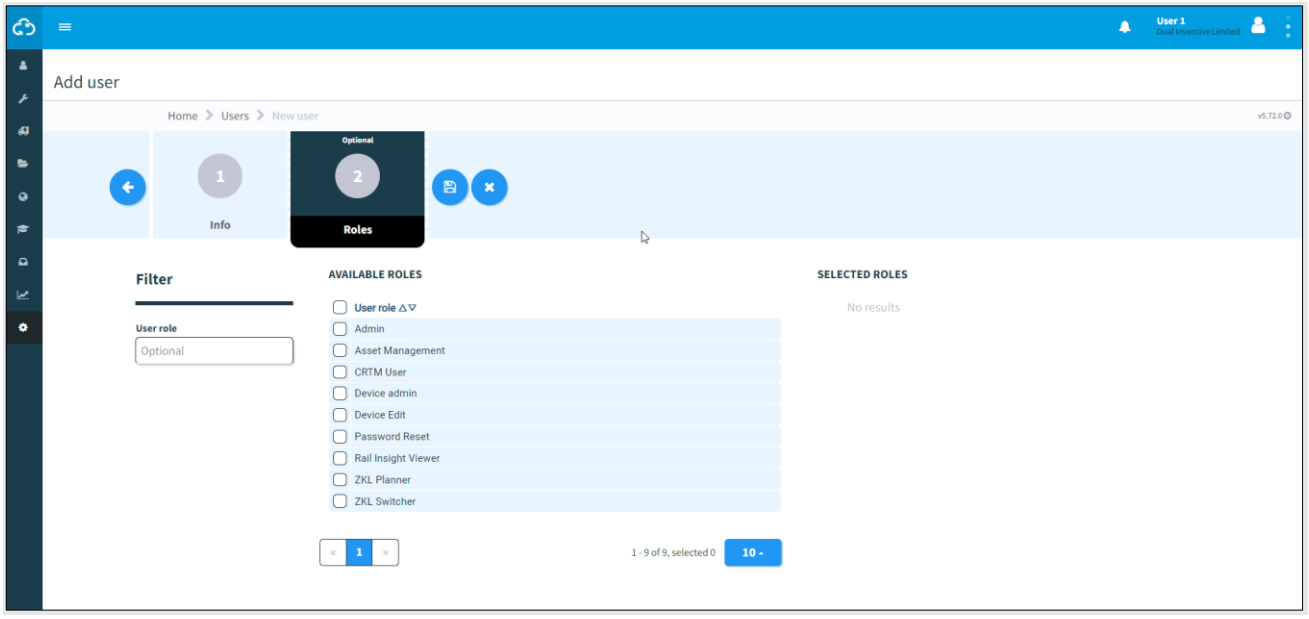


Figure 26 Adding users - roles

1. Select one or more User roles.
2. If needed: change any entered data of step 1 before saving the user.
3. Save the user.
4. If needed: cancel the user creation at any point. The entered data will not be saved.

After saving the user, the page View user appears:

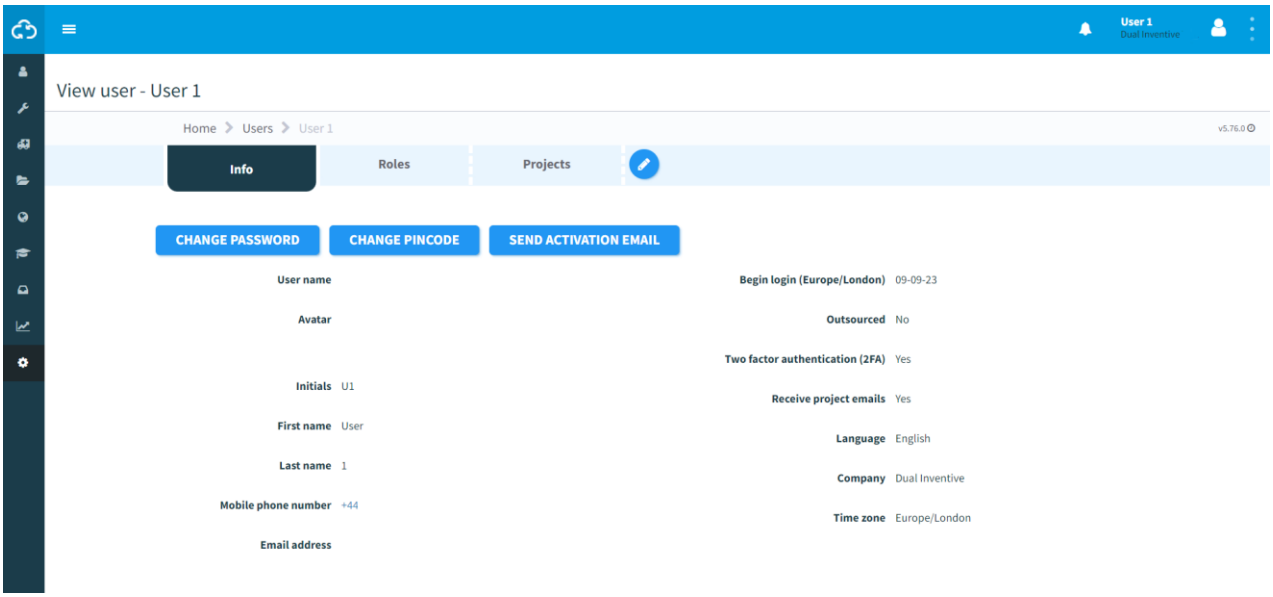


Figure 27 View user

From this page, you can manage users:

1. Send an activation email to grant the new user access to MTinfo 3000.
2. If needed, change the user's password or pin code.
3. If needed, edit user information. Select the applicable tab Info, Roles or Projects to edit.

NOTE
The mobile phone number is used to send critical notifications to.

6.7.3 Employee who leaves the company

When an employee is going to work somewhere else it is necessary to remove the user from the project. This can only be done when a user is not on a project which is in use. When the user is on an active project and you want to update the date of "Begin login" you see the warning: "This is critical information, you cannot modify it until the user is not assigned to an open project".

6.8 Creating and managing user rights roles

User rights in MTinfo 3000 allow what a user is allowed to see and do in the application, and what not. Each right corresponds to one or more features/functionalities in the system.

User roles are bundles of user rights which can be assigned to a user. The added value of this feature is that instead of having to select multiple users per right, they can instead be assigned one user role that covers all of these rights instead.

In order to create a new user role, navigate to the company which you want to create a user role first (see step 5.6.3).

1. Press the user roles button

2. You will see an overview of the current user roles. Press the following button to create a new user role

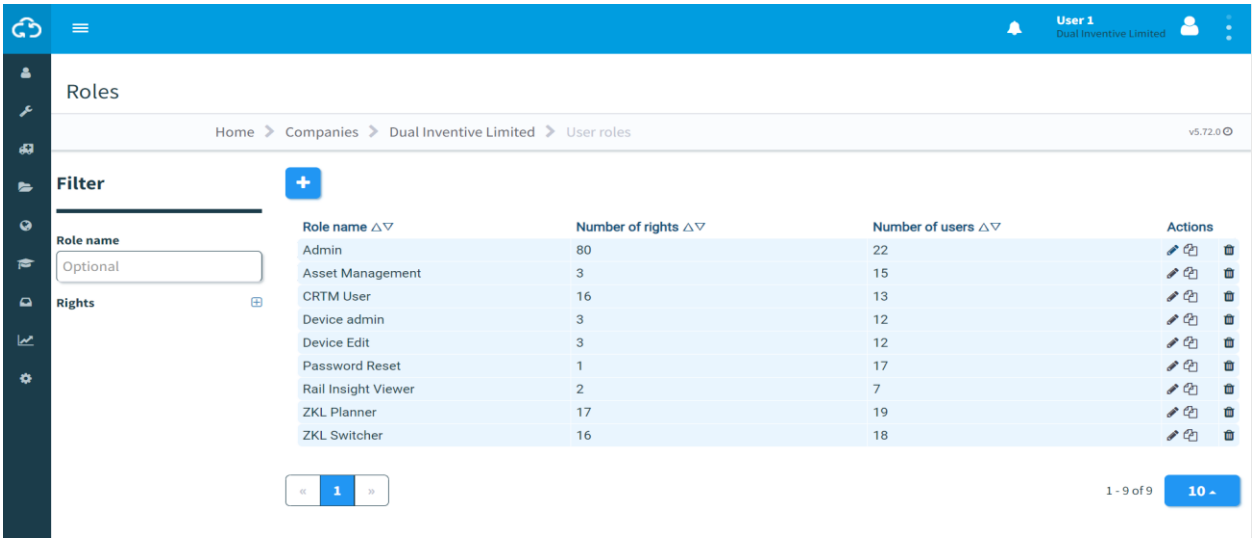


Figure 28 Creating user roles

3. Give the user role a name and select the appropriate rights. The names of the rights are self-explanatory and show which area or functionality they grant access to within MTinfo 3000. Multiple rights can be selected for one user role.

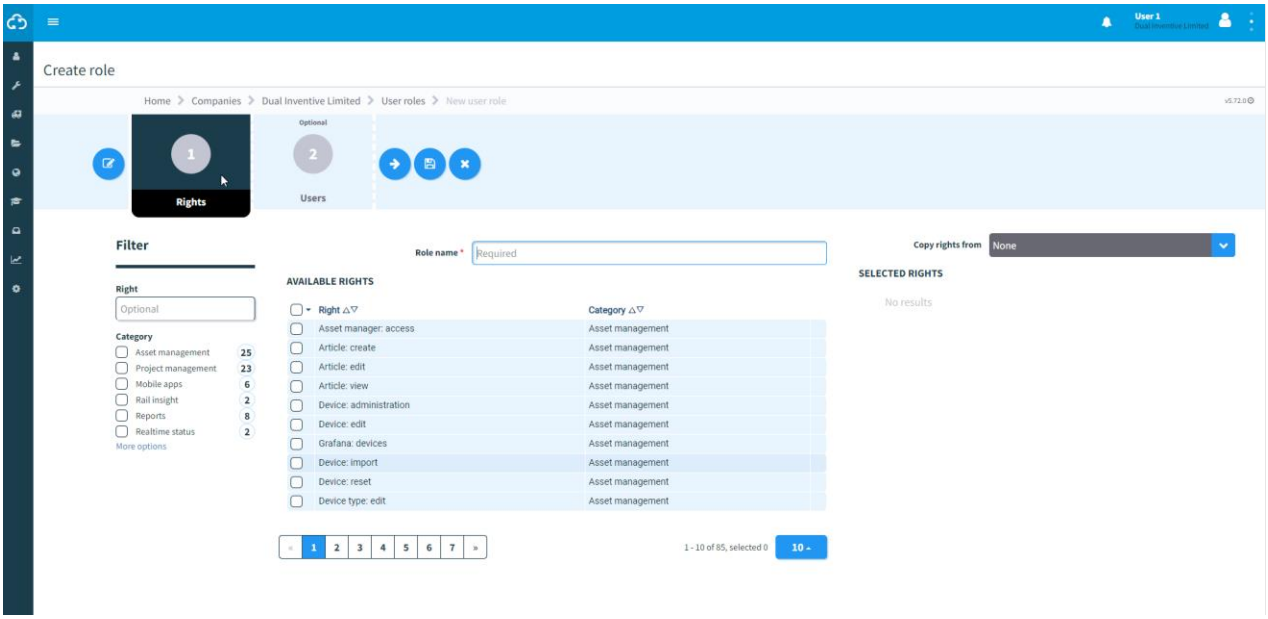


Figure 29 Creating a user role – step 1

If required, you can copy rights from an existing role using the drop-down menu on the right side.

4. After creating the user role, you can immediately add one or more users to this role. This step is optional.
5. Once all these steps have been completed, press the save button to save the user role.

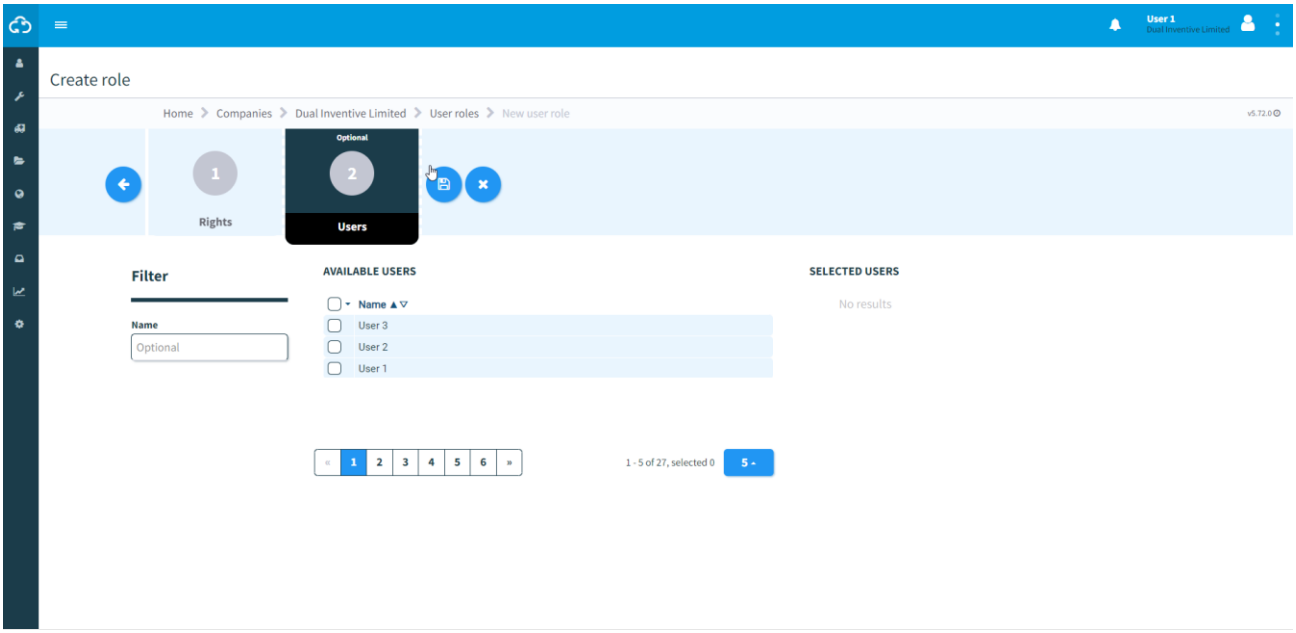


Figure 30 Creating a user role – step 2

6.9 Search and view projects

From the page Search project, search for existing projects:

	Go to the Dashboard and click Projects.

The page Search project appears with an overview of the existing projects:

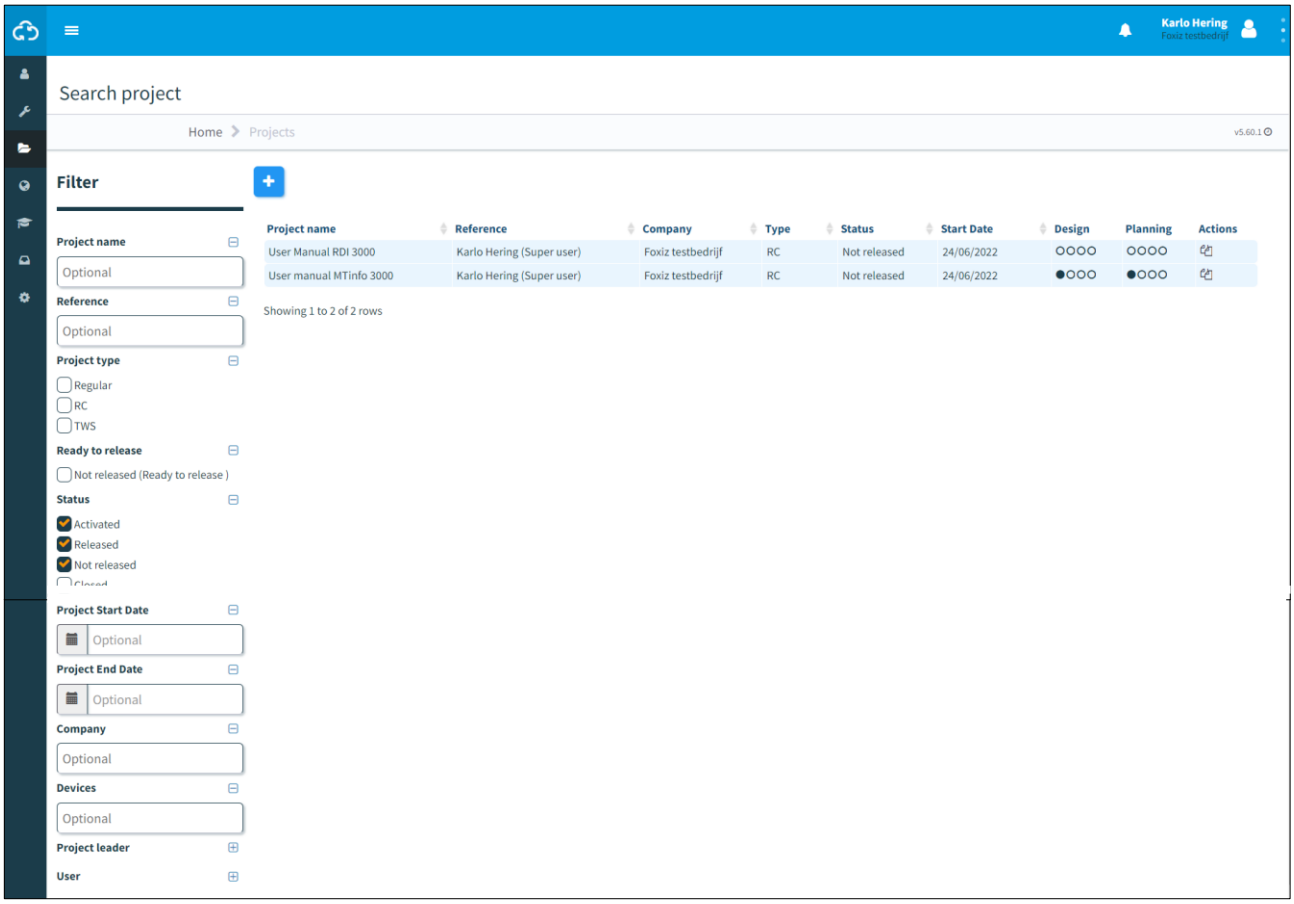


Figure 31 Search project

From this page, search, filter and sort projects. On the left side, you see Filter. Enter a project name and/or reference, partially or as a whole. Use filters (project type, ready to release, status, etc.) for effective searching.

	Use the arrows to sort projects alphabetically (a-z or z-a).

NOTE
Search, filter and sort are available for many overviews, for example users, reports, etc.

To view an individual project, click the project's row. The page View project appears:

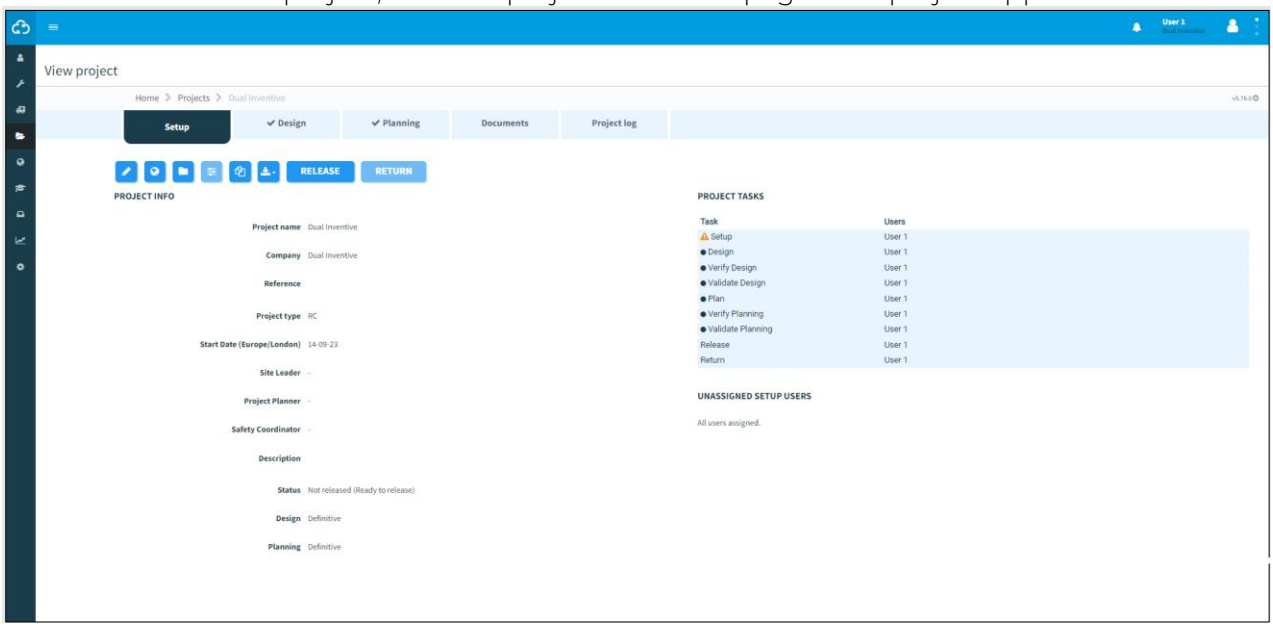


Figure 32 View project

From the tab Setup, you have access to several functions for the selected project:

	Edit a project.
	View the real-time status.
	Close a project.
	Switch protection zones (not active).
	Duplicate a project.
	Download a report or document.
RELEASE	Release a project (not active).
RETURN	Return a project (not active).

When a button is not active, it colours light blue. Not active buttons become active (blue) after having performed the applicable actions in MTinfo 3000.

You can also view:

- project details: project name, company, project type, start date, Site Leader, Project Planner, etc. (scroll down to see more);
- the status of project tasks.

	Click the icon to go back to the Dashboard.

NOTE
There are different ways to access several functions in MTinfo 3000, for example from the Dashboard or the page View project. Not all different ways are discussed in this manual. You will learn by doing and finding your own way in MTinfo 3000.

6.10 Create projects

This section explains how to create MTinfo 3000 projects. A project allows you to easily set up, design, plan and control protection zones.

6.10.1 Setup projects

Before you set up a project, first create a new project:

	1.	Go to the Dashboard.
	2.	Click on Projects to access the page Search projects (Error! Reference source not found.).
	3.	Create a new project.
	4.	Start the setup.

The page Setup project (Error! Reference source not found.) appears. Follow steps 1 to 3 to setup a new project.

6.10.1.1 Step 1 - Project info

In step 1 of the project setup, add the applicable project information.

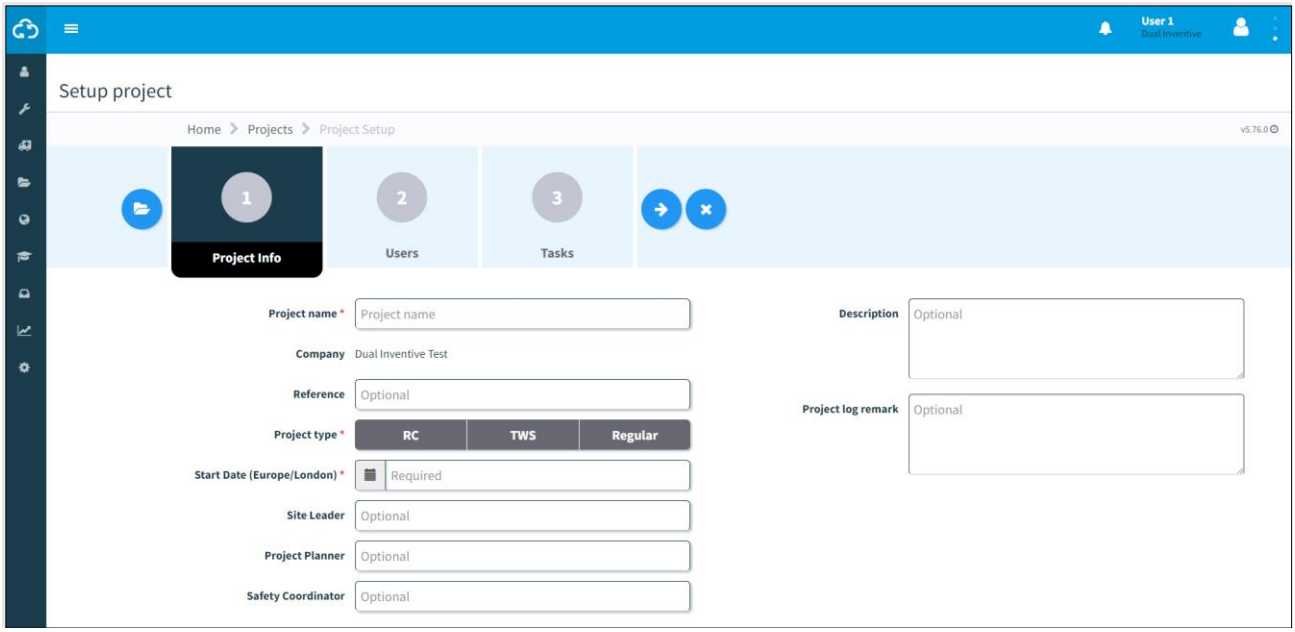


Figure 33 Setup project - project info

1. Fill in a Project name.
2. Optional: add a Reference.
3. Select **RC** as Project type.
4. Fill in the Start date (this date is just used as an indication to know when the project is planned to start but does not actually do anything).
5. Optional: add a Site Leader.
6. Optional: add a Project Planner.
7. Optional: add a Safety Coordinator.
8. Optional: add a Description.
9. Optional: add a Project log remark.
10. Go to step 2.

6.10.1.2 Step 2 - Users

In step 2 of the project setup, select the project users (planners).

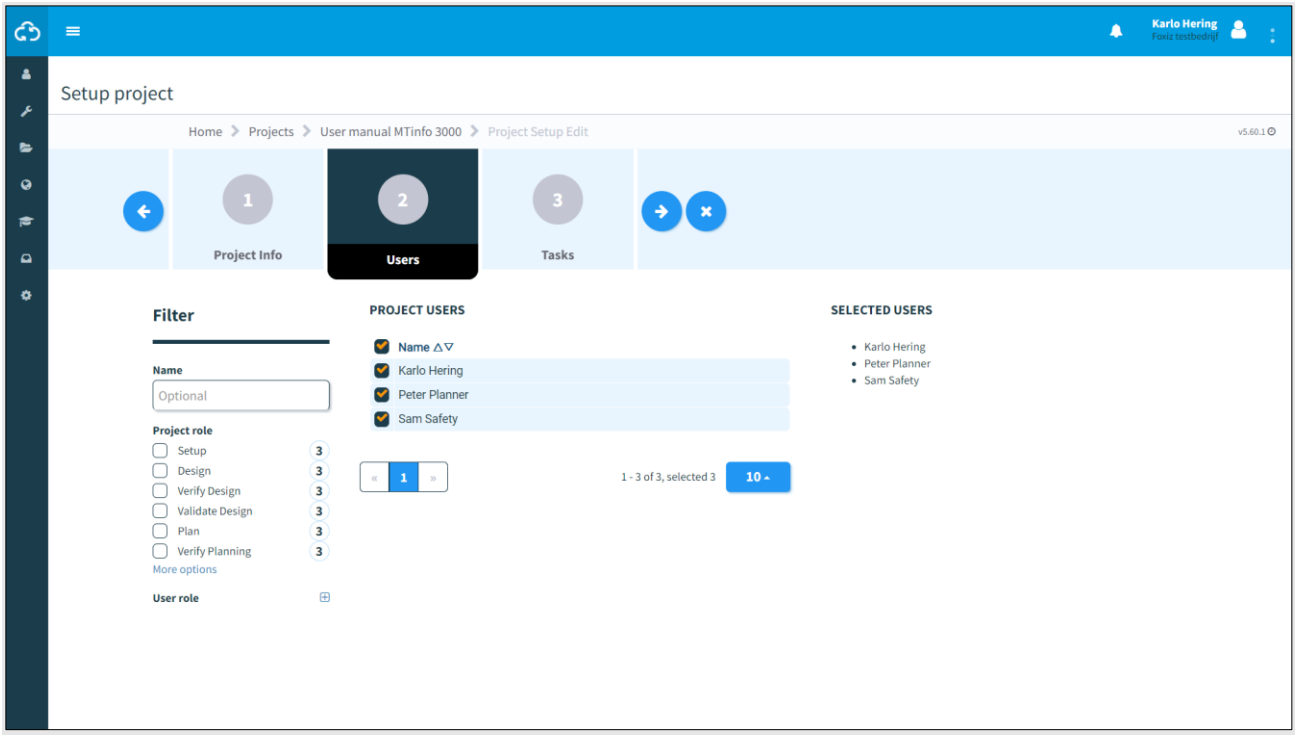


Figure 34 Setup project - users

	1.	Select the project users.
	2.	Go to step 3.

6.10.1.3 Step 3 - Tasks

In step 3 of the project setup, connect the project users and tasks.

WARNING
Never assign a single project user to all tasks. Verification and validation should be independent from the project design and planning. MTinfo 3000 recommends assigning at least two users to the setup stage.

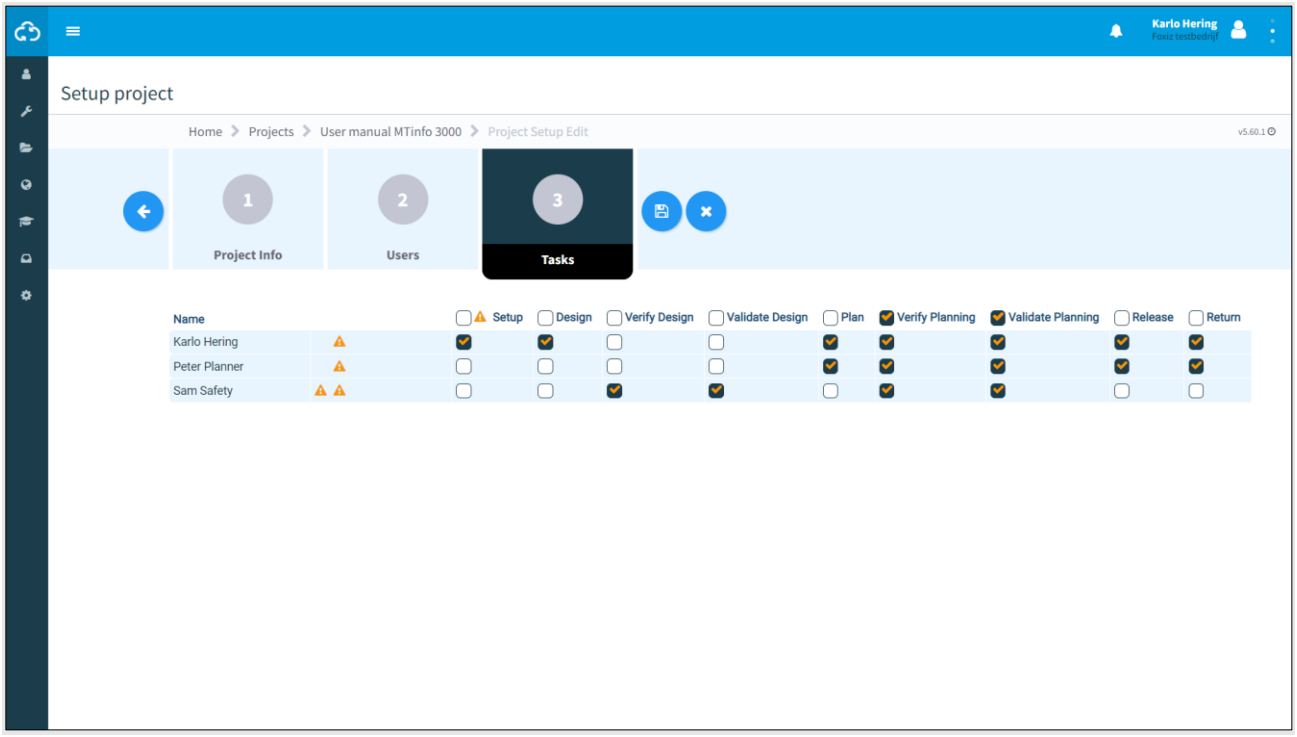


Figure 35 Setup project - tasks

1. Assign the project users to their tasks.
2. If needed: change any entered data of the previous steps before saving the project setup.
3. Save the project setup.
4. If needed: cancel the project setup at any point. The entered data will not be saved.

NOTE
It is recommended to assign a minimum of two people to the “Release” and “Return” to not being dependent on one person to release or return a project.

6.10.2 Design projects

Design projects is used to create protection zones and assign devices to them.

1. Go to the page View project (Error! Reference source not found.).
2. Click the tab Design for access to the steps of the project design.
3. Start the design.

The page Design projects (Error! Reference source not found.) appears. Follow steps 1 to 4 to design the project.

6.10.2.1 Step 1 - Devices

In step 1 of the project design, select which devices are to be switched on the project. Only switchable devices are displayed.

WARNING
Make sure that the devices on the project are located at the correct location in the track. Do not do this via the GPS tracking but check the actual position in the track.

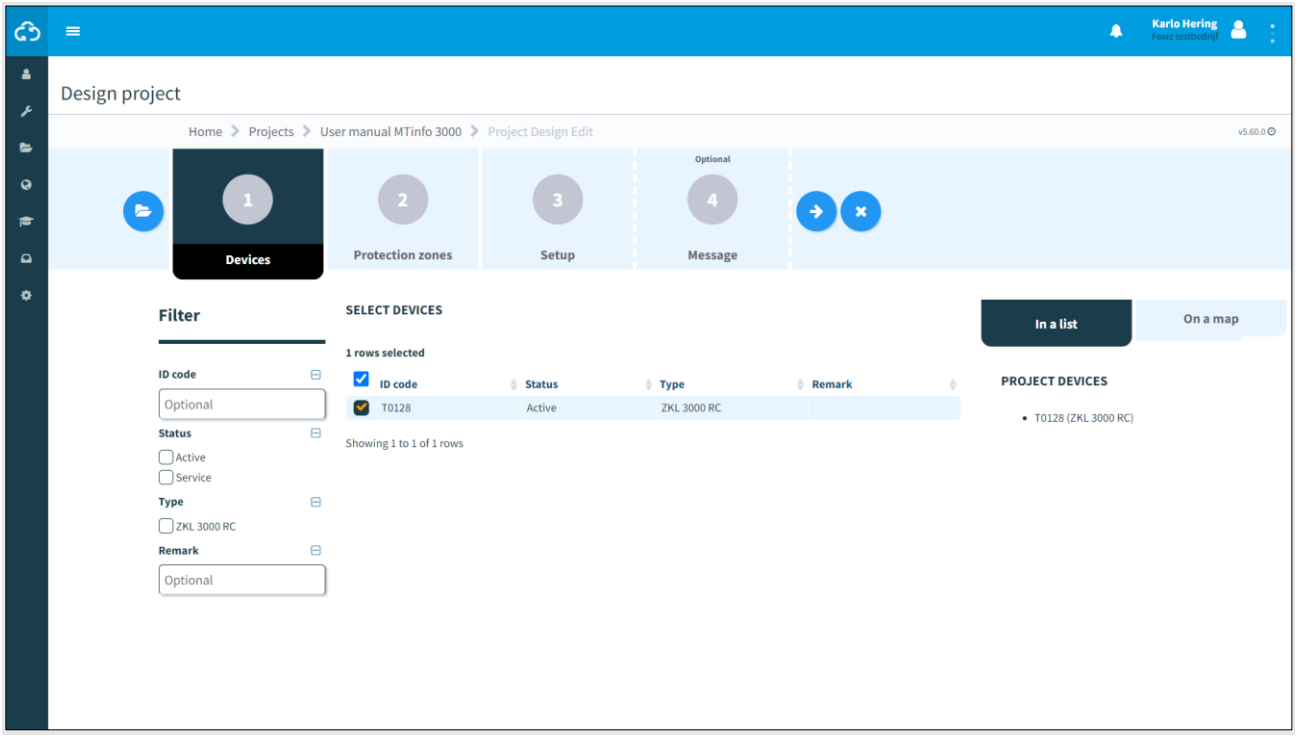


Figure 36 Design project - devices

1. Select the devices to be switched. See the selected devices on the right side of this screen: In a list or on a map.
2. Go to step 2.

NOTE

In case the location of a device needs to be changed later on, contact the person with the project's Right *Design* and change the design according to the process.

NOTE

Ensure that before and during the design, connections are present with the devices that are to be used. If connections are not present a project can never be released.

6.10.2.2 Step 2 - Protection zones

In step 2 of the project design, create protection zones.

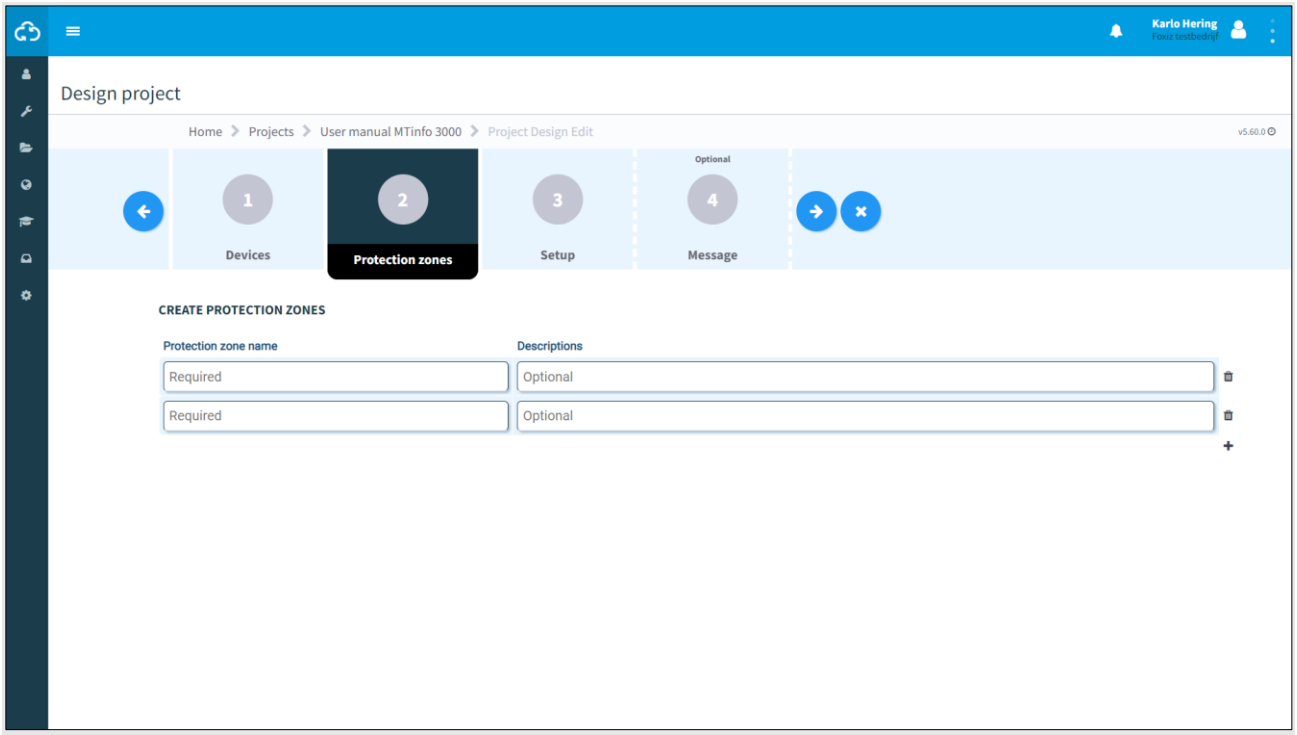


Figure 37 Design project - protection zones

+	1.	Create one or more protection zones.
	2.	Fill in a Protection zone name. The name must be unique within the project.
	3.	Optional: fill in a Description.
→	4.	Go to step 3.

6.10.2.3 Step 3 - Setup

In step 3 of the project design, link the selected devices (step 1) and protection zones (step 2).

NOTE
It is not possible within a project to add the same device to two protection zones.

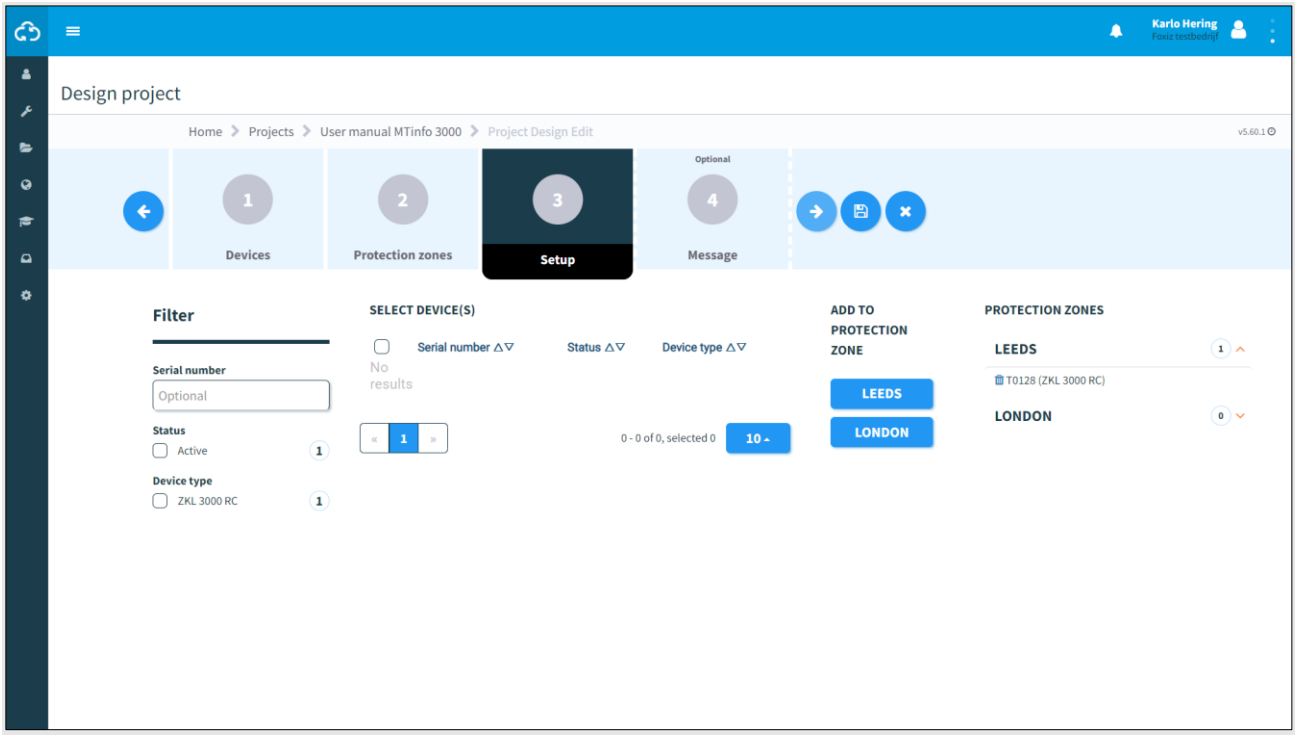


Figure 38 Design project - setup

1. Select one or more devices.
2. Click the button with the name of the protection zone to add the selected devices to the protection zone. At the right-side, see an overview of the linked devices and protection zones.
3. If needed: remove a device from the linked protection zone.
4. Go to step 4.

6.10.2.4 Step 4 - Message

In the optional step 4 of the project design, messages can be added. They will be displayed when a user opens protection zones in the app.

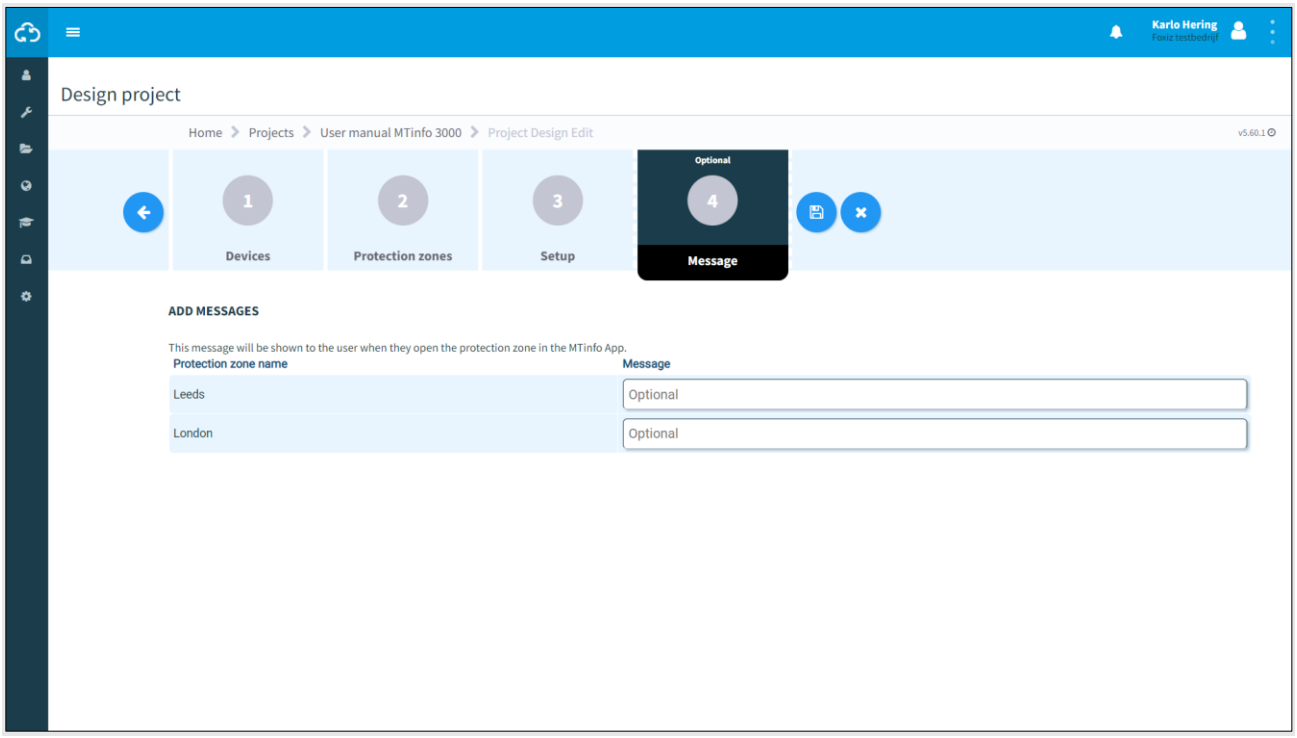


Figure 39 Design project - message

1.	Optional: add a message to each Protection zone name.

The last step is to save the project design (see 6.10.2.5).

6.10.2.5 Step 5- Save project design

Save the project design before starting the verification and validation. Or verify and validate the project design directly (see 6.10.4).

NOTE
To reduce risks, MTinfo 3000 uses the six-eyes principle. It is strongly recommended that a second authorized user should verify the design and a third authorised user should validate the design.

NOTE
You can verify and validate the design directly if you are authorized. Because of the six-eyes principle, Dual Inventive does not recommend this step in operational use.

1. Click the icon (see Error! Reference source not found.).

This screen appears:

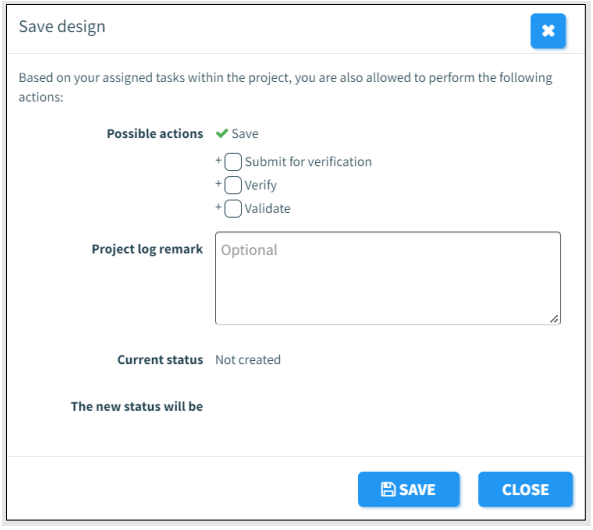


Figure 40 Save design

2. Tick the box Submit for verification. Authorised project users will be assigned to the task Verify project in My MTinfo.
3. Tick the box Verify if you want to verify the project design directly.
4. Tick the box Validate if you want to validate the project design directly.
5. Optional: add a Project log remark. This will be shown in the Project log (see 10.4).
6. If needed: change any entered data before saving the design as final. Click on any of the previous steps and change the data accordingly.
7. Save the project design.

6.10.3 Plan projects

Plan projects is used to assign project users to protection zones which they are allowed to switch.

1. Go to the page View project (Error! Reference source not found.).
2. Click the tab Planning for access to the steps of the project planning.
3. Start the project planning.

The page Plan project (Error! Reference source not found.) appears. Follow steps 1 to 6 to plan the project.

6.10.3.1 Step 1 - Switch users

In step 1 of the project planning, select the switch users.

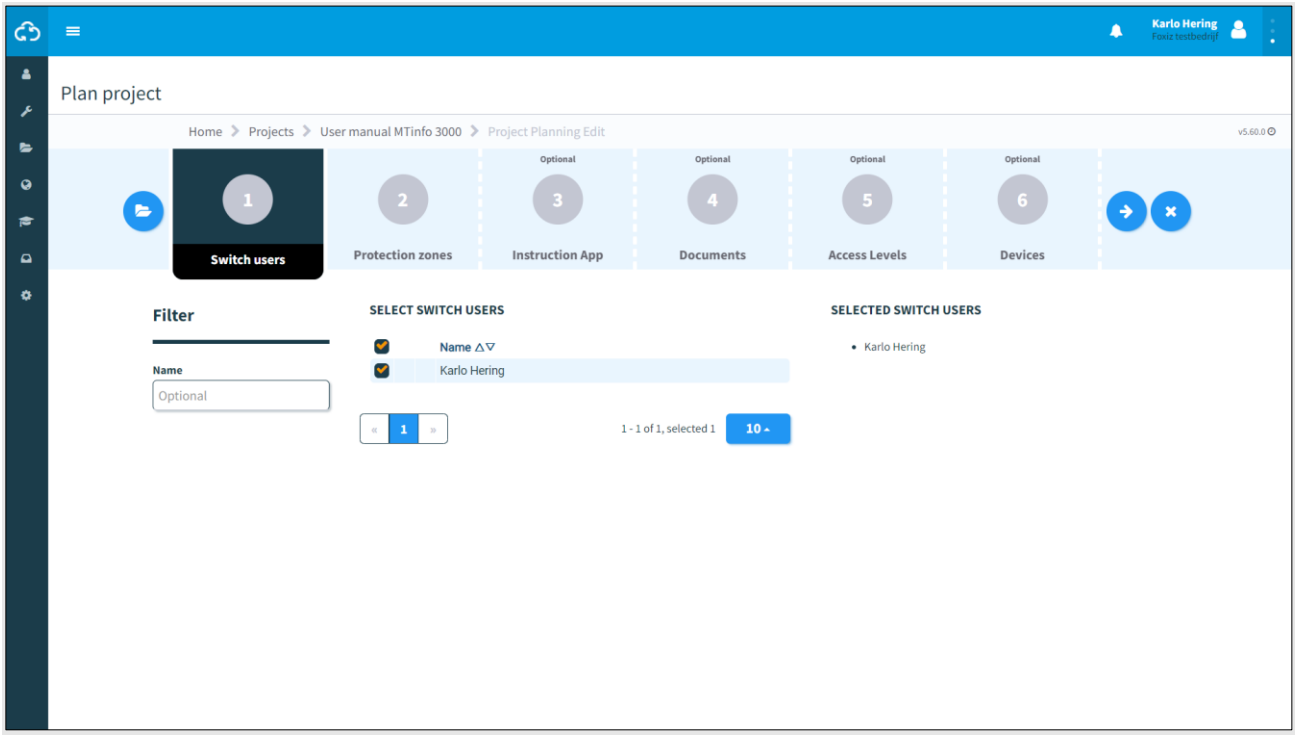


Figure 41 Plan project - switch users

1. Select the Switch users that are allowed to switch protection zones.
2. Go to step 2.

NOTE

This icon shows users without access to the app or rights to view the project in MTinfo 3000. Users without switching rights are not shown in this step to begin with.

NOTE

If a scheduled switch user becomes ill or is absent, contact the person with the project's Right Planning and change the planning according to the process.

It is advised to schedule in a backup.

6.10.3.2 Step 2 - Protection zones

In step 2 of the project planning, assign the selected switch users (step 1) to the protection zones they are allowed to switch. The period wherein the switch users can switch the protection zone, can be determined in this step.

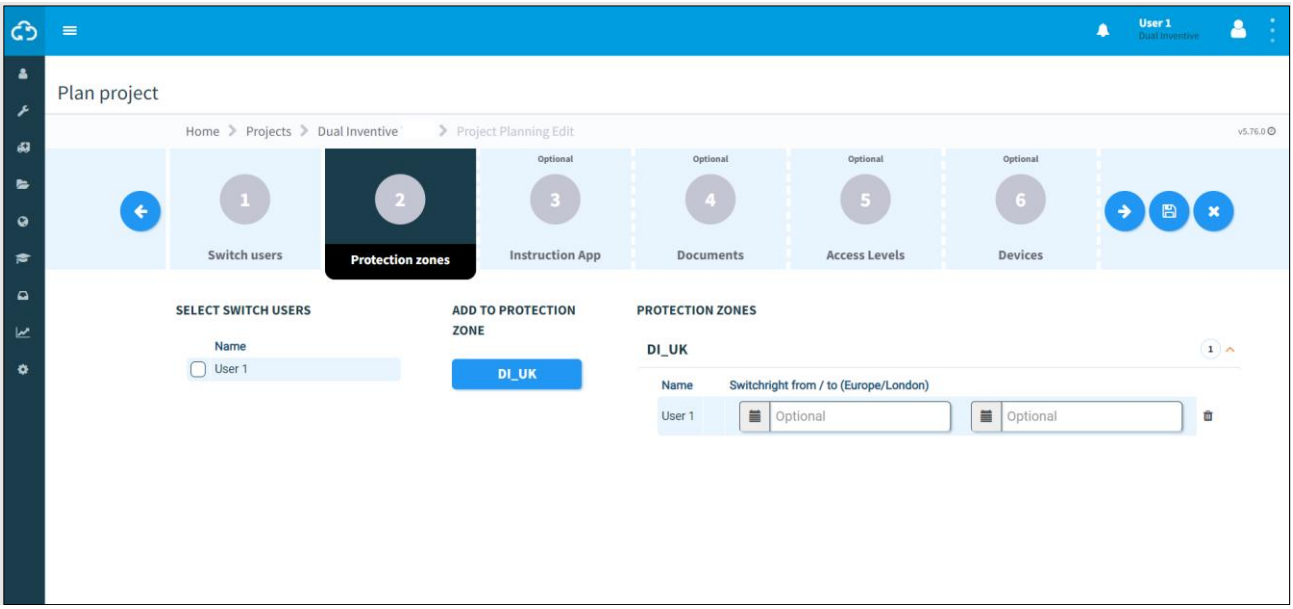


Figure 42 Plan project - protection zones

1. Select one or more switch users.
2. Add switch users to the protection zone by clicking the button(s) with the name(s) of the protection zone(s). On the right side, the period for switching appears.
3. If needed: remove a user from a protection zone.
4. Optional: fill in the period (from/to). Switch users can only switch the protection zone within this period. If the fields are kept empty, switch users are not limited, in that case protection zones can be switched by the assigned user(s) until the project is returned.
5. Go to step 3.

6.10.3.3 Step 3 - Instruction app

In the optional step 3 of the project planning, switch users are automatically selected. This step serves to select the non-switch users who need access to documentation. The instruction tile of the app tile contains all relevant instructions for the project.

NOTE
If switch users are assigned to protection zones within a switching period, they cannot be deselected.

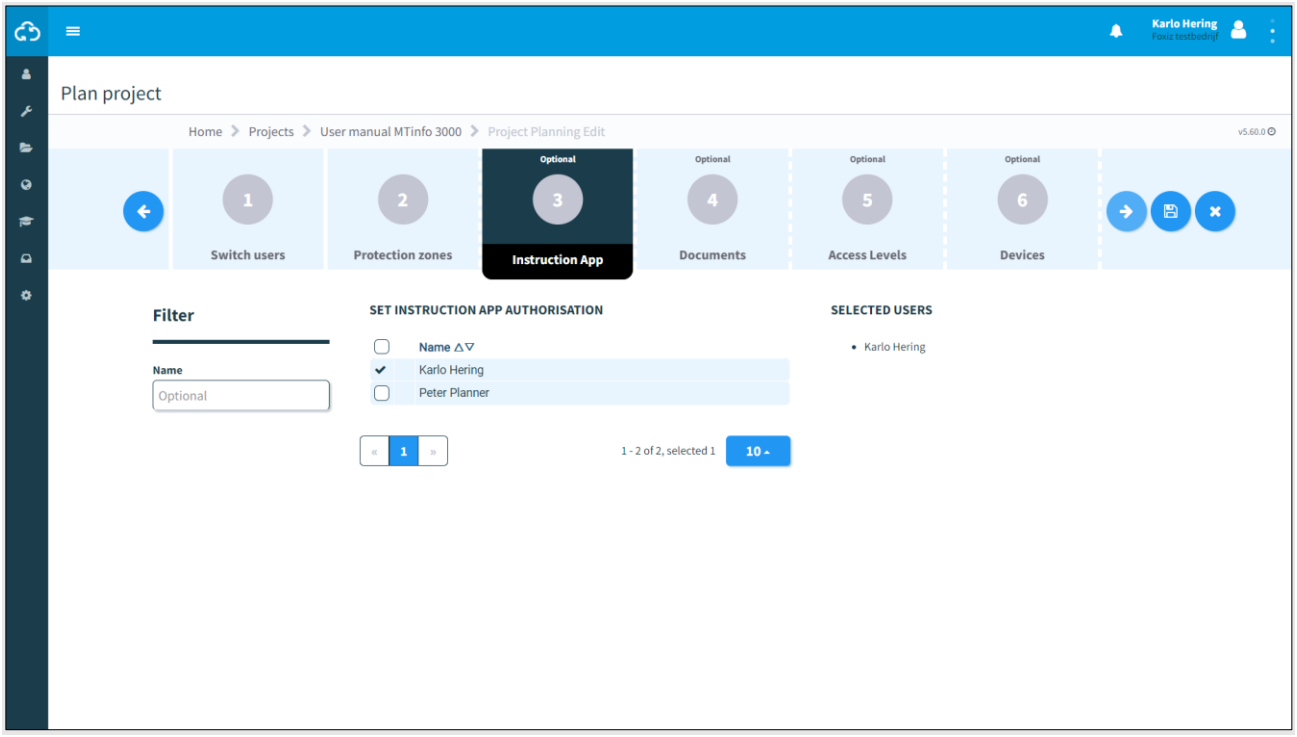


Figure 43 Plan project - instruction app

1. Select the users who need access to the instruction tile of the app.
2. Go to step 4.

6.10.3.4 Step 4 - Documents

In the optional step 4 of the project planning, upload documents that users can consult through the instruction tile of the app.

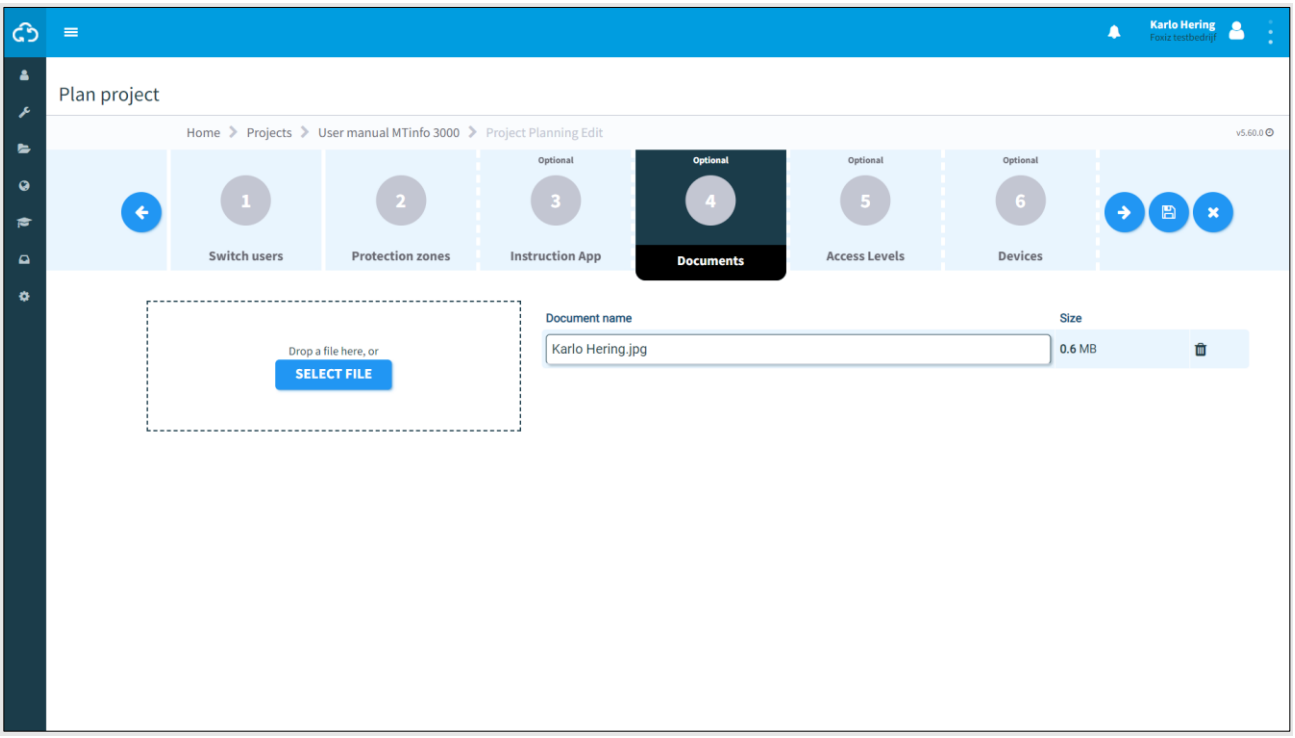


Figure 44 Plan project - documents

1. Upload one or more documents by dropping them into the indicated box or select files (max. 8 MB) manually. The names of the uploaded files appear after uploading.
2. If needed: change Document names.
3. If needed: delete files.
4. Go to step 5.

6.10.3.5 Step 5 - Access levels

In the optional step 5 of the project planning:

- determine the user authorisation;
- determine the document authorisation levels;
- add users to the documentation mailing list.

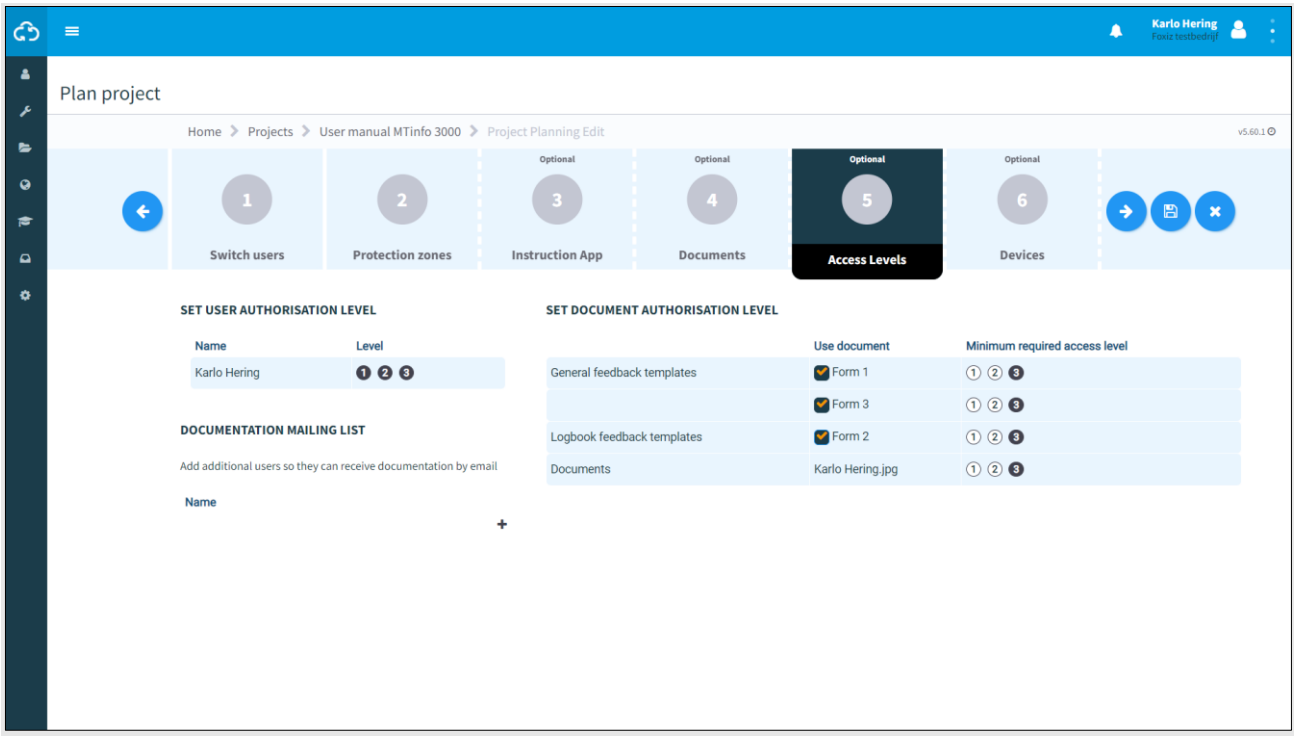


Figure 45 Plan project - access levels

The black coloured numbers determine the authorization levels:

❶ ② ③	Only users with level 1 have access to documents.
① ❷ ③	Only users with level 1 and 2 have access to documents.
① ② ❸	All users have access to documents.

1. Set the User authorisation level by clicking the level.
2. Set the Document authorisation level by clicking the level.
3. Optional: add users to the Documentation mailing list.
4. Go to step 6.

6.10.3.6 Step 6 - Devices

> **NOTE**
> This optional step 6 of the project planning is currently being decommissioned; you can skip this step.

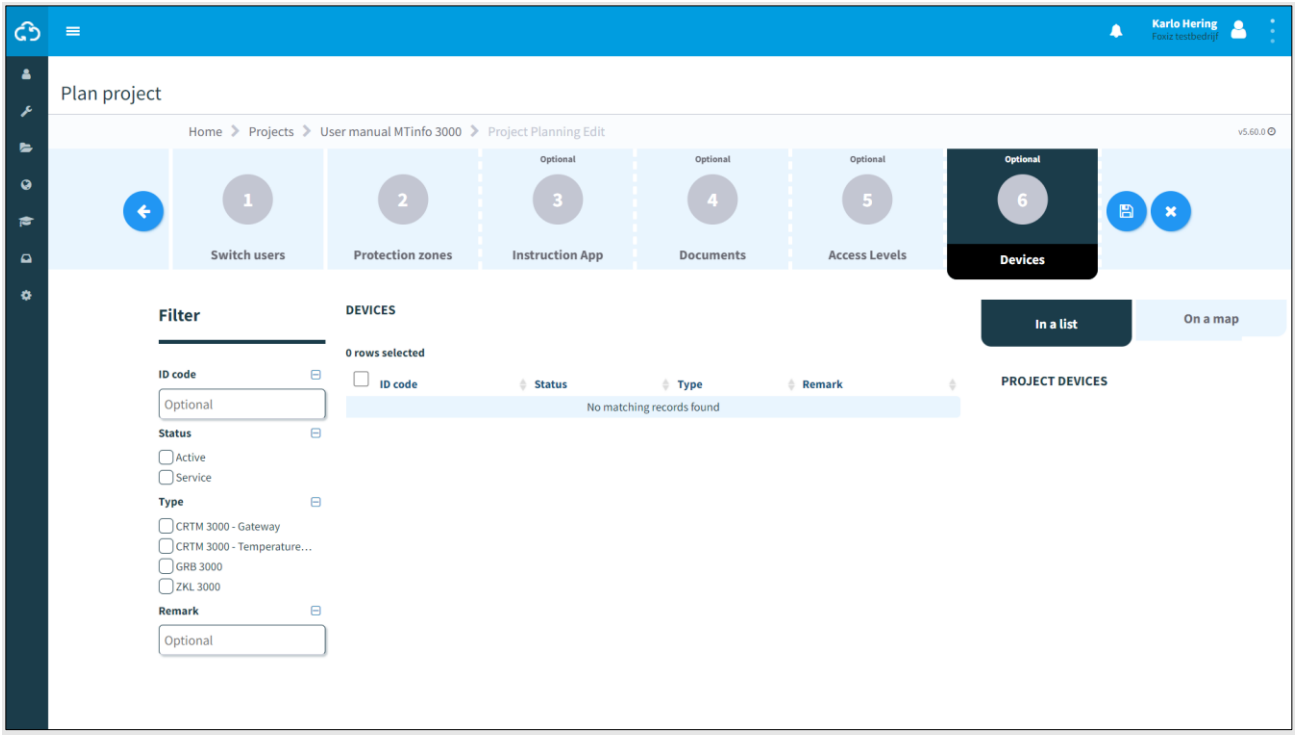


Figure 46 Plan project - devices

The last step is to save the project planning.

6.10.3.7 Step 7 - Save project planning

Save the project planning and submit it for verification or validation. Or verify and validate the project planning directly (see 6.10.4).

NOTE
To reduce risks, MTinfo 3000 uses the six-eyes principle. It is strongly recommended that a second authorised user should verify the planning and a third authorised user should validate the planning.

NOTE
You can verify and validate the planning directly if you are authorised. Because of the six-eyes principle, Dual Inventive does not recommend this step in operational use.

1. Save (see Error! Reference source not found.).

This screen appears:

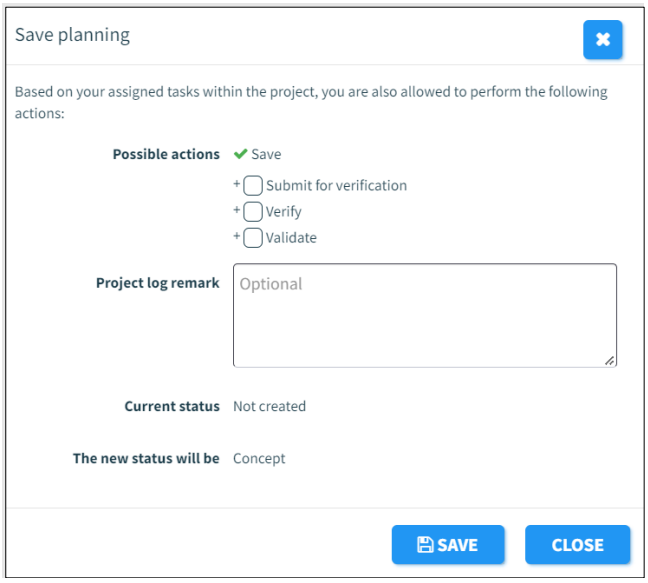


Figure 47 Save planning

Saving the project planning works similar as saving the project design (see 6.10.2.5).

6.10.4 Verification and validation

To utilise the six-eyes principle in MTinfo 3000, at least three people need to check both the project design and the project planning before releasing projects. When a project is ready to be verified or validated, My MTinfo shows the applicable actions to be performed.

1. Go to the Dashboard and go to My MTinfo (on the right side, see Error! Reference source not found.) which shows an overview of the assigned tasks in MTinfo 3000.
2. Click the task Verify or Validate.

The page View project appears. Depending on the task, the tab Design or tab Planning is selected:

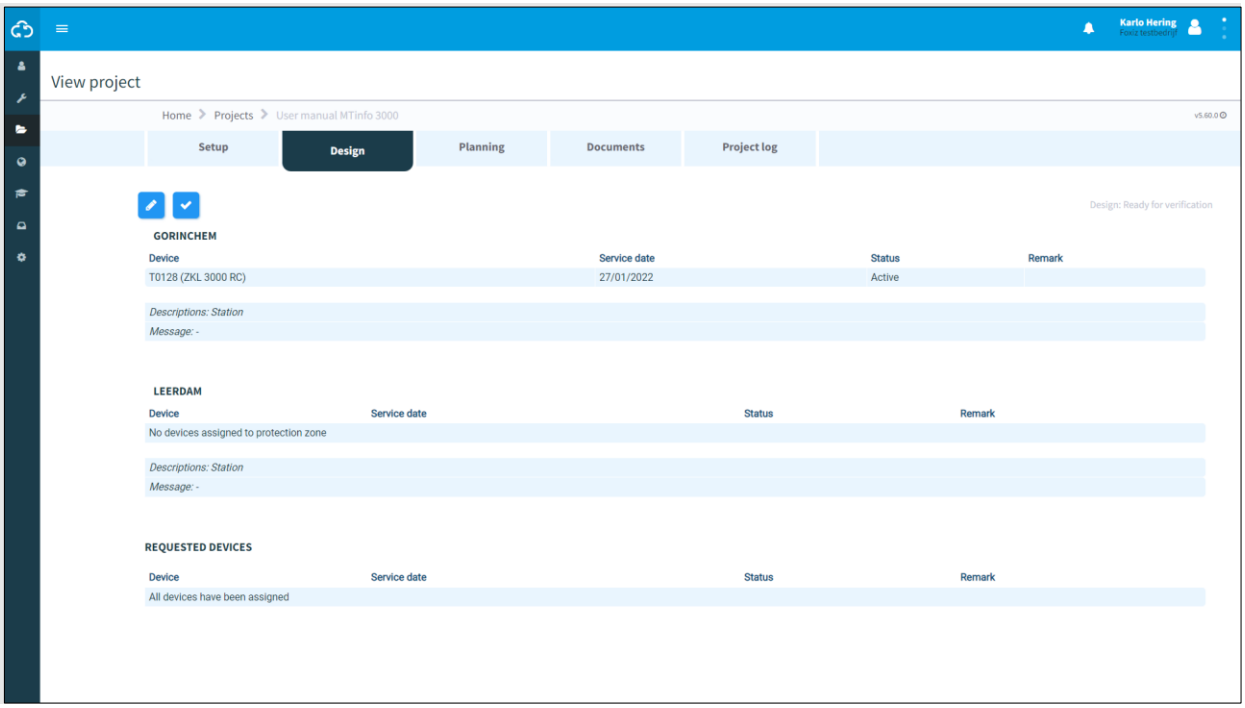


Figure 48 View project - verify and validate

3. Click the icon.

Depending on the task, the screen Check design or Check planning appears:

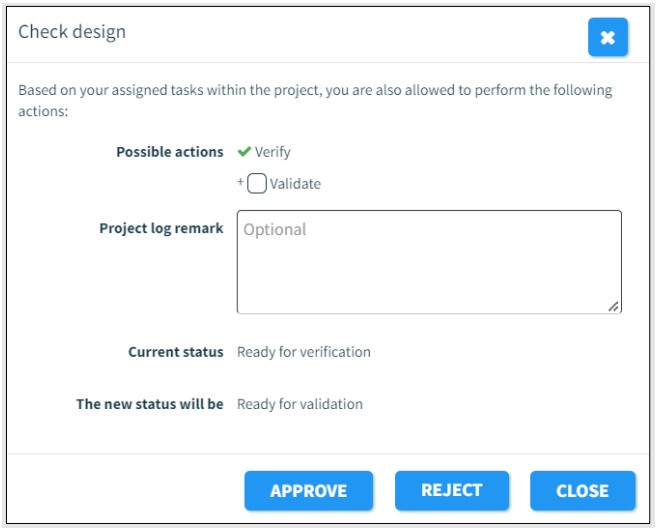


Figure 49 Check design

4. Optional: fill in a reason in the field Project log remark.
5. Click to approve or reject the validation or verification.

6.10.5 Release, return and close projects

Once MTinfo 3000 projects have been set up, designed and planned, projects must be released before they can be operational. Return and close are two more functions for managing projects.

NOTE
For safety reasons, you can only change a project when it is not released. To change a released project, first it needs to be returned (see 6.10.5.2).

6.10.5.1 Release

When a project is released, the assigned devices are locked to the project. They cannot be used simultaneously on different (released) projects.

To release a project:

1. Go to the page View project (Error! Reference source not found.), tab Setup.
2. RELEASE Click the button.

This screen appears:

Figure 50 Release - start

3. RELEASE Click this button.

NOTE
Before releasing a project please check the battery history of assigned devices.

MTinfo 3000 performs several checks before releasing a project:

Figure 51 Release - finished

Error! Reference source not found. explains the checks:

CHECK	EXPLANATION
Planning	Checking the project planning.
Design	Checking the project design.
Device availability	Checking the device availability.
Request release	Checking if the project can be released.
Project released	The project is released.
Inform users	Informing the project users through e-mails that a project has been released.

When a check is successful, a green checkmark appears next to it. When a check is not successful, a red cross appears in front of the specific step with its cause. Resolve the problem:

CHECK	PROBLEM	SOLUTION
Planning	The project planning is not completed. The planning is not verified and/or validated.	Complete the project planning. Verify and/or validate the project planning.
Design	The project design is not completed. The design is not verified and/or validated.	Complete the project design. Verify and/or validate the project design.
Device availability	The device is not available because of several reasons, e.g., the device is defect, empty batteries.	Check the real-time status of the device and resolve the problem.
Request release	The project cannot be requested for release for many reasons like: • the secure server is down; • the device is used in other projects; • the device has errors.	Check if the device is not used in any other projects. Check if the device does not have any errors or else contact Dual Inventive to resolve the issue.
Project released	The project cannot be released.	A project cannot be released when one or more devices are offline. Please check the device's batteries and reset the device. If this does not solve the issue, contact Dual Inventive.

CHECK	PROBLEM	SOLUTION
Inform users	Users do not receive any SMS or email when the project has been released.	Check if the correct phone number and email is filled in. Also check if the email notifications are turned on. If so, then contact Dual Inventive.

Once the problem has been solved, attempt to release the project again. When all checks are successful, the project is released. All project users receive an e-mail.

During “project released” check MTinfo 3000 can give a warning when the critical maintenance date of a device expires during the project.

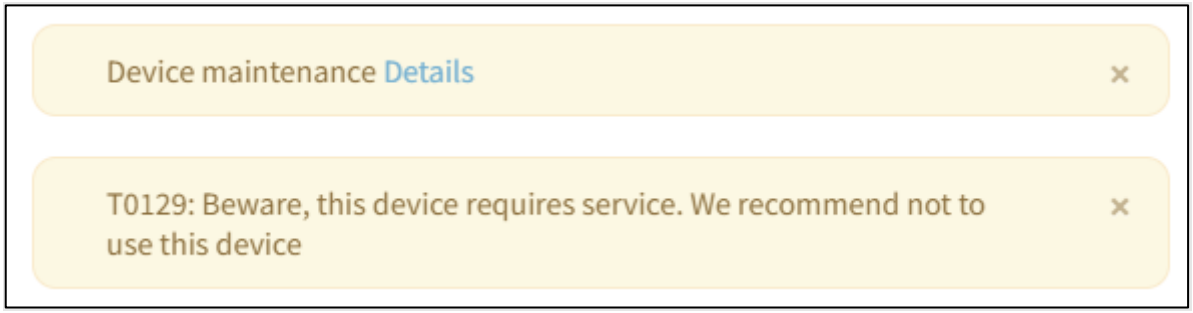


Figure 52 Release – warning service date of a devices expires

6.10.5.2 Return

If you want to end or edit a released project, first it must be returned. This is for safety reasons and it prevents that devices are used simultaneously on multiple projects. As soon as a project has been returned, the devices can be released on other projects.

NOTE
After returning a project, users cannot switch protection zones on the project anymore. Any devices that have been switched on, will remain switched on even after the project is returned.

1. Go to the page View project (Error! Reference source not found.), tab Setup.

RETURN 2. Click the button.

This screen appears:

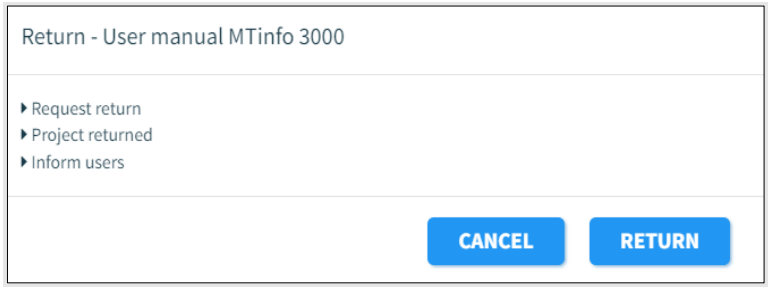


Figure 53 Return - start

RETURN 3. Click this button.

MTinfo 3000 performs again several checks before returning a project:

Figure 54 Return - finished

When a check is successful, a green checkmark appears next to it. When a check is not successful, a red cross appears in front of the specific step with its cause. This will normally not happen because you can return a device in most circumstances, even when a battery is empty. When a red cross appears, please follow the section trouble shooting in the user manual of your device. If that does not help, please contact Dual Inventive.

When all checks are successful, the project is returned. All project users receive an e-mail. If the project cannot be returned, MTinfo 3000 will notify the user who is trying to return the project.

6.10.5.3 Close

Once a project has been completed, it remains on your list of available projects, so you can release a project again. If you want to delete projects on your list, close the project. It is only possible to close a project when it is not released.

NOTE
Closing a project is irreversible. Be aware that a closed project can still be duplicated (see Error! Reference source not found.).

To close a project:

1. Go to the page View project (Error! Reference source not found.), tab Setup.
2. Click the icon.

This screen appears:

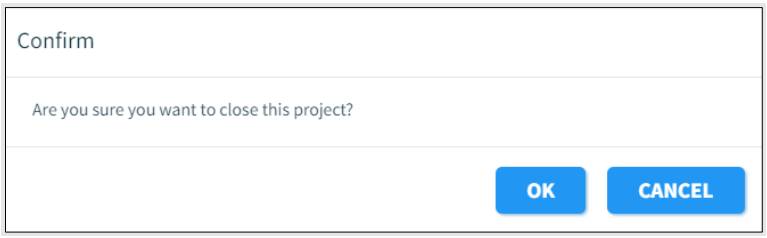


Figure 55 Close

3. Click OK to close the project permanently.

Closed project can be viewed for reference when you change your filter to 'closed' (see Error! Reference source not found.).

7 SWITCH PROTECTION ZONES

Switch protection zones remotely through the MTinfo 3000 web interface and the app. For remote switching, you must be authorised. This section explains how to select and switch protection zones through the MTinfo 3000 web interface.

NOTE
For switching protection zones through the app, refer to the User manual MTinfo 3000 app.

1. Go to the page View project (Error! Reference source not found.), tab Setup.

2. Click the icon.

The page Switch protection zone(s) (Error! Reference source not found.) appears. Follow step 1 and 2 to select and switch protection zones.

7.1 Step 1 - Protection zone

In the first step, select the protection zone(s) to switch.

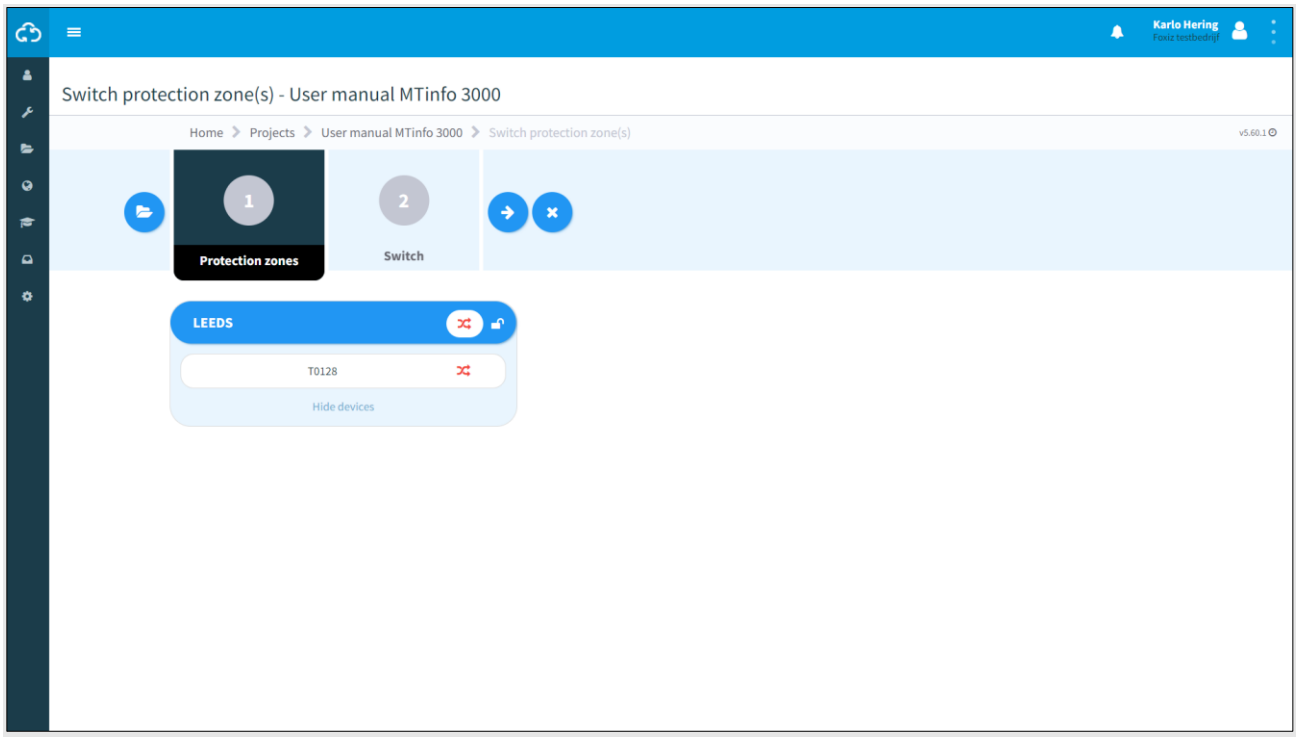


Figure 56 Switching protection zone(s) - protection zones

1.	Select the protection zones to switch.

The green shift symbol means that the protection zone has been switched. The red shift symbol means that the protection zone has not been switched yet.

NOTE

It is possible to switch multiple protection zones at once if you are authorised on company level. By default, only one protection zone can be switched each time.

In the case that you want to switch multiple protection zones at once, and one or more protection zones do not react, for example because of a temporary connectivity problem, it is possible to switch on a protection zone that is already on and vice versa.

2.	Go to step 2.

7.2 Step 2 - Switch

In the second step, choose to turn the devices on (switchable) or off (not switchable).

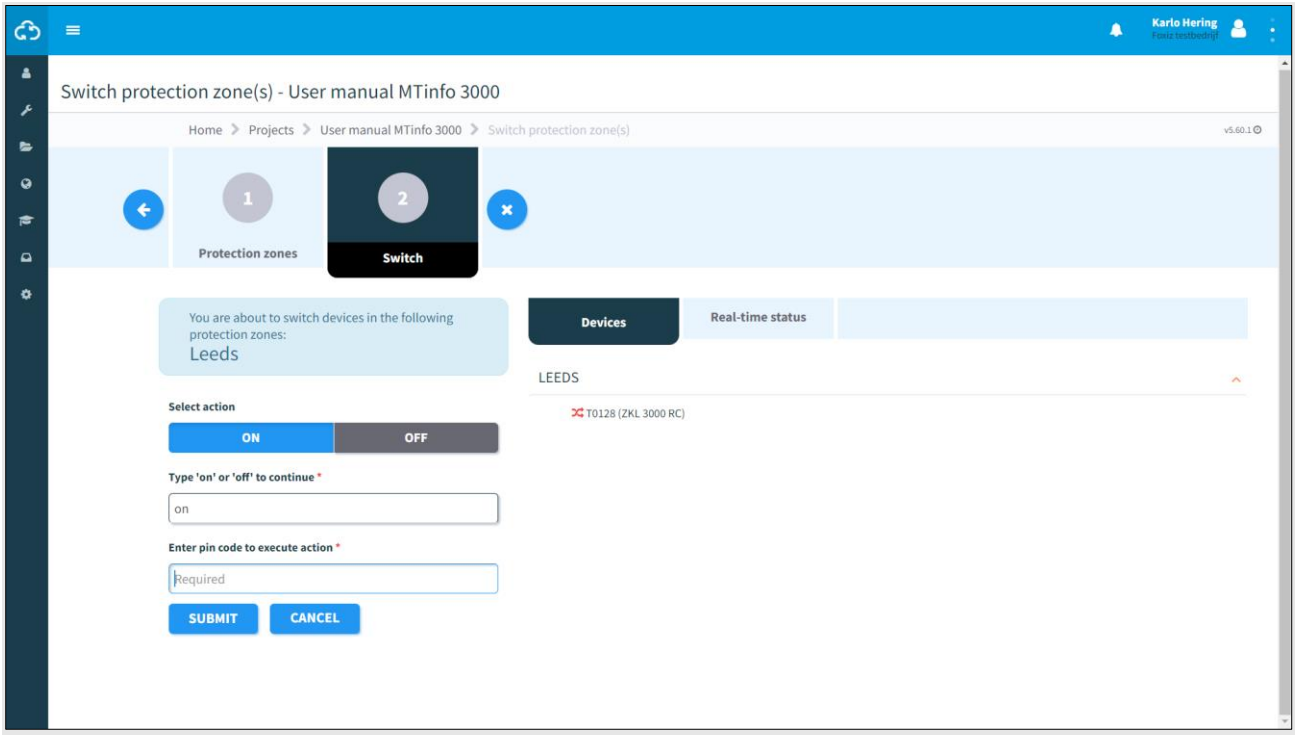


Figure 57 Switching protection zone(s) - switch

1. Select: ON or OFF
2. Type: on or off.
3. Enter your PIN code.
4. Submit.

On the right side, you see below the tab Devices whether the action was successful or not. You can also see this by opening the tab Real-time status (see 9.1).

When a switch action fails, warnings (Error! Reference source not found.) or an error (Error! Reference source not found.) will be shown.

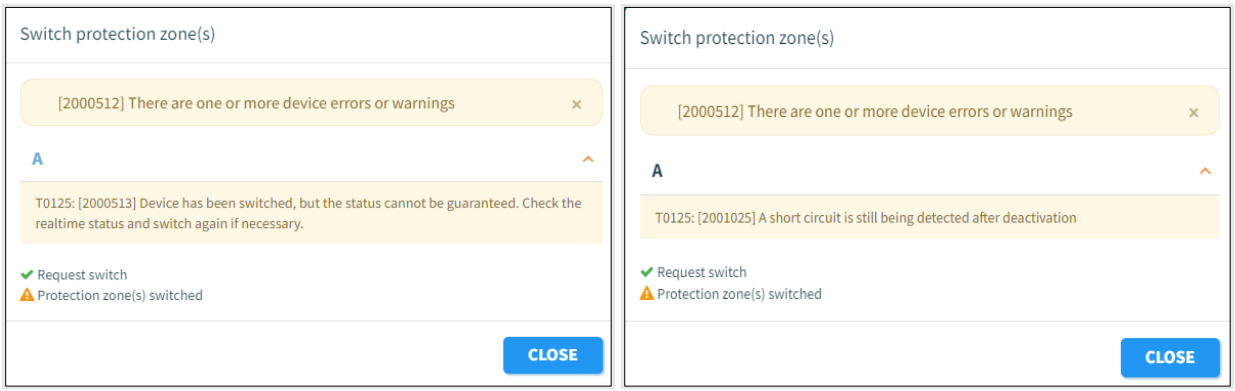


Figure 58 Warnings

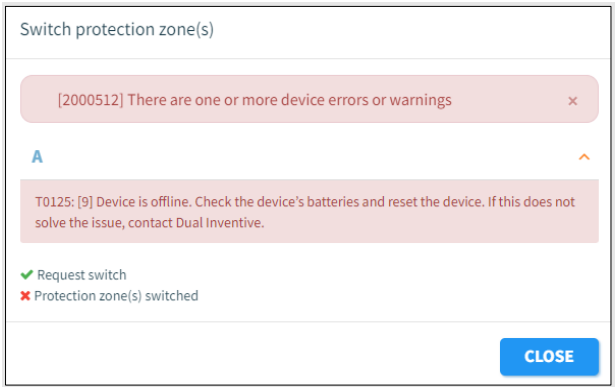


Figure 59 Error

7.3 Web application – Single zone switching

On the start page, click the 'Projects' tile or select 'Projects' in the 'Work management' menu at left of the screen. Search for the project for which you want to switch a protection zone and click the project to view it.

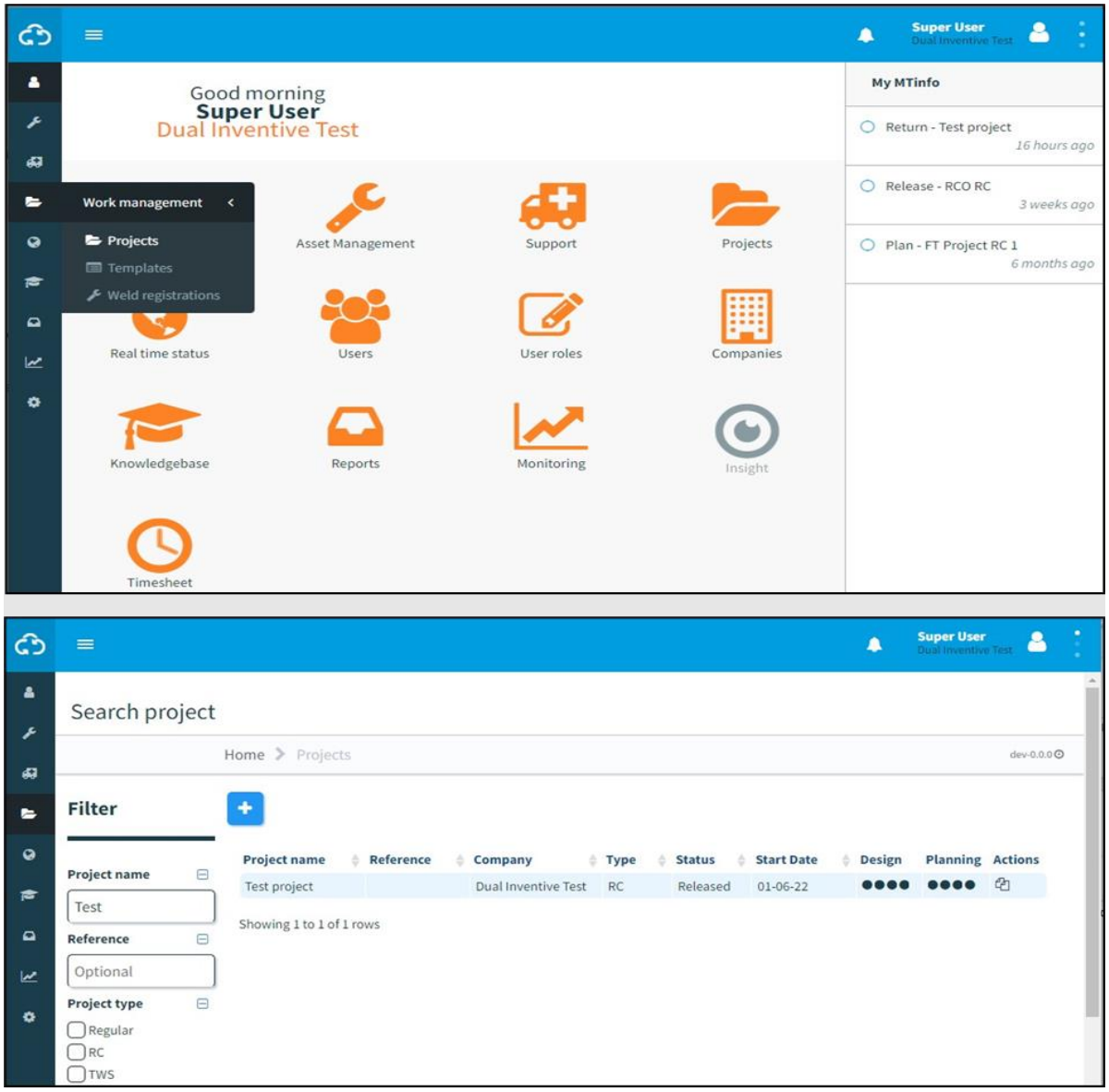


Figure 60 Search project page

- Click the “Switch Protection zone” button.

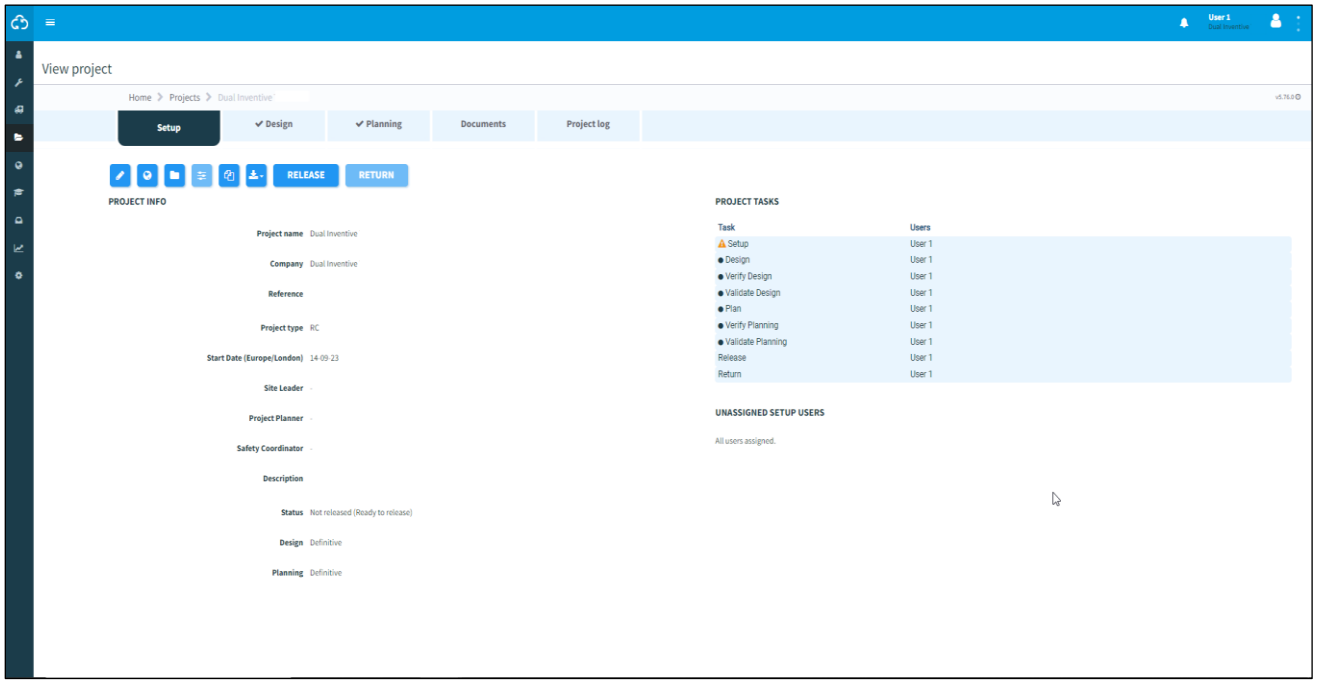


Figure 61 Project view page

You can only switch protection zones for a released project. If the project is not released the button will be disabled.

- Click on the “Switch” button of the protection zone you want to switch to continue.

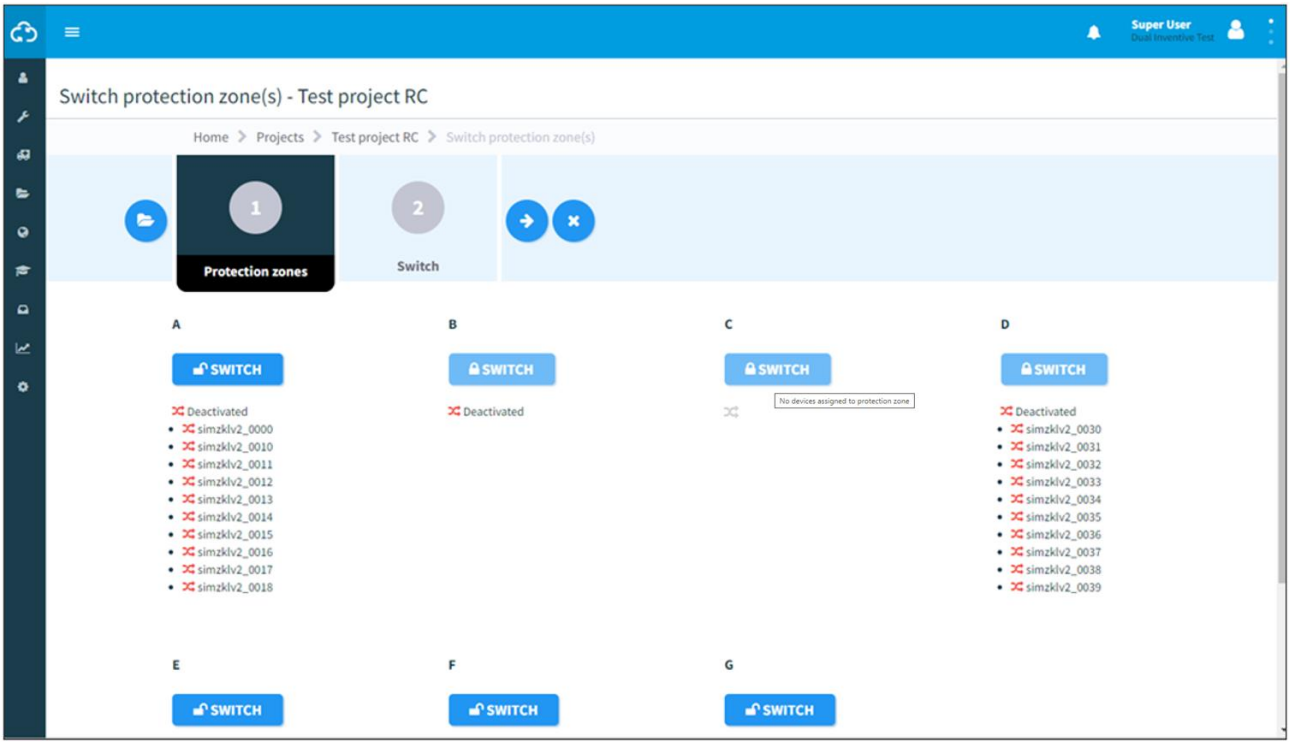


Figure 62 Switch protection zone page

- If there are no devices assigned to the protection zone, you are not an operator assigned to the protection zone or you are not allowed to switch it at this time, it will be disabled. The

"Switch" button will contain a closed lock icon and hovering over the button will show a tooltip why itis disabled.

- Click "Show devices" to see which devices are contained in the protection zone.
- The status of the zone will be indicated by an icon
- A light grey colour indicates the status is unknown or no devices are assigned to the protection zone
- A green colour indicates all devices within the zone have been activatedand have no errors.
- Red in all other cases.
- The status of each device will be indicated by an icon
- A light grey colour indicates the status is unknown.
- Green indicates the device is activated and no problems are reported.
- Red in all other cases.
- Data is NOT updated in real time. It shows the last known status when the page opened.
- Click "on" or "off" to respectively switch the devices in the protection zone on or off.Confirm the action by typing "on" or "off", enter your pin code and click "Switch" to continue or "Cancel" to abort.

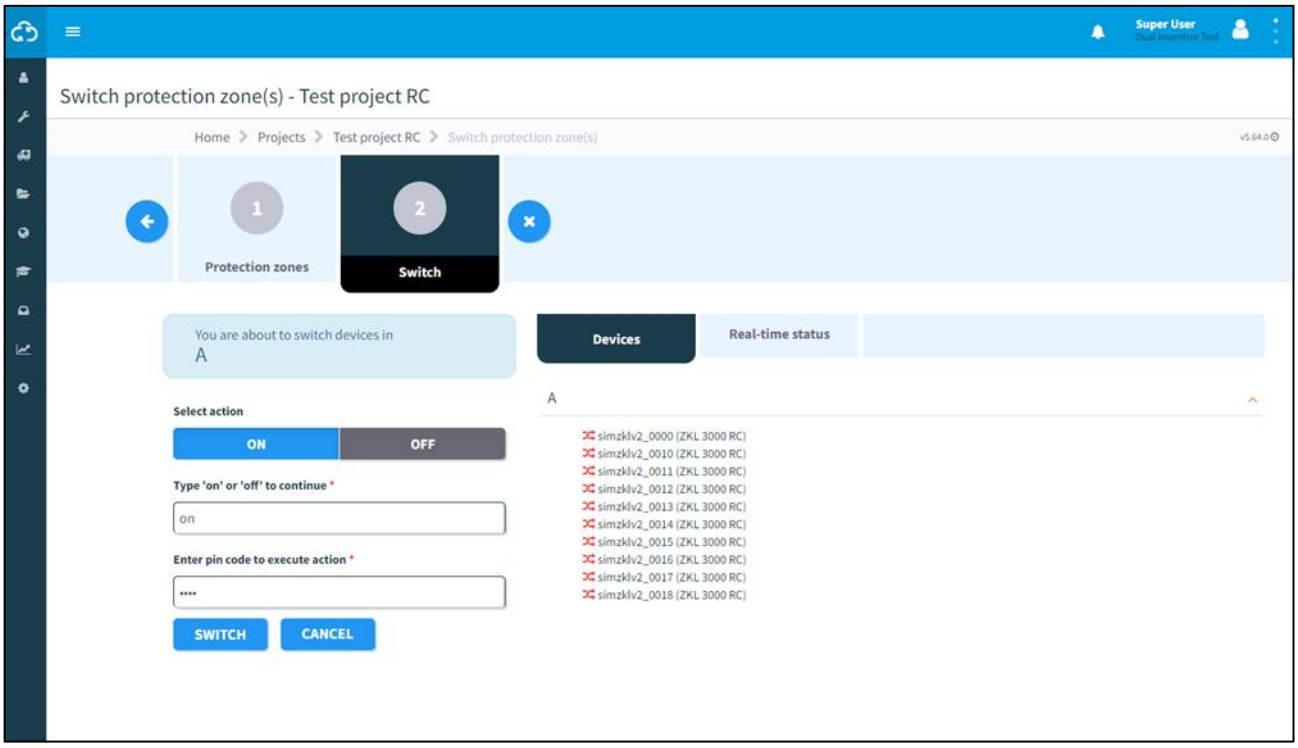


Figure 63 Switch devices page

3. The result of the action is shown.

When the request is successful the result will be like the example below:

Figure 64 Switch successful message

In case there are errors and/or warnings, the result will be like the example below:

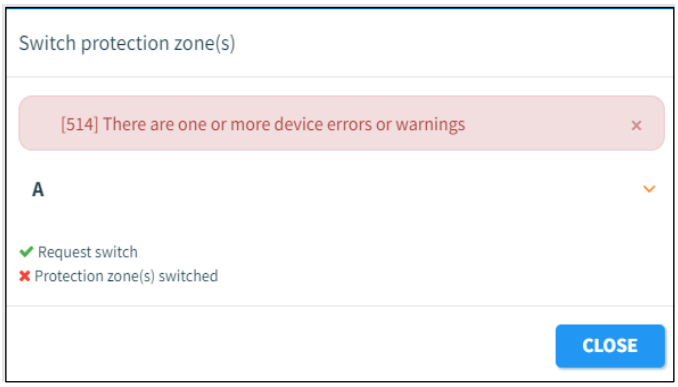


Figure 65 Switch error/warning message

- A result message is shown:
- A green colour indicates everything went well.
- A yellow colour indicates switching succeeded, but one or more devicesreported a warning.
- A red colour indicates one or more devices did not switch successfully andreported an error.

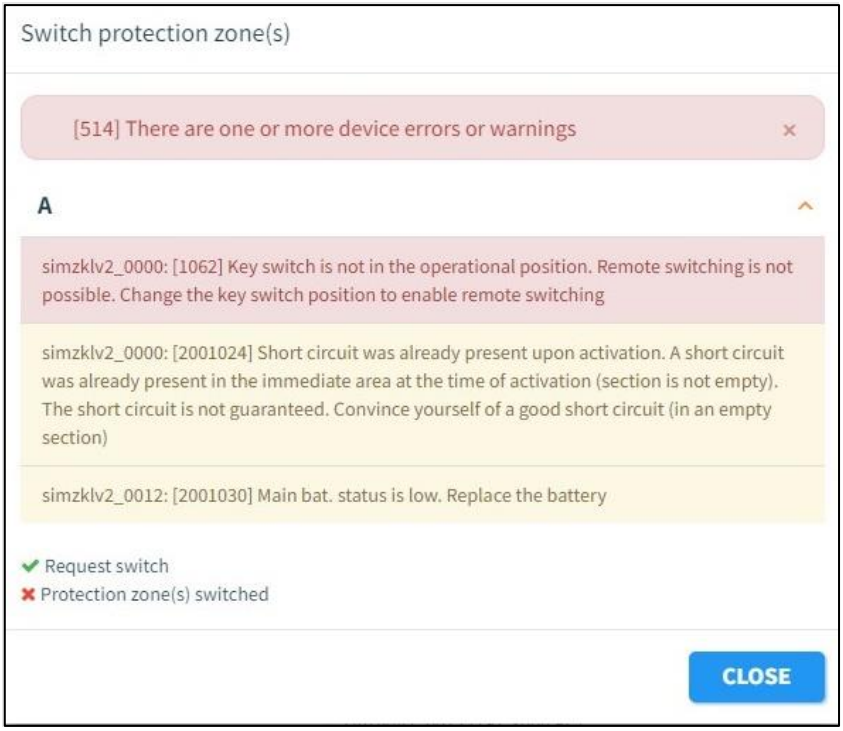


Figure 66 Device error/warning message

4. In case of errors/warnings: click the name of the protection zone to show the error /warning details.

- Errors and warnings are grouped per device.
- Follow the instruction provided in the error/warning to resolve the issue, if this does not solve the problem contact Dual Inventive Support.

7.4 Web application – Multiple zone switching

NOTE

It is only possible to switch multiple zones at once if this setting is enabled for your company.

- On the start page, click the 'Projects' tile or select 'Projects' in the 'Work management' menu at left of the screen. Search for the project for which you want to switch a protection zone and click the project to view it.

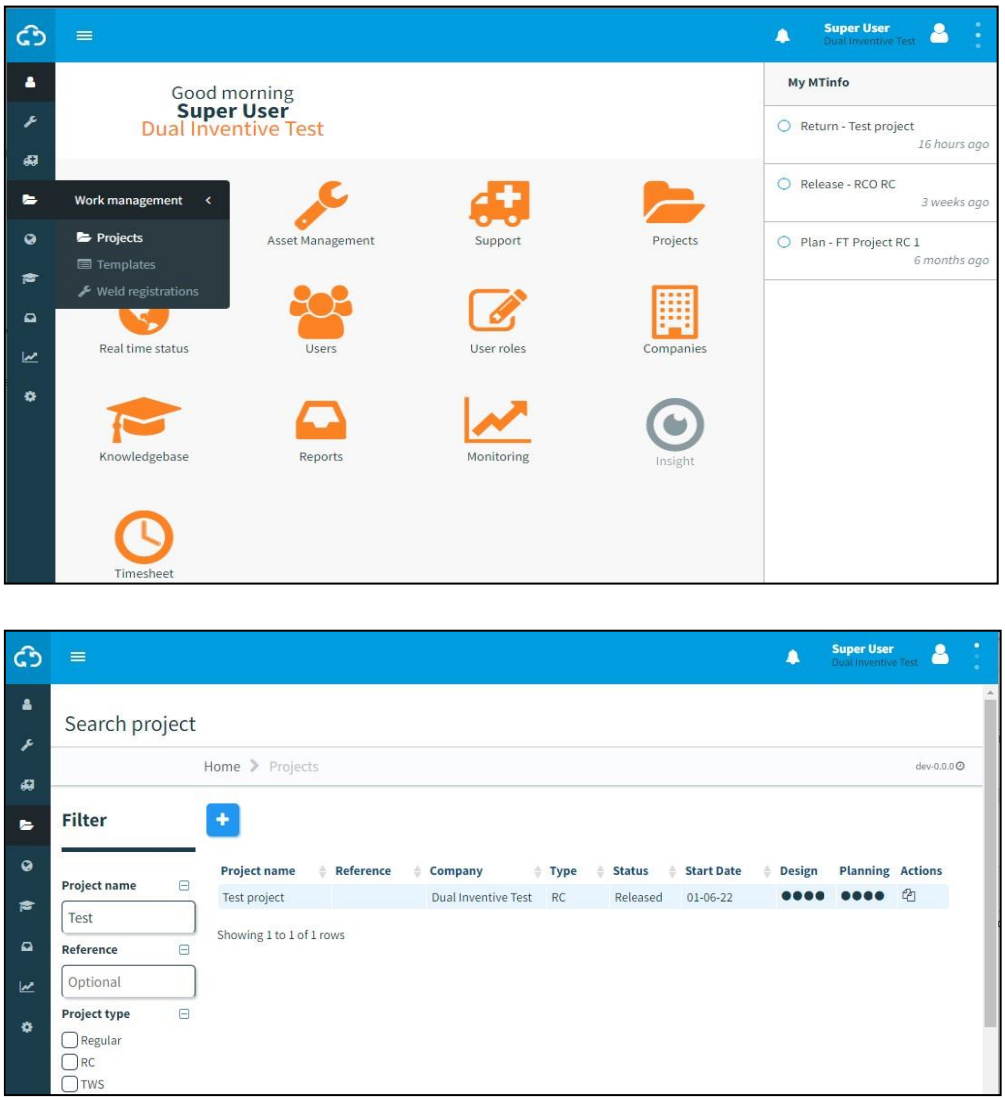


Figure 8-12: Search project page

- Click “Switch Protection Zone” Button.

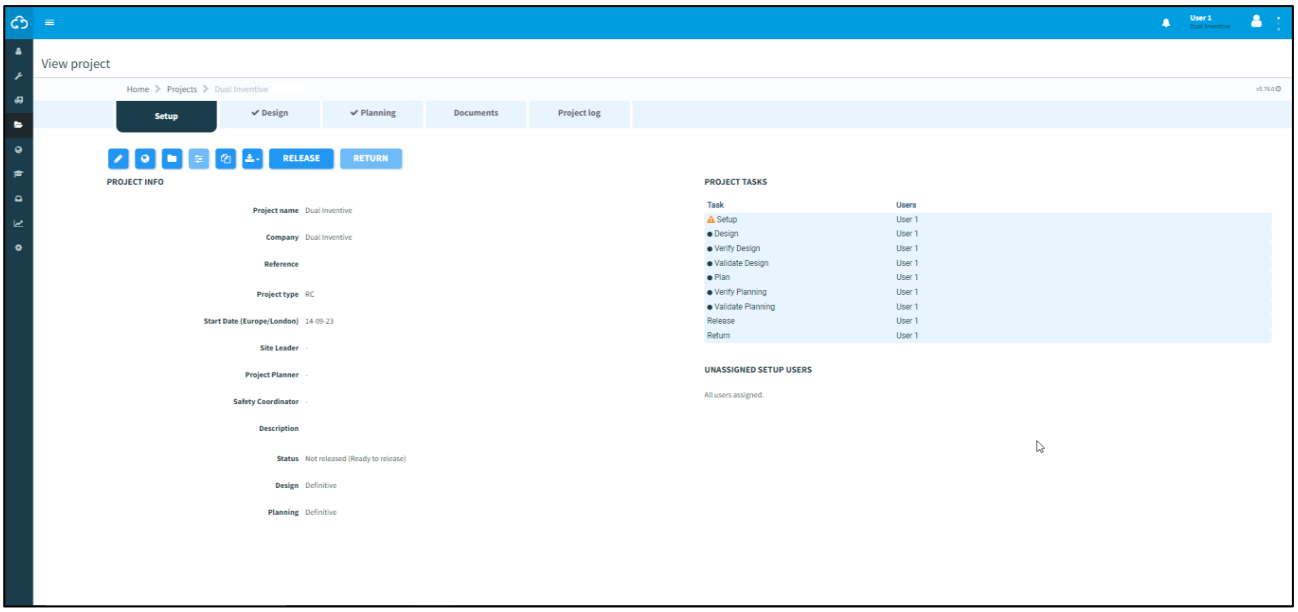


Figure 67 Project view page

You can only switch protection zones for a released project. If the project is not released the button will be disabled.

- Check the zone(s) you want to switch by clicking it and then click on “Switch” to continue.

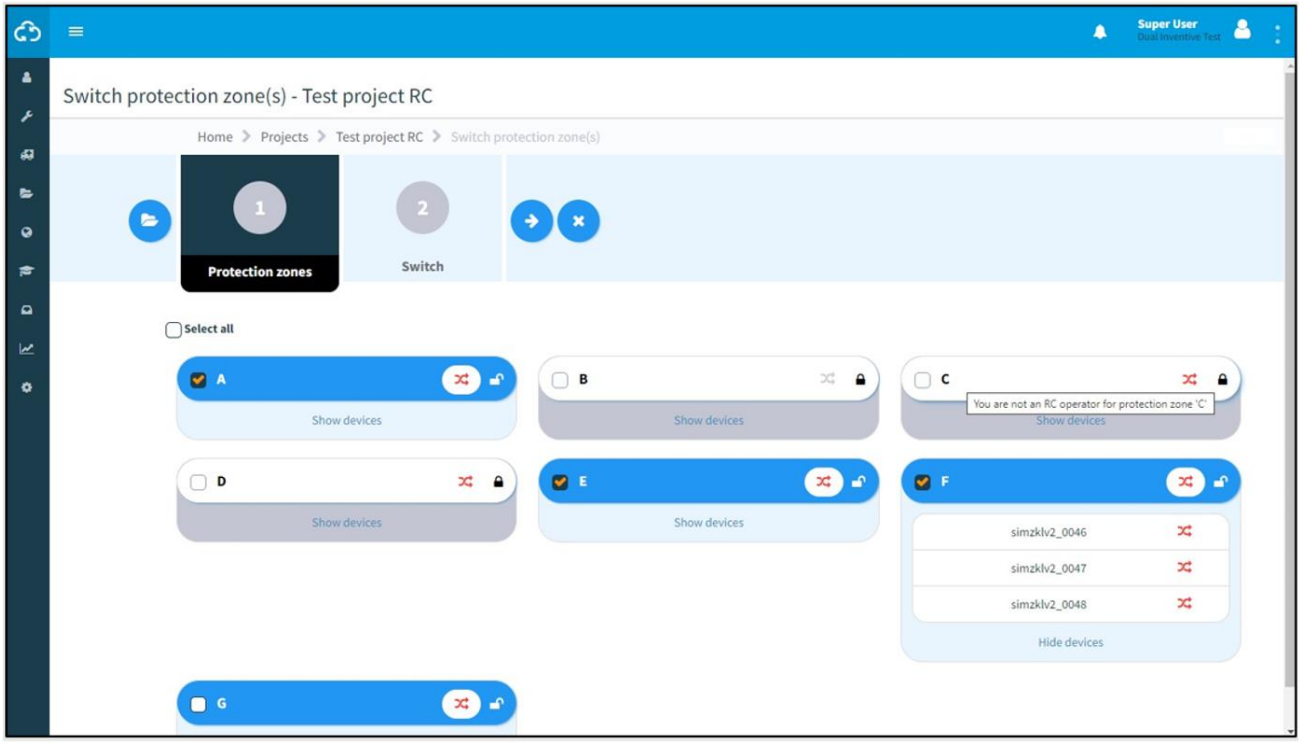


Figure 68 Switch protection zone

a. If a protection zone is disabled, the header will contain a closed lock icon and hovering over the header will show a tooltip why it is disabled.

b. The protection zone will be disabled if:

   i. you are not an operator assigned to the protection zone

ii. you are not allowed to switch it at this time

iii. there are no devices assigned to the protection zone.

c. Multiple zones can be selected.

d. Click “Show devices” to see which devices are contained in the protection zone.

e. The status of the protection zone will be indicated by an icon

i. A light grey color indicates the status is unknown or there are no device assigned to the protection zone.

ii. A green color indicates all devices within the zone have been activated and no errors are reported.

iii. Red in all other cases.

f. The status of each device will be indicated by an icon

i. A light grey color indicates the status is unknown.

ii. Green indicates the device is activated and no problems are reported.

iii. Red in all other cases.

g. Data is NOT updated in real time. It shows the last known status when the page opened.

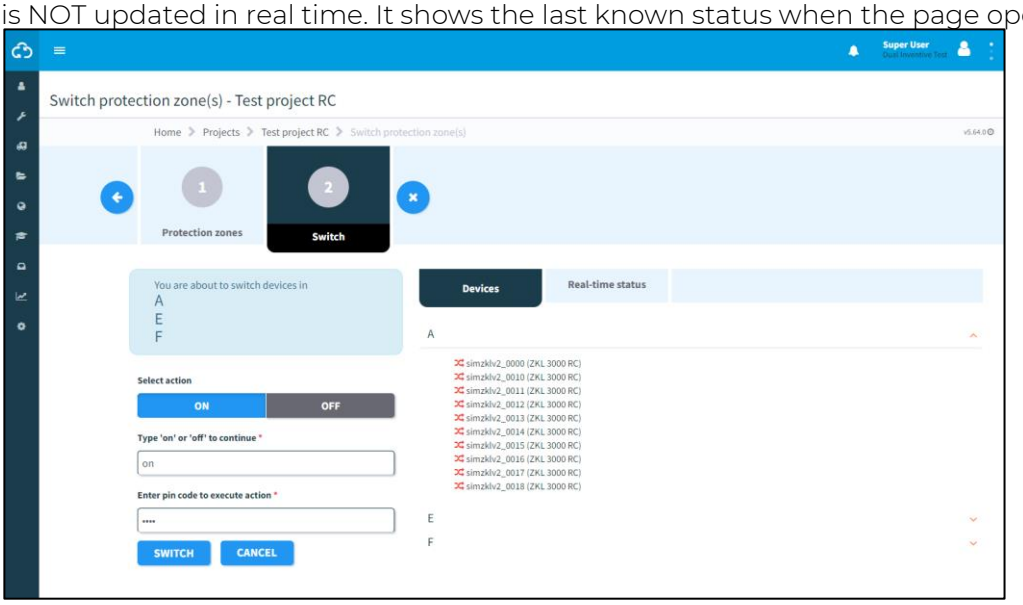


Figure 69 Switching devices page

- Click “ON” or “OFF” to respectively switch the devices in the protection zone on or off. Confirm the action by typing “on” or “off”, enter your pin code and click “Submit” to continue or “Cancel” to abort.
- The status of each device in the protection zone is indicated by an icon:
    i. A light grey color indicates the status is unknown.
    ii. Green indicates the device is activated and no problems are reported.
    iii. Red in all other cases.
- The first protection zone is expanded, the other zones can be opened to showthe devices contained within.
- Device data is updated in real time.
- The result of the action is shown.

When the request is successful the result will be like the example below:

Figure 70 Switch successful message

In case there are errors and/or warnings, the result will be like the example below:

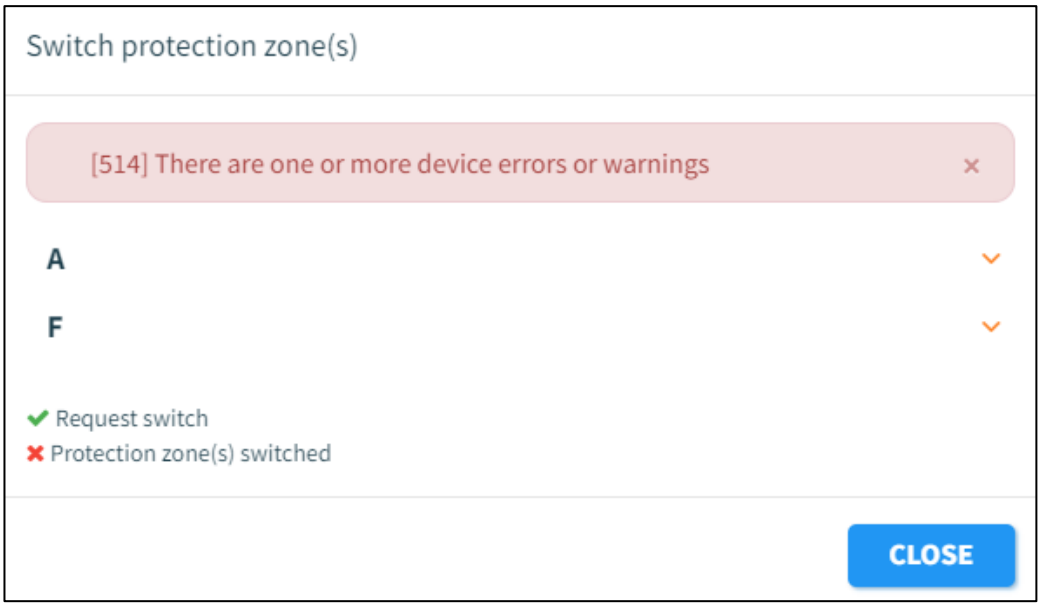


Figure 71 Switch error/warning message

A result message is shown:

- A green colour indicates everything went well.
- A yellow colour indicates switching succeeded, but one or more devicesreported a warning.
- A red colour indicates one or more devices did not switch successfully andreported an error.
- In case of errors / warnings: click the name of the protection zone to show the error / warning details.

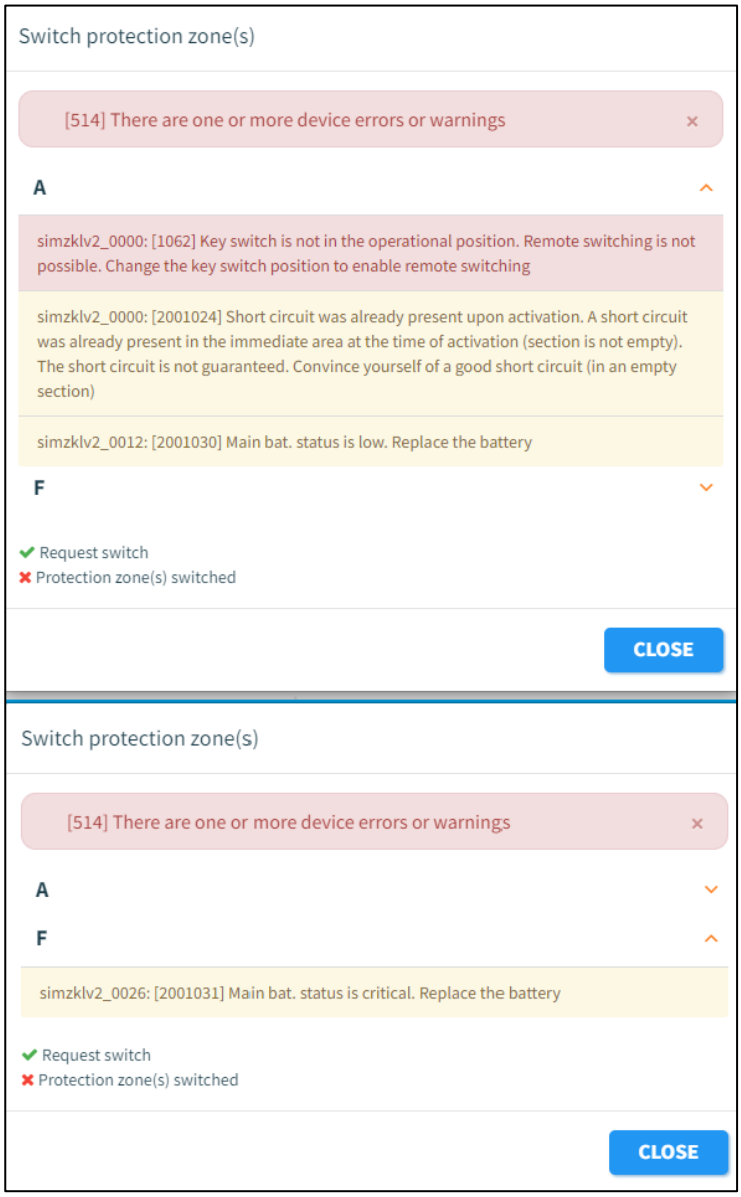


Figure 72 Device error/warning message

Errors and warnings are grouped per zone and then per device.

- Click the zone to show the errors / warnings for that zone.
- Follow the instruction provided in the error/warning to resolve the issue, if thisdoes not solve the problem contact Dual Inventive Support.

8 REPORTS

MTinfo 3000 can generate different types of reports. Reports provide insights into the measured detection, location, battery levels of the devices, etc.
There are two categories of reports:

- Periodically generated reports (periodical).
- One-time generated reports (once).

Both types of reports must be generated by the user.
Additionally, there are different types of reports, which are available in both categories, excluding the GPS report. The types of reports are:

Project
A project report is used when multiple devices of the same project need to be added to a report. In that case, the user can search for the relevant project and immediately select all the devices on that project instead. The data that will be generated in this report consists of a history or snapshot the selected sensor data of devices, such as switch status, detection status and battery voltage.

Project switches
A project switches report shows the switch actions that are done on a project, per device, paired with how long it took for the command to be executed (measurement of the time it took for the switch command to be sent to the device, and for the device to actually perform the switch action) and whether this command was executed successfully.

Devices
Devices periodical reports show the same data as Project (periodical) reports. The only difference is that no project needs to be selected in the Devices (periodical) report. That makes this a faster option if a user only wants to generate the report of one device, or of multiple devices spread out over different projects.

Device switches
This is a detailed report that shows exactly how long and how often selected devices have been switched. It uses a different formula to determine these switches, so that it also includes different scenarios such as devices being offline, and key switch actions. Because of this, the switch data of this report may differ from other reports such as Devices and Project switches.

GPS
This report is exported as a .kml file, which is used to display geographic data in Earth browsers such as Google Earth. In this report, users can see the geographic history of selected devices in such an Earth browser."

8.1 Periodical reports

This section explains how to generate a periodical report. As an example, a Devices report is generated.

The page Reports appears:

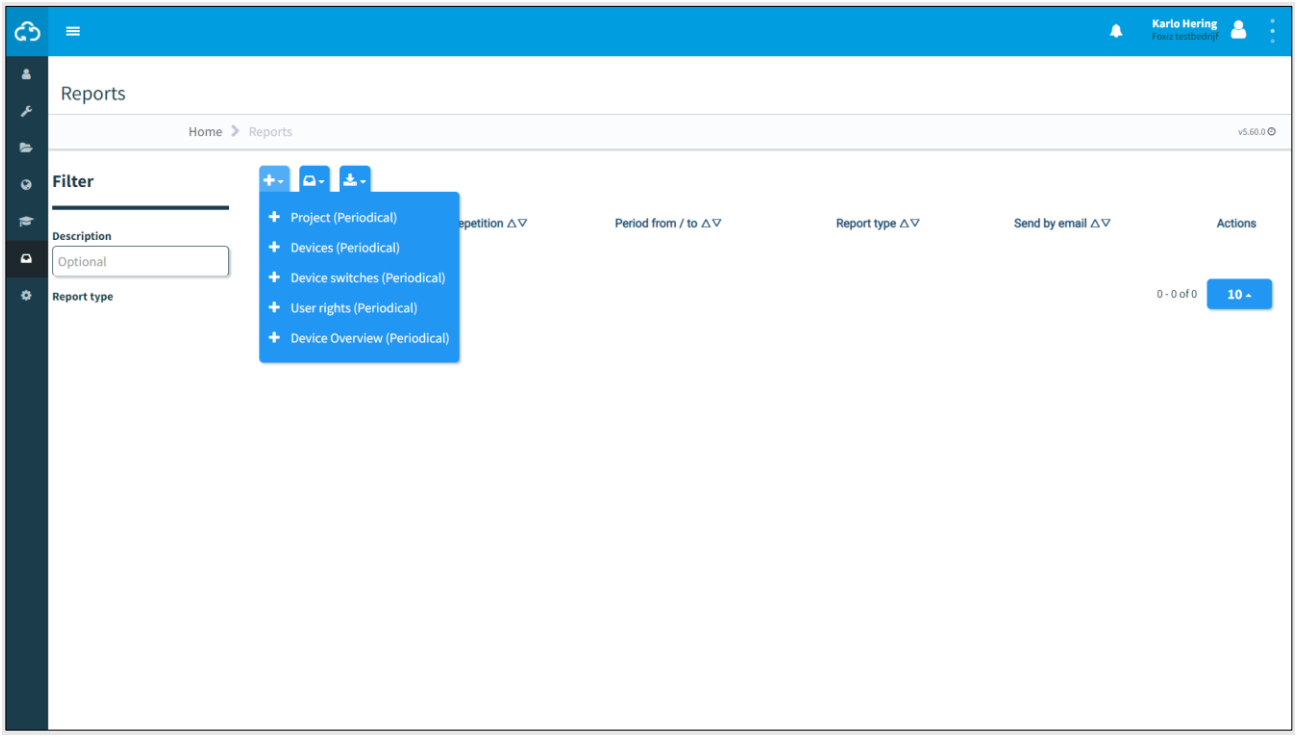


Figure 73 Reports - periodical

+	2. Click the icon. 3. Select Devices (Periodical).

The page View Report (Error! Reference source not found.) appears. Follow steps 1 to 5 to generate a report.

8.1.1 Step 1 - Report info

In step 1 of generating a report, add basic information.

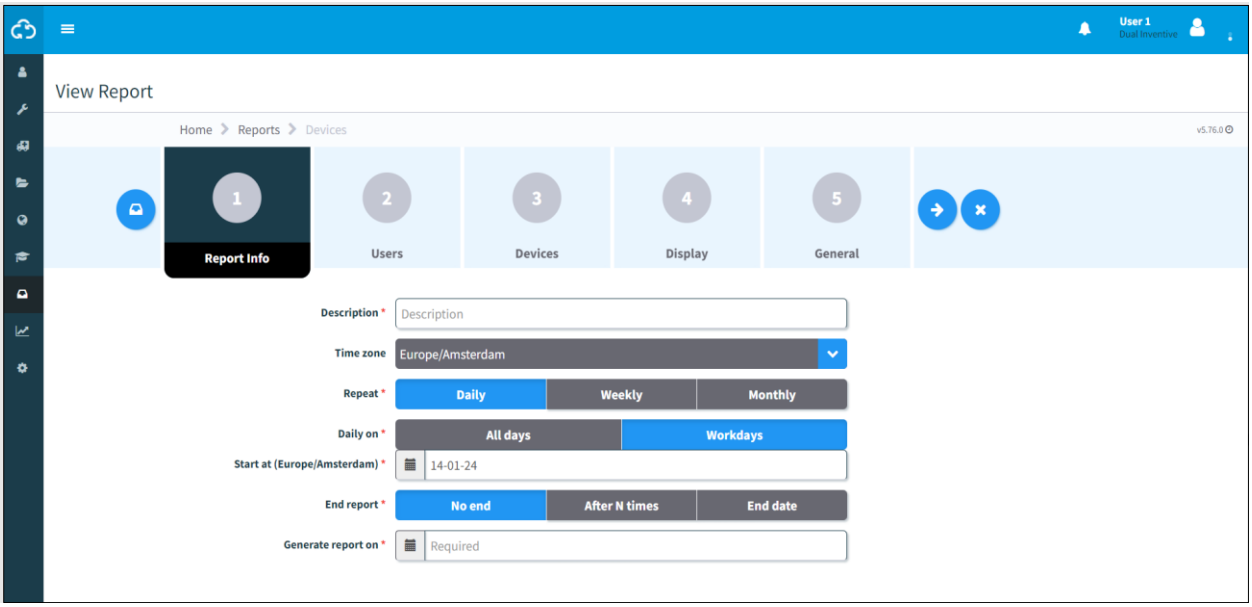


Figure 74 View report - report info

1. Fill in the Description of the report.
2. Choose the preferred time zone.
3. Choose the frequency of report generation: Daily, Weekly or Monthly.
4. Choose when the report is generated: All days or Workdays.
5. Choose when the report must be started.
6. Choose when the report must end: No end, After a number (N) times or End date.
7. Choose the daily time when the report must be generated.
8. Go to step 2.

8.1.2 Step 2 - Users

In step 2 of generating a report, select the users who will receive the report.

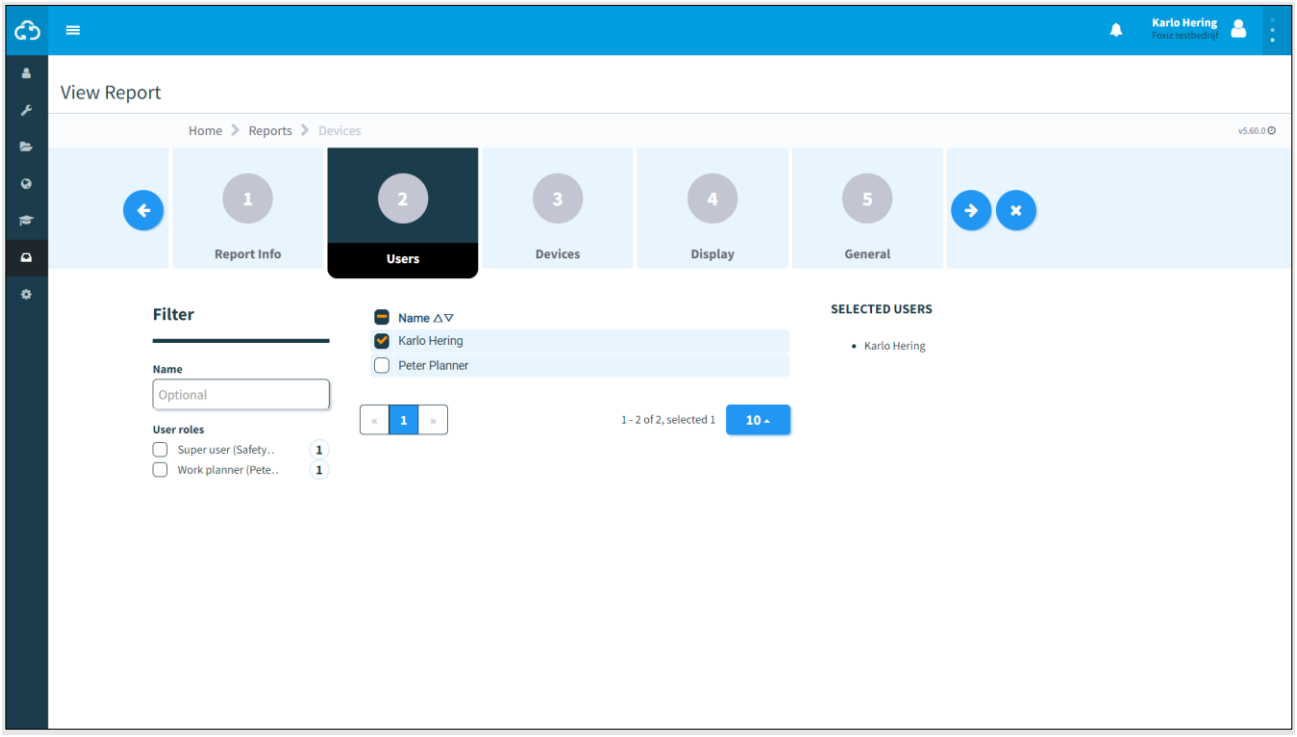


Figure 75 View report - users

1. Select at least one user.
2. Go to step 3.

8.1.3 Step 3 - Devices

In step 3 of generating a report, select the devices where you want to receive the report from. When the devices are selected, they will appear automatically under the tab in a list and the tab On a map.

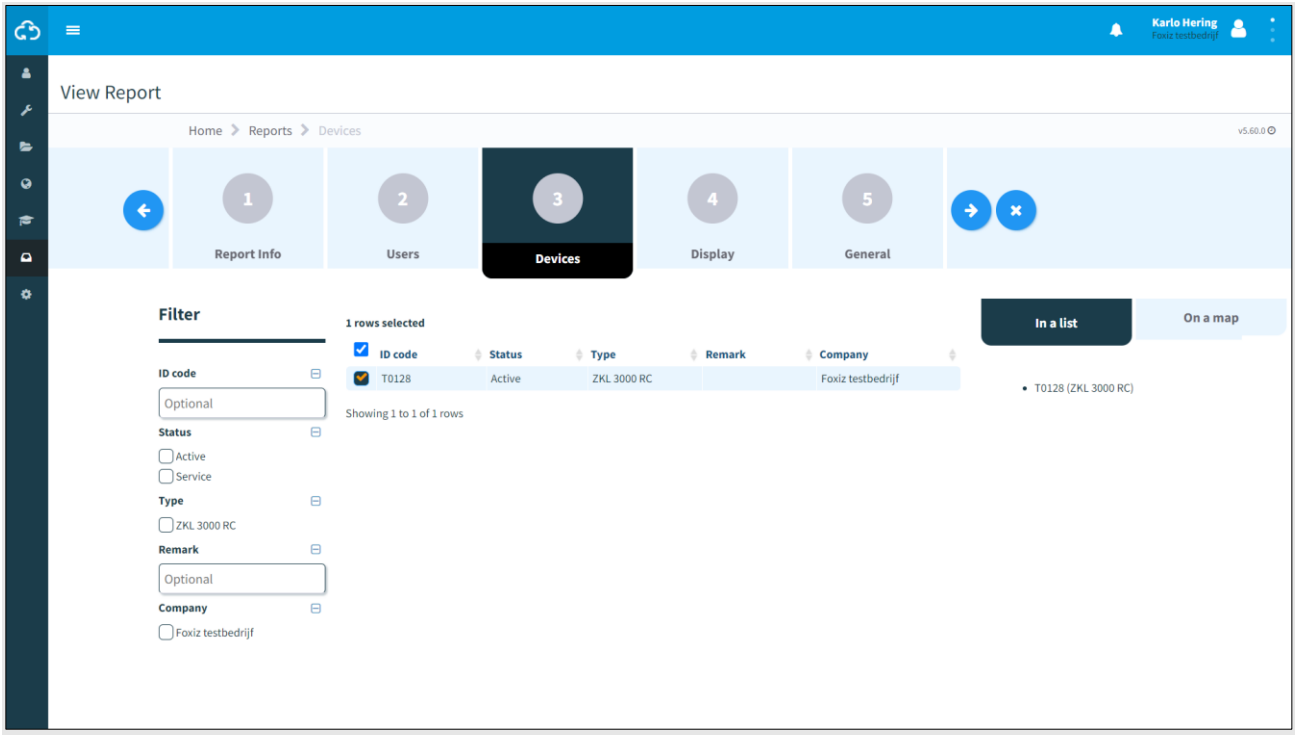


Figure 76 View report - devices

	1.	Select one or more devices.
	2.	Go to step 4.

8.1.4 Step 4 - Display

In step 4 of generating a report, select the report type and the data to be reported.

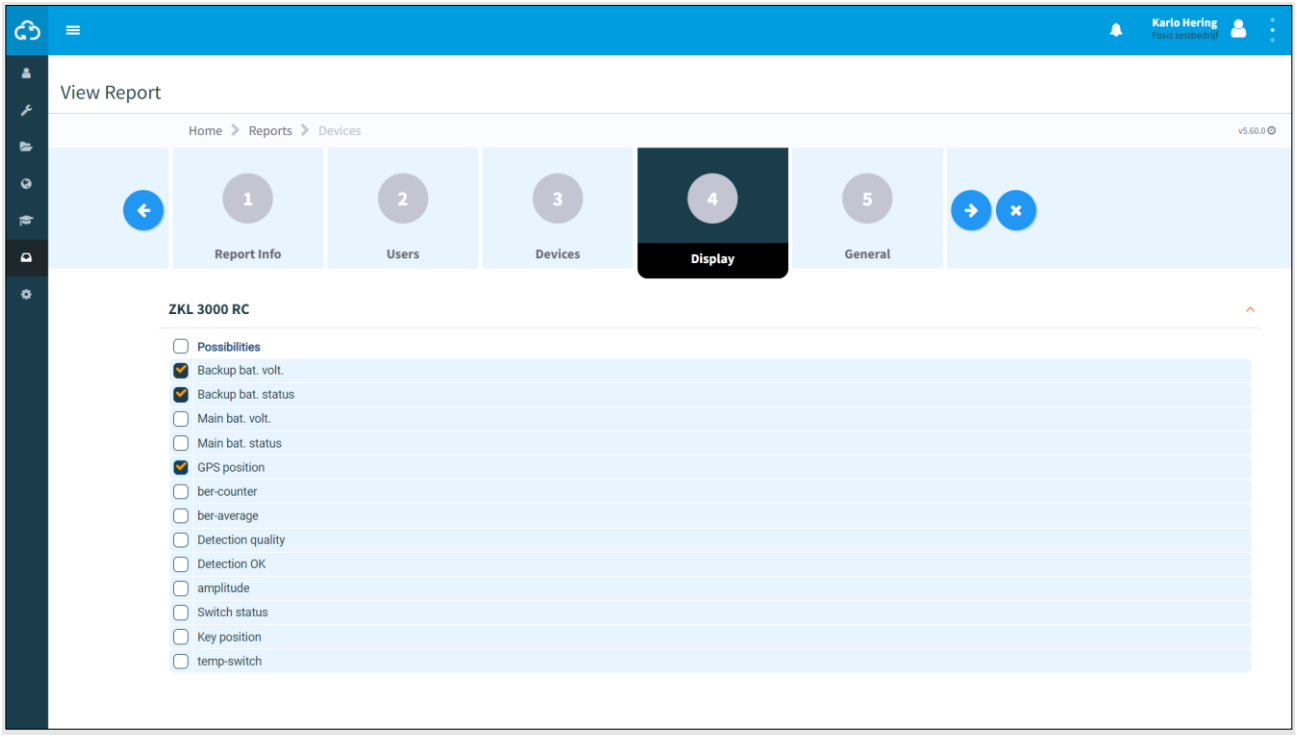


Figure 77 View report - display

1. Select the needed data.
2. Go to step 5.

8.1.5 Step 5 - General

In step 5 of generating a report, select some general options and save the report.

Choose to generate one overview with only the latest status of all selected devices or the history. The device's history is shown until the last time the report was generated. The first report will be based on the specified interval. When you have set up a weekly report, the first report will display the data from the last week.

NOTE
A PDF report can only store a limited amount of data. For reports with a lot of devices and/or history, choose CSV file.

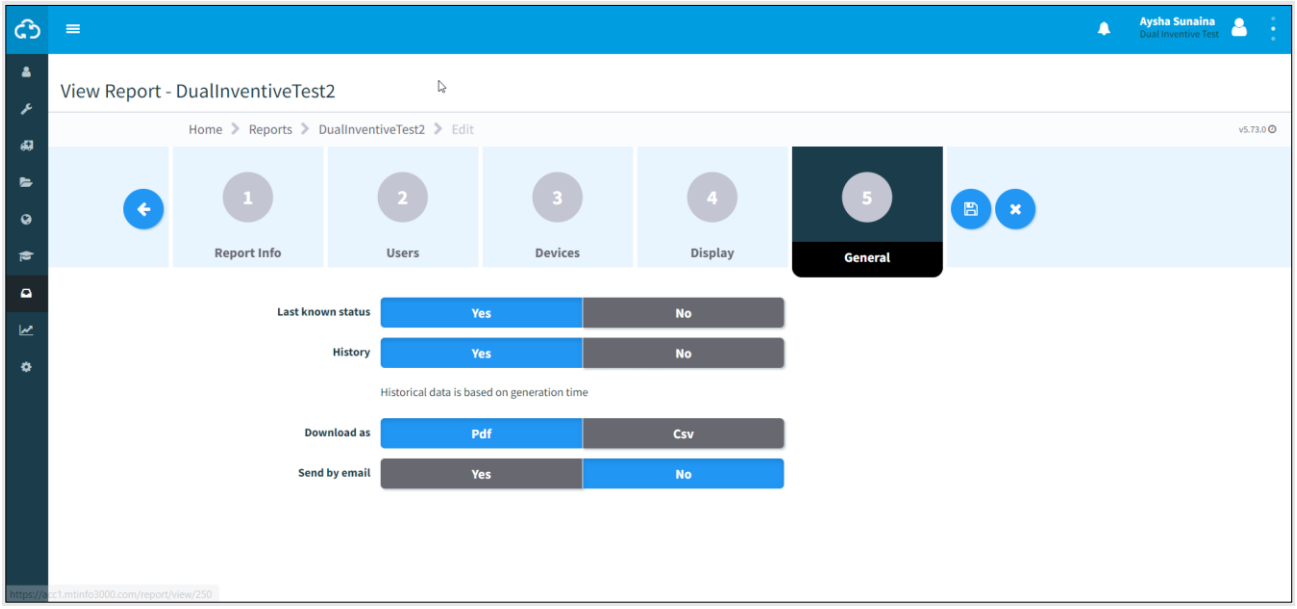


Figure 78 View report - General

1. Choose the last known status: Yes or No.
2. Choose the history: Yes or No.
3. Choose to download as: PDF or CSV.
4. Choose to send by email: Yes or No.
5. Save the report.

Now, the report will be generated as specified. If the report is ready to be downloaded, MTinfo 3000 will show this through a blue pop-up in the top right corner of the user's screen.

8.2 One-time reports

This section explains how to generate a one-time report. The difference between a periodical report and a one-time report is that first two steps of a periodical report (Report info, Users) are not applicable for a one-time report.

As an example, a devices report is generated:

1. Go to the Dashboard and click Reports.

The page Reports appears:

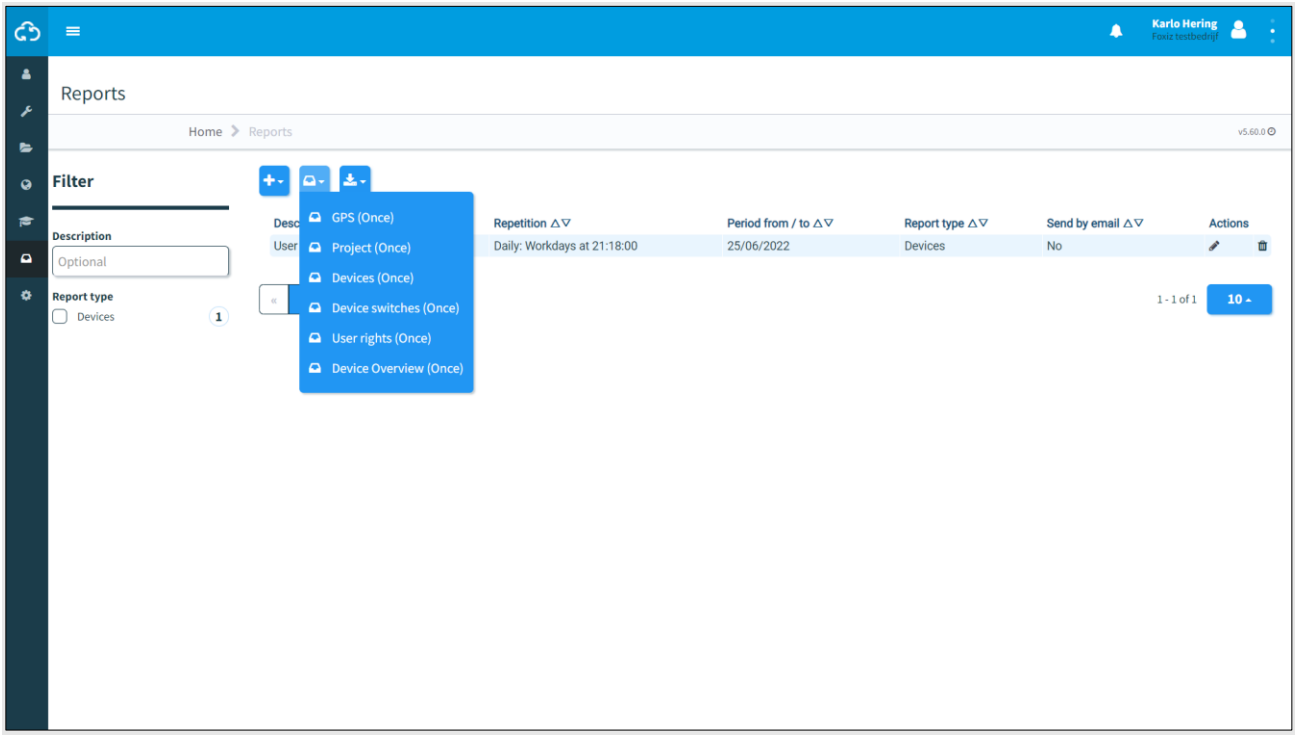


Figure 79 Reports - once

2. Click the icon

3. Select Devices (Once).

The page View Report appears:

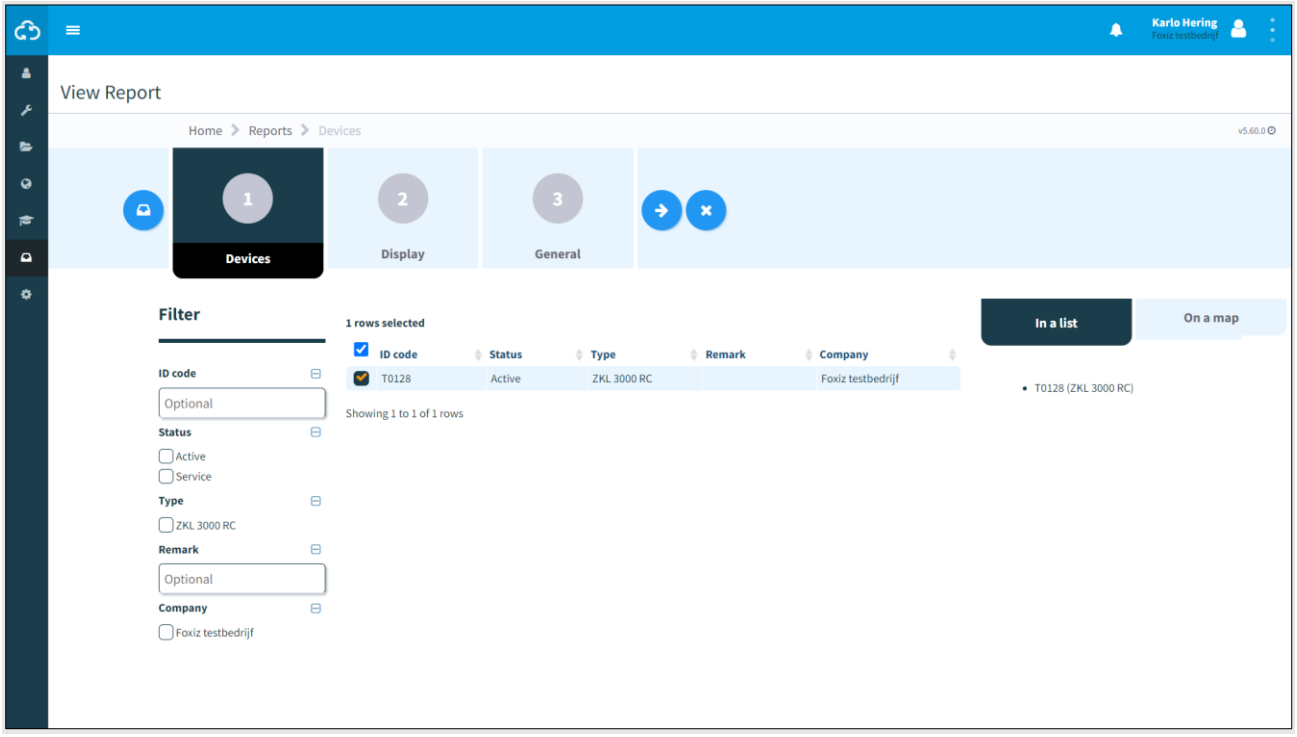


Figure 80 View report - one-time report

A one-time report is generated in three steps which are similar to the steps for a periodical report:

- Step 1 - Devices (Error! Reference source not found.);
- Step 2 - Display (Error! Reference source not found.);
- Step 3 - General (Error! Reference source not found.).

One-time report will use the time zone set by the user under his profile in MTinfo 3000 as default setting.

8.3 Download reports

Download the generated reports in My MTinfo 3000, My reports (see Dashboard, Error! Reference source not found.).

It also possible to download a pre-defined report:

1. Go to the Dashboard and click Reports.

The page Reports appears:

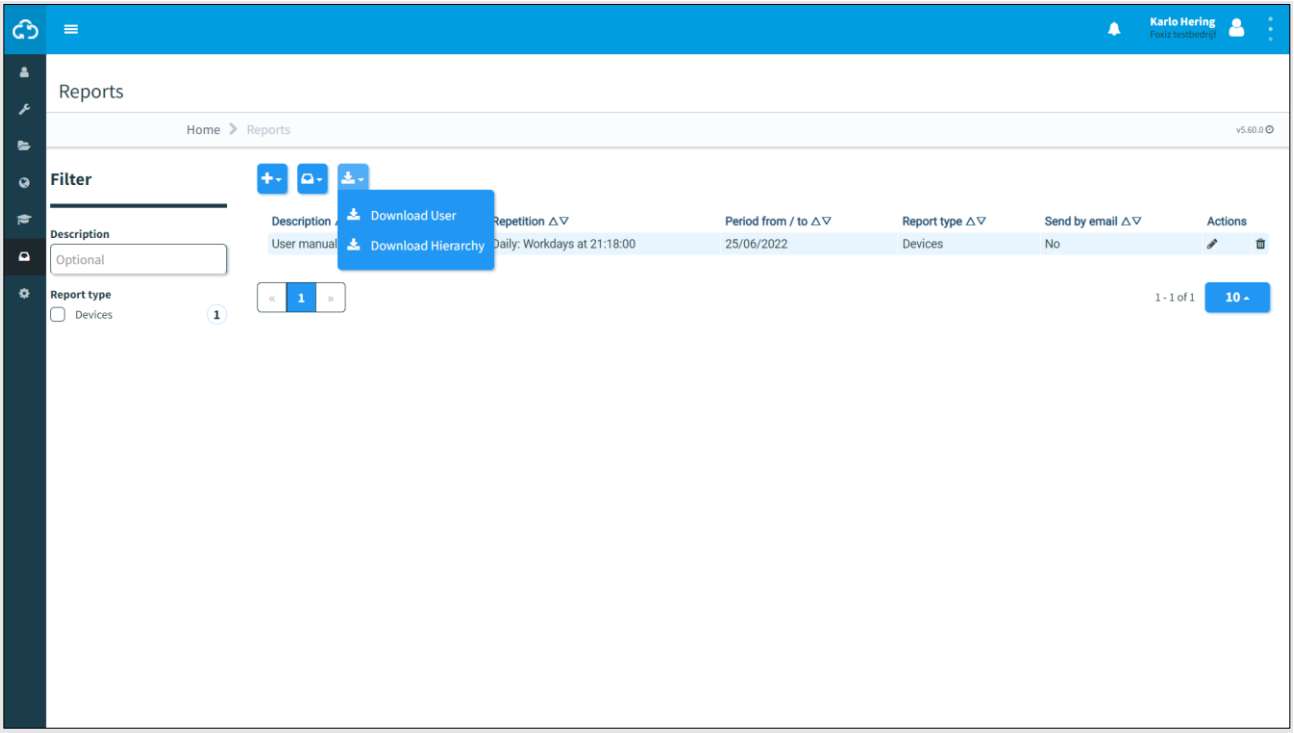


Figure 81 Reports - download

2. Click the icon.
3. Select Download User or Download Hierarchy.

By choosing Download User, first the company's user(s) must be selected:

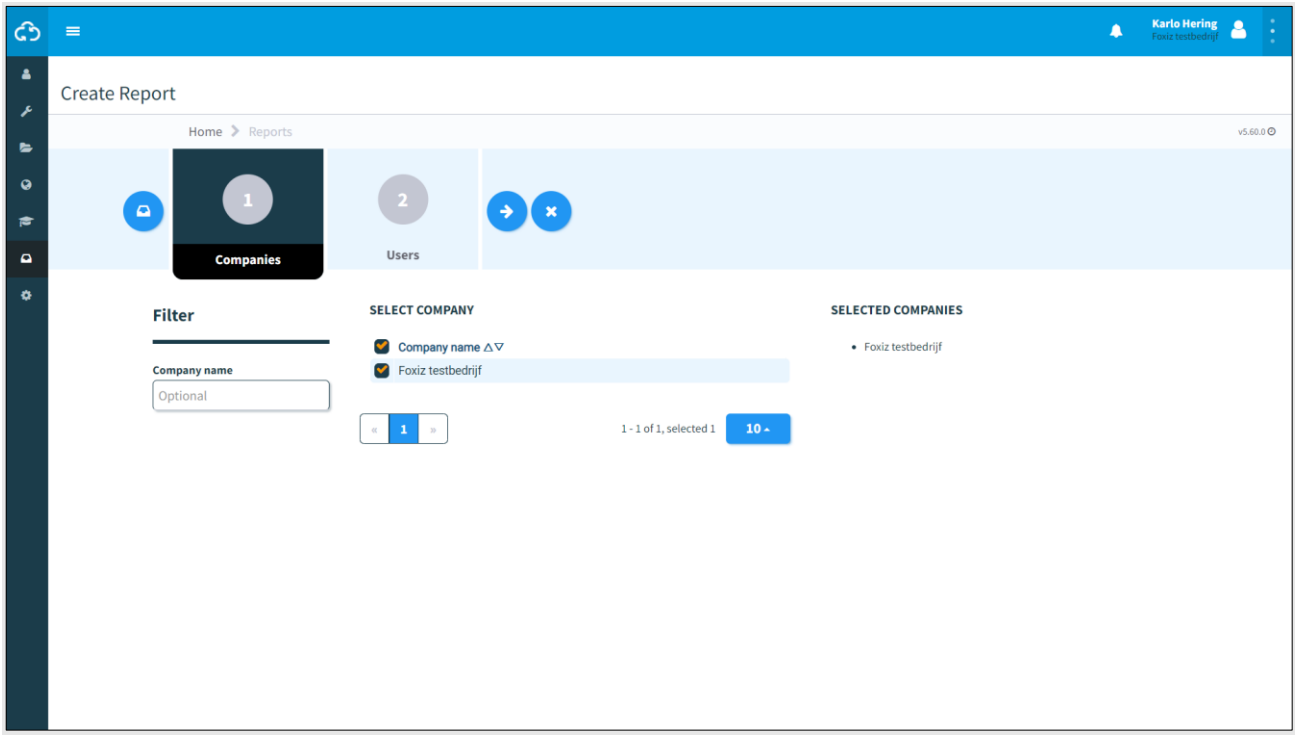


Figure 82 Download report - select users.

By choosing Download Hierarchy, the report is downloaded to the user's local download folder.

9 ADDITIONAL FUNCTIONS

MTinfo 3000 has several additional functions for monitoring and logging:

- real-time status of devices;
- adding data to devices;
- creating and managing templates (forms);
- project documentation;
- project log.

9.1 Real-time status

Monitor devices in real time through MTinfo 3000. It depends on the product which real-time information is presented, see the applicable appendix:

- ZKL 3000 RC (see 11);
- RDI 3000 (see 12).

There are different ways to view the real-time status:

- from the Dashboard (Error! Reference source not found.);
- from the page View project (Error! Reference source not found.);
- from the page Switching protection zone(s) (Error! Reference source not found.).

In general:

1. Click the icon to show a screen with the location of the device.
2. Use the filter (left top corner) and the search function (right top corner) to search for devices.
3. Customise the map with:
   - map options (left top corner);
   - zooming in/out (bottom right corner);
   - dragging Pegman onto the map to open street view (bottom right corner).
4. Click the symbol of the device to show a screen with data of the device.

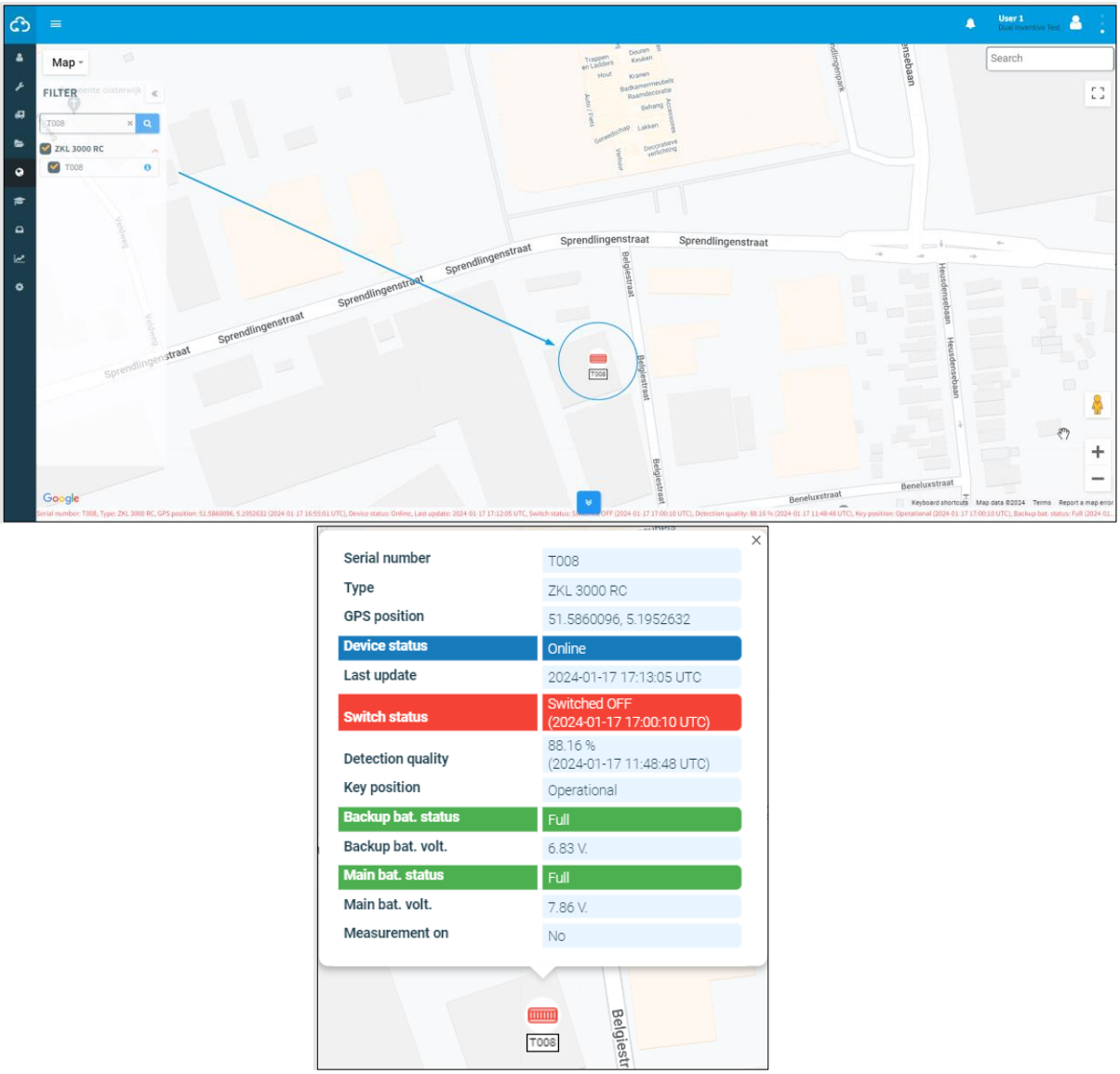


Figure 83 Real-time location and data

9.2 Adding data to devices

Attach labels and notes to devices to identify them easily.

1. Go the Dashboard and go to Asset management:

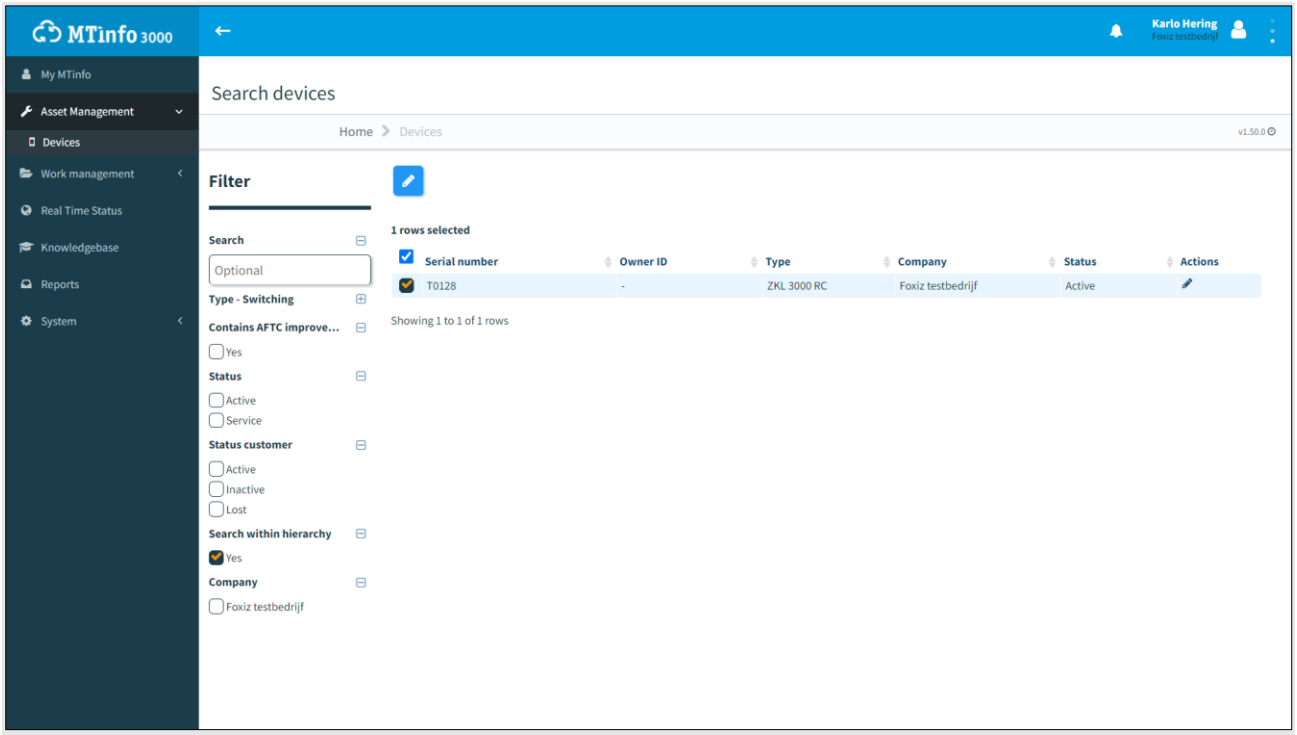


Figure 84 Dashboard - asset management

2. Select Devices in the left menu.
3. Select the devices you want to attach a label or comment to.
4. Click the icon.

The page Edit device appears:

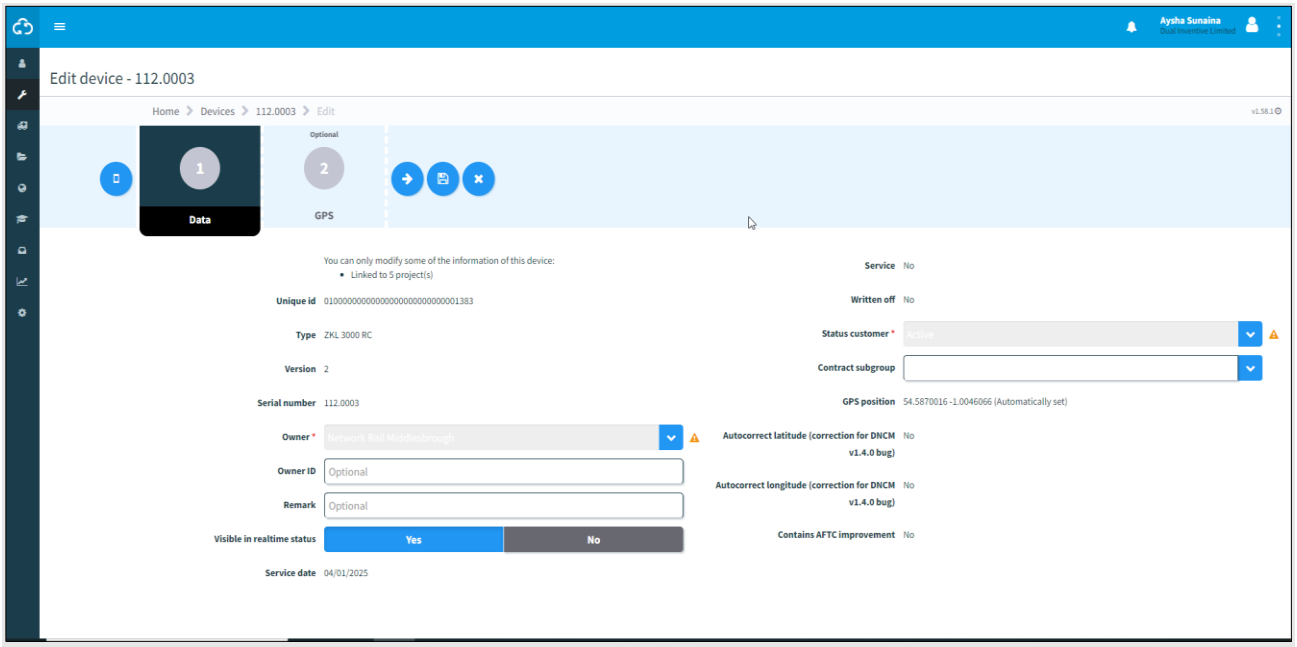


Figure 85 Edit device

5. Edit the device's data. Note:
   - This is also shown in the real-time status and can be used to give further information about a device to the switchers who consult the real-time status;
   - grey fields cannot be changed because the device is linked to other (released) projects.
6. Optionally, locate the device under the GPS tab by checking 'Manual location'.
7. Save

9.3 Templates

MTinfo 3000 offers the possibility to manage and create company specific templates (forms).

1. Go to the Dashboard (left side, see Error! Reference source not found.) and go to Work Management – Templates.

The page Search template appears:

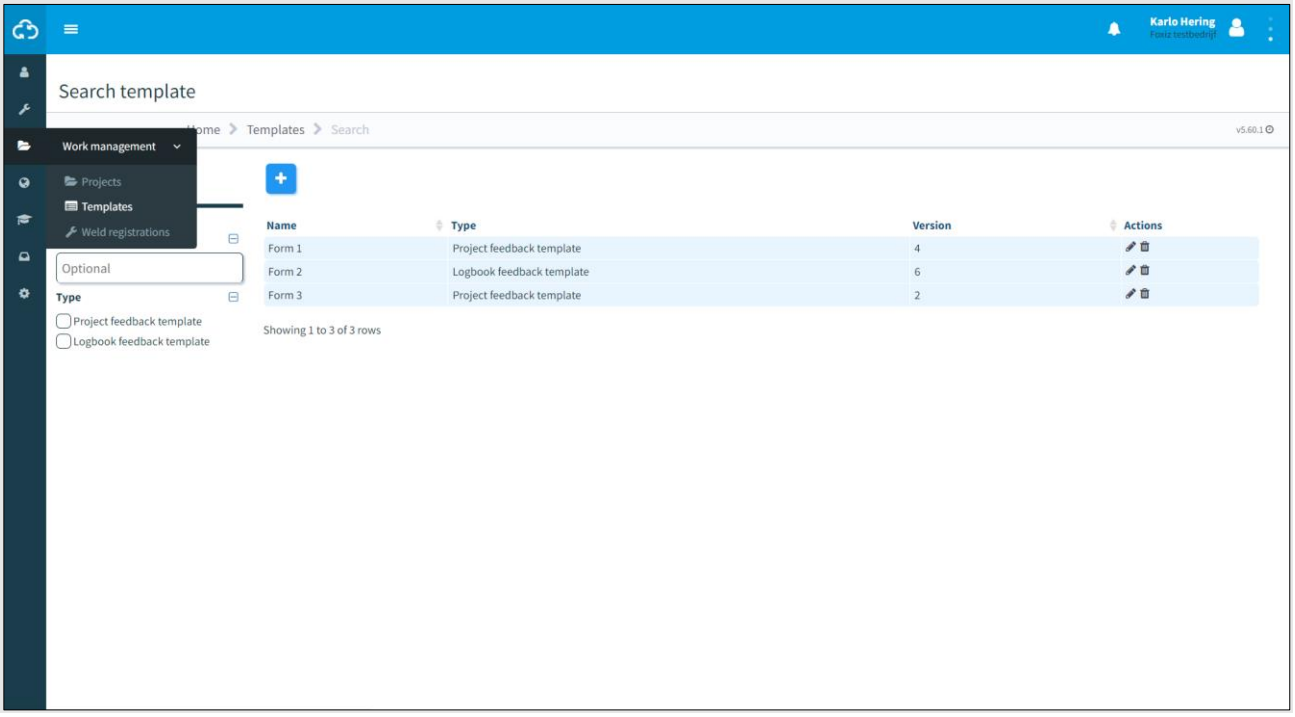


Figure 86 Search templates

2. Click the icon to create a new template.

Follow steps 1 and 2 to create a new template.

9.3.1 Step 1 - General

In step 1 of creating templates, add the required template information.

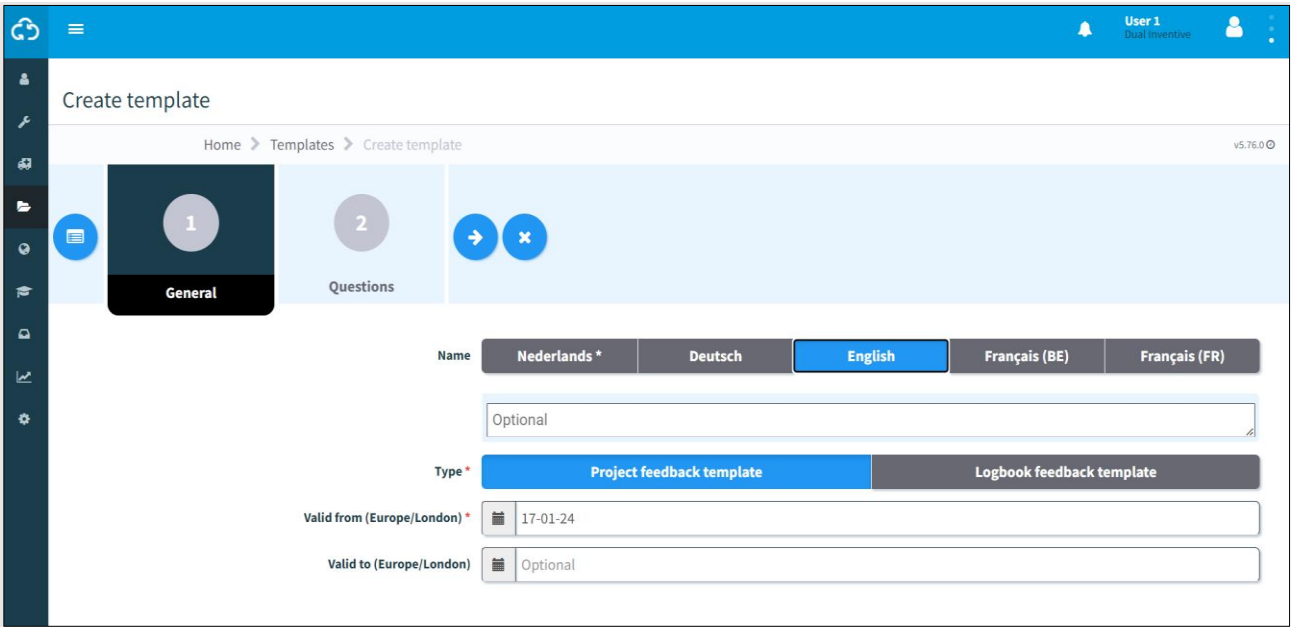


Figure 87 Creating templates - general

3. Select the language (name).
4. Select the type: Project feedback template or Logbook feedback template.
5. Fill in the valid from date and valid to date.
6. Go to step 2.

The Logbook feedback template is used in the MTinfo 3000 app and can be filled out multiple times by one user. This is not possible for the Project feedback.

How to make a Project feedback template is explained in this section.

9.3.2 Step 2 - Questions

In step 2 of creating templates, drag and drop predefined questions to create a new template.

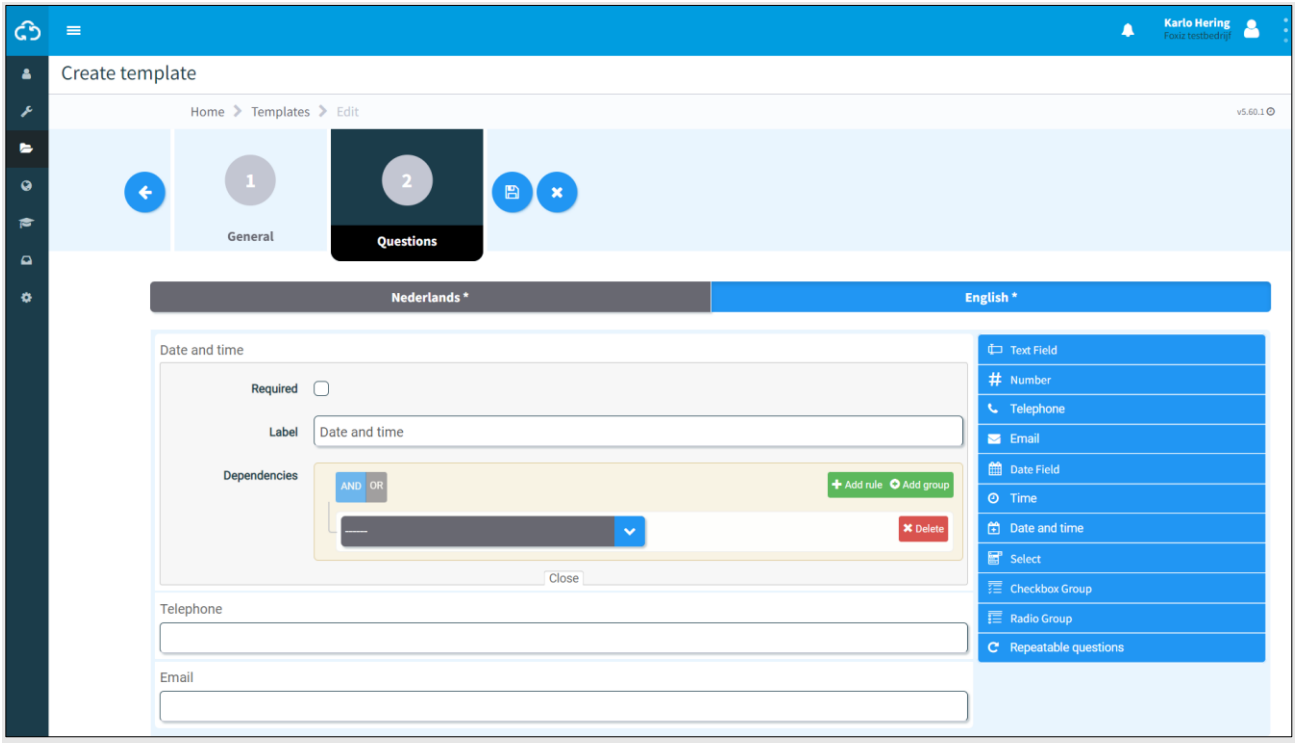


Figure 88 Creating templates - questions

1. Drag and drop the predefined questions. Change the order of questions by moving them up or down.

2. Click this icon to edit a predefined question:

   - required, the user of the template must answer the question: yes/no;
   - label, change the name of the question;
   - dependencies, the question only appears on the template when meeting the conditions:
     - and/or;
     - by adding a new rule;
     - by adding a new group.
   - if needed, delete a dependency.

3. Save the template.

Table 9-1 explains the types of predefined question:

QUESTION	EXPLANATION
Text Field	An open-ended question that allows users to formulate their own answer. It is possible to select default values that will be filled in automatically when these values are entered in MTinfo 3000 projects.
Number	A question that requires entering a number. It is possible to indicate what the minimum and default value of this number must be, and which increment is needed (for example 'per 10').
Telephone	A field that requires entering a telephone number. The option to add the country code appears in the form automatically.
Email	A field for entering an email address.
Date Field	A field for entering a date.
Time	A field for entering a time.
Date and time	A field for entering simultaneously a date and time.
Select	A drop-down menu for choosing one answer.
Checkbox Group	A list of options for ticking one or more answers. The creator of the template can set a minimum and maximum number of options to tick.
Radio Group	A list of options from which just one answer can be selected.
Repeatable questions	A bundle of questions which can be created and completed multiple times.

Table 9-1: Question types

After saving the template, it can be used in MTinfo 3000 projects. It is always possible the edit or delete templates (see Error! Reference source not found., tab Documents).

NOTE
Editing or deleting templates does not affect released projects. Only after a project is returned and released again, template modifications are realized.

9.4 Project documentation

In step 4 of the project planning, documents have been added optionally. Use the documents menu to view added or filled out documents that are used during a project.

Whenever a user adds or fills out forms via the app, it will be shown on the page View project (Error! Reference source not found.), tab Documents.

9.4.1 General

You can choose to download:

- Project data;
- Project data + feedback/logbook;
- Archive (ZIP);
- Document acceptance.

NOTE
Downloading the Archive (ZIP) may take a while.

1. Go to the page View project (Error! Reference source not found.) and click the tab Setup.

The screen View project appears:

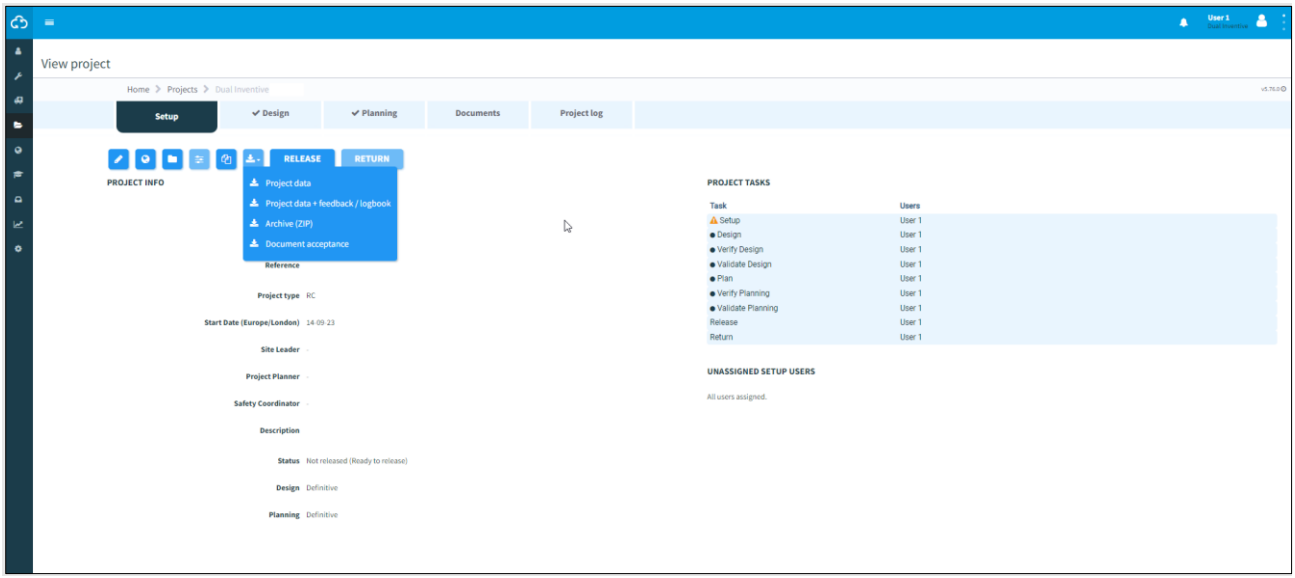


Figure 89 Project documentation - general

2. Click the icon.
3. Choose an option.

The project documentation will be downloaded to the user's local download folder.

9.4.2 Documents through the app

When a user uploads or fills in a document through the app, it will be shown here.

1. Go to the page View project (Error! Reference source not found.) and click the tab Documents.

The page View project appears:

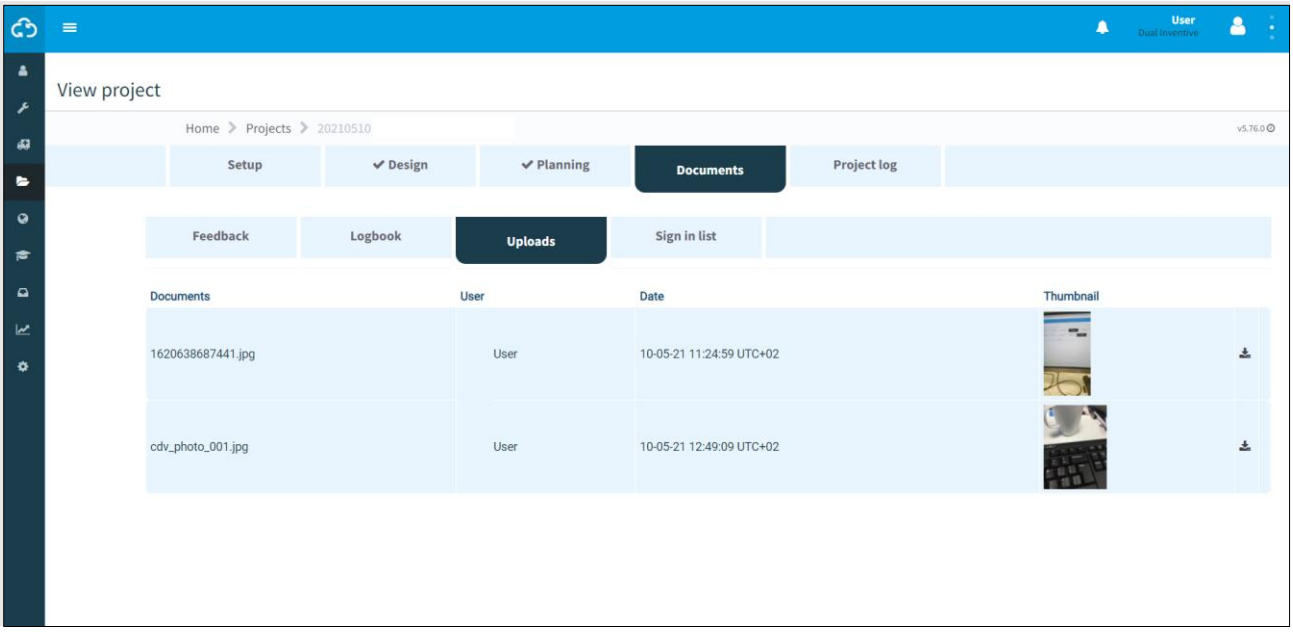


Figure 90 Project documentation - through the app

2. Select a tab: Feedback, Logbook, Uploads, Sign in list.
3. Select documents.
4. Click the icon to download documents.
5. Click the icon to add comments to a document.

The project documents will be downloaded to the user's local download folder.

9.5 Project log

The project log shows the history of the performed tasks within a project.

1.	Go to the page View project (Error! Reference source not found.), tab Project log:

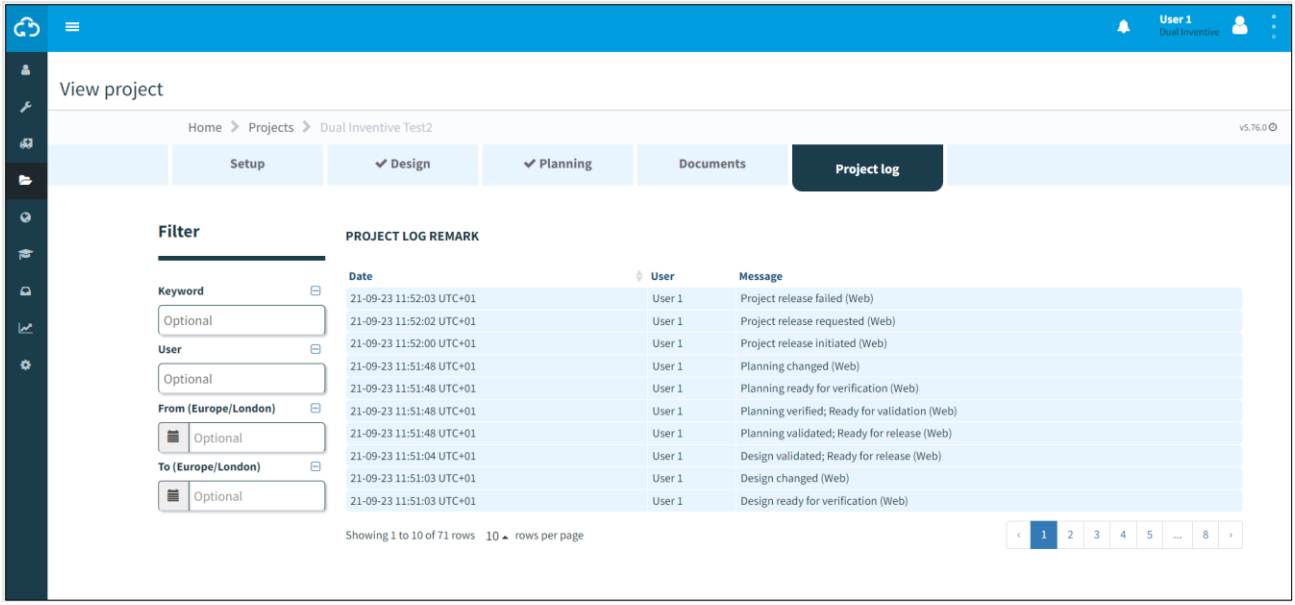


Figure 91 Project log

2.	Search the Project log remark by using a keyword, user or period (from/to).

9.6 Knowledgebase

This section shows how to add documents to the Knowledgebase in MTinfo3000. By adding a document to the knowledgebase in MTinfo 3000, it will be visible in the MTinfo 3000 app for all logged in users. This makes it easy to share important documents with users that they should always have at hand, such as safety instructions and manuals. In order to add documents to the knowledgebase, follow these steps:

- From the MTinfo 3000 dashboard, select “Knowledgebase”

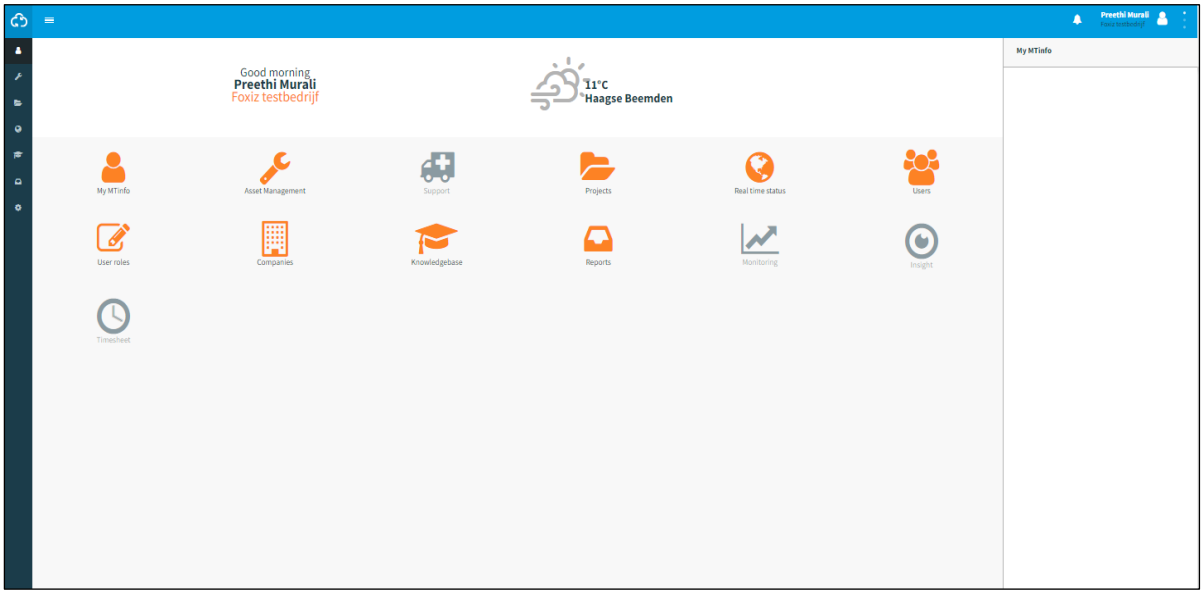


Figure 92 Dashboard page

The knowledgebase space will show all documents that have been uploaded already:

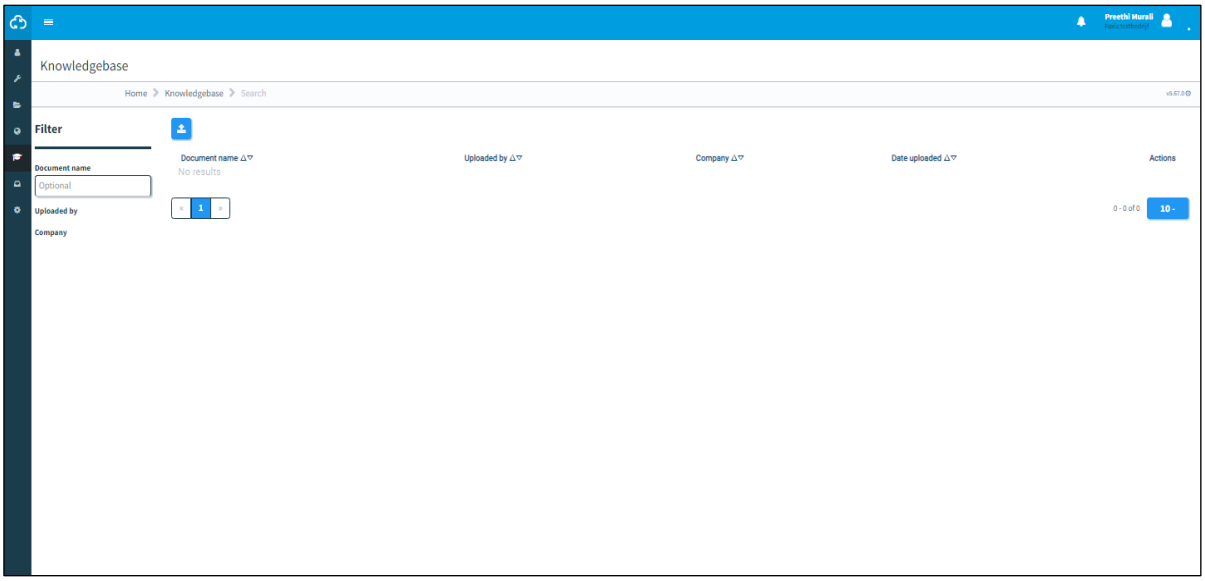


Figure 93 Knowledgebase space

- Press the 'Upload Documents' icon
- From the below screen, you can search for or drag and drop the file

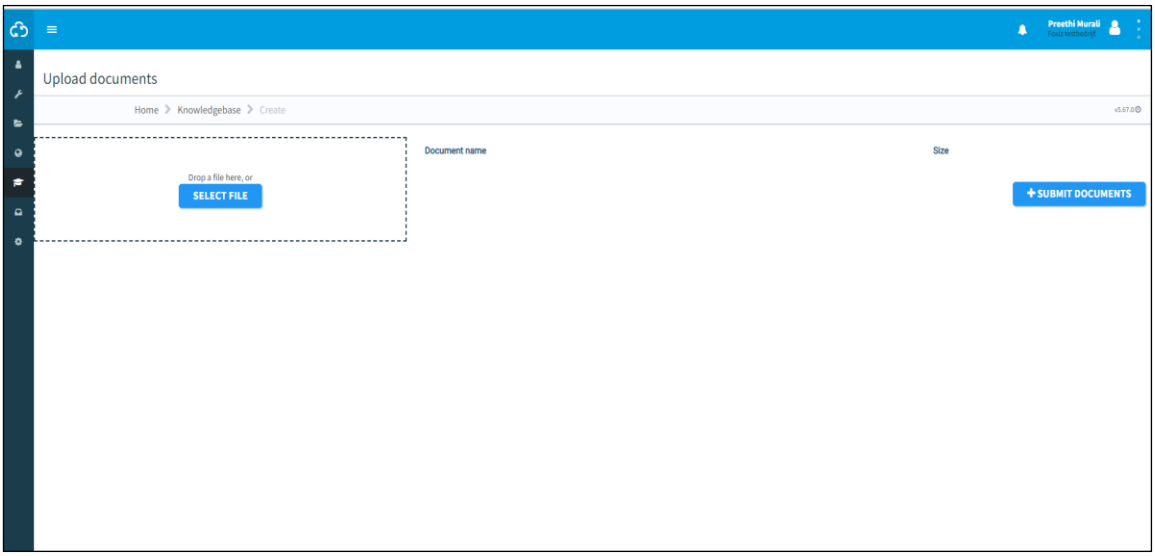


Figure 94 Upload documents page

- Click 'Select File' and select the file you wish to upload, or click and hold the file, then drag it to the box as shown below

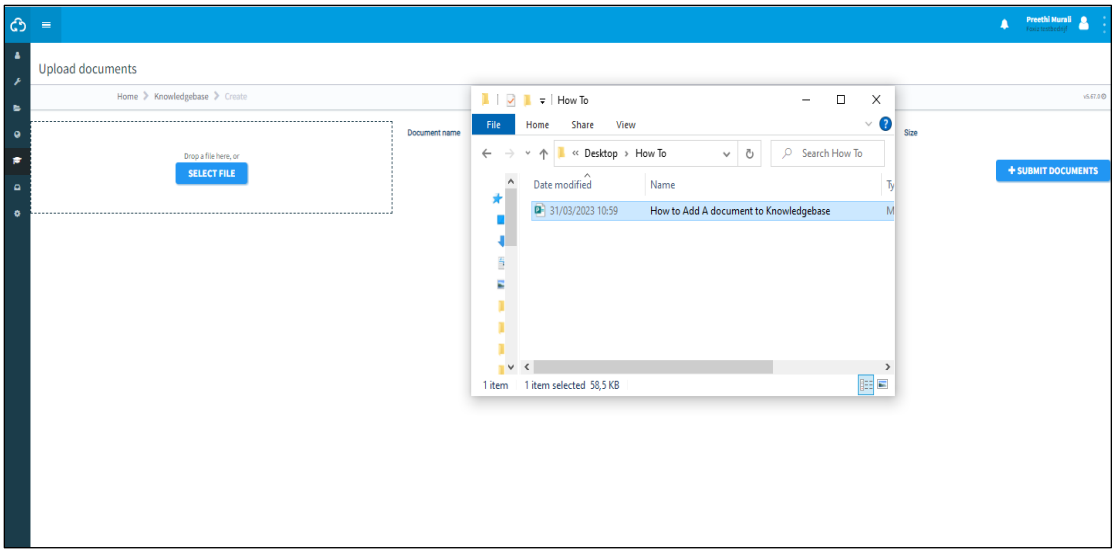


Figure 95 Uploading documents

- Select '+ Submit documents' to add the documents to the knowledgebase. Additionally, the uploaded documents can be renamed in this screen as well

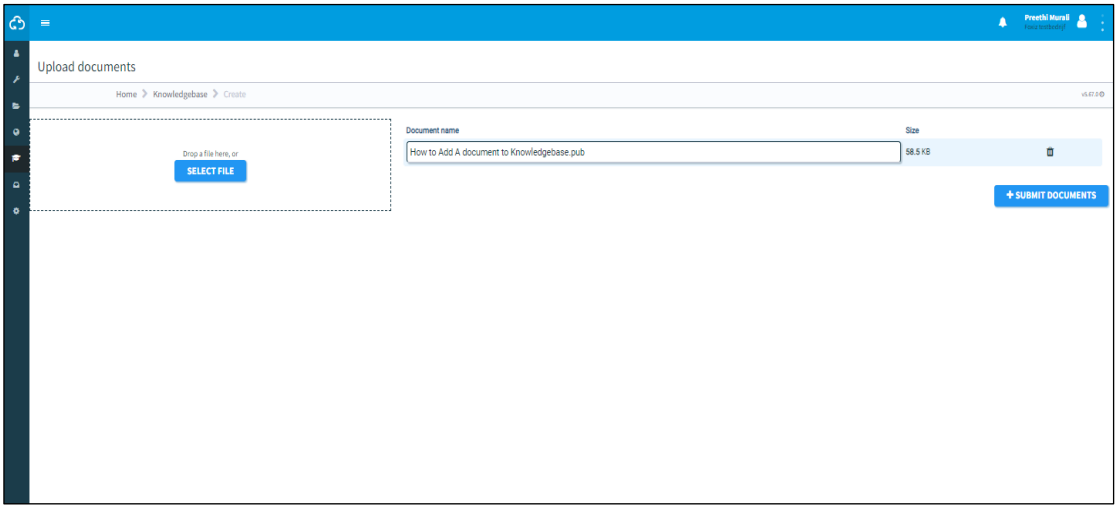


Figure 96 Uploaded documents

- The uploaded document is visible to all users in your company

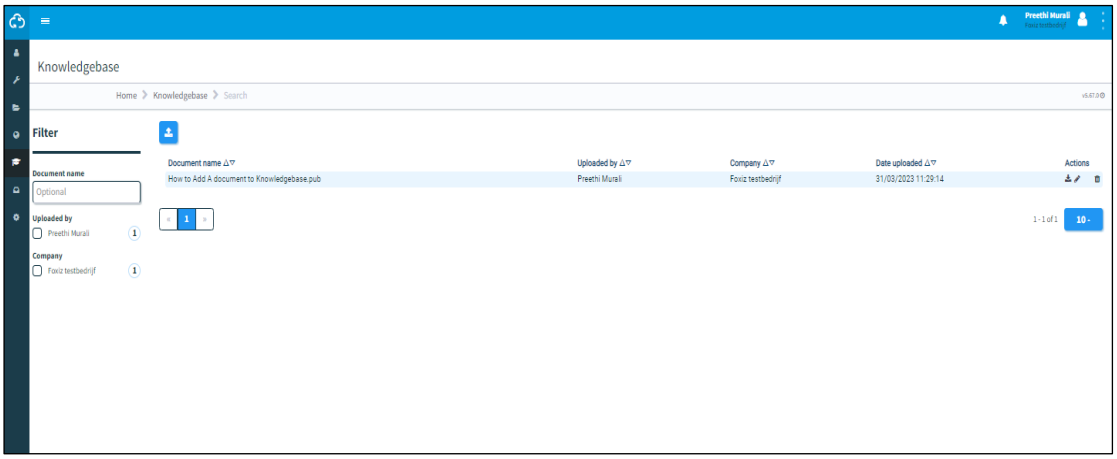


Figure 97 Knowledgebase space

10 SYSTEM MAINTENANCE AND SYSTEM HEALTH

As a user of our system, it is imperative to remain informed about any maintenance and system health that may impact your experience. To facilitate this, we have established an internet status page that provides real-time information regarding the health of our systems.

To access the status page, please navigate to https://mtinfo3000.status.io/. On this page, you will find information pertaining to any ongoing incidents or scheduled maintenance. Additionally, you can view the history of past incidents on this page.

In order to ensure that you are apprised of all updates, we strongly recommend subscribing to our status page. By doing so, you will receive notifications via email whenever there is an update to the status of our system. To subscribe, please click the "Subscribe" button on our status page and follow the prompts.

By remaining informed through our status page and subscribing to updates, you will always be aware of the current state of our system and can plan accordingly.

11 APPENDIX ZKL 3000 RC

11.1 Explanation real-time status ZKL 3000 RC

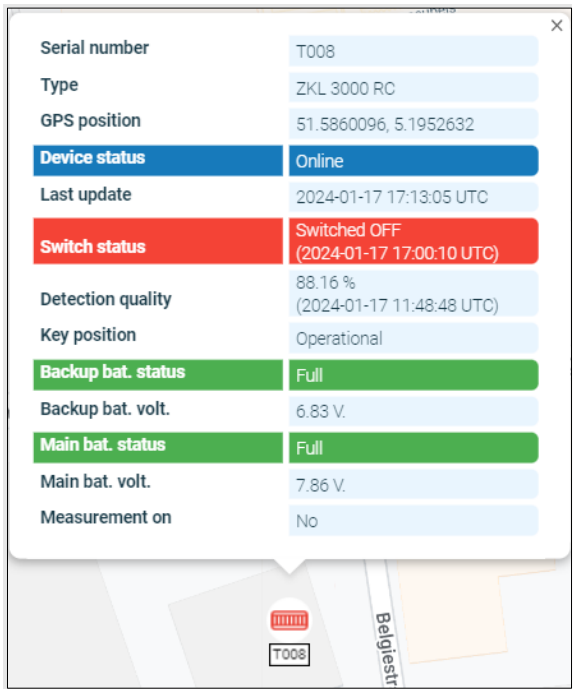


Figure 98 Real-time status ZKL 3000 RC

ITEM	EXPLANATION
Serial number	Serial number of the selected device.
Type	The type of the device that is being displayed, in this case a ZKL 3000 RC.
GPS position	GPS position of the selected device.
Device status	Status of the device. When it is offline, it is not connected with MTinfo 3000 or both batteries are empty.
Last update	Last received message from the device.
Switch status	Device is switched ON or OFF.
Detection OK	The detection is OK or not OK.
Detection quality	Detection quality (%) between the ZKL 3000 RC and the track. Anything > 0% is considered as OK. The detection quality only becomes not OK when the value is exactly 0%.
Key position	• OPERATIONAL: device can be switched remotely. • ON: manual switched is shorted, cannot be switched remotely. • OFF: manual switched is not-shorted.

ITEM	EXPLANATION
Battery status (backup, main)	• Full: sufficient power (66-100%). • Half: adequate power (33-66%). • Low: low in power (15-33%). • Critical: almost empty (3-15%). • Depleted: completely empty (0-3%). • Removed: completely empty (0%).
Battery voltage (backup, main)	Shows the voltage of the batteries of the ZKL 3000 RC.

NOTE
For a more in-depth explanation, see the User manual ZKL 3000 RC, section Troubleshooting. When an error appears in the real-time status, it is very important to consult the manual.

12 APPENDIX RDI 3000

12.1 Explanation Real-time status RDI 3000

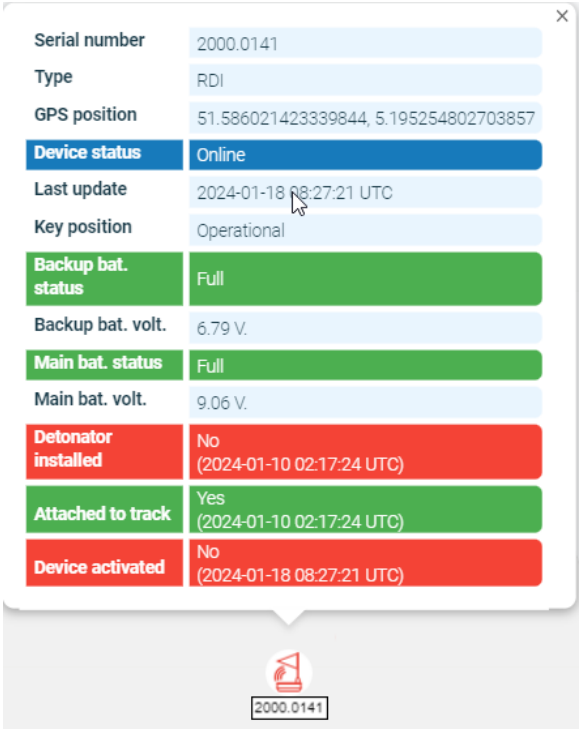


Figure 99 Real-time status RDI 3000

ITEM	EXPLANATION
Serial number	Serial number of the selected device.
Type	Type of the device that is being displayed, in this case a RDI 3000.
GPS position	GPS position of the selected device.
Device status	Status of the device. When it is offline, it will not connect with MTinfo 3000 or both batteries are empty.
Last update	Last received message from the device.
Key position	• OPERATIONAL: device can be switched remotely. • ON: manual switched is shorted, cannot be switched remotely. • OFF: manual switched is not-shorted.
Battery status (backup, main)	• Full: sufficient power (66-100%). • Half: adequate power (33-66%). • Low: low in power (15-33%). • Critical: almost empty (3-15%). • Depleted: completely empty (0-3%). • Removed: completely empty (0%).

ITEM	EXPLANATION
Battery voltage (back-up, main)	Shows the voltage of the batteries of the RDI 3000.
Detonator installed	• Yes: detonator is on the rail. • No: detonator is not on the track, lies next to the rail.
Attached to track	• Yes: the RDI 3000 is attached to the rail. • No: the RDI 3000 is not attached to the rail.
Device state	• Yes: The RDI 3000 is activated. • No: The RDI 3000 is not activated.

NOTE
For a more in-depth explanation, see the User manual RDI 3000, section Troubleshooting. When an error appears in the real-time status, it is very important to consult the manual.

13 APPENDIX NOTIFICATION MESSAGES

13.1 General

NOTE
A notification is a message or a reminder of a message sent by MTinfo 3000 to a users' mobile device (tablet, phone).
A reminder for a safety related notification is an extra service to help the user. It is not explicitly considered as mitigation of an identified risk.

WARNING
SMS will not be delivered to the user if a wrong telephone number is registered or when the user blocks the sender's phone number in the MTinfo 3000.
Verify if you have entered your correct telephone number and do not block the sender.

WARNING
In order to receive the non-safety related push notifications, the following prerequisites should be met:

- Latest MTinfo 3000 app installed on the users' mobile device.
- Push notifications should be allowed in phone settings.
- User must be logged into the MTinfo 3000 app.

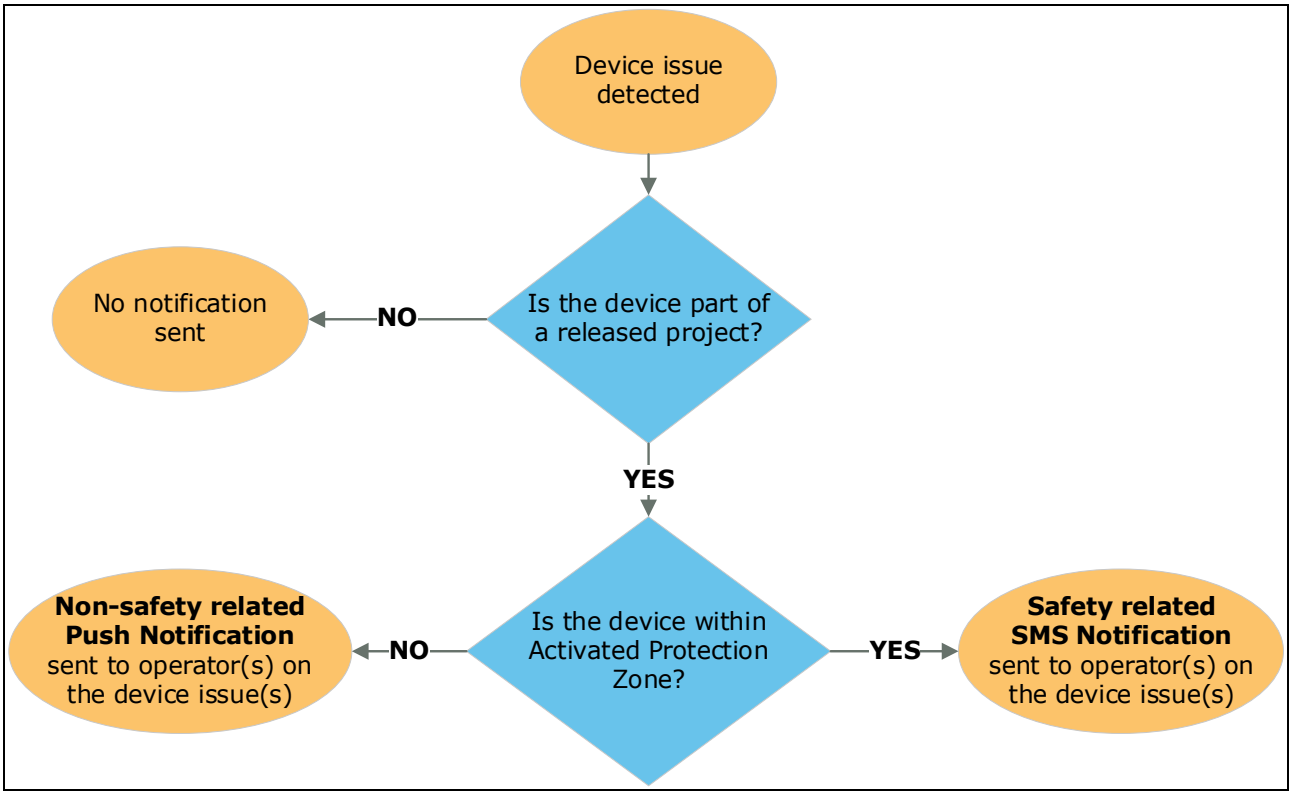


Figure 100 Notification logic diagram

13.2 Notifications ZKL 3000 RC

13.2.1 Errors and Notifications

Users with switching rights on a released project will automatically receive push notifications. Note the prerequisites to receive push notifications is stated in section 13.1 .

Alerts from devices in activated protection zones will be sent via text messages (SMS). Users' mobile phone number is entered as alarm number within the user profile to enable this.

The notification service starts as soon as the ZKL 3000 RC has been assigned to a project and the project is released. It is the responsibility of the recipient to act upon these notifications (more information is available in the ZKL 3000 RC Installation Manual, reference [2]).

The notification that require action are:

NOTIFICATIONS	EXPLANATION
ZKL 3000 RC "Serial Number" *Detection NOT ok. Please check manual for more information.	ZKL 3000 RC with ID "Serial Number" is no longer creating a proper short circuit in the track. The detection is not OK.
ZKL 3000 RC "Serial Number" * is offline. Please check manual for more information.	ZKL 3000 RC with ID "Serial Number" is offline. The ZKL3000 RC cannot make a connection to MTinfo 3000.
ZKL 3000 RC "Serial Number" * The backup battery is CRITICAL,the main battery is CRITICAL. Please check manual for more information.	Both batteries of ZKL 3000 RC with ID "Serial Number" arecritical. The system will send a new notification as soon as one of the batteries is getting depleted.
ZKL 3000 RC "Serial Number" * The backup battery has sufficient power, the main battery is CRITICAL. Please check manual formore information.	The main battery of the ZKL 3000 RC with ID "Serial Number" is critical and the backup battery is ok (either fullor half full). The system will send a new message as soon as one of the batteries will reach the next depletion level.
ZKL 3000 RC "Serial Number" * The backup battery is CRITICAL,the main battery has sufficient power. Please check manual for more information.	The backup battery of the ZKL 3000 RC with ID "Serial Number" is critical and the main battery is ok (either full or half full). The system will send a new message as soon as one of the batteries will reach the next depletion level.
ZKL 3000 RC "Serial Number" * The backup battery has sufficient power, the main battery is DEPLETED. Please check manual for more information.	The main battery of the ZKL 3000 RC with ID "Serial Number" is depleted and the backup battery is ok (eitherfull or half full). The system will send a new message as soon as the ok battery reaches the next depletion level.
ZKL 3000 RC "Serial Number" * The backup battery is DEPLETED, the main battery has sufficient power. Please check manual for more information.	The backup battery of the ZKL 3000 RC with ID "Serial Number" is depleted and the main battery is ok (either full or half full). The system will send a new message as soon as the ok battery reaches the next depletion level.
ZKL 3000 RC "Serial Number" * The backup battery is DEPLETED, the main battery is CRITICAL. Please check manual for moreinformation.	The backup battery of the ZKL 3000 RC with ID "Serial Number" is depleted and the main battery is critical. The system will send a new Notification as soon as the main battery is depleted.

NOTIFICATIONS	EXPLANATION
ZKL 3000 RC “Serial Number“ * The backup battery is CRITICAL, the main battery is DEPLETED. Please check manual for more information.	The main battery of the ZKL 3000 RC with ID “Serial Number” is depleted and the backup battery is critical. The system will send a new Notification as soon as the backup battery is depleted.
ZKL 3000 RC “Serial Number“ * The backup battery is DEPLETED, the main battery is DEPLETED. Please check manual for more information.	Both batteries of ZKL 3000 RC with ID “Serial Number” are depleted.
ZKL 3000 RC “Serial Number“ * The backup battery is CRITICAL, the main battery has been REMOVED. Please check manual for more information.	The backup battery of the ZKL 3000 RC with ID “Serial Number” is critical and the main battery has been removed, The system will send a new notification as soon as thebackup battery is depleted.
ZKL 3000 RC “Serial Number“ * The backup battery is DEPLETED, the main battery has been REMOVED. Please check manual for more information.	The backup battery of the ZKL 3000 RC with ID “SerialNumber” is depleted and the main battery has been removed.
ZKL 3000 RC “Serial Number“ * The backup battery has been REMOVED, the main battery is CRITICAL. Please check manual formore information.	The backup battery of the ZKL 3000 RC with ID “Serial Number” has been removed and the main battery is critical, The system will send a new notification as soon as the main battery is depleted.
ZKL 3000 RC “Serial Number“ * The backup battery has been REMOVED, the main battery is DEPLETED. Please check manual for more information.	The backup battery of the ZKL 3000 RC with ID “SerialNumber” has been removed and the main battery is depleted.
ZKL 3000 RC “Serial Number“ *Detection NOT ok. Please checkmanual for more information.	ZKL 3000 RC with ID “Serial Number” is no longer creating a proper short circuit in the track. The detection is not OK.
ZKL 3000 RC “Serial Number“ * is offline. Please check manual for more information.	ZKL 3000 RC with ID “Serial Number” is offline. The ZKL3000 RC cannot make a connection to MTinfo 3000.
ZKL 3000 RC “Serial Number“ * The backup battery is CRITICAL,the main battery is CRITICAL. Please check manual for more information.	Both batteries of ZKL 3000 RC with ID “Serial Number” arecritical. The system will send a new notification as soon as one of the batteries is getting depleted.
ZKL 3000 RC “Serial Number“ * The backup battery has sufficient power, the main battery is CRITICAL. Please check manual formore information.	The main battery of the ZKL 3000 RC with ID “Serial Number” is critical and the backup battery is ok (either fullor half full). The system will send a new message as soon as one of the batteries will reach the next depletion level.
ZKL 3000 RC “Serial Number“ * The backup battery is CRITICAL,the main battery has sufficient power. Please check manual for more information.	The backup battery of the ZKL 3000 RC with ID “Serial Number” is critical and the main battery is ok (either full orhalf full). The system will send a new message as soon as one of the batteries will reach the next depletion level.

NOTIFICATIONS	EXPLANATION
ZKL 3000 RC “Serial Number“ * The backup battery has sufficientpower, the main battery is DEPLETED. Please check manual for more information.	The main battery of the ZKL 3000 RC with ID “Serial Number” is depleted and the backup battery is ok (eitherfull or half full). The system will send a new message as soon as the ok battery reaches the next depletion level.
ZKL 3000 RC “Serial Number“ * The backup battery is DEPLETED, the main battery has sufficient power. Please check manual for more information.	The backup battery of the ZKL 3000 RC with ID “Serial Number” is depleted and the main battery is ok (either fullor half full). The system will send a new message as soon as the ok battery reaches the next depletion level.
ZKL 3000 RC “Serial Number“ * The backup battery is DEPLETED, the main battery is CRITICAL. Please check manual for more information.	The backup battery of the ZKL 3000 RC with ID “Serial Number” is depleted and the main battery is critical. The system will send a new notification as soon as the main battery is depleted.
ZKL 3000 RC “Serial Number“ * The backup battery is CRITICAL,the main battery is DEPLETED. Please check manual for more information.	The main battery of the ZKL 3000 RC with ID “Serial Number” is depleted and the backup battery is critical. The system will send a new notification as soon as the backup battery is depleted.
ZKL 3000 RC “Serial Number“ * The backup battery is DEPLETED, the main battery is DEPLETED. Please check manual for more information.	Both batteries of ZKL 3000 RC with ID “Serial Number” are depleted.
ZKL 3000 RC “Serial Number“ * The backup battery is CRITICAL, the main battery has been REMOVED. Please check manual for more information.	The backup battery of the ZKL 3000 RC with ID “Serial Number” is critical and the main battery has been removed, The system will send a new notification as soon as thebackup battery is depleted.
ZKL 3000 RC “Serial Number“ * The backup battery is DEPLETED, the main battery has been REMOVED. Please check manual for more information.	The backup battery of the ZKL 3000 RC with ID “SerialNumber” is depleted and the main battery has been removed.
ZKL 3000 RC “Serial Number“ * The backup battery has been REMOVED, the main battery is CRITICAL. Please check manual formore information.	The backup battery of the ZKL 3000 RC with ID “Serial Number” has been removed and the main battery is critical, The system will send a new notification as soon as the main battery is depleted.
ZKL 3000 RC “Serial Number“ * The backup battery has been REMOVED, the main battery is DEPLETED. Please check manual for more information.	The backup battery of the ZKL 3000 RC with ID “SerialNumber” has been removed and the main battery is depleted.

13.2.2 Text Notifications - Reminders

For the offline and the detection safety related events a reminder system is introduced. The reminders are helping the user to remind that there is an unresolved issue with a specific ZKL 3000 RC.

Battery notifications already have an implicit reminder system as the user is notified when the main or backup battery reaches critical or depleted levels.

NOTE
Reminders do not relieve the user of his responsibility to go immediately to the device to inspect it!

Please, always consult the Real Time Status for the up-to-date situation.

A reminder is sent after a 15-minute interval. A maximum of 3 reminders are sent for one continuously 'detection NOT ok' or 'offline' situation. Reminders are only sent when the device is in active state (i.e. in an activated protection zone).

The reminder text messages are:

NOTIFICATIONS	EXPLANATION
Reminder: ZKL 3000 RC "Serial Number" * Detection NOT ok. Please check manual for more information.	Reminder message when the detection is not ok and the device is in an activated protection zone.
Reminder: ZKL 3000 RC "Serial Number" * is offline. Please check manual for more information.	Reminder message when the device is offline and the device is in an activated protection zone.

13.3 Notifications RDI 3000

13.3.1 Errors and Notifications

Users with switching rights on a released project will automatically receive notifications via push notifications. Note the prerequisites to receive push notifications stated in chapter 13.1 .

Alerts from devices in activated protection zones will be sent via text messages (SMS). Users' mobile phone number is entered as alarm number within the user profile to enable this.

The notification service starts as soon as the RDI 3000 has been assigned to a project and the project is released. It is the responsibility of the recipient to act upon these notifications.

The notification notifications that require action are:

NOTIFICATIONS	EXPLANATION
RDI 3000 "Serial Number" * is offline. Please check manual for more information	RDI 3000 with ID "Serial Number" is offline. The RDI 3000 cannot make a connection to MTinfo 3000.
RDI 3000 "Serial Number" is NOT against the track. Pleasecheck the manual for more information	RDI 3000 with ID "Serial Number" * isNOT against the track. The RDI 3000 might have been removed from track.
RDI 3000 "Serial Number" has a broken led group. Please check the manual for more information.	RDI 3000 with ID "Serial Number" * has a broken led group. One or more red LED light elements are faulty. Red LED brightness no longer meets specifications.
RDI 3000 "Serial Number" * detonator state is NOT ok. Please check manual for more information.	RDI 3000 with ID "Serial Number" * detonator state is NOT ok. The RDI 3000 cannot guarantee the detonator is placed correctly on the track.
RDI 3000 "Serial Number" * The backup battery is CRITICAL, the main battery is CRITICAL. Please check manual for more information	Both batteries of RDI 3000 with ID "Serial Number" are critical. The system will send a new notification as soon as one of the batteries approaches depletion.

NOTIFICATIONS	EXPLANATION
RDI 3000 “Serial Number” *The backup battery has sufficient power, the main battery is CRITICAL. Please check manual for more information	The main battery of the RDI 3000 withID “Serial Number” is critical and the backup battery is ok (either full or halffull). The system will send a new message as soon as one of the batteries approaches the next depletion level.
RDI 3000 “Serial Number” * The backup battery is CRITICAL, the main battery has sufficient power. Please check manual for more information	The backup battery of the RDI 3000 with ID “Serial Number” is critical andthe main battery is ok (either full or half full). The system will send a new message as soon as one of the batteries approaches the next depletionlevel.
RDI 3000 “Serial Number” *The backup battery has sufficient power, the main battery is DEPLETED. Please check manual for more information	The main battery of the RDI 3000 withID “Serial Number” is depleted and the backup battery is ok (either full or halffull). The system will send a new message as soon as the ok battery reaches the next depletion level.
RDI 3000 “Serial Number” *The backup battery is DEPLETED, the main battery has sufficient power. Please check manual for more information	The backup battery of the RDI 3000 with ID “Serial Number” is depleted and the main battery is ok (either fullor half full). The system will send a new message as soon as the ok battery reaches the next depletion level.
RDI 3000 “Serial Number” * The backup battery is DEPLETED, the main battery is CRITICAL. Please check manual for more information	The backup battery of the RDI 3000 with ID “Serial Number” is depleted and the main battery is critical. The system will send a new notification as soon as the main battery is depleted.
RDI 3000 “Serial Number” * The backup battery is CRITICAL, the main battery is DEPLETED. Please check manual for more information	The main battery of the RDI 3000 with ID “Serial Number” is depleted and the backup battery is critical. The system will send a new notification as soon as the backup battery is depleted.
RDI 3000 “Serial Number” * The backup battery is DEPLETED, the main battery is DEPLETED. Please check manual for more information	Both batteries of RDI 3000 with ID “Serial Number” are depleted.
RDI 3000 “Serial Number” * The backup battery is CRITICAL, the main battery has been REMOVED. Please check manual for more information.	The backup battery of the RDI 3000 with ID “Serial Number” is critical and the main battery has been removed. The system will send a new notification as soon as the backup battery is depleted.
RDI 3000 “Serial Number” * The backup battery is DEPLETED, the main battery has been REMOVED. Please check manual for more information.	The backup battery of the RDI 3000 with ID “Serial Number” is depleted and the main battery has been removed. The system will send a new notification as soon as the backup battery is removed.

13.3.2 Errors and Notifications - reminders

For the offline and safety related events a reminder system is introduced. The reminders are helpingthe user by reminding that there is an unresolved issue with a specific RDI 3000.

Battery notifications already have an implicit reminder system as the user is notified when the main or backup battery reaches critical and depleted levels.

NOTE
Reminders do not relieve the user of his responsibility to go immediately to the device to inspect it!

Please, always consult the Real Time Status for the up-to-date situation.

A reminder is sent after a 15-minute interval. A maximum of 3 reminders are sent for one continuously 'not ok'-situation. Reminders are only sent when the device is in active state (i.e.in an activated protection zone).

The reminder text messages are:

NOTIFICATIONS	EXPLANATION
Reminder: RDI 3000 "Serial Number" * is offline. Please check manual for more information	Reminder message when the deviceis offline and the device is in an activated protection zone.
Reminder: RDI 3000 "Serial Number" is NOT against the track. Please check the manual for more information	Reminder message when the device might have been removed from trackor moved to a different place or is not correctly installed.
Reminder: RDI 3000 "Serial Number" has a broken led group. Please check the manual for moreinformation.	Reminder message when the devicelight indication is not sufficient any longer.
Reminder: RDI 3000 "Serial Number" * Detonator state is NOT ok. Please check manual formore information.	Reminder message when the device cannot guarantee the detonator is ontrack.

13.4 Notifications RSS 3000

13.4.1 Errors and Notifications

Users with switching rights on a released project will automatically receive notifications via push notifications. Note the prerequisites to receive push notifications stated in chapter 13.1 .

Alerts from devices in activated protection zones will be sent via text messages (SMS). Users' mobile phone number is entered as alarm number within the user profile to enable this.

The notification service starts as soon as the RSS 3000 has been assigned to a project and the project is released. It is the responsibility of the recipient to act upon these notifications.

The notification notifications that require action are:

NOTIFICATIONS	EXPLANATION	ACTION
RSS 3000 “Serial Number“ * Detection NOT ok. Please check manual for more information	RSS 3000 with ID “Serial Number” is no longer creating a proper short circuit for the relay. The detection is not OK.	Check the device connector and cable to the Relay and replace if damaged. If this doesn’t solve the issue replace the device with another device and return for service.
RSS 3000 “Serial Number“ is offline. Please check manual for more information	RSS 3000 with ID “Serial Number” is offline. The RSS 3000 cannot make a connection to MTinfo 3000.	Check the power source of the RSS 3000 or check the Status page for network outage. If this doesn’t solve the issue contact Dual inventive.

13.4.2 Errors and Notifications - Reminders

For the offline and the detection safety related events a reminder system is introduced. The reminders are helping the user to remind that there is an unresolved issue with a specific RSS 3000.

NOTE

Reminders do not relieve the user of his responsibility to go immediately to the device to inspect it when receiving the first notification massage!

Please, always consult the Real Time Status for the up-to-date situation.

A reminder is sent after a 15-minute interval. A maximum of 3 reminders are sent for one continuously ‘not ok’-situation. Reminders are only sent when the device is in active state (i.e. in an activated protection zone).

The reminder text messages are:

NOTIFICATIONS	EXPLANATION	ACTION
Reminder: RSS 3000 “Serial Number“ * Detection NOT ok. Please check manual for more information	Reminder message when the detection is not ok and the device is in an activated protection zone.	Check the device connector and cable to the Relay and replace if damaged. If this doesn’t solve the issue replace the device with another device and return for service.
Reminder: RSS 3000 “Serial Number“ is offline. Please check manual for more information	Reminder message when the device is offline and the device is in an activated protection zone.	Check the power source of the RSS 3000 or check the Status page for network outage. If this doesn’t solve the issue contact Dual inventive.