iMaintenance Configuration Guide

Connected Worker Solutions

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Configuration Guide for **iMaintenance**, a *Connected Office Worker Solution*.

Release Version: *2511*

Release Date: *05 December 2025*

Published Date: *05 December 2025*

Document Version: *1.0*

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Preface

Understand audience, know related documents and products and conventions followed in this document.

Intended Audience

This user guide is for plant maintenance field service technicians in your organization. The user guide familiarizes operators or technicians with features and functionality of the Connected Back Office solution.

Document Conventions

Table 0-1 Conventions followed in the document

Convention	Meaning
boldface	Indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Indicates book titles, emphasis, or place-holder variables for which you supply values.
`monospace`	Indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter

Related Products & Solutions

- Work Order Management
- Inventory and Warehouse Management
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Contents

1. Introduction

The **iMaintenance Configuration Guide** is your blueprint for shaping how iMaintenance works in your organization.

Once the product is deployed, this guide helps you transform the out-of-the-box system into a solution tailored to your business processes, plants, and teams.

Unlike installation or deployment activities that live with IT, the configurations in this guide are what bring iMaintenance to life for end users. From onboarding tenants and defining identity providers, to managing users and roles, setting up master data, and enabling core modules like Work Orders, Issues, and Timesheets — every section of this guide is designed to help you align iMaintenance with the way your organization runs maintenance.

With this guide, you will:

- **Establish the foundation** → onboard your tenant, configure authentication, and set up users and master data.
- **Control product behavior** → decide which modules are available, how Work Orders flow, and how AI, timers, and measuring points are applied.
- **Integrate and extend** → connect to ERP systems, define MCC behavior, and configure observation handling.
- **Customize and optimize** → design forms, create RACE templates, define risk matrices, set notifications, and personalize platform settings.
- **Drive insights** → configure dashboards and reports that turn operational data into decision-ready intelligence.

Whether you are an **administrator, functional lead, or supervisor**, this guide gives you the controls to tune iMaintenance so it mirrors your organization's rules, safety requirements, and productivity goals — without touching the underlying infrastructure.

1.1. About the Configuration Platform

The **iMaintenance Configuration Console** is the web admin layer that lets your organization shape how iMaintenance behaves—without code.

From one place, functional admins define modules, map forms, enforce validations, and set product-wide defaults so technicians and supervisors get a clean, consistent experience in the field.

What you can do here:

- **Manage Core Modules**: Enable/disable Issues, Work Orders, and Timesheets at tenant or plant level.
- **Control Work Order Behavior**: Auto timers, raise issue at submission, follow-up issues, operation confirmation, RCA, measuring points.
- **Design Data Capture**: Build forms/templates, add conditional logic, field rules, and validations.
- **Assign by Hierarchy**: Map forms and settings to plants, locations, units, or teams.
- **Set Global Defaults**: Session timeout, chat, attachments/DMS, list templates, key mappings.
- **Administer Access**: Create users and groups, assign roles/permissions, enforce governance.
- **Connect Systems (UI side)**: Configure ERP connections and other integrations exposed in the console.
- **Publish Insights**: Configure dashboards and reports used across the org.

Who should use this

- **Functional Administrators / Doc Owners** — primary audience. They own templates, module controls, business rules, and access policies.
- **IT / Basis (as-needed support)** — assists when a configuration requires backend application (e.g., DB-stored flags), SSO/IDP wiring, or transport/security steps documented in the **Deployment & Setup Guide**.

> “
>
> If you execute work (create/complete WOs, inspections, timesheets), see the **User Guides**. If you shape how iMaintenance works, you’re in the right place.
>
> ”

1.2. What's New for Configuration

This section highlights the latest features and enhancements introduced across recent iMaintenance configuration release.

New Features and Enhancements in Release 2511

Table 1-1 New Features and Enhancements in Release 2511

Configure MCC Field Visibility Based on Templates (Web App) Allow administrators to view and manage field configurations in the Maintenance Control Center based on Work Order or Operation templates defined in RACE. Add or remove fields from the MCC display without affecting mobile application behavior. The configuration dynamically reflects template-level settings while clearly distinguishing between template-level and field-level options. For more information, see Manage Maintenance Operations *(on page 74)*.
Manage Operation-Level Resources Directly in MCC (Web App) Add or remove resources for individual operations directly from MCC operation cards without navigating away from the main view. Assign technicians to resource slots inline and watch resource counts update automatically as changes are made. All modifications sync to SAP and mobile applications in real-time when saved. For more information, see Assign a Work Order at Header and Operation Level *(on page 76)*.
Filter Resource Dropdown by Plant in MCC (Web App) Fetch resource data in the MCC assignment dropdown based on the Plant instead of the Work Center. This change supports organizations that assign technicians to Personal Areas and need plant-based filtering to display the correct resource list during operation assignments.

Table 1-1 New Features and Enhancements in Release 2511 (continued)

For more information, see Assign a Work Order at Header and Operation Level *(on page 76)*.
Enable or Disable Assignment Options from Tenant Configuration (Web App) Configure whether the Assign call-to-action appears at the Work Order level, Operation level, both, or neither through tenant configuration settings. This flexibility accommodates different customer workflows where some prefer header-level assignments while others require operation-level granularity. The UI dynamically reflects configuration changes while respecting existing control key rules at the operation level.
Configure ERP-Aware User Upload for SAP and Maximo Tenants (Web App) Define tenant-level configuration settings that control how user data is onboarded based on your ERP type. SAP tenants see the Excel upload option for manual user management while Maximo tenants have this option disabled with user data fetched directly from the ERP. Configuration changes take effect in real-time after cache refresh.
Support Special Characters in MongoDB Keys (Web App) Handle special characters such as dots and dollar signs in MongoDB document keys when integrating with third-party systems or processing user-generated data. This technical enhancement prevents data storage failures and ensures smooth interoperability with external systems that may include special characters in their data structures.
Configure Default Values for Text Response Fields (Web App) Set default values for text response type fields in template configurations. When technicians open a form, the configured default values appear pre-filled in the appropriate fields. This reduces repetitive data entry and ensures standardized responses across the organization. For more information, see Create and Publish Forms *(on page 81)*.
Improved Global Picklist Performance with Caching and Indexing (Web App)

Table 1-1 New Features and Enhancements in Release 2511 (continued)

Accelerate Global Picklist loading through implementation of caching and database indexing optimizations. Since the Global Picklist is used across multiple modules, these performance improvements reduce response times throughout the application. For more information, see Create and Publish Forms *(on page 81)*.
Enhanced Session Management (Web App) Introduce a unified session control mechanism that ensures only one active session per user across devices. When a user attempts to log in from a new device, the system checks for any existing active sessions and prompts the user with an action choice.

New Features and Enhancements in Release 2510

Table 1-2 New Features and Enhancements in Release 2510

Enhance Accuracy in AI-Driven Forms Enhance the reliability and precision of AI-driven form generation and field predictions within the iMaintenance application. The upgraded AI model now delivers more accurate field mappings, validations, and context-aware suggestions—reducing manual corrections and ensuring data consistency across forms. For more information, see Create and Publish Forms *(on page 81)*.
Embedded Forms Integration with SAP Post Embedded Forms created in the Platform to SAP seamlessly, ensuring that any form filled via mobile or web is automatically captured in SAP. Admins can configure which forms are eligible for posting and manage integration settings for specific processes, enabling real-time data synchronization and smooth business process alignment. For more information, see Create and Publish Forms *(on page 81)*.
Work Order Filtering by Revision and Planner Group

Table 1-2 New Features and Enhancements in Release 2510 (continued)

Enable precise Work Order retrieval in the Maintenance Control Center by applying Revision and Planner Group filters. Users can quickly fetch relevant Work Orders based on the selected criteria, ensuring targeted data access and streamlined workflow management. For more information, see Use the Maintenance Control Center (MCC) *(on page 74)*.
Enhanced Plant Creation in Plant Management Admins can now create a new Plant with Planning and Maintenance Plant types. The Create and Edit Plant panels include the new option in the Plant Type drop-down, enabling configuration of plants that don't fit traditional categories for greater flexibility and real-world alignment. For more information, see Create a Plant *(on page 41)*.
Risk Matrix Enhancement – Map Risk Levels to ABC Criticality Enhance the Risk Matrix feature to allow mapping of Risk Level values (Very High, High, Medium, Low) to ABC Criticality indicators (A, B, C) per Plant and Issue/Work Order. Plant Admins or Process Owners can define plant-specific logic, ensuring that Risk Matrix outputs align with operational criticality for consistent and automated prioritization. For more information, see Configure Risk Evaluation with the Risk Matrix *(on page 116)*.
Enhance Risk Matrix Priorities Define Issue and Work Order priorities using the Risk Matrix and synchronize them seamlessly with SAP. Supervisors can create plant-specific templates, assign consequence and likelihood scenarios, and set priority names with time values. Integration ensures that priorities remain consistent whether an Issue/Work Order is raised in Innovapptive or SAP, streamlining risk-based decision-making. For more information, see Configure Risk Evaluation with the Risk Matrix *(on page 116)*.
Insert Image Response Type in Forms

Table 1-2 New Features and Enhancements in Release 2510 (continued)

Admins can now use the Insert Image response type in the Forms module to upload a single image directly from their device into a form field. This feature enables visual context in issue reporting and workflows, allowing annotated diagrams, reference charts, or schematics to be added easily, improving clarity and accelerating review processes. For more information, see Create and Publish Forms *(on page 81)*.
Control Risk Matrix and Priority Field Behavior Based on Configuration Maintain consistency and prevent configuration errors with enhanced control over Risk Matrix and Priority Field behavior. When the Risk Matrix is disabled at the tenant level, its response type is automatically deactivated, and users are prompted to update any affected templates. The Priority field now dynamically adjusts based on the selected Issue Type or Work Order Type, ensuring only valid priority options are displayed according to system or template-level configurations.
View System Status, User Status, and Priority in Asset 360 Dashboard Enhance visibility and consistency with the addition of System Status, User Status, and Priority fields directly in the Asset 360 Dashboard list view. Users can now quickly view key status details under the Issues and Work Orders sections without navigating to separate lists. The displayed information aligns exactly with the individual Issues and Work Orders list views, ensuring a consistent experience across both web and mobile platforms. For more information, see View the Asset360 Dashboard *(on page 126)*.
Configurable Field Management for MCC via RACE Enable administrators to view, add, or remove fields in the Maintenance Control Center (MCC) Field Configuration based on templates defined in RACE, without affecting existing mobile implementations. This enhancement replaces the static setup with a dynamic configuration, ensuring that MCC displays data aligned with template-specific Work Orders and Operations. For more information, see Use the Maintenance Control Center (MCC) *(on page 74)*.
Real-Time Push Alerts for Tagged Messages

Table 1-2 New Features and Enhancements in Release 2510 (continued)

Receive instant push notifications whenever you are tagged using @mention in the chat. This ensures you are promptly alerted to messages that require your attention, enabling faster responses and improved collaboration.
Ensure Every Operation Has a Unit of Measurement AI-suggested operations now always include a Unit of Measurement (UOM). Legacy operations are automatically backfilled with appropriate UOMs. For more information, see Create and Publish Forms *(on page 81)*.
Integrate UOM with Number Fields When adding Number response types to forms, you can pull Units of Measurement directly from master data. These values stay aligned with enterprise standards. For more information, see Create and Publish Forms *(on page 81)*.
Start New Deployments with Updated Out of the Box (OOTB) Data Seed data scripts for both Platform (Configuration) and iMaintenance have been refreshed to match the latest templates and functional updates.
Enable Enterprise Authentication with Okta SSO You can enable Okta-based Single Sign-On (SSO) so that users log in with their corporate credentials. For more information, see Log in to Platform Application *(on page 19)*.
Control Chat Visibility by Tenant or Module You can define where chat is available—at the tenant level, within specific modules (Work Order, Issue). For more information, see Customer Tenant Onboarding with Azure IDP *(on page 23)*.
Make Workcenter Optional in Bulk User Uploads

Table 1-2 New Features and Enhancements in Release 2510 (continued)

The Workcenter field is now optional during bulk user creation via Excel upload, matching the behavior of manual user creation. For more information, see Bulk Upload Users *(on page 40)*.
Create Forms Directly from Excel Templates You can download a pre-defined Excel template, fill in form fields offline, and upload it back into the platform to automatically generate a form. For more information, see Bulk Upload Forms *(on page 93)*.
Auto-Assign Forms Based on Configurable Rules You can define rules to automatically assign embedded forms based on Work Order type, Equipment, Functional Location, Notification, Task List, Maintenance Plan, Order Type, DMS, or PRT. For more information, see Auto Assign Forms *(on page 86)*.
Configure Pre-Filled Fields in Forms Form authors can now define which fields are auto-populated when creating a form, with full control over field properties such as editable or read-only. For more information, see Create and Publish Forms *(on page 81)*.
Show Clearer SAP Sync Status The platform now provides explicit push notifications for SAP sync. Successful number generation is confirmed, while failed syncs show an "Unsuccessful Sync" message.
Auto-Assign Forms to SAP Work Orders You can map forms in RACE by Equipment, Functional Location, Work Order Type, Task List, or Maintenance Plan. Once a Work Order syncs from SAP, the mapped forms are attached automatically.

Table 1-2 New Features and Enhancements in Release 2510 (continued)

Streamline Material Collection in the Field The enhanced Components tab supports recording materials against operations, posting updates to SAP in real time. It allows bulk or per-operation entries, partial or full goods issues, returns, and material reuse.
Add Visual Guidance with Icons and Images in Instruction Response Type You can embed icons and images directly into Instruction response types within forms. For more information, see Create and Publish Forms *(on page 81)*.
Improve Layout Clarity and Auto-Save Feedback The authoring interface now displays plant details under form titles, uses clearer section layouts, and shows real-time auto-save status. AI-driven form creation includes expanded instance selection options. For more information, see Create and Publish Forms *(on page 81)*.
Add Dedicated Measuring Point Sections You can insert a dedicated Measuring Point (MP) section in forms, by selecting Equipment and Functional Location or both. For more information, see Create and Publish Forms *(on page 81)*.
Track AI-Generated Forms with Form Numbers AI-generated forms now display an assigned Form Number, just like manually authored forms. For more information, see Create and Publish Forms *(on page 81)*.
Auto-Populate Forms from Photos Users can upload an image with a form ID, and the system extracts content using OCR, mapping it to the correct fields with AI-based logic.

Table 1-2 New Features and Enhancements in Release 2510 (continued)

For more information, see Create and Publish Forms *(on page 81)*.
Improve Text Extraction with OCR Pre-Processing Uploaded forms are now processed with Optical Character Recognition (OCR) before being sent to the LLM. Both OCR output and the original PDF are passed through for improved accuracy.
Connect to Centralized AI Services AI-Assist services now run within the AIServer workspace, with consuming services connecting dynamically.
Sort Work Orders by Basic Start Date You can configure the Work Order list in Maintenance Control Center (MCC) to always sort by Basic Start Date across all categories. For more information, see Use the Maintenance Control Center (MCC) *(on page 74)*.
Create Objects and Issues Without Switching Contexts From an existing Work Order, you can now create or update Objects, and also generate Issues from those Objects—all without leaving the Work Order screen.

2. Log in to Application

This chapter has the following topics:

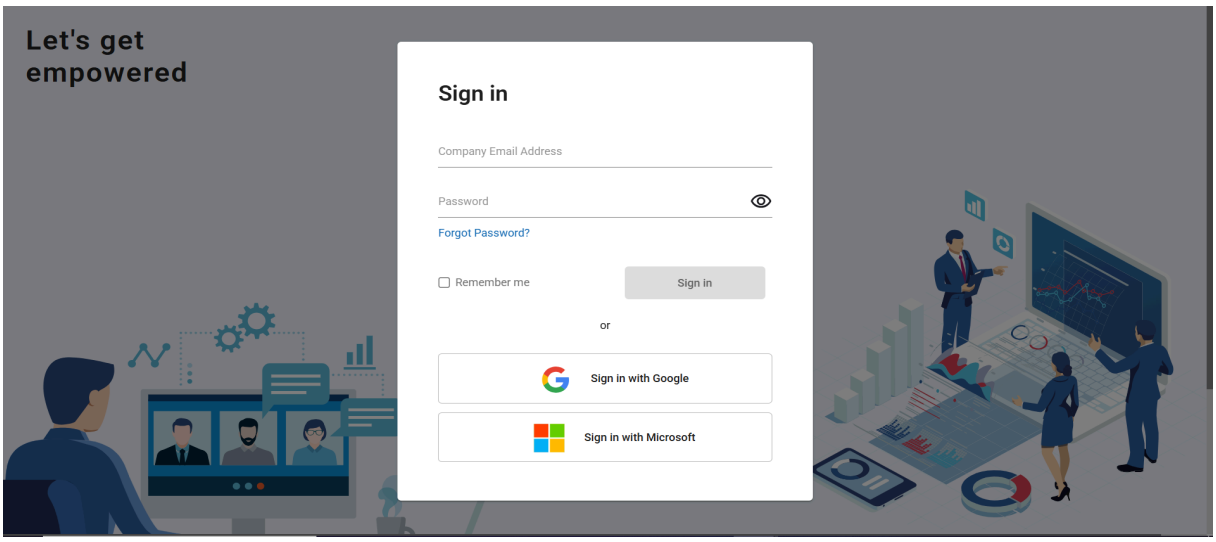
2.1. Log in to Platform Application

You can access the platform using multiple login methods based on your organization's configuration.

Basic Authentication

Use your company registered email and password to log in.

1. Open the application.
2. Enter your **Email Address** and **Password**.
3. Click **Sign in**.
4. Select **Remember me** to save login credentials. (Optional)



Single Sign-On (SSO: Google or Microsoft)

You can also sign in using your **Google** or **Microsoft** account—whichever is enabled for your organization.

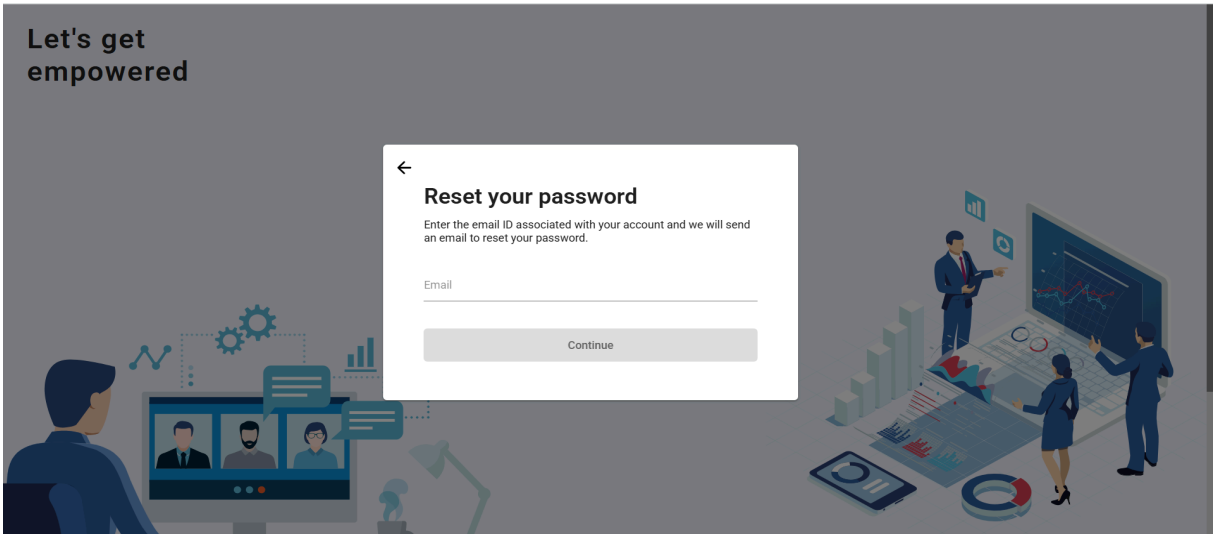
1. On the login screen, click **Sign in with Google** or **Sign in with Microsoft**.
2. Select or enter your account credentials.

> **Note:**
> If this is your first time, the same button completes your sign-up process. If your browser has saved Google or Microsoft accounts, they will appear automatically for quicker selection.

2.2. Troubleshoot Login Issues

If you forget your password:

1. Navigate to the **Sign in** page.
2. Click **Forgot Password?**
3. Enter your registered email and click **Continue**.



4. If two-factor authentication is enabled, verify using the code sent to your phone.
5. Follow the email link to set a new password.

3. Navigate to the iMaintenance Configuration

This section helps you get familiar with the layout of the platform and how to access various modules efficiently.

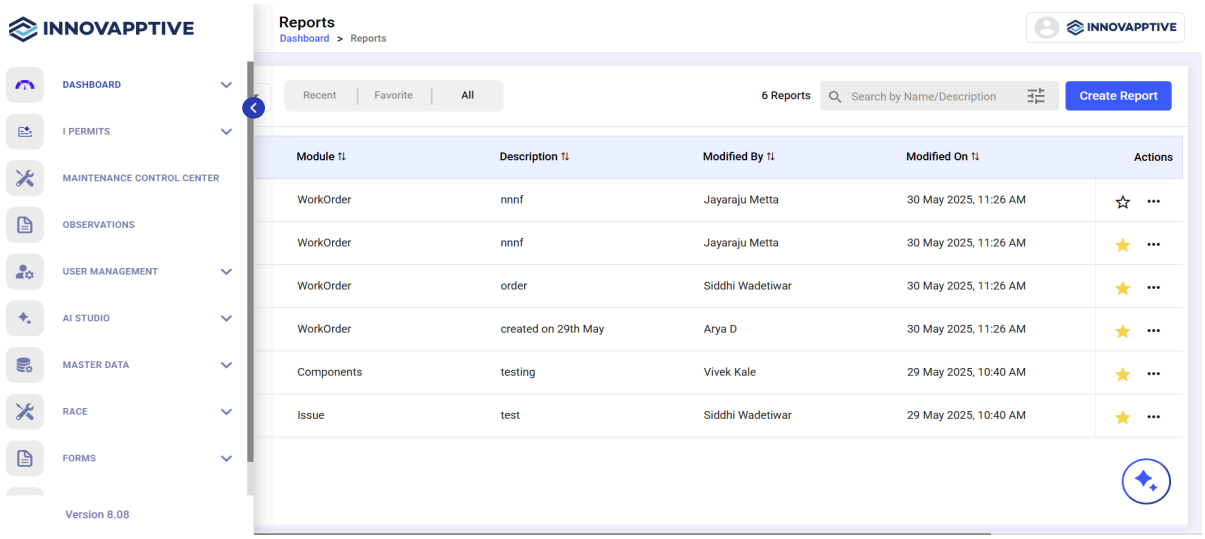
This chapter has the following topics:

3.1. Explore the Home Screen

This section helps you get familiar with the layout of the platform and how to access various modules efficiently.

After logging in, you are directed to the Home Screen, which acts as the central hub for all platform activity. From here, you can:

- Track specific plants and assets' performance.
- View key widgets and summaries.
- Access dashboards and reports.
- Use the left-hand navigation panel for quick access to modules such as Maintenance Control Center (MCC), Observations, Forms, and more.



The layout is designed for **ease of use**, with consistent elements across modules for a smoother user experience.

3.2. Access Modules

Modules represent different functional areas of the platform (e.g., MCC, Observations, Forms, RACE, Settings).

To access a module:

1. Use the **left navigation pane** to browse through available modules.
2. Click a module name (e.g., **Maintenance Control Center**) to open it.
3. Sub-menus, if any, will expand below the selected module.

   Some modules may only appear based on your **role and access permissions**.

   Tip: Hover over icons in the side panel to view full module names if the menu is collapsed.

3.3. Understand the Platform Layout

The platform interface is made up of the following key areas:

Area	Description
Header Bar	Located at the top, it includes user profile options, notifications, and product/version details.
Navigation Panel (Left Sidebar)	Lets you access different modules, features, and configuration options.
Main Workspace	The center of the screen where dashboards, forms, reports, and module content are displayed.
Filters and Actions (Top of Workspace)	Contextual filters, search bars, and action buttons are available based on the module in use.

The interface is consistent across modules to make navigation intuitive and user-friendly.

4. Customer Tenant Onboarding with Azure IDP

This chapter provides step-by-step instructions to configure a customer's Azure Active Directory (Azure AD) for federated Single Sign-On (SSO) with Innovapptive mobile applications. It applies to IT administrators and implementation engineers performing customer onboarding.

Follow the below steps to register tenant specific CWP enterprise application in the Azure portal:

1. Access the Azure portal using the following URL https://portal.azure.com/ and, use required tenant credentials to login into the Azure portal.
2. Post login, click the **View** button.
3. Click the **App registrations** on the left-side menu.
4. Click the **New Registration** button and provide the required information to register tenant specific CWP enterprise application.
    a. Name (Name of the CWP enterprise application).
    b. Supported account types (It is self-explanatory. Select it based on the client's requirement. For now, go with a single tenant).
    c. Redirect URI (Mention here the Tenant Specific URL that the user must be redirected to post successful login with Azure IDP).
    d. Click the **Register** button.
    e. For mRounds 1.0 product the redirect URI should be added as a Single page application.
    f. For iMaintenanace Product the redirect URI should be added as Web based application.

Note:

- The CWP application URL follows the format: <customername><tenanttype>.innovapptive.com.

  For example, if the customer name is Google, the URLs will be:

  - Dev: googledev.innovapptive.com
  - QA: googleqa.innovapptive.com
  - Prod: google.innovapptive.com
- Both QA and Prod environments share the same domain format.

5. Click the **Authentication** on the left-side menu to select the token authorization endpoint flow.
6. Select **Access tokens** checkbox and click the **Save** button.
7. Click the **API Permissions** from the left-side menu.
    a. Click the **Add a permission** button. You must see Request API Permissions on the right side.
    b. Click the **Microsoft Graph**.
    c. Click the **Delegated permissions**.
    d. Search and select email, offline_access, openid, chat, apple maps, and profile permissions one by one.
    e. Click the Add permissions button.
    f. Click the **Grant admin consent** button.
    g. Select Microsoft APIs and click on Microsoft Graph (Refer Below)
    h. Add 7 user delegation permissions and 1 application permission (Refer below)

    Optional: sharepoint permissions need to be added if we want to integrate sharepoint.

> **Note:**
>
> In Azure App Registrations, there are two types of API permissions: **Delegated** and **Application**. **Delegated permissions** are used when an app acts on behalf of a signed-in user, meaning the app's access is limited to the user's permissions and requires user login. These are ideal for interactive apps like web or mobile applications. **Application permissions**, on the other hand, allow the app to run independently of a user and access APIs with its own identity, typically used by background services or daemons. Application permissions usually require admin consent and provide broader access at the tenant level.

Claim Value	Permission	Type	Permission Status
offline_access	Maintain access to data you have given it access to	Delegated	Default
AccessReview.Read.All	Read all access reviews	Application	Default

Files.Read.All	Read all files that user can access	Delegated	Sharepoint
User.Read.All	Read all users' full profiles	Delegated	Default
Files.Read.All	Read files in all site collections	Application	Sharepoint
Sites.Read.All	Read items in all site collections	Delegated	Sharepoint
Sites.Read.All	Read items in all site collections	Application	Sharepoint
Files.Read	Read user files	Delegated	Sharepoint
User.Read	Sign in and read user profile	Delegated	Default
openid	Sign users in	Delegated	Default
profile	View users' basic profile	Delegated	Default
email	View users' email address	Delegated	Default

i. Click on Add permissions and follow the below next process.

8. The following steps are useful in SAP OData endpoint authentication using SSO (SAML 2.0 Bearer Assertion Flow for OAuth 2.0).

a. Click the **Certificates and secrets** from the side menu. You must see the Certificates and secrets screen.
b. In the **Client secrets** tab, click the **New client secret** button. Provide description, expiration days and then click the **Add** button.
c. Copy the generated secret value using the **Copy** icon and save it in a text file, to use at the time of tenant onboarding from the CWP web application. In case of secret expiration, follow the above step to generate a new secret and update in tenant onboarding.
d. Click **Expose an API** from the side menu and then click the **Add a scope** button. You'll be asked to set the Application ID URI for the enterprise application registration. Accept the proposed default value by clicking the **Save and continue** button.
e. Provide the required details and click the **Add scope** button.
f. Copy the created scope by using the Copy icon and save it in a text file (or) Come back to Expose an API side menu for scope (View => App registrations => Application Name => Expose an API), to use at the time of tenant onboarding.

9. Click **Overview** from the side menu. Copy the Application (client) ID, Directory (tenant) ID and Application ID URI of the newly registered CWP enterprise application and save it in a text file (or) Come back to Overview side menu for client, tenant ids and application id URI (View => App registrations => Application Name), to use at the time of tenant onboarding.
10. If the user is not added into AAD Enterprise applications please follow the below steps to add the user into a particular application.
    a. Go to the e-application and look for the application that you created.
    b. Open the application and select users / groups and add the user if he is not added already to the application.

> **Note:**
> If the user is already added to the application, **don't follow the 9th step.**

Table 4-1 From CWPEnterpriseApp

Tenant ID	f8e6xxx-xxxx-xxxx-xxx-bxxxxxx
Client ID	50xxxxxxx-xxxxxx2ad-xxxxxx

Application ID URI	api://50bfxxxxxxxx-42ad-xxxxxx
Client secret	hyxxQ~wXXXXXXXac0bntd4xxxxxx
Scope	api://50xxxxxxx-42ad-xxxxx/netweavexxxx

Note:
Above is the base format of the Azure Enterprise app details.

5. Authentication Identity Configuration

This chapter explains how Innovapptive's mobile applications (such as mWorkOrder, mRounds, and mTag) handle user authentication in a multi-tenant deployment environment. The authentication framework is based on federated Single Sign-On (SSO) and secure token-based session management.

It covers how users authenticate using enterprise-managed identity providers (such as Azure AD, Google, or Okta), how access and refresh tokens are managed, and how user data is synchronized with backend systems. This information is relevant for developers, implementers, and security teams configuring the authentication layer in customer deployments.

Component Overview

The authentication flow involves multiple systems working together to validate user identity, issue secure tokens, and enable access to backend services. The table below summarizes the core components involved:

Component	Description
Innovapptive DB	Stores tenant-specific configuration such as Tenant ID, SSO method (e.g., Azure, Google), Client ID, and Client Secret.
Tenant ID	A unique identifier assigned to each customer environment.
SSO Method	Specifies the identity provider (e.g., Cognito, Azure AD, Google, Okta) used for user authentication.
Client ID & Secret	Credentials associated with the Innovapptive application registered in the tenant's SSO provider.
Mobile App	The application being used — such as mWorkOrder, mRounds, or mTag — initiates the authentication request.

Component	Description
Auth Server	Innovapptive's authentication microservice, deployed in the tenant's cloud, is responsible for token issuance and user validation.
Users Table	Managed by the Auth Server. Stores user records, including internal User ID, SSO identifier, and SSO-issued refresh tokens.
SSO Server	The tenant-managed identity provider is responsible for authenticating users and issuing authorization codes and refresh tokens.
Mongo User Directory	MongoDB Realm directory is used to authorize users for offline data sync and database access.

5.1. Federated SSO Login Flow

Innovapptive's mobile apps authenticate users using federated SSO, integrating with tenant-managed identity providers like Azure AD, Google, or Okta.

The following flow explains the complete authentication sequence—from mobile app launch to user provisioning—highlighting how the app, backend services, SSO server, and user management databases interact at each step.

1. The mobile app fetches the SSO method and Client ID for the tenant from the Innovapptive DB.
2. Based on the SSO type, the app displays a single sign-in button, such as Sign in with Google or Sign in with Okta.
3. When the user taps the button, an in-app browser opens and redirects them to the SSO login or consent screen.
4. Upon successful authentication, the SSO server redirects the user to Innovapptive's landing URL with a one-time authorization code.
5. The app sends this code—along with the tenant ID—to the Auth Backend.
6. The backend sends a grant request to the SSO server using:
    - Authorization code
    - Client ID
    - Client Secret

7. The SSO server responds with an access token and a refresh token.
8. Using the access token, the Auth Backend fetches the user's profile details from the SSO server.
9. The backend then:
    - Stores the user details and SSO refresh token in the Users Table
    - Creates a Mongo Realm user with a unique password
10. The backend returns the following credentials to the mobile app:

- Realm username and password
- Basic Auth JWT token (used for secure API and DB sync)

Figure 5-1 Federated SSO Login Flow – From Mobile App to SSO and Backend Sync

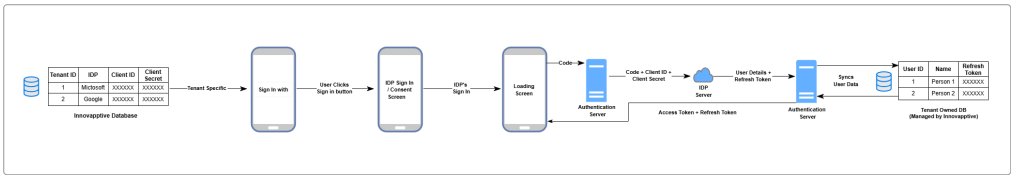
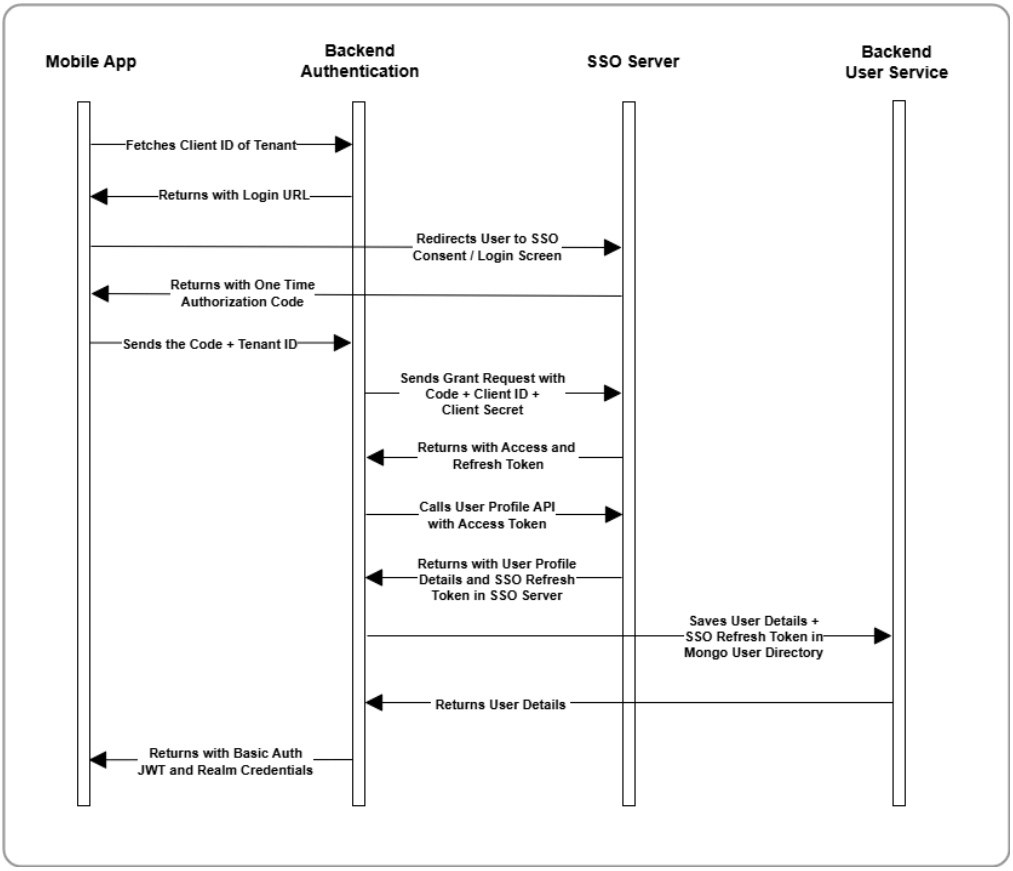


Figure 5-2 Authentication Module Flow V1 – Step-by-Step Message Exchange Across Components



Reference: https://excalidraw.com/#json=Uc84zojdzuFrFQB_0mr-5,UHk6cX3C_yJpW-dDgC4nPw

5.2. Token-Based App API Flow

After the user is authenticated via SSO, the mobile app uses access and refresh tokens issued by the Auth Server to interact securely with backend services. This section explains how these tokens are generated, validated, and refreshed across service calls.

This flow assumes that the mobile app interacts with one or more backend services behind a common authentication layer.

What Happens at Login

1. Once the user logs in, the Auth Server generates both an access token and a refresh token, which are stored in the Users Table and also sent to the mobile app.
2. Both tokens are formatted as JWTs (JSON Web Tokens).
3. The access token is short-lived (default: 15 minutes, configurable).
4. The refresh token has a longer lifespan (default: 30 days, configurable).
5. Tokens are signed using asymmetric encryption:
    - The Auth Server holds the Private Key used to sign tokens.
    - All other backend services use the Public Key to verify access tokens.

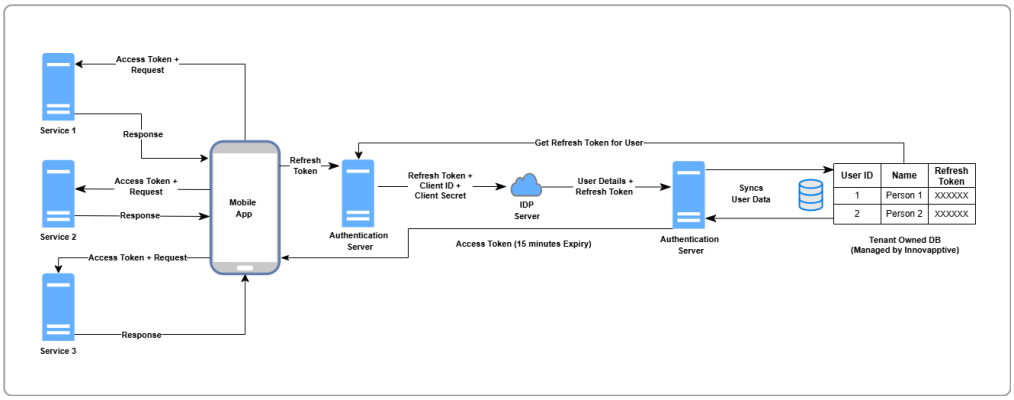
5.3. Use the Token After Login

1. Every backend service is protected by a common middleware that validates the incoming access token using the Public Key.
2. For user-related data:
    - Services may perform read-only access to the Users Table directly for performance.
    - Alternatively, they can proxy the request via the Auth Server if direct access is restricted or decoupled.
3. If the access token has expired (after 15 minutes), the API call will fail with an authentication error.
4. When this happens, the app uses the refresh token to request a new access token from the Auth Server.

5.4. Refresh Token Handling

1. During the refresh call, the app also submits the SSO-issued refresh token to the Auth Server.
2. The Auth Server verifies the user's presence and active status in the tenant's SSO system.
3. If valid, it issues a new access token back to the app.
4. If the user no longer exists in the SSO system or is marked inactive:
    - The Auth Server deletes the corresponding user entry from the Users Table.
    - The app is instructed to log the user out immediately.

Figure 5-3 Token Life-cycle and Secure API Access Using JWTs



5.5. Alternatives for Users Table Synchronization

If the Users Table cannot always be reliably synchronized with the tenant's SSO server, alternative mechanisms may be considered to maintain alignment between user records and identity provider data.

There are two commonly adopted patterns for maintaining sync between the SSO system and the Users Table:

Scheduled Sync Pipeline

Establish a synchronization pipeline that pulls user data from the SSO server and updates the Users Table.

- This can be either a manual process (e.g., initiated by admin tools) or an automated one.
- For automated sync, the cadence (hourly, daily, etc.) must be defined based on acceptable staleness and load tolerance.
- This method is relatively straightforward but introduces a time gap between SSO changes and backend updates.

Event-Driven Pub/Sub Model

Adopt a publish/subscribe architecture, where the SSO server emits events (e.g., user created, updated, deactivated) to an exposed API endpoint on Innovapptive's side.

- These events are then used to update or delete user entries in the Users Table in near real-time.
- This approach ensures better consistency and reacts instantly to user state changes.
- However, it depends heavily on:
    - The SSO provider's eventing capabilities
    - Proper initial sync to align existing records

Reference: JSON Web Tokens with Public Key Signatures – Miguel Grinberg

6. Manage Users & Roles

The **User Management** module allows administrators to onboard users, define roles, manage access levels, and organize users into groups. It ensures users only see and interact with modules relevant to their responsibilities.

This chapter has the following topics:

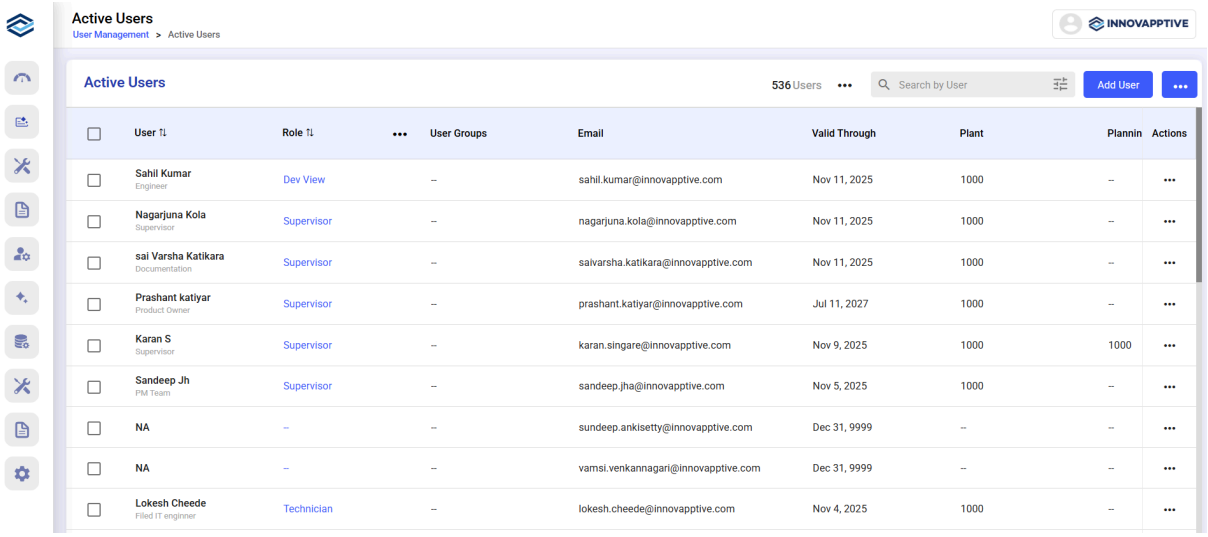
6.1. Add and Modify Users

Administrators can create users manually or in bulk, assign them roles, link them to plants, and control their access period.

To create a user manually:

1. Navigate to **User Management** > **Active Users**.

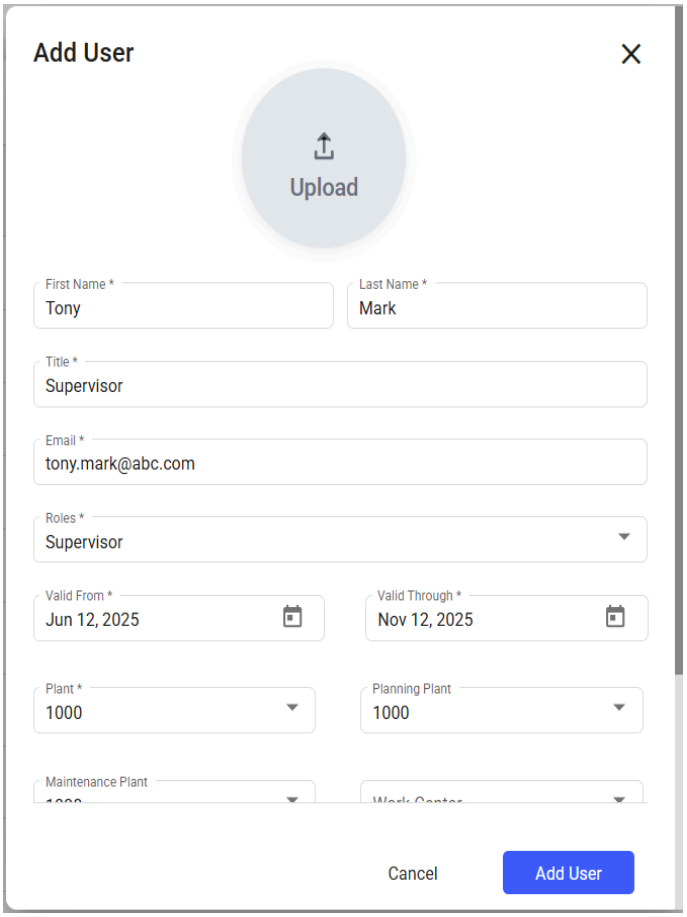
Figure 6-1 Active Users



2. Click **Add User** > **Create Manually**.
3. In the **Add User** window, fill in the following fields:

- First/Last Name, Title, Email
- Role, Validity Dates
- Plant, Planning Plant, Maintenance Plant
- Work Center, Reporting To, Reportees
- User Group, Data Entry Profile, Shift

Figure 6-2 Add User



4. Click **Add User**.

   The user will appear under the *Active Users* tab.

   Use **Upload Excel** for bulk creation.

   Download the user list via **More** icon > **Download Users List**.

   To modify or deactivate a user:

   - Click **More** icon > **Edit** to update details.
   - Click **Deactivate** to disable access. Deactivated users are listed under *Inactive Users*.

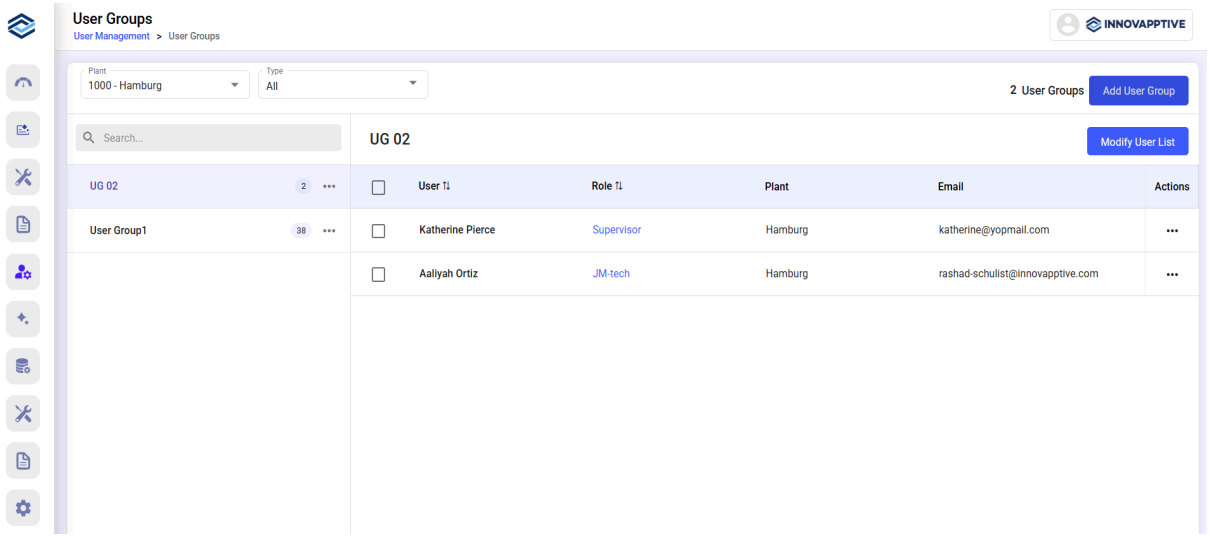
6.2. Manage User Groups

User Groups simplify access control by grouping users with similar responsibilities. This allows admins to assign permissions at the group level instead of individually.

To create a user group:

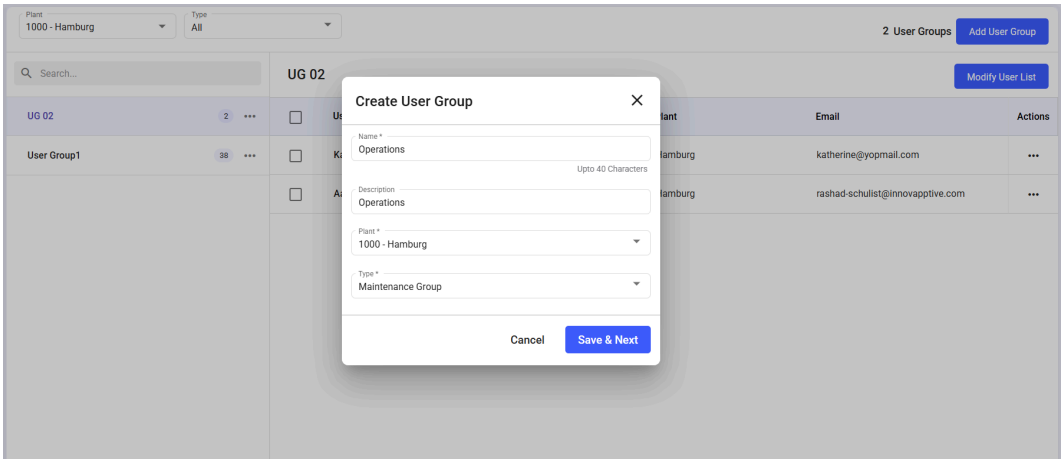
1. Navigate to **User Management** > **User Groups**.

Figure 6-3 User Groups Screen



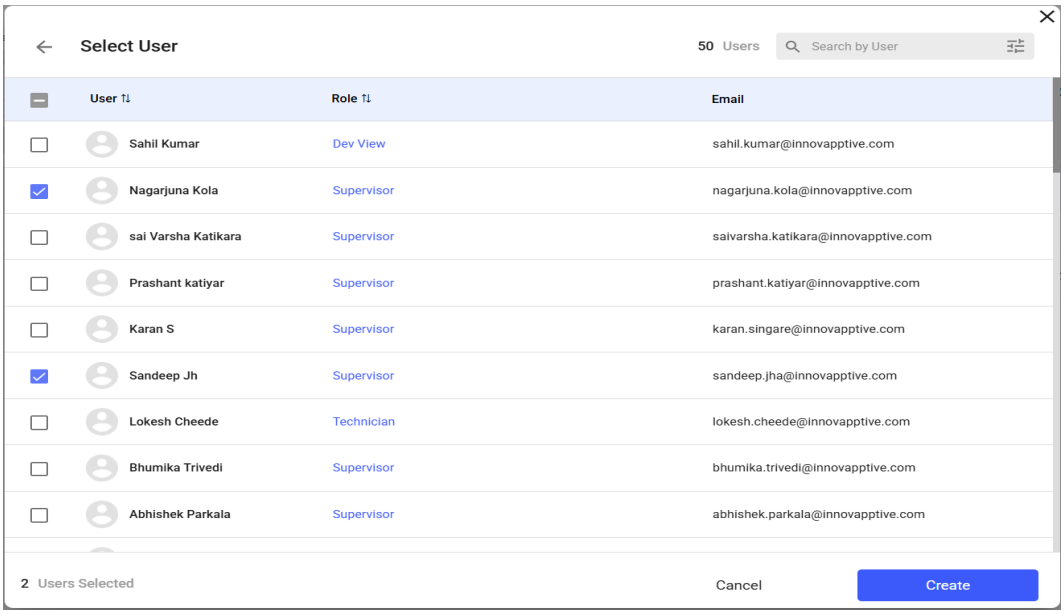
2. Click **Add User Group**.
3. In the **Create User Group** window, fill in the following details:
    - Name, Description, Plant
    - Type: Planner Group or Maintenance Group
4. Click **Save & Next**.

Figure 6-4 Create User Group



5. In the **Select User** window, select users and click **Create**.

Figure 6-5 Select Users



To modify user groups:

- Use **More** icon > **Edit**, **Copy**, or **Delete**.
- To change members:
  - Select the group > click **Modify User List**.
  - Deselect or remove users as needed.

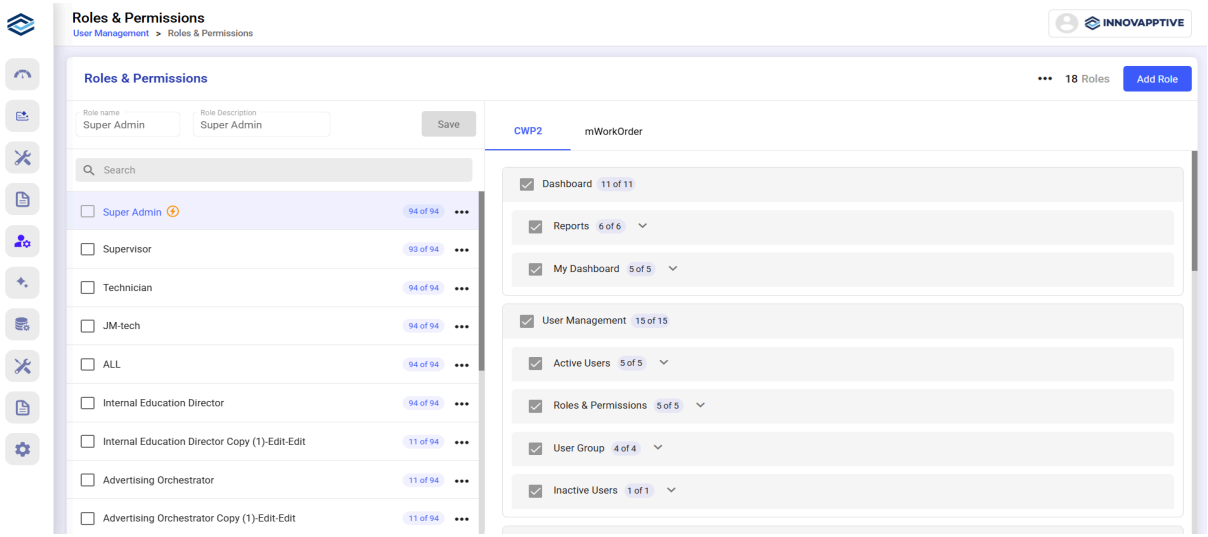
6.3. Create Roles and Permissions

Roles determine which modules and features a user can access. Each role can be assigned specific permissions for either CWP 2.0 or iMaintenance.

To create a role and assign permissions:

1. Navigate to **User Management** > **Roles and Permissions**.

Figure 6-6 Roles and Permissions Screen



2. Click **Add Role**.
3. Fill in **Role Name** and **Role Description**.
4. Click **Save**.
5. Select the new role.
6. Choose the modules that are required for the role or persona on the right-side.
7. Click **Save**.

Use **More** icon > **Copy** to clone existing roles.

Use **More** icon > **Delete** to delete the role.

Note:

- You cannot edit or delete the Super Admin role. You can only copy.
- You cannot delete the role that is already assigned to the user. First, un-assign the user and delete the role.
- You cannot delete roles that are assigned to users or edit the Super Admin role.
- When a user is assigned to a module in the CWP (e.g., the Dashboard module) and given permission to execute work orders in mWorkOrder, they can only access the Dashboard module and perform work order execution in the mobile app. This setup grants the user access to both the web and mobile applications.

6.4. Bulk Upload Users

Administrators can streamline user creation by uploading multiple user records at once using an Excel template. This method is ideal for onboarding large teams efficiently.

> **Note:**
> The Work Center field is optional during bulk user creation.

To bulk upload users:

1. Expand the **User Management** and select **Active Users**.
2. Click the More icon on the top right corner and select **Download Template**.
3. Fill out the Excel sheet.
4. Click **Add User** > **Upload Excel**.
5. Select and upload the file.

7. Maintain Master Data

The **Master Data** module holds the foundational elements of your system—plants, locations, shifts, assets, units of measurement, and response sets. Proper configuration ensures consistency across forms, workflows, and analytics.

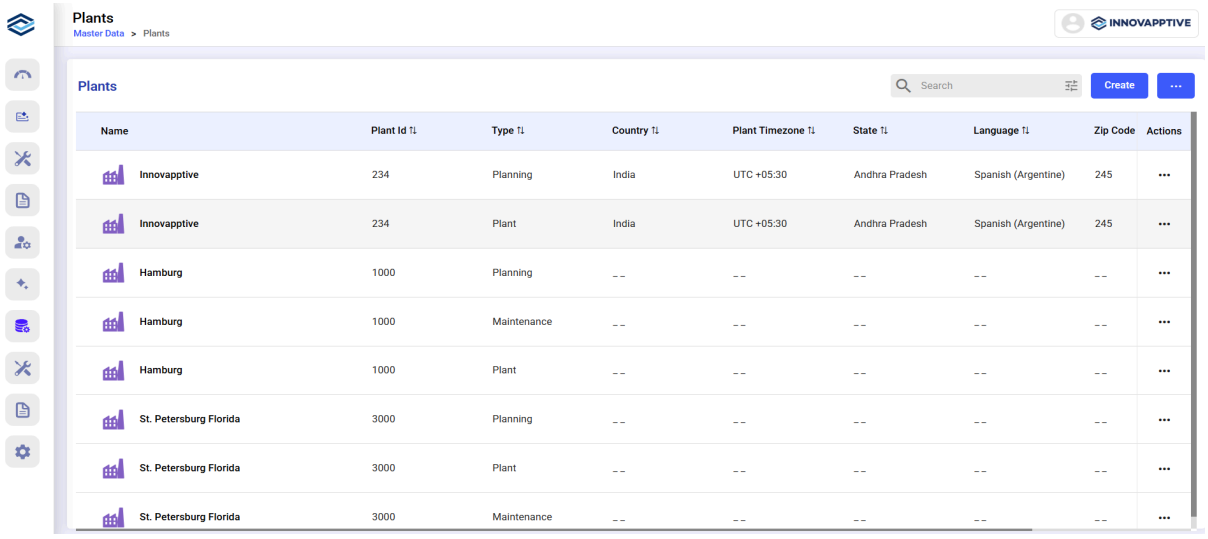
This chapter has the following topics:

7.1. Create a Plant

To create a plant:

1. Navigate to **Master Data** > **Plants**.

Figure 7-1 Plants Screen



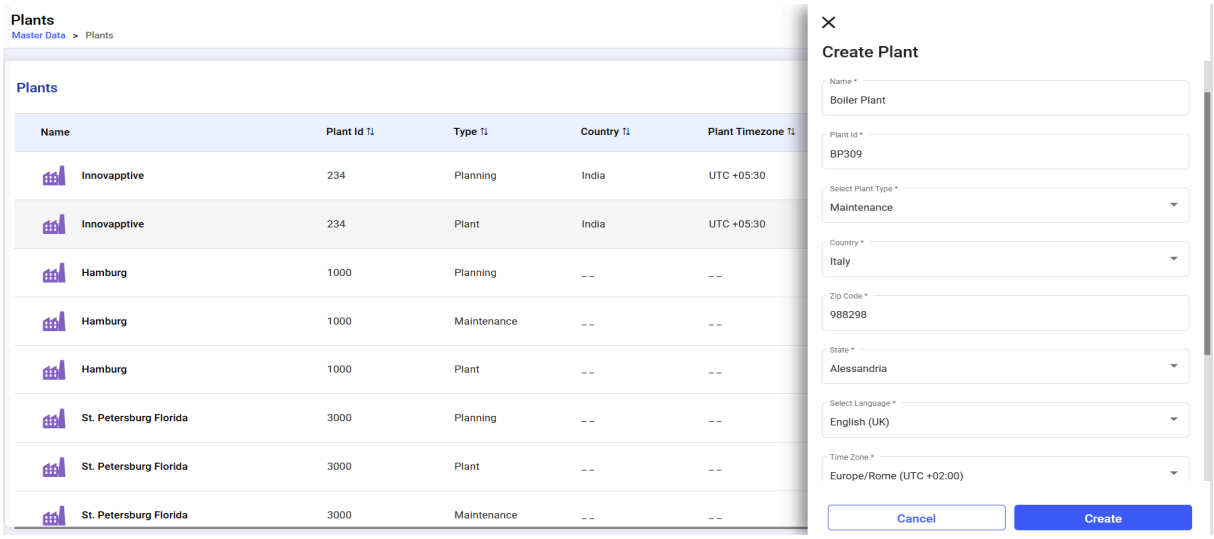
2. Click **Create New**.
3. In the **Create Plant** window, fill in the following fields:

- Name, Plant ID, Plant Type, Country, Zip Code, State, Time Zone, and Shifts.
- Enable **Shift Handover Report** toggle if needed.

> **Note:**
> If the Plant ID already exists, an error message “Plant ID <> already exists” is displayed. Use another ID.

4. Under the **Additional Details** section, add custom Labels & Fields.
5. Click **Create**.

Figure 7-2 Create Plant



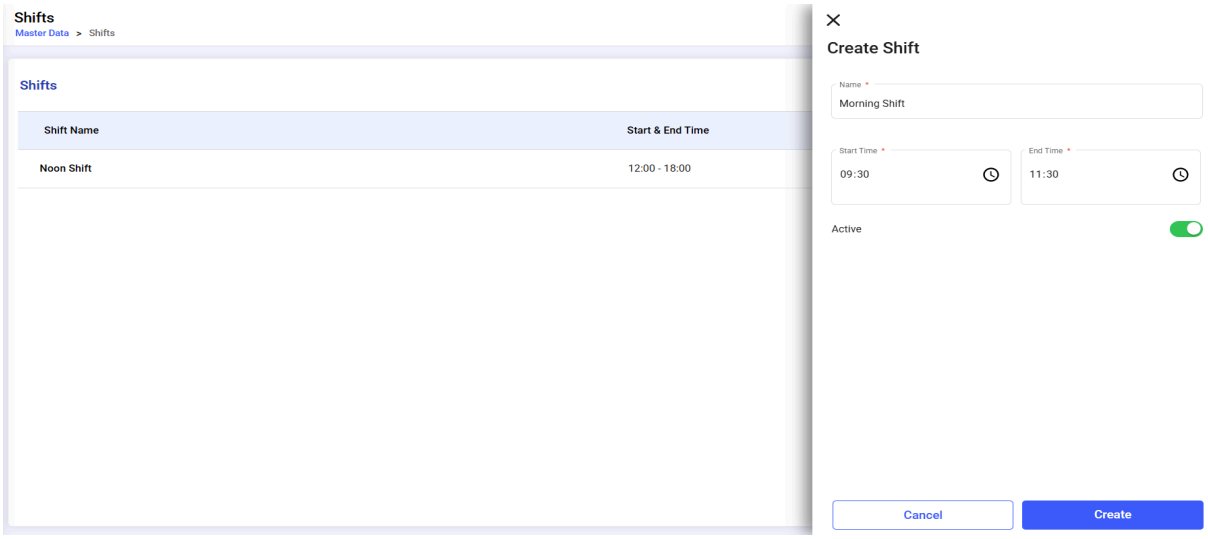
Use **More** icon to **Copy**, **Edit**, or **Delete**.

7.2. Create a Shift

To create a shift:

1. Navigate to **Master Data** > **Shifts**.
2. Click **Create New**.
3. In the **Create Shift** window, fill in the following details:
    - Name, Plant, Start Time, End Time.
    - Set **Active** toggle to make the shift active.
4. Click **Create**.

Figure 7-3 Create Shift

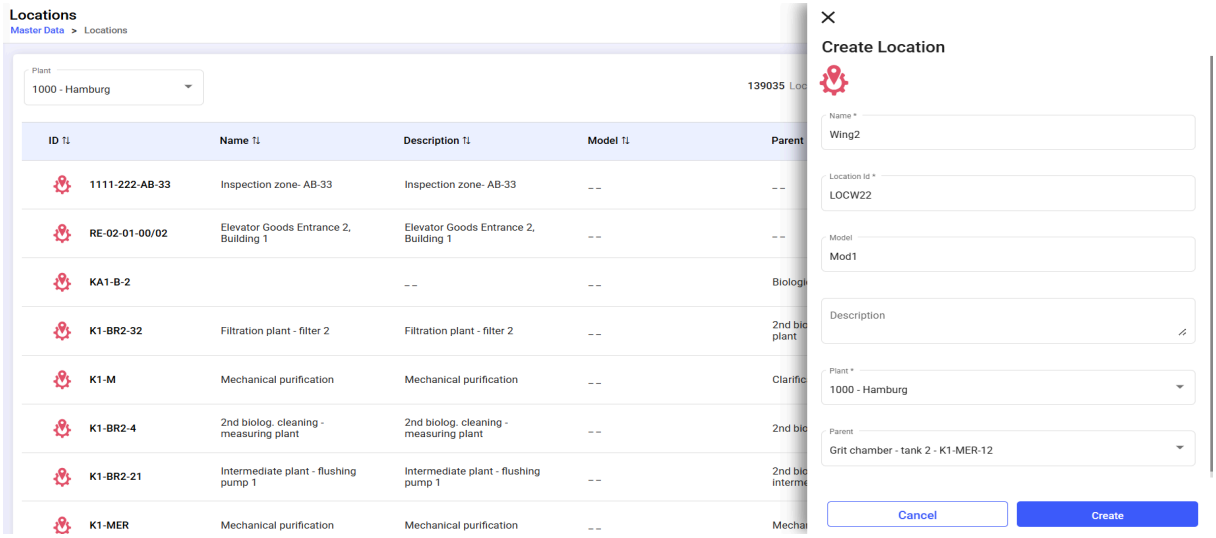


7.3. Create a Location

To create a location:

1. Navigate to **Master Data** > **Locations**.
2. Click **Create New** > **Create Manually**.
3. In the **Create Location** window, fill in the details, such as Name, Location ID, Model, Description, Plant, and Parent.
4. Click **Create**.

Figure 7-4 Create Location

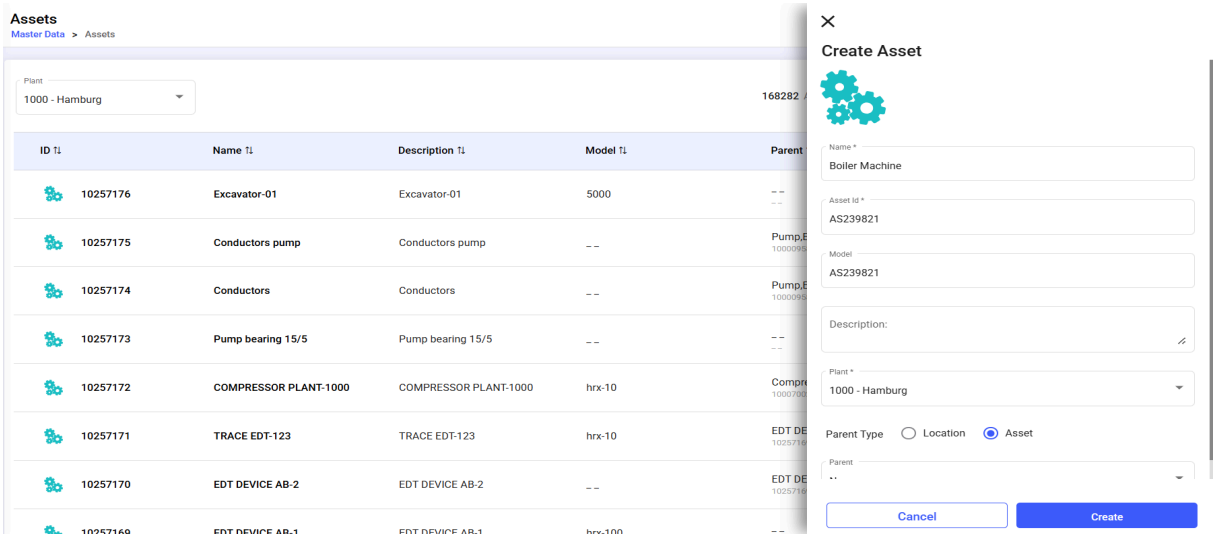


7.4. Create an Asset

To create an asset:

1. Navigate to **Master Data** > **Assets**.
2. Click **Create New** > **Create Manually**.
3. In the **Create Assets** screen, fill in the fields, such as Name, Asset ID, Model, Description, Plant, Parent Type/Name.
4. Click **Create**.

Figure 7-5 Create Asset

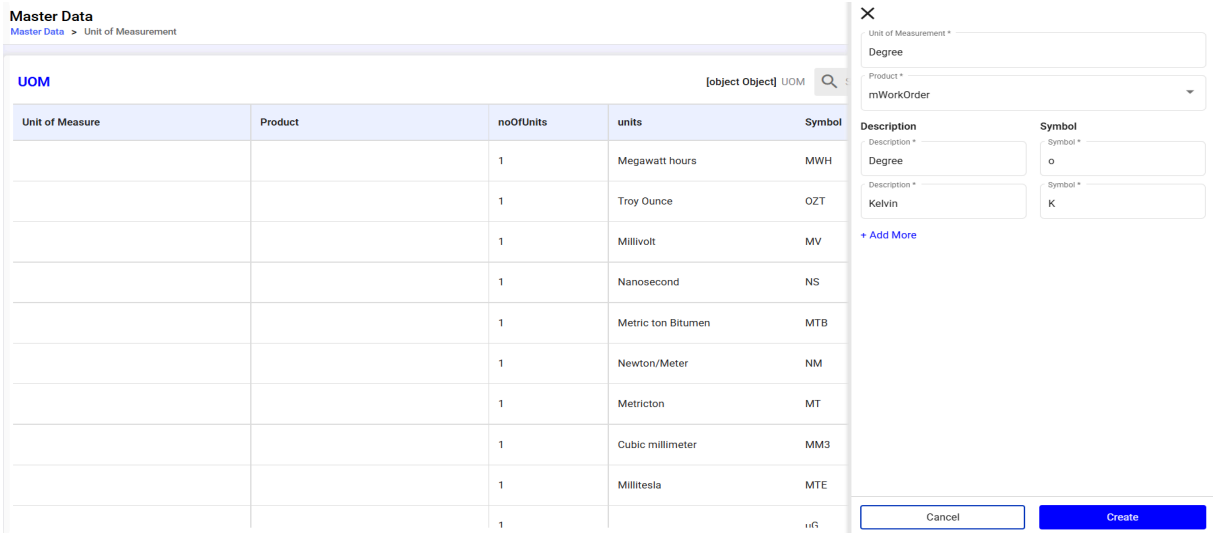


7.5. Create UOM

To create a UOM:

1. Navigate to **Master Data** > **Unit of Measurement**.
2. Click **Create New** > **Create Manually**.
3. In the **Create Unit** window, fill in the following fields:
    - Measurement Type, Description, Symbol.
    - Add more entries as needed.
4. Click **Create**.

Figure 7-6 Create UOM

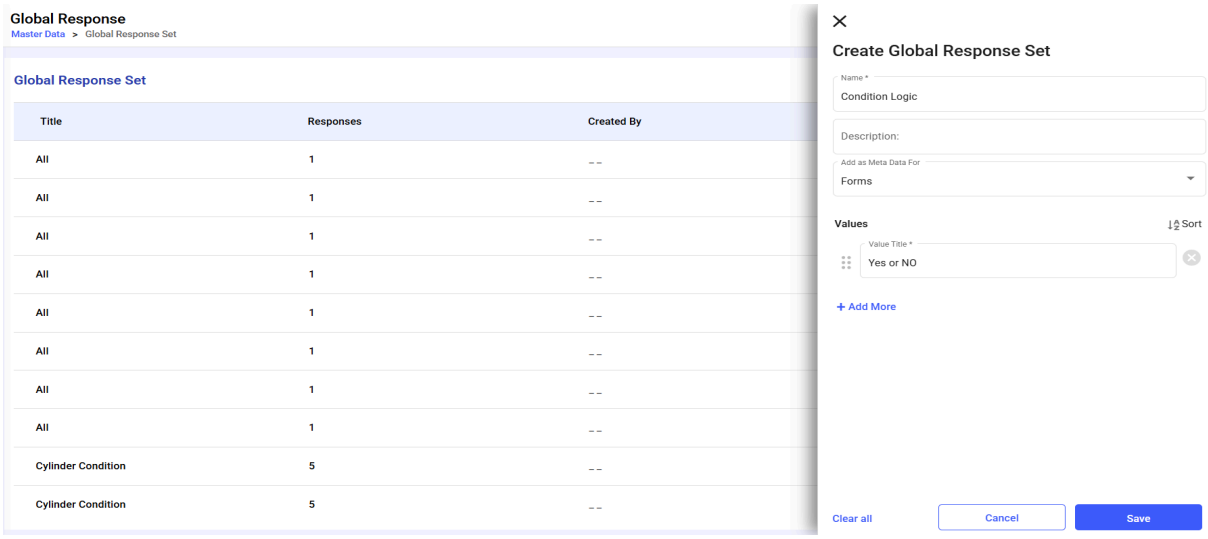


7.6. Create a Global Response Set

To create a global response set:

1. Go to **Master Data** > **Global Response Set**.
2. Click **Create New** > **Create Manually**.
3. In the **Create Global Response Set** window, fill in the following fields:
    - Name, Description, and Metadata Type.
    - Add response values.
4. Click **Save**.

Figure 7-7 Create Global Response Set



7.7. Bulk Upload Master Data

Bulk upload reduces manual effort for setting up master data.

To bulk upload master data:

1. Navigate to the respective module (Locations, Assets, UOM, or Response Sets).
2. Click the More icon on top right corner and select **Download Template**.
3. Fill out the Excel sheet.
4. Click **Create New** > **Upload Excel**.
5. Select and upload your file.

8. Configure iMaintenance Core Settings

The **Core Settings** in iMaintenance define how the product behaves across your entire organization. These settings control fundamental aspects of daily use, such as session timeouts, chat availability, measuring points, auto-timers, AI enablement, issue creation, root cause analysis, attachments, and more.

Although many of these options are stored at the database level, they directly influence **how technicians, supervisors, and administrators experience the product every day**. Functional teams should review these configurations to ensure they align with business processes, while IT teams may assist in applying the changes.

By configuring these core settings, you can tailor iMaintenance to match your organization's operational needs, improve usability, and enforce consistent standards across all users.

Note:
To modify the configurations, use the below collection in the database. Tap on the collection to view the list of configurations, each identified by its respective "**type**".

Collection Name: Configuration

8.1. Enable or Disable Core Modules

The Issue, Work Order, and Timesheet modules can be enabled or disabled at both the **tenant** and **plant** levels. These settings determine whether the modules are visible and accessible across the web and mobile applications.

- Use the **tenantLevel flag** to turn a module on or off globally for all plants.
- Use the **plantLevel flag** for more granular control, enabling or disabling modules for individual plants.

1. **Issue, Work Order, Timesheet Configurations**
    - The **Issue, Work Order, Timesheet module Configuration** controls the visibility and accessibility of the *Issue*, *Work Order*, *Timesheet modules* across the Tenant or Plant levels within your deployment. Use the following flags to manage access appropriately based on organizational needs.
2. **tenantLevel Flag**
    - **Purpose**: Controls module access at the **Tenant** level.
    - **Options**:
        - true: Enables the Issue Module for **all plants** under the tenant.
        - false: Disables the Issue Module **globally across all plants**.
        - **Default Value**: true
    - Set as true if you want all plants to access the Issue Module.
    - Set as false to completely disable the Issue Module across the tenant.
3. **plantLevel Flag**
    - **Purpose**: Enables fine-grained control at the **Plant** level.
    - **Options**:
        - false: Module access is the same across all plants (as per tenantLevel setting).
        - true: Enables plant-specific control. You **must** provide a valid plant ID for each plant you want to configure.
        - **Default Value**: false
    - Set to true if you want to enable/disable the module per plant.
    - Set to false if plant-level configuration is not required.

```
Sample Configuration

{
  "_id": {
    "$oid": "6811d64e10cbda7d4d979883"
  },
  "type": "issueConfig", //Type would change for WorkOrder and Timesheet modules
  "config": {
    "tenantLevel": true,
    "plantLevel": true
  },
  "plant": {
    "$oid": "681a06b3aab43f5e132ff5c3"
  }
}
```

Note:

- When a module is disabled, both their creation and any related features will be hidden and inaccessible across the Mobile and Web applications.
- Ensure consistency between tenantLevel and plantLevel flags to avoid misconfiguration.
- If plantLevel is set to true, you must maintain a corresponding configuration for each relevant plant.

8.2. Configure Work Order Settings

Work Order settings define how iMaintenance enforces controls during the lifecycle of a Work Order — from initiation to completion.

These configurations allow you to:

- Configure Measuring Points
- Automate timing of work execution.
- Trigger issues directly from forms.
- Capture follow-up issues.
- Confirm operations before closure.
- Record and analyze Root Cause Analysis (RCA).

Use these sub-settings to align Work Order execution with your organization's compliance, safety, and operational standards.

Configure Measuring Points

The Measuring Point (MP) Configuration manages the visibility and availability of measuring points across key modules within the system. Admins can control this setting at both the Tenant and Plant levels, based on operational requirements.

- **Enable or disable measuring point features** across all or selected modules. Supports module-level visibility for: Functional Location, Equipment, Issue, Asset, Asset360, Work Order, Work Order Operation.
- Configuration is stored in the **database** and applied per tenant or plant.

Table 8-1 Default Settings

Setting	Default Value	Description
tenantLevel	TRUE	Measuring Point is available across all plants by default.
plantLevel	TRUE	Enables plant-specific control of MP visibility.
functionalLocation	TRUE	Measuring Point visible in Functional Location module.
workOrder	TRUE	Measuring Point visible in Work Order module.
workOrderOperation	TRUE	Measuring Point visible in Work Order Operation.
issue	TRUE	Measuring Point visible in Issue module.
asset	TRUE	Measuring Point visible in Asset module.
asset360	TRUE	Measuring Point visible in Asset360 view.
realmSync	TRUE	Measuring Point included in realm sync processes.

Sample Configuration

```
{
  "_id": {
    "$oid": "67fdffef33f2f7a34586fbf3"
  },
  "type": "measuringPointConfig",
  "config": {
    "tenantLevel": true,
    "functionalLocation": true,
    "workOrder": true,
    "workOrderOperation": true,
    "issue": true,
    "asset": true,
    "asset360": true,
    "realmSync": true,
    "plantLevel": true
  },
  "plant": {
```

```
    "$oid": "681a06b3aab43f5e132ff5c3"
  }
}
```

Note:

- By default, Measuring Points are enabled across all modules and all plants.
- Use tenantLevel = false and plantLevel = true to apply visibility settings for specific plants.
- All module-level flags (functionalLocation, workOrder, etc.) must be explicitly set to true or false depending on business needs.
- Disabling a module flag will hide measuring points from that specific module across the Web and Mobile applications.

Configure Auto Timer

The Auto Timer Configuration controls whether an automatic timer is enabled for Operations during Work Order execution. This setting can be managed at both the Tenant and Plant levels to align with organizational workflow preferences.

Admins can control the behavior of the Auto Timer feature using the following configuration options:

- Enable/Disable Auto Timer
- Allow Technician to Edit Timer
- Enable Background Time Calculation

Table 8-2 Default Settings

Setting	Default Value	Description
enabled	TRUE	Enables the Auto Timer by default.
editable	TRUE	Allows the Technician to edit the timer manually.
background	TRUE	Timer is auto-calculated in the background without user interaction.

Sample Configuration

```
{
  "_id": {
    "$oid": "6788b584c3ca9a2f538dbc19"
  },
  "type": "autoTimer",
  "plant": {
    "$oid": "681a06b3aab43f5e132ff5c3"
  },
  "config": {
    "enabled": true,
    "background": true,
    "editable": true
  }
}
```


Note:

- If enabled is set to false, the Auto Timer feature is disabled entirely for that tenant or plant.
- If editable is false, the Technician will not be allowed to adjust the timer manually during execution.
- If the background is false, time tracking will require manual start/stop by the Technician.

Configure Raise Issue at Form Submission level

The Raise Issue Configuration controls whether an Issue can be raised automatically when a Digital Form is submitted. This setting is configurable at both the Tenant and Plant levels to support enterprise-specific workflows.

- Enables or disables the triggering of issues from form submissions.
- Supports use cases where form-based inspections or checklists can result in actionable issue records.

Table 8-3 Default Settings

Setting	Default Value	Description
formLevel	FALSE	When false, the system will allow raising issues from form submission.

Sample Configuration

```
{
  "_id": {
    "$oid": "6821e6077218a319b2e8bb88"
  },
  "type": "raiseIssue",
  "config": {
    "formLevel": false
  },
  "plant": {
    "$oid": "681a06b3aab43f5e132ff5c3"
  }
}
```

Note:

- When formLevel is set to false, issue creation will be triggered automatically upon digital form submission.
- If formLevel is set to true, the raise issue option will be suppressed on form submission screens.
- This setting is useful for controlling noise or limiting automated issue creation in certain workflows or plant environments.

Configure Raise Follow-up Issue

The Raise Follow-up Issue Configuration defines how follow-up issues are handled when linked to a Work Order. This setting is applicable at the Tenant Level and helps streamline corrective workflows after execution tasks.

- Enables or disables the ability to raise follow-up issues from within a Work Order.
- Admins can configure how the follow-up issue behaves:
  - independentIssue – Creates a new, standalone issue with no linkage to the original work order.
  - linkToWorkOrder – Automatically links the follow-up issue to the originating work order.
  - linkAndDelinkToWorkOrder – Auto-links the issue to the work order but gives Supervisors the option to delink if needed.

Table 8-4 Default Settings

Setting	Default Value	Description
tenantLevel	TRUE	Applies configuration across all plants under the tenant.
raiseFollowUpIssue	TRUE	Enables the follow-up issue creation capability.
independentIssue	FALSE	Follow-up is not created as standalone by default.
linkToWorkOrder	FALSE	Follow-up is not auto-linked only.
linkAndDelinkTo-WorkOrder	TRUE	Follow-up is auto-linked, with an option to delink (default behavior).

Sample Configuration

```
{
  "_id": {
    "$oid": "682495bc6f10a452d982a052"
  },
  "type": "raiseFollowUpIssueConfig",
  "config": {
    "tenantLevel": true,
    "raiseFollowUpIssue": true,
    "independentIssue": false,
    "linkToWorkOrder": false,
    "linkAndDelinkToWorkOrder": true
  }
}
```

Note:

- This setting only applies at the tenant level; plant-level overrides are not supported at this time.
- Ensure that only one mode is set to true at a time to avoid conflicting behaviors.
- If raiseFollowUpIssue is set to false, no follow-up issue options will be presented during or after Work Order execution.
- The linkAndDelinkToWorkOrder mode offers flexibility and is recommended for most operational scenarios.

Configure Operation Confirmation

The Operation Confirmation Configuration controls whether operation-level confirmations are enabled during Work Order execution. This configuration can be managed at both the Tenant and Plant levels to suit specific operational or compliance requirements.

- Allows enabling or disabling operation confirmations (e.g., start/complete or quantity confirmations) for each operation step within a Work Order.
- Useful in industries where granular tracking of operation progress is required for compliance, audits, or productivity metrics.

Table 8-5 Default Settings

Setting	Default Value	Description
tenantLevel	FALSE	Operation confirmation is not enabled at the tenant level by default
plantLevel	FALSE	Operation confirmation is not enabled at any plant level by default

Sample Configuration

```
{
  "_id": {
    "$oid": "6847e24eb8edacc8be69cf93"
  },
  "type": "operationConfirmationConfig",
```

```
  "config": {
    "tenantLevel": false,
    "plantLevel": false
  },
  "createdAt": {
    "$date": "2025-05-28T12:45:00.000Z"
  },
  "updatedAt": {
    "$date": "2025-05-28T12:45:00.000Z"
  }
}
```

Note:

- If both tenantLevel and plantLevel are set to false, operation confirmations will be hidden from the UI and not required during Work Order execution.
- Enabling confirmation at plantLevel requires specifying the plant context in the configuration document.
- Use this feature to enforce process discipline and track execution detail at a more granular level.

Configure Work Order RCA

The Work Order RCA (Root Cause Analysis) Configuration defines whether RCA tracking is enabled at both the Work Order and Work Order Operation levels. This configuration allows organizations to enforce structured problem analysis during or after maintenance execution at either the Tenant or Plant level.

- Enables Root Cause Analysis feature as part of the Work Order lifecycle.
- Configurable at:
    - Tenant Level – Applies across all plants.
    - Plant Level – Allows plant-specific overrides (if supported in implementation).
- RCA visibility and workflow can be toggled for:
    - workOrderLevel – RCA enabled at the overall Work Order level.
    - workOrderOperationLevel – RCA enabled for each individual operation/task.

Table 8-6 Default Settings

Setting	Default Value	Description
tenantLevel	TRUE	RCA settings apply across all plants by default.
workOrderLevel	TRUE	RCA is enabled at the Work Order level.
workOrderOperationLevel	TRUE	RCA is enabled for each Work Order operation.

Sample Configuration

```
{
  "_id": {
    "$oid": "6846ceb4efb99e538fa46336"
  },
  "type": "workOrderRCAConfig",
  "config": {
    "tenantLevel": true,
    "workOrderLevel": true,
    "workOrderOperationLevel": true
  }
}
```

Note:

- If workOrderLevel is false, RCA will not be visible or required at the Work Order header level.
- If workOrderOperationLevel is false, RCA will be hidden from individual operation steps.
- Enabling both levels provides full visibility into root causes at both macro (order) and micro (operation) levels—ideal for high-compliance or reliability-focused environments.
- These settings are useful for supporting failure analysis, audit trails, and continuous improvement initiatives.

8.3. Configure User Experience Controls

User Experience (UX) controls define how iMaintenance appears and responds to users across both web and mobile applications.

These settings apply at a product-wide level and influence everyday interactions — from how long a session remains active, to whether chat and attachments are available, to how lists and key fields are displayed.

By configuring these options, administrators can:

- Standardize how users access and share information.
- Control the visibility of supporting features such as chat and attachments.
- Enforce consistent formats and templates for lists, forms, and key mappings.

These configurations ensure a smooth, predictable user experience while aligning iMaintenance with your organization's compliance and collaboration needs.

Configure Session Timeout

Session timeout settings define how long a session remains active during inactivity.

- Session timeout can be configured at Tenant Level or Plant level.
- Default Session Timeout is at tenant level and set for 30 mins.
- All sessions login and logouts are captured in DB for audit purposes.
- The highlighted DB values should be used to manage Session timeout.
    - Session Timeout can be Enabled or Disabled by setting True or False.
    - Duration can be set in Million Seconds. Ex 30 mins/ 1800000 Ms

```
{
  "_id": {
    "$oid": "6788b5dec3ca9a2f538dbc1c"
  },
  "type": "sessionTimeout",
  "plant": {
    "$oid": "681a06b3aab43f5e132ff5c3"
  },
  "config": {
    "enabled": true,
    "duration": 1800000
  }
}
```

User is shown with a warning message when session is timed out and redirected to login screen.

Configure Chat Controls

The Chat Configuration controls chat functionality at both Tenant and Plant levels. It allows administrators to enable chat for specific modules and define push notification behavior.

- Enable or disable chat features across tenants or specific plants.
- Module-specific control: Currently supports the Issue and Work Order modules.
- Push notification customization: Choose between receiving all messages or only @mentions.

Table 8-7 Default Settings

Setting	Default Value	Description
chat	TRUE	Enables chat feature globally.
issueModule	TRUE	Chat enabled for Issue Module by default.
workOrderModule	TRUE	Chat enabled for Work Order Module by default.
pushNotifications.all	FALSE	Sends notifications for all messages.
pushNotifications.mention	TRUE	Sends notifications only when a user is mentioned.

Sample Json Configuration

```
{
  "_id": {
    "$oid": "67fcd5efffb1552aa9ae6272"
  },
  "type": "chatConfig",
  "__v": 0,
  "config": {
    "chat": true,
    "workOrderModule": true,
    "issueModule": true,
    "pushNotifications": {
      "all": true,
      "mention": false
    },
     },
```

```
  "plant": {
    "$oid": "681a06b3aab43f5e132ff5c3"
  }
}
```

Note:

- Configurations are persisted in the database and applied per tenant or plant as needed.
- Admins can selectively disable chat for specific modules by setting the respective module flag (issueModule, workOrderModule) to false.
- Push notification behavior:
  - Set "all": true to notify users on every message.
  - Set "mention": true to notify only on direct mentions (useful for reducing noise).
- A plant entry is required when applying plant-level configurations.

Configure Attachments

The Attachment Configuration manages how attachments are handled across various modules like Issue, Work Order, Functional Location, Equipment, etc., at both the Tenant and Plant levels. Admins can configure the available repositories, their behaviors, and permitted document types per module.

- Define which modules support attachments (e.g., Issue, Work Order, Asset, Measuring Point).
- Specify one or more repository types for each module:
  - GOS (Generic Object Services)
  - DMS (Document Management System)
  - SharePoint (not shown in the current example but assumed as extensible).
- Configure actions (e.g., create, delete) and document type rules for repositories like DMS.
- Store configuration in the database for runtime enforcement.

Table 8-8 Default Settings

Module	Repositories	Default App ID

Table 8-8 Default Settings (continued)

Issue	GOS	NOATT
WorkOrder	GOS	WOATT
Asset	GOS, DMS	EQATT
FunctionalLocation	GOS, DMS	FLATT
MeasuringPoint	GOS, DMS	MPATT
MeansDoc	GOS, DMS	MDATT

Sample Configuration

```
{
  "_id": {
    "$oid": "6829c064cf146098dc602988"
  },
  "type": "attachments",
  "__v": 0,
  "config": {
    "Issue": {
      "repositories": ["GOS"],
      "appId": "NOATT"
    },
    "WorkOrder": {
      "repositories": ["GOS"],
      "appId": "WOATT"
    },
    "Asset": {
      "repositories": ["GOS", "DMS"],
      "appId": "EQATT"
    },
    "FunctionalLocation": {
      "repositories": ["GOS", "DMS"],
      "appId": "FLATT"
    },
    "MeasuringPoint": {
      "repositories": ["GOS", "DMS"],
      "appId": "MPATT"
```

```
},
"MeansDoc": {
  "repositories": ["GOS", "DMS"],
  "appId": "MDATT"
},
"GOS": {
  "url": "/IWORKORDER_SRV/ProductAttachmentCollection",
  "actions": ["create", "delete"]
},
"DMS": {
  "url": "/IWORKORDER_SRV/ProductAttachmentCollection",
  "actions": ["create"],
  "documentTypesConfig": {
    "Issue": [
      {
        "documentType": "DES",
        "documentVersion": "00",
        "documentPart": "000",
        "storageCategory": "DMS_C1_ST"
      },
      {
        "documentType": "DRW",
        "documentVersion": "00",
        "documentPart": "000",
        "storageCategory": "DMS_C1_ST"
      }
    ],
    "WorkOrder": [
      {
        "documentType": "DES",
        "documentVersion": "00",
        "documentPart": "000",
        "storageCategory": "DMS_C1_ST"
      },
      {
        "documentType": "DRW",
        "documentVersion": "00",
```

```
            "documentPart": "000",
            "storageCategory": "DMS_C1_ST"
          }
        ],
        "Asset": [
          {
            "documentType": "DES",
            "documentVersion": "00",
            "documentPart": "000",
            "storageCategory": "DMS_C1_ST"
          },
          {
            "documentType": "DRW",
            "documentVersion": "00",
            "documentPart": "000",
            "storageCategory": "DMS_C1_ST"
          }
        ],
        "FunctionalLocation": [
          {
            "documentType": "DES",
            "documentVersion": "00",
            "documentPart": "000",
            "storageCategory": "DMS_C1_ST"
          },
          {
            "documentType": "DRW",
            "documentVersion": "00",
            "documentPart": "000",
            "storageCategory": "DMS_C1_ST"
          }
        ],
        "MeasuringPoint": [
          {
            "documentType": "DES",
            "documentVersion": "00",
            "documentPart": "000",
```

```
            "storageCategory": "DMS_C1_ST"
          },
          {
            "documentType": "DRW",
            "documentVersion": "00",
            "documentPart": "000",
            "storageCategory": "DMS_C1_ST"
          }
        ],
        "MeansDoc": []
      }
    }
  },
  "createdAt": {
    "$date": "2025-05-18T11:11:32.183Z"
  },
  "updatedAt": {
    "$date": "2025-06-16T14:40:23.851Z"
  }
}
```


Note:

- Repositories such as GOS and DMS must be configured with their respective url endpoints and supported actions (e.g., create, delete).
- DMS repositories support advanced configuration with documentTypesConfig to define rules like:
    - Document Type (e.g., DES, DRW)
    - Version/Part/Storage category.
- Admins should ensure that each module has a valid appId for integration consistency.
- SharePoint configuration is assumed to be supported but not defined in this example. It can follow a similar structure.

Configure List View

List View Configurations define how records are displayed in the list views for different modules (e.g., Work Orders, Issues, Equipment, Functional Locations). Each configuration controls which Fields are visible, their labels, backend data mappings, and optional formatting types (e.g., Date).

These configurations are managed at the database level and directly affect the user interface layouts for Mobile apps.

Table 8-9 Common Parameters

Field	Description
displayName	The label shown to the user in the column header (e.g., "Location").
keyName	The backend key to fetch data (e.g., location.name, asset.name).
type	Optional – used for formatting data (e.g., "date" for date fields).
order	Implicit – the JSON field order defines the column order in the UI.

Work Order List View

```
{
  "_id": { "$oid": "6846aed763dacd6d3628dc94" },
  "type": "workOrderListTemplate",
  "config": {
    "fields": [
      { "displayName": "Location", "keyName": "location.name" },
      { "displayName": "Equipment", "keyName": "asset.name" },
      { "displayName": "Description", "keyName": "description" },
      { "displayName": "Planning Plant", "keyName": "planningPlant.erpPlantId" },
      { "displayName": "Maintenance Plant", "keyName": "maintenancePlant.erpPlantId" },
      { "displayName": "Required Start Date", "keyName": "plannedStartTime", "type": "date" },
      { "displayName": "Required End Date", "keyName": "plannedEndTime" },
      { "displayName": "Created By", "keyName": "createdBy.firstName" },
      { "displayName": "Testing", "keyName": "testing" },
      { "displayName": "Revision", "keyName": "others.revision" },
      { "displayName": "Code Group", "keyName": "others.codeGroupId" },
      { "displayName": "Work Center", "keyName": "workCenter.erpWorkCenterId" },
      { "displayName": "Breakdown", "keyName": "breakdown" }
```

```
    ]
  }
}
```

Issue List View

```
{
  "_id": { "$oid": "6846af3763dacd6d3628dc95" },
  "type": "issueListTemplate",
  "config": {
    "fields": [
      { "displayName": "Location", "keyName": "location.name" },
      { "displayName": "Equipment", "keyName": "asset.name" },
      { "displayName": "Description", "keyName": "description" },
      { "displayName": "Planning Plant", "keyName": "planningPlant.erpPlantId" },
      { "displayName": "Required Start Date", "keyName": "plannedStartTime", "type": "date" },
      { "displayName": "Required End Date", "keyName": "plannedEndTime" },
      { "displayName": "Created By", "keyName": "createdBy.firstName" },
      { "displayName": "Testing", "keyName": "testing" },
      { "displayName": "Revision", "keyName": "others.revision" },
      { "displayName": "Code Group", "keyName": "others.codeGroupId" },
      { "displayName": "Work Center", "keyName": "workCenter.erpWorkCenterId" }
    ]
  }
}
```

Equipment List View

```
{
  "_id": { "$oid": "6846af6d63dacd6d3628dc96" },
  "type": "equipmentListTemplate",
  "config": {
    "fields": [
      { "displayName": "Description", "keyName": "description" },
      { "displayName": "Location", "keyName": "location.erpAssetId" },
      { "displayName": "Type", "keyName": "type" },
      { "displayName": "Manufacturer Name", "keyName": "manufacturer.object.name" },
      { "displayName": "Manufactured In", "keyName": "manufacturer.object.country" },
      { "displayName": "Planning Plant", "keyName": "planningPlant.erpPlantId" },
      { "displayName": "Maintenance Plant", "keyName": "maintenancePlant.erpPlantId" }
```

```
    ]
  }
}
```

Functional Location List View:

```
{
  "_id": { "$oid": "6846af8a63dacd6d3628dc97" },
  "type": "functionalLocationListTemplate",
  "config": {
    "fields": [
      { "displayName": "Type", "keyName": "type" },
      { "displayName": "Manufacturer Name", "keyName": "manufacturer.object.name" },
      { "displayName": "Manufactured In", "keyName": "manufacturer.object.country" },
      { "displayName": "Planning Plant", "keyName": "planningPlant.erpPlantId" },
      { "displayName": "Maintenance Plant", "keyName": "maintenancePlant.erpPlantId" }
    ]
  }
}
```

Note:

- All keyName values should map to valid fields defined in the corresponding module's Field Configuration.
- The order of fields in the array defines the column order in the UI.
- Fields with type: "date" will be formatted as per locale/timezone rules.
- These configurations can be modified to customize user-specific or role-based layouts (if supported).

Configure Innovapptive Key Mapping

```
{
  "_id": {
    "$oid": "6790eab0f1f16f84aa3de757"
  },
  "type": "innovapptiveKeyMapping",
  "config": {
    "breakdown_ISSUE": "M2",
```

```
    "breakdown_WO": "PM03",
    "corrective_ISSUE": "M1",
    "corrective_WO": "PM02",
    "emergency_WO": "EMER",
    "preventive_WO": "PM01",
    "service_ISSUE": "S1",
    "objectCategory_EQ": "IEQ",
    "objectCategory_FL": "IFL",
    "issueSystemStatus": {
      "DLFL,NOCO": "Rejected",
      "OSNO": "Open",
      "NOPR,ORAS": "In-Progress",
      "NOPR": "Released",
      "NOCO": "Completed"
    },
    "woOperationSystemStatus": {
      "CRTD": "Not Started",
      "CLSD": "Completed",
      "REL": "Released",
      "PCNF": "Partial Confirm",
      "MCNF": "Partial Confirm",
      "CNF": "Completed"
    },
    "issueProcessControl": {
      "1": "Allowed",
      "2": "Warning",
      "3": "Prohibited"
    },
    "workOrderSystemStatus": {
      "CRTD": "Created",
      "REL": "Released",
      "TECO": "Closed",
      "CLSD": "Closed"
    }
  },
  "plant": {
```

```
    "$oid": "681a06b3aab43f5e132ff5c3"
  }
}
```


8.4. Configure AI

The AI Configuration controls the availability of AI-powered features at both the Tenant and Plant levels. Admins can selectively enable or disable access to specific AI agents used across modules like Issue Management, Work Order Planning, and Technician Assistance.

- Tenant- and Plant-level control over AI feature availability.
- Fine-grained toggles to enable/disable individual AI agents. AI agent features include:
  - AI Assist – Technician assistance during task execution.
  - AI Plan – Smart planning and scheduling recommendations.
  - AI Detect – Fault detection and predictive diagnostics.

Table 8-10 Default Settings

Setting	Default Value	Description
tenant-Level	TRUE	AI features enabled across all plants by default.
aiAssist	TRUE	Enables the AI Assist feature.
aiPlan	TRUE	Enables AI-driven planning capabilities (assumed field, not in sample).
aiDetect	TRUE	Enables AI-based fault detection and diagnosis (assumed field).

Sample Configuration


```
{
  "_id": {
    "$oid": "68065dcd91f242c6956f47ca"
  },
  "type": "aiConfig",
  "config": {
    "tenantLevel": true,
    "aiIssue": true,
    "aiWorkOrder": true,
```

```
    "aiAssist": true
  }
}
```

Note:

- AI configurations are stored in the database and can be customized per tenant or plant.
- If tenantLevel is set to false, plant-level overrides must be defined with associated plant IDs.
- Each AI agent (aiAssist, aiPlan, aiDetect) can be individually toggled based on usage needs and licensing.
- Ensure consistent settings across modules and levels to avoid unexpected behavior in AI feature availability.

9. Integrate External Systems

The **Integration Manager** module connects the Innovapptive platform to external ERP systems, enabling seamless data flow between your operational tools and enterprise backend. It supports **real-time syncs**, **offline handling**, and **automated data exchanges**.

Earlier, integrating operator round data with SAP PM and PI Historian demanded custom code and weeks of work.

Now, with RACE and Integration Manager, admins link mobile round data to PI tags and SAP work orders using a no-code interface. Anomalies flow instantly from the field to SAP PM.

Impact, 60% faster integration, improved data consistency, and seamless automation from shop floor to enterprise.

9.1. Understand the Integration Workflow

Integration Manager supports three types of data synchronization:

Type	Description
Inbound Integration	Imports master data (plants, locations, assets) from ERP to the Innovapptive platform. Usually done during tenant onboarding.
Outbound Integration	Pushes transactional data (e.g., issues, work orders) from the platform to ERP.
Delta Sync	Periodically syncs offline transactions by detecting and posting new/updated records once connectivity is restored. Runs via a scheduled cron job (every 2–4 hours).

Mobile users receive a consistent experience as master and transactional data are shared across web and mobile.

9.2. Connect to ERP

Connecting the platform to the ERP system is a simple one-time setup.

To connect to ERP:

1. Navigate to **Integration Manager** in the left panel.
2. In the **Integrations** screen, click **Connect** next to your ERP system.

   Once connected:
   - Inbound sync brings master data (plants, assets, locations) into the platform.
   - Outbound transactions are pushed to the ERP automatically.

10. Manage Maintenance Operations

This chapter covers the key modules that help supervisors and technicians manage work orders and reported issues in real-time. It includes the **Maintenance Control Center (MCC)** and the **Observations module**, both of which are essential for planning, assigning, and tracking maintenance activities efficiently.

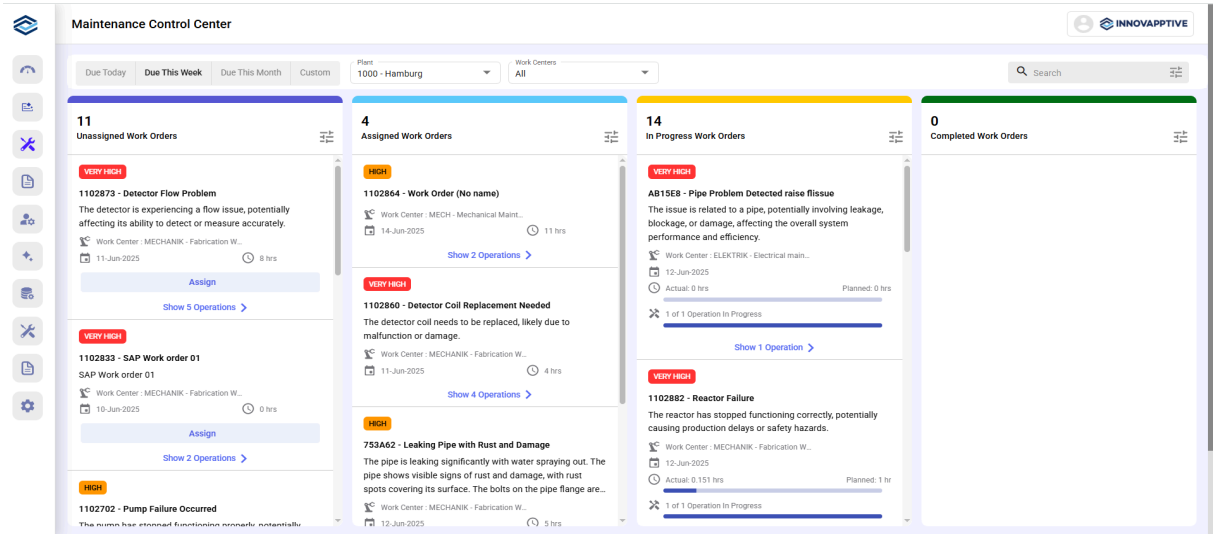
This chapter has the following topics:

10.1. Use the Maintenance Control Center (MCC)

The **Maintenance Control Center (MCC)** is a central module within the iMaintenance application that helps supervisors efficiently track and manage work orders and operations.

In this module, you can,

- View all work orders, categorized by status and sorted by start date.
- Assign or reassign work orders and individual operations.
- Filter, search, and monitor real-time progress.
- Optimize scheduling, resource utilization, and task completion.



View Work Orders by Status

Work orders are categorized into the following tabs:

- **Unassigned Work Orders:** Not yet assigned to any technician.
- **Assigned Work Orders:** Assigned but not yet started.
- **In Progress:** Currently being executed, showing planned vs. actual hours.
- **Completed:** Finished work orders with detailed performance data.

Search and Filter

You can:

- Use the **Search bar** (top-right) to find specific work orders.
- Apply **filters** by clicking the **Filter icon**, including:
    - Date ranges: Due Today, Due This Week, Due This Month, Custom.
    - Plants, Revision, Planner Group, and Work Centers.
    - Priority levels: Very High, High, Medium, Low.

Configure Fields

You can view, add, or remove fields based on templates defined in RACE, without affecting existing mobile implementations.

To Configure:

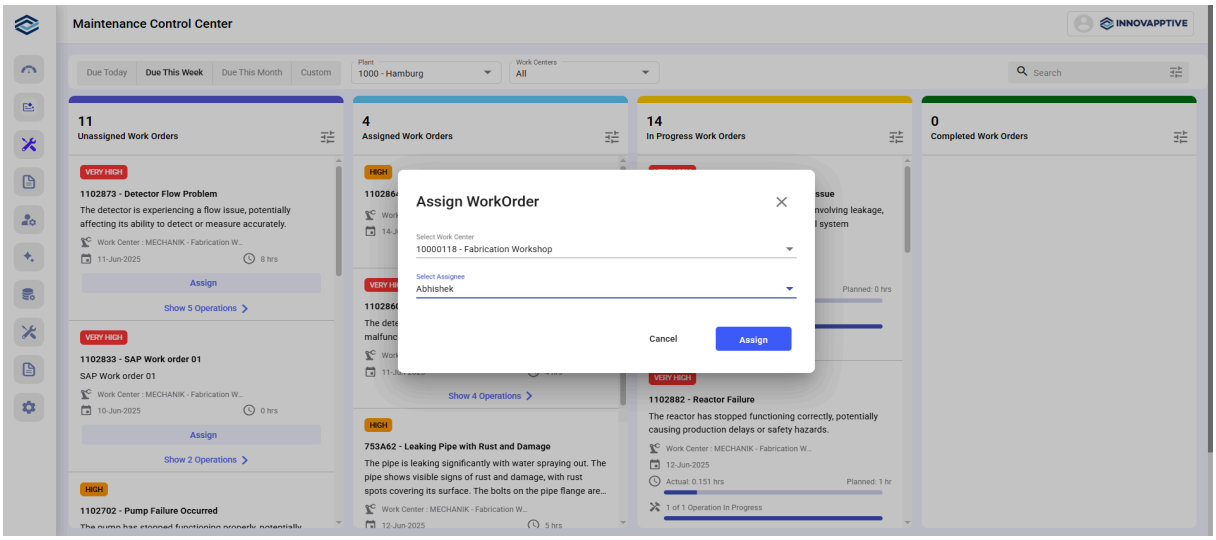
1. Click the **Configuration** icon next to the Search bar.
2. Under the **Field Configurations** tab:
    - Click the Add Field button to add the fields you need.
    - Adjust fields order using the Up and Down arrow icons.
    - Delete unnecessary fields using the Delete icon.

10.2. Assign a Work Order to a Technician

Work orders can be assigned directly from the **Unassigned Work Orders** list.

To assign a work order to a technician:

1. Navigate to the **Maintenance Control Center**.
2. Select a work order under **Unassigned Work Orders**.



3. Click **Assign**.
4. In the **Assign Work Order** pop-up, select the **Work Center** and **Technician (Assignee)**.
5. Click **Assign**.

   The work order now moves to the **Assigned** tab and is visible in the technician's iMaintenance mobile app.

10.3. Assign a Work Order at Header and Operation Level

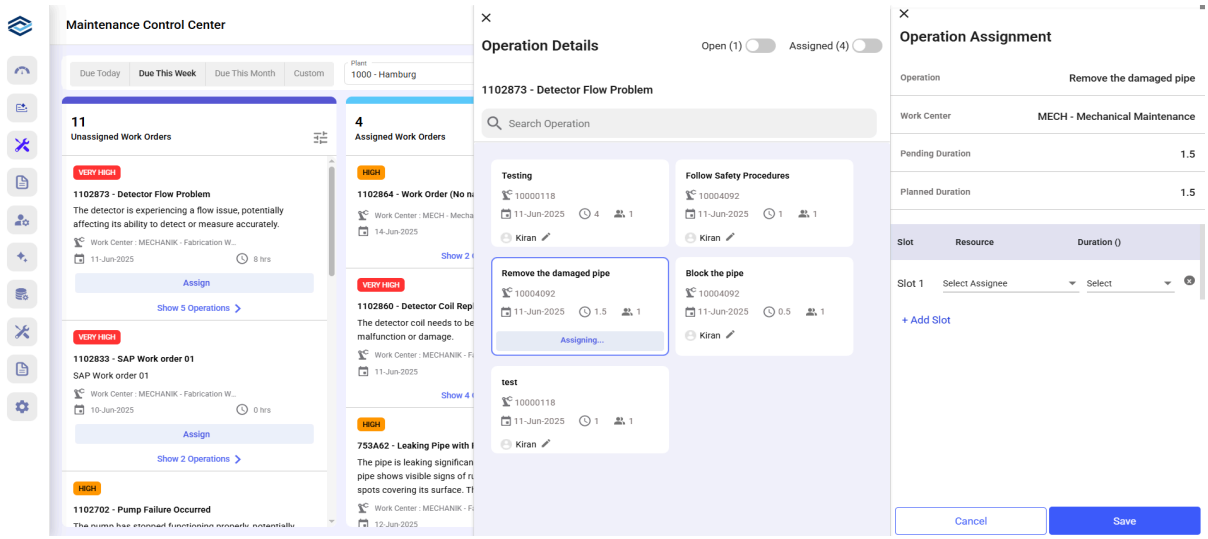
You can assign work orders and operations within a work order to different technicians for more granular task management.

To assign a work order at the header level:

1. In the **Maintenance Control Center** screen, click **Assign** for the desired work order.
2. In the **Assign Work Order** window:
   - Select the **Work Center** from the drop-down.
   - Select **Assignee** from the drop-down list.
   - Click **Assign**.

To assign a work order at the operation level:

3. In the **Maintenance Control Center** screen, click **Show <X> Operation(s)** for the desired work order.
4. In the **Operation Details** window, click **Assign Technician** on the operation widget.



5. In the **Operation Assignment** window:
   - Select a technician from the **Resource** drop-down. (The resources list is displayed based on the Plant).
   - Select the operation duration.
   - Click **Add Resource** to assign multiple resources if needed.
   - Click **Save**.

> **Note:**
>
> - Click **Edit** next to the technician's name to make changes.
> - You can change the assignee **until the work order is marked as Completed**.

11. Review Observations

The **Observations** module allows supervisors to view and manage issues reported through the iMaintenance mobile app. These issues are typically tied to specific assets and locations within a plant.

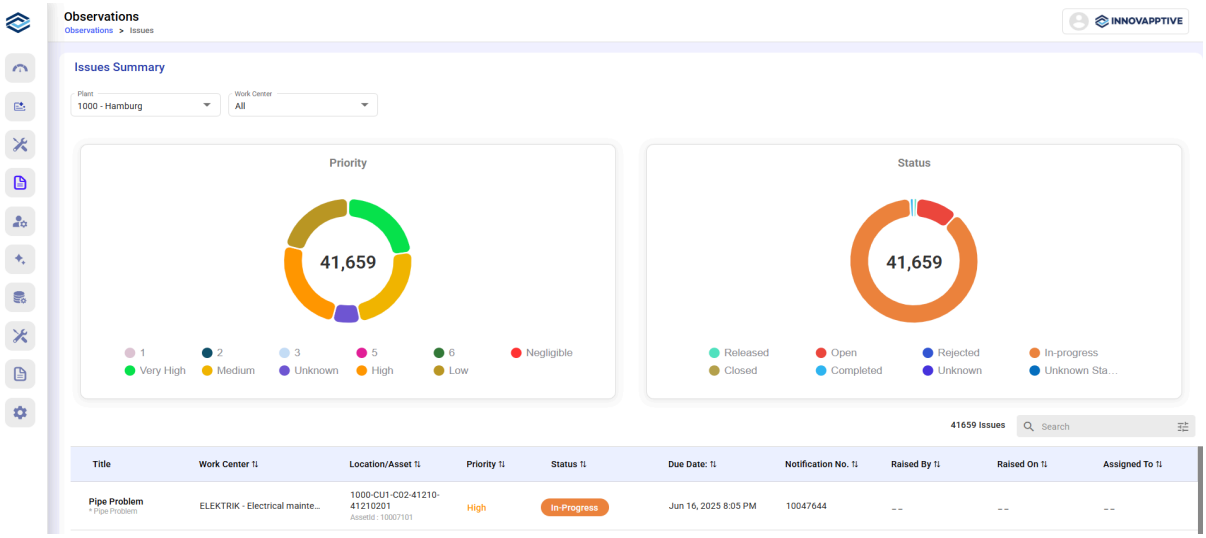
This section has the following topics:

11.1. View Observations

To access observations:

1. Click the **Observations** module in the left navigation.
2. View a list of issues, shown with:
    - Status and priority visualizations (graphs).
    - Issue title, description, plant, location, and priority.

Figure 11-1 Observations Module



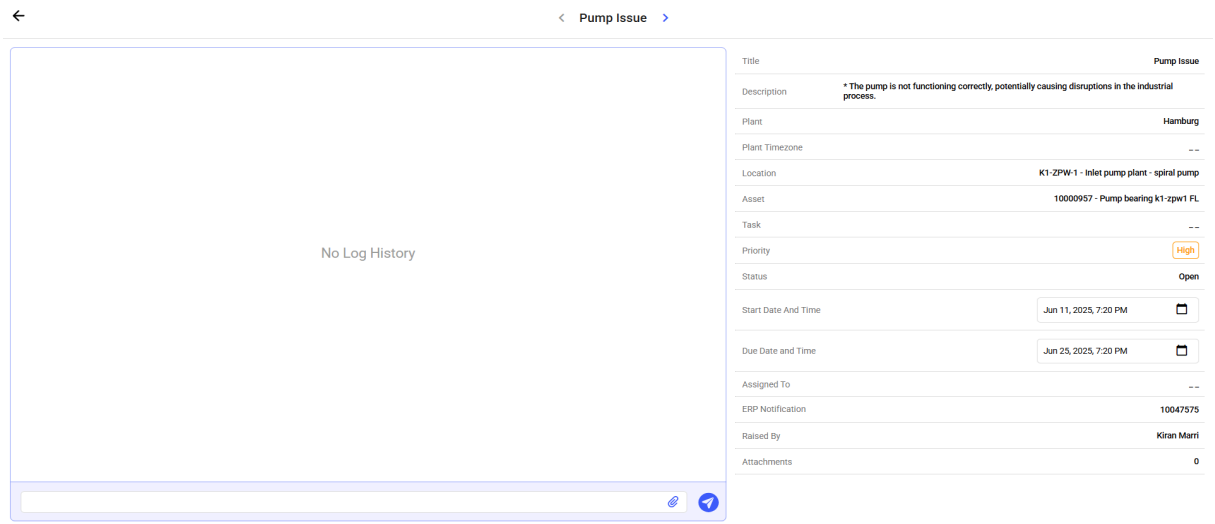
11.2. Edit Issue Details

To edit issue details:

Click on an issue.

In the **Issue Details** screen, you can,

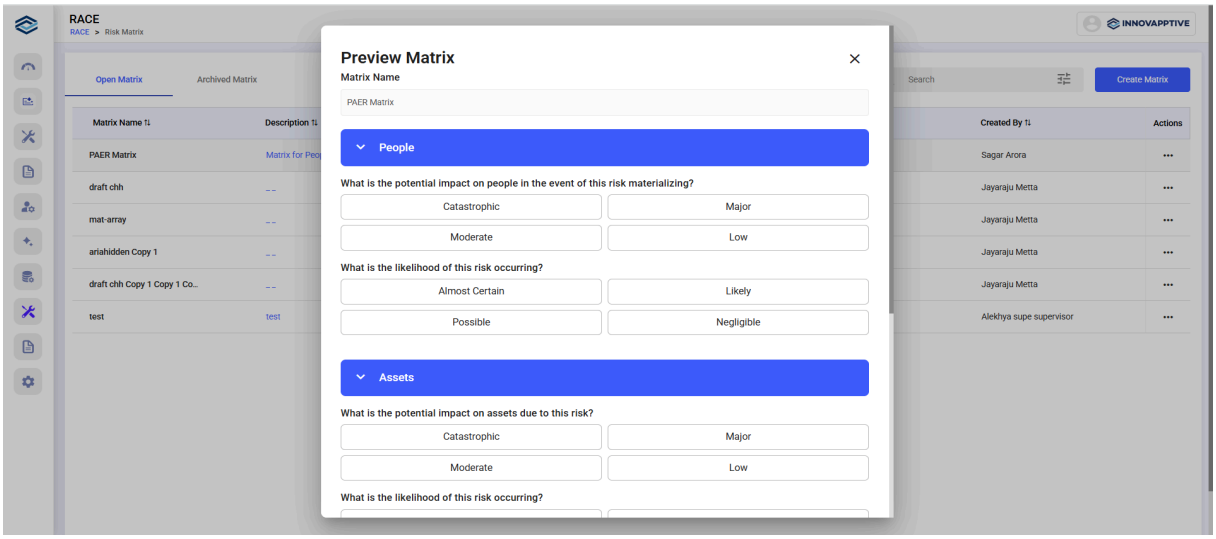
- Edit **Priority**
- Change the **Start Date & Time**
- Modify the **Due Date & Time**



11.3. Change Priority with Risk Matrix

To change priority:

1. Click the **Priority** (e.g., Major, Minor, Moderate, Negligible).
2. In the **Preview Matrix** window:
    - Select values across four categories:
        - **People**
        - **Assets**
        - **Environment**
        - **Likelihood**
    - Each category includes questions to evaluate risk level.



3. Based on responses, the system calculates the **Final Response Criteria** (new priority).
4. Click **Update** to apply changes.

This ensures consistent, risk-based prioritization of reported issues.

12. Design and Manage Forms

Forms are essential for capturing structured field data in the iMaintenance mobile application. This chapter covers everything from manually creating and publishing forms to leveraging AI for auto-generation to managing archived forms.

This section has the following topics:

12.1. Create and Publish Forms

Build forms using a visual builder that lets you define pages, sections, questions, and response types. These forms can be tailored to different inspection or reporting scenarios, improving consistency and usability in the field.

You can also configure which fields should be auto-populated and set them as editable or read-only based on your requirements.

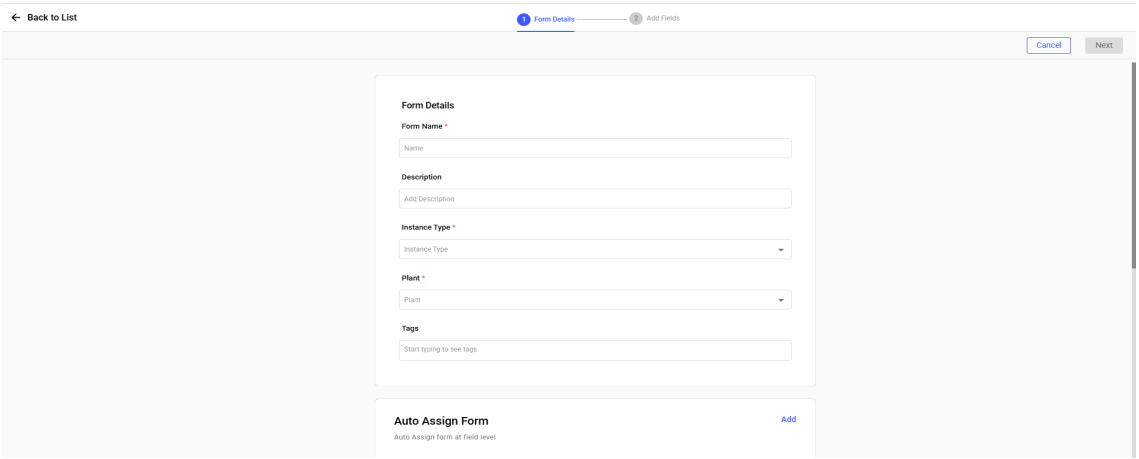
To create and publish a form:

1. Expand the **Forms** module.
2. Click **Embedded Forms** in the left menu.
3. Click **Create New** on the right side.
4. In the **Form Details** screen, provide the following:

Field	Description
Form Name	Enter a name (e.g., Equipment Inspection).
Description	Describe the purpose of the form.
Instance Type	Select *Single* or *Multiple Instance*.
Plant	Select the applicable plant.
Tags	Add tags to categorize the form.

Field	Description
Auto Assignment of Forms	Assign Forms based on Equipment, Functional Location, Tasklist, Maintenance Plan and Work order Type.
Measuring Point Section	Add Measuring Point category of Equipment and Functional location.
Additional Details	(Optional) Add custom fields with Labels (max 25 chars) and Values (max 40 chars).

Figure 12-1 Add Form Details



5. Click **Next**.
6. In the **Add Fields** screen, a default section with 4 fields is auto-populated to help you get started. Here you can:
    - Add **Pages**, then **Sections** within each page.
    - Insert **Fields (Questions)** into sections.
    - Select **Response Type** (text, multiple choice, slider, etc.)
    - Rename, reorder, or delete fields and change response types as needed.
    - Rename sections to match your workflow.

    Each Response Type is a field/input type used in the Authoring Module of Platform modules.

Response Type	Description	Supported Properties
Read Only	Displays reference data. No user input allowed.	Add Logic, Default Value, Localization, Enable, Required, Input Data.
Text	Free text input (e.g., title, descriptions).	Add Logic, Default Value, Additional Details, Localization, Enable, Required, Type
Number	Numeric values field	Add Logic, Default Value, Additional Details, Localization, Enable, Required, Unit, History, Range, Formula, and Unit of Measurement (UoM)
Date & Time	Calendar input for date & time values.	Additional Details, Localization, Enable, Required, Date & Time Format
Signature	Captures digital signatures from users.	Additional Details, Localization, Enable, Required
Scan	Uses device camera to scan QR/barcode.	Additional Details, Localization, Enable, Required
Hyperlink	Clickable link to web or document resources.	Additional Details, Localization, Enable, Required, Add Link
User	Selects a user from the system.	Add Logic, Default Value, Additional Details, Localization, Enable, Required
Slider	Selects a value from a defined scale.	Add Logic, Default Value, Additional Details, Localization, Enable, Required, Range, History
Geo Location	Captures GPS location of user.	Additional Details, Localization, Enable, Required

Response Type	Description	Supported Properties
Add Photo	Upload images for visual evidence.	Additional Details, Localization, Enable, Required
Form	Embeds a nested form within the main form.	Add Logic, Forms, Field Configurations, Additional Details, Localization, Enable, Required.
Search Text	Searchable text field for selecting values from Drop-down.	Add Logic, Input Data, Localization, Enable, Required
Instructions	Displays non-editable instructional text.	Additional Details, Enable, Required, Add Tags, Add Files, icons and images.
Array List	Field group (e.g., items, causes).	Additional Details, Localization, Enable, Required, Input Data.
Date Range	Selects a start and end date.	Additional Details, Localization, Enable, Required
Attachments	Uploads documents or files (PDFs, DOCs, Voice, Image, etc.).	Additional Details, Localization, Enable, Required, Attachment Details
Checkbox	Boolean input for Yes/No selection.	Add Logic, Additional Details, Localization, Enable, Required
Toggle	UI toggle for ON/OFF selection.	Add Logic, Localization, Enable, Required.
Risk Matrix	Triggers a configurable risk priorities drop-down values	Add Logic, Additional Details, Localization, Enable, Required
Scan Search Text	Scan barcode to search and drop-down to select values.	Add Logic, Localization, Enable, Required, Input Data

Response Type	Description	Supported Properties
Insert Image	Add a single image	Additional Details, Localization, Enable, Required

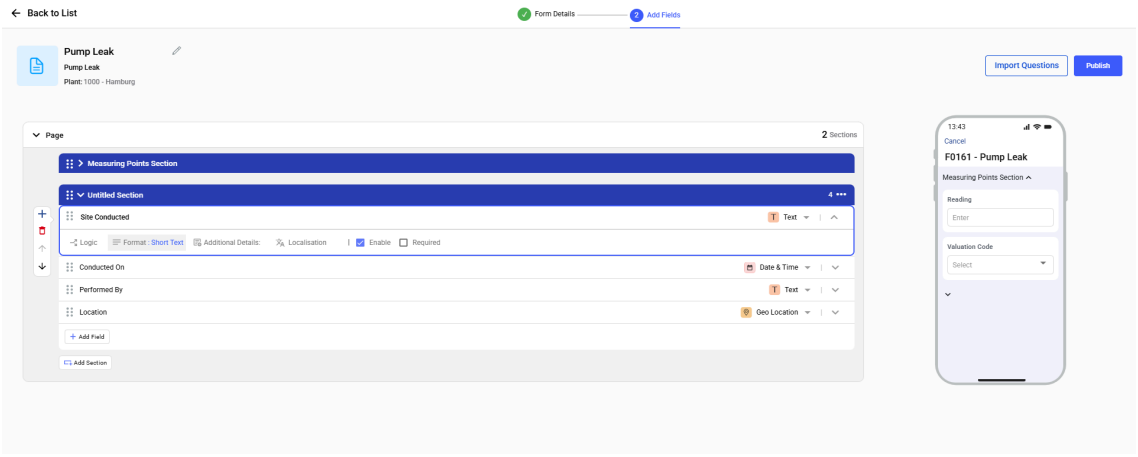
- Set conditions or logic (e.g., show/hide based on answers) as shown in the below table.
- Mark fields as **Required**, enable **History**, or apply **Localization**.

Response Type Properties

Add Logic	Enables conditional rules for a field (show/hide Field/Section, Raise Issue, Mandatory field/Section etc.) based on field values.
Default Value	Pre-fills the field with a value when the form loads in mobile application.
Additional Details	Allows admin to define character limit or extra metadata for users.
Localization	Allows admin to translate field labels into multiple languages.
Enable	Toggles whether the field is active and visible in the consumption.
Required	Marks the field as mandatory for submission.
Input Data	Allow admin to define collection of dataset for field.
Unit	Allows admins to select a unit of measurement (e.g., °C, Kg, hrs) to numeric fields.
History	Allows admin stores previous values entered in the field.
Range	Sets a minimum and maximum limit for values (typically in number or slider).

Formula	Supports calculated values based on other Numeric field inputs.
Date & Time	Allows admin to define which date format should be used in the consumption.
Add Link	Allows the field to point to an external URL or system reference.
Type	Defines the technical input format (e.g., string, number, object) – mostly system-managed.
Upload Files	Allows users to attach images, PDFs, or documents to the field.
Add Tags	Lets admin apply metadata tags for filtering, grouping, or analytics.

Figure 12-2 Add Questions



- Use **Preview** (right side) to see how the form appears in the mobile app.

7. Once done, click **Publish**.

The form is now live and visible in the *My Forms* screen with *Published* status. It is also posted to SAP based on the configuration.

12.2. Auto Assign Forms

Set up rules to automatically assign embedded forms to Work Orders based on criteria such as Equipment, Functional Location, Task List, Maintenance Plan, Order Type, or other attributes.

Configure Auto Assignment

To configure auto assignment:

1. **Add Auto Assignment Rule**
    - Click the **Add** button under the **Auto Assign Forms** section.
    - A **pop-up window** will open with a tabbed view.
2. **Define Assignment Criteria**

    The pop-up has **four tabs**, each representing a criteria type:

    a. **Functional Location / Equipment**
        - View a **hierarchical structure** of functional locations and equipment related to the selected Plant.
        - Select one or more nodes where the form should auto-attach.

    b. **Work Order Type**
        - Displays a list of available WO types.
        - Use checkboxes to select one or multiple types.

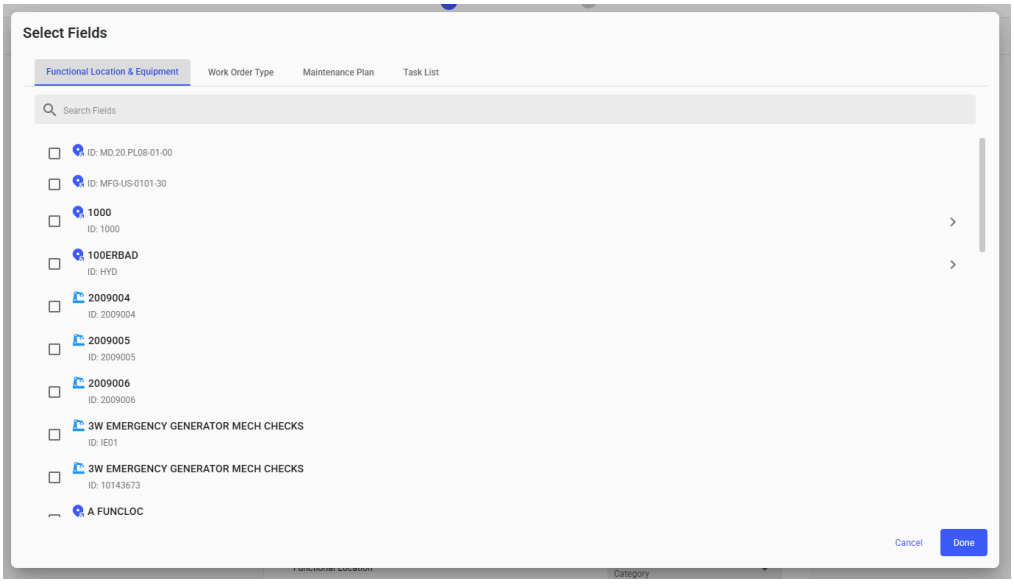
    c. **Maintenance Plan**
        - Displays all available maintenance plans.
        - Multi-select support is available.

    d. **Task List**
        - Displays task lists.
        - Supervisors can select one or more lists for auto-assignment.
3. **Save & Apply**

- After making selections in one or more tabs, click **Save**.
- The form will now automatically attach whenever a record (WO, EQ, FL, Maintenance Plan, or Task List) matches the configured conditions.

> **Note:**
> **Mobile Behavior**: Auto-attached forms are visible in the WO/Notification detail screen on mobile.

Figure 12-3 Auto Assign Forms



12.3. Add Measuring Point Section

The Measuring Points (MP) feature enables **form creators** to configure a dedicated section for capturing MP readings during the form authoring or publishing stage. This ensures seamless integration with **Equipment (EQ)** and **Functional Location (FLOC)** headers, allowing mobile users to view and record relevant MP data directly within the form.

To add or configure the measuring point section:

1. **Add Measuring Point Section**

   In the Form Details, click **Add Measuring Point Section**.

2. Select EQ/FLOC with Measuring Point Category.
   a. Choose whether the MP section should be tied to:
      - **Equipment (EQ)**
      - **Functional Location (FLOC)**
      - **Both**
   b. Select **Measuring Point Categories** (e.g., M, N, P).
   c. Each chosen category will create an individual MP subsection within the form.
   d. Example: Selecting *M* and *N* will display two subsections in mobile, each showing MPs belonging to that category.

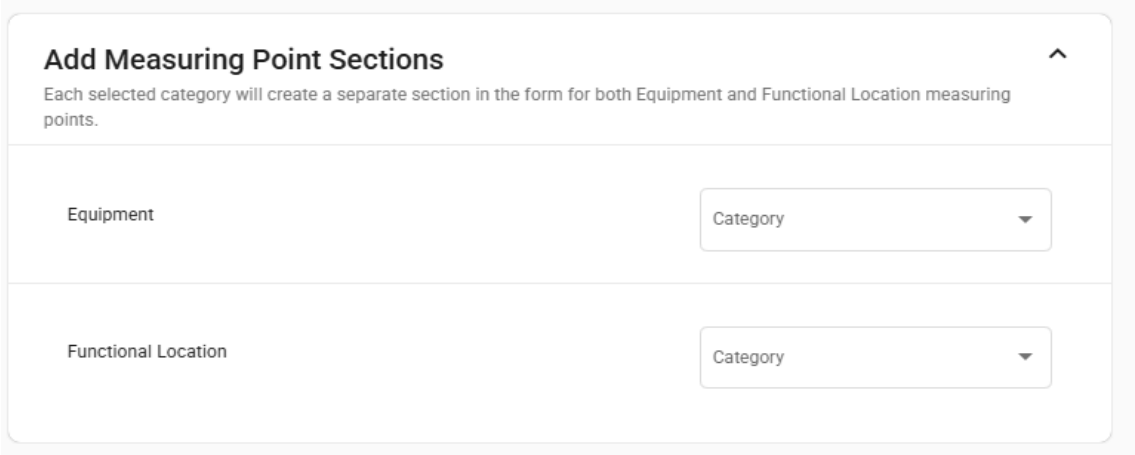
      This ensures MPs are pulled dynamically from the appropriate header context.

3. **Publish Form**
   a. Once published, the form configuration stores metadata for the MP section.
   b. On mobile, the section will:
      - Fetch MPs via API using EQ/FLOC values.
      - Display MPs grouped by category.
      - Allow users to capture readings directly.

Mobile Experience

- The MP section will appear in the form at the configured position.
- MPs are fetched dynamically based on **header-level EQ/FLOC**.
- Each MP will display fields for data entry (e.g., value, unit, timestamp).
- **MP Count** will be shown per EQ/FLOC for better user visibility.
- If no MPs exist → section displays *"No Measuring Points available"*.

Figure 12-4 Add Measuring Points



12.4. Use Generative AI to Create Forms

You can speed up form creation by using AI to either **describe** the form you need or **upload an image/pdf** of a physical form.

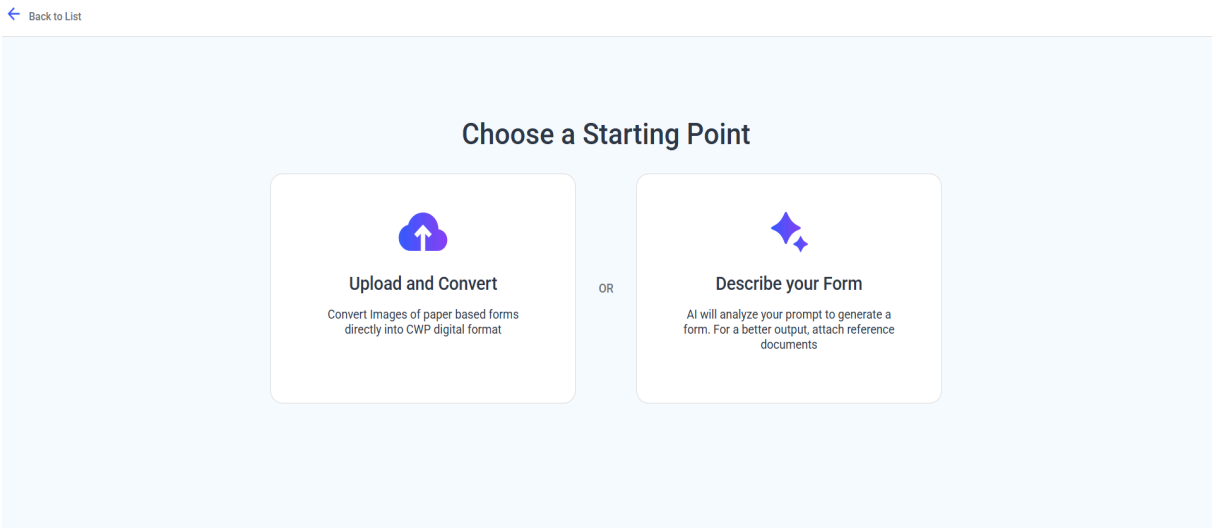
Table 12-1 Two AI-driven options:

Option	Description
Upload and Convert	Converts scanned images or PDFs of paper forms into digital forms.
Describe Your Form	AI reads a prompt or attached reference docs and auto-generates a form.

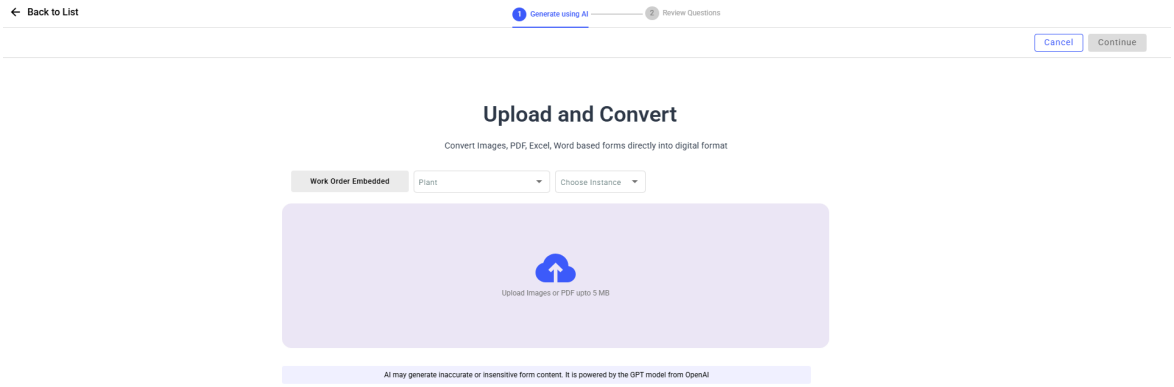
Upload and Convert

1. Navigate to the **Forms** module and click **Create using AI**.
2. In the **Choose a Starting Point** screen, select **Upload and Convert**.

Figure 12-5 Choose Starting Point



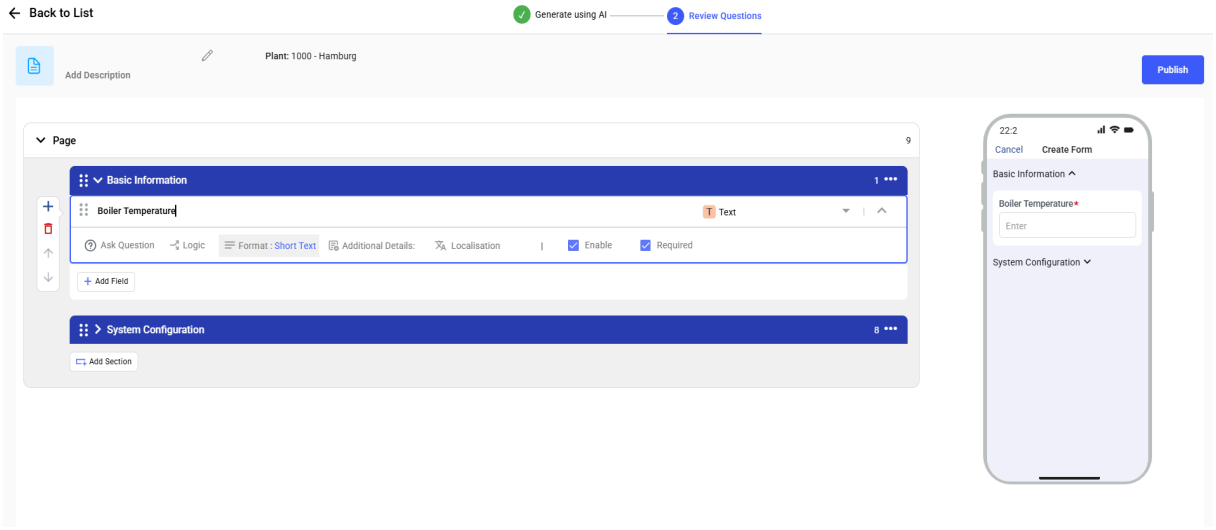
3. In the **Generate Using AI** screen, choose:
   - **Plant**
   - **Instance Type** (Single/Multiple).



4. Upload the **image or PDF** of the form.

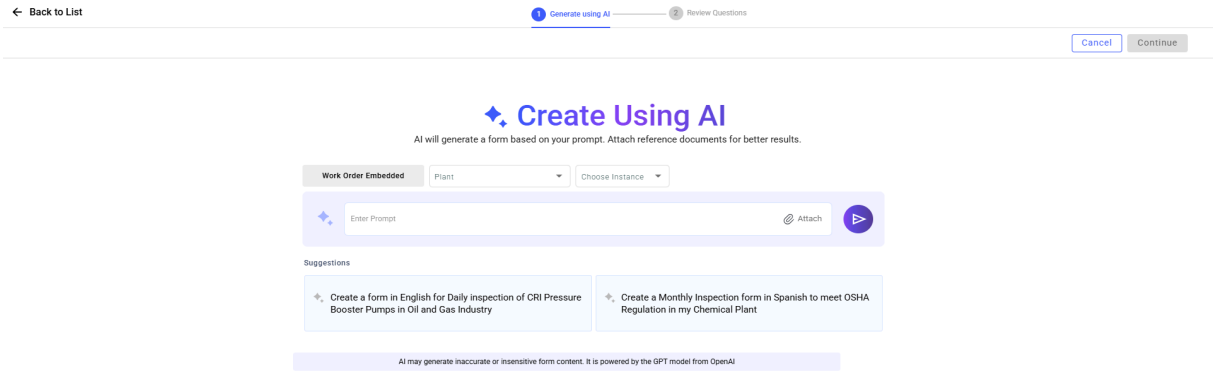
5. Click **Continue**.
6. AI generates the form with relevant sections and fields.
7. In the **Review Questions** screen, make changes if needed and click **Publish**.

Figure 12-6 Review Questions



Describe Your Form

1. In **Choose a Starting Point** screen, select **Describe Your Form**.
2. In the **Generate using AI** screen, enter a prompt in the **text field**.
3. Select:
    - **Plant**
    - **Instance Type** (Single/Multiple).



4. (Optional) Attach reference documents.

5. Click **Enter**.
   AI generates the form with relevant sections and fields.
6. Click **Continue**.
7. In the **Review Questions** screen, review and edit the generated form.
8. Click **Publish**.

Form Management Actions

In the **My Forms** screen, you can,

- **Edit** a form: Click the **More icon** next to a form > *Edit*.
- **Copy** a form: *More icon > Copy*.
- **Archive** a form: *More icon > Archive*.

  Archived forms appear in the Archived module.

12.5. Bulk Upload Forms

Upload multiple forms at once using a pre-defined Excel template to streamline form creation

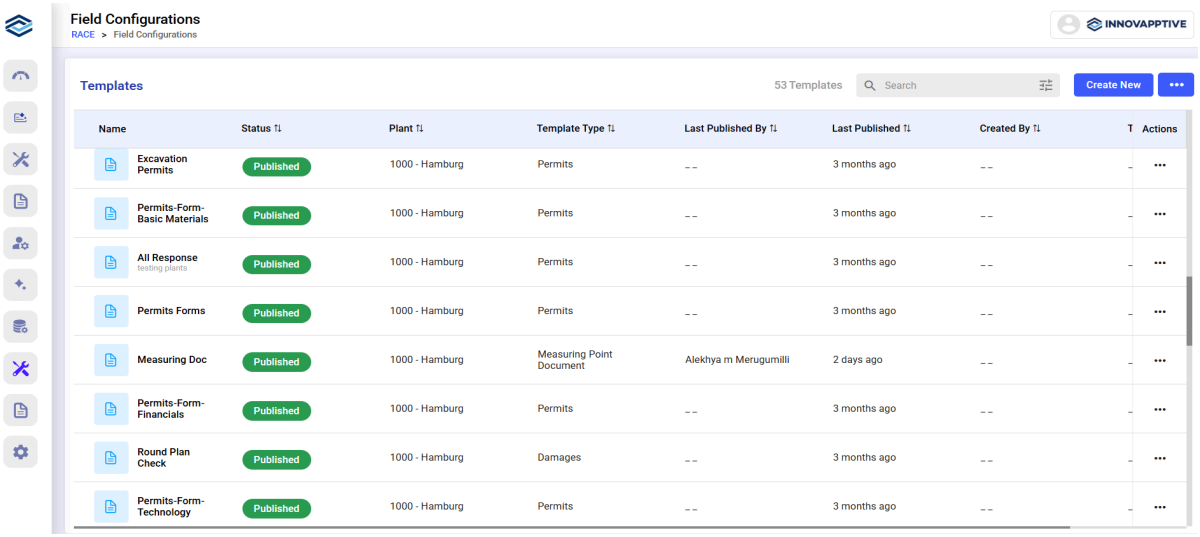
To bulk upload forms:

1. Expand **Forms** and select **Embedded Forms**.
2. Click the More icon on the top right corner and select **Download Excel Template**.
3. Fill out the Excel sheet.
4. Click **Create New** > **Upload Excel**.
5. Select and upload the file.

13. Set Up Configurations with RACE

The **RACE (Rapid Application Configuration Engine)** module is the administrative toolkit that allows you to define how forms work on mobile, localize the platform's language, and optimize mobile data sync behavior by user roles. These configurations help tailor the iMaintenance experience without requiring code changes.

Figure 13-1 Field Configurations



This chapter has the following topics:

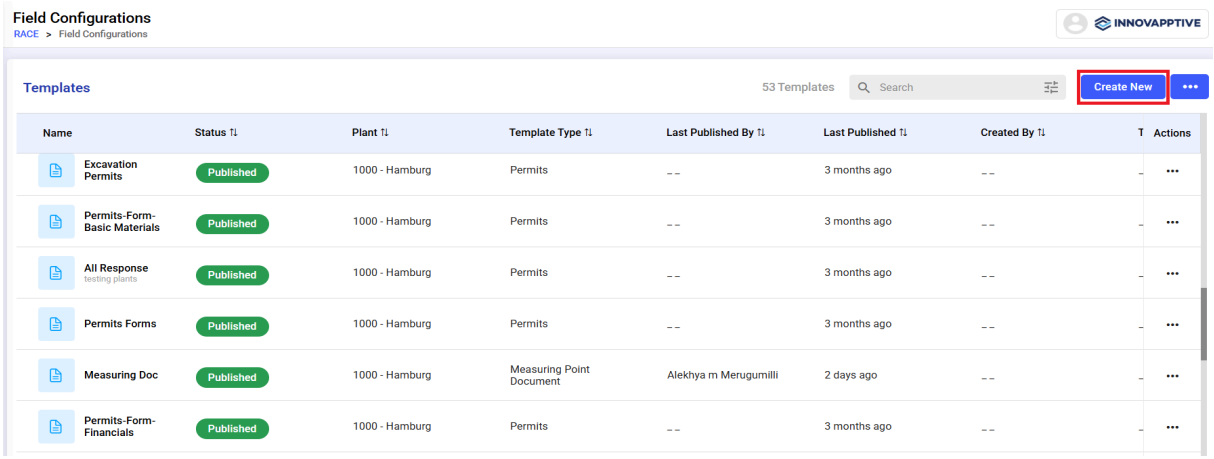
13.1. Create Field Configurations Templates

Field Templates are reusable form structures used in the mobile app for issue reporting, inspections, and other workflows. You can define pages, sections, and tasks and configure how users interact with the form.

To create and publish a template:

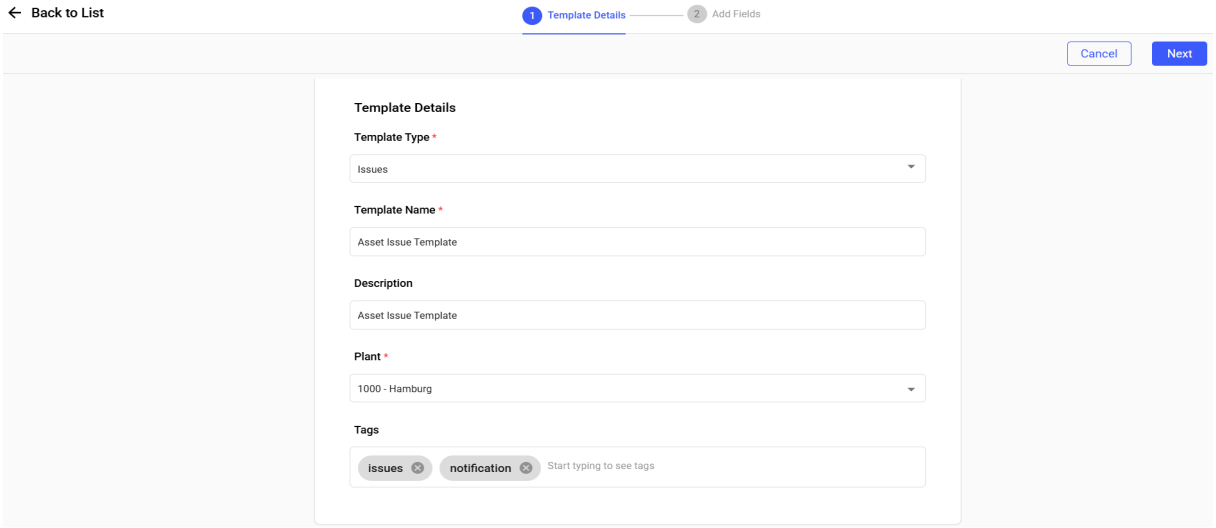
1. Navigate to **RACE** > **Field Configurations**.
2. Click **Create New** on the top-right.

Figure 13-2 Create New



3. In the **Template Details** screen:
    - Choose **Template Type** such as:
        - Issues
        - Work Order
        - Components
        - Operations
        - Permits
        - Measuring Point
        - Items
        - Causes
        - Damages
        - Activity
        - Tasks
        - Measuring Point Document
        - Timesheet
        - Equipment Details
        - Functional Location Details
    - Enter **Template Name**.
    - Add **Description**.
    - Select **Plant**.
    - Add **Tags**.
    - Click **Next** on the top-right.

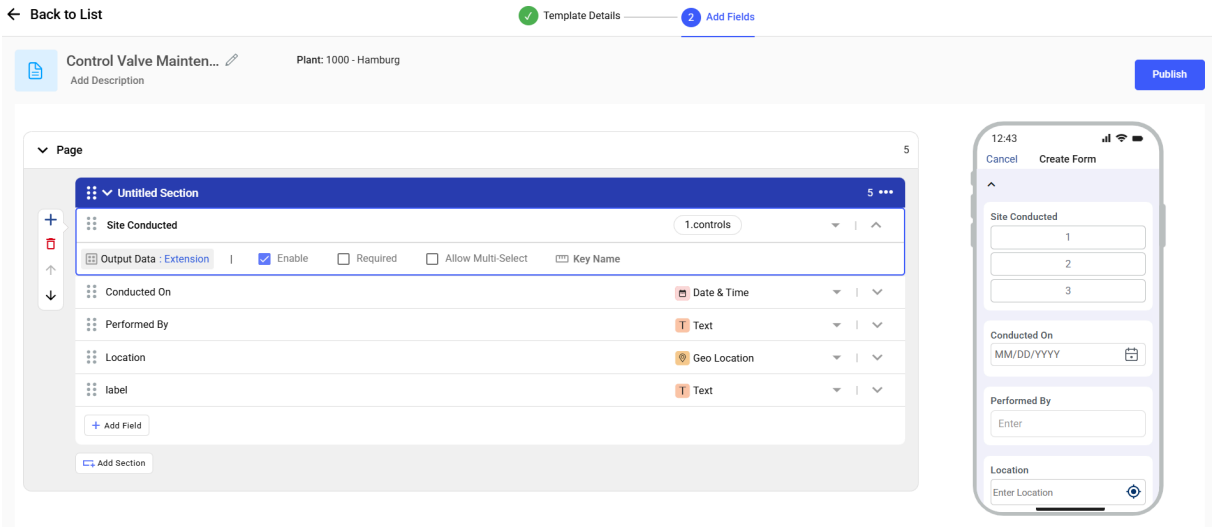
Figure 13-3 Template Details Screen



4. In the **Add Fields** screen:

- Add **Sections** and **Tasks**.
- Define **Response Types** (e.g., Text, Number, Signature, and so on).
- Preview the mobile layout on the right.
- Click **Publish** to make the template live.

Figure 13-4 Add Fields Screen



Note:

- Use the **More** icon and select Edit to edit the details.
- Only one template is allowed per plant. You cannot create multiple templates for the same plant.

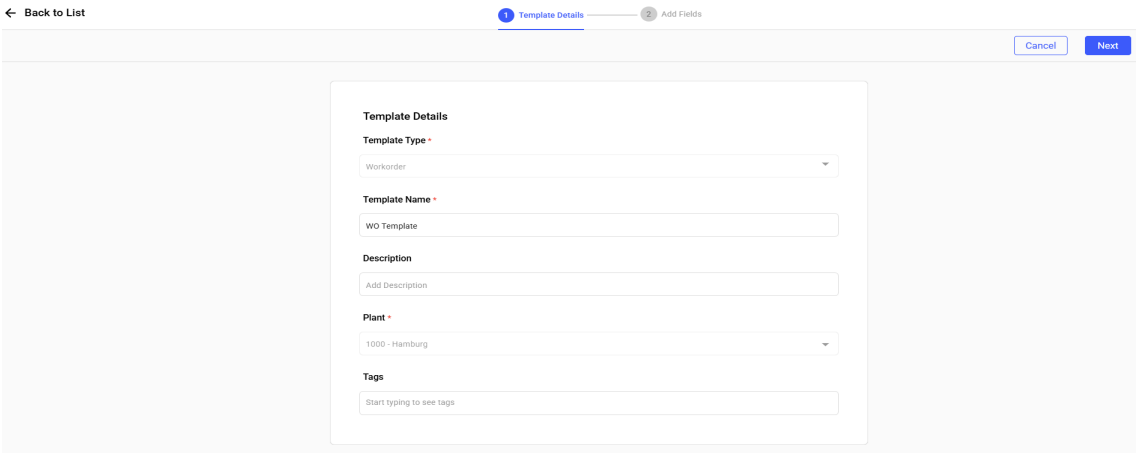
13.1.1. Configure Work Order Creation Template

Work Orders are core to iMaintenance. As an Admin or Supervisor, you can configure the Work Order template using Out-of-the-Box (OOTB) fields—adding or removing fields as needed.

To configure a work order template:

1. Expand the **RACE** module and click **Field Configurations**.
2. Click **Create New** on the top-right.
3. In the **Template Details** screen:
    a. Select the **Template Type** as **Work Order**.
    b. Enter **Template Name**.
    c. Add **Description**.
    d. Select **Plant**.
    e. Add **Tags**.
    f. Click **Next**.

Figure 13-5 Work Order Template

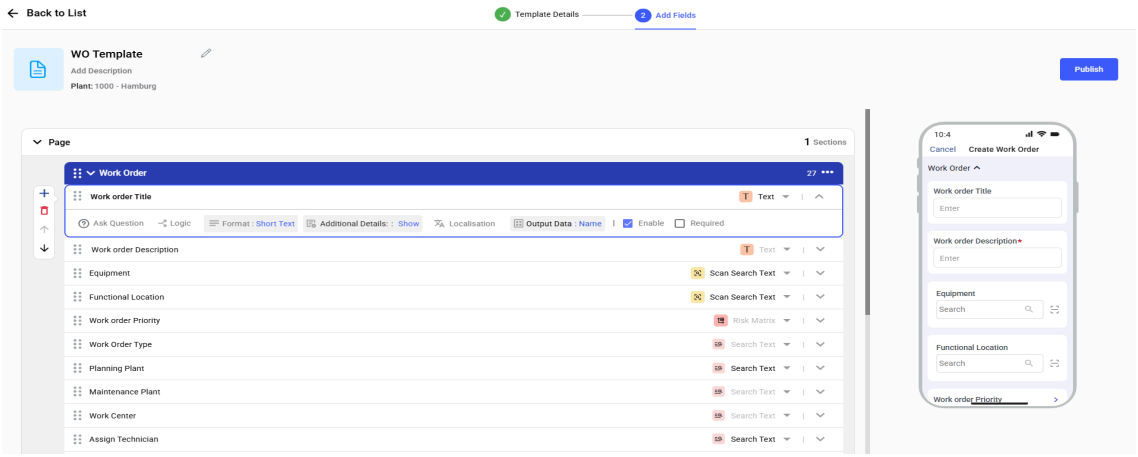


4. In the **Add Fields** screen:
    a. Add **Sections** and **Tasks (fields)** and define **response types (behavior)** as shown in the table below.

Field Name	**Platform Behavior**
Work Order Title	Free-text; mandatory
Work Order Description	Free-text; mandatory
Priority	Drop-down; configurable via Risk Matrix
Equipment	Drop-down with search and scan
Functional Location	Drop-down with search
Work Order Type	Mandatory; default per persona
User Status	Auto-filled from SAP or editable
Assign Technician	Select from active users by workcenter

Work Center	Auto-populates based on FL or Equipment
Planning Plant	Synced from user profile or FL
Maintenance Plant	Derived from Equipment or FL
Work Order Start Date	Date picker; validation logic
Work Order End Date	Must be ≥ start date
Operations, Components, Permits, Forms	Nested templates; config separately
Attachments	Upload; 5MB limit, supports PDF/IMG/MP4

Figure 13-6 Work Order Template Fields



5. Click **Publish**.

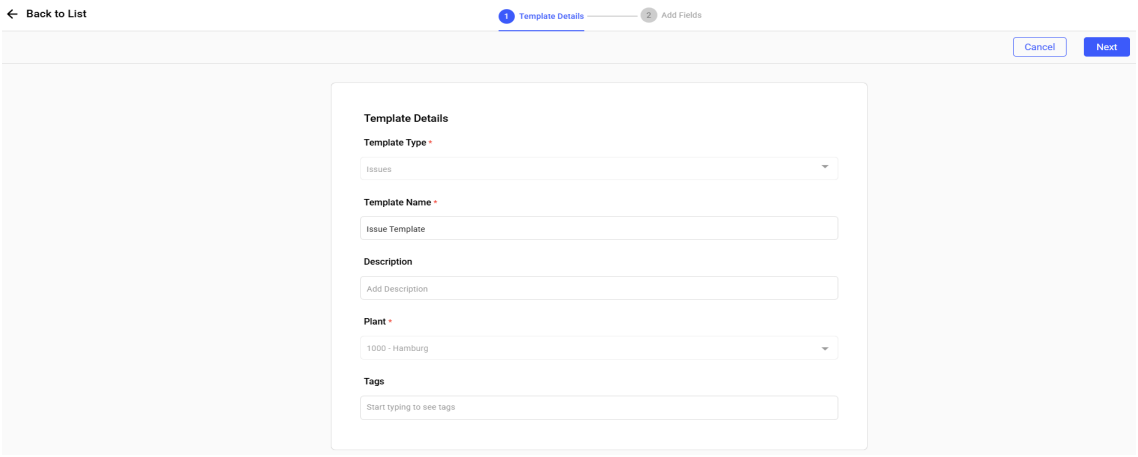
13.1.2. Configure Issue Creation Template

Issues are linked to SAP Notifications, and templates define the data captured for safety, maintenance, or quality reporting. As an Admin or Supervisor, you can configure the Issue template using OOTB fields.

To configure an issue template:

1. Expand the **RACE** module and click **Field Configurations**.
2. Click **Create New** on the top-right.
3. In the **Template Details** screen:
    a. Select the **Template Type** as **Issue**.
    b. Enter **Template Name**.
    c. Add **Description**.
    d. Select **Plant**.
    e. Add **Tags**.
    f. Click **Next**.

    Figure 13-7 Issue Template

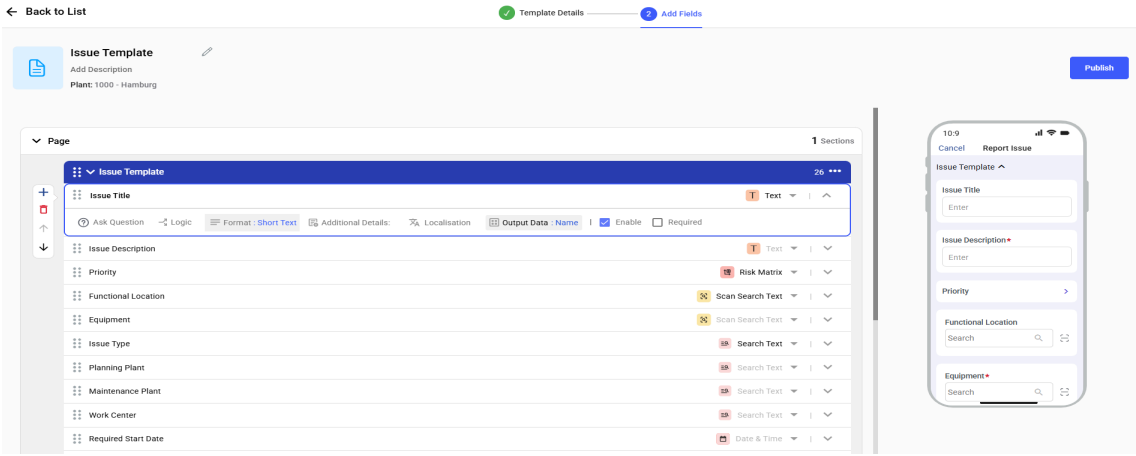


4. In the **Add Fields** screen:
    a. Add **Sections** and **Tasks (fields)** and define **response types (behavior)** as shown in the table below.

Field	**Behavior**
Title	Mandatory free-text
Description	Mandatory Free text
Priority	Drop-down, auto-color coded from Risk Matrix
Equipment	Linked to FL; auto-populate logic; Drop-down with Search and Scan
Functional Location	Hierarchical search with drop-down
Attachments	File/image support (limit: 25MB)

Notification Type	Default per plant; configurable
Maintenance Plant	Drop-down with search option
Planning Plant	Drop-down with search option
Work Center	Drop-down with search option
Required Start Date	Date Field
Required End Date	Date Field

Figure 13-8 Issue Template Fields



5. Click **Publish**.

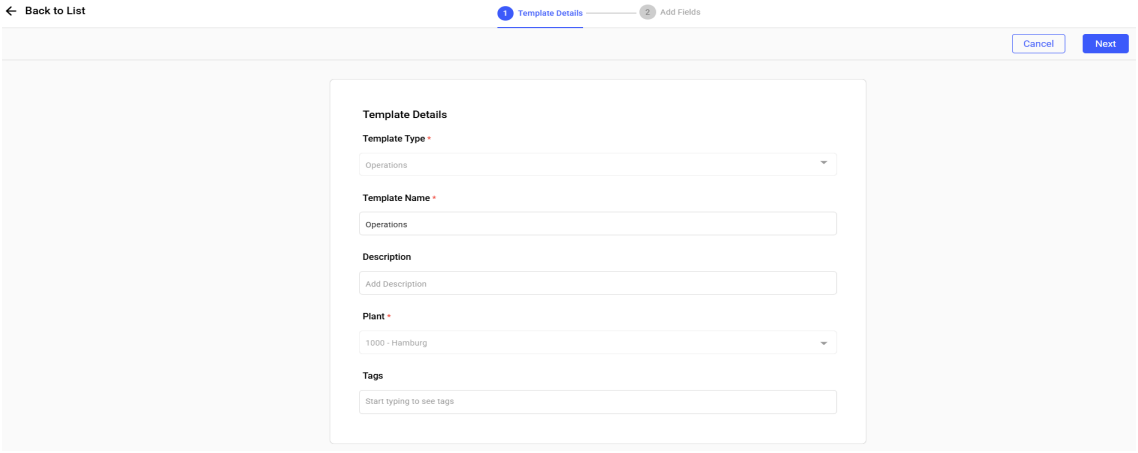
13.1.3. Configure Operation Template

Operations define the individual tasks within a Work Order. As an Admin or Supervisor, you can customize the Operation template using OOTB fields. Each Operations template is linked to its corresponding Work Order template for consistent task management.

To configure an operation template:

1. Expand the **RACE** module and click **Field Configurations**.
2. Click **Create New** on the top-right.
3. In the **Template Details** screen:
    a. Select the **Template Type** as **Operation**.
    b. Enter **Template Name**.
    c. Add **Description**.
    d. Select **Plant**.
    e. Add **Tags**.
    f. Click **Next**.

Figure 13-9 Operation Template

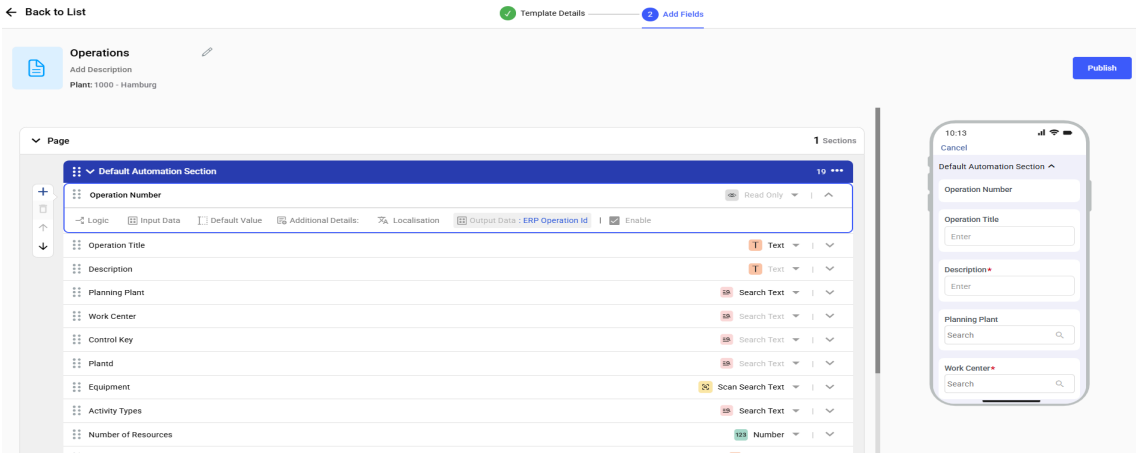


4. In the **Add Fields** screen:
    a. Add **Sections** and **Tasks (fields)** and define **response types (behavior)** as shown in the table below.

Field	**Behavior**
Operation Activity	Auto-incremented activity number
Description	Free-text field
Work Center	Drop-down with search option
Control Key	Drop-down Defines execution type
Plant	Drop-down; Auto populate based on WO/Issue
Planning Plant	Drop-down with search option
Activity Type	Drop-down field
No. of Resources	Number field

Work	Total effort in person-hours; Number field
Unit of Work	Number Field
Duration	Duration in unit; Number field
Start Date	Date Field
End Date	Date Field

Figure 13-10 Operation Template Fields



5. Click **Publish**.

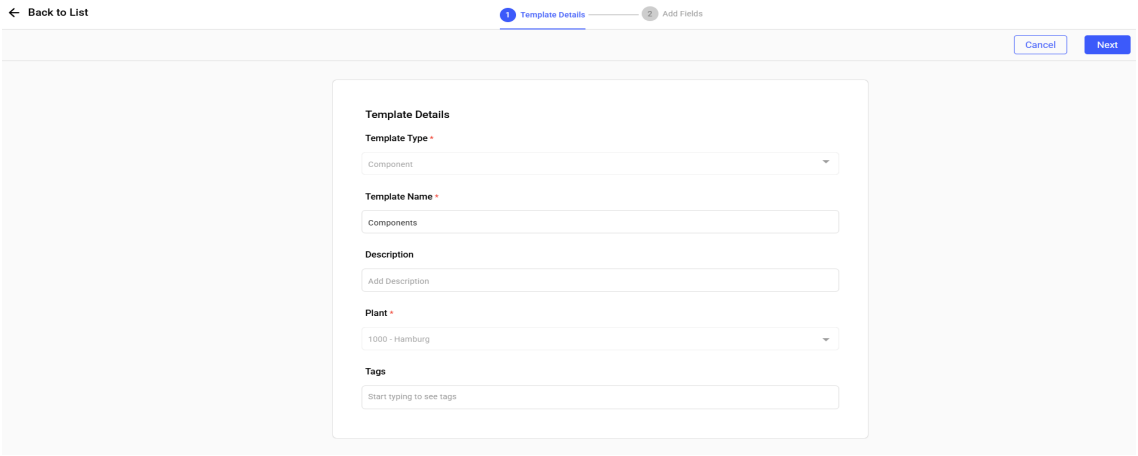
13.1.4. Configure Component Template

Components represent materials like spare parts and consumables linked to Work Orders. As an Admin or Supervisor, you can customize the Component template using OOTB fields. The Component template is linked to the corresponding Work Order template.

To configure a component template:

1. Expand the **RACE** module and click **Field Configurations**.
2. Click **Create New** on the top-right.
3. In the **Template Details** screen:
    a. Select the **Template Type** as **Component**.
    b. Enter **Template Name**.
    c. Add **Description**.
    d. Select **Plant**.
    e. Add **Tags**.
    f. Click **Next**.

Figure 13-11 Component Template

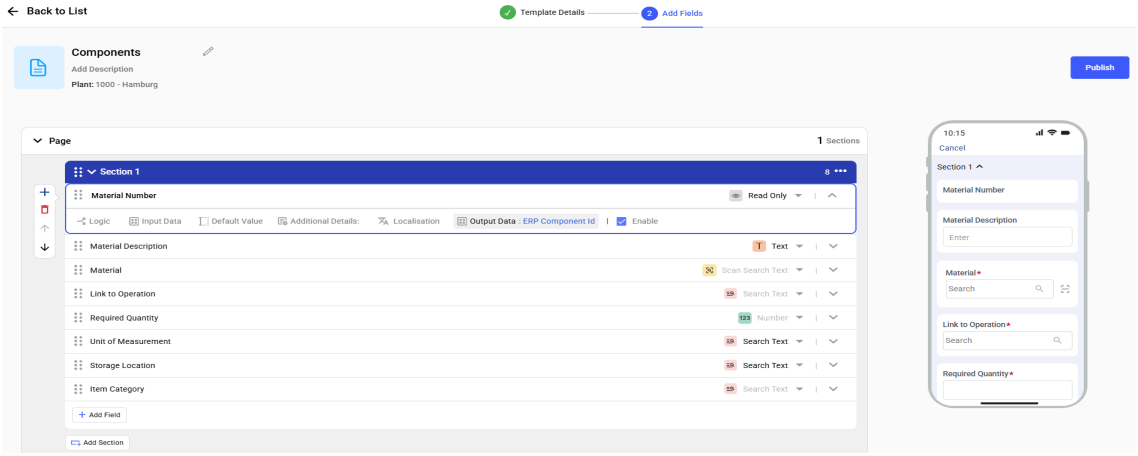


4. In the **Add Fields** screen:
    a. Add **Sections** and **Tasks (fields)** and define **response types (behavior)** as shown in the table below.

Field	**Behavior**
Material Number	Number Field
Material Description	Auto-populated
Item Category	Drop-down field with search

Required Quantity	Mandatory, Number field
Unit of Measurement	Auto-populate from material master
Storage Location	Drop-down with Search
Link to Operation	Drop-down of existing operations

Figure 13-12 Component Template Fields



5. Click **Publish**.

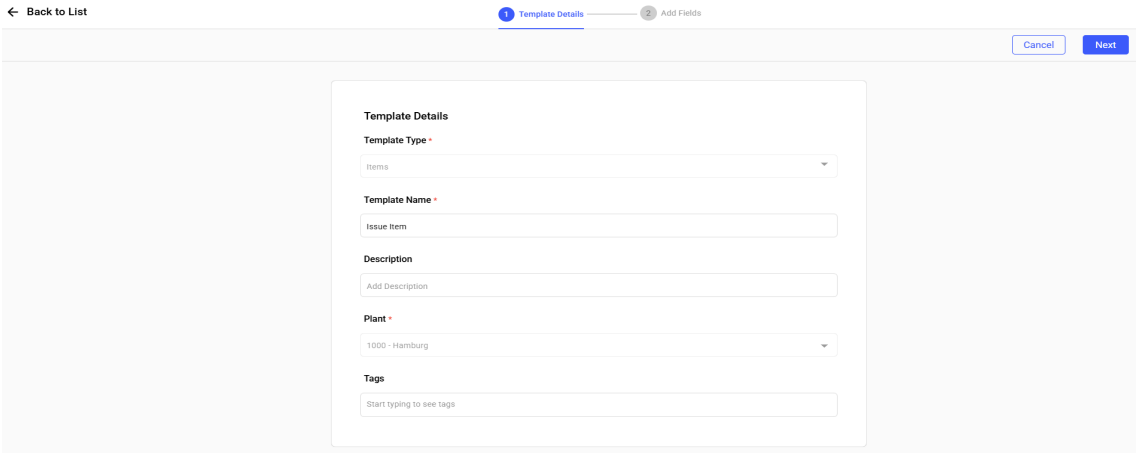
13.1.5. Configure Item Template

Items represent materials linked to Issues, such as parts or consumables. As an Admin or Supervisor, you can customize the Item template using OOTB fields. The Item template is connected to the corresponding Issue template.

To configure an item template:

1. Expand the **RACE** module and click **Field Configurations**.
2. Click **Create New** on the top-right.
3. In the **Template Details** screen:
    a. Select the **Template Type** as **Item**.
    b. Enter **Template Name**.
    c. Add **Description**.
    d. Select **Plant**.
    e. Add **Tags**.
    f. Click **Next**.

Figure 13-13 Item Template

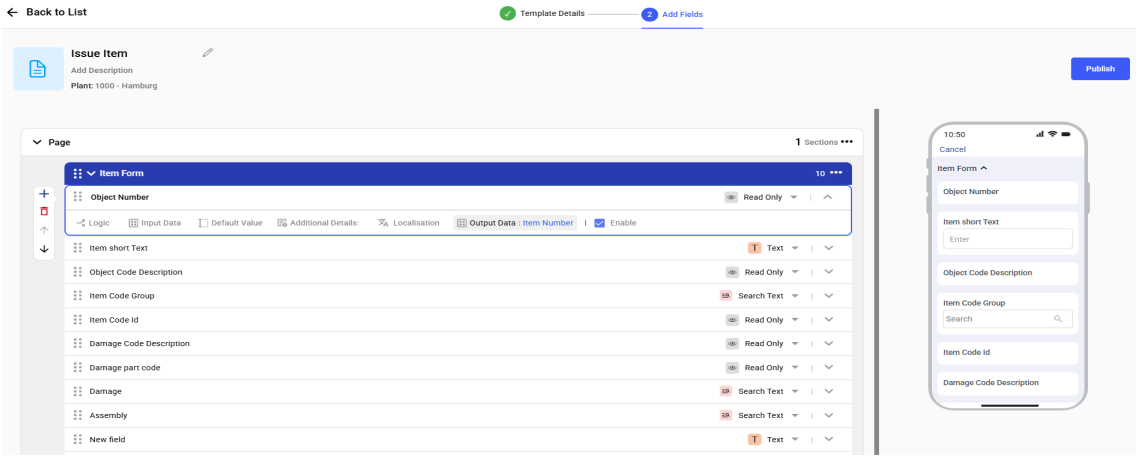


4. In the **Add Fields** screen:
    a. Add **Sections** and **Tasks (fields)** and define **response types (behavior)** as shown in the table below.

Field	**Behavior**
Item number	Auto incremental value
Item Code group	Drop-down with search

Object part code	Auto populates from Item Code Group
Damage Code group	Drop-down with search
Damage part code	Auto Populates
Item short text	Text field

Figure 13-14 Issue Template Fields



5. Click **Publish**.

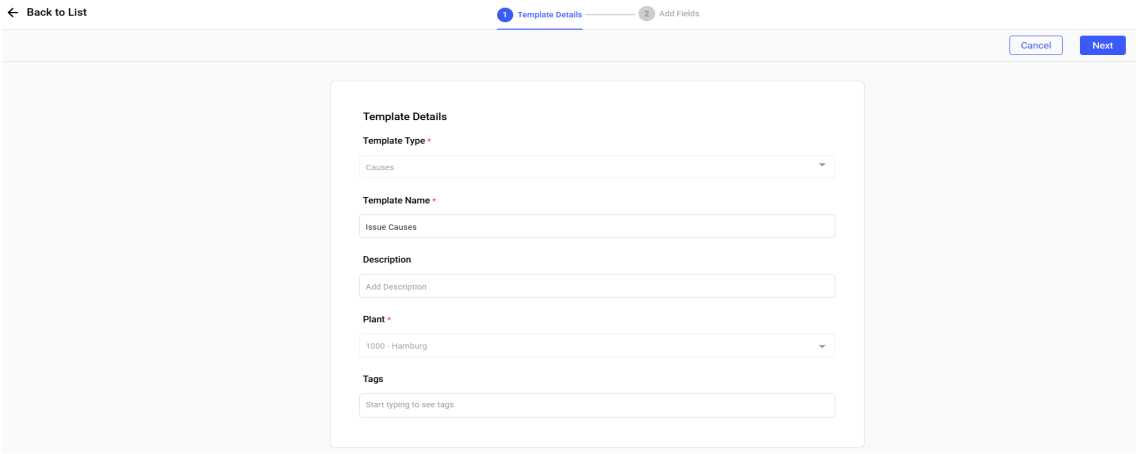
13.1.6. Configure Cause Template

Causes capture the root reason behind an issue and are linked to the Issue. As an Admin or Supervisor, you can customize the Causes template using OOTB fields. The Cause template is associated with the corresponding Issue template.

To configure a cause template:

1. Expand the **RACE** module and click **Field Configurations**.
2. Click **Create New** on the top-right.
3. In the **Template Details** screen:
    a. Select the **Template Type** as **Cause**.
    b. Enter **Template Name**.
    c. Add **Description**.
    d. Select **Plant**.
    e. Add **Tags**.
    f. Click **Next**.

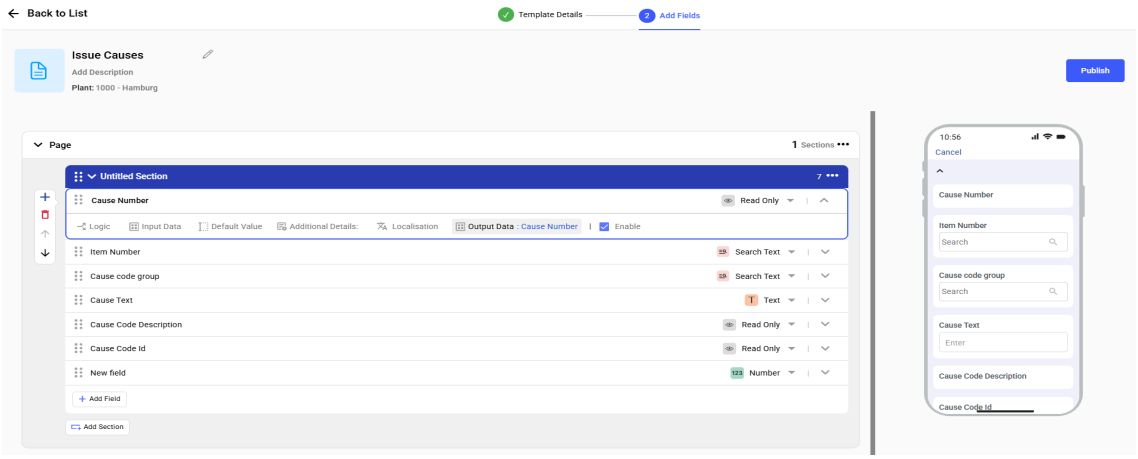
Figure 13-15 Cause Template



4. In the **Add Fields** screen:
    a. Add **Sections** and **Tasks (fields)** and define **response types (behavior)** as shown in the table below.

Field	**Behavior**
Cause number	Auto incremental value; Read Only Field
Item number	Drop-down with search
Cause code group	Drop-down with search
Cause code	Auto-populates from Code group; Read Only
Cause text	Text Field

Figure 13-16 Cause Template Fields



5. Click **Publish**.

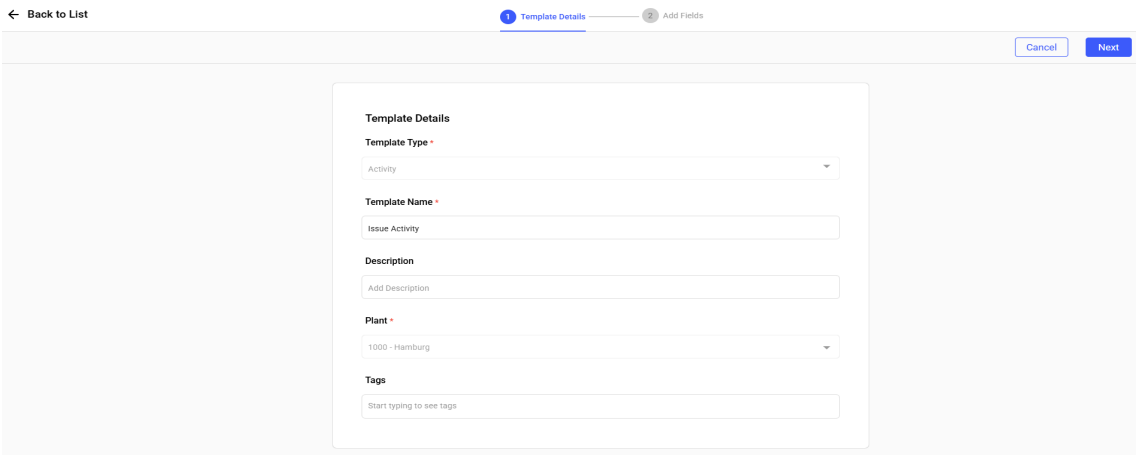
13.1.7. Configure Activity Template

Activities are detailed tasks within an Issue, used to track execution, performance, and compliance. As an Admin or Supervisor, you can customize the Activity template using OOTB fields. Each Activity template is linked to the corresponding Issue template, enabling structured task management and reporting.

To configure an activity template:

1. Expand the **RACE** module and click **Field Configurations**.
2. Click **Create New** on the top-right.
3. In the **Template Details** screen:
    a. Select the **Template Type** as **Activity**.
    b. Enter **Template Name**.
    c. Add **Description**.
    d. Select **Plant**.
    e. Add **Tags**.
    f. Click **Next**.

Figure 13-17 Activity Template

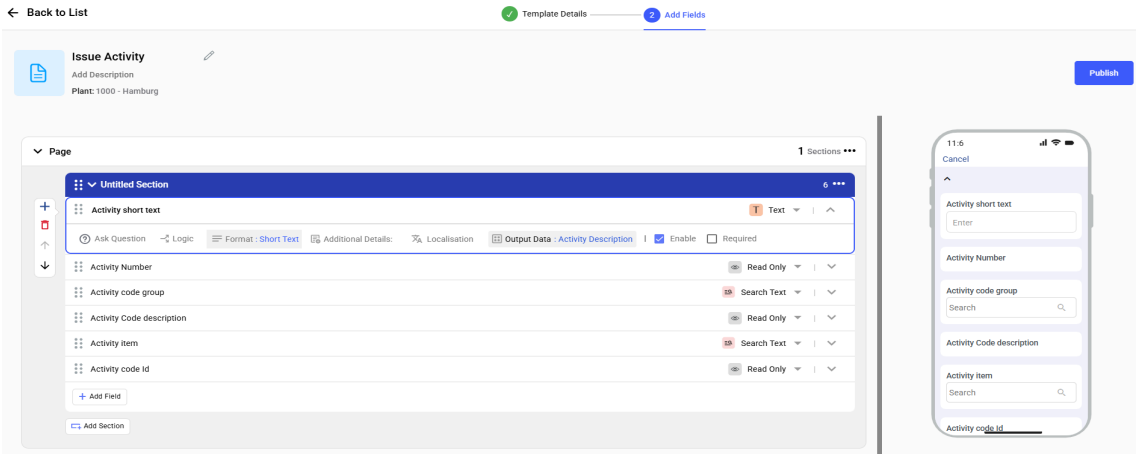


4. In the **Add Fields** screen:

a. Add **Sections** and **Tasks (fields)** and define **response types (behavior)** as shown in the table below.

Field	**Behavior**
Activity number	Auto populates Incremental Number
Item number	Auto populate based on Item Field Configurations
Activity code group	Drop-down with Search
Activity code (Auto populate)	Auto-populated from code group
Activity short text	Describes Activity; a text field

Figure 13-18 Activity Template Fields



5. Click **Publish**.

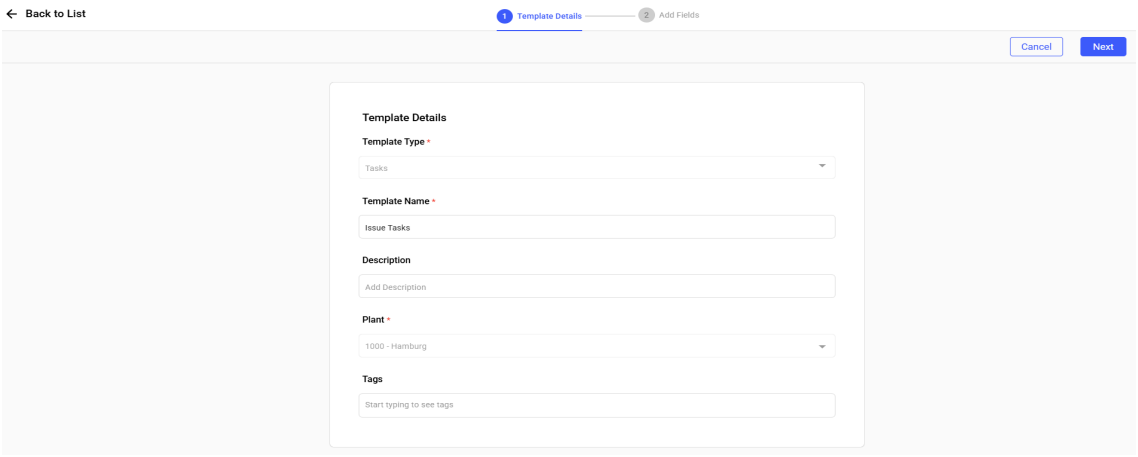
13.1.8. Configure Task Template

Tasks represent specific actions within an Issue and are configured using Task templates. As an Admin or Supervisor, you can customize the Task template using OOTB fields. Each Task template is linked to the corresponding Issue template, ensuring consistent action.

To configure a task template:

1. Expand the **RACE** module and click **Field Configurations**.
2. Click **Create New** on the top-right.
3. In the **Template Details** screen:
    a. Select the **Template Type** as **Task**.
    b. Enter **Template Name**.
    c. Add **Description**.
    d. Select **Plant**.
    e. Add **Tags**.
    f. Click **Next**.

Figure 13-19 Task Template

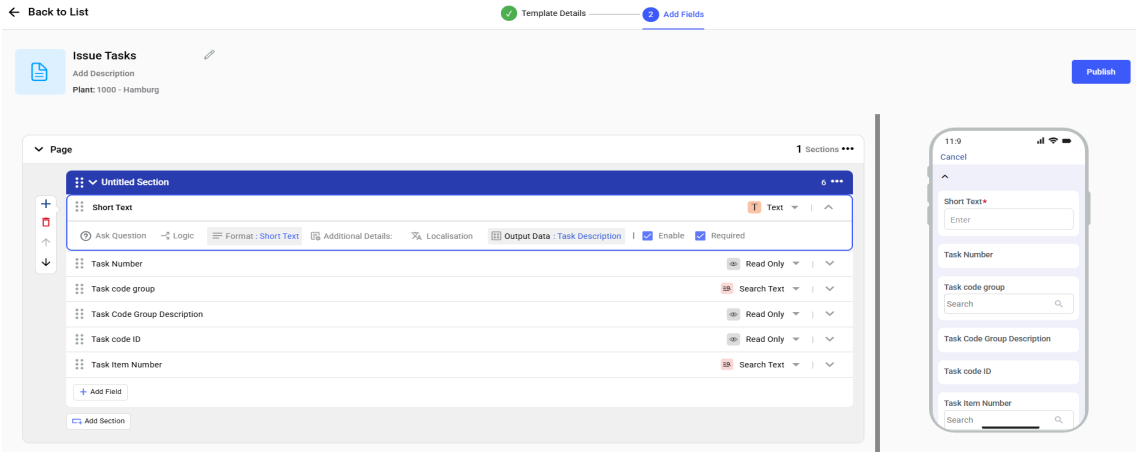


4. In the **Add Fields** screen:

a. Add **Sections** and **Tasks (fields)** and define **response types (behavior)** as shown in the table below.

Field	**Behavior**
Task number	Auto populates Incremental Number
Item number	Auto populate based on Item Field Configurations
Task code group	Drop-down with Search
Task code	Auto-populated from task group
Task short text	Describes task; a text field

Figure 13-20 Task Template Fields



5. Click **Publish**.

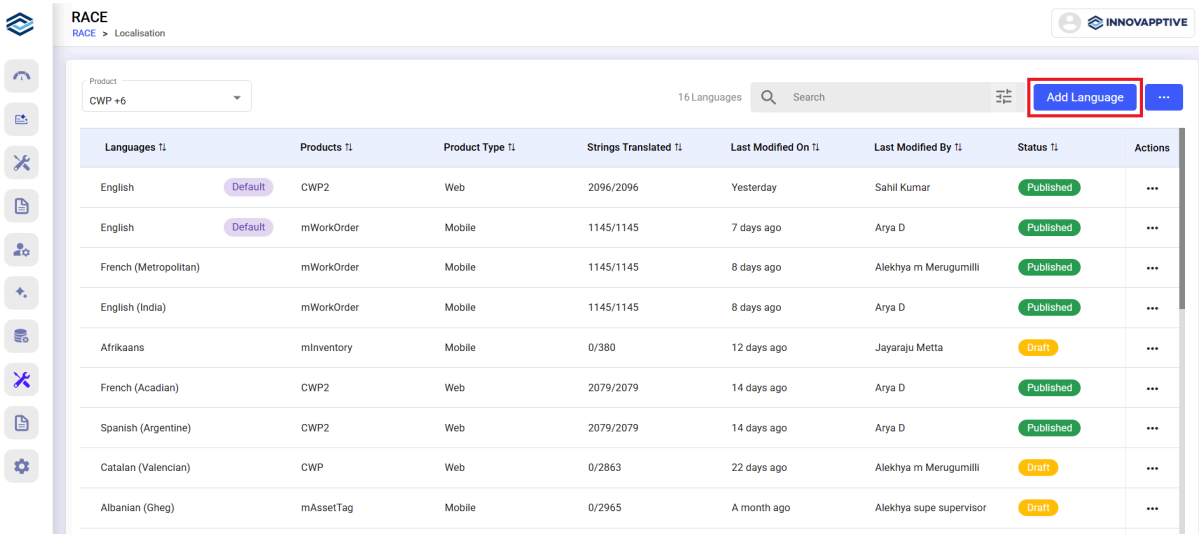
13.2. Manage Localization

The Localization feature allows Admins to manage language translations for all Innovapptive products—both web and mobile. It's particularly useful for aligning UI terms with local business terminology or translating content into regional languages.

To add a new language:

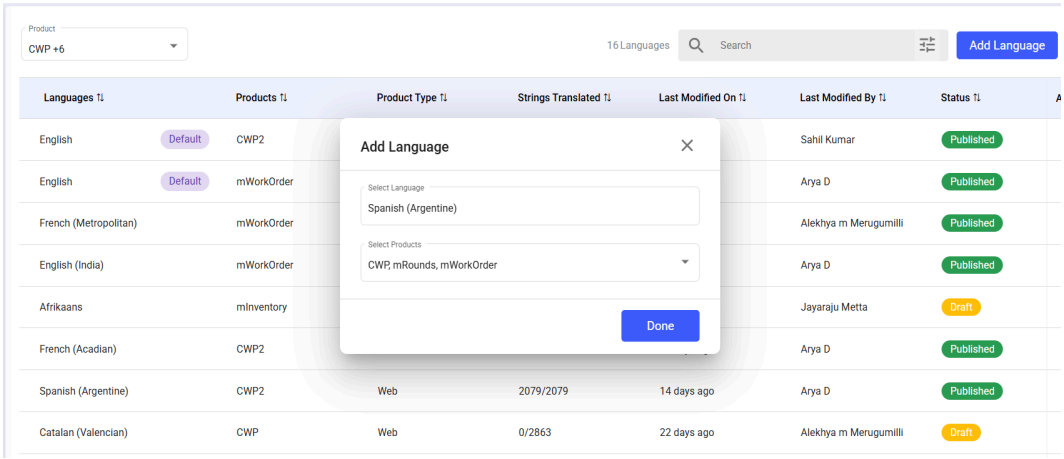
1. Expand **RACE** and click **Localization**.
2. Click **Add Language** and select **Add Manually**.

Figure 13-21 Localization Screen



3. In the **Add Language** window, select the **Language** and applicable **Products**.

Figure 13-22 Add Language



4. Click **Done**.

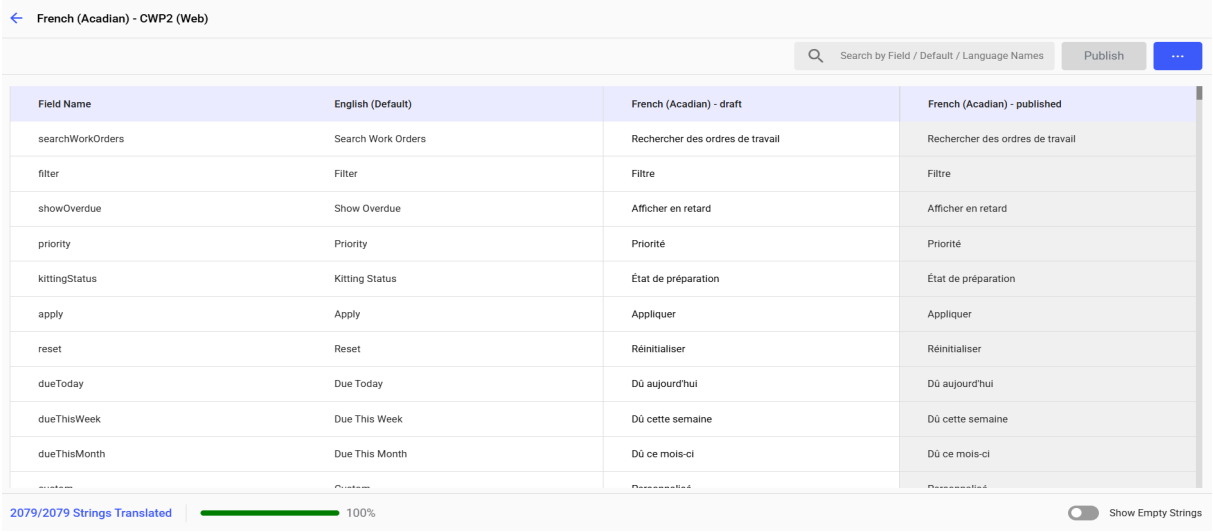
   The newly created language is displayed in the list.

5. Click the **More** icon and select **Edit**.

   You can view the total translated string count for that product in its released version.

6. Translate all the strings for the selected language.

Figure 13-23 Translate Strings



7. Click **More** icon on the top right.
   - Select **Clear All Strings** to clear all strings at once.
   - Select **Refresh AI Translations** to use AI suggestions and clear them if needed.

> **Note:**
> Select the **Show Empty Strings** toggle at the bottom to quickly view the empty strings.

8. Once all the strings are translated, click **Publish**.

In the Localization screen, you can also,

- Select the **Product** drop-down to view All Products or individual products (e.g., CWP Web, iMaintenance Mobile, etc.) By default, the filter is applied to 'All Products', showing all languages across all products.
- Click on the Sort icon next to each column header to sort alphabetically, numerically, or by date.
- View the number of languages currently listed in the table (e.g., "18 Languages") at the top.
- Use the **Search** bar at the top right to quickly find a specific language or product.
- Use the **Filter** icon to filter the list based on Last Modified On or Last Modified By.
- Click **Add Language** and select **Upload Excel** to upload translations via Excel templates.
- Click the More icon and select **Download Excel Template** to download the template.

14. Configure Risk Evaluation with the Risk Matrix

The **Risk Matrix** is a powerful configuration tool that lets you define how risks are calculated and prioritized based on incident data. It supports consistent and objective decision-making across inspections, observations, and safety reporting.

Earlier: In many maintenance and safety programs I've seen, risk assessments were either one-size-fits-all or stuck in rigid templates. Teams had to rely on paper forms or inflexible tools where updating risk criteria—like likelihood or severity—meant IT involvement or a long wait for customization.

The result?

Risk evaluations that didn't reflect real-world changes or site-specific conditions. Worse, teams often skipped the process altogether because it felt disconnected from their actual workflows.

This led to two major problems:

- Outdated or irrelevant risk profiles – creating blind spots in hazard identification.
- Low user adoption – because the tools didn't match how frontline teams actually work.

Now, configuring a Risk Assessment Matrix is completely no-code and flexible. With our platform, EHS managers or planners can tailor the matrix—severity, likelihood, risk levels, color coding—to match company policies or evolving field realities, all without a developer. You can update parameters instantly, deploy them across teams, and ensure everyone is using the latest risk model—whether they're on-site or remote.

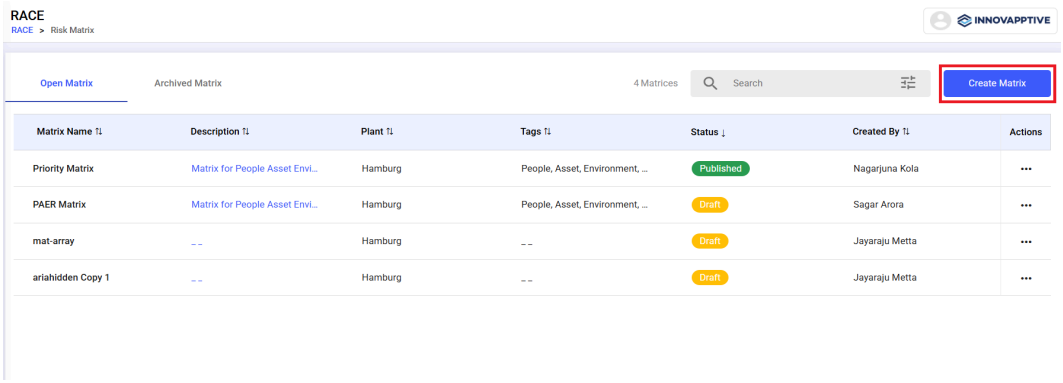
As an outcome - Smarter risk decisions, higher compliance, and a safety culture that adapts as fast as your operations do."

14.1. Create a Risk Matrix

To create a risk matrix:

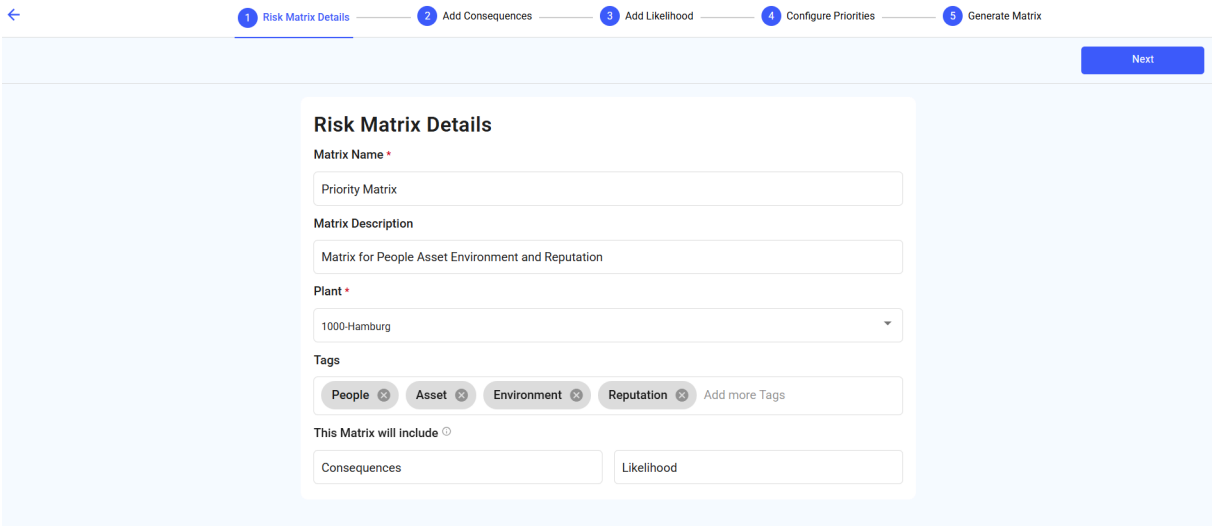
1. Navigate to **RACE** and select **Risk Matrix**.
2. Click **Create Matrix**.

Figure 14-1 Create Risk Matrix



3. In the **Risk Matrix Details** screen, enter Matrix Metadata:
   - Matrix Name
   - Matrix Description
   - Plant
   - Category (Issue or Work Order)
   - Type
   - Prioritization Profile
   - Tags
   - Define matrix components (e.g., Consequences, Likelihood)
   - Click **Next**.

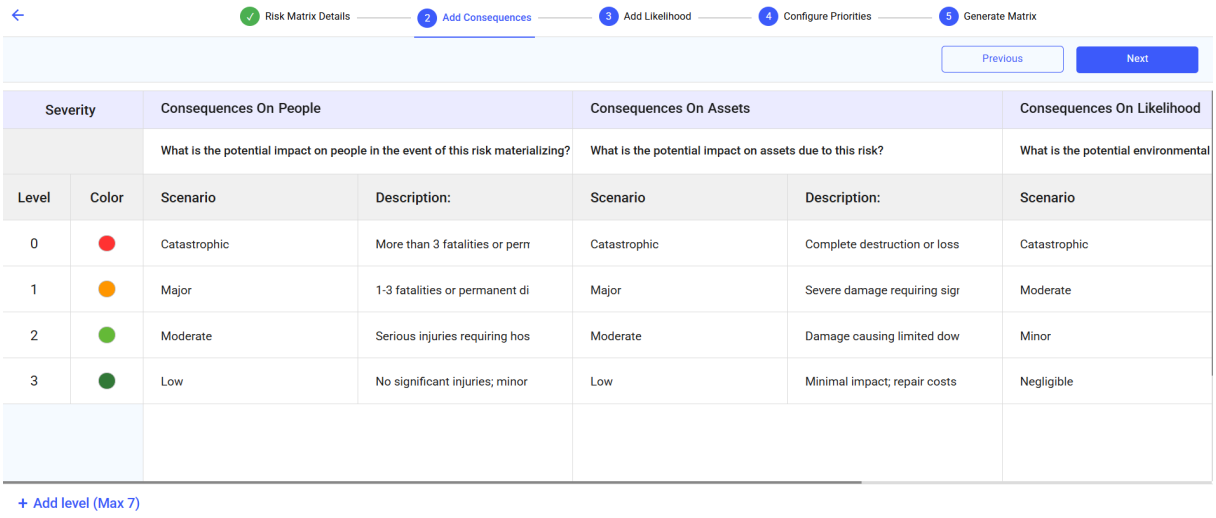
Figure 14-2 Risk Matrix Details



4. In the **Add Consequences** screen, add consequences,

- Click the **+ Add Consequences** button at the right-side.
- Select the relevant color in the **Color** column.
- Define up to 5 consequence categories (e.g., People, Assets, Environment).
  - Add an evaluation question for each category.
  - Define severity levels (0–5) with:
    - A label
    - A scenario
    - A description
- You can add or remove levels as needed.
- Click **Next**.

Figure 14-3 Add Consequences

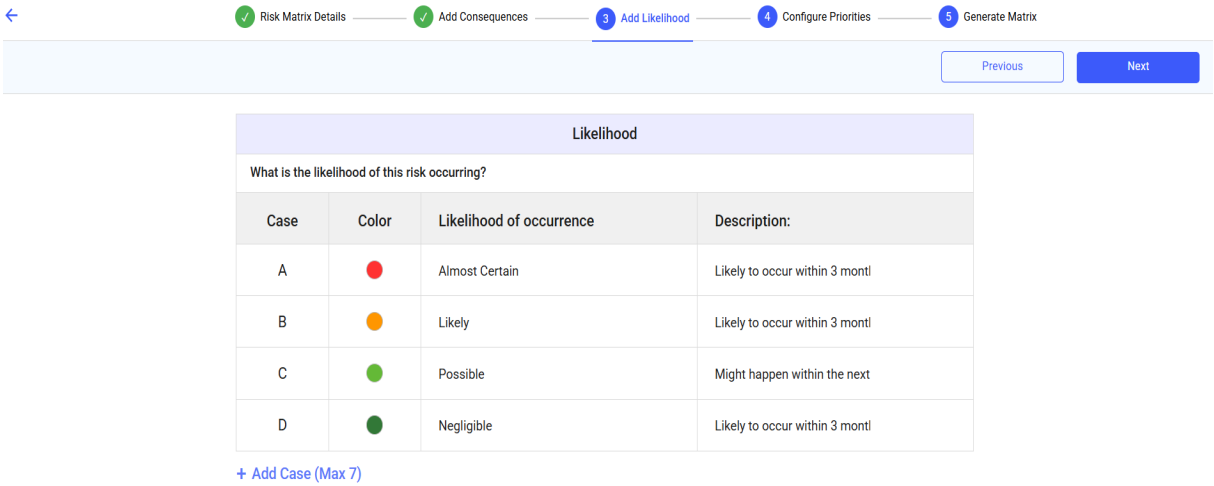


5. In the **Add Likelihood** screen, add Likelihood.
   - Click **+ Add Case** at the bottom.
   - Select the relevant color in the **Color** column.
   - Define scenario in the **Likelihood of occurrence** column.
   - Add a description in the **Description** field.

> **Note:**
> You can add maximum 7 cases.

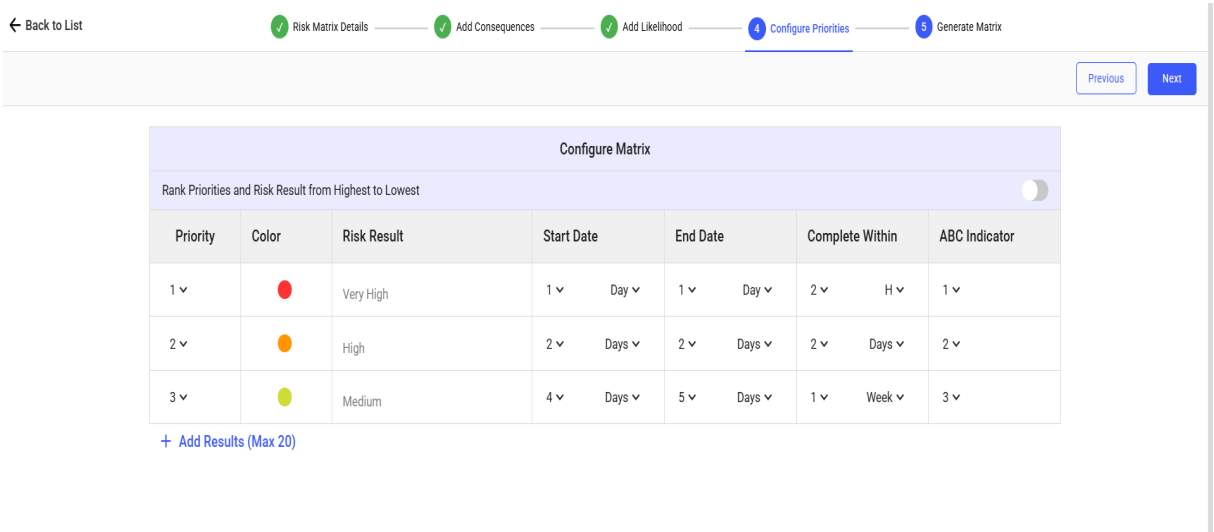
   - Click **Next**.

Figure 14-4 Add Likelihood



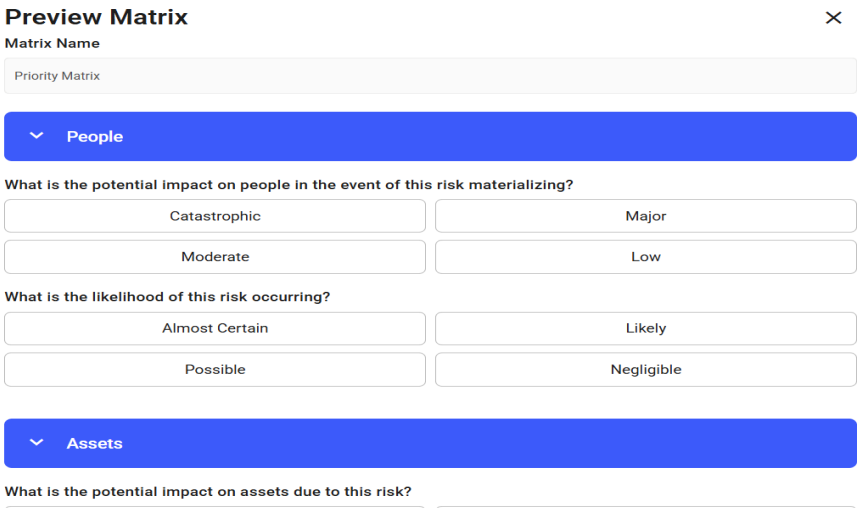
6. In the **Configure Priorities** screen, configure Priorities.
   - Click the **+ Add Results** button at the bottom.
   - Assign priorities (0, 1, 2…) based on consequence and likelihood combinations:
     - Name the **risk results**.
     - Select start date and end date.
     - Set **response timeframes** (e.g., 1 Day, 2 Weeks).
     - Map risk level values to ABC indicators per plant, issue or work order (e.g., High risk level can be mapped to both A and B classes.
     - Rank results from highest to lowest if needed.
   - Click **Next**.

Figure 14-5 Configure Priorities



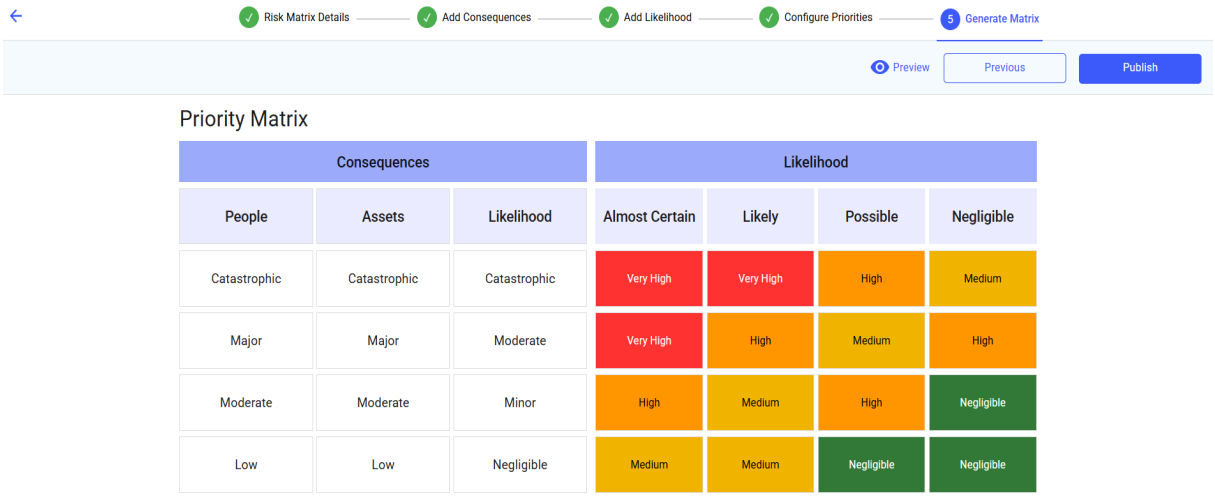
7. In the **Generate Matrix** screen, generate the matrix:
    - Review the color-coded matrix.
    - Each cell represents a risk level (e.g., Very High, Medium).
    - Click on the cell to change the risk level.
    - Click **Preview** to view risk matrix in its final form.

Figure 14-6 Matrix Preview



- Click **Publish**.

Figure 14-7 Generate Matrix



The matrix is now available for use in incident reporting or form configurations.

Use **More** icon to Edit, Copy, Preview, or Archive a matrix.

15. Customize Platform Settings

The **Settings** module provides administrators with the tools to manage platform-wide preferences that directly affect the iMaintenance mobile application. These settings include storage behavior, theme configurations, and sync options that enhance user experience and app performance.

This chapter has the following topics:

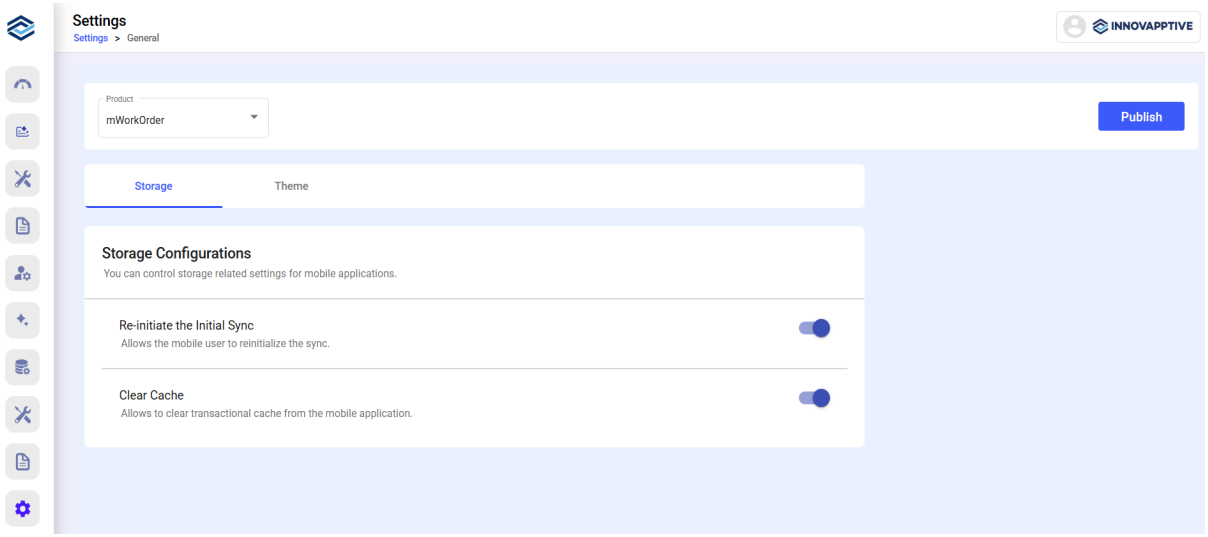
15.1. Manage Storage & Sync Settings

The **Storage** tab under **General** Settings allows admins to control how the mobile app handles data, including cache management and full sync initiation.

To manage storage and sync settings:

1. Navigate to **Settings** and click the **Storage** tab.
2. Select the **Product** (e.g., iMaintenance).
3. Enable or disable the storage related settings and click **Publish**.

Figure 15-1 Storage Settings



It has two primary options:

Setting	Description
Re-initiate Initial Sync	Enables mobile users to trigger a full sync with backend systems, useful when resolving sync issues or applying new configurations.
Clear Cache	Adds a "Clear Cache" button in the mobile app, allowing users to delete local data (junk/temporary files) to improve performance.

Once enabled and published the settings, they are applied to the selected product (e.g., iMaintenance) within the mobile application.

15.2. Define Mobile Data Sync Preferences

This feature lets you optimize how data is synchronized to mobile devices—minimizing sync times and improving app performance. Preferences can be set at **tenant**, **plant**, and **role** levels.

To define mobile data sync preferences:

1. Expand **Settings** and click **Mobile Data Preferences**.
2. Select the **Product** (e.g., iMaintenance).
   The screen appears with two tabs:

Tab	Purpose
Global Data	Define default data fields for each plant (e.g., Maintenance Plant, Planning Plant)
Transactional Data	Define sync filters for Work Orders and Issues based on user roles

In this screen, you can,

- Rename or remove fields
- Add new fields
- Reorder fields
- Configure sync durations per role

Example: Supervisors may sync 7 days of data, while Technicians sync 3.

Figure 15-2 Global Data

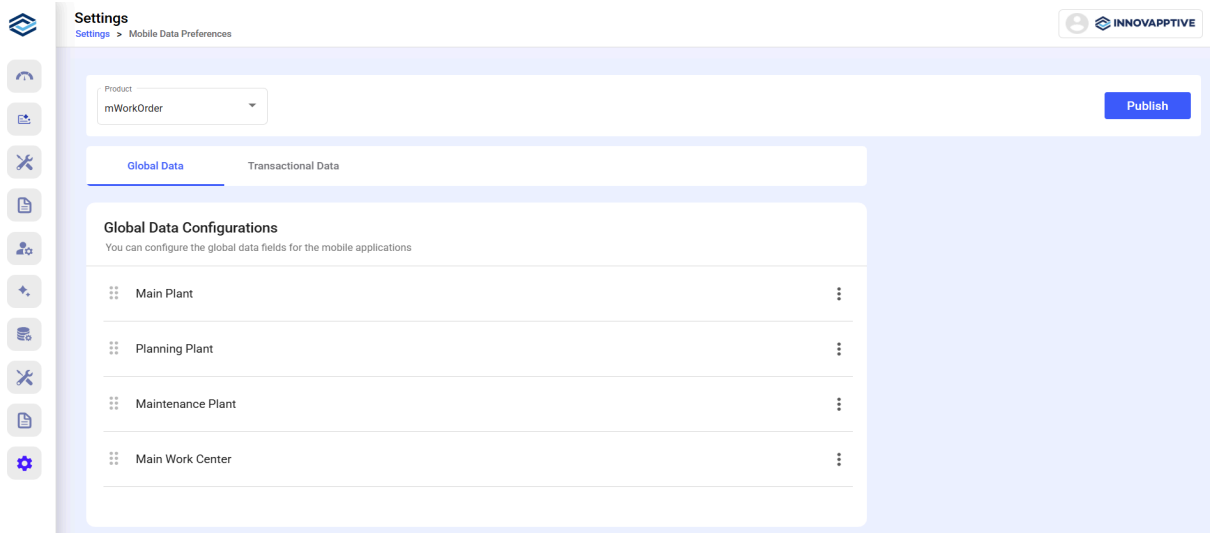
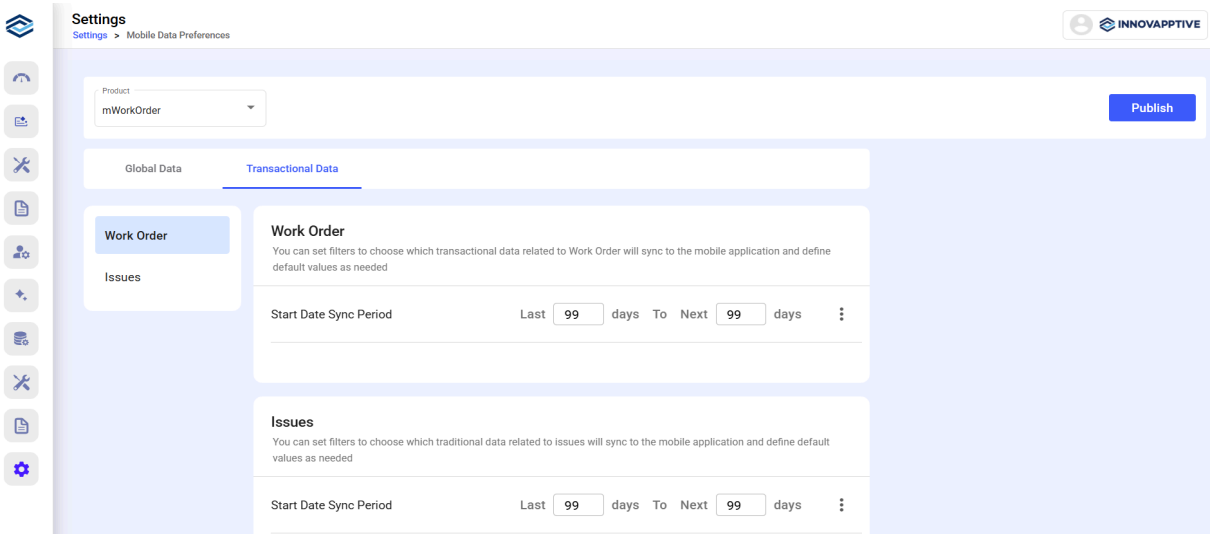


Figure 15-3 Transactional Data



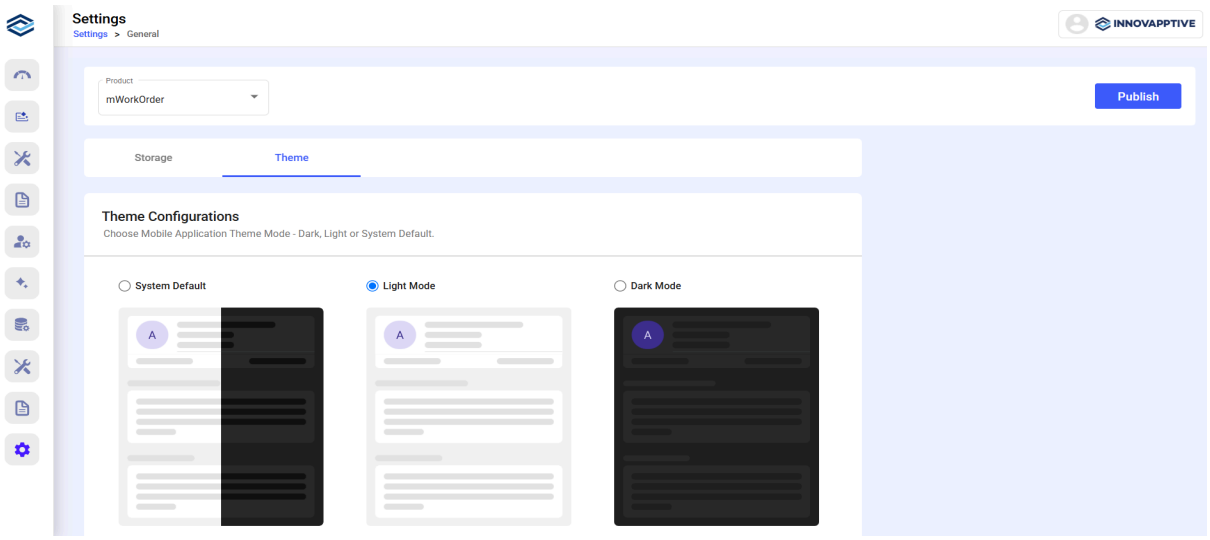
15.3. Apply Theme Configurations

Admins can customize the **visual appearance** of the iMaintenance mobile app using predefined themes to match user environments or company branding.

To apply theme configurations:

1. Navigate to **Settings** and click the **Theme** tab.
2. Select the **Product** (e.g., iMaintenance).
3. Choose a theme and click **Publish**.

Figure 15-4 Theme Settings



You can choose from the following mobile theme modes:

Mode	Description
System Default	Uses the theme based on the user's device setting (light/dark mode)
Light Mode	Clean, bright interface with dark text—ideal for daylight use
Dark Mode	Low-light UI for night shifts or dim environments (e.g., mining, manufacturing)

Theme preferences apply globally for that product once published.

16. Set Up Notifications

The **Notification Engine** gives administrators control over system-generated alerts, helping teams stay informed about workflow events without being overwhelmed. It's integrated with the iMaintenance mobile app, enabling flexible communication across devices.

16.1. Understand the Notification System

The notification system is built to support automated communication based on user actions and workflow milestones. It uses **third-party services for email delivery** and is governed by built-in templates and logic.

Key components:

Component	Description
Recipients	Defines who gets notified (e.g., assignees, supervisors)
Timing	When notifications are triggered (e.g., assignment, completion)
Content	Predefined messages that communicate what happened
Type	The nature of the event (e.g., task assigned, issue created)

These controls ensure that users receive timely alerts relevant to their role—improving visibility without unnecessary noise.

17. Build Dashboards and Reports

The platform offers robust tools to visualize, track, and analyze operational data through customizable dashboards and reports. These tools help supervisors and technicians gain real-time insights into asset health, work order status, performance metrics, and more.

This section has the following topics:

17.1. View the Asset360 Dashboard

The Asset360 Dashboard provides a 360o view of real-time overview of work center and asset performance, maintenance costs, resource utilization, work order status, workforce efficiency and historical data for assigned plants. It helps supervisors make informed decisions by tracking KPIs across various operational dimensions.

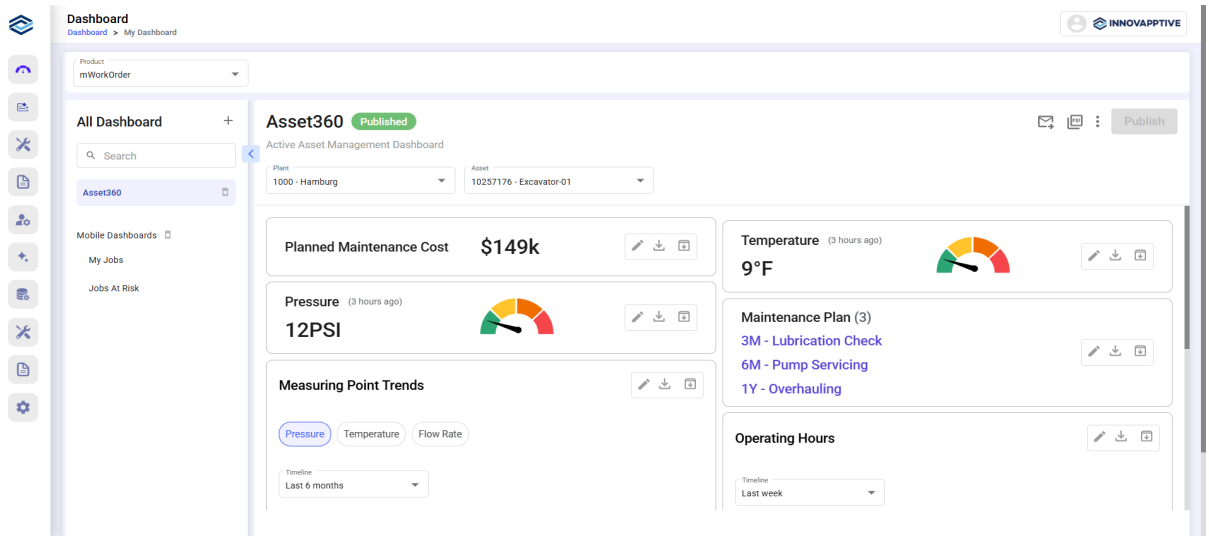
For example, Earlier, the supervisor worked in silos with delayed data, manual KPI tracking, and reactive decisions. Cost visibility was limited, and ensuring compliance demanded significant manual effort.

With Asset360 Dashboard, supervisors get a real-time, 360° view of their work centers—spotting under-performing equipment or technicians. Powered by live data, AI-driven insights, and role-based dashboards, it drives proactive, efficient, and audit-ready maintenance operations and reduces overall maintenance costs.

Key actions available:

- **Selecting Plants and Assets** to track their performance.
- **Viewing key metrics** such as:
    - Actual Maintenance Cost
    - Planned Maintenance Cost
    - Equipment Downtime
    - Work orders with System Status, User Status, and Priority
    - Issues with System Status, User Status, and Priority
    - Mean Time To Repair

- **Customizing widgets** (only title and color) and publishing updates.
- **Downloading widget data** for offline use.
- **Archiving widgets** that are no longer needed.
- **Sharing dashboards via email** using the Mail icon.
- **Exporting dashboards** as PDFs.
- **Searching dashboards** using the search bar.



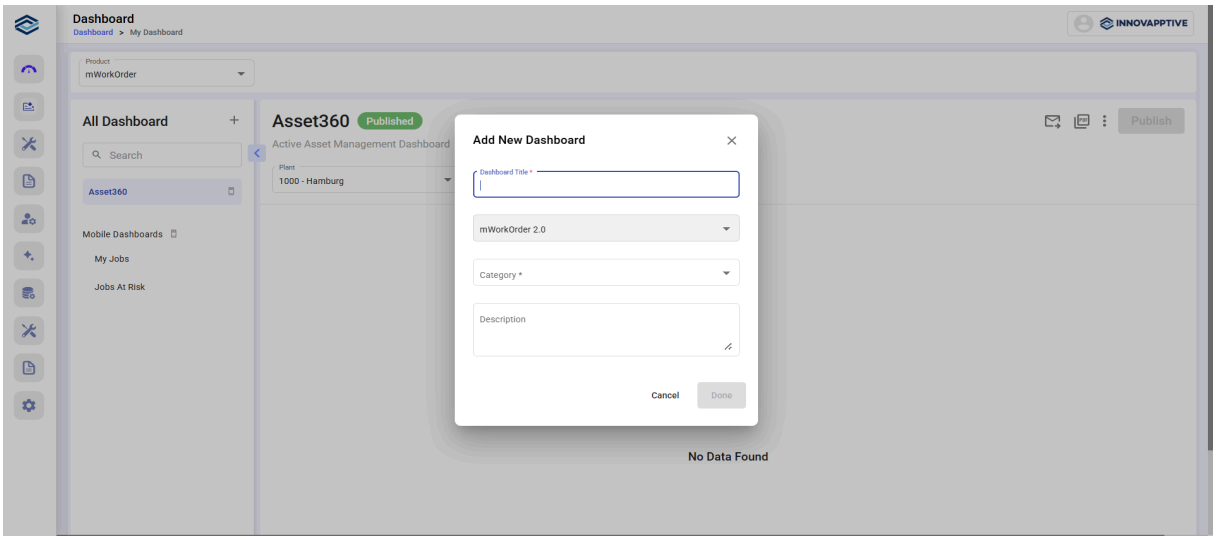
Note:
You can modify only the title and color of the widgets and click **Publish** on the top right. The changes made to the Asset360 Dashboard are reflected in the iMaintenance mobile app.

17.2. Create Dashboards

You can create custom dashboards tailored to operational needs, giving different user personas visibility into the most relevant data.

To create a dashboard:

1. Navigate to **Dashboard** > **My Dashboard**.
2. Click the **Add (+)** icon next to **All Dashboards** on the left panel.
3. In the **Add New Dashboard** window:
    - Enter a title.
    - Select a product (e.g., *iMaintenance*).
    - Choose a category (e.g., *Jobs at Risk, My Jobs*).
    - Add a description.



4. Click **Done** to create the dashboard.

    You can now begin adding widgets to the dashboard.

    Tip: Fields marked with an asterisk (*) are mandatory and must be filled out to create a dashboard.

17.3. Add and Configure Widgets

Widgets visually represent operational data on your dashboard using charts, tables, or KPIs.

To add a widget:

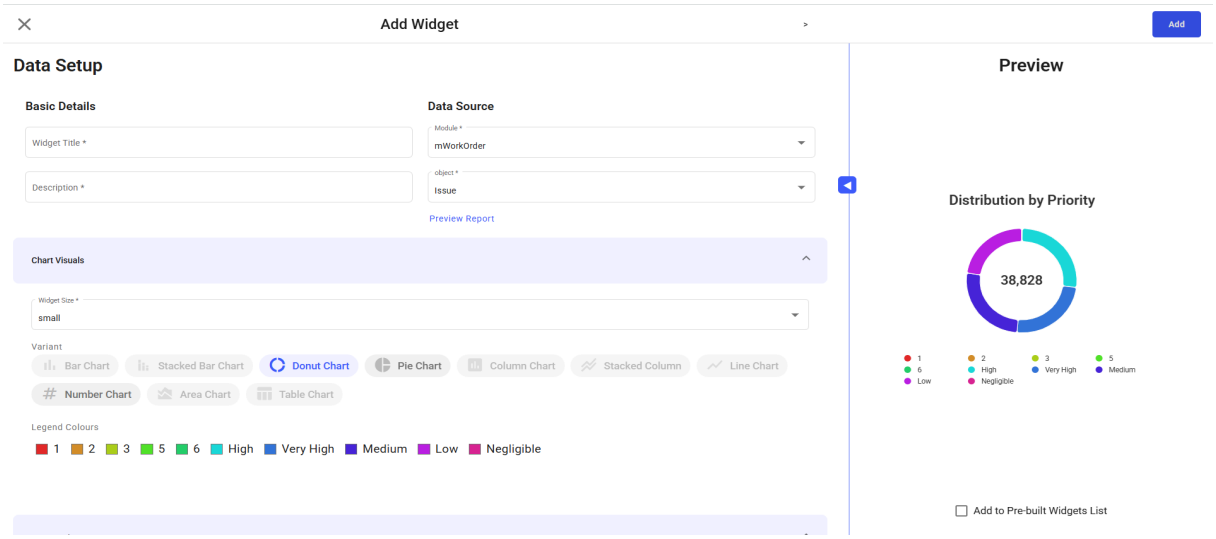
1. Navigate to **Dashboard** > **My Dashboard**.
2. Navigate to the **Mobile Dashboards** section, open your custom dashboard, and click **Add Widget**.
3. Choose from:
    - **Pre-built Widgets**: Ready-made visualizations that can be modified.
    - **Build Your Own Widget**: Custom-built using your selected data fields.

If using Pre-built Widgets:

- Select the module (e.g., *iMaintenance*.)
- Choose the object (e.g., *Work Order*, *Issues*.)
- Select data fields and click **Add to Dashboard**.
- (Optional) Modify the fields as needed.

If building your own widget:

- Select Module and Object (e.g., Work Orders, Operations).
- Enter widget title and description.
- Set visualization options:
  - Widget size: Small, Medium, Large.
  - Chart types: Bar, Pie, Donut, Line, Column, Table, etc.
  - Legend colors for visual clarity.



- Configure data:
  - **Data Settings:** Define how data is sliced (e.g., by Priority).
  - **Data Filter:** Apply filters like Priority, Assigned To Me, Created By Me.
  - Preview the widget layout.

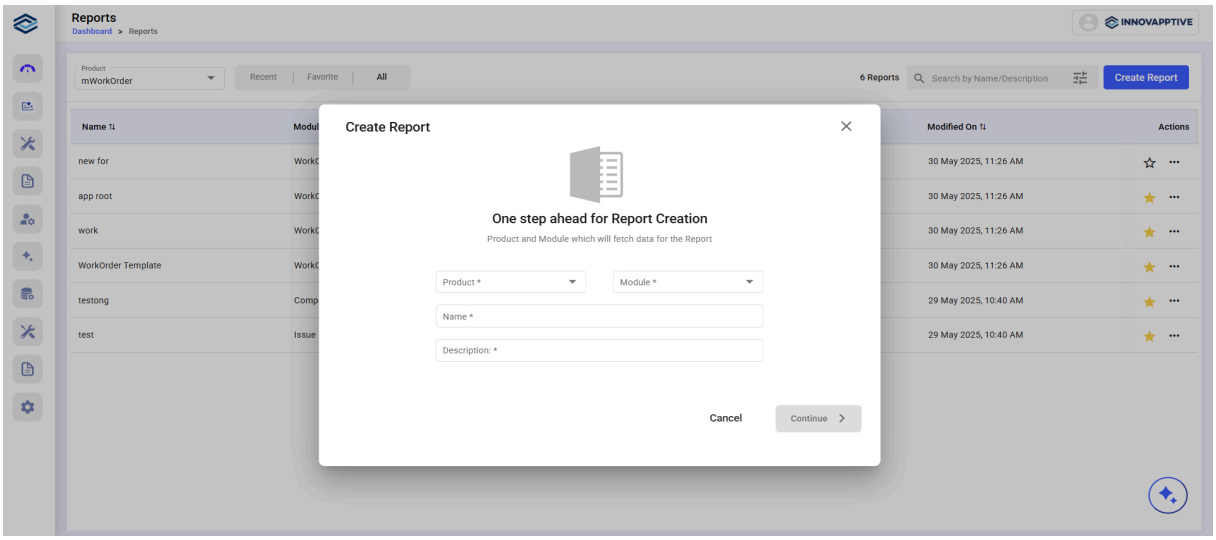
4. Click **Add** to save the widget.

17.4. Create Custom Reports

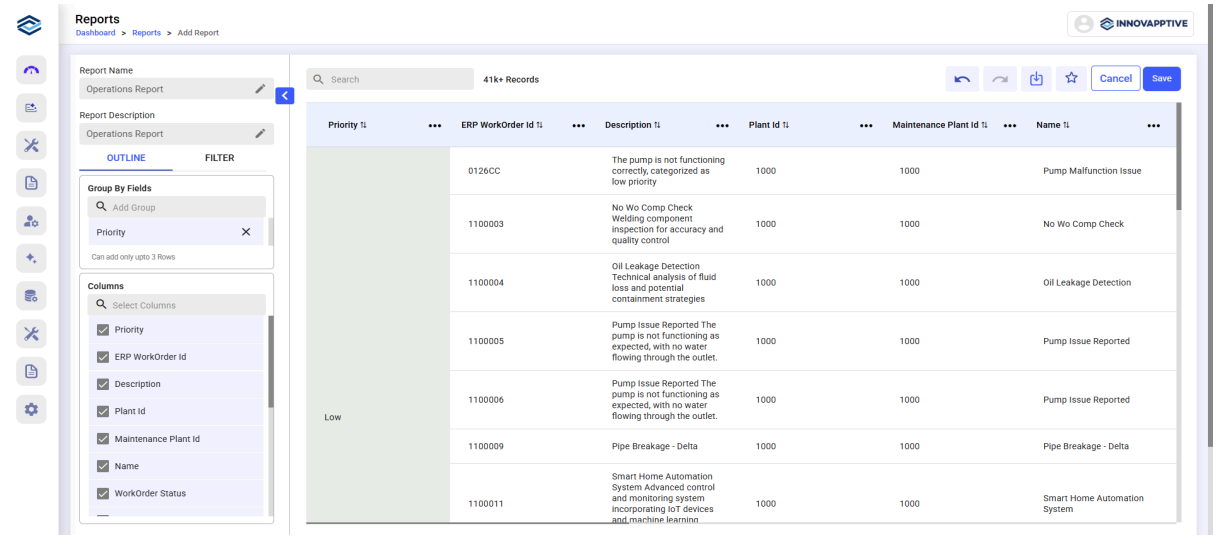
Reports allow you to generate detailed insights using business objects such as Work Orders, Components, Operations, and Issues.

To create a report:

1. Navigate to **Dashboard** > **Reports**.
2. Click **Create Report**.
3. In the **Create Report** window:
    - Select the product (e.g., *iMaintenance*).
    - Select the module (e.g., *Operations*).
    - Enter report name and description.
    - Click **Continue**.



4. In the **Add Report** screen:
    - Edit the report name/description if needed.
    - Use **Group by Fields** (e.g., Plant ID).
    - Select **Columns** to display the report.
    - Click **Save**.



You can also,

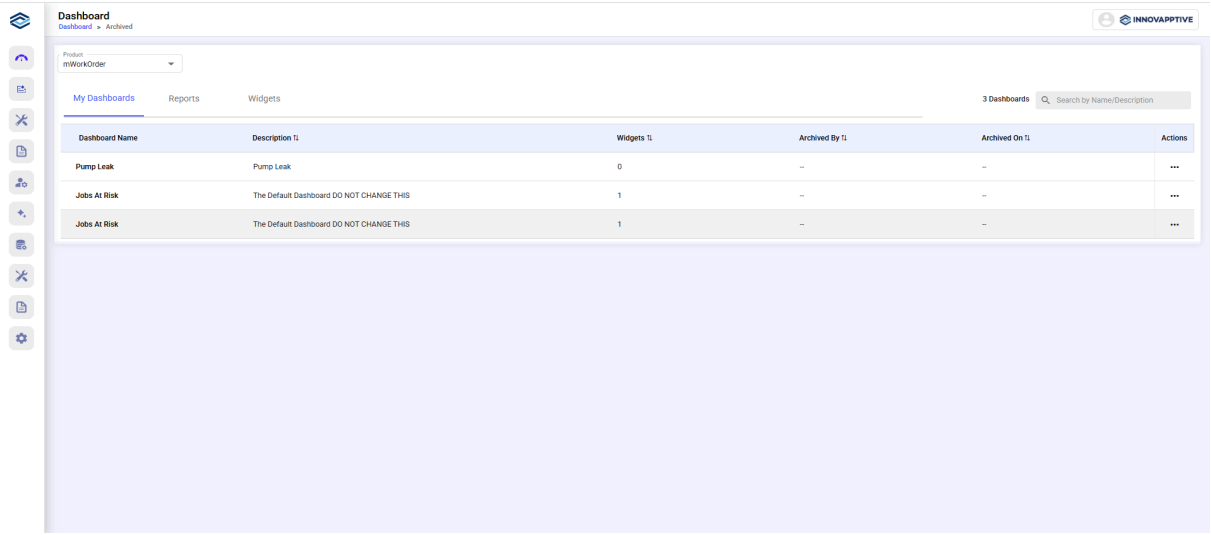
- Mark as Favorite.
- Search the columns.
- Filter by Date, Plant, Shift, Location, Equipment ID, etc.
- Use operators like *equals*, *contains*, *greater than*, etc.
- Download reports in CSV or Excel format.
- Use **Undo**, **Redo**, **Sort**, or **More** to hide/move/stick/group columns.

17.5. Archive and Share Dashboards

Archived dashboards, widgets, and reports help you de-clutter your workspace without losing valuable data.

To manage archived items:

1. Navigate to **Dashboard** > **Archive**.



2. Use the tabs to view:
   - **Dashboards** (includes name, description, widget count, archived date/by).
   - **Reports** (includes module, description, modified by/on).
   - **Widgets** (includes source, dashboard, archived by/on).
3. Use the search bar and column sorting to locate items.
4. Use the **Actions** menu to restore or delete items.