ActiveMap Mobile iOS user manual 11.8 (5.48) on iOS

Activemap Computer Systems Design

May 22, 2025

CONTENTS

CHAPTER

ONE

GENERAL INFORMATION

1.1 Application information

ActiveMap Mobile is a part of the ActiveMap applied software suite for automated control of field employees, as well as for performing works at service objects (hereinafter referred to as the System).

ActiveMap is an online system for organizing the interaction between field workers and the dispatcher (task coordinator). The system helps to plan and manage the production work and to operationalize quality control of field services.

Capabilities of ActiveMap:

- Flexible customization to meet the needs of the company.

You can adapt ActiveMap to any business process. A list of work types, steps and deadlines can be set up for each organization cluster.

- Adding tasks and controlling their execution.

The system allows users to add operational and planned tasks, including scheduled tasks on a given template.

- Object inventory.

ActiveMap helps to carry out an inventory of objects: update information on the status of existing objects, identify nonexistent, and to create new ones.

- Control of field employees.

The system helps to control employees with real-time tracking of their location, viewing the history of their movement, and recording the execution of requests.

- Convenient and quick interaction between field employees and work coordinators.

ActiveMap speeds up the process of exchanging results between the field employee and the work coordinator. The coordinator can promptly update task information, which is immediately communicated to the field employee. The coordinator can also quickly return the task to the fieldworker for execution based on the results of the fieldwork.

- Using photo and video fixation materials and GPS data.

The system can verify that tasks were carried out using photos, video recordings, and location data. This avoids the necessity of field inspection of executed orders.

- User rights configuration.

The system enables the configuring of user rights. Each user is assigned a certain role. The role of the system user determines access to the list of tasks, rights to edit and manage these tasks. The roles vary from simple executors to the administrator of the entire system.

- Displaying service objects on a map.

ActiveMap allows users to create tasks based on service objects with the automatic filling out of coordinates and task fields.

- Creating electronic documents.

The system allows users to create reports on the work with tasks and user activity based on the document form of the organization, as well as invoices issued by field employees.

More information about the comprehensive capabilities of the ActiveMap system can be found on the website of the Activemap Computer Systems Design company https://activemap.me/.

ActiveMap Mobile is a mobile application for the IOS operating system. It implements the client part of the task management module of the ActiveMap software suite. ActiveMap Mobile allows setting tasks and monitoring the status of their execution. The application helps to coordinate the work of office and field staff, which increases the efficiency of mobile workers.

ActiveMap Mobile capabilities (Fig. 1.1):

- **Real-time data collection.** Workers send photos and videos from event locations to the dispatcher. The files are georeferenced and show where the footage was taken.
- **Tasks.** Mobile workers receive tasks through the app. The dispatcher sends tasks and monitors their execution. Quick assignment of tasks increases the productivity of mobile teams.
- **Interactive maps.** ActiveMap Mobile provides access to corporate maps. The application works with data layers. Layers are georeferenced data sets. Companies mark real estate objects, clients, communications, and more on them. Everything that is outside the office and is of interest to the company is added with tags to the map.
- **Data Analysis**. ActiveMap Mobile allows generating statistics and reports on the effectiveness of employees' work.

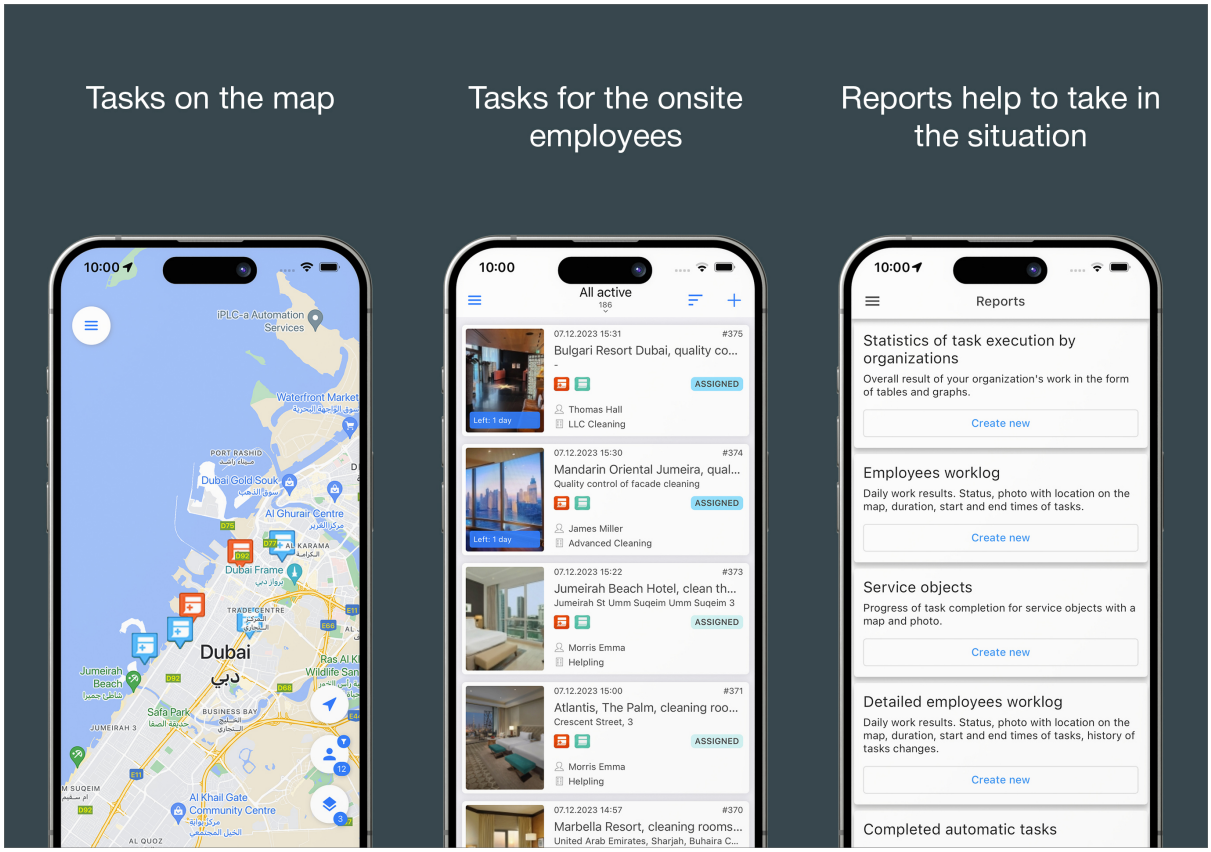


Fig. 1.1: ActiveMap Mobile capabilities

The ActiveMap Mobile application is designed to accomplish the following tasks:

- Prompt receipt and execution of tasks with the necessary information specified (location, photo angles, deadline, work description, checklist, etc.);
- Offline work[1];
- Real-time task creation and assignment to employees;
- Generation of reports to control the efficiency of employees' work;
- Control of employee location and ability to track removal from the area of responsibility in real time;
- Distribution of planned tasks among employees using schedules with the ability to make real-time changes;
- Invoice generation.

[1] The application allows users to add and save tasks on the mobile device without Internet access. Sending user tasks to the server and viewing the tasks registered on the server is possible only when the Internet is available.

1.2 Software and hardware requirements

The application works on mobile devices with iOS 15.0 and above, iPadOS 15.0 and above, iPod touch iOS 15.0 and above, macOS 12.0 and above and a Mac with an Apple M1 chip or newer. The following is required to work in the ActiveMap Mobile:

- Internet connection[1];
- availability of a built-in camera;
- permission to access:
  - camera and media files of the device;
  - device location;
  - personal information (email address, user IDs, phone number);
  - files and documents;
  - application and performance information;
  - user device IDs.

The permissions for the ActiveMap Mobile application can be expanded after each update. You can find more information about permissions on the application page https://apps.apple.com/ae/app/activemap/id1663628805.

1.3 Installing the app

> **Attention:** If you have a link to ActiveMap Mobile from the administrator of your organization, you can directly access the application in App Store. After installation, the application opens and automatically logs in to the user account.

To install ActiveMap Mobile on iOS devices, open the App Store and use the app search form to find ActiveMap Mobile. After clicking “Install”, the ActiveMap Mobile download process starts on the device (Fig. 1.2).

[1] The application allows users to add and save tasks on the mobile device without access to the Internet. Sending user tasks to the server and viewing the tasks registered on the server is possible only when the Internet is available.

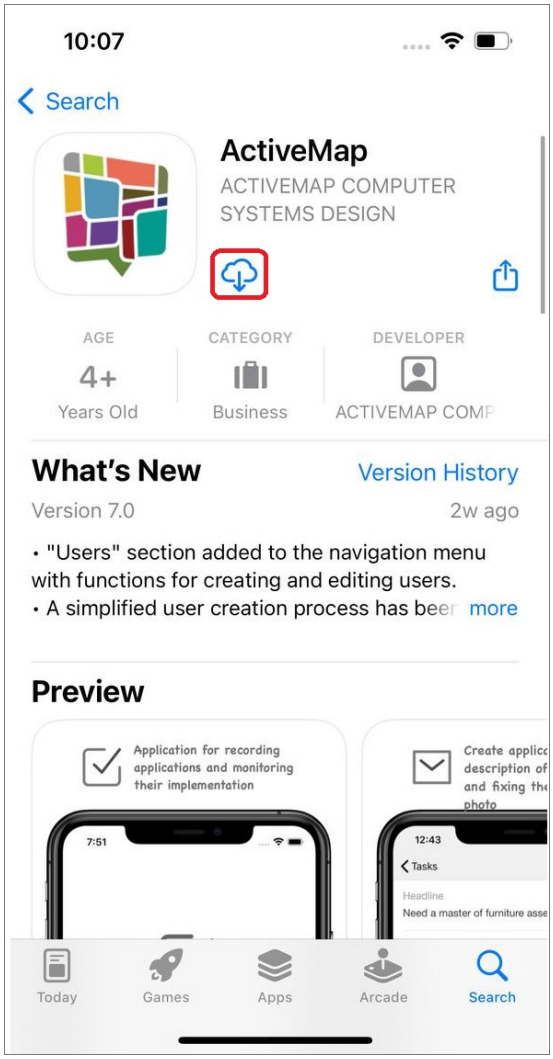


Fig. 1.2: Application in App Store

Once the download process is completed, the ActiveMap Mobile launch shortcut appears on your device (Fig. 1.3).

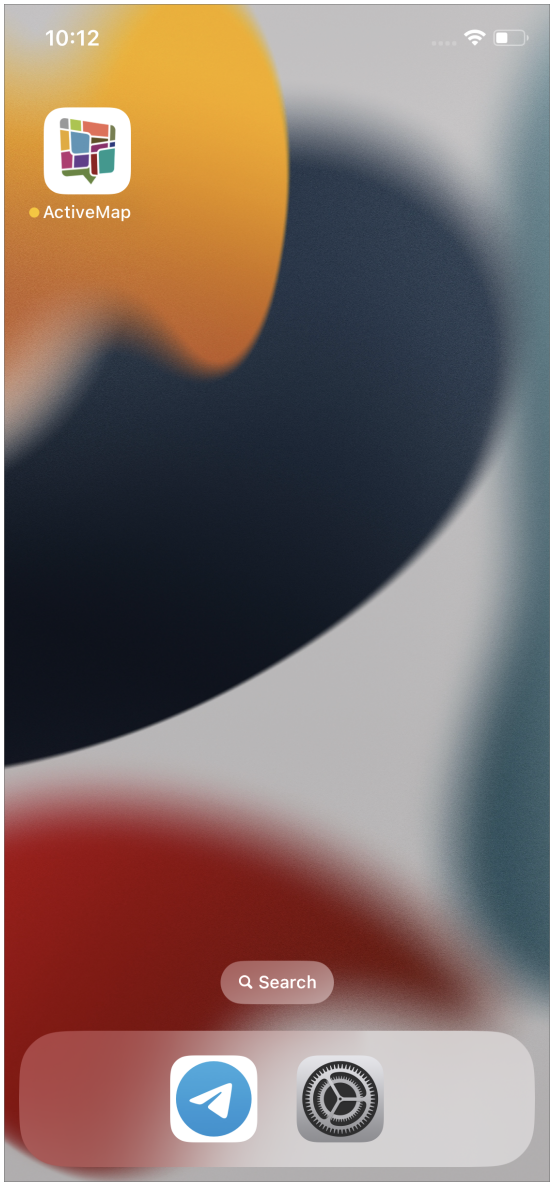


Fig. 1.3: ActiveMap Mobile shortcut on a mobile device screen

CHAPTER

TWO

WORKING IN THE APP

2.1 Authorization and account management

2.1.1 Getting started

Use the application shortcut to run the ActiveMap Mobile. After launching, an information window appears on the screen.

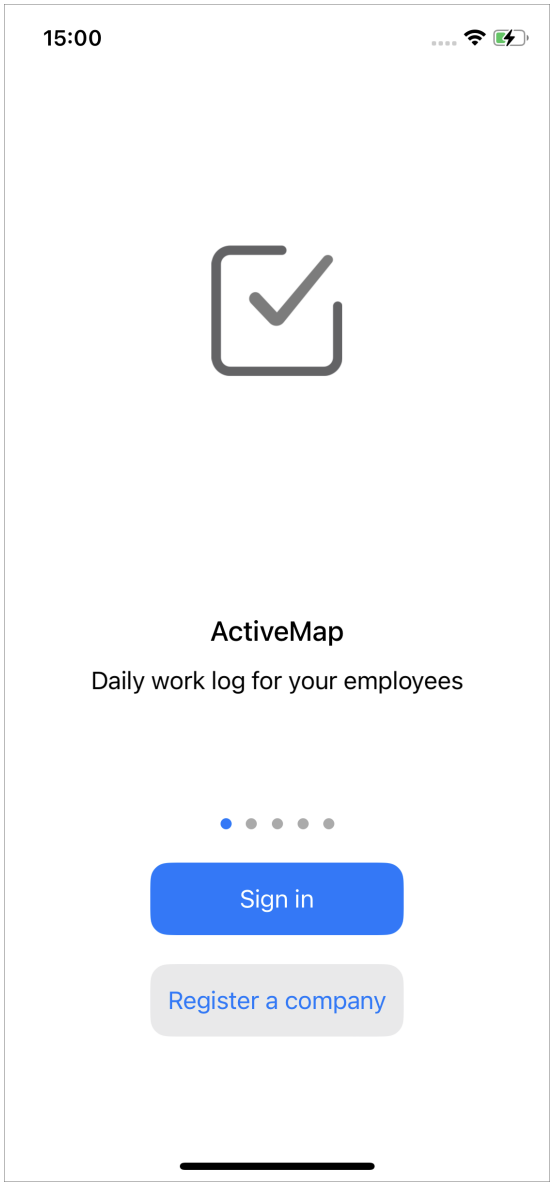


Fig. 2.1: Getting started window in the ActiveMap Mobile

User registration in the application is the creation of an account or several accounts on a common server. After completing the registration, follow the link received. The application automatically authorizes under the user account.

2.1.2 Registration of the company and employees in the application

Click “Register a company” and follow the suggested steps to register in the app (Fig. 2.1). To register a company, enter the company’s name, your name, phone number or e-mail (Fig. 2.2). By default, an organization is created with the following settings:

- Business area: Other services.
- Types of work: Worklog.
- I want to see location of employees on the map: Yes.
- I want tasks for employees to be created automatically according to the schedule: No.

- Accounts for colleagues will be created later.

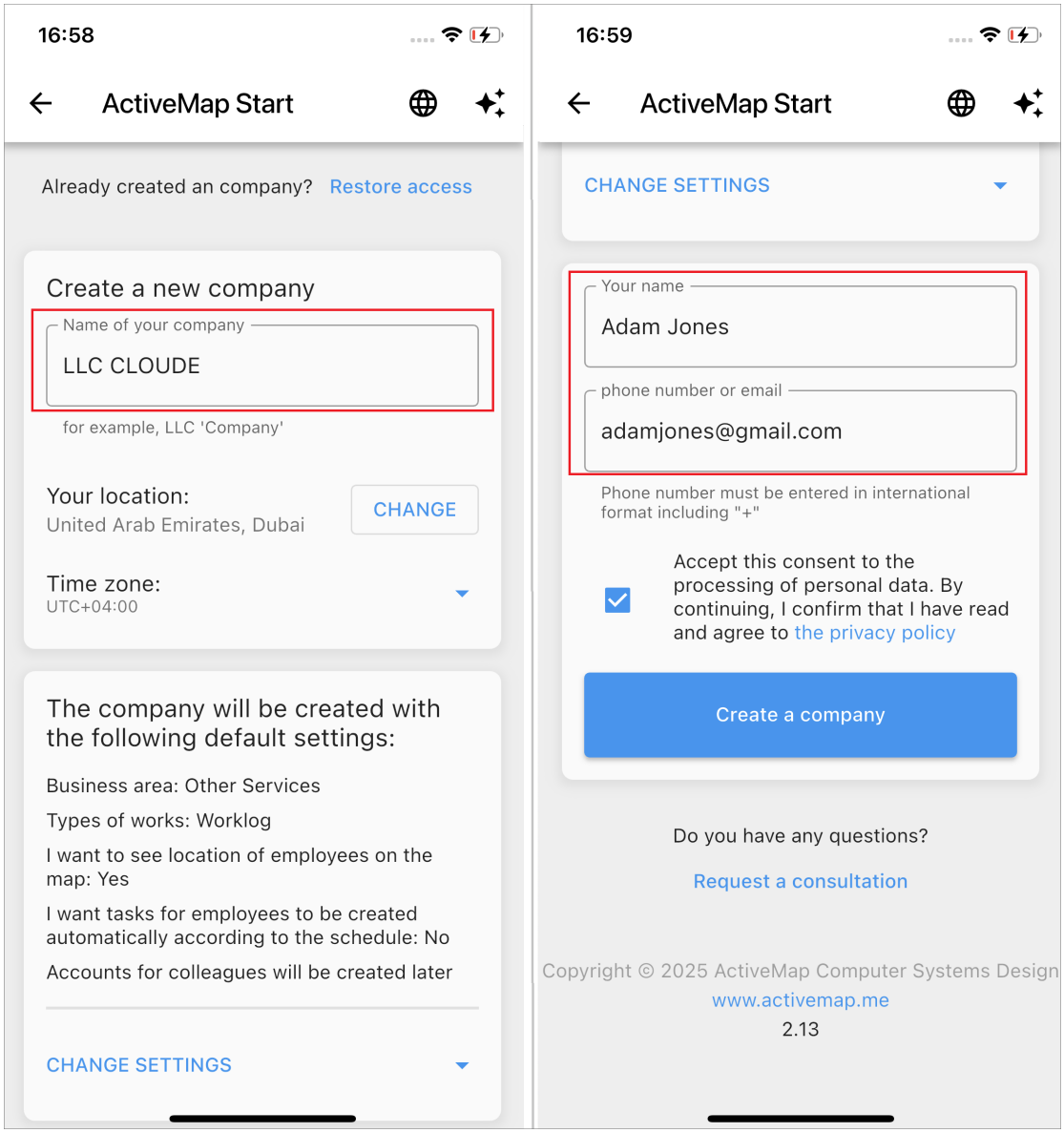


Fig. 2.2: Company registration in ActiveMap

There is also an extended version of the registration, where you can change the business area, add types of work, and create accounts for employees. You can skip the step of creating accounts for employees, as the system setup wizard opens after the organization is created in the system (Fig. 2.3).

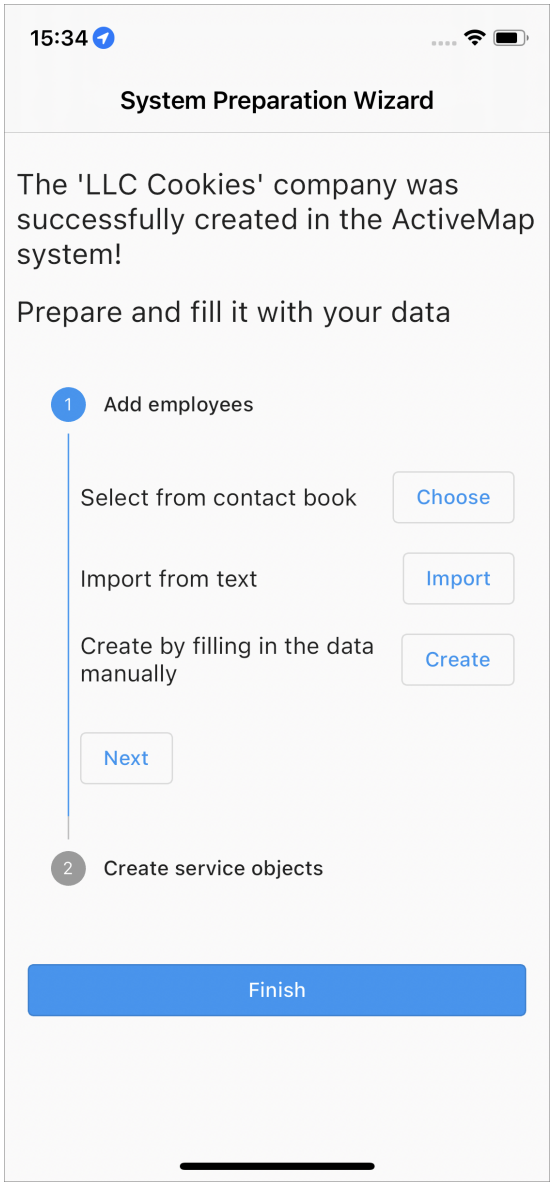


Fig. 2.3: System setup wizard

The first step is to create employees. The wizard offers three options for creating employee accounts in the system:

- Select from the user's device contact book.
- Import from text.
- Create by filling in the data manually.

Selecting from the contact book is an import from the contacts on the user's device. You must grant permission for the application once to access the contacts. In the wizard window, click "Select", then select all the contacts to import, and click "Done" (this button displays the number of contacts to import). In the import window, click "Create". You will see a message that the import is completed. The invitation links for employees will become available (Fig. 2.4). Employees can use these links to log in to the application without entering a server and login/password.

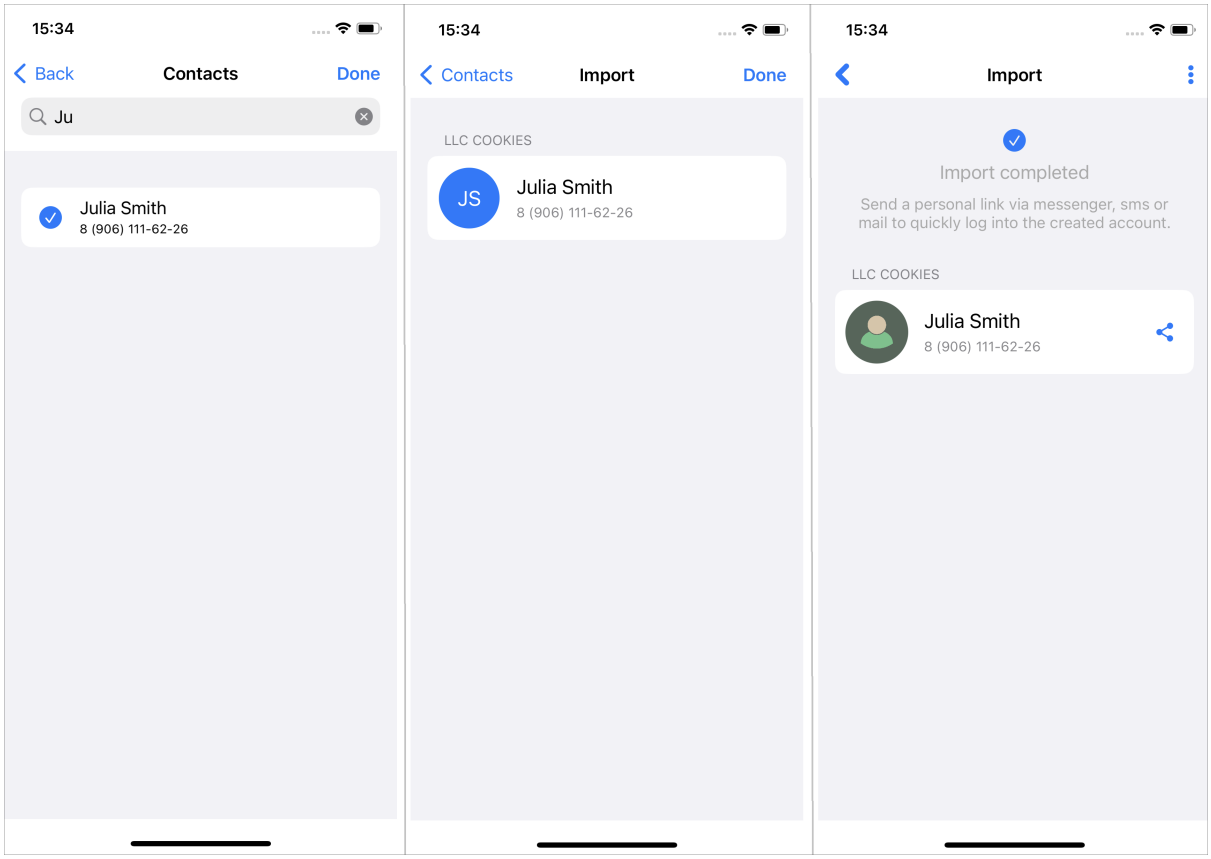


Fig. 2.4: Creating employee accounts from the phone book

Import from text is the creation of employee accounts by entering them into a text window (Fig. 2.5). The separator between employees is a line break.

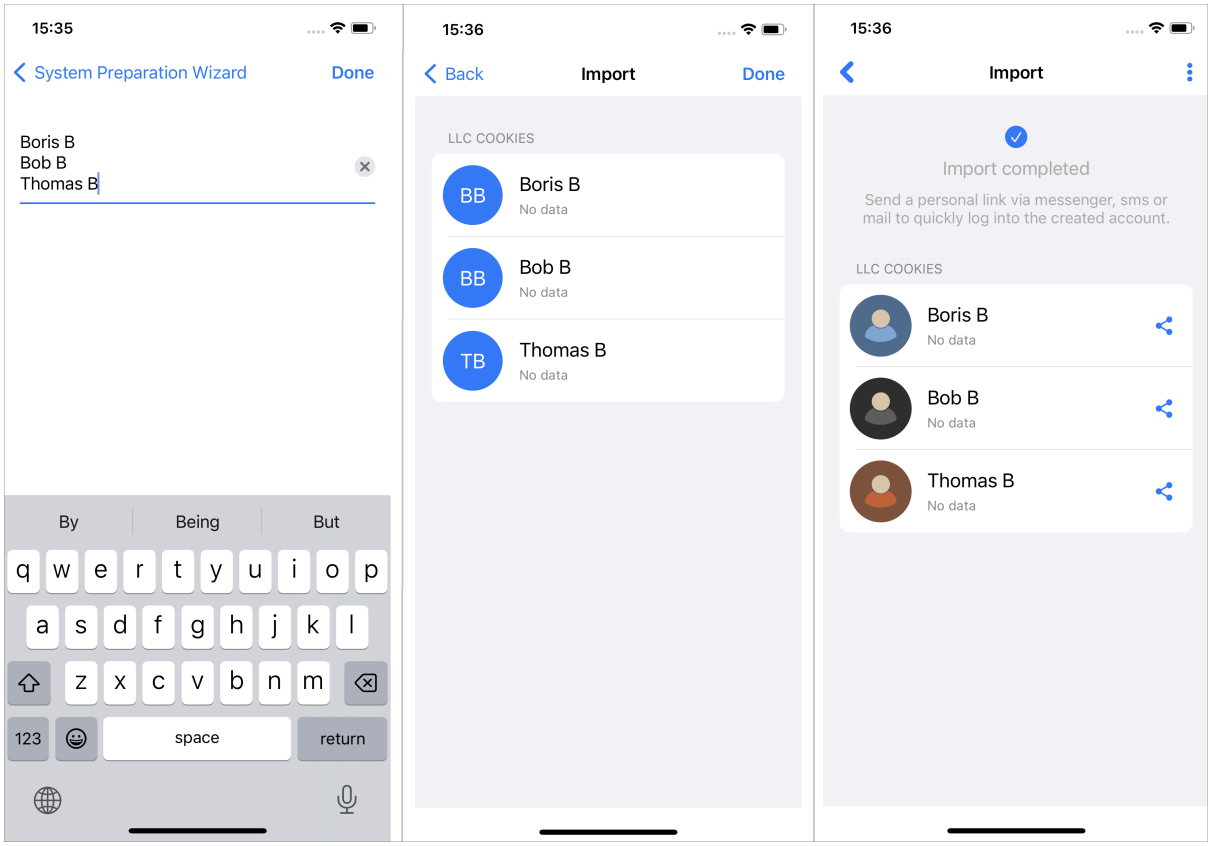


Fig. 2.5: Creating employee accounts from text

Creating accounts by filling in the data manually is the standard way of creating an account for each individual employee (Fig. 2.6).

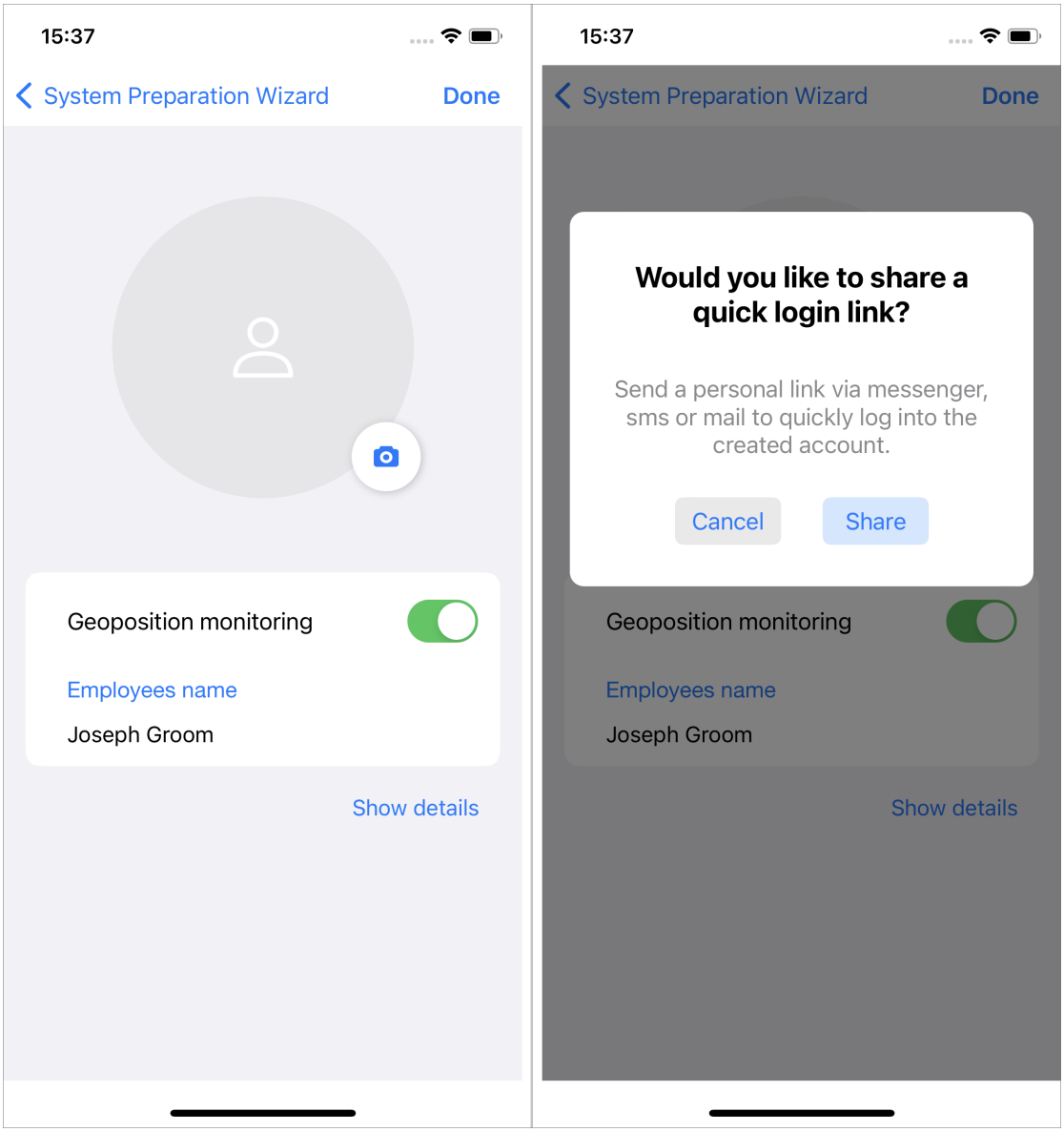


Fig. 2.6: Creating an employee account

The second step is to create service objects. To proceed to the second step, click “Next” and select the method of creating service objects: using import or creating each object individually (Fig. 2.7).

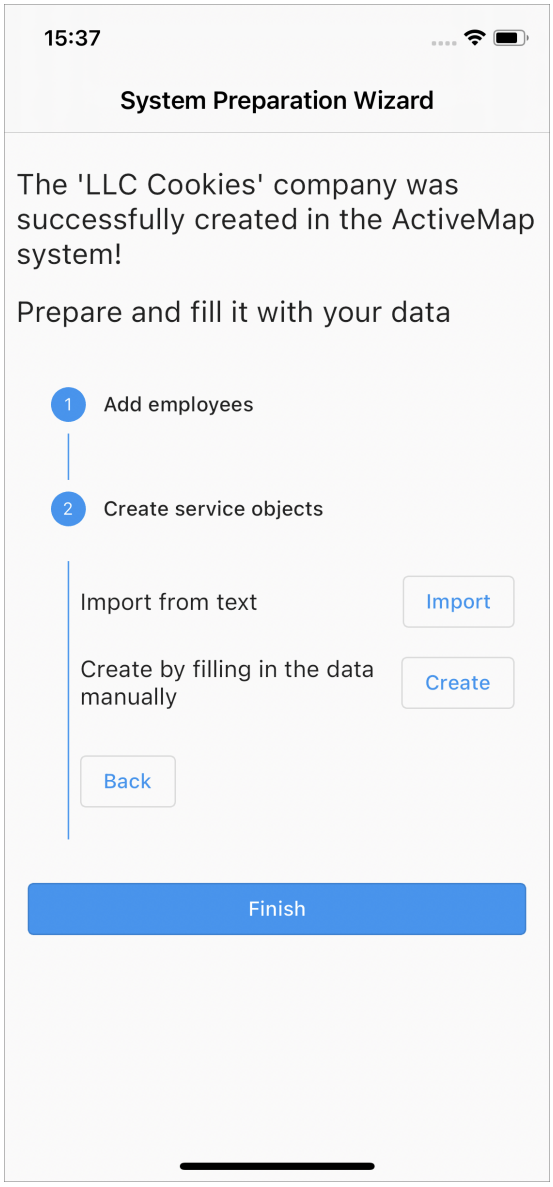


Fig. 2.7: Creating service objects

When importing service objects, a window for mass creation of objects opens. Here you specify the names of the service objects (Fig. 2.8). You can set the separator between objects by clicking on the gear. The default one is a line break.

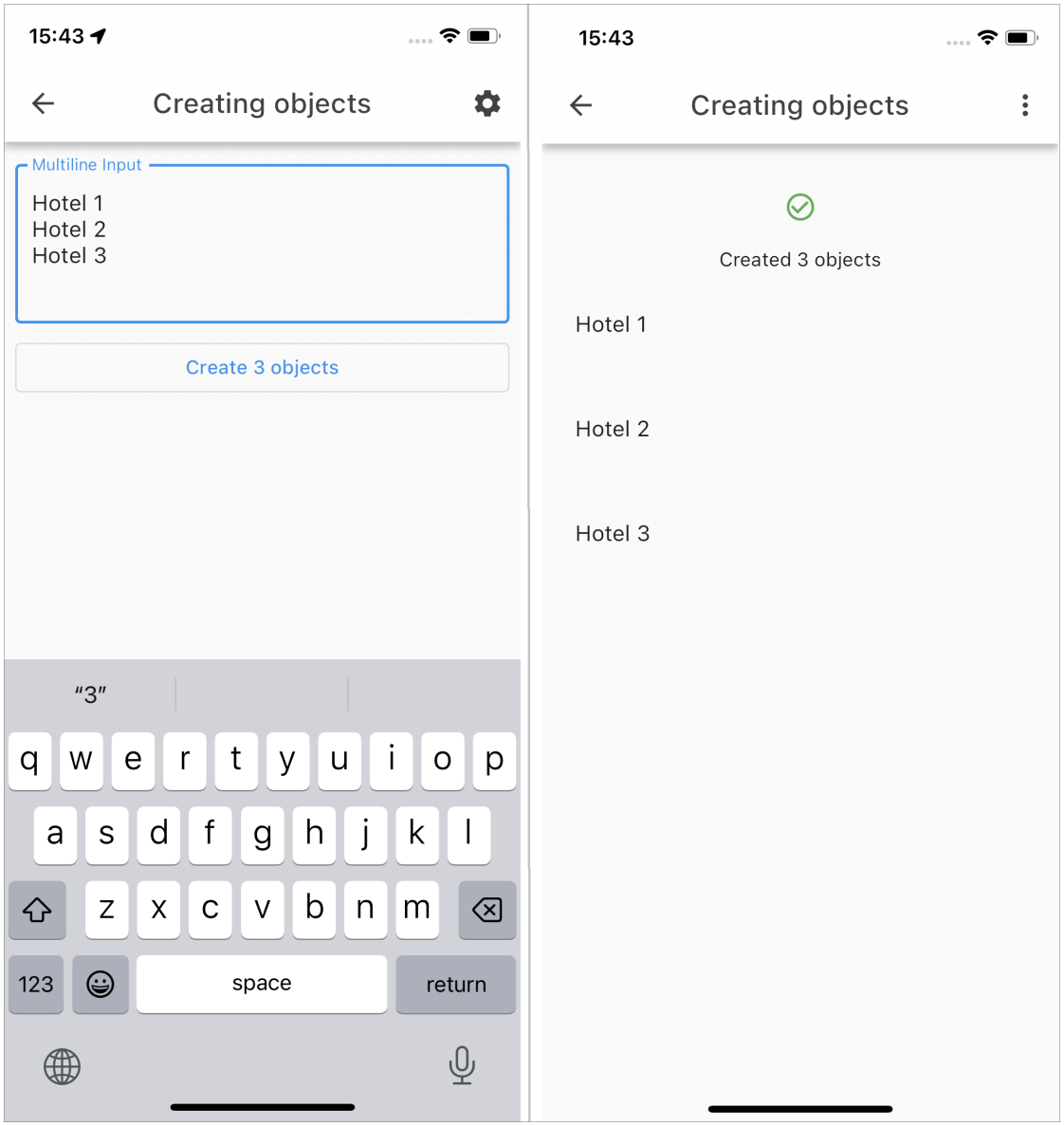


Fig. 2.8: Importing service objects

To create objects individually, click “Create”. The object creation window opens. Here you can add the location of the object in addition to the name. By default, the “Coordinates” section shows the user’s current coordinates. You can change them by specifying the exact location of the object being created (Fig. 2.9).

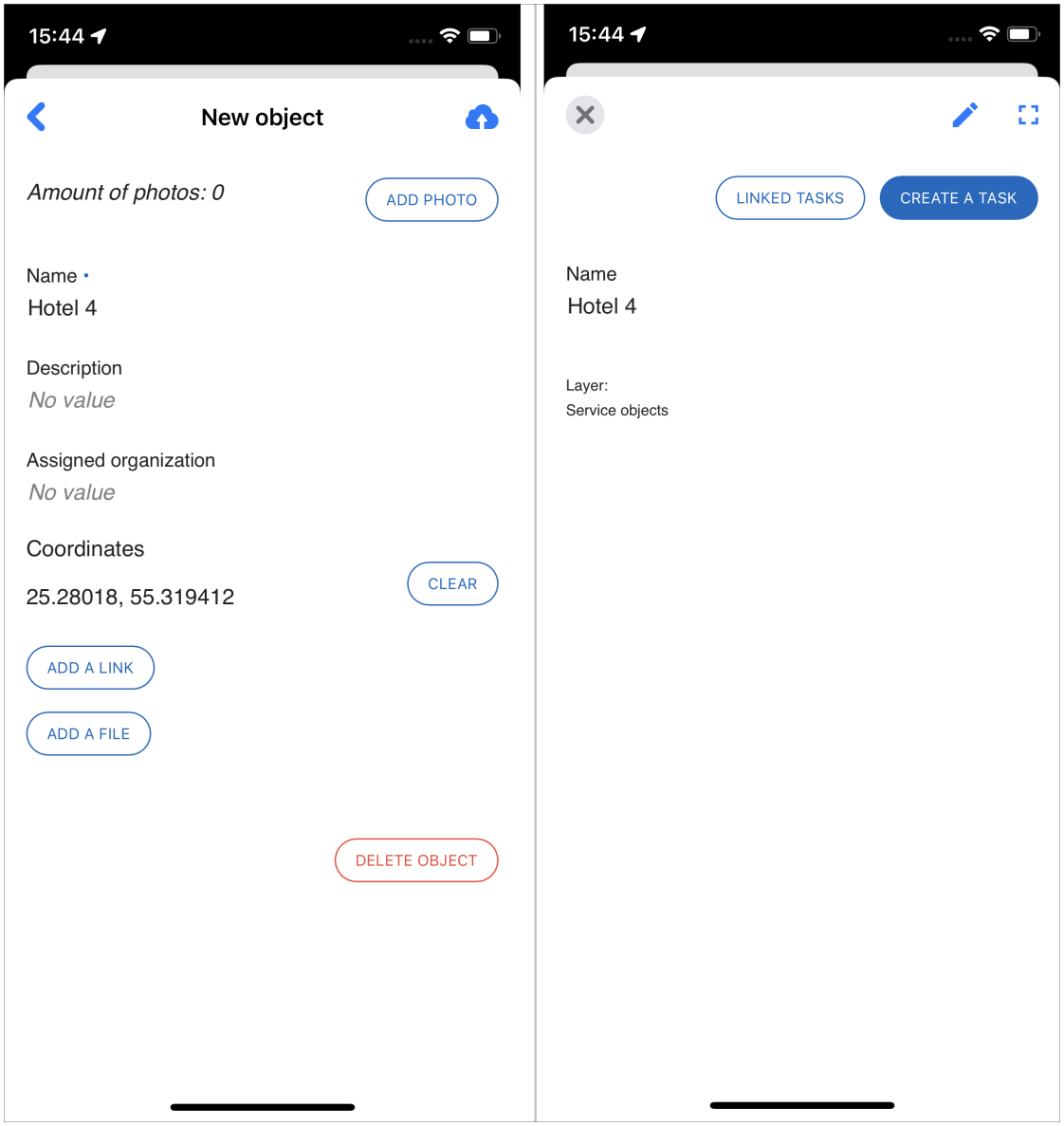


Fig. 2.9: Creating a service object

Click “Finish” to complete the system configuration. The ActiveMap Mobile application opens with already created tasks for all created users (Fig. 2.10).

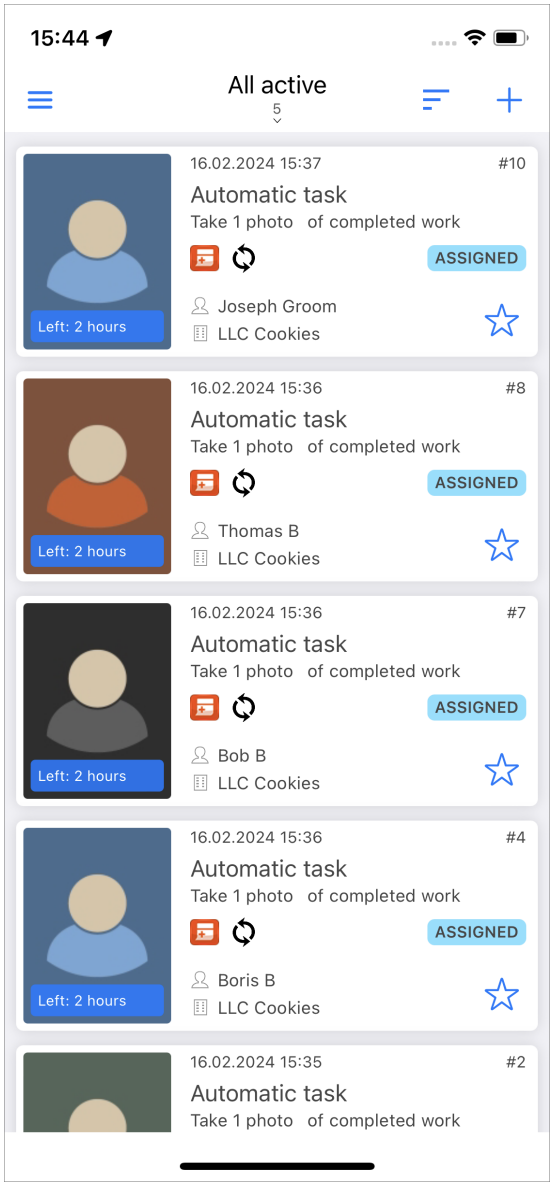


Fig. 2.10: List of tasks for employees

You can read our privacy policy in the get started window: https://app.activemap.me/policies-privacy-en/. Please read our privacy policy carefully to know what information we collect and for what purposes we use it.

If anything remains unclear, you can request a consultation. Our staff will do their best to assist you. To do this, click “Request a consultation”, fill in the form, and click “Send” (Fig. 2.11).

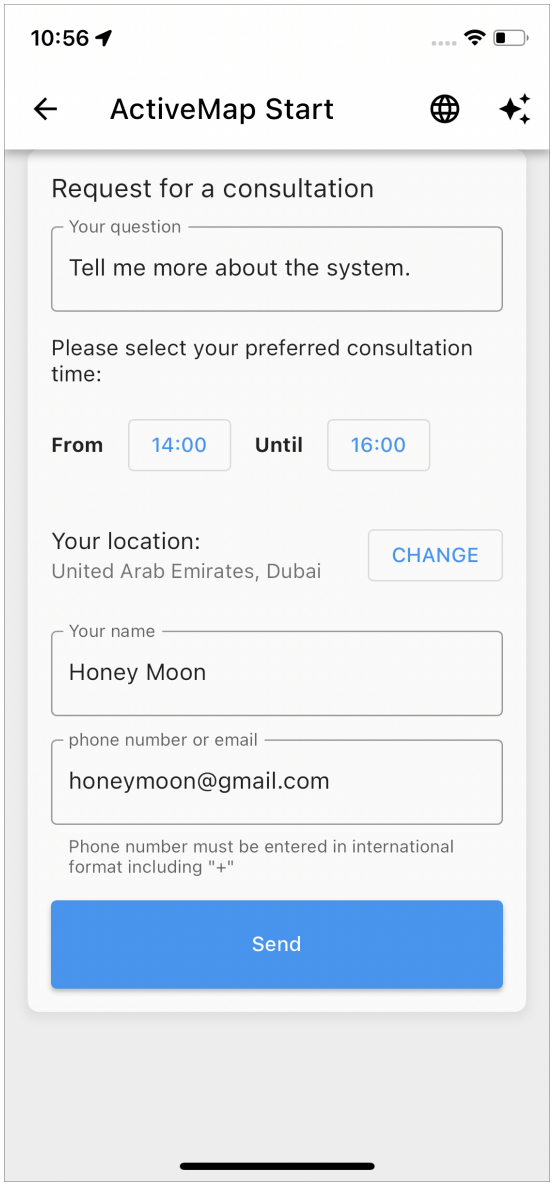


Fig. 2.11: Consultation request form

2.1.3 Authorization

To add and view tasks, log in to the ActiveMap Mobile application. Authorization is possible only for registered users.

Attention: Unregistered users have no access to the System.

If there is a link to the ActiveMap Mobile, the application is automatically authorized under the user account after launching. Accept the invitation (Fig. 2.12) to get started.

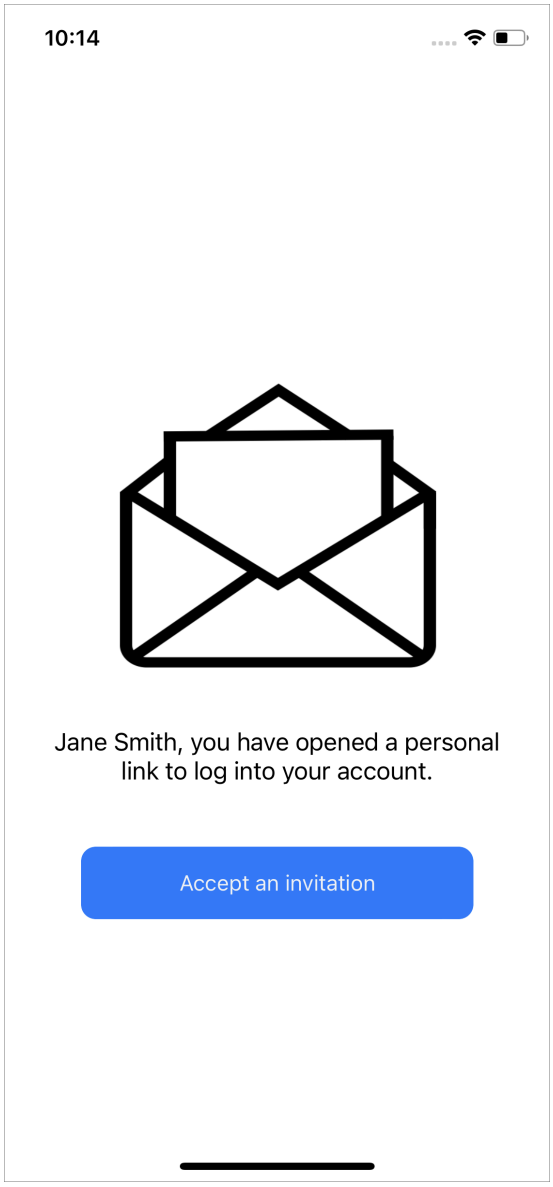


Fig. 2.12: User's personal link invitation

When following a link from an organization, registration and authorization is done by phone number. In this case, an account with the "Executor" role is created.

For standard authorization after starting the application, click "Sign in" and enter the server address in the opened window (Fig. 2.13), then click "Continue".

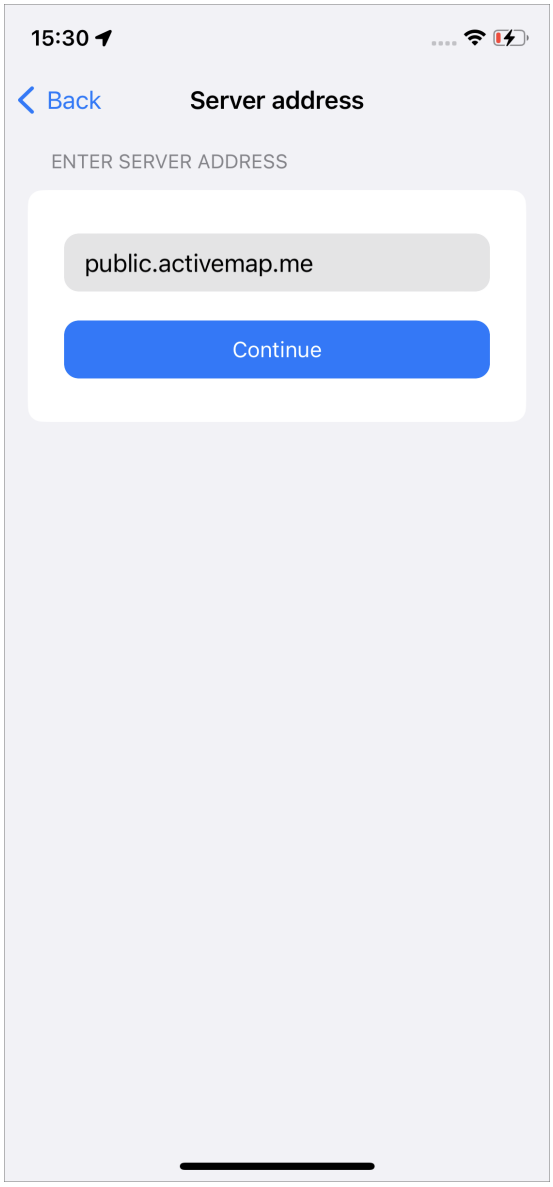


Fig. 2.13: Window for entering server address

In the next window enter login and password (Fig. 2.14) and click “Continue”.

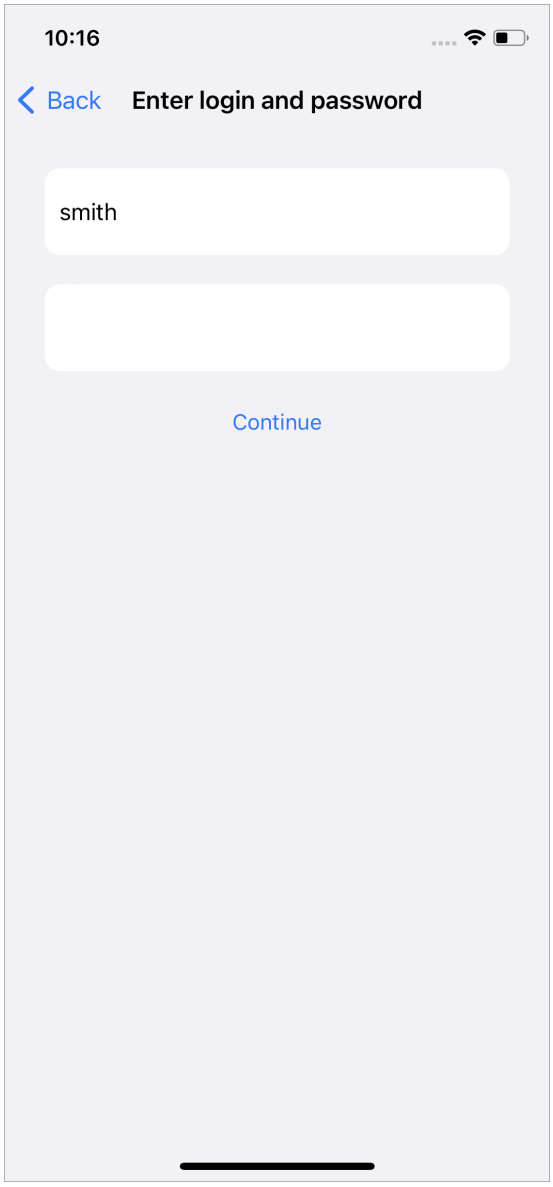


Fig. 2.14: Window for entering login and password

“Server”, “Login”, and “Password” fields are mandatory. If you try to login to the ActiveMap Mobile without entering this parameters, the application displays a message asking you to fill in the fields.

After authorization in the ActiveMap Mobile a window with a list of tasks opens (Fig. 2.15).

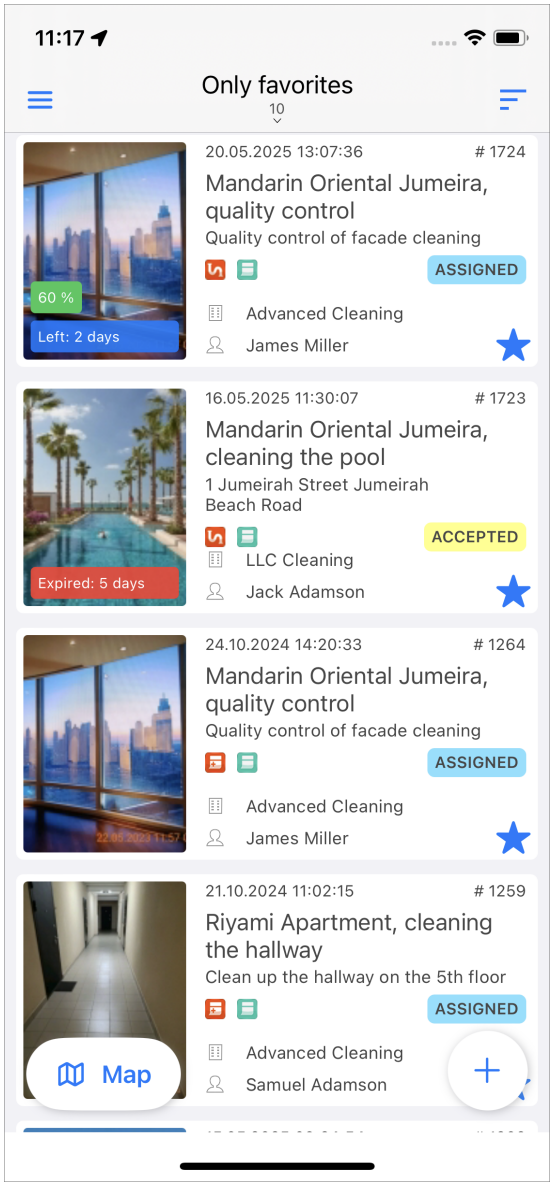


Fig. 2.15: Displaying the task list

To work in the ActiveMap Mobile under another account, click “Logout” to log out of your current account. The “Authorization” window opens. Here you can view the list of servers and all the added accounts. To authorize in the ActiveMap Mobile with the saved accounts, click on the desired one. Click ⊗ to remove an account (Fig. 2.16).

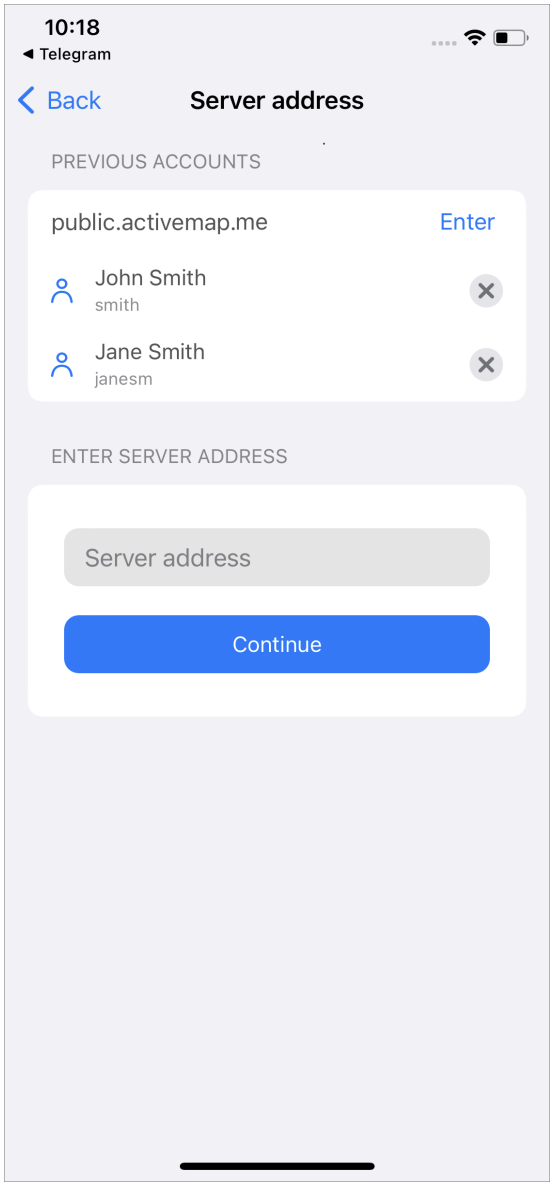


Fig. 2.16: List of saved accounts

2.1.4 Account management and roles in the system

To view user data, go to the navigation sidebar by clicking ☰. The basic user data (Fig. 2.17) is displayed at the top of the window:

- Full name
- Organization
- Server address
- Current monitoring status indicator

The green color of the indicator means that the geolocation is enabled on the device and monitoring is enabled in the application. The red color of the indicator means that the ge-

olocation is disabled on the device and monitoring is enabled in the application. The grey color of the indicator means that geolocation monitoring is disabled in the application, regardless of the geolocation settings on the device.

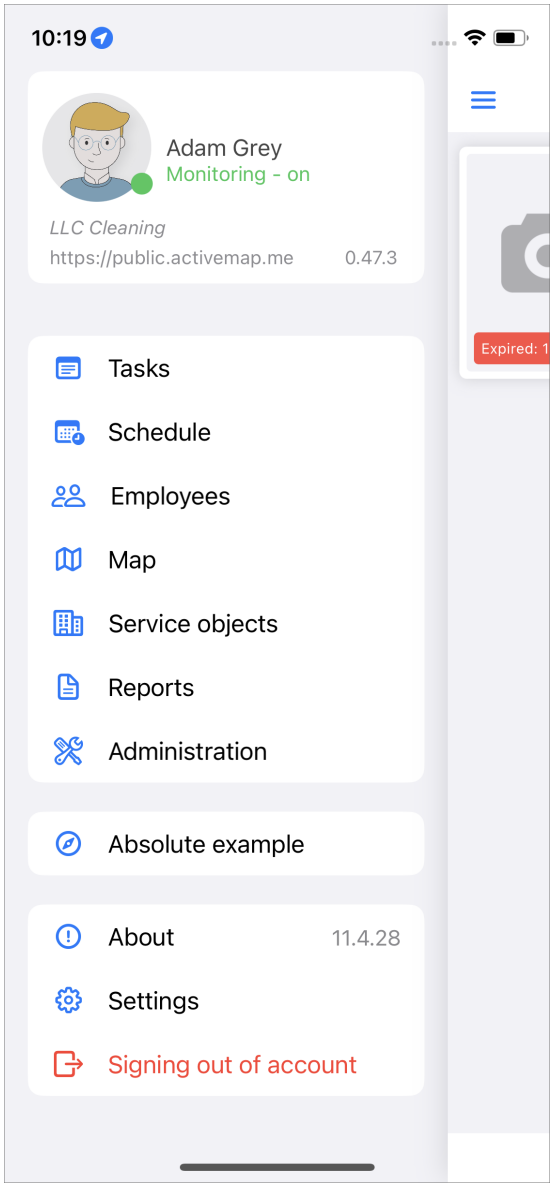


Fig. 2.17: Navigation sidebar, displaying basic user data

Clicking on the user's card takes you to the "My Profile" section. Here you can see the following user data (Fig. 2.18):

- User photo
- Full name
- Tags
- Phone number
- Email
- Login

- Role in the system
- Main organization
- Additional organizations (if any)
- Personal link

In this window you can also edit some of your user data by clicking .

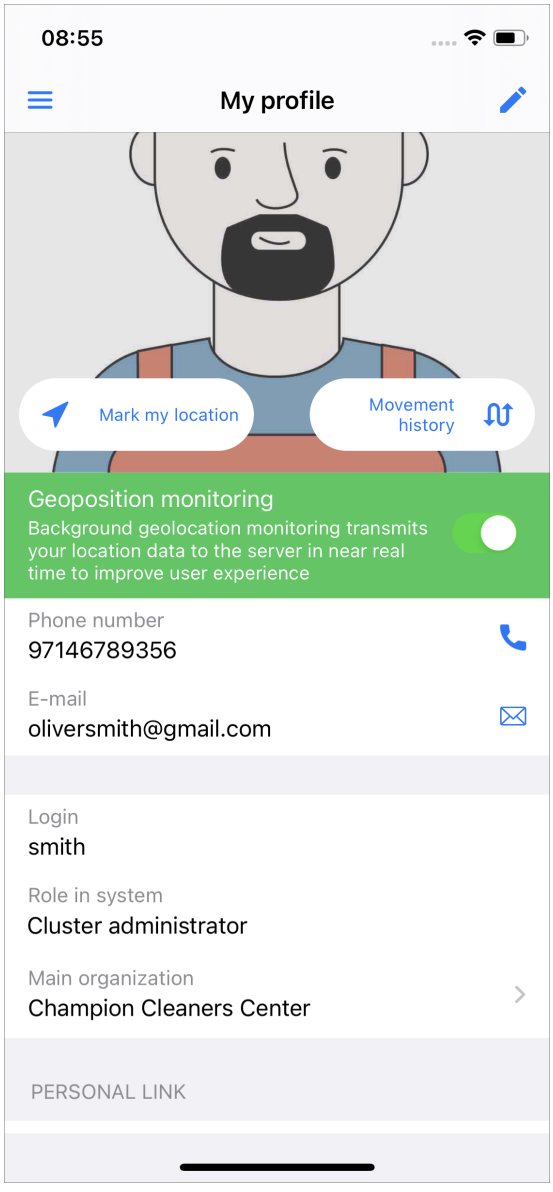


Fig. 2.18: Displaying user data

You can edit the following user data by clicking :

- Photograph
- Login
- Full name
- Phone number

- E-mail
- Password
- Main organization
- Tags

You can edit the main organization if you have the appropriate rights.

Click “Done” to save the changes. Some of the profile data in the current session (login, role) remains unchanged in the interface until the next authorization.

The ability to change certain user data depends on the role. Inspectors and executors can only change their passwords. Users with administrator roles are able to add tags to users. However, only users with the System Administrator role can add new tags and edit existing ones.

You can also delete your account in the profile editing window. This option is not available by default, you have to activate it in the ActiveMap settings. Once you delete an account, all its links to the created tasks are lost. Even if you create a user with identical data, the connection cannot be restored as it is a new user for the system.

You can turn on/off background monitoring of geolocation in the user card window. Furthermore, you can refine your location using the “Mark my location” button. Clicking the button opens a map window showing the user’s location (Fig. 2.19). To move the location mark to the actual location, click  . If the location has been successfully determined, the marker turns green and a confirmation button  appears in the window. Click it to save the coordinates and return to the user card window. If the location detection is unsuccessful, the mark turns grey and a message appears at the bottom of the window indicating that location services are waiting for a response. If there is a large error in determining the location, the mark turns red and a message appears indicating that the permissible error has been exceeded.

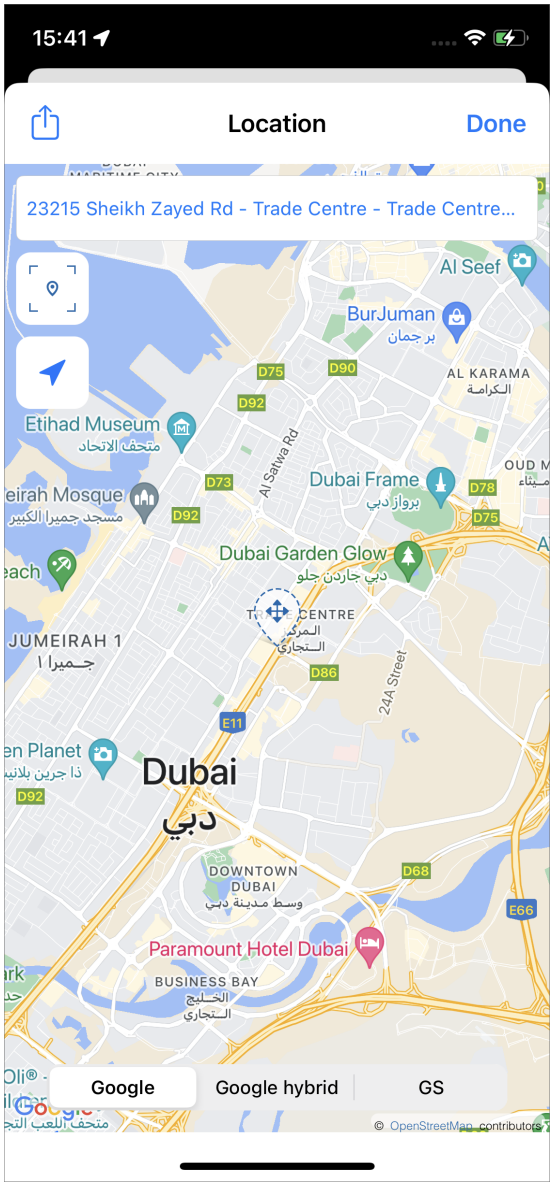


Fig. 2.19: User location

In the “My Profile” section, you can also view the user’s movement history. To do this, click “Movement history”. A window with a map and a movement track opens (Fig. 2.20). At the top of the window, there is a calendar for selecting the day and a slider defining the time interval within which the movements are displayed. At the bottom of the window, there is a slider. It highlights individual track points as you move along it, indicating when the coordinates and address of that point were received.

To display user movement history as a list, click  . The window switches to list mode, showing the time, geopositioning events, and user location addresses (Fig. 2.21).

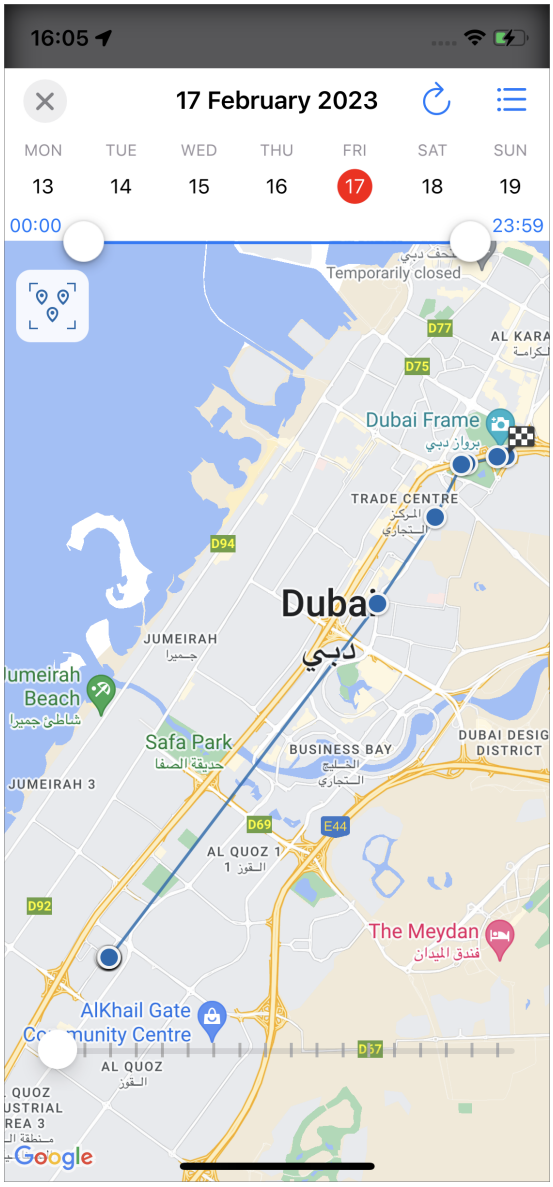


Fig. 2.20: Movement history displayed as a track

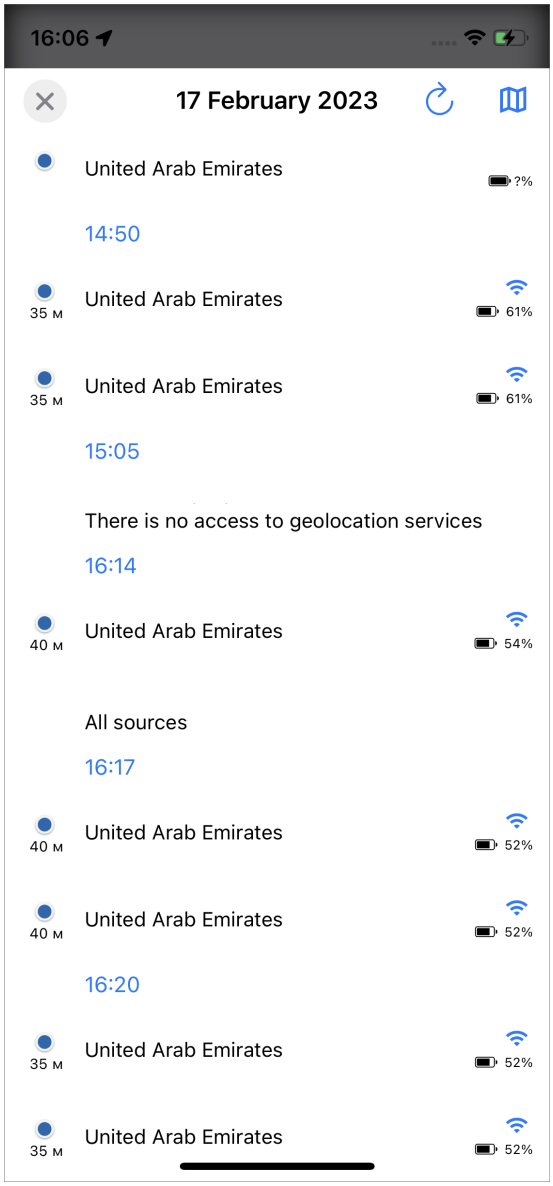


Fig. 2.21: Movement history displayed as a list

Administrators assign the roles when creating user accounts. They differ from each other in the set of actions they can perform in the ActiveMap system components.

- The **"System Administrator"** is responsible for the system configuration, including the management of clusters, organizations, users of all roles, contracts, directories, and for the distribution of access rights to the different layers and reports.
- The **"System Inspector"** manages the tasks of all clusters.
- The **"Cluster Administrator"** is responsible for administration of one or more specified clusters, namely: managing organizations and users, granting access rights to layers and reports, and managing tasks.
- The **"Cluster Inspector"** manages the tasks of one or more specified clusters.
- The **"Organization Administrator"** is responsible for administering the organization, namely: creating users, granting access rights to layers and reports within the organization, and managing tasks of the organization.

- The **“Organization Inspector”** manages the tasks of the organization.
- The **“Executor”** creates new tasks and executes the assigned tasks in the System.

All user roles can be configured to view, edit, and manage layers. All roles can create and upload layers.

2.2 Application interface

2.2.1 Navigation sidebar

To open the navigation sidebar, click ☰ in the upper left corner of the task management window. The navigation sidebar consists of the following sections (Fig. 2.17):

- “My profile” – information about the account the user is logged in.
- “Tasks” – task management window opening.
- “Schedules” – creation of planned tasks according to a template. The section is available under the roles of administrators and inspectors (*Working with schedules* (page 121)).
- “Employees” – user management. The section is available for the roles of administrators and the System Inspector (*User management* (page 70)).
- “Map” – displaying tasks, layers, and user locations on a map.
- “Service objects” – the list of service object layers.
- “Reports” – generating and viewing reports created in the ActiveMap web system. The section is available under the roles of administrators and inspectors (*Working with reports* (page 134)).
- “Administration” - setting up basic task parameters (*Administration* (page 124));
- “Settings” – configuring the ActiveMap Mobile application parameters.
- “About” – displaying information about the ActiveMap Mobile application.
- “Exit” – logging out from the user account.

2.2.2 Task management window

Task management window allows you to perform the following actions:

- View tasks created on the server.
- Add new tasks and send them to the server.
- Modify tasks and send changes to the server.

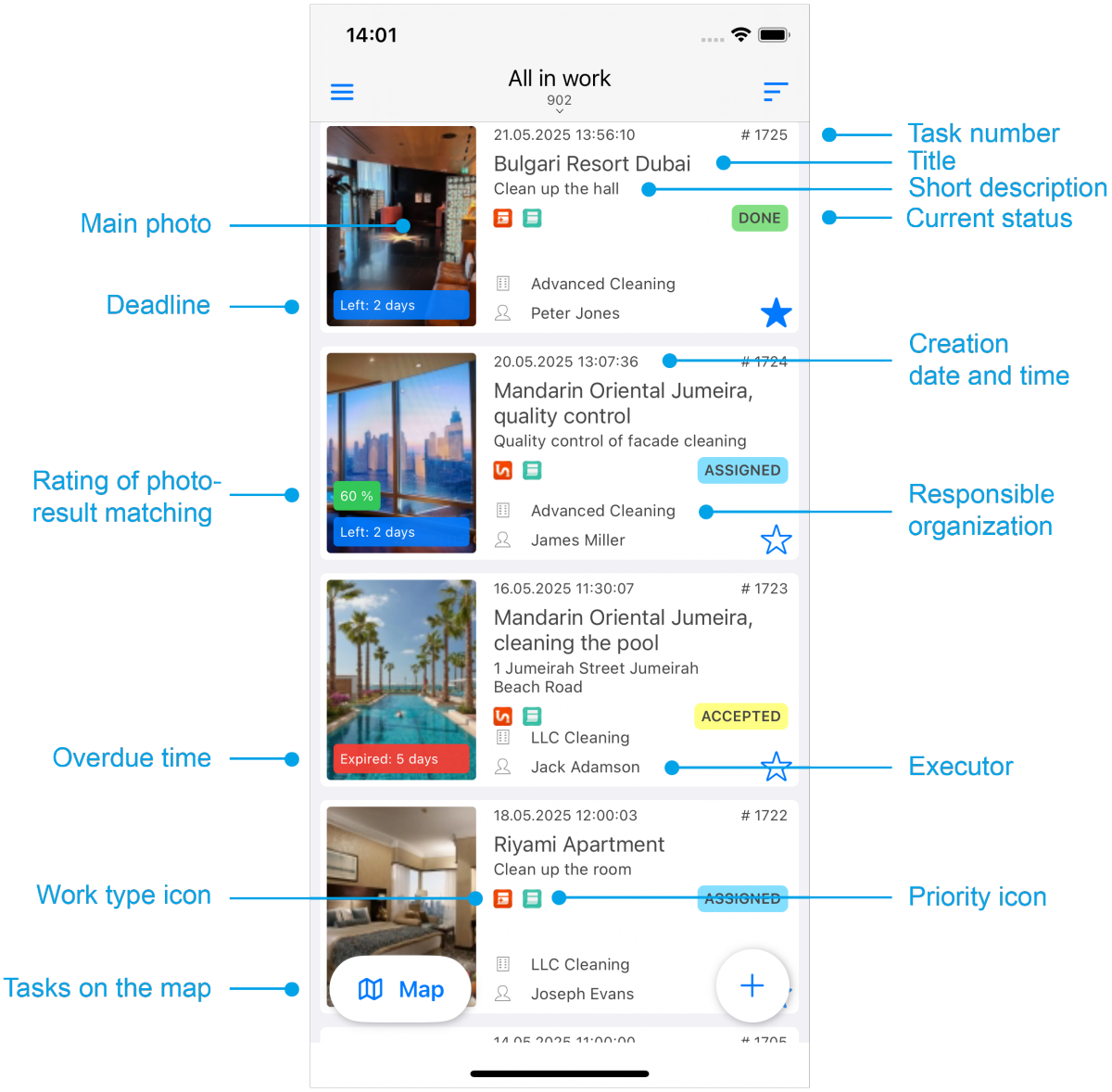


Fig. 2.22: List of tasks created on the server

You can see the following buttons at the top of the task list window (Fig. 2.23):

1. Filter  (Fig. 2.24).
2. Sorting  (Fig. 2.27).
3. Creating task  (Fig. 2.30).
4. Task map  .

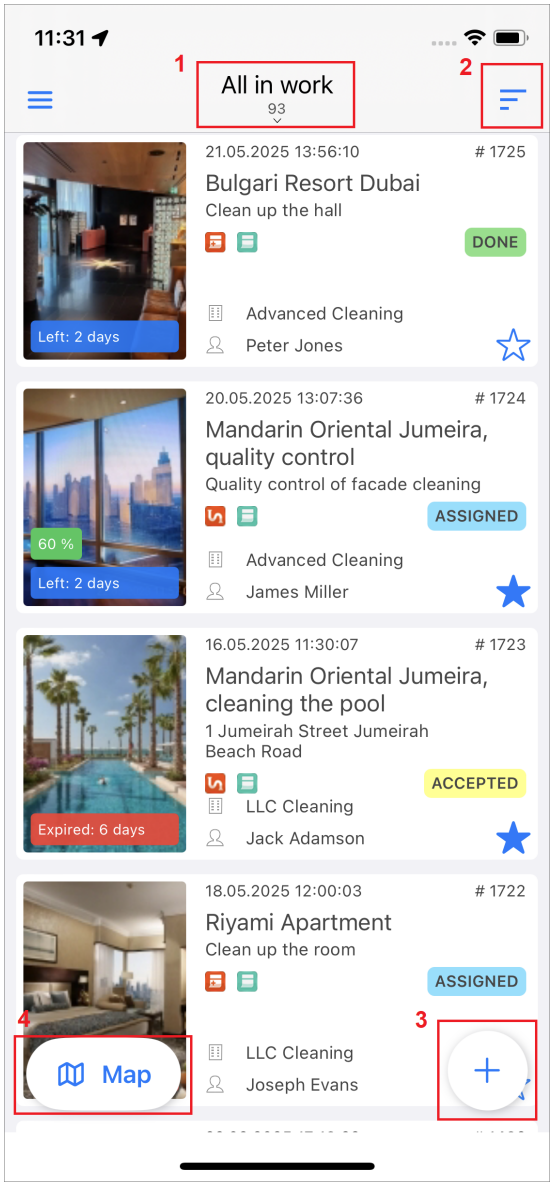


Fig. 2.23: Task management window

2.2.3 Task list setup

Selecting the “Task list” section displays a list of all tasks created on the server and available for this user (Fig. 2.22). The ability to see and edit tasks depends on the user’s role in the system (*Account management and roles in the system* (page 23)).

By default, tasks in the list are arranged in descending order by date added. Each task contains the following information (Fig. 2.22):

- Main task photo (if available);
- Task number (ID);
- Date and time the task was created;
- Task title;
- Task description;

- Task step (assigned, accepted, under control, etc.);
- Work type icon;
- Task priority icon;
- Labels:
  - "Overdue" – for overdue tasks, indicating the number of days overdue;
  - "Remaining: number of days" – displays how many days are left to complete the task;
  - "Photo-result matching score" – displays the minimum percentage of similarity between the added photos and the sample photo;
- Name of the organization the task is assigned to (or "Not assigned" for tasks not assigned to a specific organization);
- Task executor (or "Not assigned" for the tasks that are not assigned to a certain executor).

The deadline for completing the assigned task depends on the type of work. The administrator configures it through the web interface in the "Administration" section. To customize the list of tasks using the quick filter (Fig. 2.24), click 

in the top of the task management window.

The following quick filters are available:

- All – all tasks registered on the server and available to the user.
- All active – tasks in progress.
- Only favorites – tasks added to the favorites by the current user.
- Only expired – tasks that have passed their due date.
- Assigned to me – tasks assigned to the current user.
- Created by me – tasks created by the current user.

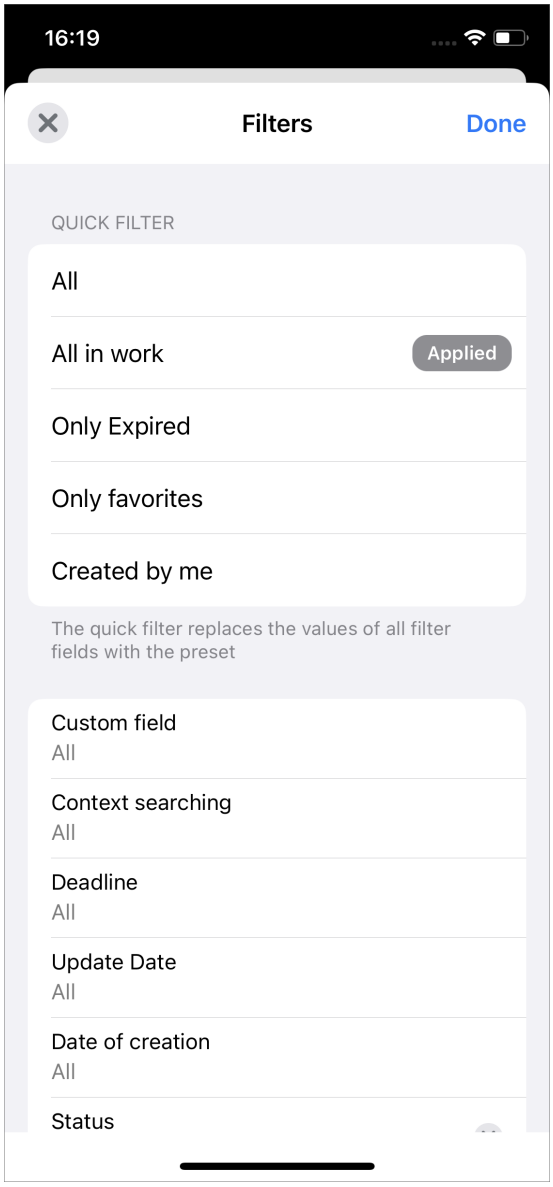


Fig. 2.24: Task filter window

Swiping down refreshes the task list.

Favorite tasks are different for each user. To make a task favorite, mark it with a star in the task card. To remove from favorites, remove the star from the task. Favorite tasks are displayed and synchronized for the user in the ActiveMap Desktop and ActiveMap Mobile (Fig. 2.25).

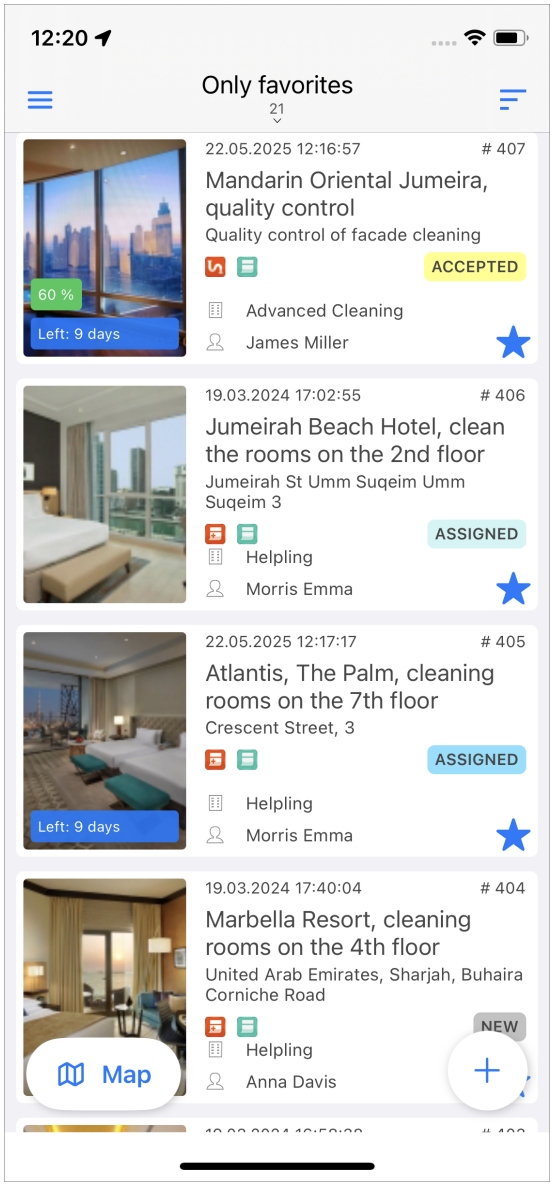


Fig. 2.25: Favorite tasks

Task lists may differ in the same sections for users with different roles (for more information about roles, see *Account management and roles in the system* (page 23)). The Organization users can see only the tasks assigned to them and the tasks that they have created in the "All" group. The Organization Administrator can see the tasks assigned to all users of the organization in this group. The number of tasks is indicated at the top of each task list window.

2.2.4 Task filter and advanced task sorting

You can perform customized task filtering using the filter setup button 

(Fig. 2.24).

Custom filtering options include:

- Custom field (displays tasks filtered by custom field values);
- Contextual search (adds an additional substring search filter that looks for matches in the “Title”, “Description”, and “Task number” fields);
- Deadline;
- Update date;
- Creation date;
- Status (rejected, in progress, closed);
- Step (assigned, accepted, done, etc.)[1];
- Priority (planned, emergency, additional, etc.);
- Work type;
- Author;
- Assigned organization;
- Assigned performer;
- Expiration date;
- Creating organization;
- Service objects;
- Template presence;
- Schedules.

When applying extended conditions, the “Filtered” label appears in the quick filters area (Fig. 2.26). Selecting a quick filter again (All, My tasks, etc.) cancels the extended filtering.

[1] reference tables can be changed according to individual customer requirements.

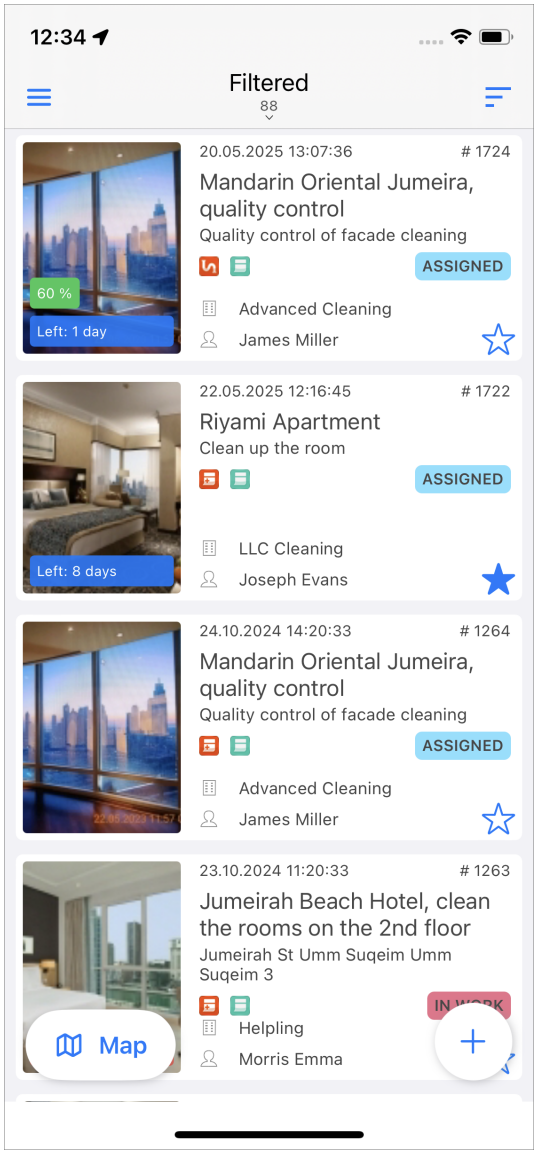


Fig. 2.26: Filtered tasks

You can set sorting options using the settings button  (Fig. 2.27).

Sorting direction:

- Ascending
- Descending

Sorting parameters:

- By sequence number
- By title
- By creation date
- By update date
- By deadline
- By priority

- By distance[2]

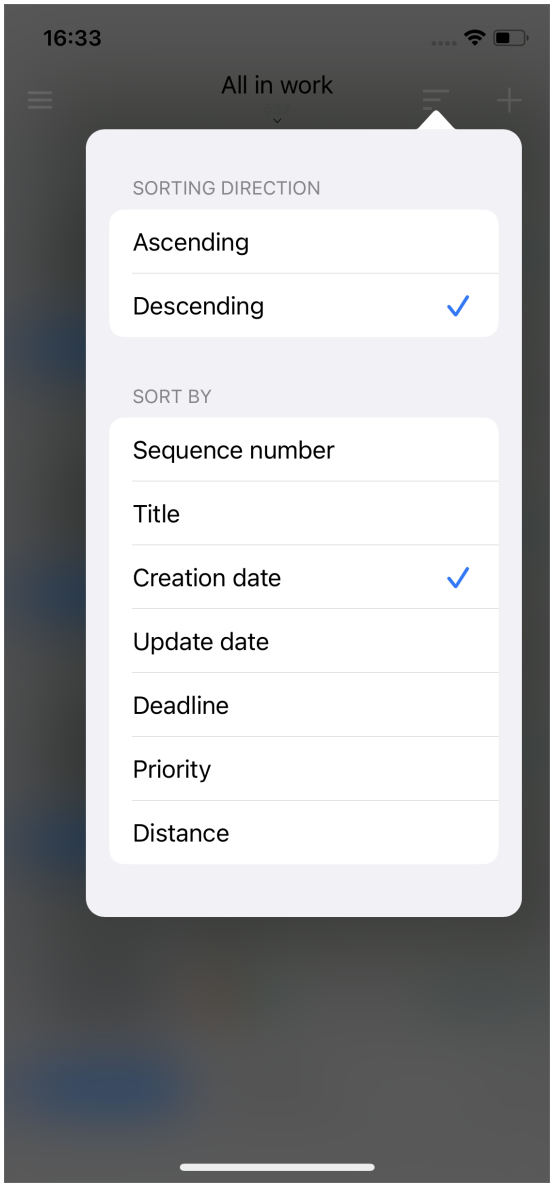


Fig. 2.27: Task sorting window

2.2.5 Tasks on the map

You can view tasks either as a list or on the map (Fig. 2.28). Viewing tasks on the map is available only in online mode. The filters set in the task list are automatically applied on the map. To switch from the list to the map, click 

.

[2] in this case, it means the distance from the task location to the user. Active, when the user's geolocation monitoring is enabled. Inactive, when geolocation monitoring is disabled.

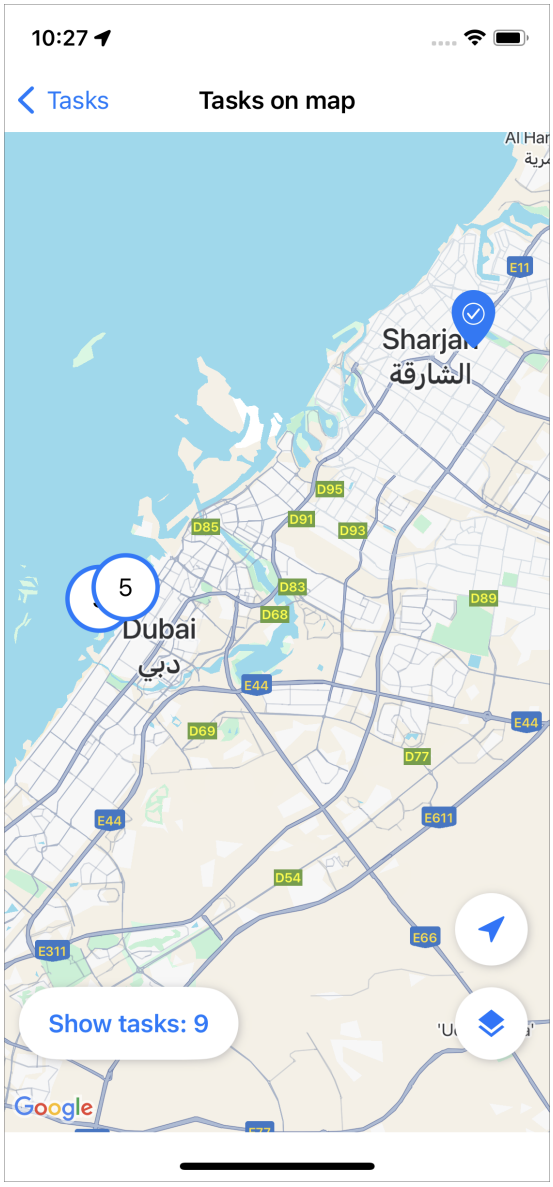


Fig. 2.28: Task map window

Only tasks with location coordinates are displayed on the map. The number of visible tasks is shown in the bottom left corner of the map. It is automatically updated when you move the map. Clicking it opens a list of these tasks with the “Tasks in the region” quick filter applied (Fig. 2.29). You cannot change it. However, you can add an additional filter to select tasks within the presented list. Switching back to the map returns the original list of tasks.

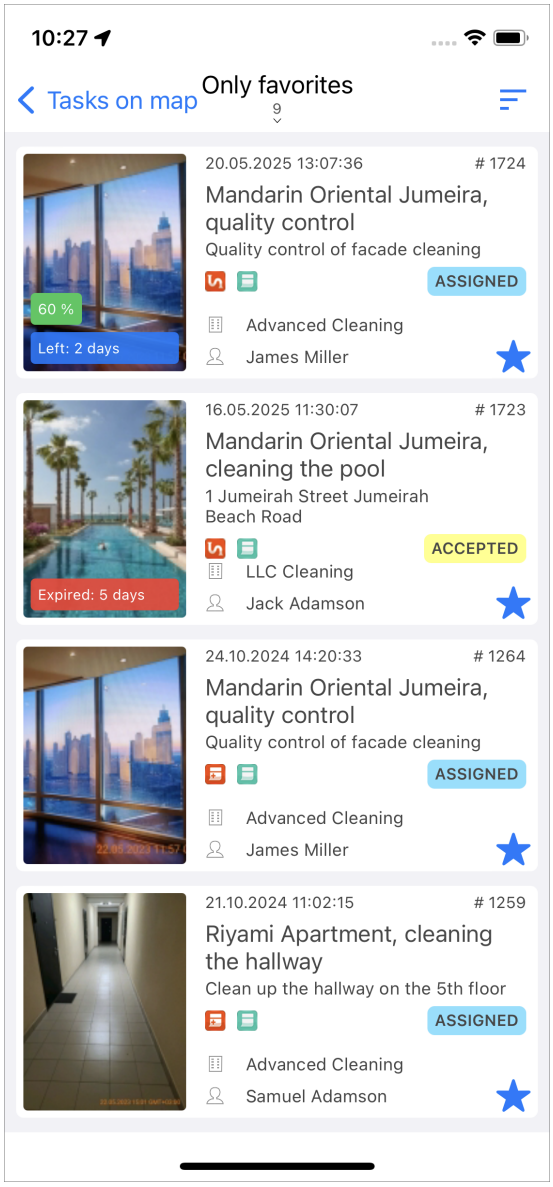


Fig. 2.29: List of tasks in the region

To return to the full task list, click “<Tasks” in the task map window.

You can open the particular task card by tapping its marker on the map. In the opened window, you can make changes, send them to the server, and then return to the task map to continue working.

You can also enable layers in the task map window. To do this, click  at the bottom of the window and turn on the required layer. For more information on working with layers, see *Working with the map* (page 99).

2.2.6 Time zones

The ActiveMap system can work in several time zones. You can select the time zone when creating a cluster. All cluster schedules are created in the time zone specified in the cluster settings.

When working on a mobile device, tasks are created in the time zone selected in the device settings. Clear the cache to apply the changed time zone in the application (*Application settings* (page 146)).

2.3 Creating tasks

2.3.1 New task window

The task creation window (Fig. 2.30) is used to create and send new tasks to the server.

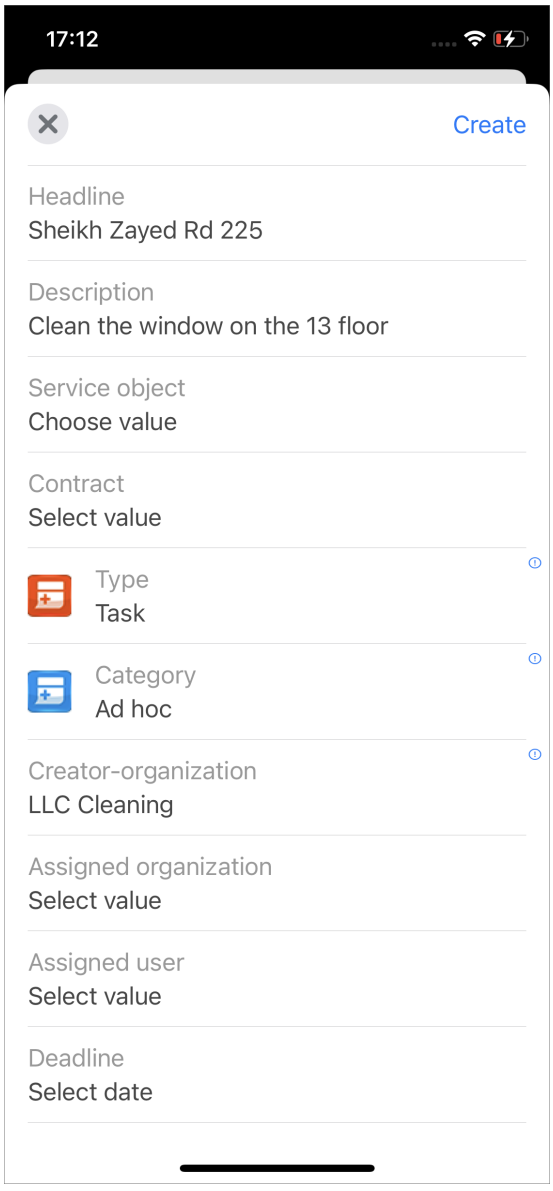


Fig. 2.30: Task creation window

To start adding a new task, click + in the upper right corner of the task management window. In the opened window fill in the title, description, select the work type and priority in the corresponding fields, and fill in the custom attribute fields. If you have the appropriate rights, assign the organization and executor to complete the task (Fig. 2.31). It is possible to automatically fill in the executing organization if the "Default executing organization" setting is enabled in the system.

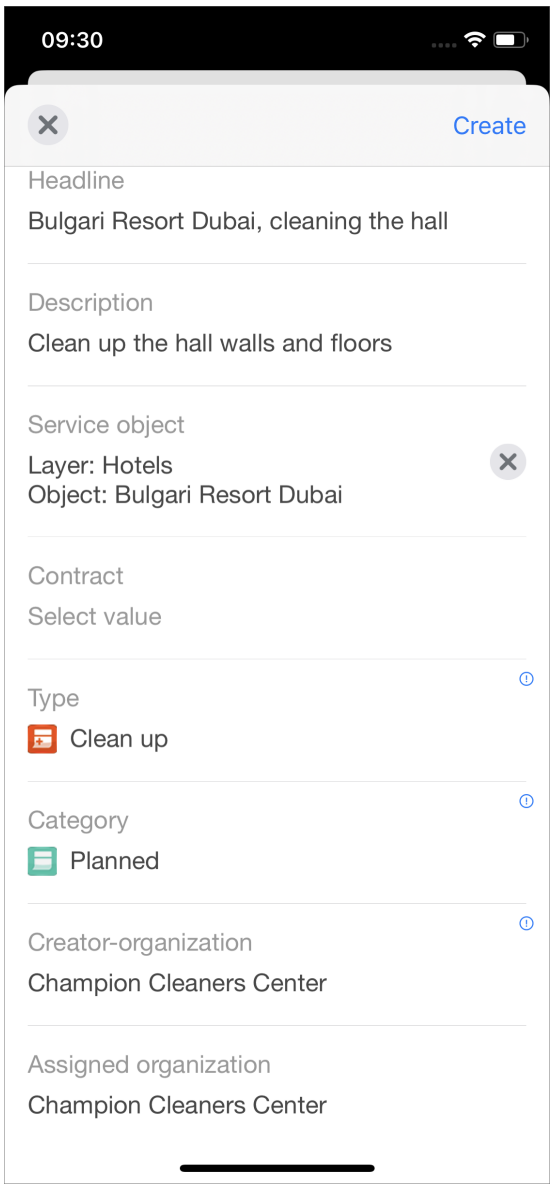


Fig. 2.31: Creating a task

ActiveMap has a number of reference data:

- Organizations and users;
- Work types, work type groups, steps, priorities, custom fields;
- Settings, serviced objects and more.

Normally new values are entered into reference tables (dictionaries) in ActiveMap Web. But you can add some data in the mobile application (*Administration* (page 124)). To update ref-

erence tables in ActiveMap Mobile, refresh the data (*Updating reference tables and settings* (page 83)). After the updated reference table becomes available, you can start creating a task in ActiveMap Mobile again.

2.3.2 Working with custom fields

Users with administrative access rights may add custom fields via the ActiveMap web interface in the “Administration” -> “Tasks” -> “Custom fields” tab. The following field formats are supported:

- String,
- Text,
- Integer,
- Float,
- Date and time,
- Date only,
- Logical value,
- Composite,
- Selecting from a list,
- Phone number,
- Bar code,
- Geometry,
- Data objects,
- File.

Geometry field allows you to add additional geometrical objects to the map (point, line, or polygon).

You can specify a default value or a regular expression for custom fields in ActiveMap Web. The exception applies to the following field formats: composite, geometry, data objects, and file. A regular expression is a pattern string that specifies a template for the custom field. It is also possible to configure a list of tasks (by work type) for which the custom field is available. You can group custom attribute fields. You can make the attribute field mandatory to fill in. When creating a custom attribute field, you can specify the minimum and maximum length of the field. After updating the data, custom fields appear in the task windows according to the type of work. The custom fields are located in the extended task window. Custom fields are available for filling and editing if the user has appropriate rights.

Using a custom field of the “data objects” format, you can add multiple objects from layers, reference tables (dictionaries), and data tables. Click “Add object”, use the search if necessary, and select the object (Fig. 2.32). If the “Allow multiselect” setting is enabled in the system, repeat this action for all objects to be added.

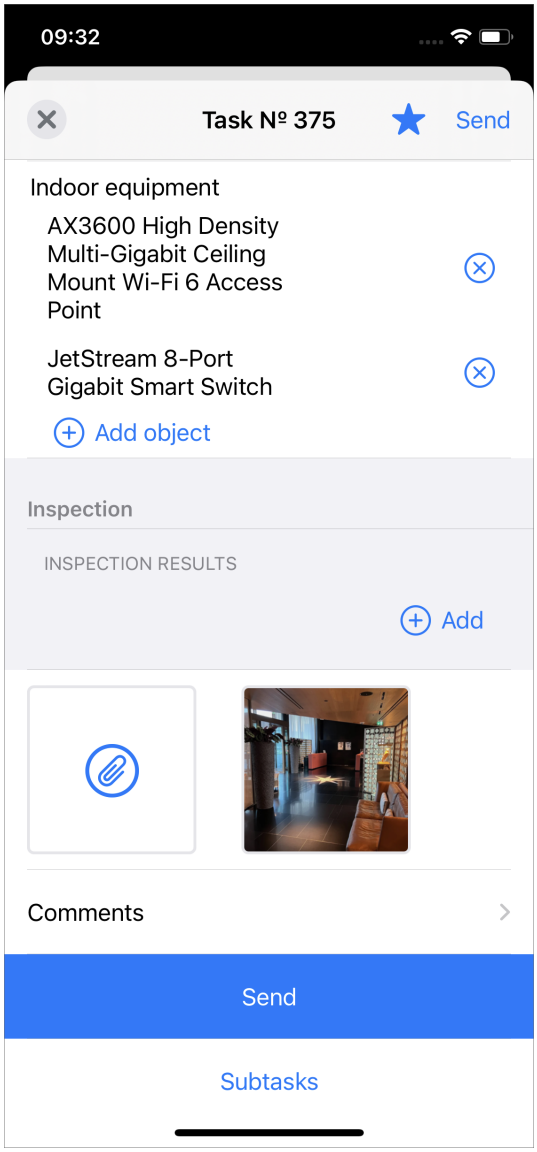


Fig. 2.32: Adding objects to a field of the “data objects” type

You can also enable the “Allow add and edit amount” setting for a custom field of the “data objects” format. This option allows adding a quantitative characteristic to the object (Fig. 2.33).

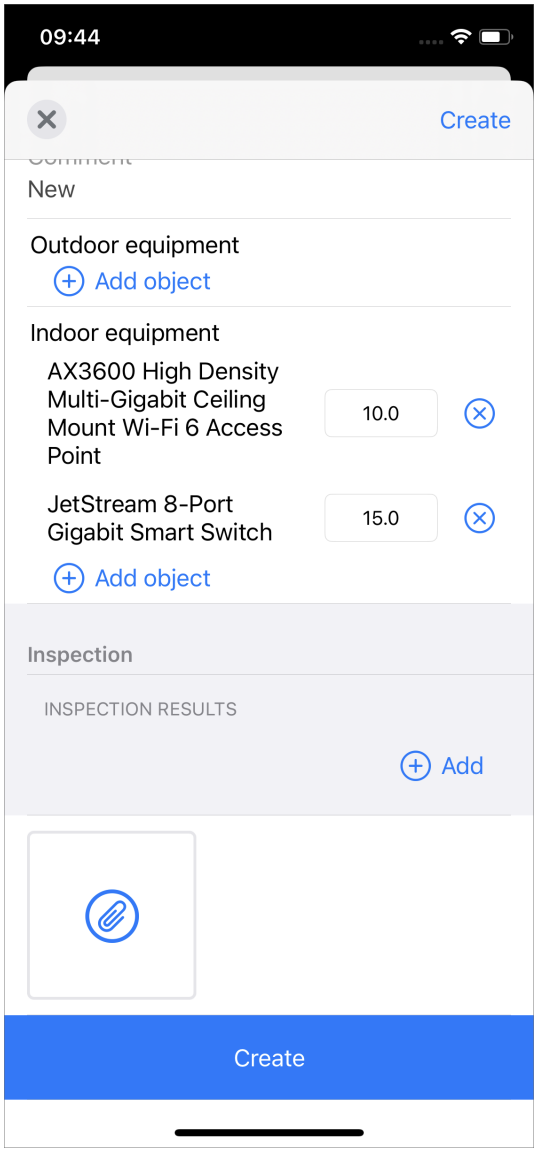


Fig. 2.33: Adding quantitative characteristics

The application provides the ability to add new objects to layers, dictionaries, or data tables connected to a custom field as data objects or modify the existing ones.

Important: Objects with the “Draft” status cannot be added as a “data object”.

A composite field is a custom field format that contains one or more nested fields and supports the creation of multiple field instances in a task card. It is used to add several similar field sets to the task, with the number of sets being unknown in advance (Fig. 2.34). For example, you can use composite fields for the task of equipment inspection on the objects. A separate task is created for each object. The number of equipment units at the object may vary. Using a composite field, you can add the required number of equipment units to the task and specify their characteristics as nested fields. To delete a composite field block, use ⋯ in the upper-right corner.

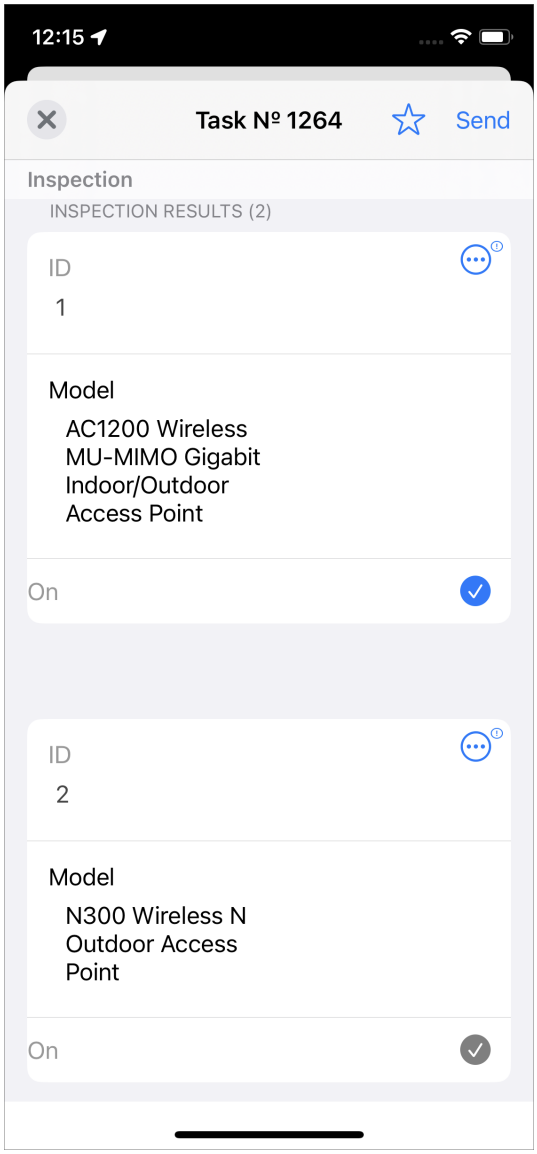


Fig. 2.34: Adding a composite field

The application supports adding second-level composite fields, i.e. a composite field within a composite field. In the task window, users can add and fill in the predefined number of second-level composite fields. When creating a task, the minimum number of second-level composite field instances is displayed by default (Fig. 2.35).

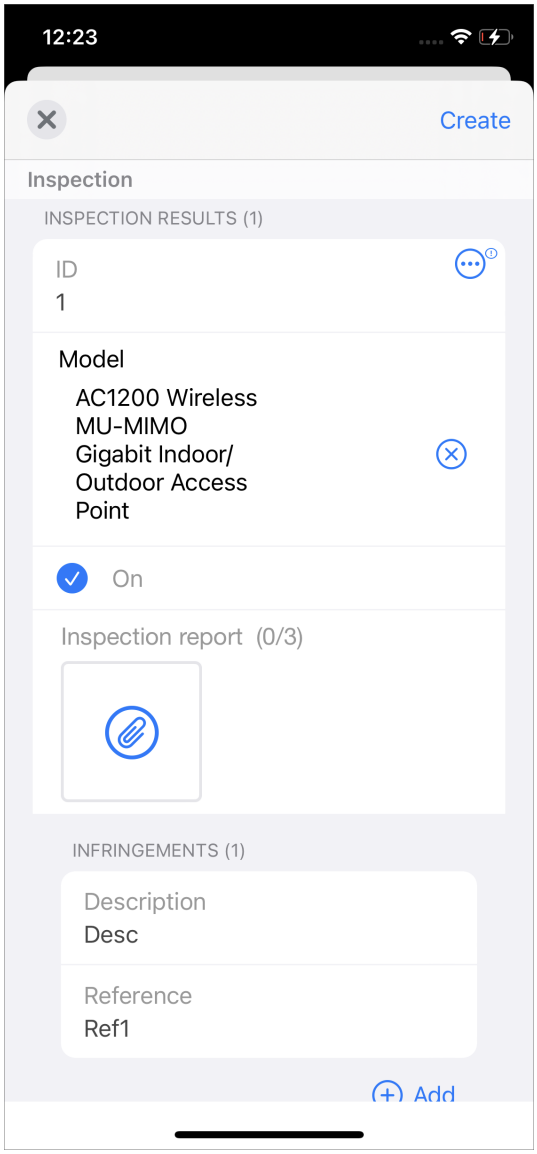


Fig. 2.35: Adding a second level composite field

Using a custom field of the “File” format, you can attach files to separate fields within the task. You can categorize files not only by stickers but also by individual “File” format fields. Clicking on the  opens a window displaying the supported options for adding files to the selected field. To upload files, the user must have rights to edit custom fields. The maximum number of files allowed in the field is displayed in parentheses, as well as the current number of uploaded files (Fig. 2.36).

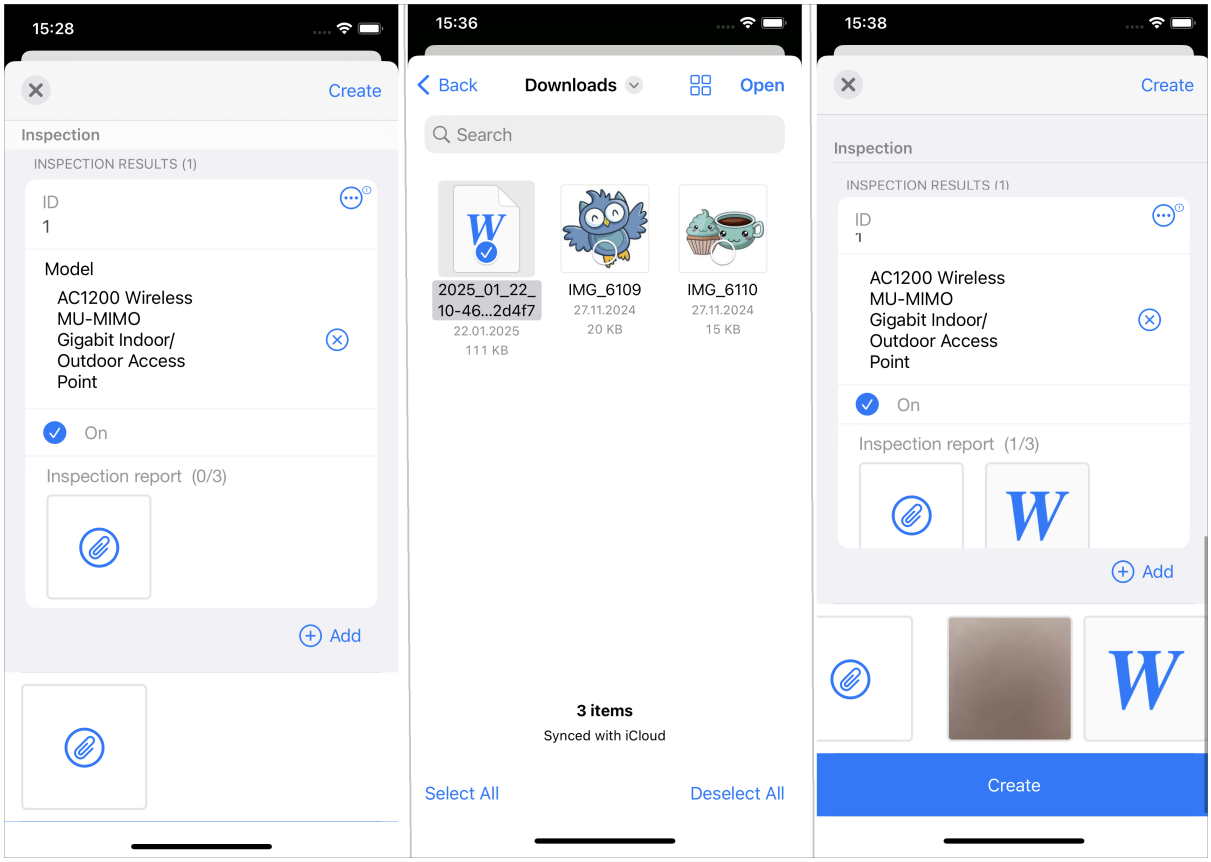


Fig. 2.36: Adding data to a custom field of the “File” format

The following file types are supported:

- photo,
- audio,
- video,
- signature,
- QR code,
- file (document).

The file types are specified in the settings of the custom field. Attachment of several types is supported. To delete a file, hold the selected file, then click “Delete” in the pop-up window, and submit the changes to the system. Uploaded files are displayed in the task’s file gallery.

You can also attach stickers to files. To do this, hold the photo in the gallery and then select a sticker from the list. The list of available stickers depends on the selected type of work.

You can insert links in custom fields of the “text” format. These links will open in the browser on your device.

To create a new geometric object and attach it to a task, click the “Create” button in the “geometry” data type field.

2.3.3 Linking a task to a service object

To link a task to a service object, select the "Service Object" field in the task creation window. The service object selection window (Fig. 2.37) opens.

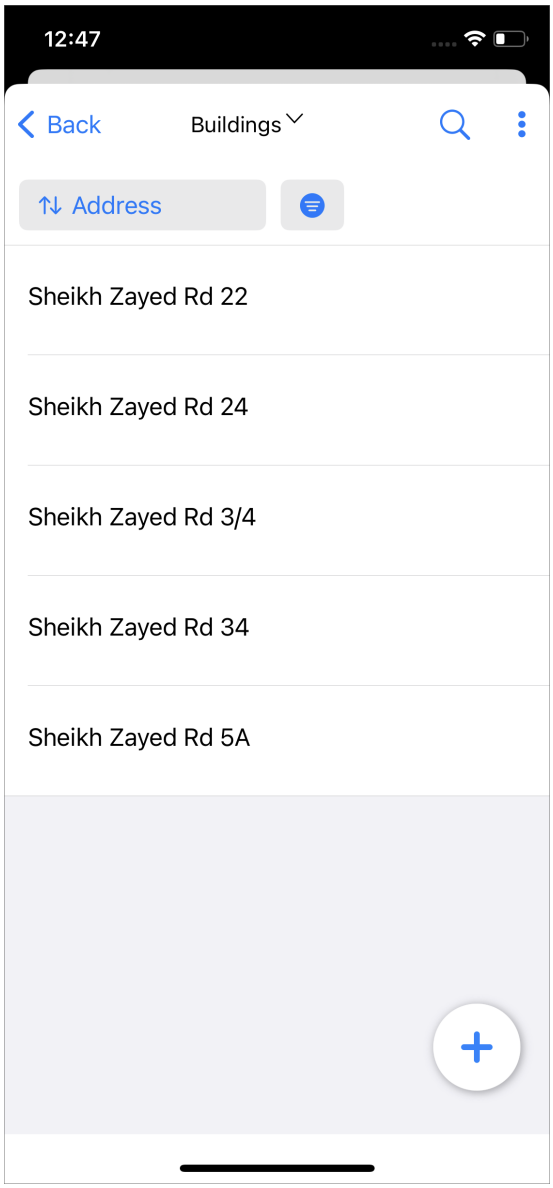


Fig. 2.37: Service object selection window

By default, the object list of the first service object layer is displayed in alphabetical order. To select the desired layer, click on the layer name at the top of the window. Layer selection window opens, showing a grouping of all available layers. To filter out non-service layers, turn on the "Only service objects" toggle (Fig. 2.38).

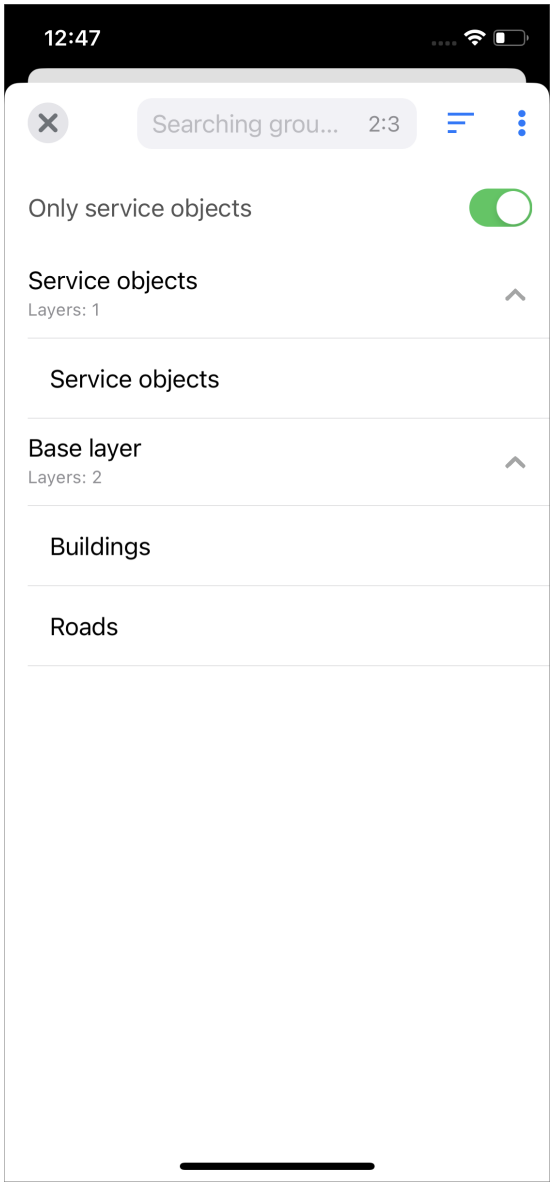


Fig. 2.38: Service layer selection window

After selecting the desired layer, the application automatically switches to the service object selection window. Here you have to select the desired object. After that, the name of the layer and the service object (Fig. 2.39) is displayed in the “Service object” field.

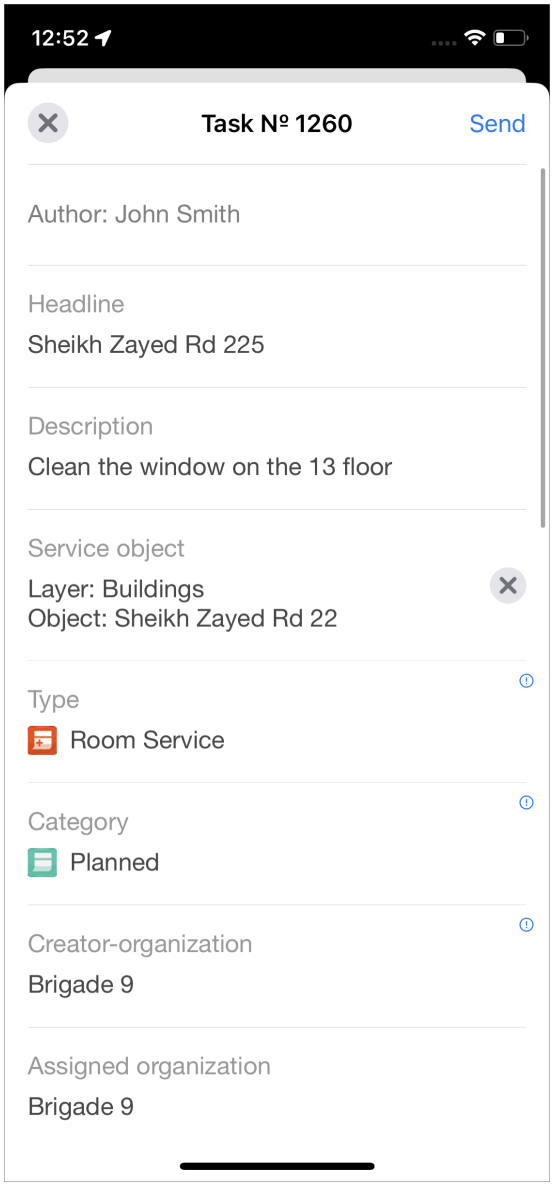


Fig. 2.39: Displaying service object in task

2.3.4 Attaching a contract

System Administrator or Cluster Administrator creates the list of contracts valid within the cluster. The System Inspector, Cluster Inspector, Assigned Organization Administrator, and Cluster Inspector have the rights to view the contract. Executors, who see the task created by the contract, also receive minimal information (id, title). You can create a task within one contract, you cannot edit two contracts. However, you can attach several tasks and schedules to one contract. When a contract is deleted, operational tasks created under it are saved (the name of the contract is displayed in the task), already created scheduled tasks are also retained, but the schedule itself is deleted.

Important: When creating a task with a contract, it is necessary to select the service object

and the type of work specified within the contract. Otherwise, a task creation error occurs.

To attach a contract, click “Select value” in the contracts block, find and select the required contract (Fig. 2.40). Once the task has been sent to the server, you cannot edit or delete the contract. When attaching a contract, the assigned organization is automatically filled in (after sending the task to the server). If the entered data do not correspond to the contract, the application generates an error and the task is not sent until all the discrepancies are corrected. It may be necessary to correct the contract settings (service objects and work types specified in the contract) rather than the task itself.

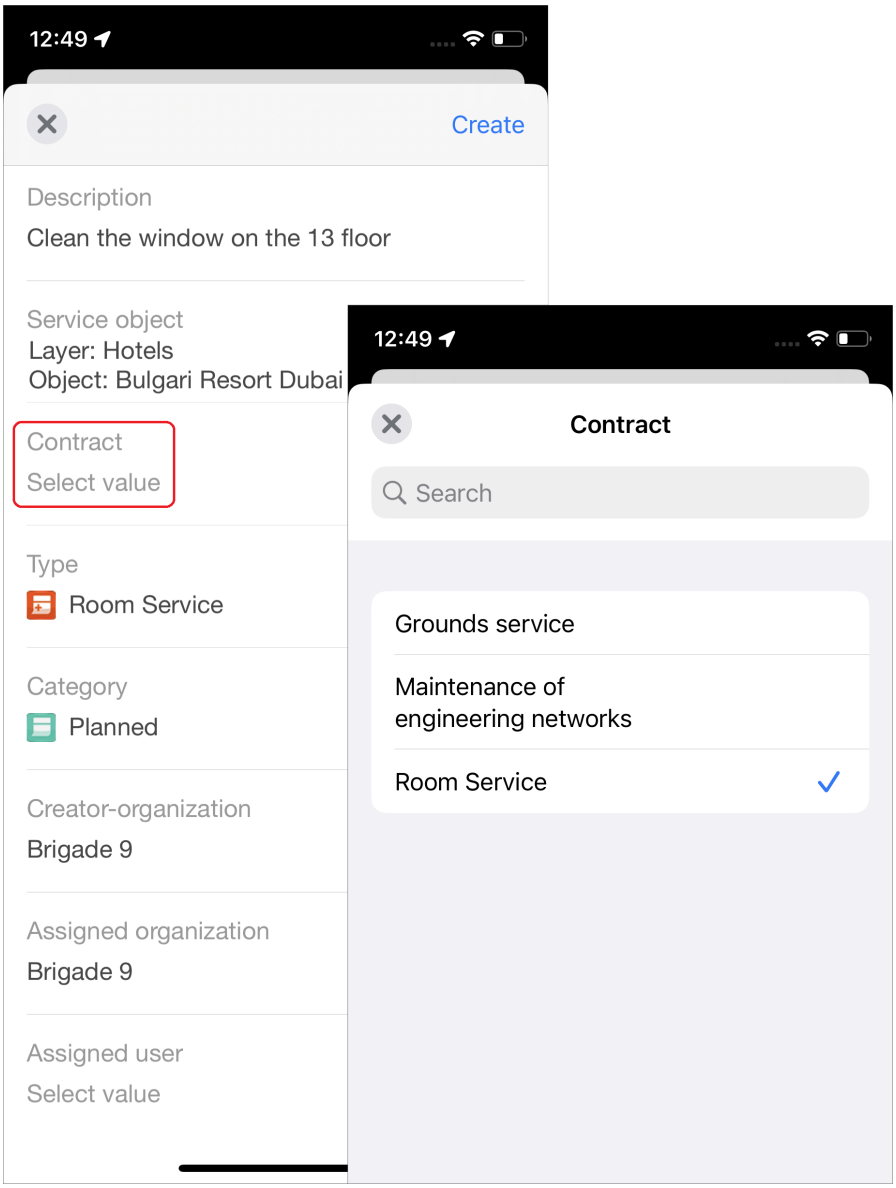


Fig. 2.40: Attaching a contract

2.3.5 Adding photos and other media files to a task

In the section for adding media files (Fig. 2.41, Fig. 2.42) you can attach/take a photo/video, record an audio recording, attach a file (documents in txt, rtf, docx, pdf, xlsx, pptx formats), an invoice, or a signature. The "Attach media" button allows you to attach a media file saved in the gallery of the user's device to the task. Depending on the user's role, access to the gallery can be disabled.

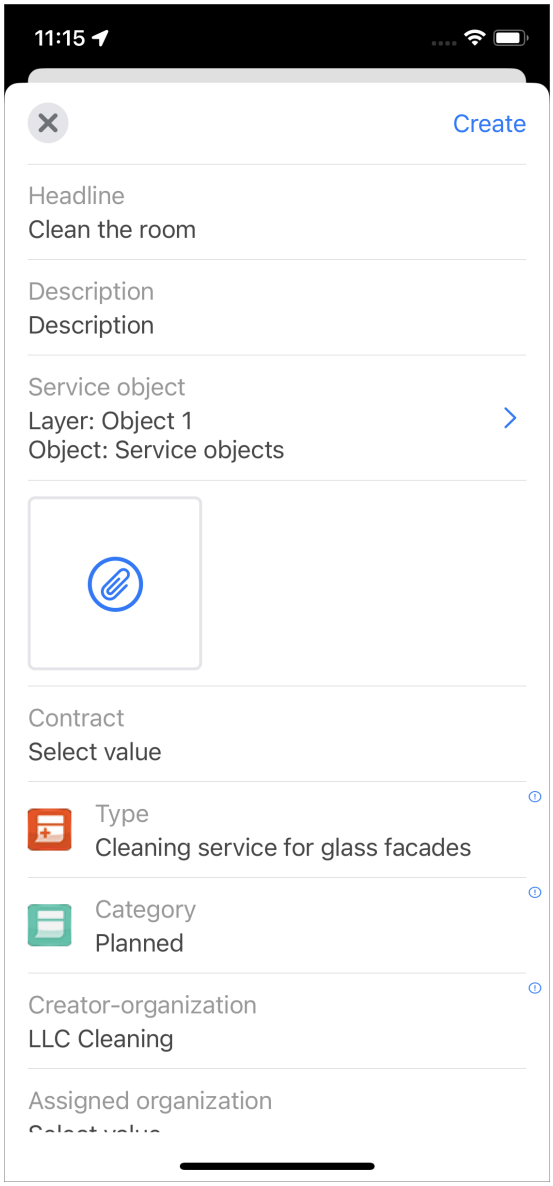


Fig. 2.41: Adding media files

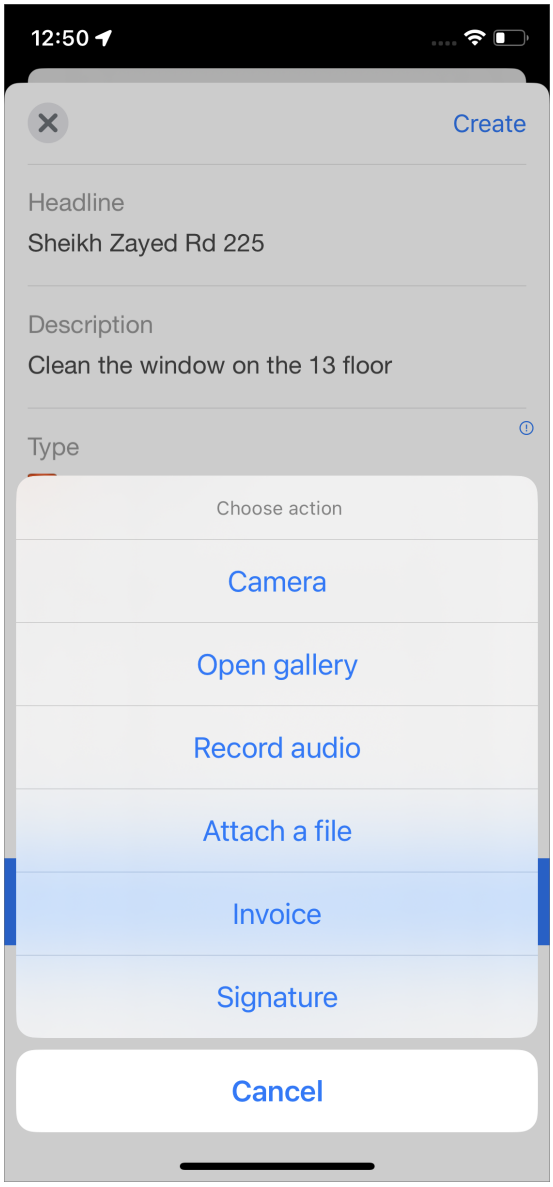


Fig. 2.42: File adding menu

When adding media files ActiveMap Mobile requests permission to access the photo (Fig. 2.43). If you select “Camera” as the attached file type, the device switches to the photo shooting mode. The next step is to take a photo image. When you click “Use photo”, the taken photo is processed and attached to the task.

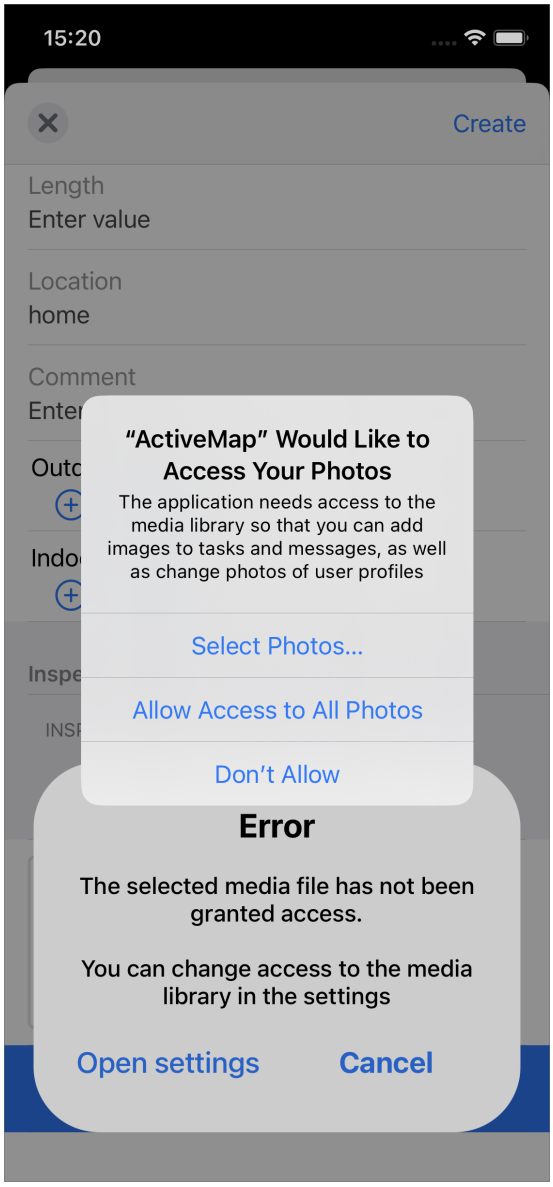


Fig. 2.43: Permission to access the photo

When adding media files, the ActiveMap Mobile requests permission to access the microphone (Fig. 2.44). If you select the "Audio Record" attached file type in the quick access bar, the device switches to the sound recording mode. Make a recording and click "Done" to attach the recording to the task.

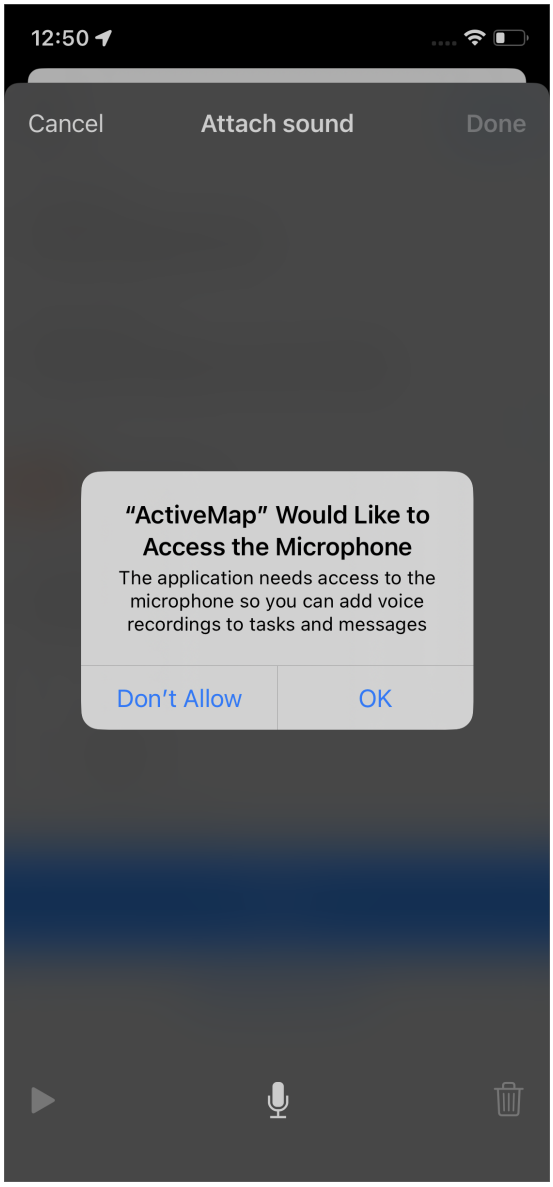


Fig. 2.44: Permission to access the microphone

When you select "Attach a file", files available for upload on the device open. Find the one you need and upload it. To see all files attached to a task, open any file and click in the lower right corner. A list of all files attached to the task opens.

Adding an invoice is described in detail in the *Invoice module* (page 139) section.

Selecting "Signature" opens the signature creation window (Fig. 2.45). There are editing tools in the top panel of the window:

- Clear all – clear all.
- – undo last action.
- – adjust pencil color (opens color selection panel and eraser).
- – save the signature.

When you finish creating the signature, click  to return to the task. The signature appears in the list of attached files.

Fig. 2.45: Creating a signature

2.3.6 Geolocation of tasks

You can geotag the task to the user's location (Fig. 2.46, Fig. 2.47).

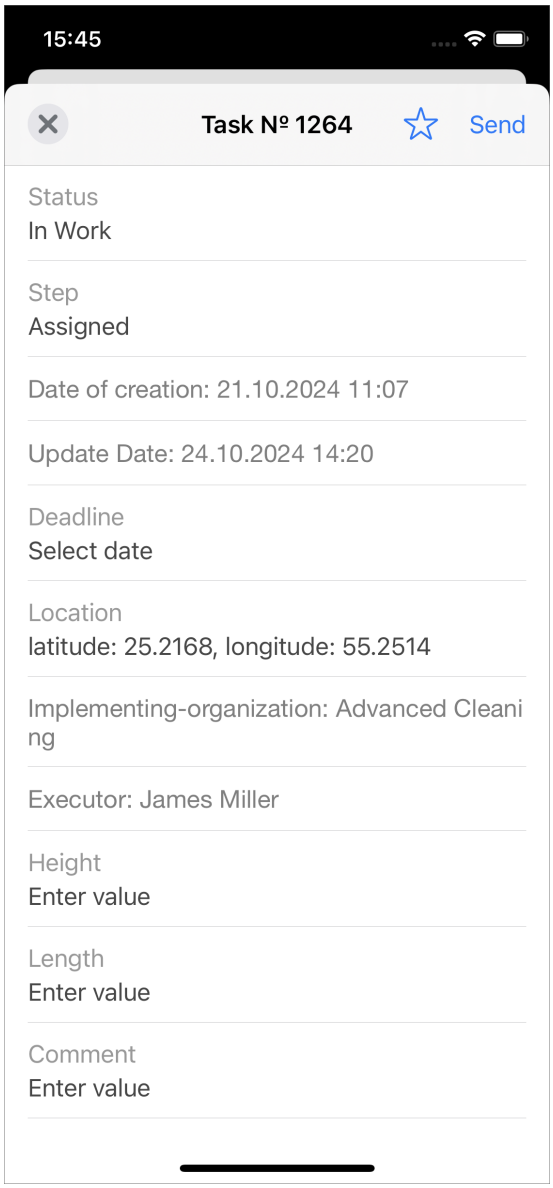


Fig. 2.46: Task location

To determine the location, allow ActiveMap Mobile to use the device's geolocation. Under good signal reception conditions, the location can be determined within a few meters after a few seconds. The location is marked with a blue pin on the map. You can change the position of the pin by marking a different location by moving the map.

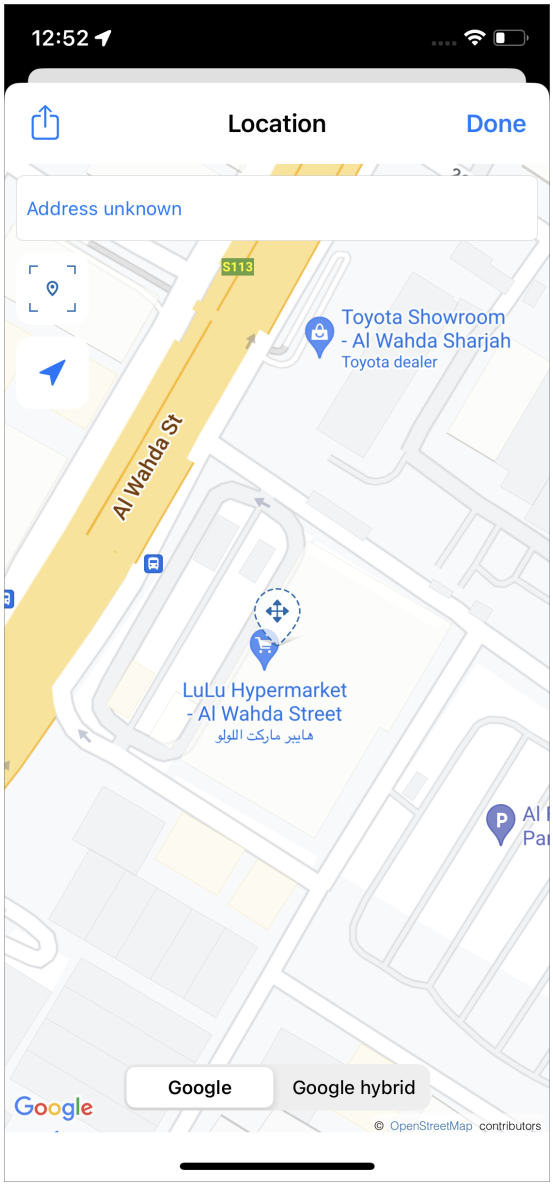


Fig. 2.47: Task location window

Furthermore, you can manually set the location of the task in this window. Enter an address in the appropriate field at the top of the window or use a task location pin. Click  to create a task location pin. The pin is set at the user's location. To move the pin, hold it down, move your finger to the desired location on the map, and then release the pin. A list of addresses appears, including the user's location and the address of the task location pin. Select the pin address to confirm the pin's placement. Select the user's address to return the pin to the user's location.

 and  buttons allow users to navigate to the task location pin and the user's location, respectively.

Users can choose the basemap by clicking the buttons with the basemap names at the bottom of the window. Additionally, users can open the specified location in third-party applications

by clicking  at the top of the window. A list of available applications appears. The application selected from this list opens in the mode of building a route to a specified point.

After setting the desired task location, click “Done” at the top of the window. After entering information on the task, attaching files, and determining the location, click “Submit” to send the task to the server.

If you do not need to work with the map, the application supports hiding the map in the task interface. For more details, see *Application settings* (page 146).

2.3.7 Creating a task in offline mode

Creating a task in offline mode does not differ from the standard one, with one exception. If service objects are required or there are fields of the “Data objects” format, you have to download them while connected to the Internet. After filling in all the fields and adding photos, close the task by clicking the cross in the upper left corner of the task creation window and select the “Send later” option (Fig. 2.48).

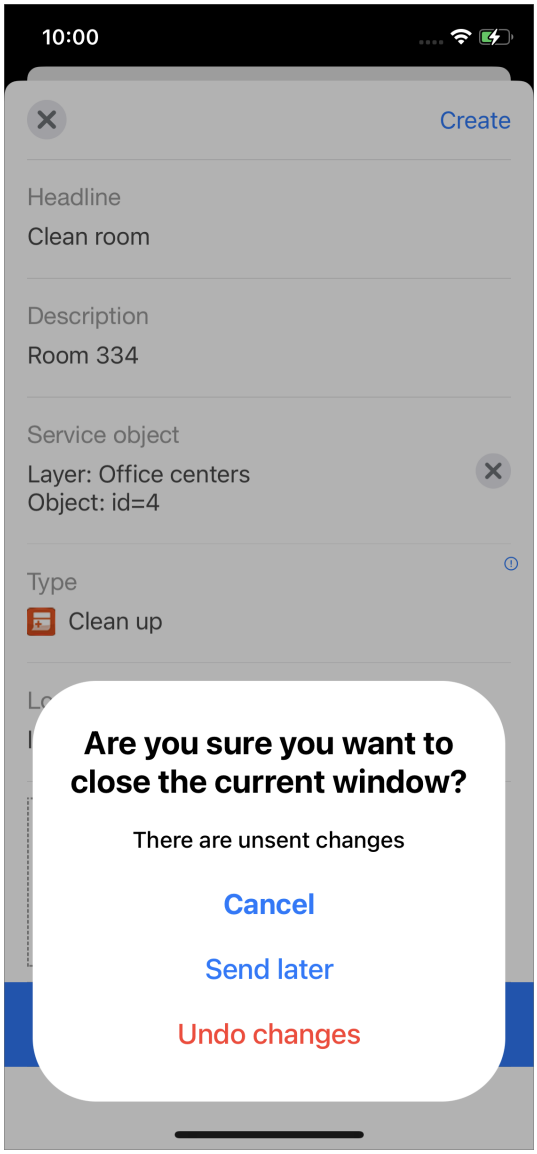


Fig. 2.48: Confirmation of creating a task with the “Draft” status

All tasks created in offline mode are marked with the “Draft” status (Fig. 2.49).

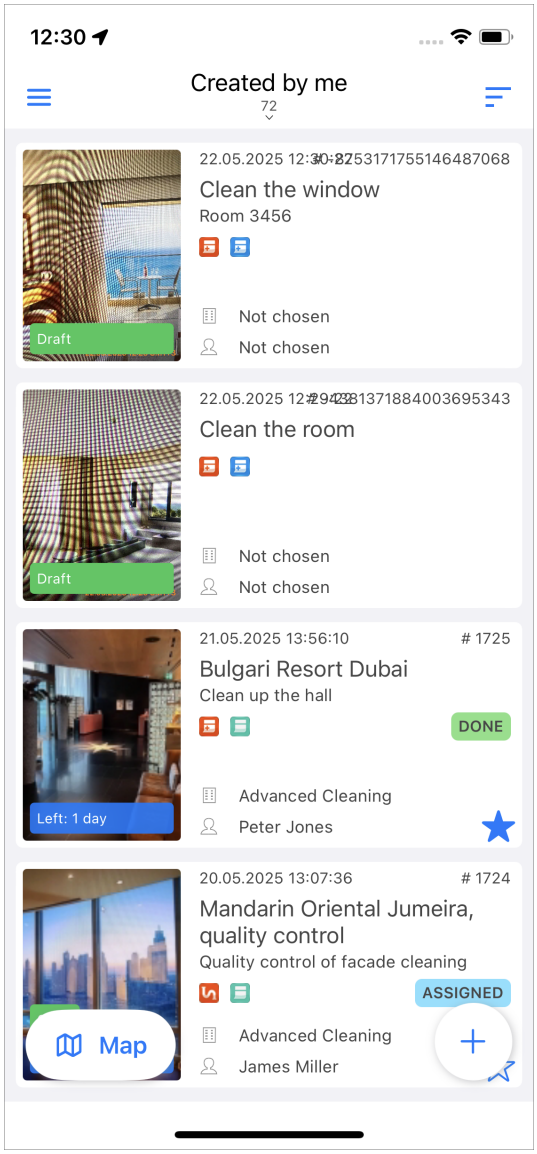


Fig. 2.49: Tasks with “Draft” status

Once connected to the Internet, you have to open each task with the “Draft” status and click “Send” to create the tasks in the system.

2.4 Editing and managing tasks

2.4.1 Task editing window

The ability to edit tasks created on the server depends on the user’s role (*Account management and roles in the system* (page 23)). Most users can only edit certain task parameters. For example, change the step of execution or add media files and comments. Uneditable fields have a lock icon on the right. The right to edit a particular field can be configured by the roles using the organization’s permission grid.

To change the task’s title and description, edit the text in the corresponding fields. To delete media files attached to the task, hold the file of interest for a few seconds and click “Delete”.

To add a new media file, click "+" and select the appropriate action (*Adding photos and other media files to a task* (page 53)).

When the "Consider the distance from the task point" setting is enabled, you can see markers on attached photos taken on Android devices (Fig. 2.50):

- Red marker – the photo was taken far from the task point (the radius is specified in the "Maximum distance from the task point" setting, for more details see *Settings in the ActiveMap* (page 148)).
- Green marker – the photo was taken near the task point.

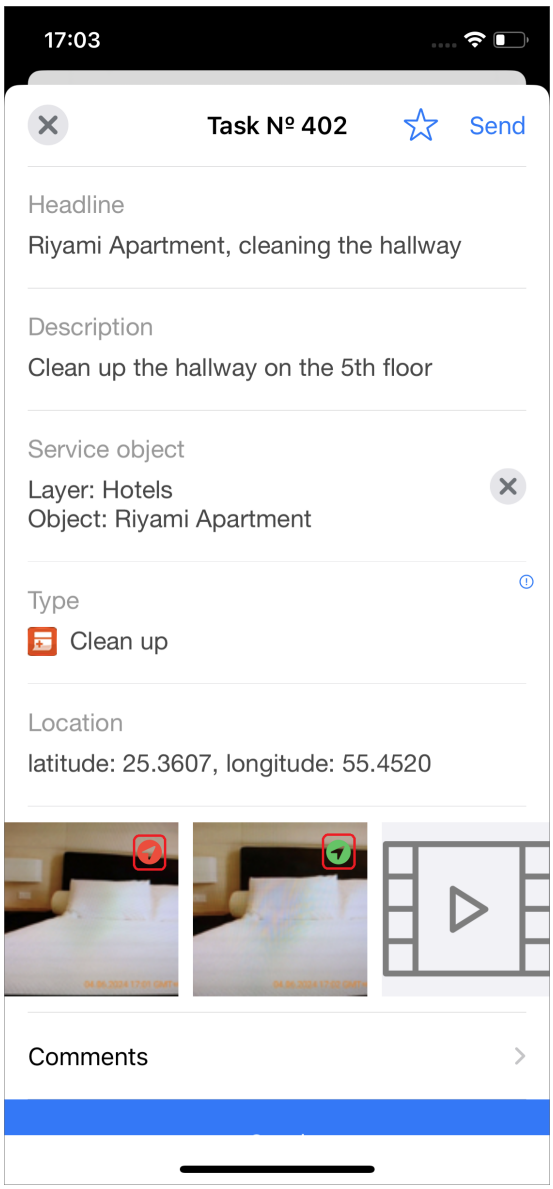


Fig. 2.50: Distance markers from the photo location to the task location

To change the attached location, specify the new location on the map. For more information about ways of specifying location, see *Creating tasks* (page 41).

To add a service object (if it has not been previously specified), select the object of interest or scan the object's QR code. You cannot delete or modify an already attached service object.

To change the status, priority, type of work, step of execution, assigned organization, and executor, select other values from the corresponding lists.

To add a new comment to a task, go to the “Comments” (Fig. 2.51) at the bottom of the task, enter text in the input field, and click ‘Send’ (Fig. 2.52). The comments sent to the server are added to the tasks without being checked by the server administrator.

If necessary, you can edit custom attribute fields (depending on the format of the field, enter other values, select values from the lists). To send the added task to the server, select the “Send” menu item.

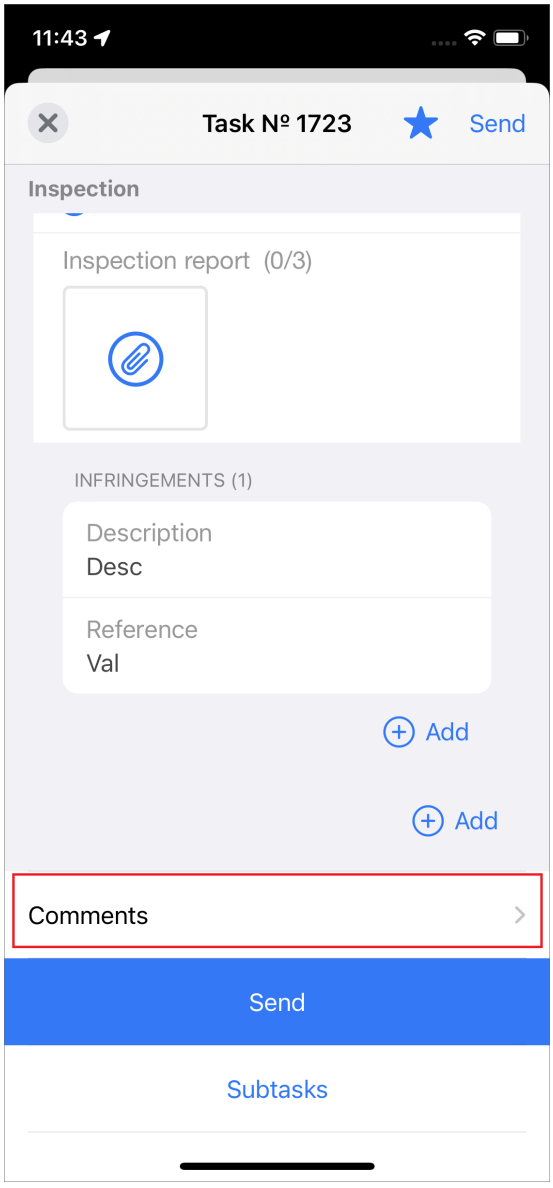


Fig. 2.51: Comments section

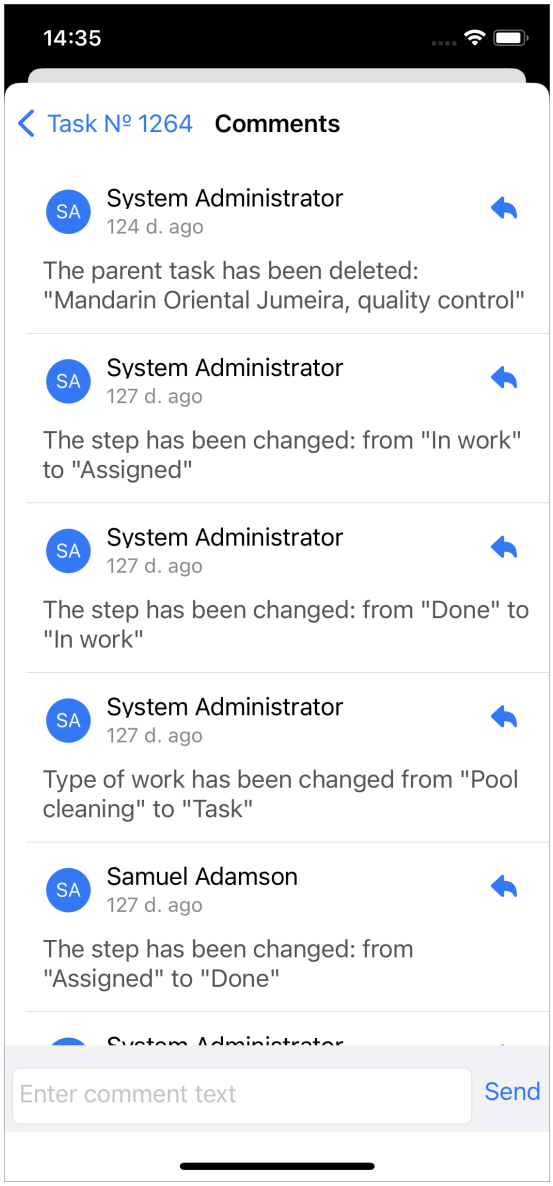


Fig. 2.52: Add comments

To delete a task, go to the task list, tap the screen, hold for a few seconds, and click “Delete”.

If you do not have rights to edit the task location, you can build a route to the task point.

2.4.2 Loading and editing tasks offline

The application provides task downloading to ensure access to all task information (including photos and files) in offline mode. Before going offline, open the necessary tasks (e.g., assigned to you) while connected to the Internet. All opened tasks will be available offline. If you need to add a service object or fill in a custom field of the “Data objects” format, download the necessary layers into the cache (for more details, see the *Service objects* (page 84) section).

The fact that you are working with saved tasks is noted at the top of the task list window. After filling in all the attributes and adding photos, click the cross on the left in the task window

and select “Send later”. The task in the list is marked as “There are unsent changes” (Fig. 2.53).

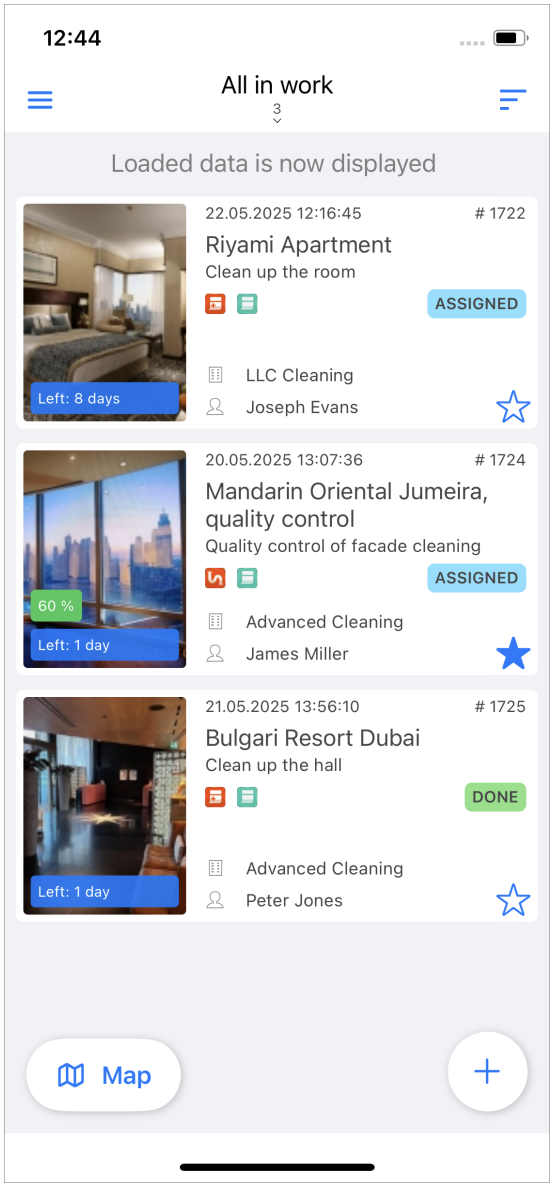


Fig. 2.53: Tasks with offline changes

Attention: Changes made to tasks by other users are not applied to downloaded tasks. To update the tasks, reload them to the user’s device.

Once connected to the Internet, you should send all changed tasks to the server. To do this, open each changed task and click “Send”.

To delete downloaded tasks from the memory, clear the cache (Settings/Clear cache, for more details see the *Application settings* (page 146)). Clearing the cache deletes not only information about the tasks, but also the downloaded service objects.

2.4.3 Task steps

In the right part of the task list, you can see the step of the task:

- “New” – created and unprocessed tasks;
- “Assigned” – tasks that have already been processed by the administrator;
- “Accepted” – tasks accepted by the executor;
- “Executed” – completed tasks (Fig. 2.54).

The step reference tables can be changed to suit individual requirements of the Client.

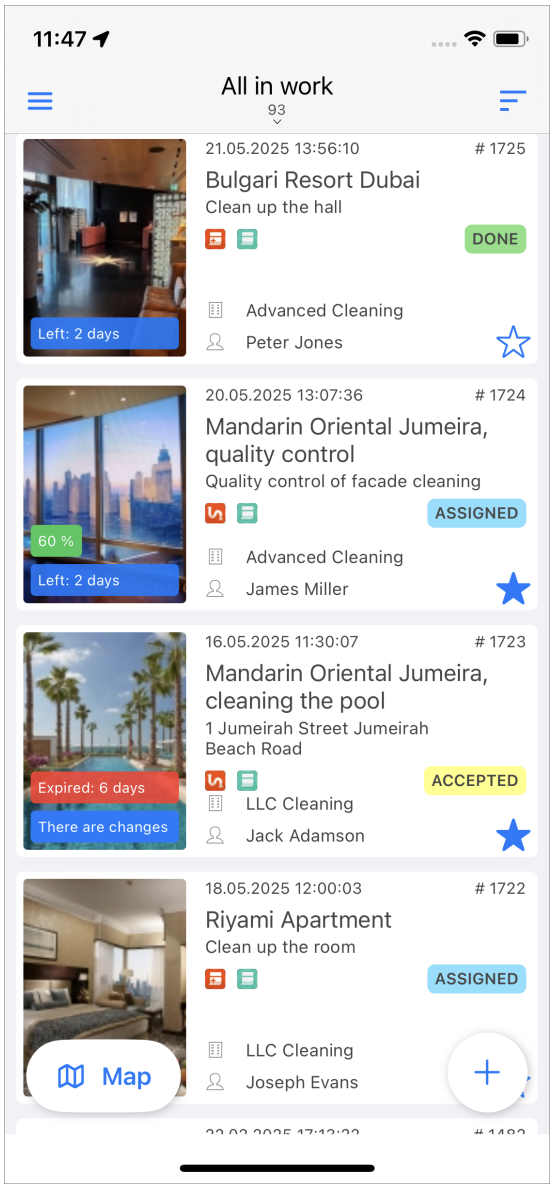


Fig. 2.54: Statuses and steps of the tasks

2.4.4 Copying a task

If you have to create new tasks of the same type and enter the same data, you can use task copying. To do so, create one original task, fill in the required data, and add media files.

Next, open the task, scroll down, click “Subtasks”, click  , and choose what information to copy to the new task:

- Title
- Task text
- Priority
- Work type
- Service object
- Location
- Custom fields
- Media files

Selecting the last two options copies all custom fields and media files.

After selecting the data, click “Done”. A creation window opens with the information already filled in. You can make changes and then send the new task to the server or leave it in the draft list. To view all tasks created from a single task, open that task, swipe down, and click “Show subtasks”. A list of all tasks created by copying the initial task appears (Fig. 2.55).

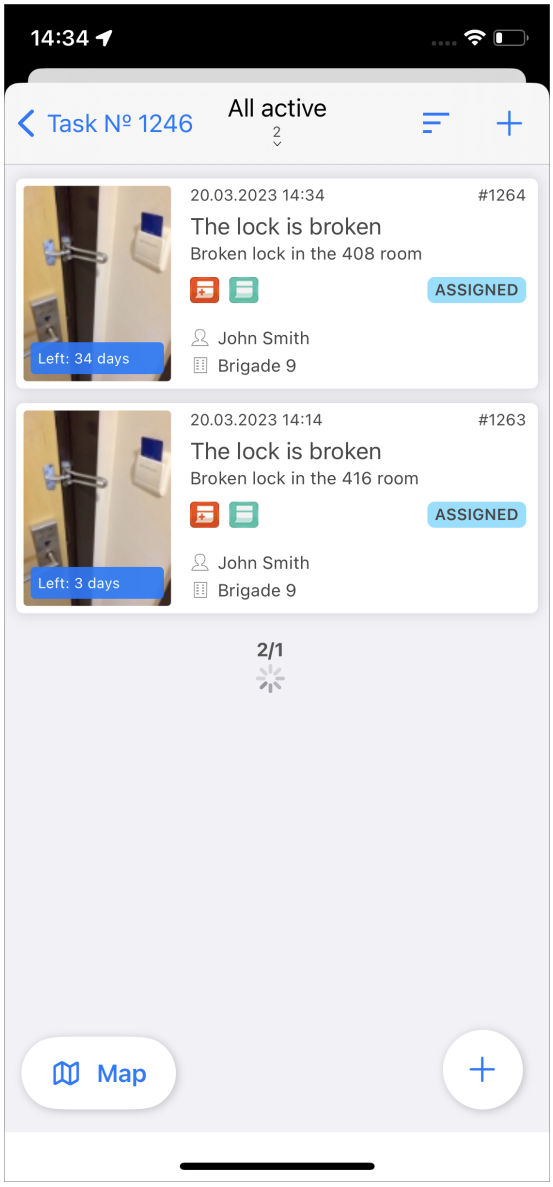


Fig. 2.55: Subtasks

Note: If the copied task uses a work type that belongs to a specific organization, it is copied to the new task even if you do not select the work type. If a work type is common for all organizations and you do not check the box for a work type when copying, the default work type is used in the subtask.

Note: If the System Administrator or Cluster Administrator copies a task, then he/she have to specify the creating organization. If the user of the specific organization copies a task, then the creating organization is automatically copied to the subtask.

If the subtask is created offline, delay sending it until the Internet is available.

2.5 User management

The section is available for the System Administrator, Cluster Administrator, and Organization Administrator roles. There are two ways to access the list of users in the application:

1. The “Employees” section of the side menu.
2. *Map* → *User management*.

The first way is below, and the second one is in the *Users on the map* (page 110) section.

2.5.1 Viewing the list of users

The System Administrator can see all users of all clusters. The Cluster Administrator can see all users of all organizations in the cluster. The Organization Administrator see all users of the organization. Additional organization users are available for viewing and editing.

To see the user list, open the navigation sidebar and select the “Employees” section. A window in the form of a list opens (Fig. 2.56). You can use the search to find a specific user.

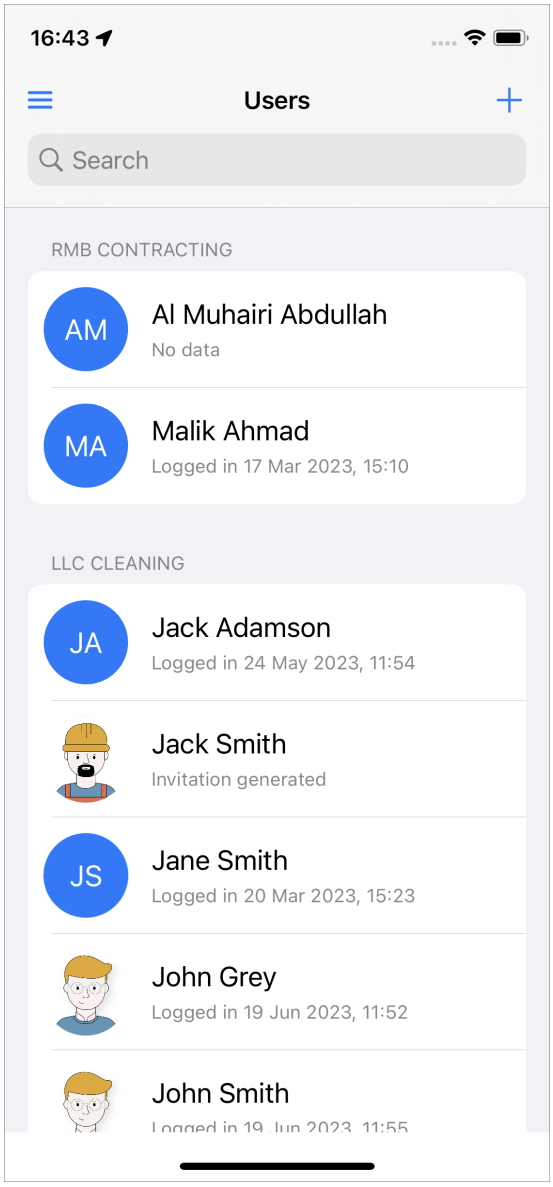


Fig. 2.56: Viewing the list of users

To get information about the user, click on the user card in the list. The user's profile opens. In the opened window, you can see all the user's data. Here you can also view the user's track by clicking , selecting the day and time range of interest. The track is displayed. You can move the marker of the user's location and view the information at each point of movement. The track is displayed on the map, but you can view the track points in the form of a list. To do this, click . To update the user's location, click "Refresh".

In the user's profile, you can see the number of tasks assigned to this user in the "In progress" step (Fig. 2.57). Here you can also assign an already created task to this user. To do this, click "Assign a task", then select the necessary task. To create a new task, click "Create" and follow the steps of creating the task. The "Assigned organization" and "Assigned performer" fields are filled in automatically.

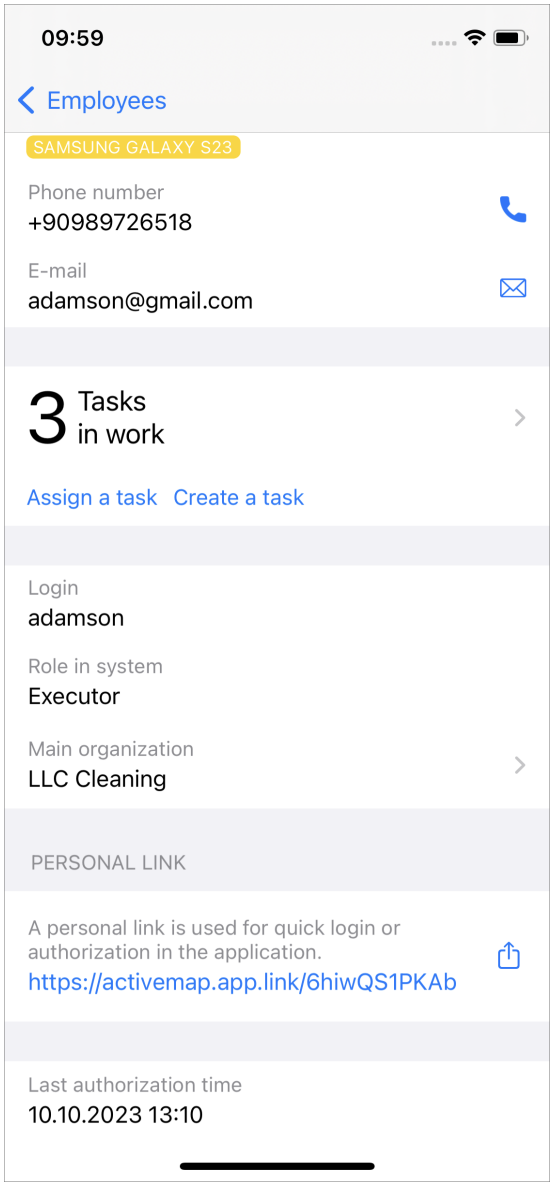


Fig. 2.57: User profile

2.5.2 Creating users

To create new users, go to the “Employees” section of the navigation menu and click + to create a new user. This feature is not available to all user roles.

System Administrator can create users with the following roles:

- System Administrator
- System Inspector
- Cluster Administrator
- Cluster Inspector
- Organization Administrator

- Organization Inspector
- Executor

Cluster Administrator can create users with the following roles:

- Cluster Administrator
- Cluster Inspector
- Organization Administrator
- Organization Inspector
- Executor

Organization Administrator can create users with the following roles:

- Organization Administrator
- Organization Inspector
- Executor

Fill in the data in the opened window and click “Create” (Fig. 2.58). To create a user, it is enough to enter data in the “Full name” field. To enter detailed information about the user, click “Show details” and fill in the required fields. In this window, you can enable/disable geolocation monitoring.

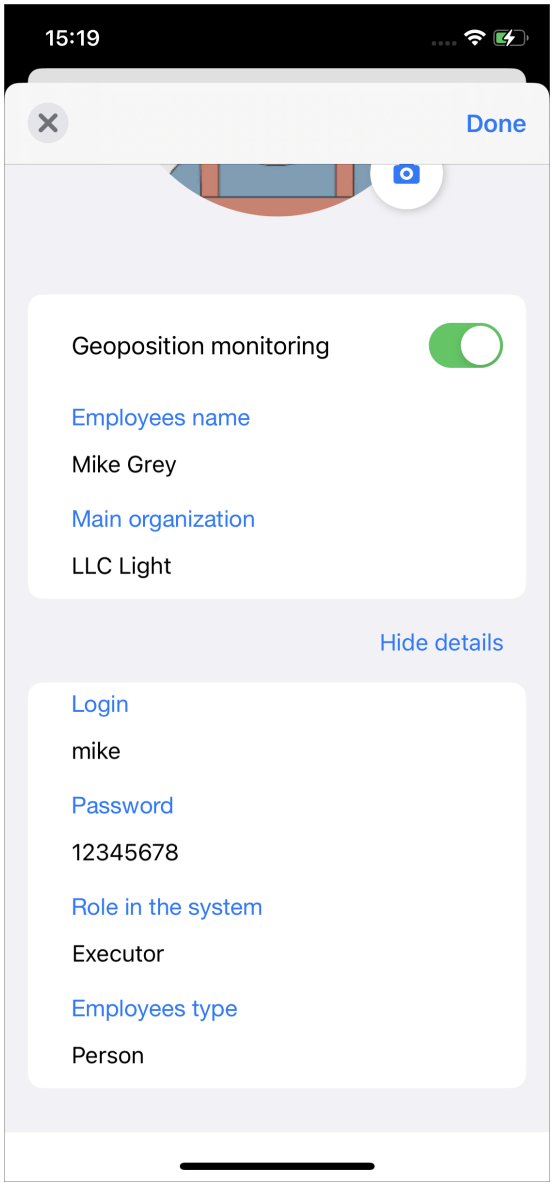


Fig. 2.58: Filling in data for a new user

A new user appears in the system. The application immediately offers to send a link for downloading the application and authorization of the new user.

The user, upon receiving the link, opens it and immediately logs in to the app if the application is installed on the device (Fig. 2.59). If the application is not installed, the link opens in the App Store store and authorization occurs after the app is installed.

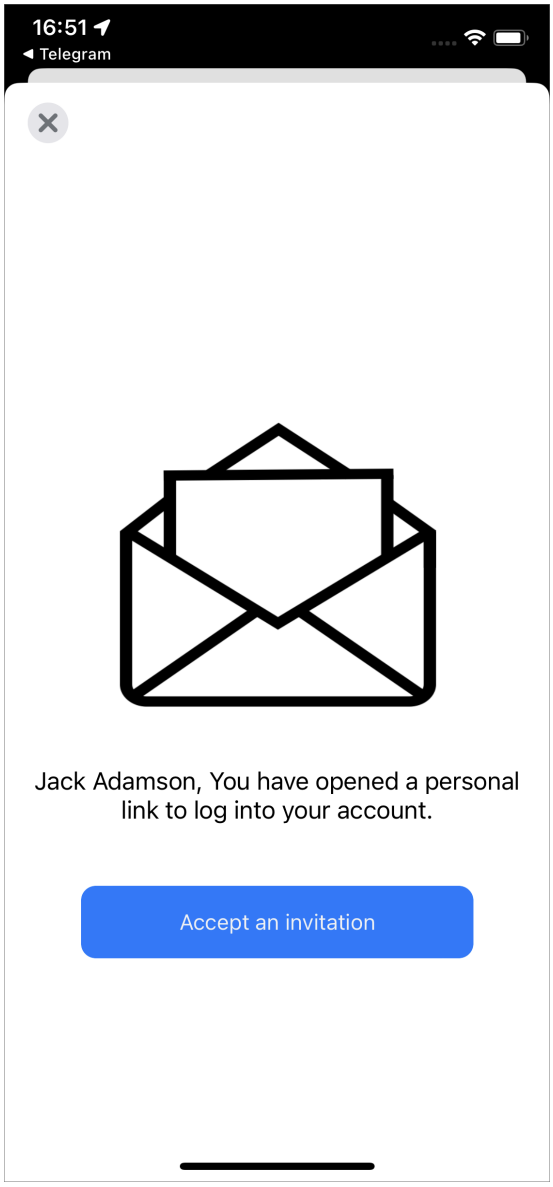


Fig. 2.59: User authorization via link

2.5.3 Importing users

New users can be uploaded from the smartphone's contact book or by manually entering the full names of employees with a line break. This feature is available for the roles of Cluster Administrator and Organization Administrator. The System Administrator cannot import users.

Attention: User import works only with Internet access.

Go to the "Employees" tab and click ⋮ to import users. Next, select the desired upload option:

- Import from contacts

- Import from text

Selecting “Import from contacts” opens a list of contacts on the user’s device (you need to provide the requested permissions first). Use the search bar to find the desired contact. Then select it and click “Done”. You can select multiple contacts. If necessary, select a contact and open the window for editing the future user profile. Click “Done” to quickly import the contacts. An account with the “Executor” role and the “Person” type is created in the system by default. Login and password are generated automatically. The created user is displayed in the opened window. Click “Share” to send a link to the employee for authorization in the application (Fig. 2.60).

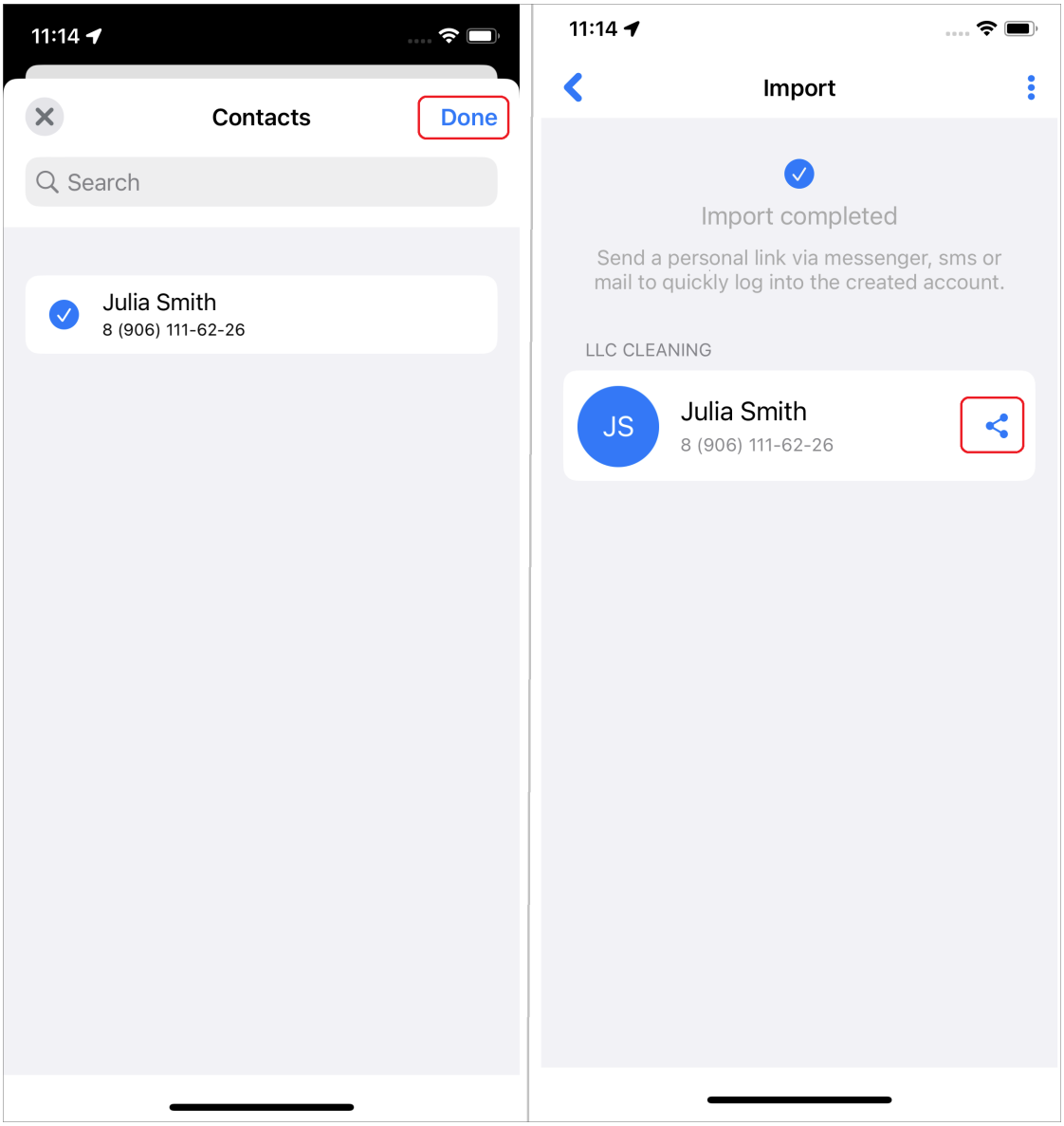


Fig. 2.60: Importing users from contacts

Selecting “Import from text” opens a window where you have to specify the employees’ full names. You can do it using a line break (Enter) or paste the prepared and copied list of employees’ full names from the clipboard. Then click “Done”. If necessary, select a contact and open the window for editing the future user profile. Click “Done” to quickly import contacts from the text. An account with the “Executor” role and the “Person” type is created

in the system by default. Login and password are generated automatically. The created user is displayed in the opened window. Click “Share” to send a link to the employee for authorization in the application (Fig. 2.61).

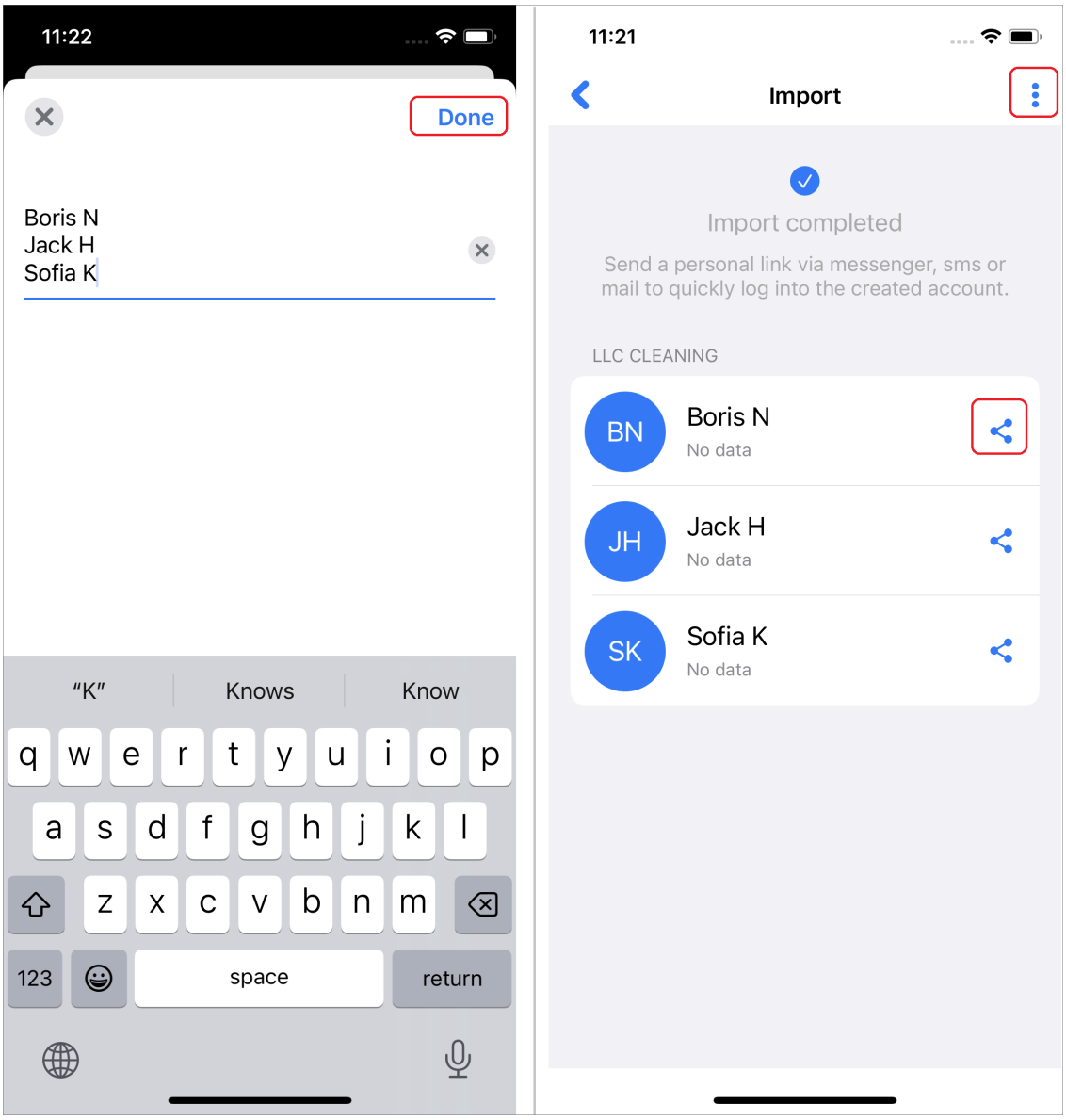


Fig. 2.61: Importing users from text

Importing users is also available at the bottom of the “Employees” page.

2.5.4 Managing user accounts

To make changes to a user's profile (not the current one), find the user in the "Employees" section of the navigation sidebar. You can use the search to find a specific user. Clicking the user name opens the account card. Next, click , make changes, and click "Done". To access the current user's profile, go to the navigation sidebar (*Account management and roles in the system* (page 23)).

The application provides the functions of blocking and deleting users. These functions are not available to all user roles. To block a user, find the user in the "Users" section of the navigation sidebar. Use the search to find a specific user. Clicking the user name opens the account card. Click , scroll down, click "Block account", and confirm your action (Fig. 2.62). The user disappears from the list of users in the application. Blocked user cannot log in to the application. You can unblock the user only in ActiveMap Web.

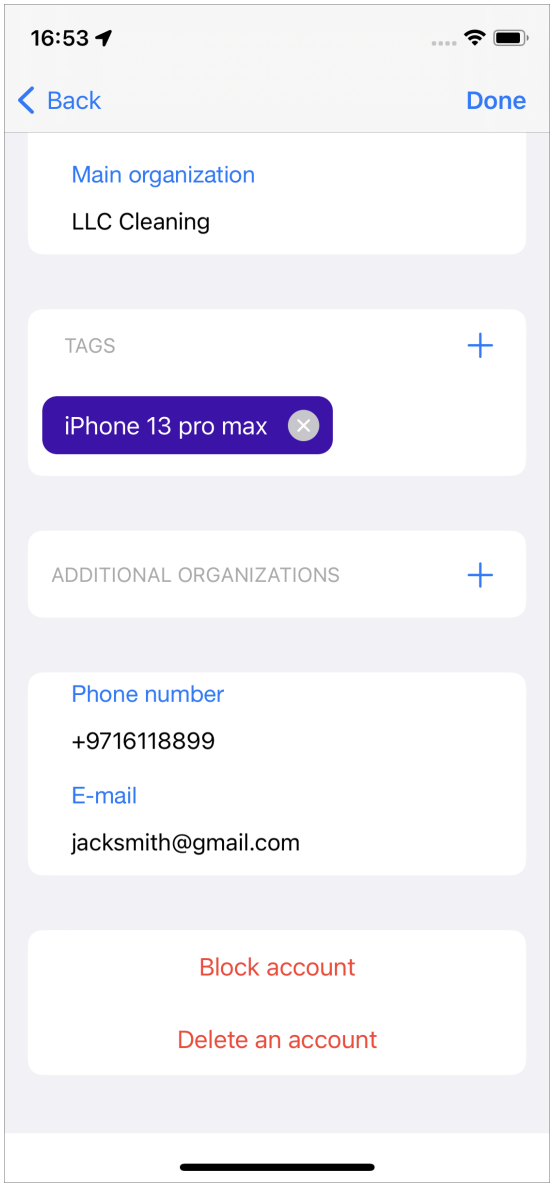


Fig. 2.62: Editing user profile

To delete a user, find the user in the “Users” section of the navigation sidebar. Use the search to find a specific user. Clicking the user name opens the account card. Click , scroll down, click “Delete an account”, and confirm your action (Fig. 2.62). You cannot delete the account under which you are currently authorized.

2.6 Organization management

2.6.1 Creating an organization

Organization creation is available to the System Administrator and Cluster Administrator. To create an organization go to the “Employees” section of the navigation sidebar or to the profile of the current user. Then open any user card, click , scroll to the “Main organization” block, and click on it (Fig. 2.63). In the opened window, click to create a new organization.

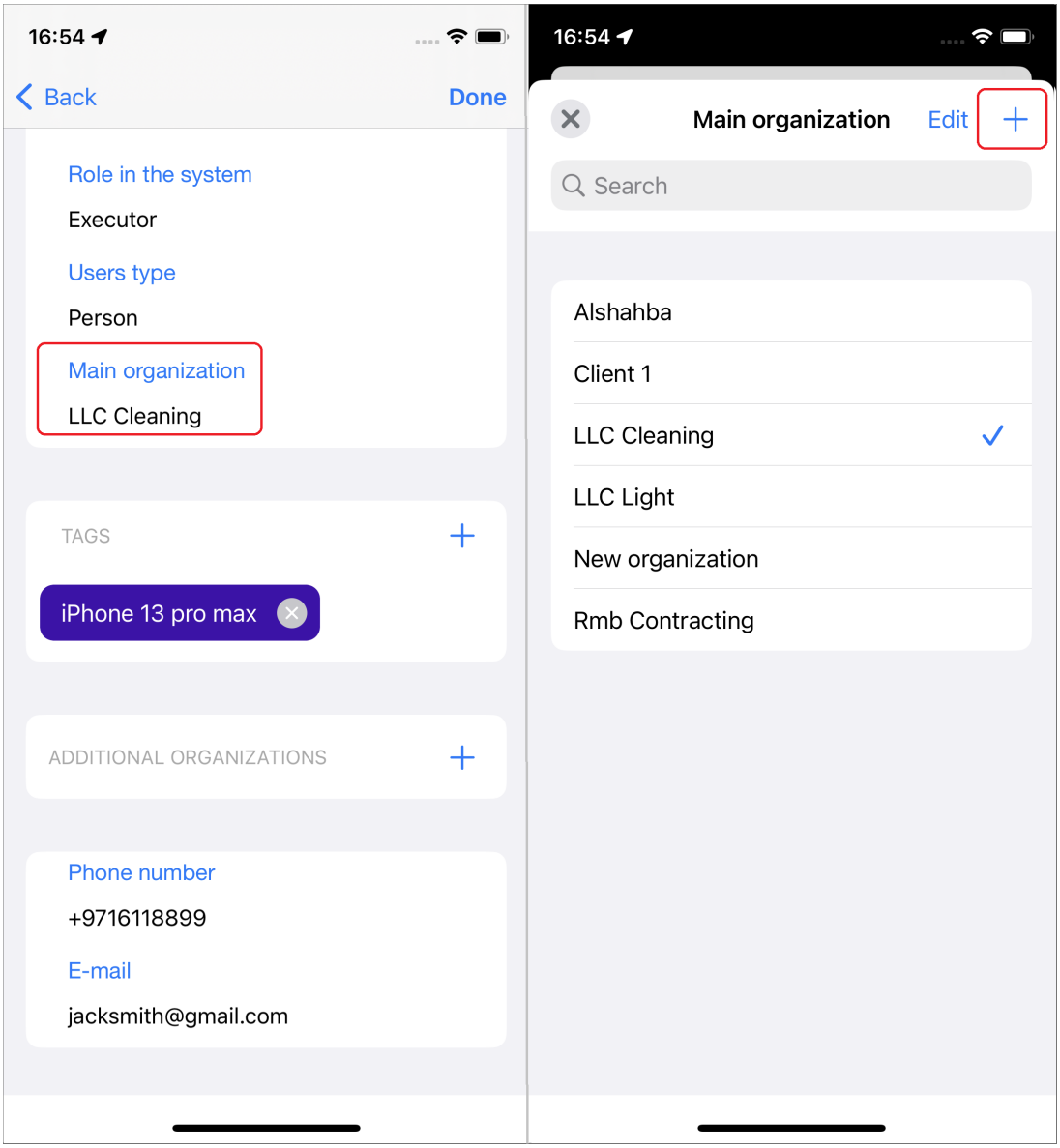


Fig. 2.63: Creating an organization

Fill in only the full name or click “Show details” and fill in all suggested fields, then click “Create” (Fig. 2.64). The organization appears in the list of organizations. It is automatically inserted into the value of the “Main organization” field. To change the user organization to a new one, click “Done”, and exit the user profile without saving changes to cancel.

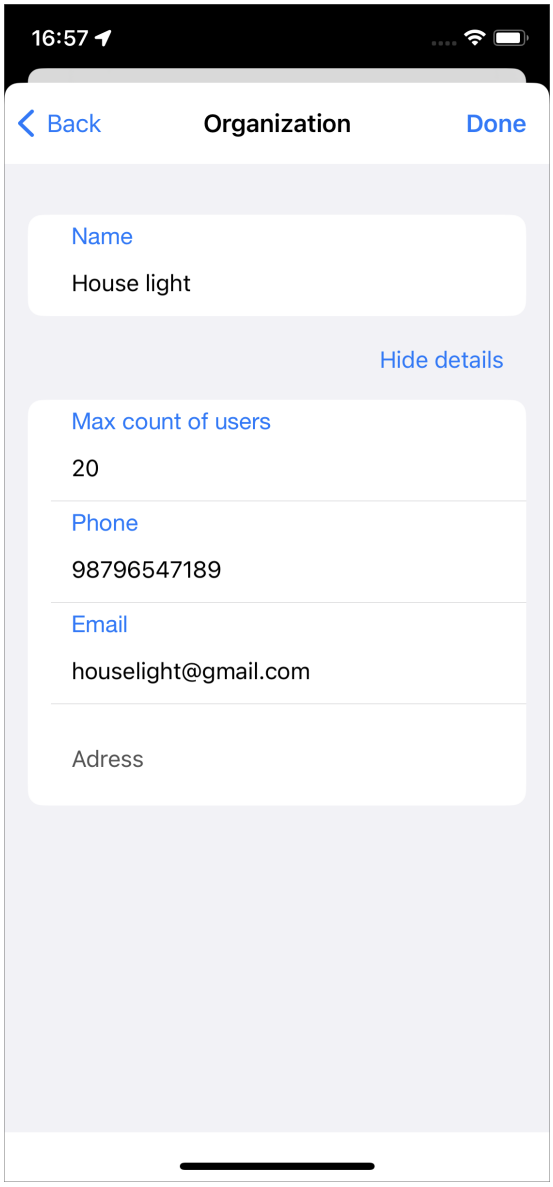


Fig. 2.64: Creating an organization

2.6.2 Editing an organization

Organization editing is available to the System Administrator and Cluster Administrator. To edit an organization, go to the "Employees" section of the navigation sidebar or go to the profile of the current user. Then open any user card, click , scroll to the "Main organization" block, and click on it. Open the window menu and select "Edit". The list of organizations opens in edit mode (Fig. 2.65).

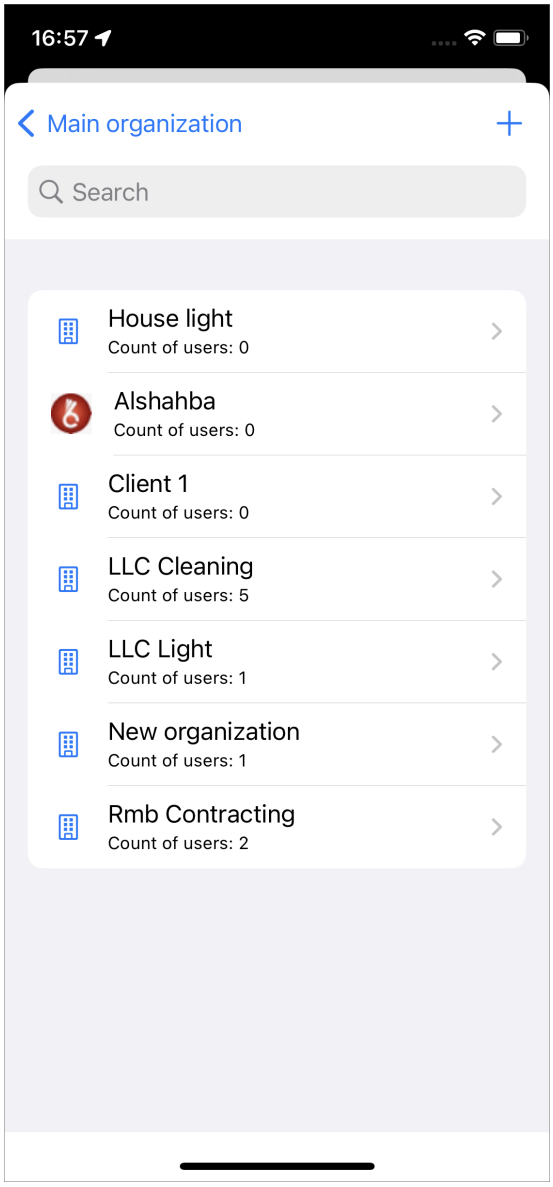


Fig. 2.65: Organization editing window

Next, select the organization, make changes in the editing window, and click “Done” (Fig. 2.66).

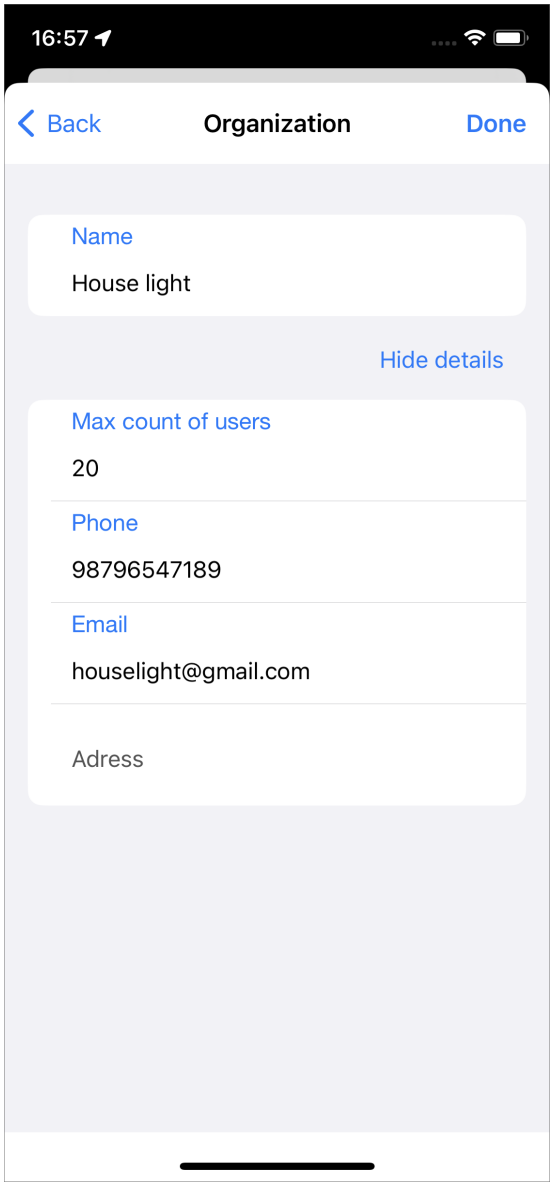


Fig. 2.66: Editing an organization

The last selected organization is automatically inserted into the main organization. To undo changes, exit the user profile without saving the changes.

2.7 Updating reference tables and settings

The ActiveMap system has a number of reference data:

- Organizations and users;
- Types of work, groups of types of work, steps, priorities, custom fields;
- System component settings;
- Service objects (layers, reference tables, and data tables).

When reference tables change, the system quickly delivers them to client applications.

Normally new values are entered into reference tables (dictionaries) in ActiveMap Web. However, you can add some data in the mobile application (*Administration* (page 124)). After editing the reference data in other clients, you need to update the data in the ActiveMap Mobile application.

Updating data in ActiveMap Mobile occurs during any access to the server (for example, when the user updates the task list or opens the task card). When the application starts, some reference data, such as information about organizations and users, is automatically updated. Data on types of work, groups of types of work, steps, priorities, and custom fields is also updated automatically.

If the data remains the same, force it to update (for more information, see *Application settings* (page 146)). Data is updated within a minute from the last data addition on the ActiveMap Web. If there were several actions at once to add new values to ActiveMap Web, then the application is updated no earlier than one minute after the last change to ActiveMap Web.

Data from layers, reference tables, and data tables is updated only through manual refresh.

If you are creating or editing a task or a layer object in the ActiveMap Mobile application at the time the reference tables are being updated on ActiveMap Web, the reference tables will not be updated in the application. This is because the application do not send requests to the server during creation or editing. In this case, exit the task creation/editing mode (all changes are saved) and update the task list. Then return to the task draft (set “My tasks” filter) or edited task and continue filling it with updated reference tables. The delivery time of reference tables updates is about a minute.

To apply updated system component settings, you must also force a data update.

2.8 Service objects

2.8.1 Creating and managing service objects

In this section, you can manage service objects: view, create, edit, and delete them as well as tasks linked to them. To view service objects, go to the “Service objects” section of the navigation sidebar (Fig. 2.67).

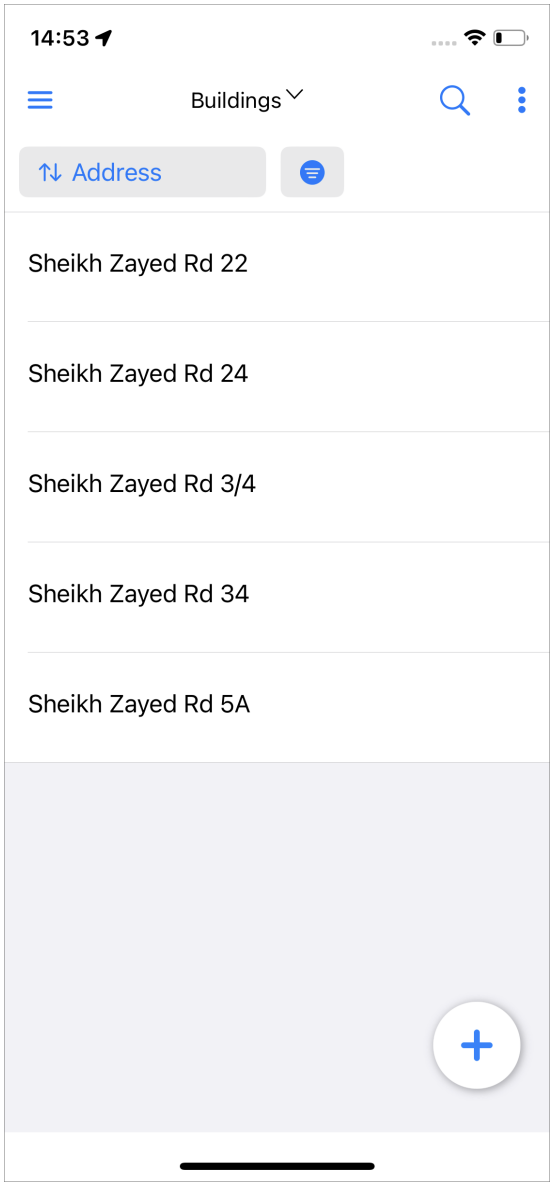


Fig. 2.67: Service objects window

In the opened window, you can select a layer. Click on the row with the name of the currently active layer at the top of the window and select the desired layer from the drop-down list (Fig. 2.68).

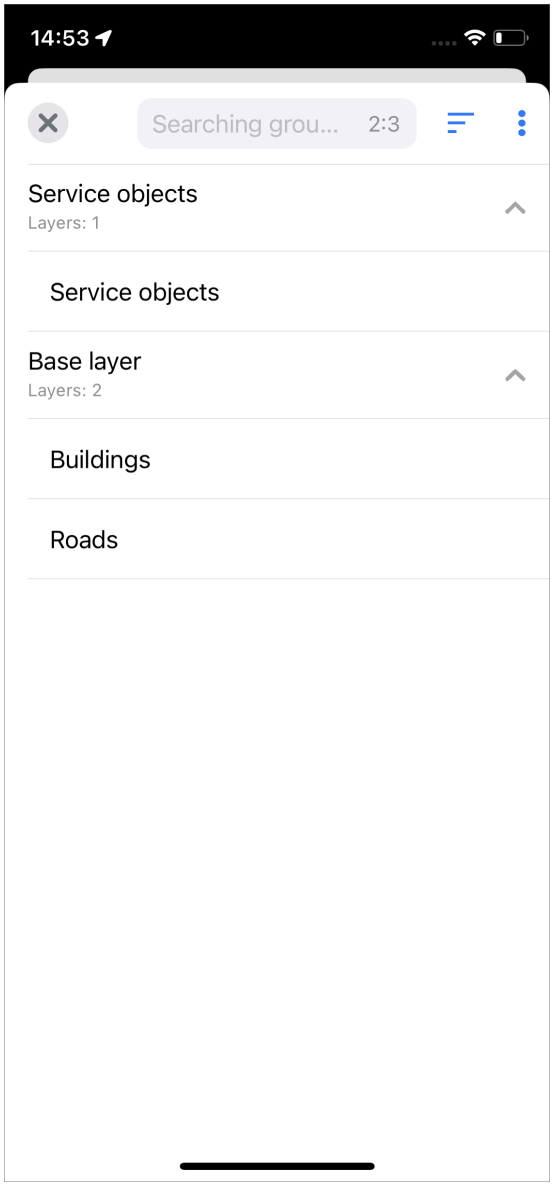


Fig. 2.68: Selecting a layer with service objects

The drop-down list contains groups of service layers. Here are the layers marked by the administrator as service layers. The number of layers is indicated on the line of each group. At the top of the window, there is a search box that allows users to search for groups and layers by their names. In addition, to the right of the search box, there is a sorting button , providing a choice of sorting parameters by name and by layer number. This window has a menu , which contains the following actions:

- Update the data.
- Expand groups.
- Collapse groups.

After selecting a layer by tapping, the application closes the layer selection window and transfers to the window for displaying the list of objects of the selected layer. In this window, you can use the search bar. The objects are searched according to the attributes configured

in the ActiveMap web system, regardless of the presence of the Internet. The application implements the search for service objects when geolocation is disabled. When clicking , a service object search window (Fig. 2.69) opens. Here you can use a standard search string, as well as search using a QR code and an NFC tag. To search for a service object using a QR code, click "Scan the QR code". The application opens the built-in camera for scanning. At the same time, a QR code should be created in advance for a service object. To search for an object using an NFC tag, bring the device to the object's NFC tag.

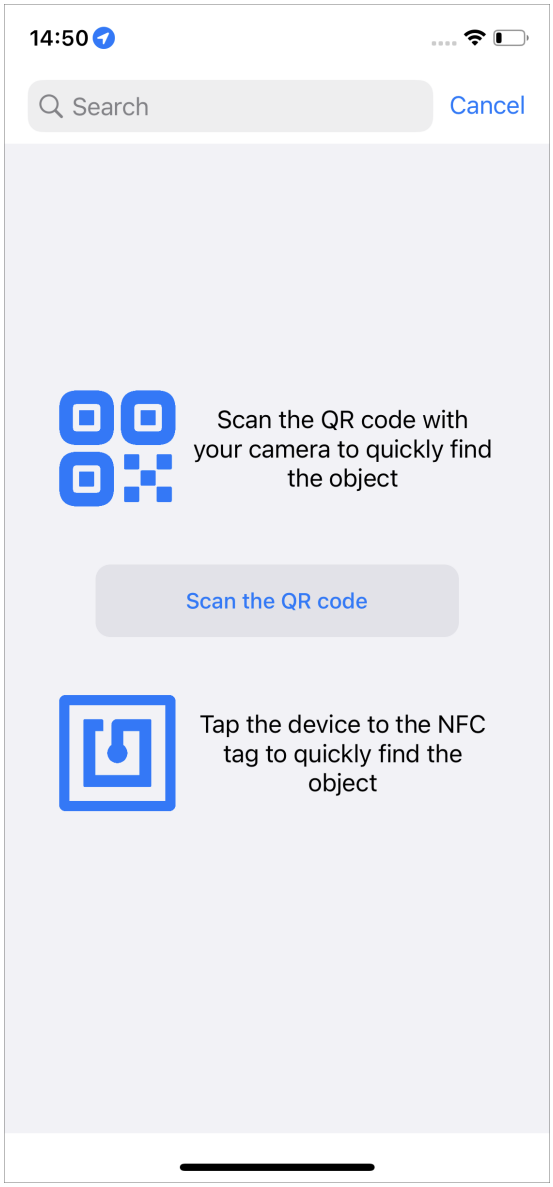


Fig. 2.69: Service objects search window

Important: When service objects are uploaded and there is an Internet connection, the search for objects is based only on data in the internal storage until the user refreshes the uploaded data.

Click to open the service object list window menu (Fig. 2.70).

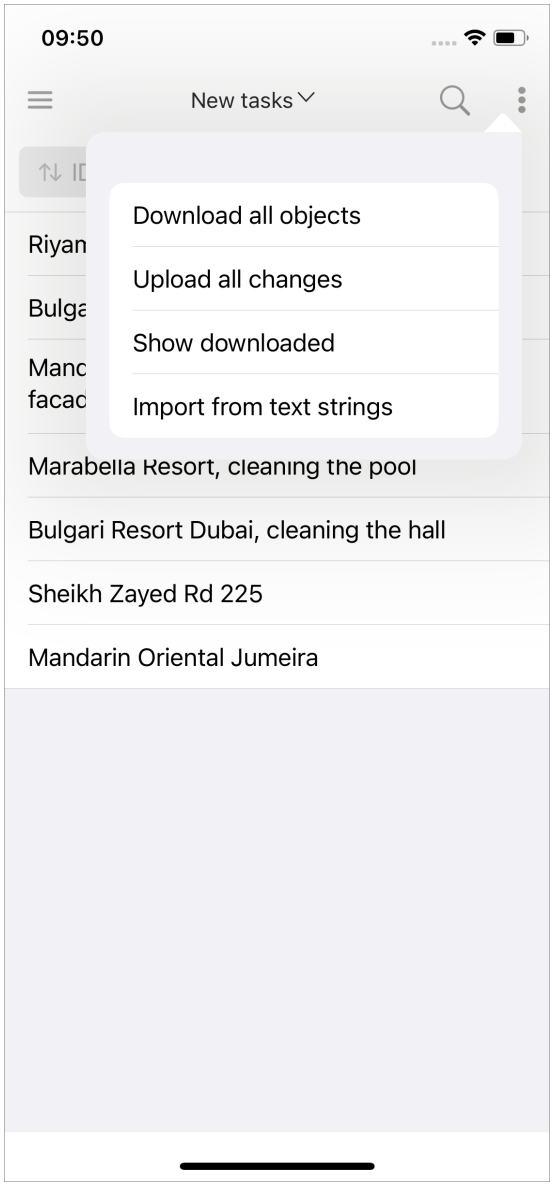


Fig. 2.70: Menu of the service objects window

- "Download all objects" – loads objects into device memory (cache).
- "Upload all changes" – sends all changes at once to the server.
- "Show downloaded" – displays the list of objects loaded into the cache. It is required to verify the loading of all objects necessary for the offline work.
- "Import from text strings" – uploads new objects into the layer from the text.

Loading objects is needed to work with these objects offline: edit, add, and delete service objects. After downloading the objects, the following message appears at the top of the service objects list (Fig. 2.71):

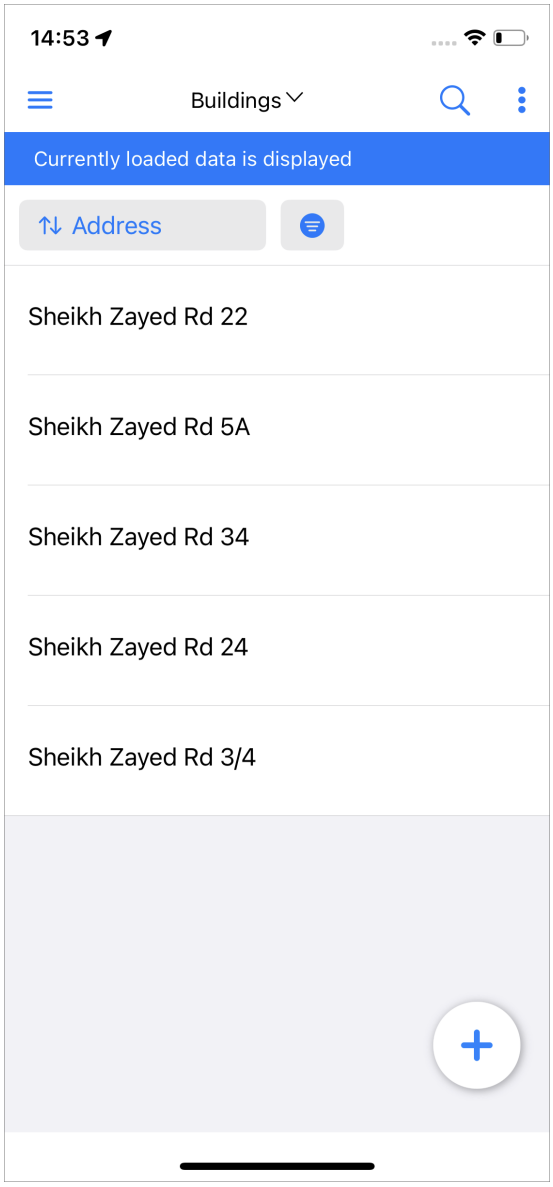


Fig. 2.71: Downloaded data message

If you are connected to the internet, this message disappears after you have submitted the changes and data updates. You can continue working as normal until the cache is reloaded. To clear the cache, log out of your user account. You can do this by selecting the "Exit account" navigation sidebar item.

Attention: If service objects are downloaded, you continue to work with the data stored in your phone's cache at the time of download, even when the internet is available. To work with the current data, refresh it by swiping or selecting "Refresh data" from the menu of the service object layers list. If the "Downloaded data currently displayed" message disappears, it means that the data is displayed online.

The sort and filter buttons (Fig. 2.72) are located at the top of the object list window. Sorting involves selecting parameters: attribute and direction.

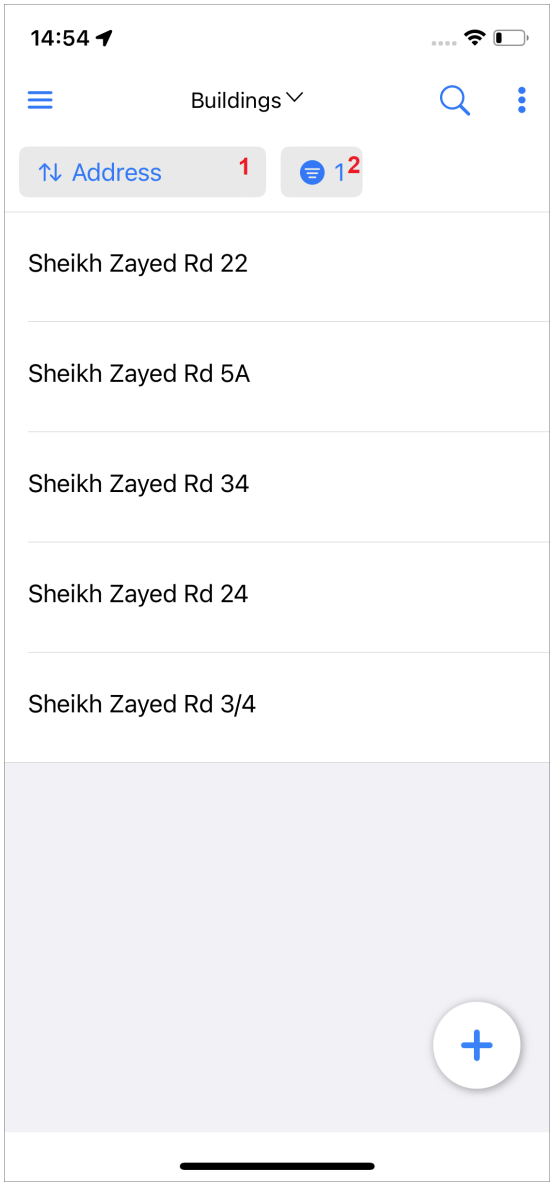


Fig. 2.72: Sorting (1) and filtering (2) of service objects

Filtering involves selecting an attribute to which the filter is applied and entering the desired value (Fig. 2.73). It is possible to expand the filter with various combinations of conditions. When setting up a filter, select the required option:

- Entry – displays objects where the attribute values contain part of the strings entered by the user.
- Match – displays objects where the attribute's values fully match the user-entered strings.

Next, enter the attribute value for the filter and click "Done" to apply it. The filtered object list opens.

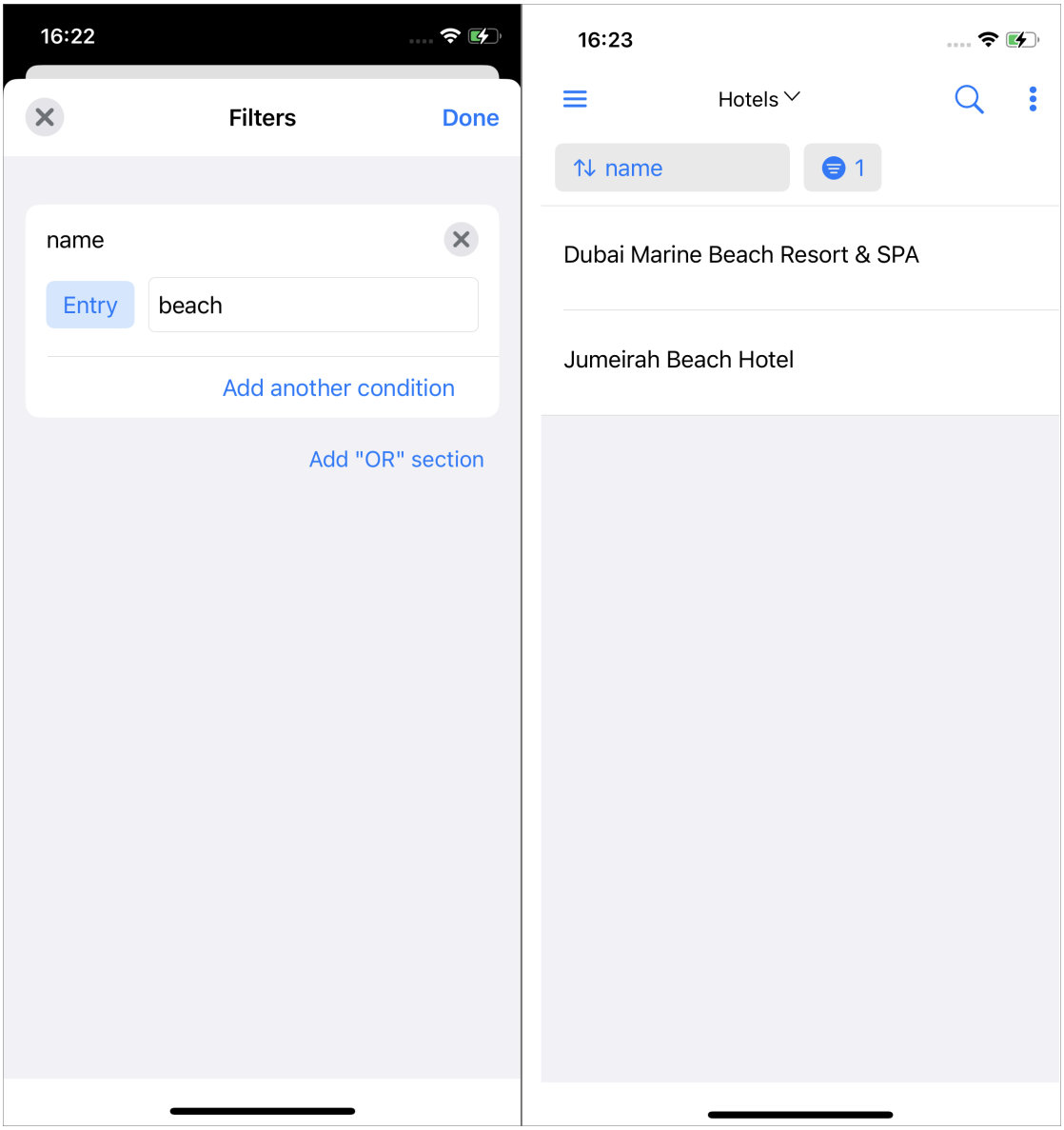


Fig. 2.73: Filling in the filter and the result of applying it

You can select the desired object by tapping it in the object list window. In the opened window, you can see the name of the object and the layer to which it belongs (Fig. 2.74). It also displays photos (if available), links, and attached files. In this window, you can fly to the object by clicking at the top of the window. A window with a map showing the object's label opens. To have up-to-date data in the repository for the offline work, be sure to download the objects again.

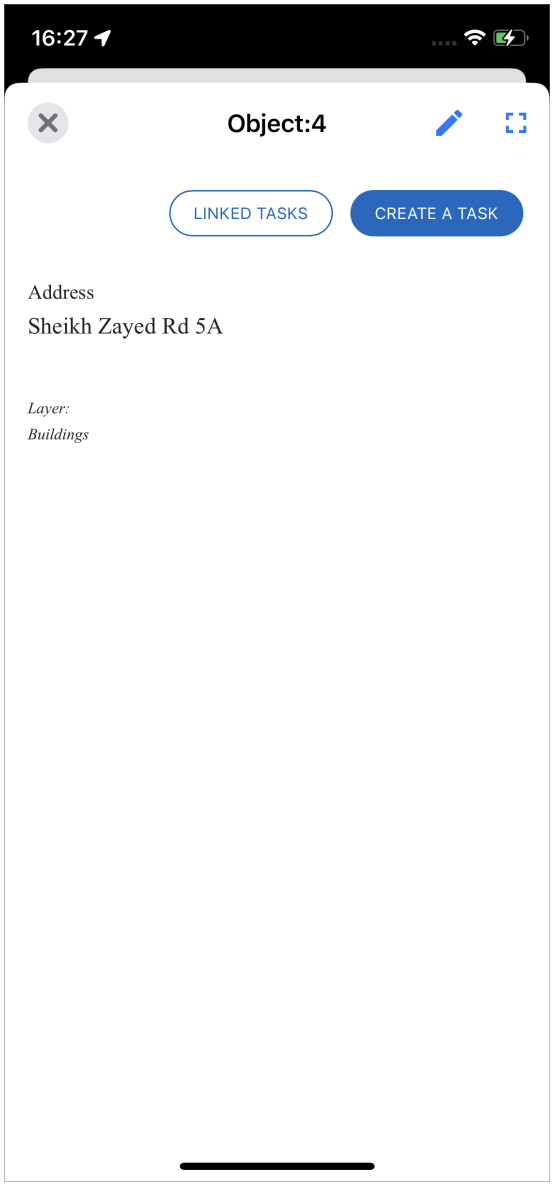


Fig. 2.74: Service object view window

In the object view window you can go to the editing of the service object by clicking . Editing the service object is done similarly to editing a thematic layer object (Fig. 2.75, more details in *Editing layer objects* (page 107)).

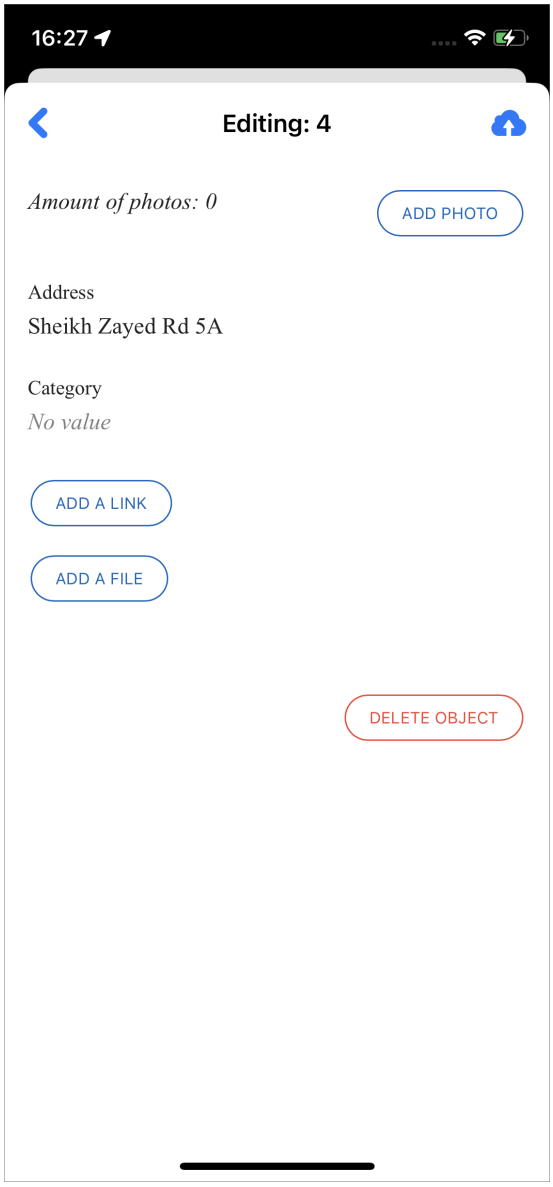


Fig. 2.75: Service object editing window

Click “Linked tasks” in the object view window to view the tasks associated with the service object. The opened window is similar to the task view window (*Task management window* (page 30)). You can use filters and sorting to search for the desired tasks.

You can also create a related task by clicking “Create Task”. A window similar to creating a task in the “Tasks” section opens, except that the “Service object” field is already filled with information about this service object.

To create a service object, click + at the top of the service object list window. A new object creation window opens, similar to the thematic layer object editing window (Fig. 2.76). For more information, see *Editing layer objects* (page 107). When you open the object creation window, the line with coordinates contains the “Waiting for geolocation services” inscription. An animated signal search loader is displayed to the right of the line. After the user’s location is established, the coordinates appear in the line.

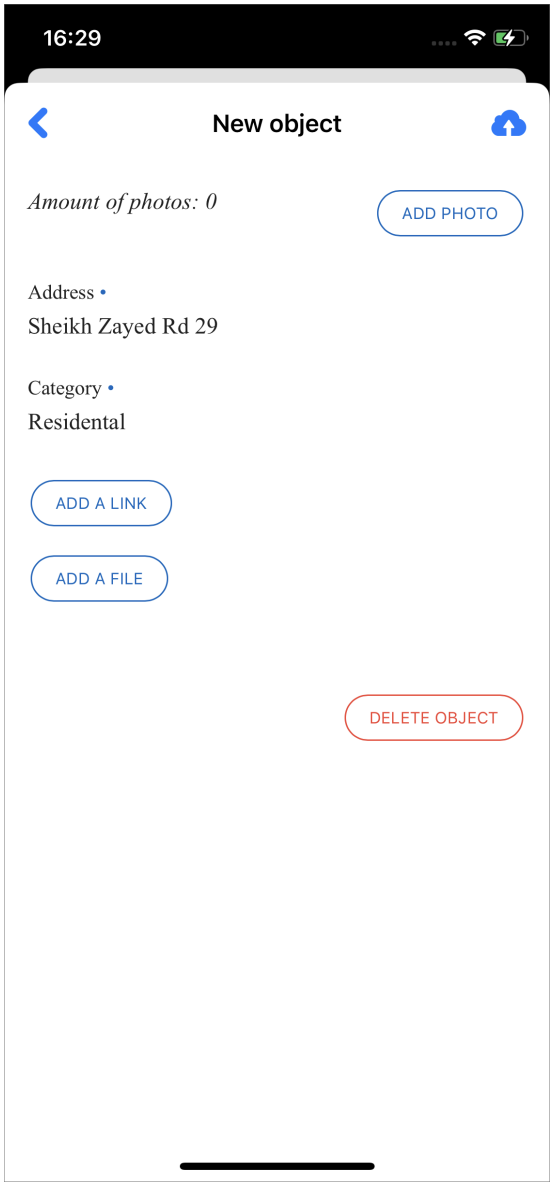


Fig. 2.76: New object window

To cancel creating a service object, click  in the upper left corner of the window. The system warning message about unsent changes appears (Fig. 2.77).

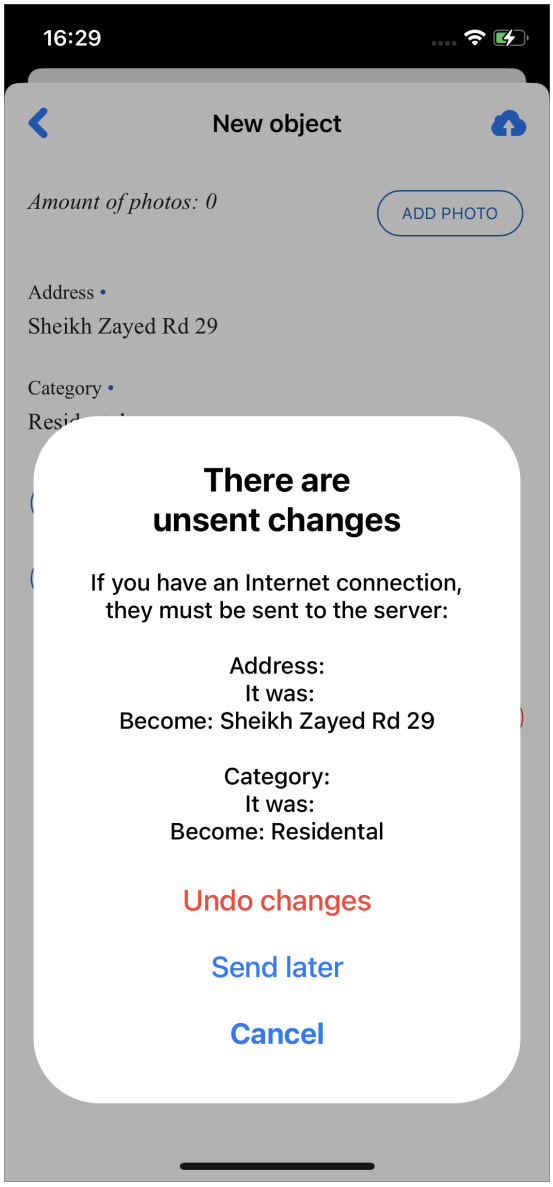


Fig. 2.77: System warning message about unsent changes

Selecting “Undo changes” closes the creation window without saving the changes. If you select “Send later”, the system creates a draft of the object (Fig. 2.78). If you select “Cancel”, the object creation window becomes active again and you can continue adding information.

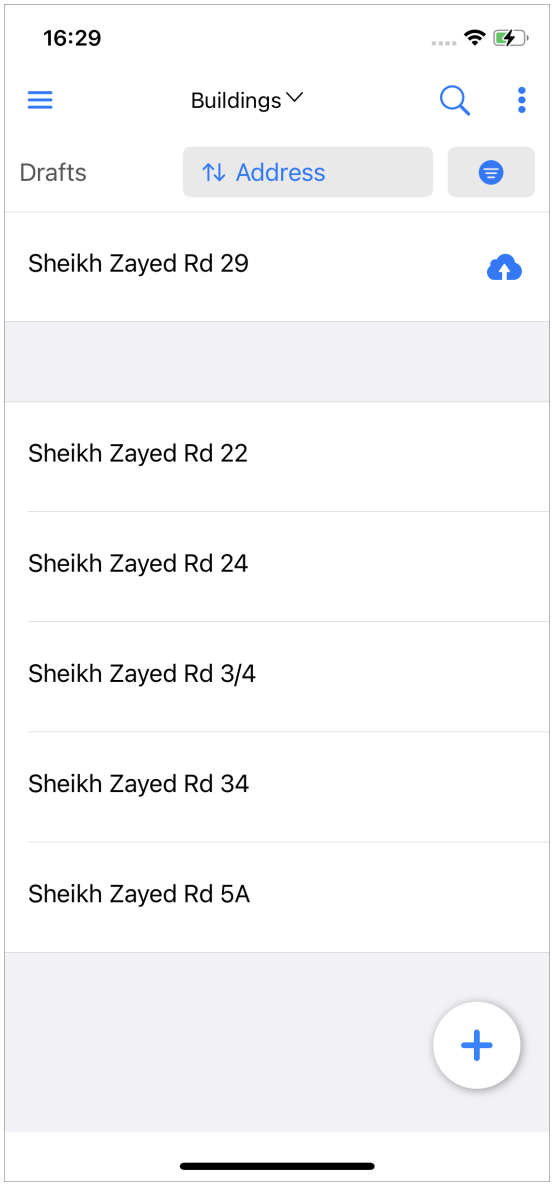


Fig. 2.78: Draft in the list of service objects

If you do not need to make changes to the draft and it is enough to send it to the server (for example, if the object was not sent to the server due to lack of the Internet connection), click in the draft object string. This sends it without opening the object window.

If you have to make changes to the draft before sending it to the server, open the object window by clicking on the object line. Fields with changes that were not sent to the server are marked with a blue dot to the right of the field name. After making the necessary changes, click located at the top of the window.

To delete a draft, open the object window and click “Delete object” at the bottom of the window.

To delete a service object, open the object view window, click at the top of the window, then click “Delete object” at the bottom of the opened object edit window.

If the user is working with a downloaded object, a message about the time of the last object

download to the cache appears in the service object view window (Fig. 2.79):

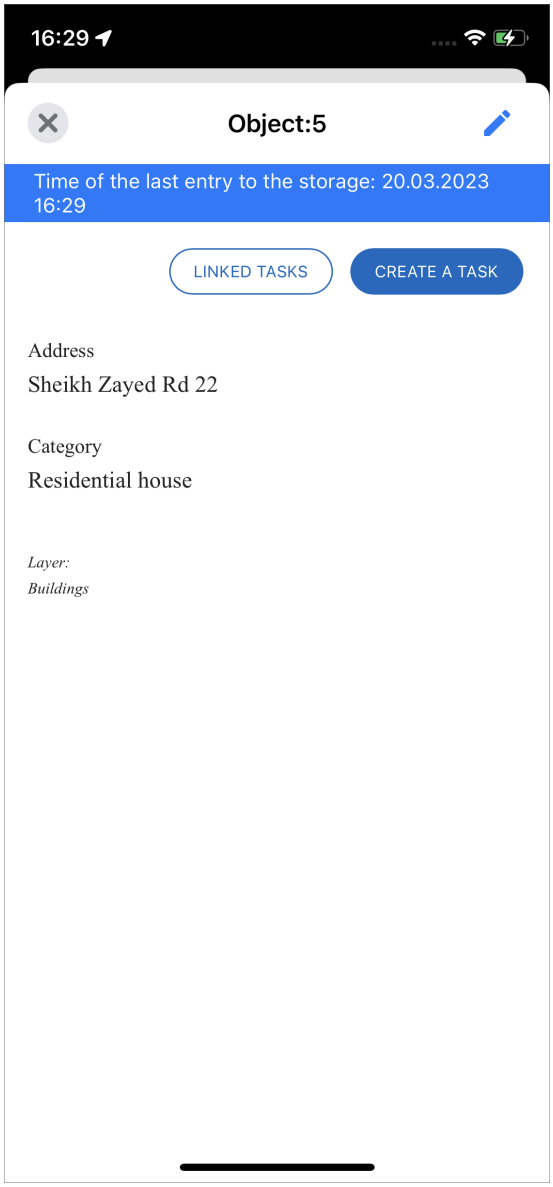


Fig. 2.79: Message about working with the loaded object

2.8.2 Importing service objects

Attention: The import of service objects is possible only with Internet access.

You can use bulk import to add new objects. For correct import, consider the following:

- You must have rights to edit the layer.
- The layer must have a title with the “text” field type for loading the imported information to (if there are several fields, the first one should be of the text type).

- Empty lines, as well as spaces at the beginning and the end of a line are not taken into account during import.
- The total limit for uploading objects via import must be more than 0.
- You cannot create a new layer in this way.
- The objects will not have geometry.
- You cannot add any other attributes except the name.

First, prepare a text for import with object names separated by commas, or a text list with one object name on each line. To start the upload, go to the "Service Objects" tab. Select the layer and click ⋮. Next, select "Import from text". A window for mass object creation opens. Clicking ⚙ opens a window where you can choose the separator between the objects. Then click "Paste from clipboard". If necessary, you can add objects manually. After all objects are specified, click "Create" (Fig. 2.80).

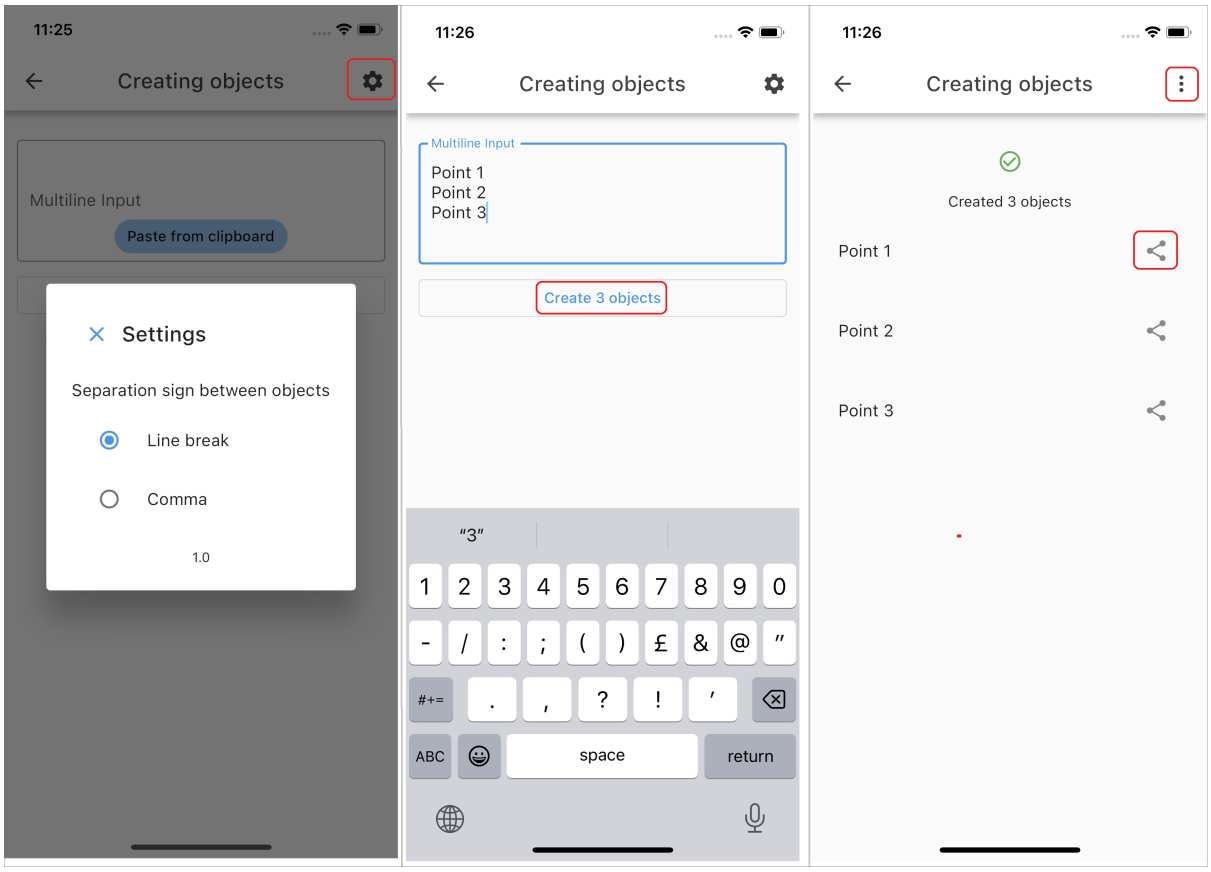


Fig. 2.80: "Import service objects" window

A list of created service objects appears on the screen. If needed, you can share the links to the objects with other users.

Attention: If you try to upload already imported objects into a layer, the system generates an error.

2.9 Working with the map

2.9.1 Managing layers

Working with geospatial data and cartographic information

In addition to georeferencing of tasks, the application offers the following features for working with geospatial data:

- Online visualization of georeferenced data;
- Search in the list of information layer objects;
- Obtaining cartographic information (list of layers, objects, their attribute data, and attached media files at the selected point on the map);
- Viewing users' locations.

Selecting "Map" from the side menu of the task management window takes you to the "Map" window, which displays an electronic map of the world. You can change the map scale using the "pinch" and "spread" movements. To navigate the map, use the "drag" movement.

"My Location" button in the top right-hand corner of the map window lets you fly over the map to your current location (if the location sources on your device have been set up correctly).

Viewing layers

Clicking on "Manage Layers"  in the lower right part of the map window opens the map layers management window (Fig. 2.81).

Fig. 2.81: Layer management

The layer management window contains the following elements (Fig. 2.82):

1. Layer groups
2. Layers
3. Search box
4. Showing all or only selected layers
5. Sorting settings
6. Window menu

The number of layers is displayed under each layer group. Clicking on the group name displays the list of group layers.

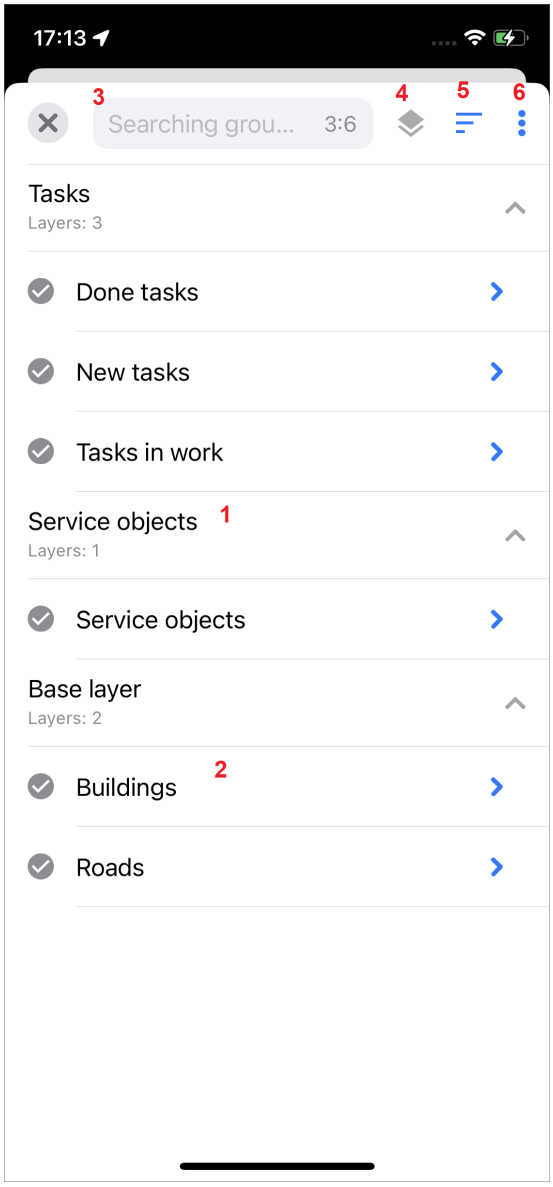


Fig. 2.82: Map layers management window

To search for a layer, enter the name or part of the name in the search box. In the list of layer groups, you can see the number of layers satisfying the specified search conditions at the bottom of each group name. In groups with non-zero found layers, clicking on the line with the group name shows a list of layers (Fig. 2.83).

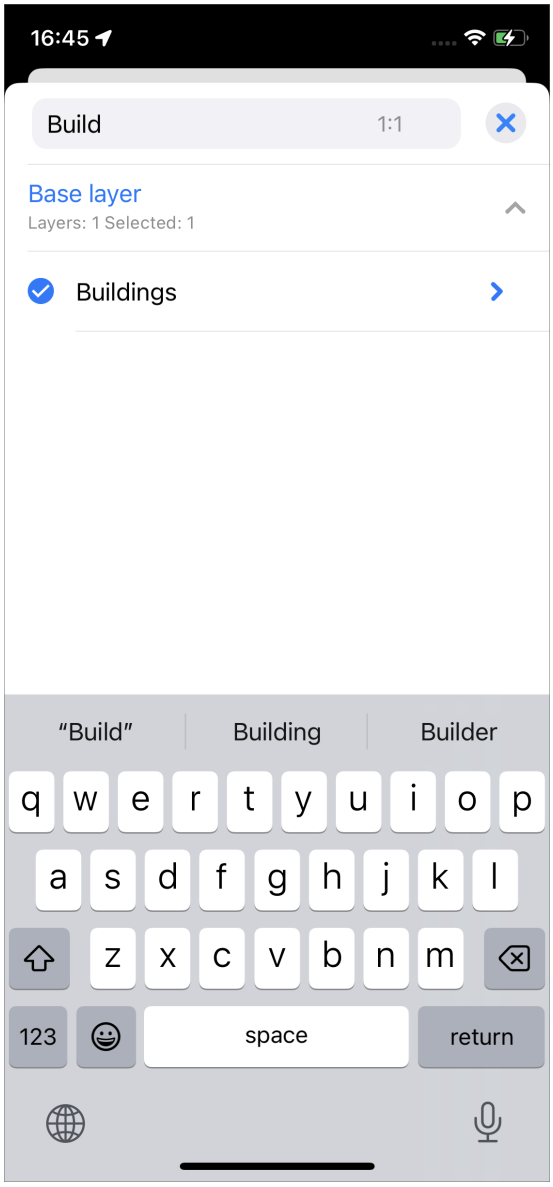


Fig. 2.83: Searching for a layer in the map layer management window

The row of each layer contains the following elements:

- Name of the layer,
- Layer visibility control field,
- Arrow to go to the window of layer objects.

To display layer objects on the map, check the layer visibility control. The layer objects appears on the map. However, their visibility area and map scale stay the same as they were before switching on the layer's visibility. To navigate to the layer, go to the list of layer objects by clicking the arrow on the left side of the layer row, and then click at the top of the window. All layer objects are displayed on the map, automatically selecting the map area and the scale required to make all the objects in the selected layer visible.

Viewing layer objects

To view information on layer objects, go to the layer object list window by clicking on the arrow in the right part of the layer line. In this window (Fig. 2.84), you can search for objects, fly to the layer on the map, sort and filter. This works similarly to service objects, see details in *Service objects* (page 84).

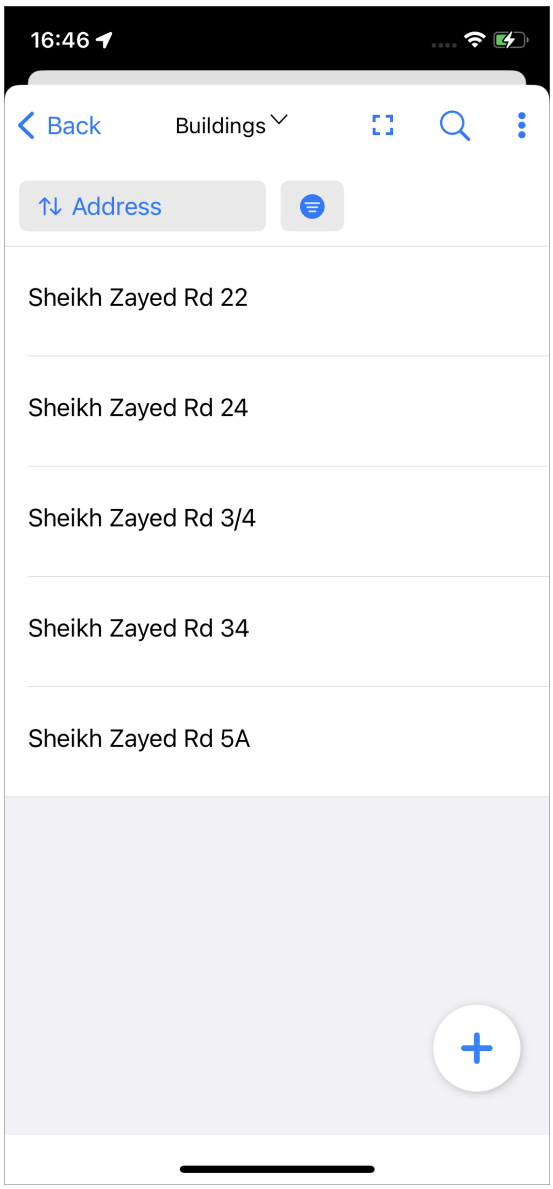


Fig. 2.84: Layer object list window

To view information about an object from the list, click on it. The "Object view" window opens, containing attribute information about the selected object. To obtain cartographic information (a list of layers, objects, their attribute data, and media files) at the selected point on the map, mark the point on the map by tapping it. The "Object view" window opens with a list of layers and objects that are at the designated point on the map (Fig. 2.85). This window also contains information about the number of layer objects in the selected point. To obtain detailed attribute information about the object, select the object in the list by tapping it. The "Object view" window containing attribute information about the selected

object opens (Fig. 2.86).

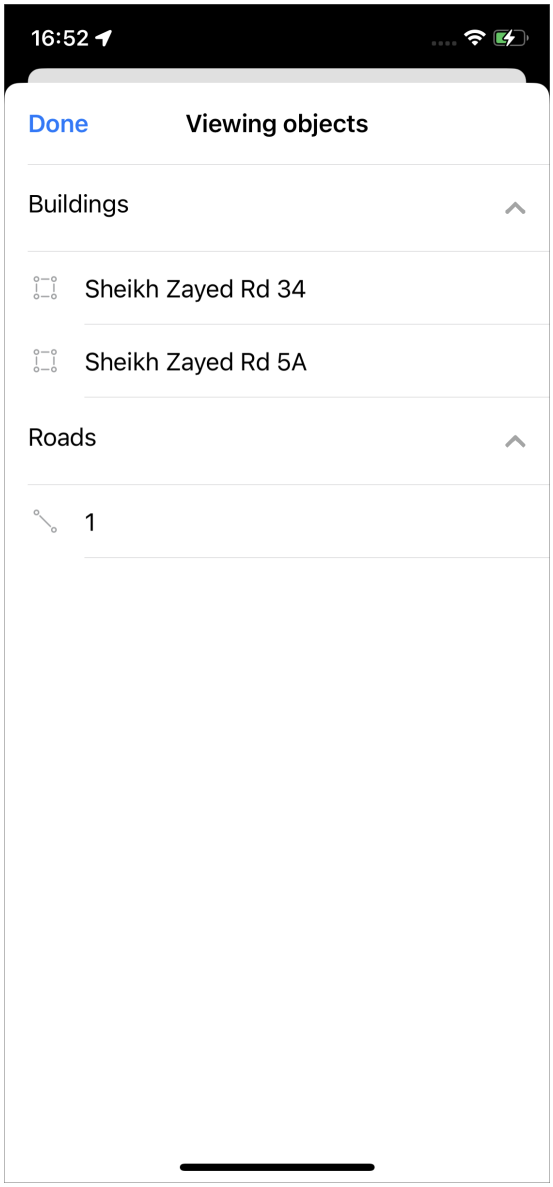


Fig. 2.85: Window of the object list at a selected point on the map

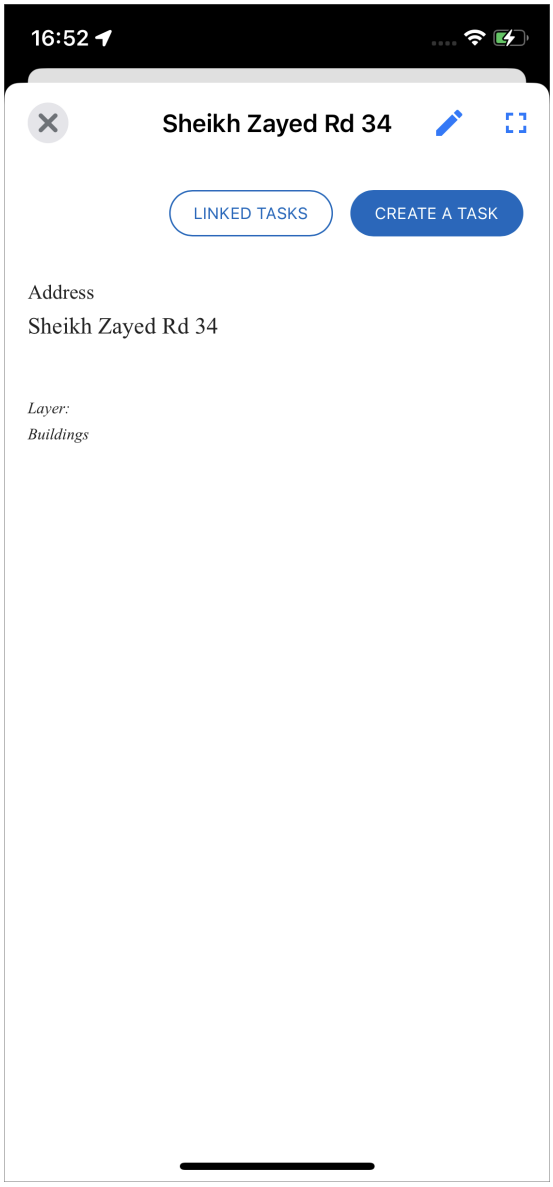


Fig. 2.86: Object view window

You can perform the following actions in the object view window:

- View information about the object.
- View tasks linked to the object.
- Create a related task.
- Fly over the object on the map.
- Edit the object.

Clicking the “Related tasks” opens a window similar to the task list window. It shows tasks associated with the object. You can sort and filter them, similar to the task list. To create an associated task, click the “Create a task”. A window similar to the task creation window opens. Fill in the fields, attach media files, and click “Create”. Coordinates are taken from the object connected to the task.

To fly to the object on the map, click . The object location view window opens (Fig. 2.87). In this window, you can zoom in and out with the “pinch” gesture (spread/pinch your fingers), go to the sidebar menu, fly to your location, and return to the object view window by clicking “Return to object”.

Fig. 2.87: Object location view window

Editing layer objects

To edit an object, click on in the object view window. The object edit window (Fig. 2.88) opens.

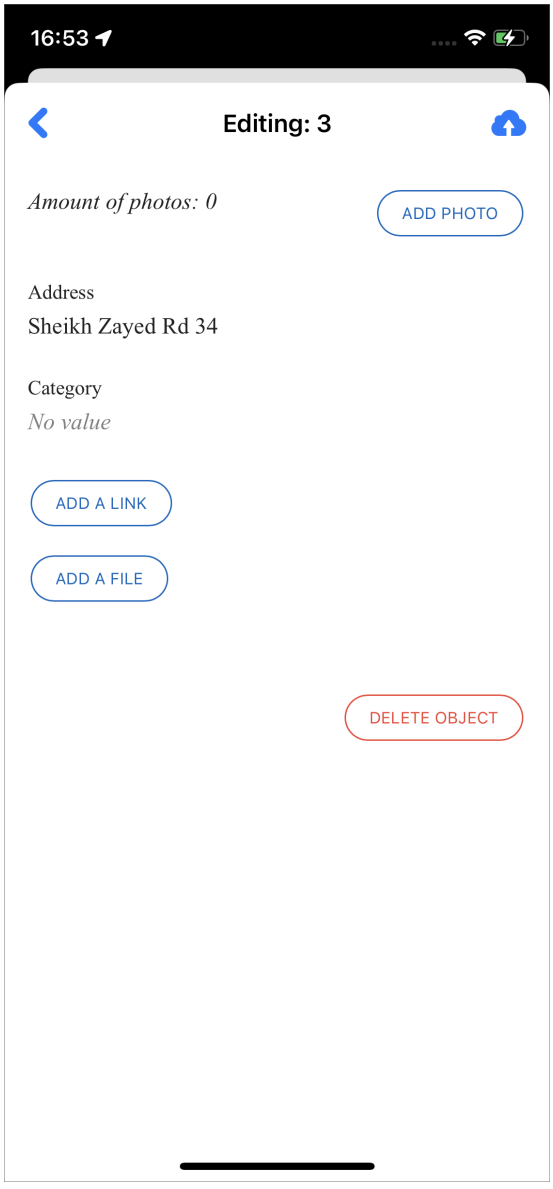


Fig. 2.88: Object editing window

To edit the information of the object, click the relevant field. This brings up the field editing window (Fig. 2.89). In this window you can correct or re-fill the field. In addition, you can move to the next field by clicking Next without exiting the field editing mode or go back to the previous field by clicking . After making all necessary changes, click "Done". To exit the field editing mode without saving changes, click .

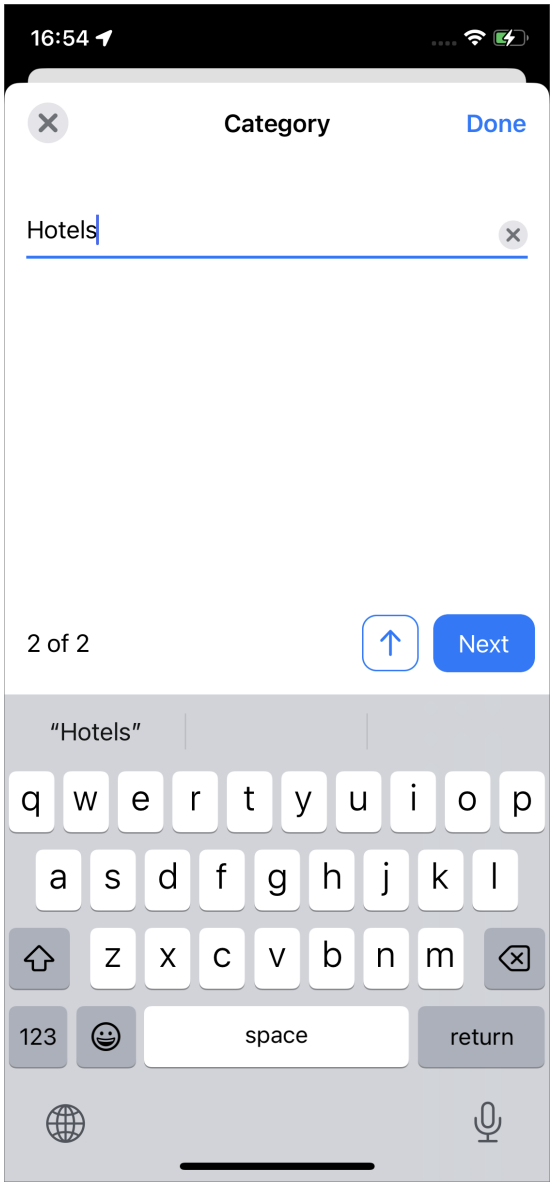


Fig. 2.89: Object field editing window

You can also add a photo in the object editing window. Click the "Add photo" to open a camera. Once you take the picture, click "Use photo" or "Reshot". To delete the attached photo, click on its preview.

Clicking "Add a link" opens a form for entering the address of the link and filling in the "Description/Title" field (Fig. 2.90). Created link is displayed in the object viewing window under the name entered in the form. To delete a link, click to the right of its name in the object editing window.

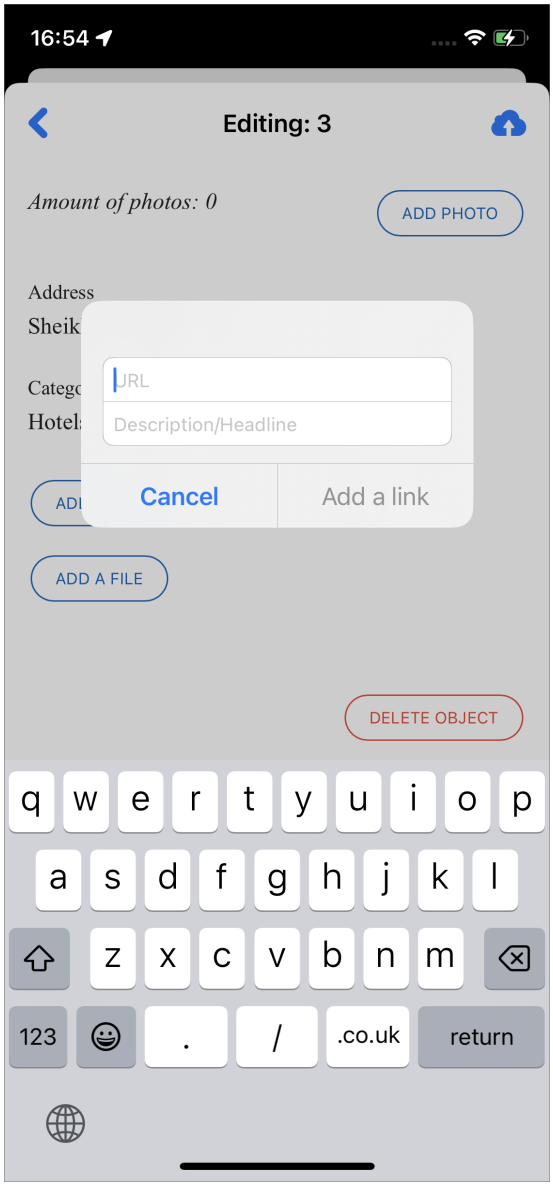


Fig. 2.90: Link adding form

Clicking “Add a file” opens a window where you can select a document (Fig. 2.91). To attach a document to an object, tap on it. The file manager closes itself and the attached document is displayed in the object editing window. To delete a document, click to the right of its name.

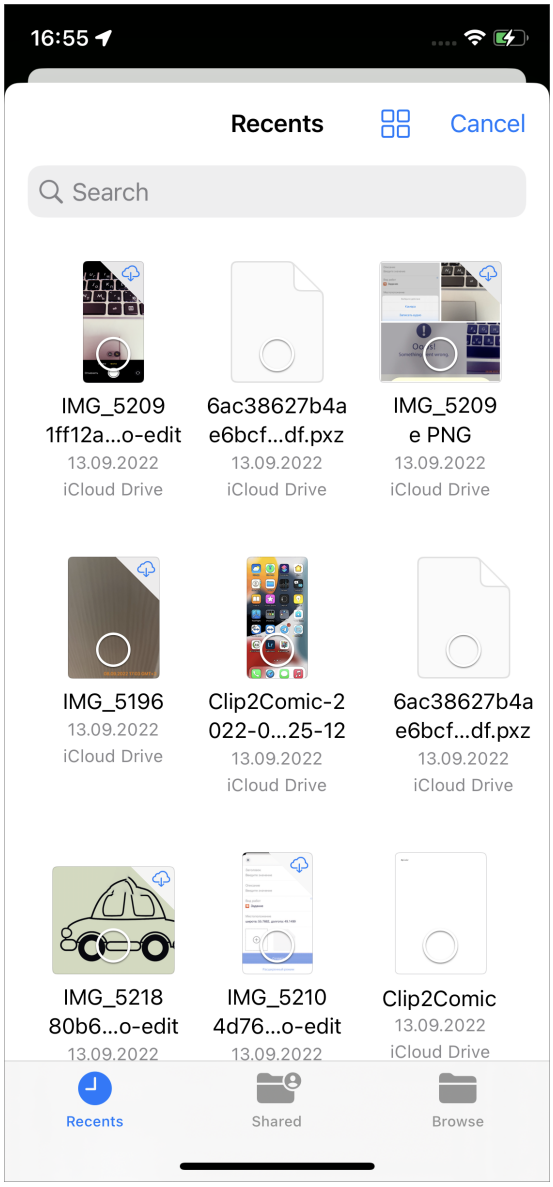


Fig. 2.91: Window for selecting the document to be attached to the object

After making all necessary changes in the object editing window, click to synchronize the changes with the server. After a successful synchronization, the editing window closes and the object viewing window becomes active.

2.9.2 Users on the map

Viewing users and their movements on the map

The map displays where users are currently located, provided that the users have GPS monitoring enabled and access to the Internet. In the "Map" section, the "All" filter is set by default for all roles. If the user is offline or monitoring is disabled, the last known coordinates are displayed (Fig. 2.92). Viewing users is available to users with administrative roles by default (inspectors, administrators). Users with other roles should be granted permissions to view user locations. Users with other roles can only track their own movements.

This feature allows monitoring of user movements in real time and viewing their movement history. Also it allows obtaining the following information about a user: movement speed, battery level, time of last data transmission, distance, number of assigned tasks in progress, organization membership, system role, account data, and connection status.

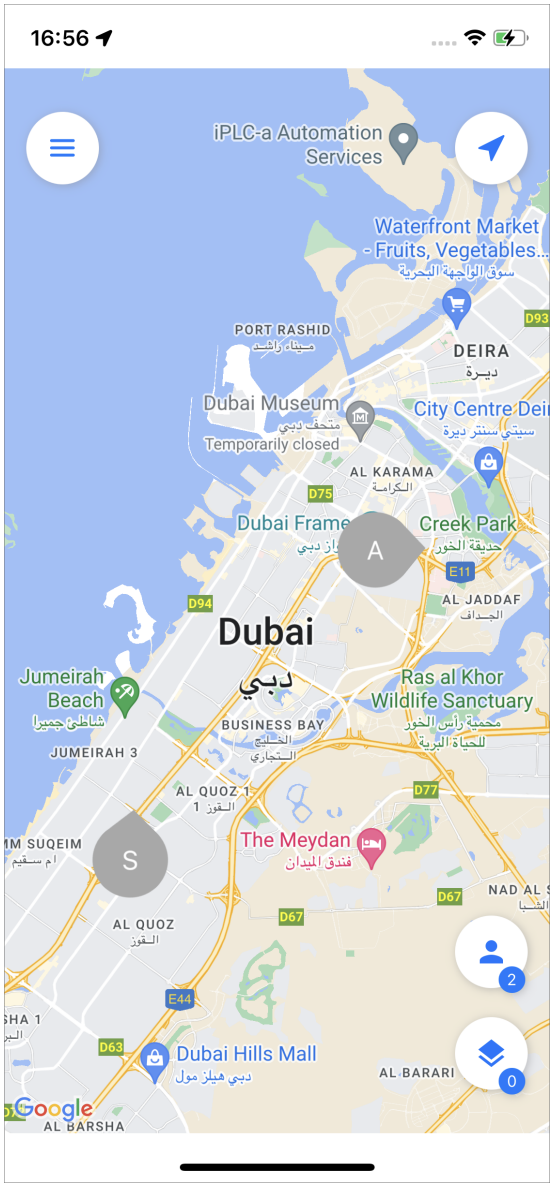


Fig. 2.92: User location map

User icons on the map change color depending on when the position data was last sent to the server. You can change the activity intervals of the last transmitted data in the settings of the "Users" system layer in the ActiveMap Web web system. By default, the following intervals are set:

- Green color – coordinates sent to the server less than 15 minutes ago.
- Orange color – coordinates sent to the server less than 60 minutes ago.
- Red color – coordinates sent to the server less than 24 hours ago.
- Grey color – coordinates are missing for more than 24 hours.

To change the list of users on the map or to see the location of a specific employee, click 

. The button also shows the total number of authorized users on the server. A list of users opens, available for viewing under the current account and filtered by activity interval (Fig. 2.93). The following information is presented here:

- Time elapsed since the last user activity;
- Avatar colored according to activity intervals and battery level;
- Login;
- Organization,
- Role;
- Labels.

The toggle on the right allows hiding users on the map with the corresponding activity status. Window also contains filtering/sorting tools. To return to the map, close the list of users with 
.

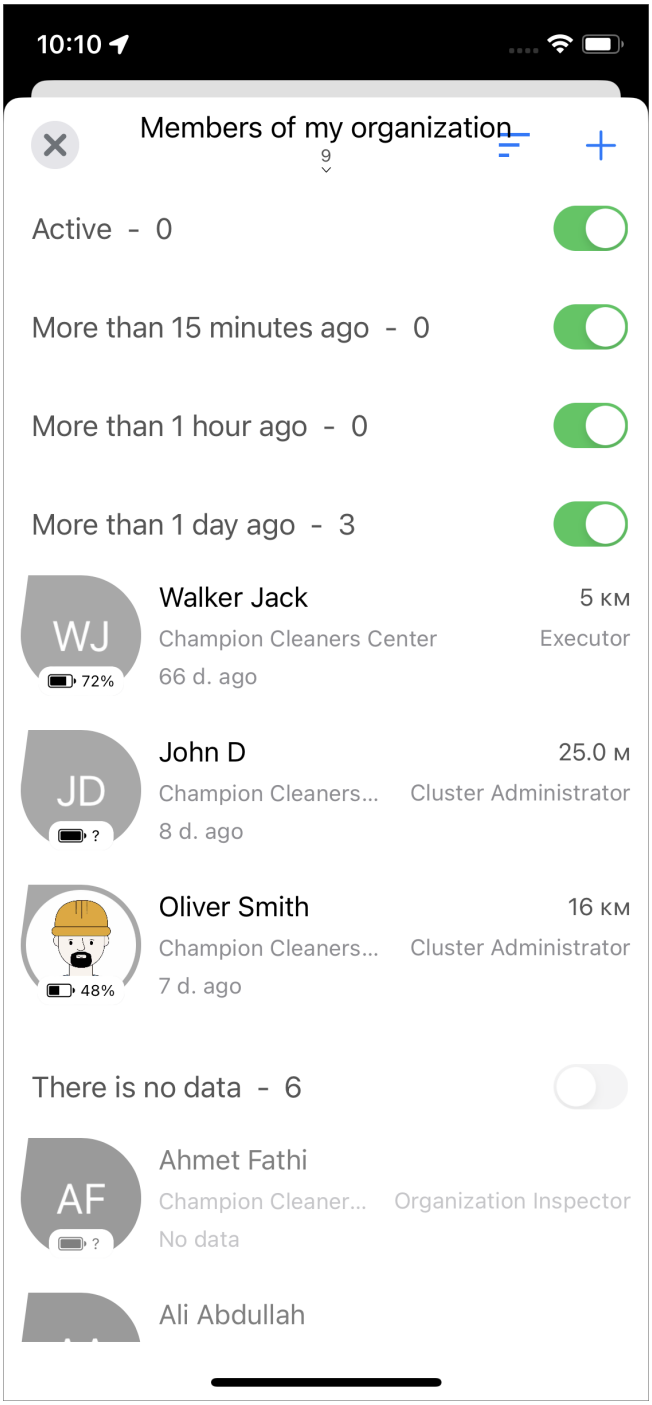


Fig. 2.93: List of users

The default sorting is by last activity time. However, sorting by name and distance from the current location is also available.

Clicking on 

opens a list of available filters (Fig. 2.94):

- User type
- User tag
- Creator-Organization

- Is in the organization
- Role in the system
- Users name
- Users Login
- User ID
- Monitoring

In addition, a quick filter is available, which replaces the values of all filter fields with preset values:

- All
- With monitoring
- Members of my organization

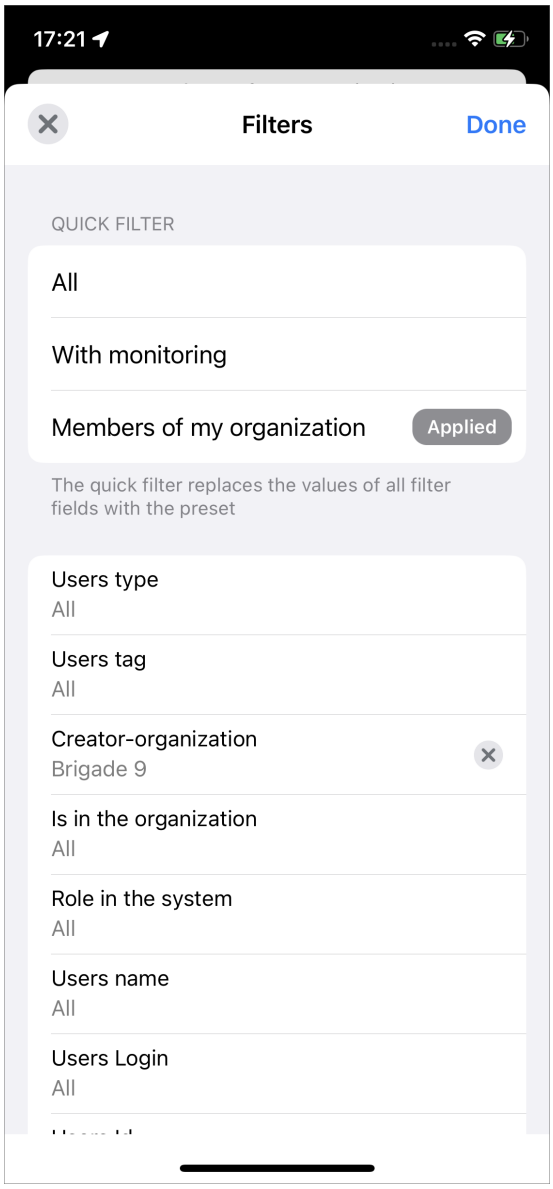


Fig. 2.94: User filter

Clicking any entry in the list opens a user card with information about the user and the location on the map (Fig. 2.95). The information window shows:

- Avatar
- User type
- Login
- Battery level
- Movement speed
- Distance to the current user
- Role
- Organization
- Labels
- Number of tasks in progress
- Last authorization time

To view the user's track, click on the track icon in the upper right corner. The window for viewing the user's movements is similar to the track window in the profile card (*Account management and roles in the system* (page 23)). Here you can generate and send a link to invite the user to the app.

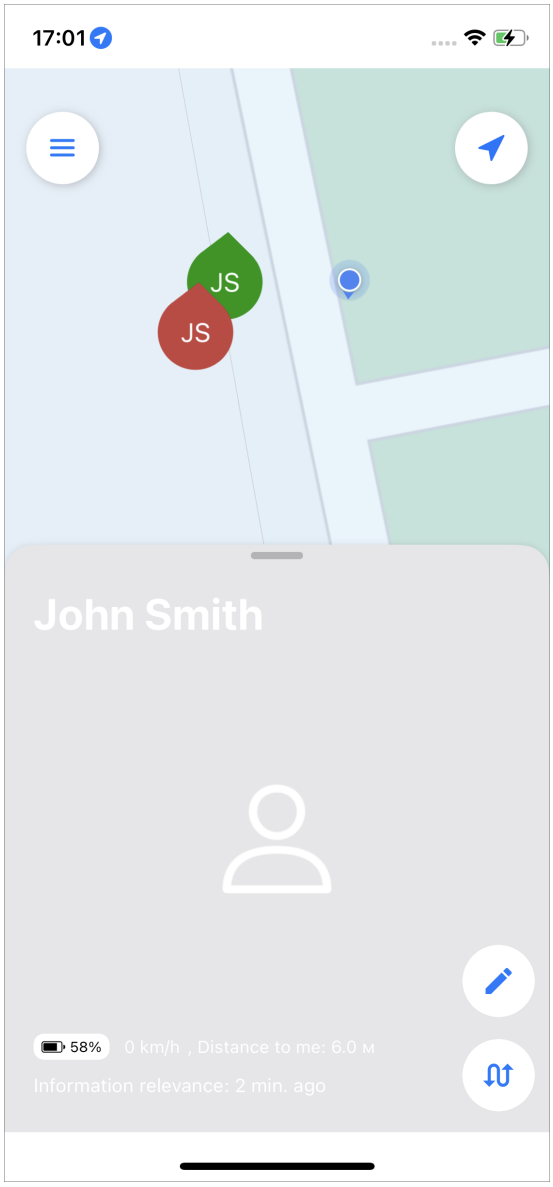


Fig. 2.95: User card

Creating users

To create new users, go to the navigation menu *Map* → *User management*  and click  to create a new user (Fig. 2.96). This functionality is not available for all user roles.

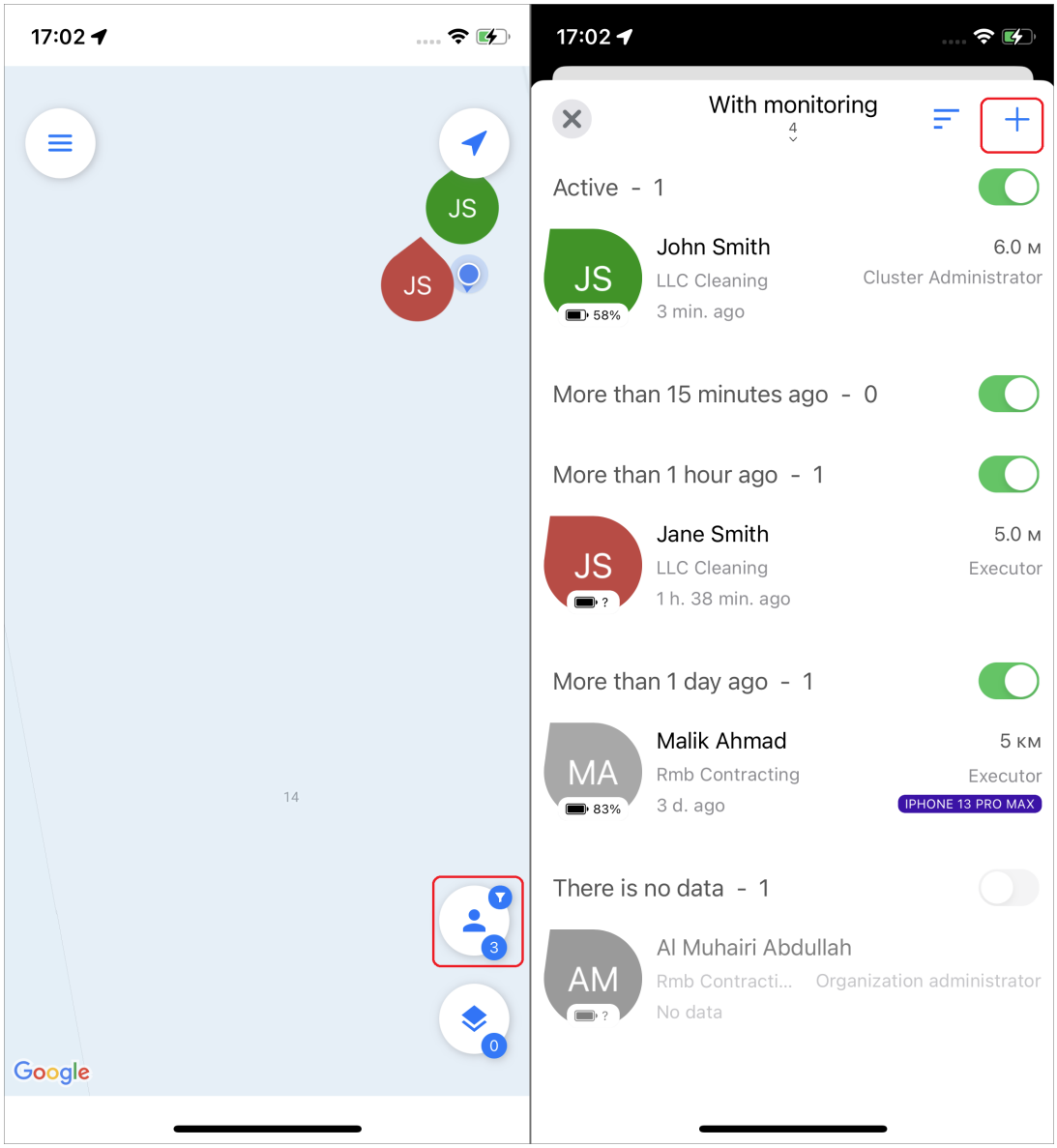


Fig. 2.96: Adding a new user

In the opened window fill in the data and click “Apply” (Fig. 2.97):

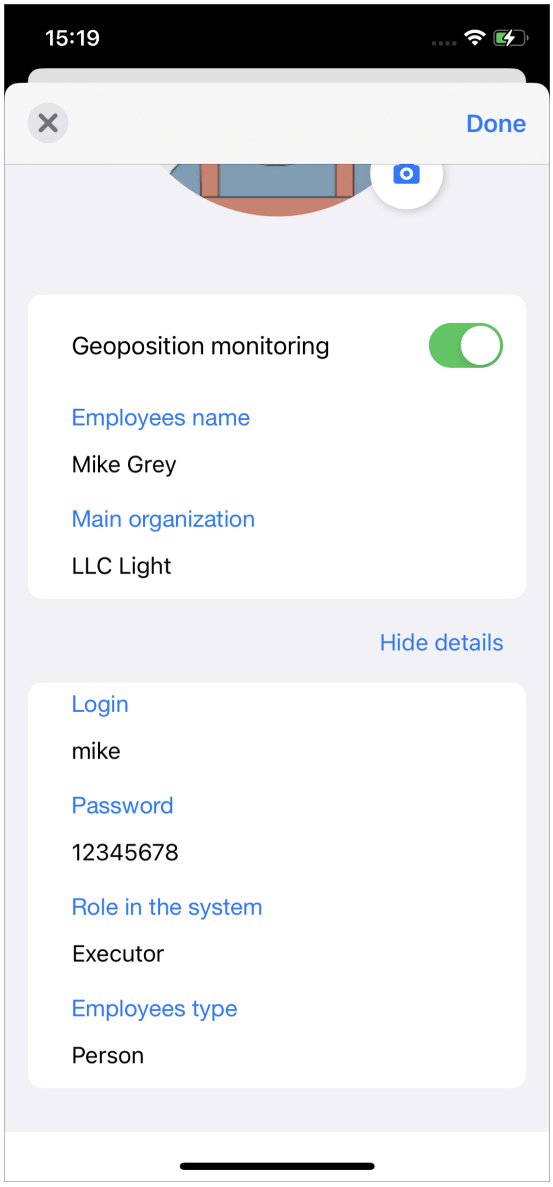


Fig. 2.97: Filling in information about a new user

A new user appears in the system. To send a link to an employee, go to the user's profile, generate a personal link, and send it via any convenient messenger (Fig. 2.98). You can create the link for any registered user an unlimited number of times.

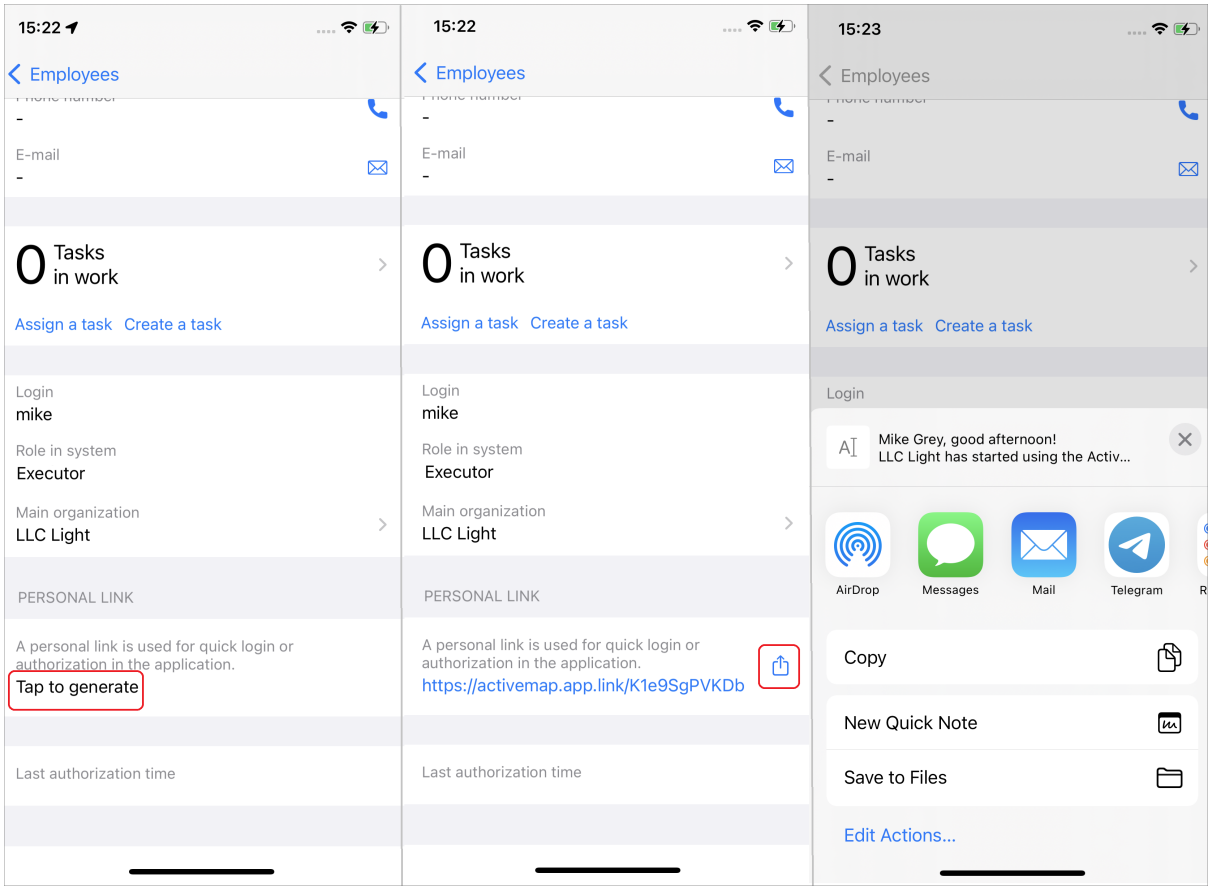


Fig. 2.98: Creating and sending a link for a new user

The employee received the link opens it and immediately authorizes in the application if the application is installed on the device. If the application is not installed, then the link opens in the App Store and authorization occurs after installing the application.

Managing user accounts

To make changes to user profile, find the user in the navigation sidebar *Map* → *Manage Users*  using the filter options. Click on the user to open the account card. Next click "Edit Profile"  , make changes, and click "Apply". You can access the profile of the current user from the navigation sidebar (*Account management and roles in the system* (page 23)).

The application provides functions for locking and deleting users. These functions are not available to all user roles. To lock users, find them in the side navigation menu section *Map* → *Manage Users*  using filter parameters. Click on the user to open the account card. Next, click "Edit Profile"  , scroll down, click "Block account", and confirm your action (Fig. 2.99). The user disappears from the list of users in the application and cannot authorize in the application. You can unlock the user only in ActiveMap Web.

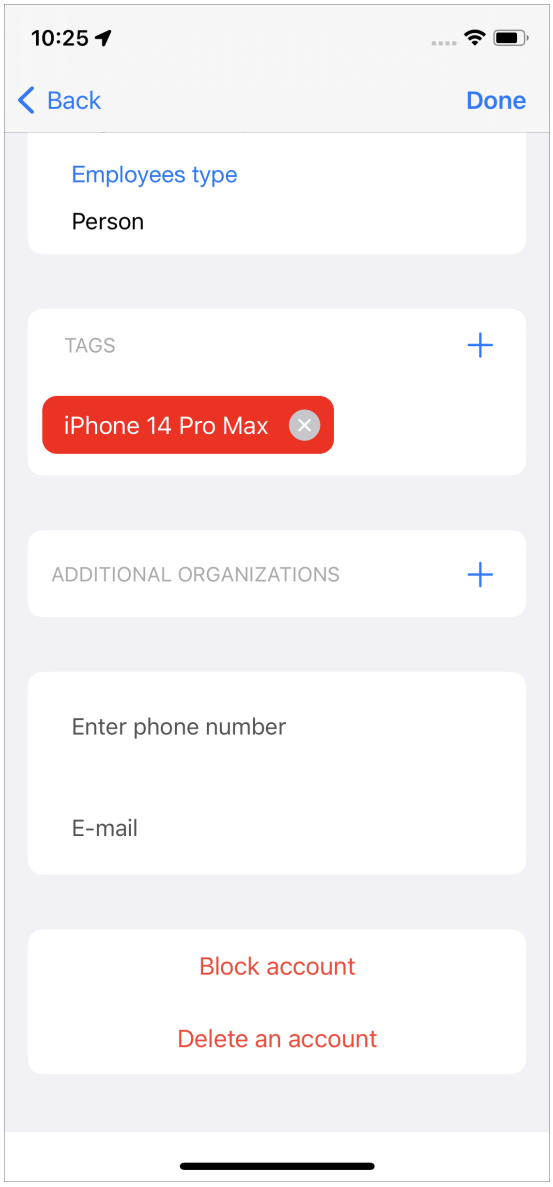


Fig. 2.99: Editing user's profile

To delete a user, find a user in the navigation sidebar *Map* → *Manage Users*  using the filter options. Click on the user name to open the account card. Next click "Edit profile"  , scroll down, click "Delete an account", and confirm your action (Fig. 2.99).

2.10 Working with schedules

This section is available under administrative roles, which allow creating planned tasks (all administrators and inspectors).

If you select the “Schedules” section in the navigation sidebar of the task management window, the application takes you to the created schedules. To create a new schedule, click + in the upper right corner (Fig. 2.100). Enter the name and select the organization in the schedule creation window (Fig. 2.101).

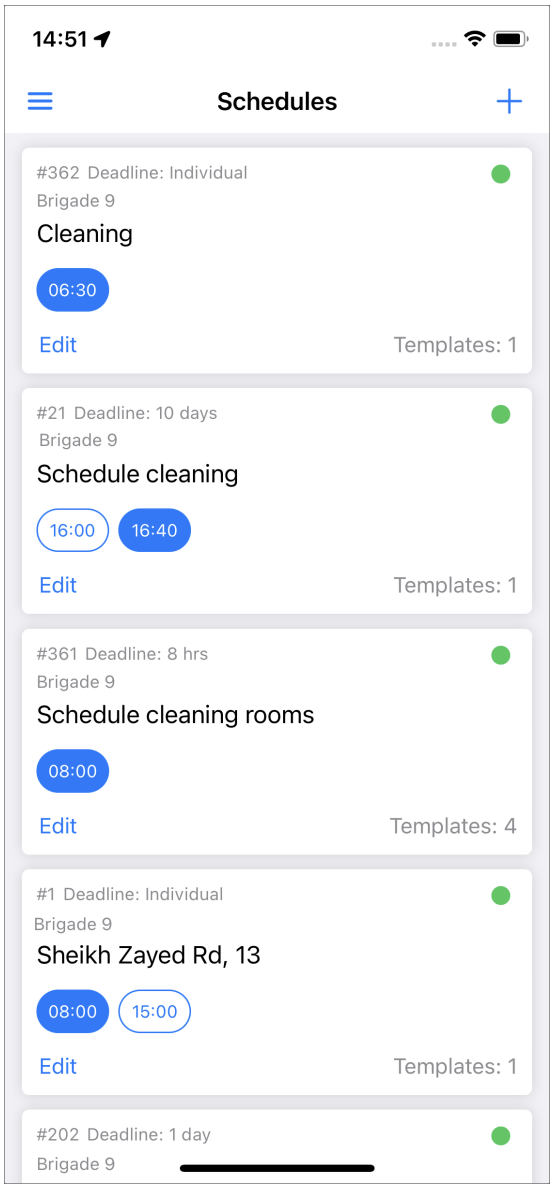


Fig. 2.100: Create new schedule

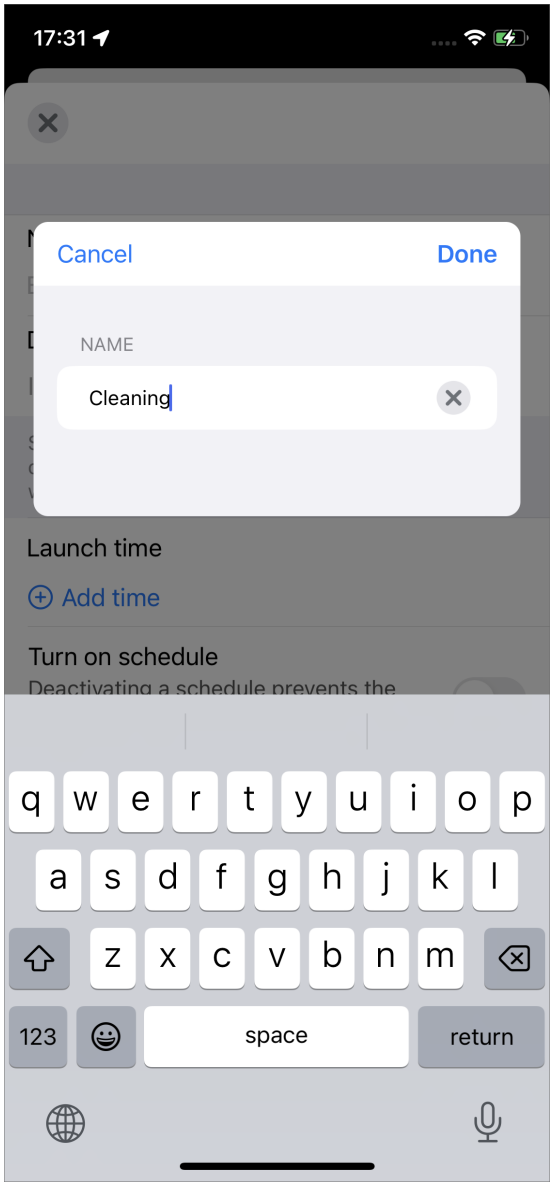


Fig. 2.101: Creating a schedule

In the editing window of both new and existing schedule, you can:

- Create and attach a task template.
- Set the deadline for tasks (Fig. 2.102).
- Set the time and date for starting the schedule.
- Deactivate and activate the schedule or delete it (Fig. 2.102).

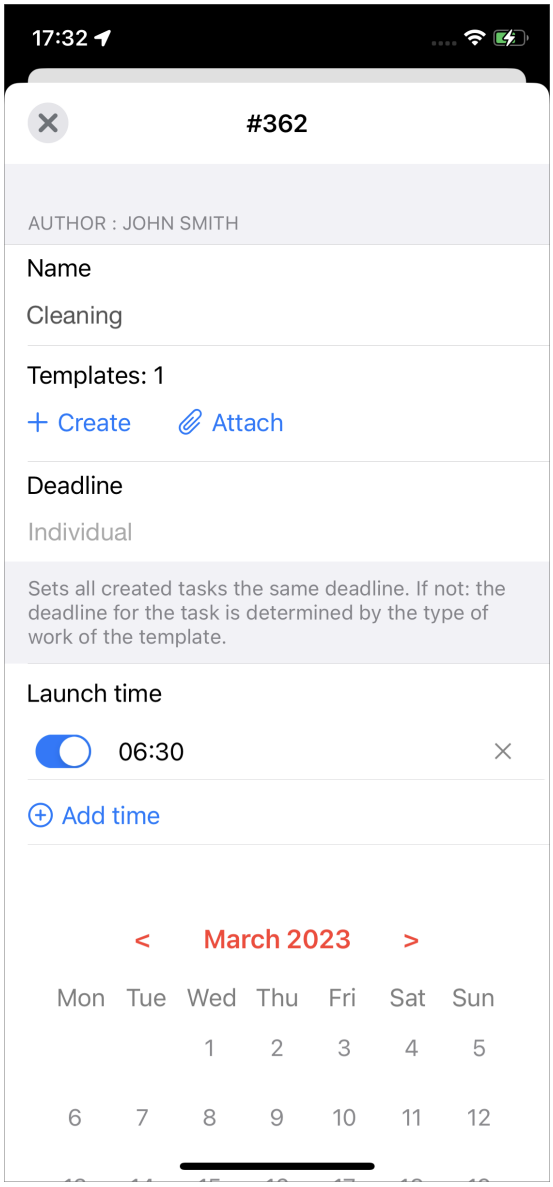


Fig. 2.102: Schedule card

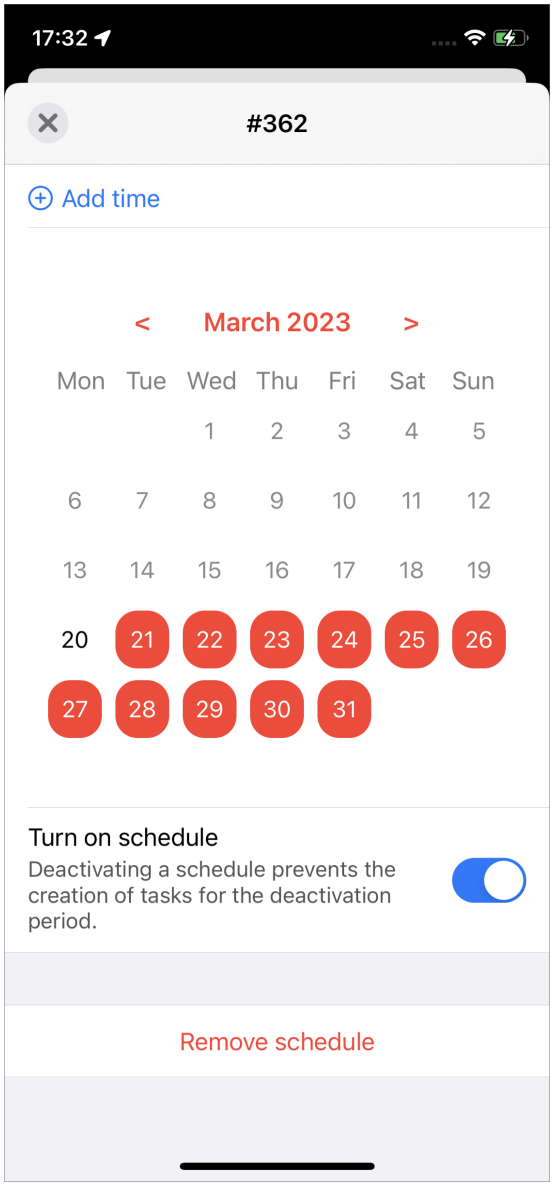


Fig. 2.103: Calendar and launch times

2.11 Administration

This section allows users to manage certain task parameters and edit data tables and dictionaries.

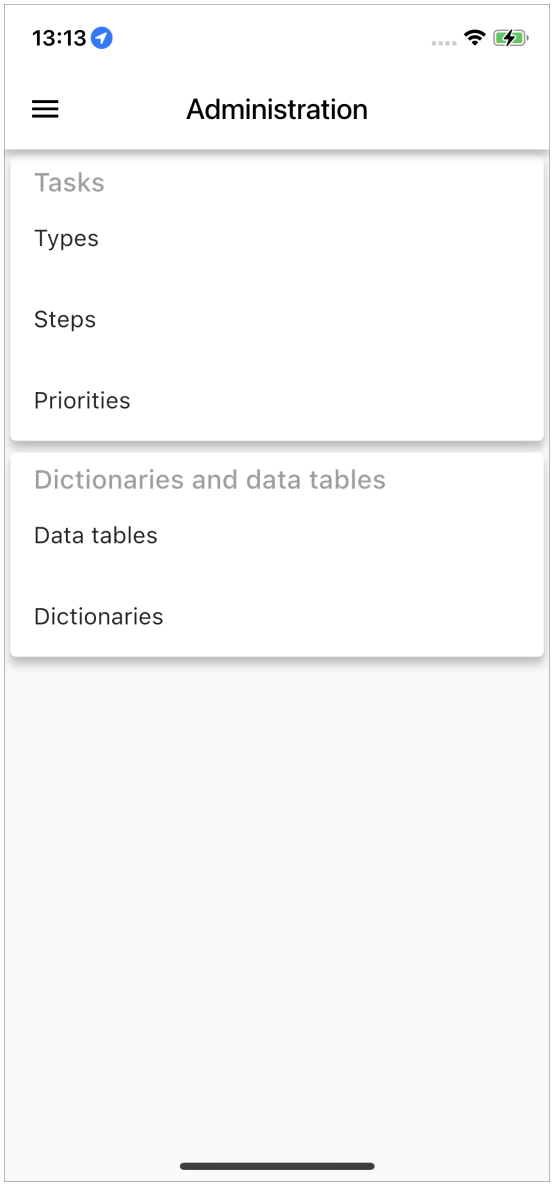


Fig. 2.104: “Administration” section

2.11.1 Task administration

This section enables the management of the following task parameters:

- types of work
- steps of work
- priorities

The section is available for the roles of the Organization administrator, Cluster administrator, and System administrator according to their rights.

Types of work

In this section, you can see a list of types of work available to an authorized user. Users with the Cluster administrator and System administrator roles can create, edit, and delete types of work. The Organization administrators can only view them.

To create a new type of work, click  . Fill in all the fields, select the organizations where the work type will be available, and save. You can set a different icon by clicking “Change icon”. The maximum size is 256x256. The new type of work is ready for use.

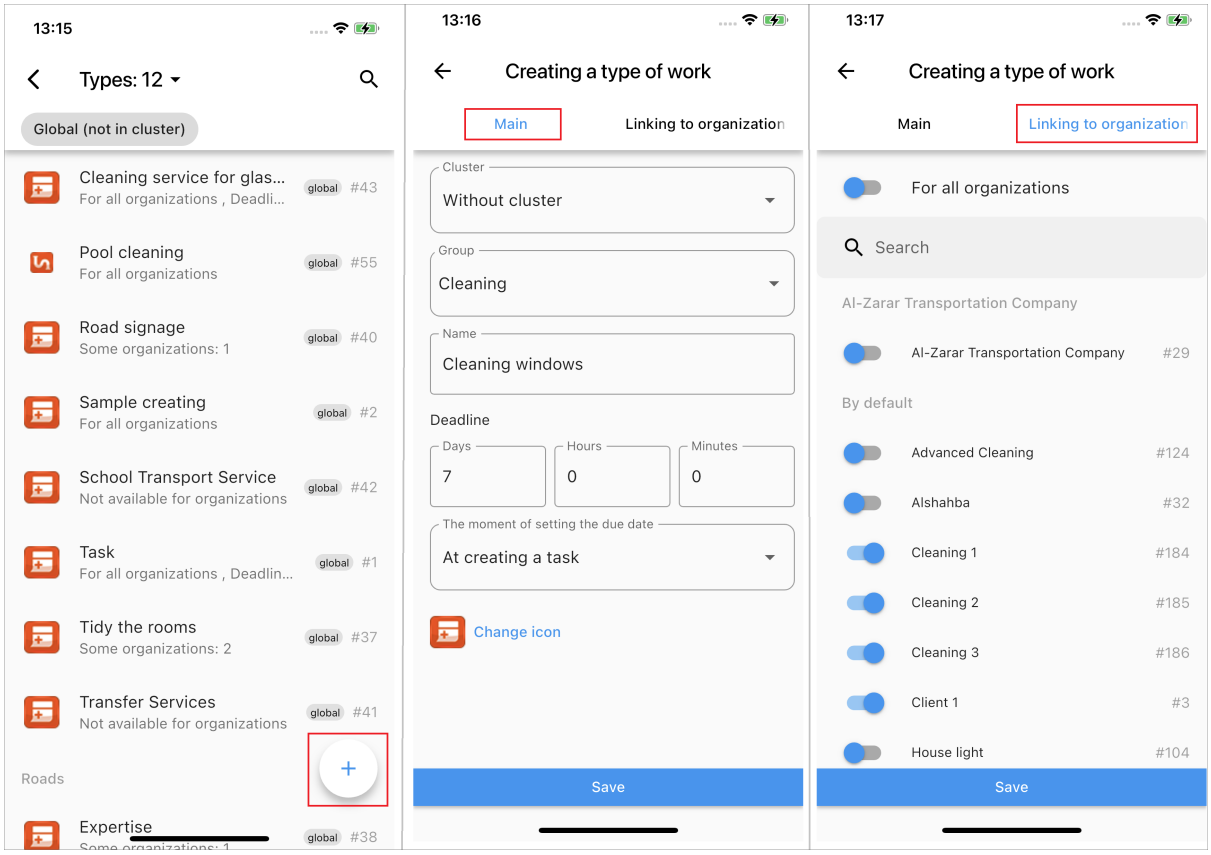


Fig. 2.105: Creating a work type

To edit a work type, use the search bar or the cluster/organization filter, select the required work type, make the changes, and save. To delete a work type, find it using the search bar or filter, select the work type, click  in the upper right corner, and confirm deletion.

You can proceed to configuring work steps and priorities without returning to the previous page. Expand the dropdown list under “Types” and select the required parameter.

Steps

In this section, you can see a list of work steps available to an authorized user. Steps are displayed in the order set in the web component. Cluster and System administrators can create, edit, and delete work steps, while Organization administrators can only view them.

To create a new step, first, decide whether the step belongs to a specific cluster or is available in all clusters:

- Global – does not belong to the cluster, everyone can see it.
- Isolated – belongs to a specific cluster.

If it is global, select "Without cluster" in the filter. If it belongs to a specific cluster, find and select the required cluster in the filter.

Important: Select a cluster before creating a new step. Further cluster selection is not available.

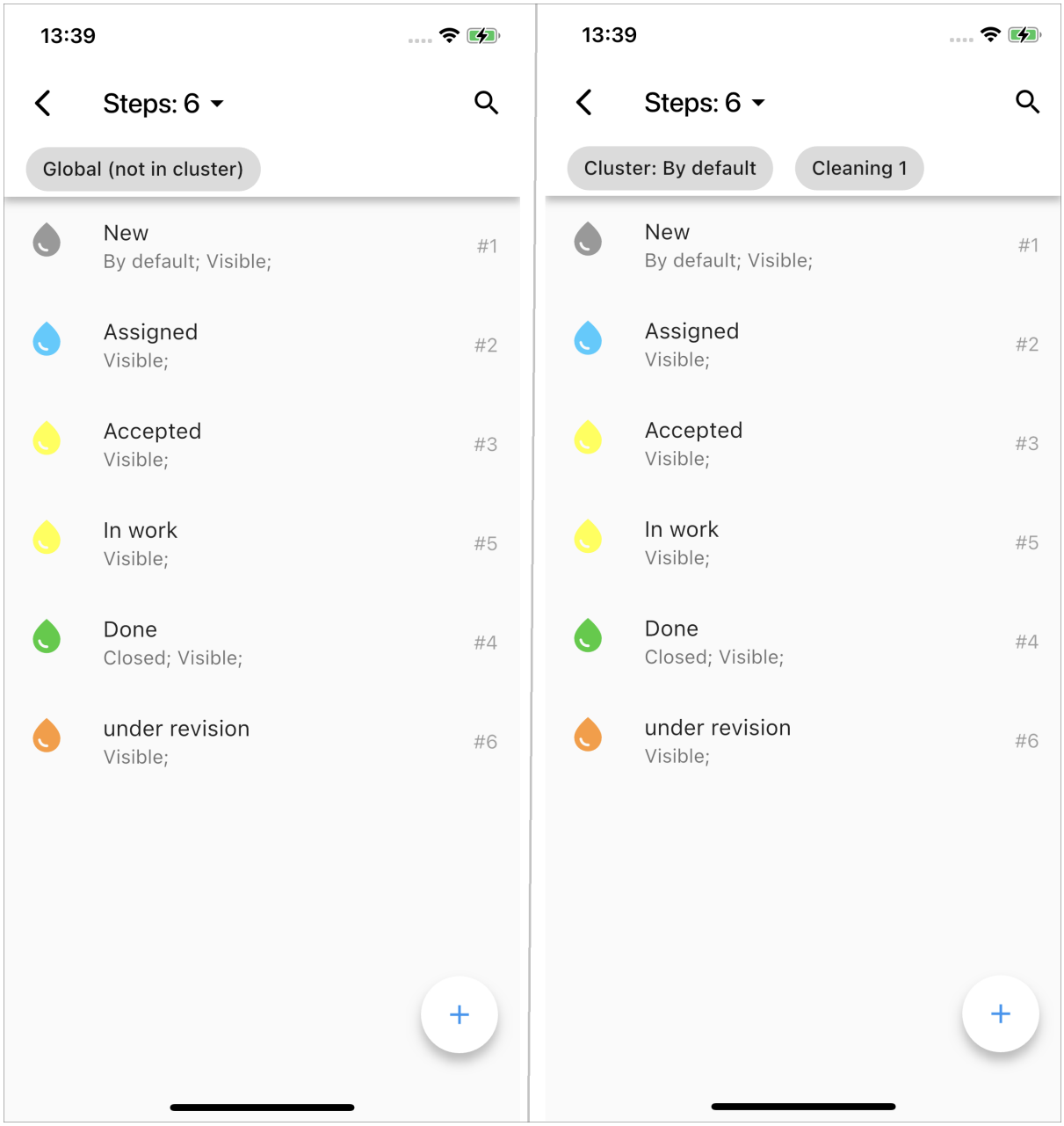


Fig. 2.106: Cluster filter

After selecting the cluster, click + and fill in all the available fields and settings:

- "Name" field – the name of the step to be created.
- "Default" toggle – setting the step automatically when creating a task.
- "Visible" toggle – making the step available to users.
- "Closed" toggle – marking the task as completed after transition to this step.

If needed, change the icon color by clicking "Change icon". Once everything is filled in, save the changes. The new work step is ready for use now.

If a cluster has no steps and the first one is created, it is automatically set as default. You cannot delete or uncheck the "By default" step. If you mark another step as default, the

previous step is automatically deselected. The “Assigned” step is the first non-default and non-closing step. If no such step exists, the step will not change when assigning an executor.

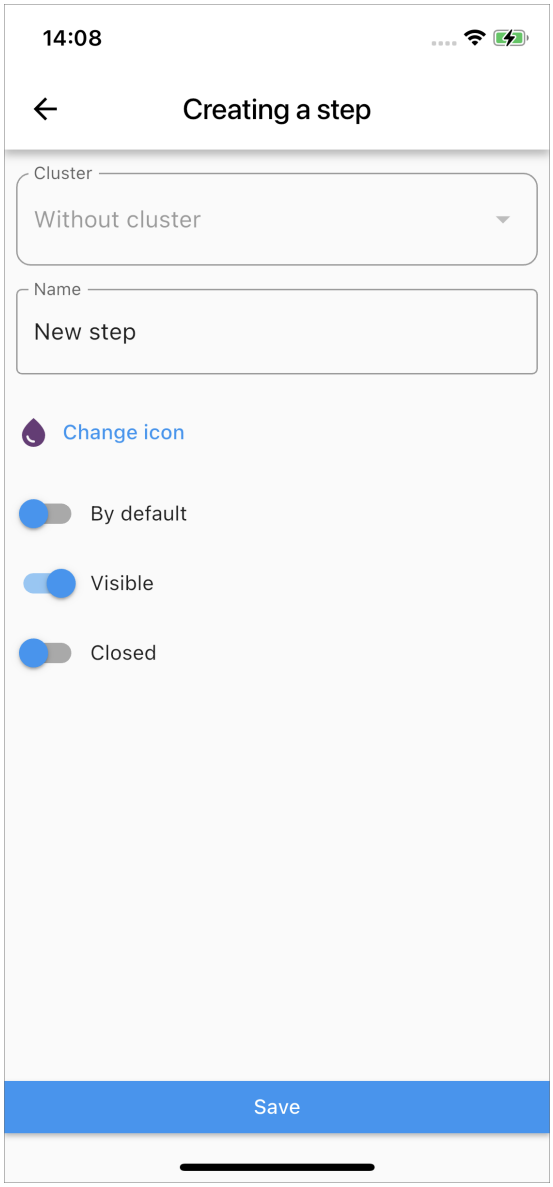


Fig. 2.107: Creating a step

To edit a step, first use the search bar or cluster filter to find it. Then select the step, make changes, and save them. To delete a step, find it using the search bar or filter, select the step, click in the upper right corner, and confirm deletion.

You can proceed to configuring types of work and priorities without returning to the previous page. Expand the dropdown list under “Steps” and select the required parameter.

Priorities

In this section, you can see a list of priorities available to an authorized user. Cluster and System administrators can create, edit, and delete priorities, while Organization administrators can only view them. Filtering by clusters is available. By default, all priorities are displayed: both global and isolated. Clicking “All” opens a window with a list of clusters. Using the search bar, you can select a cluster and view priorities available within it. Within a cluster, you can set a filter by organizations.

To create a new priority, click  , fill in all the fields, and save. You can set a different icon by clicking “Change icon”. The maximum size is 256×256. The new priority is ready for use now.

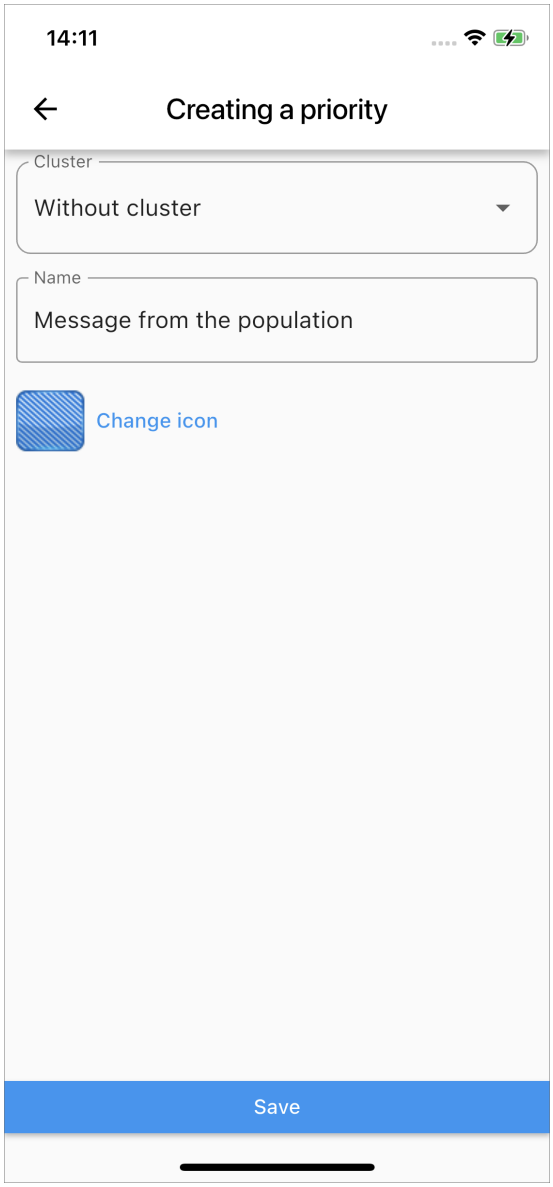


Fig. 2.108: Creating a priority

To edit a priority, first use the search bar or cluster filter to find it. Then select the priority, make changes, and save them. To delete a priority, find it using the search bar or filter, select,

click  in the upper right corner, and confirm deletion.

You can proceed to configuring types of work and steps without returning to the previous page. Expand the dropdown list under “Priorities” and select the required parameter.

2.11.2 Dictionaries and data tables

This section contains data tables and dictionaries (reference tables). The section is available to Organization administrators, Cluster administrators, and System administrators according to their rights. Users can create new objects in tables and dictionaries, as well as edit and delete existing ones. The workflow is similar to working with service objects.

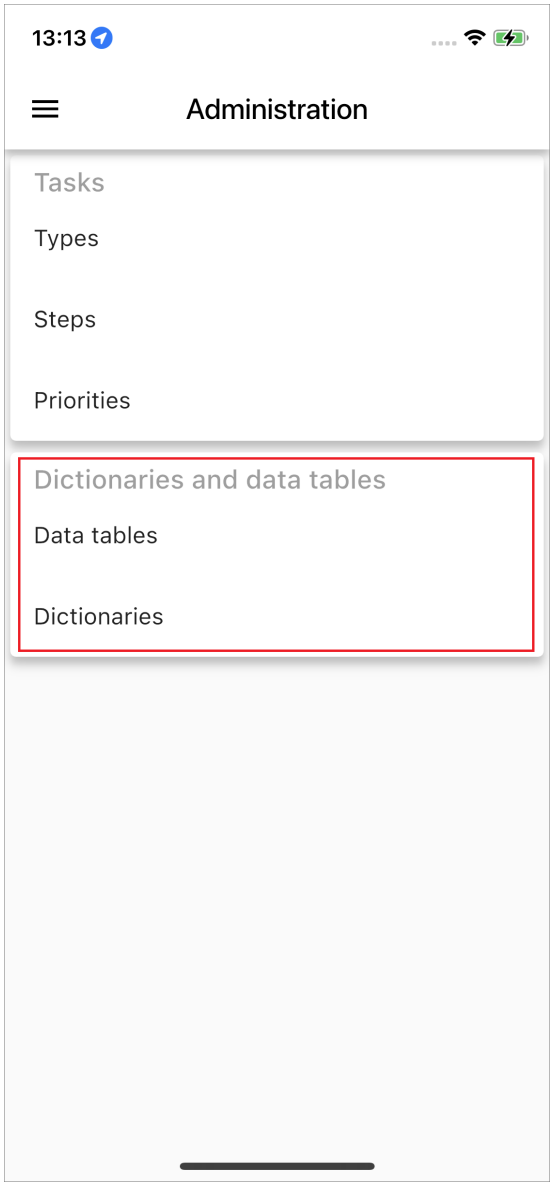


Fig. 2.109: Block of dictionaries and data tables

To create a new object, find the necessary table and click  . Then, fill in the fields and submit the data to the server.

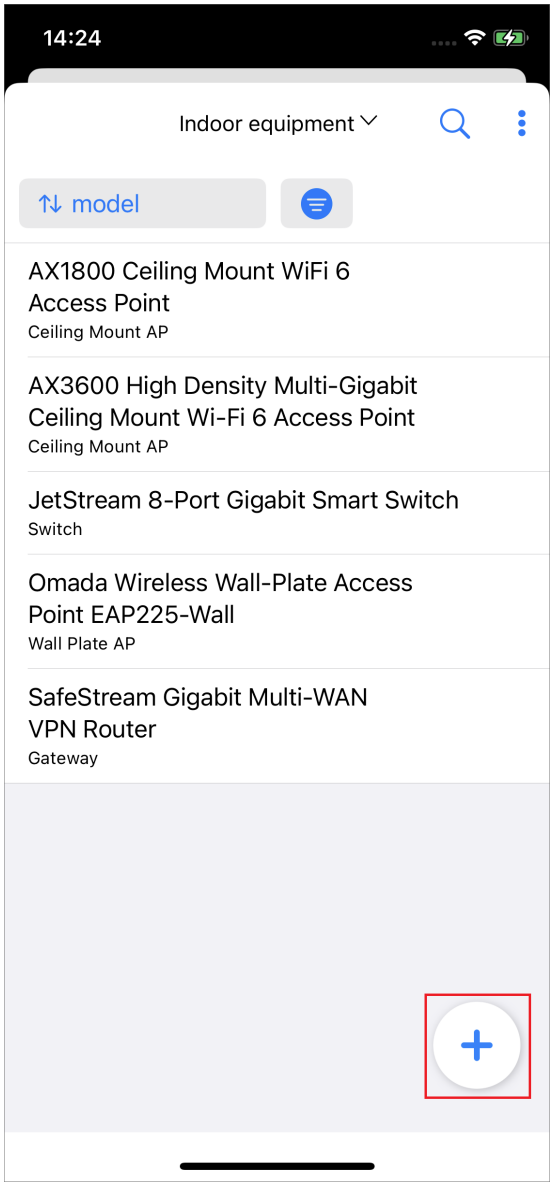


Fig. 2.110: Creating a new object in a table

To edit an object, find the required table, then find the object. Make changes and submit the data to the server.

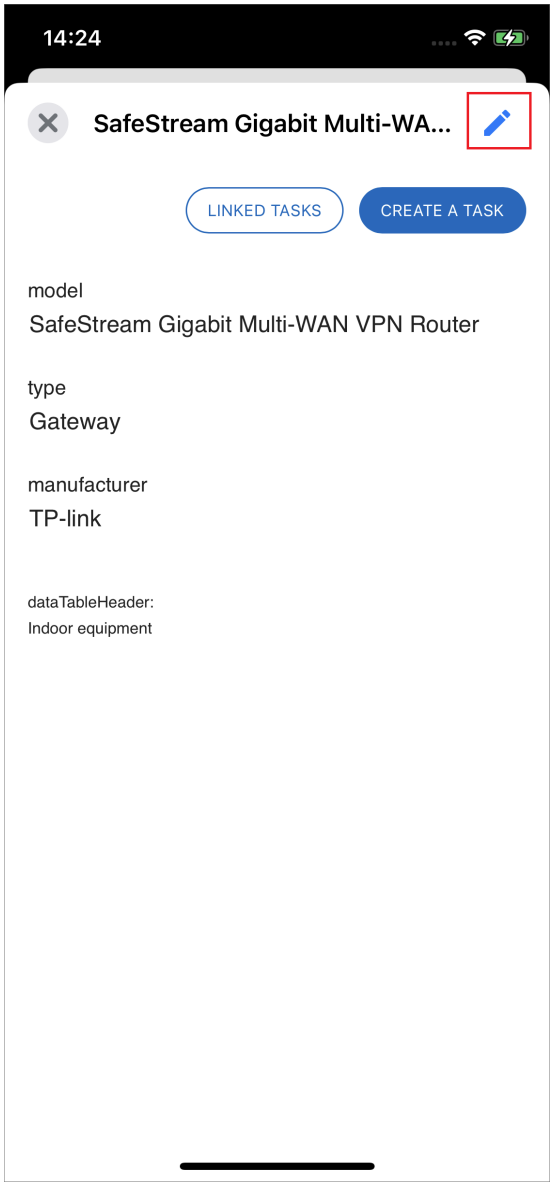


Fig. 2.111: Editing an object in a table

To delete an object, find the required table, then find the object. Open the editing window by clicking , scroll to the end of the attributes, and click “Delete object.”

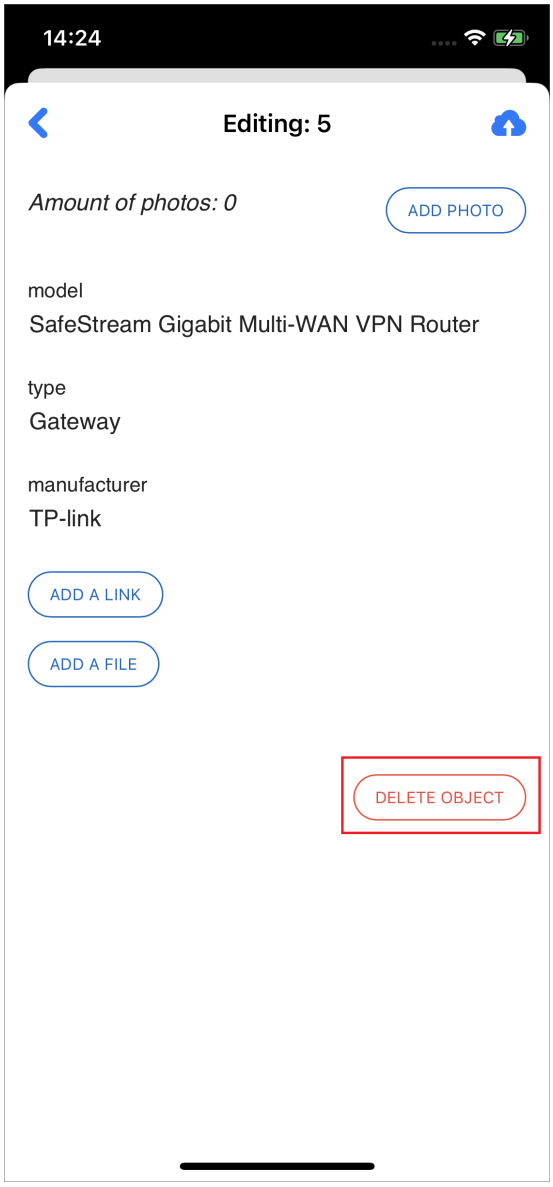


Fig. 2.112: Deleting an object in a table

2.12 Working with reports

The application provides the ability to work with reports. To make the report available, the user must be granted the appropriate rights in the ActiveMap Web.

To generate reports, select the “Reports” section from the navigation sidebar. (Fig. 2.113).

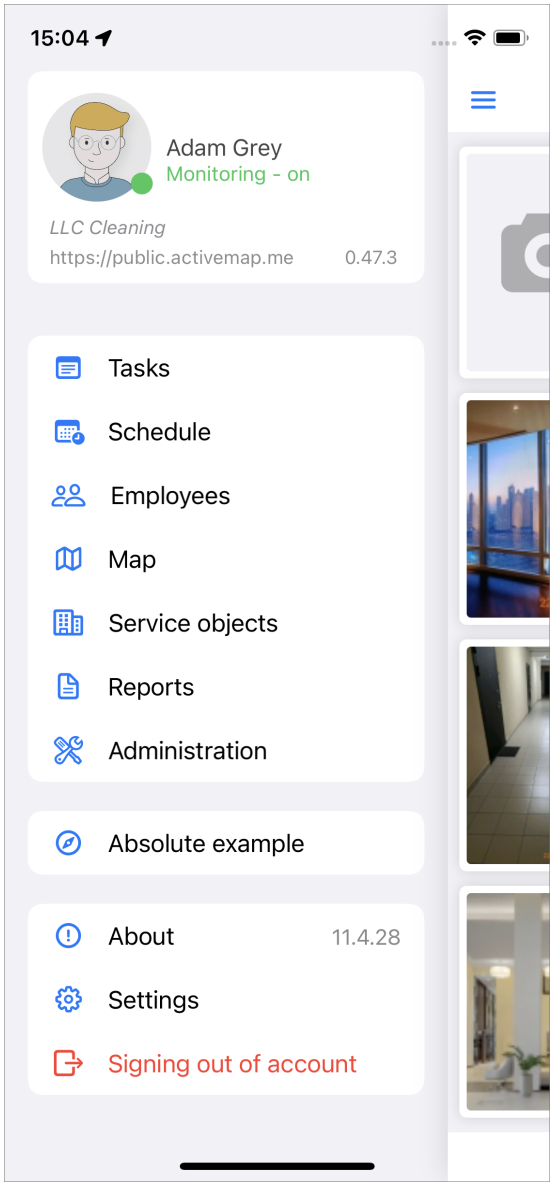


Fig. 2.113: Reports menu

The list of available reports opens (Fig. 2.114).

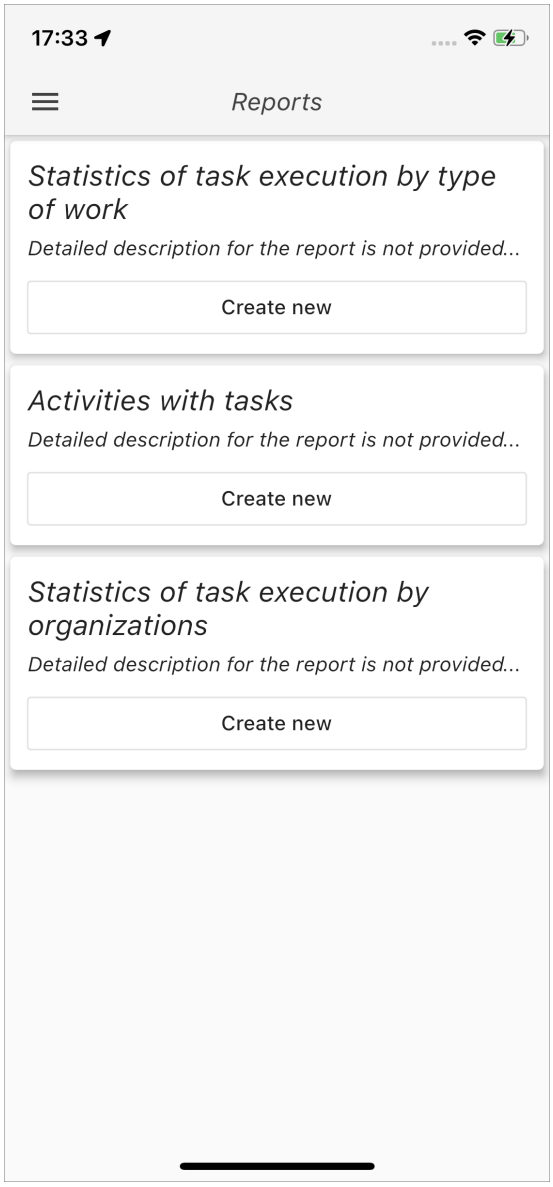


Fig. 2.114: Reports list

If you click “Create new”, you can set a time interval and other parameters and select the format of the generated file (PDF or XLSX) (Fig. 2.115).

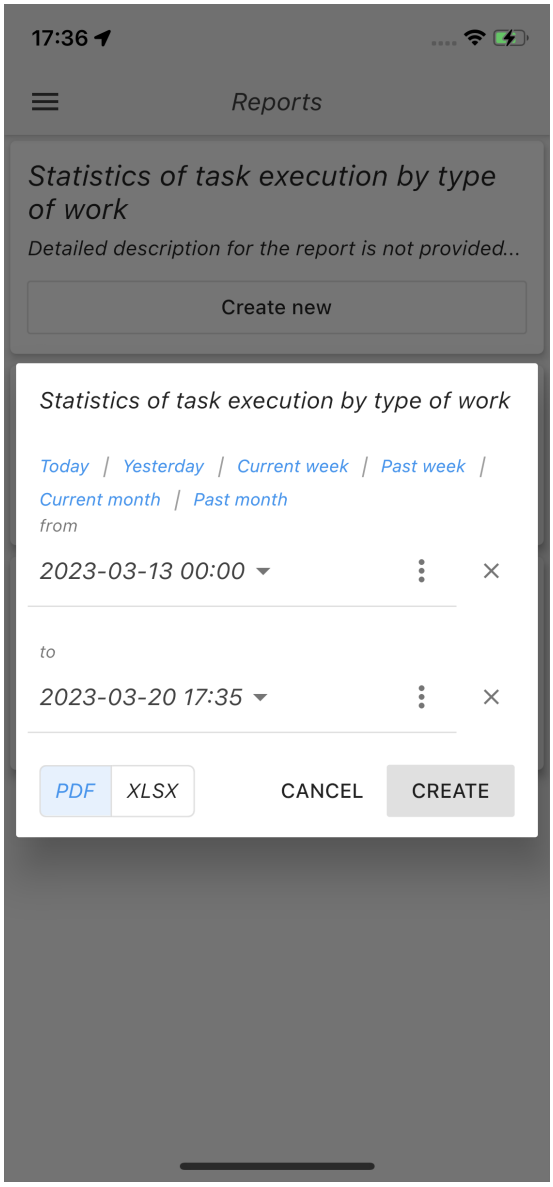


Fig. 2.115: Parameter input window

The report generation window includes a search bar within dropdown lists if the list contains more than 20 items (Fig. 2.116).

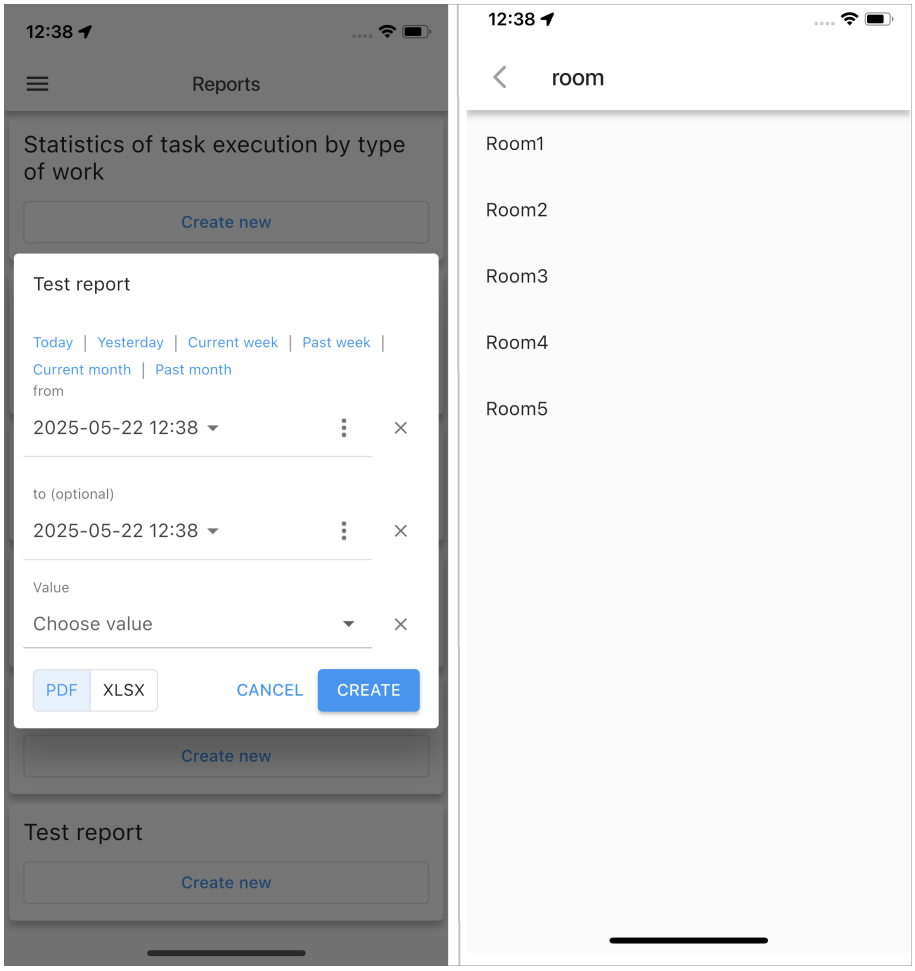


Fig. 2.116: Searching among parameter values

After setting the parameters, click “Create” to start generating statistical report (Fig. 2.117).

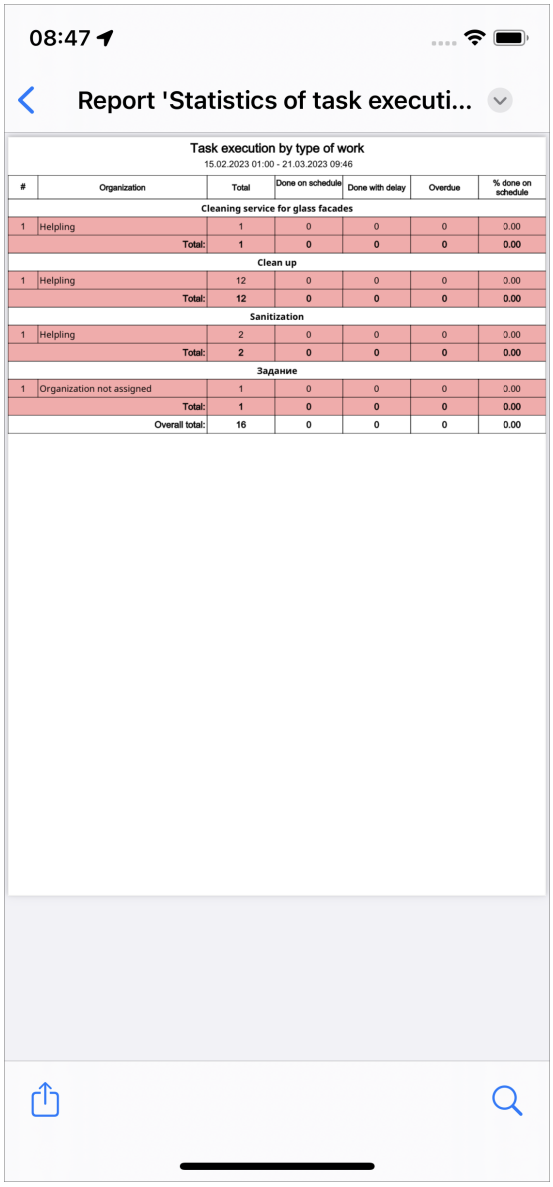


Fig. 2.117: Generated report

2.13 Invoice module

The **“Invoice”** module allows users to calculate the cost of work online. This module requires customization based on the list of services and materials used by the organization.

To generate an invoice, enable the “Invoice” module in the settings of the ActiveMap Mobile mobile application in the ActiveMap Web. Fill in information about organizations – the customer and the executor (legal name, account details, logos, signatures, seals, and other necessary information for display on invoices). All fields of the “Materials and Services” table should be filled in based on the data of the list of services and materials used by the organization. The “Materials and Services” table is filled in the desktop component of ActiveMap system. After filling in the table, proceed to generate an invoice. To do this, click “Add Media” and select “Invoice” while creating or executing the task. The “Invoice” window opens (Fig. 2.118). You can add the entire list of required materials and services by

clicking the “Add position”, set the quantity of provided materials and services in the given units.

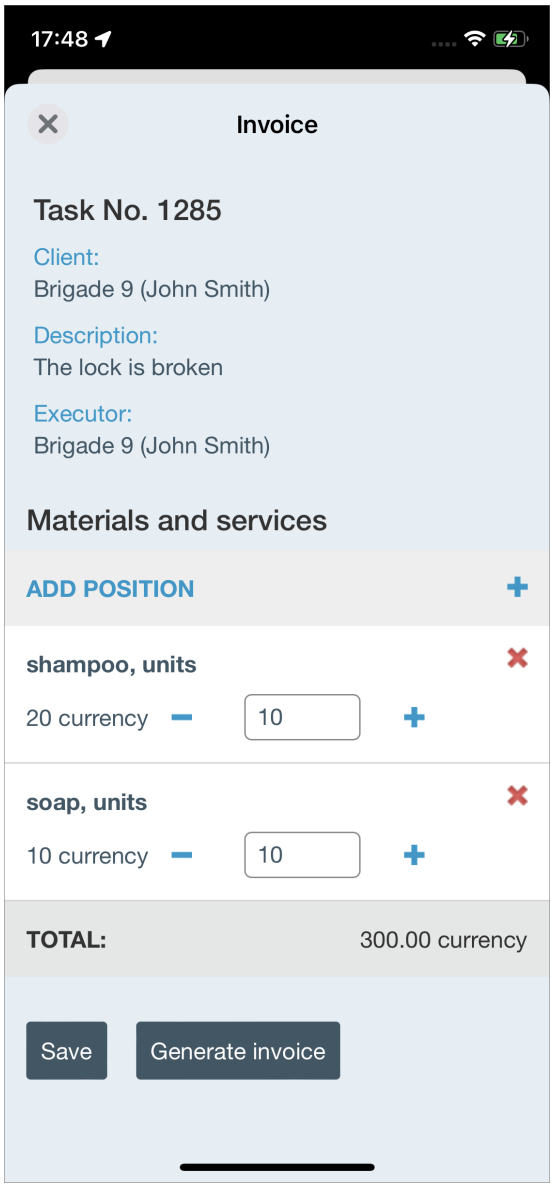


Fig. 2.118: Forming an invoice

In the materials and services selecting window, you can use the search, which provides suitable results when you enter the text (Fig. 2.119). To add a material or service to the invoice, click on it.

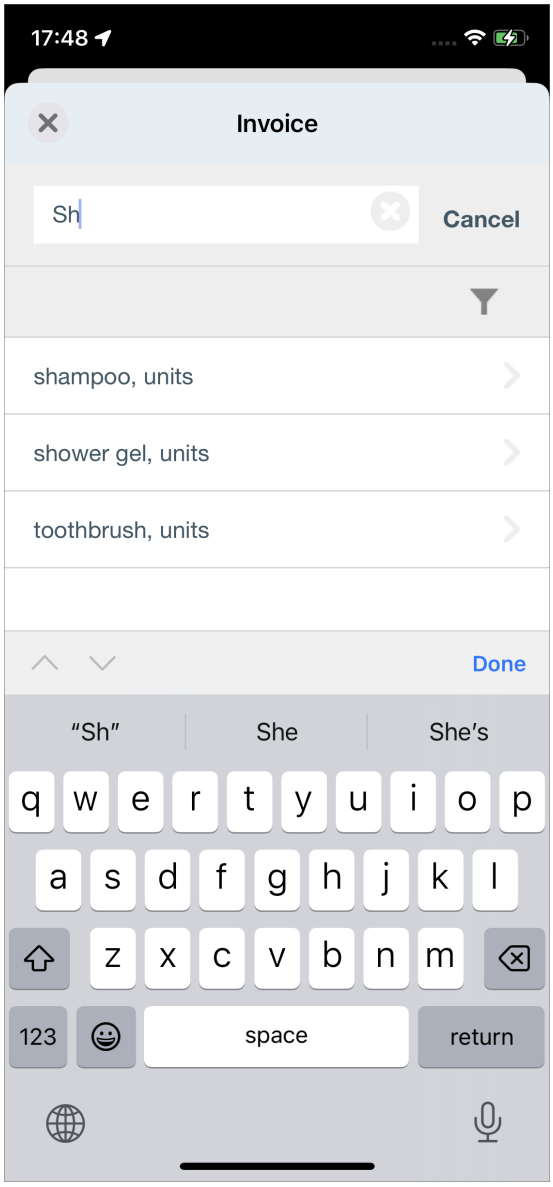


Fig. 2.119: Searching for materials and services

If the server is configured to use material and service groups, you can use the filter by clicking . Click a field for selecting material groups and services. A list of groups of materials and services appears. Select the desired one. After making your selection, click the plus sign to the right of the selected group name and click "Apply". Select the desired materials or services from the filtered list (Fig. 2.120).

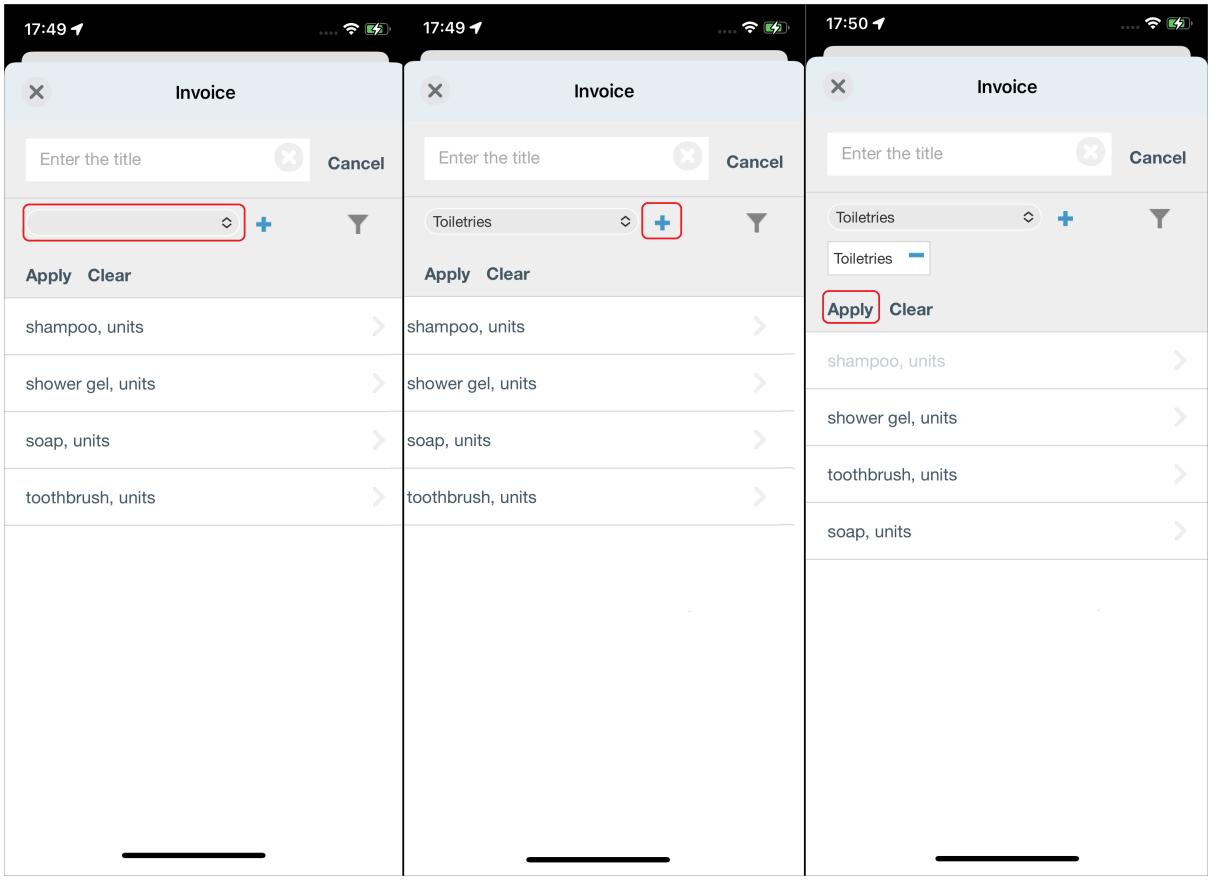
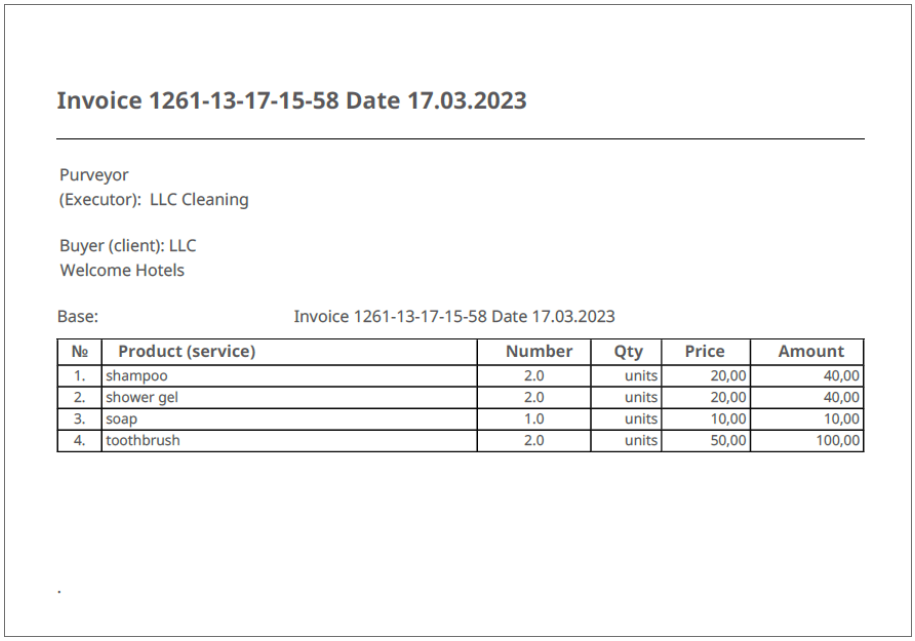


Fig. 2.120: Filter by material and service groups

To add other items to the invoice, repeat the above steps. To change the amount of materials and services, use the buttons to increase/decrease the quantity in the area of added materials and services. To remove an item from the invoice, click the cross in the block with the item. After adding all the items, start creating an invoice by clicking “Generate invoice”. A message appears upon successful creation of the invoice: “The invoice has been created and attached to the task”. To return to creating/editing the task, click “Done”. You can save changes in the invoice. If there are unsaved changes in the calculations, the application shows a warning when exiting the “Invoice” window.

The invoice is automatically attached to the task in pdf format. Other users (with access to the task) are able to see it immediately after it is generated (Fig. 2.121).



Invoice 1261-13-17-15-58 Date 17.03.2023

Purveyor
(Executor): LLC Cleaning

Buyer (client): LLC
Welcome Hotels

Base: Invoice 1261-13-17-15-58 Date 17.03.2023

№	Product (service)	Number	Qty	Price	Amount
1.	shampoo	2.0	units	20,00	40,00
2.	shower gel	2.0	units	20,00	40,00
3.	soap	1.0	units	10,00	10,00
4.	toothbrush	2.0	units	50,00	100,00

Fig. 2.121: Invoice

2.14 External web services

The default search engine is specified. You can change the web service in the system settings.

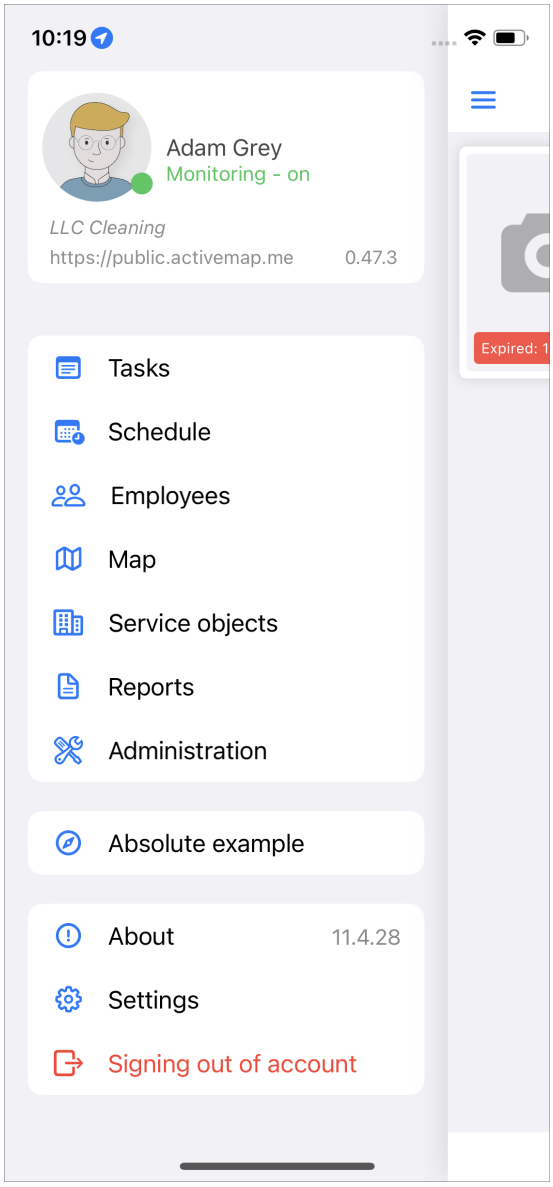


Fig. 2.122: Connected web service

CHAPTER

THREE

ABOUT ACTIVEMAP MOBILE

The “About ActiveMap Mobile” section of the navigation sidebar displays information about ActiveMap Mobile with a brief description of the main functions. To view the history of changes, click “What’s new?” (Fig. 3.1).

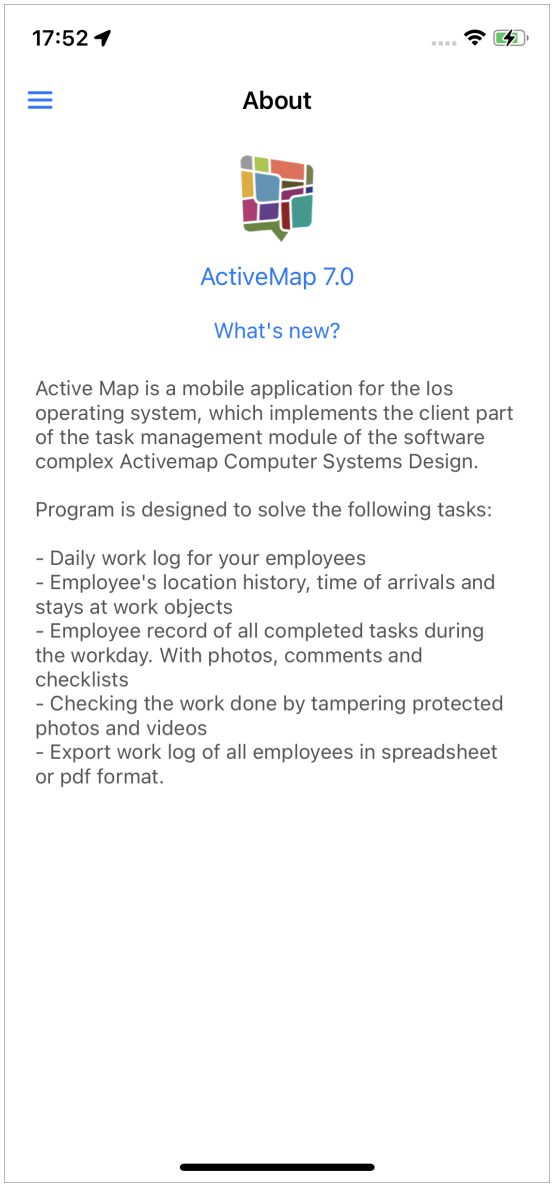


Fig. 3.1: Displaying information about ActiveMap Mobile

CHAPTER

FOUR

SETTINGS

4.1 Application settings

To view and modify the settings, go to the “Settings” section in the navigation sidebar (Fig. 4.1).

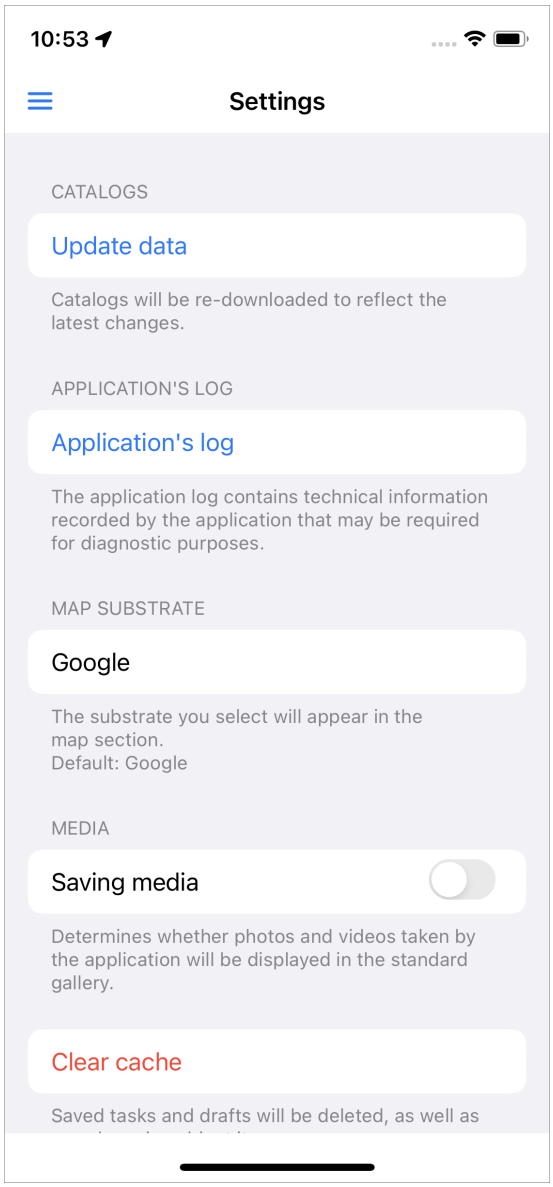


Fig. 4.1: Program settings

Update data explicitly updates all reference data by synchronization with the server (required when settings or data are updated on the server). For more details, see *Updating reference tables and settings* (page 83).

Saving media toggle switch allows you to specify whether photos and videos taken by the application are saved in the user's device gallery.

The **Application's log** allows you to export the application log files. They contain technical information recorded by the device required for diagnostic purposes. To send the log file, click "Export application log". A window opens where you can select a convenient way to send the file or save it to the device.

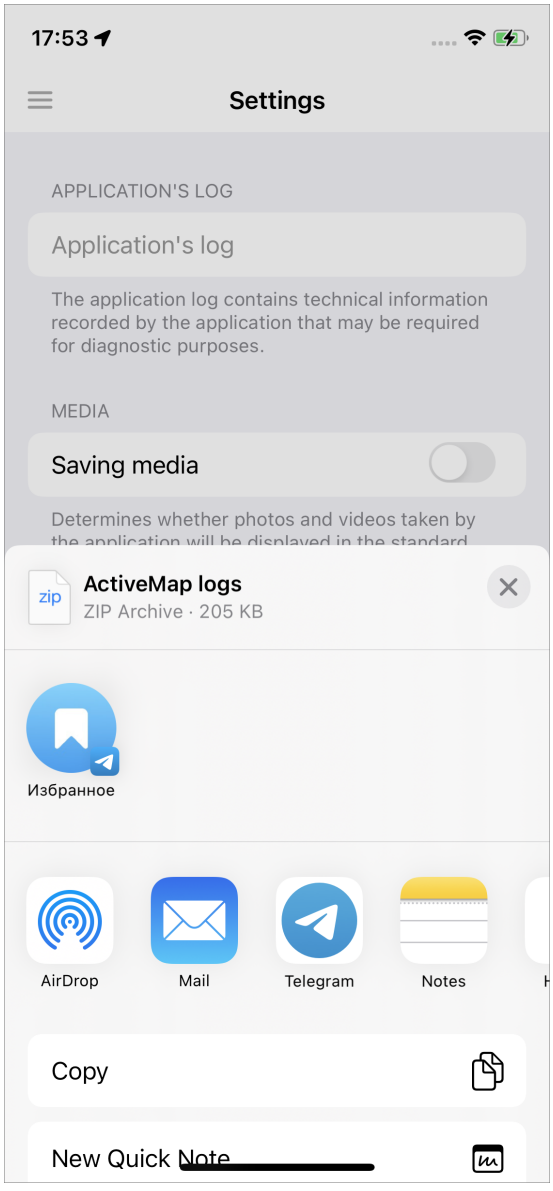


Fig. 4.2: Application log export window

The **Basemap** allows you to select a suitable basemap. The list of basemaps includes several maps to choose from. You can customize the list of available basemaps during system setup.

Clear cache allows you to delete temporary files (including downloaded objects). When clearing is complete, the "Cache is cleared!" message appears on the screen.

CHAPTER

FIVE

SETTINGS IN THE ACTIVEMAP

Danger: Changes in this block may cause system failure or termination of its functionality.

Only the System Administrator has access to the ActiveMap system component settings. However, in this section, you can find out what other settings are available for a convenient and efficient work in the application. The settings are made in the ActiveMap Web, in the “Management” block, “Settings” -> “Mobile application” section.

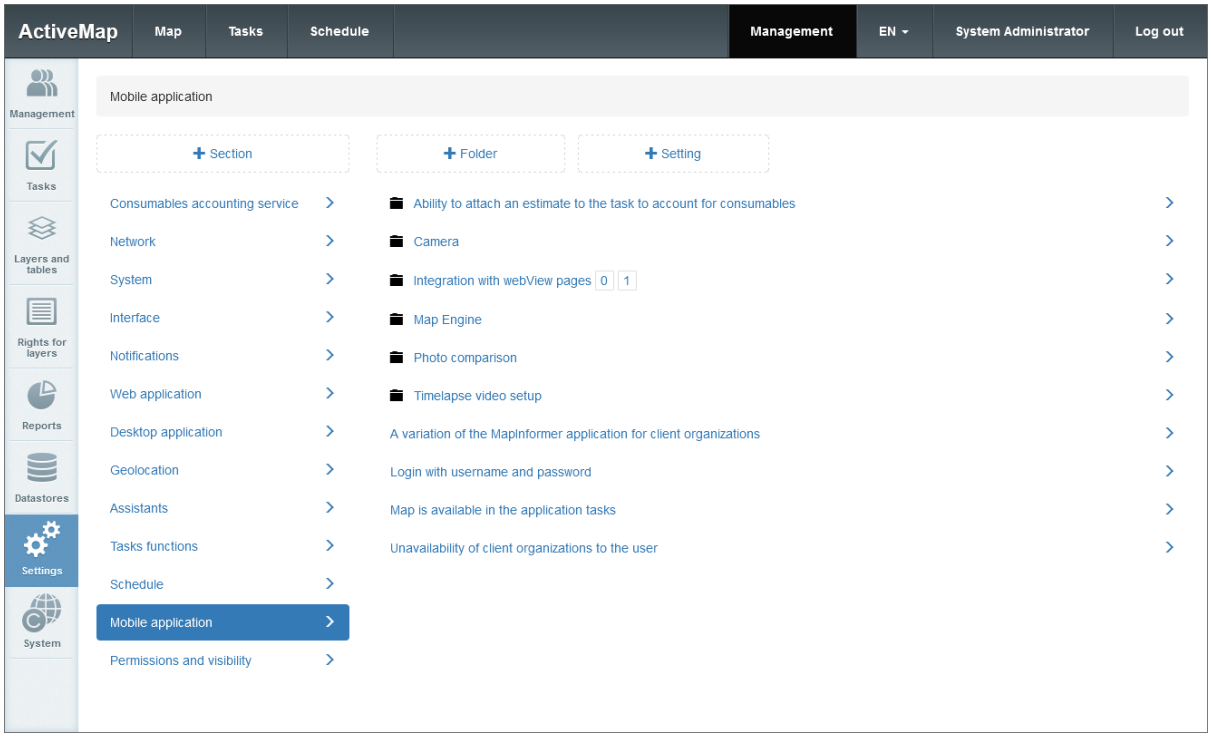


Fig. 5.1: Mobile application settings

Attention: The settings are applied to Android and iOS applications.

Settings can be applied to specific users, individual roles, organizations, or all users in the system. You can also configure task state parameters under which the selected setting is work.

5.1 Mobile application

5.1.1 Ability to attach an estimate to the task to account for consumables

This feature allows users to generate an invoice for the services and materials on site or to calculate the balance of provided materials. The balance of provided materials represents how much material is distributed and how much is used during the execution of tasks. It requires the creation of reports and additional settings in the work organization. Here you can also change the header text of the output file ("Invoice" by default).

5.1.2 Camera

In this folder, you can configure individual parameters for the standard or custom camera in the application.

- **Consider the distance from the task point** – together with the "Prohibit photographing" setting allows displaying a message about the impossibility of taking a photo due to a large location error. If the "Prohibit photographing" setting is turned off, the geolocation icon turns red to indicate location error. Disabled by default.
- **GPS Only** – sets the source for determining location to GPS only. If this setting is disabled, coordinates can also be determined using A-GPS. Disabled by default.
- **Geolocation control when using a camera** – prevents taking a photo until the user's location is determined. Enabled by default. If disabled, the application does not prevent taking photos even if coordinates have not been determined yet.
- **Is caption to the photo obligatory?** – makes it mandatory to add a caption to the attached photo. A user cannot attach the photo to the task without adding a caption. Disabled by default.
- **Maximum distance from the task point** – sets the maximum distance (in meters) from the task point at which users can take a photo. The default is 150 m.
- **Maximum location delay** – sets the time (in milliseconds) of device geolocation validity after losing the GPS signal when using the built-in camera. By default, it is 10000 ms. If the location is received after the specified time and the "Prohibit photography" setting is enabled, the application does not allow taking a photo until it receives a point that meets the requirements.
- **Maximum location error** – allows setting the acceptable error (in meters) for determining the device's geolocation when using the built-in camera. The default is 50 m. If the obtained location has a larger error and the "Prohibit photographing" setting is enabled, the application does not allow taking a photo until it receives a point that meets the requirements.
- **Necessity of exact time** – prevents taking a photo until the time is synchronized with the exact time (from the Internet or GPS). Synchronization is required once and saved until the device is switched off. If the setting is disabled, synchronization is still performed, but it does not interfere with taking a photo. This results in the time of the device being attached to the photo. Disabled by default.
- **Prohibit photographing** – prevents taking a photo if the user is outside of the task zone, if the geolocation function on the device is turned off, or if geolocation services cannot determine the location of the device with the specified accuracy. Disabled by default.
- **Select a sticker after taking a picture** – does not allow attaching a photo to the task without first specifying a sticker. Disabled by default.

- **Select a sticker before starting the camera** – does not allow taking a photo without first specifying a sticker. Disabled by default.
- **Show photo editing window** – opens the photo preview and editing window immediately after taking a photo. Enabled by default.
- **Stamp the date on the photo** – allows adding a date and time stamp to the photo. Enabled by default.
- **Stamp coordinates on the photo** – allows adding a location stamp with longitude and latitude coordinates to the photo. Enabled by default.
- **The presence of a field for adding a caption to the photo** – allows adding descriptions to a photo in the photo editor. Enabled by default.
- **Use of custom camera** – prohibits using of the device's standard camera when working with a mobile application. Enabled by default.

5.1.3 Integration with webView pages

This setting allows adding sections of third-party web applications and services to the navigation menu of the mobile application. By default, this setting is disabled. You can give your own name to the added section.

5.1.4 Time-lapse video setup

A timelapse is a set of photos captured at a specific interval between shots that are combined into a single video clip. The result is an accelerated video showing what happens to objects over a long period of time or distance. Each photo retains its coordinates. This allows users to create tasks from video frames attaching the current frame (as a task photo) and geoposition in the ActiveMap Desktop application.

This folder includes the following settings:

- **Allow location recording** – recording the device's movement track and location while recording the current frame. You can view it in the ActiveMap Desktop desktop application. Disabled by default.
- **FPS (View)** – the number of frames per second for video viewing. The default is 5.
- **Maximum error in meters** – allowable coordinate error when recording a timelapse-video. If the coordinate exceeds this error, it is not taken into account during recording. By default, the allowable error is 100 meters.
- **Minimum change in distance in meters** – the minimum distance between location updates when recording video. The default is 5 meters.
- **Quality** – the quality of recorded frames. The default is 480 pixels.
- **FPS (Recording)** – the number of frames per second for video recording. The default is 2.

5.1.5 Photo comparison

It is often necessary to return an object to its original state – the sample state. For example, to clean a bus stop and bring it to a certain appearance. If you have a sample photo, you can enable photo comparison of the sample and the completed work photo with the calculation of the similarity percentage in the following settings:

- Allowable percentage comparison of two photos – a number of the threshold percentage value, after which the photo is considered similar to the sample. If the photo percentage is above the threshold, the percentage information background is colored in green. If the photo percentage is below the threshold, it turns red. If the field is not filled, the background is not colored. It is usually 40 or 50.
- Offline (URL to file) – the URL to the file that is loaded with the reference tables (dictionaries). Once the file is successfully uploaded, the photo editing window displays the percentage of similarity with the sample. If you enter the photo result editing window during the file upload, a loading pictogram is displayed instead of the percentage. After the download is complete, the pictogram disappears, and the percentage of similarity between the two photos is shown.
- Online (URL to service) – the URL to the service that implements the comparison of the sample photo and the result. If this field is not filled in the photo result editing window, the photo comparison button is not available.

5.1.6 Login with username and password

The setting activates user authorization in the mobile application using a login and password instead of a phone number. By default, this setting is disabled.

5.1.7 Map is available in the application tasks

This setting allows to enable or hide the map window in tasks in mobile applications. By default, this setting is enabled.

5.1.8 Unavailability of client organizations to the user

The setting is intended for selecting an organization when registering a user in the mobile application. If this setting is enabled, the user cannot select an organization. By default, this setting is disabled.

Interface

The “Interface” section contains visibility settings for certain elements in the mobile application interface.

5.1.9 File Gallery

- Readonly – the ability to view files without adding new ones (view-only mode).
- Visible – the ability to add photos and files. If this setting is disabled, any previously added photos and files are not displayed in the task card.

CHAPTER

SIX

FREQUENTLY ASKED QUESTIONS

6.1 Authorization

If you have problems with authorization, please contact technical support by calling the hotline or by sending an email to support@activemap.me.

6.2 Location determination

In case of problems with determining the location of the user's mobile device, it is necessary to configure the application's access to high-precision geolocation in the device settings.

6.3 Application notifications

To configure application notifications, go to the "Notifications" section of the mobile device settings. In this section, navigate to the ActiveMap Mobile application tab and set up notification display and sounds. If the configuration has been completed but the application notifications do not work correctly, please contact technical support by calling the hotline or by sending an email to support@activemap.me.

6.4 Loading photos from the device

If you are having trouble uploading images from your phone, please check the app's access settings for photos. Go to your device settings, find the app ActiveMap Mobile, and ensure that the access to "Photos" is set to "All Photos".

6.5 What to do if changes in service objects are not sent to the server?

If there is an error sending changes to service objects, update the layer settings in ActiveMap Web. Disable layer search, save the layer. Then open the settings again, enable layer search and click "Indexing".

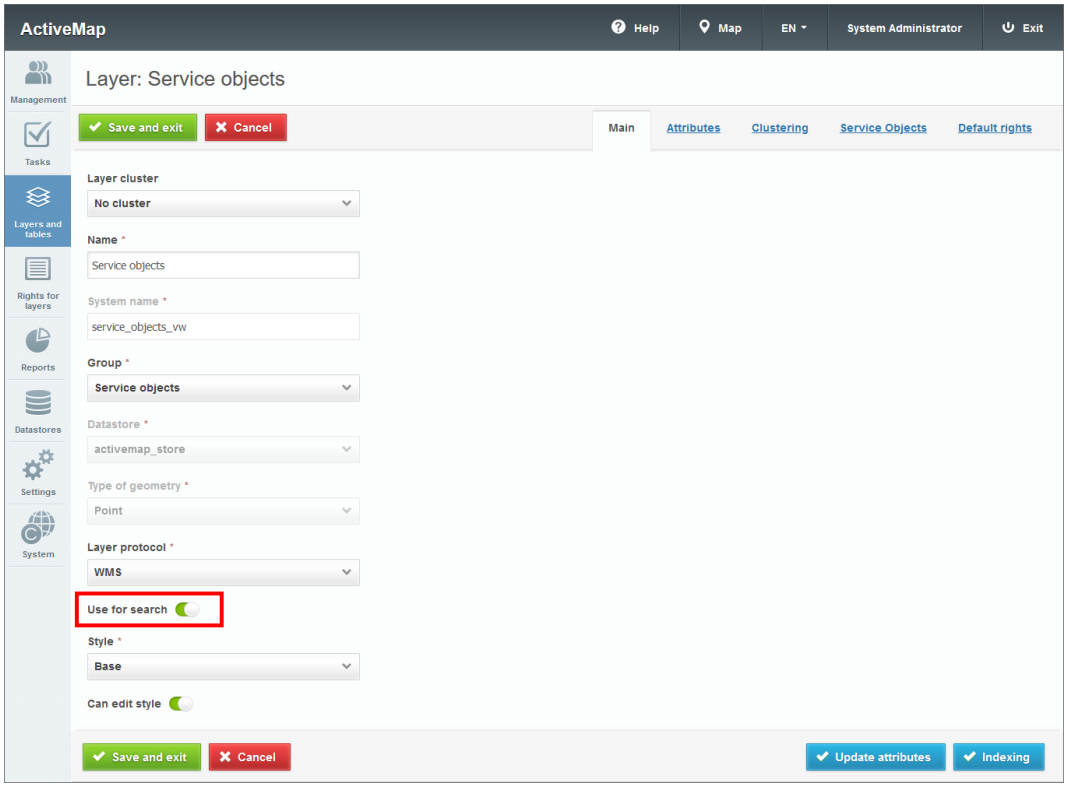


Fig. 6.1: Layer settings window

CHAPTER

SEVEN

GLOSSARY

Account is a set of data about a user stored in the system, necessary for the authentication and providing access to personal data and settings.

Activation code is a file containing an encrypted hardware code, information about the number of users, and the license period.

Applied software suite is a set of interconnected programs designed to solve problems of a certain class of a particular subject area and interact with the user.

Attribute data are values describing features of the objects. Attribute data types are: integer, real, text, date, date and time, geometry.

Band is an object that is placed directly on the report page. It is a container for the other objects, such as “Text”, “Picture”, etc.

Basemap is the dominant or underlying layer in a given map that provides geographical context to the map and other dataset layers above it. Users visualize tasks, service objects, and thematic layers above the basemap. They use it for navigation through a map and for getting general information about the area of interest.

Bluetooth Low Energy (BLE) tags, also known as beacons, is a class of Bluetooth Low Energy (LE) devices that broadcast their identifier to nearby portable electronic devices. The identifier and several bytes sent with it can be used to determine the device’s physical location, track customers, or trigger a location-based action on the device.

Centroid is the center of a geographical object on a map. For most objects, the centroid coincides with the center of the rectangle described around the object.

Client organization is an association of users who make their requests via the mobile application, monitor their status, who are capable of evaluating the work performed. User rights for operating the System are restricted.

Cluster is an association of several organizations for the purpose of enabling the in-process control of the performance of departments.

Cluster Administrator is a user role in the System, responsible for administration of one or more specified clusters, namely: managing organizations and users, granting access rights to layers and reports, and managing tasks.

Cluster Inspector is a user role in the System, responsible for managing tasks of one or more specified clusters.

Clusterization is the representation of raster layer objects located nearby by a single label on a map.

Composite field is a custom field format that contains one or more nested fields and supports the creation of multiple field instances in a task card. It is used to add several similar field sets to the task, with the number of sets being unknown in advance.

Contract is an entity for accounting and planning the task to be performed by organizations under contractual obligations.

Custom fields are attribute fields, which can be customized in the system versus features of a project underway, and be referenced to the certain work items.

Data export is a data loading from the Program database to an external file.

Data table is a set of the related data stored in a structured format in a database.

DBF data format is a data storage format used as one of the standard ways of storing and transmitting information by database management systems, spreadsheets, etc.

Drag and Drop is a way to manipulate interface elements using a mouse or a touch screen. The method is implemented by "grabbing" (pressing and holding the left mouse button) the object displayed on the screen, which is available for such operation, and then moving it to another place (to change its location) or "dropping" it to another element (to call the corresponding action in the program).

Executor is a user role for creating new tasks and performing the assigned tasks in the System.

GDAL (Geospatial Data Abstraction Library) is a translator library for raster and vector geospatial data formats. As a library, it presents a single raster abstract data model and a single vector abstract data model to the calling application for all supported formats.

Geographic coordinates are the mathematical values that designate a position on the earth relative to a given reference system.

GeoJSON data format (Geographic JavaScript Object Notation) is a format for representing various geographic data structures. A GeoJSON object can be represented by a geometry, a feature, or a feature collection. GeoJSON supports the following geometry types: Point, LineString, Polygon, MultiPoint, MultiLineString, MultiPolygon and GeometryCollection. A feature in GeoJSON consists of geometry and additional properties. Feature collection consists of a set of features.

Geographic Information System (GIS) is an information system designed to collect, store, analyze, and display spatial data and related information about presented GIS objects.

GPS is a satellite navigation system that measures distance, time and determines the location in the WGS 84 world coordinate system. It can accurately determine the three-dimensional coordinates of an object equipped with a GPS receiver: latitude, longitude, height above sea level, as well as its speed, direction of movement, and current time.

File label (sticker) is a textual mark in a picture.

Hardware code is a file that contains encrypted information about the server characteristics and the license key.

Hatching is a set of drawings and colors used to fill polygonal objects.

Image sticker (file label) is a text mark on the photo.

Information display panel is a panel designed to display specific information related to user actions, as well as messages that correct user actions (warning messages, tips).

Installer is a program that installs files on the end user's computer.

Interval is a data table that is used to configure the display styles of layer objects on the map depending on their specific numerical characteristics. The Program uses intervals of (a, b) type.

Invitation (an invite link) is a link containing information on the server address, login, and password of a user to simplify the process of authorization in the mobile application.

Layer is a visual representation of geographical data in the environment of any digital map.

Layer group is a set of layers grouped according to thematic or other specified criteria.

Layer object visibility on the map is a displaying the layer object on the map as a certain symbol, line, or polygon.

Layer visibility on the map is a displaying of all layer objects on the map as a group of symbols, lines, or polygons.

LDAP (Lightweight Directory Access Protocol) is an open, vendor-neutral, industry standard application protocol for accessing and maintaining distributed directory information services over an Internet Protocol (IP) network.

Legend is a set of symbols and explanations on a map.

License is a file containing information on the acceptable quantity of users and validity period, allowing to link the server software of the System to the equipment.

License key is a character string provided to the customer by the software vendor after purchasing the license, used to activate the product and obtain a digital license for a fixed server. Contains the maximum number of users and the license period in an encrypted form.

Linear object is an object on a digital map that represents a place or item that has length but no area at a given scale.

Managing map layers is the set of actions for managing layer visibility, creating and editing the geometry of layer objects on the map.

Map scale is the ratio of a distance on a map to the corresponding distance on the ground. A scale of 1:100,000 means that one unit on the map corresponds to 100,000 of the same units of measurement on the ground.

Mapping is a correspondence between a layer attribute and a task field.

MapInfo Interchange Format (MIF) is a MapInfo text data format that includes geographic data (objects) and a description of the data table containing attribute information related to objects.

Metadata is the information that describes the characteristics and properties of a particular layer.

Multi-object is a combination of several objects. Multi-objects can be of point, line, and polygon geometric types.

Multiservice is the ability to represent any layer as a layer with service objects.

Node is the point representing the beginning or ending of an edge of a linear or polygonal object, topologically linked to all the edges that meet there.

Object attributes (attribute data) are values describing the object properties. Attribute data types are: integer, real, text, date and time, geometry.

Object geometry is the measurements and properties of points, lines and surfaces. In GIS, geometry represents spatial components of geographic objects.

Object import is a data loading from external files into the Program database.

One-to-many relationship is a relation between two sets of data where one record in a parent table can be associated with one or more records in another table (child data table).

Operational tasks are the tasks created to solve current issues.

Organization Administrator is a user role in the System, responsible for administering the organization, namely: creating users, granting access rights to layers and reports within the organization, and managing tasks of the organization.

Organization Inspector is a user role in the System, responsible for managing tasks within the organization.

Photo sample is a reference photo used as the basis for assessing similarity with a photo uploaded by the user to confirm the completion of work on the service object.

Photo response is a photo uploaded by the executor to the task as a response to the attached photo sample to confirm the completed work on the service object.

Point object is a cartographic object that does not have length or area in the accepted scale.

Polygonal (area) object is a cartographic object that bounds the area at a given scale.

Program user (User) is a person (employee) or organization that uses the current Program to perform a specific function.

Raster layer represents data in the form of geographically-referenced images as well as fragments of raster images displayed in the same projection and prepared for each level of map detail.

Reference table (dictionary) is a table with systematically organized data intended to help users to handle attribute information on objects.

Service objects are the layers containing the objects of interest of the user organization due to their relation to business activity of the involved organization. Service objects are used to set up tasks. They contain the necessary information for the task execution.

Schedule is a tool that allow users to automatically create and assign template tasks at a certain time with a specified periodicity.

SHP data format is a vector format of geographic files. It allows users to store the following types of geometric objects: points (polypoints), lines (polylines), polygons, and other objects. A file can contain only one object type. Each entry in the SHP file can have multiple attributes to describe its geometry.

Scheduled tasks are the tasks created at a specified date and time according to a template.

Spatial database is a database optimized to store and access spatial data or data that defines a geometric space.

SQLite is an in-process library that implements a self-contained, serverless, zero-configuration, transactional SQL database engine.

SQLite Data Format is the SQLite relational database file format.

Sub-object is an object included in the multi-object.

Symbol is a graphical representation of a geographic object or a class of spatial objects, which helps to identify and distinguish them from other spatial objects on the map.

System Administrator is a user role in the System with the maximum rights, responsible for its configuration, including managing clusters, organizations, users of all roles, contracts, directories, as well as for distributing access rights to layers and reports.

System Inspector is a user role in the System, responsible for managing tasks across all clusters.

System reference table is a reference table generated automatically based on data entered into the system. System reference tables include tables of system users, priorities and types of work.

TAB data format is the format of MapInfo vector spatial data files (MapInfo files).

Task is a system entity containing information about the type of work, creation date, deadline, priority, execution step, contract, service object, as well as instructions for execution. It is possible to attach photo samples, photo responses, and other auxiliary files (documents, photos, and videos) to the task.

Task priority is a characteristic of the urgency of the task.

Task status is a characteristic of the completion degree of work on the task, determined by the dispatcher or administrator when accepting the task.

Task step is a stage in the sequence of actions for completing a task changed by the task executor, dispatcher, or automatically by the system according to the set algorithm.

Thematic layer is a spatial data bank layer which objects are interrelated by the same topic.

Tile (map tile) is one of many images that a map is divided into. Most map services use square tiles of 256x256 pixels.

Timelapse-video is a video file comprising a series of pictures taken via a video camera during a long time period.

Tile Map Service (TMS) is a specification for storing and retrieving cartographic data that provides access to the map tiles rendered at a specific scale level. These resources are accessed via the "REST" interface.

Toolbar is a graphical user interface with buttons for performing Program commands.

Tiled Web Map Service (TWMS) is a specification for storing and retrieving map data that provides pre-built georeferenced map images. TWMS relies on technologies for building and transmitting large images to the Internet using tiles – small, standard-sized image fragments. A TWMS service may also include one or more styles, dimensions, or tiling schemes to define how the TWMS layer is displayed. Accessing data via the TWMS protocol requires preprocessing of the source cartographic data by creating tiles for the full range of scales, over the entire area. This technology allows locally caching an image by building a tile grid.

User profile is a characteristic of an individual system user, represented by a set of attributes, such as full name, email, phone number, etc.

User rights management is a set of actions for registering and managing user rights in the Program.

User tags is an entity allowing to group users against a specified attribute (e.g., the phone model).

User type is a user characteristic (a human being or a vehicle) to determine the user mapping settings versus the type selected.

Vector image is a representation of graphical objects and images based on the use of geometric primitives such as points, lines, and polygons.

Webhook is an automated launching of http requests in response to operations on entities (comments and tasks).

Web Feature Service (WFS) is a web service for querying spatial data that includes a standardized API. Unlike the Web Map Service (WMS), which returns a map image (rendered data), the WFS service returns actual objects with geometry and attributes that can be used in any type of geospatial analysis. WFS services also support filters that allow users to perform spatial and attribute queries on the data.

Web Map Service (WMS) is a standard protocol for serving geographically referenced images over the Internet, generated by a cartographic server based on data from the GIS database. The WMS service may also include a Styled Layer Descriptor (SLD) to define how the WMS layer should be displayed.

The WMS service layer consists of three elements arranged hierarchically in the table of contents. At the top is the name of the WMS service, which contains all the layers of the WMS map. The next level down contains the WMS composite layers whose only function is to organize the WMS sublayers into appropriate groups. There is at least one WMS composite layer, but there can be any number of composite WMS layers (and even nested groups within groups). WMS composite layers do not contain map layers. This is the third group, WMS sublayers that actually contain map layers.

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