How-To: Data Model Series (Part 1): Creating a Data Model

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About this series

This series is all about **how to create and use Data Models**. You are in **Part 1**, which provides step-by-step instructions on how to create and manage a data model.

This series was designed to be read in order. If you don't have any previous experience with the data model tool, we recommend that you follow this approach, starting with Part 1. But if you are already familiar with Vena data models and are just looking for a refresher, you can also feel free to dip in anywhere within this series.

Part 1: Creating a Data Model - **you are here**

Part 2: Hierarchies and Roll-ups

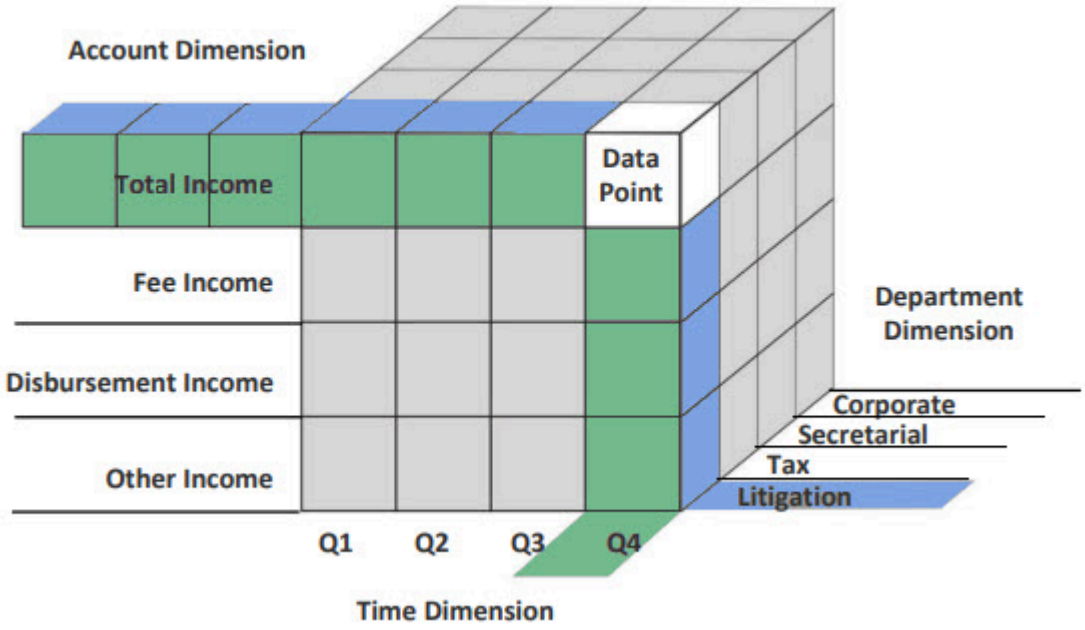
Part 3: Attributes and Versioning

Part 4: ETL Tool

What is a Data Model?

A data model is a multidimensional database that stores both numeric and narrative data. It can be built using multiple dimensions, each with many members. An intersection of members from each dimension comprises an individual data point.

OLAP cube example:



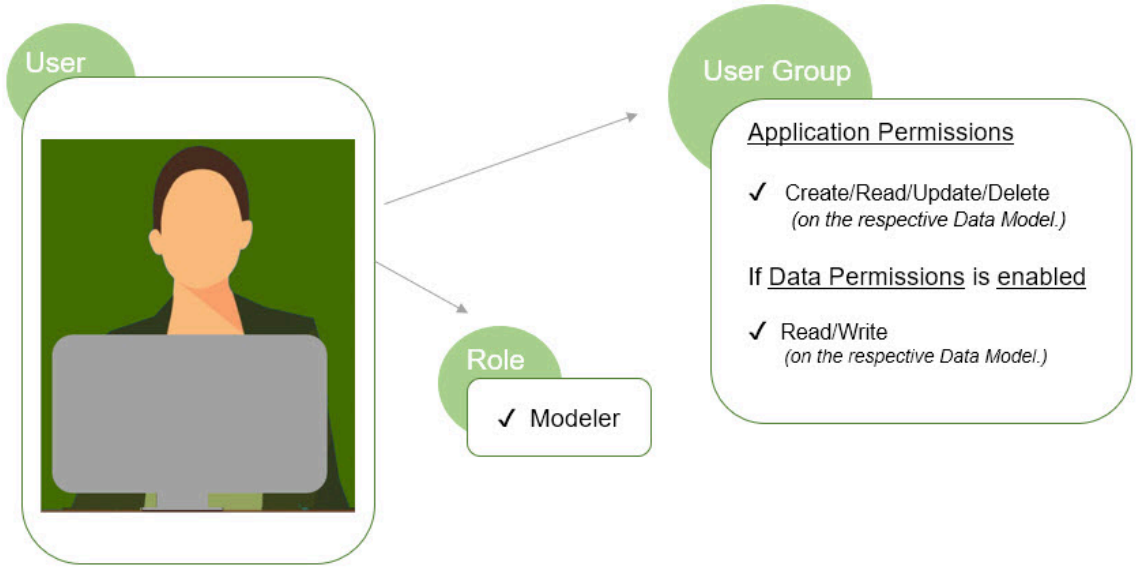
The data point in the top-right cell can be defined as the value for the total income, in Quarter 4, for the Litigation Department. Each piece of data is found at the intersection point of all Dimensions.

Before you begin

To follow the instructions in this article, you will need at least **Modeler** access. If Data Permissions are set up in your environment, you will also need the appropriate permissions for the data that you are working with.

User Permission Requirements

Users are required to possess the following permissions to perform data model-related tasks such as creating, updating, or deleting dimensional hierarchies and members. The same permissions functionality can also be applied to processes and specific data sets. For more information, check out the Application Permissions Guide and the Data Permissions Guide.



The Vena **Admin** is responsible for creating/assigning all of the above permissions.

- Contents within a model include:
  - Dimensions of a model
  - Members of a dimension
- Contents within a process include:
  - Tasks
  - Activities
  - Review Tasks
  - Task Details
  - Approve/Reject capabilities, etc.

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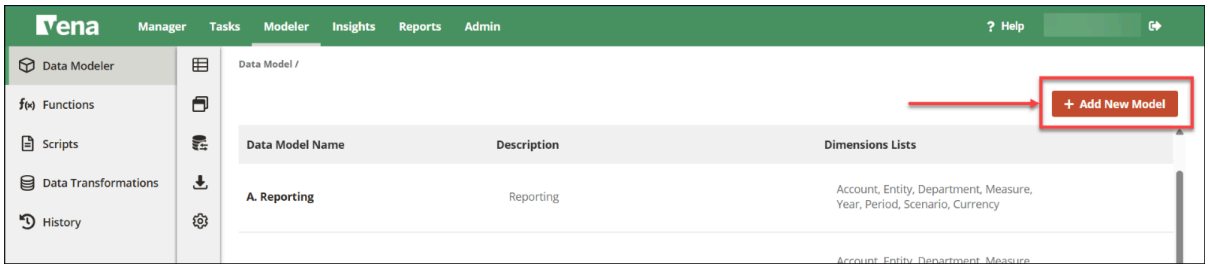
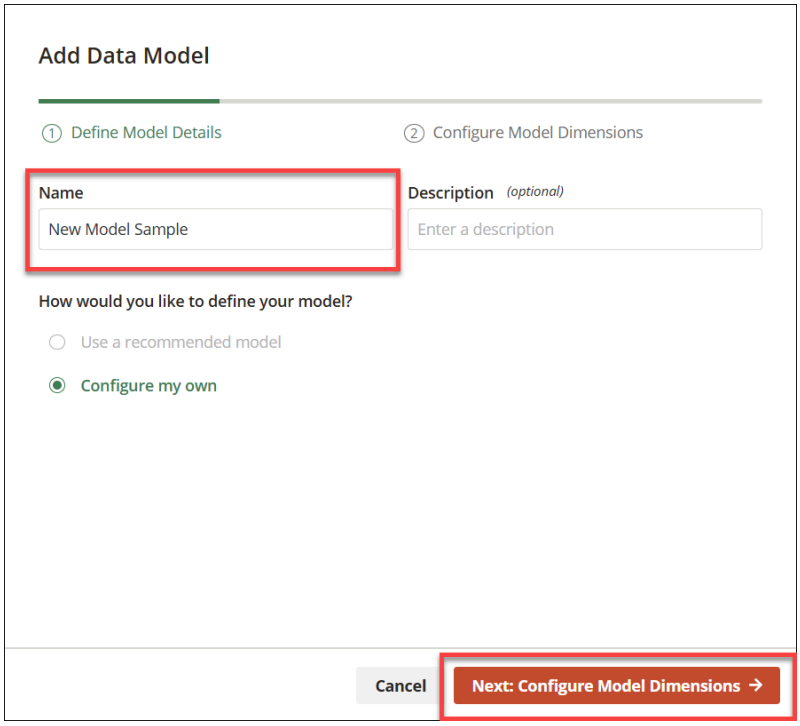
How to

Create a Data Model

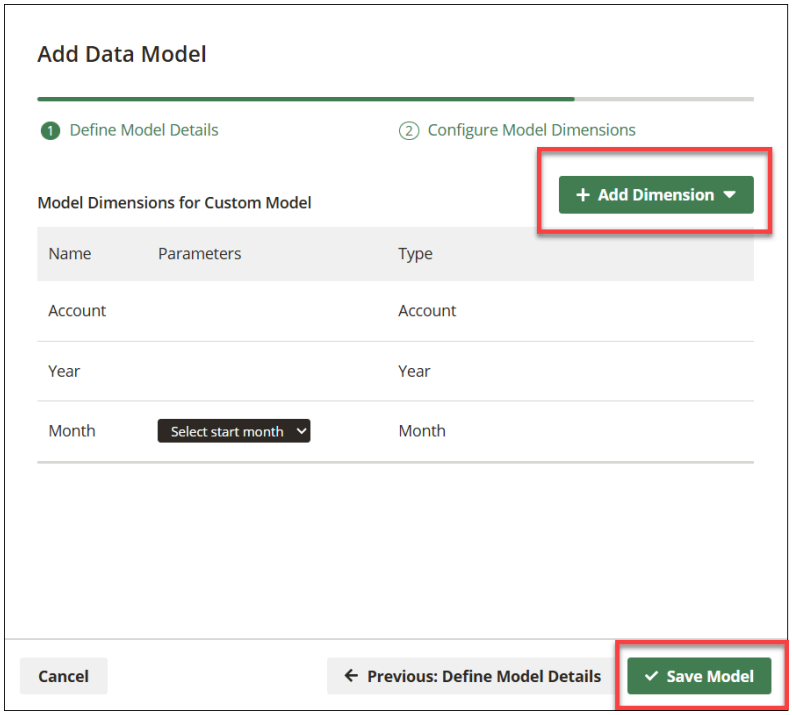
1. Navigate to the **Modeler** tab.
2. Select the **Data Modeler** sidebar.
3. Select **+ Add New Model**.



4. The *Add Data Model* drawer opens on the right side of the screen. Name the new data model, then select **Next: Configure Model Dimensions.**



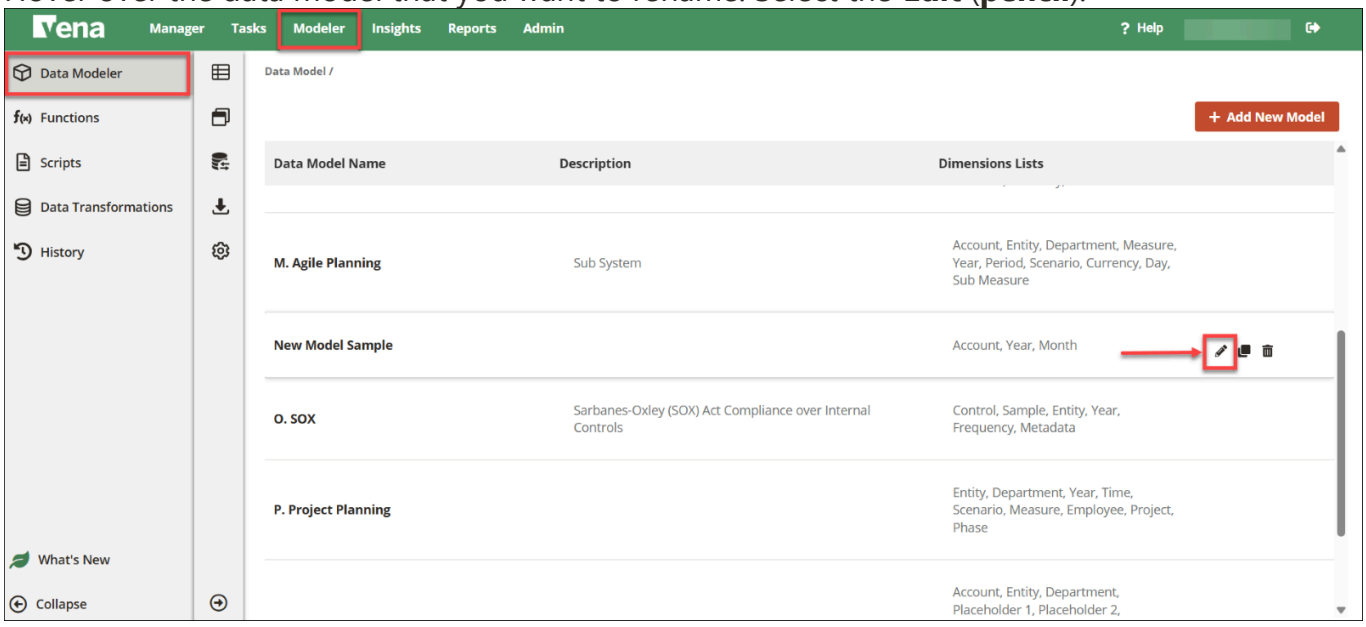
5. Configure the dimensions for the new model. Select **+Add Dimension** to add Standard Dimensions or include custom dimensions. When you're finished, select **Save Model.**



Rename a Data Model

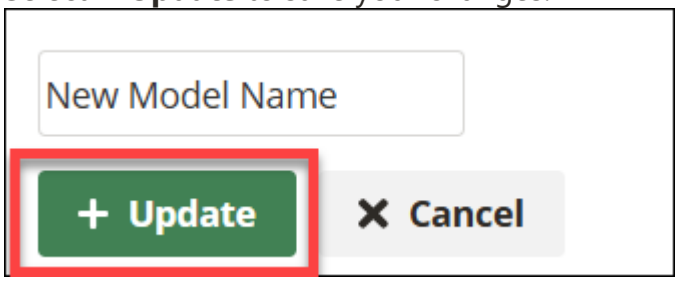
Name changes will impact existing data records but will not impact (break) reports that display the data from a specific data model.

1. Navigate to the **Modeler** tab.
2. Select the **Data Modeler** sidebar.
3. Hover over the data model that you want to rename. Select the **Edit** (**pencil**).



4. Enter a new name in the text box.

5. Select **+ Update** to save your changes.



Attach a Data Model to a Process

Attaching one or more data models to a process will:

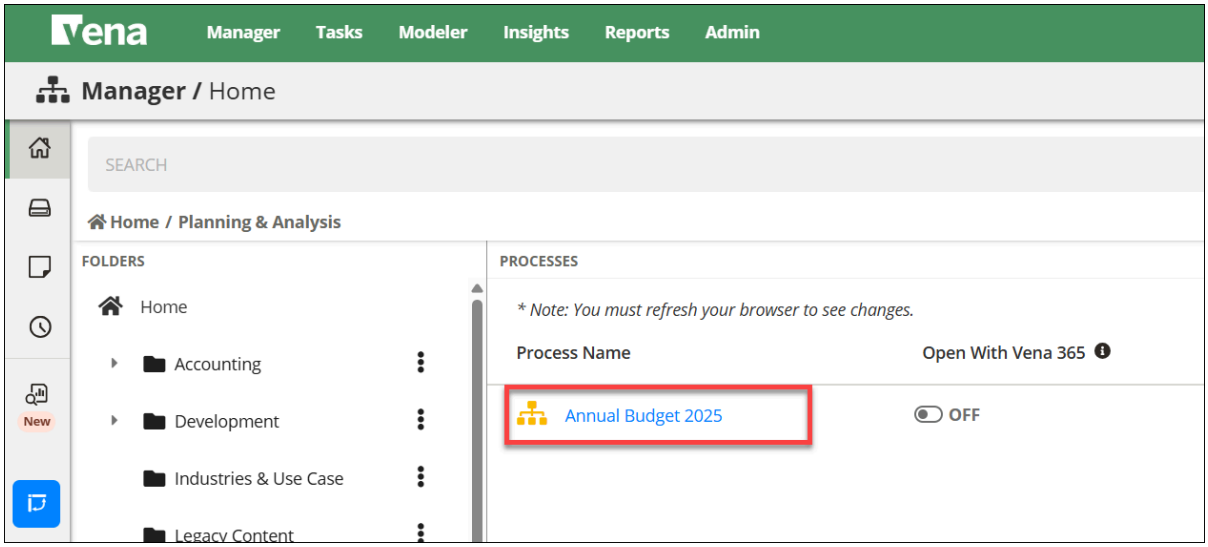
- Allow users with different data permissions to access different templates.
- Pull data from multiple data models for a specific process.

Users in the Manager role can create templates/reports to write/read from different data models.

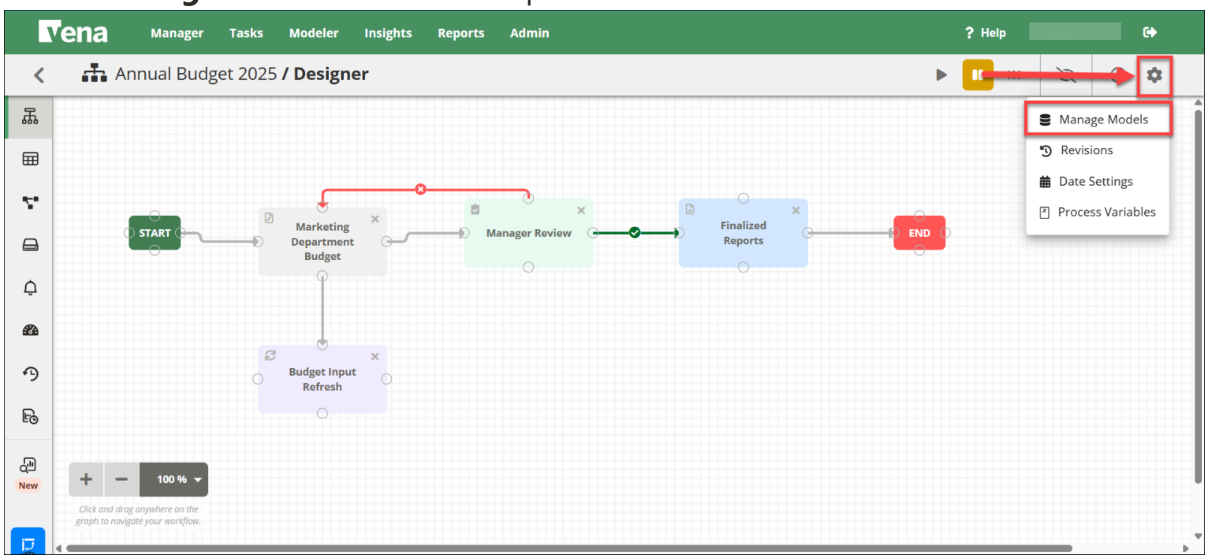
> **Note**
>
> If you run into an "invalid data model" error message when working with Ad Hoc reporting, follow the steps below to ensure that your process is attached to the correct data model.

To attach a data model to a process:

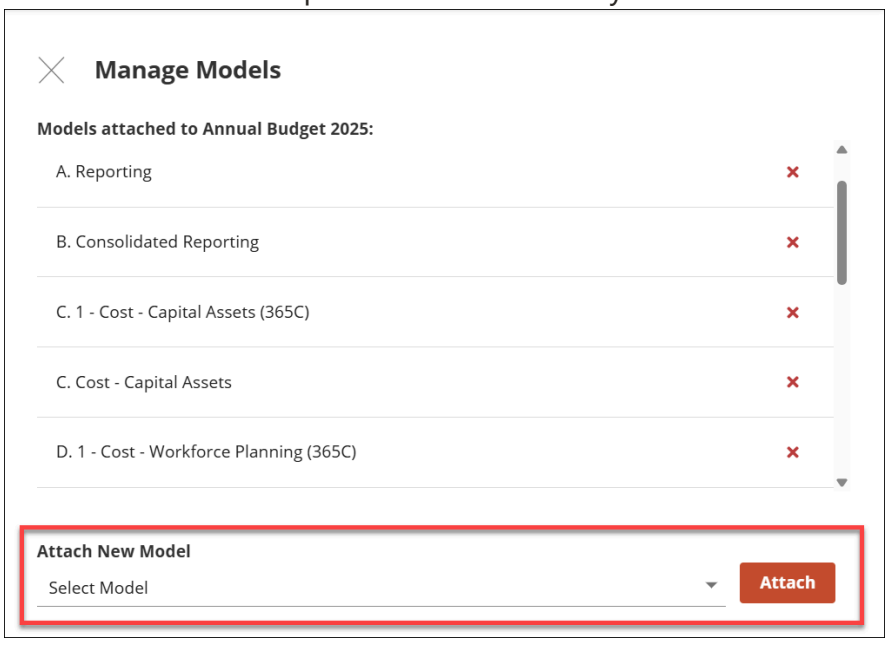
1. Navigate to the **Manager** tab.
2. Select the **process** you want to attach a data model to from the *Processes* table. This opens the process workflow.



3. On the *Designer* page, select the  (**gear**) icon in the upper right-hand corner.
4. Select **Manage Models** from the drop-down list.



5. Use the *Attach New Model* drop-down to select the data model that you want to attach to the process.
6. Select **Attach** to complete the action once you've selected the model.



Export a Data Model

In order to export/migrate data from one environment (tenant) to another in Vena, you have two options. You can either use the **ETL Export** functionality or **Tenant Migration**. Identifying what you are trying to accomplish will help you to decide which option to use.

1. **Export Data Model via ETL Tool**
   The ETL tool is Vena's traditional tool for importing and exporting data. With the ETL tool, you can export data model hierarchies, selected dimensions and intersection data without requiring the use of a template. More information about the ETL Export tool, including step-by-step instructions, can be found here.

Data models: Model hierarchies and attributes.	✓
Selected Dimensions: Isolate specific dimensions for export.	✓
Intersection Data	✓
Processes: Process workflows and their metadata (e.g., task assignments, due dates, task form assignments, process variables, etc.).	✗
Integration Components: Integration setups, including sources, channels, and destinations.	✗

2. **Export a data model via Tenant Migration**
   The Tenant Migration feature allows you to easily maintain a multi-environment system by duplicating work done in one environment in any of your other environments. This means you can fully build out a complex process in a development (Sandbox) environment away from live users, then move it over to a testing environment where you can safely validate it without touching production data, and finally deploy it on your production environment when it's ready. Read the Tenant Migration article for more information and step-by-step instructions.

Data models: Model hierarchies and attributes.	✓
Selected Dimensions: Isolate specific dimensions for export.	✗
Intersection Data	✗
Processes: Process workflows and their metadata (e.g., task assignments, due dates, task form assignments, process variables, etc.).	✓
Integration Components: Integration setups, including sources, channels, and destinations.	✓

Clone a Data Model

Read this article for full instructions on how to clone a data model.

Note

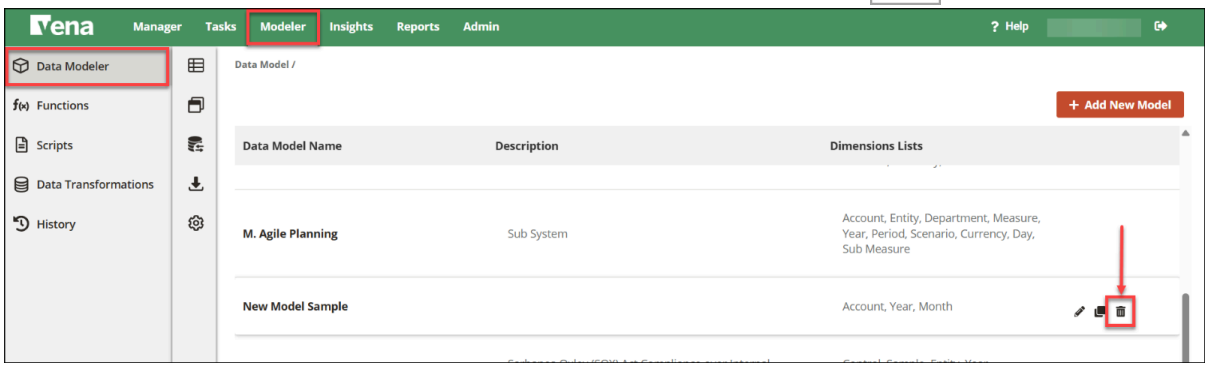
- After you duplicate a cube, the associated processes should also be duplicated. This allows the user to re-map any existing templates to the new cube without disturbing existing templates connected to the source cube.
- After the processes have been duplicated, the user should disconnect the new cube from the source processes to prevent any association with the original data model. The source cube should only be connected to the source processes and the new cube should only be connected to the new duplicated processes.

Delete a Data Model

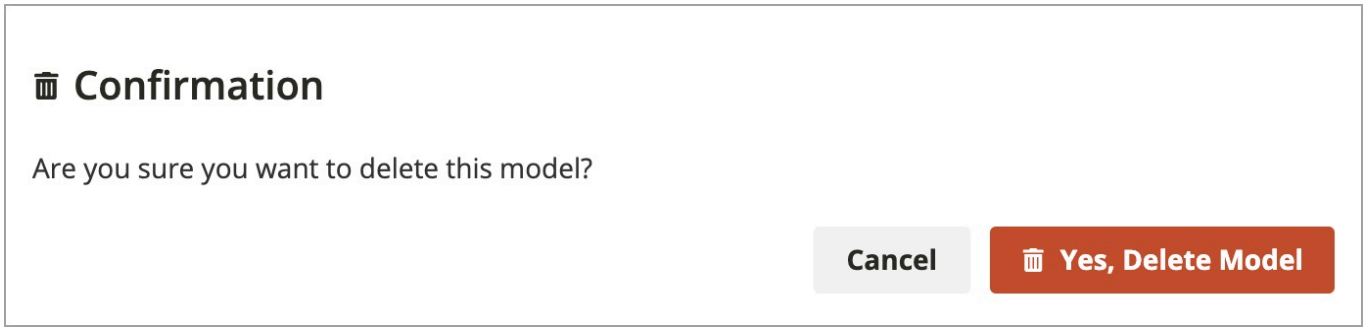
Warning

Delete data models with care, as this may cause errors in PivotTables or formulas that reference these tables. PivotTable results can change in unexpected ways after a relationship is deleted or deactivated.

1. Navigate to the **Modeler** tab.
2. Navigate to the **Data Modeler** sidebar.
3. Hover over the data model you want to delete and select the (**delete**) icon.



4. A confirmation modal will ask you to confirm the deletion. Select **Yes, Delete Model** to remove the data model.



5. The data model will be deleted and removed from the list. You have completed the deletion of the testing environment from your Vena tenant.

Caution

Ensure there are no processes attached to the data model. Once a data model is deleted, it will no longer be accessible and can adversely impact any workflow processes previously attached to it. Processes can be detached by deselecting the **Attach Process** button in the Manage Model drawer, accessible via the Manager tab. Read this article for step-by-step instructions on how to detach a process.

Notes & Limitations

- You can build multiple data models in any Vena application.
- Each process may connect to multiple data models.

Best Practices

- Ensure that each user has the proper access to relevant data models. For example, if a user doesn't have to provide changes (manual input) to a model, then ensure their Data Permissions are set to *Read*.
- Make sure that only those individuals who need to make changes (edit, add, remove) are given *Write* permissions. The best practice is to only give *Write* access to users who modify data. This reduces the risk of data corruption and accidental errors.

Related Topics

- Read about how to clone and view a data model.
- Read about how to export a data model.
- Read about how to create and manage a data model hierarchy using ETL Import.
- Read about how to map from multiple data models to a single template.

Was this article helpful?