Meridium APM EAM Integration

3.6.1.1.0

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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.me-ridium.com/documentation/WebHelp/WebHelpMaster.htm).

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

Table of Contents

Overview of EAM Integration

The Meridium APM product is built upon a fundamental premise that you are using an external Enterprise Asset Management (EAM) system to store information about your equipment, the locations in which the equipment exist, failures of the equipment and locations, and work that has been performed on the equipment and locations.

Meridium APM provides tools that let you analyze and process this data. Before you can analyze the data in Meridium APM, however, you must transfer it from your EAM system into your Meridium APM system. After the data exists in Meridium APM, it can be analyzed to determine the state of your equipment and locations and the reliability, trends, potential risks, and probability of failures associated with them.

To facilitate the process of transferring data between your EAM system and your Meridium APM system, the following Meridium APM features are available:

- The SAP Interfaces, which allow you to transfer data to and from your SAP system.
- The Oracle EBS eAM Interfaces, which allow you to transfer data to and from your Oracle EBS eAM system.
- The Maximo Interfaces, which allow you to transfer data to and from your Maximo system.

Alternative EAM integration options are provided by Meridium APM Connect. Complete documentation related to APM Connect can be found here.

EAM Integration Data Model

The following image illustrates which families are used when you integrate your Meridium APM system with your EAM system. In the following image, boxes represent entity families, and arrows represent relationship families that are configured in the baseline database.
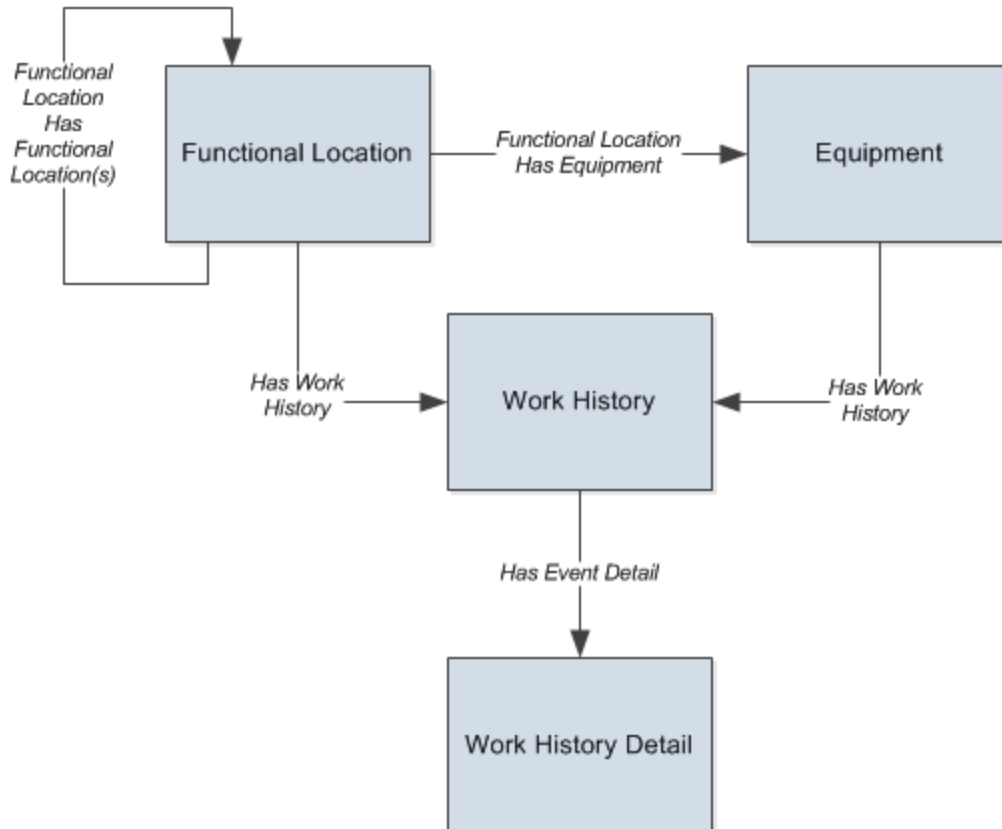
Note: The specific interfaces (e.g., SAP Interfaces) also use other families that are specific to those interfaces. Additional families that are used by the interfaces are included in the data model illustrations for those interfaces. The EAM Interfaces data model presented in this area of the documentation is meant to illustrate only the *common* families that are used by *all* of the interfaces.

Based upon this data structure:

- *Functional Location records* are used to store information about locations in your organization, including but not limited to the locations at which the physical pieces of equipment are installed.

- *Equipment records* are used to store information about physical pieces of equipment, such as pumps, motors, and compressors.

- *Work History records* and *Work History Detail records* are used to store data about work that was performed against your locations and equipment as well as failures that occurred for those locations and equipment.

- Each Functional Location record can be linked to another Functional Location record, where overall, the links between the Functional Location records represent the way in which your locations are [organized](#).

- Each Equipment record can be linked to a Functional Location record representing the location in which the piece of equipment is installed.

About Organizing Locations into a Hierarchy

The Meridium APM product is built upon the fundamental premise that within your company, there are multiple locations, which can be organized in a hierarchy to represent the fact that some locations belong to other locations. For example, three systems might belong to the same unit, meaning that units reside on a *higher* level of the hierarchy than systems.

This concept of *levels* of locations should be familiar to you regardless of the number of levels you have or the names that you assign to them within your company.

Regardless of the number or type of locations that exist in your company, in order to track them in the Meridium APM system, you will need to use the Functional Location family and the fields in each Functional Location record to define which location it represents. Remember that because there is only one Functional Location family, you will need to use it to store data about *all* of your Functional Location records, where the values in each Functional Location record identify which type of location it is.

As a standard practice, we assume that your equipment is installed at locations that exist on the *lowest* level of your location hierarchy.

> **Note:** The field *Is a Unit?* is defined for the Functional Location family in the baseline database but is used *only* by the Risk Based Inspection (RBI) module to identify Functional Location records that represent units.

Location Hierarchy Example

Suppose a company consists of one site containing multiple locations that are structured as in the following diagram.

Using this example, you can see that the company categorizes locations according to five levels, where sites exist at the highest level and process locations exist at the lowest level.

If you were to transfer data about these locations into the Meridium APM system, each location in the hierarchy would be represented by a different Functional Location record. For example, both *System X* and *Process Location 101* would be represented by Functional Location records. The values in the records would identify one record as System X and the other record as Process Location 101.

A Note About Equipment that Can Be Moved Around

In most companies, some equipment can be moved around between locations, and other equipment cannot be moved around. Remember that the Meridium APM system allows you to:

- Store data about pieces of equipment in Equipment records.
- Store data about locations in Functional Location records.
- Link each Equipment record to a Functional Location record to identify the location in which the equipment is installed.

The Functional Location record to which an Equipment record is linked indicates only the *current* location in which that piece of equipment is installed. It is not possible to determine any locations in which the piece of equipment was installed previously.

You will need to keep this concept in mind when deciding whether to link to the Equipment record or Functional Location in the Meridium APM modules. In general, the following guidelines apply:

- If a piece of equipment is always installed at the *same location*, within a module, you can link to the Equipment record *or* the Functional Location record since the Equipment record will always be linked to the same Functional Location record. Regardless of whether you link to the Equipment or Functional Location record, the piece of equipment is always implied.
- If a piece of equipment gets moved between locations, within a module:
  - If you link to the *Functional Location* record, the context of the analysis will be the *location*, regardless of which specific piece of equipment it contains.

  For example, if you link an Asset Strategy to a Functional Location record, the strategy will focus on the *location and its current piece of equipment*. So, you might create an Action record to "Check pump discharge pressure and flow rate daily" because regardless of which pump exists at that location at any given time, this action will need to be performed at that specific location each time.
  - If you link to the *Equipment* record, the context of the analysis will be the *piece of equipment*, regardless of the location in which it is currently installed.

  For example, if you link an Asset Strategy to an Equipment record, the strategy will focus on the *piece of equipment and its current location*. So, you might create an Action record to "Inspect pump for wear every six months" because regardless of where the equipment is installed, you know that this action will always need to be performed against it.

About Classifying Equipment

If you are using the Meridium APM product according to the Meridium APM Best Practice, you will be storing information about all of your equipment in records belonging to the baseline Equipment family. As a result, your database will have *many* Equipment records, possibly thousands of them. In order to manage your work in the Meridium APM system, we recommend that you classify your pieces of equipment using the classification levels that are illustrated in the following image.
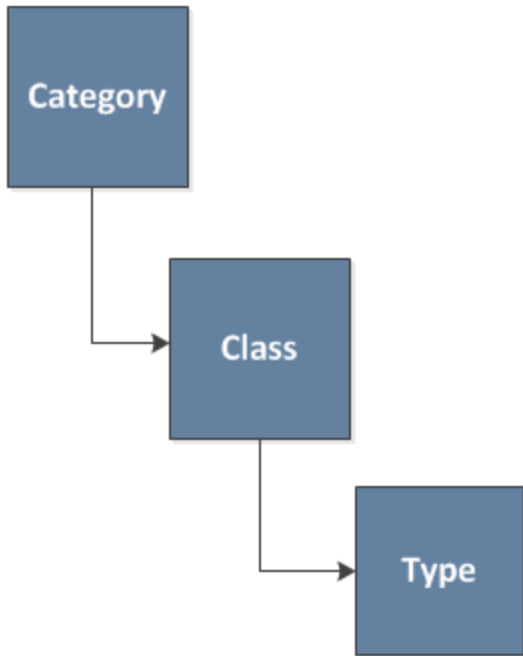
For example, suppose that your database contains many Equipment records representing pumps, some of which are centrifugal pumps and some of which are reciprocating pumps. Rather than classifying them all as simply *pumps*, you would want to classify them according to the levels defined above. So, you might end up with a classification like the one shown in the following image.
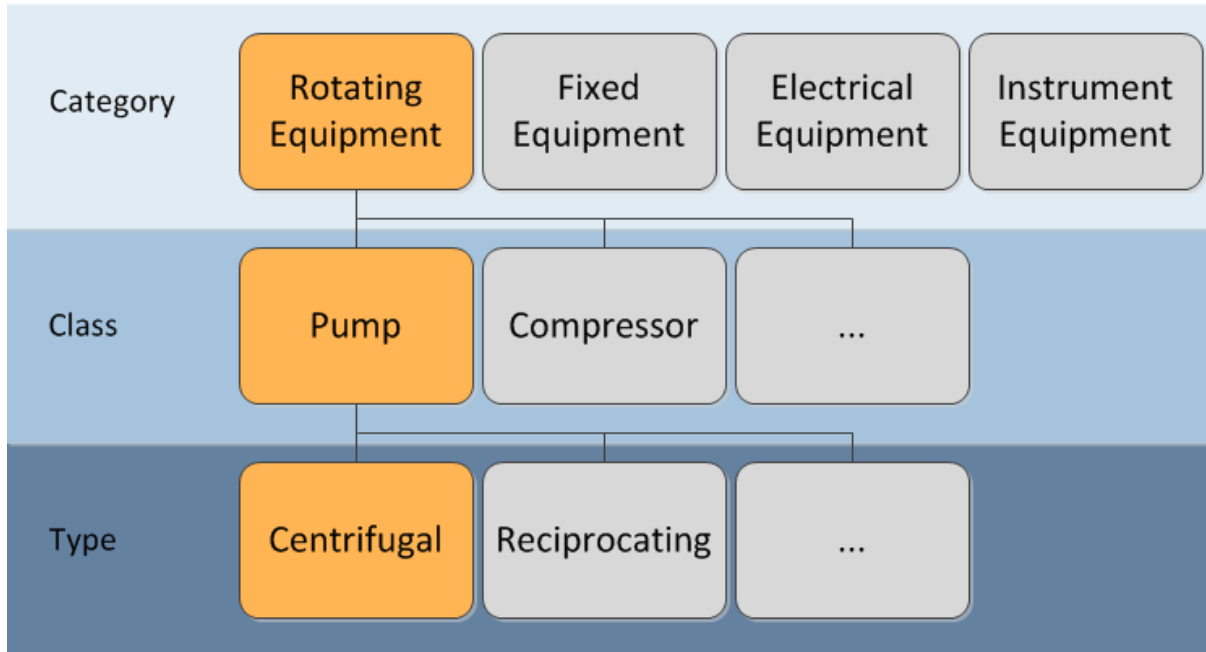
From the image, you can see that centrifugal pumps can be classified like this:

- **Category:** Rotating Equipment
- **Class:** Pump
- **Type:** Centrifugal

Likewise, you can see that reciprocating pumps can be classified like this:

- **Category:** Rotating Equipment
- **Class:** Pump
- **Type:** Reciprocating

After you have classified your equipment, you can analyze information about that equipment at multiple levels. For example, you could create a query showing all failures of all centrifugal pumps, or you could create a query showing all failures of all rotating equipment. The classification levels allow you to roll up equipment data into manageable and meaningful views.

A Note About Classifying Locations

You can classify locations in the same way that you can classify pieces of equipment, but this option is intended to be used by customers who have Functional Location records representing locations that are *not* linked to an Equipment record. According to the Meridium APM Best Practice, all Functional Location records representing the lowest-level locations in your location hierarchy should be linked to an Equipment record. While you can configure your database differently if desired, and the Meridium APM product supports alternative approaches, the Meridium APM documentation does not account for them.

The Meridium APM documentation, therefore, explains how to classify only pieces of equipment. If you want to classify locations, you can do so using the general guidelines that are provided for classifying pieces of equipment. Note, however, that the classification fields are not available on the baseline Functional Location datasheet.

Workflow for Classifying Equipment

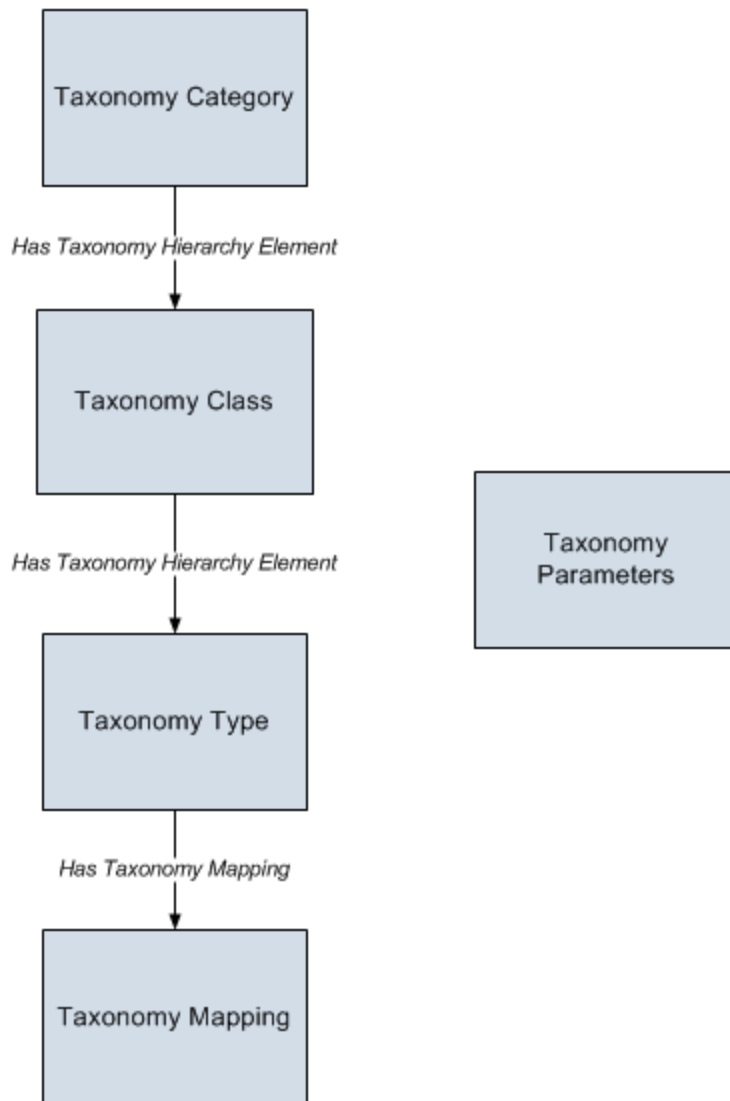To classify your equipment, you will need to complete the following steps:

1. For each equipment category that you want to represent, create a Taxonomy Category record.

2. For each equipment class that you want to represent, create a Taxonomy Class record.

3. Link each Taxonomy Class record to the Taxonomy Category record identifying the equipment category under which that class is categorized.

4. For each equipment type that you want to represent, create a Taxonomy Type record.

5. Link each Taxonomy Type record to the Taxonomy Class record identifying the equipment category under which that class is categorized.

6. Create Taxonomy Mapping records.

After these steps have been completed, when the taxonomy mapping field in an Equipment record is populated with a value, the Taxonomy Category, Taxonomy Class, and Taxonomy Type fields in that Equipment record will be populated automatically based upon the taxonomy records that were configured using these steps.

> **Note:** Remember that in the baseline database, the fields in the Equipment family are disabled because we assume that your Equipment records are created and populated automatically using the SAP Interfaces or the Oracle EBS eAM Interfaces.

Illustration of the Equipment Classification Data Model

The following diagram illustrates the families and relationships that are used to help you classify equipment. The shaded boxes represent entity families, and the arrows represent relationship families. You can determine the direction of each relationship from the direction of the arrow head: the box above each arrow head is the predecessor in that relationship, and the box below each arrow head is the successor in that relationship. For example, you can see that Taxonomy Class records are linked to Taxonomy Category records through the Has Taxonomy Hierarchy Element relationship, where the Taxonomy Category family is the predecessor.

```
┌─────────────────────┐
│  Taxonomy Category  │
└─────────────────────┘
          │
          ▼
 Has Taxonomy Hierarchy Element

┌─────────────────────┐
│   Taxonomy Class    │
└─────────────────────┘
          │                            ┌─────────────────────┐
          ▼                            │      Taxonomy       │
 Has Taxonomy Hierarchy Element        │     Parameters      │
                                       └─────────────────────┘
┌─────────────────────┐
│   Taxonomy Type     │
└─────────────────────┘
          │
          ▼
   Has Taxonomy Mapping

┌─────────────────────┐
│  Taxonomy Mapping   │
└─────────────────────┘
```

How Do the Taxonomy Records Work Together?

A piece of equipment is classified using the Taxonomy Category, Taxonomy Class, and Taxonomy Type fields on the Equipment record. Because these fields are populated automatically, however, several taxonomy records must exist in order for the automatic population to work. The following table lists the taxonomy records that must exist, the purpose of those records, and the process through which those records are created (automatically, as part of the baseline database creation/upgrade process, or manually, by the customer).

Record	Purpose	Provided as Baseline Content?
One Taxonomy Parameters record.	Identifies the Equipment record *field* whose value should trigger the automatic population. Throughout this documentation, this field is referred to as the *taxonomy mapping field*.	Yes. Unless you want to change the value in the [baseline record](#), you will not need to define manually the Equipment record field whose value should trigger the automatic population.

Record	Purpose	Provided as Baseline Content?
Multiple Taxonomy Mapping records.	Each record identifies: • A specific *value* that, when specified in an Equipment record, should trigger the Taxonomy Category, Class, and Type fields in that same Equipment record to be populated automatically (where the *field* that should contain that value is defined via the Taxonomy Parameters record). • The values with which the Taxonomy Category, Class, and Type fields in that Equipment record should be populated, assuming that the taxonomy mapping field (defined via the Taxonomy Parameters record) contains the specified value.	No.

Record	Purpose	Provided as Baseline Content?
Multiple Taxonomy Category, Taxonomy Class, and Taxonomy Type records.	Each record identifies the specific values with which the Taxonomy Category, Taxonomy Class, and Taxonomy Type fields in the Equipment record should be populated. The values in Taxonomy Category, Taxonomy Class, and Taxonomy Type records are used to populate the lists of available values in Taxonomy Mapping records.	No.

Taxonomy Parameters Records

The baseline Meridium APM database contains the Taxonomy Parameters records shown in the following image.

	Family	Record ID
▶	Taxonomy Parameters	Equipment Taxonomy Mapping Field ~ MI_EQUIP000_OBJ_TYP_C
	Taxonomy Parameters	Functional Location Taxonomy Mapping Field ~ MI_FNCLOC00_OBJ_TYP_C

The first record displayed in the list identifies a field in the *Equipment* family. From the Taxonomy Parameters datasheet, you can see that it identifies the MI_EQUIP000_OBJ_TYP_C field, which is the *Object Type* field (identified on the datasheet by the *Equipment Type* caption).

Equipment Taxonomy Mapping Field ~ MI_EQUIP000_OBJ_TYP_C (Taxonomy Parameters)

Datasheet Taxonomy Parameters

Taxonomy Parameters

		Value(s)
▶	Parameter Name	Equipment Taxonomy Mapping Field
	Parameter Value	MI_EQUIP000_OBJ_TYP_C

The following image highlights the Object Type field on the Equipment datasheet.

Datasheet Equipment

Equipment Identification | Equipment Taxonomy

		Value(s)	Description
▶	Equipment ID	000000000001002188	PUMP - GUARD CASE CHARGE
	Equipment Technical Number	G0001-004	
	SAP Category	R	ROTATING EQUIPMENT
	SAP Class	4006	PUMP
	Equipment Type	ROTPUMREC ←	Reciprocating Pump
	Equipment Status	INST	

In a given Equipment record, the value in the Object Type field will be used to trigger the automatic population of the Taxonomy Category, Taxonomy Class, and Taxonomy Type fields in that same Equipment record.

> **Note:** The specific *value* that should trigger the automatic population is defined in a Taxonomy Mapping record.

The second Taxonomy Parameters record, shown in the first image, identifies a field in the *Functional Location* family. Based on the values in this Taxonomy Parameters record, in a given Functional Location record, the value in the *Object Type* field will be used to trigger the automatic population of the Taxonomy Category, Taxonomy Class, and Taxonomy Type fields in that same Functional Location record.

Note: The specific *value* that should trigger the automatic population is defined in a Taxonomy Mapping record.

Taxonomy Category Records

Each *Taxonomy Category* record identifies a separate equipment category into which you want to classify your equipment. Taxonomy Category records contain the following fields:

- **Taxonomy Category:** A short name for the equipment category.
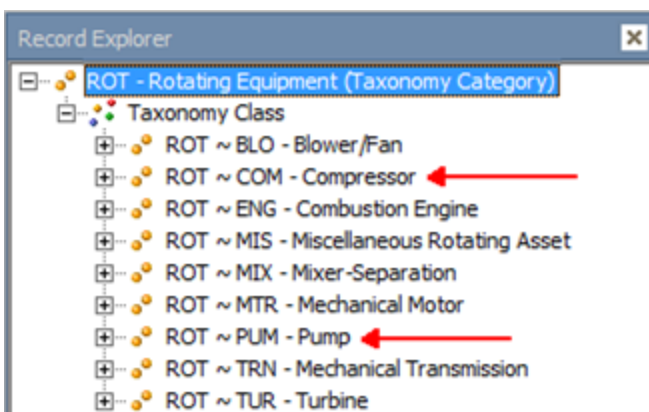- **Taxonomy Category Description:** A description of the equipment category.

For example, to represent the *Rotating Equipment* category, you might create a Taxonomy Category record like the one shown in the following image.
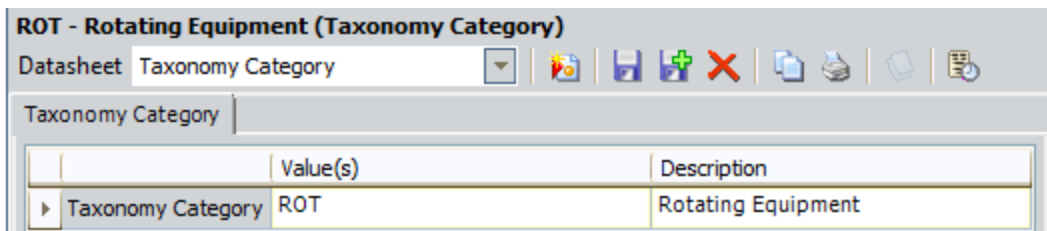
Each Taxonomy Category record can be linked to multiple successor Taxonomy Class records, where those Taxonomy Class records identify unique classes within that category. For example, the Taxonomy Category record shown above, which identifies the *Rotating Equipment* category, might be linked to several Taxonomy Class records, where two of them represent the following classes:

- Compressor
- Pump

In the following image, you can see that the root Taxonomy Category record, *ROT - Rotating Equipment*, is linked to multiple Taxonomy Class records. Red arrows have been added to the image to point out the Taxonomy Class records representing the *Compressor* and *Pump* classes.

Taxonomy Class Records

Each *Taxonomy Class* record identifies a separate equipment class into which you want to classify your equipment. Taxonomy Class records contain the following fields:

- **Taxonomy Category:** The name of the equipment category under which the class is organized.
- **Taxonomy Category Description:** A description of the equipment category under which the class is organized.
- **Taxonomy Class:** A short name for the equipment class.
- **Taxonomy Class Description:** A description of the equipment class.

For example, to represent the *Pump* class within the *Rotating Equipment* category, you might create a Taxonomy Class record like the one shown in the following image.

Each Taxonomy Class record *must* be linked to one (and only one) predecessor Taxonomy Category record to identify the equipment category under which that class is organized.

In addition, each Taxonomy Class record can be linked to multiple successor Taxonomy Type records, where those Taxonomy Type records identify unique equipment types within that class. For example, the Taxonomy Class record shown above, which identifies the *Pump* class, might be linked to two Taxonomy Type records representing the following types:

- Centrifugal
- Reciprocating

In the following image, you can see that the root Taxonomy Category record, *ROT - Rotating Equipment*, is linked to the Taxonomy Class record *ROT~PUM~Pump*, which is linked to multiple Taxonomy Type records. Red arrows have been added to the image to point out the Taxonomy Type records representing the *Centrifugal Pump* and *Reciprocating Pump* types. The Taxonomy Class record is highlighted in blue in the **Record Explorer** pane.
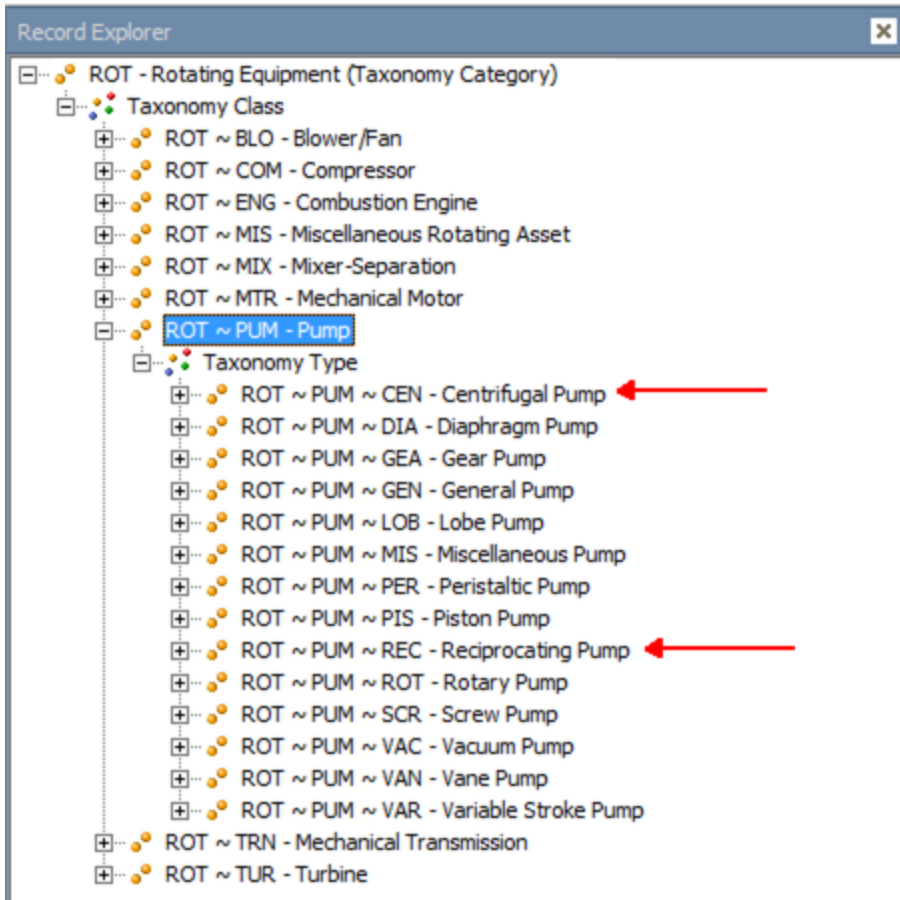
Taxonomy Type Records

Each *Taxonomy Type* record identifies a separate equipment type into which you want to classify your equipment. Taxonomy Type records contain the following fields:

- **Taxonomy Category:** The name of the equipment category under which the type is organized.
- **Taxonomy Category Description:** A description of the equipment category under which the type is organized.
- **Taxonomy Class:** The name of the equipment class under which the type is organized.
- **Taxonomy Class Description:** A description of the equipment class under which the type is organized.
- **Taxonomy Type:** A short name for the equipment type.
- **Taxonomy Type Description:** A description of the equipment type.

For example, to represent the *Reciprocating Pump* type within the *Pump* class and the *Rotating Equipment* category, you might create a Taxonomy Type record like the one shown in the following image.

Each Taxonomy Type record *must* be linked to one (and only one) predecessor Taxonomy Class record to identify the equipment class under which that type is organized.

In addition, each Taxonomy Type record can be linked to multiple successor Taxonomy Mapping records. Each Taxonomy Mapping record to which a Taxonomy Type record is linked identifies the *value* in Equipment records that should trigger the Category, Class, and Type fields in those Equipment records to be populated automatically.

Taxonomy Mapping Records

Each *Taxonomy Mapping* record identifies:

- The value in an Equipment record that should trigger the Category, Class, and Type fields in that same Equipment record to be populated.

  > **Note:** The Equipment family *field* in which this value should exist is defined in a Taxonomy Parameters record.

- The values with which the Taxonomy Category, Taxonomy Class, and Taxonomy Type fields in that Equipment record should be populated.

Taxonomy Mapping records contain the following fields:

- **Taxonomy Mapping Value:** The Equipment record value that should trigger the Taxonomy Category, Taxonomy Class, and Taxonomy Type fields in that same Equipment record to be populated.
- **Taxonomy Category:** The value that should be inserted into the Taxonomy Category field in Equipment records that contain the specified taxonomy mapping value.
- **Taxonomy Category Description:** The description of the equipment category whose name appears in the Taxonomy Category field.
- **Taxonomy Class:** The value that should be inserted into the Taxonomy Class field in Equipment records that contain the specified taxonomy mapping value.
- **Taxonomy Class Description:** The description of the equipment class whose name appears in the Taxonomy Class field.
- **Taxonomy Type:** The value that should be inserted into the Taxonomy Type field in Equipment records that contain the specified taxonomy mapping value.
- **Taxonomy Type Description:** The description of the equipment type whose name appears in the Taxonomy Type field.

For example, suppose that when Equipment record contains the value *ROTPUMPREC* in the Object Type field, you want the Taxonomy Category, Taxonomy Class, and Taxonomy Type fields in that Equipment record to be populated with the values *ROT*, *PUM*, and *REC*, respectively. In this case, you might create a Taxonomy Mapping record with the values shown in the following image.

ROTPUMPREC ~ ROT ~ PUM ~ REC - Reciprocating Pump (New Taxonomy Mapping)		
Datasheet Taxonomy Mapping		
Taxonomy Mapping		
	Value(s)	Description
Taxonomy Mapping Value	ROTPUMREC	
Taxonomy Category	ROT	Rotating Equipment
Taxonomy Class	PUM	Pump
Taxonomy Type	REC	Reciprocating Pump

Each Taxonomy Mapping record *must* be linked to one (and only one) predecessor Taxonomy Type record to identify the values that should be inserted into the Taxonomy Category, Taxonomy Class, and Taxonomy Type fields in Equipment records with the specified taxonomy mapping value.

A Complete Example

The following example explains how you would need to configure your taxonomy records so that an Equipment record could be classified like this one:

...based upon the value *ROTPUMREC* in the Object Type field (shown on the datasheet as *Equipment Type*):

In this scenario, the taxonomy records shown in the following images would exist.

Taxonomy Parameters

Taxonomy Category

Taxonomy Class

		Value(s)	Description
▸	Taxonomy Category	ROT	Rotating Equipment
	Taxonomy Class	PUM	Pump

Taxonomy Type

		Value(s)	Description
▸	Taxonomy Category	ROT	Rotating Equipment
	Taxonomy Class	PUM	Pump
	Taxonomy Type	REC	Reciprocating Pump

Taxonomy Mapping

		Value(s)	Description
▸	Taxonomy Mapping Value	ROTPUMREC	
	Taxonomy Category	ROT	Rotating Equipment
	Taxonomy Class	PUM	Pump
	Taxonomy Type	REC	Reciprocating Pump

Creating Taxonomy Category Records

Taxonomy Category records identify equipment categories into which you want to classify your equipment.

To create a Taxonomy Category record:

1. In the Meridium APM Framework, on the main menu, click the **New** button.

   The **Select Family** dialog box appears.

2. In the list, select **Taxonomy Category**, and click **OK**.

   A new Taxonomy Category record appears in the Record Manager.

3. In the **Value(s)** cell, type a short name for the equipment category. The value that you type must be unique with respect to other values in the same field in existing Taxonomy Category records. In other words, the database cannot contain two Taxonomy Category records with the same value in the **Value(s)** cell (i.e., the Taxonomy Category field).

4. In the **Description** cell, type a description of the equipment category.

5. On the **Common Tasks** menu, click the **Save** link.

   The Taxonomy Category record is saved to the database.

Creating Taxonomy Class Records

Taxonomy Class records identify equipment classes into which you want to classify your equipment.

To create a Taxonomy Class record:

1. In the Meridium APM Framework, on the main menu, click the **New** button.

   The **Select Family** dialog box appears.

2. In the list, select **Taxonomy Class**, and click **OK**.

   A new Taxonomy Class record appears in the Record Manager.

3. In the **Taxonomy Category** row, in the **Value(s)** cell, and select the equipment category to which this class belongs. The list contains all values that exist in the Taxonomy Category field in existing Taxonomy Category records.

   The **Description** cell in the **Taxonomy Category** row is populated automatically with the corresponding equipment category description. The Description cell is disabled.

4. In the **Taxonomy Class** row, in the **Value(s)** cell, type a short name for the equipment class. The value that you type must be unique with respect to other values in the same field in existing Taxonomy Class records. In other words, the database cannot contain two Taxonomy Class records with the same value in the **Value(s)** cell (i.e., the Taxonomy Class field).

5. In the **Taxonomy Class** row, in the **Description** cell, type a description of the equipment class.

6. On the **Common Tasks** menu, click the **Save** link.

   The Taxonomy Class record is saved to the database.

Creating Taxonomy Type Records

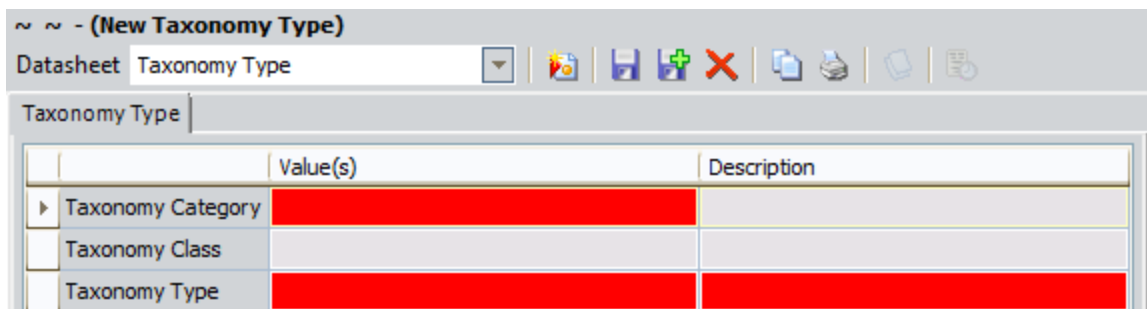*Taxonomy Type* records identify equipment types into which you want to classify your equipment.

To create a Taxonomy Type record:

1. In the Meridium APM Framework, on the main menu, click the **New** button.

   The **Select Family** dialog box appears.

2. In the list, select **Taxonomy Type**, and click **OK**.

   A new Taxonomy Type record appears in the Record Manager.

3. In the **Taxonomy Category** row, in the **Value(s)** cell, and select the equipment category to which this type belongs. The list contains all values that exist in the Taxonomy Category field in existing Taxonomy Category records.

   The **Description** cell in the **Taxonomy Category** row is populated automatically with the corresponding equipment category description. The **Description** cell is disabled. In addition, the Taxonomy Class field becomes required.

4. In the **Taxonomy Class** row, in the **Value(s)** cell, and select the equipment class to which this type belongs. The list contains all values that exist in the Taxonomy Class field in existing Taxonomy Class records.

   The **Description** cell in the **Taxonomy Class** row is populated automatically with the corresponding equipment class description. The **Description** cell is disabled.

5. In the **Taxonomy Type** row, in the **Value(s)** cell, type a short name for the equipment type. The value that you type must be unique with respect to other values in the same field in existing Taxonomy Type records. In other words, the database cannot contain two Taxonomy Type records with the same value in the **Value(s)** cell (i.e., the Taxonomy Type field).

6. In the **Taxonomy Type** row, in the **Description** cell, type a description of the equipment type.

7. On the **Common Tasks** menu, click the **Save** link.

   The Taxonomy Type record is saved to the database.

Creating Taxonomy Mapping Records

Taxonomy Mapping records identify:

- The value in an Equipment record that should trigger the Taxonomy Category, Class, and Type fields in that same Equipment record to be populated.

  > Note: The Equipment family *field* in which this value should exist is defined in a [Taxonomy Parameters record](#).

- The values with which the Category, Class, and Type fields in that Equipment record should be populated.

To create a Taxonomy Mapping record:

1. In the Meridium APM Framework, on the main menu, click the **New** button.

    The **Select Family** dialog box appears.

2. In the list, select **Taxonomy Mapping**, and click **OK**.

    A new Taxonomy Mapping record appears in the Record Manager.

3. In the **Taxonomy Mapping Value** row, in the **Value(s)** cell, type the Equipment record value that should trigger the Taxonomy Category, Class, and Type fields in that same Equipment record to be populated.

    > Note: The **Description** cell in the **Taxonomy Mapping Value** row is always disabled and never populated automatically.

4. In the **Taxonomy Category** row, in the **Value(s)** cell, and select the value that should be inserted automatically into the Taxonomy Category field in an Equipment record containing the specified taxonomy mapping value. The list contains all values that exist in the Taxonomy Category field in existing Taxonomy Category records.

    The **Description** cell in the **Taxonomy Category** row is populated automatically with the corresponding equipment category description. The **Description** cell is disabled. In addition, the Taxonomy Class field becomes required.
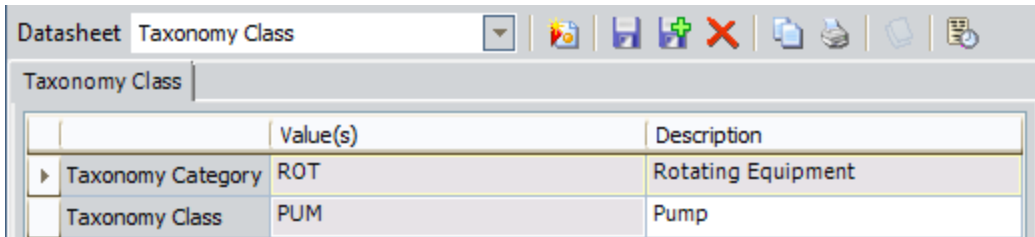
5. In the **Taxonomy Class** row, in the **Value(s)** cell, and select the value that should be inserted automatically into the Taxonomy Class field in an Equipment record containing the specified taxonomy mapping value. The list contains all values that exist in the Taxonomy Class field in existing Taxonomy Category records that contain the selected Taxonomy Category value.

   The **Description** cell in the **Taxonomy Class** row is populated automatically with the corresponding equipment class description. The **Description** cell is disabled.

6. In the **Taxonomy Type** row, in the **Value(s)** cell, and select the value that should be inserted automatically into the Taxonomy Type field in an Equipment record containing the specified taxonomy mapping value. The list contains all values that exist in the Taxonomy Type field in existing Taxonomy Type records that contain the selected Taxonomy Category and Taxonomy Class values.

   The **Description** cell in the **Taxonomy Type** row is populated automatically with the corresponding equipment type description. The **Description** cell is disabled.

7. On the **Common Tasks** menu, click the **Save** link.

   The Taxonomy Mapping record is saved to the database. In addition,

- The Taxonomy Mapping record is linked automatically to the Taxonomy Type record whose Taxonomy Type field contains the same value that you selected in the Taxonomy Type field in this Taxonomy Mapping record.

- If any existing Equipment records contain the specified taxonomy mapping value but *different* values in the Taxonomy Category, Class, or Type fields than the values that you specified in this Taxonomy Mapping record, those Equipment records are updated appropriately with the correct category, class, and type values.

About Modifying Taxonomy Category, Class, and Type Records

After a Taxonomy Category, Taxonomy Class, or Taxonomy Type record exists, only the description of that category, class, or type can be modified. All other fields become disabled. For example, consider the following image of a saved Taxonomy Class record.
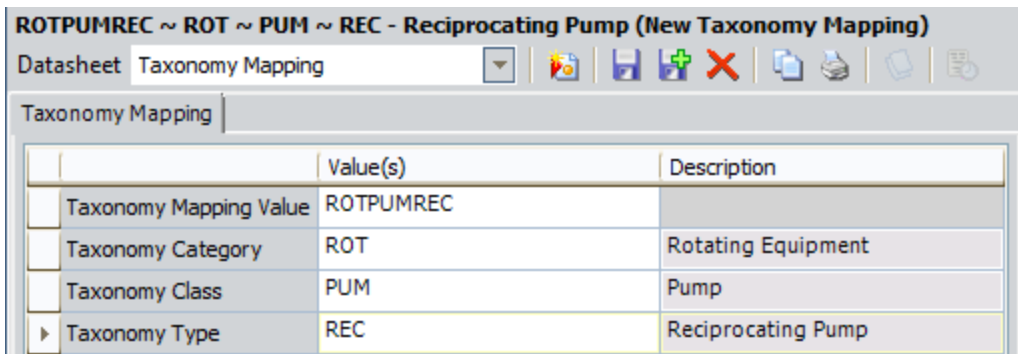

Because the record has been saved, only the value in the *Taxonomy Class Description* field can be modified. The values in the *Taxonomy Category* and *Taxonomy Class* fields cannot be modified.

About Modifying Taxonomy Mapping Records

When you modify a Taxonomy Mapping record, the Meridium APM system checks automatically to see if:

- The value in the Taxonomy Type field in the Taxonomy Mapping record has changed. If so, the Taxonomy Mapping record is unlinked automatically from the original Taxonomy Type record and linked instead to the Taxonomy Type record with the updated value that you selected in the Taxonomy Type field in the Taxonomy Mapping record.
- The value in the Taxonomy Category, Taxonomy Class, or Taxonomy Type fields have changed. If so, any existing Equipment records containing the specified taxonomy mapping value but *different* values in the Taxonomy Category, Class, or Type fields than the updated values in the Taxonomy Mapping record are updated appropriately with the correct category, class, and type values.
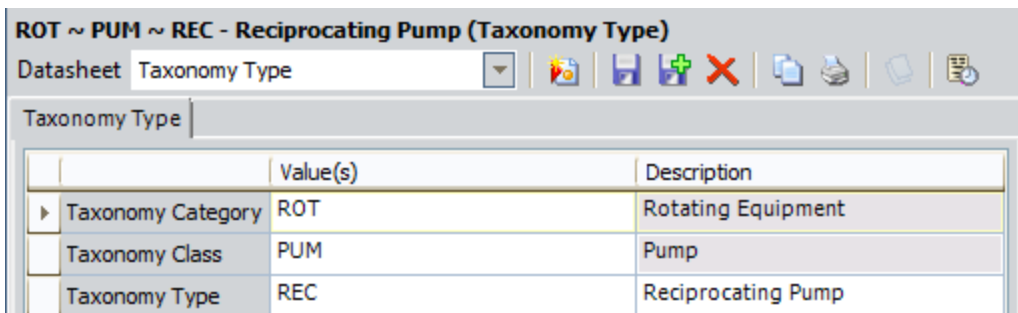
For example, consider the following Taxonomy Mapping record.

In this case, this Taxonomy Mapping record is linked to the following Taxonomy Type record (shown in the following image).
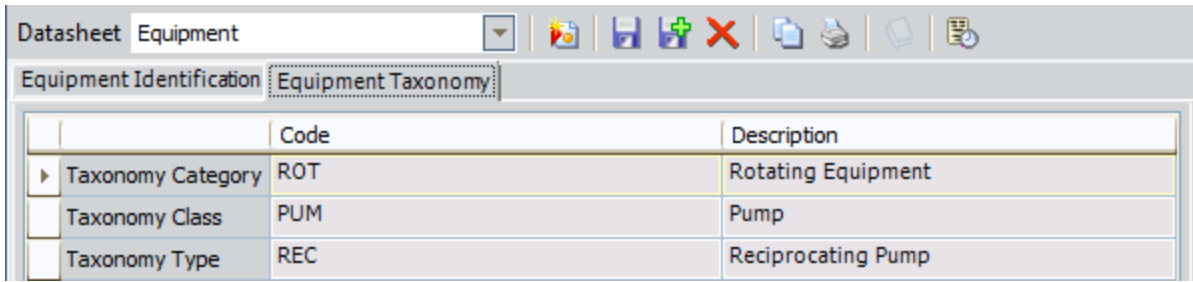

Notice how the Taxonomy Type fields in both records contain the same value, *REC.*
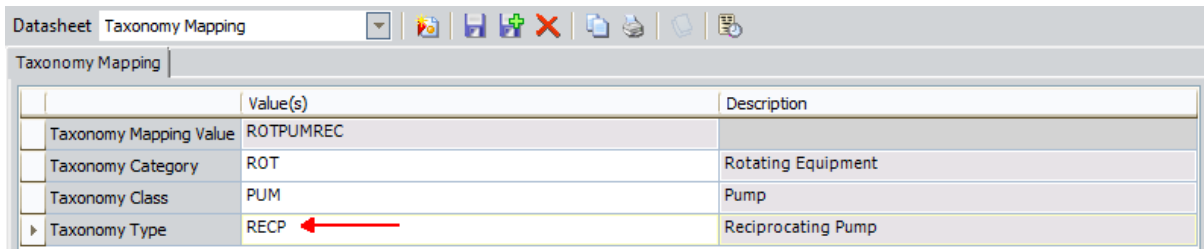
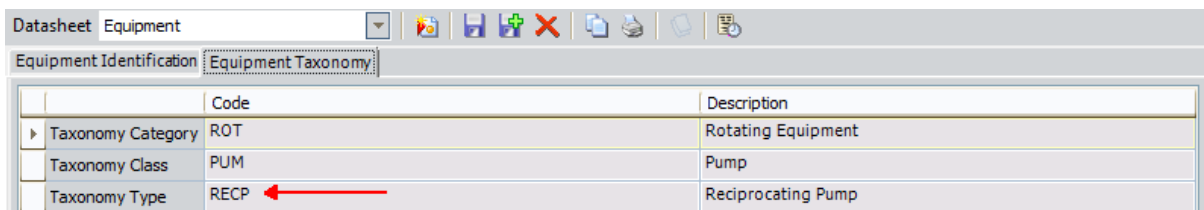If an Equipment record contains the values shown in the following image:

...and you change the value in the Taxonomy Type field in the Taxonomy Mapping record from *REC* to *RECP*:

...the Equipment record will be updated automatically to contain the value CENT in the Taxonomy Type field, as shown in the following image.

About Managing Sites

Some companies that use the Meridium APM software have facilities at multiple *sites*, or locations, around the world. If desired, you can [define these sites by creating Site Reference records](#), where each record represents a different site.

You can associate sites with the pieces of equipment and locations that belong to that site. To do so, you will need to [link each Site Reference record to the desired Equipment or Functional Location records](#).

The following Meridium APM module and features use sites and their association with equipment and locations to facilitate a certain workflow:

- Risk Assessment
- Asset Strategy Management (ASM)
- Asset Strategy Implementation (ASI)
- SAP Interfaces
- Reliability Centered Maintenance (RCM)
- Failure Modes and Effects Analysis (FMEA)
- Asset Criticality Analysis (ACA)

Site Management Data Model

The following image illustrates how the Site Reference family is related to the Equipment, Functional Location, and Risk Matrix families. In the following image, boxes represent entity families, and arrows represent relationship families that are configured in the baseline database.
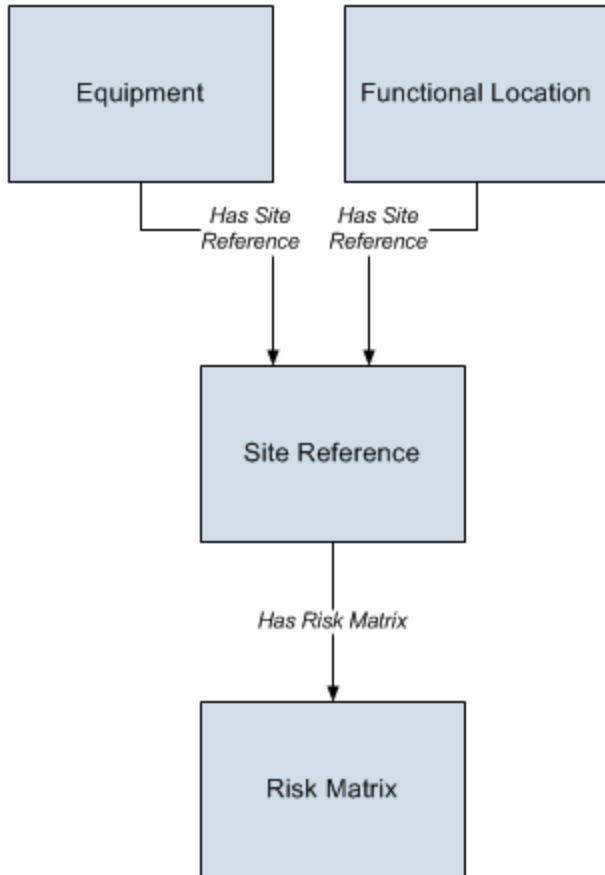
> **Note:** The Site Reference family is related to other families that belong to specific modules (e.g., the SAP System family). These relationships are included in the data model for those modules.

Defining Sites

To define a site within your company:

1. In the Meridium APM Framework, on the Meridium APM Framework toolbar, click the **New** button.

    The **Select Family** dialog box appears.

2. In the list of families, select **Site Reference**.

    A new Site Reference record appears in the Record Manager.

3. On the Site Reference datasheet, in the **Name** text box, type the name of the site.

4. On the **Common Tasks** menu, click the **Save** link.

    The Site Reference record is saved.

Associating Equipment and Locations with a Site

To associate a piece of equipment or location with the site to which it belongs:

1. In the Meridium APM Framework, perform a search for the Site Reference record representing the site with which you want to associate a piece of equipment or location.

2. Open the desired Site Reference record.

    The Site Reference record appears in the Record Manager.

3. Using the shortcut menu in the **Record Explorer** pane, link the Site Reference record to the appropriate Equipment or Functional Location record.

    The Equipment or Functional Location record is linked to the Site Reference record.