

How-To: Build and Manage Data Models in Modeler



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Why use this feature?

This guide is intended to explain how to build a data model, how to maintain it, and some helpful tools and tricks.

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How to

Data Model: Build your data model

Add a data model

1. Log into vena.io and select the **Modeler** tab.
2. Select **+Add New Model**.

The screenshot shows the Vena Modeler interface. The top navigation bar has tabs for MDLR, Manager, Contributor, Modeler (which is highlighted with a red box), and Admin. On the left, there's a sidebar with icons for Scripts, Data Transformations, and History. The main content area is titled 'Data Model /'. It shows a table with two rows: 'FCM - Data' and 'FCM - Management'. The 'FCM - Data' row has a description: 'Entity, Account, Year, Period, Source, Currency, Measure, Item, Scenario'. The 'FCM - Management' row has a description: 'Entity, Account, Year, Period, Source, Currency, Measure, Scenario, Item'. In the top right of the main area, there is a red box around the '+ Add New Model' button.

3. Enter a *Data Model Name* and *Description*, and select **+Add**.

The screenshot shows the Vena Modeler interface. The top navigation bar has tabs for MDLR, Manager, Contributor, Modeler (highlighted with a red box), and Admin. On the left, there's a sidebar with icons for Scripts, Data Transformations, and History. The main content area is titled 'Data Model /'. It shows a table with columns: 'Data Model Name', 'Description', and 'Dimensions Lists'. A new row is being added, with 'Planning' in the 'Data Model Name' field and an empty 'Description' field. At the bottom of the table, there are '+ Add' and 'X Cancel' buttons. A red box highlights the '+ Add New Model' button in the top right of the main area.

4. Your new data model will appear in the list of available models:

The screenshot shows the Vena Modeler interface. The top navigation bar has tabs for MDLR, Manager, Contributor, Modeler (highlighted with a red box), and Admin. On the left, there's a sidebar with icons for Scripts, Data Transformations, and History. The main content area is titled 'Data Model /'. It shows a table with columns: 'Data Model Name', 'Description', and 'Dimensions Lists'. One row is listed: 'Planning' with '2021 Planning' in the 'Description' column. A red box highlights the 'Data Model Name' column header in the table.

Dimensions: Structure your data model

Add dimensions

1. Select the data model you just created.

2. Select the **pencil (edit)** button beside *No Dimensions Available*. (If you're adding dimensions to an existing model, select the pencil icon at the end of the dimensions list.)

The screenshot shows the Vena Modeler interface with the 'Modeler' tab selected. On the left, there's a sidebar with icons for Members, Versioning, ETL, and a refresh symbol. The main area is titled 'Data Model / Model Structure for Planning'. It displays the message 'No Dimensions Available' with a small pencil icon to its right, which is highlighted with a red box.

3. This opens a panel with options to add dimensions or link dimensions from existing models.

The screenshot shows the 'Dimensions In Cube Planning' panel that was opened from step 2. It has a header with '+ Add Dimension' and 'Share' buttons. Below is a table with columns 'Name' and 'Type'. At the bottom are input fields for 'Enter Dimension Name', '+ Add Dimension' (green button), and 'Cancel' (grey button).

4. Repeat steps 2-3 to add or link additional dimensions as needed.

Members: Populate your hierarchy

Add members

1. To add a member to your hierarchy, select the **plus (+)** icon on the member you would like to add a child under. This opens the in-line edit panel.

The screenshot shows the 'Members' list. An inline edit panel is open for a member named 'Net Income Attributable to Controlling Interest'. The panel includes fields for 'Member Name', 'Alias', 'Attributes', and 'Operator'. A red box highlights the '+' icon at the bottom right of the panel.

2. You can add a Member Name, Alias, Attribute and/or define the Operator here.

Member Name	Alias	Attributes	Operator
<input type="checkbox"/> All Accounts			+
<input type="checkbox"/> Net Income Attributable to Controlling Interest			+
<input type="checkbox"/>	<input type="checkbox"/>	Attribute	<input type="button" value="+"/>
<input type="button" value="Add Member"/>		<input type="button" value="Cancel"/>	

Move Members

1. To move a single member, select the **grab** icon to the left of the member and drag it to the intended position.

The screenshot shows the 'Model Structure for FCM - Data' section of the Modeler. The 'Entity' tab is selected. In the 'Member Name' list, the member 'US002' is highlighted with a red box and has a 'grab' icon to its left. A tooltip window titled 'Moving US002 to US003' with red double-headed arrows is overlaid on the list, indicating the action being performed.

2. To move members in bulk, simply select the checkboxes beside the members you want to move, then use the *grab* icon to move the members to their new position.

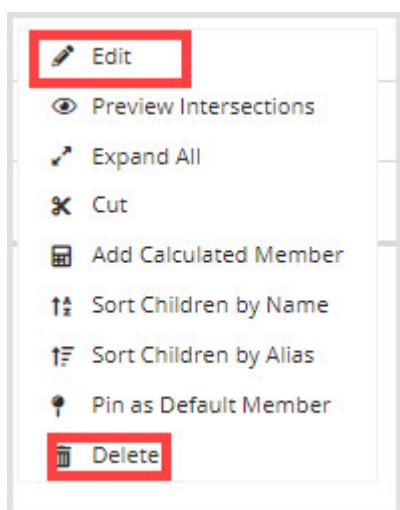
<input type="checkbox"/>	Member Name
<input type="checkbox"/>	Global Consolidated
<input type="checkbox"/>	Peak US Operations
<input checked="" type="checkbox"/>	US001
<input checked="" type="checkbox"/>	US002
	2 members to Peak US Operations Group Entity
<input type="checkbox"/>	Peak US Operations Group Entity

Edit or delete Members

1. To edit or delete a member, right-click or select the **vertical ellipsis** in the member row. (If you want to simply edit a member, you can also select the **pencil (edit)** icon in the member row.)

<input type="checkbox"/>	Member Name	Alias	Attributes	Operator	
<input checked="" type="checkbox"/>	All Accounts				+ <input type="button" value="Edit"/> + <input type="button" value="Delete"/>

2. Select **Edit** from the window to edit a member. To delete a member, select **Delete** at the bottom of the window.



3. If you select **Edit**, the inline panel opens. You can make changes to the Member Name, Alias, Attached attributes, and operator from here.

The screenshot shows the Vena Modeler interface with the 'EBIT' data model selected. A drawer is open for the 'Revenue' category, specifically for 'Gross Margin'. The drawer contains fields for 'Gross Margin' and other related data. At the bottom of the drawer are two buttons: '+ Update' and 'X Cancel'.

- After you've made your revisions, select **Update** to save the changes.

Attributes: Create alternative views

Add attributes

- Select the **Manage Attributes** button. This opens the attributes drawer.

The screenshot shows the Vena Modeler interface with the 'Account' tab selected. A modal window titled 'Manage Attributes-Account' is open. In the top right corner of this modal, there is a red box and a red arrow pointing to the '+ Add Attribute' button. The modal lists several attributes with their names and types:

Name	Type
Demo	STRING
OPEX template Direct Input	STRING
OPEX template Driver-based	STRING
OPEX template No Forecast	STRING
OPEX template Other template	STRING
Package Type CAPEX	STRING
Package Type FX	STRING
Package Type HR	STRING

- To add an attribute, select **+ Add Attribute**.

The screenshot shows the 'Manage Attributes-Account' dialog box. At the top right is a green button labeled '+ Add Attribute'. Below it is a red box highlighting the 'Name' input field, which contains the text 'Currency in MXN'. To the right of the input field is a 'Type' column showing 'STRING'. Below the input field are two buttons: a green '+ Add Attribute' and a grey 'Cancel' button.

Name	Type
Currency in MXN	STRING
Elimination Automated - Account Matching	STRING
Elimination Automated - Account Subledger	STRING
Elimination Manual	STRING
FX Functional Currency in CAD	STRING
FX Functional Currency in EUR	STRING
FX Functional Currency in USD	STRING
Historical	STRING

Done

3. Enter the attribute name and save it by selecting the **+ Add Attribute** button below the attribute field. You should see your new attribute in the sidebar.

The screenshot shows the 'Manage Attributes-Account' dialog box with the newly added attribute 'FX | Functional Currency in MXN' highlighted with a red box. The attribute is listed under the 'Name' column and has a 'Type' of 'STRING'.

Name	Type
Elimination Automated - Account Matching	STRING
Elimination Automated - Account Subledger	STRING
Elimination Manual	STRING
FX Functional Currency in CAD	STRING
FX Functional Currency in EUR	STRING
FX Functional Currency in GBP	STRING
FX Functional Currency in MXN	STRING

Attach members to an attribute

1. To attach members to an attribute, select the member by clicking on the **pencil (edit)** button in the member row.

The screenshot shows the Vena Modeler application's interface. The left sidebar has 'Members' selected. The main area shows a table with columns: Member Name, Alias, Attributes, and Operator. A row for 'All Accounts' is selected, and its edit icon is highlighted with a red box. Other rows include 'Net Income Attributable to Controlling Interest' and a blank row with a plus sign.

2. Using the drop-down menu, select the checkbox next to the attribute(s) you want to attach to your member.

This screenshot shows the 'Edit Member' dialog. It lists members under 'Member Name' and allows setting an 'Alias'. On the right, there's a 'Newcastle' button, an 'Attribute' dropdown menu with a red box, a '+ Add Attribute' button, and a checked checkbox labeled 'Top 10 Sellers'.

3. Select **+ Update** to save your changes. Your new attribute will appear alongside its member.

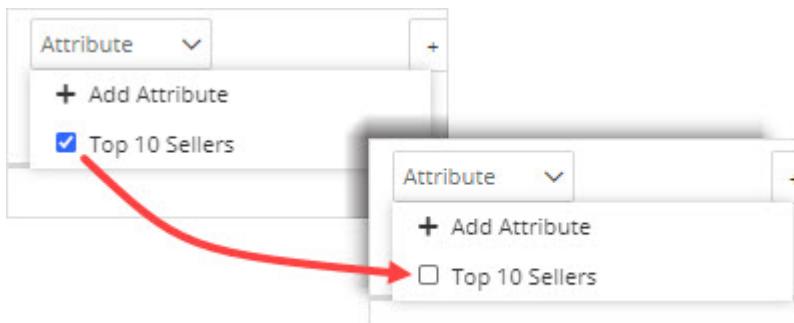
This screenshot shows the 'Entity' section of the Modeler. It lists entities like 'Default member', 'Germany', and 'Canada'. The 'Germany' row has a red box around its 'Attributes' column, which displays 'Top 10 Sellers'. The 'Default member' row also has a plus sign in its 'Operator' column.

Detach members from an attribute

1. To detach members to an attribute, select the member by selecting the **pencil (edit)** button in the member row.

Member Name	Alias	Attributes	Operator
All Accounts			
Net Income Attributable to Controlling Interest			

2. Using the drop-down menu, clear the checkbox next to the attribute(s) you want to remove from your member.



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

Maintaining your data model

Revisions for audit tracking

1. To check what changes were made previously to a data model, select **Revisions** to open the revisions window.

2. Use the pagination and "go to page" to find the date of transactions you're looking for. You may copy/paste this table for your records.

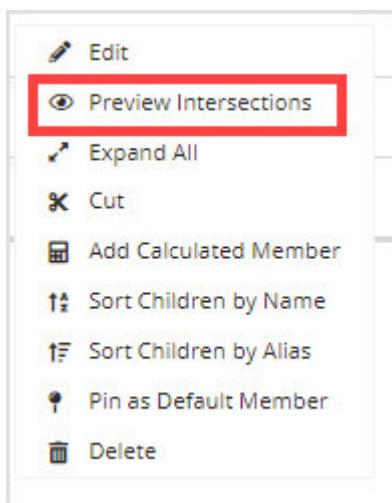
The screenshot shows the 'FCM - Data: Revisions' window. On the left is a tree view of the model structure under 'Member Name'. The main area displays a table of revisions with columns: Description, Action, Time, and User. The table contains 12 rows of revision history.

Description	Action	Time	User
Moved member "4000" parent member "Revenue" after member "4010"	Updated	Dec 8, 7:32 AM	Rachel Taguicana
Moved member "4000" parent member "4010"	Updated	Dec 8, 7:32 AM	Rachel Taguicana
Deleted dimension member "Sales - Excluding Professional Services_948653376139821056"	Deleted	Dec 8, 7:19 AM	Rachel Taguicana
Added dimension member "Sales - Excluding Professional Services"	Added	Dec 8, 7:12 AM	Rachel Taguicana
New position for "US003" operator "+" parent member "North America Operations"	Added	Dec 8, 6:57 AM	Rachel Taguicana
Updated dimension "Entity"	Updated	Dec 8, 6:57 AM	Rachel Taguicana
Updated dimension "Entity"	Updated	Dec 8, 6:57 AM	Rachel Taguicana
Updated a dimension member "North America Operations"	Updated	Dec 8, 6:57 AM	Rachel Taguicana
Moved member "test" after member "No Entity"	Updated	Dec 8, 6:56 AM	Rachel Taguicana
Added dimension member "test"	Added	Dec 8, 6:56 AM	Rachel Taguicana

At the bottom, there are navigation links: Previous, 1, 2, 3, 4, ..., 11, Next, Go to page [1], Go >, and a Close button.

Preview intersections

1. To preview intersections, right-click anywhere on a member row or use the **vertical ellipses** to open the drop-down menu.
2. Select **Preview Intersections**.



3. This opens the *Preview Intersections* window.

Entity	Placeholder 3	Placeholder 4	Year	Period	Scenario	Currency	Measure	Value	Etl_id
Placeholder 3 Specific	Not Placeholder 4 Specific	Not Placeholder 4 Specific	2018	1	Actual	USD	Local Rate USD	2	
Placeholder 3 Specific	Not Placeholder 4 Specific	Not Placeholder 4 Specific	2018	1	Actual	USD	Local Rate CAD	0.76	
Placeholder 3 Specific	Not Placeholder 4 Specific	Not Placeholder 4 Specific	2018	1	Actual	USD	Local Rate GBP	1.43	
Placeholder 3 Specific	Not Placeholder 4 Specific	Not Placeholder 4 Specific	2018	1	Actual	GBP	Local Rate USD	0.71	
Placeholder 3 Specific	Not Placeholder 4 Specific	Not Placeholder 4 Specific	2018	1	Actual	GBP	Local Rate CAD	0.55	
Placeholder 3 Specific	Not Placeholder 4 Specific	Not Placeholder 4 Specific	2018	1	Actual	GBP	Local Rate GBP	1	
Placeholder 3 Specific	Not Placeholder 4 Specific	Not Placeholder 4 Specific	2018	1	Actual	CAD	Local Rate USD	1.31	

4. You can use the **Export** button to download the values in the window.

Preview Intersections										
Entity	Account	Year	Period	Source	Currency	Measure	Item	Scenario	Value	Etl_id
US001	6101	2021	1	Reconciliation	USD	JE Debit	JE 1	Actual	2500	
US001	6101	2021	1	Reconciliation	USD	JE Entity	JE 1	Actual	US001 (Rochester)	
US001	6101	2021	1	Reconciliation	USD	JE Account	JE 1	Actual	6101 (Software)	
US001	6101	2021	1	Reconciliation	USD	JE Description	JE 1	Actual	Prepaid Software Reclass	
US001	7102	2021	7	Reconciliation	USD	JE Debit	Fixed Asset Entry	Actual	111160.6233333	
US001	7102	2021	7	Reconciliation	USD	Preparer	Fixed Asset Entry	Actual	Submitted	
US001	7102	2021	7	Reconciliation	USD	JE Entity	Fixed Asset Entry	Actual	US001 (Rochester)	
US001	7102	2021	7	Reconciliation	USD	JE Account	Fixed Asset Entry	Actual	7102 (Depreciation Expense)	
US001	7102	2021	7	Reconciliation	USD	JE Description	Fixed Asset Entry	Actual	Jul 2021 Fixed Asset Depreciation Entry	
US001	7102	2021	7	Reconciliation	USD	Reviewer	Fixed Asset Entry	Actual	Reviewed	

Previous [1](#) [2](#) [3](#) [4](#) [5](#) Next Go to page Go >

Export

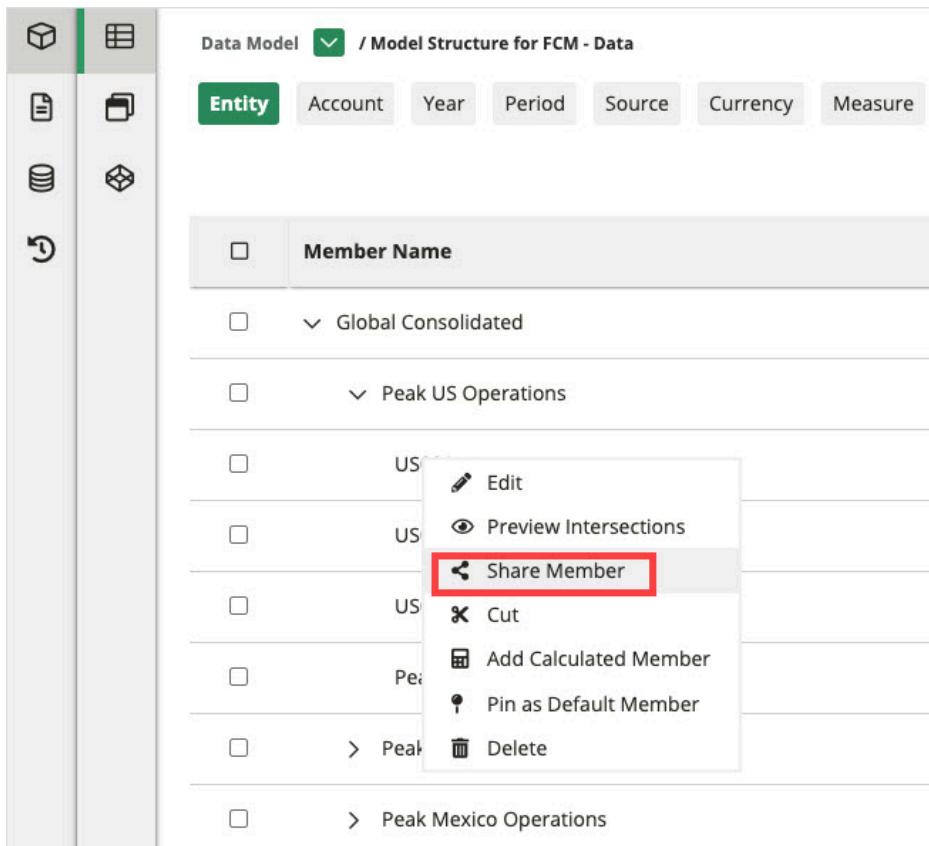
Back

Advanced member modeling

Shared members and alternate hierarchies

You may want to recall a roll-up that includes/excludes members from the main hierarchy. You can do this by sharing members to another parent and mapping the new alternative parent to the template later on. To share a member, perform the following steps:

1. Right-click anywhere on a member row or use the **vertical ellipses (3 dots)** to open the dialogue box.
2. Select the **Share Member** option.



3. Select the parent member you would like to share under and select **Complete Share** to share the member.

A screenshot of the Vena Modeler interface. On the left is a navigation sidebar with icons for Home, Model Structure, Entity, Account, Year, Period, Source, Currency, and Measure. The main area shows a tree view under 'Member Name'. A context menu is open over the member 'US003'. The menu items are: Edit, Preview Intersections, Complete Share (highlighted with a red box), Cancel, Add Calculated Member, Pin as Default Member, and Delete.

4. The member will now also appear under the parent member selected. There will be a shared icon beside the shared member name. Deleting one position will not delete the others.

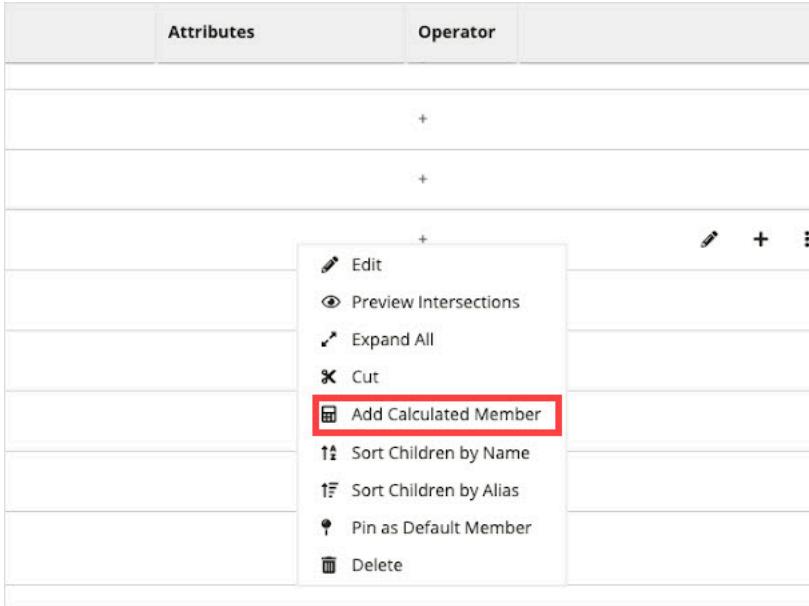
A screenshot of the Vena Modeler interface showing the updated hierarchy. The member 'US003' is now listed under the node 'Peak US Operations'. A red arrow points to the shared icon (a small square with a double-headed horizontal arrow) next to 'US003'.

Learn more about alternate hierarchies in [this article](#).

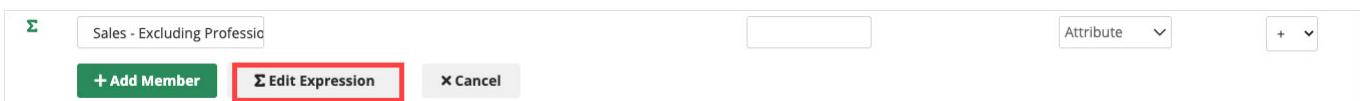
Calculated members

Another way to recall a roll-up that includes/excludes a group of members or parents without cluttering the hierarchy is to use a calculated member.

1. Right-click anywhere on a member row or use the ellipsis and select **Add Calculated Member** from the drop-down menu.



2. In the in-line panel, name the calculated member and select **Edit Expression** to add MQL expressions.



3. In this example, we want to add accounts 4000 (Product Sales) and 4020 (Subscription Sales). Once you're finished, select **Save** to save your expression.

Σ Editing Calculated member: Sales - Excluding Professional Services

A calculated member is a member whose value is the sum of a custom group of members. To form this group, use an MQL or HQL expression. [Click here](#) for more detail.

Union ('4000' '4020')

[Cancel](#) [Save](#)

4. Back in the in-line editor, select **+ Add Member** to save the calculated member.



5. To edit the expression of a calculated member, right-click and select **Open Expression Editor** from the menu.

