GE VERNOVA

Asset Performance Management

APM Classic

V4.6.11.0.0

Asset Strategy Management

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Chapter 1

Overview

Topics:

- Overview of the Asset Strategy Management (ASM) Module
- Access the ASM Overview Page
- Asset Strategy Management (ASM) Workflow

Overview of the Asset Strategy Management (ASM) Module

The APM Asset Strategy Management (ASM) module lets you create a strategy, which is a set of actions that represent a plan to optimize equipment and location performance to achieve business benefits.

Using ASM, you can create the following types of strategies:

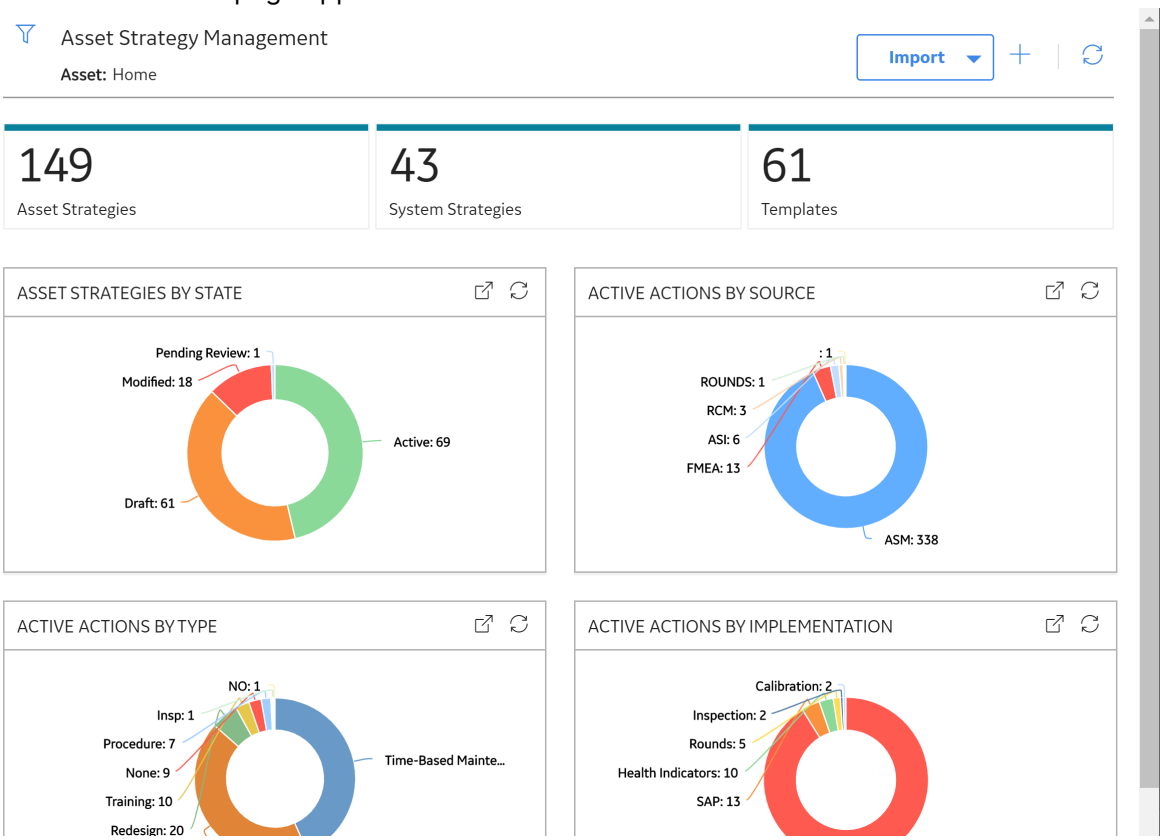
1. **Asset Strategy**: The combination of Actions and Risks that are associated with a piece of equipment or location.
2. **System Strategy**: A collection of Asset Strategies.

In other words, ASM allows you to create Asset Strategies to define ways in which equipment and locations can fail and the actions that you want to perform to prevent those failures and reduce their consequences. Once you have multiple Asset Strategies, you can bundle those Asset Strategies into a System Strategy.

Access the ASM Overview Page

Procedure

In the module navigation menu, select **Strategy** > **Asset Strategy Management**.
The **ASM Overview** page appears.



The tabs at the top of the page summarize the number of strategies in various categories. You can select a tab to view the following information:

- **Asset Strategies:** A list of asset strategies.
- **System Strategies:** A list of system strategies.
- **Templates:** A list of all strategy templates.

The page contains the following charts:

- **Asset Strategies by State:** Plots the number of strategies in each state.
- **Active Actions by Source:** Plots the number of active actions from the active strategies based on the source of an action.
- **Active Actions by Type:** Plots the number of active actions of each type.
- **Active Actions by Implementation:** Plots the number of active actions based on implementation.

You can select in the page to filter the information displayed on the **ASM Overview** page to a specific time range or asset. When you filter by an asset, the page displays information for the selected asset and the assets under it in the hierarchy. The Home level includes information not related to an asset or related to an asset not in the Asset Hierarchy.

Note: The **Asset Strategy Management Overview** page is not updated automatically when you return to the previously opened tab. You can select to update the page.

Asset Strategy Management (ASM) Workflow

This workflow provides the basic, high-level steps for using this module. The steps and links in this workflow do not necessarily reference every possible procedure. For more procedures, see the links in the Related Information section.

1. Evaluate asset risk and performance, which allows you to identify and quantify unmitigated risks. These evaluations will help you define how your current maintenance plans mitigate risks, identify gaps in your mitigation plans, and define the regulatory actions that are needed.
2. Mitigate risks with an action, which allows you to assess and document what is currently being done to mitigate risk as well as identify additional actions to mitigate risk.
3. Optimize mitigations, which allows you to review your current mitigation plan for areas that need to be improved, removed, or replaced.
4. Communicate improved plans, which includes updated strategies, improvements in risk reduction, and return on investment values.
5. Implement the strategy, which allows you to implement your new strategy into your work management system. The items implemented can involve, but are not limited to:
   - Recommended Actions.
   - Processes to measure strategy effectiveness.
   - Documentation of the decision making process behind the strategy.
   - A communication plan for receiving feedback from workers in the field.
6. Execute the strategy, which allows you to execute work via your company's current work management system and processes.

Chapter 2

Workflow

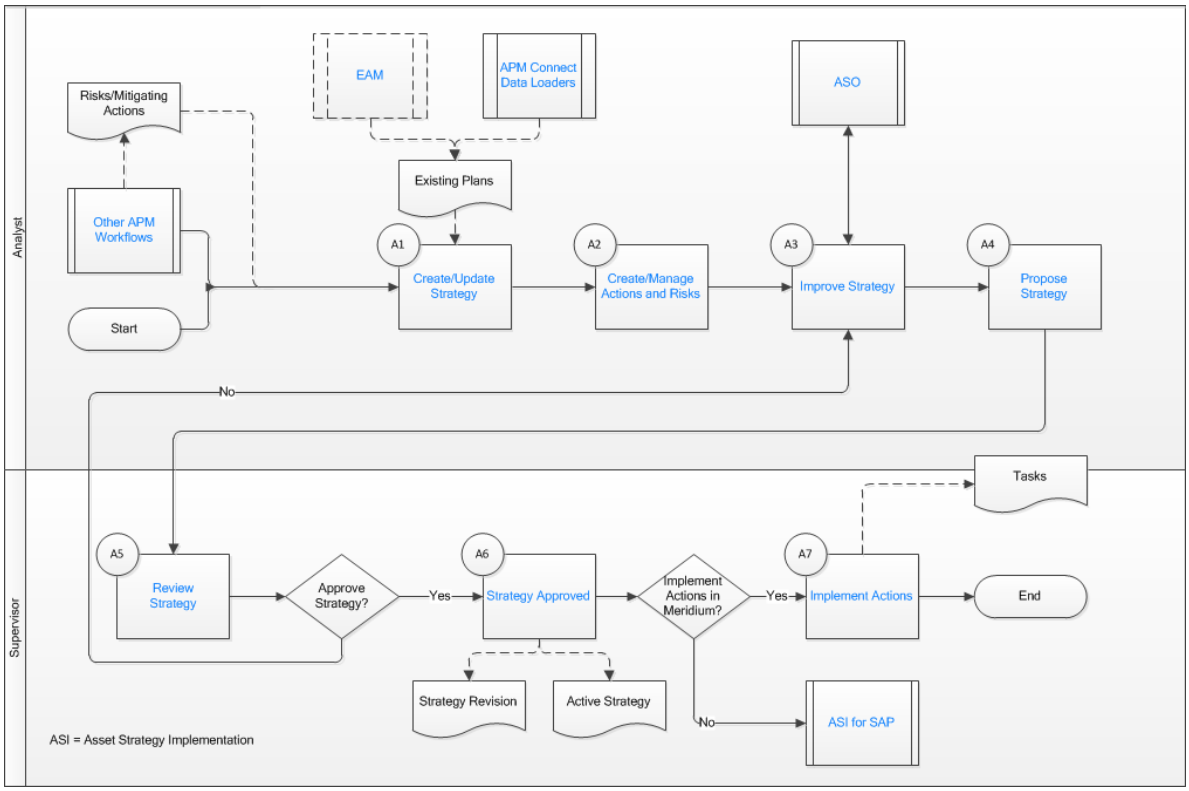
Topics:

- APM Strategy: Asset Strategy Management Workflow
- Other Workflows
- EAM
- APM Connect Data Loaders
- Create/Update Strategy
- Create/Manage Actions and Risks
- Improve Strategy
- Asset Strategy Optimization (ASO)
- Propose Strategy
- Review Strategy
- Strategy Approved
- Implement Actions
- ASI for SAP

APM Strategy: Asset Strategy Management Workflow

This workflow describes the process of creating a strategy, which is a set of actions that represent a plan to optimize equipment and location performance to achieve business benefits.

In the following workflow diagram, the blue text in a shape indicates that a corresponding description has been provided in the sections that follow the diagram. For more information, refer to the topic Interpreting the Workflow Diagrams.



Other Workflows

Persona: Varies

These workflows produce Risks as well as Mitigating Actions that can be pushed to ASM to build a strategy. They include:

- RCM: Evaluates a system with respect to its individual function to determine how to avoid functional failures.
- FMEA: Focuses on equipment and functional locations, analyzing how each could fail and the effect of the failures.
- RBI: Allows you to analyze the risk of an asset's failing in certain mechanisms, and then to create an inspection strategy for each mechanism.
- SIS/Hazards: Assesses the integrity of safety instrumented systems, identifies hazards, assesses hazard risks, and provides solutions for mitigating safety risks.

Go to the RCM/FMEA Workflow.

EAM

Persona: Analyst

Import data from your SAP system using the APM Connect EAM connection adapters. Strategy data imported from your SAP system can then be manipulated directly in the APM ASM module.

APM Connect Data Loaders

Persona: Analyst

Import data from external sources into the various APM modules using the APM Connect Data Loaders. The ASM Strategy Data Loader enables the import of strategies, which can be manipulated in APM.

Go to the Data Loaders workflow.

Create/Update Strategy

Persona: Analyst

Asset Strategies can be created manually, created from existing plans, or promoted from existing methodologies such as RCM/FMEA, RBI, and SIS. The result is the ability to view all actions and mitigated risks.

Create/Manage Actions and Risks

Persona: Analyst

Create, add, modify, and delete Risks, and then assess Unmitigated Risk. Create, add, modify, supersede, and delete Actions. Assign Actions to Risks, and then assess Mitigated Risk.

Improve Strategy

Persona: Analyst

View all risks and mitigating actions to determine the best overall strategy for the asset or collection of assets. This can be performed manually using the Risk Analysis tool by assessing Risk Mitigation and Action Cost as well as by superseding Actions, or, as an optional step, by utilizing Asset Strategy Optimization (ASO).

Asset Strategy Optimization (ASO)

Persona: Analyst

ASO allows the user to compare multiple strategy scenarios and select the preferred strategy to propose for approval.

Propose Strategy

Persona: Analyst

Once the Team acts upon all proposed changes, the Analyst should propose an improved strategy to the Supervisor for review and approval.

Review Strategy

Persona: Supervisor

Review a summary of changes to the strategy, including deltas on Action Cost and Risk Mitigation.

Strategy Approved

Persona: Supervisor

After review, the Supervisor determines if the strategy should be approved for implementation. If the strategy is approved it becomes Active, with a revision history. If the strategy is not approved, it is sent back to the Analyst or Team for further analysis.

Implement Actions

Persona: Supervisor

Can implement actions via the following:

- Calibration Task
- Health Indicator
- Inspection Task
- Lubrication Requirement
- Measurement Location
- Policy Instance
- EAM Work Request

ASI for SAP

Persona: Supervisor

After a strategy is approved in ASM, the actions associated with the strategy can be implemented in APM, or they can be sent to ASI for SAP, where they are packaged as Work Management Items to export and implement in SAP.

Chapter 3

Asset Strategies

Topics:

- About Asset Strategies
- About Recommended Actions in ASM
- Access an Asset Strategy
- Access a Master Strategy Template
- Create a Strategy
- Activate an Asset Strategy as Baseline
- Save a Strategy as a Template
- Delete an Asset Strategy
- Remove a Master Strategy Template
- Export an Asset Strategy
- Access Recommended Actions in ASM
- Add a Recommended Action
- Access Reference Documents

About Asset Strategies

An asset strategy is the combination of actions and risks that are associated with a piece of equipment or location. An asset strategy consists of the following:

- Multiple Risk records, which represent ways in which the piece of equipment or location can fail.
- Multiple Action records, which represent the physical actions that you want to perform to maintain the piece of equipment or location.
- Multiple Risk Assessment records, which represent the risk rank associated with a failure.

The first step in building an asset strategy is to create an Asset Strategy record. You can then further define the asset strategy by adding risks and actions. After your database contains one or more asset strategies, you can build system strategies.

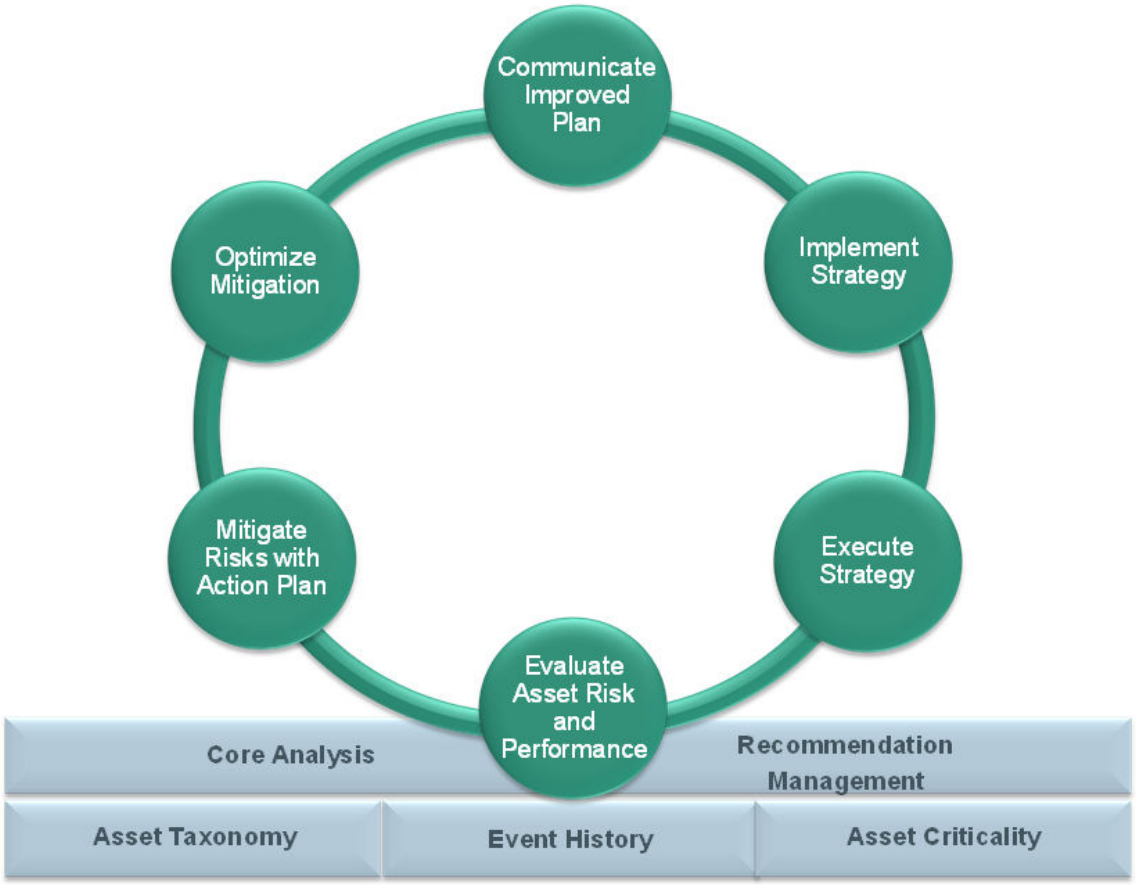
As shown in the ASM data model, each Asset Strategy record is linked directly to:

- One Active Strategy record
- One Proposed Strategy record

The Active Strategy record and the records to which it is linked represent the strategy that you are currently using to maintain the piece of equipment or location. Likewise, the Proposed Strategy record and the records to which it is linked represent the strategy that you want to start using to maintain the piece of equipment or location.

In other words, for each asset strategy, there is always one active strategy and one proposed strategy.

The following image shows an illustration of how the steps in the Asset Strategy Work Process relate to one another. Each step in the work process is represented by a green circle. In addition, you can see that the entire work process is built upon the APM basic components, which are represented by the blue boxes.

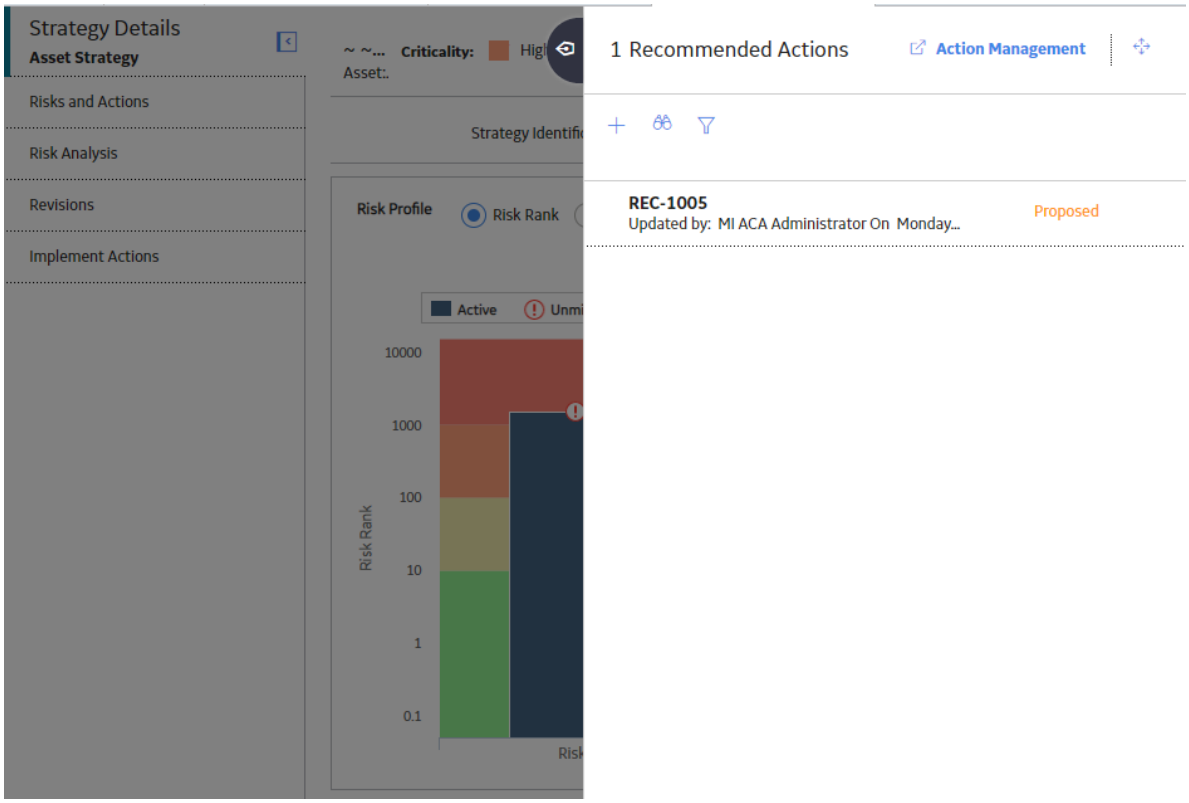


Within the APM product, each of the steps listed above can be accomplished using one or more of the following modules:

- Asset Strategy Management (ASM)
- Asset Strategy Implementation (ASI)
- Reliability Centered Maintenance (RCM)
- Failure Modes and Effects Analysis (FMEA)

About Recommended Actions in ASM

Recommended Actions are used in ASM to provide up-to-date information regarding how a strategy is performing. They provide the basis for any modifications necessary to keep the strategy optimized and current.



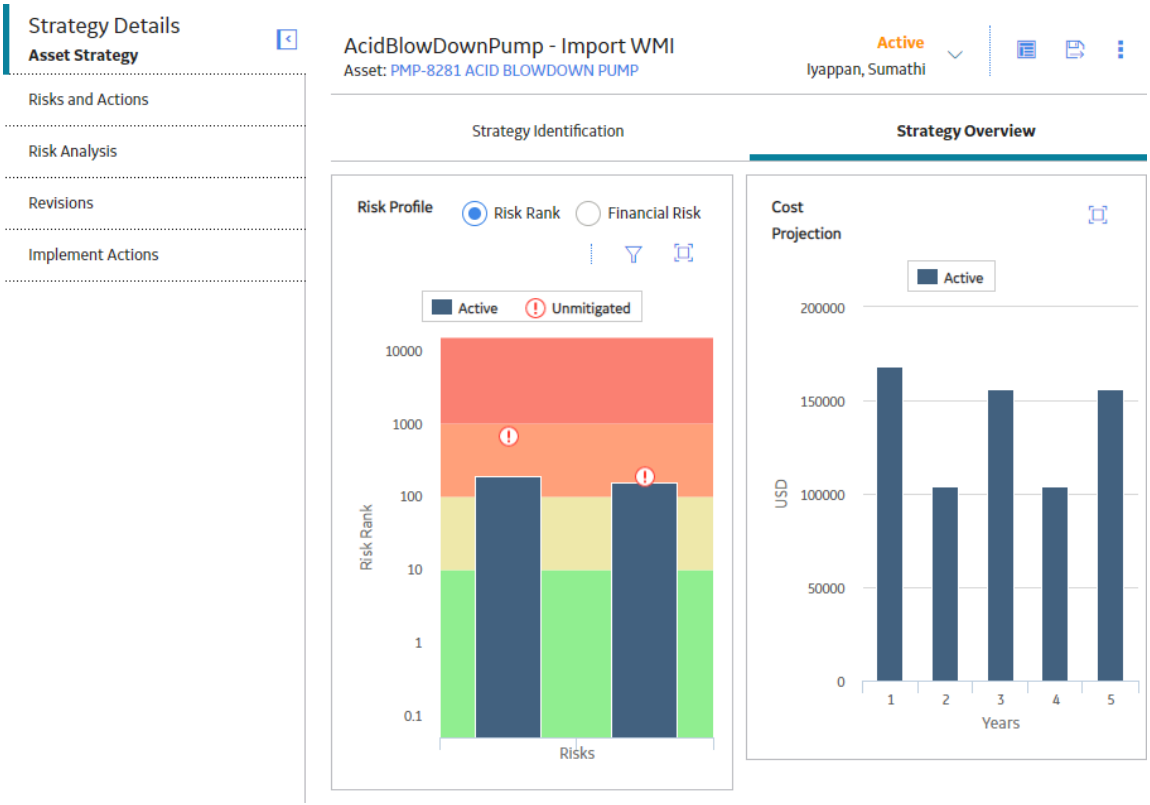
Recommended Actions provide the greatest value when the user is in the **Actions** page. The user can compare the findings from the inspector or engineer with the strategy Actions, to determine if the Tasks derived from those Actions are effective.

Tip: For information about additional options available when working with the Recommendation records, refer to the Action Management section of the documentation.

Access an Asset Strategy

Procedure

1. Access the **ASM Overview** page.
2. Select the **Asset Strategies** tab.
   The **Asset Strategies** section appears, displaying a list of available asset strategies.
3. Select the strategy that you want to manage.
   The **Strategy Details** page for the strategy appears.

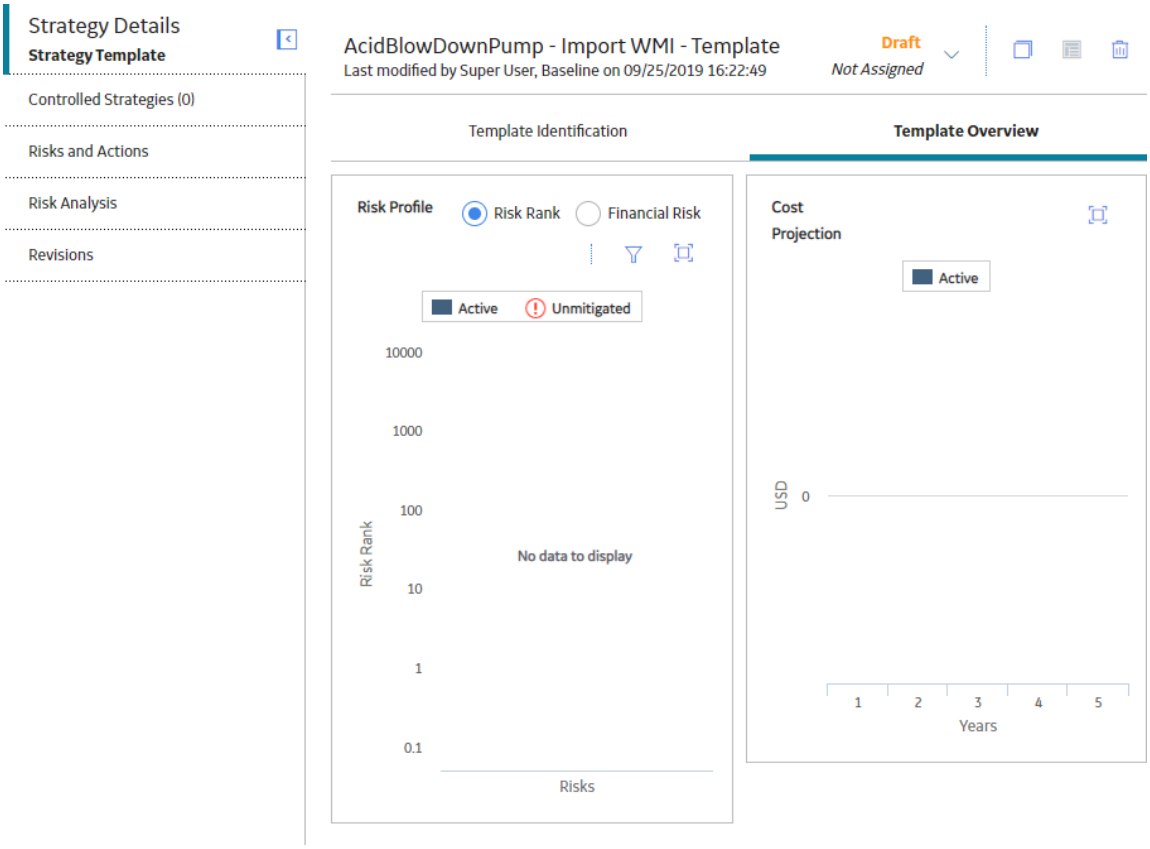


Note: Health status and criticality status indicators appear in the **Strategy Details** workspace. You can select the **Health** icon (for example,) to access the health summary for the asset in a new page, and you can select the **Criticality** icon (for example,) to access the ACA for the asset in a new page. If the asset strategy has no linked Health Indicator or ACA records, no indicators will appear on the strategy.

Access a Master Strategy Template

Procedure

1. Access the **Asset Strategy** for which you want to access the associated master strategy template.
   The workspace for the selected asset strategy appears.
2. In the workspace, select , and then select **Go To Master**.
   The workspace for the master strategy template associated with the select asset strategy appears.



Note: The **Go To Master** option does not appear if the selected asset strategy is not associated with a master strategy template.

Next Steps

- Remove a Master Strategy Template

Create a Strategy

Procedure

1. Access the **ASM Overview** page.
2. In the page, select +, and then select **Create Asset Strategy**.
   The **Enter Parameter Values** window appears.
3. In the **Asset** section, select .
   The **Hierarchy** window appears, displaying the asset hierarchy.
4. Select a hierarchy level associated with the asset to which you want to assign a strategy, and then select **Done**.

   Note: You can search through both Hierarchy and Groups by selecting the respective tabs in the **Hierarchy** window.

   The assets associated with the hierarchy level appear in the **Select Asset** window.
5. Select the asset to which you want to assign a strategy, and then select **OK**.
   The **Strategy Details** workspace appears, displaying the datasheet for the strategy.

6. As needed, enter values in the available fields.
7. Select .
   Your strategy is created and saved.

Next Steps

- Create a Risk or Action

Activate an Asset Strategy as Baseline

Before You Begin

This topic assumes that you have a pre-existing asset strategy in the Draft state.

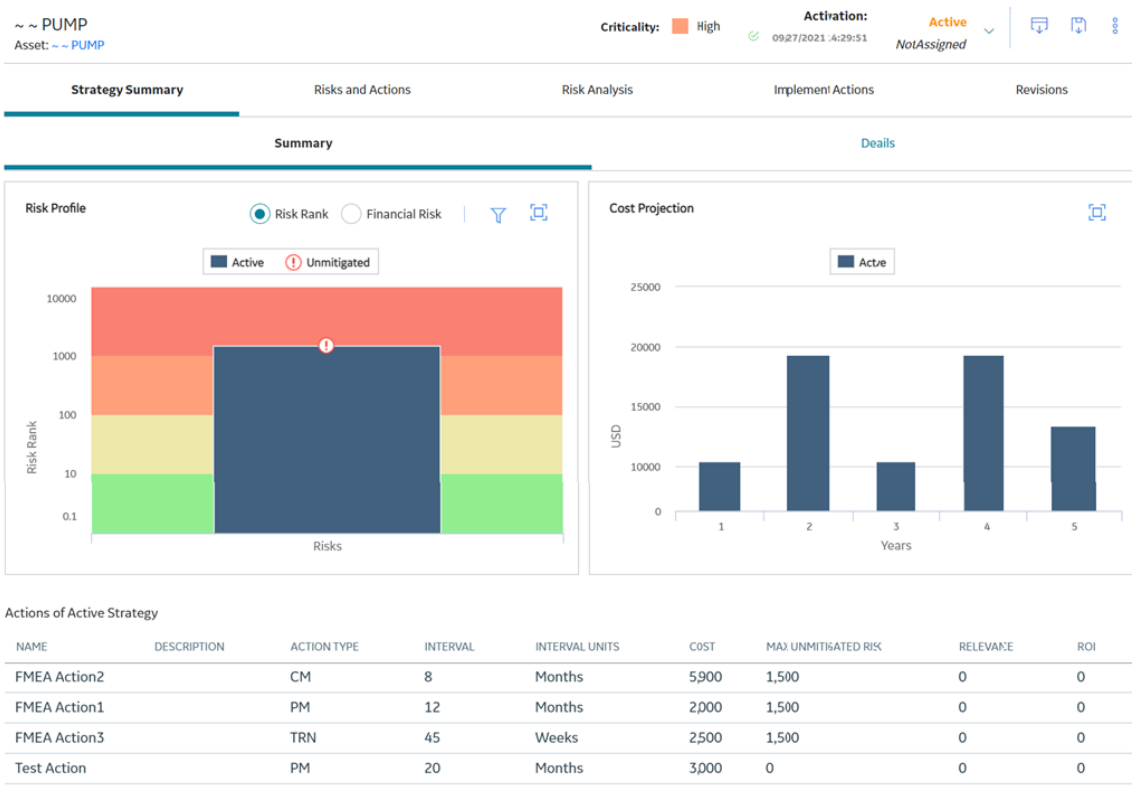
Tip: Reference the following topic if you want to create a new asset strategy before you start this set of instructions.

There are two activate operations in ASM:

- **Baseline**: This is mostly used to approve existing strategies for assets without going through the Pending Review state.
- **Propose**: This allows the asset strategy to go through a review workflow so that the strategy can be modified before it is activated.

Procedure

1. Access an asset strategy.
2. Select the asset strategy you want to activate as Baseline.
   The **Strategy Details** workspace for the selected asset strategy appears.

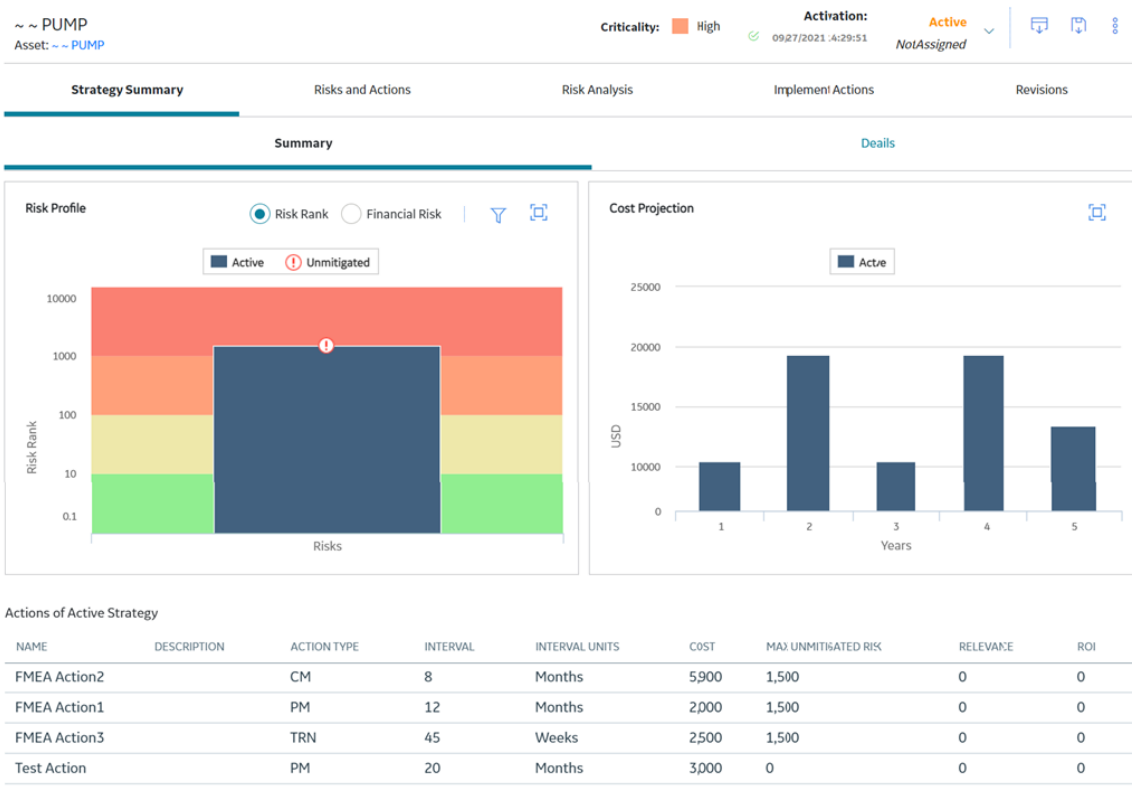


3. In the workspace, select ⌄, then select **Baseline**, and then select **Done**.
   A window appears, asking you to confirm the proposed changes to the strategy.
4. Select **Yes**.
   You will receive a notification that the strategy is activated.

Save a Strategy as a Template

Procedure

1. Access an asset strategy.
2. Select the asset strategy which you want to save as a template.
   The **Strategy Details** workspace for the selected strategy appears.



Actions of Active Strategy

NAME	DESCRIPTION	ACTION TYPE	INTERVAL	INTERVAL UNITS	COST	MAJ UNMITIGATED RIS	RELEVANCE	ROI
FMEA Action2		CM	8	Months	5,900	1,500	0	0
FMEA Action1		PM	12	Months	2,000	1,500	0	0
FMEA Action3		TRN	45	Weeks	2,500	1,500	0	0
Test Action		PM	20	Months	3,000	0	0	0

3. Select .
   A template is created based on the strategy and a new tab appears containing the details for the new template.

   Note:

   - A strategy can only be saved as a template if its state is Active.
   - The secondary actions that are defined for the actions in the strategy are also applied to the template.

Delete an Asset Strategy

Procedure

1. Access the **ASM Overview** page.
2. Select the **Asset Strategies** tab.
   The **Asset Strategies** section appears, displaying a list of available asset strategies.
3. Select the row containing the asset strategy that you want to delete, and then, in the upper-left corner of the section, select .
   The **Confirm Delete** dialog box appears, asking you to confirm that you want to delete the asset strategy.
4. Select **Yes**.
   The asset strategy is deleted.

   Note: You can also delete the strategy using the delete button () while viewing the strategy that you want to delete.

Remove a Master Strategy Template

Procedure

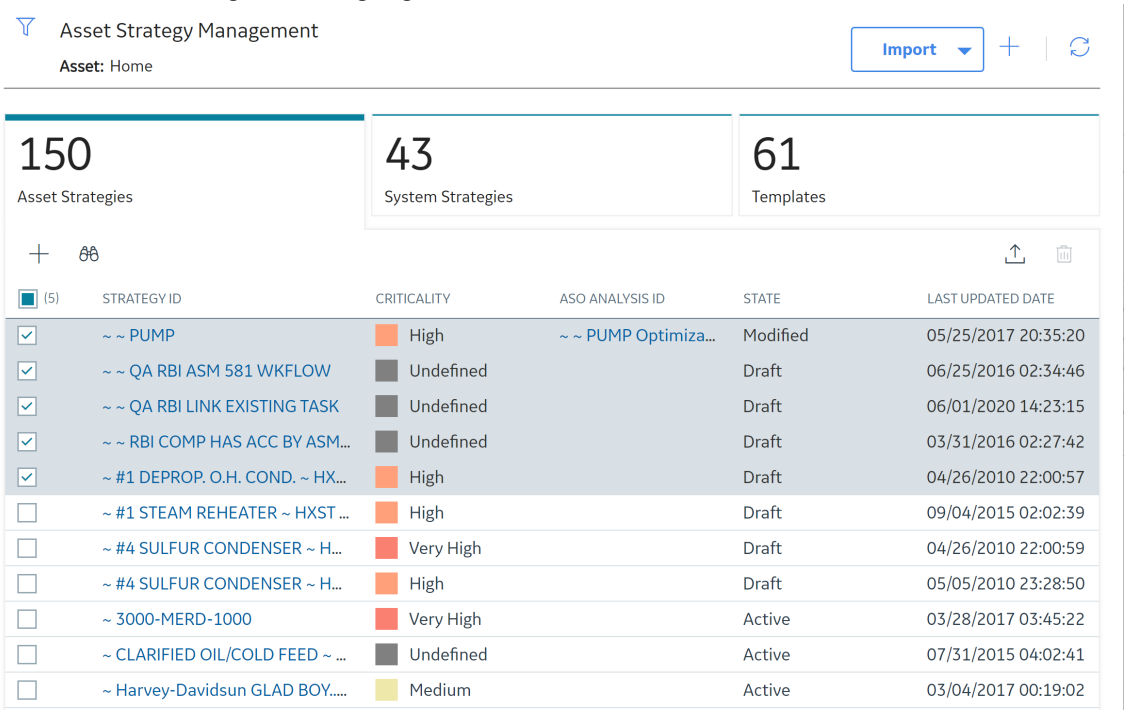
1. Access the **Asset Strategy** from which you want to remove the associated master strategy template.
   The workspace for the selected asset strategy appears.
2. In the workspace, select and then select **Remove From Master**.
   A **Confirm Remove from Master** dialog box appears, asking you to confirm that you want to remove the asset strategy from the master strategy template.

   Note: The **Remove from Master** option does not appear if the selected asset strategy is not associated with a master strategy template.
3. Select **Yes**.
   The association with the master strategy template is removed.

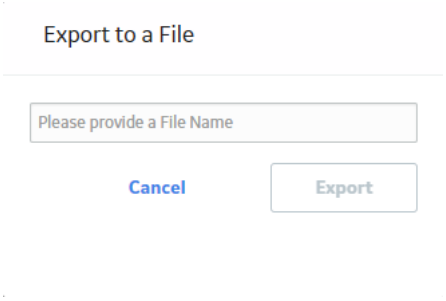
Export an Asset Strategy

Procedure

1. Access the **ASM Overview** page.
2. Select the **Asset Strategies** tab.
3. Select one or more strategies that you want to export.
   The selected strategies are highlighted.



4. Select .
   The **Export to a File** window appears.



5. In the **Please provide a File Name** box, enter a file name for the export.
6. Select **Export**.
   The selected Asset Strategies are exported.

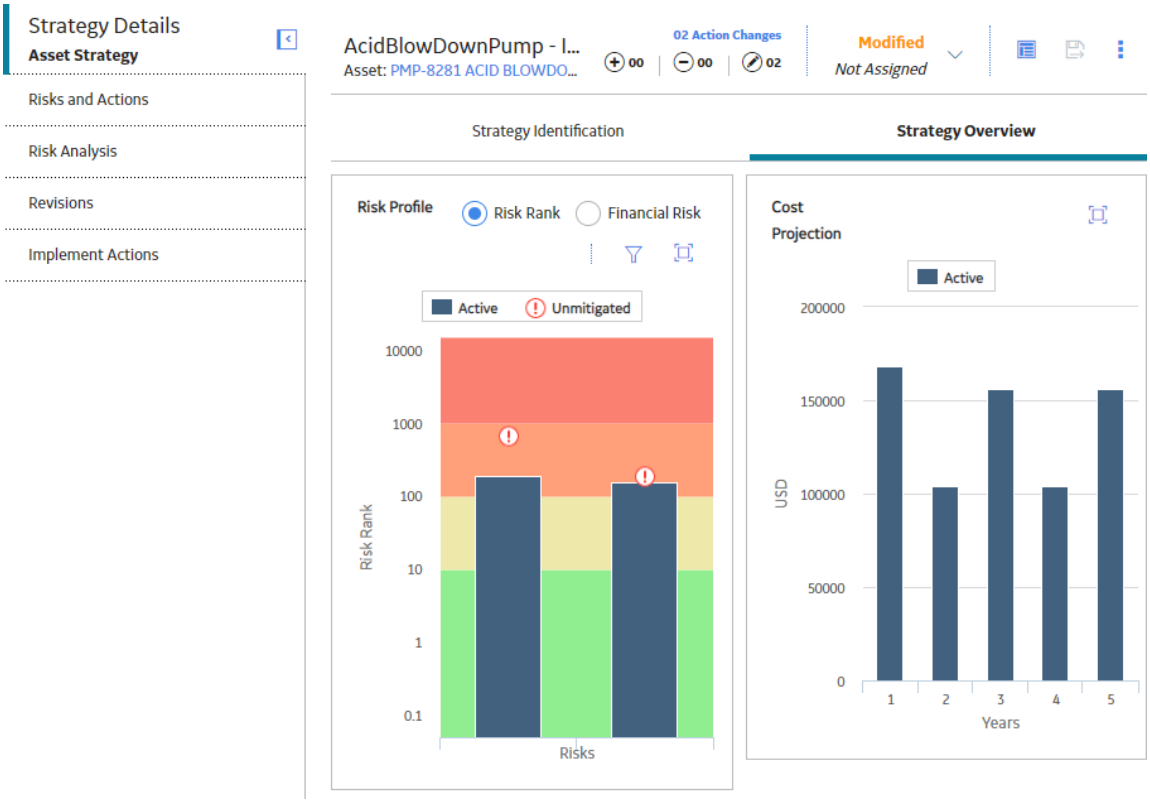
   Note: All the Secondary Actions associated with the primary actions in the strategy are also exported.

Access Recommended Actions in ASM

Procedure

1. Access the **ASM Overview** page.
2. Select the **Asset Strategies** tab.
   The **Asset Strategies** section appears, displaying a list of available strategies.

   Note: You can access Action Management by selecting , and then selecting **Action Management** from the **Asset Strategies** section.
3. Select the asset strategy from which you want to access recommended actions.
   The **Asset Strategy** workspace appears.



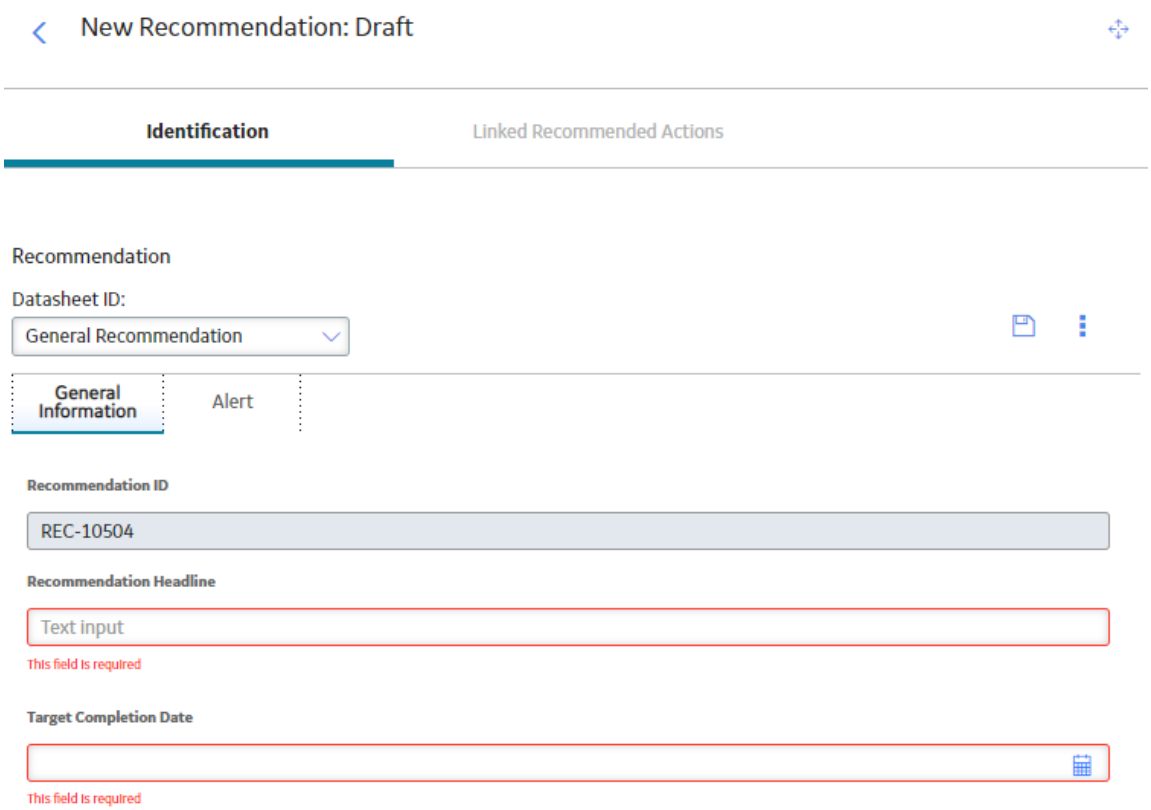
4. Select .
   The **Recommended Actions** pane expands.

   Tip: For information about additional options available when working with recommendation records, refer to the Recommended Actions section of the documentation.

Add a Recommended Action

Procedure

1. Access Recommended Actions in ASM.
2. In the **Recommended Actions** pane, select + .
   The recommendation appears in the pane, displaying the **Identification** section.



3. As needed, enter values in the available fields.
4. Select .
   The recommended action is saved.

Access Reference Documents

About This Task

In the Asset Strategy module, you can add Reference Documents to the following record types:

- Asset Strategies
- Actions
- Risks
- System Strategies

Procedure

1. Access a datasheet for the record type to which you want to add a Reference Document.
2. Select , and then select Reference Documents.
   The **Reference Document** workspace appears.

   Tip: For more information, refer to the Reference Documents section of the documentation.

Chapter 4

Active Strategies and Proposed Strategies

Topics:

- About Active Strategies and Proposed Strategies
- Access a System Strategy
- Create a System Strategy
- Activate an Asset Strategy as Baseline
- Approve an Asset Strategy as a Proposed Strategy
- Add an Existing Asset Strategy to a System Strategy
- View Action Changes in System Strategy
- Remove an Asset Strategy from a System Strategy
- Delete a System Strategy

About Active Strategies and Proposed Strategies

Note: The information in this topic also applies to Asset Strategy Templates, but is limited to Asset Strategies to simplify the discussion.

When reviewing the ASM data model, you will notice that each Asset Strategy record is linked directly to:

- One Active Strategy record.

  -and-
- One Proposed Strategy record.

The Active Strategy record and the records to which it is linked represent the strategy that you are currently using to maintain the piece of equipment or location. Likewise, the Proposed Strategy record and the records to which it is linked represent the strategy that you want to start using to maintain the piece of equipment or location.

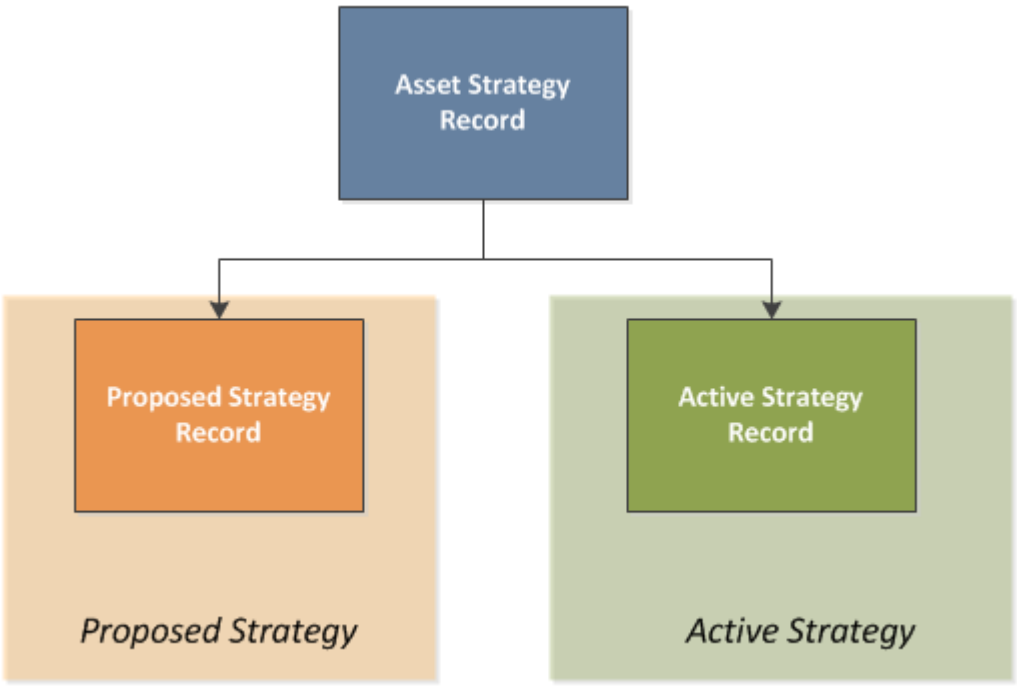
Details

For each Asset Strategy, there is always one Active Strategy and one Proposed Strategy. Throughout this documentation, we refer to the following types of Asset Strategy:

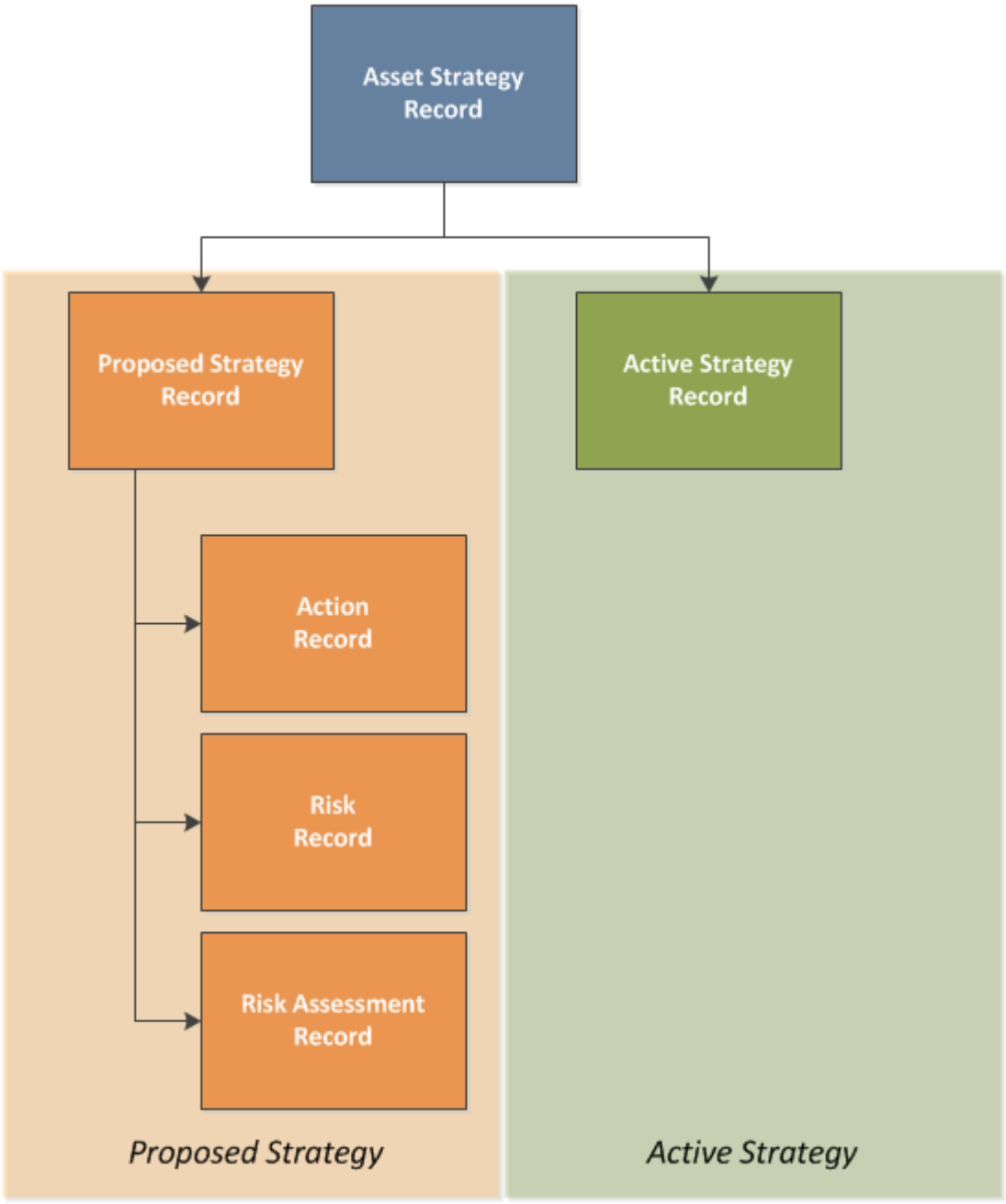
- **Active Strategy :** Represents the strategy that you are currently using to maintain the piece of equipment or location.
- **Proposed Strategy**: Represents the strategy that you want to start using to maintain the piece of equipment or location.

When you create an Asset Strategy, the Active Strategy and the Proposed Strategy are created automatically and are identical. As you make changes to the Asset Strategy by adding Risks and Actions and assessing the risk, those changes are stored in the Proposed Strategy. When you activate the Proposed Strategy, the contents of the Proposed Strategy are copied to the Active Strategy. Then, once again, the Active Strategy and Proposed Strategy are identical.

Consider the following image, which illustrates the Proposed Strategy and Active Strategy that are created when you create an Asset Strategy.

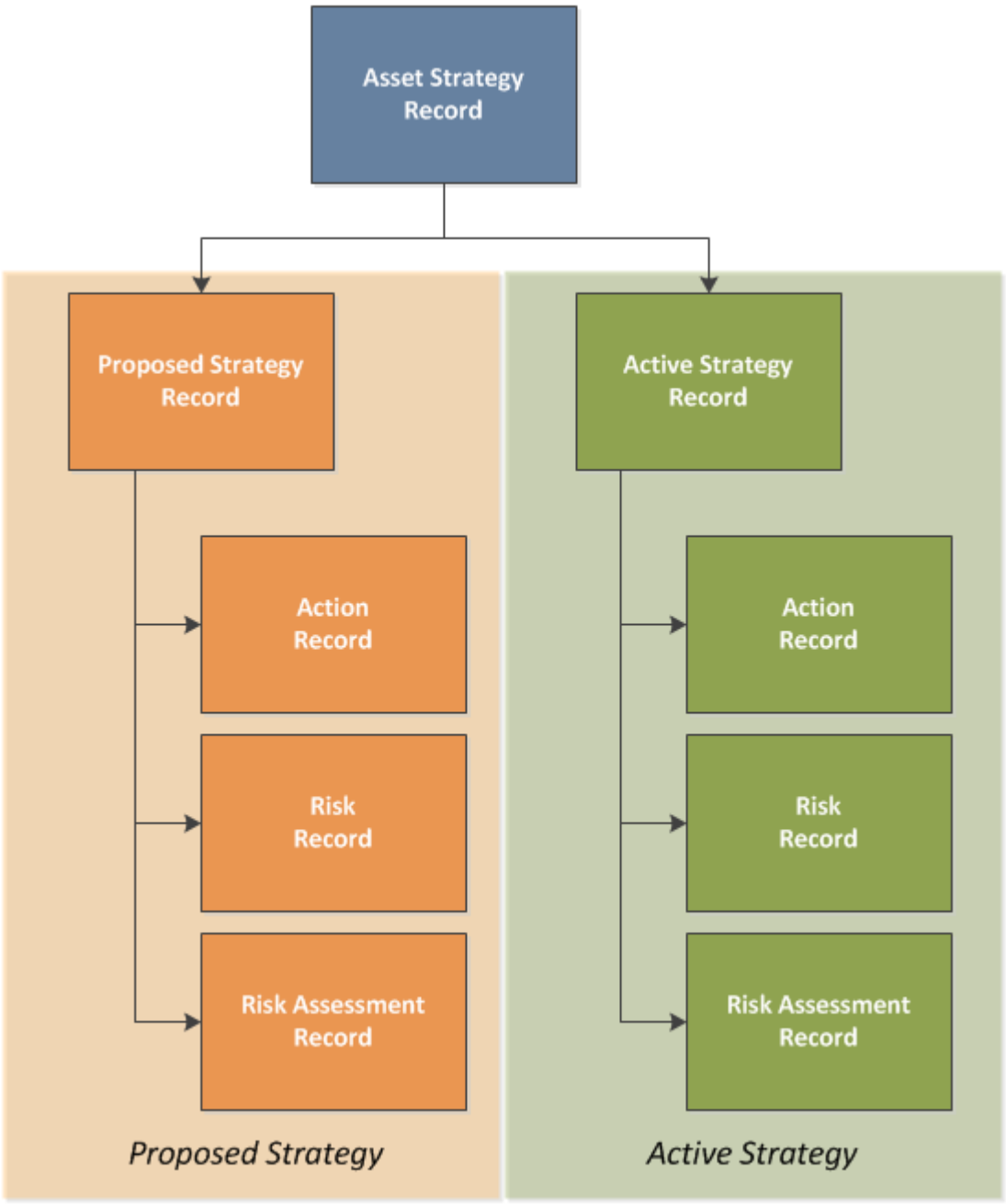


Now, consider the following image, which illustrates what happens to the Proposed Strategy when you add an Action, Risk, and Risk Assessment to the Asset Strategy.

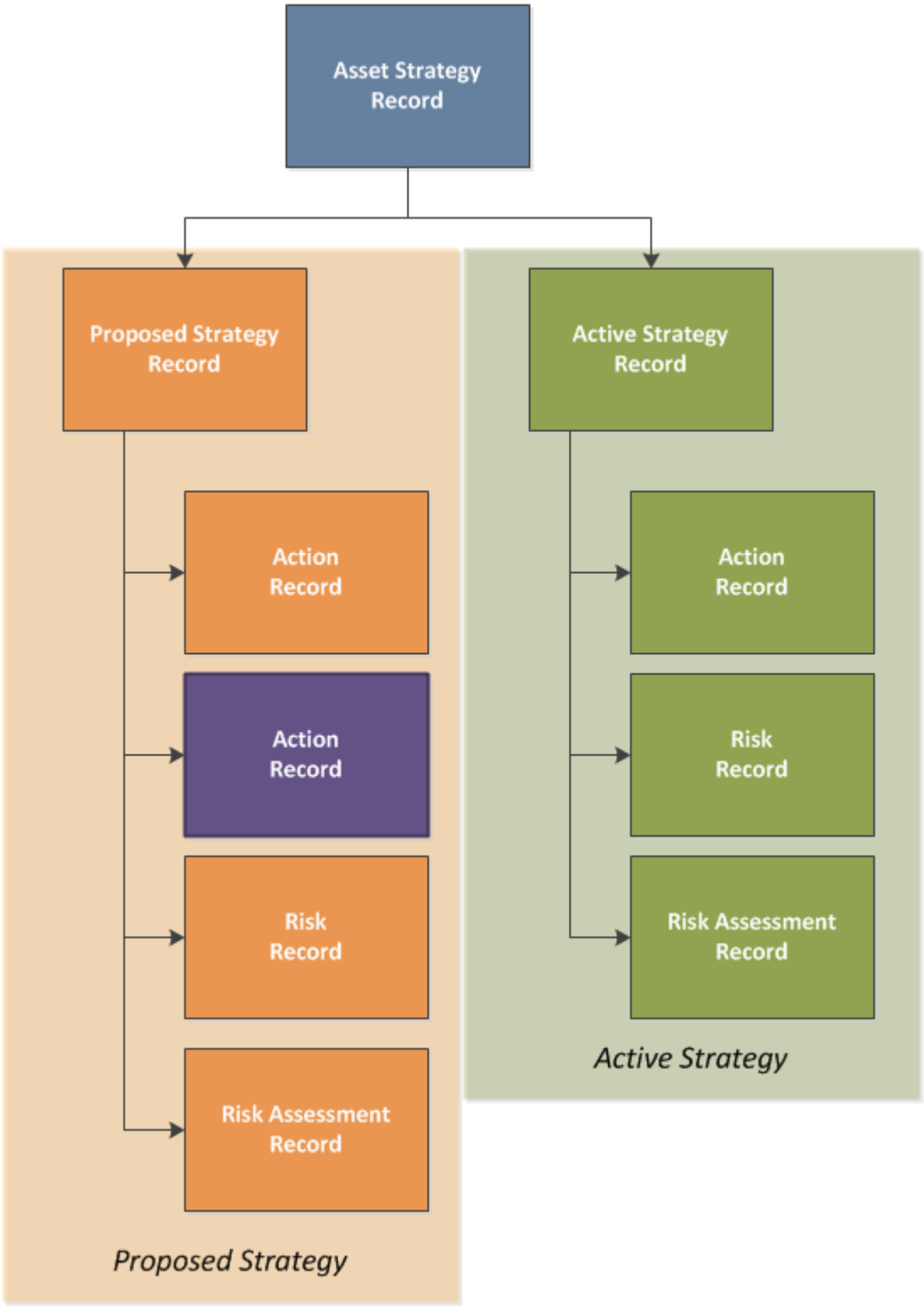


You can see from the preceding image that only the Proposed Strategy is affected. The Active Strategy remains unchanged.

Finally, consider the following image, which illustrates what happens when you activate the Proposed Strategy.



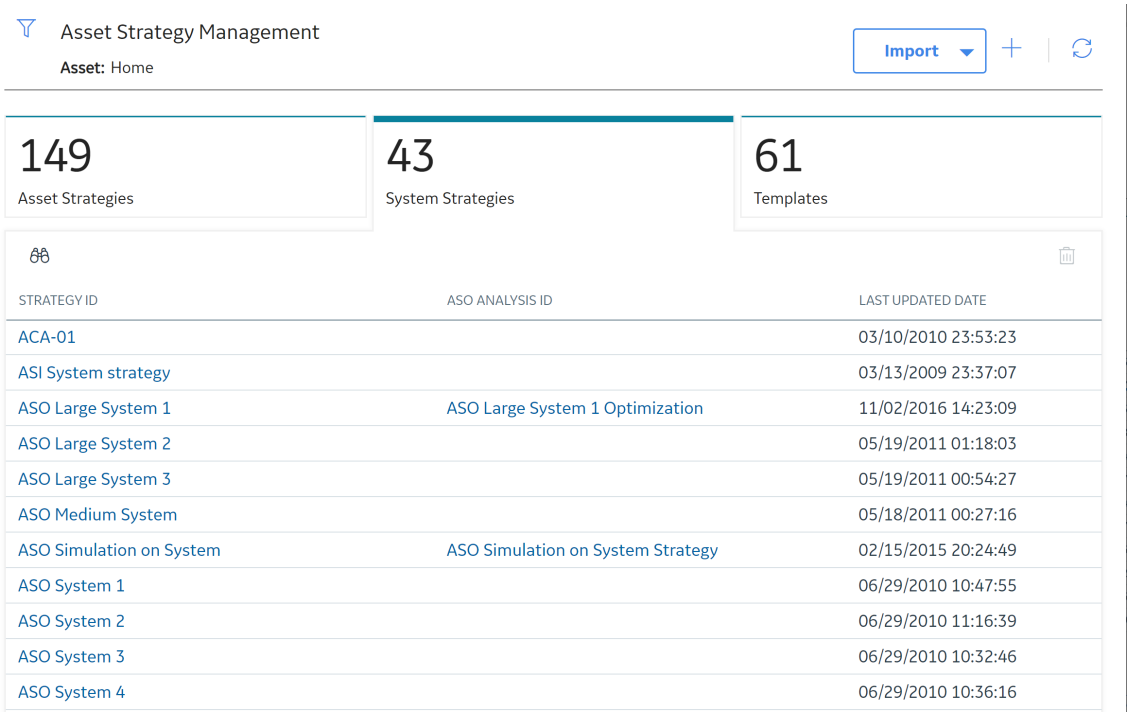
You can see from the preceding image that the Proposed Strategy and the Active Strategy are now identical again. The process would begin again if you were to modify the Asset Strategy in some way. For example, if you were to add a new Action, the following image illustrates how the Proposed Strategy would be updated, where the new Action is colored purple.


Asset Strategy Record
Proposed Strategy Record
Active Strategy Record
Action Record
Action Record
Risk Record
Risk Assessment Record
Action Record
Risk Record
Risk Assessment Record
Proposed Strategy
Active Strategy

Access a System Strategy

Procedure

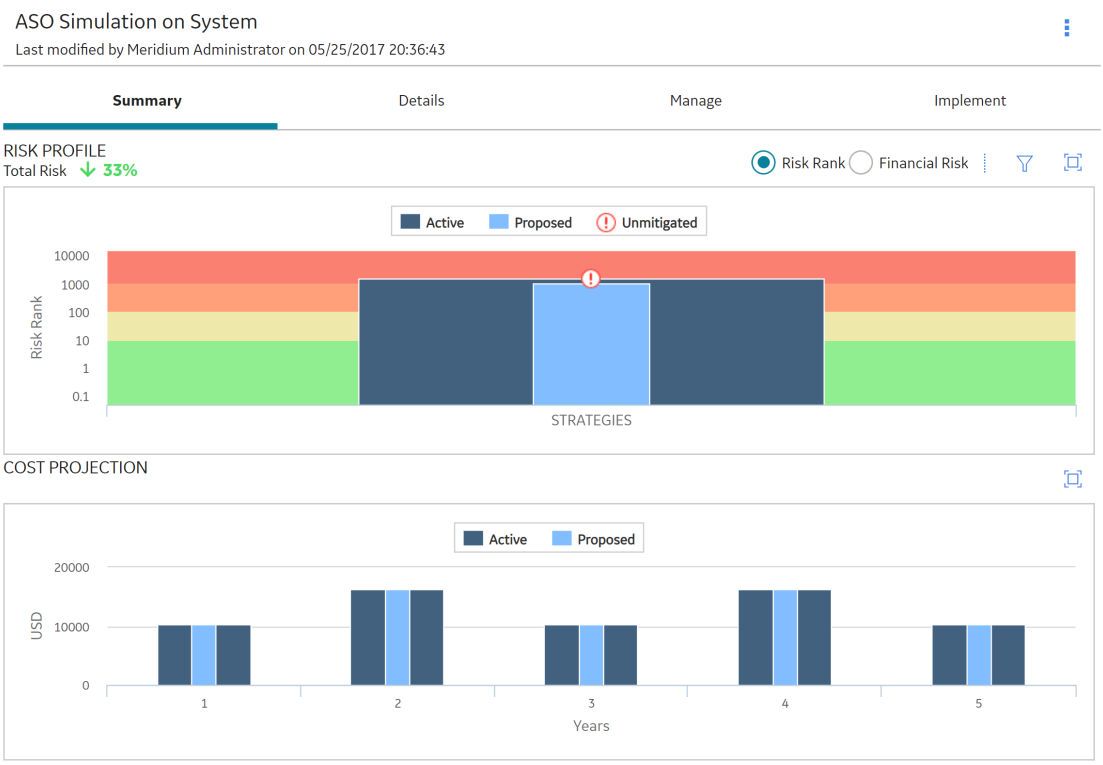
1. Access the **ASM Overview** page.
2. Select the **System Strategies** tab.
   A list of system strategies appears.



3. In the **Strategy ID** column, select the link for the system strategy that you want to view.

   The **Strategy Summary** workspace for the selected system strategy appears, displaying the **Summary** section. The following charts appear:

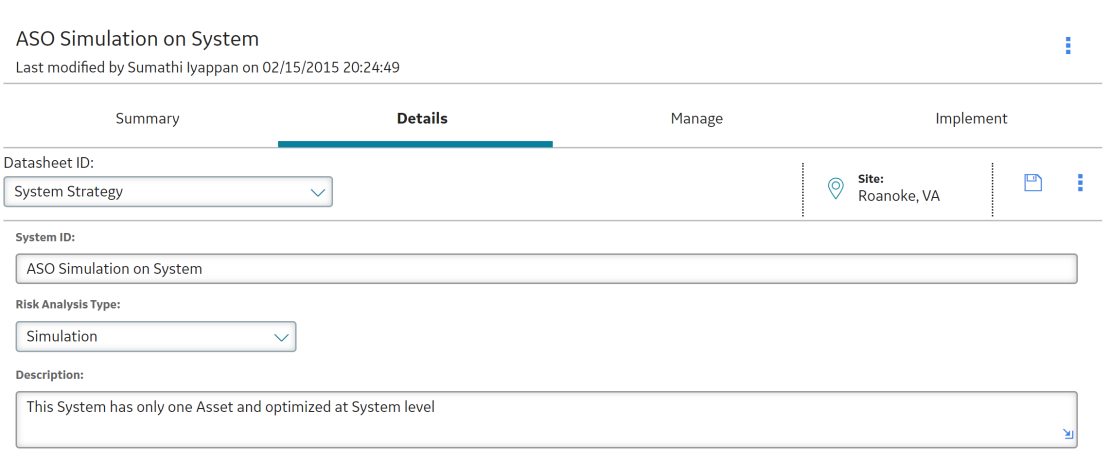
   - Risk Profile
   - Cost Projection



Create a System Strategy

Procedure

1. Access the **ASM Overview** page.
2. In the page, select +, and then select **Create System Strategy**.
   The new strategy appears in a new tab, displaying the **Details** section. The following image shows the **Details** section for a system strategy.



3. As needed, enter values in the available fields for a system strategy.
4. Select .
   The strategy is created.

Activate an Asset Strategy as Baseline

Before You Begin

This topic assumes that you have a pre-existing asset strategy in the Draft state.

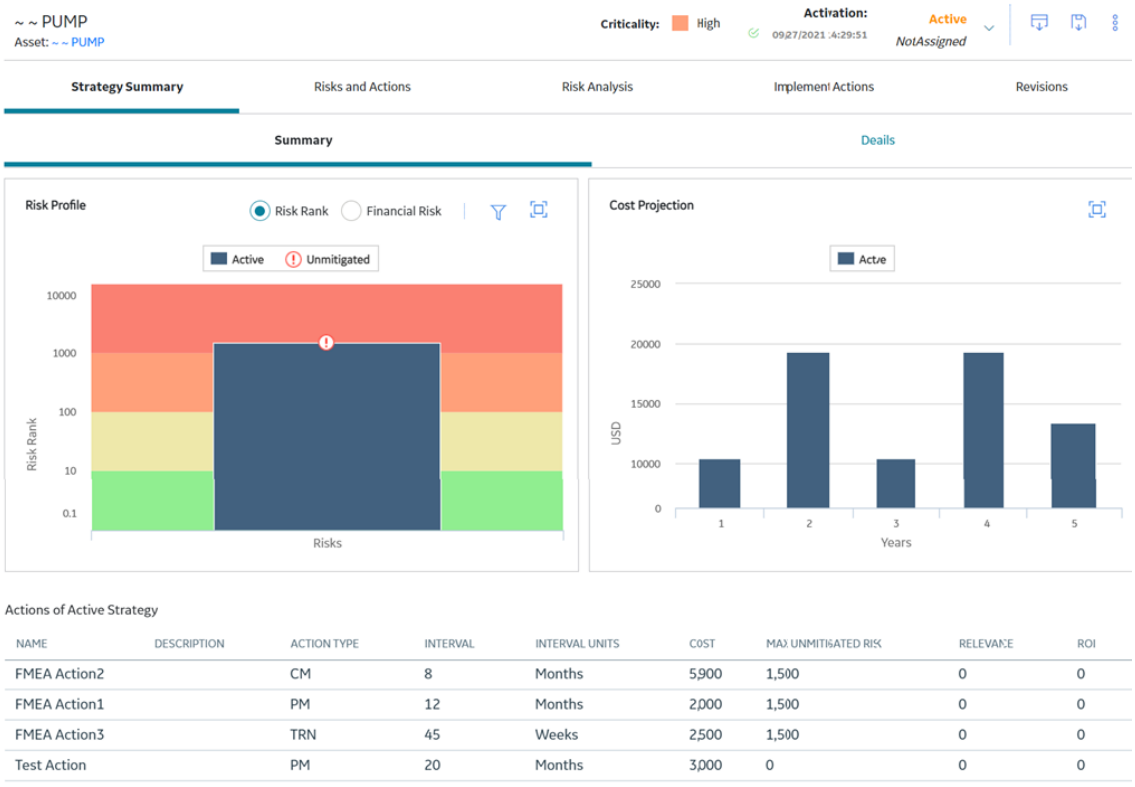
Tip: Reference the following topic if you want to create a new asset strategy before you start this set of instructions.

There are two activate operations in ASM:

- **Baseline**: This is mostly used to approve existing strategies for assets without going through the Pending Review state.
- **Propose**: This allows the asset strategy to go through a review workflow so that the strategy can be modified before it is activated.

Procedure

1. Access an asset strategy.
2. Select the asset strategy you want to activate as Baseline.
   The **Strategy Details** workspace for the selected asset strategy appears.



3. In the workspace, select , then select **Baseline**, and then select **Done**.
   A window appears, asking you to confirm the proposed changes to the strategy.

4. Select **Yes**.
   You will receive a notification that the strategy is activated.

Approve an Asset Strategy as a Proposed Strategy

About This Task

This topic assumes that you have a pre-existing asset strategy in the Draft state.

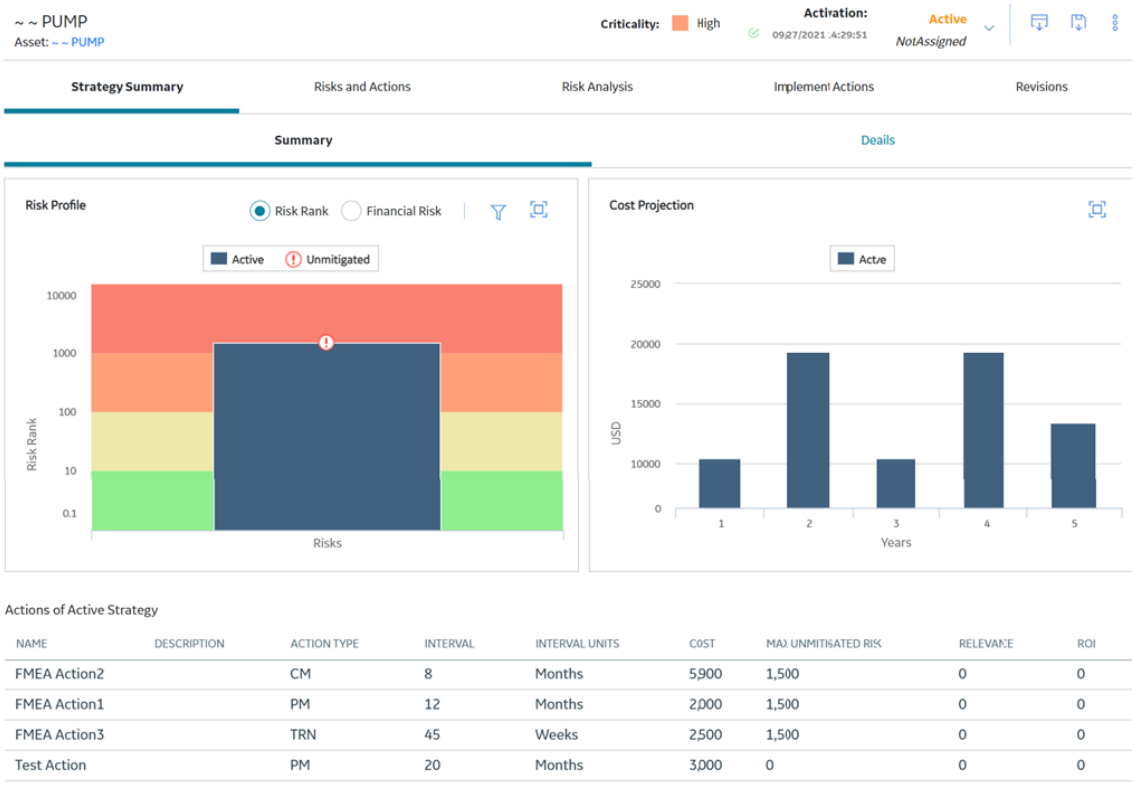
Tip: Reference the following topic if you want to create a new asset strategy before you start this set of instructions.

There are two activate operations in ASM:

- **Baseline**: This is mostly used to approve existing strategies for assets without going through the Pending Review state.
- **Propose**: This allows the asset strategy to go through a review workflow so that the strategy can be modified before it is activated.

Procedure

1. Access an asset strategy.
2. Select the asset strategy you want to activate as Proposed.
   The **Strategy Details** workspace for the selected asset strategy appears.



Actions of Active Strategy

NAME	DESCRIPTION	ACTION TYPE	INTERVAL	INTERVAL UNITS	COST	MAX UNMITIGATED RISK	RELEVANCE	ROI
FMEA Action2		CM	8	Months	5,900	1,500	0	0
FMEA Action1		PM	12	Months	2,000	1,500	0	0
FMEA Action3		TRN	45	Weeks	2,500	1,500	0	0
Test Action		PM	20	Months	3,000	0	0	0

3. In the workspace, select ⌄, then select **Propose**, and then select **Done**.
   A message appears, asking you to confirm that you want to perform the Propose operation.
4. Select **Yes**.

The **Basis for Revision** text box appears.

5. Enter the basis for your revision, and then select **OK**.
   The asset strategy enters the **Pending Review** state.
6. To make the strategy active, select , select **Make Active**, and then select **Done**.
   A window appears, asking you to confirm that you want to activate the strategy.
7. Select **Yes**.
   The strategy is activated.

   Note: If you want to rework a proposed strategy at ay time after it is activated, select **Rework** from the strategy's state menu, an then select **Done**

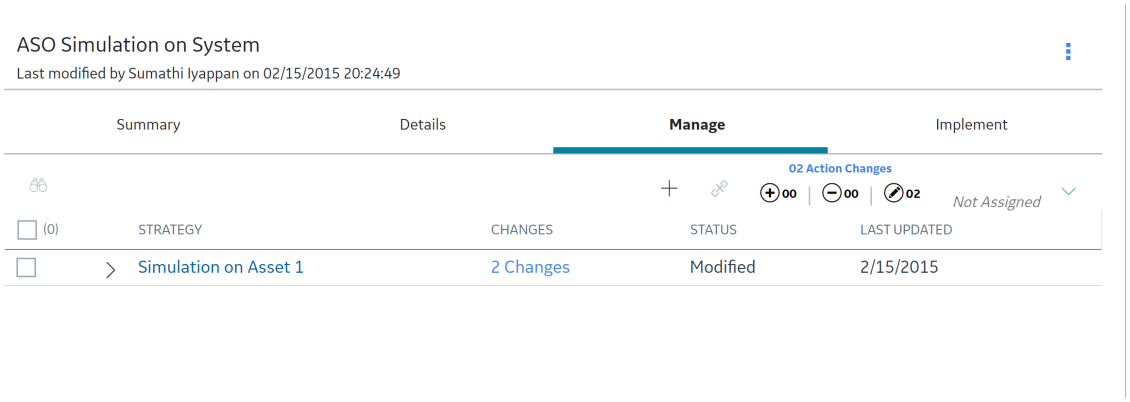
Add an Existing Asset Strategy to a System Strategy

Before You Begin

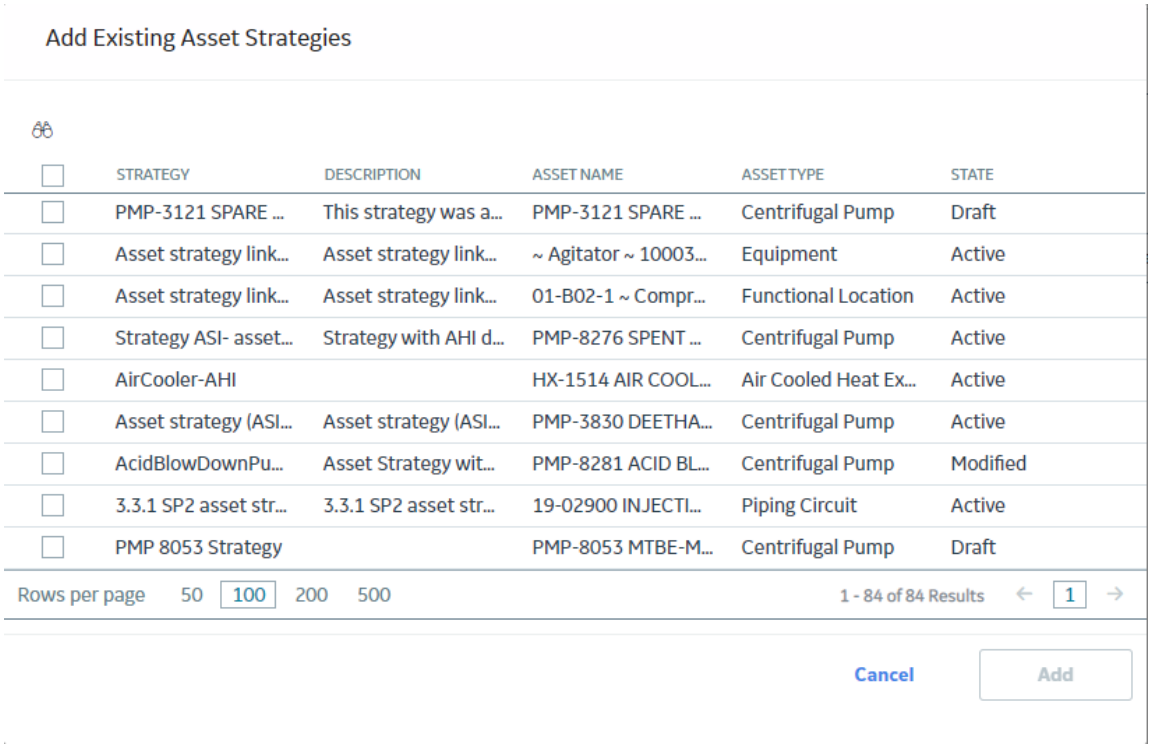
This topic assumes that you have pre-existing asset strategies to add to your system strategy.

Procedure

1. Access the system strategy to which you want to add an asset strategy.
2. Select the **Manage** tab.
   The **Manage** workspace appears.



3. Select .
   The **Add Existing Asset Strategies** window appears.



4. For each strategy that you want to add, select the check box, and then select **Add**.
   The asset strategy is added to the system strategy.

   Note: The maximum number of asset strategies that can be added to a system strategy is 500.

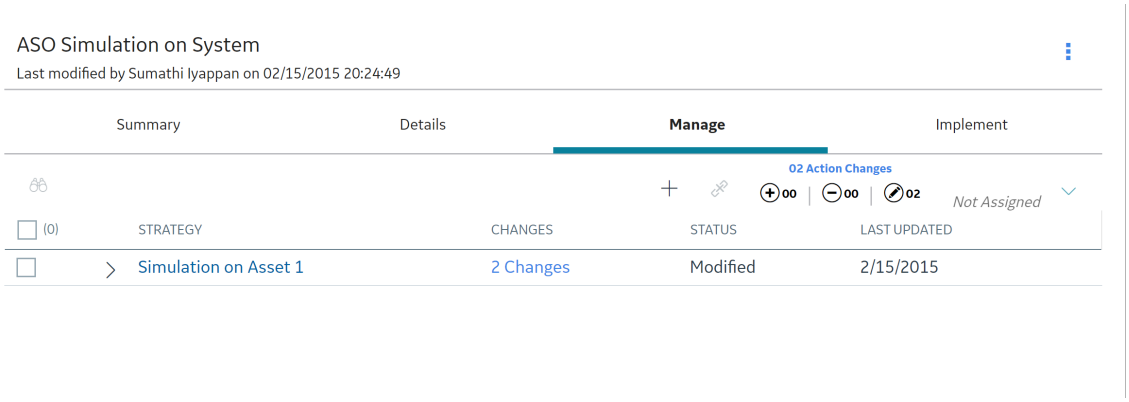
View Action Changes in System Strategy

About This Task

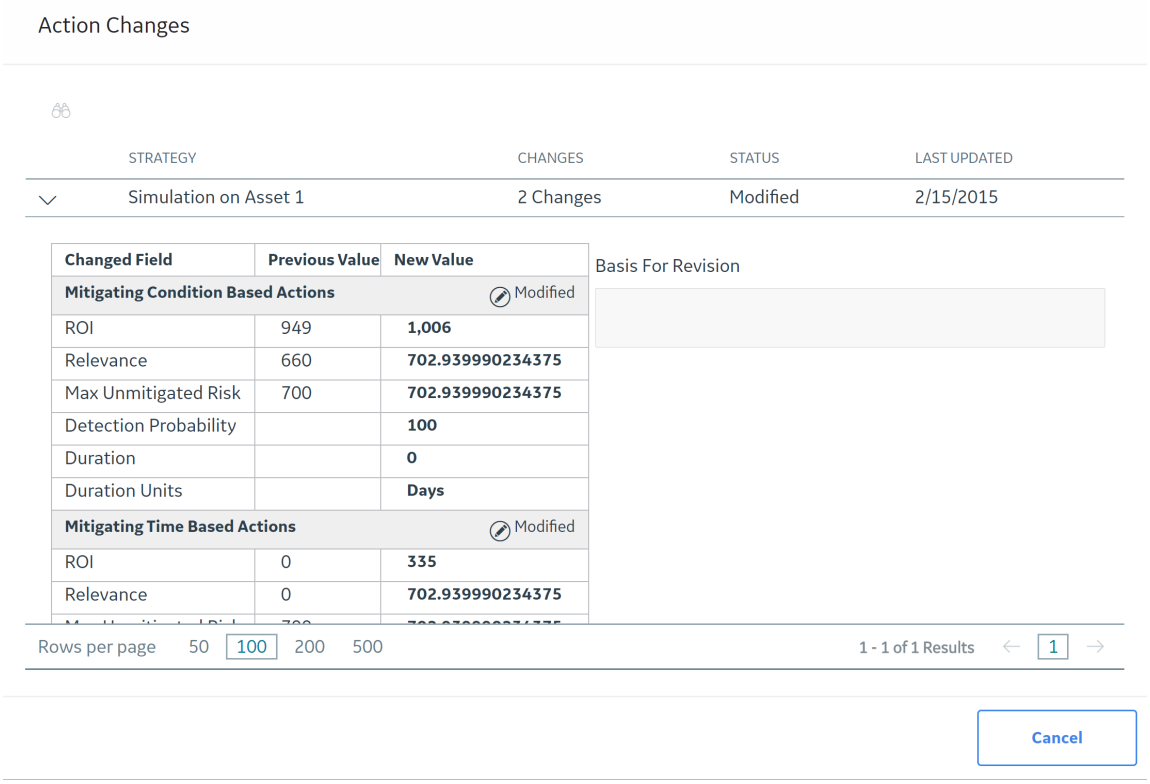
This topic describes how to view the changes for all the actions in the system strategy.

Procedure

1. Access the system strategy for which you want to view the action changes.
2. Select the **Manage** tab.
   The **Manage** workspace appears.



3. Select **Action Changes** to view the changes made to the actions in the system strategy.
   The **Action Changes** window appears.



Remove an Asset Strategy from a System Strategy

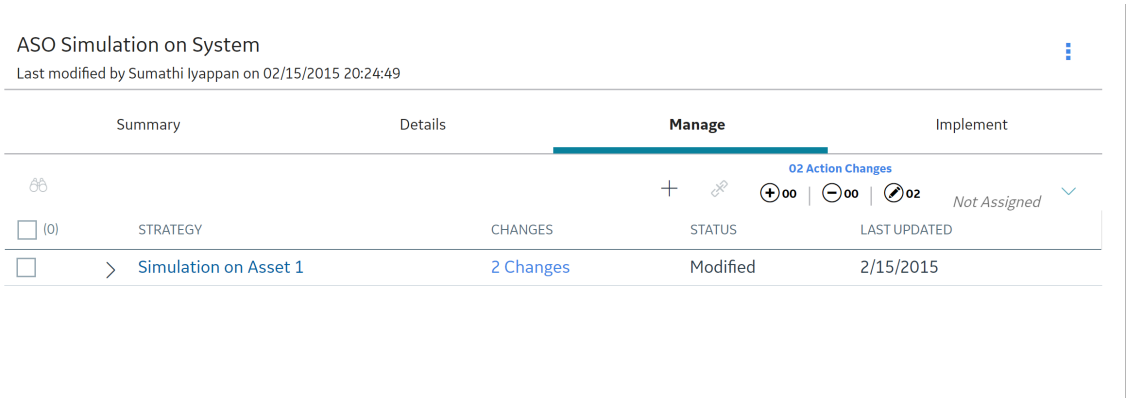
This topic describes how to remove an asset strategy from a system strategy.

Before You Begin

Only the owner of the strategy has the system permissions to delete a strategy.

Procedure

1. Access the system strategy from which you want to remove an asset strategy.
2. Select the **Manage** tab.
   The **Manage** workspace appears, displaying a list of available strategies.



3. For each strategy that you want to remove, select the check box.
   In the workspace, is enabled.
4. Select .
   A window appears, asking you to confirm that you want to remove the selected strategies from the parent strategy.
5. Select **OK**.
   The selected strategy is removed.

Delete a System Strategy

Procedure

1. Access the **ASM Overview** page.
2. Select the **System Strategies** tab.
   The **System Strategies** section appears, displaying a list of system strategies.
3. Select the row containing the strategy that you want to delete, and then, in the section, select .
   The **Confirm Delete** dialog appears, asking you to confirm that you want to delete the strategy.
4. Select **Yes**.
   The strategy is deleted.

   Note: You can also delete a strategy using the delete button () under option while viewing the strategy that you want to delete.

Chapter 5

Asset Strategy Templates

Topics:

- About Asset Strategy Templates
- Create a Strategy Template
- Copy a Template in ASM
- Export an Asset Strategy Template
- Apply a Template to an Asset Strategy as a Copy
- Apply a Template as a Master to an Asset Strategy
- Access the Controlled Strategy View for Asset Strategy Templates
- Add an Existing Strategy to a Template
- Unlink Strategies in Templates

About Asset Strategy Templates

An Asset Strategy Template represents an Asset Strategy that you plan to reuse by applying it to additional Asset Strategies. The process of creating an Asset Strategy Template from scratch is almost identical to the process of creating an Asset Strategy. Additionally, you can create an Asset Strategy Template using an existing Asset Strategy.

When working with Asset Strategy Templates, you can add Action records and Risk records and manage Risk Assessments.

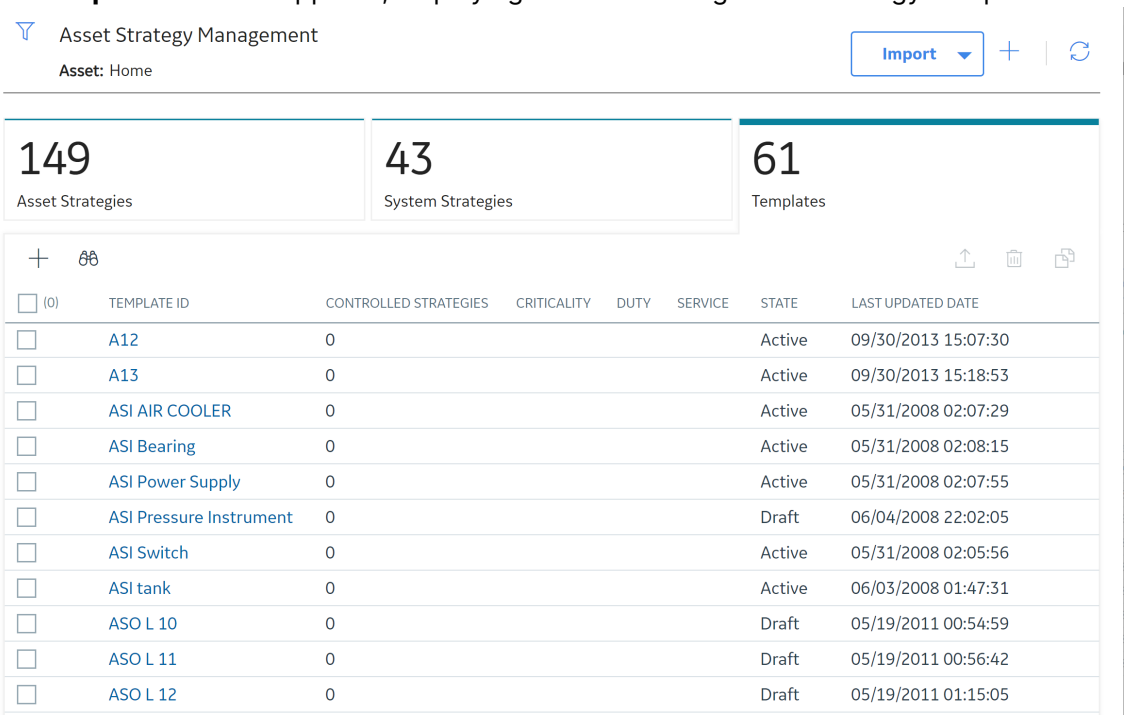
Create a Strategy Template

Before You Begin

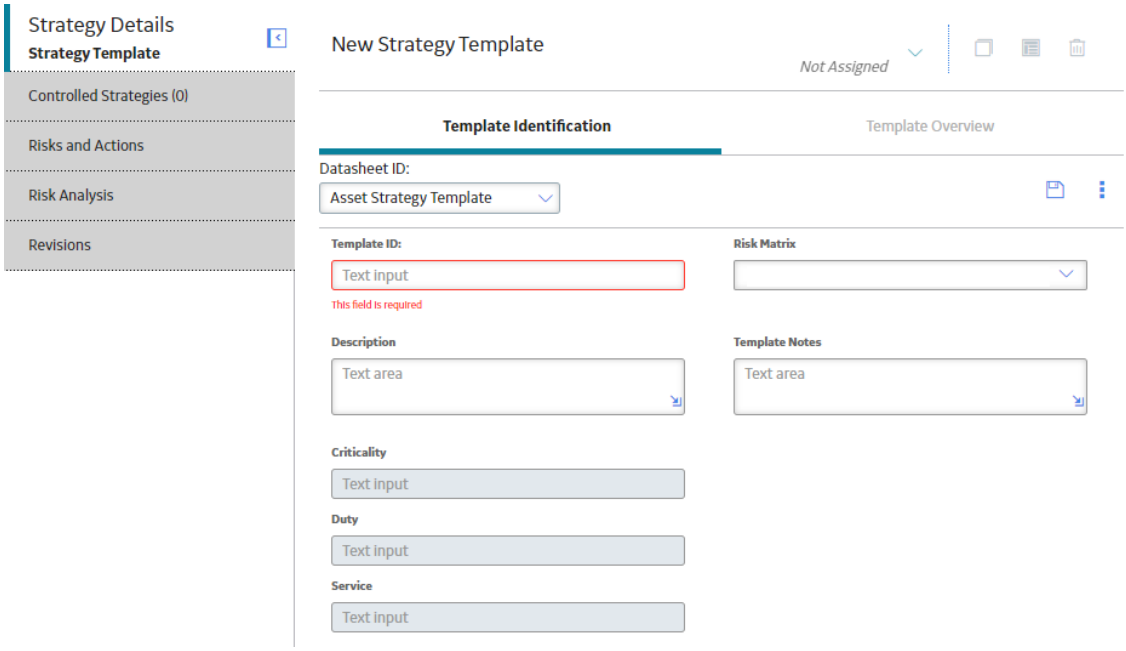
Only an Asset Strategy Template whose state is Active can be selected for use in this procedure.

Procedure

1. Access the **ASM Overview** page.
2. Select the **Templates** tab.
   The **Templates** section appears, displaying a list of existing Asset Strategy Templates.



3. Select + .
   The **Strategy Details Strategy Template** datasheet for the selected analysis appears.



4. As needed, enter data in the available fields.

   Note: Template ID is a required field.

5. When finished, select .
   Your template is saved in the Draft state.

Copy a Template in ASM

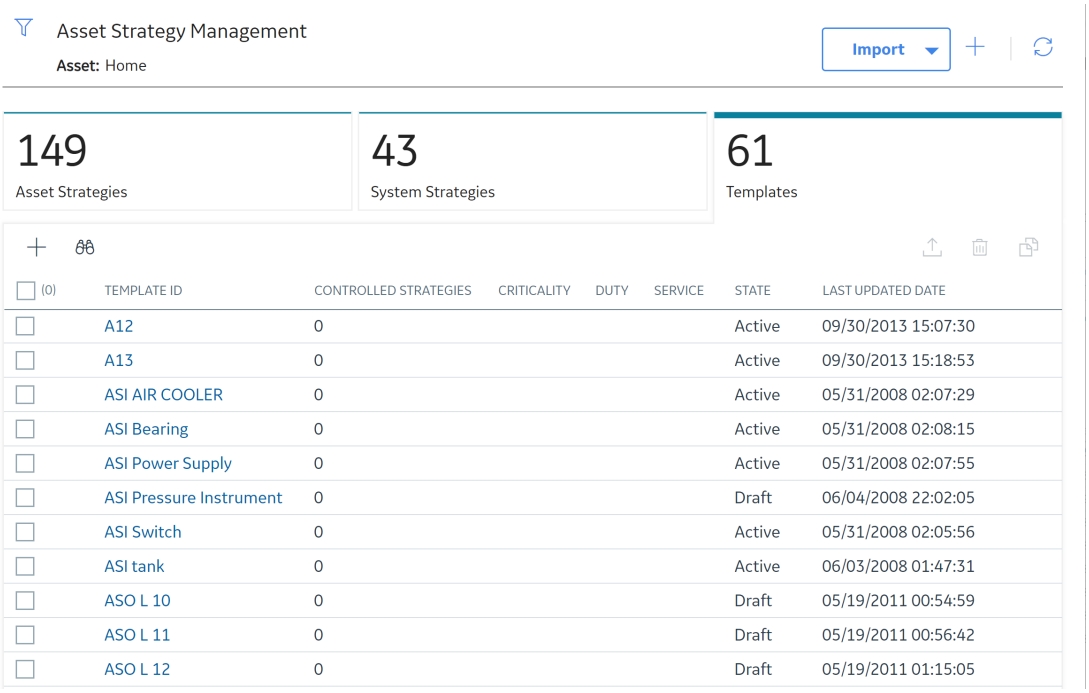
Before You Begin

Only an Asset Strategy Templates whose state is Active can be selected for use in this procedure.

Procedure

- Copy a Template in ASM in the **Template** section:

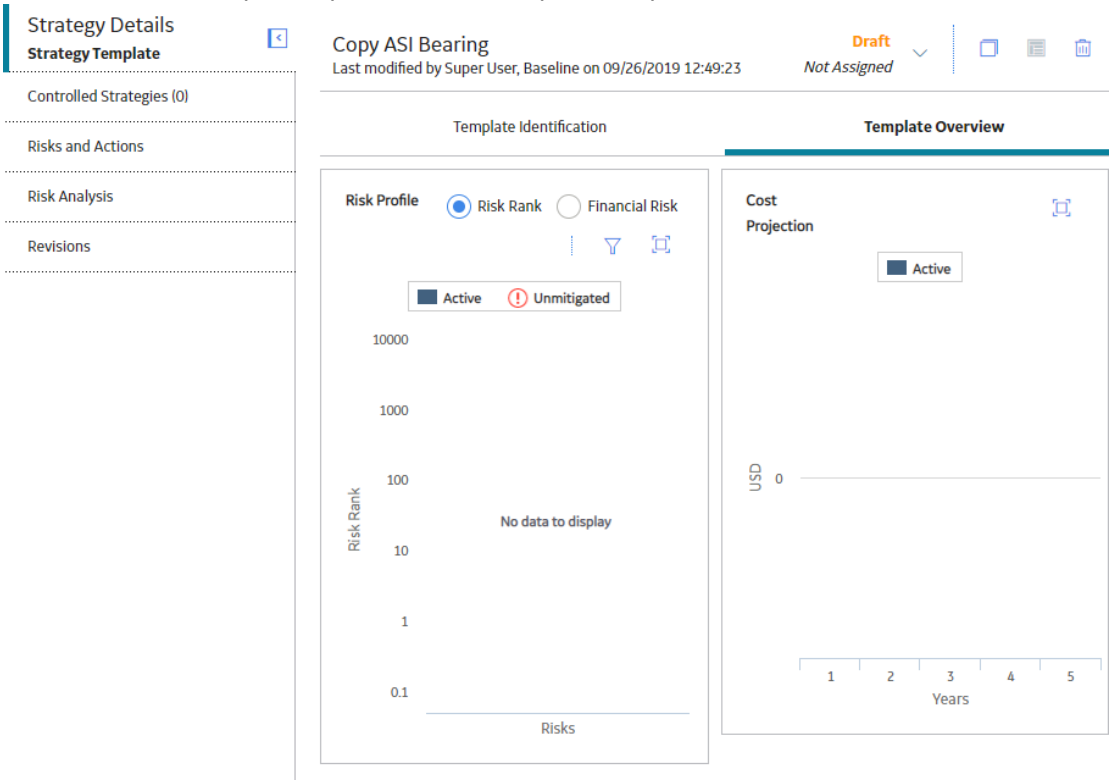
  1. Access the **ASM Overview** page.
  2. Select the **Templates** tab.
     The **Templates** section appears, displaying a list of existing Asset Strategy Templates.



3. Select the row for a template.

   Note: Do not select the link under the template name.

4. Select .
   In a new tab, a template opens with the copied template in the Draft state.



5. Select the **Template Identification** tab to make your changes, and then select .

- Copy a template in ASM from within a template:

1. In the template that you want to copy, select .
   A new window appears, displaying the template that you want to copy.
2. Modify the template, if necessary.
   When done, select .

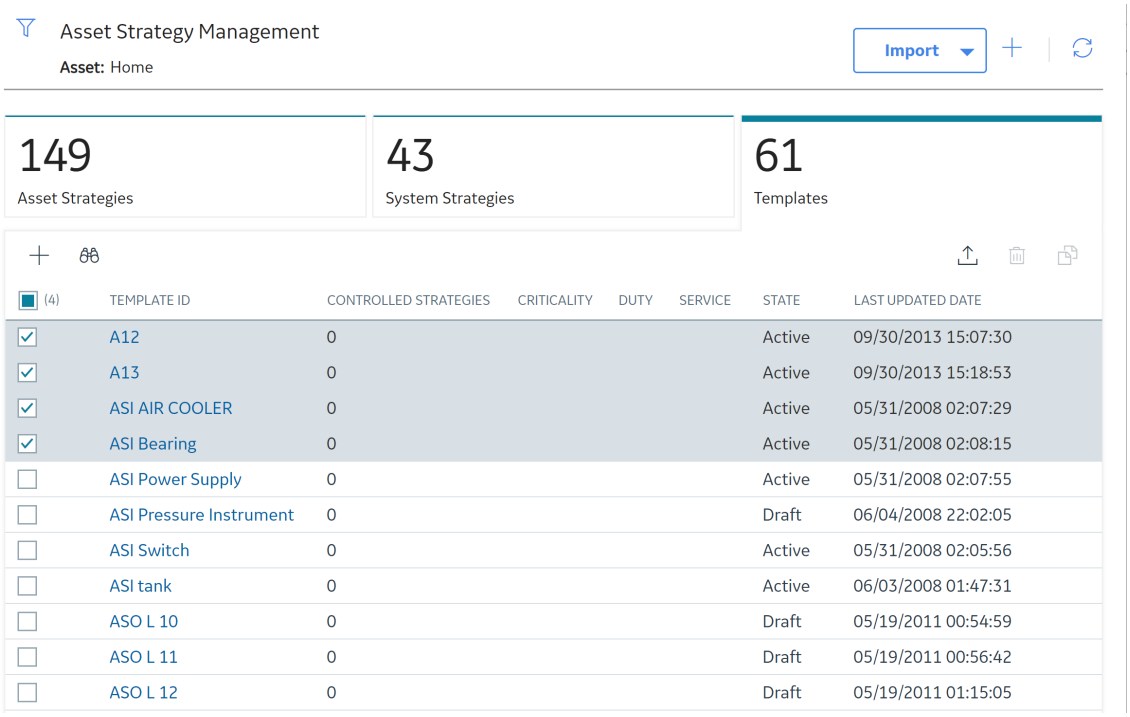
The template is copied.

Export an Asset Strategy Template

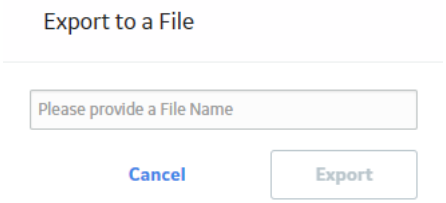
Procedure

1. Access the **ASM Overview** page.
2. Select the **Templates** tab.
3. Select one or more templates that you want to export.

   The selected templates are highlighted.



4. Select .
   The **Export to a File** window appears.



5. In the **Please provide a File Name** box, enter a file name for the export.

6. Select **Export**.
   The selected Asset Strategy Templates are exported.

   Note: All the Secondary Actions associated with the primary actions in the asset strategy template are also exported.

Apply a Template to an Asset Strategy as a Copy

About This Task

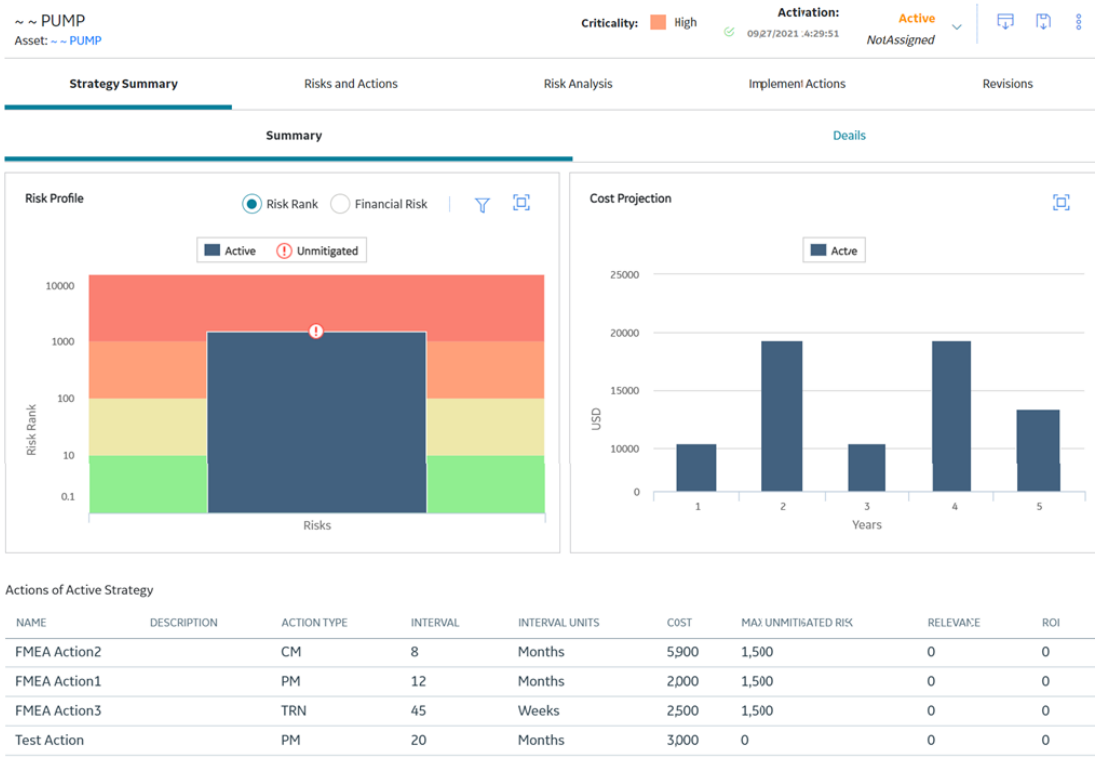
When you apply a template to a strategy as a copy, a copy of the template, with its related records, is applied to the strategy. You can choose to copy both actions and risks, or just risks, to the strategy. Additionally, you can decide whether you want to discard or keep certain items related to the strategy.

Applying a template to a strategy can be done from an Asset Strategy record or from a Strategy Template record.

Procedure

- Apply a Template as a Copy from the Strategy Record:

  1. Access the **ASM Overview** page.
  2. Select the **Asset Strategies** tab.
     The **Asset Strategies** section appears, displaying a list of available asset strategies.
  3. Select the strategy in which you want to apply a template as a copy.
     The **Strategy Details** workspace for the selected asset strategy appears.

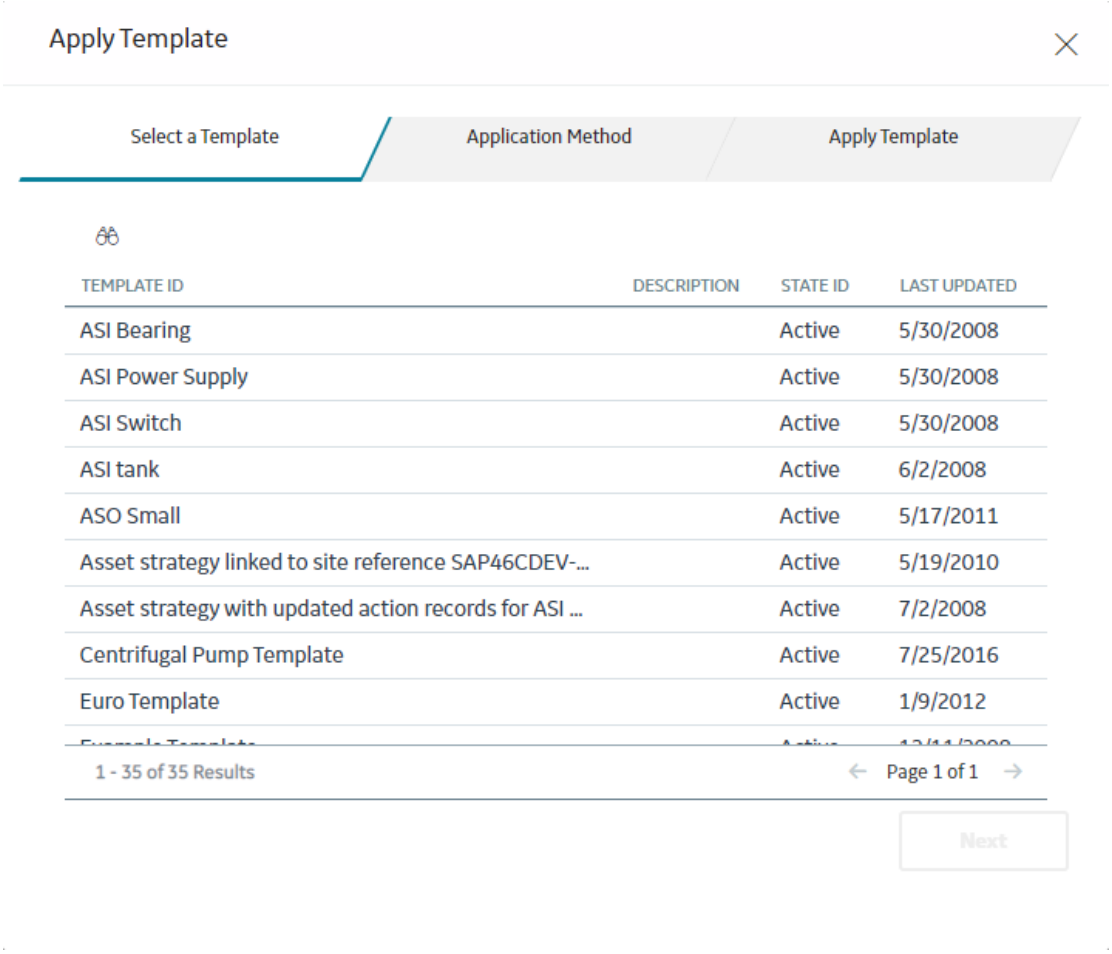


Actions of Active Strategy

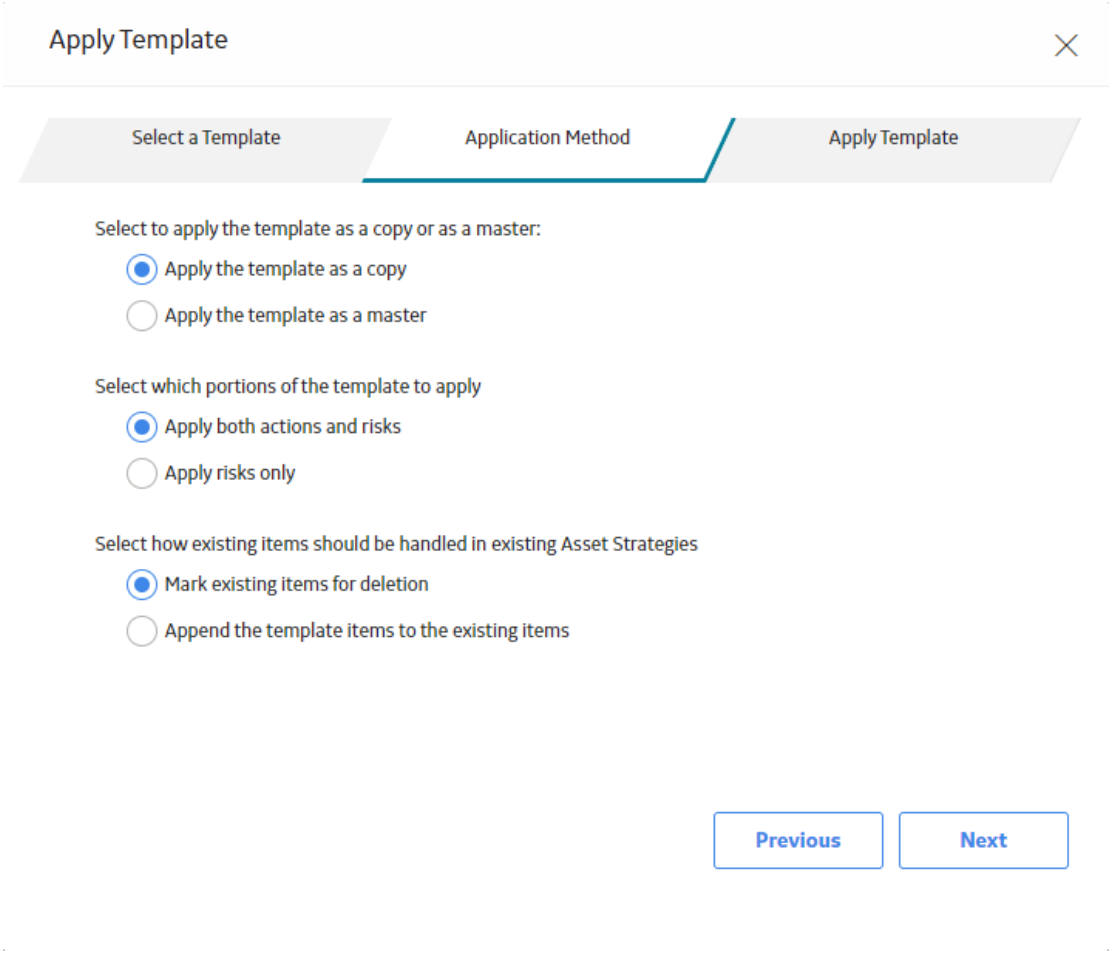
NAME	DESCRIPTION	ACTION TYPE	INTERVAL	INTERVAL UNITS	COST	MAX UNMITIGATED RISK	RELEVANCE	ROI
FMEA Action2		CM	8	Months	5,900	1,500	0	0
FMEA Action1		PM	12	Months	2,000	1,500	0	0
FMEA Action3		TRN	45	Weeks	2,500	1,500	0	0
Test Action		PM	20	Months	3,000	0	0	0

  4. Select .

The **Apply Template** window appears, displaying a list of existing Active Asset Strategy Templates.

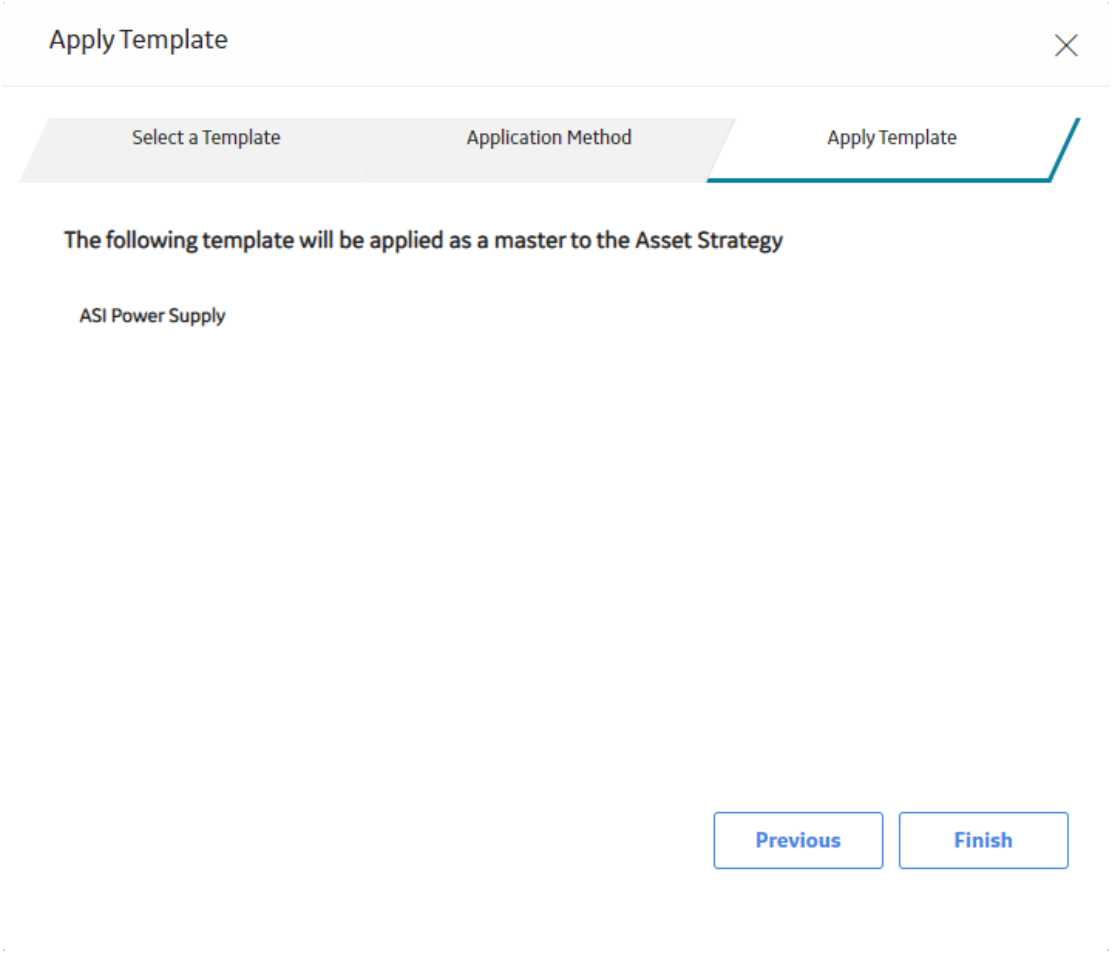


5. Select the template that you want to use, and then select **Next**.
   The **Application Method** section appears. The **Apply the Template as a Copy** option is preselected.



Tip: If you would like to apply your template as a master instead, you can follow these steps.

6. Select which portions of the template to apply by selecting the appropriate option:
   - Apply both actions and risks
   - Apply risks only
7. Select how existing items should be used in existing asset strategies by selecting the appropriate option:
   - Mark existing items for deletion
   - Append the template items to the existing items
8. Select **Next**.
   The **Apply Template** window displays a message indicating that the template will be applied as a master.



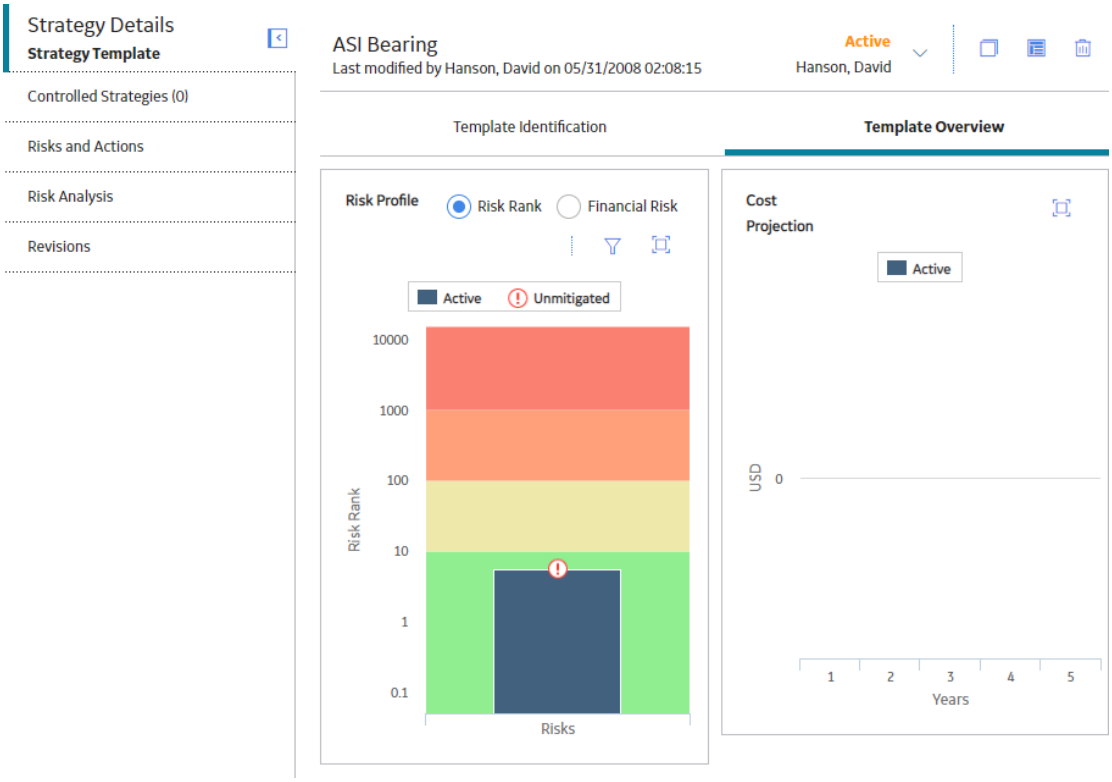
9. Select **Finish**.

   Note:

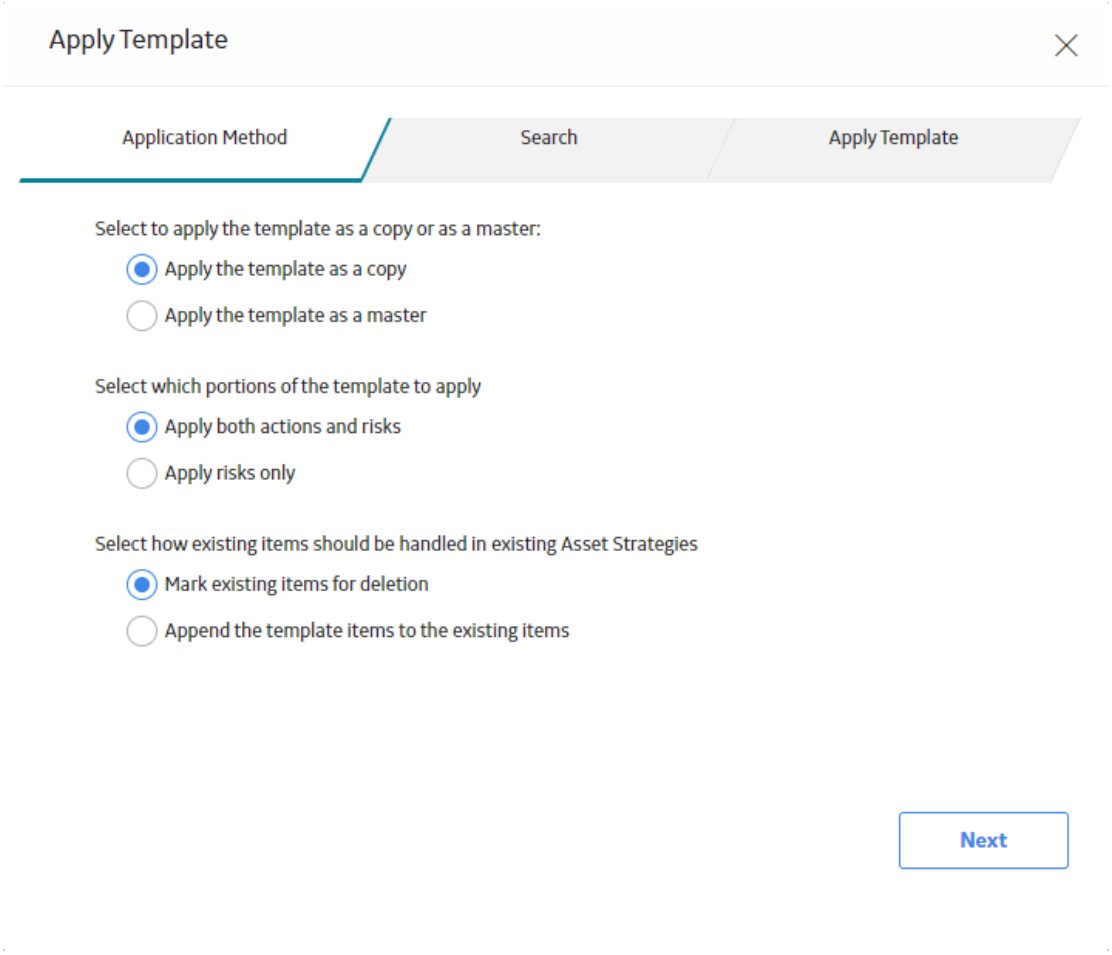
   - A template can be applied as a copy to strategies from any site as long as the risk matrix matches.
   - Secondary actions defined in the template level also get applied during template application to the strategy.

- Apply a Template as a Copy from the Template Record:

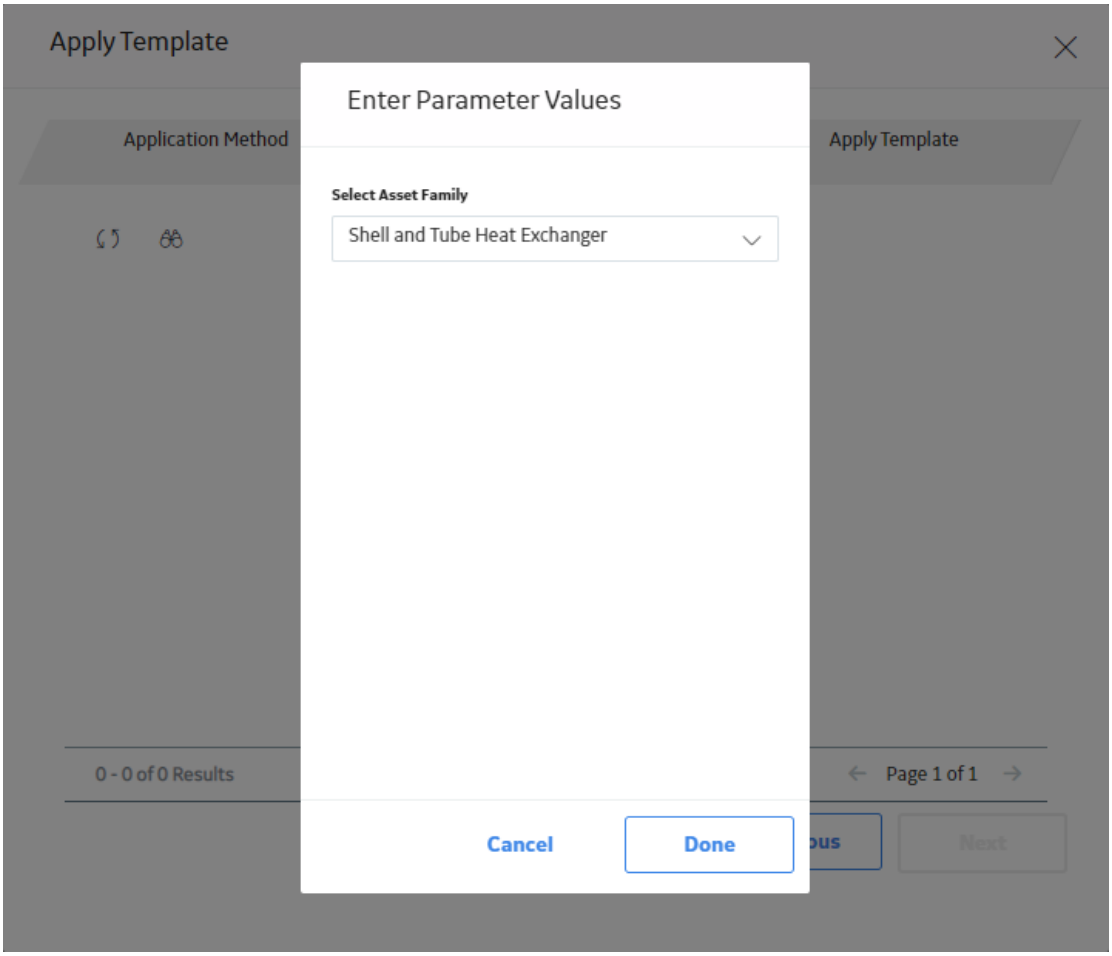
  1. Access the **ASM Overview** page.
  2. Select the **Templates** tab.
     The **Templates** section appears, displaying the list of templates.
  3. Select the template that you want to apply to a strategy.
     In a new tab, the **Strategy Details Strategy Template** workspace for the selected template appears, displaying the **Template Overview** section.



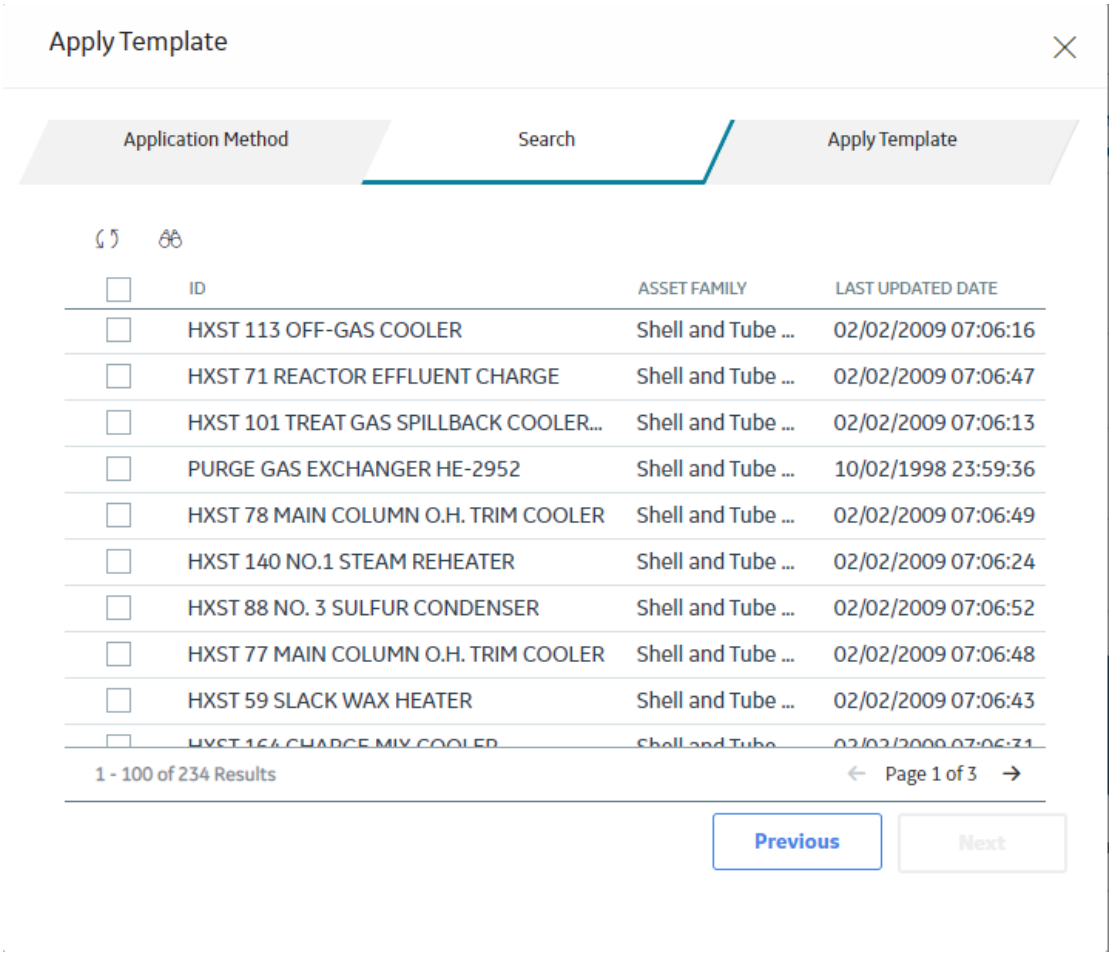
4. Select .
The **Apply Template** window appears, displaying the **Application Method** tab. The **Apply the Template as a Copy** option is selected by default.



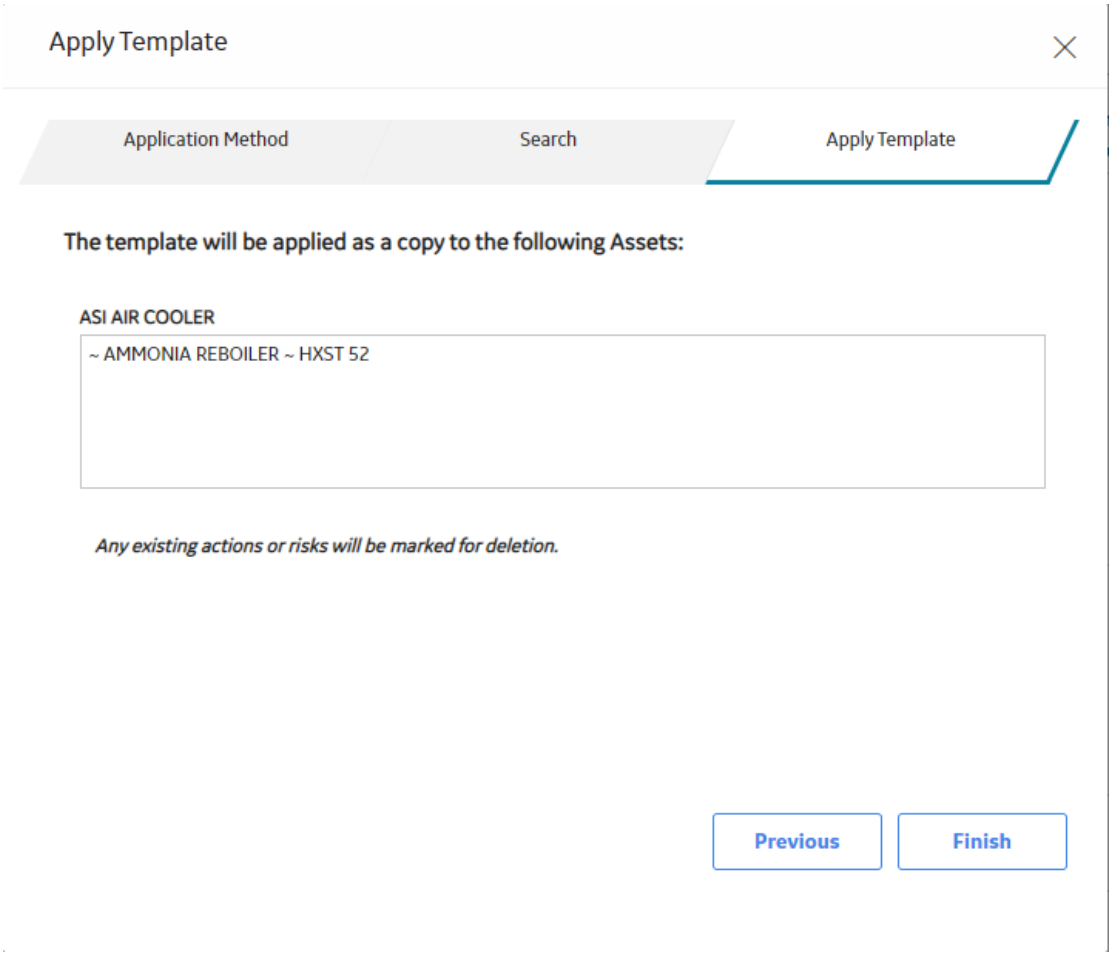
5. Select which of the following portions of the template you want to apply:
   - Apply both actions and risks
   - Apply risks only
6. Select one of the following option for how you want existing items to be used in existing asset strategies:
   - Mark existing items for deletion
   - Append the template items to the existing items
7. Select **Next**.
   The **Apply Template** window displays the **Search** tab, and the **Enter Parameter Values** window appears.



8. Using the **Select Asset Family** drop-down list, select the family of the asset to which you want to apply a template, and then select **Done**.
   The **Search** tab displays a list of assets in the family that you selected.



9. Select the asset(s) to which you want to apply the template, and then select **Next**. The **Apply Template** window displays a message indicating that the template will be applied as a master to the asset(s) that you selected.



10. Select **Finish**.

    Note:

    - If you apply a template to an asset that has no strategy, applying the template will create an asset strategy for that asset.
    - Secondary actions defined in the template level also get applied during template application to the strategy.

Apply a Template as a Master to an Asset Strategy

About This Task

When you apply a template as a master to an asset strategy, all of the associated records for that template are applied to the strategy, and moving forward, the strategy is controlled by the template. Any changes then made to the template's risks or actions will also be reflected in the strategies it controls.

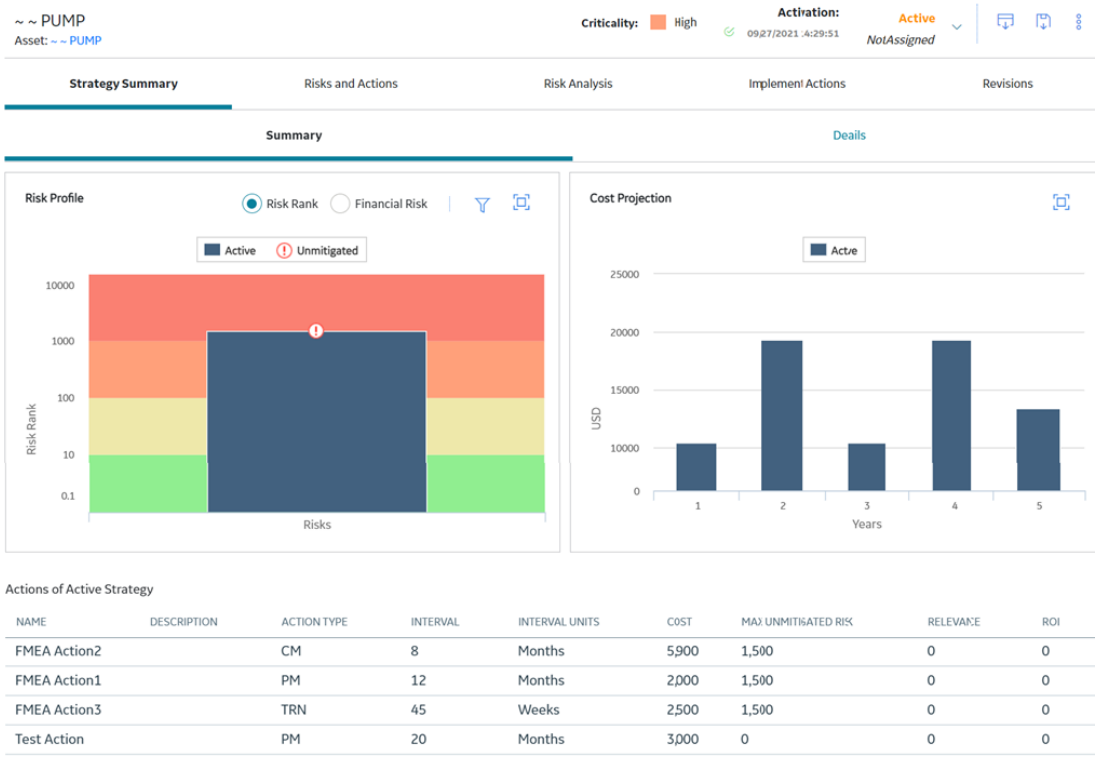
Applying a template to a strategy can be done from an Asset Strategy record or from a Strategy Template record.

Note: For optimal performance, the number of controlled strategies for a template is limited to 5000.

Procedure

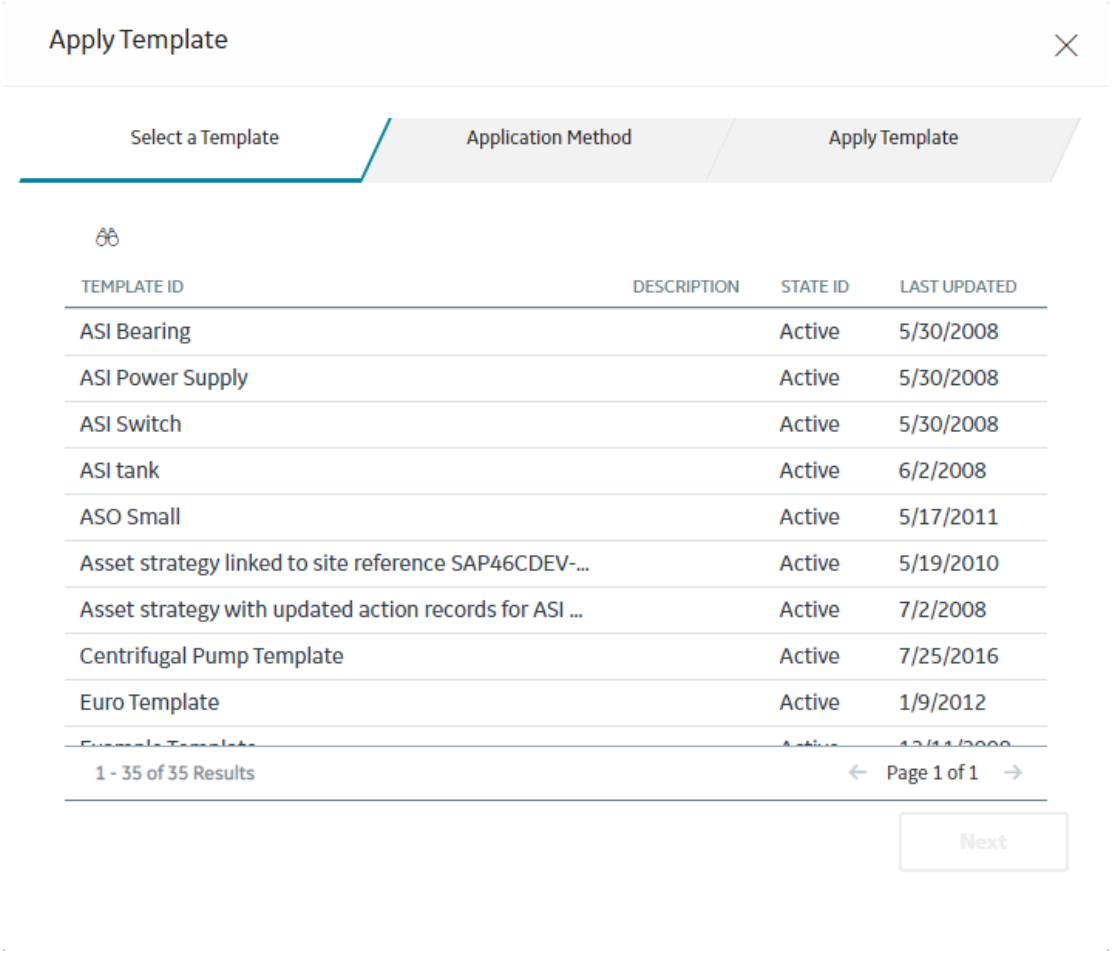
- Apply a Template to a Strategy from the Asset Strategy Record

1. Access the **ASM Overview** page.
2. Select the **Asset Strategies** tab.
   The **Asset Strategies** section appears, displaying a list of available asset strategies.
3. Select the strategy to which a template is to be applied as master.
   The **Strategy Details** workspace for the selected asset strategy appears.

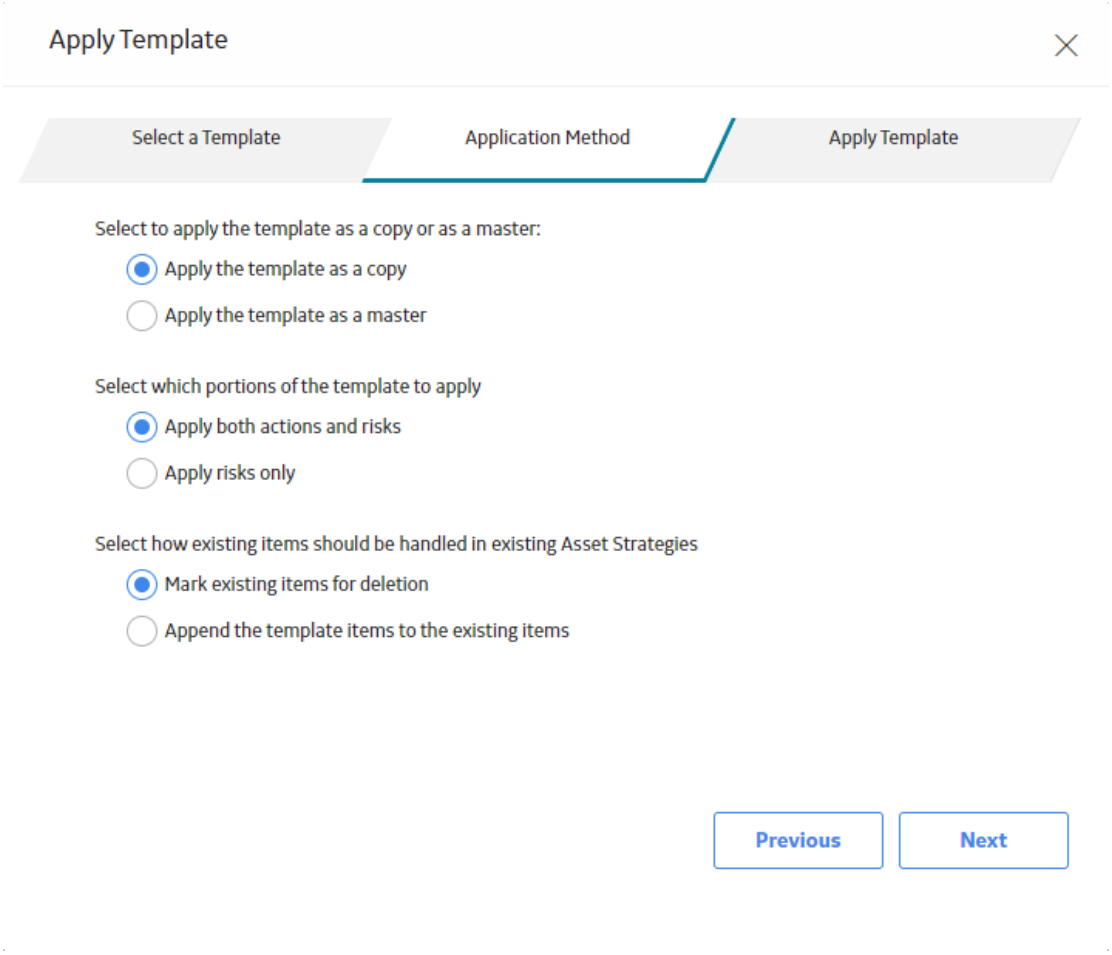


4. In the upper-right corner, select .
   The **Apply Template** window appears.

   Note: Only templates in the Active state appear in the list.

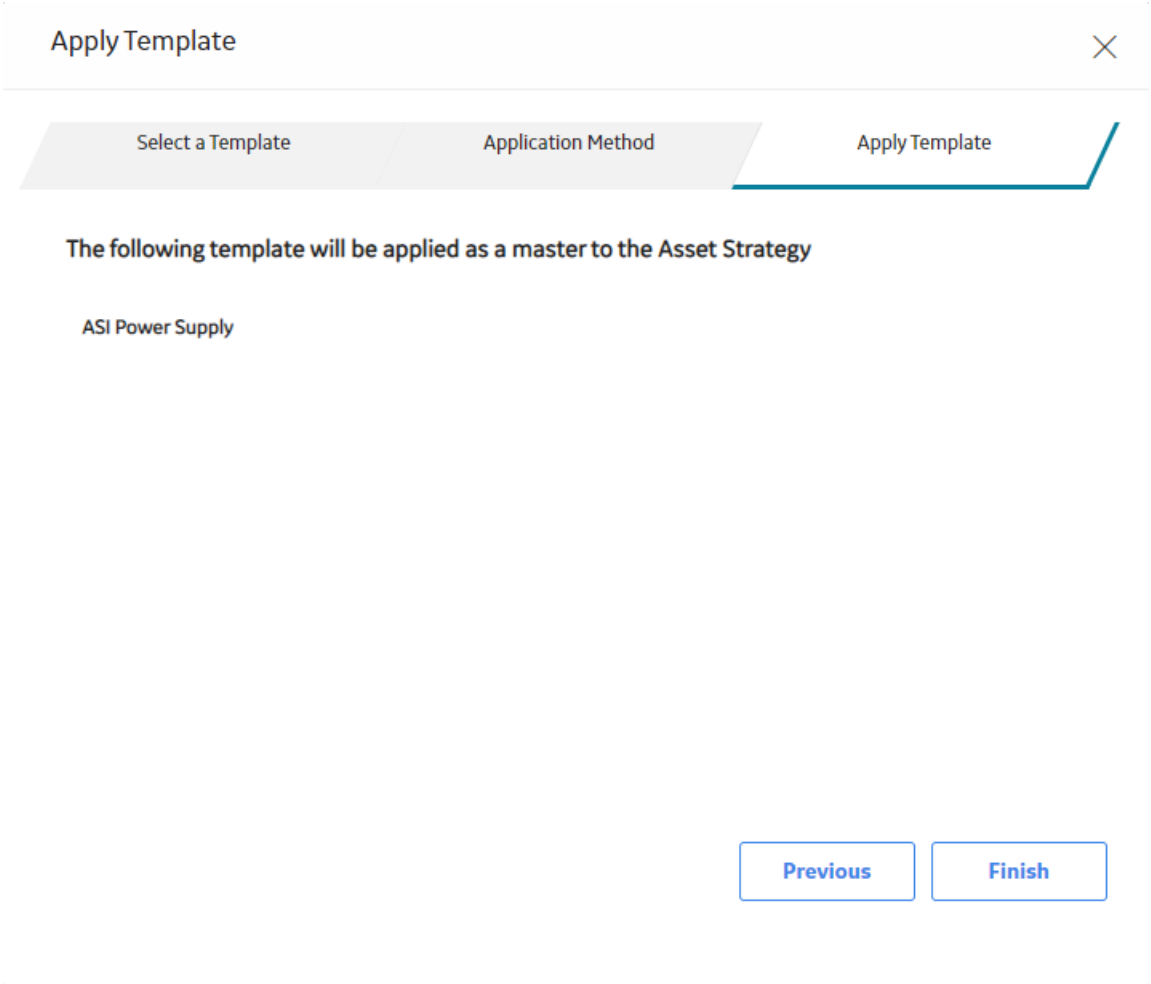


5. Select the **Template ID** of the template that you want to use and then select **Next**. The **Application Method** tab is displayed.



6. Select **Apply the Template as a Master** option and then select **Next**.

   Tip: If you would like to apply your template as a copy instead, you can follow these steps.
7. The **Apply Template** window displays a message indicating that the template will be applied as a master.



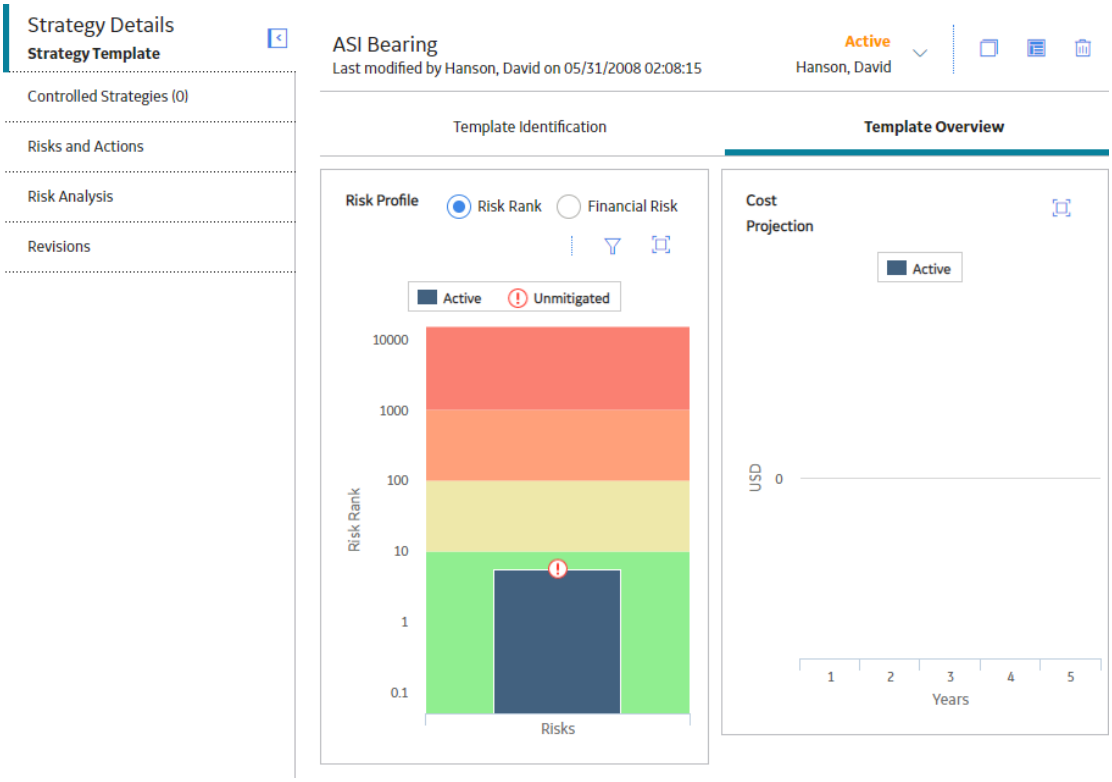
8. Select **Finish**.

   Note:

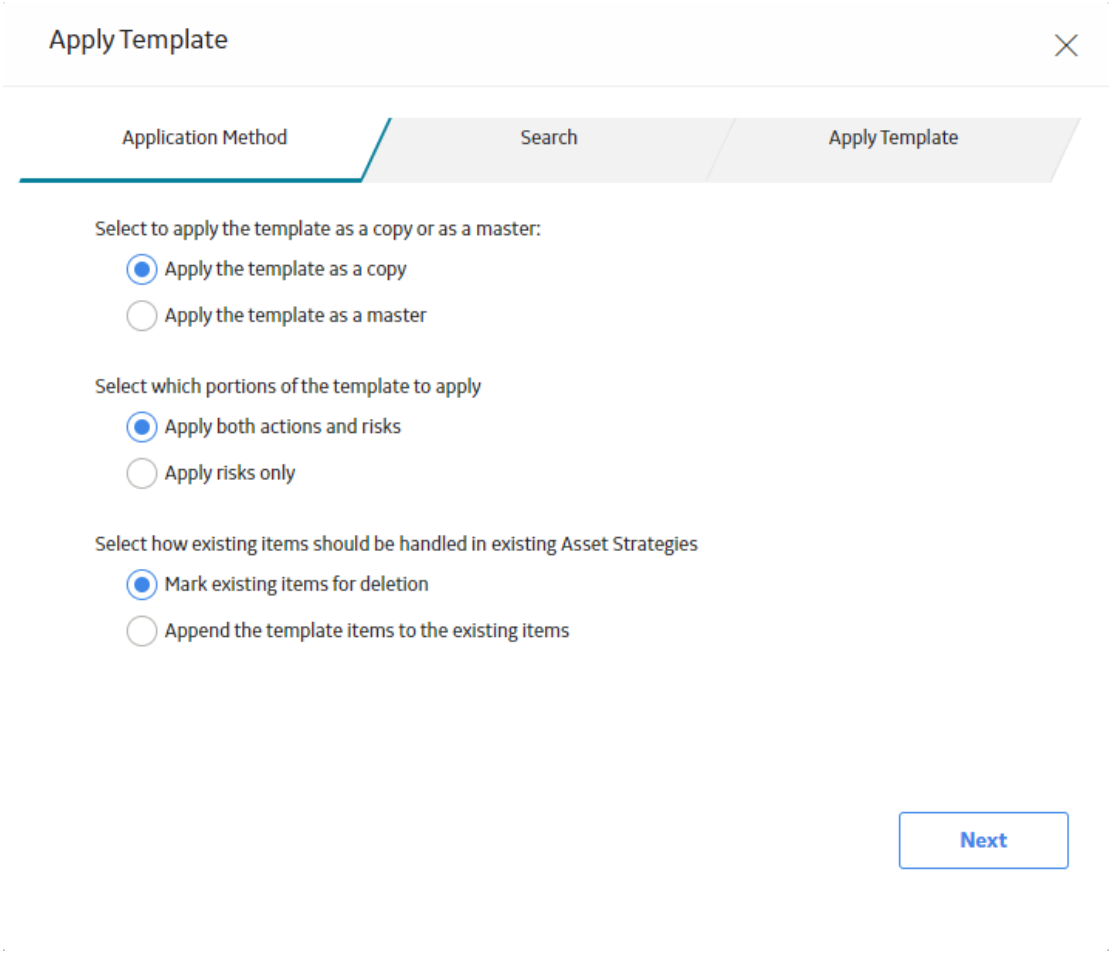
   - Templates can control strategies from multiple sites belonging to same risk matrix as a master, but if the user does not have permission on all sites, then strategy approval operations will be unavailable.
   - Secondary actions defined in the template level also get applied during template application to the strategy.

- Apply a Template to a Strategy from the Asset Strategy Record

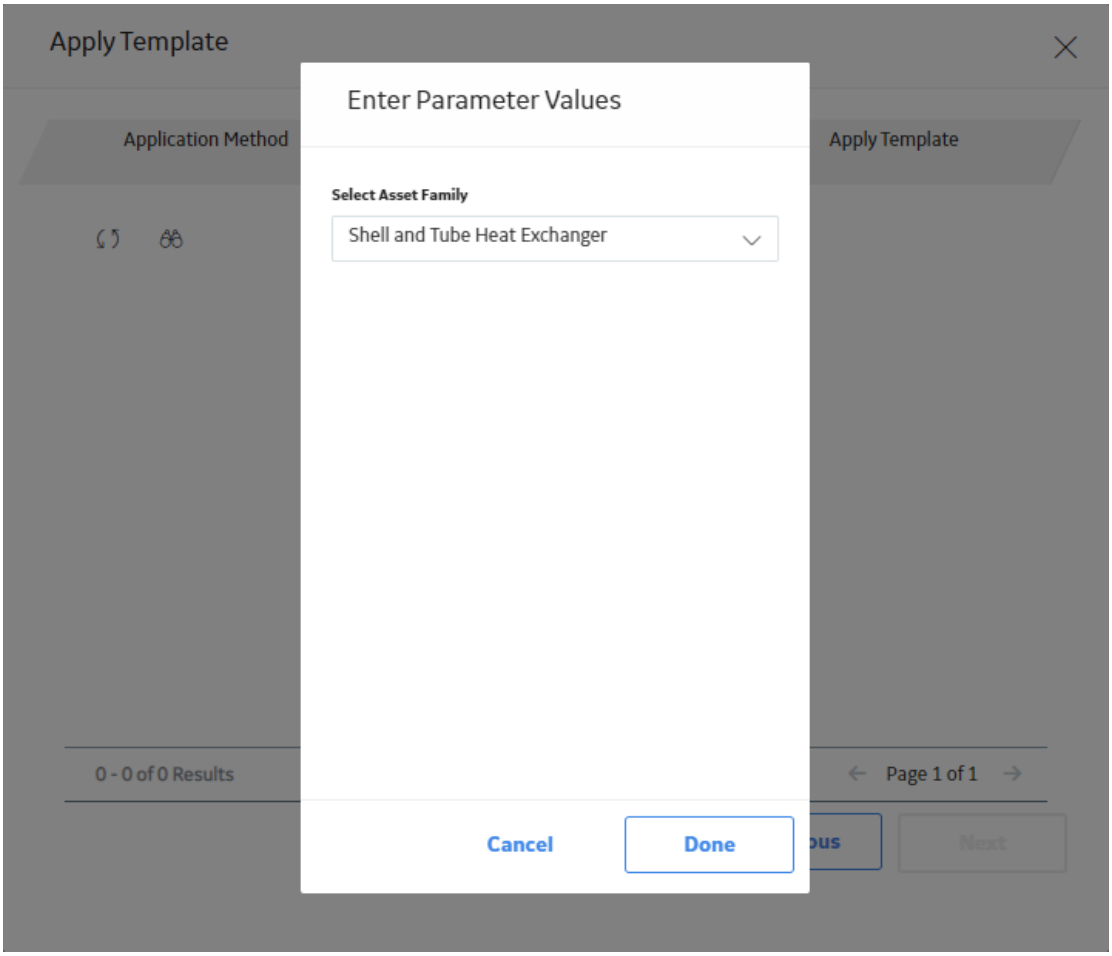
  1. Access the **ASM Overview** page.
  2. Select the **Templates** tab.
     The **Templates** section displays the list of templates.
  3. Select the template that you want to apply to a strategy.
     In a new tab, the **Strategy Details Strategy Template** workspace for the selected template appears, displaying the **Template Overview** section.



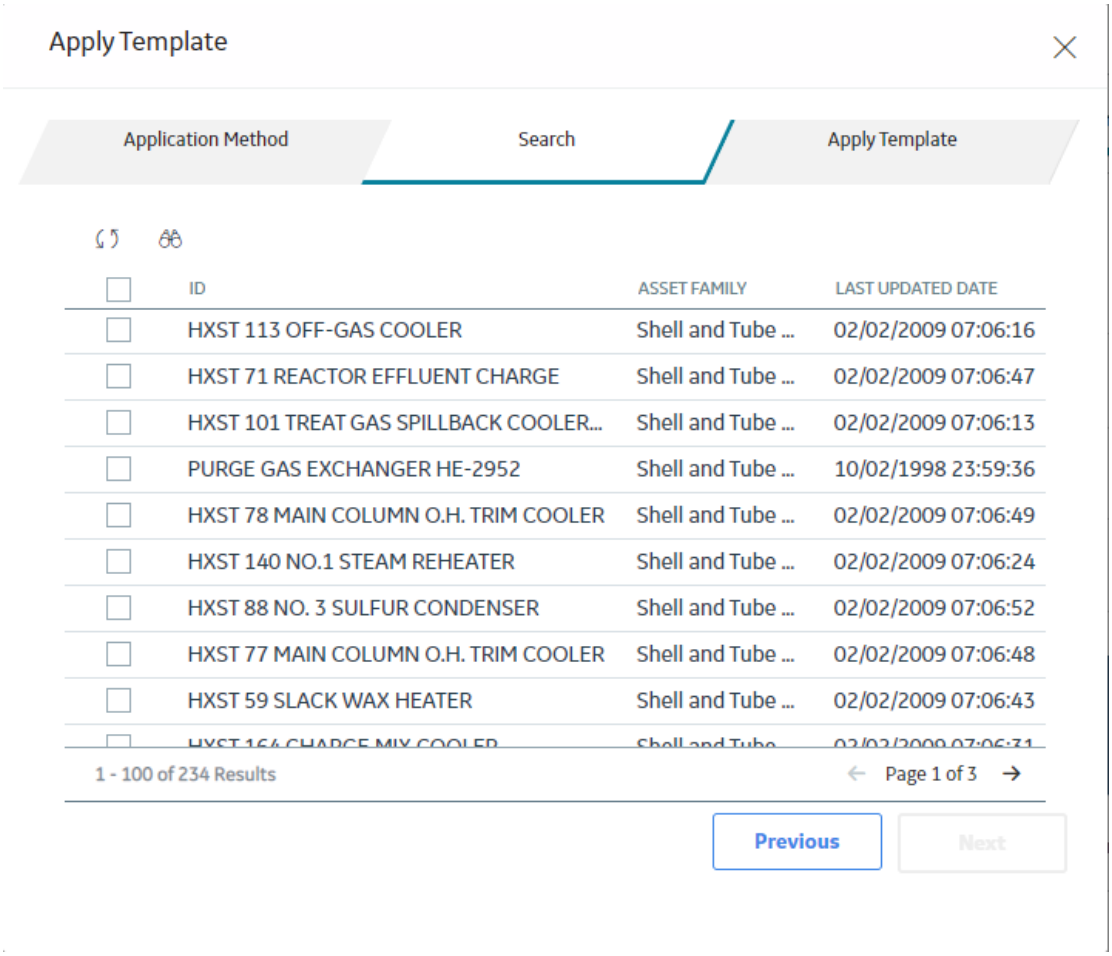
4. Select .
The **Apply Template** window appears, displaying the **Application Method** tab.



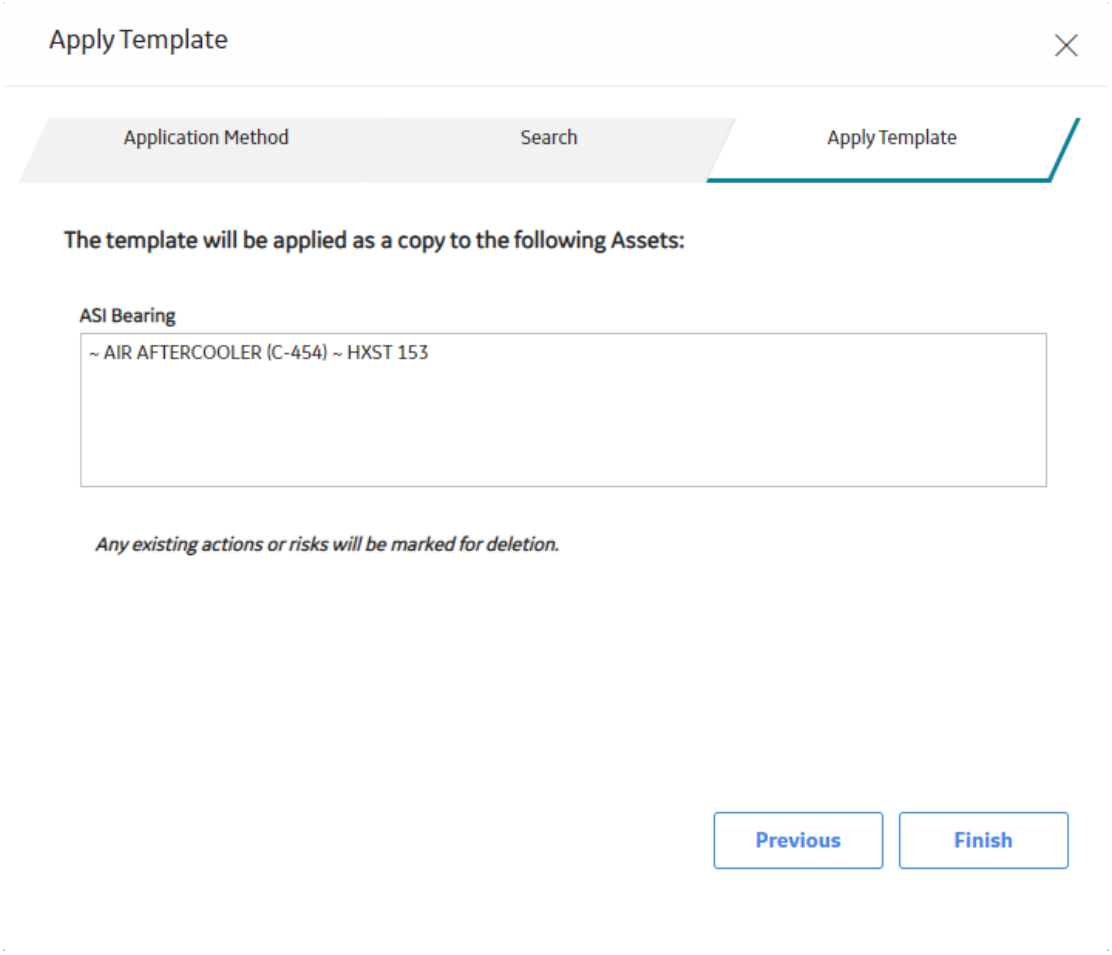
5. Select **Apply the Template as a Master** option and then select **Next**.
   The **Apply Template** window displays the **Search** tab, and the **Enter Parameter Values** window appears.



6. Using the **Select Asset Family** drop-down list, select the family of the asset to which you want to apply a template, and then select **Done**.
   The **Search** tab displays a list of assets in the family that you selected.



7. Select the asset(s) to which you want to apply the template, and then select **Next**. The **Apply Template** window displays a message indicating that the template will be applied as a master to the asset(s) that you selected.



8. Select **Finish**.

   Note:

   - If you apply a template to an asset that has no strategy, applying the template will create an asset strategy for that asset.
   - Secondary actions defined in the template level also get applied during template application to the strategy.

Access the Controlled Strategy View for Asset Strategy Templates

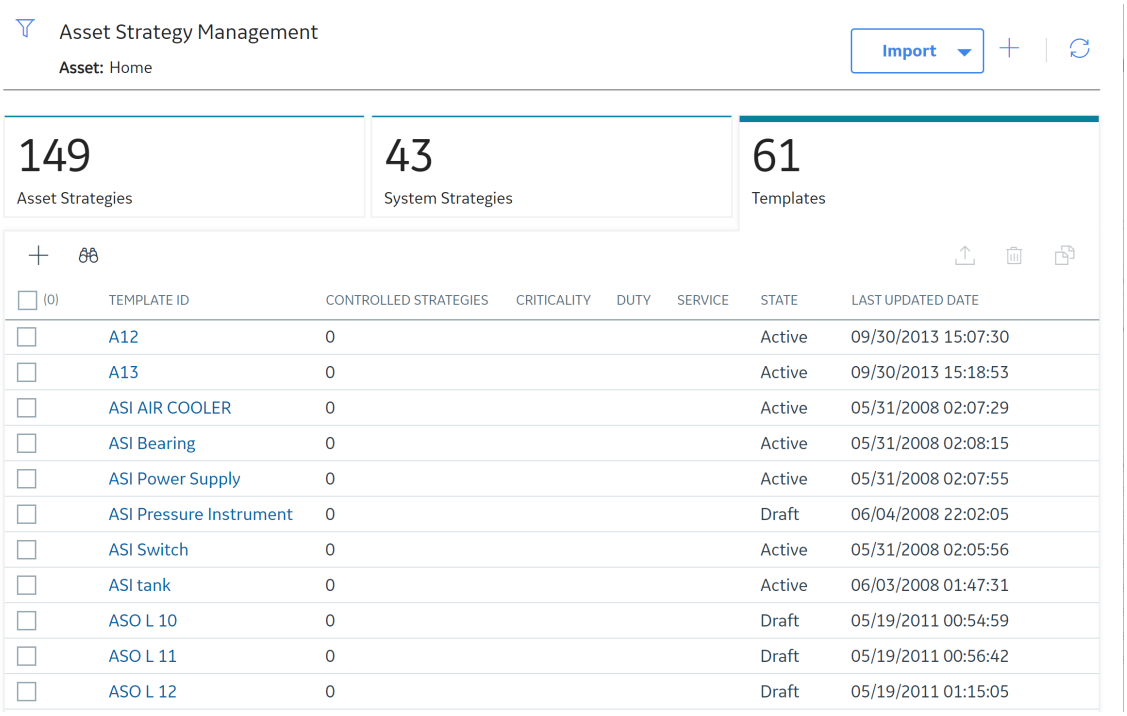
About This Task

When you apply a template as a master to an asset strategy, all of the associated records for that template are applied to the strategy, and moving forward, the strategy is controlled by the template. Any changes then made to the template's risks or actions will also be reflected in the strategies it controls.

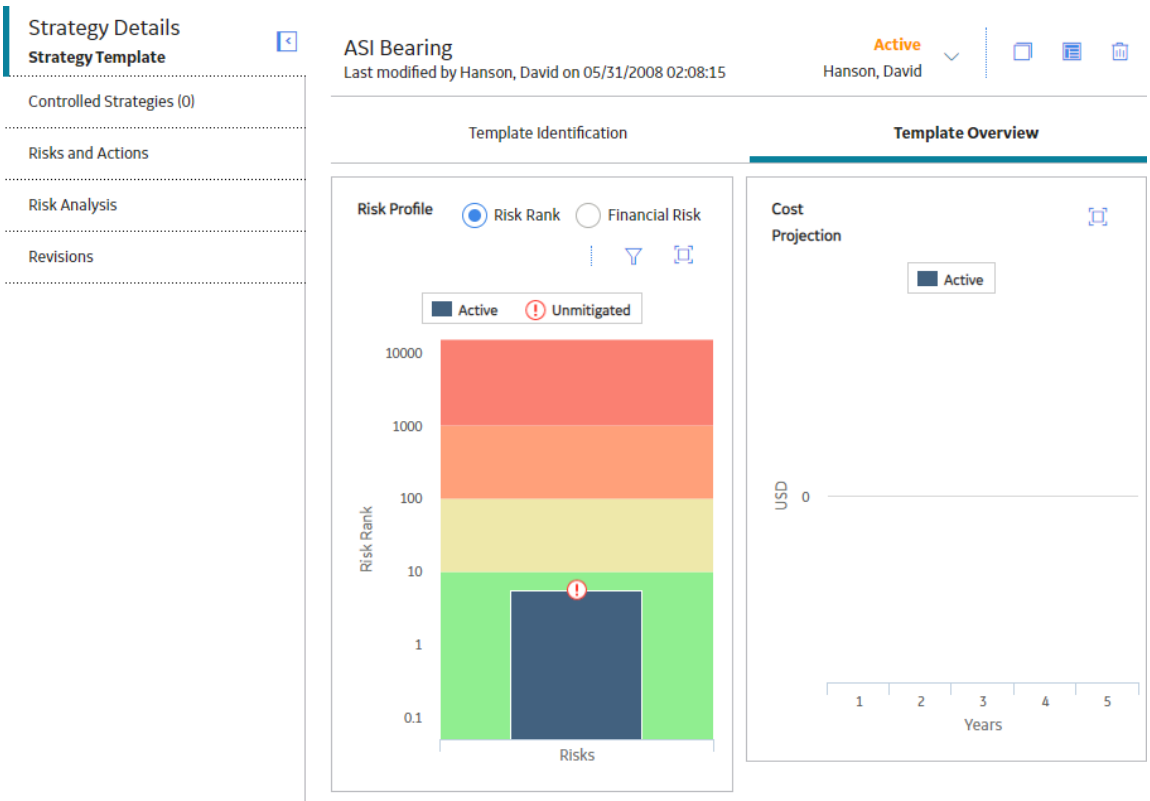
Procedure

1. Access the **ASM Overview** page.

2. Select the **Templates** tab.
   The **Templates** section appears, displaying a list of available templates.

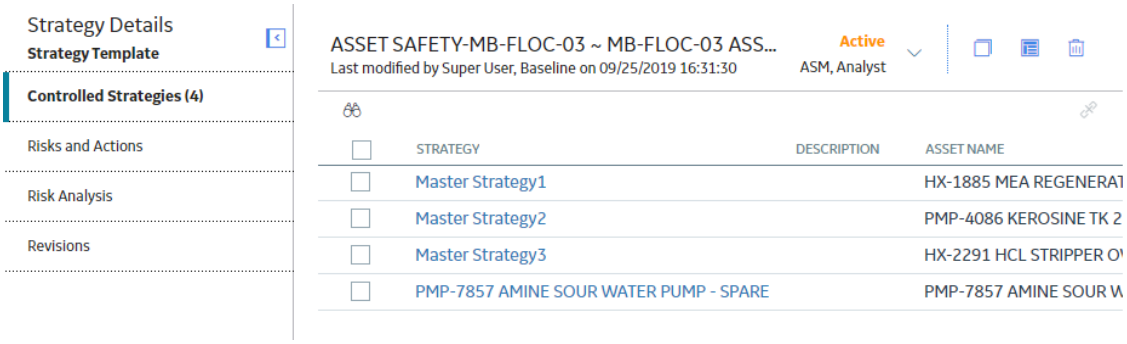


3. Select the template from which you want to access the **Controlled Strategies** view.
   The **Strategy Details Strategy Template** workspace appears.



4. Select the **Controlled Strategies** tab in the **Strategy Details Strategy Template** pane.

The associated strategies appear. In this workspace, you can then add existing strategies or remove strategies.



Next Steps

- Create a Strategy Template
- Remove Strategies in Templates

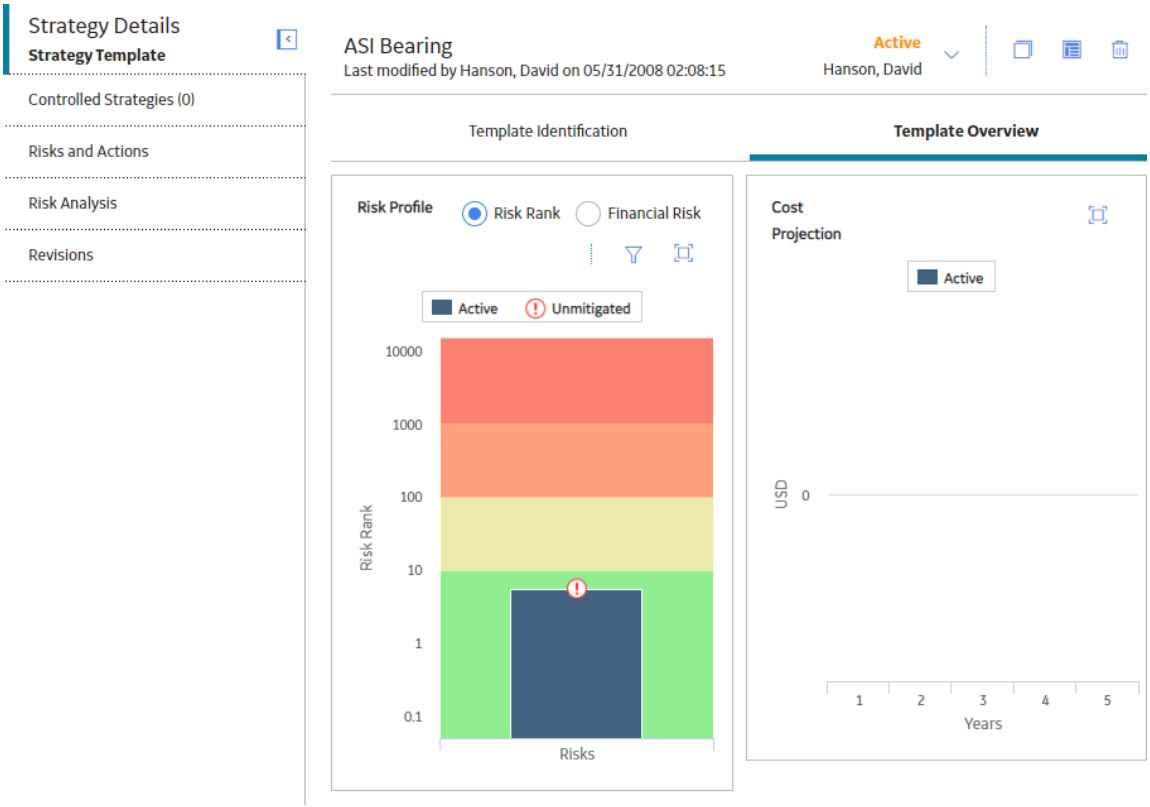
Add an Existing Strategy to a Template

Before You Begin

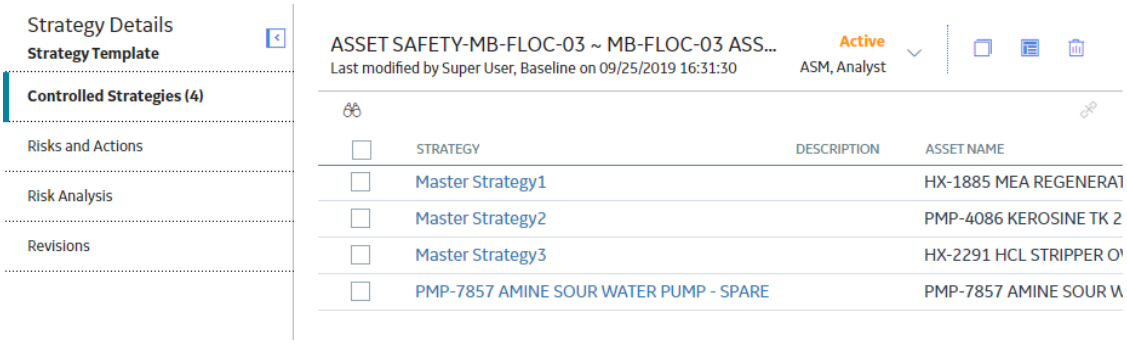
This topic assumes that there are pre-existing asset strategies that you want to add to your template.

Procedure

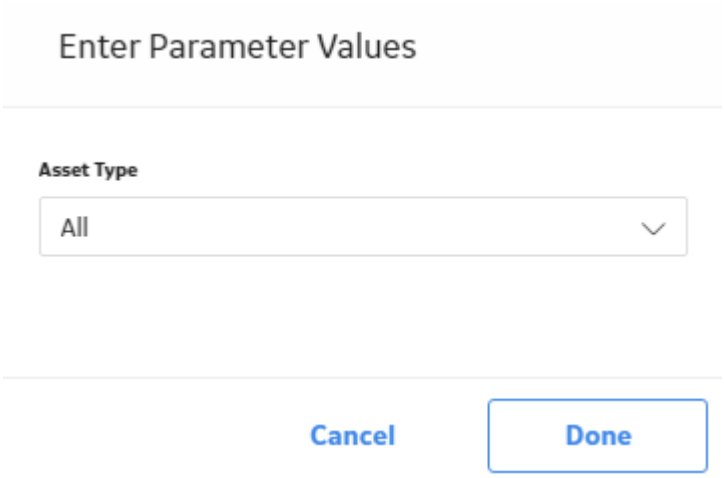
1. Access the **ASM Overview** page.
2. Select the **Templates** tab.
   The **Templates** section opens.
3. Select the template where you want to add an existing strategy.
   In a new tab, the **Strategy Details Strategy Template** workspace for the selected analysis appears, displaying the **Template Overview** section.



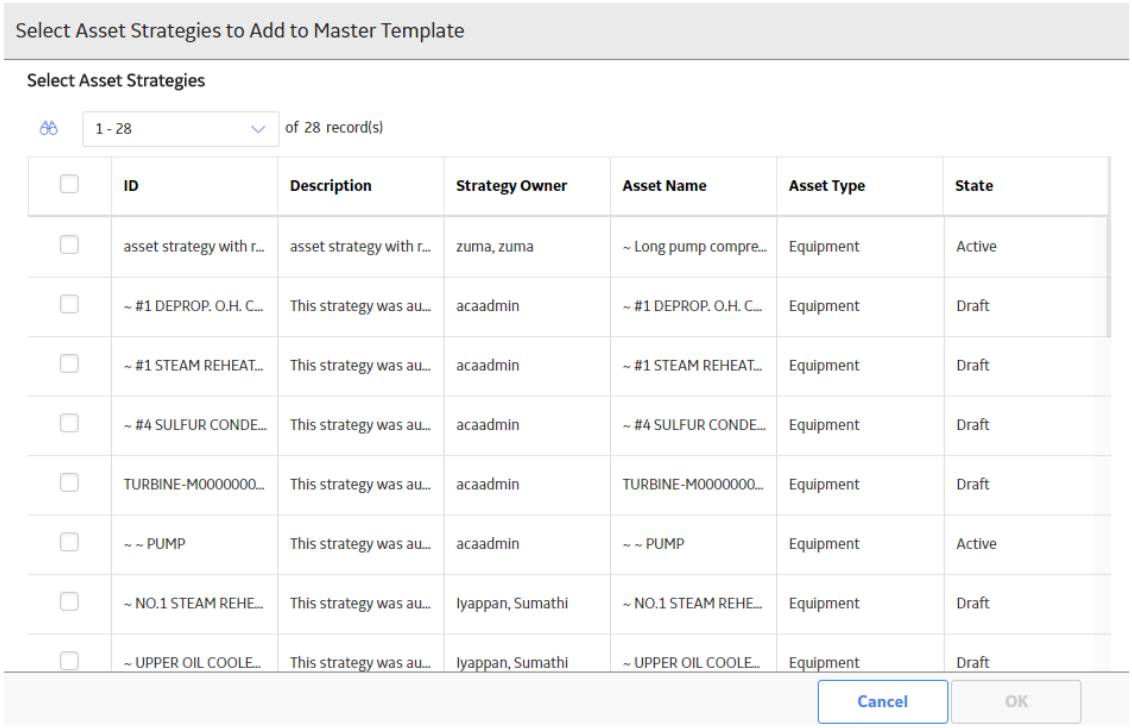
4. Select the **Controlled Strategies** tab.
   The **Controlled Strategies** workspace appears.



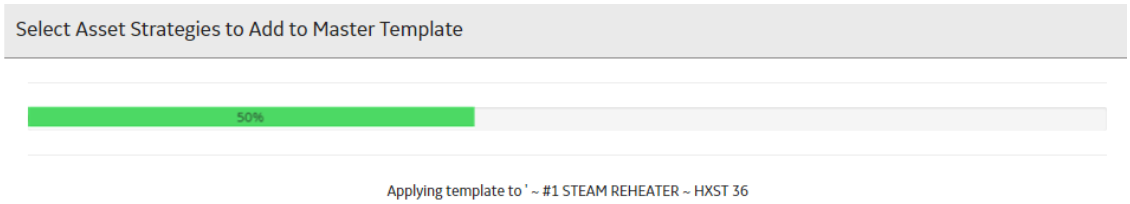
5. To add an existing strategy, select +.
   The **Enter Parameter Values** window for the selected asset type appears.



6. Select the appropriate type from the **Asset Type** drop-down menu, and then select **Done**. The **Select Asset Strategies to Add to Master Template** window appears.



7. Select the asset strategies that you want to apply to the master template by selecting the check box in the row of the strategies that you want to include, and then select **OK**.
A progress bar appears, letting you know the status of the template application. When finished, the **Controlled Strategies** workspace reappears, displaying a message notifying you that your strategies have been added to the template.



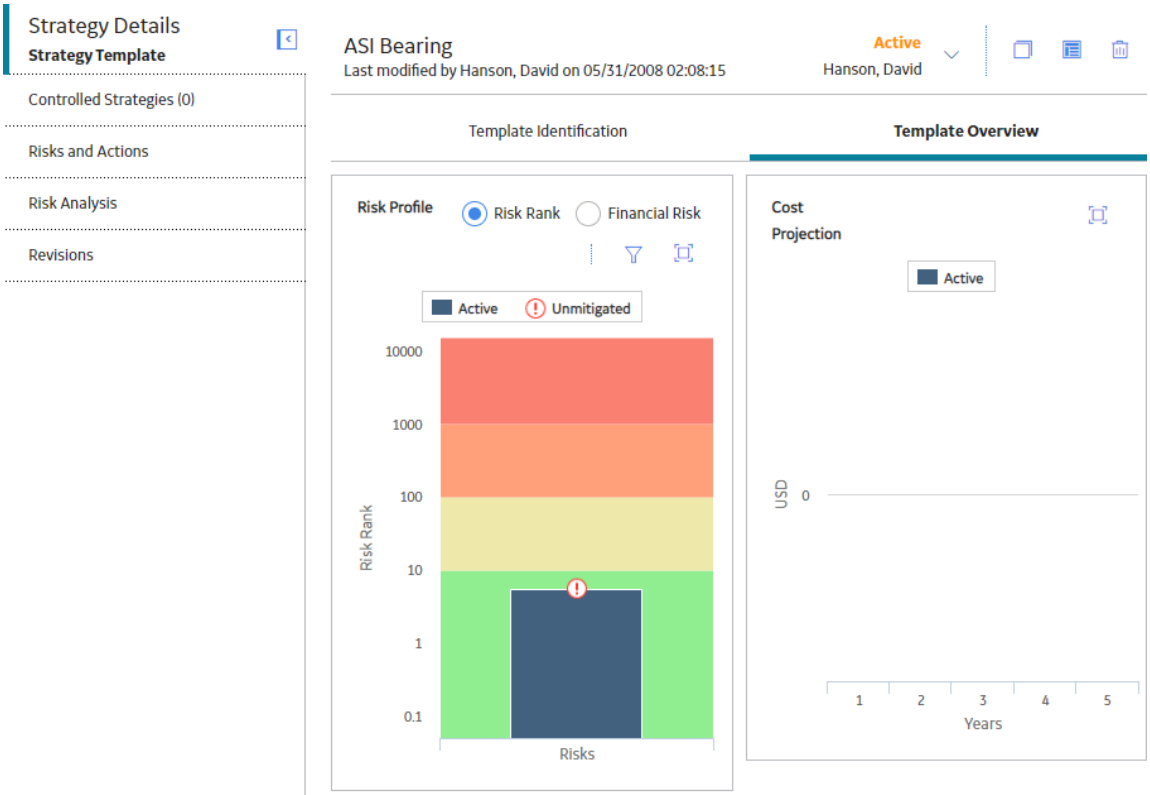
Unlink Strategies in Templates

Before You Begin

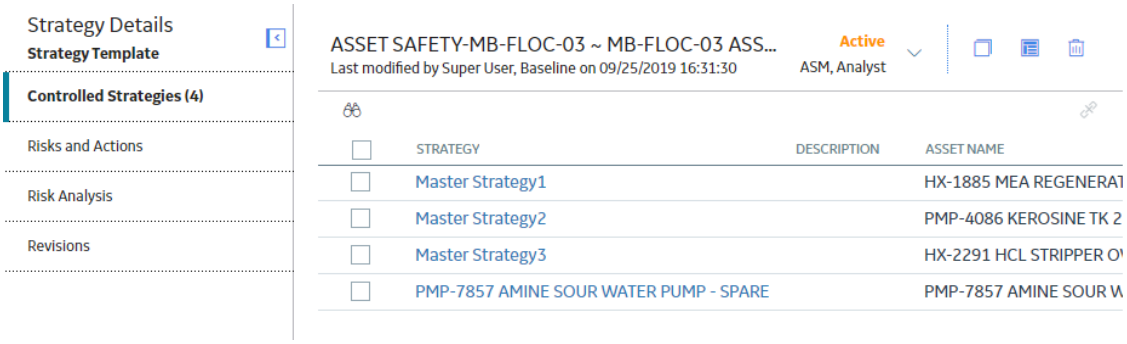
This topic assumes that you have strategies already linked to a template that you would like to unlink.

Procedure

1. Access the **ASM Overview** page.
2. Select the **Templates** tab.
   The **Templates** section appears.
3. Select the template from which you want to unlink a strategy.
   The **Strategy Details Strategy Template** workspace for the selected analysis appears, displaying the **Template Overview** section.



4. Select the **Controlled Strategies** tab.
   The **Controlled Strategies** workspace appears.



5. Select the check boxes to the left of the **Strategy** column of each strategy that you want to unlink.
   The strategy/strategies are highlighted.
6. Select .
   A window appears, asking you to confirm that you want to remove the strategy/strategies.
7. Select **Yes**.
   The selected strategies are removed.

Chapter 6

Risks Analysis

Topics:

- About the Risk Analysis Section
- Access Risk Analysis
- Apply Risk Analysis Results

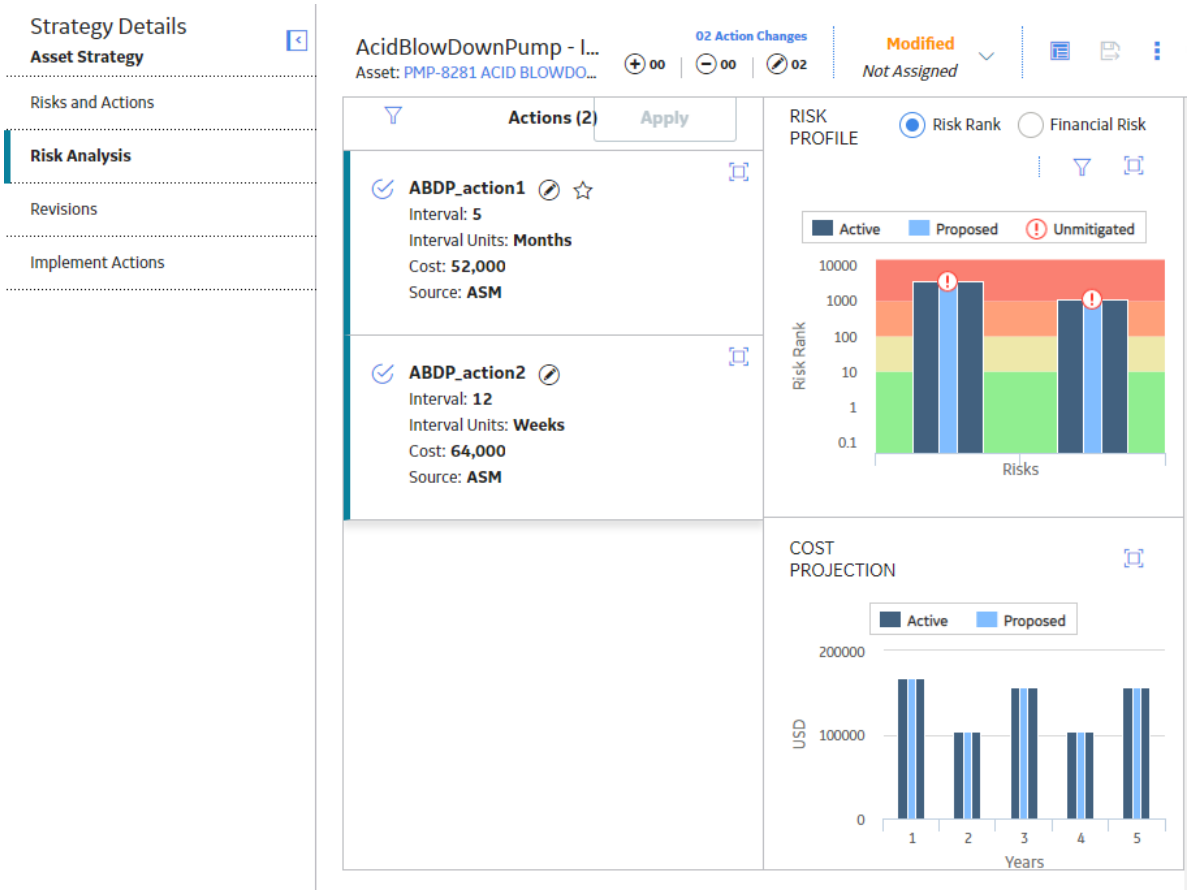
About the Risk Analysis Section

Expand Action Cards

The cards in the **Risk Analysis** workspace can be expanded to display more details by selecting , and then collapsed by selecting . When you expand an action card, the datasheet for the action is displayed in the edit mode.

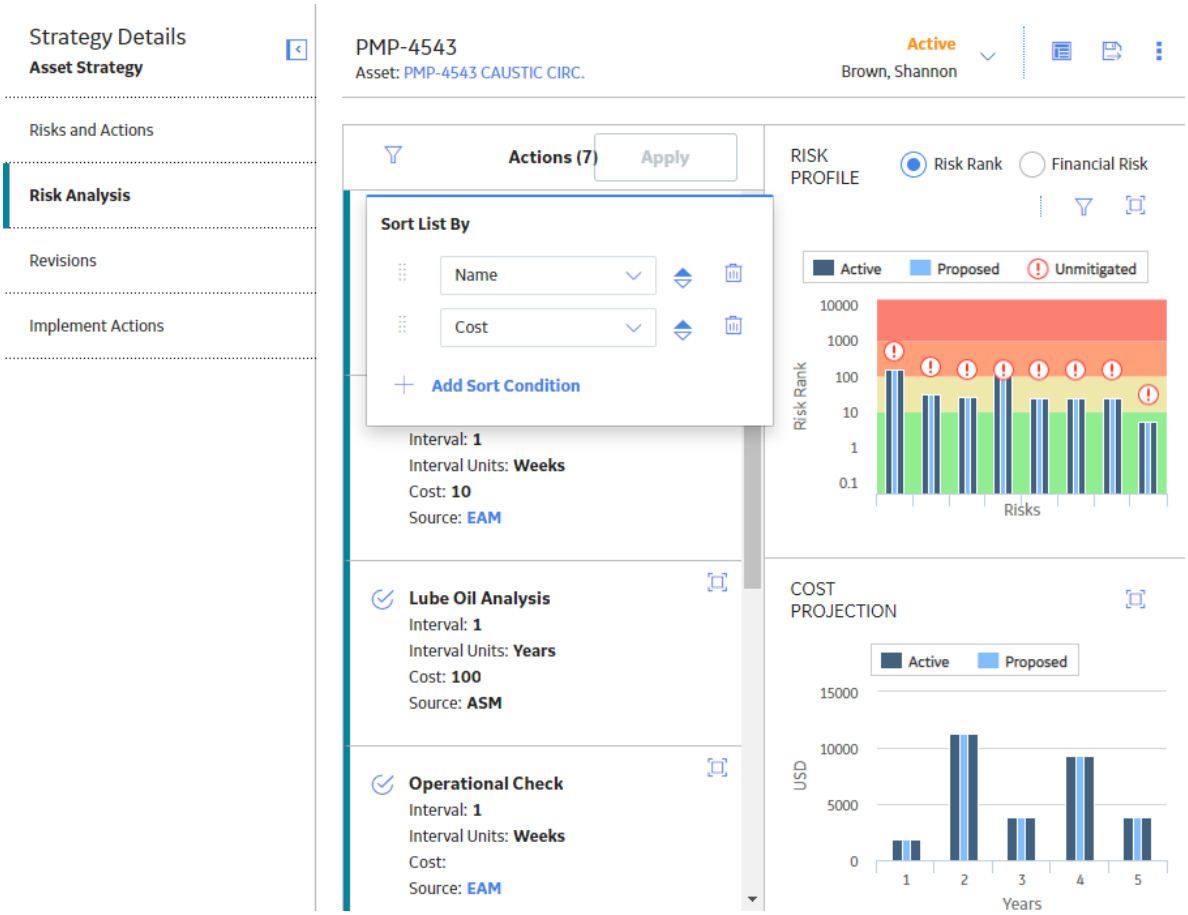
Toggle Actions On and Off in Risk Analysis

Within the **Actions** list on the left side of the **Risk Analysis** workspace, you can toggle the action cards on and off to include in or exclude from the risk analysis charts on the right. When an action card is selected, it is highlighted in blue in the list of actions on the left, and that action is included in the charts on the right. When an action card is deselected, that action is excluded from the charts on the right.



Sort Action Cards

Actions can be sorted to display the items you are most interested in viewing from a large list using .



In the **Sort List By** box, you have the following options:

- **Sort by Field:** Select the individual drop-down list boxes in the control to select the fields by which you want to sort.

  Note: Consult the ASM Admin section.

- **Sort in Ascending or Descending Order:** Select to toggle between ascending and descending order for each sort condition.
- **Add Multiple Conditions to Sort by:** Select **Add Sort Condition** to add a sort condition.
- **Delete a Sort Condition:** Select beside a sort condition to delete it.
- **Rearrange Order of Sort Conditions:** Select to drag-and-drop sort conditions into different positions in the sort hierarchy.

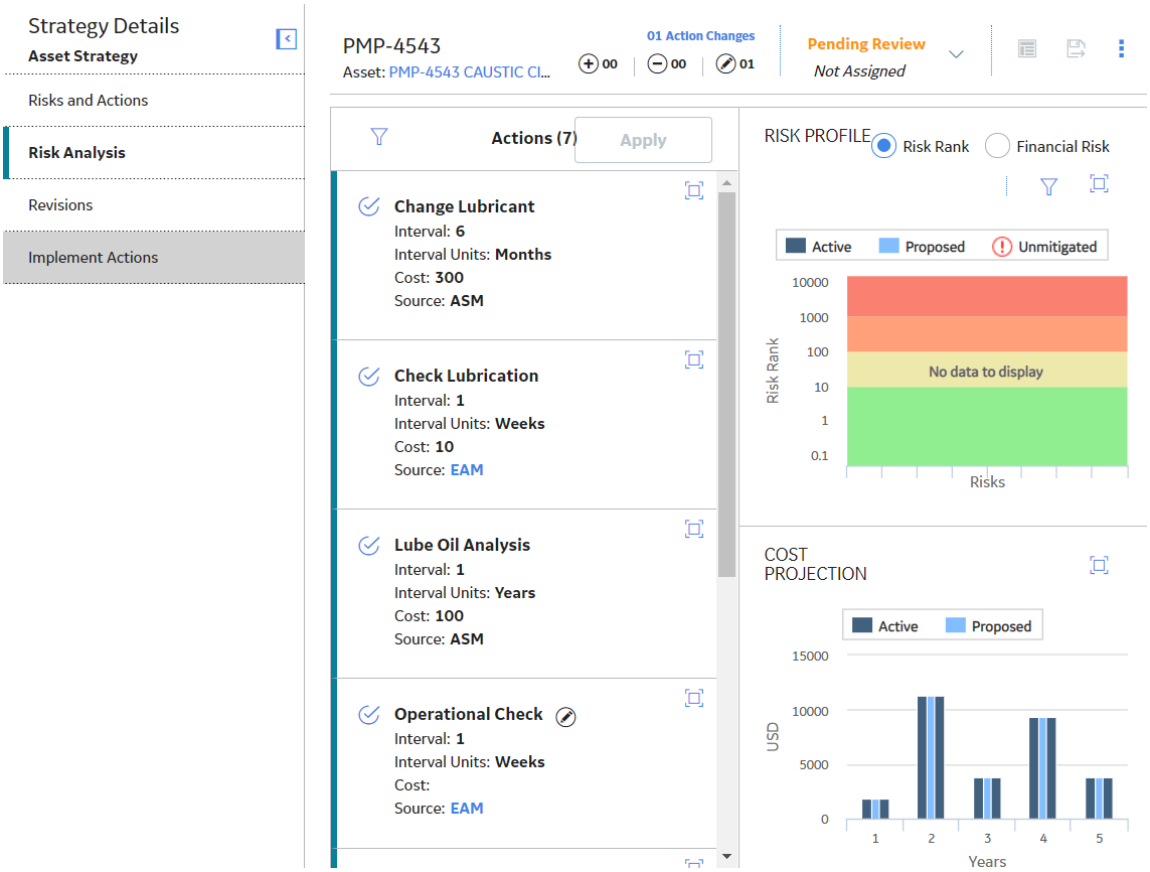
As you make selections in the **Sort List By** box, the grid sorts accordingly.

Access Risk Analysis

Procedure

1. Access the **ASM Overview** page.
2. Select the **Asset Strategies** tab.
   The **Asset Strategies** section appears, displaying a list of available asset strategies.

3. Select the strategy for which you want to access the risk analysis.
   The **Strategy Details** workspace for the selected asset strategy appears.
4. Select the **Risk Analysis** tab.
   The **Risk Analysis** workspace appears.

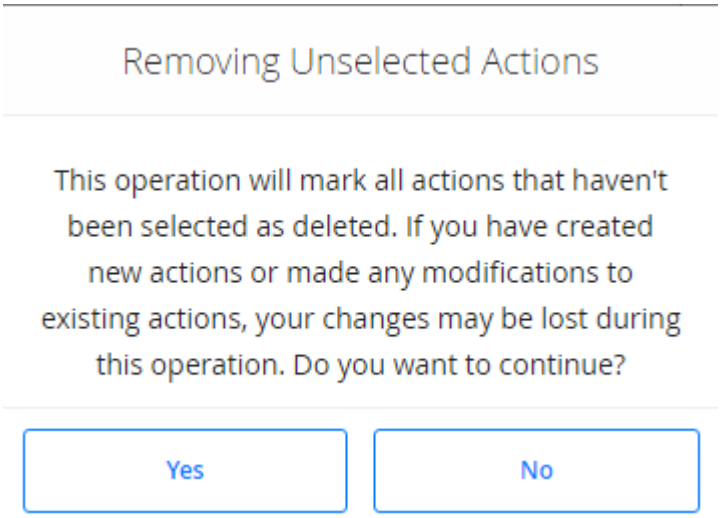


Apply Risk Analysis Results

Procedure

The following steps describe how you can apply the actions that you want to apply to the asset in light of your risk analysis results.

1. Access **Risk Analysis** .
   The actions are displayed on the left side and the risk analysis charts are displayed on the right side.
2. Toggle the action cards on or off, depending on your preferences for applying risk analysis results, and then select **Apply**.
   A message appears, asking you to confirm that you want to complete the Apply action.



When you apply the results of the risk analysis:

- Any selected actions that were previously in the deleted state become unmodified.
- Any unselected actions that were new are removed entirely.
- Any unselected actions that were existing in a modified or active state are flagged as removed and remain on the list.

Note: If the state of the strategy is Pending Review, you will be able to toggle the selections, but the **Apply** button will remain disabled.

Note: Mandatory actions, consolidated actions, and actions sourced from RBI or SIS cannot be applied.

Chapter 7

Revisions

Topics:

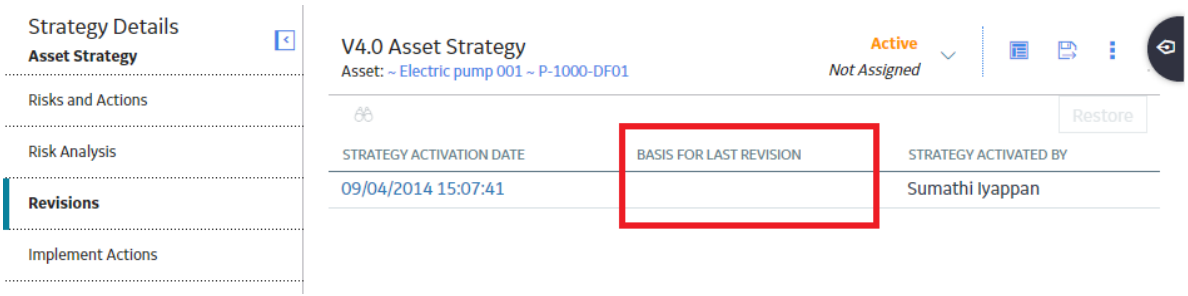
- About Revisions
- Access Revisions
- Access Revision Changes
- Restore Revision Changes

About Revisions

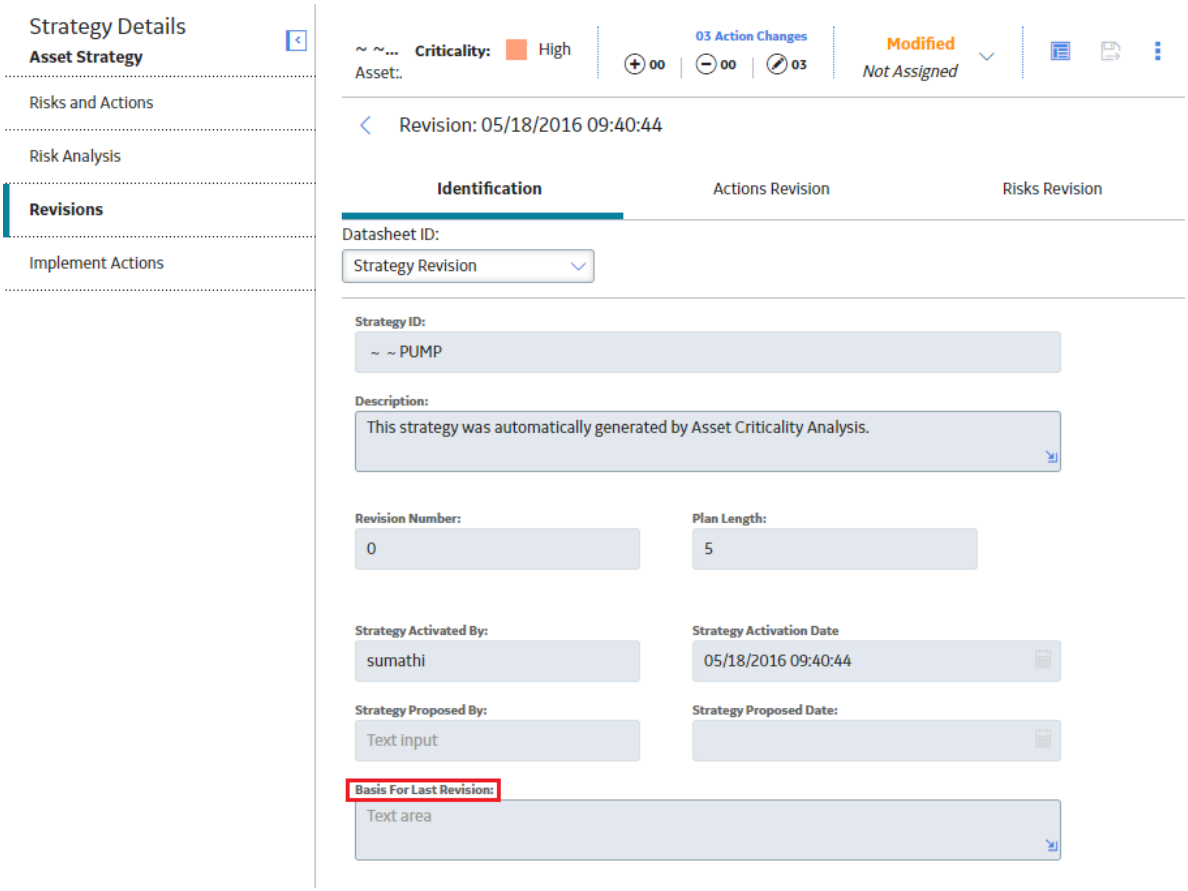
The **Revisions** section of an asset strategy contains the records and timestamps for when the strategy was activated, as well as details on any revisions that have been made to the strategy.

Basis for Revision

If a strategy is in Pending Review state, you will be able to see the basis for revision in the **Basis For Last Revision** column on the **Revisions** page. If the strategy is in **Modified** state, you will be able to see the **Basis for rework** in the same location. Select the link to view the entire basis for revision or basis for rework text.



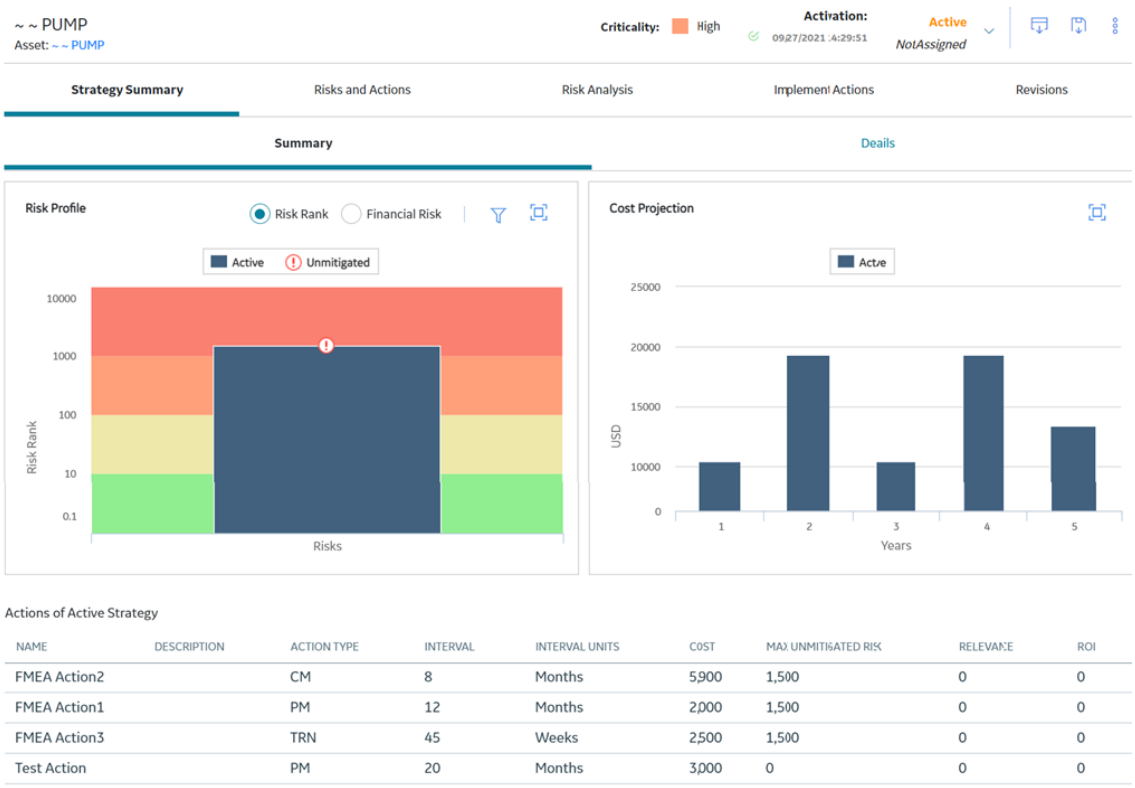
After a strategy is moved to **Active** state, if there have been revisions, the basis for revision is archived in the **Revisions** section of the strategy, in the **Identification** section of the revision record.



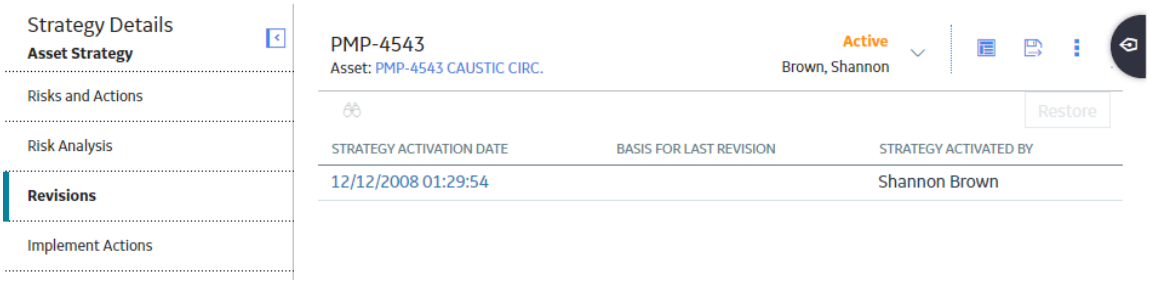
Access Revisions

Procedure

1. Access the **ASM Overview** page.
2. Select the **Asset Strategies** tab.
   The **Asset Strategies** section appears, displaying a list of available asset strategies.
3. Select the strategy whose revisions you want to access.
   The **Strategy Details** workspace for the selected asset strategy appears.



4. Select the **Revisions** tab.
   The **Revisions** page appears, displaying a grid containing the revisions that have been made to date.

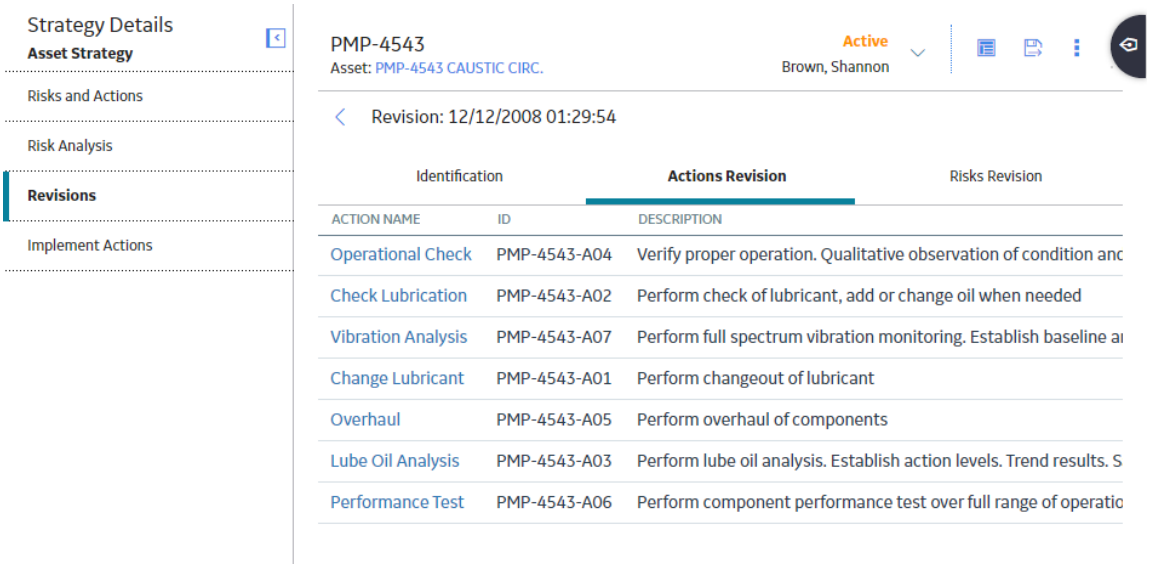


Note: Revision history is only available for asset strategies, and not for system strategies.

Access Revision Changes

Procedure

1. Access **Revisions**.
2. Select the revision whose changes you want to access.
   A workspace for the strategy's revisions appears, displaying the **Actions Revision** section.



3. Select the action whose revision changes you want to access.

   -or-

   To display the risk revisions for that strategy, select the **Risks Revision** tab, and then select the risk whose revision changes you want to access.

   A workspace appears, displaying either risks or actions revisions, depending on which tab you selected.

   Note: The **Show Changes** button is only enabled for actions or risks that have been edited.
4. Select **Show Changes**.

   The **Changes for Selected Action** window appears, displaying the changes made on the action for that revision package.

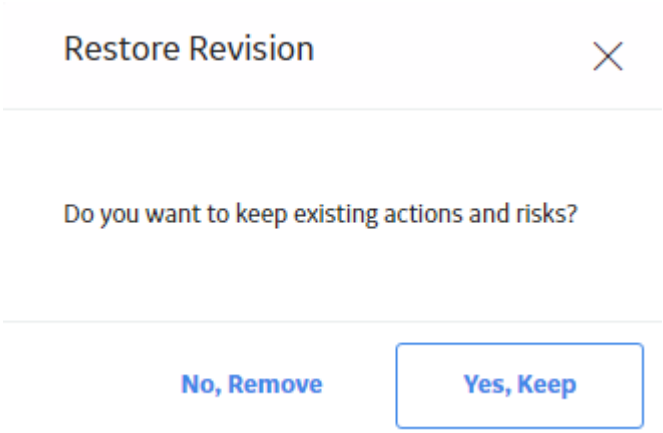
Restore Revision Changes

Procedure

1. Access **Revisions**.
2. In the grid, select the line containing the revision whose changes you want to restore, and then select **Restore**.
   The **Restore Revision** window appears.

   Note: The **Restore** button is disabled in the following cases:

   - When you have sourced the Actions or Risks from RBI.
   - When you have selected the **Mandatory** check box for the Actions.



3. Select **Yes, Keep** to restore the revision and keep the existing actions and risks.

   -or-

   Select **No, Remove** to restore the revision and remove the actions and risks.

   The strategy revision is restored, and, depending on your selection, the associated actions and risks are either retained or removed.

Chapter 8

Implement Actions

Topics:

- About Implement Actions
- Access the Implement Actions Workspace
- About Calibration Tasks
- Link Existing Health Indicators
- About Inspection Tasks
- About Proof Test Tasks
- Create New Measurement Location or Lubrication Requirement Records
- Link a Policy Instance
- Apply Updates to Implemented Actions
- Unlink Implementations
- Link Existing Tasks to Actions
- Send Approved Actions to an ASI Package
- View Execution History for Actions

About Implement Actions

In an asset strategy, actions define the work needed to mitigate the risks identified for an asset. That work is executed by implementing the actions, and the method by which you do this depends on the particular action and the APM module that is most suitable to use to execute the action.

Consider the following examples:

- If you have an action called Check Lubricant, you may want to implement it by creating a new Lubrication Requirement, which would then be managed in Rounds Designer.
- If you have an action called General Inspection, you may want to implement it with an Inspection Task, whose execution would then be managed in Inspection Management.
- If you have an action with the description Review flow rate, pressure, and vibration for Pump 1, you may want to implement that action with a Health Indicator, which would then be displayed in Asset Health Manager to continuously monitor those items.

In an asset strategy, you can implement an action using one of the following means:

- Calibration Task
- Inspection Task
- Proof Test Task
- Rounds Classic
- Rounds Pro Step
- Lubrication Requirement
- Measurement Location
- Health Indicator
- Policy Instance

In addition, you can:

- Send actions to ASI for SAP, so that they can be implemented and executed in an SAP system.
- Create an EAM Work Request to create alerts that will help you build out a specific EAM structure. When you send the EAM Work Request, a General Recommendation is created in APM, which then sends the work request to your EAM system when it is saved.
- View execution history for actions.

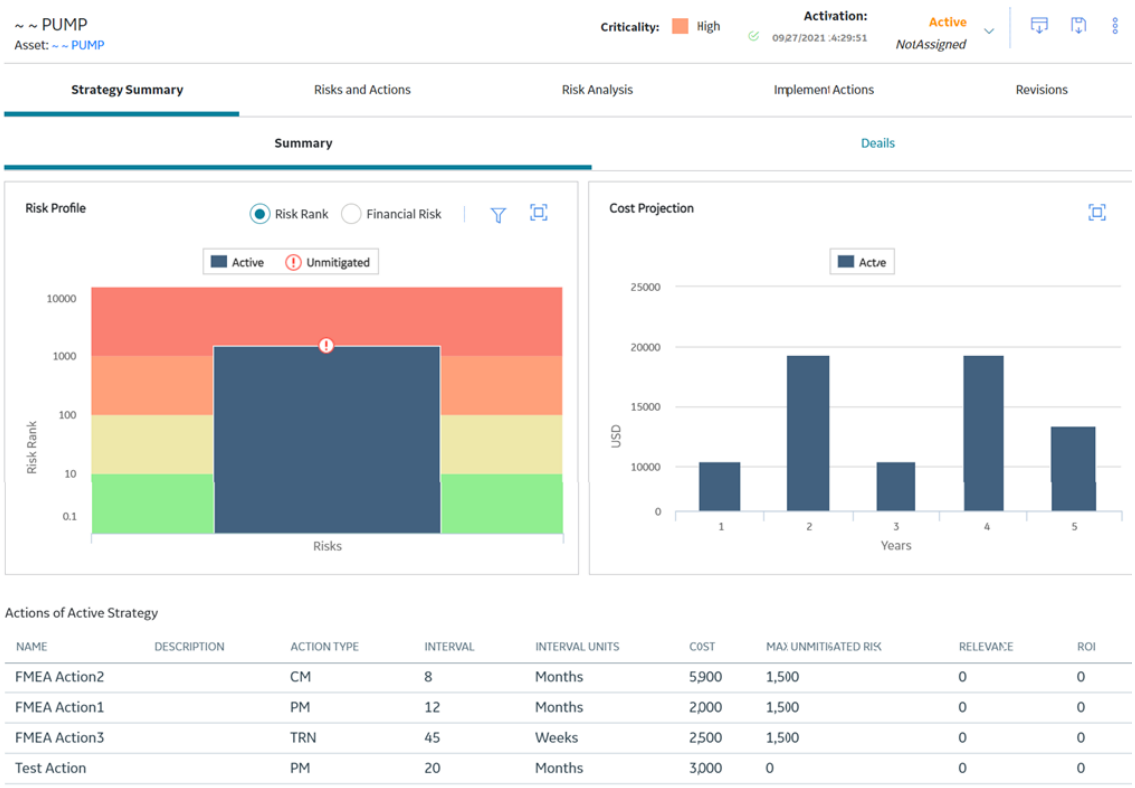
Access the Implement Actions Workspace

About This Task

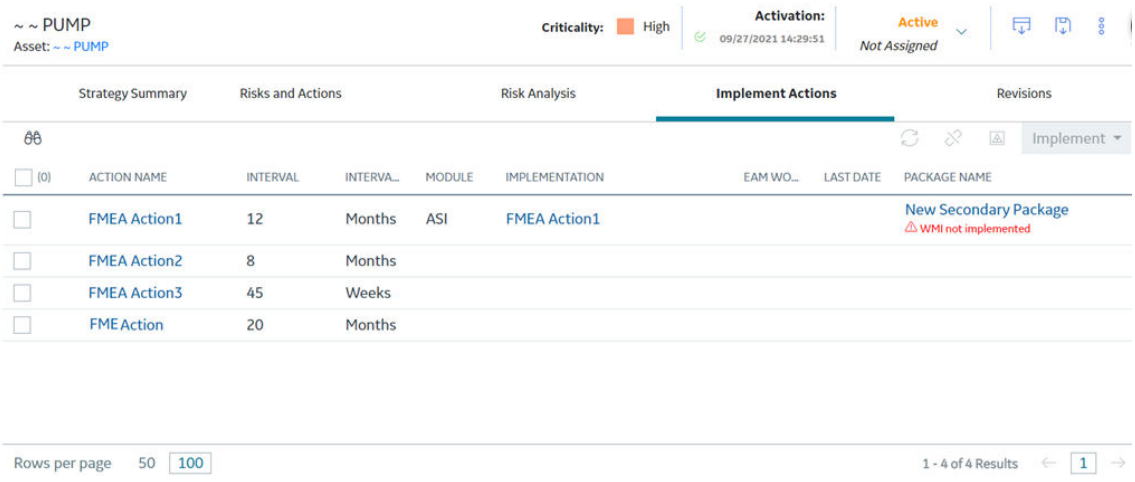
Important: The **Implement Actions** workspace is accessible only if the asset strategy is Active or Modified.

Procedure

1. Access the **ASM Overview** page.
2. Select the **Asset Strategies** tab.
   The **Asset Strategies** section appears, displaying a list of available asset strategies.
3. Select the strategy whose actions you want to implement.
   The **Strategy Details** workspace for the selected asset strategy appears.



4. Select the **Implement Actions** tab.
   The **Implement Actions** workspace appears.



About Calibration Tasks

In the **Implement Actions** workspace, you can create corresponding calibration tasks for actions when you implement the actions. After you create the records, you can link to them from the **Implement Actions** workspace.

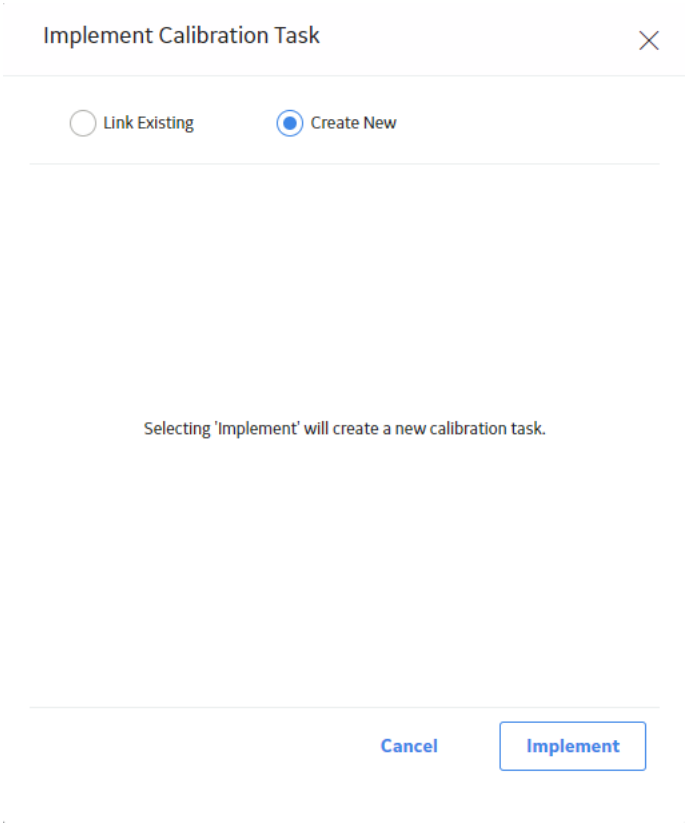
Create New Calibration Task

About This Task

In the **Implement Actions** workspace, you can create corresponding calibration tasks for actions when you implement the actions. After you create the records, you can link to them from the **Implement Actions** workspace.

Procedure

1. Access Implement Actions.
2. In the **Implement Actions** workspace, select the check box in the row containing the action you want to implement via new calibration task.
   The action is highlighted.
3. Select the **Implement** menu, and then select **Calibration Task**.
   The **Implement Calibration Task** window appears.



4. Select the **Create New** option, and then select **Implement** to create the new task.
   A message appears, confirming that the action has been implemented successfully.

Results

- A new calibration task is created.
- In the **Implement Actions** workspace, in the **Implementation** column of the action you implemented, a hyperlink to the calibration task appears.

Link a Calibration Task

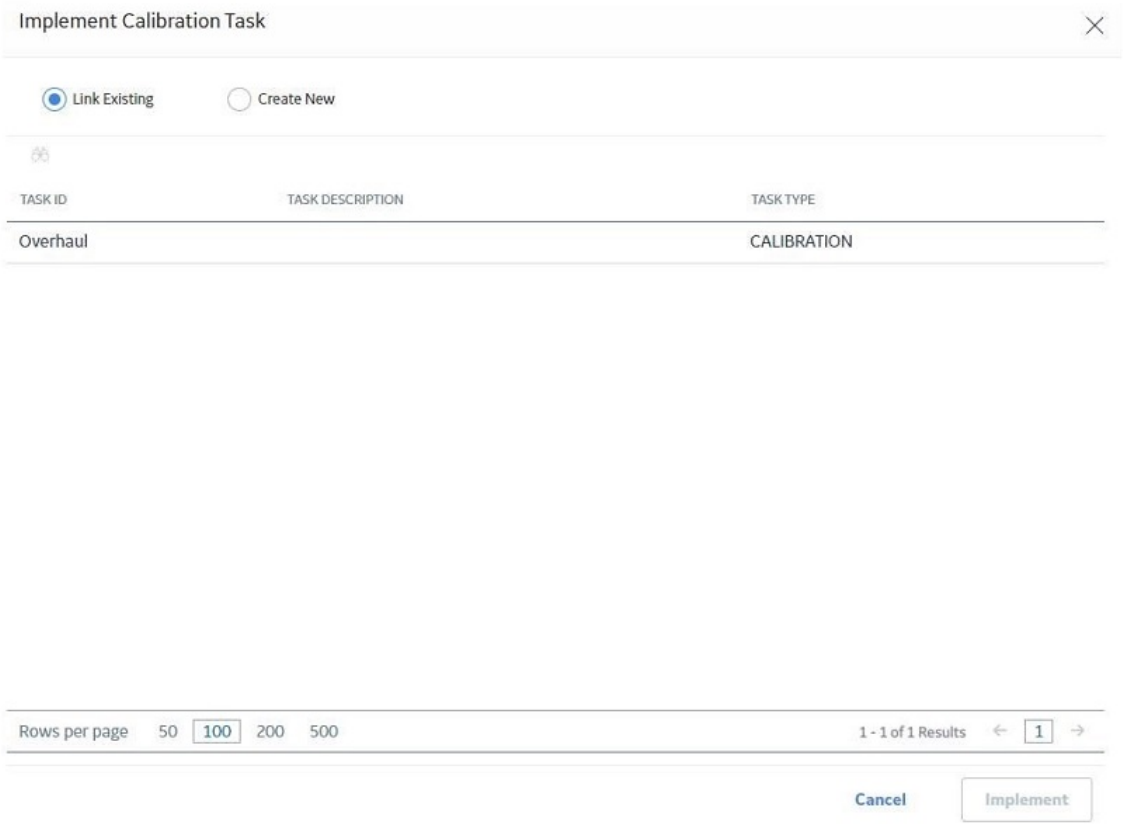
About This Task

In the **Implement Actions** workspace, you can create corresponding calibration tasks for actions when you implement the actions. After you create the records, you can link to them from the **Implement Actions** workspace.

Procedure

1. Access Implement Actions.
2. In the **Implement Actions** workspace, select the check box in the row containing the action you want to implement via calibration task link.
   The action is highlighted.

   Note: The selected action must have previously been implemented as a calibration task.
3. Select the **Implement** menu, and then select **Calibration Task**.
   The **Implement Calibration Task** window appears.



4. Select the **Link Existing** option, and then select the action you want to link.
5. Select **Implement** to link to the existing calibration task.

Results

- A new calibration task link is created.
- In the **Implement Actions** workspace, in the **Implementation** column of the action you implemented, a hyperlink to the calibration task appears.

Link Existing Health Indicators

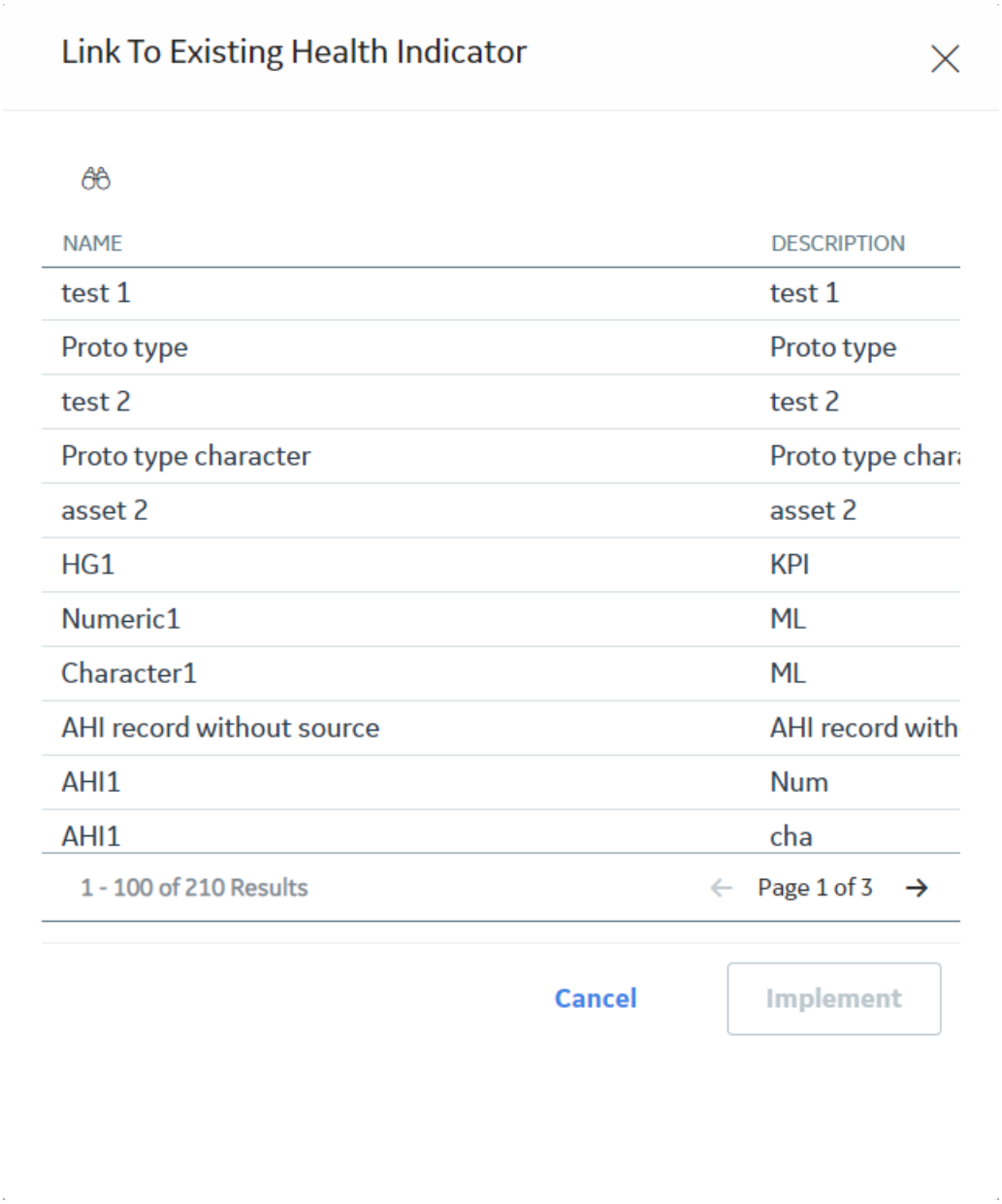
About This Task

In the **Implement Actions** workspace, you can link health indicator records when you implement the actions. Implementing an action with a health indicator creates a record in Asset Health Management that stores information used to determine the health of an asset.

Procedure

1. Access Implement Actions.
2. In the **Implement Actions** workspace, select the check box in the row containing the action which you want to implement with a health indicator record.

   Note: You can only link one health indicator record per action.
3. Select the **Implement** drop-down menu, and then select **Health Indicator**.
   The **Link To Existing Health Indicator** window appears, displaying a list of health indicators.



4. Select the row containing the record that you want to link, and then select **Implement**. A message appears, confirming that the heath indicator was linked successfully.

Results

- The health indicator is linked to the action.
- In the **Implement Actions** workspace, in the **Implementation** column of the action you implemented, a hyperlink to the health indicator record appears.
- The **Health Status** indicator appears on the **Strategy Details** page of the strategy. The indicator shows the overall status for the asset based on the health indicator diagnostics. The icons used to represent the health statuses are the same used in Asset Health Manager.

About Inspection Tasks

In the **Implement Actions** workspace, you can create and link corresponding inspection tasks for actions when you implement the actions. After you create the records, you can link to them from the **Implement Actions** workspace.

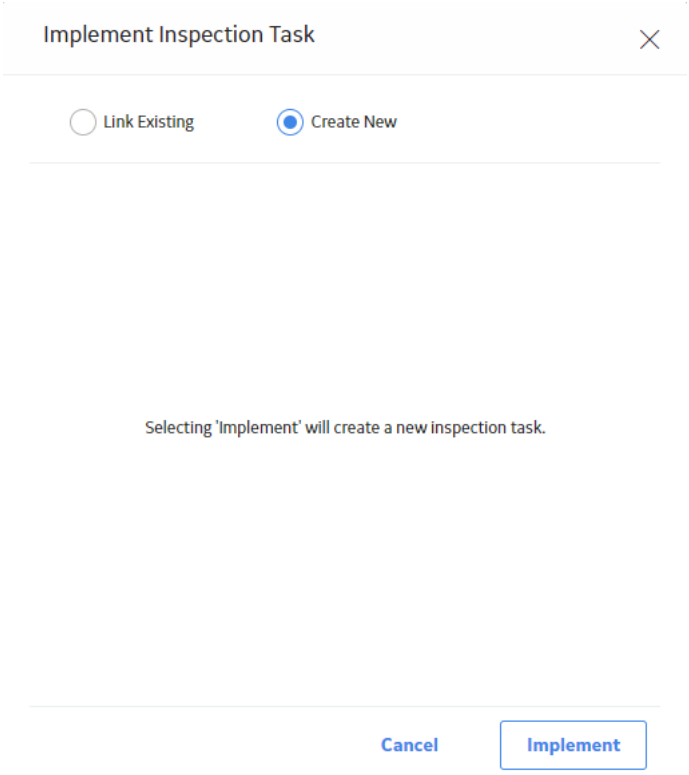
Create New Inspection Task

About This Task

In the **Implement Actions** workspace, you can create corresponding inspection tasks for actions when you implement the actions. After you create the records, you can link to them from the **Implement Actions** workspace.

Procedure

1. Access Implement Actions.
2. In the **Implement Actions** workspace, select the check box in the row containing the action you want to implement via new inspection task.
   The action is highlighted.
3. Select the **Implement** menu, and then select **Inspection Task**.
   The **Implement Inspection Task** window appears.



4. Select the **Create New** option, and then select **Implement** to create the new task.
   A message appears, confirming that the action has been implemented successfully.

Results

- A new inspection task is created.
- In the **Implement Actions** workspace, in the **Implementation** column of the action you implemented, a hyperlink to the inspection task appears.

Link an Inspection Task

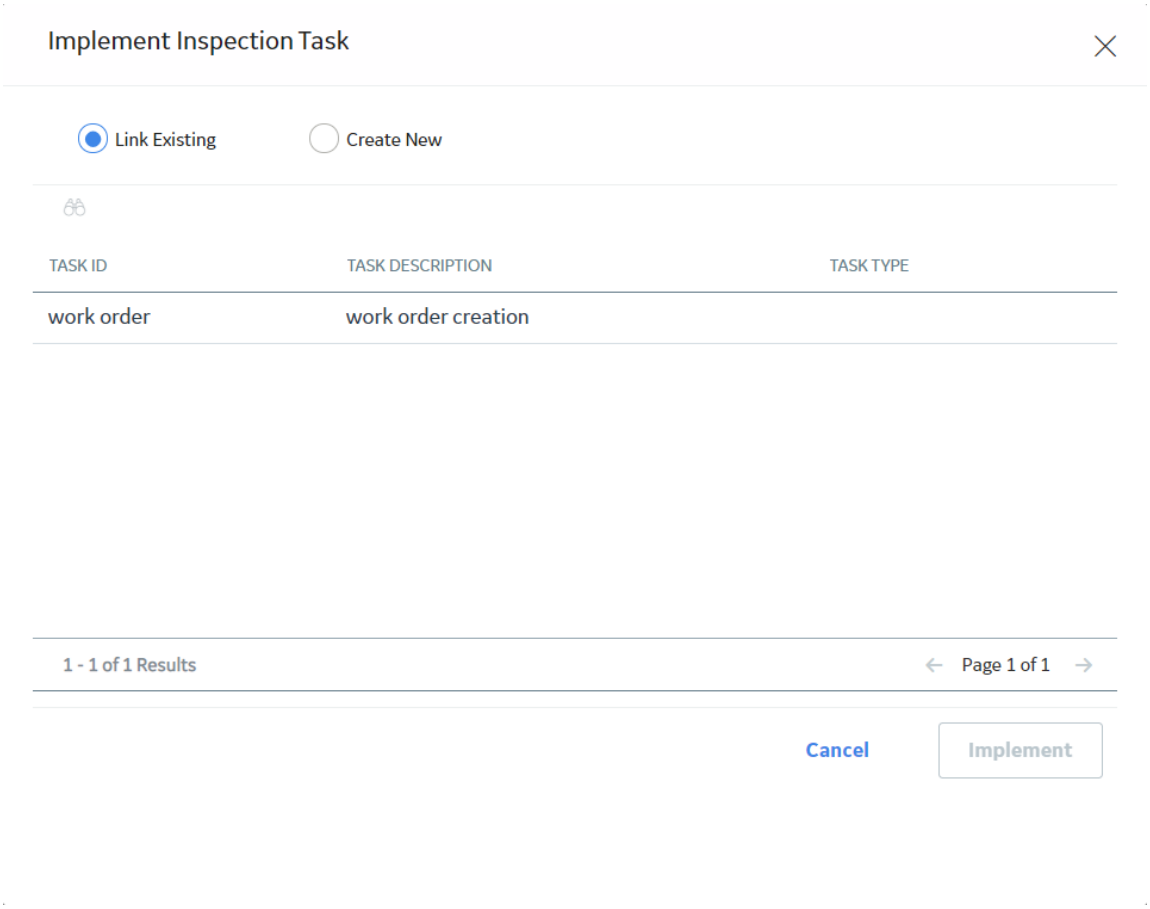
About This Task

In the **Implement Actions** workspace, you can create corresponding inspection tasks for actions when you implement the actions. After you create the records, you can link to them from the **Implement Actions** workspace.

Procedure

1. Access Implement Actions.
2. In the **Implement Actions** workspace, select the check box in the row containing the action you want to implement via inspection task link.
   The action is highlighted.

   Note: The selected action must have previously been implemented as an inspection task.
3. Select the **Implement** menu, and then select **Inspection Task**.
   The **Implement Inspection** task window appears.



4. Select the **Link Existing** option, and then select the action you wish to link to.

5. Select **Implement** to link to the existing task.

Results

- A new inspection task link is created.
- In the **Implement Actions** workspace, in the **Implementation** column of the action you implemented, a hyperlink to the inspection task appears.

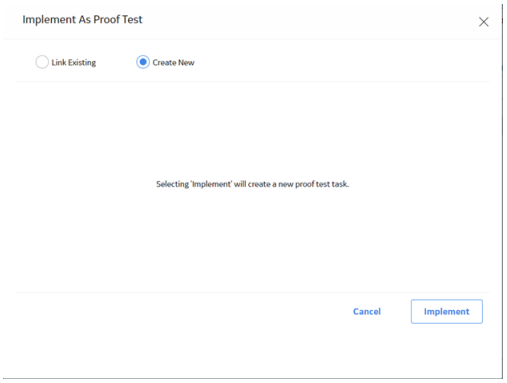
About Proof Test Tasks

In the **Implement Actions** workspace, you can create and link a proof test task for actions when you implement the actions. After you create the records, you can link them to the Inspection task from the **Implement Actions** workspace.

Create a Proof Test Task

Procedure

1. Access Implement Actions.
2. In the **Implement Actions** workspace, select the check box in the row containing the action you want to implement via a new proof test task.
   The action is highlighted.
3. Select the **Implement** menu, and then select **Proof Test Task**.
   The **Implement As Proof Test** window appears.



4. Select **Create New**, and then select **Implement**.
   A message appears, stating that the action has been implemented.

Results

- A proof test task is created.
- In the **Implement Actions** workspace, in the **Implementation** column of the action you implemented, a link to the proof test task appears.

Link a Proof Test Task

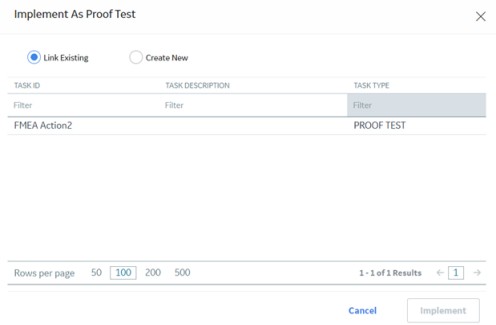
Procedure

1. Access Implement Actions.
2. In the **Implement Actions** workspace, select the check box in the row containing the action you want to implement via the proof test task link.

The action is highlighted.

Note: The selected action must have been previously implemented as a proof test task.

3. Select the **Implement** menu, and then select **Proof Test Task**.
   The **Implement As Proof Test** window appears.



4. Select **Link Existing**, and then select the action to which you want to link the proof test task.
5. Select **Implement**.

Results

- A proof test task link is created.
- In the **Implement Actions** workspace, in the **Implementation** column of the action you implemented, a link to the proof test task appears.

Create New Measurement Location or Lubrication Requirement Records

About This Task

In the **Implement Actions** workspace, you can create corresponding measurement location and lubrication requirement records to implement an action. After you create the records, you can link to them from the **Implement Actions** workspace.

Procedure

1. Access Implement Actions.
2. In the **Implement Actions** workspace, select the check box in the row containing the action you want to implement via a new Measurement Location or Lubrication Requirement record.
   The action is highlighted.
3. Select the **Implement** drop-down menu from the upper-right corner, and then select **Rounds Classic**.
   The **Implement Actions** in the **Rounds Classic** window appears, depending on which type of implementation you selected, displaying a list of measurement location or lubrication requirement records from Rounds to which you could link the action.
4. Select the **Create New From Template** option.
   A grid appears, displaying a list of available template types.
5. Select the template type you want to use, and then select **Implement**.
   A message appears, confirming that the action has been implemented.

Results

- A new measurement location or lubrication requirement is created.
- In the **Implement Actions** workspace, in the **Implementation** column of the action you implemented, a hyperlink to the measurement location or lubrication requirement appears.

Link a Policy Instance

About This Task

In the **Implement Actions** workspace, you can link a policy instance to implement an action. Policy instances are records that identify specific aspects you might want to monitor for an asset, in this case in accordance with actions which have already been identified for the associated asset strategy.

Procedure

1. Access Implement Actions.
2. On the **Implement Actions** workspace, select the check box in the row containing the action to which you want to link a policy instance.
   The action is highlighted.

   Note: An action may not be linked to more than one policy instance.
3. Select the **Implement** drop-down menu, and then select **Policy Instance**.
   The **Implement Policy Instance** window appears.

4. Select the policy instance with which you want to implement an action, and then select **Implement**.
   A message appears, confirming that the action has been implemented successfully.

Results

- The policy instance is linked to the action.
- In the **Implement Actions** workspace, in the **Implementation** column of the action you implemented, a hyperlink to the policy instance record appears.

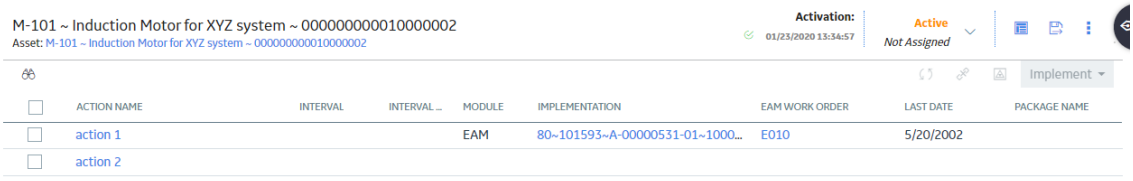
Apply Updates to Implemented Actions

Before You Begin

- Modify action(s) as necessary. When you do so, the state assignment for the strategy is changed to Modified.

Procedure

1. Approve the strategy whose related actions you modified.
   The strategy is changed back to the Active state.
2. In the pane, select the **Implement Actions** tab.
   The **Implement Actions** workspace appears.



3. In the **Implement Actions** workspace, select the actions that you modified and that you want to update with their implementations, and then select .
   The updates are applied to the implemented actions. If any updates were unsuccessful, the **Errors** window appears, which contains a list of the unsuccessful updates.

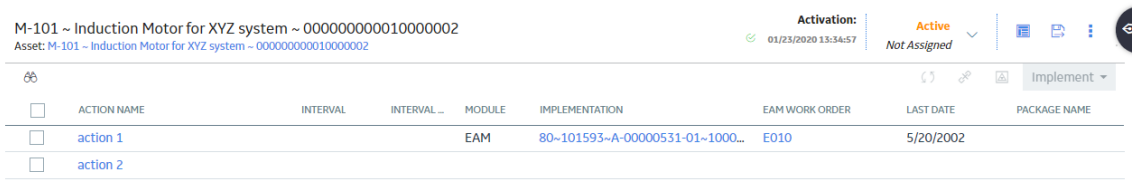
Unlink Implementations

About This Task

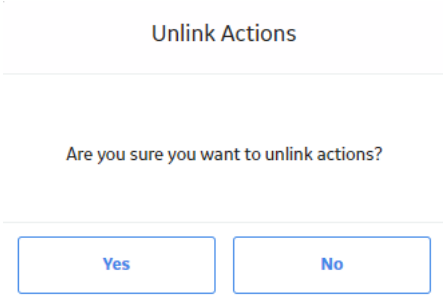
These steps describes how to unlink implementations.

Procedure

1. Access the **Implement Actions** workspace.
2. Next to each implementation that you want to unlink, select the check box.
   The selected implementations are highlighted.



3. Select .
   A confirmation window appears.



4. Select **Yes**.
   The selected implementations are unlinked.

Link Existing Tasks to Actions

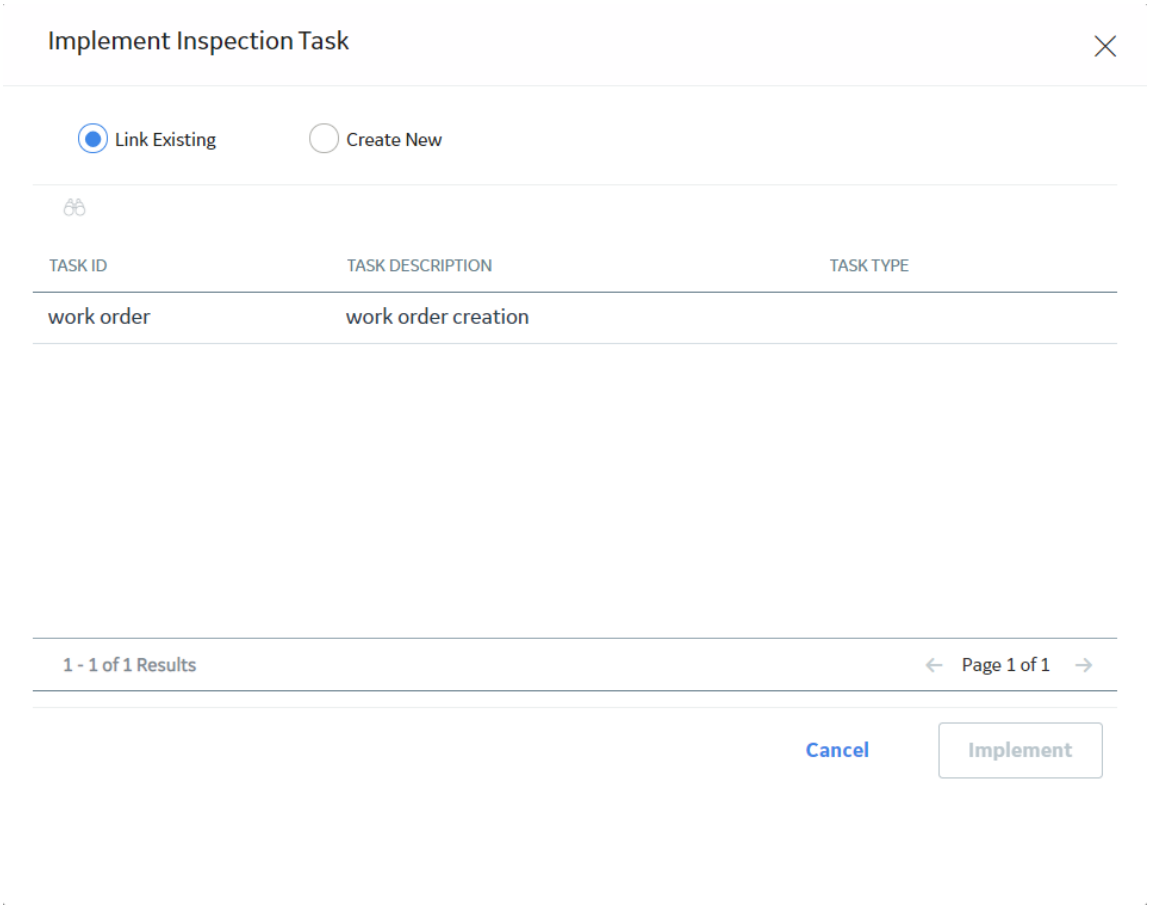
About This Task

In the **Implement Actions** workspace, you can link calibration and inspection tasks when you implement the actions.

Note: To link an existing record, it cannot already be linked to another action.

Procedure

1. Access Implement Actions.
2. On the **Implement Actions** workspace, select the check box in the row containing the action you want to implement.
   The action is highlighted.
3. Select the **Implement** drop-down menu, and then select either **Calibration Task** or **Inspection Task**.
   A window appears with the **Link Existing** option selected, displaying a list of records you can link.



4. Select the row containing the calibration or inspection task that you want to link, and then select **Implement.**
   A message appears, confirming that the task was linked successfully.

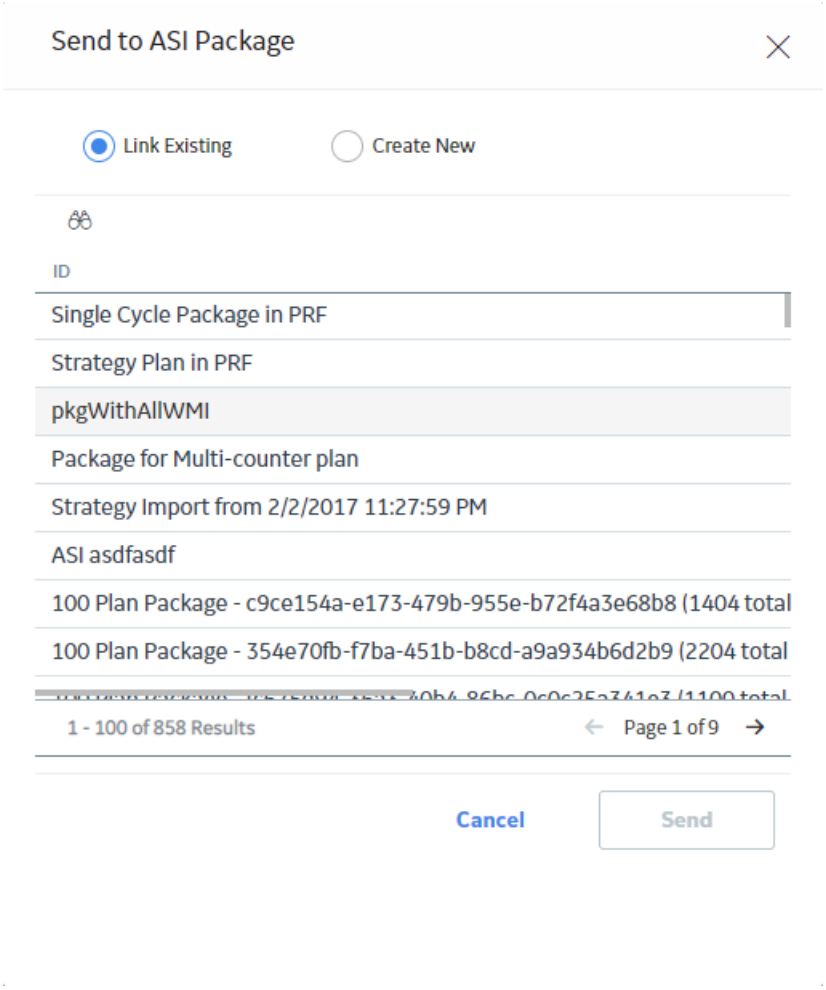
Results

- The calibration or inspection task is linked to the action.
- In the **Implement Actions** workspace, in the **Implementation** column of the action you implemented, a hyperlink to the calibration or inspection task appears.

Send Approved Actions to an ASI Package

Procedure

1. Access the **Implement Actions** section.
2. In the Implement Actions section, select the check box in the rows containing the implemented actions that you want to send to ASI, and then select .
   The Send to ASI Package window appears, displaying a list of existing implementation packages that match the CMMS system of the Asset. By default, the **Link Existing** option is selected.



Note: The maximum amount of records that you can select for one implementation is 250.

Note: The button will be enabled only if one of the following conditions are satisfied:

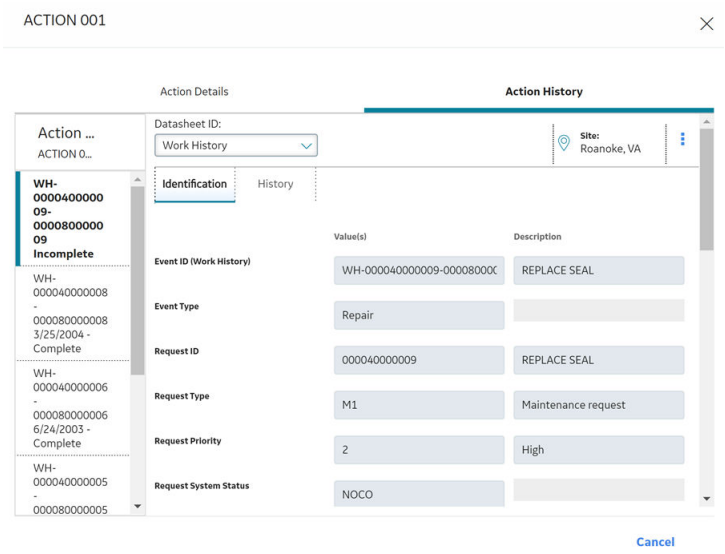
- The Asset is an equipment or a functional location.
- the Asset has a CMMS system.

3. If you want to send the implemented actions to an existing ASI package, select the package to which you want to link them, and then select Send. Or, if you want to create a new ASI package and link the implemented actions to an existing ASI package, select Create New, then enter values in the available fields as needed, and then select Send.
A message appears, confirming that your items have been sent to ASI.

View Execution History for Actions

Procedure

1. Access Implement Actions.
2. In the **Implement Actions** workspace, select a link in the **Action Name** column for the row containing the action for which you want to view the execution history.
The **<Action Name>** window appears, displaying the **Action History** section that contains a list of execution history for the action.



Note: You can view the Active Work Order information for Actions, and the date when the work order was last completed.

Chapter 9

EAM Integration

Topics:

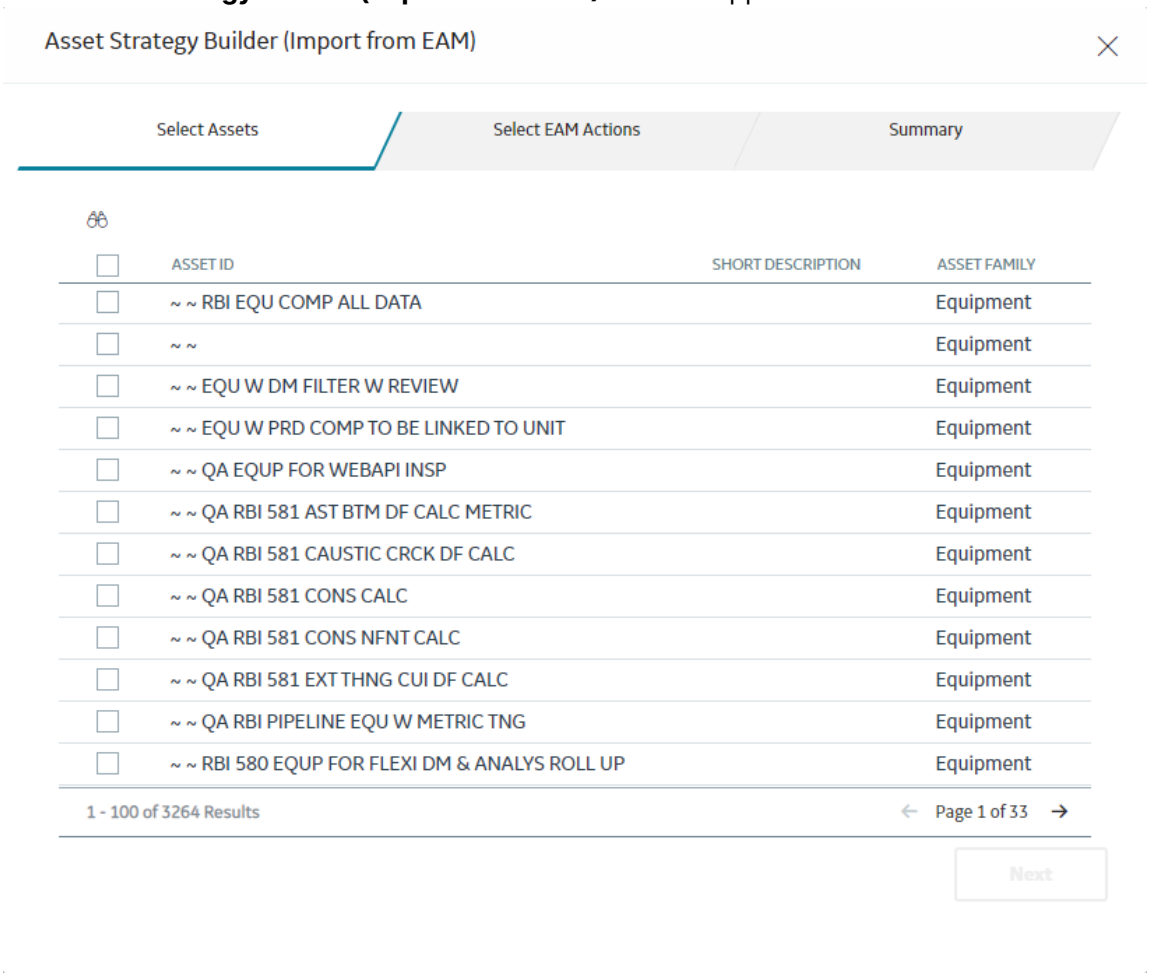
- Create Actions from EAM Plans
- Implement an EAM Maintenance Plan
- Apply Action Updates to EAM Actions
- Link an Action to an EAM Maintenance Plan
- Implement an Action as an EAM Work Request

Create Actions from EAM Plans

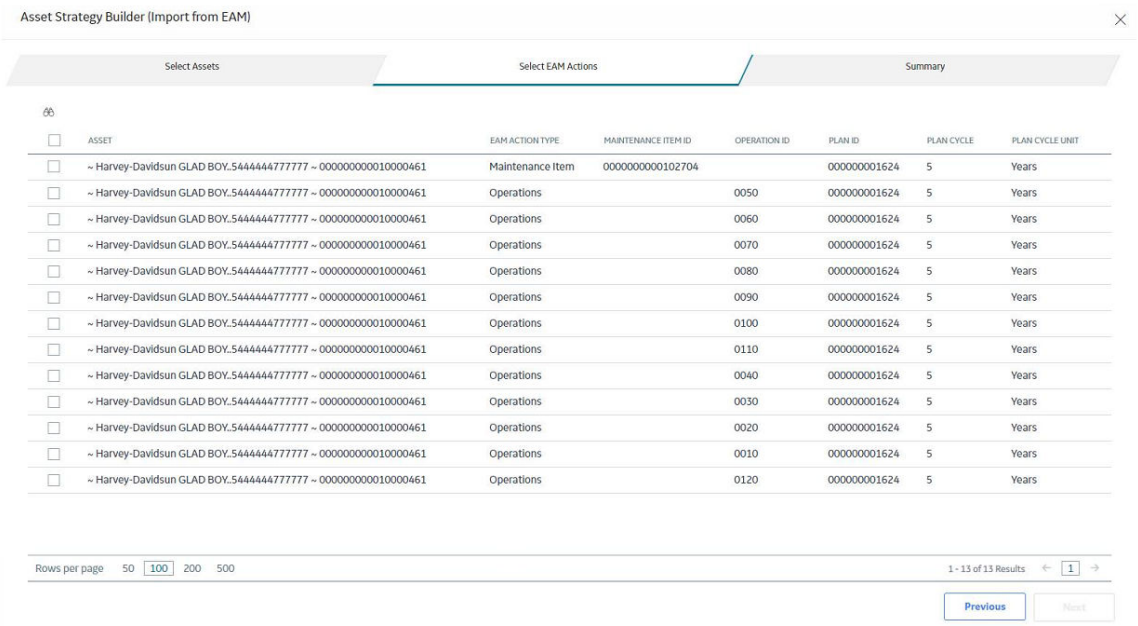
This topic describes how to create actions from EAM Plans.

Procedure

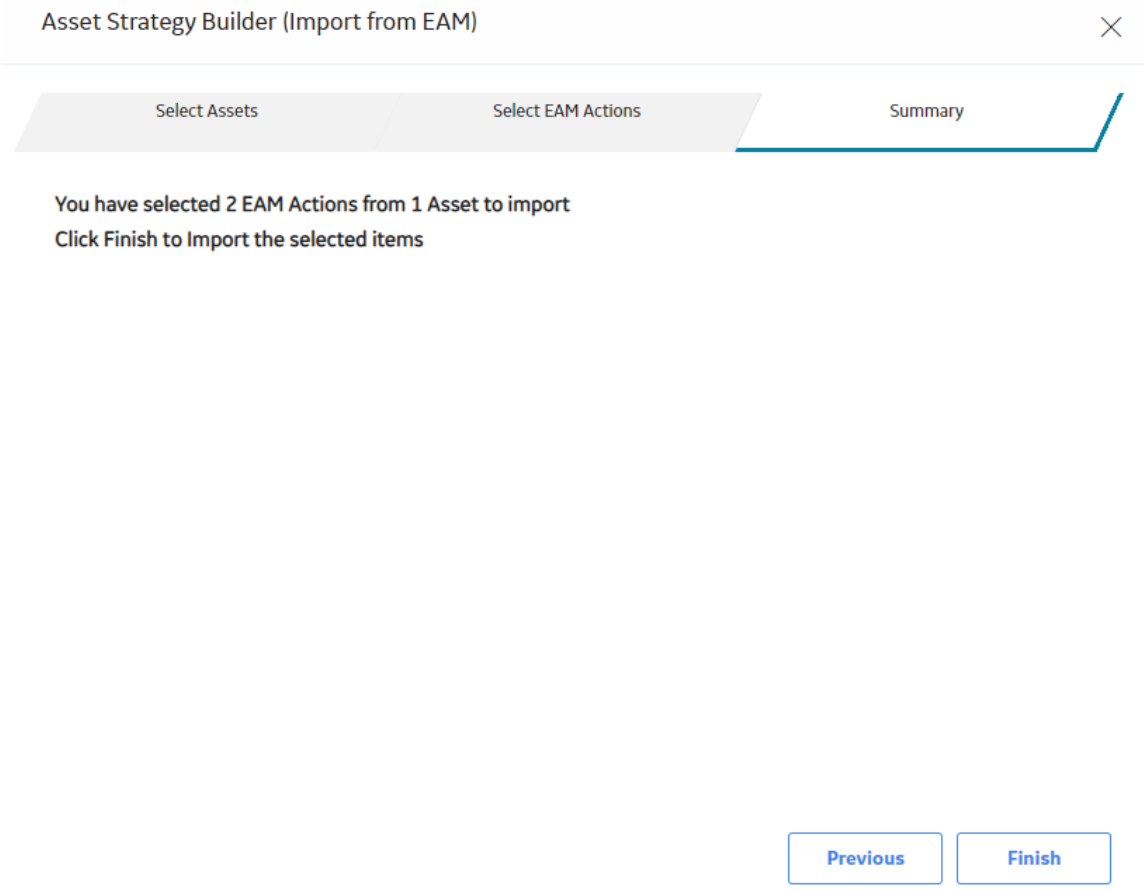
1. Access the **ASM Overview** page.
2. Select **Import**, and then select **From EAM**.
   The **Asset Strategy Builder (Import from EAM)** window appears.



3. Select the check box for each asset that you want to import.
4. Select **Next**.
   The **Select EAM Actions** section appears.



5. Next to each Action that you want to import, select the check box.
6. Select **Next**.
   The **Summary** section appears.



7. Select **Finish**.
   Asset Strategy Actions are created for the selected EAM Maintenance Items and EAM Operations. Also, for each selected asset for which an Asset Strategy did not already exist, one is created.

   Note: A progress indicator appears. Once the process is complete, the date and time of the last import appears. If the process cannot be completed, an error message appears.

Implement an EAM Maintenance Plan

About This Task

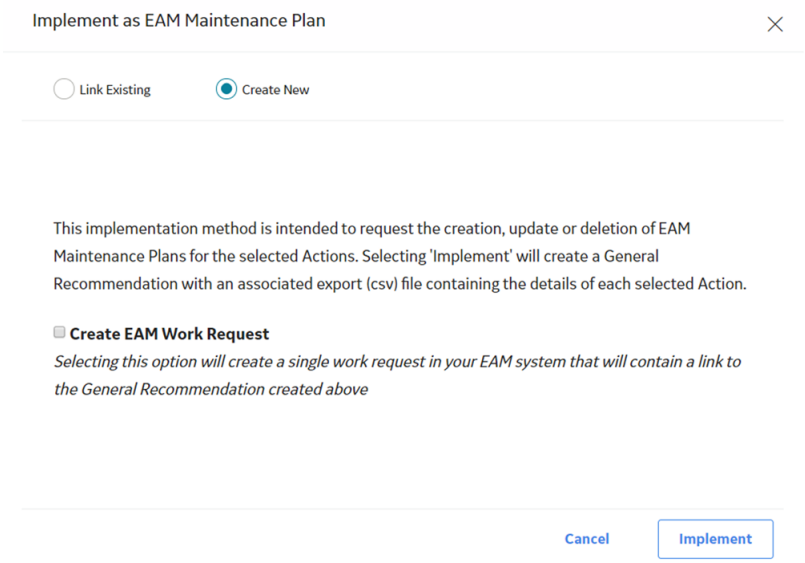
In the **Implement Actions** workspace, you can implement a maintenance plan to create a recommendation in the EAM system for the selected Actions.

Procedure

1. Access Implement Actions.
2. In the **Implement Actions** workspace, select the check box for each row containing an action that you want to include in the maintenance plan.
   The Actions are highlighted.

   Note: The maximum number of records that you can select for one implementation is 250.
3. In the workspace, select **Implement**, and then select **EAM Maintenance Plan**.

   The **Implement as EAM Maintenance Plan** window appears.



   Note: If you need to create an EAM Work Request, select the **Create EAM Work Request** check box.
4. Select **Send**.

   A message appears, confirming that the maintenance plan has been implemented successfully.

Results

- A General Recommendation is created and linked to the asset.
- The General Recommendation contains a reference document with the details for each selected action.
- If the **Create EAM Work Request** check box is selected, before selecting **Implement**, a work request is created in the EAM system that contains a link to view the General Recommendation in APM.

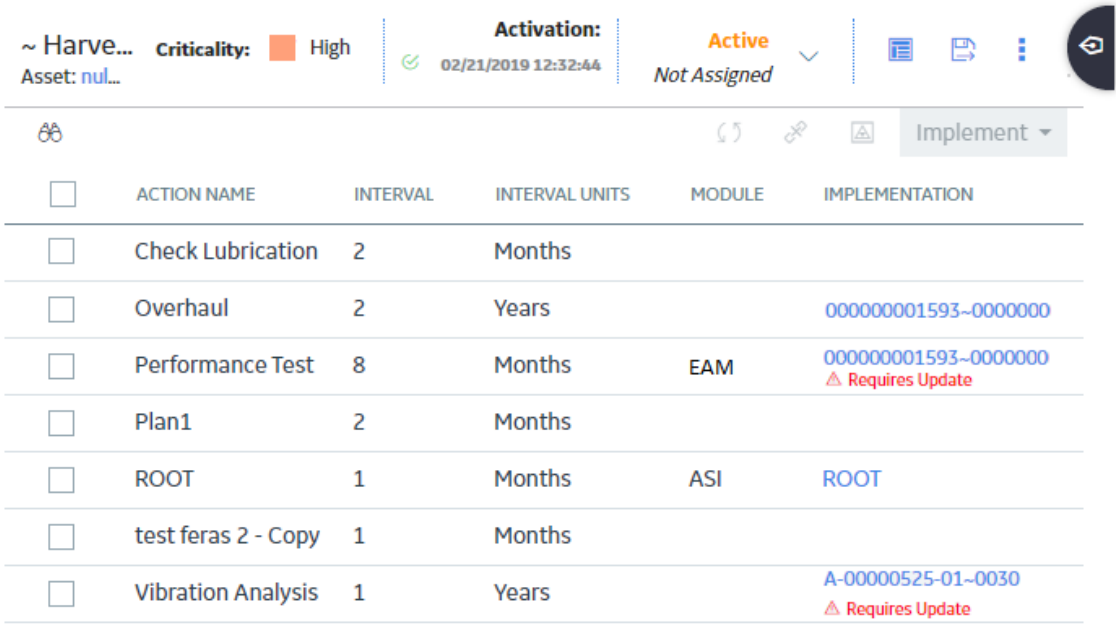
Apply Action Updates to EAM Actions

Before You Begin

- You can modify actions as necessary. When you modify actions, the state assignment for the strategy is changed to Modified.

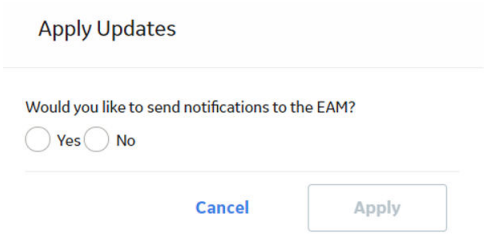
Procedure

1. Approve the strategy whose related actions you have modified.
   The strategy is changed back to the Active state.
2. In the pane, select the **Implement Actions** tab.
   The **Implement Actions** workspace appears.



3. In the **Implement Actions** workspace, next to the Actions that you have modified and require updates to their implementations, select the check box, and then select .

   Note: If an Action is implemented in the EAM module, then an additional window appears with an option to select if you want to create an EAM work request.
4. Select **Yes**, to send a notification to the EAM system.



The updates are applied to the Implemented Actions. If any updates are unsuccessful, the **Errors** window appears, containing a list of unsuccessful updates.

Note: If you change the plan in the EAM system after you have updated APM, then an indicator appears, alerting you that the Action interval is not in sync.

Results

- A General Recommendation is created and linked to the asset.
- The General Recommendation contains a reference document with the details for each selected action.
- If in the **Apply Updates** window, you selected **Yes**, then a work request is created in the EAM system that contains a link to view the General Recommendation in APM.

Link an Action to an EAM Maintenance Plan

About This Task

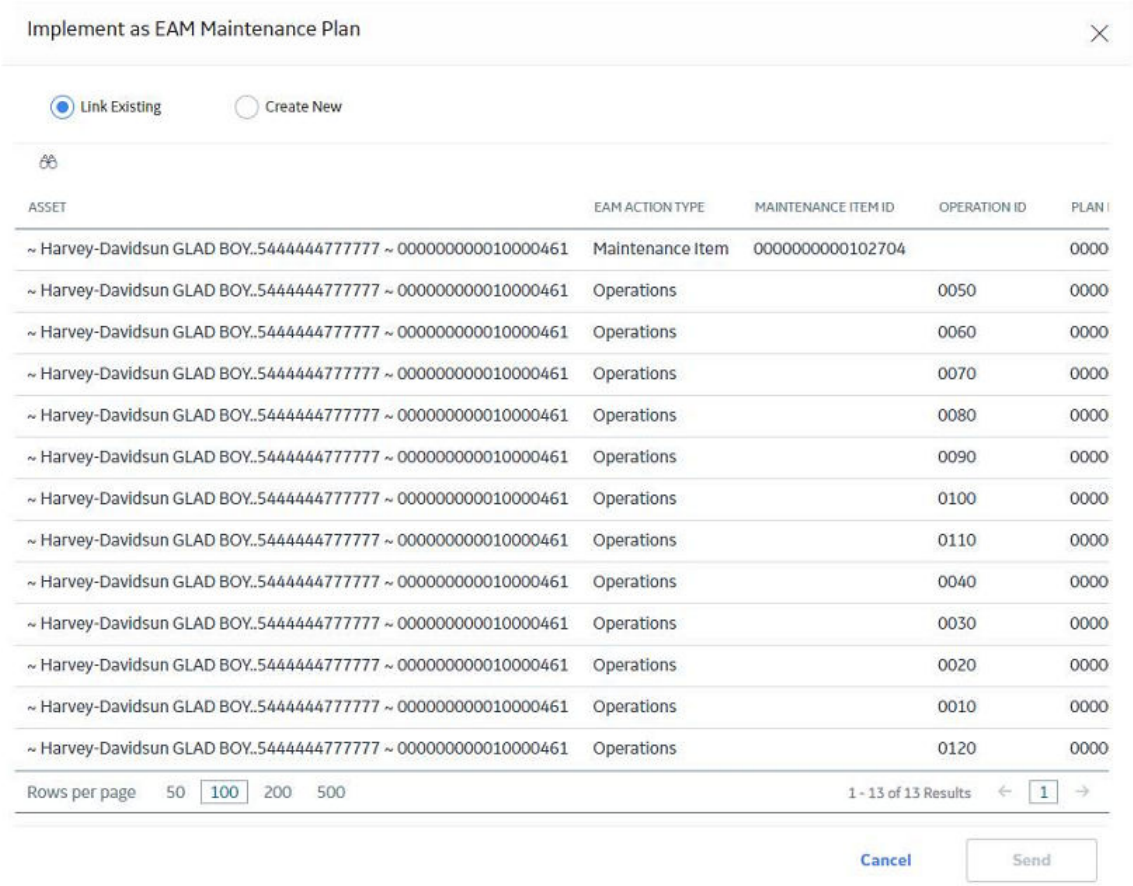
In the **Implement Actions** workspace, you can link EAM Maintenance Plans when you implement the actions.

Before You Begin

To link an EAM Maintenance Plan, it cannot already be linked to another action.

Procedure

1. Access Implement Actions.
2. In the **Implement Actions** workspace, next to the action that you want to link, select the check box.
   The action is highlighted.
3. Select the **Implement** menu, and then select **EAM Maintenance Plan**.
   A window appears with the **Link Existing** option selected, displaying a list of records.



4. Select the row containing the EAM Maintenance Plan that you want to link, and then select **Send**.
   A message appears, confirming that the action was linked successfully.

Results

- The EAM Maintenance Plan is linked to the action.
- In the **Implement Actions** workspace, in the **Implementation** column of the action you implemented, a link to the EAM Maintenance Plan appears.

Implement an Action as an EAM Work Request

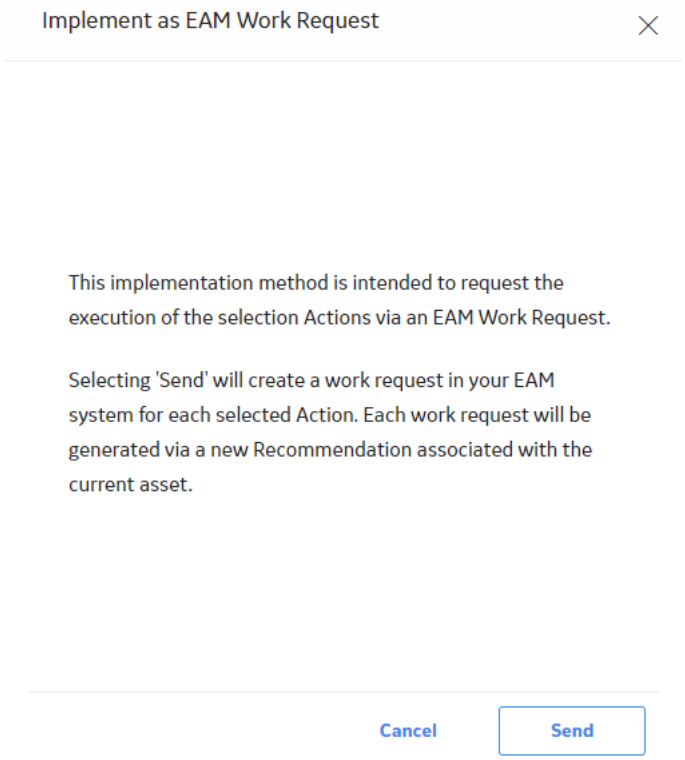
About This Task

In the **Implement Actions** workspace, you can send a work request to create an implementation in the EAM system for the selected Actions.

Procedure

1. Access Implement Actions.
2. In the **Implement Actions** workspace, select the check box in each row containing an action that you want to include in the work request.
   The actions are highlighted.

3. In the workspace, select the **Implement** drop-down menu, and then select **EAM Work Request**.
   The **Implement as EAM Work Request** window appears.



4. Select **Send**.
   A message appears, confirming that the work request has been sent successfully.

Results

- A work request is sent to the EAM system for the associated asset.
- The work request contains details about each action selected, such as the action name, description, the strategy ID, site ID, as well as others.
- The work request is created to alert the user that items need to be created to build out a specific EAM structure and ultimately to implement the strategy.

Chapter 10

Rounds Integration

Topics:

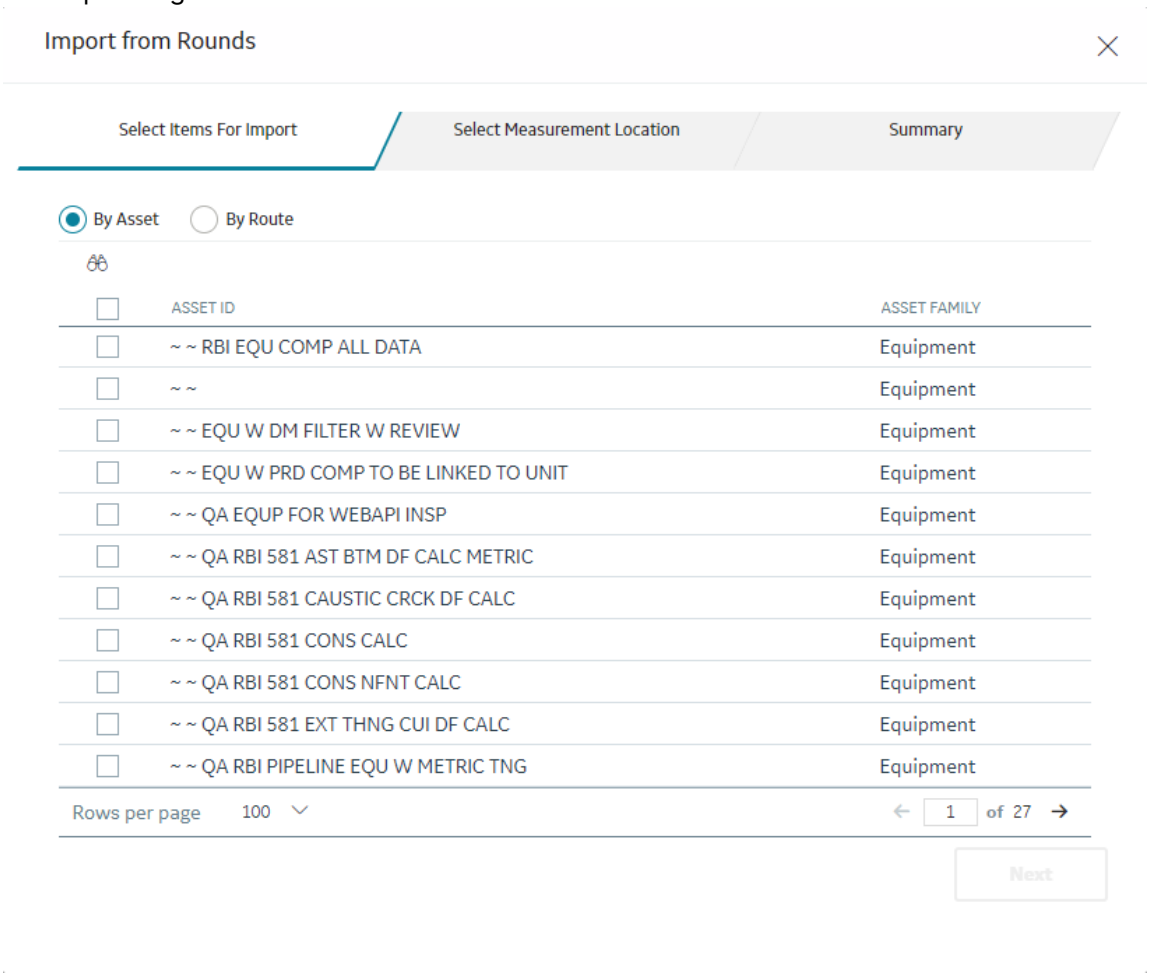
- Create Actions from Measurement Locations

Create Actions from Measurement Locations

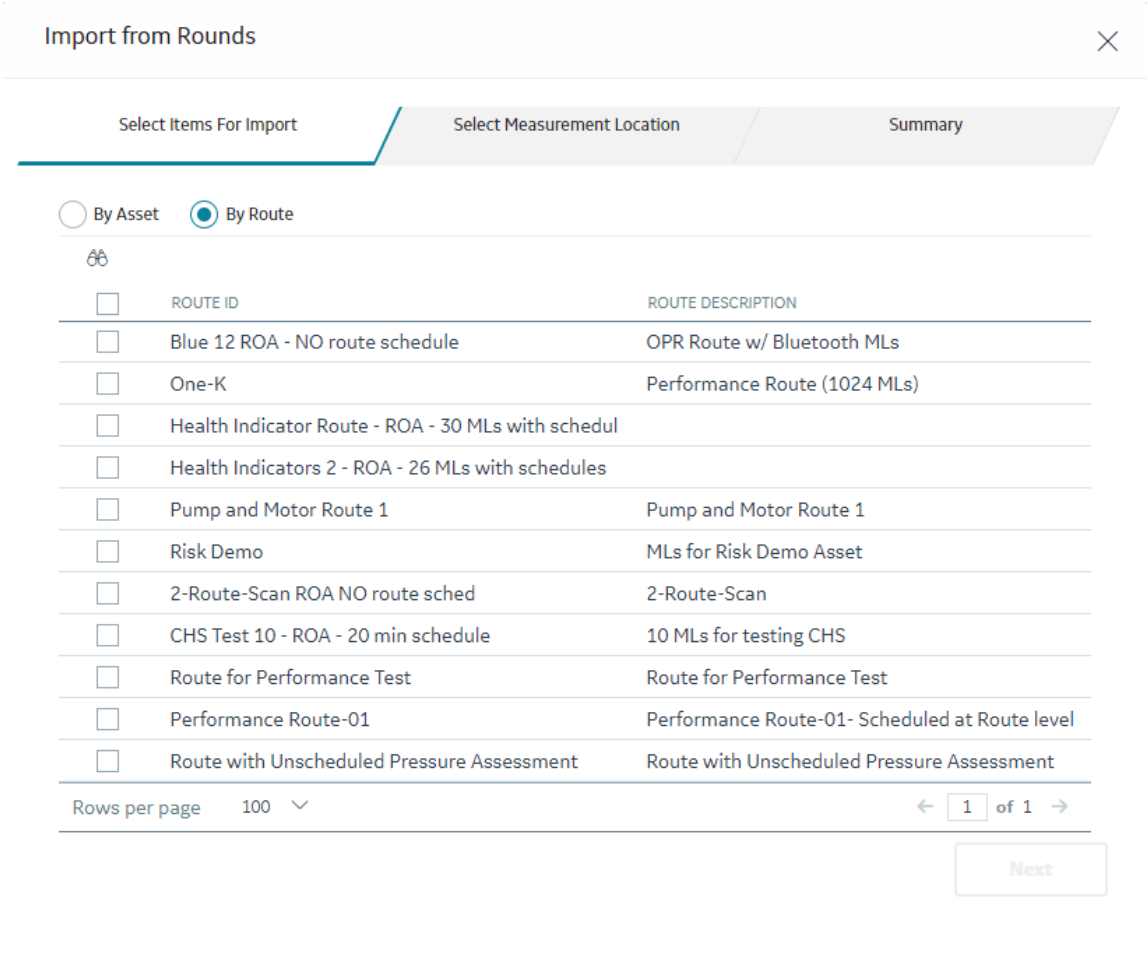
This topic describes how to create actions from Measurement Locations.

Procedure

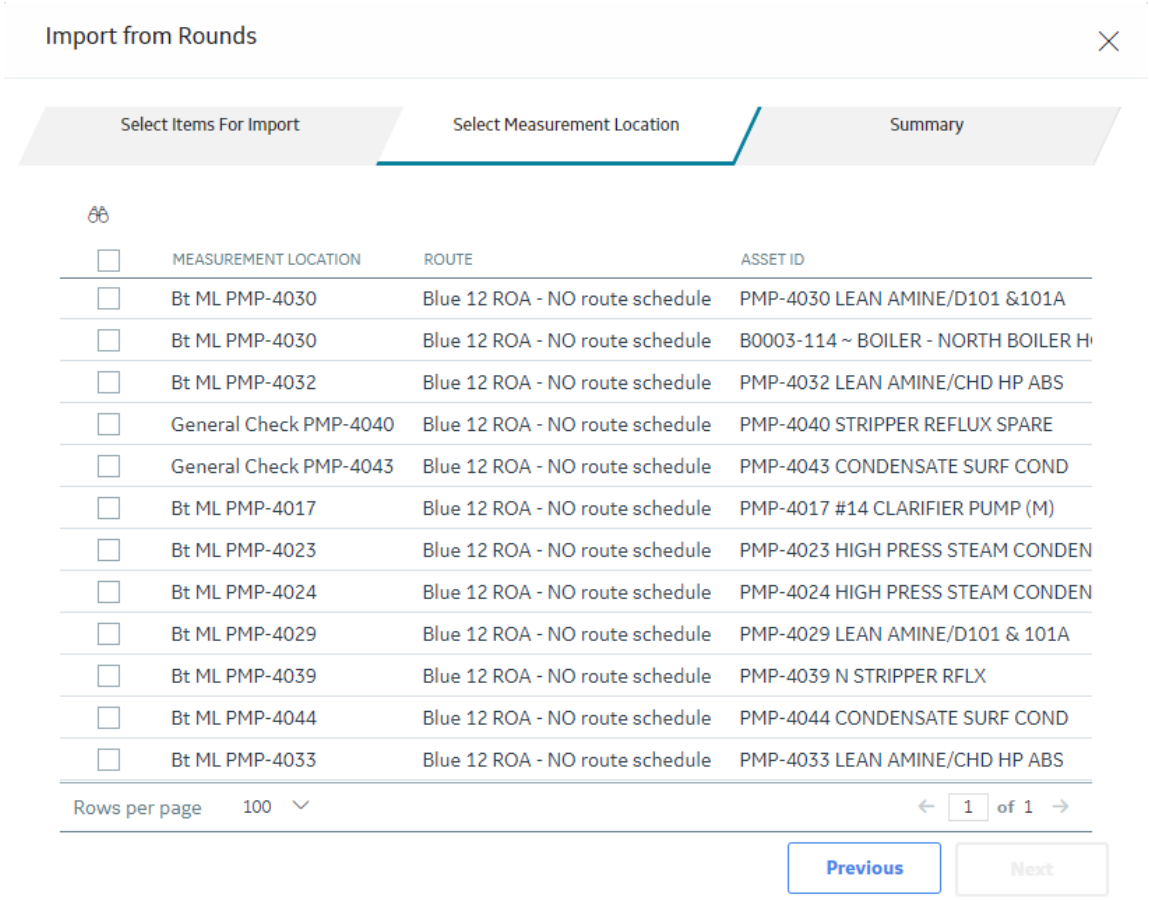
1. Access the **ASM Overview** page.
2. Select the **Import** button, and then select **From Rounds**.
   The **Import from Rounds** window appears containing a list of assets. From the **Select Items For Import** section, you can select one or more assets to access a list of corresponding Measurement Locations.



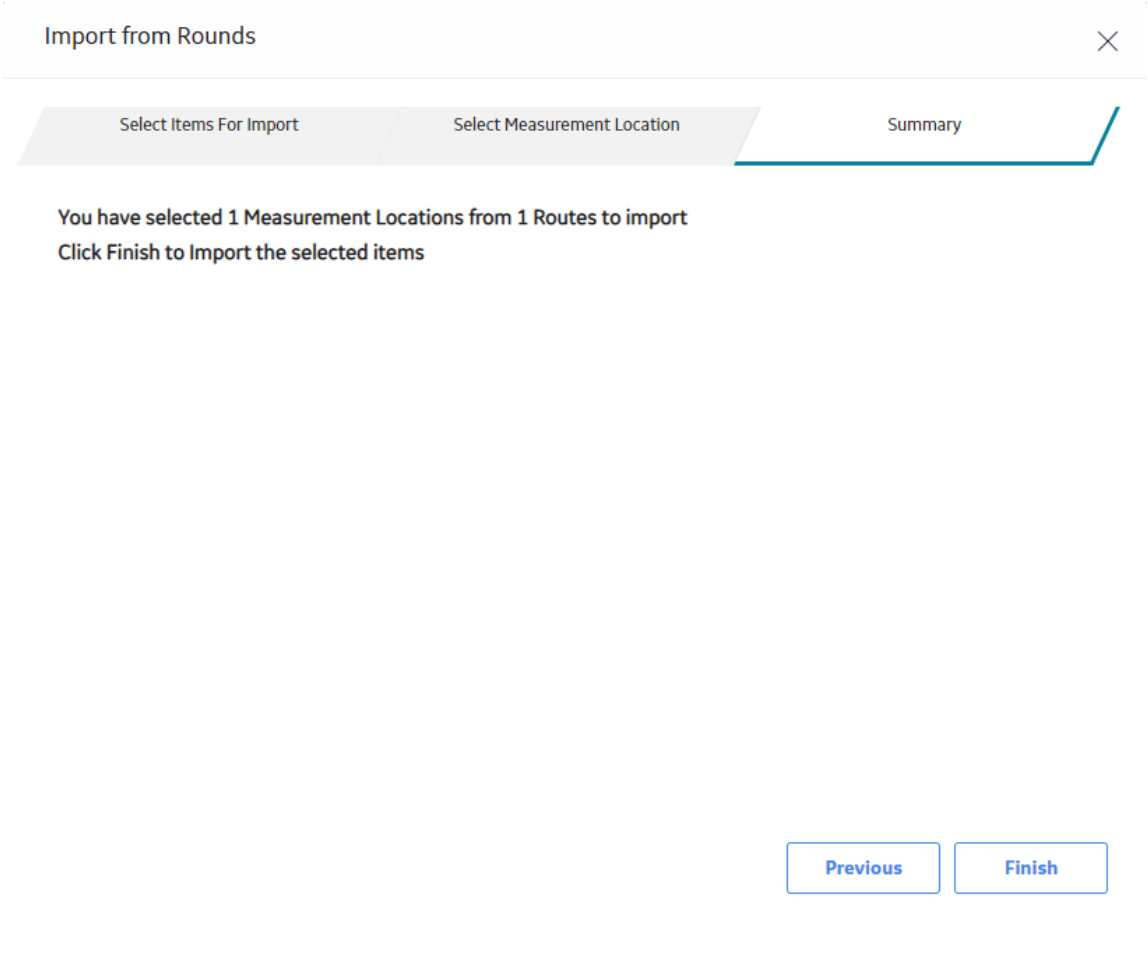
You can also select one or more routes from a list of available routes to access a list of corresponding Measurement Locations by selecting the **By Route** option.



3. Select the check boxes for the assets or routes for which, you want to access the list of Measurement Locations.
4. Select **Next**.
   The **Select Measurement Location** section appears.



5. Select the check boxes for the Measurement Locations that you want to import.
6. Select **Next**.
   The **Summary** section appears.



7. Select **Finish**.
   Actions are created for the selected Measurement Locations. Also, asset strategies will be created for each selected asset, if no strategies existed.

   Note: A progress indicator appears. After the process is complete, the date and time of the last import appears. If the process fails, an error message appears.

Chapter 11

Risks and Actions

Topics:

- About Risks and Actions
- Access Risks and Actions
- Create a Risk or Action Without a Context
- Create a Risk Without Any Context or in the Context of an Action
- Create an Action in Context of a Risk
- Create a Mitigated Risk in the Context of an Action
- Modify a Risk or Action
- Copy a Risk or Action
- Delete a Risk or Action
- Undo a Risk or Action
- Supersede Actions
- Unlink Superseded Actions
- Link a Risk or Action
- Unlink a Risk or Action

About Risks and Actions

A risk identifies a way that a location or a piece of equipment can fail, as well as the consequence of the failure. This consequence is presented as a risk rank value, which is determined from the values that you select in the Risk Assessment interface that appears when you create a risk. After you have created an Asset Strategy record, you can begin adding risks to the asset strategy.

The values that you specify in a risk are stored in a Risk record. Throughout this documentation, unless it is necessary to refer to the record itself, we use the term risk.

An action identifies the physical ways in which you maintain a piece of equipment or location. For example, an action might indicate that you want to perform a visual inspection of a piece of equipment. After you have created an Asset Strategy record, you can begin adding actions to the asset strategy.

The values you specify in an action are stored in an Action record. Throughout this documentation, however, unless it is necessary to refer to the record itself, we use the term action.

Switch the Positions of the Risks and Actions Columns

In the **Risks and Actions** workspace, you can switch the position of the risks and actions columns by selecting .

Whichever column appears in the left side of the workspace, **Risks** or **Actions**, is in the primary position and is selectable. This means that, for example, if the **Risks** column is on the left and you select a particular risk, all the actions that mitigate that risk appear in the **Mitigating Actions** column on the right. Similarly, if the **Actions** column is on the left and you select a particular action, all the risks that are mitigated by that action appear in the **Mitigated Risks** column on the right.

Expand Risks and Actions Cards

The cards in the **Risks and Actions** workspace can be expanded to display more details by selecting , and then collapsed by selecting .

When you expand an Action card, the following information is displayed:

- Datasheet for the action.
- A list of linked actions under the heading Superseded Actions.

When you expand a Mitigating Action card, the following information is displayed:

- Datasheet for the action.
- Risk matrix with unmitigated risk assessment (not editable) and mitigated risk assessment (editable).

When you expand a Risk card, the following information is displayed:

- Datasheet for the risk.
- Risk matrix with editable unmitigated risk assessment.

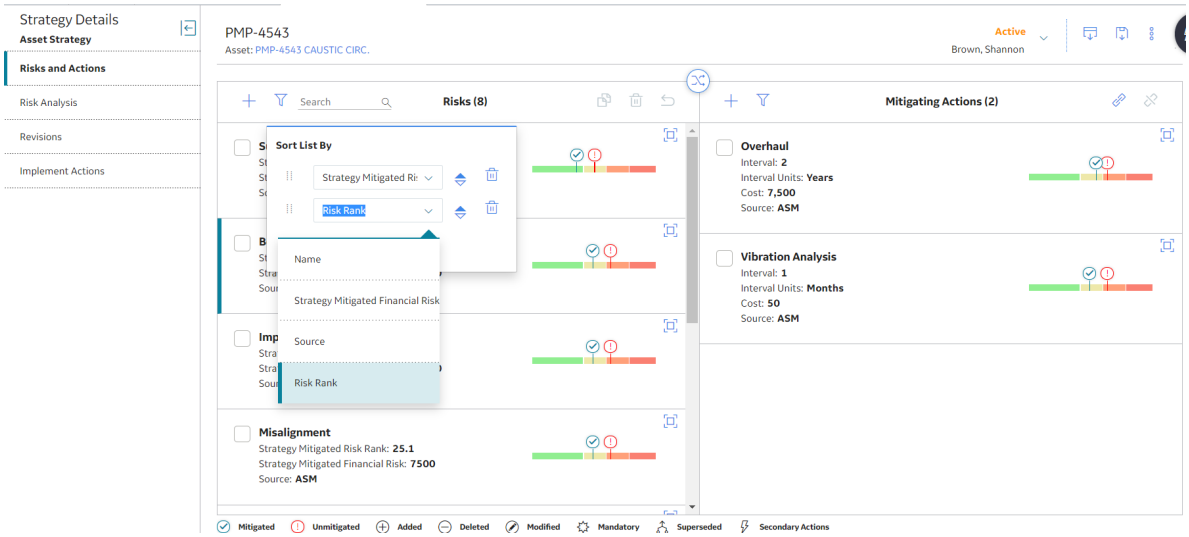
When you expand a Mitigated Risk card, the following information is displayed:

- Datasheet for the risk.

- Risk matrix with the unmitigated risk assessment (not editable) and mitigated risk assessment (editable).

Sort Risks and Actions

Risks and actions can be sorted to display the items that you are most interested in viewing from a large list by selecting .



In the **Sort List By** box, you have the following options:

- **Sort by Field:** Select the individual drop-down list boxes in the control to select the fields by which you want to sort.

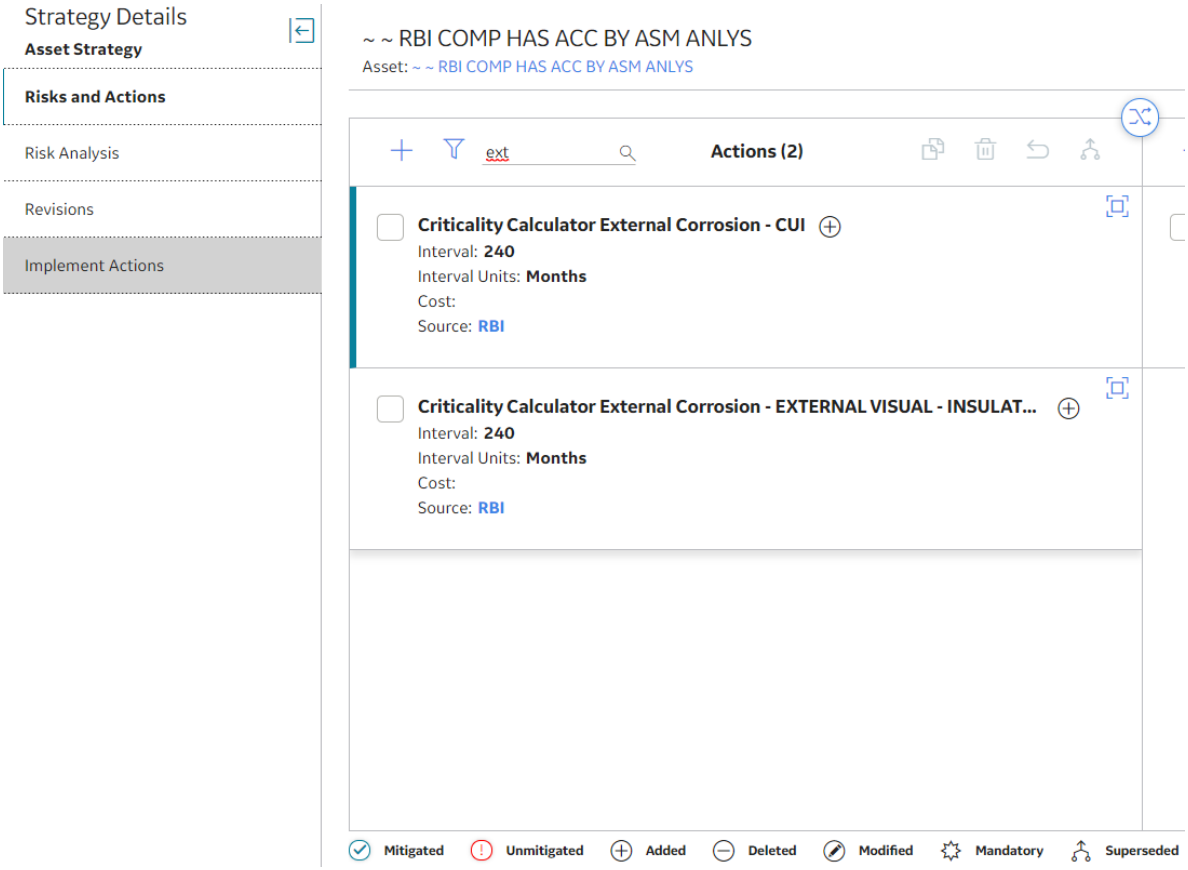
  Note: Consult the ASM Admin section.

- **Sort in Ascending or Descending Order:** Select to toggle between ascending and descending order for each sort condition.
- **Add Multiple Conditions to Sort by:** Select **Add Sort Condition** to add a sort condition.
- **Delete a Sort Condition:** Select beside a sort condition to delete it.
- **Rearrange Order of Sort Conditions:** Select to drag-and-drop sort conditions into different positions in the sort hierarchy.

As you make selections in the **Sort List By** box, the grid sorts accordingly.

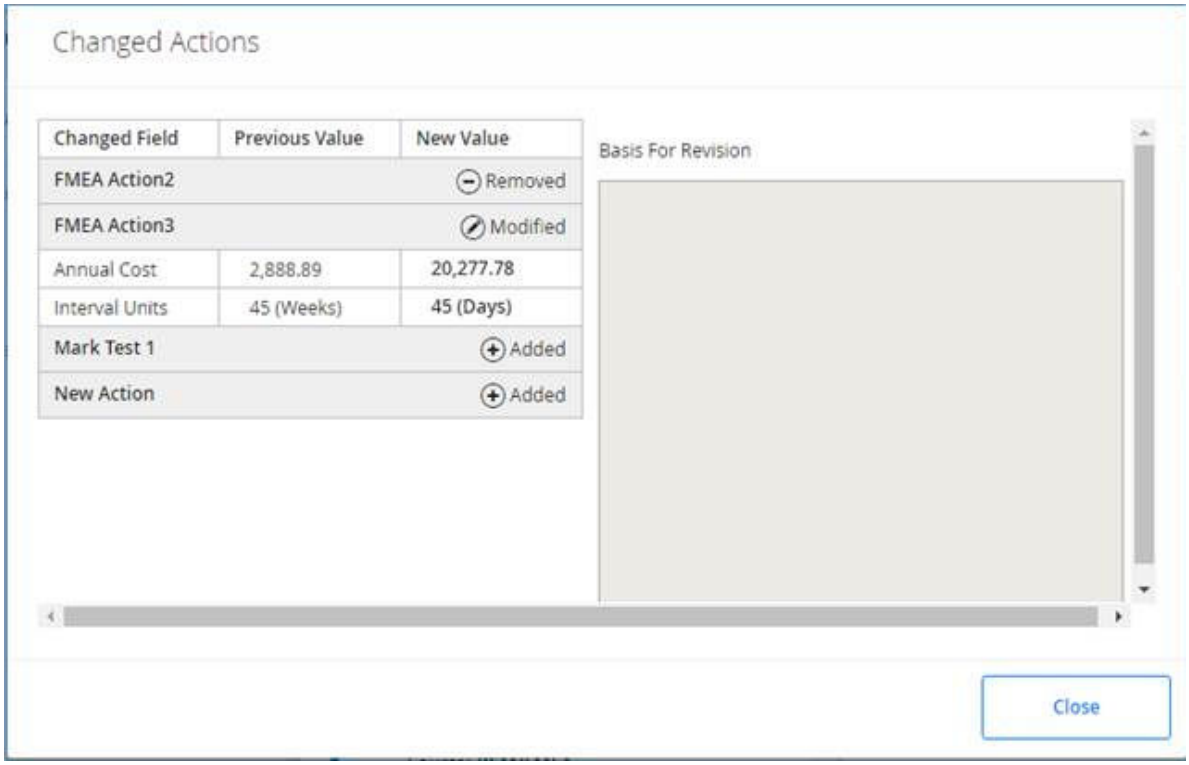
Search Risks and Actions

Risks and actions can be searched to display the items that you are most interested in viewing from a large list by typing few characters of risk or action name in the **Search** box.



View Changes to a Modified Strategy

You can view a summary of the changes made to a modified strategy by selecting **XX Action Changes** at the upper-right area of the strategy record. When you select it, the **Changed Actions** window appears, listing the actions and fields that have changed on the left and the read-only Basis For Revision/Rework on the right. If a strategy is in a Pending Review state, the **Basis For Revision** will appear. If a strategy is in a Modified state, having gone through a rework, the **Basis For Rework** will appear. Only actions that have changed appear in the list of fields; not risks.



Modifying Risks, Actions, and Assessments

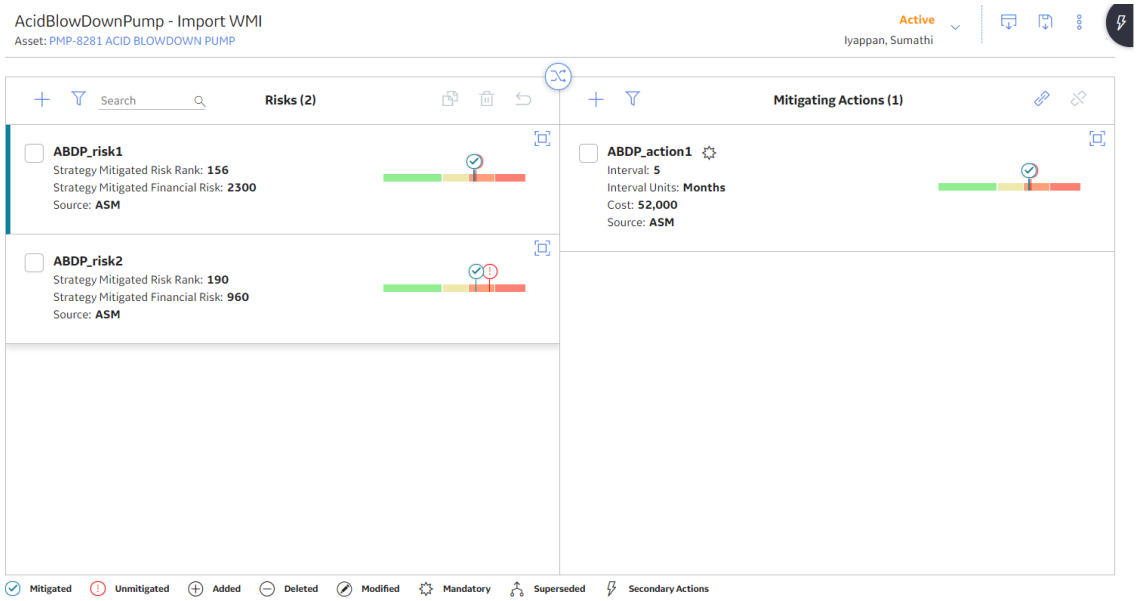
When an action or a risk appears in the right column of the grid in the **Risks and Actions** workspace, the status displayed is the status of the Risk Assessment. The following table lists examples of operations and their resulting statuses.

Operation	Resulting Status in the Right Pane
Modify a risk or action directly without affecting the assessment.	No status icon will be displayed.
Modify the assessment without modifying the risk or action.	Status icon will be .
Link an existing action or risk.	Status icon will be .
Link a new action or risk.	Status icon will be .
Unlink an existing assessment.	Status icon will be .
Unlink a new assessment.	Risk or action card will no longer be displayed.
Delete an existing risk that has mitigating action(s).	Status icon will be .

Access Risks and Actions

Procedure

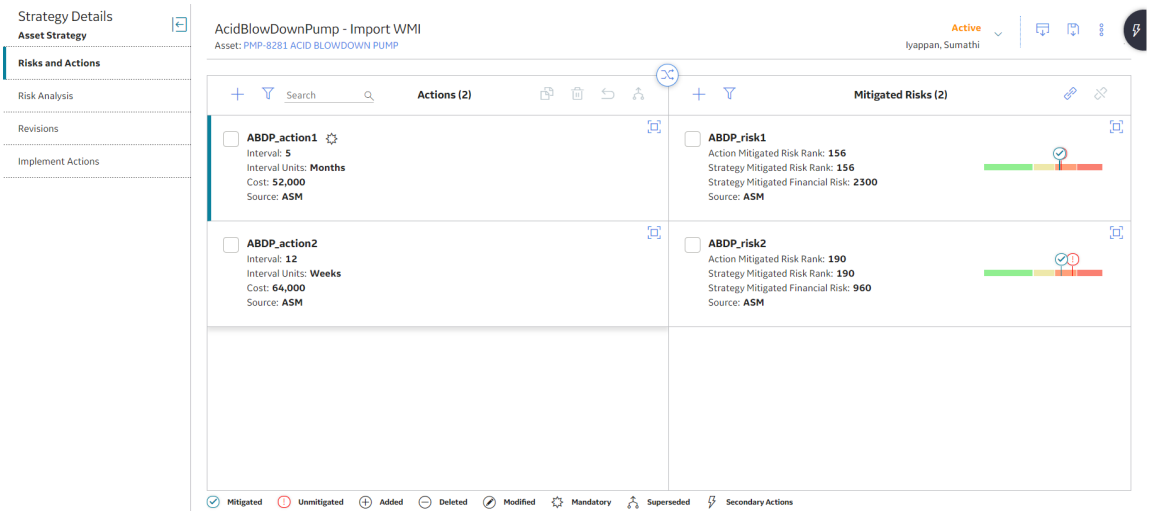
1. Access Asset Strategies.
2. Select the strategy whose risks and actions you want to access.
   The **Strategy Details** workspace for the selected asset strategy appears.
3. Select the **Risks and Actions** tab.
   The **Risks and Actions** workspace appears.



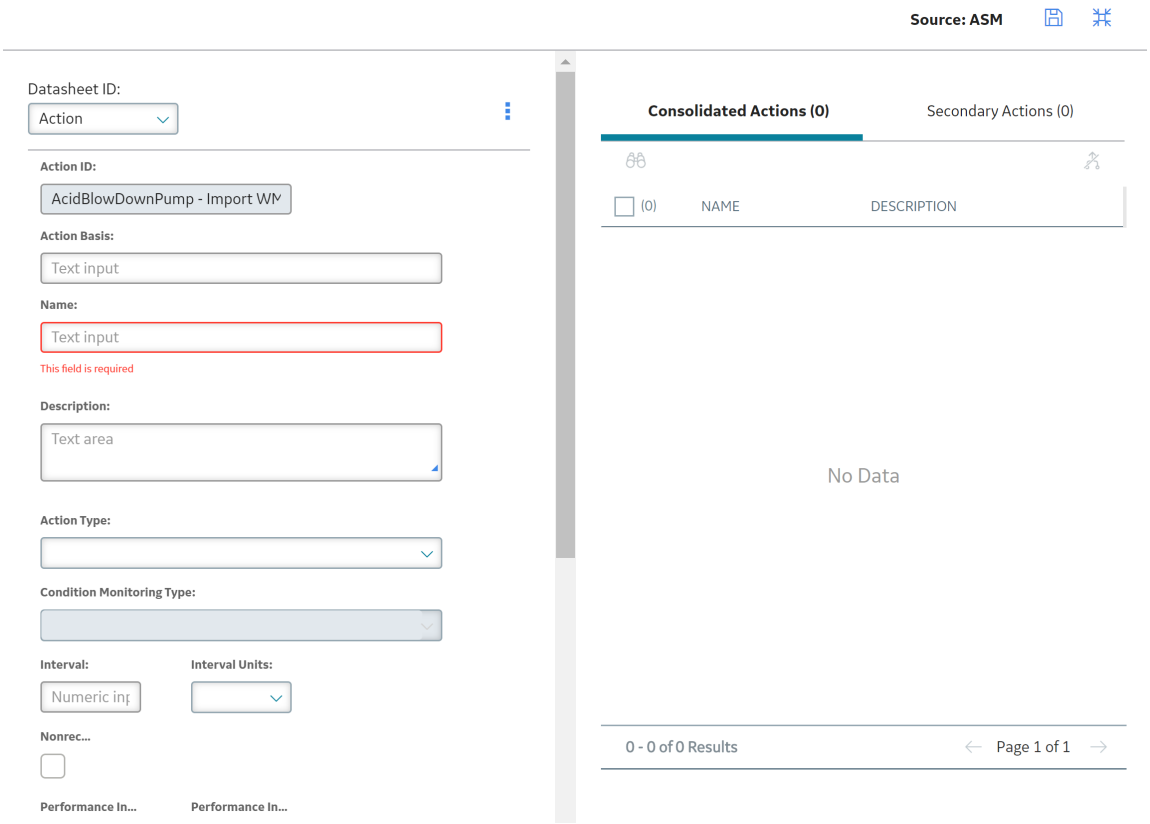
Create a Risk or Action Without a Context

Procedure

1. Access **Risks and Actions**.
2. In the **Risks and Actions** workspace, in the grid, select .
   The column positions are switched. The **Actions** column is now the left column.



3. In the **Actions** column, select +.
   A blank datasheet appears for the new action record.

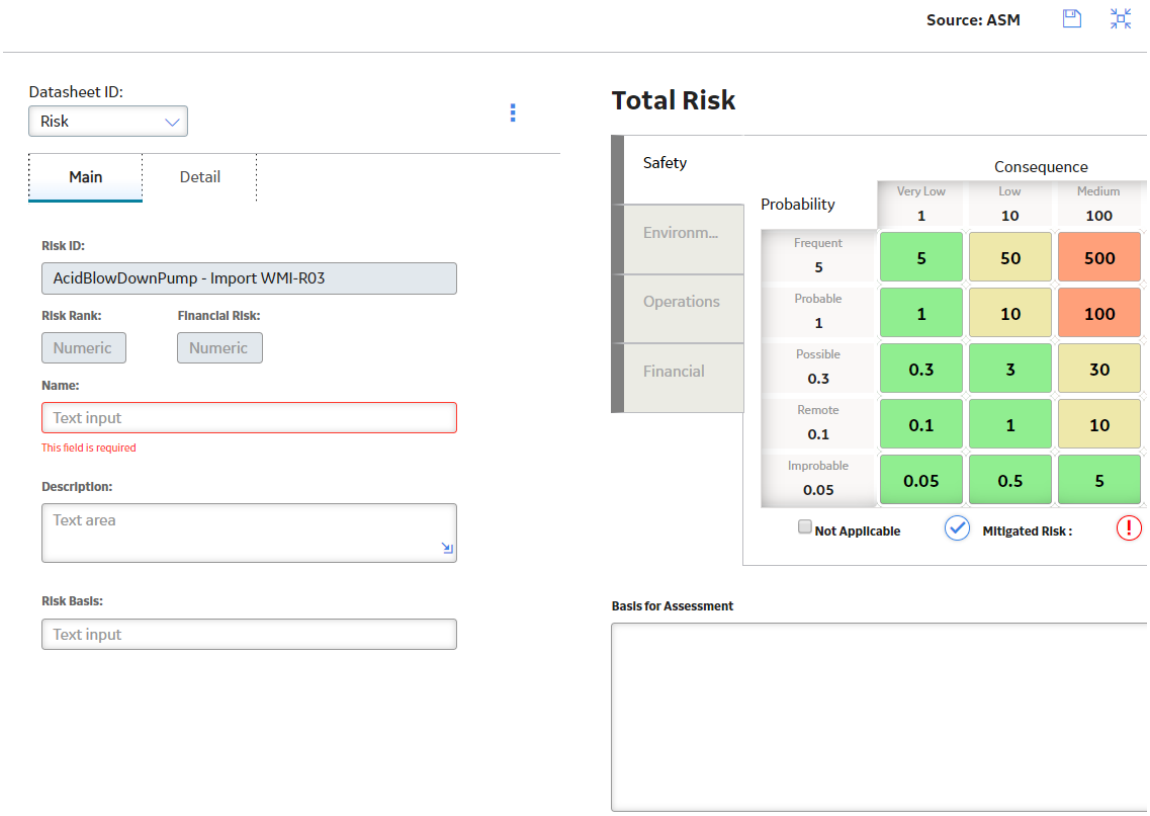


4. As needed, enter values in the available fields and use the risk matrix control to assess the risk.
5. Select .
   The record is saved.

Create a Risk Without Any Context or in the Context of an Action

Procedure

1. Access **Risks and Actions**.
2. In the **Risks** column, select +.
   A blank datasheet appears for the new risk record.

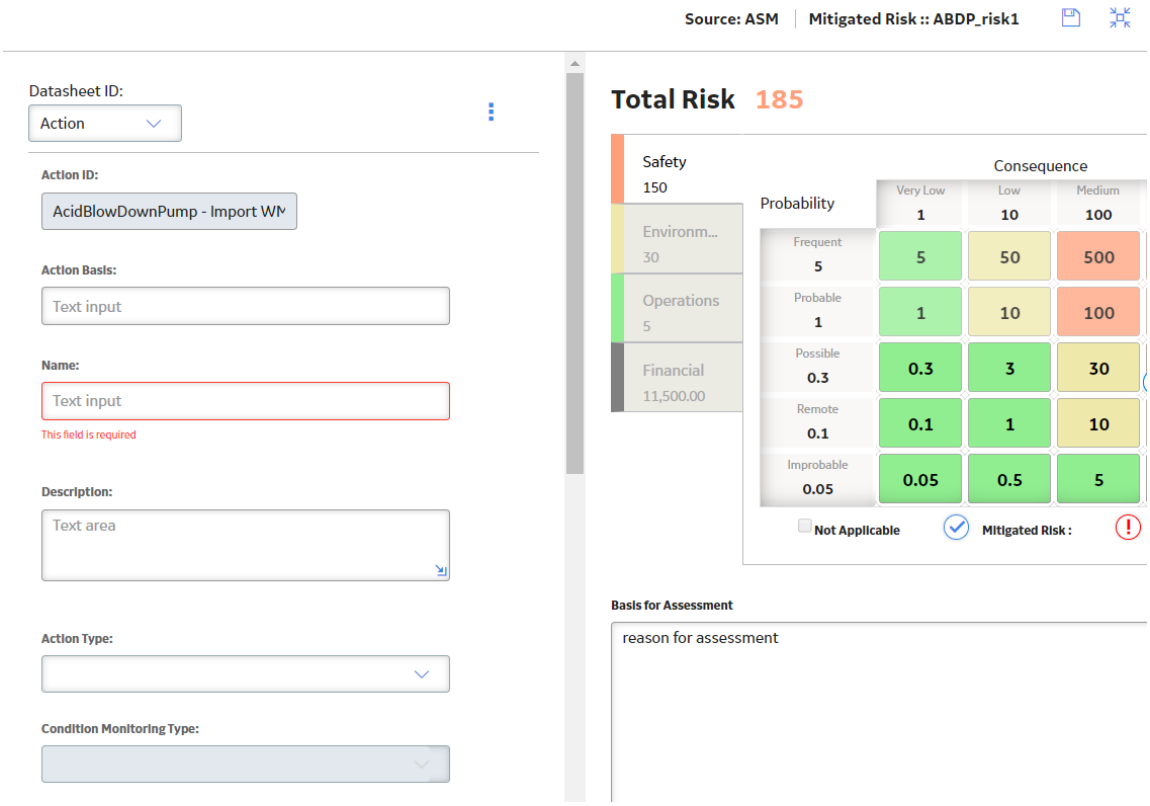


3. As needed, enter values in the available fields and use the risk matrix control to assess the risk.
4. Select .
   The record is saved.

Create an Action in Context of a Risk

Procedure

1. Access **Risks and Actions**.
2. In the **Mitigating Actions** column, select +.
   A blank datasheet appears for the new action record.

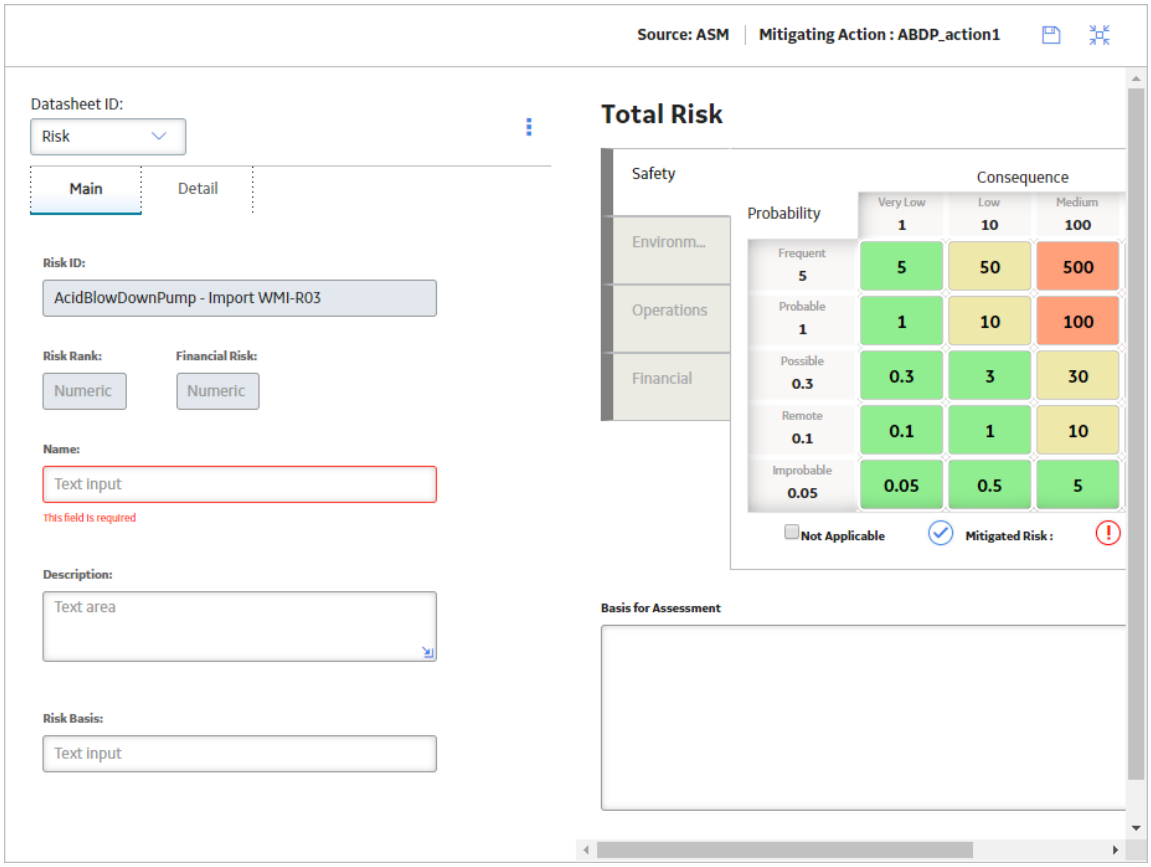


3. As needed, enter values in the available fields and use the risk matrix control to assess the risk.
4. Select .
   The record is saved.

Create a Mitigated Risk in the Context of an Action

Procedure

1. Access **Risks and Actions**.
2. In the **Risks and Actions** workspace, in the grid, select .
   The column positions are switched. The **Mitigated Risks** column is now the right column.
3. In the **Mitigated Risks** column, select .
   A blank datasheet appears for the new mitigated risks record.



4. As needed, enter values in the available fields and use the risk matrix control to assess the unmitigated risk.

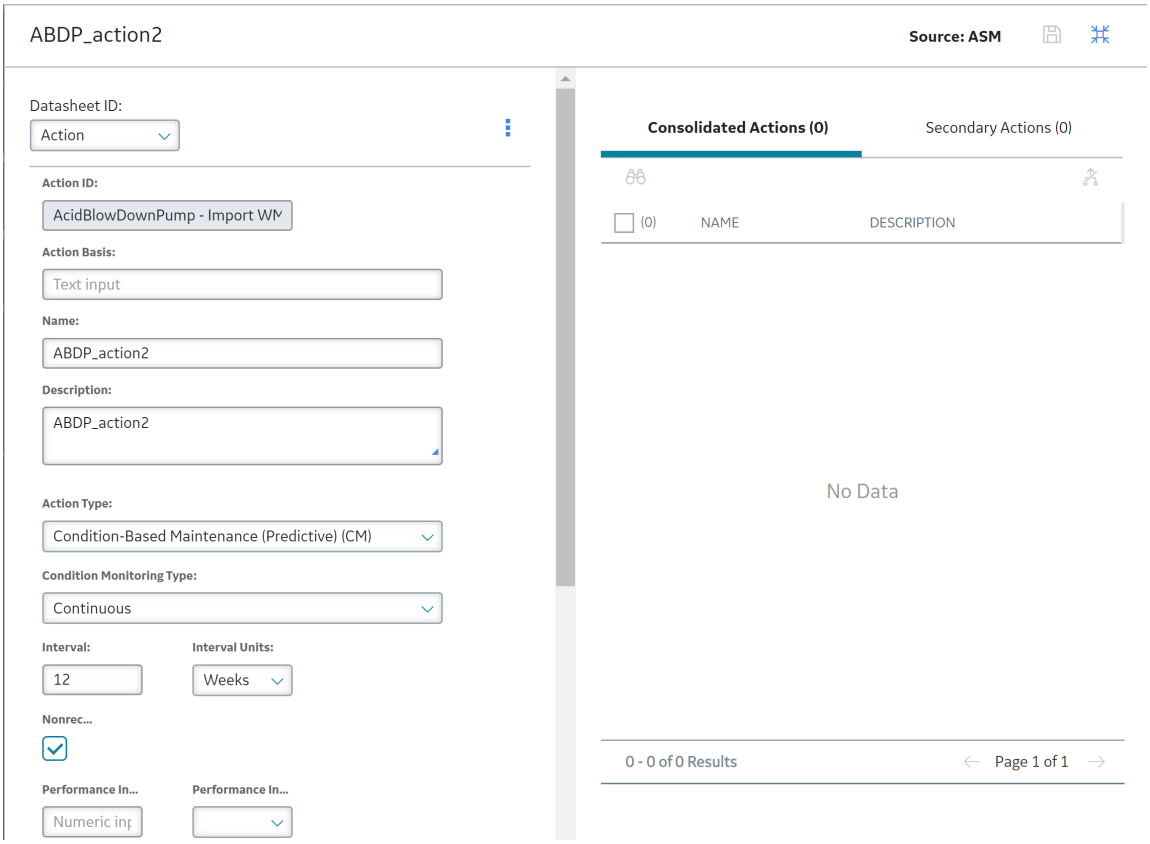
   Note: You will only be able to do an unmitigated assessment in this view before saving the new risk. After that, to edit the unmitigated risk assessment, you must switch the column positions by selecting . Usually, you can only edit the mitigated risk assessment when in the context of an action.

5. Select .
   The record is saved and the unmitigated risk assessment is used to initialize the mitigated risk assessment.
6. Use the risk matrix control to assess the mitigated risk.
7. Select .
   The risk is saved.

Modify a Risk or Action

Procedure

1. Access **Risks and Actions**.
2. Select in the card for the risk or action that you want to modify on either side of the **Risks and Actions** workspace.
   The card expands for the risk or action that you selected, displaying the datasheet.



3. As needed, modify the values in the available fields and use the risk matrix control to assess the risk.
4. Select .
   The record is saved and the card for the risk or action is updated.

   Note: If you modify actions that were previously implemented, you must apply the updates you made to the implemented actions.

Copy a Risk or Action

Procedure

1. Access **Risks and Actions**.

   Note: In the **Risks and Actions** workspace, in the grid, only items in the left column can be copied. Depending on whether you want to copy a risk or an action, if needed, select to switch the column positions.
2. Select the check box next to the risk or action that you want to copy, and then select .
   The new copy of the risk or action will appear in the column and will be selected. None of the items associated with the copied item will be copied, but only the original copied item itself.

Delete a Risk or Action

Before You Begin

The Strategy must be in an Active or Modified state before any risks or actions can be removed.

Procedure

1. Access **Risks and Actions**.

   Note: In the **Risks and Actions** workspace, in the grid, only items in the left column can be copied. Depending on whether you want to delete a risk or an action, if needed, select to switch the column positions.
2. Select the check box inside the card for the item that you want to delete, and then select .
   The **Confirm Delete** dialog box appears, asking you to confirm that you want to delete the risk or action.
3. Select **Yes**.
   The risk or action is marked for removal and a is displayed on the applicable risk or action card. When the state of the strategy is set to Active again, the deleted item will disappear from the risks or actions column.

Undo a Risk or Action

Procedure

1. Access **Risks and Actions** .

   Note: In the **Risks and Actions** workspace, the undo operation can only be executed in the left column. Depending on whether you want to carry out the undo operation on a risk or an action, if needed, select to switch the column positions.
2. Select the check box inside the card for the item whose last action should be undone, and then select .
   A message appears, asking you to confirm that you want to undo the last action taken against the selected item.
3. Select **Yes**.
   The last action taken against the selected item is undone. No icon appears in the card for the item, as it is now unmodified.

   Note: If an item was newly added, then the undo operation will remove it entirely.

Supersede Actions

Before You Begin

This topic assumes that at least two actions have been added to the selected strategy.

Procedure

1. Access **Risks and Actions**.

   Note: In the **Risks and Actions** workspace, in the grid, only items in the left column can be superseded. Depending on whether you want to supersede actions, if needed, select to switch the column positions.
2. Select the check box in the card for each action that you want to supersede, and then select .
   The **Supersede Actions** window appears.
3. Select the radio button next to the action that you want to supersede the others, and then select **Supersede**.
   The superseded actions are now activated and appear in the **Superseded Actions** section of the expanded action card for the superseding action, and the superseding action's card now contains a button.
4. In the **Supersede Actions** section, in the **Name** column, you can select the link to access the details of the action.
5. In the **Secondary Actions** section, in the **Name** column, you can select the link to access the details of the secondary action.

   Note: Any secondary actions that were linked to the superseded action are now linked to the superseding target action.

Unlink Superseded Actions

Before You Begin

This topic assumes that the selected strategy contains Superseded Actions.

Procedure

1. Access **Risks and Actions**.

   Note: In the **Risks and Actions** workspace, in the grid, only items in the left column can be superseded. Depending on whether you want to supersede risks or actions, if needed, select to switch the column positions.
2. Select on the card for the superseding action that you want to expand.

   The action card expands, displaying the action's datasheet on the left and the **Superseded Actions** section on the right.
3. In the **Superseded Actions** section, select the action that you want to unlink, and then select .

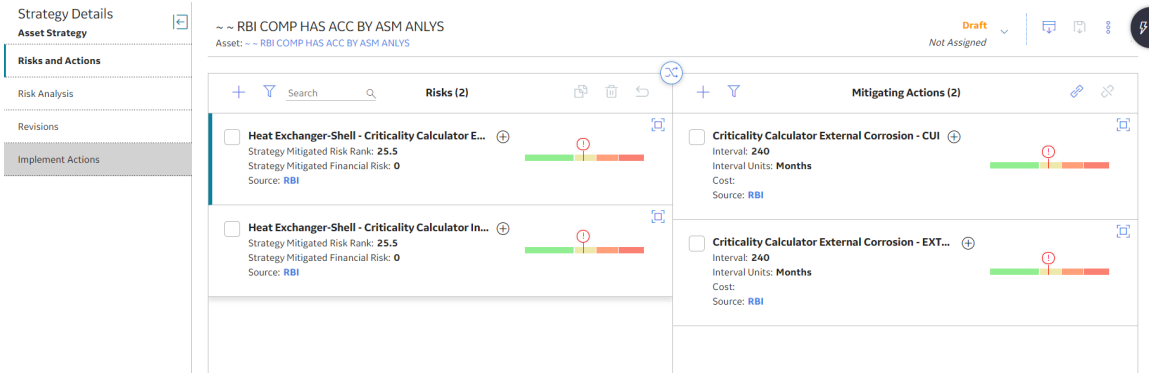
   The action is removed from the **Superseded Actions** section and returns to the **Actions** column in the **Risks and Actions** workspace.

Link a Risk or Action

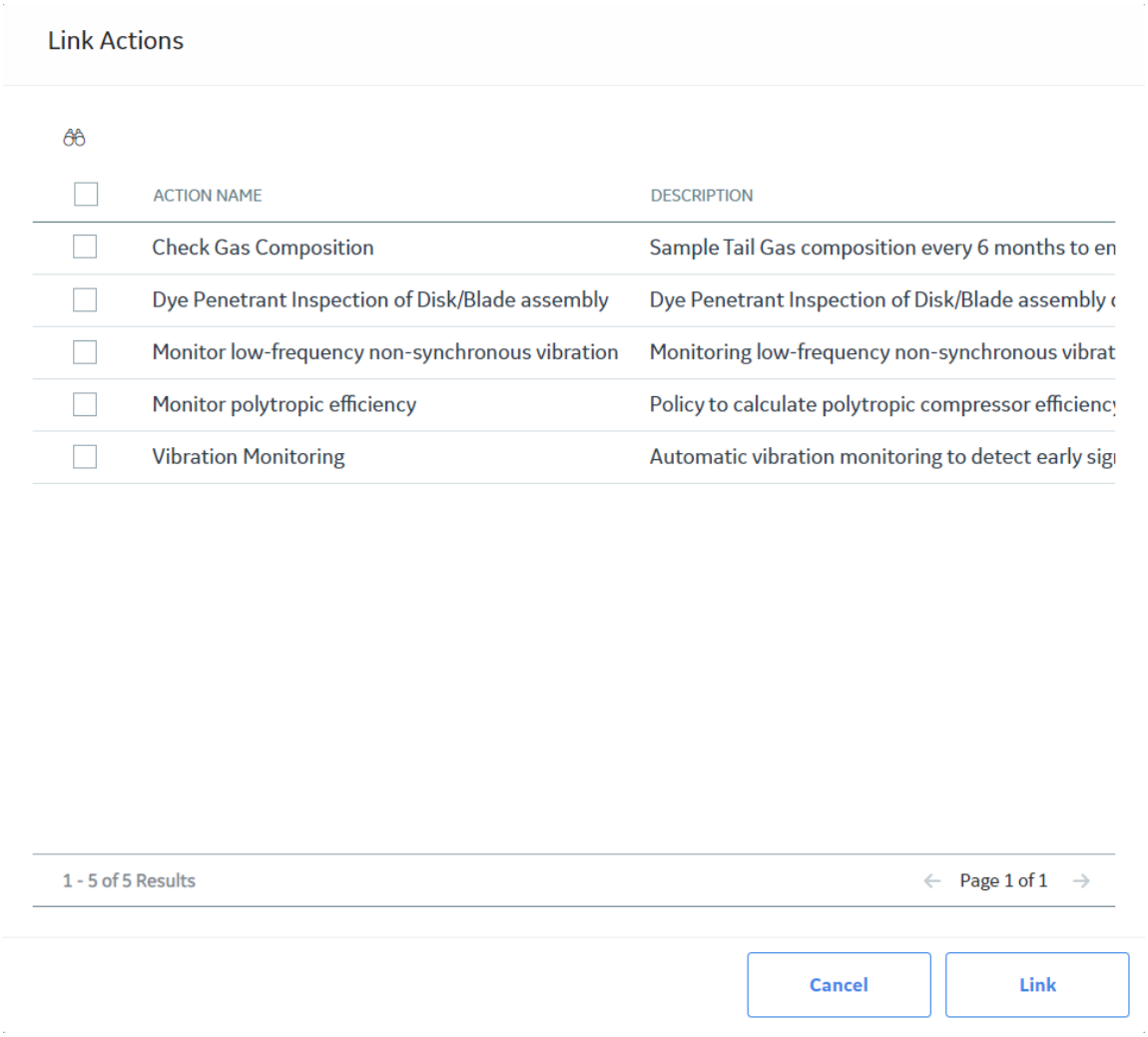
Procedure

1. Access **Risks and Actions** .

   Note: In the **Risks and Actions** workspace, in the grid, only items in the right column can be linked. Depending on whether you want to link a risk or an action, if needed, select to switch the column positions.
2. In the left column, select the card for the item to which you want to link a mitigating action or a mitigated risk.
   The card for the item is highlighted with a blue edge.



3. In the grid, select .
   The **Link Actions** or the **Link Risks** window appears, displaying a list of available items that you can link to the risk or action that you selected in the pane.



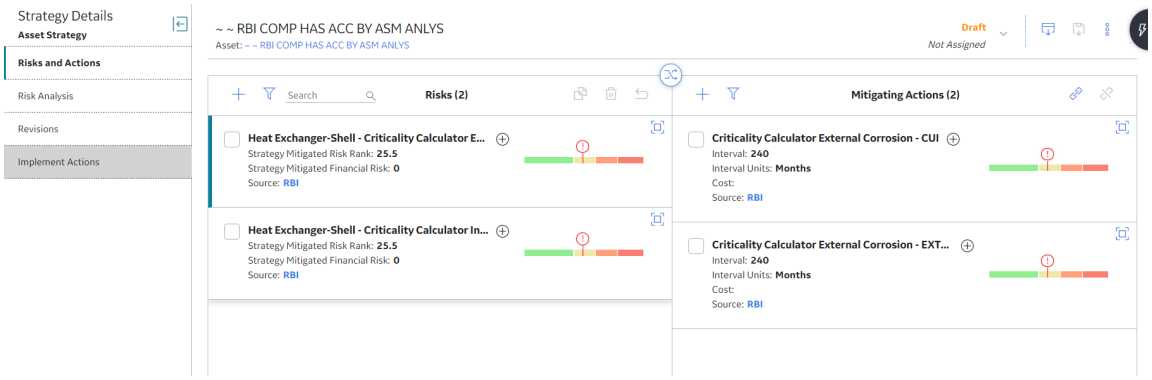
4. Select the check box for each item you want to link, and then select **Link**.
   The selected items are linked.

Unlink a Risk or Action

Procedure

1. Access **Risks and Actions**.

   Note: In the **Risks and Actions** workspace, in the grid, items can only be unlinked from the right column. Depending on whether you want to unlink a risk or an action, if needed, select to switch the column positions.
2. In the left column, select the card for the item from which you want to unlink a mitigating action or a mitigated risk.
   The card for the item is highlighted with a blue edge.



3. In the right column, select the check box for each mitigating action or mitigated risk that you want to unlink from the highlighted item, and then, in the upper-right corner of the grid, select .
   A message appears, asking you to confirm that you want to unlink the selected items.
4. Select **Yes**.
   The items are unlinked.

Chapter 12

Secondary Actions

Topics:

- About Secondary Actions
- Access Secondary Actions
- Create a Secondary Action
- Delete a Secondary Action

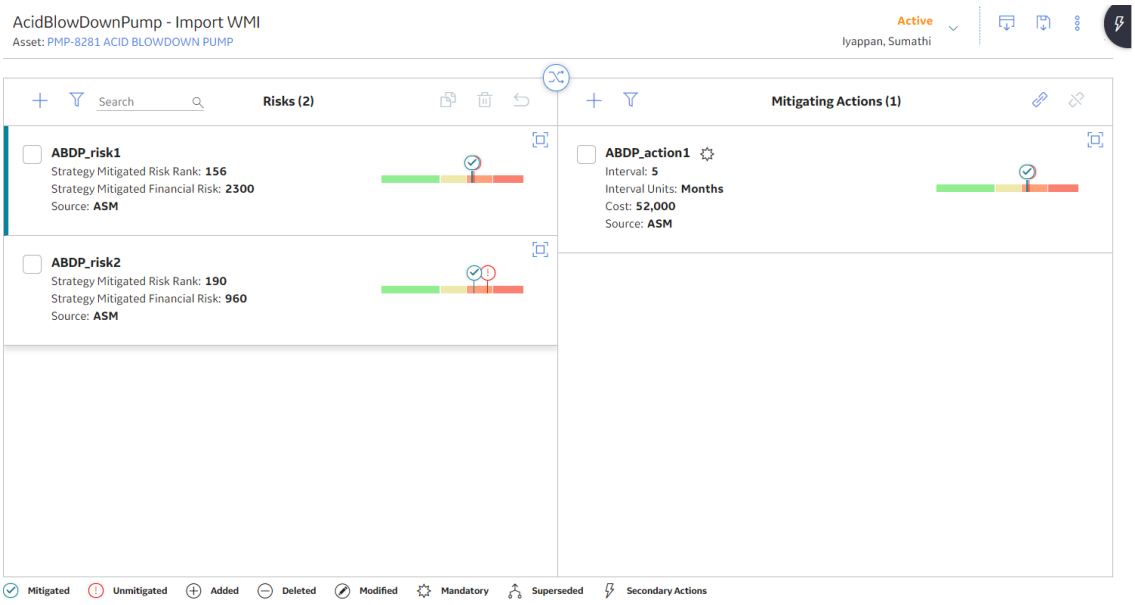
About Secondary Actions

A Secondary action is associated with a primary action. It defines the corrective actions that should be performed to mitigate an undesirable condition that is found while performing primary maintenance, monitoring, or data collection activity.

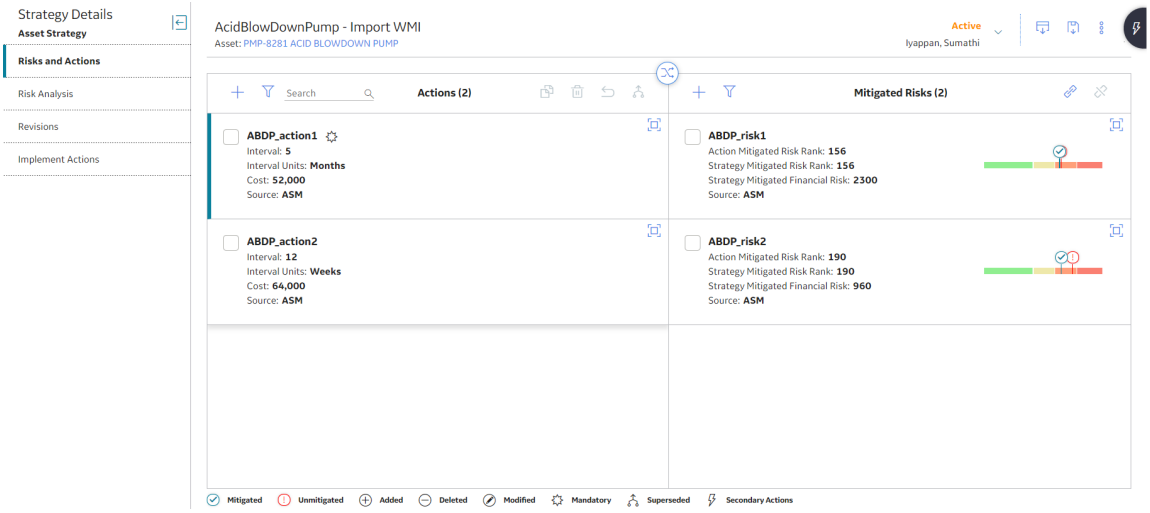
Access Secondary Actions

Procedure

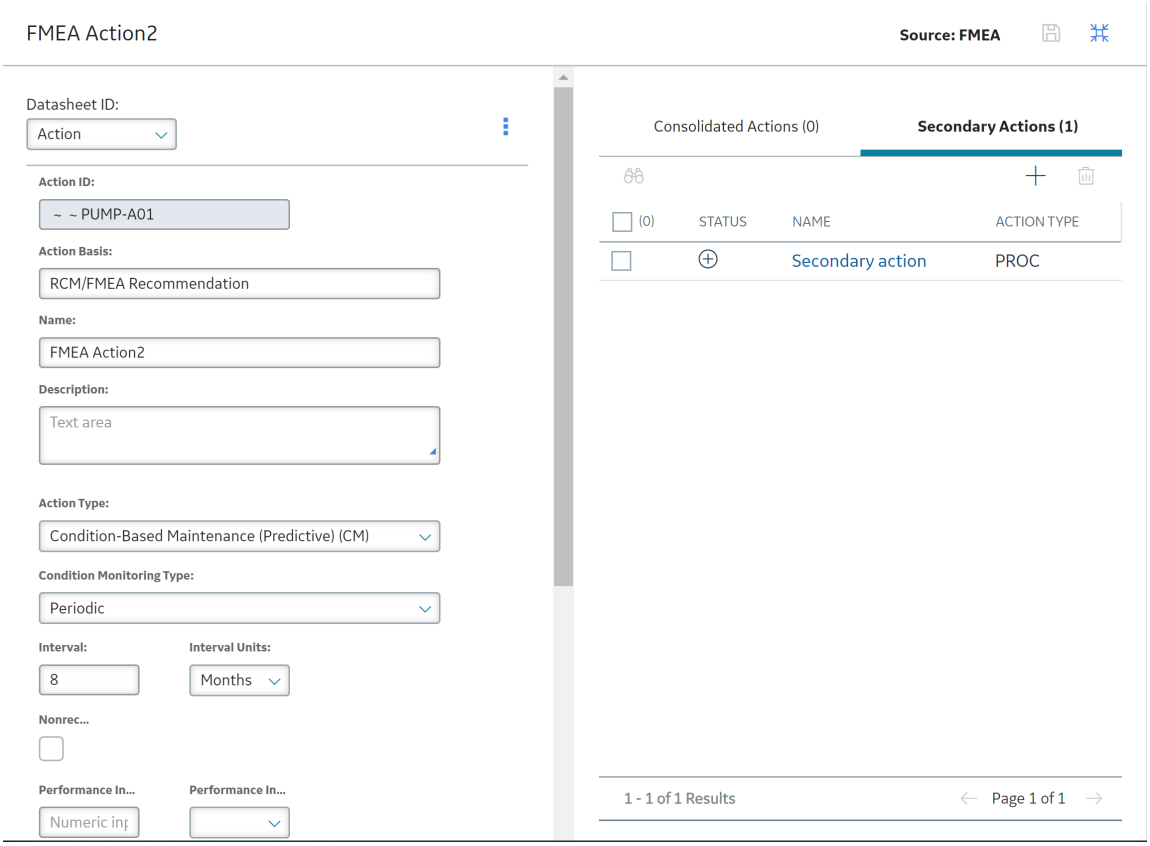
1. Access Asset Strategies.
2. Select the strategy whose secondary action you want to access.
   The **Strategy Details** workspace for the selected asset strategy appears.
3. Select the **Risks and Actions** tab.
   The **Risks and Actions** workspace appears.



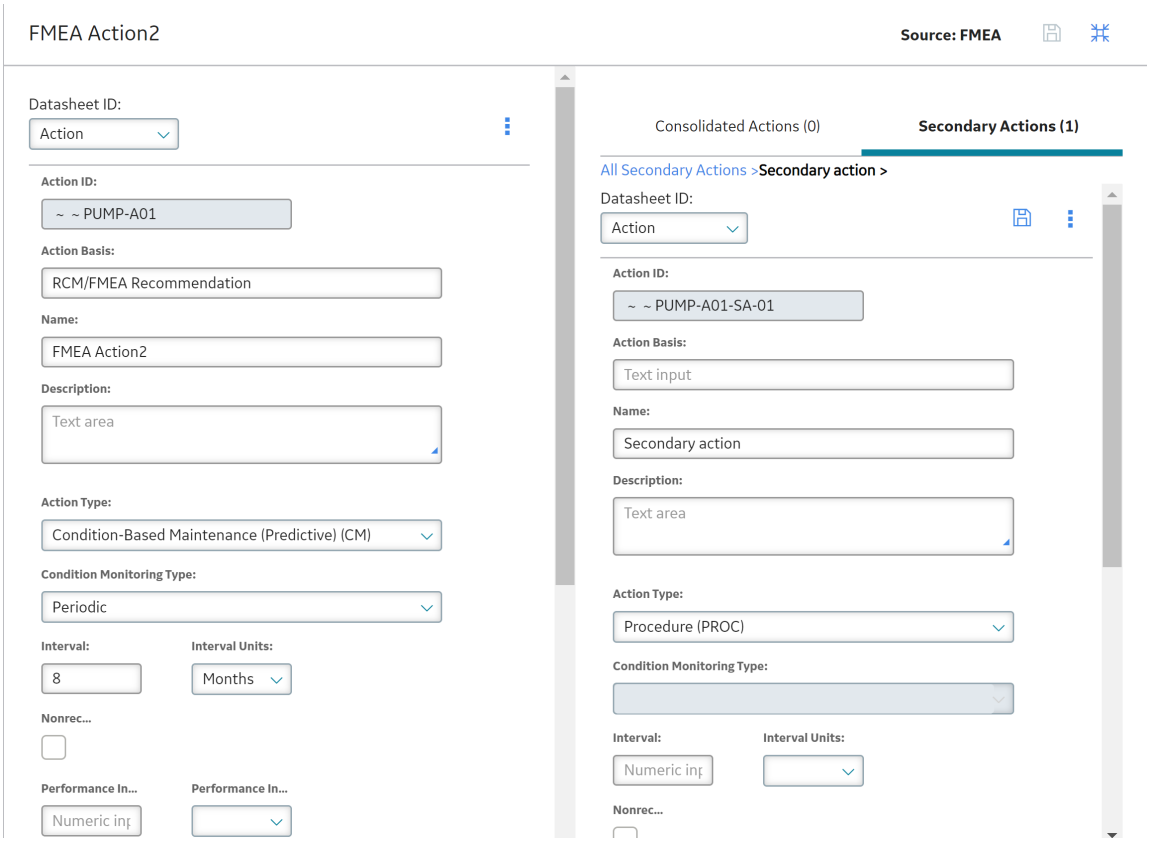
4. In the **Risks and Actions** workspace, in the grid, select .
   The column positions are switched. The **Actions** column is now the left column.



5. Select in the card for the action for which you want to view the secondary action. The card expands for the action that you selected, displaying the datasheet.



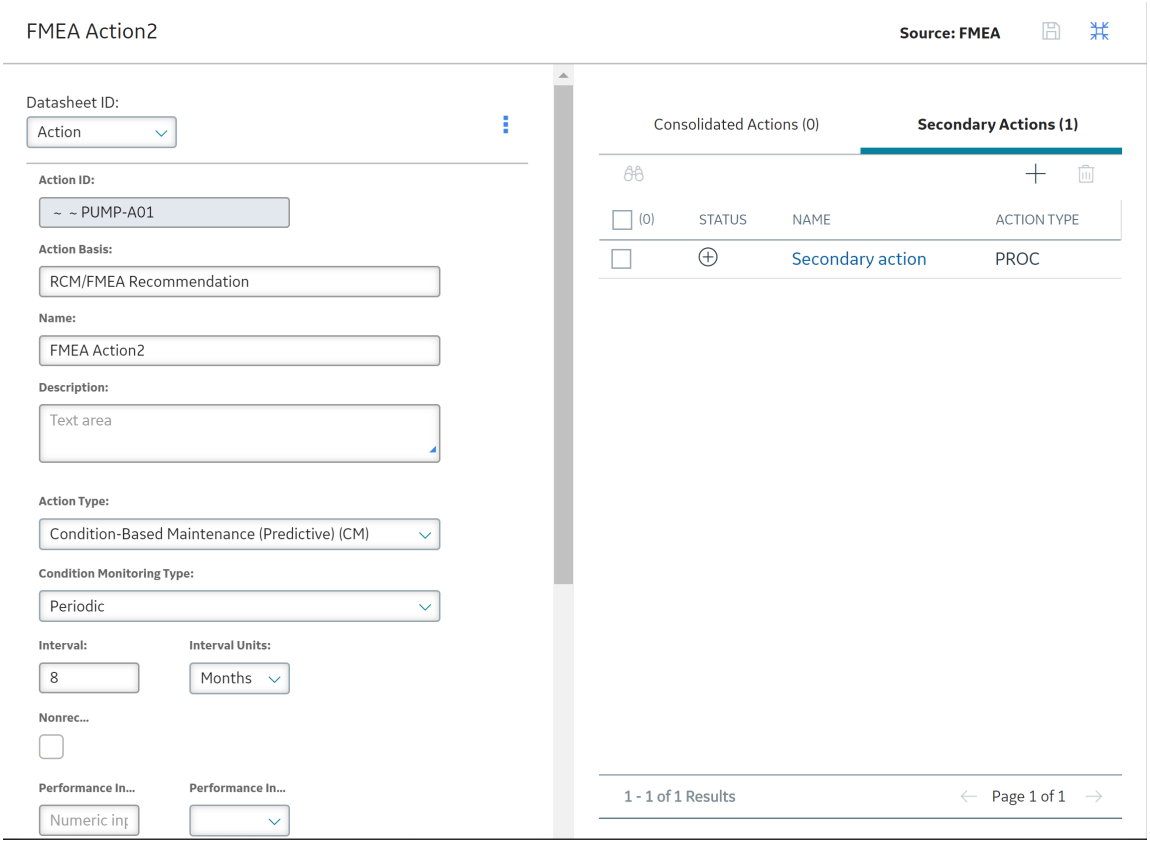
6. In the **Secondary Actions** section, select the action that you want to access. The datasheet for the selected secondary action appears.



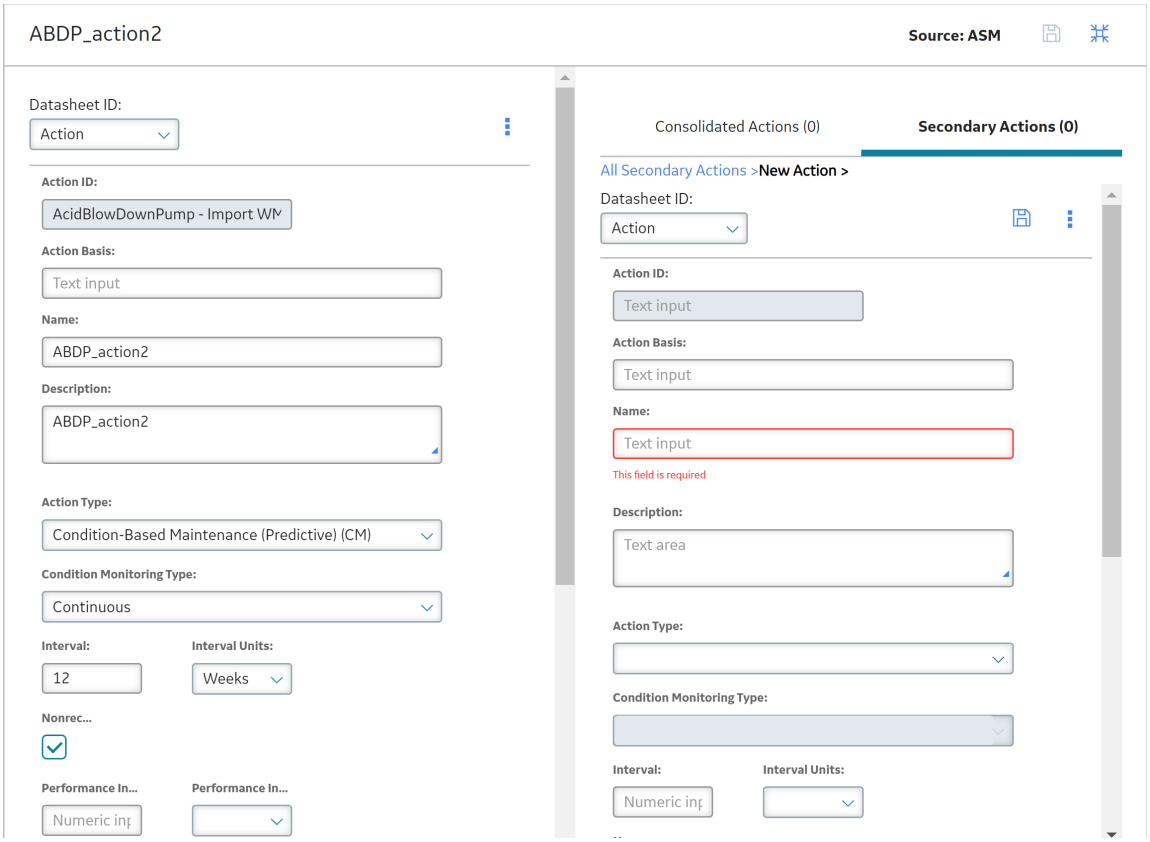
Create a Secondary Action

Procedure

1. Access **Secondary Actions**.



2. In the **Secondary Actions** section, select +.
   A blank datasheet appears for the new secondary action record.

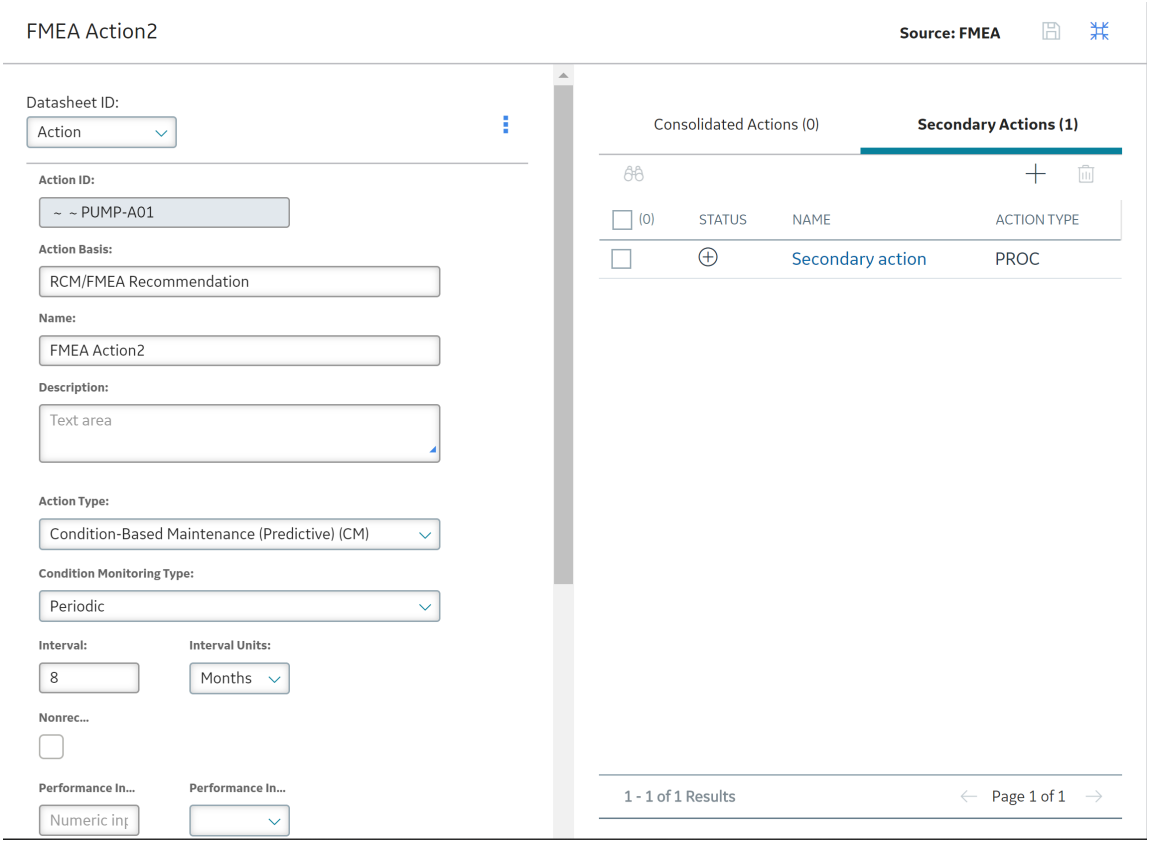


3. As needed, enter values in the available fields.
4. Select .
   The record is saved.

Delete a Secondary Action

Procedure

1. Access **Secondary Actions**.



2. In the **Secondary Actions** section, select the row containing the secondary action that you want to delete, and then select .
The secondary action is deleted.

Chapter 13

System Strategies

Topics:

- About System Strategies
- Access a System Strategy
- Create a System Strategy
- Add an Existing Asset Strategy to a System Strategy
- Use Bulk State Management in a System Strategy
- View Action Changes in System Strategy
- Remove an Asset Strategy from a System Strategy

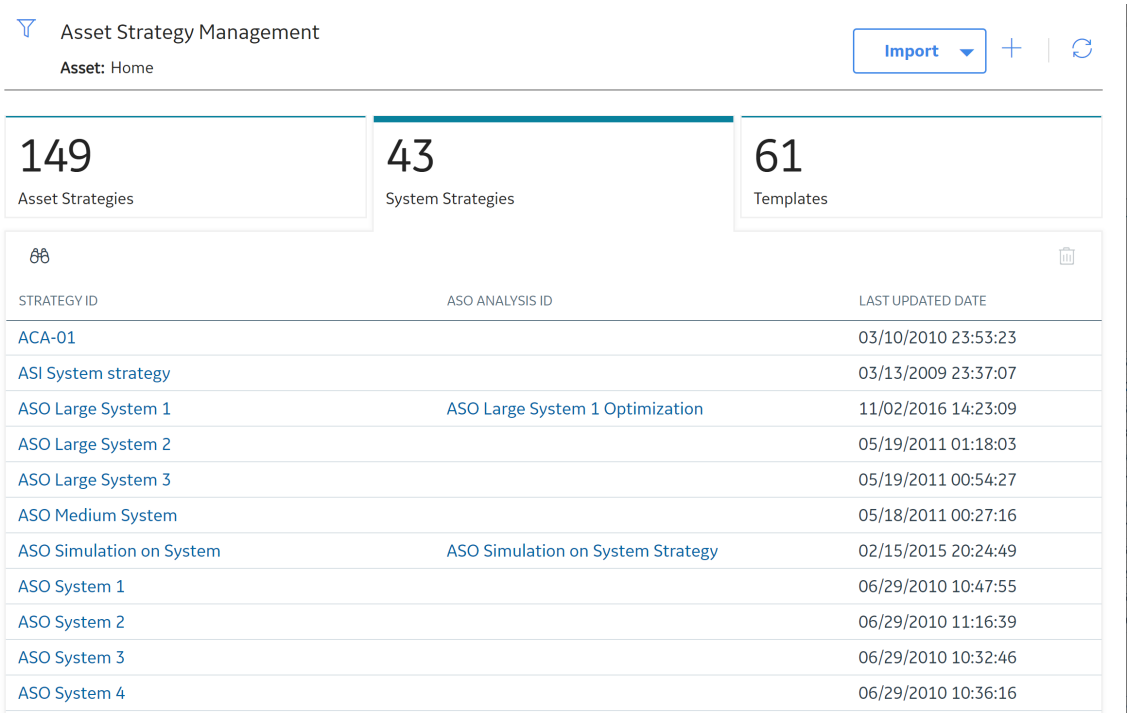
About System Strategies

A System Strategy is a collection of Asset Strategies. The first step in building a System Strategy is to create a System Strategy record. You can then further define the System Strategy by adding one or more Asset Strategies.

Access a System Strategy

Procedure

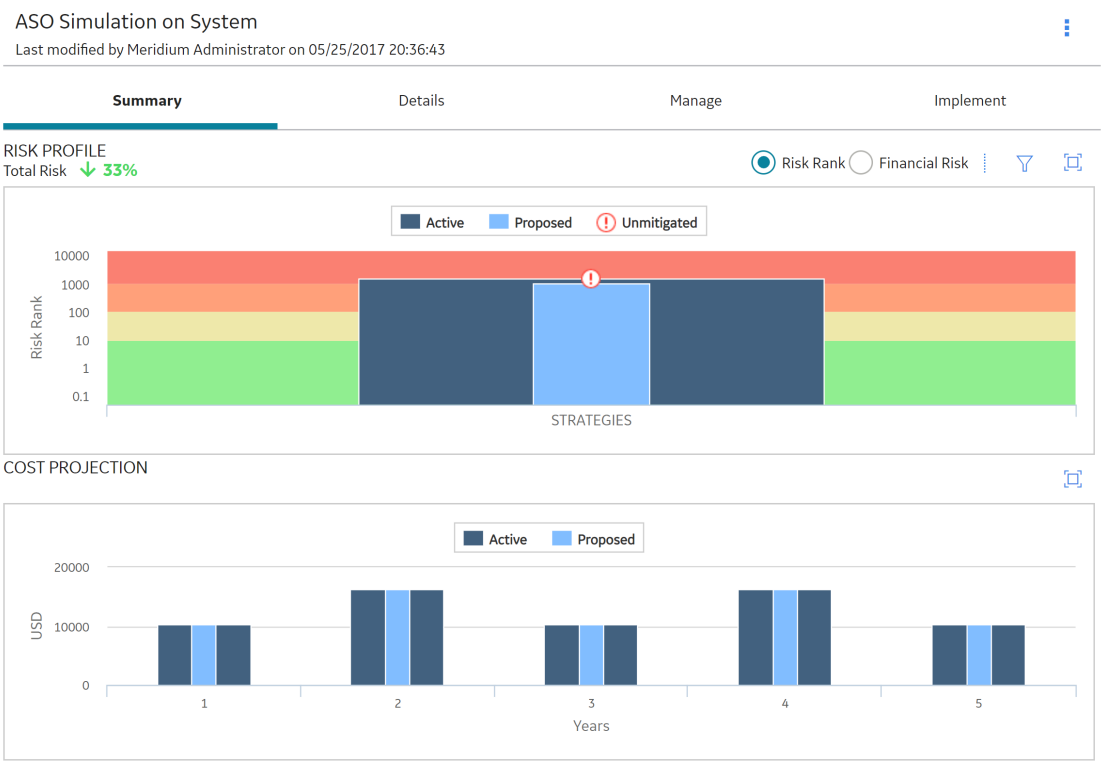
1. Access the **ASM Overview** page.
2. Select the **System Strategies** tab.
   A list of system strategies appears.



3. In the **Strategy ID** column, select the link for the system strategy that you want to view.

   The **Strategy Summary** workspace for the selected system strategy appears, displaying the **Summary** section. The following charts appear:

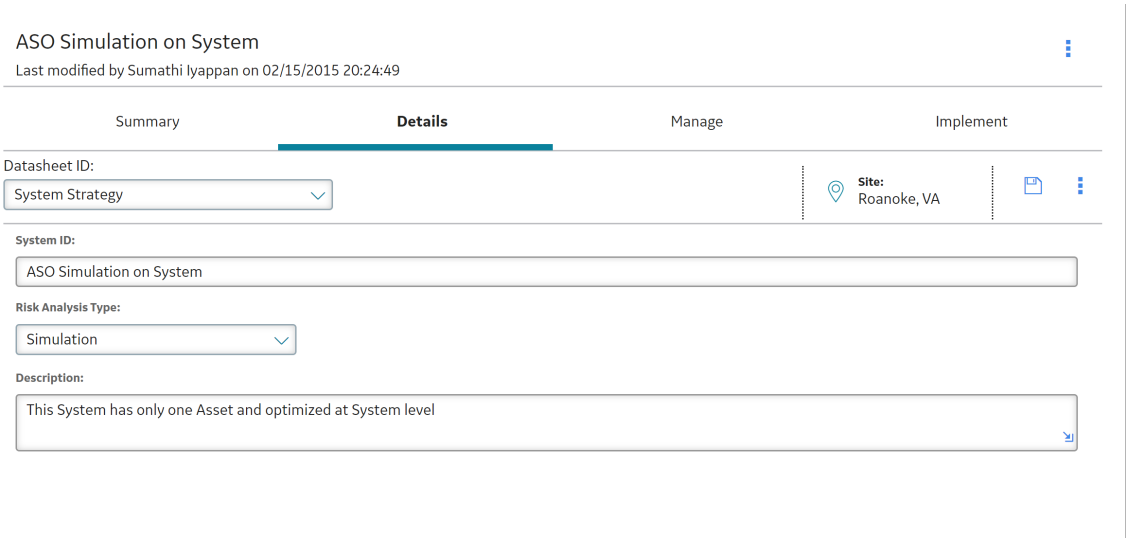
   - Risk Profile
   - Cost Projection



Create a System Strategy

Procedure

1. Access the **ASM Overview** page.
2. In the page, select +, and then select **Create System Strategy**.
   The new strategy appears in a new tab, displaying the **Details** section. The following image shows the **Details** section for a system strategy.



3. As needed, enter values in the available fields for a system strategy.
4. Select .
   The strategy is created.

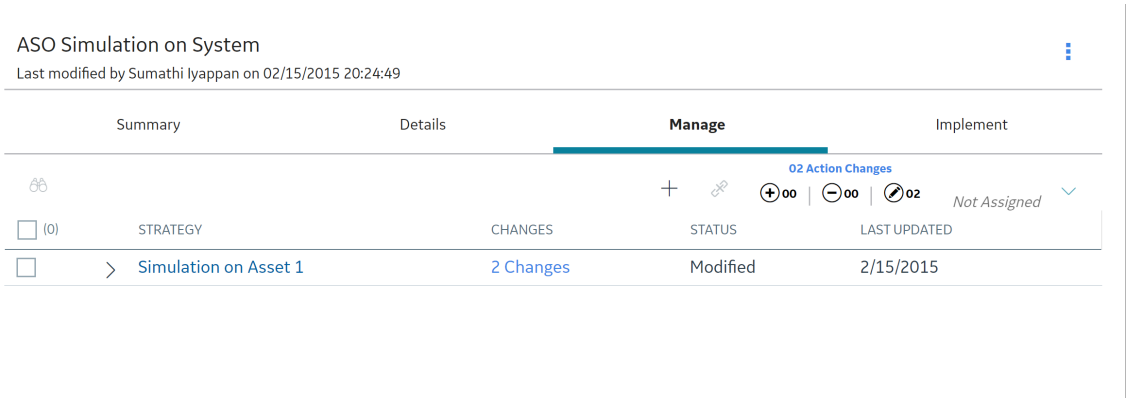
Add an Existing Asset Strategy to a System Strategy

Before You Begin

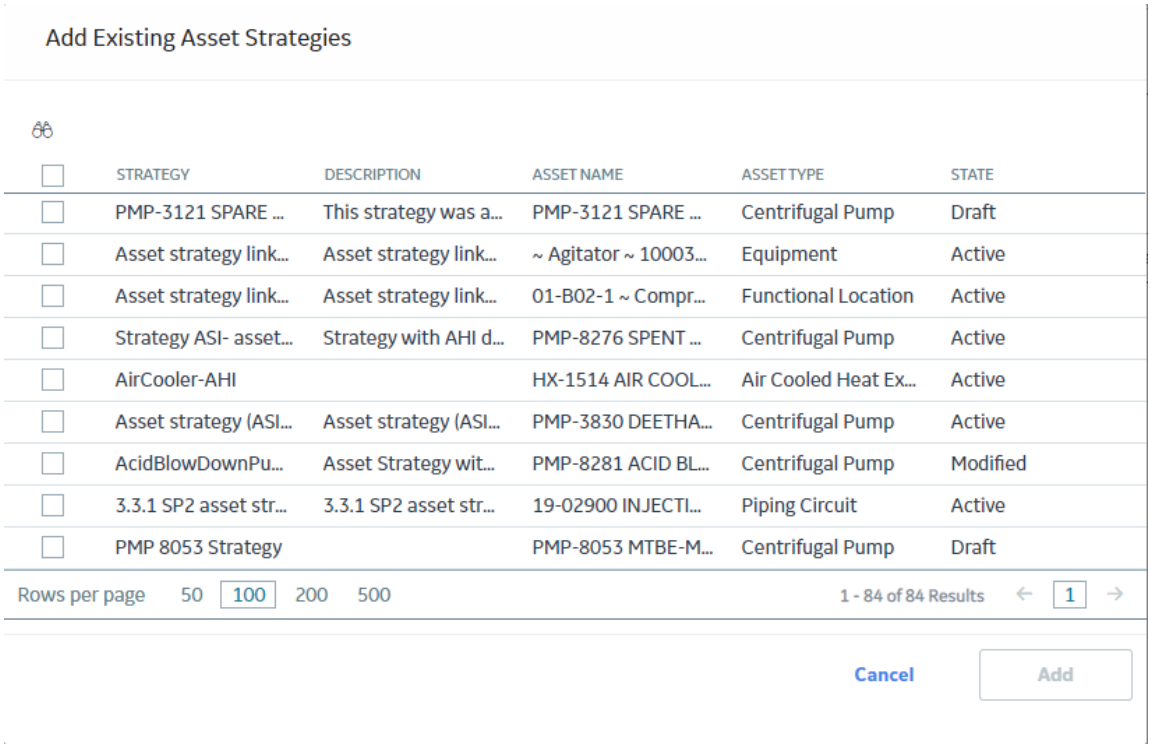
This topic assumes that you have pre-existing asset strategies to add to your system strategy.

Procedure

1. Access the system strategy to which you want to add an asset strategy.
2. Select the **Manage** tab.
   The **Manage** workspace appears.



3. Select .
   The **Add Existing Asset Strategies** window appears.



4. For each strategy that you want to add, select the check box, and then select **Add**.
   The asset strategy is added to the system strategy.

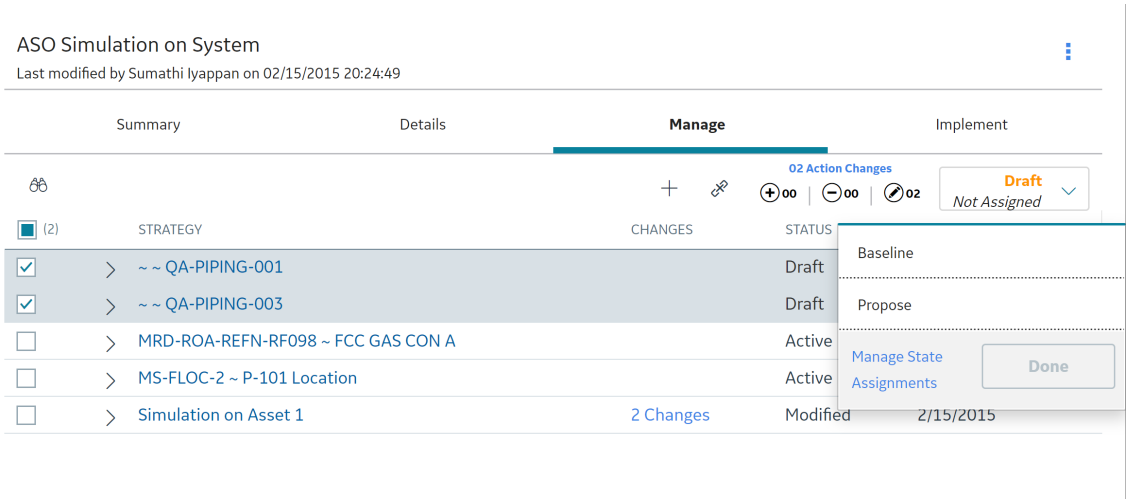
   Note: The maximum number of asset strategies that can be added to a system strategy is 500.

Use Bulk State Management in a System Strategy

Procedure

In the **Manage** workspace, you can use mass state management to update the state of all the Asset Strategies contained within your system strategy at the same time.

1. Access the system strategy for which you want to use bulk state management.
2. Select the **Manage** tab.
   The **Manage** workspace appears.



3. In the **State** drop-down list, select the appropriate choice for the state of the strategy, and then select **Done**.
   A message appears, confirming that the operation has been performed.

   Note: To move the strategy through the rest of the state assignments, repeat step 3.

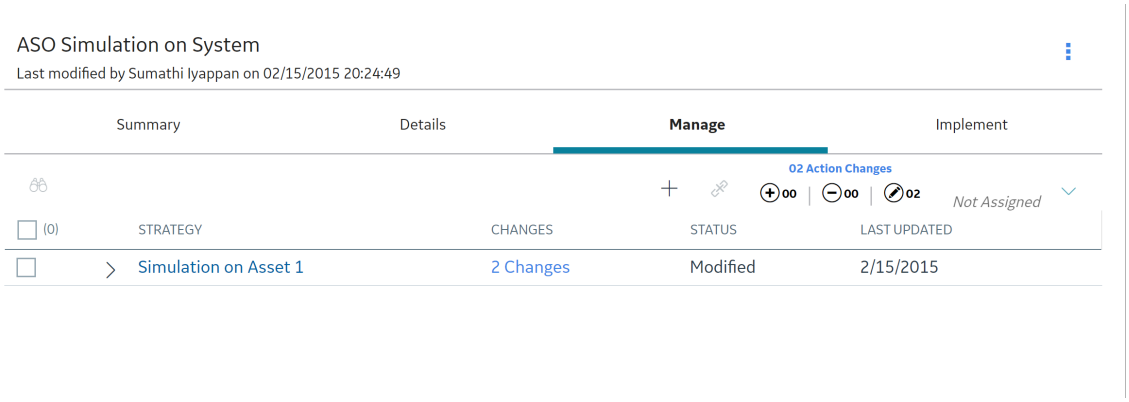
View Action Changes in System Strategy

About This Task

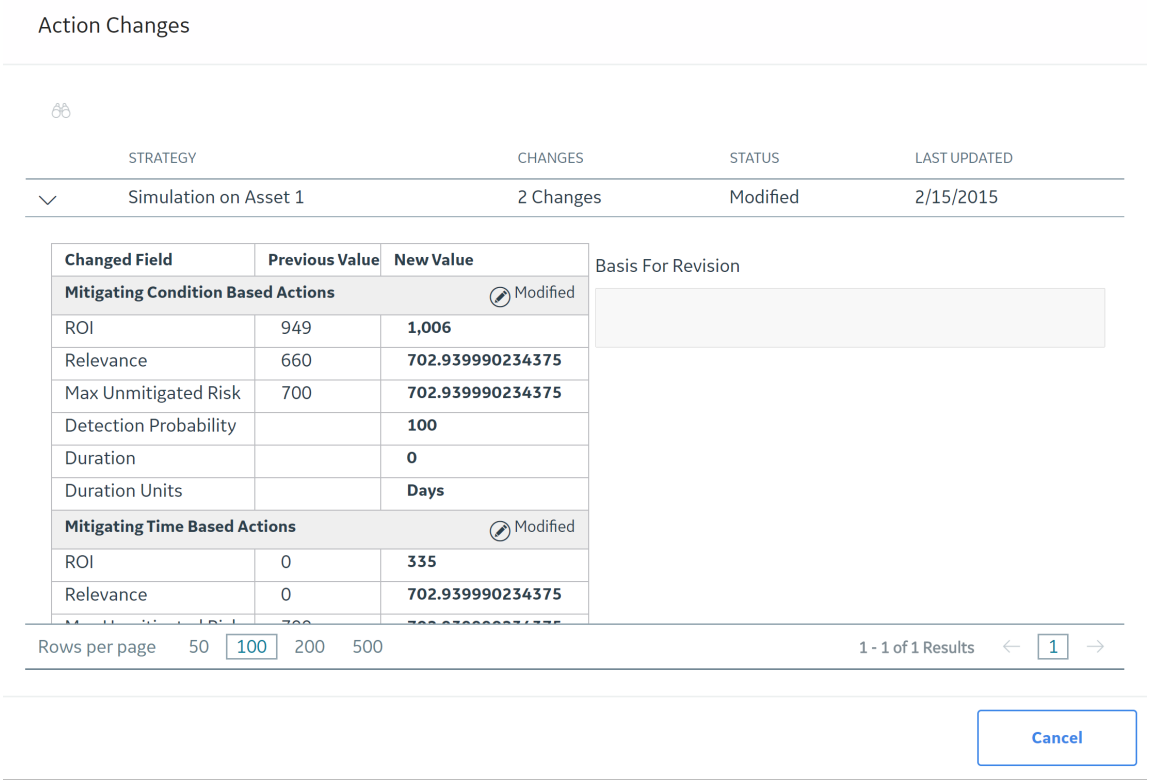
This topic describes how to view the changes for all the actions in the system strategy.

Procedure

1. Access the system strategy for which you want to view the action changes.
2. Select the **Manage** tab.
   The **Manage** workspace appears.



3. Select **Action Changes** to view the changes made to the actions in the system strategy.
   The **Action Changes** window appears.



Remove an Asset Strategy from a System Strategy

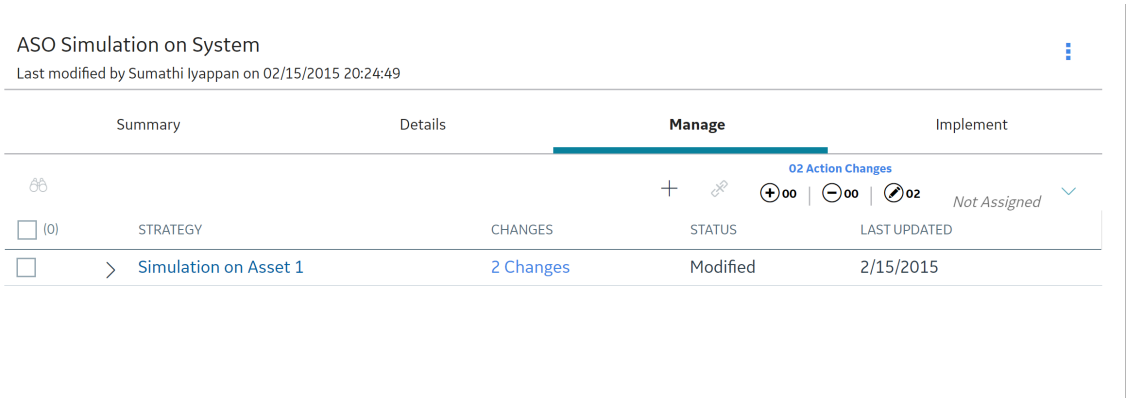
This topic describes how to remove an asset strategy from a system strategy.

Before You Begin

Only the owner of the strategy has the system permissions to delete a strategy.

Procedure

1. Access the system strategy from which you want to remove an asset strategy.
2. Select the **Manage** tab.
   The **Manage** workspace appears, displaying a list of available strategies.



3. For each strategy that you want to remove, select the check box.

In the workspace, is enabled.

4. Select .
   A window appears, asking you to confirm that you want to remove the selected strategies from the parent strategy.
5. Select **OK**.
   The selected strategy is removed.

Chapter 14

Implement Actions from System Strategy

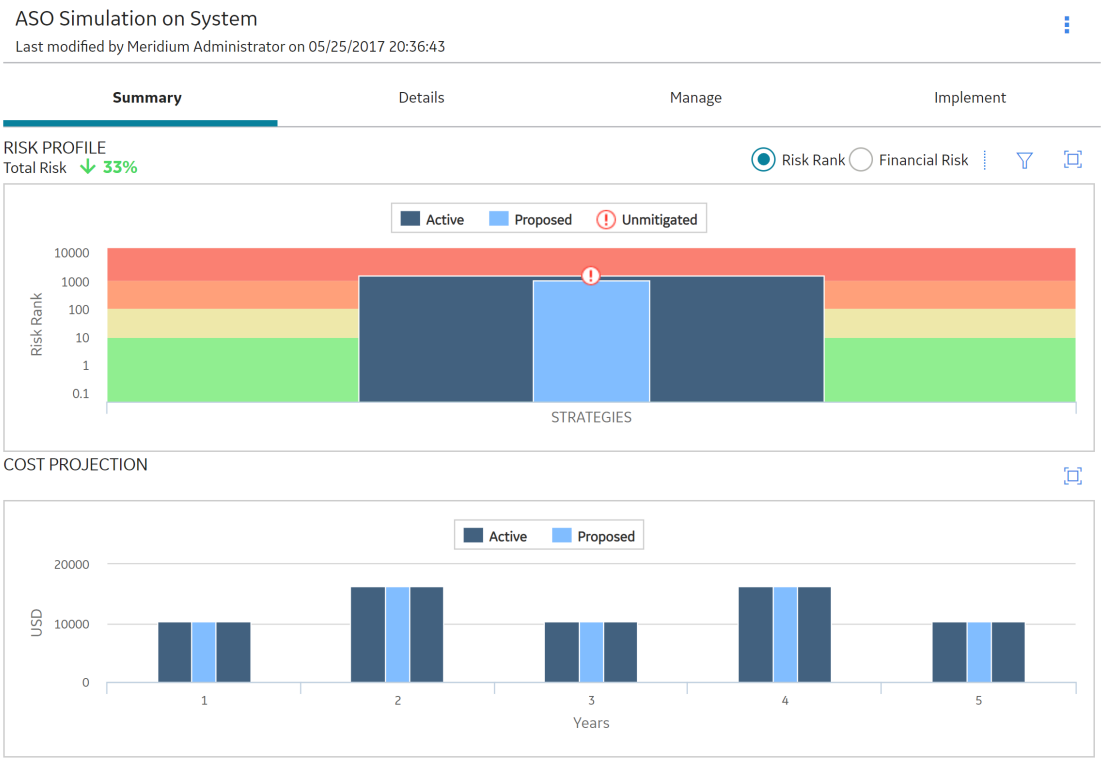
Topics:

- Access the Implement Workspace
- Link Existing Tasks to Actions
- Link Existing Health Indicators
- Link Existing Proof Test Task
- Create New Measurement Location or Lubrication Requirement Records
- Link a Policy Instance
- Link EAM Work Request
- Create EAM Maintenance Plan Record
- Apply Updates to Implemented Actions
- Unlink Implementations
- Send Approved Actions to an ASI Package
- Delete a System Strategy

Access the Implement Workspace

Procedure

1. Access the **ASM Overview** page.
2. Select the **System Strategies** tab.
   The **System Strategies** section appears, displaying a list of available system strategies.
3. Select the system strategy whose actions you want to implement.
   The **Strategy Summary** workspace for the selected system strategy appears.



4. Select the **Implement** tab.
   The **Implement** workspace appears.

Link Existing Tasks to Actions

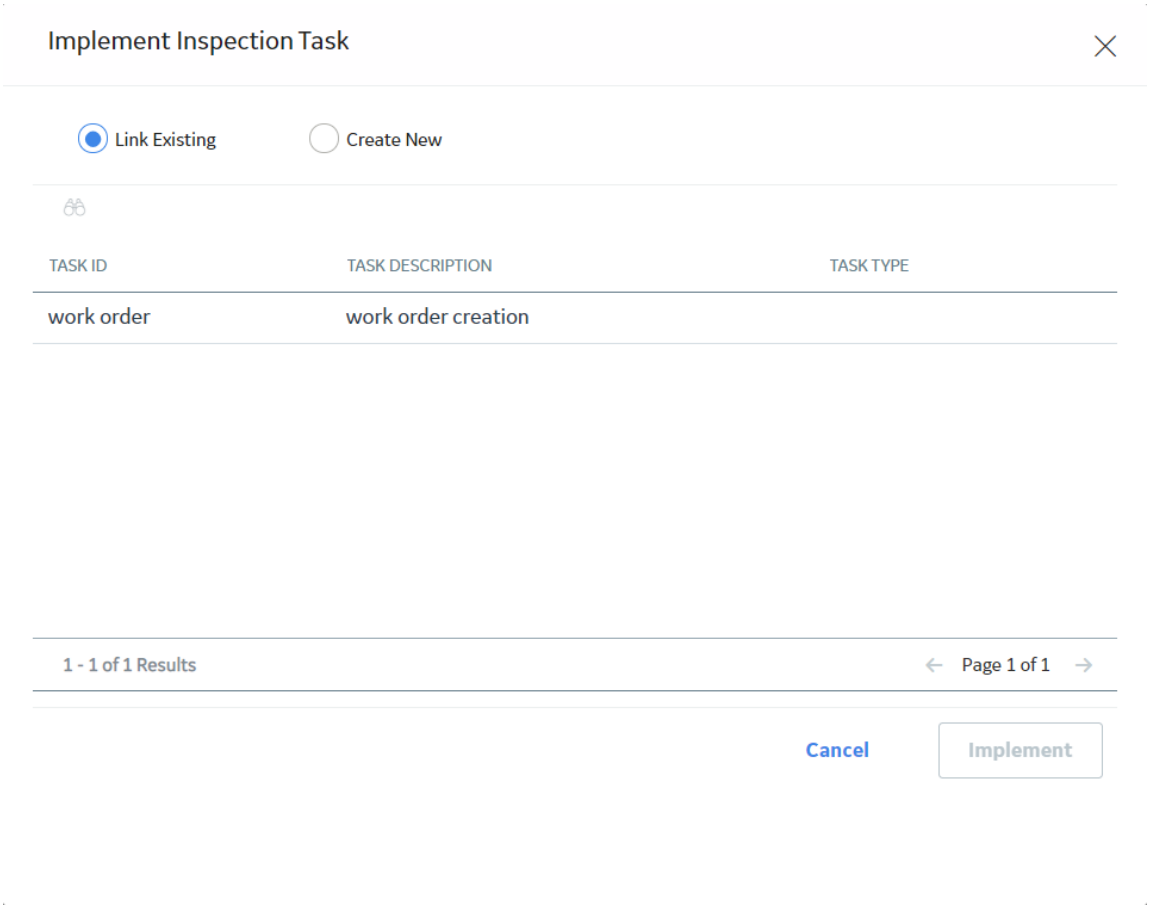
About This Task

In the **Implement** workspace, you can link calibration and inspection tasks when you implement the actions.

Note: To link an existing record, it cannot already be linked to another action.

Procedure

1. Access the **Implement** workspace.
2. In the **Implement** workspace, select the check box in the row containing the action you want to implement.
   The action is highlighted.
3. Select the **Implement** drop-down menu, and then select either **Calibration Task** or **Inspection Task**.
   A window appears with the **Link Existing** option selected, displaying a list of records you can link.



4. Select the row containing the calibration or inspection task that you want to link, and then select **Implement.**
   A message appears, confirming that the task has been linked successfully.

Results

- The calibration or inspection task is linked to the action.
- In the **Implement** workspace, in the **Implementation** column of the action you implemented, a hyperlink to the calibration or inspection task appears.

Link Existing Health Indicators

About This Task

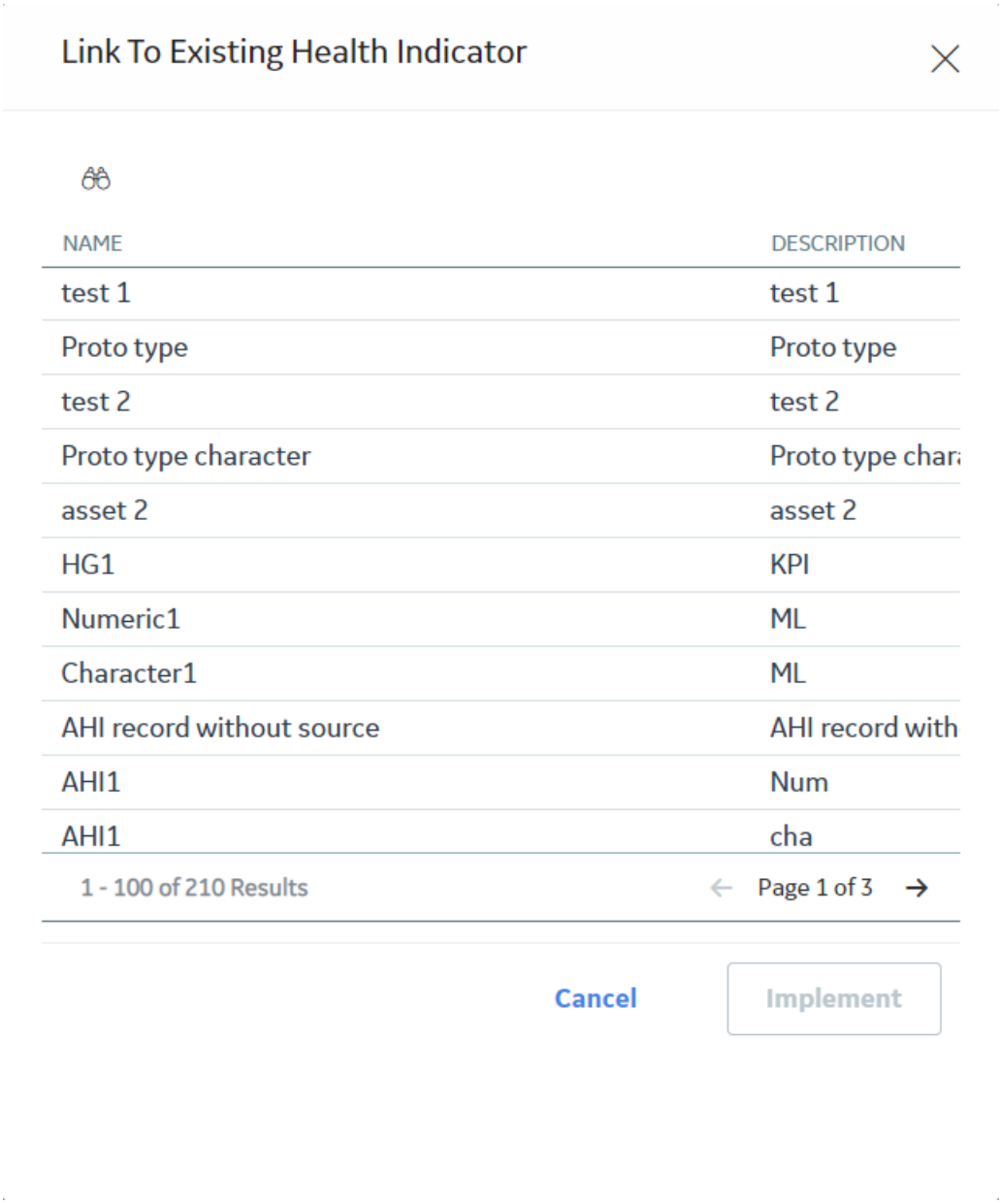
In the **Implement** workspace, you can link health indicator records when you implement the actions. Implementing an action with a health indicator creates a record in Asset Health Management that stores information used to determine the health of an asset.

Procedure

1. Access the **Implement** workspace.
2. In the **Implement** workspace, select the check box in the row containing the action which you want to implement with a health indicator record.

Note: You can only link one health indicator record per action.

3. Select the **Implement** drop-down menu, and then select **Health Indicator**.
   The **Link To Existing Health Indicator** window appears, displaying a list of health indicators.



4. Select the row containing the record that you want to link, and then select **Implement**.
   A message appears, confirming that the heath indicator has been linked successfully.

Results

- The health indicator is linked to the action.
- In the **Implement** workspace, in the **Implementation** column of the action you implemented, a hyperlink to the health indicator record appears.
- The **Health Status** indicator appears on the **Strategy Details** page of the strategy whose action was implemented as health indicator. The indicator shows the overall status for the

asset based on the health indicator diagnostics. The icons used to represent the health statuses are the same used in Asset Health Manager.

Link Existing Proof Test Task

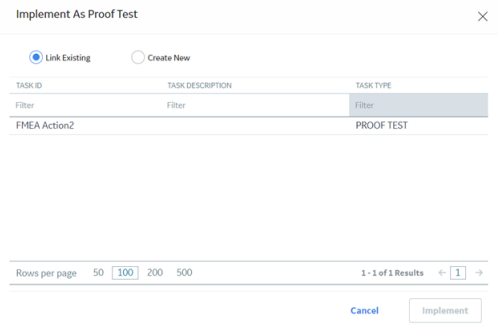
About This Task

In the **Implement** workspace, you can link proof test task when you implement the actions.

Note: To link an existing record, it cannot already be linked to another action.

Procedure

1. Access the **Implement** workspace.
2. In the **Implement** workspace, select the check box in the row containing the action you want to implement via the proof test task link.
   The action is highlighted.
3. Select the **Implement** drop-down menu, and then select **Proof Test Task**.
   The **Implement As Proof Test** window appears displaying a list of records you can link.



4. Select **Link Existing**, and then select the action to which you want to link the proof test task.
5. Select **Implement**.
   A message appears, confirming that the task has been linked successfully.

Results

- A proof test task is linked to the action.
- In the **Implement** workspace, in the **Implementation** column of the action you implemented, a hyperlink to the proof test task appears.

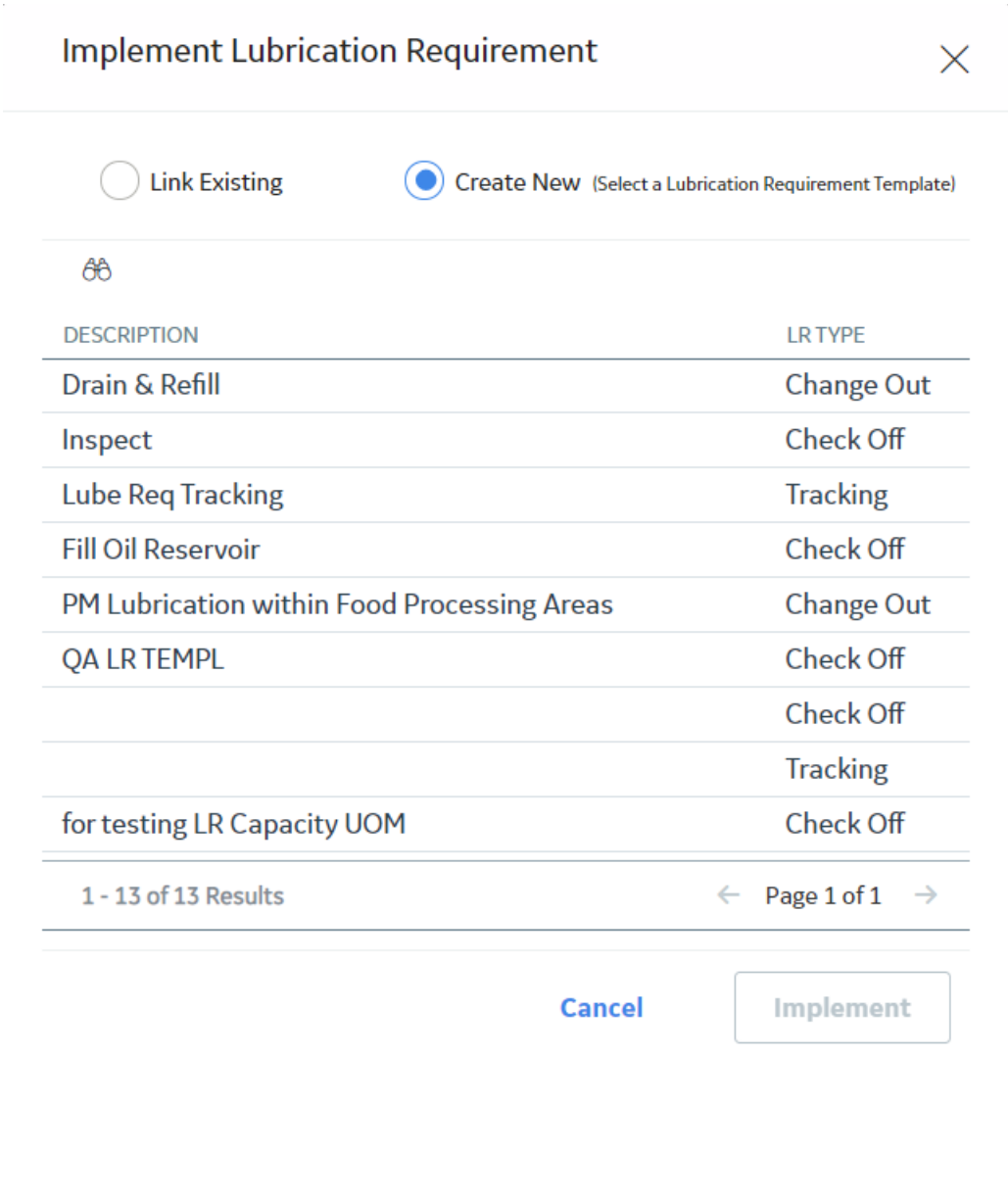
Create New Measurement Location or Lubrication Requirement Records

About This Task

In the **Implement** workspace, you can create corresponding measurement location and lubrication requirement records to implement an action. After you create the records, you can link to them from the **Implement** workspace.

Procedure

1. Access the **Implement** workspace.
2. In the **Implement** workspace, select the check box in the row containing the action you want to implement via a new Measurement Location or Lubrication Requirement record. The action is highlighted.
3. Select the **Implement** drop-down menu, and then select **Measurement Location** or **Lubrication Requirement**.
   The **Implement Lubrication Requirement** window or the **Implement Measurement Location** window appears, depending on which type of implementation you selected, displaying a list of measurement location or lubrication requirement records from Rounds to which you could link the action.



4. Select the **Create New** option.
   A grid appears, displaying a list of available template types.

5. Select the template type you want to use, and then select **Implement**.
   A message appears, confirming that the action has been implemented successfully.

Results

- A new measurement location or lubrication requirement is created.
- In the **Implement** workspace, in the **Implementation** column of the action you implemented, a hyperlink to the measurement location or lubrication requirement appears.

Link a Policy Instance

About This Task

In the **Implement** workspace, you can link a policy instance to implement an action. Policy instances are records that identify specific aspects you might want to monitor for an asset, in this case in accordance with actions which have already been identified for the associated asset strategy.

Procedure

1. Access the **Implement** workspace.
2. In the **Implement** workspace, select the check box in the row containing the action to which you want to link a policy instance.
   The action is highlighted.

   Note: An action may not be linked to more than one policy instance.
3. Select the **Implement** drop-down menu, and then select **Policy Instance**.
   The **Implement Policy Instance** window appears.

4. Select the policy instance with which you want to implement an action, and then select **Implement**.
   A message appears, confirming that the action has been implemented successfully.

Results

- The policy instance is linked to the action.
- In the **Implement** workspace, in the **Implementation** column of the action you implemented, a hyperlink to the policy instance record appears.

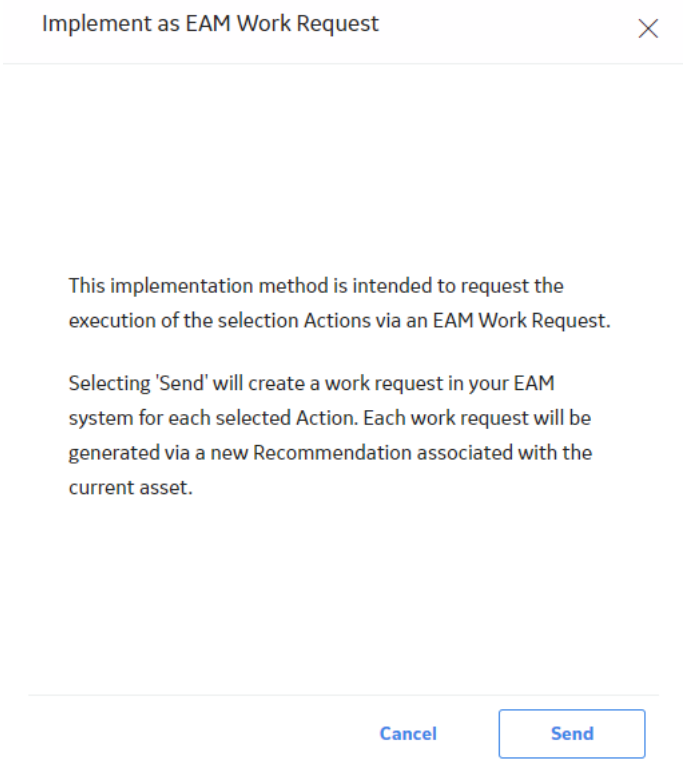
Link EAM Work Request

About This Task

In the **Implement** workspace, you can link EAM work request when you implement the action.

Procedure

1. Access the **Implement** workspace.
2. In the **Implement** workspace, select the check box in the row containing the action you want to implement with an EAM work request.
   The actions are highlighted.
3. Select the **Implement** drop-down menu, and then select **EAM Work Request**.
   The **Implement as EAM Work Request** window appears.



4. Select **Send**.
   A message appears, confirming that the work request has been linked successfully.

Results

- The EAM work request is linked to the action.
- In the **Implement** workspace, in the **Implementation** column of the action you implemented, a hyperlink to the EAM work request record appears.

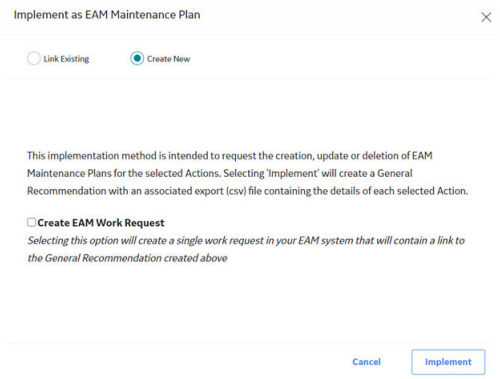
Create EAM Maintenance Plan Record

About This Task

In the **Implement** workspace, you can create corresponding EAM maintenance plan record to implement an action.

Procedure

1. Access the **Implement** workspace.
2. In the **Implement** workspace, select the check box in the row containing the action you want to implement via a new EAM maintenance plan record.
   The actions are highlighted.
3. Select the **Implement** drop-down menu, and then select **EAM Maintenance Plan**.
   The **Implement as EAM Maintenance Plan** window appears.



4. Select **Create New**, and then select **Implement**.
   A message appears, confirming that the action has been implemented.

Results

- The new EAM plan is created.
- In the **Implement** workspace, in the **Implementation** column of the action you implemented, a hyperlink to the EAM maintenance plan appears.

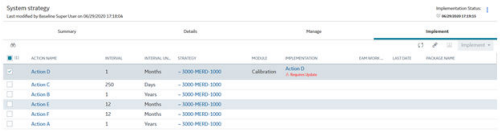
Apply Updates to Implemented Actions

Before You Begin

- Modify action(s) as necessary for the asset strategy that is linked to your system strategy. When you do so, the state assignment for the strategy is changed to Modified.

Procedure

1. Approve the strategy whose related actions you modified.
   The strategy is changed back to the Active state.
2. Access the **Implement** workspace.



3. In the **Implement** workspace, select the actions that you modified and you want to update with their implementations, and then select .
   The updates are applied to the implemented actions. If any updates were unsuccessful, the **Errors** window appears, which contains a list of the unsuccessful updates.

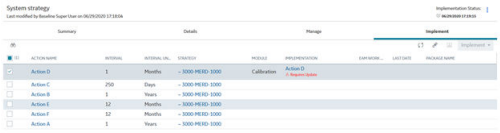
Unlink Implementations

About This Task

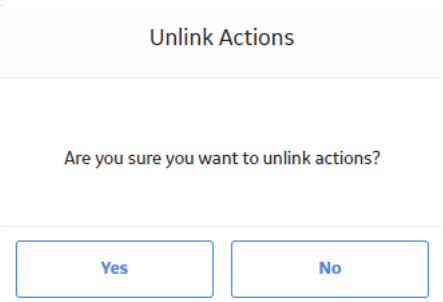
These steps describes how to unlink implementations.

Procedure

1. Access the **Implement** workspace.
2. Next to each implementation that you want to unlink, select the check box.
   The selected implementations are highlighted.



3. Select .
   A confirmation window appears.



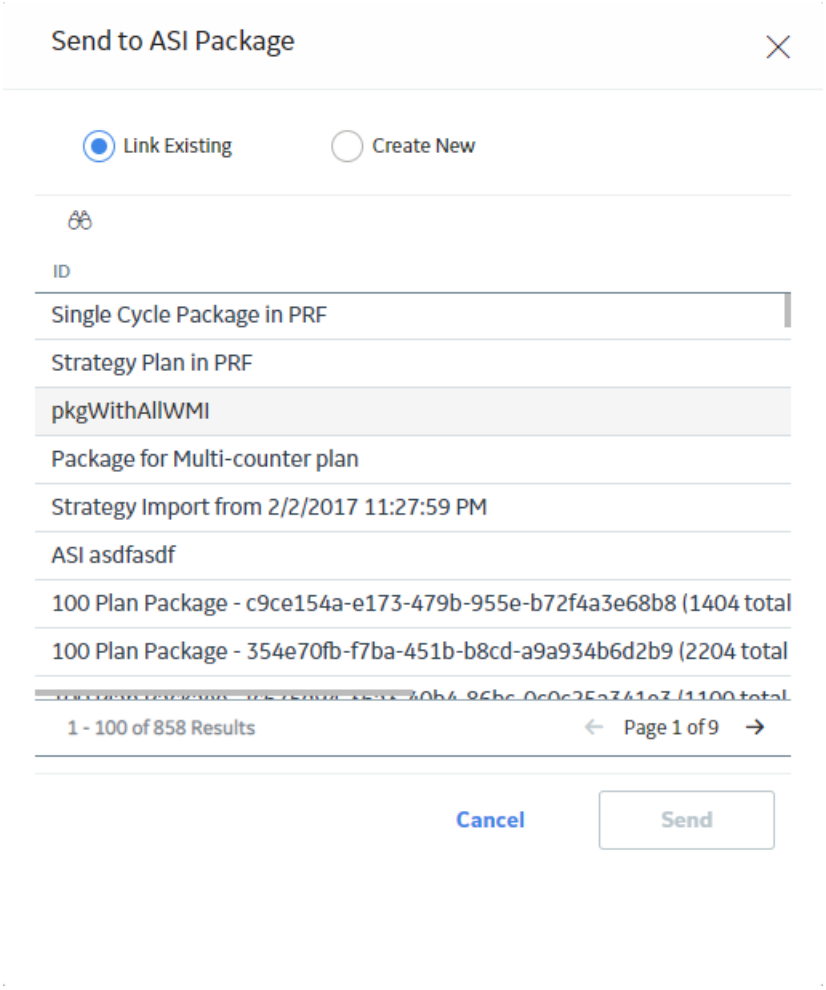
4. Select **Yes**.
   The selected implementations are unlinked.

Send Approved Actions to an ASI Package

Procedure

1. Access the **Implement** workspace.
2. In the **Implement** workspace, select the check box in the rows containing the implemented actions that you want to send to ASI, and then select .

The Send to ASI Package window appears, displaying a list of existing implementation packages that match the CMMS system of the Asset. By default, the **Link Existing** option is selected.



Note:

- The maximum amount of records that you can select for one implementation is 250.
- The button will be enabled only if one of the following conditions are satisfied:
  - The Asset is an equipment or a functional location.
  - The Asset has a CMMS system.

3. If you want to send the implemented actions to an existing ASI package, select the package to which you want to link them, and then select **Send**. Or, if you want to create a new ASI package and link the implemented actions to an existing ASI package, select **Create New**, then enter values in the available fields as needed, and then select **Send**. A message appears, confirming that your items have been sent to ASI.

Delete a System Strategy

Procedure

1. Access the **ASM Overview** page.

2. Select the **System Strategies** tab.
   The **System Strategies** section appears, displaying a list of system strategies.
3. Select the row containing the strategy that you want to delete, and then, in the section, select .
   The **Confirm Delete** dialog appears, asking you to confirm that you want to delete the strategy.
4. Select **Yes**.
   The strategy is deleted.

   Note: You can also delete a strategy using the delete button ( ) under option while viewing the strategy that you want to delete.

Chapter 15

Admin

Topics:

- Asset Strategy Management
- Access ASM Admin Settings
- Risk and Action Card Preferences
- ASM Preferences

Asset Strategy Management

This topic provides a list of help topics related to the Asset Strategy Management application settings.

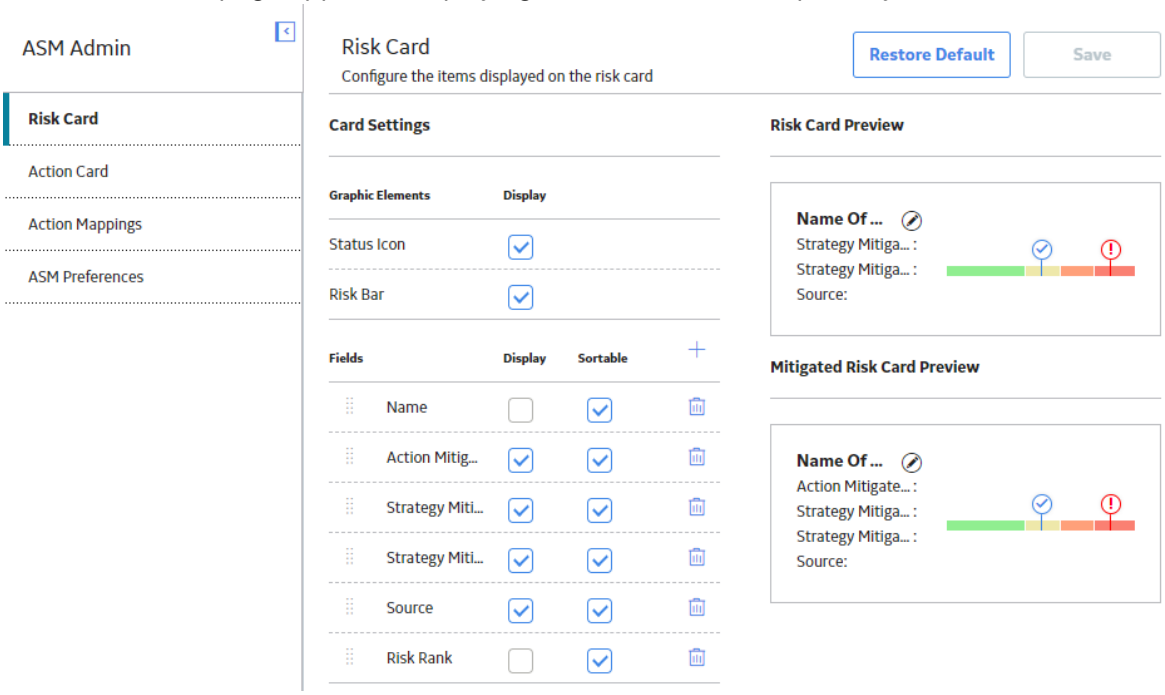
Access ASM Admin Settings

About This Task

Note: To access the **ASM Admin** page, the ASM license must be active and you must be a member of the **MI ASM Administrator** group or a Super User.

Procedure

In the module navigation menu, select **Admin** > **Application Settings** > **Asset Strategy Management**.
The **ASM Admin** page appears, displaying the **Risk Card** workspace by default.



Risk and Action Card Preferences

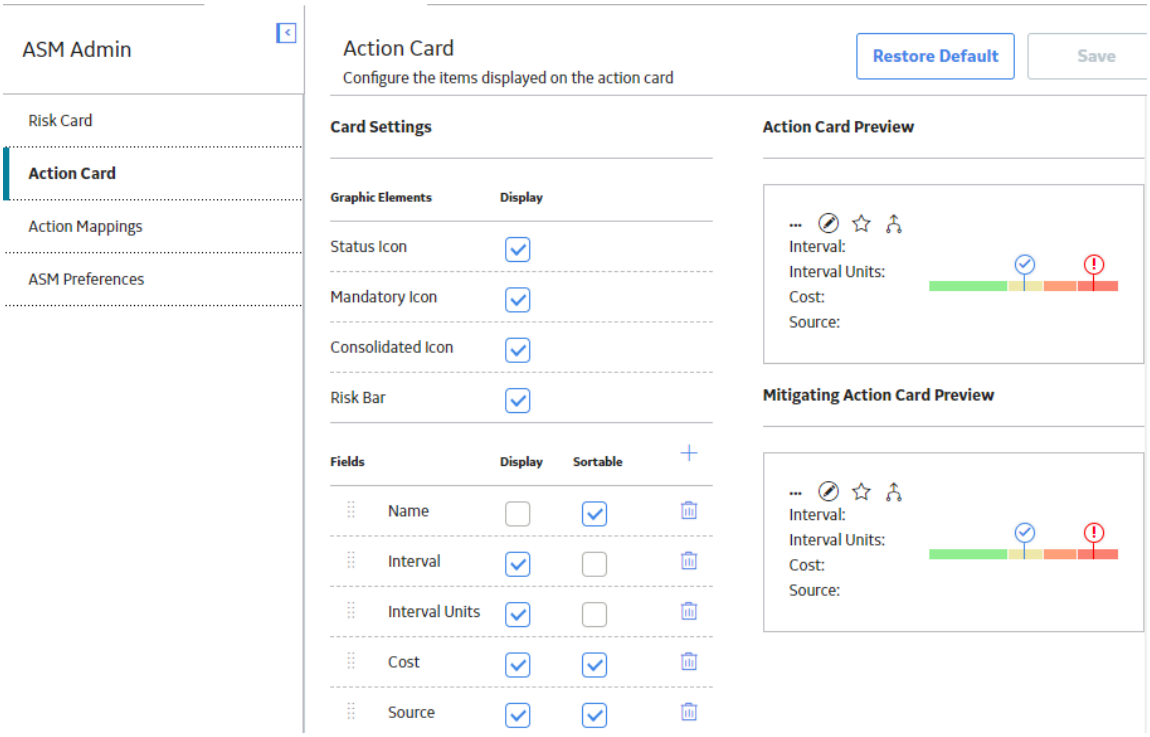
This topic provides a list of help topics related to the Risk and Action card application settings.

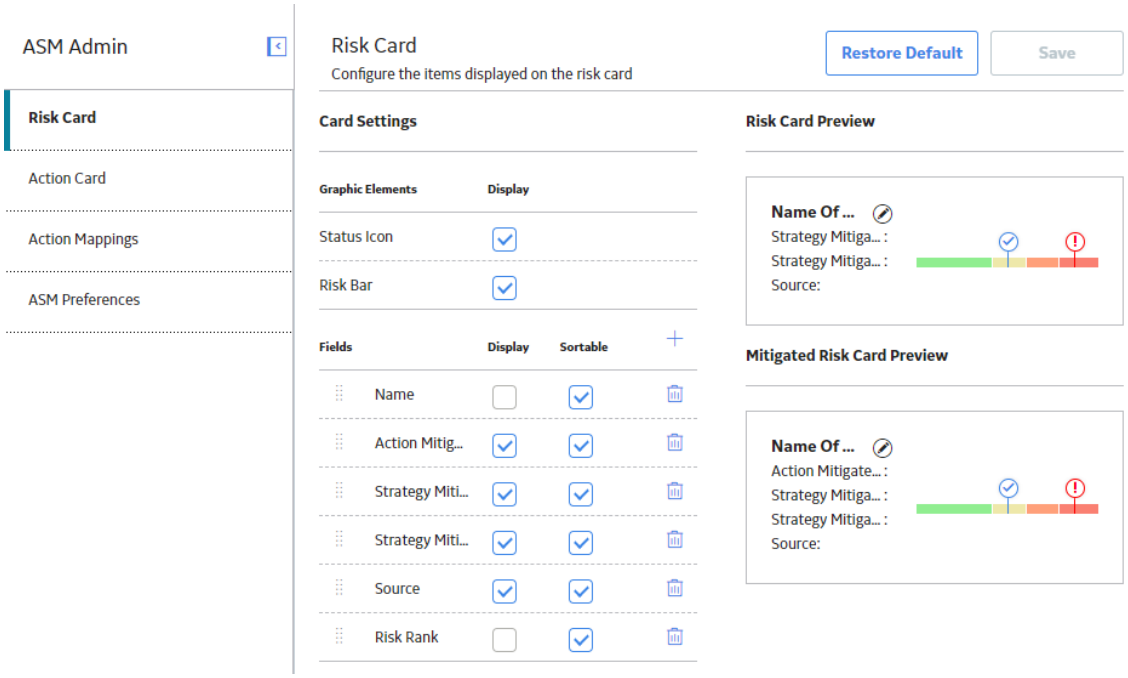
Display and Sort Preferences on Risk and Action Cards

Procedure

1. Access the Action or Risk Card Admin section.
2. Configure display settings for graphic elements and fields and enable sorting by fields using the **Display** and **Sortable** check boxes. The check boxes make the following results on the risk or action cards:
   - **Display**: when checked, that element or field will appear on the card.
   - **Sortable**: when checked, you will be able to sort by that field in ASM.

   Changes made to the display preferences are reflected in the **Card Preview** section. There are two card previews each for the Risks and Actions tabs: one displaying the risk or action and the other displaying the mitigating action or mitigated risk in the context of the risk or action. Some fields that you add, namely those beginning with Action Mitigated, are only applicable to the mitigated/mitigating card (For example, Action Mitigated Financial Risk and Action Mitigated Risk Rank).



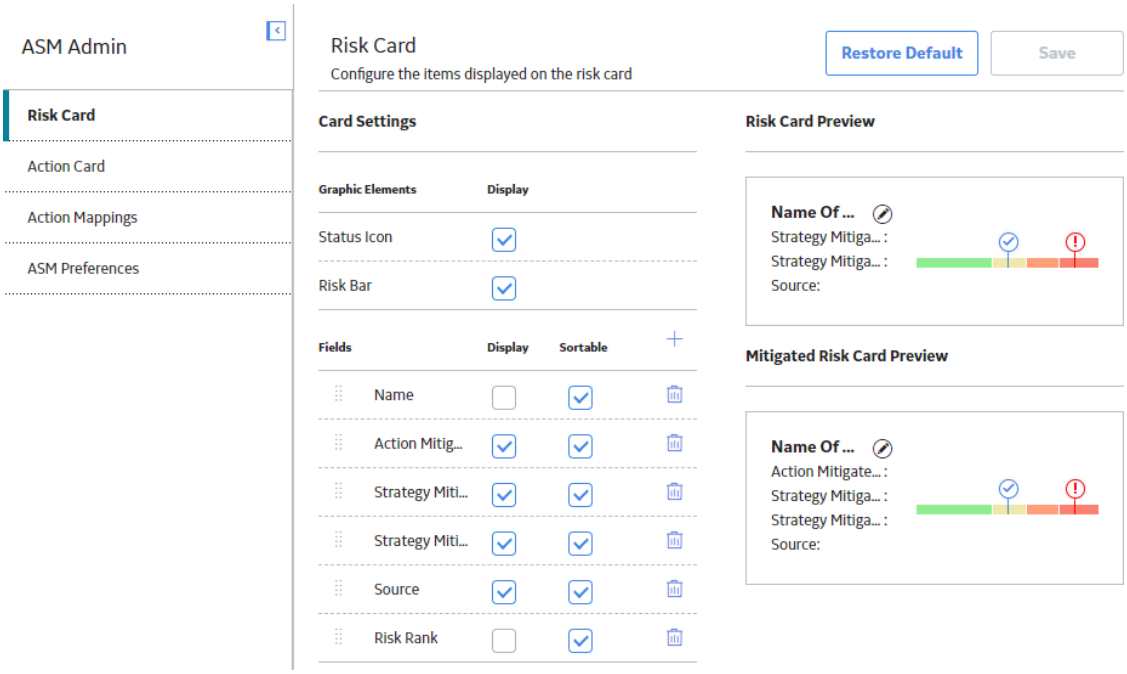


3. Select .
   Your changes are saved, and the modified values will now reflect on the **Risks and Actions** workspace for asset strategies.

Add Card Fields

Procedure

1. Access the Action or Risk Card Admin section.
2. Select , and then select the field that you want to add from the drop-down list of available fields.
   The new field is added to your list of fields for the card and in the **Card Preview** section, fields for which the **Display** check box is filled will appear on the card.



Note: You can rearrange the order in which the fields will display on the card by selecting and then dragging and dropping in another position.

3. Select .
   Your changes are saved.

Remove Card Fields

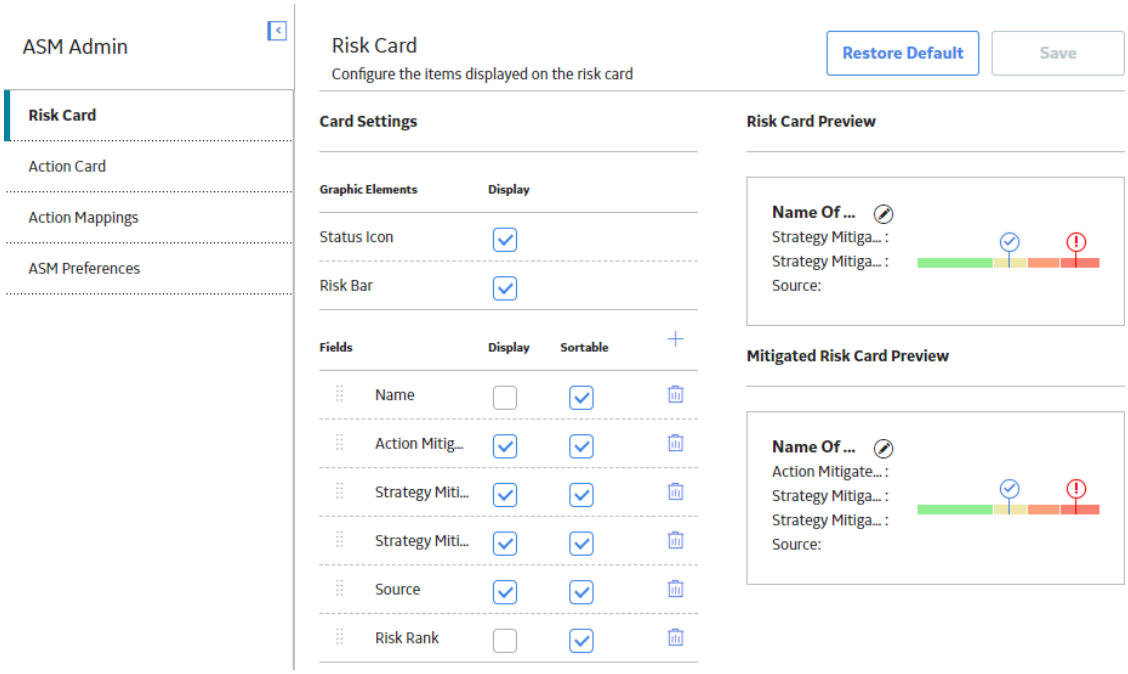
Procedure

1. Access the Action or Risk Card Admin section.
2. On the list of fields, on the row containing the field that you want to delete, select .
   The field is removed from the card.
3. Select .
   Your changes are saved.

Restore the Default Card Settings

Procedure

1. Access the Action or Risk Card Admin section.
2. In the left pane, select either the **Risk Card** or the **Action Card** tab, depending on the card for which you want to restore default settings.
   Depending on your selection, the **Risk Card** or the **Action Card** workspace appears.
3. Select **Restore Default**.
   The default settings are restored for the card.



4. Select **Save**.
   Your changes are saved.

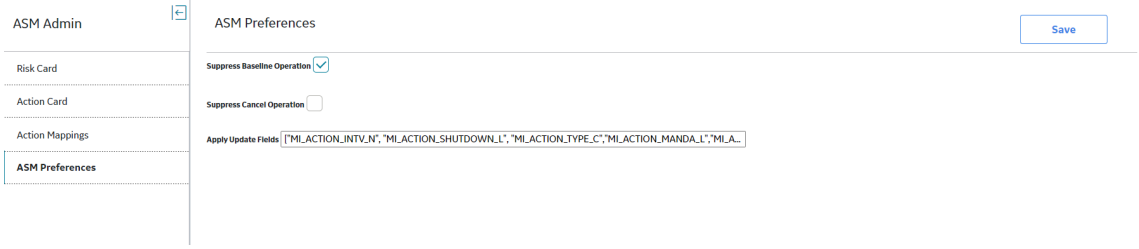
ASM Preferences

In the **ASM Preferences** section, you can hide the Baseline activate and Cancel operations from the **Strategy Details** workspace.

Hide Baseline Activate Operation from the Strategy Details Workspace

Procedure

1. Access the Admin section.
2. Select the **ASM Preferences** tab.
   The **ASM Preferences** workspace appears.

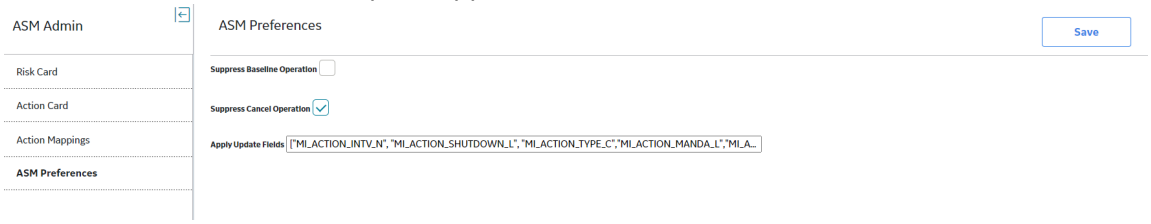


3. Select the **Suppress Baseline Operation** check box, and then select **Save**.
   Your preference is saved, and the Baseline activate operation is hidden from the **Strategy Details** workspace.

Hide Cancel Operation from the Strategy Details Workspace

Procedure

1. Access the Admin section.
2. Select the **ASM Preferences** tab.
   The **ASM Preferences** workspace appears.



3. Select the **Suppress Cancel Operation** check box, and then select **Save**.
   Your preference is saved, and the Cancel operation is hidden from the **Strategy Details** workspace.

Apply Update Fields for Actions

This function allows Administrators to control which Action fields will trigger an Apply Update for Actions upon Strategy Approval.

Procedure

1. Access the Admin section.
2. Select the **ASM Preferences** tab.
   The **ASM Preferences** workspace appears.
3. Select the required fields in the desired format, and then select **Save**.

   Note: If you update an action for a field that is in **Apply Update Fields** and re-activate the strategy, then the **Requires Update** flag displays under the **Implements action** screen. If you update the action for a field that is not specified under **Apply Update Fields** and re-activate the strategy, the **Requires Update** flag does not display.

Chapter 16

Data Loader

Topics:

- About the Asset Strategy Management (ASM) Data Loaders
- About the Asset Strategy Management (ASM) Data Loaders Requirements
- About the Asset Strategy Management (ASM) Data Loaders Data Models
- About the Asset Strategy Management (ASM) Data Loaders General Loading Strategy
- About the Asset Strategy Management (ASM) Data Loaders Workbook Layout and Use
- About the Asset Strategy Management (ASM) Data Loaders Load Verification

About the Asset Strategy Management (ASM) Data Loaders

The Asset Strategy Management (ASM) and Asset Strategy Management (ASM) Templates Data Loaders serve the following purposes:

- Provides functional equivalence with Meridium APM V3.x to enable existing or new Asset Strategies and Templates to be imported into the ASM module for further development, analysis, or implementation.
- Provides customers with a more effective APM experience because the loaded content will be searchable and usable within the various APM modules.
- Enables the user to upload Asset Strategies for storage and to create templates in ASM that can be applied to one or more assets as a repeatable process, or to upload existing Asset Templates that can be applied to assets.

Following the data load, you can access the imported data, which will contain details such as when it was uploaded, and by whom it was created. You can open the imported strategies and templates in ASM and start using them in your workflows.

About the Asset Strategy Management (ASM) Data Loaders Requirements

To use the Asset Strategy Management (ASM) Data Loader and the Asset Strategy Management (ASM) Templates Data Loader, your organization must have completed fully the deployment of the Asset Strategy module. The Asset Strategy Management (ASM) Data Loaders should only be used after the Asset Strategy module has been implemented and you have defined the appropriate Site References, Process Units (Functional Location records), and assets (Equipment records) for your organization.

Risk Mapping

The Asset Strategy Management (ASM) Data Loaders rely on Risk Mapping families to ensure that fields on the ASM Strategy and related records are correctly populated with data, and that resulting risk values can be mapped to the Default Risk Matrix.

If you have added custom fields, you must ensure that mappings exist for those fields, or data may not be populated as expected following the data load.

Security Settings

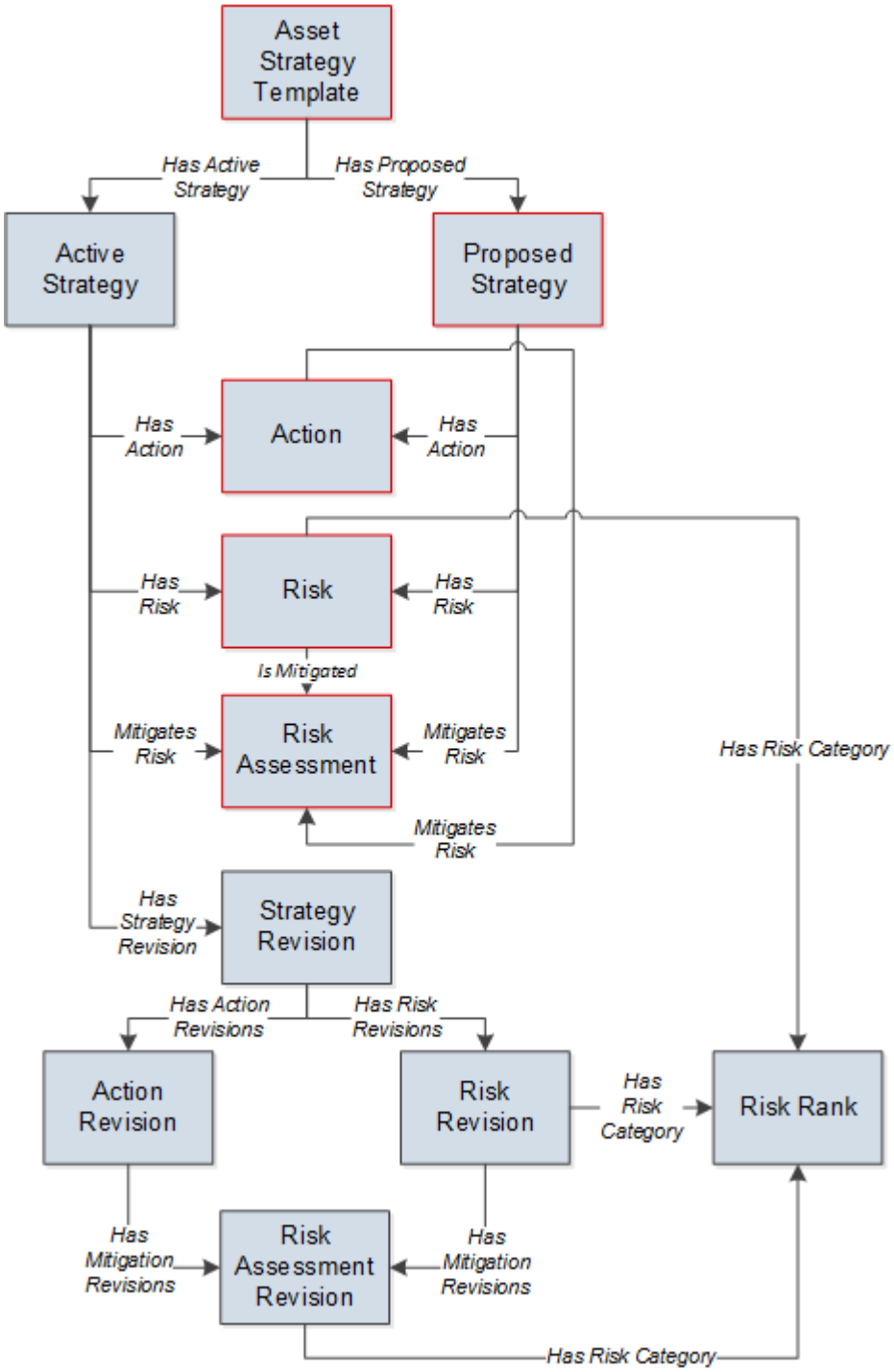
The Security User performing the data load operation must be associated with either the MI Data Loader User or MI Data Loader Admin Security Role, and must also be associated with the MI ASM Analyst Security Group or a Security Role that is associated with this Security Group.

About the Asset Strategy Management (ASM) Data Loaders Data Models

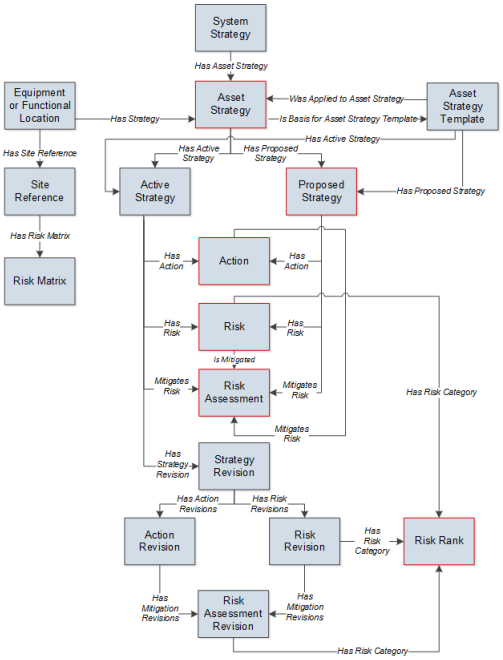
The data for ASM strategies and templates is loaded from Excel workbooks, each containing multiple worksheets. The ASM Template worksheets include Templates, Actions, Risks, and Mitigations, and the ASM Strategy worksheets include Strategies, Actions, Risks, and

Mitigations. These elements are highlighted with red boxes around the relevant functional areas from the two ASM data models shown below. Elements shown without a red border are data model elements that will not be loaded by the data loader.

Asset Strategy Management (ASM) Templates Data Loader



Asset Strategy Management (ASM) Data Loader



About the Asset Strategy Management (ASM) Data Loaders General Loading Strategy

Best Practices

When importing data using the Asset Strategy Management (ASM) Data Loaders, you must use the following best practices:

- Do not try to create and update a component in the same Excel workbook.
- Do not include anything in the Excel workbook that you do not want imported into the dataset. If you include fields that are blank, they will import into the database as blank fields. If you do not want a specific field imported because it would overwrite a value in an existing field, remove that column from the worksheet.

Load Sequence

The data loader jobs must load in a specific sequence in order to successfully populate fields, create records, and link them to the predecessor and/or successor records. This section documents the order of steps that you must perform for the strategy and template data loaders to work correctly.

Asset Strategy Management (ASM) Data Loader

For all strategies, the strategy data loader will:

- Create the ASM Strategy and link it to the defined asset through the Has Strategy relationship.
- Create Actions: One or many that are linked to the Asset Strategy through the Has Actions relationship.

- Create Risks: One or many that are linked to a mitigating Action through the Has Actions relationship.
- Create Mitigations: One or many Mitigated Risk Assessments that are linked to one or more Risks through the Is Mitigated relationship.
- Create Secondary Actions: One or many that are linked to the action.

Asset Strategy Management (ASM) Templates Data Loader

For all templates, the template data loader will:

- Create the ASM Template without any defined asset.
- Create Actions: One or many that are linked to the template through the Has Actions relationship.
- Create Risks: One or many that are linked to a mitigating Action through the Has Actions relationship.
- Create Mitigation: One or many Mitigated Risk Assessments that are linked to one or more Risks through the Is Mitigated relationship.
- Create Secondary Actions: One or many that are linked to the action.

Note: Verify that all data was successfully uploaded and all relationships have been created or preserved.

About the Asset Strategy Management (ASM) Data Loaders Workbook Layout and Use

In order to import data using the Asset Strategy Management (ASM) Data Loaders, APM provides Excel workbooks, **Asset Strategy Management (ASM).xlsx** and **Asset Strategy Management (ASM) Templates.xlsx**, which support baseline ASM in APM. These workbooks must be used to perform the data load. You can modify the Excel workbook to include custom fields used by your organization. The following tables list the worksheets that are included in the workbooks and then the fields in the corresponding worksheets for both the Strategy and Template Data Loaders.

Asset Strategy Management (ASM) Data Loader

Worksheet	Description
Strategies	This worksheet is used to specify new or existing strategies to which Action, Risks, and Mitigations will be linked.
Actions	This worksheet is used to specify Action records that will be updated or created and linked to assets.
Risks	This worksheet is used to specify Risk records that will be updated or created and linked to assets.
Mitigations	This worksheet is used to define Mitigation records that will be linked to Analyses.
Secondary Actions	This worksheet is used to define Secondary Actions records that will be linked to the action.

Strategies Worksheet

Field Caption	Field ID	Data Type (Length)	Comments
Strategy ID	MI_ASTSTRAT_ID_C	Character (255)	This field is the master reference column for each of the four tabs in the data loader spreadsheet.
Asset ID	ASSET_ID_CHR	Character (255)	This field allows the user to enter values to search for an asset.
Asset Family ID	ASSET_FAMILY_ID	Character (15)	This field allows the user to enter values to search for an asset.
Asset ID Field	ASSET_ID_FIELD	Character (255)	This field allows the user to enter values to search for an asset.
CMMS ID	ASSET_CMMS_ID	Character (255)	This field allows the user to enter values to search for an asset.
CMMS Value	ASSET_CMMS_VALUE	Character (255)	This field allows the user to enter values to search for an asset.
Strategy Notes	MI_ASTSTRAT_NOTES_T	Text	None
Risk Analysis Type	MI_ASTSTRAT_RISK_ANAL_TYPE_C	Character (255)	None
Quantitative Result	MI_ASTSTRAT_QUANT_RESUL_T	Text	None
Plan Length	MI_ASTSTRAT_PLAN_LENGTH_N	Numeric	None

Actions Worksheet

Field Caption	Field ID	Data Type (Length)	Comments
Strategy ID	MI_ASTSTRAT_ID_C	Character (255)	This field is the master reference column for each of the four tabs in the data loader spreadsheet.
Action ID	MI_ACTION_ID_C	Character (255)	This field is used to look up existing Actions, and if none are found, a new Action will be created.

Field Caption	Field ID	Data Type (Length)	Comments
Name	MI_ACTION_SHORT_DESC_C	Character (255)	None
Description	MI_ACTION_DESCRIPTION_T	Text	None
Basis	MI_ACTION_BASIS_C	Character (255)	None
Type	MI_ACTION_TYPE_C	Character (255)	None
Condition Monitoring Type	MI_ACTION_CM_TYPE_C	Character (50)	None
Interval	MI_ACTION_INTV_N	Numeric	None
Interval Unit	MI_ACTION_INTV_UNITS_C	Character (50)	None
Resource Cost	MI_ACTION_RESOURCE_COST_N	Numeric	None
Shutdown Required	MI_ACTION_SHUTDOWN_L	Boolean	None

Risks Worksheet

Field Caption	Field ID	Data Type (Length)	Comments
Strategy ID	MI_ASTSTRAT_ID_C	Character (255)	This field is used as the master reference column for each of the four tabs in the data loader spreadsheet.
Risk ID	MI_RISKASSE_ID_C	Numeric	This field is used to look up existing Risks, and if none are found a new Risk will be created.
(ENVIRONMENT) Consequence	ENVIRONMENT|MI_CONSE_N	Numeric	None
(ENVIRONMENT) Probability	ENVIRONMENT|MI_PROB_N	Numeric	None
(ENVIRONMENT) Protection Level	ENVIRONMENT|MI_PROT_N	Numeric	None
(FINANCIAL) Consequence	FINANCIAL|MI_CONSE_N	Numeric	None
(FINANCIAL) Maintenance Cost	FINANCIAL|MI_RISK_MAIN_COST_N	Numeric	None
(FINANCIAL) Probability	FINANCIAL|MI_PROB_N	Numeric	None
(FINANCIAL) Production Loss	FINANCIAL|MI_RISK_PROD_LOSS_N	Numeric	None

Field Caption	Field ID	Data Type (Length)	Comments
(FINANCIAL) Protection level	FINANCIAL|MI_PROT_N	Numeric	None
(OPERATIONS) Consequence	OPERATIONS|MI_CONSE_N	Numeric	None
(OPERATIONS) Probability	OPERATIONS|MI_PROB_N	Numeric	None
(OPERATIONS) Protection Level	OPERATIONS|MI_PROT_N	Numeric	None
(SAFETY) Consequence	SAFETY|MI_CONSE_N	Numeric	None
(SAFETY) Probability	SAFETY|MI_PROB_N	Numeric	None
(SAFETY) Protection Level	SAFETY|MI_PROT_N	Numeric	None
Basis for Assessment	MI_RISKASSE_BASIS_T	Text	None
Condition	MI_FAILRISK_CODE3_C	Character (50)	None
Description	MI_FAILRISK_DESC_T	Text	None
Driving Unmitigated Risk Alias	MI_RISKASSE_DRIV_RISK_ALIAS_C	Character (50)	None
Estimated Repair Time	MI_FAILRISK_EST_REP_TIME_N	Numeric	None
Failure Cause	MI_FAILRISK_CODE4_C	Character (50)	None
Failure Mode	MI_FAILRISK_CODE1_C	Character (255)	None
Failure Without Replacement	MI_FAILRISK_FAIL_WITH_REPL_F	Boolean	None
Is Active	MI_FAILRISK_IS_ACTIV_F	Boolean	None
Is Latent	MI_FAILRISK_IS_LATEN_F	Boolean	None
Last Failure	MI_FAILRISK_LAST_FAILU_D	Date	None
Maintainable Item	MI_FAILRISK_CODE2_C	Character (50)	None
Name	MI_RISKASSE_NAME_C	Character (515)	None
Number of Subcomponents	MI_FAILRISK_NUMB_OF_SUBC_N	Numeric	None
Percentage of PF Interval to Wait	MI_FAILRISK_PER_OF_PF_INT_N	Numeric	None

Field Caption	Field ID	Data Type (Length)	Comments
PF Interval	MI_FAILRISK_PF_INTER_N	Character (50)	None
PF Interval Units	MI_FAILRISK_PF_INTER_UNITS_C	Character (50)	None
Planned Correction Cost	MI_FAILRISK_PLAN_CORR_COST_N	Numeric	None
Planned Correction Duration	MI_FAILRISK_PLAN_CORR_DURA_N	Numeric	None
Repair Immediately	MI_FAILRISK_REPAI_IMMED_F	Boolean	None
Risk Basis	MI_RISKASSE_RISK_BASIS_C	Character (255)	None
Unmitigated Risk Alias	MI_RISKASSE_RISK_ALIAS_C	Character (50)	None
Wear Pattern	MI_FAILRISK_WEAR_PATTE_C	Character (50)	None

Mitigations Worksheet

Field Caption	Field ID	Data Type (Length)	Comments
Strategy ID	MI_ASTSTRAT_ID_C	Character (255)	This field is used as the master reference column for each of the four tabs in the data loader spreadsheet.
Risk ID	MI_RISKASSE_ID_C	Character (265)	This field is used to look up existing Risks to which the Mitigations will be linked.
Action ID	MI_ACTION_ID_C	Character (265)	This field is used to lookup existing Actions to which the Mitigations will be linked.
(ENVIRONMENT) Consequence	ENVIRONMENT|MI_CONSE_N	Numeric	None
(ENVIRONMENT) Probability	ENVIRONMENT|MI_PROB_N	Numeric	None
(ENVIRONMENT) Protection Level	ENVIRONMENT|MI_PROT_N	Numeric	None
(FINANCIAL) Consequence	FINANCIAL|MI_CONSE_N	Numeric	None

Field Caption	Field ID	Data Type (Length)	Comments
(FINANCIAL) Maintenance Cost	FINANCIAL|MI_RISK_MAIN_COST_N	Numeric	None
(FINANCIAL) Probability	FINANCIAL|MI_PROB_N	Numeric	None
(FINANCIAL) Production Loss	FINANCIAL|MI_RISK_PROD_LOSS_N	Numeric	None
(FINANCIAL) Protection level	FINANCIAL|MI_PROT_N	Numeric	None
(OPERATIONS) Consequence	OPERATIONS|MI_CONSE_N	Numeric	None
(OPERATIONS) Probability	OPERATIONS|MI_PROB_N	Numeric	None
(OPERATIONS) Protection Level	OPERATIONS|MI_PROT_N	Numeric	None
(SAFETY) Consequence	SAFETY|MI_CONSE_N	Numeric	None
(SAFETY) Probability	SAFETY|MI_PROB_N	Numeric	None
(SAFETY) Protection Level	SAFETY|MI_PROT_N	Numeric	None
Basis for Assessment	MI_RISKASSE_BASIS_T	Text	None

Secondary Actions Worksheet

Field Caption	Field ID	Data Type (Length)	Comments
Strategy ID	MI_ASTSTRAT_ID_C	Character (255)	This field is used as the master reference column for each of the four tabs in the data loader spreadsheet.
Primary Action ID	PRIMARY_ACTION_ID	Character (255)	None
Secondary Action ID	MI_ACTION_ID_C	Character (255)	None
Name	MI_ACTION_SHORT_DESC_C	Character (255)	None
Description	MI_ACTION_DESCRIPTION_T	Character (255)	None
Basis	MI_ACTION_BASIS_C	Character (255)	None
Type	MI_ACTION_TYPE_C	Character (255)	None
Condition Monitoring Type	MI_ACTION_CM_TYPE_C	Character(50)	None

Field Caption	Field ID	Data Type (Length)	Comments
Interval	MI_ACTION_INTV_N	Numeric	None
Interval Units	MI_ACTION_INTV_UNITS_C	Character(50)	None
Resource Cost	MI_ACTION_RESOURCE_COST_N	Numeric	None
Shutdown Required	MI_ACTION_SHUTDOWN_L	Boolean	None

Asset Strategy Management (ASM) Templates Data Loader

Worksheet	Description
Templates	This worksheet is used to specify new or existing templates to which Action, Risks, and Mitigations will be linked.
Actions	This worksheet is used to specify Action records that will be updated or created and linked to templates.
Risks	This worksheet is used to specify Risk records that will be updated or created and linked to templates.
Mitigations	This worksheet is used to define Mitigation records that will be linked to Analyses.
Secondary Actions	This worksheet is used to define Secondary Actions records that will be linked to the action.

Templates Worksheet

Field Caption	Field ID	Data Type (Length)	Comments
Template ID	MI_ASTSTRAT_ID_C	Character (255)	This field is the master reference column for each of the four tabs in the data loader spreadsheet.
Template Notes	MI_ASTSTRAT_NOTES_T	Text	None
Risk Matrix Name	TEMPLATE_RISK_MATRIX_NAME	Character (255)	None
Template Category	MI_ASTSTTMP_GEN_FIELD_1_C	Character (255)	None
Criticality	MI_ASTSTTMP_GEN_FIELD_2_C	Character (255)	None
Duty	MI_ASTSTTMP_GEN_FIELD_3_C	Character (255)	None
Service	MI_ASTSTTMP_GEN_FIELD_4_C	Character (255)	None

Actions Worksheet

Field Caption	Field ID	Data Type (Length)	Comments
Template ID	MI_ASTSTRAT_ID_C	Character (255)	This field is the master reference column for each of the four tabs in the data loader spreadsheet.
Action ID	MI_ACTION_ID_C	Character (255)	This field is used to look up existing Actions, and if none are found, a new Action will be created.
Name	MI_ACTION_SHORT_DESC_C	Character (255)	None
Description	MI_ACTION_DESCRIPTION_T	Text	None
Basis	MI_ACTION_BASIS_C	Character (255)	None
Type	MI_ACTION_TYPE_C	Character (255)	None
Condition Monitoring Type	MI_ACTION_CM_TYPE_C	Character (50)	None
Interval	MI_ACTION_INTV_N	Numeric	None
Interval Unit	MI_ACTION_INTV_UNITS_C	Character (50)	None
Resource Cost	MI_ACTION_RESOURCE_COST_N	Numeric	None
Shutdown Required	MI_ACTION_SHUTDOWN_L	Boolean	None

Risks Worksheet

Field Caption	Field ID	Data Type (Length)	Comments
Template ID	MI_ASTSTRAT_ID_C	Character (255)	This field is used as the master reference column for each of the four tabs in the data loader spreadsheet.
Risk ID	MI_RISKASSE_ID_C	Numeric	This field is used to look up existing Risks, and if none are found a new Risk will be created.
(ENVIRONMENT) Consequence	ENVIRONMENT|MI_CONSE_N	Numeric	None
(ENVIRONMENT) Probability	ENVIRONMENT|MI_PROB_N	Numeric	None

Field Caption	Field ID	Data Type (Length)	Comments
(ENVIRONMENT) Protection Level	ENVIRONMENT|MI_PROT_N	Numeric	None
(FINANCIAL) Consequence	FINANCIAL|MI_CONSE_N	Numeric	None
(FINANCIAL) Maintenance Cost	FINANCIAL|MI_RISK_MAIN_COST_N	Numeric	None
(FINANCIAL) Probability	FINANCIAL|MI_PROB_N	Numeric	None
(FINANCIAL) Production Loss	FINANCIAL|MI_RISK_PROD_LOSS_N	Numeric	None
(FINANCIAL) Protection level	FINANCIAL|MI_PROT_N	Numeric	None
(OPERATIONS) Consequence	OPERATIONS|MI_CONSE_N	Numeric	None
(OPERATIONS) Probability	OPERATIONS|MI_PROB_N	Numeric	None
(OPERATIONS) Protection Level	OPERATIONS|MI_PROT_N	Numeric	None
(SAFETY) Consequence	SAFETY|MI_CONSE_N	Numeric	None
(SAFETY) Probability	SAFETY|MI_PROB_N	Numeric	None
(SAFETY) Protection Level	SAFETY|MI_PROT_N	Numeric	None
Basis for Assessment	MI_RISKASSE_BASIS_T	Text	None
Condition	MI_FAILRISK_CODE3_C	Character (50)	None
Description	MI_FAILRISK_DESC_T	Text	None
Driving Unmitigated Risk Alias	MI_RISKASSE_DRIV_RISK_ALIAS_C	Character (50)	None
Estimated Repair Time	MI_FAILRISK_EST_REP_TIME_N	Numeric	None
Failure Cause	MI_FAILRISK_CODE4_C	Character (50)	None
Failure Mode	MI_FAILRISK_CODE1_C	Character (255)	None
Failure Without Replacement	MI_FAILRISK_FAIL_WITH_REPL_F	Boolean	None
Is Active	MI_FAILRISK_IS_ACTIV_F	Boolean	None
Is Latent	MI_FAILRISK_IS_LATEN_F	Boolean	None
Last Failure	MI_FAILRISK_LAST_FAILU_D	Date	None
Maintainable Item	MI_FAILRISK_CODE2_C	Character (50)	None
Name	MI_RISKASSE_NAME_C	Character (515)	None

Field Caption	Field ID	Data Type (Length)	Comments
Number of Subcomponents	MI_FAILRISK_NUMB_OF_SUBC_N	Numeric	None
Percentage of PF Interval to Wait	MI_FAILRISK_PER_OF_PF_INT_N	Numeric	None
PF Interval	MI_FAILRISK_PF_INTER_N	Character (50)	None
PF Interval Units	MI_FAILRISK_PF_INTER_UNITS_C	Character (50)	None
Planned Correction Cost	MI_FAILRISK_PLAN_CORR_COST_N	Numeric	None
Planned Correction Duration	MI_FAILRISK_PLAN_CORR_DURA_N	Numeric	None
Repair Immediately	MI_FAILRISK_REPAI_IMMED_F	Boolean	None
Risk Basis	MI_RISKASSE_RISK_BASIS_C	Character (255)	None
Unmitigated Risk Alias	MI_RISKASSE_RISK_ALIAS_C	Character (50)	None
Wear Pattern	MI_FAILRISK_WEAR_PATTE_C	Character (50)	None

Mitigations Worksheet

Field Caption	Field ID	Data Type (Length)	Comments
Template ID	MI_ASTSTRAT_ID_C	Numeric	This field is used as the master reference column for each of the four tabs in the data loader spreadsheet.
Risk ID	MI_RISKASSE_ID_C	Character (265)	This field is used to look up existing Risks to which the Mitigations will be linked.
Action ID	MI_ACTION_ID_C	Character (265)	This field is used to lookup existing Actions to which the Mitigations will be linked.
(ENVIRONMENT) Consequence	ENVIRONMENT| MI_CONSE_N	Numeric	None
(ENVIRONMENT) Probability	ENVIRONMENT| MI_PROB_N	Numeric	None
(ENVIRONMENT) Protection Level	ENVIRONMENT| MI_PROT_N	Numeric	None

Field Caption	Field ID	Data Type (Length)	Comments
(FINANCIAL) Consequence	FINANCIAL|MI_CONSE_N	Numeric	None
(FINANCIAL) Maintenance Cost	FINANCIAL| MI_RISK_MAIN_COST_N	Numeric	None
(FINANCIAL) Probability	FINANCIAL|MI_PROB_N	Numeric	None
(FINANCIAL) Production Loss	FINANCIAL| MI_RISK_PROD_LOSS_N	Numeric	None
(FINANCIAL) Protection level	FINANCIAL|MI_PROT_N	Numeric	None
(OPERATIONS) Consequence	OPERATIONS|MI_CONSE_N	Numeric	None
(OPERATIONS) Probability	OPERATIONS|MI_PROB_N	Numeric	None
(OPERATIONS) Protection Level	OPERATIONS|MI_PROT_N	Numeric	None
(SAFETY) Consequence	SAFETY|MI_CONSE_N	Numeric	None
(SAFETY) Probability	SAFETY|MI_PROB_N	Numeric	None
(SAFETY) Protection Level	SAFETY|MI_PROT_N	Numeric	None
Basis for Assessment	MI_RISKASSE_BASIS_T	Text	None

Secondary Actions Worksheet

Field Caption	Field ID	Data Type (Length)	Comments
Template ID	MI_ASTSTRAT_ID_C	Character (255)	This field is used as the master reference column for each of the four tabs in the data loader spreadsheet.
Primary Action ID	PRIMARY_ACTION_ID	Character (255)	None
Secondary Action ID	MI_ACTION_ID_C	Character (255)	None
Name	MI_ACTION_SHORT_DESC_C	Character (255)	None
Description	MI_ACTION_DESCRIPTION_T	Character (255)	None
Basis	MI_ACTION_BASIS_C	Character (255)	None
Type	MI_ACTION_TYPE_C	Character (255)	None
Condition Monitoring Type	MI_ACTION_CM_TYPE_C	Character(50)	None

Field Caption	Field ID	Data Type (Length)	Comments
Interval	MI_ACTION_INTV_N	Numeric	None
Interval Units	MI_ACTION_INTV_UNITS_C	Character(50)	None
Resource Cost	MI_ACTION_RESOURCE_COST_N	Numeric	None
Shutdown Required	MI_ACTION_SHUTDOWN_L	Boolean	None

About the Asset Strategy Management (ASM) Data Loaders Load Verification

About This Task

A successful data import will have the same effect as creating a new Asset Strategy or Strategy Template in APM. Following a successful data load, if the data loader created a new strategy or template, it will appear in the **Asset Strategies** section or the **Templates** section on the **Strategy Management Overview** page.

A successful import can also be defined as an event in which partial data on a worksheet was loaded into APM, and where the user was given appropriate messaging that enabled him or her to identify and correct issues resulting from the import.

Chapter 17

Deployment

Topics:

- Deployment and Upgrade

Deployment and Upgrade

Deployment and Upgrade content for various APM modules has been consolidated into a single document. For more information, refer to the module-specific information in the APM Module Deployment and Upgrade document.

Chapter 18

Reference

Topics:

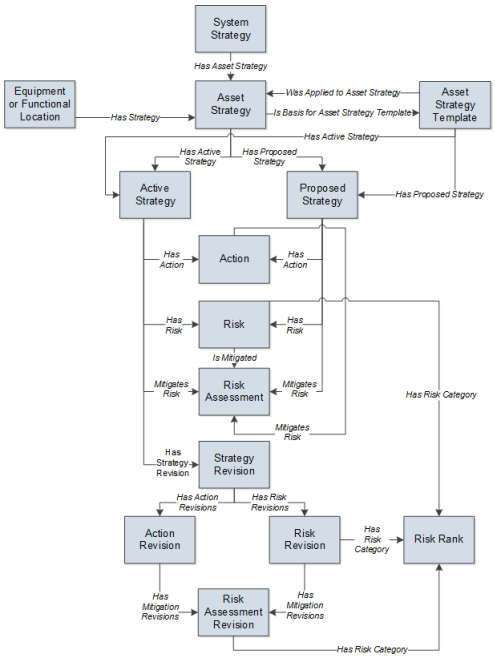
- General Reference
- Family Field Descriptions
- Catalog Items
- Calculations

General Reference

ASM Data Model

The following diagram illustrates how families are related to one another within the ASM data model. In the following image, boxes represent entity families, and arrows represent relationship families that are configured in the baseline database.

Several revision families exist in the ASM data model. Records are created in these families automatically when you modify certain information about an Asset Strategy.



ASM Security Groups

The following table lists the baseline Security Groups available for users within this module, as well as the baseline Roles to which those Security Groups are assigned.

Important: Assigning a Security User to a Role grants that user the privileges associated with all of the Security Groups that are assigned to that Role. To avoid granting a Security User unintended privileges, before assigning a Security User to a Role, be sure to review all of the privileges associated with the Security Groups assigned to that Role. Also, be aware that additional Roles, as well as Security Groups assigned to existing Roles, can be added via Security Manager.

Security Group	Roles
MI ASM Administrator	MI Strategy Admin
MI ASM Analyst	MI Strategy Admin MI Strategy Power MI Strategy User MI Mechanical Integrity Power
MI ASM Reviewer	MI Strategy Admin MI Strategy Power MI Strategy User
MI ASM Viewer	MI APM Viewer MI Strategy Admin MI Strategy Power MI Strategy User

The baseline family-level privileges that exist for these Security Groups are summarized in the following table.

Family	MI ASM Analyst	MI ASM Administrator	MI ASM Reviewer	MI ASM Viewer
Entity Families				
Action	View, Update, Insert, Delete	View	View, Update, Insert, Delete	View
Action Mapping	View	None	None	None
Active Strategy	View, Update, Insert, Delete	View	View, Update, Insert, Delete	View
Analysis Link	View	View	View	View
Asset Criticality Analysis	View	View	View	View
Asset Criticality Analysis System	View	View	View	View
Asset Strategy	View, Update, Insert, Delete	View	View, Update	View
Calibration Task	View	None	View	None
Checkpoint Task	View, Update, Insert	View, Update, Insert	View, Update, Insert	View
Consequence	View	View, Update, Insert, Delete	View	View
Distribution	View, Update, Insert, Delete	View	View	View

Family	MI ASM Analyst	MI ASM Administrator	MI ASM Reviewer	MI ASM Viewer
Execution Mapping	View	None	None	None
Growth Model	View	View	View	View
Health Indicator	View, Update, Insert, Delete	None	View, Update	View
Health Indicator Mapping	View	View, Update, Insert, Delete	View	View
Hierarchy Item Child Definition	View	View, Update, Insert, Delete	View	View
Hierarchy Item Definition	View	View, Update, Insert, Delete	View	View
Implementation Package	View, Insert	None	None	None
Inspection Task	View	None	View	View
KPI	View	View	View	View
KPI Measurement	View	View	View	View
Measurement Location	View	View	View	View
Measurement Location Group	View, Update, Insert	None	None	None
Measurement Location Template	View	View	View	View
Operator Rounds Allowable Values	View	View	View	View
Probability	View	View, Update, Insert, Delete	View	View
Proposed Strategy	View, Update, Insert, Delete	View	View, Update	View
Protection Level	View	View	View	View
RBI Degradation Mechanisms	View, Update	None	None	None
RBI Recommendation	View, Update	None	None	None
RCM FMEA Asset	View, Update, Insert, Delete	View	View	View
Reading	View	View	View	View

Family	MI ASM Analyst	MI ASM Administrator	MI ASM Reviewer	MI ASM Viewer
Reliability Distribution	View	View	View	View
Reliability Growth	View	View	View	View
Risk Assessment	View, Update, Insert, Delete	View	View, Update, Insert, Delete	View
Risk Category	View	View, Update, Insert, Delete	View	View
Risk Matrix	View	View, Update, Insert, Delete	View	View
Risk Rank	View, Update, Insert, Delete	View	View, Update, Insert, Delete	View
Risk Threshold	View	Insert, View, Update, Delete	View	View
Site Reference	View	View	View	View
System Action	View, Update, Insert, Delete	View	View	View
System Action Mapping	View	View, Update, Insert, Delete	View	View
System Action Optimization	View, Update, Insert, Delete	View	View	View
System Action Result	View, Update, Insert, Delete	View	View	View
System Analysis	View, Update, Insert, Delete	View	View	View
System Element	View, Update, Insert, Delete	View	View	View
System Element Result	View, Update, Insert, Delete	View	View	View
System Global Event	View, Update, Insert, Delete	View	View	View
System Resource	View, Update, Insert, Delete	View	View	View
System Resource Result	View, Update, Insert, Delete	View	View	View
System Resource Usage	View, Update, Insert, Delete	View	View	View

Family	MI ASM Analyst	MI ASM Administrator	MI ASM Reviewer	MI ASM Viewer
System Risk Assessment	View, Update, Insert, Delete	View	View	View
System Scenario	View, Update, Insert, Delete	View	View	View
System Sensor	View, Update, Insert, Delete	View	View	View
System Strategy	View, Update, Insert, Delete	View	View, Update	View
Work Management Item Child Definition	View	None	None	None
Work Management Item Definition	View	None	None	None
Work Management Item Definition Configuration	View	None	None	None
Relationship Families				
Asset Criticality Analysis Has System	View	View	View	View
Has Action Driver	View, Update, Insert, Delete	None	None	None
Has Action Mapping	View	None	None	None
Has Action Revisions	View, Update, Insert, Delete	View	View, Update, Insert, Delete	View
Has Actions	View, Update, Insert, Delete	View	View, Update, Insert, Delete	View
Has Active Strategy	View, Update, Insert, Delete	View	View, Update, Insert, Delete	View
Has Asset Strategy	View, Update, Insert, Delete	View	View	View
Has Associated Recommendation	View, Update, Insert, Delete	View	View	View
Has Associated Strategy	View, Update, Insert, Delete	View	View	View
Has Checkpoint	View	None	None	None
Has Child Hierarchy Item	View	View, Update, Insert, Delete	View	View

Family	MI ASM Analyst	MI ASM Administrator	MI ASM Reviewer	MI ASM Viewer
Has Child Work Management Item	View	None	None	None
Has Driving Recommendation	View, Update, Insert, Delete	View	View, Delete	View
Has Execution Mapping	View	None	None	None
Has Functional Location	View	None	View	None
Has Global Events	View, Update, Insert, Delete	View	View	View
Has Health Indicators	View, Update, Insert, Delete	View	View	View
Has Measurement Location Group	View, Update, Insert, Delete	None	None	None
Has Mitigated TTF Distribution	View, Update, Insert, Delete	View	View	View
Has Mitigation Revisions	View, Update, Insert, Delete	View	View, Update, Insert, Delete	View
Has Planned Resource Usages	View, Update, Insert, Delete	View	View	View
Has Proposed Strategy	View, Update, Insert, Delete	View	View, Update, Insert, Delete	View
Has Readings	View	View	View	View
Has Recommendations	View, Update, Insert, Delete	None	None	N/A
Has Reference Values	View	View, Update, Insert, Delete	View	View
Has Resource Usages	View, Update, Insert, Delete	View	View	View
Has Risk	View, Update, Insert, Delete	View	View, Update, Insert, Delete	View
Has Risk Assessments	View, Update, Insert, Delete	View	View	View
Has Risk Category	View, Update, Insert, Delete	View, Update, Insert, Delete	View, Update, Insert, Delete	View
Has Risk Matrix	View	None	None	None

Family	MI ASM Analyst	MI ASM Administrator	MI ASM Reviewer	MI ASM Viewer
Has Risk Revisions	View, Update, Insert, Delete	View	View, Update, Insert, Delete	View
Has Root System	View, Update, Insert, Delete	View	View	View
Has Scenarios	View, Update, Insert, Delete	View	View	View
Has Strategy	View, Update, Insert, Delete	View	View	View
Has Strategy Revision	View, Update, Insert, Delete	View	View, Update, Insert, Delete	View
Has System Actions	View, Update, Insert, Delete	View	View	View
Has System Elements	View, Update, Insert, Delete	View	View	View
Has System Optimization	View, Update, Insert, Delete	View	View	View
Has System Resources	View, Update, Insert, Delete	View	View	View
Has System Results	View, Update, Insert, Delete	View	View	View
Has System Risks	View, Update, Insert, Delete	View	View	View
Has System Strategy	View, Update, Insert, Delete	View	View	View
Has TTF Distribution	View, Update, Insert, Delete	View	View	View
Has TTR Distribution	View, Update, Insert, Delete	View	View	View
Has Unplanned Resource Usages	View, Update, Insert, Delete	View	View	View
Has Work Management Item	View, Update, Insert	None	None	None
Has Work Management Item Definition Configuration	View	None	None	None
Health Indicator Has Mapping	View, Update, Insert, Delete	View	View	View

Family	MI ASM Analyst	MI ASM Administrator	MI ASM Reviewer	MI ASM Viewer
Health Indicator Has Source	View, Update, Insert, Delete	View	View	View
Implements Action	View, Update, Insert	None	View	View
Implements Secondary Strategy	View	None	None	None
Implements Strategy	View, Insert	None	None	None
Is Based on RBI Degradation Mechanism	None	None	View, Delete	None
Is Based on RCM FMEA Failure Effect	View, Update, Insert, Delete	None	None	None
Is Basis for Asset Strategy Template	View, Update, Insert, Delete	View	View, Update	View
Is Mitigated	View, Update, Insert, Delete	View	View, Update, Insert, Delete	View
Master Template Has Asset Strategy	View, Update, Insert, Delete	View	View, Update	View
Mitigates Risk	View, Update, Insert, Delete	View	View, Update, Insert, Delete	View
Safety Analysis Has Equipment	View	N/A	View	N/A
Was Applied to Asset Strategy	View, Update, Insert, Delete	View	View, Update	View
Was Promoted to ASM Element	View	None	View	View

Associating a Strategy with a Specific Site

Some companies that use the GE Vernova software have facilities at multiple sites or locations around the world. Each site contains unique locations and equipment.

If needed, you can define these sites and associate equipment and locations with the site to which they belong. When you create an Asset Strategy record and link it to an Equipment or Functional Location record, the Site Reference field will be populated automatically with the Record ID of the Site Reference record to which the Equipment or Functional Location record is linked. To help streamline the strategy-building process, the GE Vernova system will allow you to add multiple Asset Strategies to System Strategies only if all the underlying equipment and locations belong to the same site.

ASM System Code Tables

The following table provides a list of the System Code Tables that are used by ASM.

Table ID	Table Description	Function
MI_ACTION_TYPE	Action Type	Used to populate the Action Type list in Action records.
MI_PERFORMANCE_INTERVAL_UNITS	Performance Interval Units	Used to populate the Performance Interval Units list in Action records.
MI_TIME_UNITS	Time Units	Used to populate the Interval Units list in Action records.
SC_RECOM_RESOURCE	Recommended Resource	Used to populate the Recommended Resource list in Action records.

ASM URLs

There are three URL routes associated with Asset Strategy Management: **/strategy/overview**, **/strategy/asm**, and **/strategy/admin**. The following table describes the various paths that build on the routes, and the elements that you can specify for each.

Tip: For more information, refer to the URLs section of the documentation.

ASM URLs

Element	Description	Accepted Value(s)	Notes
/strategy/overview: Opens the **Asset Strategy Management** home page.			
/strategy/asm/strategy/<AssetEntityKey>: Displays the selected Strategy on the **Strategy Details** page.			
<AssetEntityKey>	Specifies the entity key of an asset whose associated strategy data you want to display.	The entity key of the asset.	The asset entity key must be present in the URL to display the correct page.
/strategy/asm/strategy/<AssetEntityKey>/<WorkspaceName>: Displays the selected strategy in the selected workspace.			
<WorkspaceName>	Specifies the workspace within which you want to open the query.	risks-actions	Displays the selected strategy in the **Risks and Actions** workspace on the **Strategy Details** page.
		analysis	Displays the selected strategy in the **Risk Analysis** workspace on the **Strategy Details** page.
		revisions	Displays the selected strategy in the **Revisions** workspace on the **Strategy Details** page.
		implement	Displays the selected strategy in the **Implement Actions** workspace on the **Strategy Details** page.

Element	Description	Accepted Value(s)	Notes
/strategy/asm/template/<TemplateEntityKey>: Displays the selected template on the **Strategy Details** page.			
<TemplateEntityKey>	Specifies the entity key of the template whose data you want to display.	The entity key of the template.	The template entity key must be present in the URL to display the correct page.
/strategy/asm/template/<TemplateEntityKey>/<TemplateWorkspaceName>: Displays the selected template in the selected workspace.			
<TemplateWorkspaceName>	Specifies the workspace within which you want to open the query.	controlled	Displays the selected template in the **Controlled Strategies** workspace on the **Strategy Details** template page.
		risks-actions	Displays the selected template in the **Risks and Actions** workspace on the **Strategy Details** template page.
		analysis	Displays the selected template in the **Risk Analysis** workspace on the **Strategy Details** template page.
		revisions	Displays the selected template in the **Revisions** workspace on the **Strategy Details** template page.
/strategy/asm/system/<SystemEntityKey>: Displays the selected system strategy on the **Summary** page.			
<SystemEntityKey>	Specifies the entity key of the system strategy whose data you want to display.	The entity key of the desired system strategy.	The system strategy entity key must be present in the URL to display the correct page.
/strategy/asm/system/<SystemEntityKey>/<SystemWorkspaceName>: Displays the selected system strategy in the selected workspace.			

Element	Description	Accepted Value(s)	Notes
<SystemWorkspaceName>	Specifies the workspace within which you want to open the query.	summary	Displays the selected system strategy in the **Summary** workspace.
		details	Displays the selected system strategy in the **Details** workspace.
		manage	Displays the selected system strategy in the **Manage** workspace.
		implement	Displays the selected system strategy in the **Implement** workspace.

Example ASM Overview URLs

Example URL	Destination
/strategy/overview	The **ASM Overview** page.
/strategy/asm/strategy/5272011/risks-actions	The **Risks and Actions** workspace for the specified strategy.
strategy/asm/template/2112805	The **Strategy Details** page for the specified template.

ASM Admin URLs

Element	Description
/strategy/admin	Opens **ASM Admin** with the first tab selected.
/strategy/admin/risk-card	Opens **ASM Admin** with the Risk Card tab selected.
/strategy/admin/action-card	Opens **ASM Admin** with the Action Card tab selected.

About the ASM Data Structure

Asset Strategy Management (ASM) helps you create a strategy through a cycle of proposing changes that result in a plan that maintains a piece of equipment or location while posing the least possible risk and incurring the least possible cost. Because it might take months of research and discussion for a team to decide upon the proposed changes to an existing strategy, companies need a way to track proposed strategy changes separately from the current strategy. This tracking method allows management to review the cost difference and risk difference that would result from implementation of the proposed changes.

Details

ASM facilitates the creation of multiple records to help you store information about a suggested strategy separately from information about the current strategy. The first step to creating any strategy is to create an Asset Strategy record. When you first save an Asset Strategy record, APM creates the following records, which are linked automatically to the Asset Strategy record:

- Proposed Strategy
- Active Strategy

These records serve as containers to identify the strategy using information such as the strategy ID and description. The records will be linked automatically to other records as you expand the strategy by adding Action records and Risk records and assessing the risk.

Ultimately, the Proposed Strategy record and the records to which it is linked represent the strategy that you propose the company implement. The Active Strategy record and the records to which it is linked represent the strategy that the company is currently implementing.

When you modify an Asset Strategy that is in the Active state, causing its state to change to Modified, APM captures your changes in the Proposed Strategy record and other records to which it is linked. When you later activate the strategy, the APM system copies the information from the Proposed Strategy record (and appropriate linked records) to the Active Strategy record (and appropriate linked records).

The Proposed Strategy record and its linked records are then identical to the Active Strategy record and its linked records until additional changes are made, which causes the cycle to continue.

ASM families can also participate in additional relationships with families in the Asset Criticality Analysis (ACA) data model, if an Asset Criticality Analysis System record is promoted from ACA to ASM.

About the Risk and Cost Summary Graphs

Risk Profile and Cost Projection charts are on the **Strategy Details** page and the **Risk Analysis** page of every strategy in ASM. This topic explains each type of chart or graph and how best to interpret them and the results that they provide for your assets.

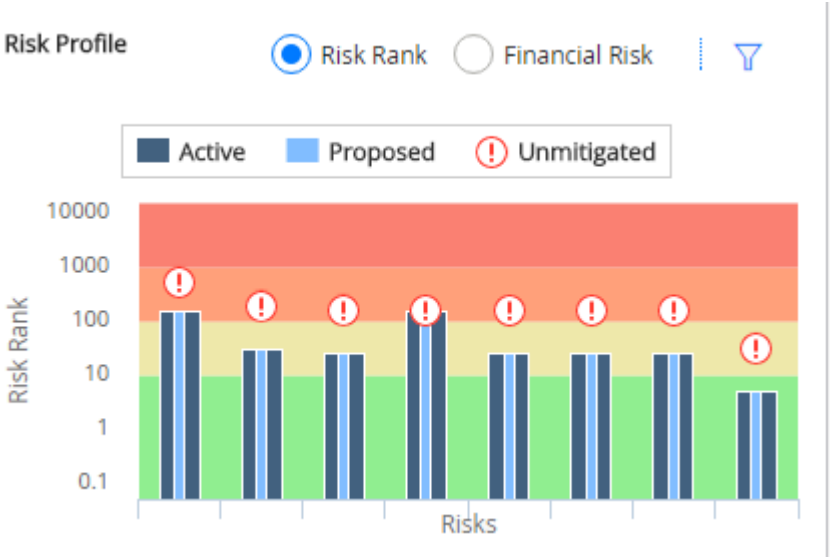
Interpreting the Risk Profile Chart

The Risk Profile chart that appears on the **Strategy Details** page shows only the Active and Unmitigated risk ranks, whereas the **Risk Analysis** shows the Proposed risk rank data, allowing you to compare the Active Strategy and the Proposed Strategy.

Note: The Risk Profile chart does not display Risk records that have been removed from the Proposed Strategy.

Risk Rank

The following image shows an example of a **Risk Profile** chart from the **Risk Analysis** section of a strategy, displaying the **Risk Rank** graph.



The **Risk Rank** graph contains the following elements:

- **Unmitigated Risk Rank:** The values for the unmitigated risk rank for each Risk in the Active Strategy are signified by .
- **Proposed Mitigated Risk Rank:** The values for the projected/proposed Strategy Mitigated Risk Rank value for each Risk that belongs to the Proposed Strategy are displayed on the light-blue vertical bar. As you make changes to the Asset Strategy, changing the strategy's state to Modified, those changes are reflected in the bars on the graph.
- **Active Risk Rank:** The Strategy Mitigated Risk Rank value for each Risk that belongs to the Active Strategy. These values are displayed on the dark-blue vertical bars on the graph.

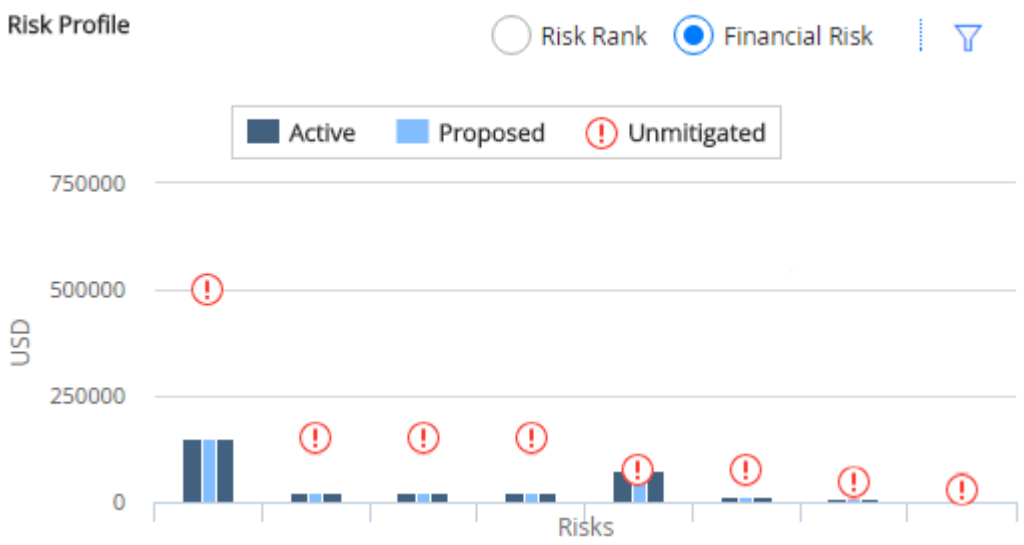
Note: If a Proposed Strategy contains more Risks than the corresponding Active Strategy, the additional Risks are displayed on the Risk Profile chart. For any additional Risk, the unmitigated risk rank and the active risk rank will be the same until the strategy is activated.

Financial Risk

You can use the radio buttons on the Risk Profile (Risk Profile) chart to toggle between the Risk Rank graph and the Financial Risk graph. As seen below, the Financial Risk graph shows the financial risk of each asset in the strategy.

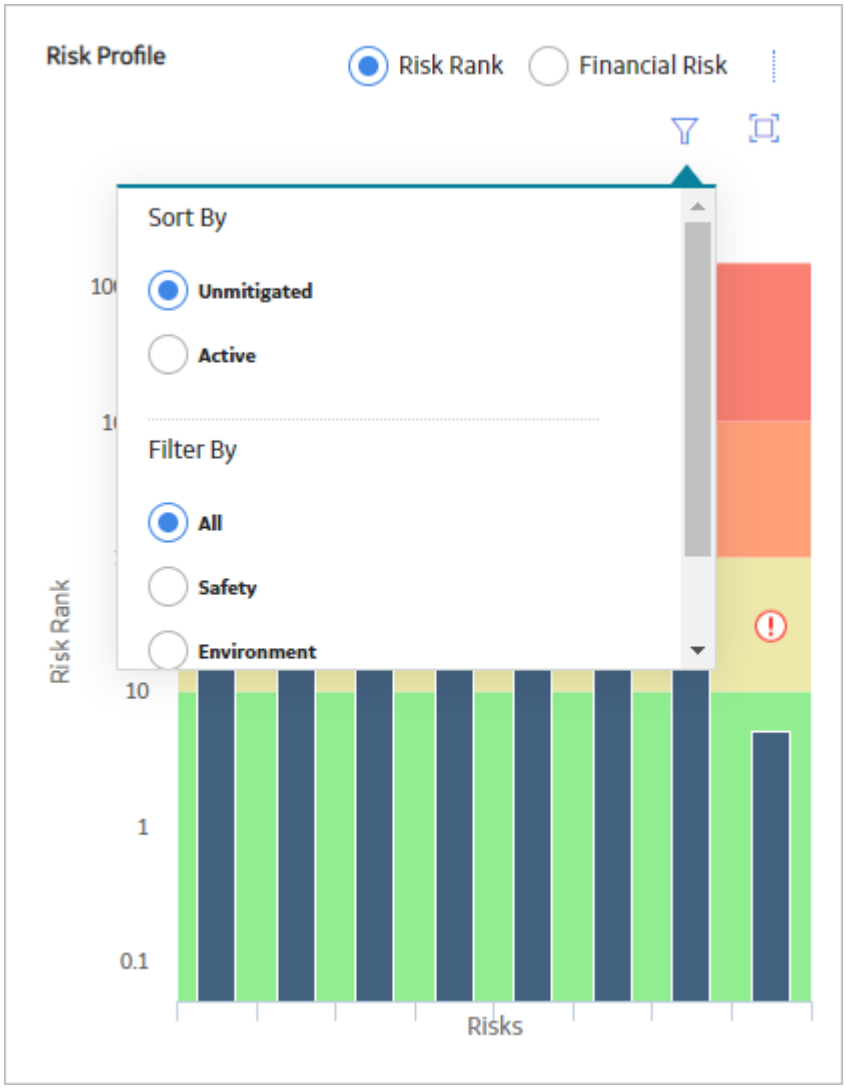
The risks are shown on the x-axis, while the y-axis contains a monetary amount in US Dollars (USD) for the following scenarios, which appear in the following chart.

- **Unmitigated :** The risks presented with no changes.
- **Active :** The risks as they are in an active strategy.
- **Proposed :** The risks as proposed with changes to the strategy.

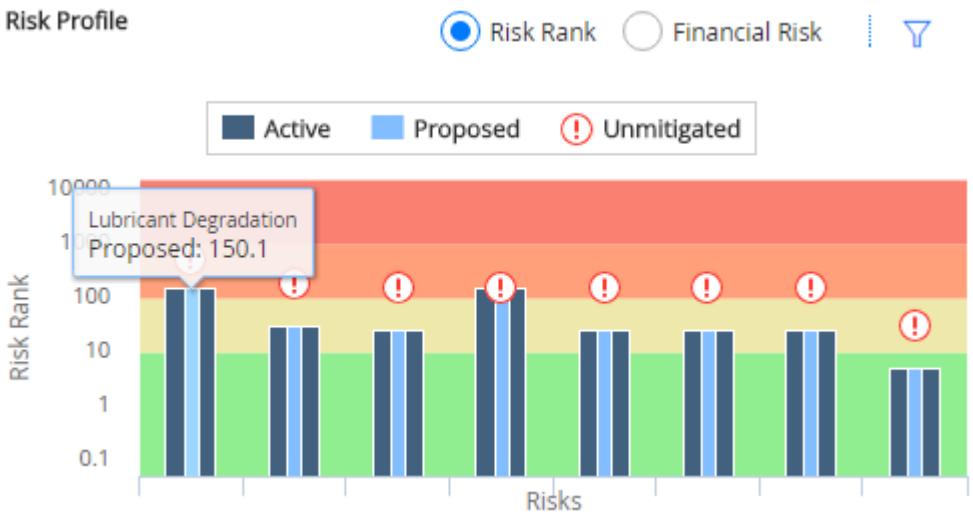


Manipulating the Risk Rank and Financial Risk Charts

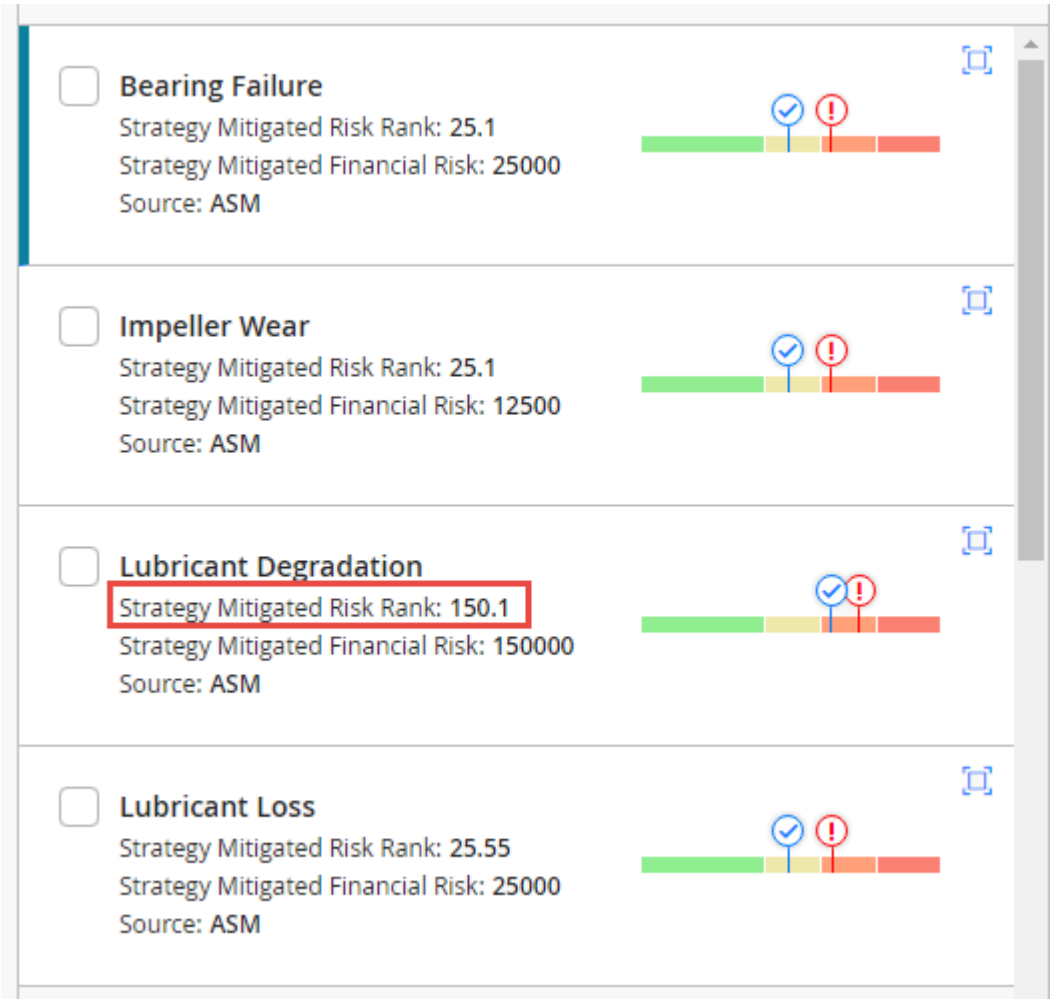
You can select to expand the **Sort By** list, which has sort and filter parameters pertaining to the chart organization, as shown in the following image.



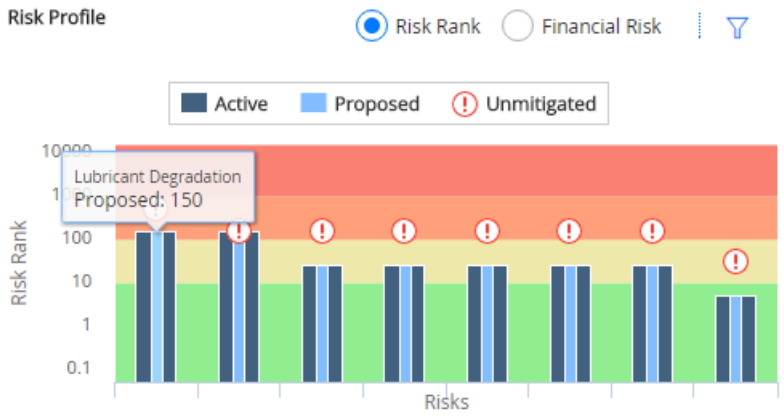
For example, consider the following graph, which shows the total mitigated risk, 150.1, for Lubricant Degradation across all risk categories.



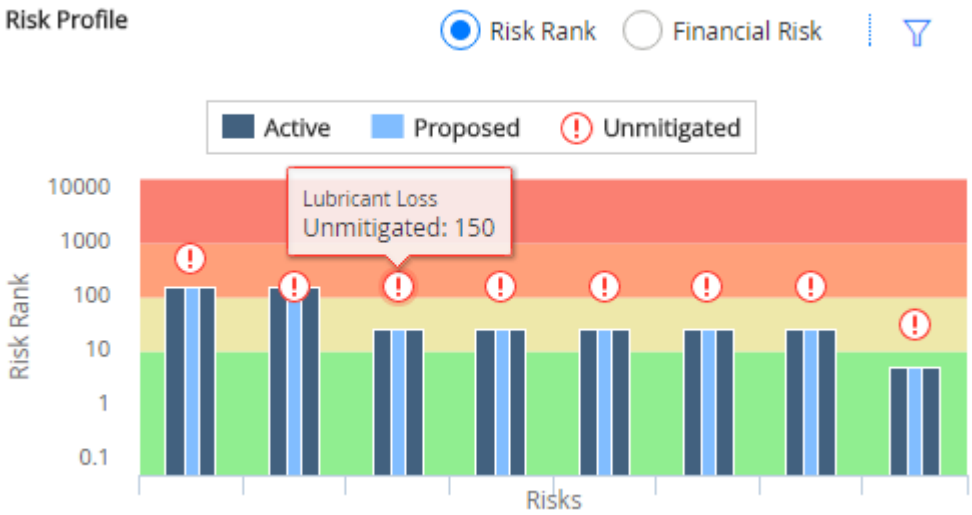
You would also see this value on the action card for Strategy Mitigated Risk Rank, accessed via the **Risks and Actions** page in your Asset Strategy.



If you filtered the **Risk Profile** section to display only risk values associated with the Operations risk category, it would look like the graph in the following image.

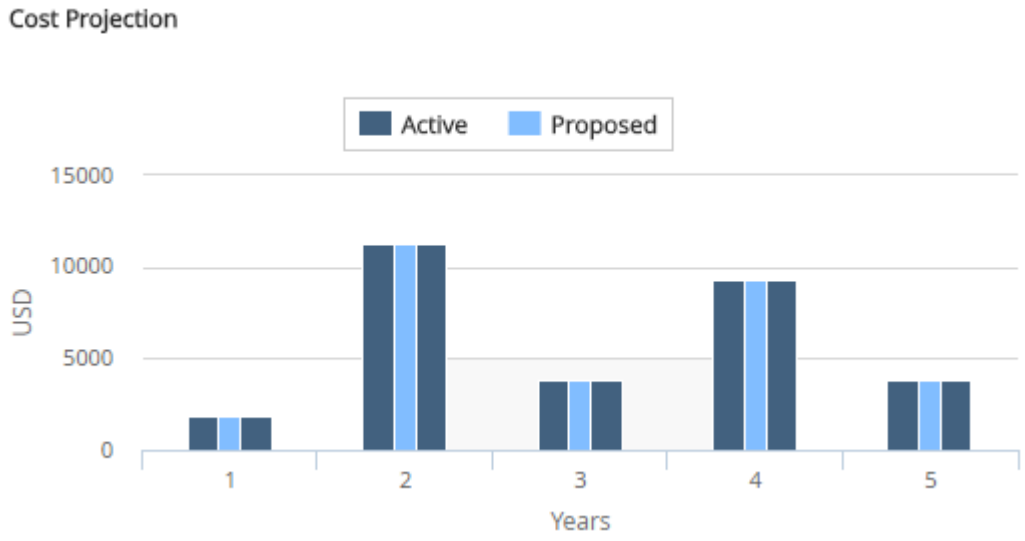


If you place the cursor over the line and the bars, you can choose to show the datapoint values on the graph to determine the exact risk rank values. The following image displays the example graph with the cursor hovering over the unmitigated risk bar for Lubricant Loss.



Interpreting the Cost Projection Chart

The **Cost Projection** chart combines the Active and Proposed scenarios for the cost of risk mitigation over a set period of time as defined in the Plan Length field for the strategy record, with the increments of time being on the y-axis and a monetary amount in US Dollars (USD) on the x-axis. The **Strategy Details** page shows only the Active scenarios, while the **Risk Analysis** page compares both Active and Proposed. The Proposed scenarios appear as a light-blue vertical bar and the Active projections appear as a dark-blue vertical bar, as seen in the following chart.



Maintaining Synchronization between the Asset Strategy and the Linked Analysis in ASO

When the optimization process is initiated from ASM, the contents of the Asset Strategy are transferred to the ASO module and the strategy in ASM is placed in Simulation mode. An Active scenario and a proposed scenario are then created in ASO.

The purpose of the Active scenario is to retain a visible record of the source strategy in ASO, for comparison purposes, while the proposed scenario provides a copy to be modeled under various proposed changes, the results of which will be shown in the simulation results, and in ASM.

When changes are made to the source strategy in ASM or to the proposed scenario in ASO, these are not immediately reflected in the linked module, i.e., synchronization is not automatic. The contents of the two modules are synchronized each time a Monte Carlo simulation is run.

When a simulation run is initiated, all scenarios (Active, Proposed and copies) are subjected to Monte Carlo simulation, for which valid simulation data will need to be added via the scenario grids. If insufficient or invalid data is preventing simulation from running the user is taken to each scenario in turn to complete the necessary data, with mandatory entries being indicated by a red icon and a count showing on the scenario tab in the left navigation pane.

When the simulation run has been completed, the contents of the proposed scenario are reflected in ASM, which is placed in a modified state. If initial synchronization, based on the proposed scenario in ASO, has not taken place, or the proposed scenario has been modified in ASO since the last simulation run, the user will not be permitted to make changes to the source strategy in ASM via Risk Analysis. Here the user will be notified in Risk Analysis and Review Strategy pages of the need to rerun the simulation and a hyperlink provided on these pages to initiate the Simulation run.

Note: The above restrictions on modifying a strategy in ASM do not apply to the Risk and Actions pages. Any additions or modifications to Actions and Risks will be captured in the Active and Proposed scenarios in ASO when the user selects **Run Simulation** in ASM. It is important that the hyperlink provided in the Risk Analysis and Review Strategy pages in ASM is used at this point since changes in ASM will not be captured if the Simulation is run from ASO. If the user chooses to run the Simulation from ASO the modified strategy will be

overwritten with the simulation results from the proposed scenario before these changes had been captured and run in the ASO Analysis.

About Revision Families in the ASM Data Model

The following revision families exist in the ASM data model:

- Strategy Revision
- Actions Revision
- Risks Revision
- Risk Assessment Revision

Details

Records are created in these families when you modify certain information about an Asset Strategy. The following table explains when these records are created.

This action:	...Creates this record
Activating an Asset Strategy for the first time	Strategy Revision Actions Revision Risks Revision
Activating an Asset Strategy after modifying an Action record	Actions Revision
Activating an Asset Strategy after modifying a Risk record	Risks Revision
Activating an Asset Strategy after modifying a Risk Assessment record that is linked to an Action record **Note:** If you activate an Asset Strategy after modifying a Risk Assessment record that is linked to a Risk record, a Risk Assessment Revision is not created. The Risk Revision record that is created as a result of the change is updated to contain the new risk rank, so a Risk Assessment Revision record is not needed.	Risk Assessment Revision
Activating a System Strategy if the underlying Asset Strategies have never been activated	Strategy Revision Actions Revision Risks Revision

ASM State Configuration

ASM leverages State Configuration Roles, which you can assign to Security Users to manage who can transition strategies from one state to another.

Details

In the baseline APM database, no State Configuration Roles are assigned to any state in the Asset Strategy State Configuration or the Asset Strategy Template State Configuration. If needed, an administrative user can assign State Configuration Roles to these states.

Throughout ASM, some options will be disabled based on whether or not the current user is assigned to the State Configuration Role that is required to perform that action. In other words, if an action will change the state of the strategy (e.g., adding an Action record) and the current user does not have permission to change the state, all options that would cause the state to change will be disabled. For example, consider the following scenario:

- An administrative user has specified that only members of the Asset Strategy Modifier State Configuration Role can transition an Active Strategy to the Modified state.
- Only members of the ASM Analyst Security Group are assigned to the Asset Strategy Modifier State Configuration Role.
- A user is logged in to APM as a member of only the ASM Reviewer Security Group.

In this case, when the ASM Reviewer opens, on the **Asset Strategy Actions** page, an Asset Strategy in the Pending Review state, the following options will be disabled on that page:

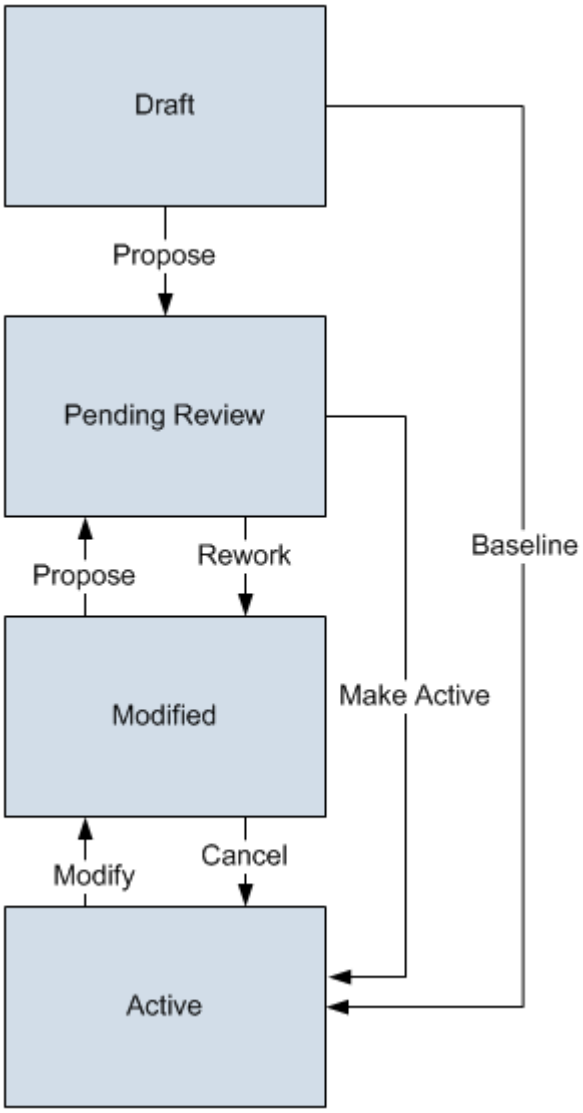
- The **Add Action** button.
- The **Remove Action** button.
- The **Undo Action** button.
- The **Assign New Risk** button.
- The **Assign Existing Risk** button.
- The Action datasheet.
- The Risk Assessment datasheet.

If no State Configuration Roles are specified for State Configuration, as in the baseline database, all options will be available to all users, and state changes will not be restricted. To take full advantage of the features in ASM, we recommend that you assign members of the ASM Security Groups to a corresponding State Configuration Role.

The following diagram shows the states and operations that exist in the baseline State Configuration for the Asset Strategy family. You can use this diagram to determine which operations will appear on the **Operations** menu when you are viewing an Asset Strategy. The **Operations** menu will display any operation to which the current Asset Strategy record can be transitioned from its current state.

Note: The information in this topic also applies to the configuration of Asset Strategy Template State Configuration.

State Configuration



The Draft state is the initial state of all new Asset Strategy records.

- **Datasheet Configuration:** By default, states and operations will appear on the datasheet when you are viewing an Asset Strategy record in the Record Manager.
- **Reserved States and Operations:** By default, all states and operations displayed in the preceding diagram are reserved. This means that you cannot remove or modify any of these states or operations. You also cannot add operations whose successor state is set to Active.
- **State Configuration Roles.** By default, no State Configuration Roles are assigned to any state in the Asset Strategy State Configuration. As needed, you can assign State Configuration Roles to any state.

ASM Site Filtering

Asset Strategies

Site filtering is applied to asset strategies by one of the following methods:

- **Assigning a site using the Site control on the new asset strategy datasheet**: Using the **Site** control, you can choose a site from any of your available sites or designate the record as **Global**. Once the new strategy is saved, the site is locked for that strategy and cannot be changed. You can switch assets assigned to the strategy, but it must be an asset with the same site assignment.
- **Assigning an asset to the strategy**: All of the strategy's associated records are assigned to the same site as the asset. If an asset strategy is initially set to global, after you assign an asset to the strategy and save it, the site assignment it inherits from that asset is locked and cannot be changed. You can switch assets assigned to the strategy, but it must be an asset with the same site assignment.

System Strategies

Site filtering is applied to system strategies by one of the following methods:

- **Assigning a site using the Site control on the new system datasheet**: Using the **Site** control, you can choose a site from any of your available sites or the global option. Once the site is set for the system, you will only be able to add asset strategies with that same site assignment.
- **Assigning an asset strategy with an assigned site to the system strategy**: If the system was initially created as global, and you assign an asset strategy to the system, the system will inherit the site of the asset strategy.

  Note: All strategies in a system must be of the same site.

Note: When you create a new asset strategy within a system strategy, the new asset strategy inherits the site from the system strategy, and you are only able to add assets to the asset strategy that are of the same site.

Asset Strategy Templates

The Strategy Template family is not enabled for site filtering. All records under a template are designated as **Global**. Templates can be applied as a copy to strategies from any site as long as their risk matrices match. The template then controls strategies from multiple sites as a master. If the template has controlled strategies from multiple sites, and you do not have permissions for all of those sites, you will not be able to activate the template.

Examples

Consider an organization that has two sites, Site X and Site Y. Further, and then consider the following scenarios:

Scenario 1: User assigned to both Site X and Site Y links assets to a strategy

Equipment 1 is assigned to Site X and Equipment 2 is assigned to Site Y. Asset Strategy 1 is assigned to Site Y. The user links Equipment 2 to Asset Strategy 1, because they share the same site (Site Y).

The user is unable to link Equipment 1 to Asset Strategy 1, because Equipment 1 would not appear in the list of available assets to link there due to site incompatibility. So, even though

this multi-site user can view both Equipment 1 and Equipment 2, they cannot link an equipment to a strategy with an incompatible site assignment.

Scenario 2: User assigned to both Site X and Site Y links an asset strategy to a system strategy

Asset Strategy 1 is assigned to Site Y and System Strategy 1 is a global record. The user links Asset Strategy 1 to System Strategy 1, which sets the site for System Strategy 1 as Site Y.

Now, only asset strategies with the Site Y assignment are able to added to System Strategy 1.

Scenario 3: User assigned to Site X and Site Y applies a template to a strategy

Asset Strategy 1 is assigned to Site Y and Asset Strategy 2 is assigned to Site X. The user applies Template A to Asset Strategy 1 and to Asset Strategy 2, even though have separate site assignments.

Family Field Descriptions

Asset Strategy Records

The following table provides an alphabetical list and description of the fields that exist in the Asset Strategy family. The information in the table reflects the baseline state and behavior of these fields.

This family is enabled for site filtering, which means that records in this family can be assigned to a specific site, and will only be accessible to users who are assigned to the same site and have the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

Field	Data Type	Description	Behavior and Usage
Description	Text	A description of the strategy.	The **Text Editor** window appears, on which you can enter a description.
Plan Length	Numeric	The number of years for which you want to calculate costs.	This value will be used to determine the number of datapoints (bars) on the Cost Projection graph.

Field	Data Type	Description	Behavior and Usage
Risk Analysis Type	List	A value that indicates whether the strategy results (shown in the graphs) are based on an ASO Analysis or not.	The field will contain one of the following values: • **Simulation**: The strategy results are based on an ASO Analysis. • **Qualitative**: The strategy results are not based on an ASO Analysis. Note the following about the Risk Analysis Type field: • If the Asset Strategy has never been used to create an ASO Analysis and is not included in an ASO Analysis, the value will be set to Qualitative, and the field will be disabled. If you create an ASO Analysis from the Asset Strategy or include the Asset Strategy in an ASO Analysis by creating an analysis from a System Strategy that includes the Asset Strategy, the value will be changed automatically to Simulation. • If the Asset Strategy was used to create an ASO Analysis, the value will be set to Simulation, and the field will be enabled. If needed, you can change the value to Qualitative to update the strategy results so that they are no longer based on the ASO Analysis. If you change the value to Qualitative, the ASO Analysis will not be deleted or unlinked from the Asset Strategy. • If the Asset Strategy is included in an ASO Analysis but was not used to create the analysis, the value will be set to Simulation, and the field will be disabled. The value will be changed automatically to Qualitative only if the Risk Analysis Type in the System Strategy that includes the Asset Strategy is set to Qualitative.
Strategy ID	Character	The ID of the strategy.	Does not have to be unique.
Strategy Notes	Text	Any additional information you want to provide about the strategy.	The **Text Editor** window appears, on which you can enter any notes.
Strategy Re-Evaluation Date	Date/Time	The date on which you want to reevaluate the strategy.	Cannot be before the Activated By date.

Strategy Template Records

The following table provides an alphabetical list and description of the fields that exist in the Strategy Template family. The information in the table reflects the baseline state and behavior of these fields.

This family is not enabled for site filtering, which means that records in this family can be accessed by any user with the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

Field	Data Type	Description	Behavior and Usage
Criticality	Character	The degree to which an asset is functionally or economically important.	This field is read-only and populated automatically.
Description	Text	A description of the Asset Strategy Template.	The **Text Editor** window appears, on which you can enter a description.
Duty	Character	The duty cycle context under which the asset is operating (for example, continuous or standby).	This field is read-only and the value is populated by the APT template data load.
Risk Matrix	List	A list that contains the Record IDs of the Risk Matrix records that exist in the database.	This field is disabled after the Asset Strategy Template record is saved.
Service	Character	The process and environmental conditions under which the asset is operating.	This field is read-only and the value is populated by the APT template data load.
Template Evaluation Date	Date/Time	The date on which you want to reevaluate the Asset Strategy Template.	Cannot be before the Activation date.
Template ID	Character	The ID of the Asset Strategy Template.	Template ID does not need to be unique.
Template Notes	Text	Any additional information you want to provide about the Asset Strategy Template.	The **Text Editor** window appears, on which you can enter any notes.

System Strategy Records

The following table provides an alphabetical list and description of the fields that exist in the System Strategy family. The information in the table reflects the baseline state and behavior of these fields.

This family is enabled for site filtering, which means that records in this family can be assigned to a specific site, and will only be accessible to users who are assigned to the same site and have the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

Field	Data Type	Description	Behavior and Usage
Description	Text	A description of the System Strategy.	The **Text Editor** window appears, on which you can enter your description.
Risk Analysis Type	List	A value that indicates whether the strategy results (shown in the graphs) are based on an ASO Analysis or not.	The field will contain one of the following values: • **Simulation**: The strategy results are based on an ASO Analysis. • **Qualitative**: The strategy results are not based on an ASO Analysis. Note the following about the Risk Analysis Type field: • If the System Strategy has never been used to create an ASO Analysis and is not included in an ASO Analysis, the value will be set to Qualitative, and the field will be disabled. If you create an ASO Analysis from the System Strategy, the value will be changed automatically to Simulation. • If the System Strategy was used to create an ASO Analysis, the value will be set to Simulation, and the field will be enabled. If needed, you can change the value to Qualitative to update the strategy results so that they are no longer based on the ASO Analysis. If you change the value to Qualitative, the ASO Analysis will not be deleted or unlinked from the System Strategy. • If the System Strategy is included in an ASO Analysis but was not used to create the analysis, the value will be set to Simulation, and the field will be disabled.
System ID	Character	The ID of the System Strategy.	Does not have to be unique. This field is required.

Action Records

The following table provides an alphabetical list and description of the fields that exist in the Action family. The information in the table reflects the baseline state and behavior of these fields.

This family is enabled for site filtering, which means that records in this family can be assigned to a specific site, and will only be accessible to users who are assigned to the same site and have the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

Field	Data Type	Description	Behavior and Usage
Action Basis	Text	The basis for the action being created.	This is not a required field.
Action ID	Character	The ID of the action.	Populated automatically from the name of the associated strategy when the action is created.
Action Type	List	The type of action you are creating.	Use the drop-down list to select the type of action.

Field	Data Type	Description	Behavior and Usage
Condition Monitoring Type	List	The type of condition monitoring for the action.	This field becomes active after the associated strategy is moved to an Active state.
Cost	Numeric	Cost to execute the action in US dollars.	Every time the action is performed, this amount is factored into the Annual Cost and Cost Projection graphs.
Cost Basis	Text	Description to justify cost of performing action.	Enter basis for the cost of carrying out the action each time.
Description	Text	A description for the action.	This is not a required field.
Existing Plan	Boolean	Is this action part of an existing plan?	Select the check box if the action is part of an existing plan.
Interval	Numeric	The number of the interval unit corresponding to how often the action should be performed.	This value corresponds with Interval Units to give the complete frequency with which the action should be performed.
Interval Units	List	The unit of the interval corresponding to how often the action should be performed.	This value corresponds with Interval to give the complete frequency with which the action should be performed.
Mandatory	Boolean	The action is required.	This check box is filled if the action is a required action.
Name	Text	A name for the action.	This is a required field.
Nonrecurring	Boolean	Should the action be on a recurring basis or only once.	Select the check box if you only want the action performed once instead of on a recurring basis.
Performance Interval	Numeric	Reference value for the interval of the performance of the action.	The values in the Performance Interval field is not used in any calculations in ASM. You can use them as reference values, but no logic is executed based on the values. All calculations that require an interval are based on the values in the Interval field and the Interval Units field.
Performance Interval Units	List	Reference value for the interval units of the performance of the action.	The values in the Performance Interval Units field is not used in any calculations in ASM. You can use them as reference values, but no logic is executed based on the values. All calculations that require an interval are based on the values in the Interval field and the Interval Units field.
Recommended Resource	Text/List	A custom entry for a resource to execute action.	Use the drop-down list and enter text into the **add caption** box that corresponds to the custom resource.

Field	Data Type	Description	Behavior and Usage
Shutdown Required	Boolean	Is shutdown required after performing the action?	Select the check box to flag for an equipment shutdown after the action is applied.
Target Completion Date	Date/Time	Target date for the action to be executed.	Use the date/time selectors to select the date and time by which the action must be executed.

Risk Records

The following table provides an alphabetical list and description of the fields that exist in the Risk family. The information in the table reflects the baseline state and behavior of these fields.

This family is enabled for site filtering, which means that records in this family can be assigned to a specific site, and will only be accessible to users who are assigned to the same site and have the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

Field	Data Type	Description	Behavior and Usage
Main			
Description	Text	A description for the risk.	This is not a required field.
Financial Risk	Numeric	The numeric value for the total unmitigated financial risk for the asset.	This value is calculated from the risk assessment performed by the user on the risk matrix.
Name	Text	A name for the risk.	This is a required field.
Risk Basis	Text	The basis for the risk being created.	This is not a required field.
Risk ID	Character	The ID of the risk.	Populated automatically from the name of the associated strategy when the risk is created.
Risk Rank	Numeric	The numeric value for the total unmitigated risk across all categories for the asset.	This value is calculated by APM. The calculation is done based on the user-provided values in the unmitigated risk assessments performed on the risk matrix.
Detail			
Condition	Text	The condition of the associated asset.	This is not a required field.
Failure Cause	Text	The cause of the failure.	This is not a required field.

Field	Data Type	Description	Behavior and Usage
Failure Mode	Text	The failure mode linked to the risk.	This field is automatically populated with the failure mode associated with the asset strategy.
Maintainable Item	Character	An item from an EAM system, failure codes, etc.	This value is based on an indexing system outside of APM, and therefore must be entered manually.
PF Interval	Numeric	The interval value for potential to failure of the asset.	Enter the number of the interval to be combined with the PF Interval Units.
PF Interval Units	List	Unit of measurement for the potential to failure of the asset.	The field will contain one of the following values: • Minutes • Hours • Days • Weeks • Months • Years

EAM Plan Records

The following table provides an alphabetical list and description of the fields that exist in the EAM Plan Records family. The information in the table reflects the baseline state and behavior of these fields.

This family is enabled for site filtering, which means that records in this family can be assigned to a specific site, and will only be accessible to users who are assigned to the same site and have the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

Field	Data Type	Description	Behavior and Usage
EAM System ID	Character	The unique ID of the EAM System source.	This field is disabled and populated automatically.
Equipment	Character	The ID of the associated Equipment.	This field is disabled and populated automatically.
Functional Location	Character	The ID of the associated Functional Location.	This field is disabled and populated automatically.
Item Change Date	Date	The date on which the EAM Maintenance item was last modified.	This field is disabled and populated automatically.
Item Created Date	Date	The date on which the EAM Maintenance Item was created.	This field is disabled and populated automatically.

Field	Data Type	Description	Behavior and Usage
Item Description	Character	The unique ID of the EAM Maintenance Item.	This field is disabled and populated automatically.
Item ID	Character	The unique ID of the EAM Maintenance Item.	This field is disabled and populated automatically.
Item Long Text	Text	The long description of the EAM Maintenance Item.	This field is disabled and populated automatically.
Plan Call Horizon	Numeric	A numeric description of the EAM Plan.	This field is disabled and populated automatically.
Plan Category	Character	The associated category of the EAM Plan.	This field is disabled and populated automatically.
Plan Change Date	Date	The date on which the EAM plan was last modified.	This field is disabled and populated automatically.
Plan Created Date	Date	The date on which the EAM Plan was created.	This field is disabled and populated automatically.
Plan Description	Character	The short description of the EAM Plan.	This field is disabled and populated automatically.
Plan ID	Character	The unique ID of the EAM Plan.	This field is disabled and populated automatically.
Plan Interval	Numeric	The numeric interval for the plan.	This field is disabled and populated automatically.
Plan Interval Units	Character	The unit of measure for the associated interval of the plan.	This field is disabled and populated automatically.
Plan Long Text	Text	The long description of the EAM Plan.	This field is disabled and populated automatically.
Plan Start Date	Date	The date on which the EAM Plan will begin.	This field is disabled and populated automatically.
Plan Strategy	Character	Indicates the strategy plan value for plans that are not based on a cycle.	This field is disabled and populated automatically.
Task List Change Date	Date	The last modified date for the EAM Task List.	This field is disabled and populated automatically.
Task List Created Date	Date	The date on which the EAM Task List was created.	This field is disabled and populated automatically.
Task List Description	Character	The short description of the EAM Task List.	This field is disabled and populated automatically.
Task List ID	Character	The unique identifier of the EAM Task List.	This field is disabled and populated automatically.

EAM Plan Details Records

The following table provides an alphabetical list and description of the fields that exist in the EAM Plan Details Records family.

This family is enabled for site filtering, which means that records in this family can be assigned to a specific site, and will only be accessible to users who are assigned to the same site and have the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

Field	Data Type	Description	Behavior and Usage
EAM System ID	Character	The unique ID of the EAM System source.	This field is disabled and populated automatically.
Operation Change Date	Date	The date on which the EAM Operation was last modified.	This field is disabled and populated automatically.
Operation Control Key	Date	The control key of the EAM Operation.	This field is disabled and populated automatically.
Operation Created Date	Date	The creation date for the EAM Operation.	This field is disabled and populated automatically.
Operation Description	Character	The short description of the EAM Operation.	This field is disabled and populated automatically.
Operation ID	Character	The unique ID of the EAM Plan.	This field is disabled and populated automatically.
Operation Long Text	Text	The long description of the EAM Operation.	This field is disabled and populated automatically.
Task List ID	Character	The unique ID of the EAM Task List.	This field is disabled and populated automatically.

Catalog Items

About the ASM Catalog Folder Structure

The main ASM Catalog folder is `\\Public\Meridium\Modules\Asset Strategy Management\Management`. This folder contains the subfolders, Queries and Reports, which contain baseline queries and reports that are used by default in ASM.

Another Catalog folder is `\\Public\Meridium\Modules\Asset Strategy`. This folder contains subfolders, Dashboards and Graphs, which contain baseline dashboards and graphs used by default in ASM.

If desired, you can store additional items in the main ASM Catalog folder or in the subfolders. In addition, you can create new subfolders to store additional items.

Note: All Public folders exist by default. Any baseline item in the Baseline folder is also available in the corresponding Public folder. Throughout this documentation, however, we refer to items in the Public folder.

Graphs Folder

The Catalog folder `\\Public\Meridium\Modules\Asset Strategy` contains subfolders which contain the baseline graphs that are used in ASM dashboards. The following table contains the graph names and details.

Graph	Behavior and Usage
Action Count By State	Displays a graph representing all of the actions separated according to their state. This graph is used in the **ASM Dashboard**.
Cost of Events per Month by Asset	Displays a graph representing the monthly costs of maintenance for each asset. This graph is used in the **Asset Strategy Dashboard**.
Criticality Distribution	Displays a graph representing the criticality for assets. This graph is used in the **Asset Strategy Dashboard**.
Strategy Count By State	Displays a graph representing all of the strategies separated according to their state. This graph is used in the **ASM Dashboard**.
Total Cost of Unreliability	Displays a graph representing the total cost of unreliability on a monthly basis. This graph is used in the **Asset Strategy Dashboard**.
Total Unplanned Maintenance Costs	Displays a graph representing the total cost of all unplanned maintenance on a monthly basis. This graph is used in the **Asset Strategy Dashboard**.

Reports Folder

The Catalog folder `\\Public\Meridium\Modules\Asset Strategy Management \Management\Reports` contains the baseline report that is used by default in ASM. The following table identifies that report.

Report	Behavior and Usage
Asset Strategy Approval Report	A summary report used to review an asset strategy and determine whether to approve it or send it for rework.

Queries Folder

The Catalog folder `\\Public\Meridium\Modules\Asset Strategy Management \Management\Queries` contains the baseline queries that are used by default in ASM. The following table identifies and describes the queries.

Note: All Public folders exist by default. Any baseline item in the Baseline folder is also available in the corresponding Public folder. Throughout this documentation, however, we refer to items in the Public folder.

Query	Behavior and Usage
Active_Template_Search	Returns a list of all asset strategy template records that are currently in the Active state.
Asset Strategy Action Revisions	Returns a list of columns representing fields from the Action family. The query is also used to support the **Implement Actions** workspace.
Asset Strategy Actions Detail	Returns the costs and details of the asset strategy's mitigating actions. The query is also used to support the **Asset Strategy Approval Report** .
Asset Strategy Active Actions Detail	Returns the details of the asset strategy's active mitigating actions. The query is also used to support the **Asset Strategy Approval Report**.
Asset Strategy Active Mitigated Financial Risks Detail	Returns the details of all of the actions that mitigate financial risks for an asset strategy. The query is also used to support the **Asset Strategy Approval Report**.
Asset Strategy Active Mitigated Risks Detail	Returns the details of all the actions that mitigate risks for an asset strategy. The query is also used to support the **Asset Strategy Approval Report**.
Asset Strategy Definition	Returns definition information for a particular asset strategy. The query is also used to support the **Asset Strategy Approval Report**.
Asset Strategy Financial Risks	Returns the financial risks for an asset strategy. The query is also used to support the **Asset Strategy Approval Report**.
Asset Strategy Risk Profile	Returns the risk profile information for an asset strategy. The query is also used to support the **Asset Strategy Approval Report**.
Asset Strategy Risk Summary	Returns strategy-level risk information. The query is also used to support the **Asset Strategy Approval Report**.
Asset_Strategy_Search	After prompting you to select a family and a state, returns a list of all asset strategy records that are linked to a record in the selected family and that are currently in the selected state. APM runs this query when you search for any strategy in ASM.
Asset_Strategy_Search_Non_Pending	After prompting you to select a family, returns a list of all asset strategy records that are linked to a record in the selected family.
Calibration Task Link Existing Query	This query is used by the ASM Implement Actions section to locate existing Calibration Tasks for implementation.

Query	Behavior and Usage
EAM Action Mapping	Returns a list of fields from the Action family that are used in the Implement as EAM Work Request and EAM Maintenance Plan features. Using this query, you can control the mappings between Action data and the EAM Notifications via the Implement as EAM Work Request and EAM Maintenance Plan features. Using Action Mappings, you can send Action information to your EAM system as a singular work request or a recurring maintenance plan.
Inspection Task Link Existing Query	This query is used by the ASM Implement Actions section to locate existing Inspection Tasks for implementation.
Locate Assets By EAM System For Import	Returns Equipment and Functional Location records where the value in the CMMS System field of the record matches the SAP System of a selected ASI package. The results of this query are displayed in the **Asset Strategy Builder** when importing SAP objects into ASI.
Locate Assets For Import	Returns a list of equipment records.
Locate Assets For Template Application	Returns assets which belong to a family that can be related to asset strategies and that are not already in a Master Template relationship.
Locate Unlinked Work Management Items For Assets	Returns all work management items, for a specified set of assets, that are not linked to an implementation package.
Strategies Without Master Templates	After prompting you to select a family, returns a list of: asset strategy records that are linked to a record in the selected family but are not linked to an asset strategy template record through the Master Template Has Asset Strategy relationship. Asset strategy records that are not linked to a record and are not linked to an asset strategy template record through the Master Template Has Asset Strategy relationship. APM runs this query when you select the **Add Existing** button on the asset strategy or when you choose to apply an asset strategy template as a master in the Apply Template Builder.
Strategy Asset Families	Returns the list of asset strategy families.
System_Strategy_Search	Returns a list of all system strategy records. APM runs this query when you select the **System Strategies** tab on the ASM Module Overview.
Template_Search	Returns a list of asset strategy templates.

Dashboards Folder

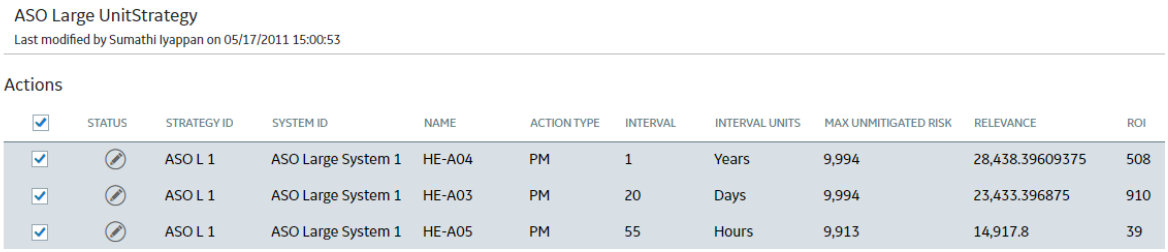
The Catalog folder `\\Public\Meridium\Modules\Asset Strategy\Dashboards` contains the baseline dashboards that are used by default in ASM. The following table identifies and describes the dashboards.

Dashboard	Behavior and Usage
ASM Dashboard	Used for the **ASM Overview** page, which contains the **Action Count By Type** and **Strategy Count by State** graphs.
Asset Strategy Dashboard	Displays ASM graphs and queries as widgets. This dashboard can also be set as the **ASM Overview** page dashboard.

Calculations

ROI Calculation

In the **Risks** workspace of an Asset Strategy, the ROI column appears in the Mitigating Actions section, as shown in the following image. The purpose of this column is to help the user identify the relative worth of each Action in terms of its ability to, in a cost-effective manner, mitigate the risks to which they are linked. A red outline has been added to this image to highlight the ROI column.


ASO Large UnitStrategy

Last modified by Sumathi Iyappan on 05/17/2011 15:00:53

Actions

STATUS	STRATEGY ID	SYSTEM ID	NAME	ACTION TYPE	INTERVAL	INTERVAL UNITS	MAX UNMITIGATED RISK	RELEVANCE	ROI
	ASO L 1	ASO Large System 1	HE-A04	PM	1	Years	9,994	28,438.39609375	508
	ASO L 1	ASO Large System 1	HE-A03	PM	20	Days	9,994	23,433.396875	910
	ASO L 1	ASO Large System 1	HE-A05	PM	55	Hours	9,913	14,917.8	39

For each Action displayed in the grid, ROI is calculated as:

ROI = ([Unmitigated Financial Risk - Mitigated Financial Risk] – Annual Action Cost) / Annual Action Cost

If an Action mitigates only one Risk, the unmitigated financial risk and mitigated financial risk apply only to that Risk. If, however, an Action mitigates multiple Risks, the ROI calculation uses the sum of the differences between the unmitigated and mitigated financial risks for each Risk that the Action mitigates.

Relevance Calculations

Relevance explains how much Risk you are mitigating by performing an Action. The calculation is the Total Unmitigated Risk Rank minus the Total Action Mitigated Risk. In short, Relevance is the net non-financial benefit of performing the Action.

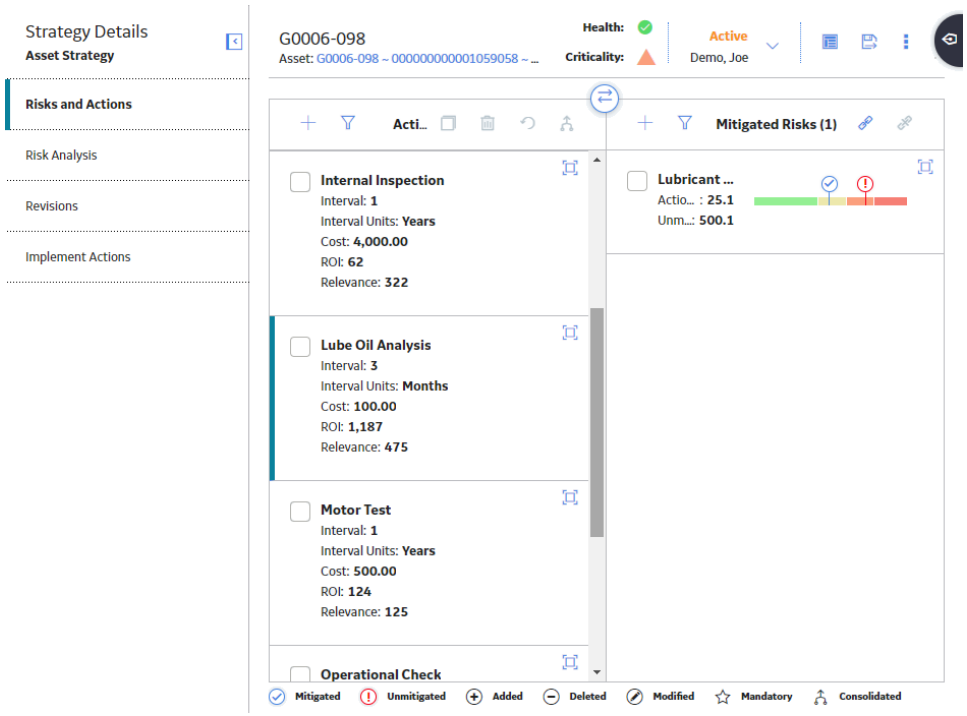
Relevance Calculation Formula

The formula for Relevance calculations can be stated as:

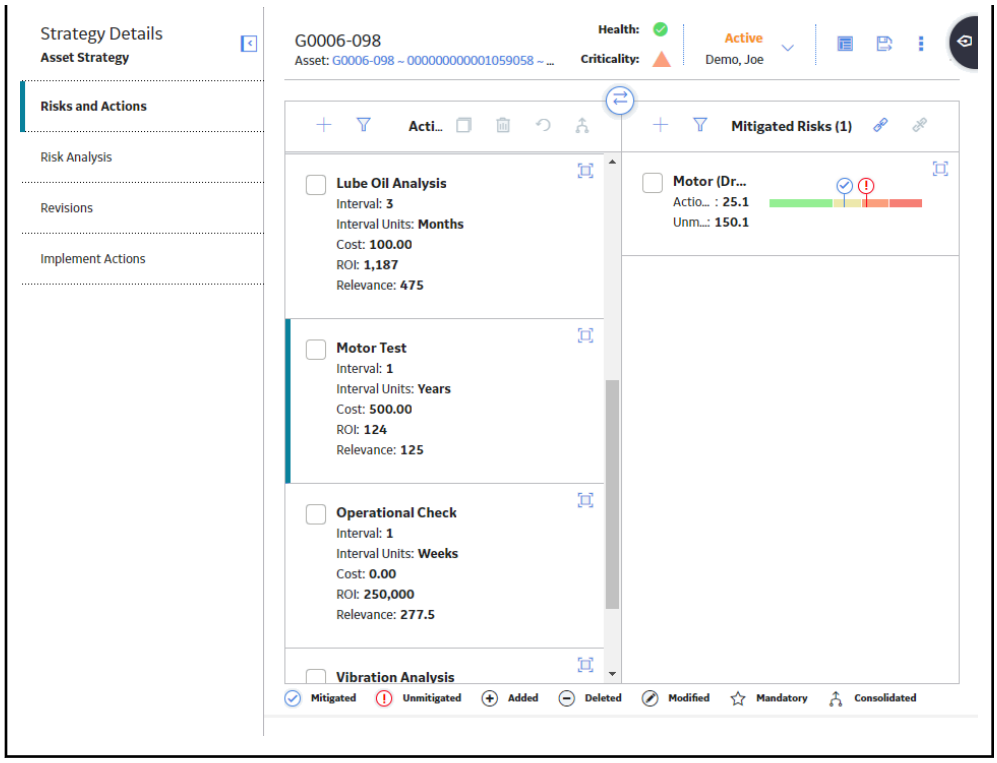
- Total Unmitigated Risk minus Total Action Mitigated Risk

Simple Example of a Relevance Calculation

- The Relevance formula for the below example is 500.1 - 25.1 = 475. 475 is the Relevance.



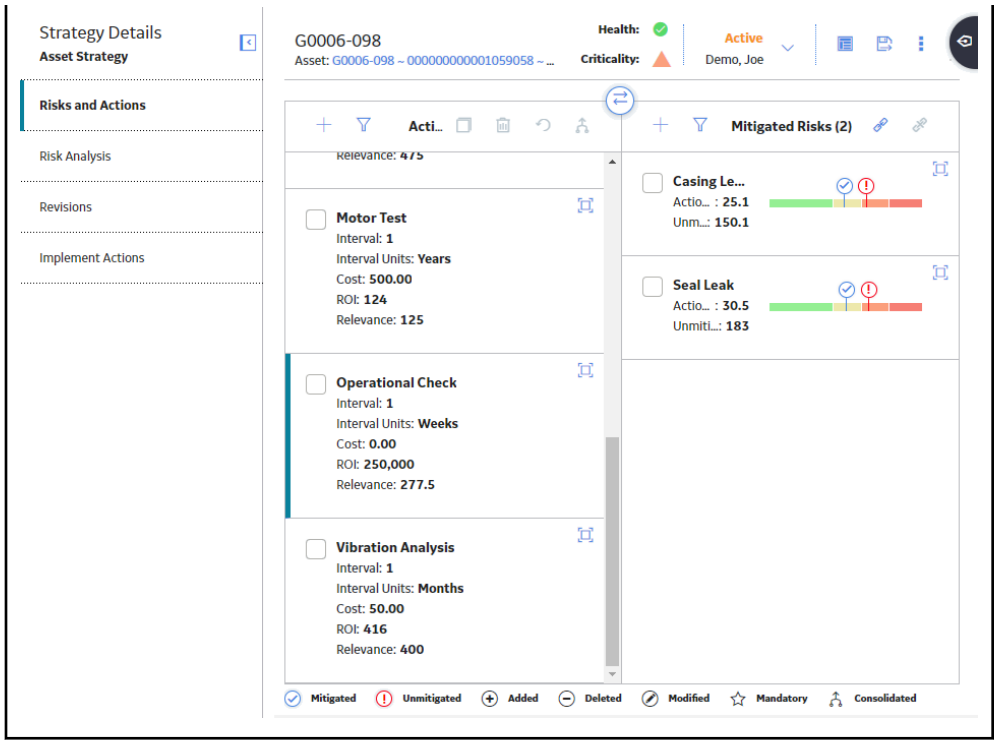
- The Relevance formula for the below example is 150.1 - 25.1 = 125. 125 is the Relevance.



Complex Example of a Relevance Calculation

The Relevance formula for the below can be broken down as follows:

- Total Unmitigated Risk Rank
  - 150.1 + 183 = 333.1
- Total Action Mitigated Risk Rank
  - 25.1 + 30.5 = 55.6
- Relevance
  - 333.1 – 55.6 = 277.5


Strategy Details
Asset Strategy
Risks and Actions
Risk Analysis
Revisions
Implement Actions
G0006-098
Asset: G0006-098 ~ 000000000001059058 ~ ...
Health:
Criticality:
Active
Demo, Joe
Acti...
Relevance: 475
Motor Test
Interval: 1
Interval Units: Years
Cost: 500.00
ROI: 124
Relevance: 125
Operational Check
Interval: 1
Interval Units: Weeks
Cost: 0.00
ROI: 250,000
Relevance: 277.5
Vibration Analysis
Interval: 1
Interval Units: Months
Cost: 50.00
ROI: 416
Relevance: 400
Mitigated Risks (2)
Casing Le...
Actio... : 25.1
Unm...: 150.1
Seal Leak
Actio... : 30.5
Unmiti...: 183
Mitigated
Unmitigated
Added
Deleted
Modified
Mandatory
Consolidated