RDI RAPID-PRO INSIGHT

Training Manual

INTRODUCTION

RapidPro Insight is a user-friendly software designed to work seamlessly with the Rapid 350, Rapid 250, and Rapid 150 systems. It provides easy access to the data collected by the monitoring system, making report generation simple and efficient.

To get started with the application, just follow these steps.

Getting started

To begin, locate the RapidPro Insight icon on your desktop and double-click it to open the application.

Login Window

The first screen you'll see is the login window. Enter your username and password to access the RDI database, where all the collected data is securely stored.

Once you log in:

- If your username and password are correct, the main RDI window will appear, showing a message confirming a successful database connection.
- If the login details are incorrect, a message will appear indicating a failed connection.

Figure 1 - Login Window

Configuring RapidPro Insight

Next, we will configure the system. This process involves following a series of steps to ensure everything is set up correctly. Let's navigate through these steps together. On the left side of the window, you'll find the main menu tree. This is your central hub for navigating between configuration options and data displays.

How to Setup an Employee

To configure employee information, double-click the **Employee** button in the main menu tree. This will open the Employee Table, where you can add, edit, or remove employee details. Note that this is a global table, meaning employees added here will be able to log in to any production monitoring unit.

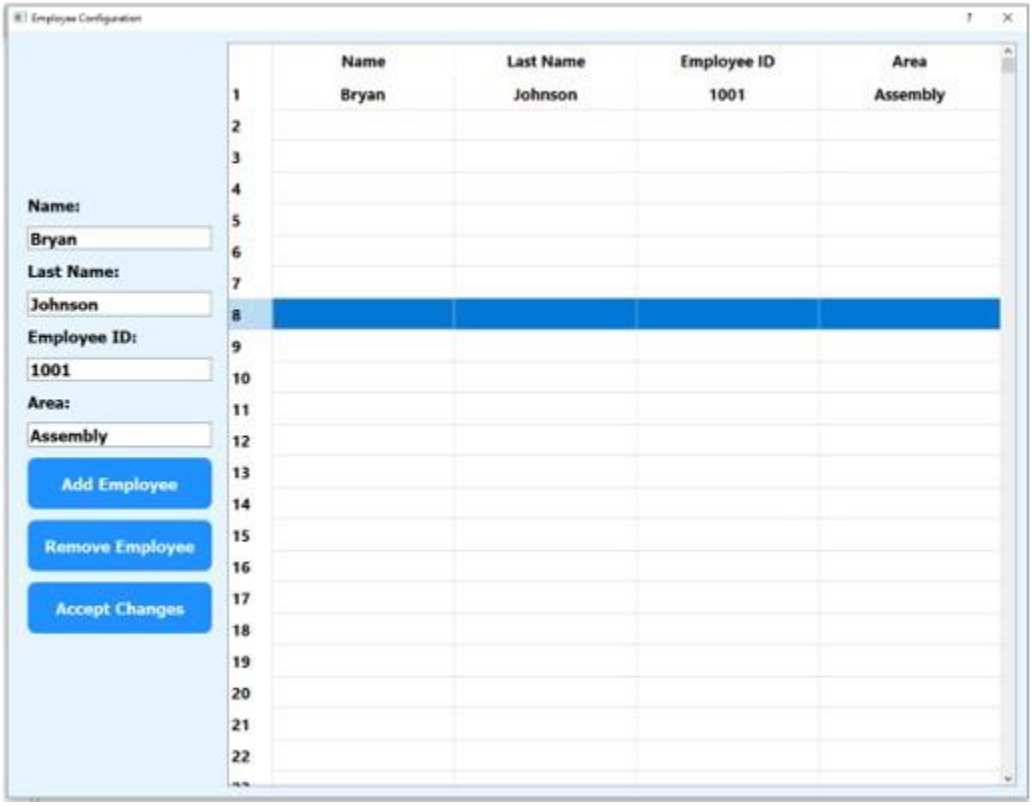

Figure 2 Add Employee

Adding an Employee

1. Fill in the following fields:
    - **Name**
    - **Last Name**
    - **Employee ID**
    - **Area**
2. Once all fields are completed, click **Add Employee**.
3. IMPORTANT: After entering all the information, click **Accept Changes** to save the data. If you skip this step, none of the changes will be saved.

Removing an Employee

1. Select the row corresponding to the employee you want to remove.

2. Click **Delete**.
3. A confirmation popup will appear to verify the action.

After clicking **Accept Changes**, a confirmation message will appear if all modifications were saved successfully. This message ensures that the updates to the employee information have been properly recorded.

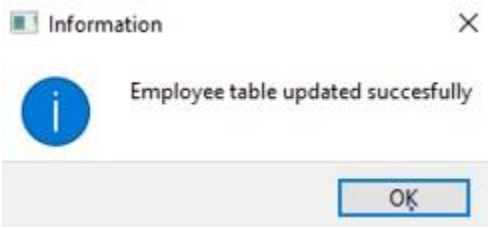

Figure 3 Change Confirmation

How to setup your Area

The RapidPro Insight software allows you to add areas by right-clicking on an available area and selecting **Add Area**. This feature helps you organize and segregate different regions of interest within the system.

Note that the areas you create do not need to represent actual physical locations within the plant. They can also represent an organizational arrangement. For example, you might have three physical areas: **Molding**, **Assembling**, and **Final Testing**. Inside each of these physical areas, you can add the machines located there.

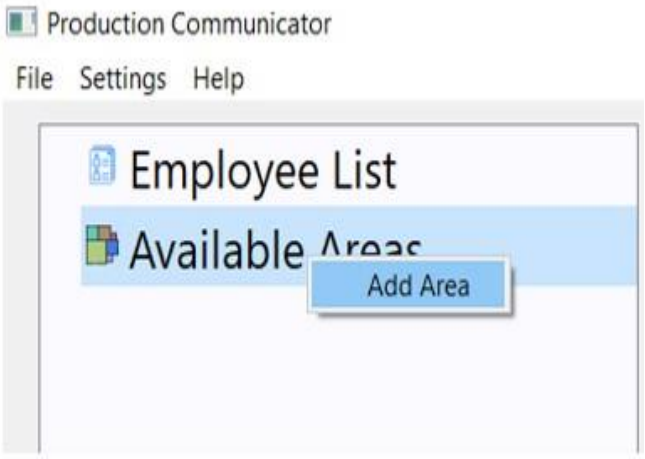

Figure 4 Create Area

Alternatively, you can arrange the areas to represent a flow or process. For instance, you could create an area called **Ford Line**, which includes the machines from the Molding, Assembly, and Final Testing areas, arranged in the sequence they appear in the production line.

Here is an example of how to create an area. Let's create an area called **Molding**:

1. Right-click on an available area and select **Add Area**.
2. Enter the name of the area (e.g., **Molding**) and click **Accept**.
3. If the name is unique, the area will be successfully added.

4. If the name already exists, an error message will appear. Remember, every area must have a unique name.

Once the area is created, it will appear as an item under the **Available Area** section, as shown in **Figure 5**.

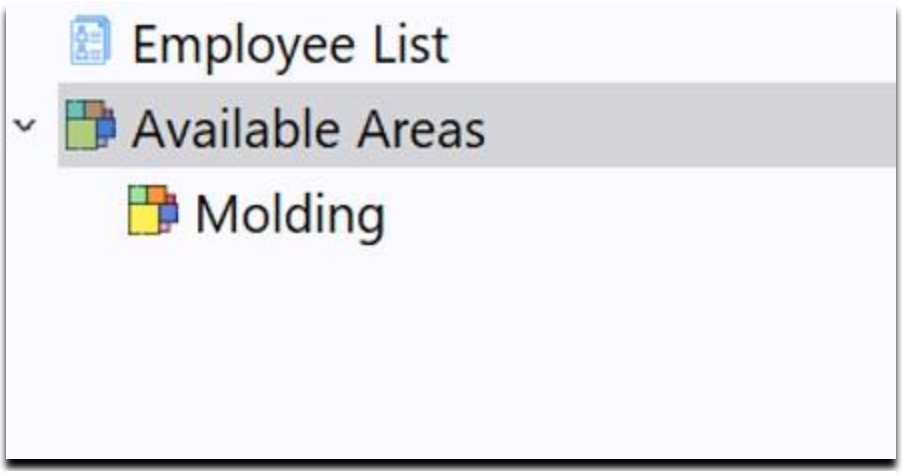

Figure 5 Area Created

Create Machine/Line

If you right-click on an area, you will have the option to create a **Machine** or a **Line**.

Note: When creating a machine, it will not be directly assigned to that area. The machine will be free to be added to any other area. If the area is deleted, the machine will not be deleted, as machines can be used in multiple areas.

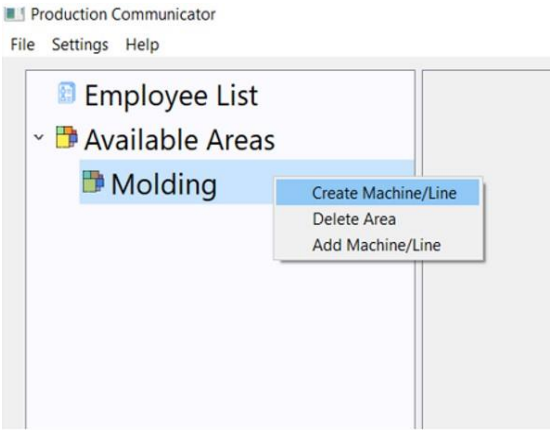

Figure 6 Create Machine

When configuring the system, a wizard will guide you through the process, providing instructions for each entry. There are four main configuration sections:

1. **Product Table**
    - Enter details about products, including cavity information and production rates.
2. **Downtime Table**
    - Configure downtime codes and set up password-protected actions.

3. **Recover/Scrap/Neglection Table**
    - Add and configure reasons for recovery, scrap, and neglect.
4. **General Variables**
    - Define variables for goals and other system parameters.

Tips for First-Time Users

While all configurations can be edited later, it is recommended to start with a basic setup if this is your first time. You can add or adjust configuration variables as needed over time.

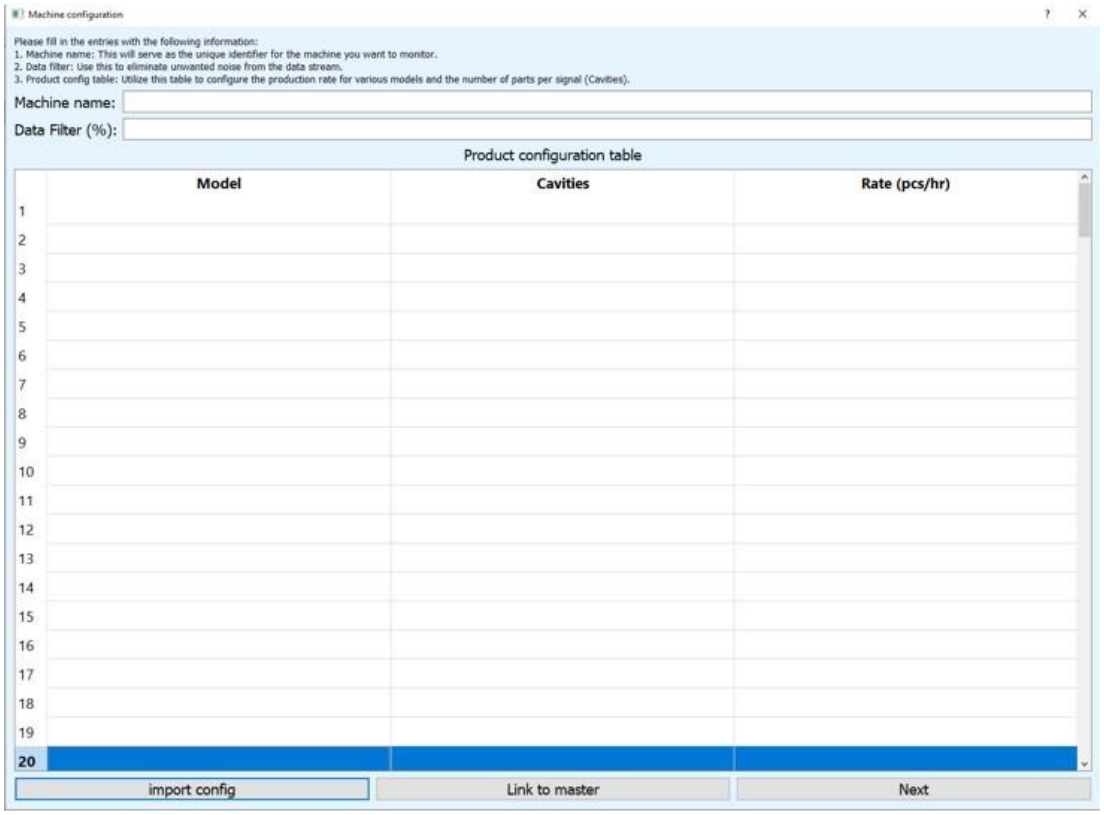

Figure 7 Machine Configuration

1. **Machine Name**
    - Enter the name of the machine in the provided field.
    - **Note:** The machine name must be unique. Duplicate names are not allowed.

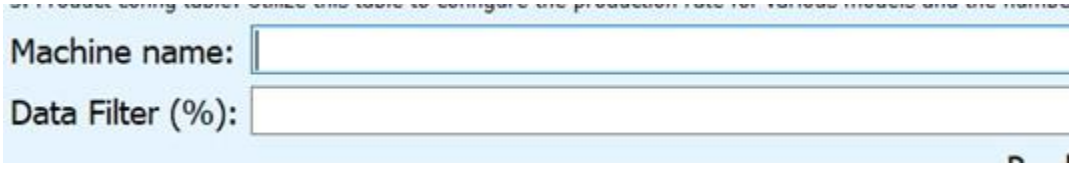

Figure 8 Machine Name

2. **Data Filter**
    - The data filter is a tool designed to exclude pulses that likely do not represent valid production cycles.
    - For example:
        - If your ideal cycle time is **10 seconds**, and a cycle is recorded at **2 seconds**, this is likely due to system noise or manual equipment manipulation.
        - By applying a **50% data filter**, the system will only accept cycles of **5 seconds or more**. The formula is:
          (Ideal Cycle×Data Filter)/100(\text{Ideal Cycle} \times \text{Data Filter}) / 100(Ideal Cycle×Data Filter)/100
    - You can adjust the data filter to be stricter. For instance:
        - With a **90% data filter**, cycles below **9 seconds** will be filtered out, accepting only those **9 seconds and above**.

Product Configuration Table

The product configuration table is straightforward to set up. Here's how to fill it:

1. **Model/Part Number (First Column)**
    - Enter the name of the model or the part number that will run on this device.
    - **Note:** By default, a maximum of 200 models can be configured.
2. **Cavities (Second Column)**
    - This column represents the number of mold cavities, indicating how many pieces are created per cycle.
    - **Important:** If your machine registers a pulse for each piece produced, set this value to **1**.
3. **Rate (Third Column)**
    - Enter the ideal production rate for the specified part number.

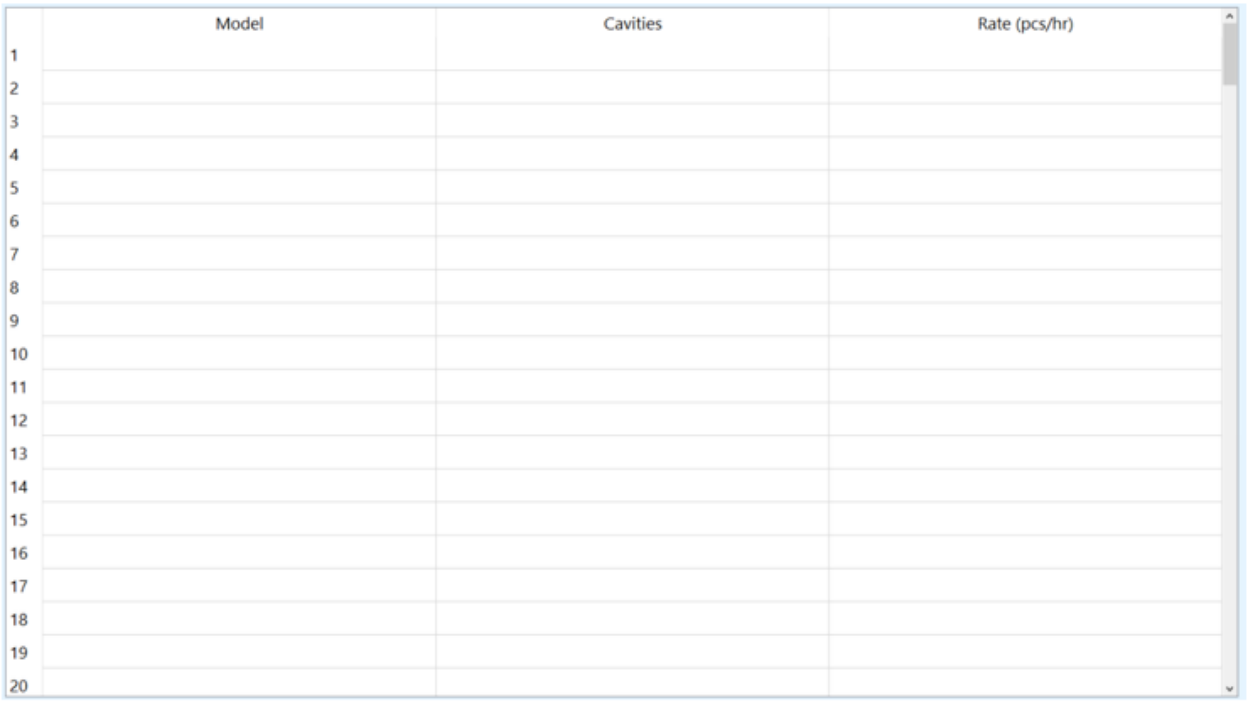

Figure 9 Product Configuration table

At the bottom of the screen, there are three options:

1. **Import Config**: This option allows you to import the product configuration from an existing machine. You can either duplicate it or use it as a reference for configuring new equipment.
2. **Link to Master**: This option links the product configuration to a global table. By doing this, any changes made to the global table will automatically update all units linked to it. This approach is beneficial compared to maintaining separate tables for each unit.
3. **Next**: This button moves you to the next step in the configuration process.

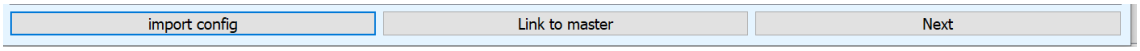

Figure 10 Configuration Options

When you click on **Import**, a selector will appear displaying all the previously created machines. To import a product configuration, simply select the desired machine from the list and click on **Import Configuration**.

All configuration settings from the selected machine will be imported, except for the machine name. The machine name must remain unique for each unit and will need to be specified separately.

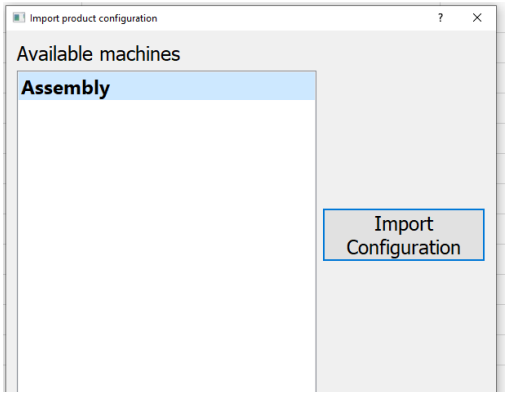

Figure 11 Available Configuration

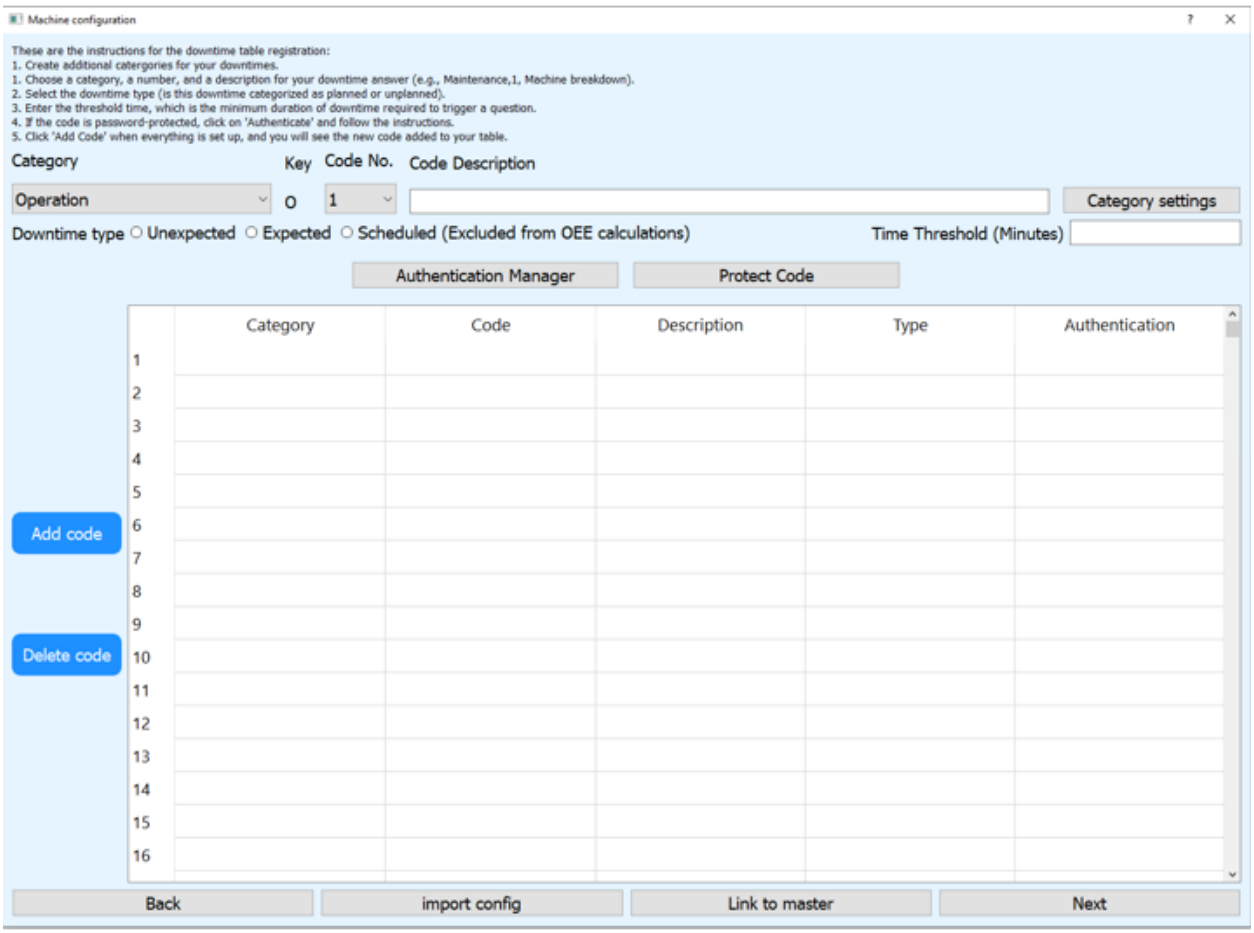

Figure 12 Configuration Window

Machine Downtime Code Configuration

After completing the product configuration, click **Next** to proceed to the **Machine Downtime Code Configuration**. This setting allows you to define alphanumeric codes that operators must use to specify reasons whenever downtime exceeds the specified time threshold.

More detailed information is provided below:

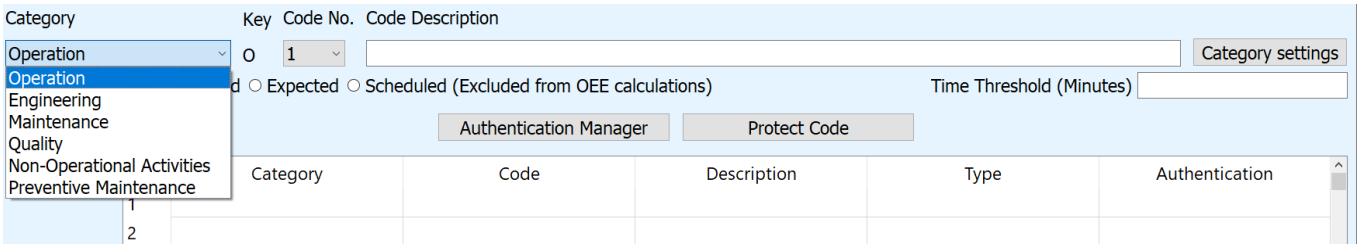

Figure 13 Configuration window options

Category Selector

The first selector you will encounter is the **Category Selector**. This selector includes predetermined options designed for general use in production. The available categories are:

1. **Operation (O)**: Downtime caused by normal machine operations, such as routine tasks like changing a nut after a specified number of cycles.
2. **Engineering (E)**: Downtime caused by the engineering department, such as validations or the integration of new products.
3. **Maintenance (M)**: Downtime caused by the maintenance department for tasks like repairs or reactive maintenance activities.
4. **Quality (Q)**: Downtime caused by the quality department, including routine inspections or line stoppages due to quality issues.
5. **Non-Operational Activities (N)**: Downtime unrelated to the production process, such as lunch breaks, meetings, or missing operators.
6. **Preventive Maintenance (P)**: Downtime associated with scheduled maintenance activities.

If these categories are insufficient for your operation, you can click the **Category Settings** button to add additional categories tailored to your needs.

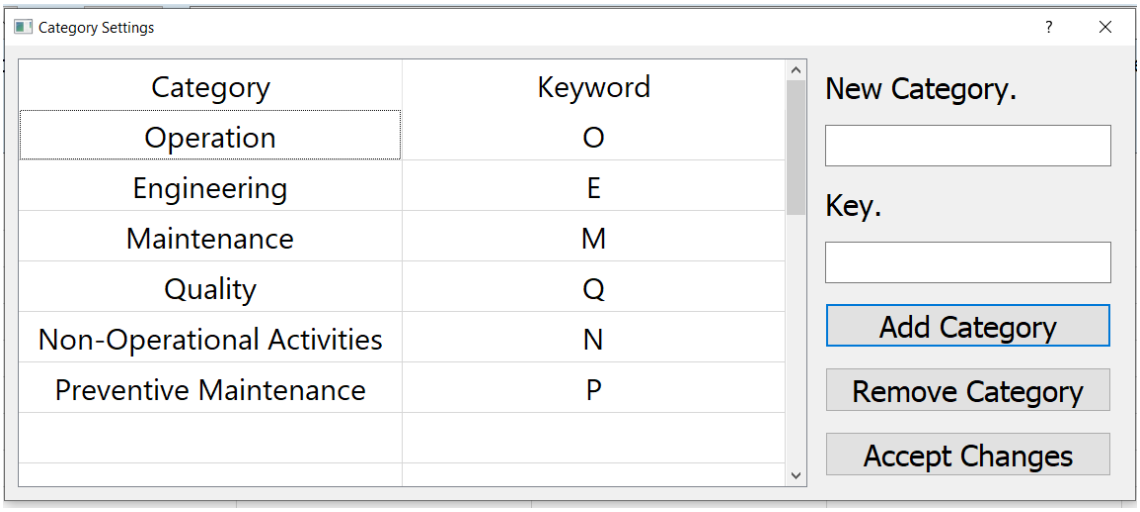

Figure 14 Category Selector

Category Settings
In this setting, you can add new categories and assign them unique keywords. On the left, you will see the default categories, which cannot be deleted.

Important Notes:

- Each category must have a unique keyword. Keywords cannot be reused for multiple categories.
- Default categories and their keywords are fixed and cannot be modified or removed.

To Add a New Category:

1. Enter the name of your new category.
2. Assign a unique keyword to the category.
3. Click **Add Category** to save your new category.

This ensures that your category list is customized to suit your specific production needs while maintaining consistency in reporting.

Removing a Category

1. Click on the row containing the category you wish to delete.
2. Click **Remove Category** to delete it from the list.

Finalizing Your Configuration

When you have finished adding or removing categories, click **Accept Changes**. This will apply the updates and make the new categories available in the selector.

Important Notes:

- Default categories cannot be modified or removed.
- Ensure that all keywords are unique to avoid conflicts in the system.

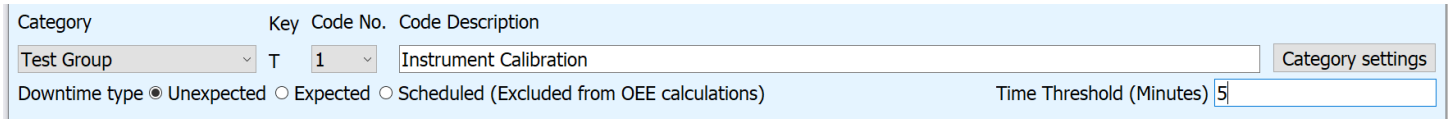

Figure 15 Category adder

Creating an Alphanumeric Downtime Code
Once you have selected your new category, the associated keyword will automatically populate in the **Key** section. Next, you need to define a **Code Number** to create the alphanumeric code. For example, if you choose **1** and give it a description such as "Instrument Calibration," the final code would be **T1**.

If you want to add more codes within the same category, simply use the next number in sequence (e.g., **T2**, **T3**, etc.).

Downtime Type Selection

The next section is the **Downtime Type**, where you have three options:

1. **Unexpected**
2. **Expected**
3. **Scheduled**

- **Unexpected** and **Expected** downtimes will be included in the **Availability** calculation, which is part of the overall performance equation. These types help determine whether the downtimes are due to normal operations or undesirable events.
- If the **Scheduled** downtime type is selected, the downtime will **not** be included in the Availability calculation, meaning it will not affect performance. This is typically used for planned activities, such as preventive maintenance or breaks (e.g., lunch).

Time Threshold

In the **Time Threshold** section, define how long the equipment must be down to request a downtime code. If the downtime is shorter than this threshold, it will be considered a **short stop** and will impact performance. **Authentication Manager Configuration**

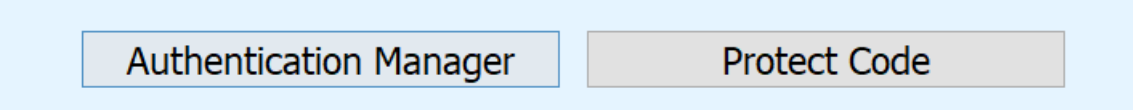

Figure 16 Authentication Manager

Refer to **Figure 13** for guidance. In the **Authentication Manager**, follow these steps:

1. **Create a New Account**
    - Enter a **Username** and **Password** for the new user.
    - After entering the details, click **Add Account** to create the user.
2. **Remove an Account**
    - To delete a user, select the row where the user you want to remove is located.
    - Click **Remove Account** to delete the selected user.
3. **Finalize Configuration**
    - Once the configuration is complete, click **Accept Changes** to save the changes.

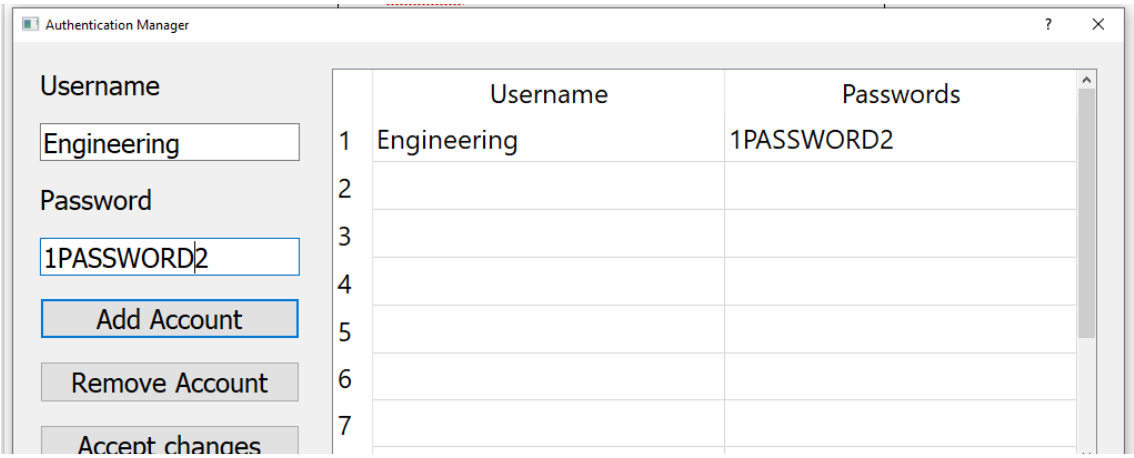

Figure 17 Authentication Manager

Protect Code Configuration

After adding the usernames and passwords, click **Protect Code**. A new authentication window will pop up. In this window, you can allow multiple users to protect the code being edited.

Allowing Users

1. Select the user from the **User Selector**.
2. Click **Allow User** to grant them access to protect the code.

Removing Users

1. To remove a user, select their name from the **Allowable Users** list.
2. Click **Remove** to revoke their access.

Once you're finished managing the users, you can continue with the configuration.

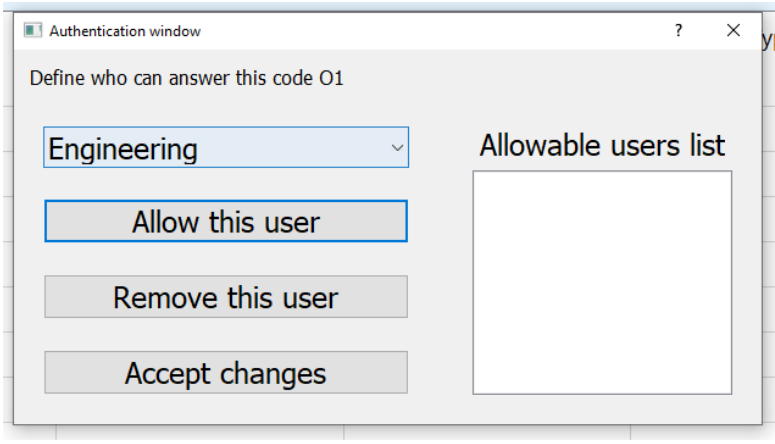

Figure 18 Authentication Window

After adding the usernames and passwords, click **Protect Code**. A new authentication window will appear. In this window, you can allow multiple users to protect the code that is being edited.

Adding Users

1. Select the user from the **User Selector**.
2. Click **Allow User** to grant access for protecting the code.

Removing Users

1. To remove a user, select their name from the **Allowable Users** list.
2. Click **Remove** to revoke their access.

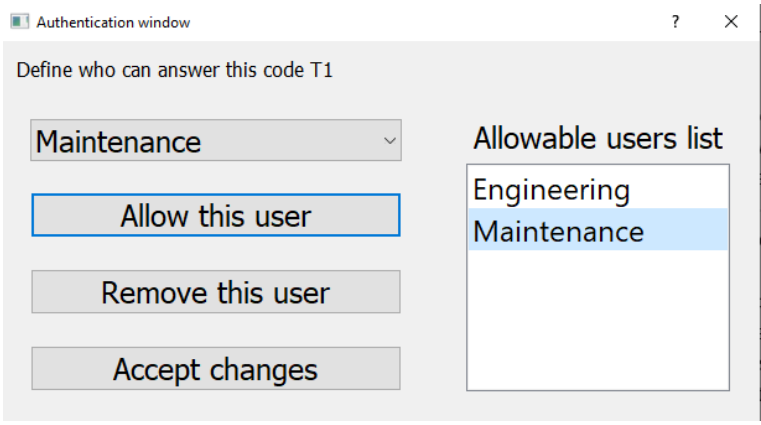

Figure 19 Protect User

Once you finish configuring the code, click **Add Code** to register it in the table shown in **Figure 12**.

In this table, you will find the following details:

Category, **Alphanumeric Code**, **Description**, **Downtime Type**, **Authentication Requirement**

These details will be displayed for each code you add, allowing for easy management and reference.

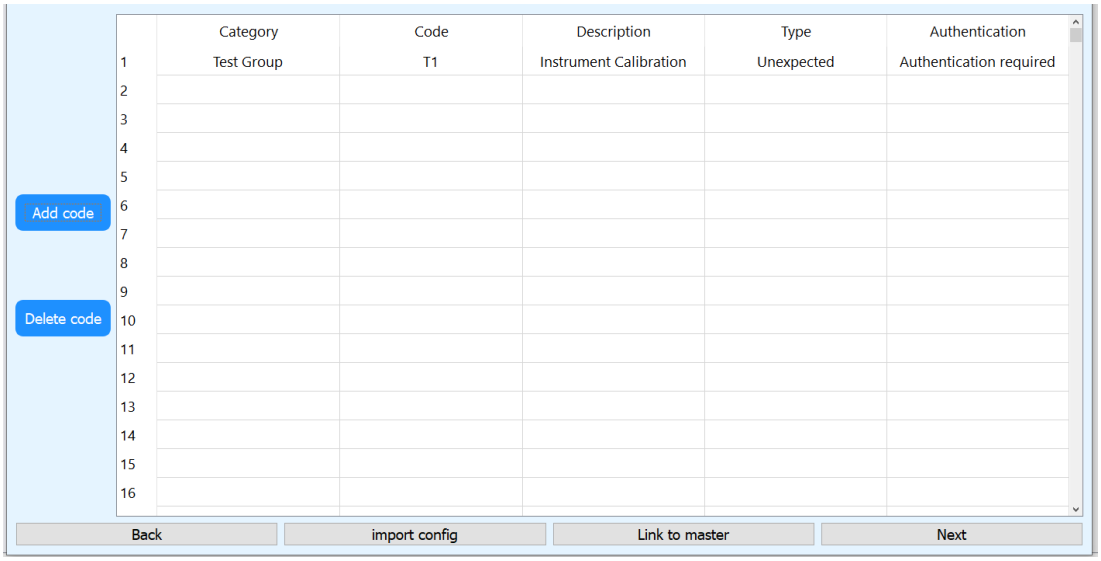

Figure 20 Updated Table

Importing Downtime Configuration

Similar to the **Product Configuration**, you can also **import downtime configuration** from other machines. This tool is particularly useful if the downtime codes are fully or partially the same across multiple machines, allowing you to easily replicate the configuration.

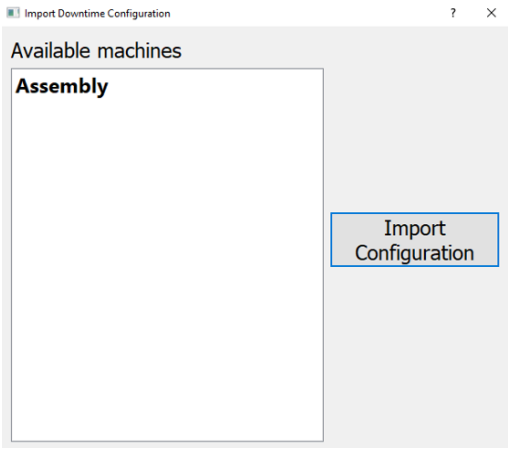

Figure 21 Import Downtime Configuration

Once the downtime configuration is complete and you click **Next**, you will be directed to a section where you can configure three different settings:

1. **Recovered Pieces Description Table**
   In this table, you will add possible reasons for why production might need to manually add pieces that were not detected automatically. For example, this could be when pieces from a previous lot or reworked lot need to be added.

2. **Scrap Pieces Description Table**
   Here, you will define the reasons for scrapping production pieces. This allows the operator to specify why pieces are deemed scrap.

3. **Neglect Reasons Table**
   This table is used to configure various reasons for neglecting a certain number of pieces. The operator can use these reasons to mark pieces that are not counted towards production.

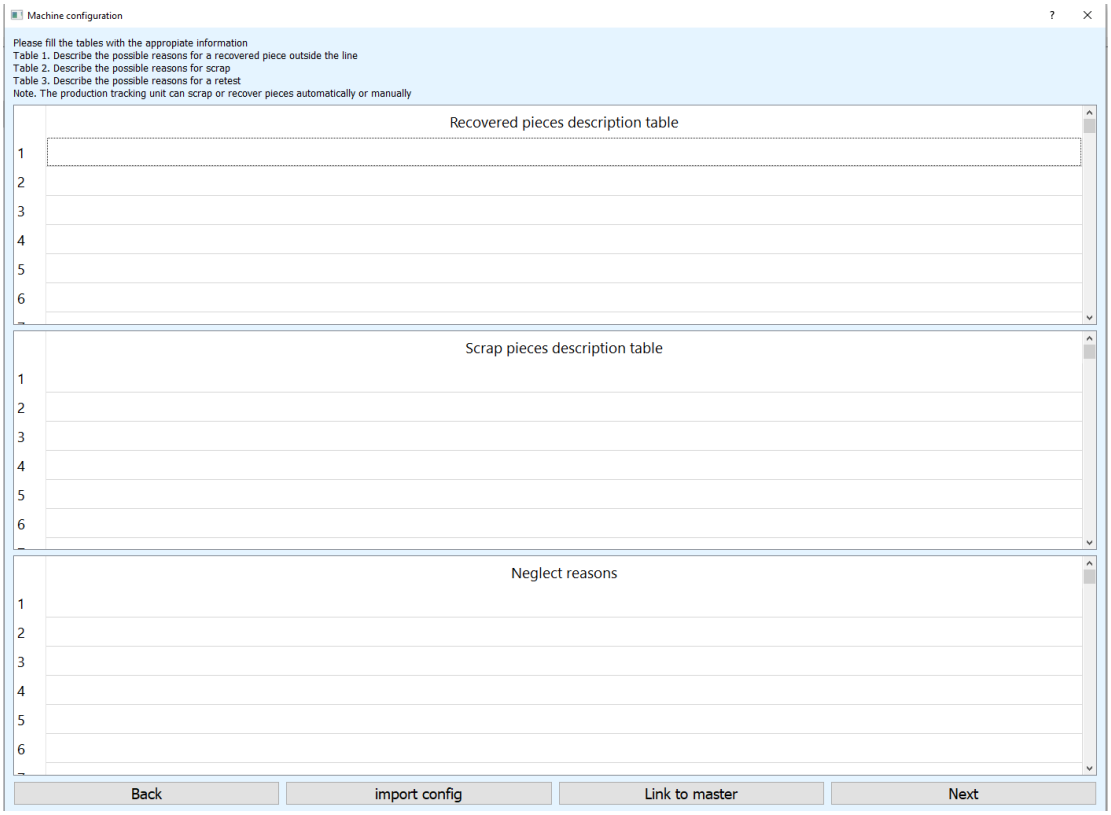

Figure 22 Machine Configuration

You can delete any area that has been created. **Note:** Deleting an area does not result in the loss of any reported data. The only thing removed is the area configuration. If needed, the area can be recreated later.