Meridium APM Asset Strategy

3.6.1.5.0

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About This Document

This file is provided so that you can easily print this section of the Meridium APM Help system.

You should, however, use the Help system instead of a printed document. This is because the Help system provides hyperlinks that will assist you in easily locating the related instructions that you need. Such links are not available in a print document format.

The Meridium APM Help system can be accessed within Meridium APM itself or via the Meridium APM Documentation Website (https://www.meridium.com/documentation/WebHelp/WebHelpMaster.htm).

> **Note**: If you do not have access to the Meridium APM Documentation Website, contact Meridium Global Support Services.

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About the Asset Strategy Work Process

The *Asset Strategy Work Process* is focused on proactive asset management plans that are designed for the purpose of mitigating risks. The Asset Strategy Work Process consists of the steps that are outlined in the following table.

Step	Description	Details
1	Evaluate asset risk and performance.	Allows you to: • Identify and qualify unmitigated risks. • Define how your current maintenance plans mitigate risks. • Identify gaps in mitigation. • Define regulatory actions.
2	Mitigate risks with an action plan.	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.	Allows you to review your current mitigation plan to: • Identify actions that have no current value to see if they can be removed or replaced. • Identify less intrusive actions that supersede other, more intrusive actions. • Document areas that need improving. • Document your decision process. • Review the impact of the new strategy on risk and cost, compared to the original strategy.
4	Communicate an improved plan.	Allows you to communicate the following information that was documented in previous steps of the work process: • The updated strategy profile. • What changed from the original strategy. • Why the updated strategy was selected. • The return on investment value. • The risk reduction numbers.

Step	Description	Details
5	Implement the Strategy.	Allows you to implement the new strategy into your work management system. Specifically, during this step, you will want to implement: • Recommendations that were identified. • Processes to measure the effectiveness of the strategy. • Document the decision-making process behind the new strategy. • A process for obtaining and communicating feedback from the workforce in the field.
6	Execute the Strategy.	Allows you to execute the work via your organization's work management system and current processes. Specifically, during this step, you will want to: • Ensure the work is being documented. • Ensure the workforce understands the value in executing the plan. • Review work history to maintain and ensure regulation compliance.

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 Foundation Work Process, whose components are represented by the blue boxes.
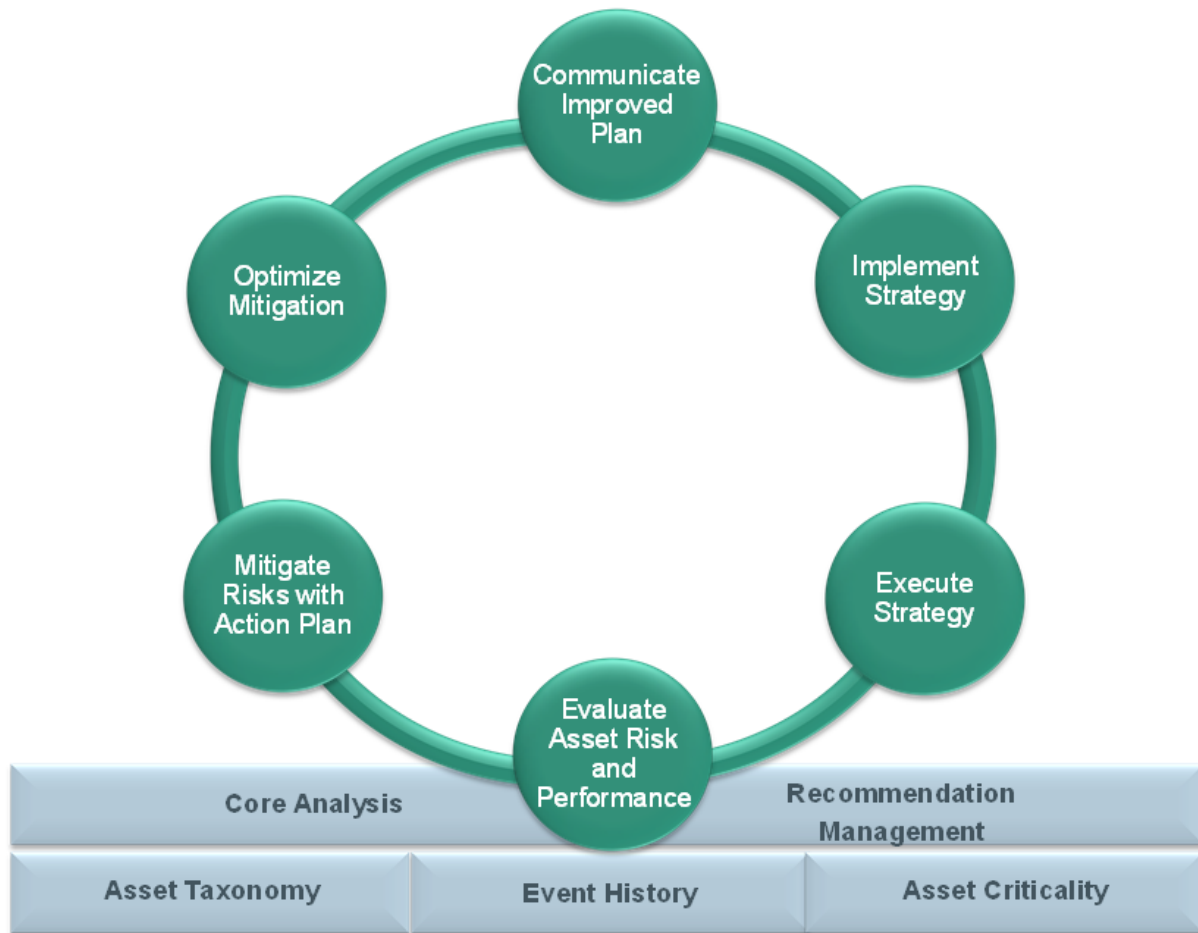
Within the Meridium APM product, each of the steps listed above can be accomplished using one or more of the following modules:

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

Asset Strategy System Requirements

Multiple licenses are required to take advantage of Asset Strategy functionality. In addition to the following licenses, your system must contain the basic Meridium APM system architecture:

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

After you have configured the basic system architecture and licensed Asset Strategy modules, you will need to perform some configuration steps.

First-Time Deployment Workflow

Deploying the Asset Strategy Work Process for the first time includes completed multiple steps, which are outlined in the table in this topic. *All* of the steps are required to fully implement the Asset Strategy Work Process. These steps provide all of the information that you need to deploy Asset Strategy with the basic Meridium APM system architecture.

Step	Task
1	Configure the Asset Strategy Management module.
2	Configure the Asset Strategy Implementation module.
3	Configure the Asset Strategy Optimization module.
4	Configure one of the following modules: • Reliability Centered Maintenance • Failure Modes and Effects Analysis

Upgrade Workflow

You can upgrade to 3.6.1.5.0 using the instructions that are provided in the Installation, Upgrade, and Configuration documentation for each Asset Strategy module:

- Asset Strategy Management
- Asset Strategy Implementation
- Asset Strategy Optimization
- Reliability Centered Maintenance
- Failure Modes and Effects Analysis

Asset Strategy User Instructions

The user instructions for the Asset Strategy modules are provided in the documentation for the related modules. Documentation for the Asset Strategy dashboard is provided in the [Asset Strategy Reference Information documentation](#).

Accessing the Asset Strategy Dashboard

To access the Asset Strategy dashboard:

- On the Meridium APM Framework main menu, click **Go To**, point to **Asset Strategy**, and then click **Dashboard**.

  The **Dashboard** page appears, displaying the Asset Strategy dashboard.
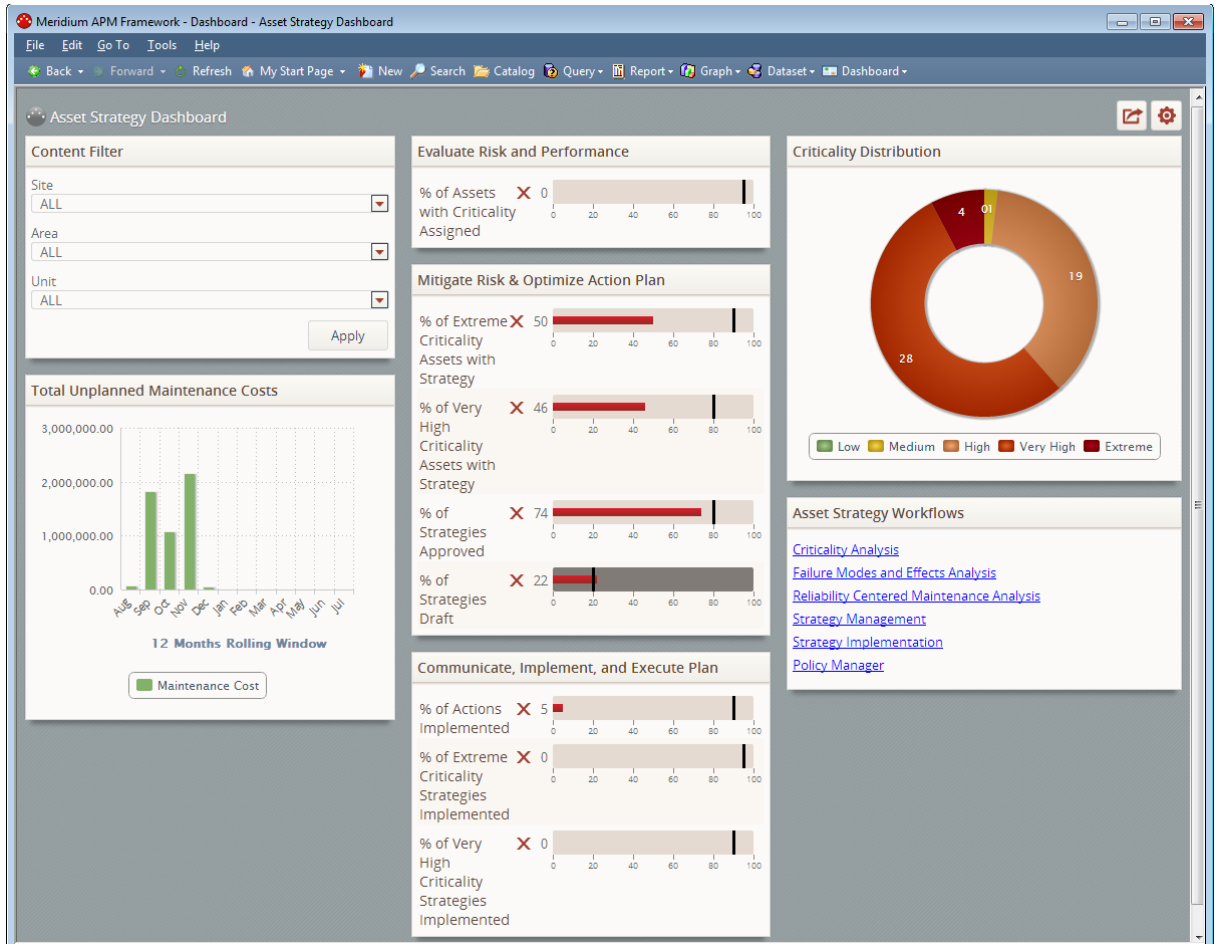
Aspects of the Asset Strategy Dashboard

The Asset Strategy dashboard contains sections that display information about the pieces of equipment and locations that you analyze using Asset Strategy modules.
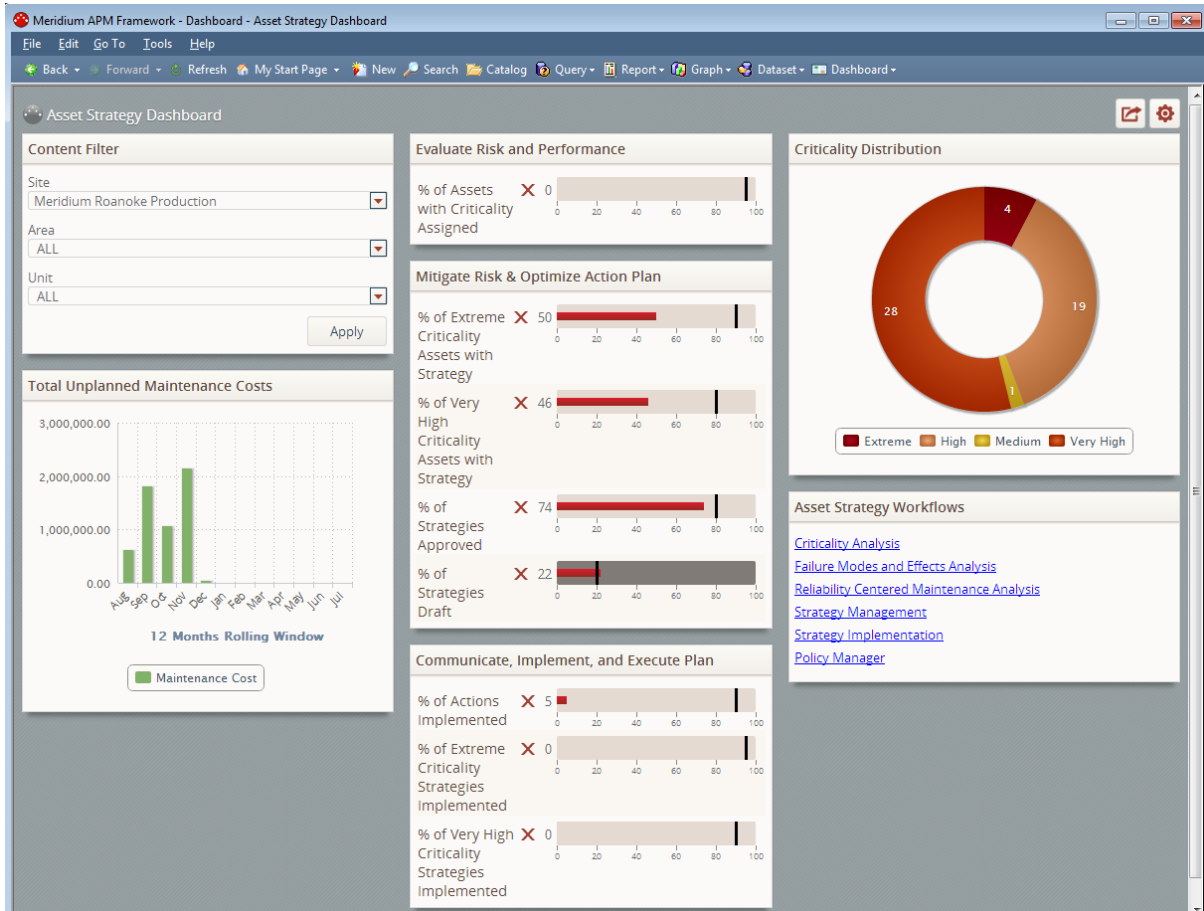
The Asset Strategy dashboard contains the following sections:

- **Content Filter** section
- **Total Unplanned Maintenance Costs** section
- **Evaluate Risk and Performance** section
- **Mitigate Risk & Optimize Action Plan** section
- **Communicate, Implement, and Execute Plan** section
- **Criticality Distribution** section
- **Asset Strategy Workflows** section

In addition, the dashboard contains several hidden sections, which you can add to the dashboard or use as a starting point for defining your own sections.

Note: The baseline Asset Strategy dashboard contains the maximum amount of content that can be displayed without introducing a time-out error when opening the page. If you want to add content, including any of the hidden content, we recommend that you also remove or modify some of the baseline content to ensure that the dashboard performance is not degraded.

Content Filter

The **Content Filter** section is a configured **Content Filter** section that contains lists that are used to filter the data that is displayed in other sections on the dashboard.

The **Content Filter** section contains the following lists:

- **Site:** Contains a list of all the values that are stored in the Functional Location Description field in Functional Location records whose Catalog Profile Description field contains the value *Site*. For example, in the following image, consider the query results, which indicate that four Functional Location records contain the value *Site* in the Catalog Profile Description field.

Functional Location Descrip	Catalog Profile Description
Meridium Dubai Production	Site
Meridium Houston Production	Site
Meridium Perth Production	Site
Meridium Roanoke Production	Site

As a result, on the dashboard, the values appear in the **Site** list, as shown in the following image.

- **Area:** Contains a list of all the values that are stored in the Functional Location Description field in Functional Location records that meet the following criteria:

- Their Catalog Profile Description field contains the value *Area*.
- Their Superior Function Location field contains the value that is stored in the Functional Location field in the record whose Functional Location Description field contains the value that you selected in the **Site** list.

For example, suppose that you select *Meridium Roanoke Production* in the **Site** list, and the associated Functional Location record (record A) contains the value *MRD-ROA* in the Functional Location field. If another Functional Location record (record B) contains the value *Area* in the Catalog Profile Description field and *MRD-ROA* in the Superior Functional Location field, the value in the Functional Location Description field in that record (record B) will appear in the **Area** list.

- **Unit:** Contains a list of all the values that are stored in the Functional Location Description field in Functional Location records that meet the following criteria:
  - Their Catalog Profile Description field contains the value *Unit*.
  - Their Superior Function Location field contains the value that is stored in the Functional Location field in the record whose Functional Location Description field contains the value that you selected in the **Area** list.

For example, suppose that you select *Meridium Roanoke Chemicals* in the **Area** list, and the associated Functional Location record (record A) contains the value *MRD-ROA-CHEM* in the Functional Location field. If another Functional Location record (record B) contains the value *Unit* in the Catalog Profile Description field and *MRD-ROA-CHEM* in the Superior Functional Location field, the value in the Functional Location Description field in that record (record B) will appear in the **Unit** list.

Although the lists allow you to select values only in Functional Location records, the Meridium APM system also finds the *Equipment records* that are linked to those Functional Location records. Whenever other content on the dashboard is being filtered based upon your selections in the **Content Filter** section, that content is being filtered based upon the selected Functional Location records *and* the Equipment records to which they are linked. For this reason, this documentation refers to Functional Location records *and* Equipment records that are returned by the filters.

> **Note:** If you store equipment and location data in families other than the baseline Equipment and Functional Location families, you will need to modify the [underlying queries](#) accordingly. Also, even if you do use the baseline Functional Location family, if you identify sites, areas, and units using a value other than *Site*, *Area*, and *Unit* or a field other than *Catalog Profile Description*, you will need to modify the underlying queries accordingly.

The values that you select in these lists will be used to filter the content that is displayed in the following sections:

- Total Unplanned Maintenance Costs
- Criticality Distribution
- Evaluate Risk and Performance

- Mitigate Risk and Optimize Action Plan (only the *% of Extreme Criticality Assets with Strategy* and *% of Very High Criticality Asses with Strategy* measures)

Total Unplanned Maintenance Costs

The **Total Unplanned Maintenance Costs** section is a configured **Chart - Series** section that displays a bar graph that plots on a monthly basis, for the past 12 months (including the current month), the sum of the values in the Maintenance Cost field in all Work History records that meet the following criteria:

- They are linked to the Functional Location and Equipment records that are returned by the **Filter Content** section.
- They contain the value *Repair* in the Event Type field.

For example, suppose that:

- You select the value *Roanoke* in the **Site** list.
- The Functional Location record *Roanoke* is linked to the Equipment record *Pump*.
- The Functional Location record *Roanoke* is linked to a Work History record containing the following values in the following fields:
    - **Event Start Date:** 7/17/2013
    - **Event Type:** Repair
    - **Maintenance Cost:** 100
- The Equipment record *Pump* is linked to a Work History record containing the following values in the following fields:

- **Event Start Date:** 7/15/2013
- **Event Type:** Repair
- **Maintenance Cost:** 50

In this case, the graph for the month of July will account for the maintenance cost in *both* Work History records (i.e., the one linked to the Functional Location record *and* the one linked to the Equipment record). Assuming that no other Work History records meet the requirements, the graph for July would look like the one in the following image, where the total unplanned maintenance cost is *$150* (100 + 50).
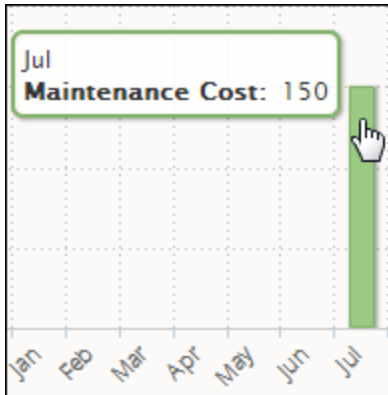
Evaluate Risk and Performance

The **Evaluate Risk and Performance** section is a configured **Measures - General** section that displays the measure *% of Assets with Criticality Assigned*, which displays the percentage of Functional Location and Equipment records that are returned by the **Content Filter** section and are linked to a Risk Assessment record through the Has Risk relationship. The target for this measure is 95%, meaning that ideally, at least 95% of the Functional Location and Equipment that are returned by the filters should be linked to a Risk Assessment record.
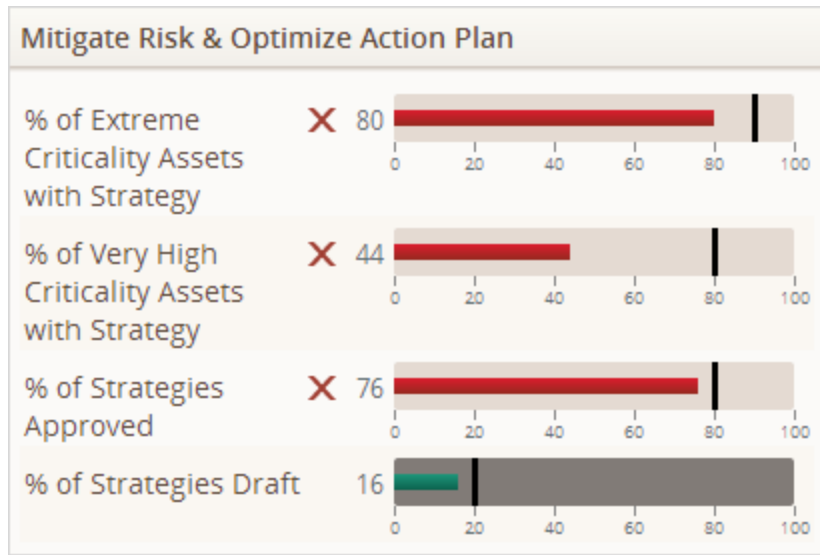
> **Note:** Equipment and Functional Location records are linked to Risk Assessment records when you follow the ACA workflow.
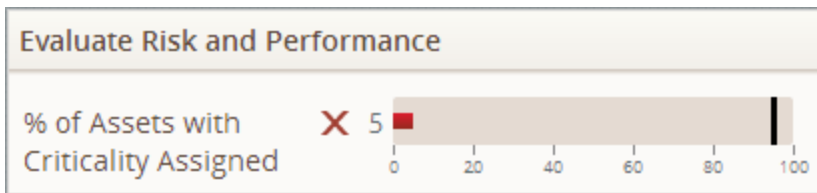
In the previous image, you can see that only 5% of Functional Location and Equipment records that are returned by the filters are linked to a Risk Assessment record.

Mitigate Risk & Optimize Action Plan

The **Mitigate Risk & Optimize Action Plan** section is a configured **Measures - General** section that displays information about locations, equipment, and their associated Asset Strategies.

The following measures are displayed in the **Mitigate Risk & Optimize Action Plan** section:

- **% of Extreme Criticality Assets with Strategy:** Displays the percentage of Functional Location and Equipment records that are returned by the **Content Filter** section and meet the following criteria:
    - They are linked to an Asset Strategy record.
    - They are linked to a Risk Assessment record, and their risk rank falls within the *Extreme* threshold.

  The target for this measure is 90%, meaning that ideally, at least 90% of the Functional Location and Equipment records that are returned by the filters and have an *Extreme* risk rank should be linked to an Asset Strategy record.

- **% of Very High Criticality Assets with Strategy:** Displays the percentage of Functional Location and Equipment records that are returned by the **Content Filter** section and meet the following criteria:
    - They are linked to an Asset Strategy record.
    - They are linked to a Risk Assessment record, and their risk rank falls within the *Very High* threshold.

  The target for this measure is 80%, meaning that ideally, at least 80% of the Functional Location and Equipment records that are returned by the filters and have a *Very High* risk rank should be linked to an Asset Strategy record.
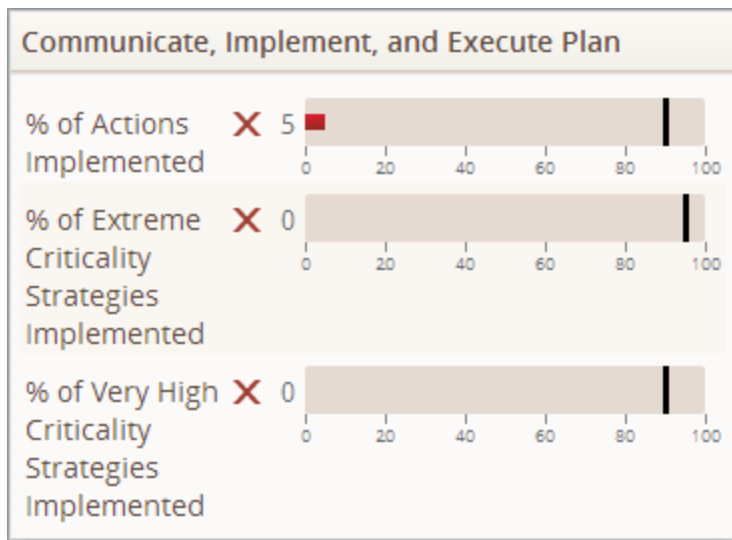
- **% of Strategies Approved:** Displays the percentage of all Asset Strategies that are set to the Active state. The target for this measure is 90%, meaning that ideally, at least 90% of your Asset Strategies should be set to the Active state.

- **% of Strategies Draft:** Displays the percentage of all Asset Strategies that are set to the Draft state. The target for this measure is 20%, meaning that ideally, *no more than* 20% of your Asset Strategies should be set to the Draft state.

Communicate, Implement, and Execute Plan

The **Communicate, Implement, and Execute Plan** section is a configured **Measures - General** section that displays information about locations, equipment, and their associated Asset Strategies.

The following measures are displayed in the **Communicate, Implement, and Execute Plan** section:

- **% of Actions Implemented:** Displays the percentage of Actions that have been used to create work item records in an ASI Implementation Package. Specifically, the underlying query looks for Action Revision records that are linked to work item records through the Implements Action relationship. The target for this measure is 90%, meaning that ideally, at least 90% of your Actions should have been used to create work item records in ASI.

- **% of Extreme Criticality Strategies Implemented:** Displays the percentage of Functional Location and Equipment records that are returned by the **Content Filter** section and meet the following criteria:

  - They are linked to an Asset Strategy record that is linked to an Implementation Package record.
  - They are linked to a Risk Assessment record, and their risk rank falls within the *Extreme* threshold.

  The target for this measure is 95%, meaning that ideally, for the Functional Location and Equipment records that are returned by the filters and have an *Extreme* risk rank and an associated Asset Strategy, 95% of those Asset Strategies should be linked to an Implementation Package record.

- **% of Very High Criticality Strategies Implemented:** Displays the percentage of Functional Location and Equipment records that are returned by the **Content Filter** section and meet the following criteria:

- They are linked to an Asset Strategy record that is linked to an Implementation Package record.
- They are linked to a Risk Assessment record, and their risk rank falls within the *Very High* threshold.

The target for this measure is 95%, meaning that ideally, for the Functional Location and Equipment records that are returned by the filters and have a *Very High* risk rank and an associated Asset Strategy, 95% of those Asset Strategies should be linked to an Implementation Package record.

Criticality Distribution

The **Criticality Distribution** section is a configured **Chart - Category** section that displays a doughnut chart representing the risk ranks of all Functional Location and Equipment records that are returned by the **Content Filter** section. The chart is divided into sections based upon the values in the Risk Rank field in the Risk Assessment records that are linked to the Functional Location and Equipment records.
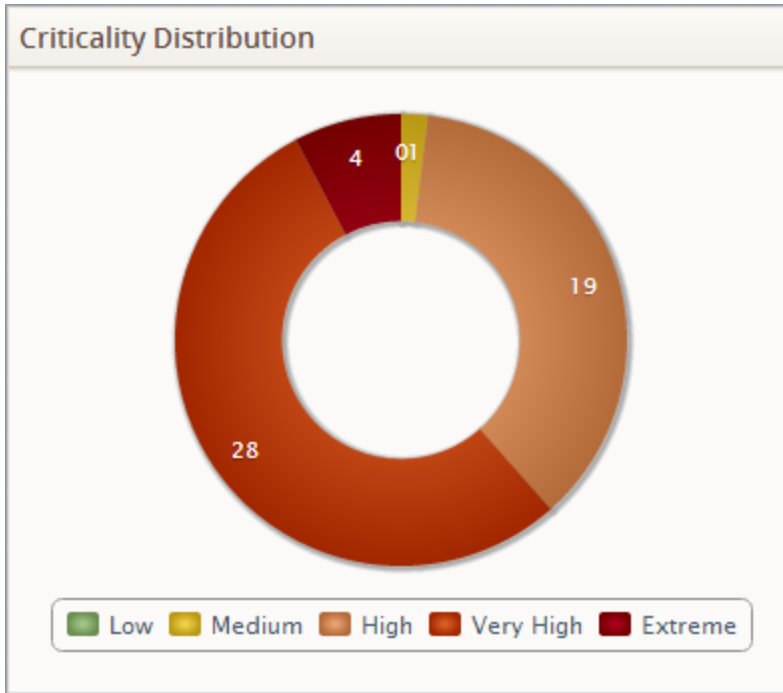
Below the chart, a legend displays the color that is associated with each value. In the preceding image, you can see that there are 28 Equipment or Functional Location records whose risk rank is *Very High*.

Asset Strategy Workflows

The **Asset Strategy Workflows** section is a configured **Hyperlinks** section that displays links to the start pages for the modules that are included in the Asset Strategy workflow and to the Policy Manager module.
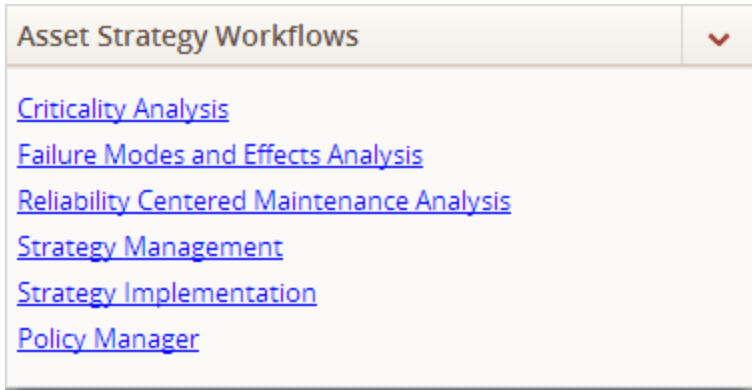
The **Asset Strategy Workflows** section contains the following links:

- **Criticality Analysis:** Displays the **Asset Criticality Analysis Start Page**.
- **Failure Modes and Effects Analysis:** Displays the **FMEA Start Page**.
- **Reliability Centered Maintenance Analysis:** Displays the **RCM Start Page**.
- **Strategy Management:** Displays the **ASM - Start Page**.
- **Strategy Implementation:** Displays the **Asset Strategy Implementation Start Page**.
- **Policy Manager:** Displays the **Policy Manager Start Page**.

Hidden Sections

The Asset Strategy dashboard includes the following sections that are hidden by default:

- **Hidden Measures:** A configured **Measures - General** section that displays additional information about your locations, equipment, and strategies. The **Hidden Measures** section contains the following measures:
    - % of RCM FMEA Risks Without Recommendations
    - # of Risks Without Actions
    - # of Asset Strategies with Actions Implemented in EAM
    - % of Non-Critical Assets with Strategy
    - % of Extreme Criticality Assets with an Analysis
    - % of Strategies in Review
- **Cost of Events per Month by Asset:** A configured **Chart - Series** section that displays a bar graph that plots on a monthly basis, for the past 12 months (including the current month), the sum of the values in the Total Cost field in all Work History records that are linked to the *Equipment records* that are returned by the **Filter Content** section. The chart displays Equipment IDs on the x-axis.
- **Total Cost of Unreliability:** A configured **Chart - Series** section that displays a bar graph that plots on a monthly basis, for the past 12 months (including the current month), the sum of the values in the Total Cost field in all Work History records that meet the following criteria:
    - They are linked to the Functional Location and Equipment records that are returned by the **Filter Content** section.
    - They contain the value *Repair* in the Event Type field.

The chart displays months on the x-axis.

About the Asset Strategy Catalog Folder Structure

The main Asset Strategy Catalog folder is \\Public\Meridium\Modules\Asset Strategy. This folder contains subfolders that store a dashboard and queries that are used to display content on the dashboard.

You can store additional items in the main Asset Strategy Catalog folder or in its subfolders. You can also create new subfolders to store additional items.

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

Dashboards Folder

The dashboard listed in the following table is stored in the Catalog location \\Public\Meridium\Modules\Asset Strategy\Dashboards. The dashboard is listed by name in the table. The dashboard name and caption are the same.

Dashboard	Behavior and Usage
Asset Strategy Dashboard	Displays the Asset Strategy dashboard on the **Dashboard** page.

Dashboard Queries Folder

The following table lists the queries that are stored in the Catalog location \\Public\Meridium\Modules\Asset Strategy\Queries\Dashboard Queries. The queries are listed by name in the table. The query name and caption are the same.

Query	Behavior and Usage
Cost of Events per Month by Asset	Used by the **Cost of Events per Month by Asset** section.
Criticality Distribution	Used by the **Criticality Distribution** section.
Filter Widget	Used by the **Content Filter** section.
Filtered Assets	Used by various measures to determine equipment and location criticality.
Filtered Assets With Criticality	Used by various measures to determine equipment and location criticality.
Non Critical Filtered Assets	Used by various measures to determine equipment and location criticality.
Number of Risks Without Actions	Used to display the *# of Risks Without Actions* measure in the **Hidden Measures** section.
Number Strategies Implemented in EAM	Used to display the *# of Asset Strategies Implemented in EAM* measure in the **Hidden Measures** section.
Percentage of Actions Implemented	Used to display the *% of Actions Implemented* measure in the **Communicate, Implement, and Execute Plan** section.
Percentage of Assets with Criticality Assigned	Used to display the *% of Assets with Criticality Assigned* measure in the **Evaluate Risk and Performance** section.
Percentage of Critical Assets with an Analysis	Used to display the *% of Extreme Criticality Assets with an Analysis* measure in the **Hidden Measures** section.

Query	Behavior and Usage
Percentage of Criticality Value Assets with Strategy	In addition to the All Criticality Definitions query (in the **Criticality Definitions Catalog folder**), this query is used to display the following measures in the **Mitigate Risk and Optimize Action Plan** section: • *% of Extreme Criticality Assets with Strategy* • *% of Very High Criticality Assets with Strategy*
Percentage of Criticality Value Strategies Implemented	In addition to the All Criticality Definitions query (in the **Criticality Definitions Catalog folder**), this query is used to display the *% of Extreme Criticality StrategiesImplemented* measure in the **Communicate, Implement, and Execute Plan** section.
Percentage of Non Critical Assets with Strategy	Used to display the *% of Non-Critical Assets with Strategy* measure in the **Hidden Measures** section.
Percentage of RCM FMEA Risks Without Recommendations	Used to display the *% of RCM FMEA Risks Without Recommendations* measure in the **Hidden Measures** section.
Percentage of Strategies In State Value	Used to display the following measures: • *% of Strategies Approved* (in the **Mitigate Risk and Optimize Action Plan** section) • *% of Strategies Draft* (in the **Mitigate Risk and Optimize Action Plan** section) • *% of Strategies in Review* (in the **Hidden Measures** section)
Total Cost of Unreliability	Used by the **Total Cost of Unreliability** section.
Total Unplanned Maintenance Costs	Used by the **Total Unplanned Maintenance Costs** section.

Criticality Definitions Folder

The queries that are stored in the Catalog location **\\Public\Meridium\Modules\Asset Strategy\Queries\Dashboard Queries\Criticality Definitions** are used to determine the risk thresholds into which each piece of equipment's or location's risk rank falls. The queries are configured in the baseline database to correspond to the risk thresholds that are defined in the baseline Risk Matrix (i.e., the Standard Practice Risk Matrix). For example, the baseline query *Extreme Criticality Definition* indicates that a risk rank is considered *Extreme* if it is greater than or equal to 1,000 and less than or equal to 1,000,000,000.

Extreme Criticality Definition : Select Query

LowerLimit	UpperLimit	Criticality
1000	1000000000	Extreme

Together, all the queries in this folder are used to determine which equipment, locations, and strategies to return in the Asset Strategy dashboard measures that look at equipment and location risk rank.

> **Note:** If you are using a Risk Matrix that uses risk thresholds that differ from those in the baseline Risk Matrix, you will need to modify these queries accordingly. If you do modify the queries, remember to review the names of the corresponding dashboard sections and modify them if needed (e.g., *% of Extreme Criticality Assets with Strategy*).