



# EG MainManager ERFA 2024

Siden sidst



# Agenda

- From last time
- MM Facility App
- MM Helpdesk app QR code scanning
- Interface improvements
- Accessibility
- New inspection module
- Questionnaire schemas
- Object type helptext
- Data warehouse views
- 2D, 3D, GIS additions
- EG MainManager FM documentation
- Release process and visibility





# From last time

- Last physical ERFA meeting was in 2022
- New ownership of EG with new possibilities
- EG MainManager FM implemented for 90% of our customer base
- 1 new EG MainManager baby
- Three volcano eruptions in Iceland (again)
- 403385400 Earthquakes
  
- As always we use our customers input as well as our experience
- We are looking forward to getting your wishes and ideas here today 😊



# Finished Roadmap Items

- EG MainManager web
  - Be able to work in an interface that supports Universell udforming WCAG 2.0
  - Be able to use keyboard for the whole system
  - Be able to select Dark mode
  - Be able to select through special mode (or global search) floating objects in tree selector so that I can work with all types of objects in MM in similar way (Property item, artifacts, gauges, sensors, vehicles etc.)
  - Be able to load on demand in tree 1st level (or pagination)
  - Be able to see more than 100 records in the list at once
  - Be able to in a simple manner select nothing selected for a dropdown so that I do not have to scroll up long lists to do that
  - Be able to see sub data filtered on the finance years selected in filter so that I can focus on the most important things and also not move to first page when adding or changing sub data
- Dashboard and my page
  - Be able to fetch necessary data from MainManager so that I can do my own reporting and analysis (Data warehouse views)



# Finished Roadmap Items cont.

## • Building archive

- Be able to use the new Norwegian building component standards (NS)
- Be able to get instructions when creating systems of different type so that I do my work in the right manner
- Be able to see icons with my active data inside rooms in interactive drawings similar to presentation in GIS maps
- Be able to register workstations/parking places/bicycle racks on building spaces and locate them as symbols on interactive drawing
- Be able to manage my cranes and navigate to them through GIS and interactive drawings
- Be able to manage my storage tanks and delivery tanks
- The database to be automatically populate/update with object type structure, site type, building type, space usage, document types, based on selected classification(s) from embedded Excel arc to simplify setup of new customers
- Be able to measure areas of polygons and measure distances between two points on GIS map
- Be able to locate all location based objects in an intuitive way on map and have good overview in lists and tree of which objects are located, located by address or not geographically located
- Be able to merge two or more building spaces so that it is easy to manage changes to room structure
- Complete and updated addresses from GeoNorge - including municipality and county - postcode and place, county and municipality must be updated automatically when changes occur (this happens quite often in Norway)
- Be able to create, use and download 2D drawings in MM as pdf showing fire layers defined in AutoCad.
- Be able to use AFF standard for registration of building components so that I can register my building systems
- Be able to register my roads, feeder pillars, light poles and luminaires so that it can be used as objects in operation and maintenance, helpdesk and lease management

## • Human resources

- Be able to change information (Email, phone numbers) on employee or person and it updates this information on all instances of this person so that it not necessary to do this multiple times

## • Document management

- Integrate to Fotostation
- Be able to process document that come from email stack
- I would like to be able find and download drawings in a document portal

## • Asset management

- Be able to register vehicles
- Be able to locate artifacts on interactive drawing with icon and coordinate
- Be able to locate equipment with icons on interactive drawings in an approved way

## • Property management

- Be able to let lease contract reference to a head contract
- Index regulate lease based on 12 months average index
- Partly index regulate lease payments
- Improved calculations of payments and visualize payment periods
- Be able to connect housing to building spaces in an easy way and view information registered on them throughout my processes
- Be able to handle merværdi calculations for Norwegian refunding of tax
- Be able to handle common lease (gjengs leie) lease contracts
- Be able to handle revenue-based lease contracts.



# Finished Roadmap Items cont.

## • Finance management

- Be able to register and handle purchase orders in a quick and user-friendly way so that I save time
- Be able to invoice financial transactions with a defined add-on percentage so that I can bill all my projects
- Be able to integrate Unit4 ERP system to MainManager
- Be able to link my fixed assets to the object structure so that I have a good overview over depreciations
- Be able to import transactions from OBS and send invoices for transactions back to finance system

## • Condition assessment and maintenance needs

- Be able to use condition-based maintenance (recurring incidents) in connection with condition registration and sensor integrations so that incidents are triggered when condition levels go above or below limits
- Be able to use 5 level condition grades
- Be able to integrate Things cloud IoT system to MM to be able to import Sensors and sensor readings

## • Helpdesk/Service management

- Be able to register incidents without being able to select from map to locate the incident
- Be able to use questionnaires where question paths can be different based on different answers so that I can get the right feedback from users
- Be able to setup up KPI response demand and charts in a simpler way
- Be able to scan QR code to get info on object or create work order/incident/inspection for that object OBJECT-TODO FORM
- Be able to login through Azure AD into Facility app
- Be able in first login through Azure AD to be created as a user in MainManager if am not already created there, so that I can keep track of my incidents
- Be able to scan QR code to select location or object in Helpdesk App
- Be able to log into MM Helpdesk/MM helpdesk portal/Web with 2 factor authentication to be able to register incidents on the building I am leasing in .

## • Operation and maintenance

- Be able to publish standard task so that only published standard tasks are visible in Play function and actions to create tasks from standards task. Also that standard tasks coming from Digital delivery does not mix with other standard task unless decided so.
- Be able to handle my work orders in new Facility app
- To have the option to create a report from a filled-out checklist
- Be able to perform checklist inspections and To-Do lists in new data model and interface, Also through interactive drawings and BIM
- to be able to administrate and get a better overview over my checklists
- Be able to create tasks from play action in an improved manner and be able to have an overview over sites that have missing standard tasks
- Be able to perform inspections (new checklist concept) in the new facility app
- Be able to get my tasks prolonged automatically and in defined cases also be automatically approved so that I save time and do not forget to do this
- Be able to finish work order in a simple and quick way
- Be able to register maintenance incidents (behov) and move them to tasks (tiltak) and do the necessary budgeting
- Be able to subscribe to fire inspections and automatically get inspection report sent when inspection is finished
- be able to take out statistics about survey answers and send emails to relevant parties.
- Be able to register material on work order through lookup in product list/inventory location so that I can register all material usage for my work
- Be able to register hours with time stamps
- Be able to send and receive Excel document from supplier with (Tilstandsanalyse) condition analysis and work with the results so that I can manage the maintenance demands

## • Cleaning management

- Be able to create location structure and drawings within Cleanpilot from MainManager

## • Energy management

- Be able to integrate to Enerkey (EG Omega) so that we can have a first class energy management system



# Result from 2022

Nr	Beskrivelse af forbedringsforslag	1-3-7-9			
D3	Enkelt oppsett (10 vs. 2 klikk)	84	C10	URL helt ned på objekt niveau	62
A4	Tilføjelse af nye brugerdefinerede felter - også gerne på app	83	D10	Sustainability/envitoment/energi	62
D5	MM kundeforum	83	C6	Indlæs flere filformater til space management - open source filformat.	58
C7	Kvalitet og stabilitet efter release	79	B1	Opdateringer af bygninger fra datafordeler og hente for eksempel energimærke	57
C5	Space mangement flere filformater -	76	A5	Parkeringspladser vist på GIS-kort	56
E1	Integration Revit (missing link) måske læring	74	D8	Filformater (eks. låst på dwg) - åpne API'er	56
D12	Åpne API'er (tegninger og muligheter for åpne/egendefinerte felter)	73	D7	Sambruk arealer -> bedre utnyttelse	55
E4	Kobling mellem økonomi og resultater ift. Tilstand	73	E2	DKV koereplan (kontroller) out of the box ift. Organisatorisk samspil mv.	55
B4	Branninspektion igennem at trykke på icon på branntegninger	71	D1	Salg nye kunder (sexy salg) - enkelt lett forståelig oppsett	53
B5	Indeklima evalueringer på rum etc., opregnet på bygninger	67	E3	Standarder norsk ift. Bygningsdele	50
B2	Hente oppgaver fra datafordeler for energimærke?	66	C3	Space mangagment - vertikal - 3D overflader.	49
C1	Datafordeler BBR	66	D11	Key figures IoT	47
A2	Gameification hvor brukeren drives af point og konkurrence - mest i forhold til opplæring og onboarding	64	C2	Norske standard NS3547 - konverteringsmotor i MMFM	46
D6	Kundeparametre (ref sustainability & envitoment & energi)	63	C9	LER 2.0 - ladestationer	45
A1	Simple opsætninger og flere standardroller	62	C8	Appen - den nye app samme login som det gamle.	33

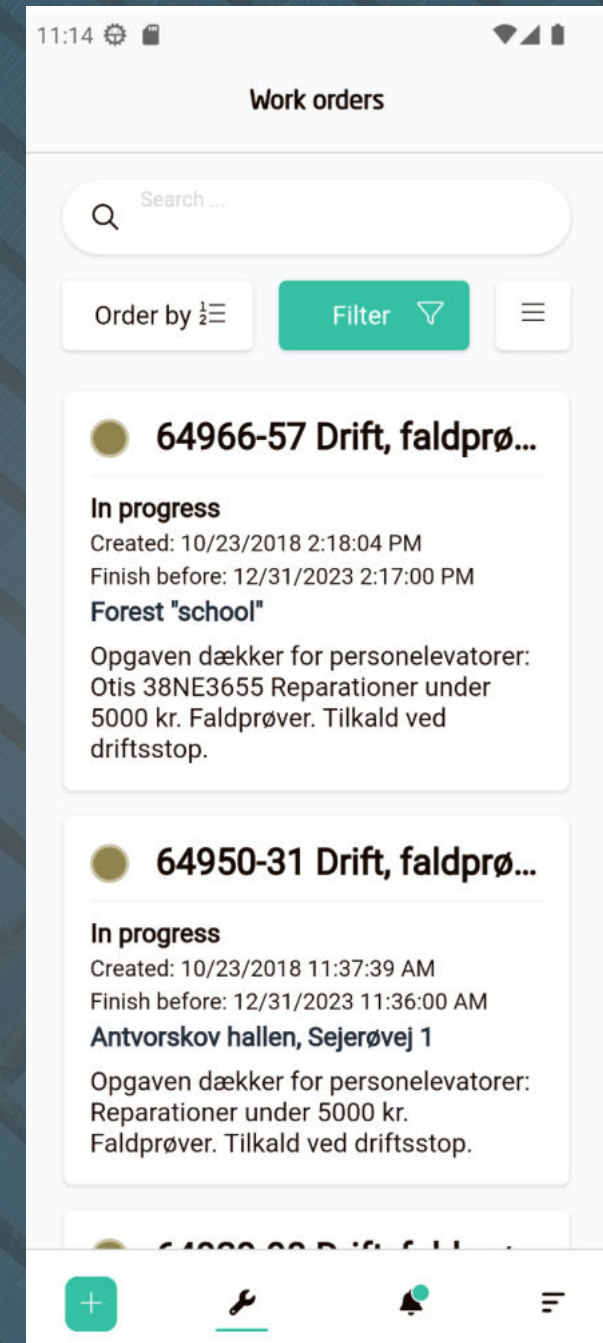
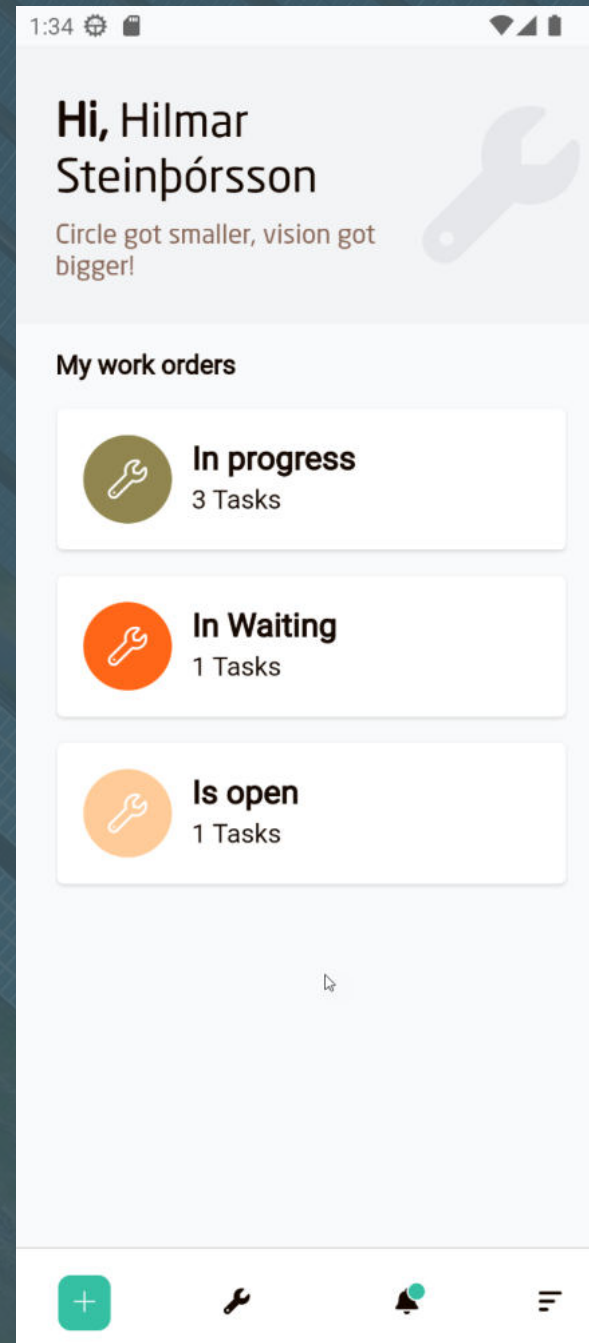
We use your feedback as input to our roadmap

We are looking forward to hearing your ideas today 😊



# MM Facility App

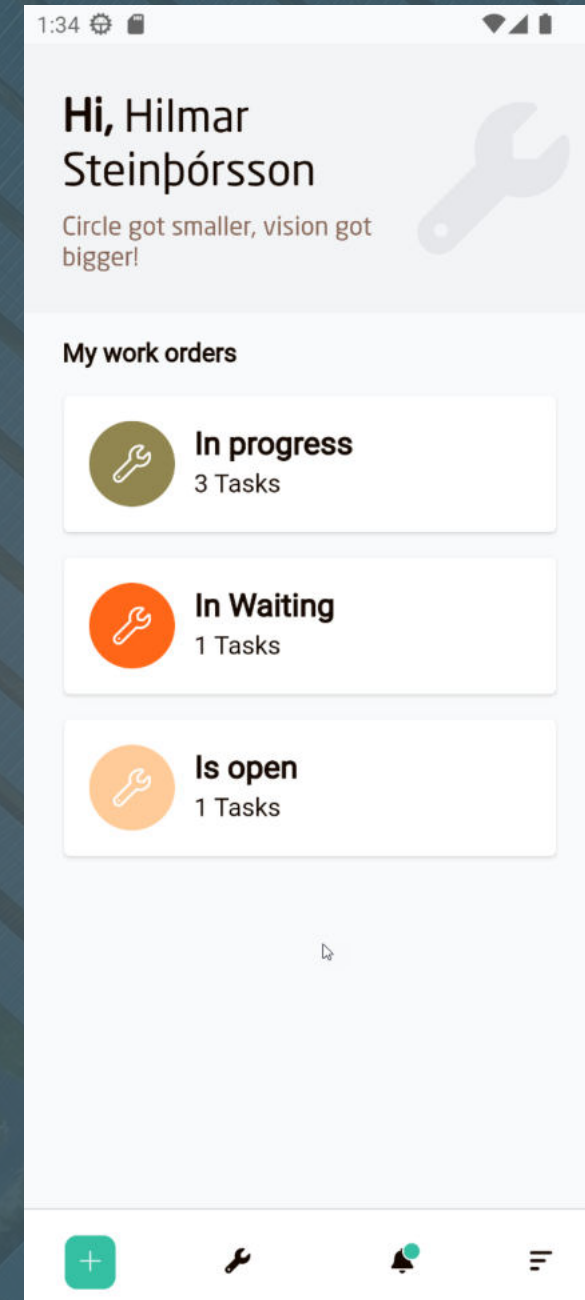
- Available on Google's Play Store and Apple's App Store
- Work orders
- Inspections
- QR code scanning
- Reminders
- Questionnaire schemas
- Adjustable fields





# MM Facility App - Overview

- Shows users work orders grouped after status
- Possible to access work orders behind each status





# MM Facility App – Work order list

- Users work orders shown in list
- Possible to filter after same fields as in web solution
- Possible to order list after all columns
- Possible to search in list
- Possible to register a new work order
- Possible to register a question scheme





# MM Facility App – Work order

- Information about location
- Possible to change status
- Follow the data setup from web solution
- Access to all sub data available in work orders





# MM Facility App - Chat

- Possible to chat with stakeholders attached to the work order
- Notifications sent for new messages





# MM Facility App - Reminders

- Possible to register reminders to yourself or other users
- Notification sent to users when reminder date is up





# MM Facility App - QR code scanning

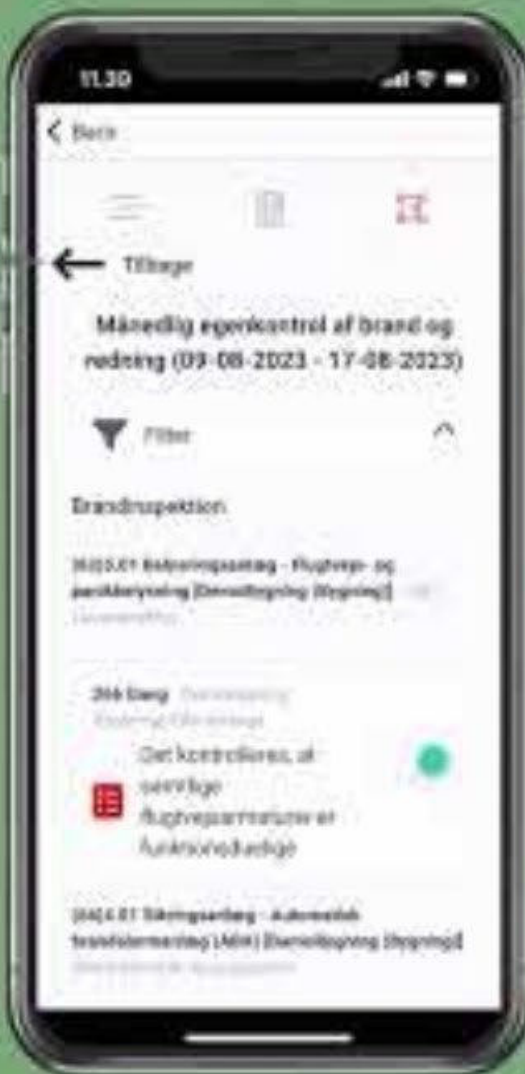
- Possible to scan qr codes to open data from MainManager
- Possible to connect property windows and actions to all objects





# MM Facility App - Inspections

...og der trykkes på  
Tilbage



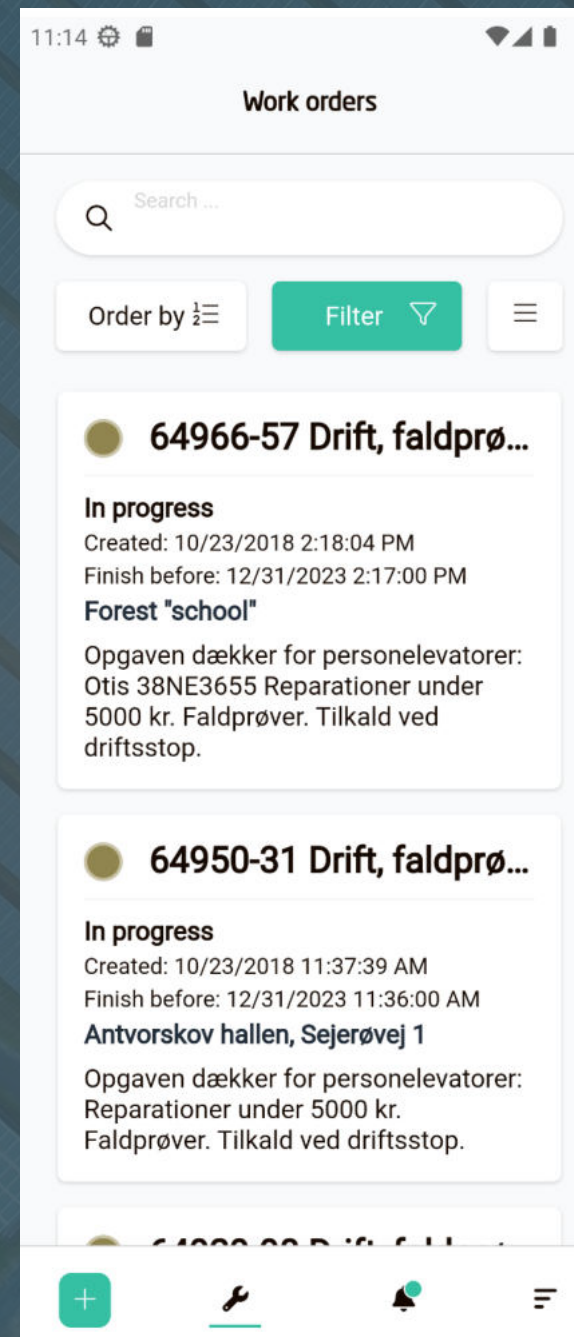
EG MainManager





# MM Facility App

- Download from Googles Play Store or Apples App Store. Search for MM Facility
- Use App Key: Simple
- Reach out to your CS contact to get login information





# MM Helpdesk App - QR codes

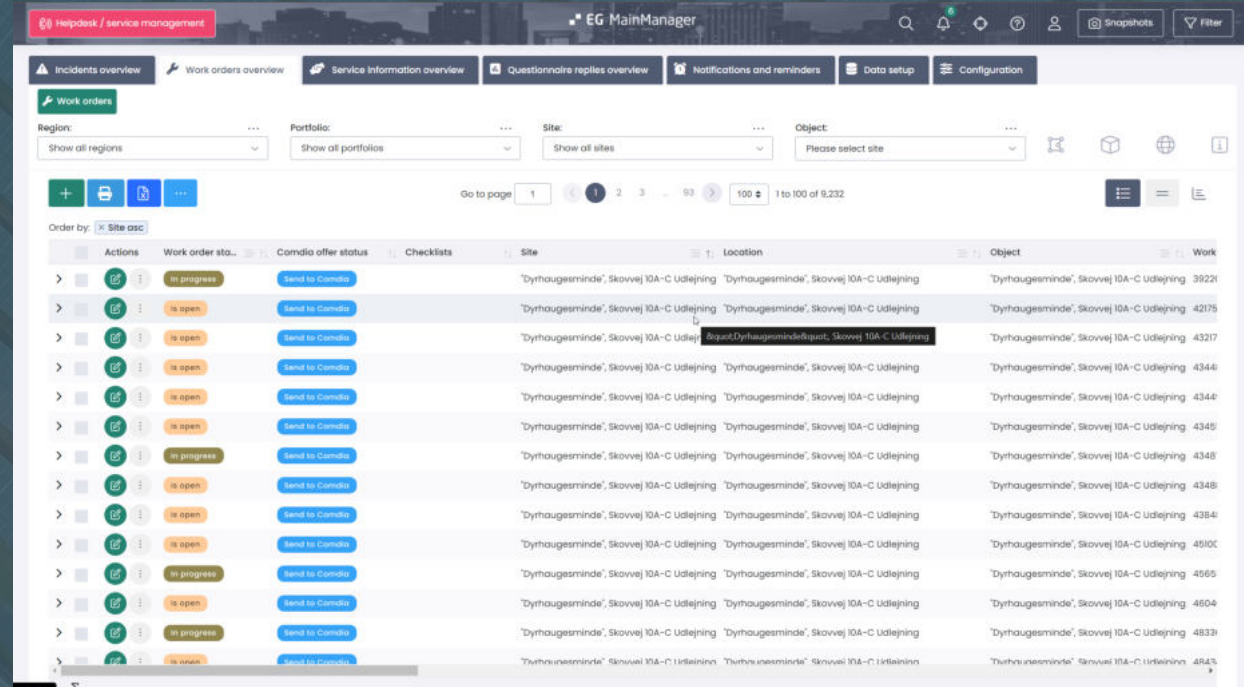
- Possible to connect QR codes to all object structure
- Possible to scan QR codes to locate an incident





# Interface improvements

- Scroll position of large lists
- Nothing selected in dropdown lists
- Toolbar visible in scrolling
- More lines possible in lists
- Possible to navigate to object through global search and list
- Improved navigation in tree (speed, all objects selectable)





# Accessibility

- WCAG 2.0 standard
- Dark mode
- Screen readers
- Contrast of colours
- Keyboard navigation

EG MainManager

Incidents overview | Work orders overview | Service information overview | Questionnaire replies overview | Notifications and reminders | Data setup | Configuration

Work orders

Region: Show all regions | Portfolio: Show all portfolios | Site: Forest school | Object: Second floor (Building 10 (Malmgade 10))

Go to page 1 | 100 | 1 to 2 of 2

Order by: Site asc

Actions	Work order sta.	Comdia offer status	Checklists	Site	Location	Object	Work order identification	Work order name
>		<a href="#">Send to Comdia</a>		Forest school	Forest "school"	Second floor	67539-27	rwar
>		<a href="#">Send to Comdia</a>		Forest school	Building 10 (Malmgade 10)/Second floor/Personatom	#FB18 Brandlukningsanlag	75021-74	test brandinspektion



## Web Content Accessibility Guidelines (WCAG) 2.0

W3C Recommendation 11 December 2008

### This version:

<http://www.w3.org/TR/2008/REC-WCAG20-20081211/>

### Latest version:

<http://www.w3.org/TR/WCAG20/>

### Previous version:

<http://www.w3.org/TR/2008/PR-WCAG20-20081103/>

### Editors:

Ben Caldwell, Trace R&D Center, University of Wisconsin-Madison  
Michael Cooper, W3C  
Loretta Guarino Reid, Google, Inc.  
Gregg Vanderheiden, Trace R&D Center, University of Wisconsin-Madison

### Previous Editors:

Wendy Chisholm (until July 2006 while at W3C)  
John Slatin (until June 2006 while at Accessibility Institute, University of Texas at Austin)  
Jason White (until June 2005 while at University of Melbourne)

Please refer to the [errata](#) for this document, which may include normative corrections.

See also [translations](#).

This document is also available in non-normative formats, available from [Alternate Versions of Web Content Accessibility Guidelines 2.0](#).

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## Abstract

Web Content Accessibility Guidelines (WCAG) 2.0 covers a wide range of recommendations for making Web content more accessible. Following these guidelines will make content accessible to a wider range of people with disabilities, including blindness and low vision, deafness and hearing loss, learning disabilities, cognitive



# Object type helptext

- Possible to register helptext on types of objects
- This text is available everywhere where the object is displayed

The screenshot displays a software interface for managing objects. At the top, the header reads: "Object type - E.KG Trykholde- og ekspansionsanlæg (Trykholdeanlæg, ekspansionsanlæg) Created 23.04.2015 17.52.52 by Gudmundur Ludvigsson. Modified 07.03.2023 09.37.29 by Maia Manilla".

The main content area is divided into several sections:

- Attach documents:** A dashed box with the text "Drop files here or click to upload".
- Help text:** A text area containing the following content:

**How to set up this kind of a system**  
You go to the correct location and boom...  
**Here it goes :)**
- Messages:** A section with a "Post message" button and a "History" link.
- Location details:** A section showing "Site: 10110 Test site A" and "Main object: +10110-A=330.001 Håndstikker".
- Classification and metadata:** A list of fields with "Show" buttons: Classification, Product info, Provider data, Operation info, and Help text.
- Help text display:** A section showing the registered helptext with formatting:

**Here we have an example of how this helptext can be registered and shown**

**We can format the text like we want to make it big and colored**

This text is to describe how to set up or register this kind of object.

  - Like fire extinguisher must be placed correctly

On the right side, there is a sidebar with navigation options: "Pages" (General, Settings, Help text), "Sub data" (Subtypes, Object type themes, Documents), "Actions" (Send email), and "Templates" (Fråbart mal, Add new).



# New inspection module

- New inspection module with new possibilities
- Scheduled checkpoints
- Possible to combine different types of check points
- Inspections through drawings
- New inspection report
- Subscribers on reports

The image displays two overlapping screenshots of a web application interface for inspection management.

The top screenshot shows a summary view for "Forest school". It includes a "Filter" section with a "Filter on period:" dropdown set to "Last year" and checkboxes for "Only show pending points in sum" and "Hide finished checklists". Below this, there are two task cards: "Toilet cleaning" (18.01.2023 - 26.01.2023) with "Finished 3 of 112" and "KFF 05 Halinspektør" (18.01.2023 - 26.01.2023) with "Finished 0 of 1".

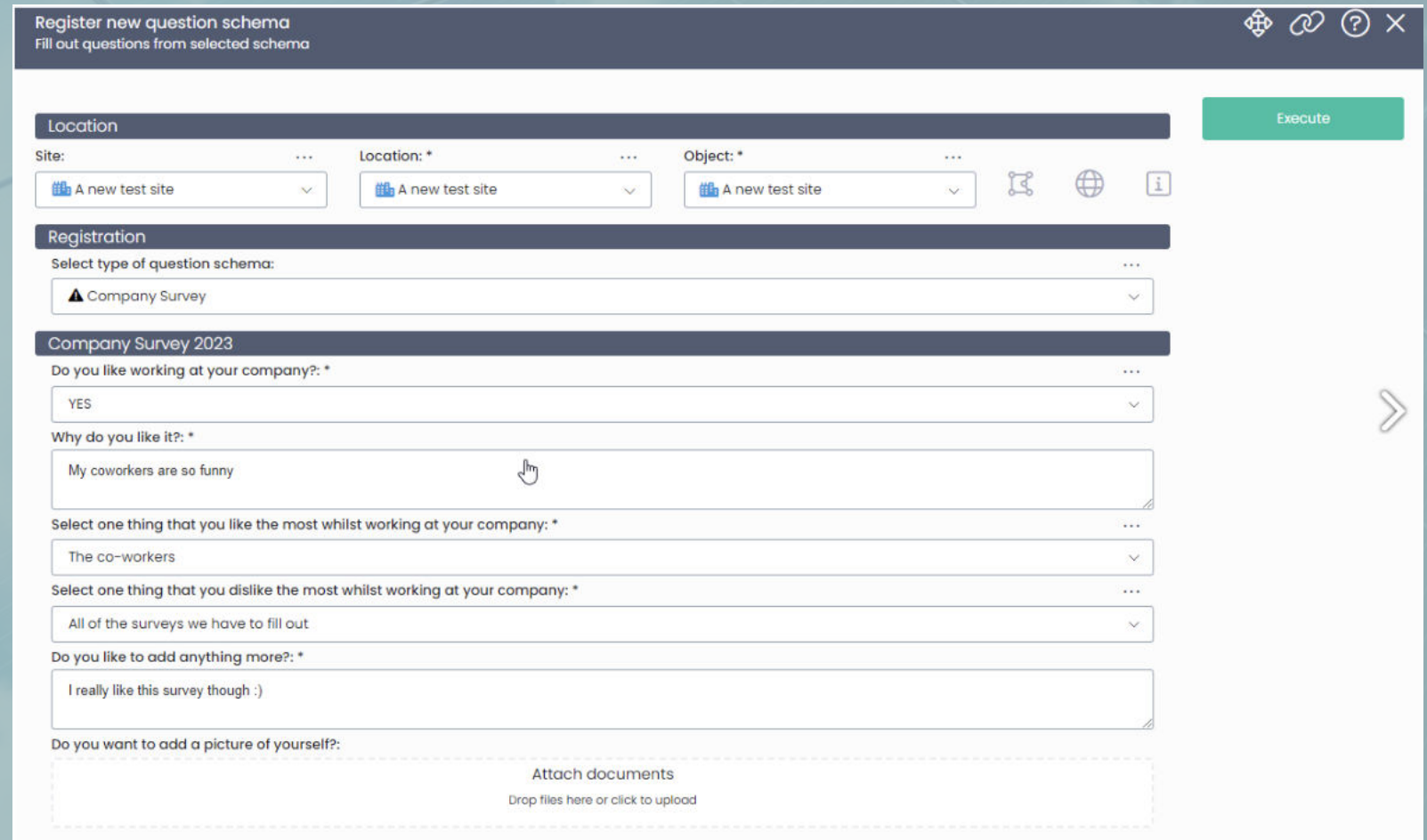
The bottom screenshot shows a detailed checklist titled "Kontrol af el-materiel - RAMBØLL (18.01.2023 - 30.04.2023)". It features a "Filter" bar and a list of items under the heading "EL-01 EL-materiel". Each item includes a date, a description, and "Yes/No" response options. The items listed are:

- 18.01.2023 Ledninger (Yes/No)
- Stik (toggle)
- 18.01.2023 09:00 - 15:00 Materielhus og håndtag (Yes/No)
- 18.01.2023 15:00 - 22:00 Materielhus og håndtag (Yes/No)
- 25.01.2023 Ledninger (Yes/No)
- 01.02.2023 Ledninger (Yes/No)
- 01.02.2023 09:00 - 15:00 Materielhus og håndtag (Yes/No)
- 01.02.2023 15:00 - 22:00 Materielhus og håndtag (Yes/No)
- 08.02.2023 Ledninger (Yes/No)
- 15.02.2023 Ledninger (Yes/No)



# Questionnaire schemas

- Possible to setup questionnaires
- Register questions and answers
- Connect questions to answers
- Report that shows result
- Possible to setup subscribers to the result report



Register new question schema  
Fill out questions from selected schema

Execute

Location

Site: ... Location: \* ... Object: \* ...

A new test site A new test site A new test site

Registration

Select type of question schema: ...

Company Survey

Company Survey 2023

Do you like working at your company?: \*

YES

Why do you like it?: \*

My coworkers are so funny

Select one thing that you like the most whilst working at your company: \*

The co-workers

Select one thing that you dislike the most whilst working at your company: \*

All of the surveys we have to fill out

Do you like to add anything more?: \*

I really like this survey though :)

Do you want to add a picture of yourself?:

Attach documents  
Drop files here or click to upload



# Data Warehouse views

- Possible to publish all data from EG MainManager
- Easy to setup
- Requires no programming
- External systems can access data through Data Warehouse View API endpoint

The image shows a software interface with a 'Create data warehouse view' dialog box and a Swagger API documentation page for 'MainManager API'.

**Create data warehouse view dialog:**

- Identification: [Text input]
- Name: \* [Text input]
- Data warehouse view group: [Dropdown menu, 'Nothing selected']
- Published:
- Description: [Text input]
- SQL: \*  

```
SELECT MainMan.ID,
MainMan.NamePart,Address1,
SiteCode,MainSubtyp,
ISNULL(q.ConditionHistoryLast,0) AS qConditionHistoryLast,
Address.ID,Address1,
CountryStateID,City,
a.Address1 ON MainMan,
MainMan.SubtypeID,
BY MainMan.ID
```
- Execute button

**MainManager API Swagger documentation:**

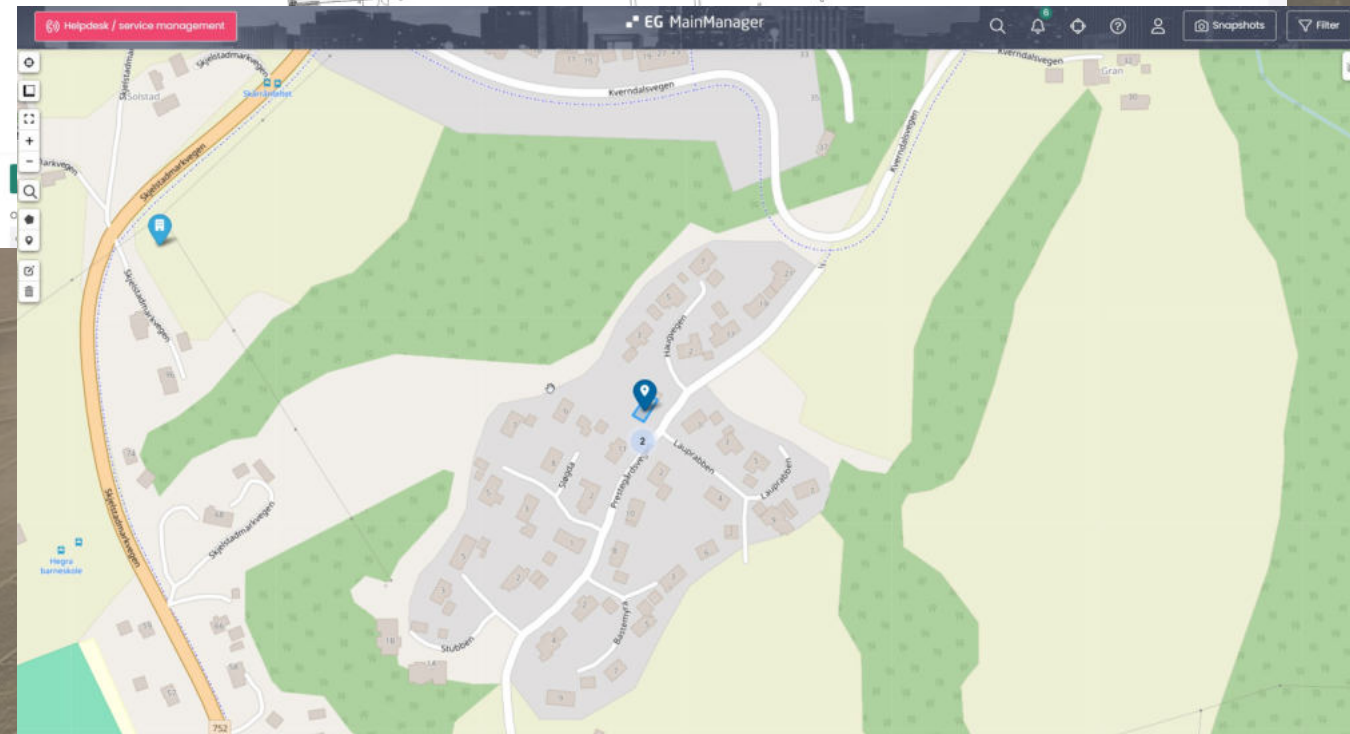
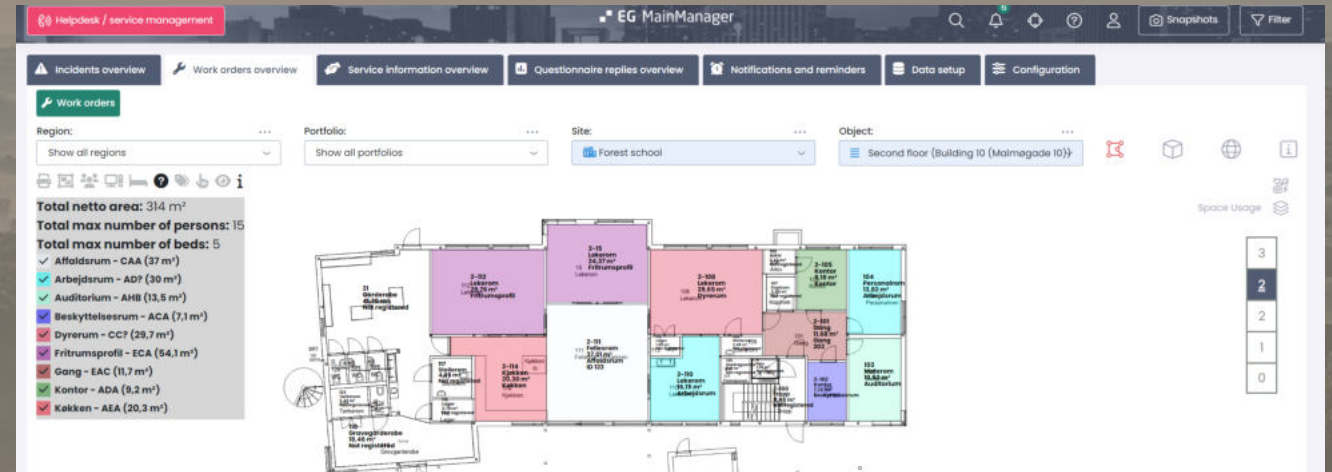
- URL: <https://kommune.mainmanager.is/swagger/docs/mainmanager>
- API Key: [Input field]
- API Name: MainManager API
- Accounting: Show/Hide | List Operations | Expand Operations
- AccountingV1: Show/Hide | List Operations | Expand Operations
- AdministratorV1: Show/Hide | List Operations | Expand Operations
- GET /api/v1/notifications
- GET /api/v1/mmlink
- GET /api/v1/datawarehouseview: The operation gets datatable for datawarehouseview.
- Implementation Notes: This API gets the JSON string for SQL query sent to MainManager API. Parameters:
  - "viewname": Name of view registered in data warehouse view register
  - "datatableoutput": Format of the result, default is JSON TabDelimited = 1, CommaDelimited = 2, SemiCommaDelimited = 3
- "recordsperpage": To fetch data in chunks you can enter Records per page and Page and then you get that subset of data until the result is an empty string. If zero than the whole dataset is fetched at once "page": The page in the chunk you want to fetch
- Response Class (Status 200): OK
- Model Example Value:

```
{
  "Message": "string",
  "DataTable": "string",
  "TotalNumberOfRecords": 0,
  "ErrorNumber": 0,
  "Success": true
}
```



# Graphical additions

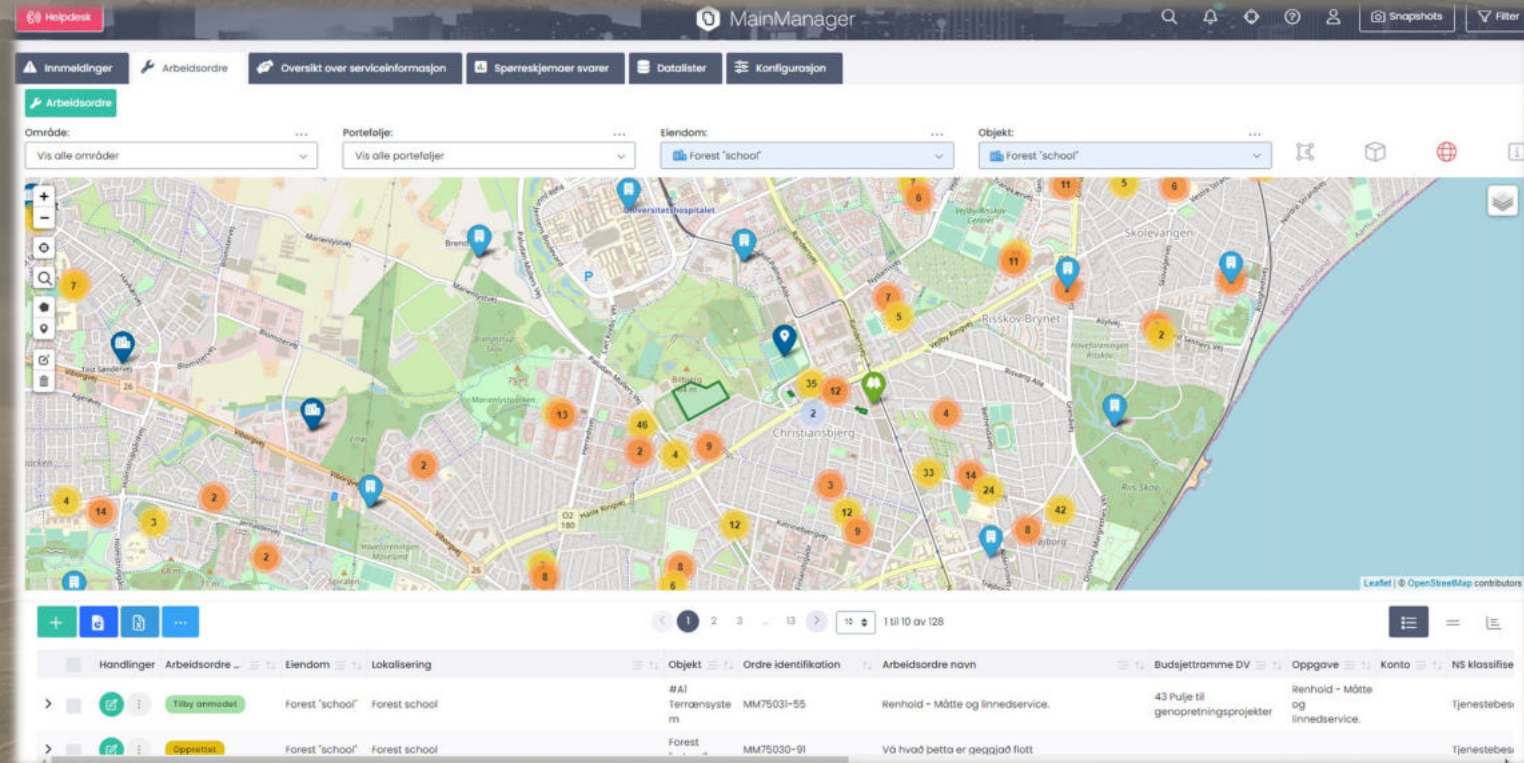
- Measurements on GIS map
- Full screen GIS
- Document layouts
- Locate all objects on GIS map (points and areas)
- Perform inspections through icons on 2D drawings
- Floor selector





# EG MainManager FM

- All new EG MainManager customers are implemented in MainManager FM
- 95% of existing customers have been converted from version 11 to version 20
- All customers should be converted in 2024





# EG MainManager FM - Online Manual

- 4 Releases each year
- Release notes sent out 2 weeks before
- Online release presentation 1 week before
- Videos available at EG MainManager channel

The screenshot displays the MainManager FM Online Manual interface. The top navigation bar includes the MainManager logo, 'Home', and 'Documentation' links. Below this, there's a search bar and a language selector set to 'English'. The main content area is titled 'General additions' and is dated 'Updated on 03 Jun 2022 • 1 Minute to read'. A prominent light blue banner highlights 'New features'. The text below discusses 'Changes on menu item translation', explaining that items like 'Standard tasks' and 'Incidents' now have different translation keys on the second level (e.g., 'overview') to allow for more specific translations in Danish, Norwegian, and Icelandic. This change affects users with special translations. The page includes three screenshots of the software's menu structure, with red boxes highlighting the 'overview' suffix on 'Organisations overview', 'Job applications overview', and 'Manuals overview'. A 'Table of contents' sidebar on the right lists various update items with their respective issue numbers.

**General additions**  
Updated on 03 Jun 2022 • 1 Minute to read

**New features**

**Changes on menu item translation**

Now all items that previously had same term in second and third level in the menu structure like Standard tasks, Incidents etc. they have now got a new translation key on the second level like Standard tasks **overview**, Incidents **overview** etc. This is done to be able to have different translation on each level. The default translation is unchanged for now in danish, norwegian and icelandic. Notice that since this is a change of the key behind the translation, this will affect customers that have been using special translations on these terms. Here we show an overview of where this will affect the system translations.

**Table of contents**

- [Changes on menu item translation](#)
- [Be able to see subscribers on chat and remove \(US3150\)](#)
- [Be able to filter on undefined data fields \(US3021\)](#)
- [Upgrade of icons](#)
- [Push notifications \(I43509\)](#)
- [HTML encoding problems \(I43345\)](#)
- [Could not create App site keys \(I43361\)](#)
- [Be able to press the pictogram icon in data selector \(I43172\)](#)
- [Data check when running action to delete \(I43418, I43545\)](#)
- [Be able to turn BIM viewer off \(I43346\)](#)





Let's go further