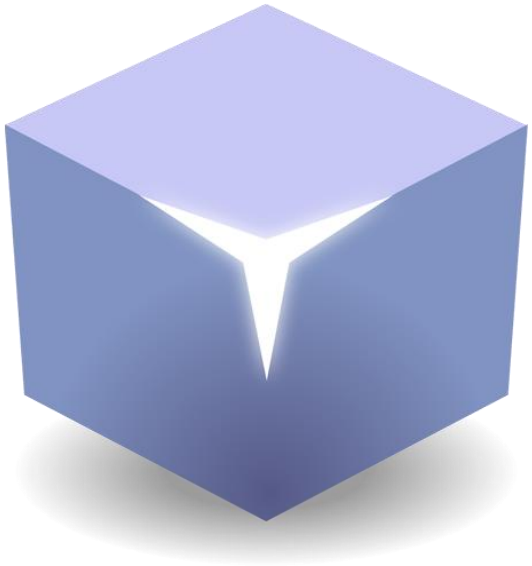


Analysis Features with OLAP & 'Analytic Models'

Using OLAP/Analytic Model analysis features of Kyubit Business Intelligence

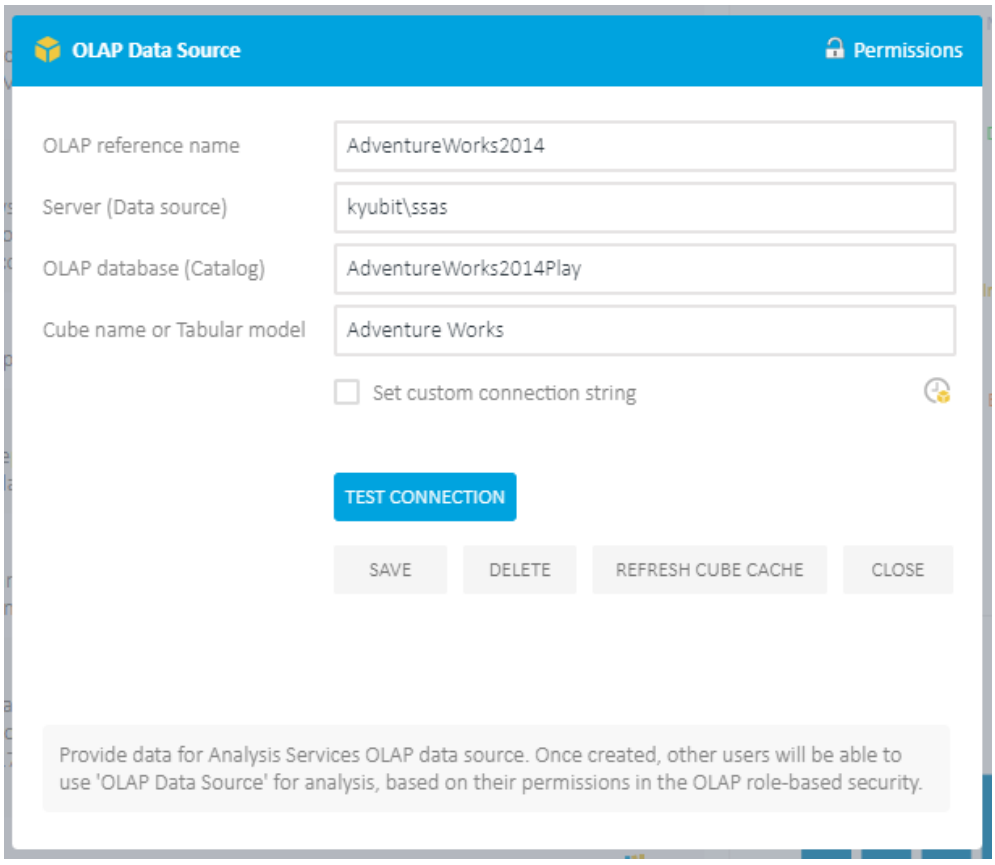
www.kyubit.com

Contents

1. OLAP/Tabular/Analytic Model data sources

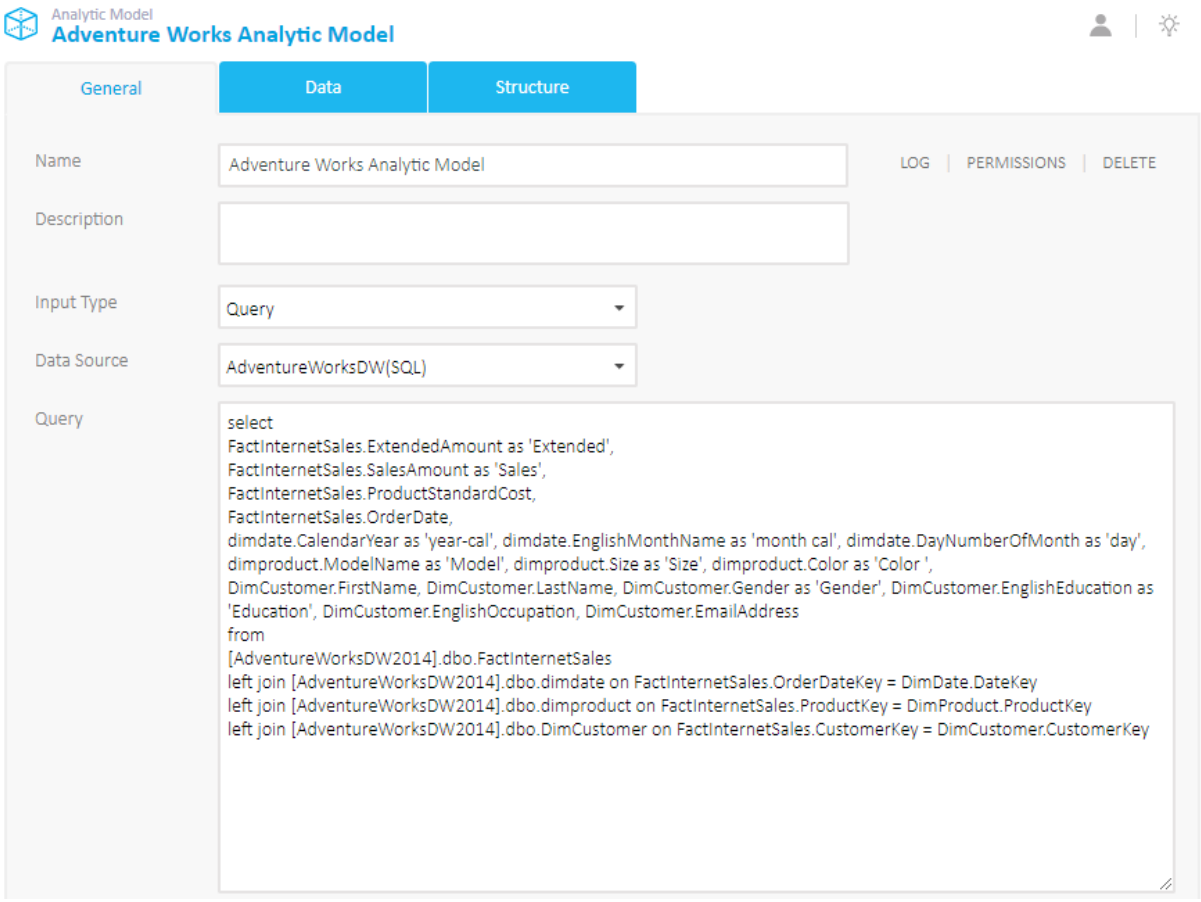
Kyubit BI application has features to analyze and visualize data from your existing **OLAP databases** or from created **Analytic Models** inside Kyubit application. Analytic Model is multidimensional data source (similar to OLAP), quickly created based on your SQL or CSV data. To start analyzing data using your existing **OLAP database**, an OLAP database cube has to be created as a new data source in the Kyubit Business Intelligence application or in the case of analyzing data from **Analytic Models**, Analytic Models will appear under Data Sources once it is created (for more details on creating an Analytic Model, please refer to **Kyubit-Self-Service-BI.pdf** document). Once OLAP/Analytic Model data source is created, it can be reused in a different analysis, reports, KPIs, Dashboards, and used by any users of the Kyubit Business Intelligence which has access permissions for the same data source. To define OLAP cube data source for certain OLAP cube, MS SQL Analysis Services 2005/2008/2012/2014 has to be installed on the intranet in the same intranet to which Kyubit Business Intelligence server belongs to. While creating OLAP data source user has to provide the following data:

- **Server name** (address) with the name of the SSAS instance
  (If the server name starts with **asazure://** new fields become visible to connec to **Azure Analysis Services**)
- OLAP **Database name**
- **Cube name** or **Tabular Model** (in this field provide the name of OLAP cube in case of multidimensional OLAP or Tabular model name in case of Tabular OLAP model)
- **OLAP reference name** (custom name for your OLAP data source)

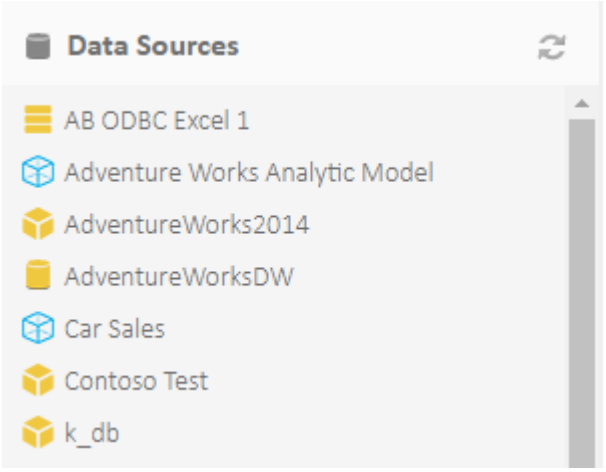


OLAP cube connection could be defined by server/database elements or could defined as **custom connection string**, so advanced users could add some extra parameters. To assign permissions for other users, select "Permissions" link.

Sample **Analytic Model** data source quickly created using SQL query in the Kyubit application. (for more details on creating an Analytic Model, please refer to **Kyubit-Self-Service-BI.pdf** document)



Data Sources list in Kyubit BI …



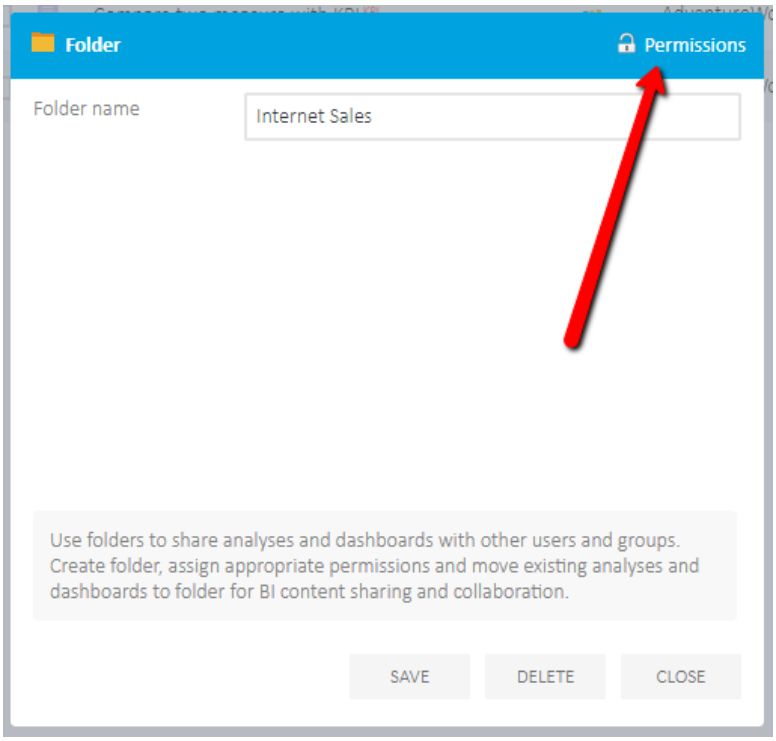
2. Folders

To give permissions to other users to see or edit created analysis, analysis has to be connected (shared) with a previously created folder. The **Folder** is an object that groups all analyses (or dashboards) with the same permissions. Folders could be used to share analysis/dashboard with a common subject or belong to a certain business unit or process. Administrator or user with a read/write permission on a folder could manage permissions for other users or groups.

If analysis/report is based on the OLAP data, to see actual data from OLAP data source, user needs permission on OLAP database level (**OLAP Role-based security**), but to see that certain analysis exists in Kyubit Business Intelligence application, user needs permission also in Kyubit Business Intelligence folder that contains that same analysis/report.

To create a new folder and define folder permissions, follow these steps:

- On Main menu select **Create Folder** button on the right side of the screen.
- Set folder name and click **Save**
- To define permissions on the folder, select permissions and choose required users and groups, and finally select which access level should be given **Read Access** or **Read/Write Access**.



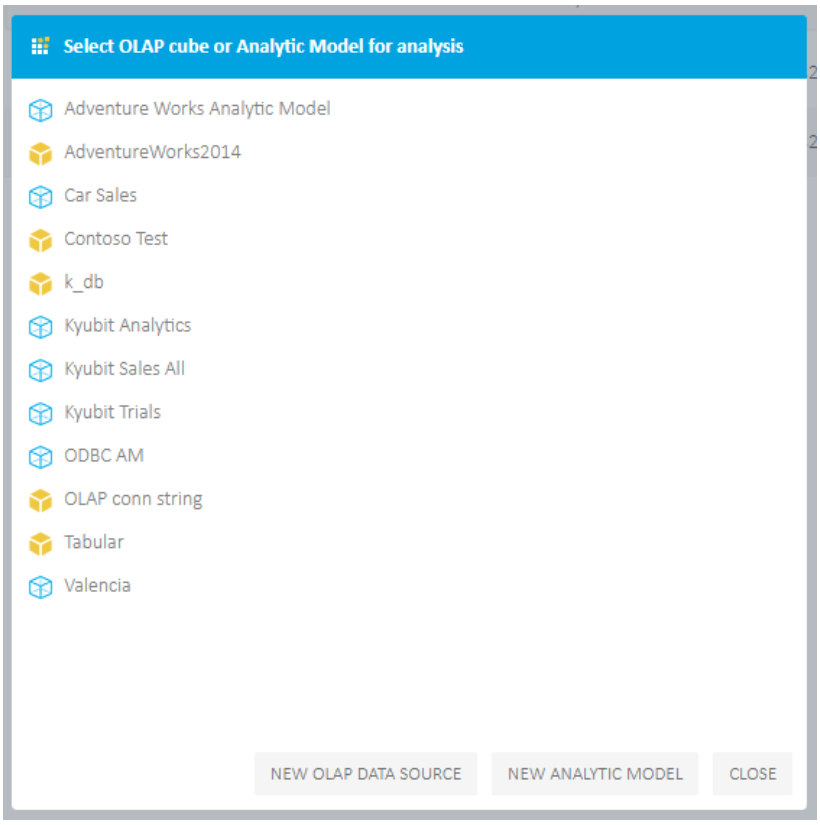
2.1. My Analysis

By default, all users have "My Analysis" folder. When saving an analysis, it is automatically saved in users "My Analysis" folder, which is visible only to the current user. "My Analysis" folder cannot be deleted or renamed. To move certain analysis to another folder, the analysis/report has to be shared (connected) to that particular folder. Once shared to the folder, the analysis/report is available to the group of users, which have access permissions to view the content of the folder.

3. Analytic Grid Analysis

3.1. New Analysis

To start a new analysis, click on the **New Analysis** button on the **Home** or **Analysis** application section (page). Note, that if you have only one OLAP/Analytic Model data source, Grid Analysis screen will immediately become visible and ready for analysis. If there are more OLAP/Analytic Model data sources, the user will be asked for which OLAP/Analytic Model data source to start the analysis. If required OLAP/Analytic Model data source is not on the data source list, select "New Data Source" to create new OLAP data source or select 'New Analytic Model' to create a new analytic model using your SQL/CSV data.



Education [Graduate Degree, High School, Partial College]
Date.Fiscal [FY 2011, FY 2010, FY 2009, FY 2012]
Product Categories [Bikes]
Drop Filters Here

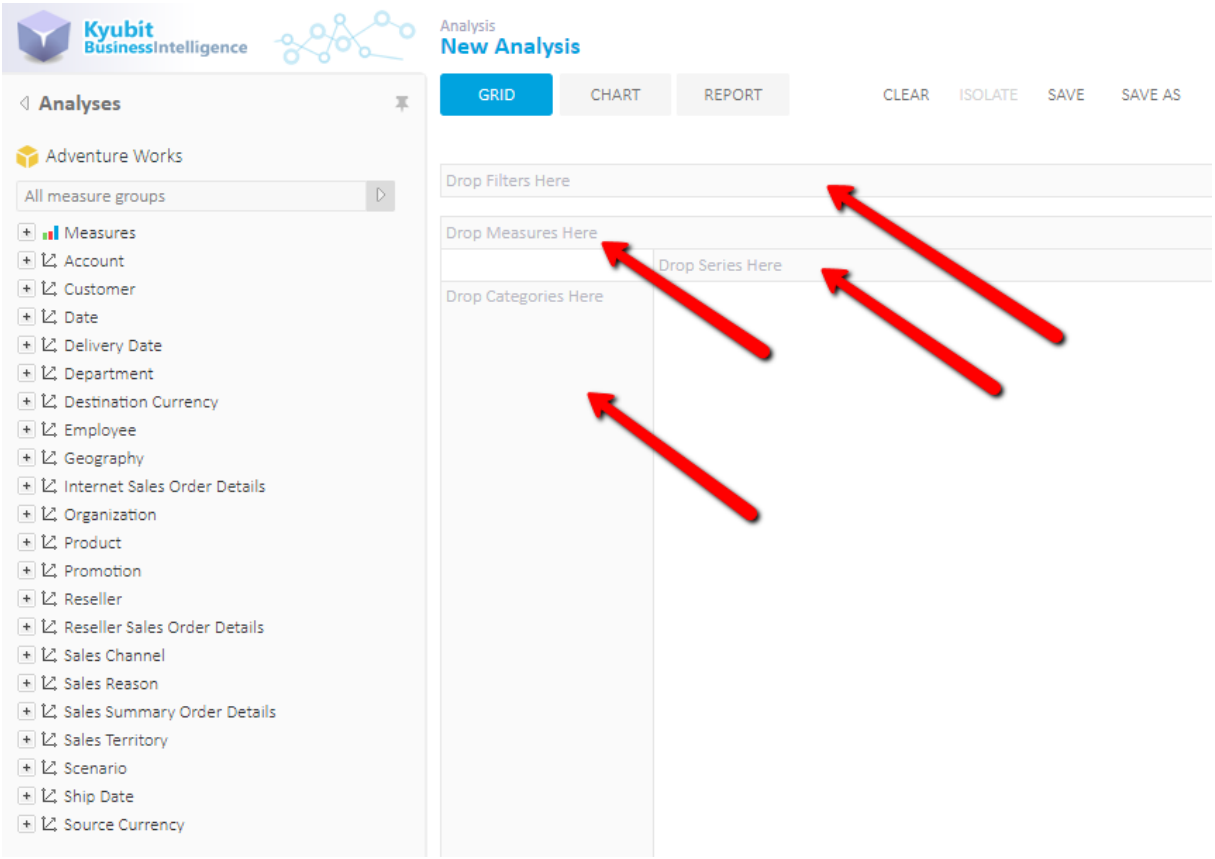
Internet Sales Amount
Drop Measures Here

	Subcategory			
	Mountain Bikes	Road Bikes	Touring Bikes	Total
Country	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
Australia	$1.286.120,98	$2.592.304,78	$358.012,86	Σ $4.236.438,61
Canada	$327.944,78	$655.338,60	$125.364,28	Σ $1.108.647,66
France	$612.840,17	$805.277,60	$247.153,39	Σ $1.665.271,17
Germany	$573.903,91	$814.867,38	$273.314,11	Σ $1.662.085,40
United Kingdom	$683.073,12	$856.904,48	$284.668,44	Σ $1.824.646,04
United States	$1.964.479,98	$2.823.109,95	$606.961,83	Σ $5.394.551,76
Total	Σ $5.448.362,94	Σ $8.547.802,79	Σ $1.895.474,90	Σ $15.891.640,63

3.2. Grid Analysis concepts

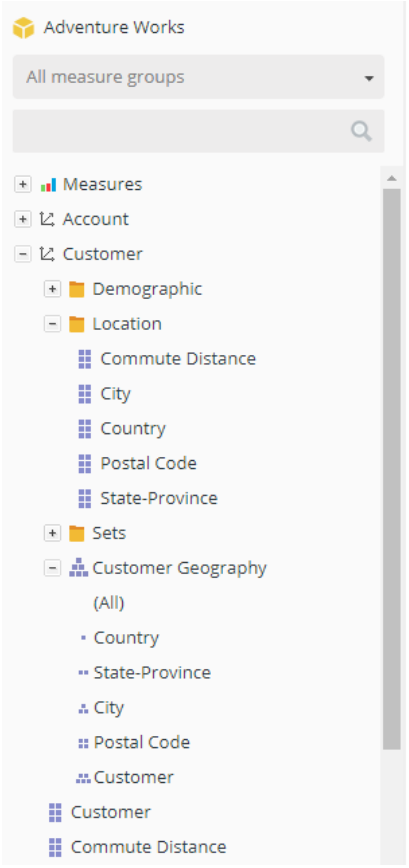
The most common approach of OLAP/Analytic Model data analysis in Kyubit Business Intelligence application is **Grid Analysis**. Simply drag-and-drop measures, hierarchies/levels from OLAP/Analytic Model cube tree structure to grid areas on the right side to analyze the data. Following areas exist for grid analysis:

- OLAP/Analytic Model structure Tree (Measures and Dimensions)
- Categories area (Axis)
- Series area (Axis)
- Measures area
- Filters area
- Values area



3.2.1. OLAP/Analytic Model Tree Structure

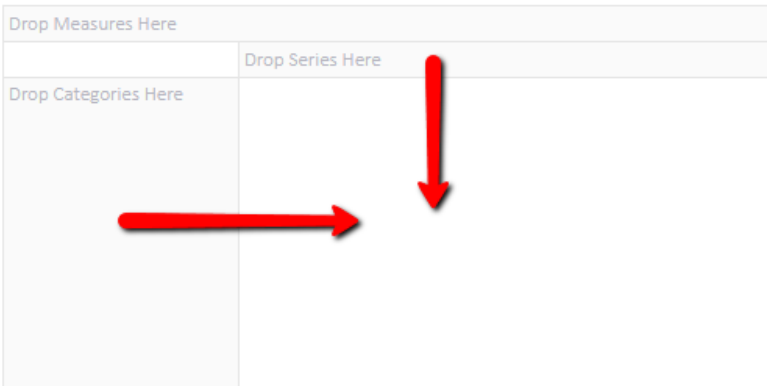
Every OLAP/Analytic Model data source consists of measures, dimensions and hierarchies. The structure is defined in the OLAP database or an Analytic Model and within Kyubit Business Intelligence is displayed using the tree view. The Analysis is performed by dragging required elements from the structure tree to the designated area on the right. Drag-and-drop tree items (Measures, dimension hierarchies) to the appropriate areas on the right.



3.2.2. Categories and series

To see some measure values over some entity structure (dimension), drag OLAP/Analytic Model dimension hierarchies from the OLAP/Analytic Model tree structure, visualized with the tree-view on the left side of the screen, to the Categories and/or Series area. For example, 'Countries' dimension hierarchy could be placed on the category axis and 'Product' dimension hierarchy on the series axis. Corresponding values from OLAP/Analytic Model data source will appear on the values area in the center of the screen.

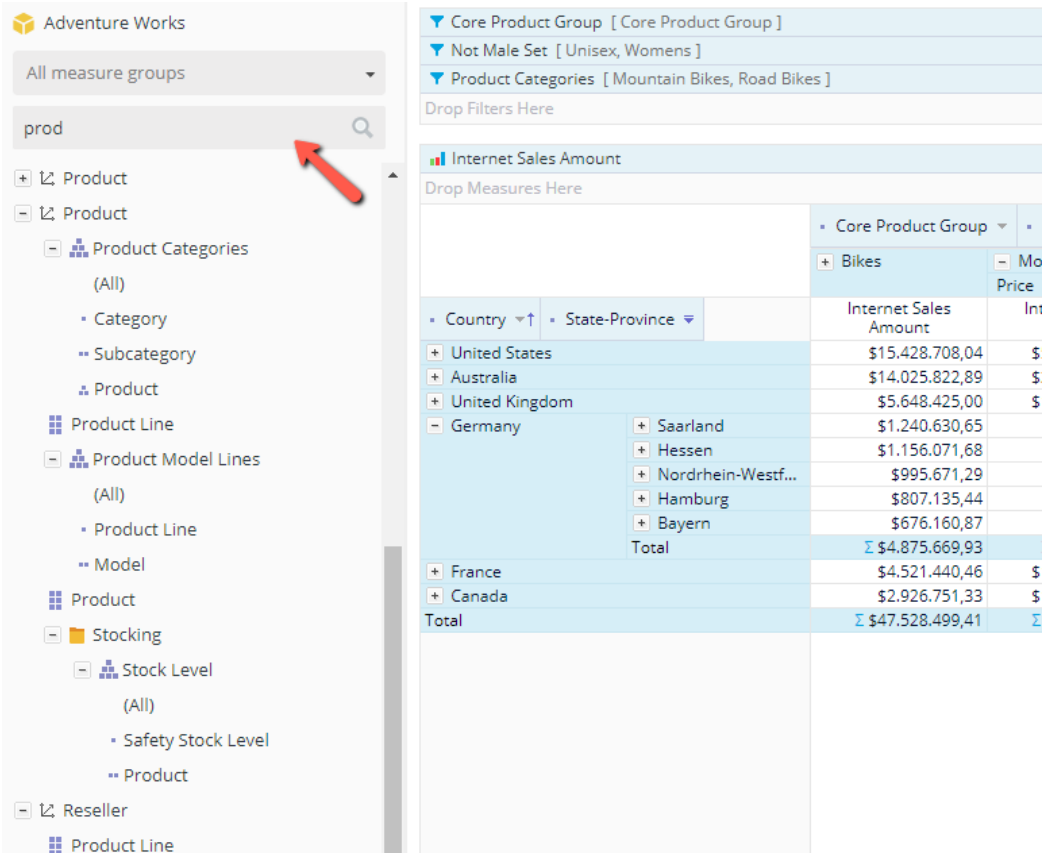
To remove dimension hierarchy from the analysis, drag dimension hierarchy from categories or series area to dimension tree area or select dimension hierarchy (one click) and press 'Delete' key.



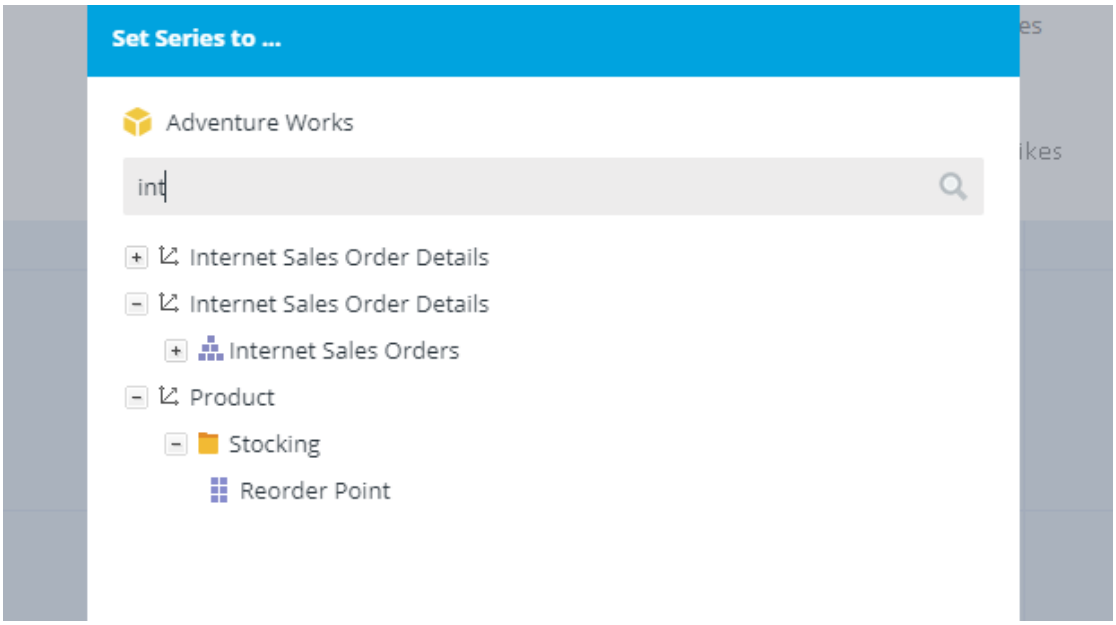
3.3. OLAP cube structure search

Searching the OLAP cube structure to find measures, measure groups, dimensions, hierarchies, levels, and named sets has never been easier. While in analysis, report, decomposition, and dashboard view, type in several letters to quickly find the appropriate cube structure element.

1) A fast way to find OLAP structure elements used in the analysis.

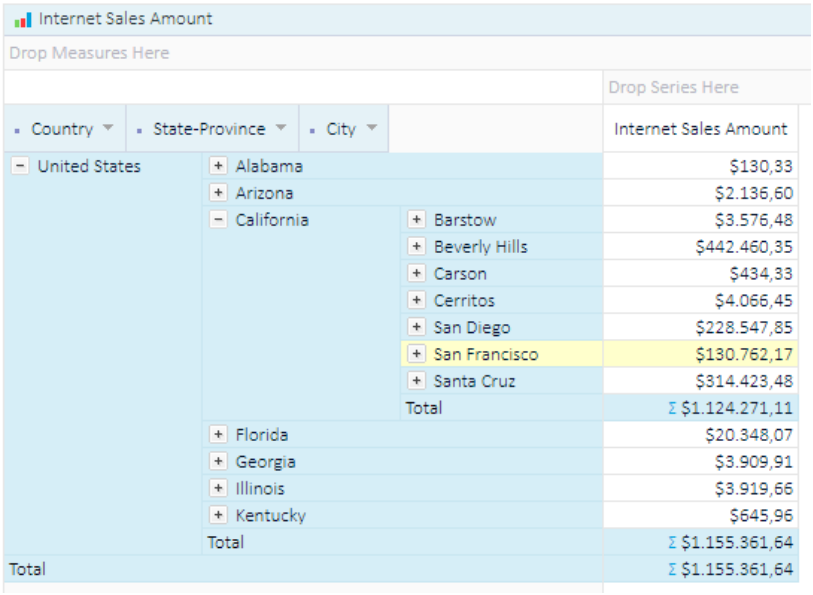


2) Particularly useful for larger OLAP cube structures.



3.4. Expand member, single dimension hierarchy

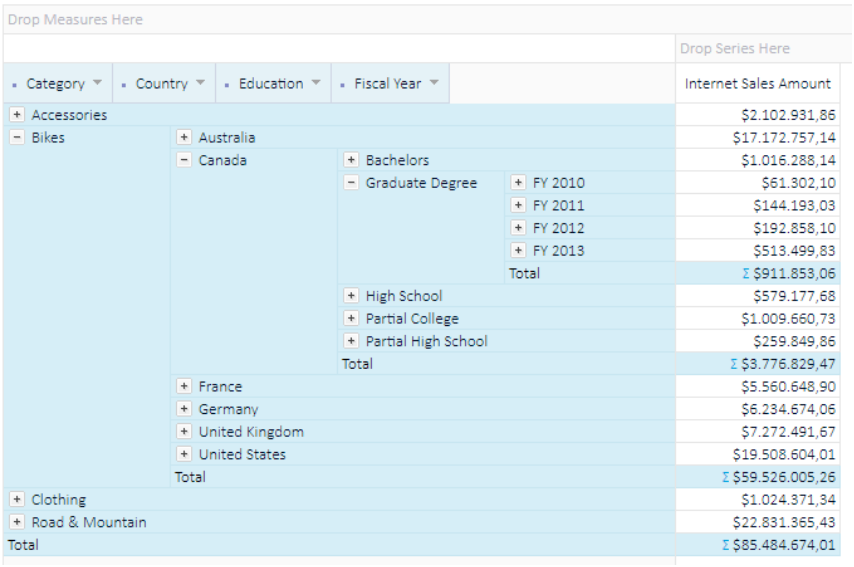
If we drag dimension hierarchy that consists of several levels (For example, Geography [Country - State - City - Customer] or Calendar [Year - Semester - Quarter - Month - Week - Day]), with each member on the categories or series area will be displayed **collapse/expand** option, which would expand values to show values for the next hierarchy level members. For example, with a few clicks, we would see the analysis for all countries, drill-down 'USA' to states, drill-down 'California' to cities and finally find values for 'San Francisco'. At the same analysis, it is possible to drill-down categories and series dimension hierarchies.



3.5. Expand member, different dimension hierarchy

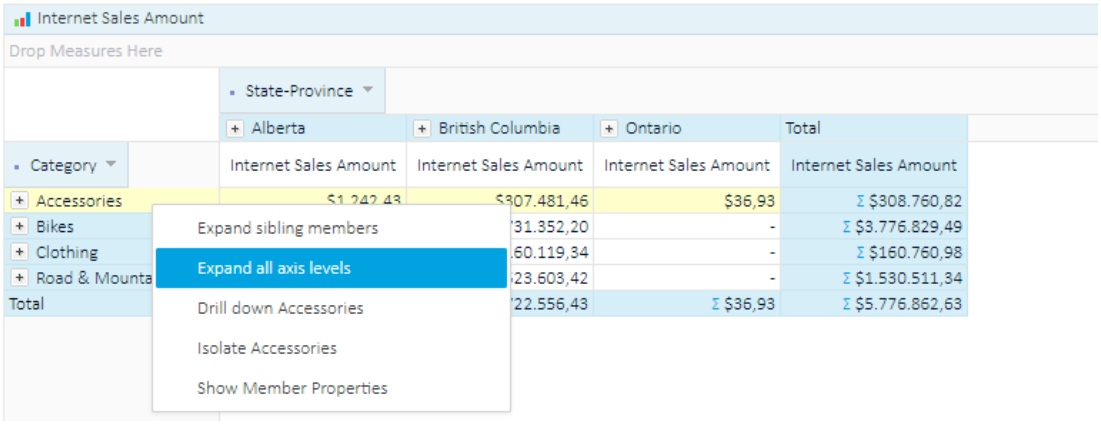
To expand values and show members of other dimension hierarchy, drag all dimension hierarchies to the same axis (Categories or Series) and click/expand desired members. It is possible to drag multiple dimension hierarchies to the same axis and on that way expand values from one hierarchy to another. For example, we could first drag 'Countries' hierarchy and then 'Product' hierarchy. On that way first we would see values for all countries, and then by expanding 'USA', we would see 'Product' categories sold in 'USA'.

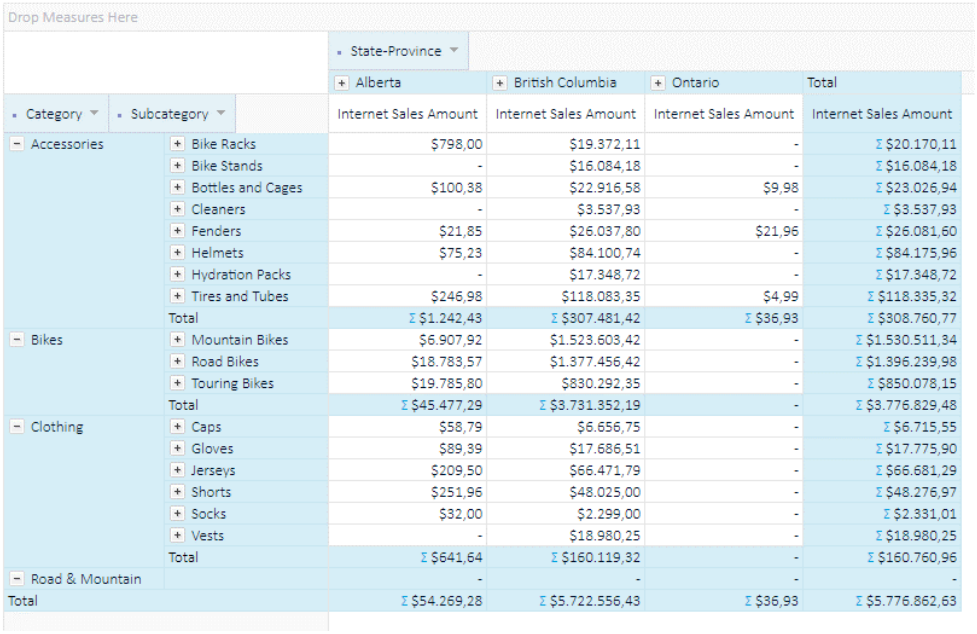
Expanding members with single or different dimension hierarchies could be combined and performed on both axes separately within the same analysis, giving a powerful and fast option to analyze data from OLAP/Analytic Model data sources.



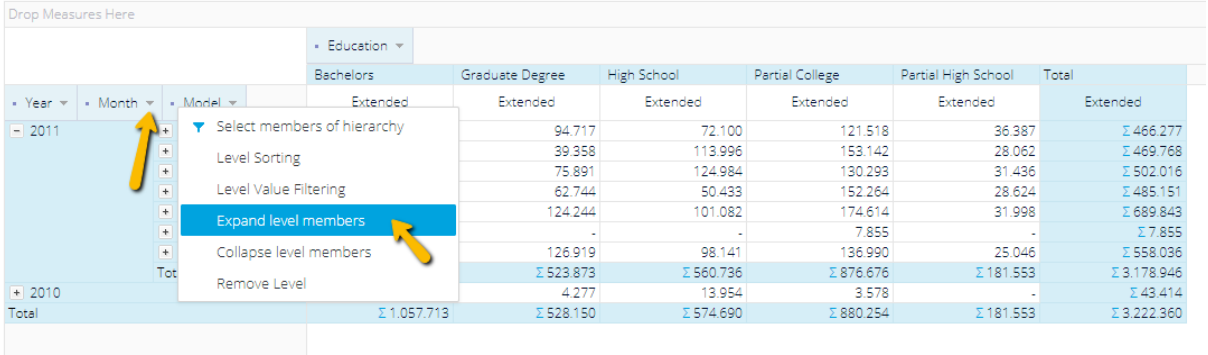
3.6. Expand all/Collapse all members

For **OLAP data** analysis, to expand all sibling members of a particular hierarchy, right-click any of sibling members and select "Expand all". On the same way select "Collapse all members" to collapse all sibling members. Expand all/Collapse all members is available only on categories axis.



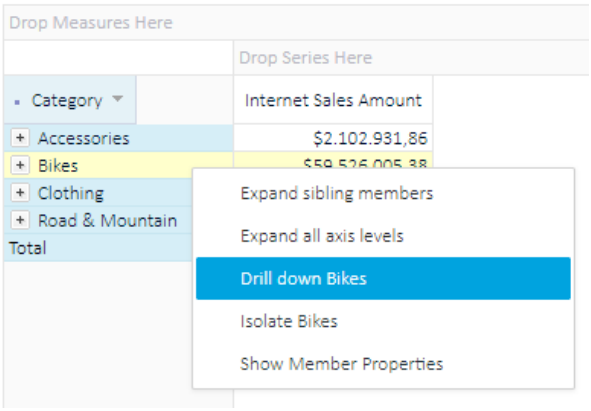


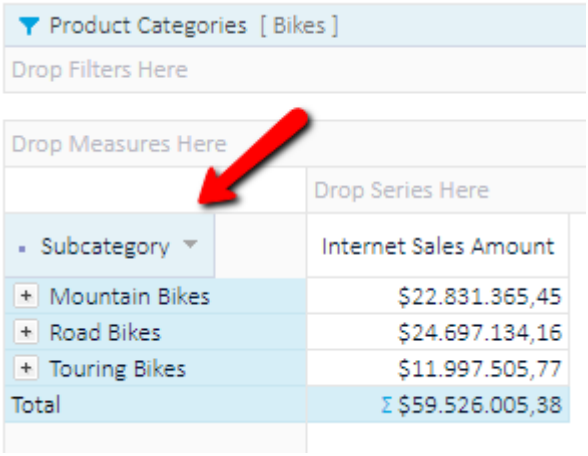
For **Analytic Model data** analysis, click on the level on the category axis (arrow) and from the menu select 'Expand Level Members' action.



3.7. Drill-down member

On a category axis it is possible to drill-down certain member if it is a root category level member. Right-click the member and select "Drill-down Bikes". "Bikes" member will be automatically added to filters and level bellow will show members related to selected "Bikes" member.

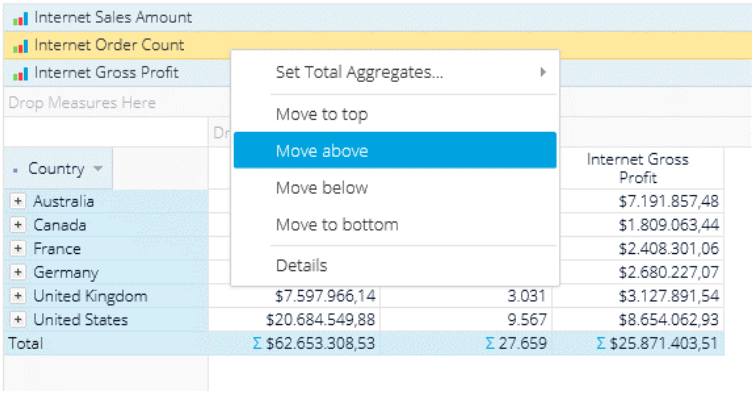




3.8. Working with Measures

When starting a new analysis, the first available measure will be used to display data on the grid view. At any time add another measure by the drag-and-drop from the left structure tree of available measures. To remove a measure that is already on the grid. Drag and move to the left on the OLAP/Analytic Model structure tree.

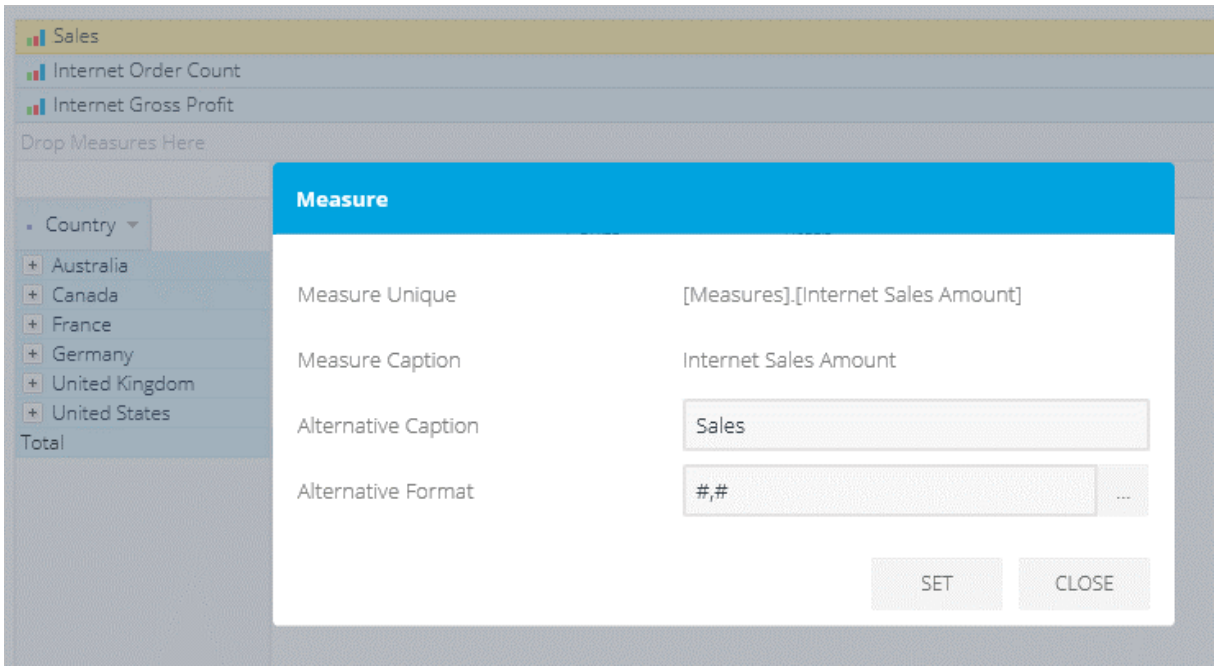
Analysis can have any number of measures added to the grid. When having multiple measures on the grid analysis right-click on the specific measure to **reorder** its appearance among other measures (move above, move below, etc.) On the same menu select the **aggregate operation** for this specific measure that will be applied on the analysis grid.



3.9. Alternative Measure Caption and Alternative Number Format

Every measure on the analysis has its default caption. In some situations, it is convenient to assign a different caption to the measure that is more appropriate for a particular purpose. To add Alternative Caption to the grid measure, right-click on the measure, choose 'Details' and assign Alternative Caption.

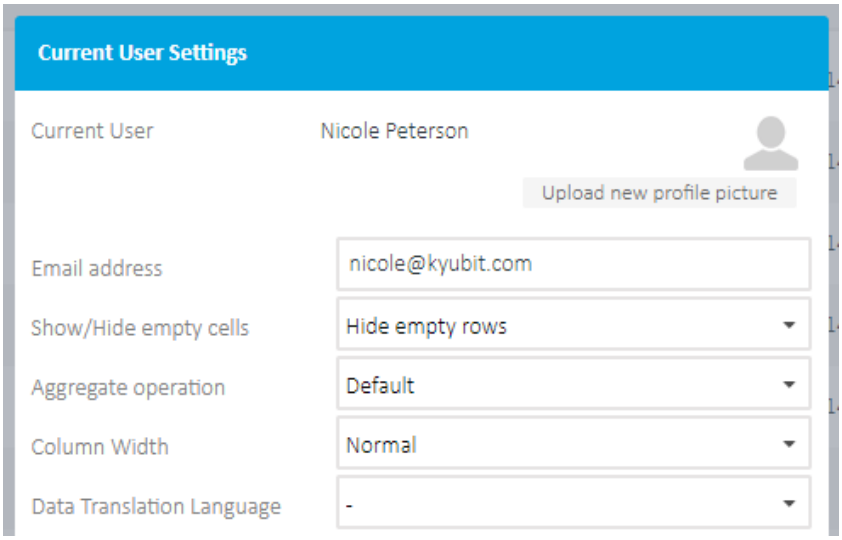
To set Alternative Number Formatting, right-click on the measure, choose 'Details' and set one of the following number formatting options or write your own.



Alternative Caption and Number Formatting are persevered when displaying same analysis as report or on the dashboard.

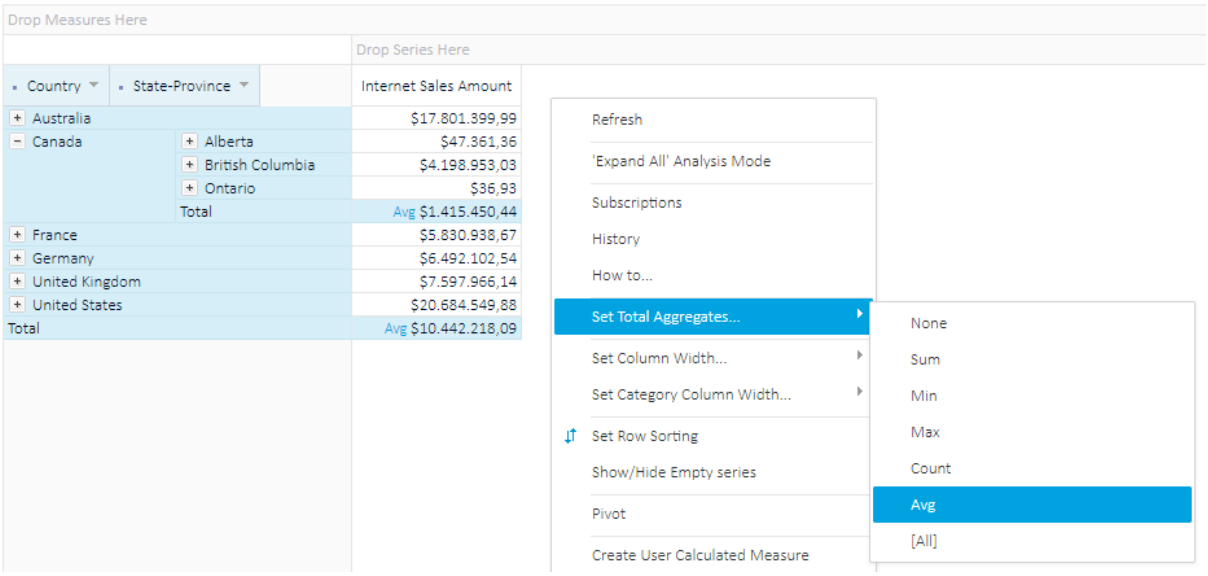
3.10. User analysis settings

Every user could define his own preference while analyzing OLAP/Analytic Model data with Kyubit Business Intelligence application. Every time the user starts a new analysis, the user settings will be applied. Select "User Settings" available in the top-right corner of the application screen.



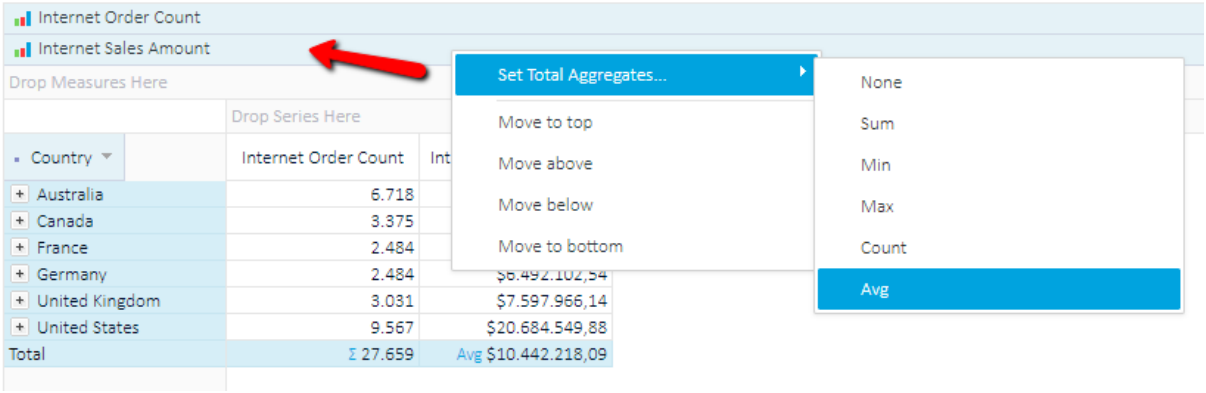
3.10.1. Analysis Aggregates

By default, the aggregate operation defined in 'User Settings' will be used to calculate analysis aggregates. The user can choose which aggregate function to apply and show at any time in the analysis view. To select the aggregate function, click the "Options" (or right-click on empty area) -> "Set Aggregates..."



3.10.2. Aggregate operation defined for each measure individually

The aggregate operation can also be defined for each measure individually. After the measure is added to the analysis, right-click on the measure and set the appropriate aggregate function.

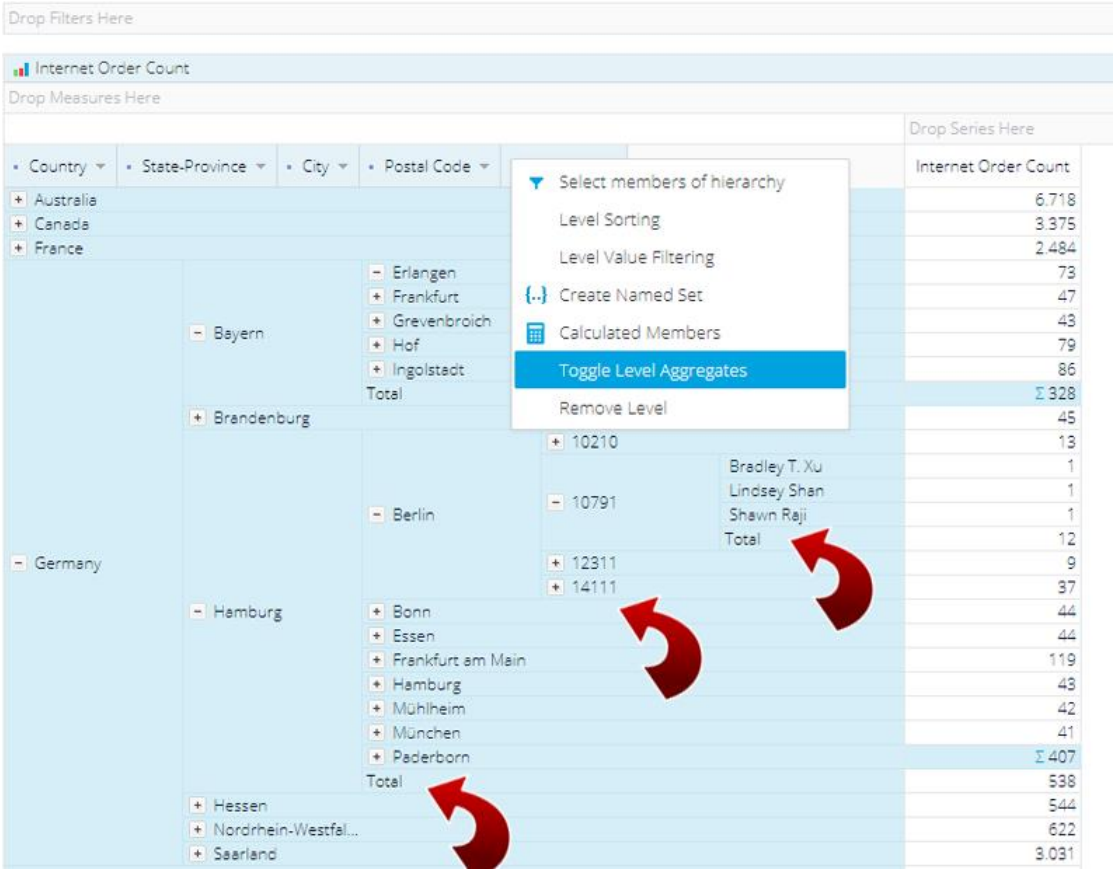


3.10.3. Show/Hide Empty rows

If analysis displays empty rows (empty cells), the user can decide to show them or not for each individual analysis. Option to Show/Hide Empty rows could be defined in the 'User Settings' as a default option when starting a new analysis.

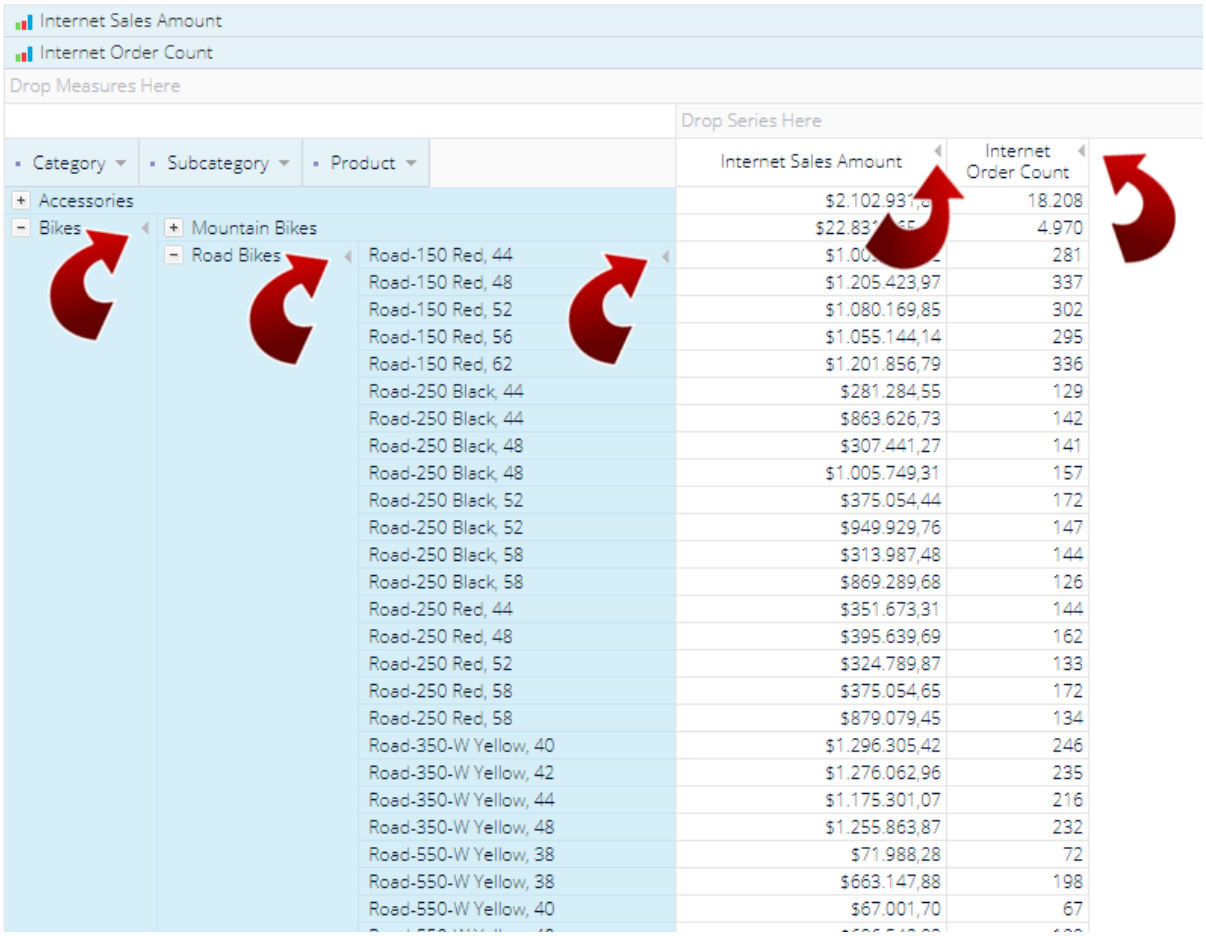
3.10.4. Toggle Level Aggregates (OLAP Analysis)

While creating OLAP grid analysis, for each level added on the category or series axis, toggle the display of aggregate Row/Column for that level and compose analysis with aggregations on the levels you prefer.

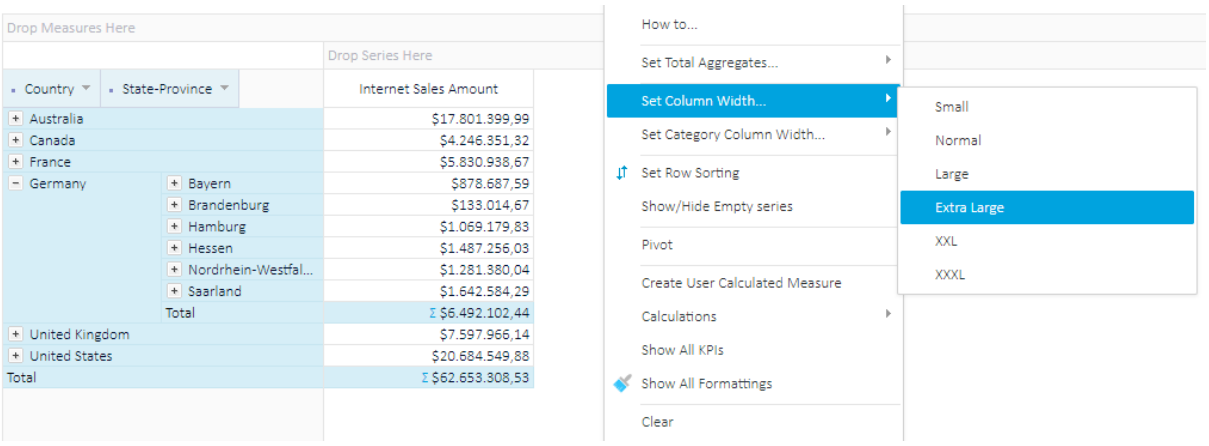


3.10.5. Set column width

In some situations, while in grid analysis, it will be convenient to customize the grid column width for the best grid visual perception. One way to adjust column width is to resize it with the mouse click-and-drag action. When you move the mouse over the column on the grid a resize placeholder will appear. Click-and-drag to resize to a more appropriate width. Each measure can have its own width and also each category dimension level can have its own width adjusted.



Another way is to set the width of all measure columns or all category level columns to one of predefined column widths from "Small" to "XXXL". Column width will be saved together with analysis. Column width could be set specifically for category items and value items.



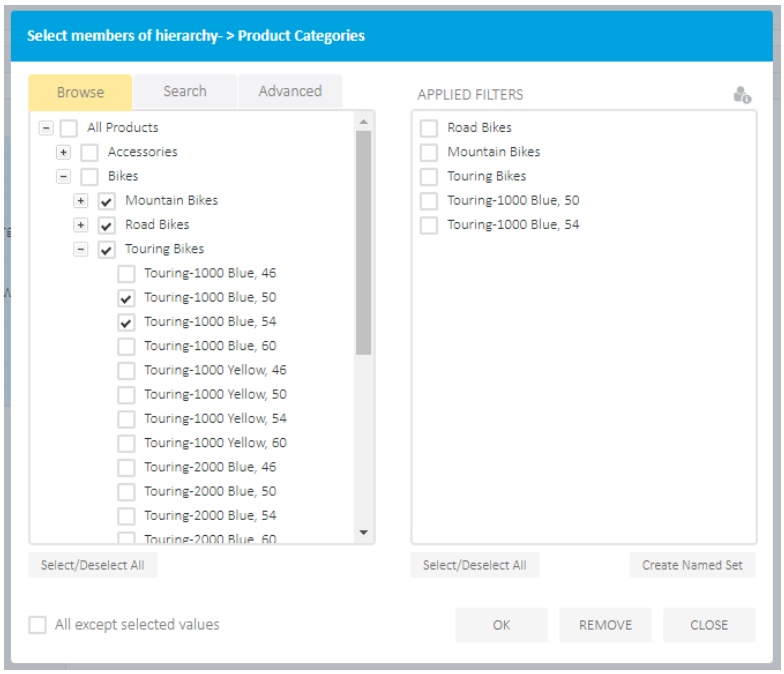
3.11. Filtering grid analysis data

Drag-and-drop dimension hierarchy to filters area and narrow analysis to a particular point of interest. Multiple filters could be selected to existing analysis. By dragging dimension hierarchies to Filters area, we prepare a grid to accept filter values (slicers). Finally, to set filters, browse through dimension hierarchy or search for dimension hierarchy members to isolate analysis data.

Dimension hierarchies could be dragged to filters area from the cube tree or, if exists, from the dimension hierarchies that are already placed to categories or series area.

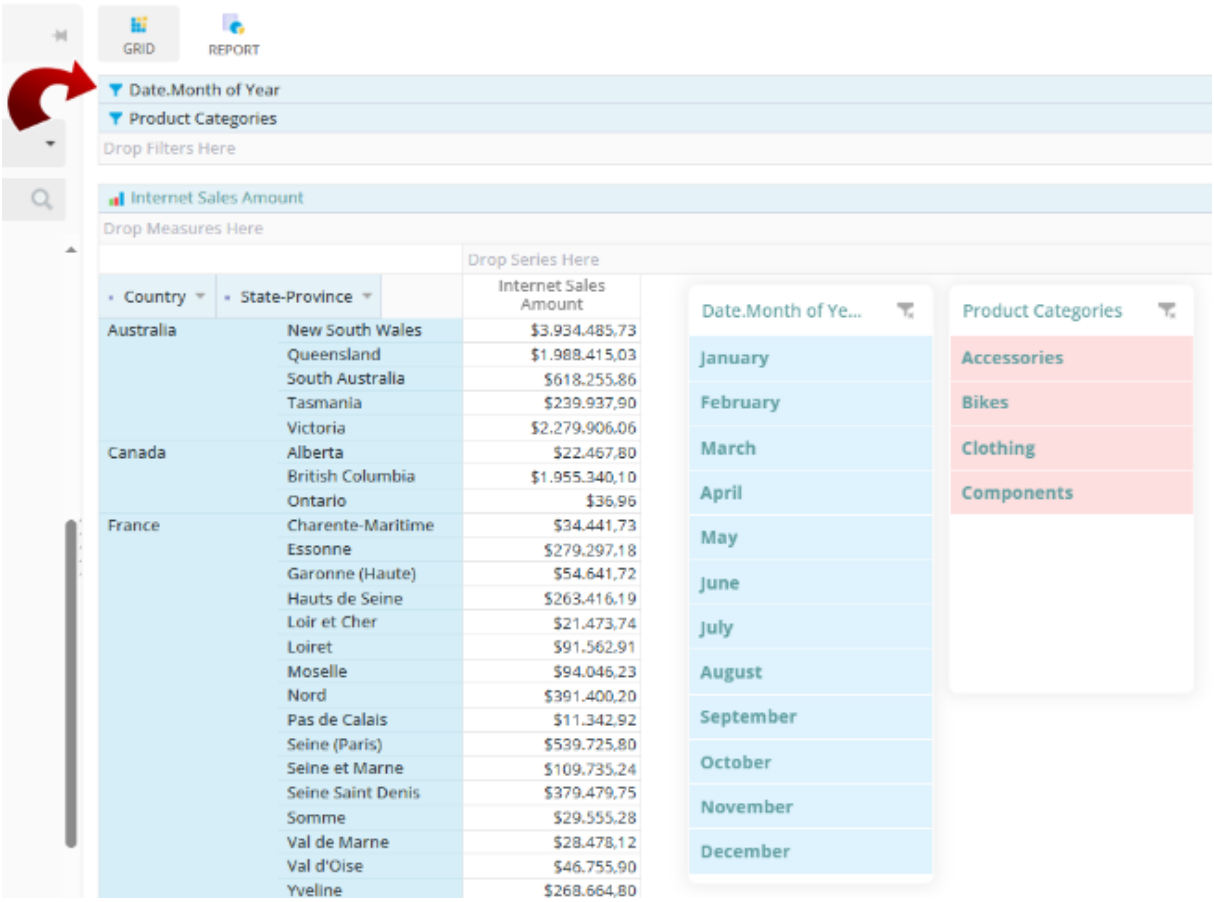
For example, we could add Calendar dimension hierarchy to filters area and select 'CY2003' which would narrow analysis and show values only for Calendar Year of '2003' for the given dimension hierarchies on the Categories and Series area.

To remove the filter from the analysis, drag filter from Filters area to cube tree or select filter (one click) and press 'Delete' key.



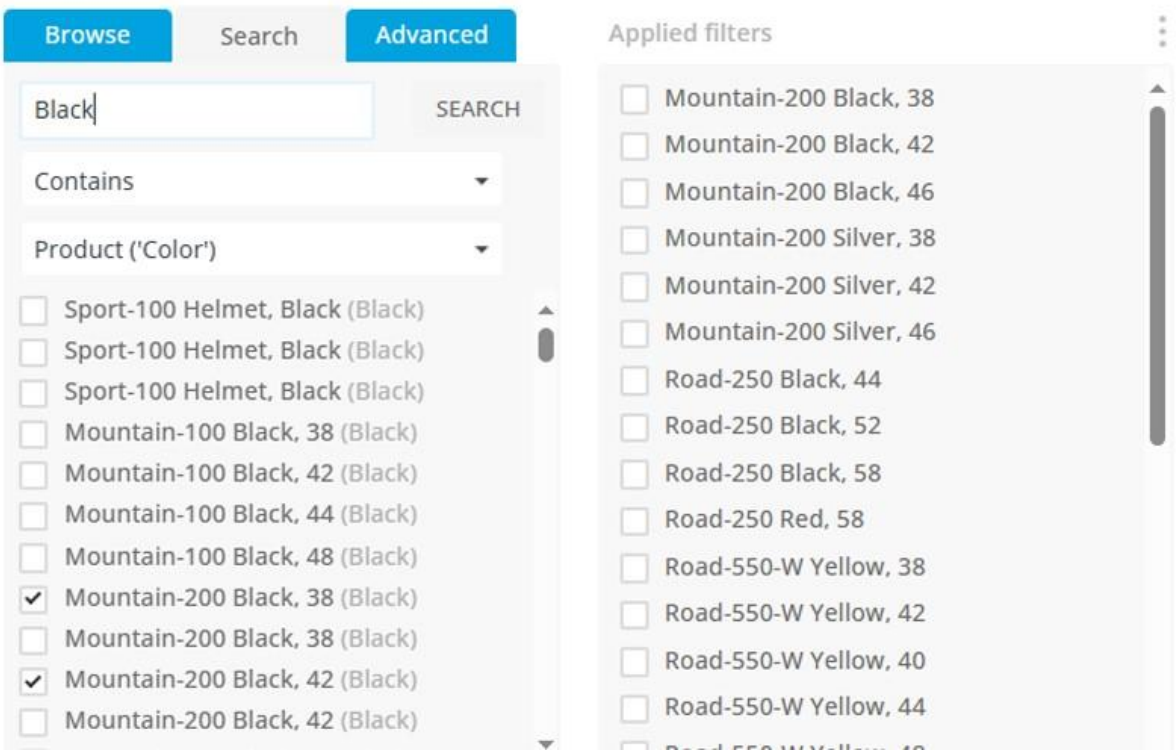
3.11.1. Quick Slicers

Every analysis filter added to the grid view filters panel could be opened as a 'Quick Slicer', which would display dimension members ready for rapid selection changes by clicking on the particular dimension members. In this way quickly change the whole grid analysis data view that would be sliced immediately after every click on the 'Quick Slicers'. Holding down the control key would add a clicked member to the selection. After the 'Quick Slicers' is displayed, hold with the mouse button on the slicer header and move the slicer position to any preferred place on the grid analysis area. Also, click on the slicer resize handle (lower-right) and resize the slicer as preferred. The selection, position, and size will be saved along with the analysis and later opened in the exact same state.



3.11.2. Search members

To find the particular members to add to analysis filters, add dimension hierarchy to the filters area and select the **Search** tab. Combine hierarchy members by browsing and member search features to find exact members for the analysis filter. Type-in part of the member name, select appropriate selector (contains, starts with, ends with, etc.) and select the dimension hierarchy level and narrow scope that will be searched to find required members. The search could be done based on the **member name** of by one of the existing **member properties**.

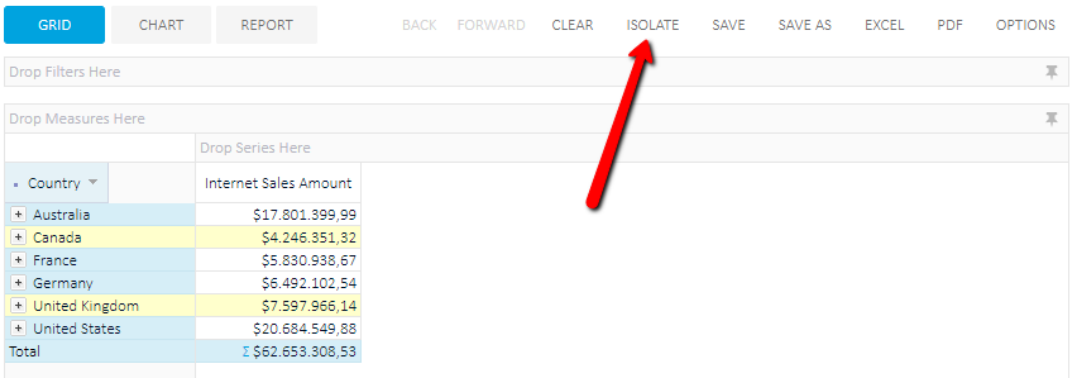


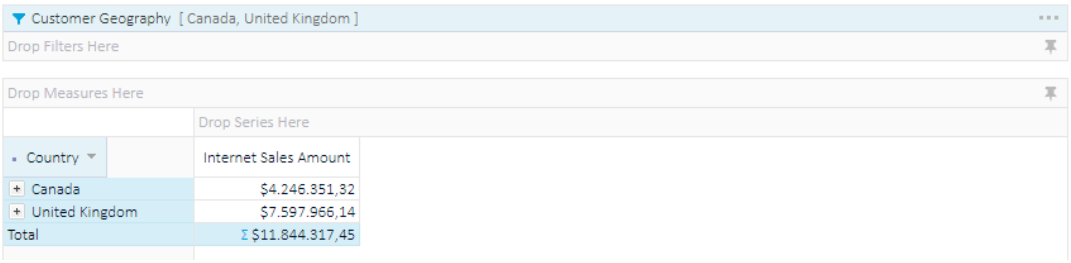
3.11.3. Isolating

When narrowing our analysis to the particular point of interest, we could drag dimension hierarchies to the filters area, but even more practical and faster way to narrow the analysis and reduce the number of values shown in the analysis is **Isolating** feature.

While analyzing the data, it is possible to select certain members on categories or series axis (Column or Row). The member and all of its children will be selected and highlighted in the yellow color. In that moment, it is possible to click on the Isolate option in the analysis toolbar and instantly selected member and all of its children will be isolated for further analysis. This means members not isolated on that axis will be removed from the further analysis. It is possible to select multiple members on categories or series axis (Columns or Rows) at the same time by holding the left shift button.

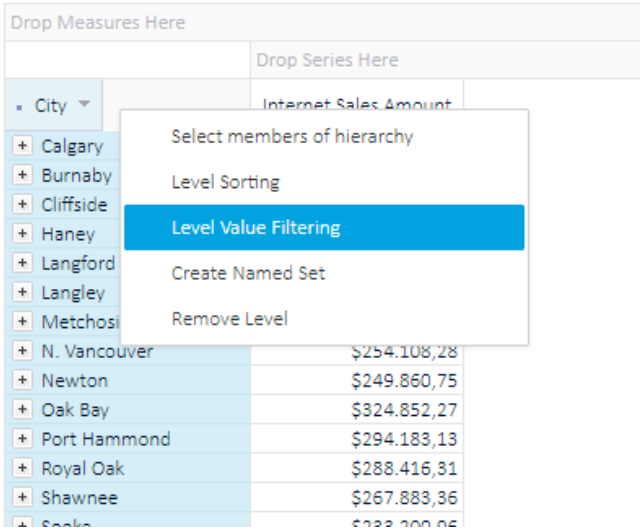
After isolating, the filters area will be refreshed with actual filter members as a result of the isolating. The isolating is just another way of setting up analysis filters and can be used together in the same analysis.

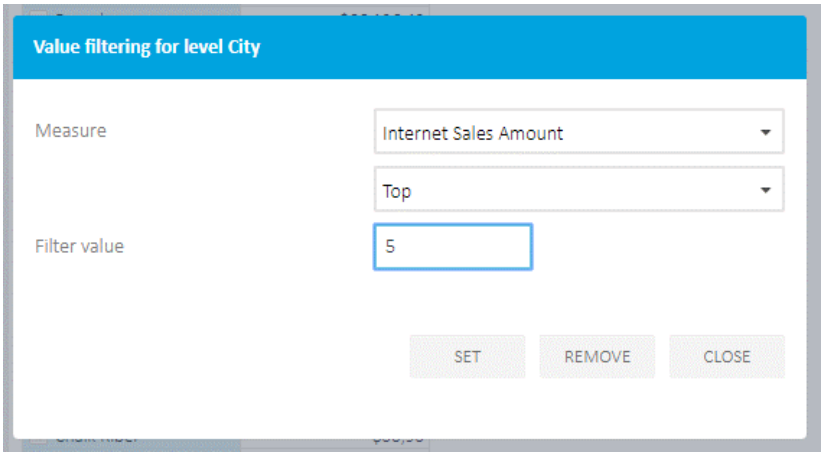


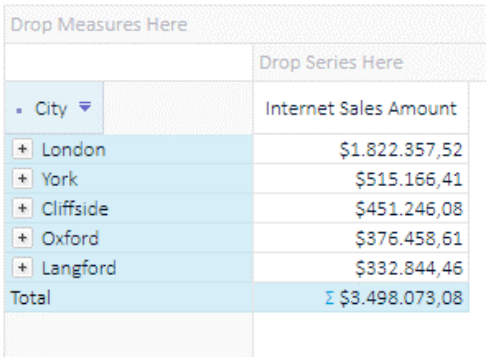


3.11.4. Dimension level value filtering

For every added dimension level on the grid analysis, it is possible to define level filtering that would narrow a number of level members to show in the grid. Click the level arrow and select **Level value filtering** from the level context menu. Level value filters could be applied using any data source defined measure, using required query selector (Top, Top Percent, Bottom, Bottom Percent, Is Higher, Is Between, etc.) and specified filter value. Levels with defined **Level value filtering** will show a different blue arrow on the grid axis.



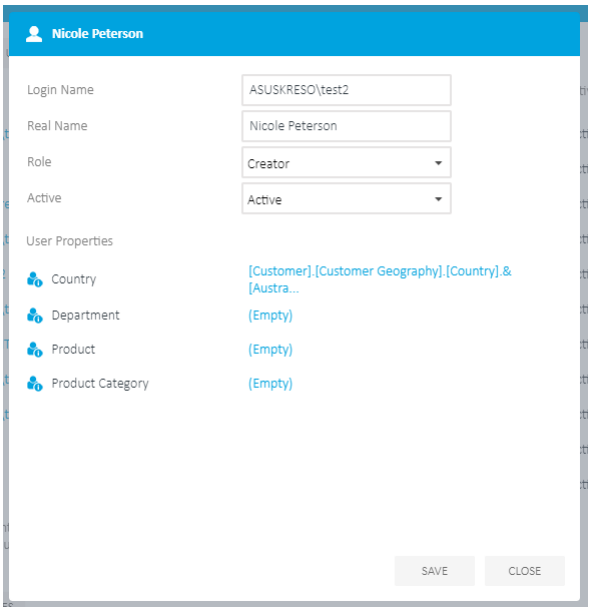


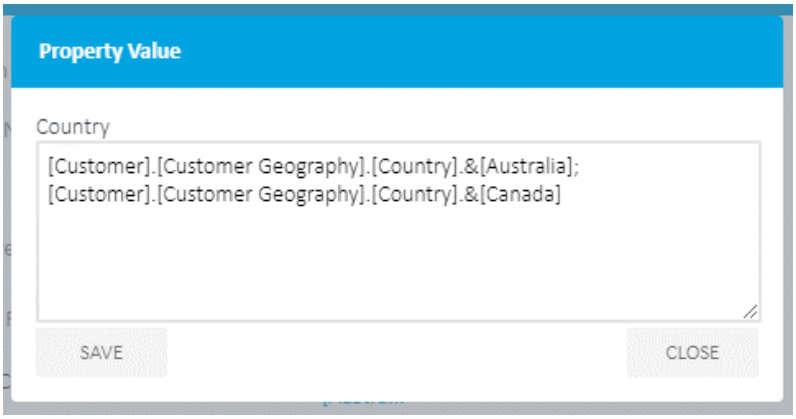


3.11.5. User Properties as analysis filters

The analysis could be filtered using current user properties to show data of interest for the current user. User properties are **Login Name**, **Real Name** of current user or **custom created** user properties that could be assigned and changed by the Kyubit administrator role.

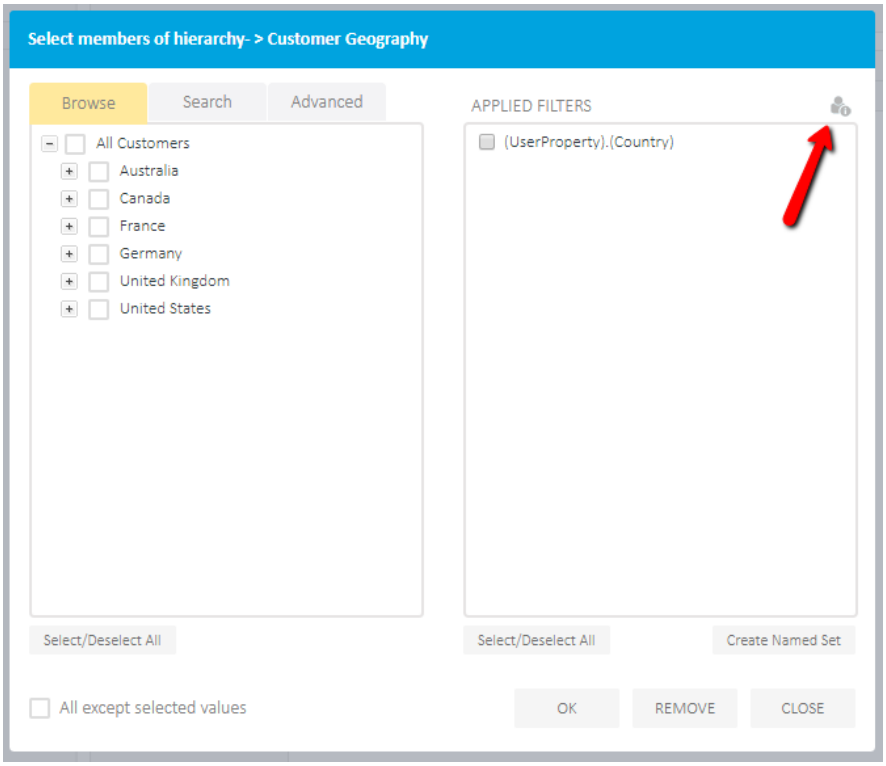
To create and manage user properties, Kyubit Administrator should navigate to the Administration -> 'Users and Admins', create a new custom user property and click on each user to assign his custom property values.





The **User Properties** could be used to filter Analyses, Queries and Dashboards.

To add a 'User Property' within an analysis, while in filter dialog form, click on the 'User Property' icon on the upper right and choose one of existing 'User Property'. More values under the same property should be delimited with the semicolon (;).



Every time user opens the analysis, 'User Property' value will be resolved and used to filter the analysis data using the current user property value.

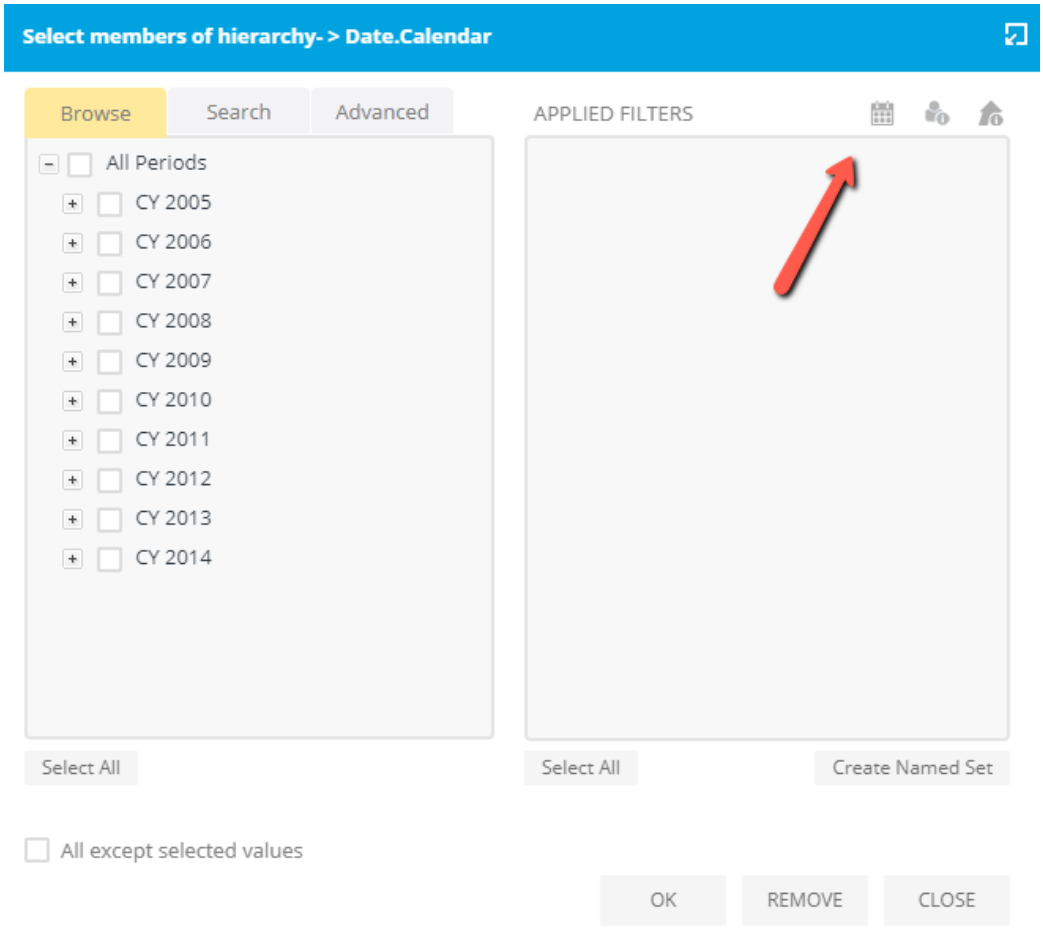
3.11.6. Date Calendar Slicers (OLAP and Analytic Models)

A date range is the most often dimension to slice analysis data. Kyubit delivers Date Calendar Picker (for OLAP time dimensions hierarchies and Analytic Models) that could be used with analyses, reports, and dashboards. The most intuitive and user-friendly date picker end-users will appreciate using while analyzing OLAP or Analytic Model data.

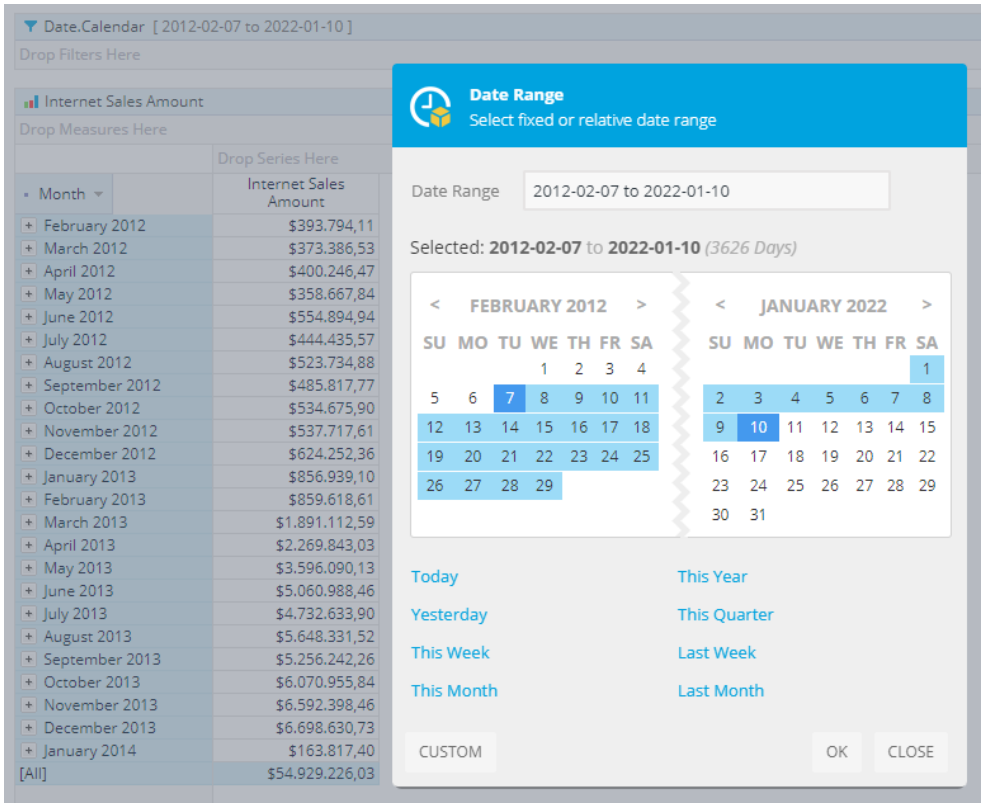
The **Date Calendar Slicers** could be used within analyses, reports or in Dashboards. In case of OLAP data, prior to being used as time intelligence filter, the OLAP dimension hierarchy (Time Intelligence) needs to be configured (only once) in the Kyubit application (explained below). After initial configuration, the same OLAP dimension hierarchy could be used for relative time period filtering anywhere in Kyubit application by any user.

To use the Date Calendar Slicers with the OLAP data, the 'Time Intelligence' should be set for 'Day', 'Month', and 'Year' granularities on the Time dimension hierarchy in the 'Time Intelligence' configuration (explained in the next chapter).

1) When the date dimension hierarchy is added to the analysis as a filter, a user can choose to select its hierarchy items or switch to the Calendar Picker view.



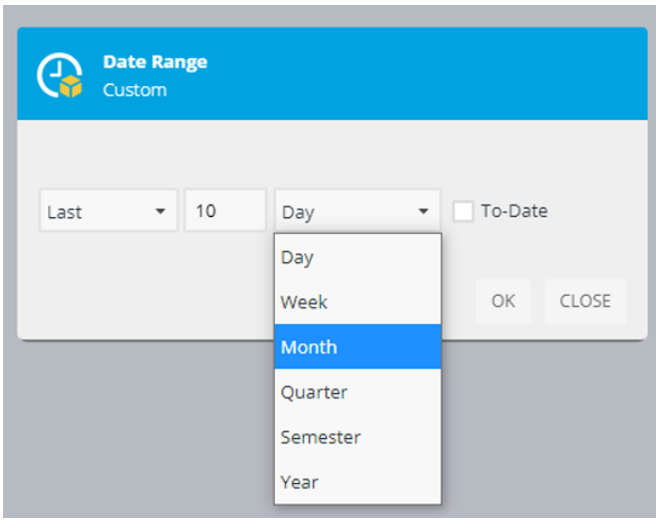
2) Navigate through the calendar to pick date period dates or type dates in the input field to define the required period that will slice existing data on the analysis or a dashboard.



3.11.7. Relative Date Range Slicing

The Date Calendar Slicer also includes a feature to provide a relative data range to slice data. The relative date period slicing includes support for any combination of the current, previous and future date ranges relative to the current date.

Calendar Date Picker already offers some shortcuts to select relative time range at the moment of opening. For more advanced configuration of a relative period of time, click on the 'Custom' button and provide any past, current, or future time period for data slicing. Optionally, include 'To-Date' that will include the current time unit in the slicing period.

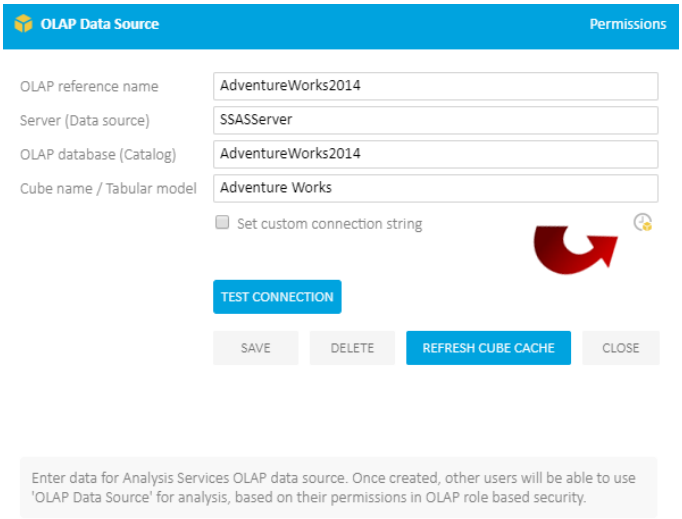


3.11.8. Configure Time Slicers (Time Intelligence configuration)

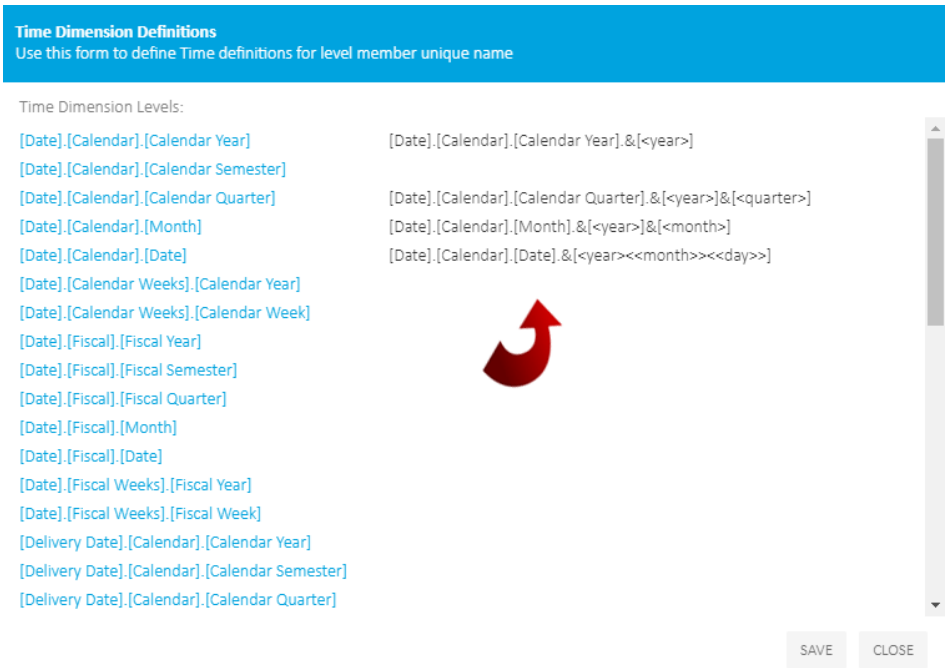
Time Dimension hierarchy could be used as **Time Intelligence Slicer** once we have defined its level member unique name format for **'Day'**, **'Month'**, and **'Year'** granularities.

This action of configuration has to be done only once, after which all users can benefit from this configuration. The base for this feature is on application to find appropriate dimension member based on current date, after which is no problem to use fixed or relative date range functions to find any scope of periods relative to current date/time. For that reason, we have to define **member unique** name formatting for each of dimension levels we want to use as Time Intelligence Slicer.

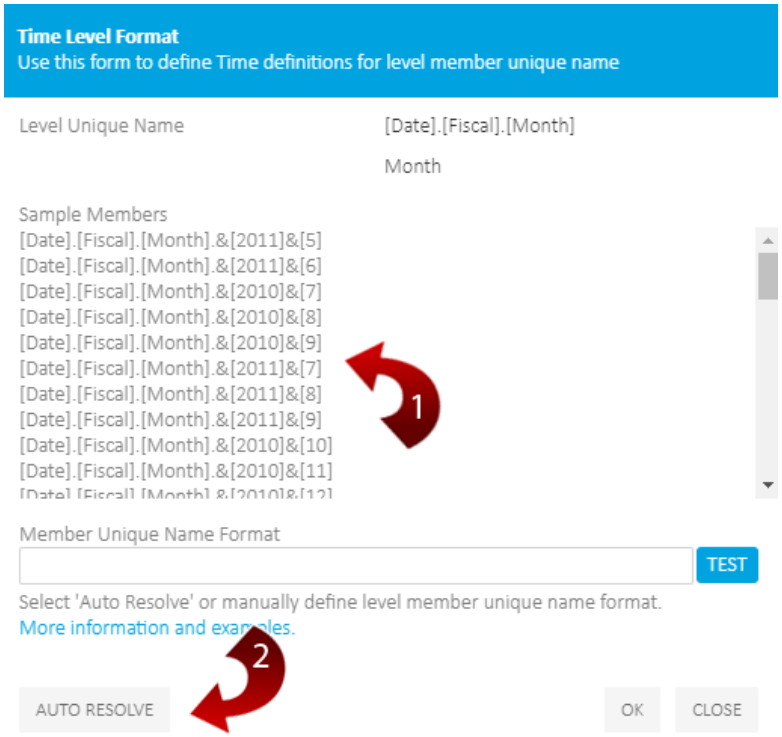
1) Open OLAP data source dialog form and click on the Time Intelligence button. List of all **Time dimension levels** in the OLAP cube will be listed.



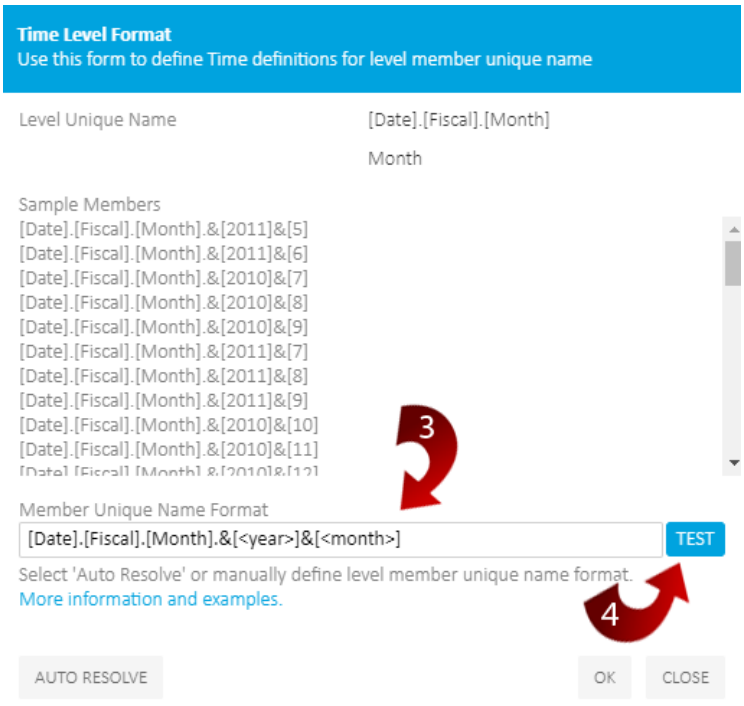
2) On the right side of listed dimension levels, already resolved formats are displayed. Click on the levels to resolve its member unique name formatting.



3) List of sample members for selected dimension level is displayed to show member unique name samples. Numbers in the member unique name should be replaced by certain date parts (Year, Semester, Quarter, Month, Week, Day). We could resolve definition manually or with help of 'Auto Resolve' button, which should work in majority cases.



4) After **Member Unique** Name Format is resolved (Manually or Auto Resolved), click on the 'Test' button which should validate provided definition. Please, refer below samples for manual definition. If validation is successful, click 'OK' and 'Save' on the list of dimension levels. That time dimension level is ready to use on any analysis or dashboard.



Numbers in the member unique name should be replaced by certain date parts (Year, Semester, Quarter, Month, Week, Day), that would define for the application which date parts are needed to construct member unique name. It is easy to manually interpret member unique name format and replace by appropriate date part Placeholders. Placeholders are not case-sensitive.

Available date part Placeholders

<Year>
Current year. Sample: 2017

<Semester>
Current semester. Sample: 2

<<Semester>>
Current semester with leading zero. Sample: 02

<Quarter>
Current quarter. Sample: 4

<<Quarter>>
Current quarter with leading zero. Sample: 04

<Month>
Current month. Sample: 9

<<Month>>
Current month with leading zero. Sample: 09

<Week>
Current week. Sample: 2

<<Week>>
Current week with leading zero. Sample: 02

<Day>
Current day within a month. Sample: 5

<<Day>>
Current day within a month with leading zero. Sample: 05

Examples…

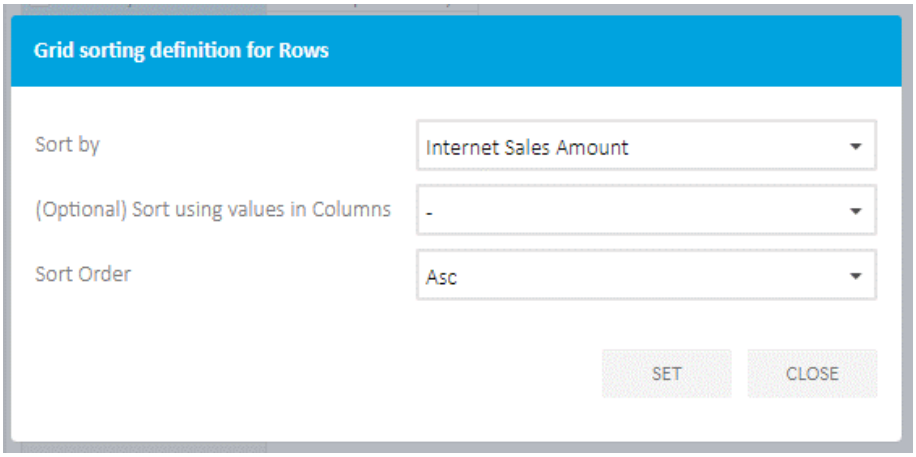
Member Unique Name: [Date].[Calendar].[Month].&[2017]&[10]
Resolves as ...
Member Unique Name Format: [Date].[Calendar].[Month].&[<Year>]&[<Month>]

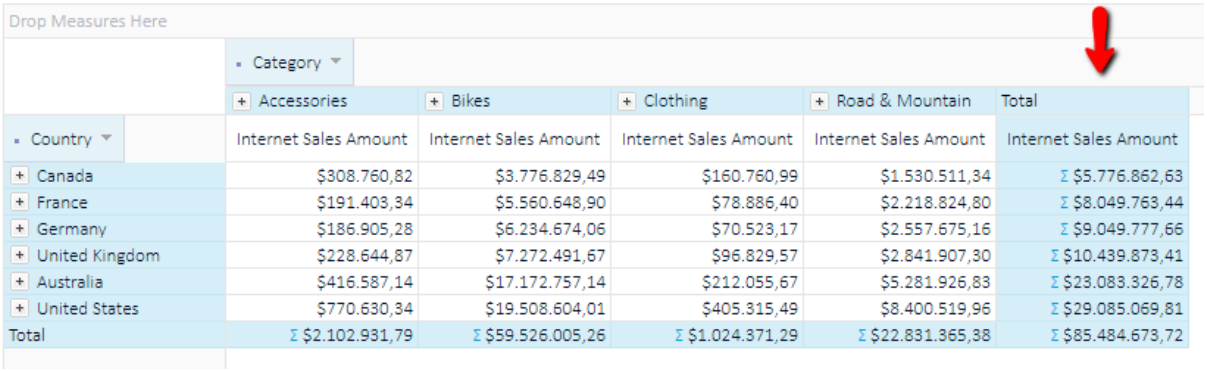
Member Unique Name: [Date].[Calendar].[Date].&[20141112]
Resolves as ...
Member Unique Name Format: [Date].[Calendar].[Date].&[<Year><<Month>><<Day>>]

Member Unique Name: [Date].[Fiscal Weeks].[Fiscal Week].&[32]&[2013]
Resolves as ...
Member Unique Name Format: [Date].[Fiscal Weeks].[Fiscal Week].&[<Week>]&[<Year>]

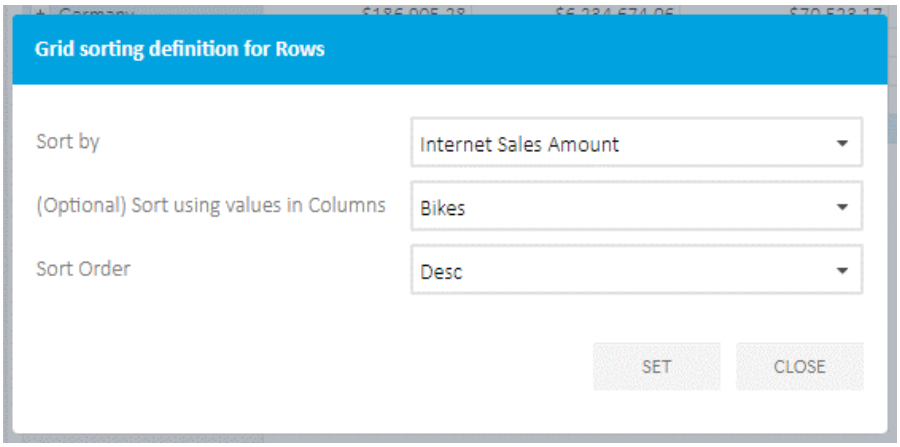
3.12. Sorting all members on the grid axis

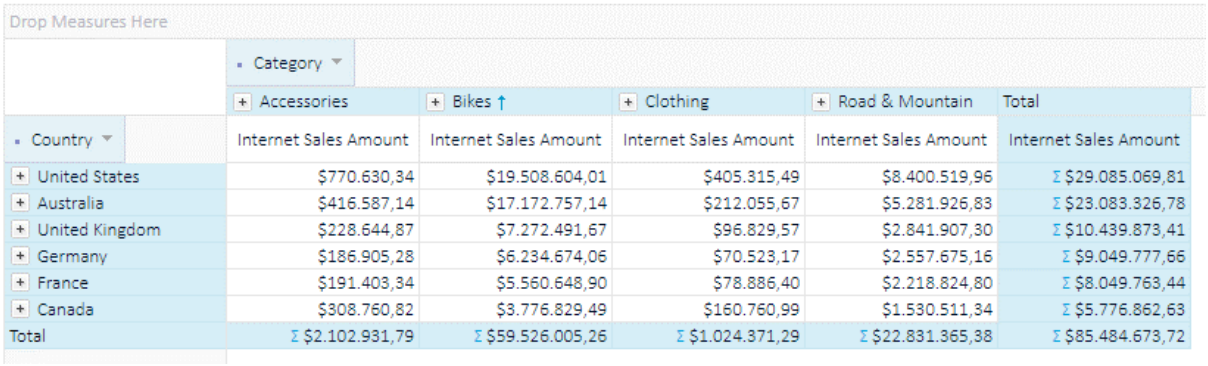
Grid analysis data could be sorted on the axis level and on the particular dimension level added to the grid analysis. To sort all members on an axis, right-click on the grid analysis and select **Set Row Sorting** or **Set Column Sorting**. Choose to sort by one of the added **measures** or **alphabetically**. If you wish to sort data using the measure values, optionally it is possible to select a member on the opposite axis upon which values sorting will be done. If the opposite member is not selected, sorting will be done by measure total on the opposite axis.





(Sorting with the selected member on the opposite axis)



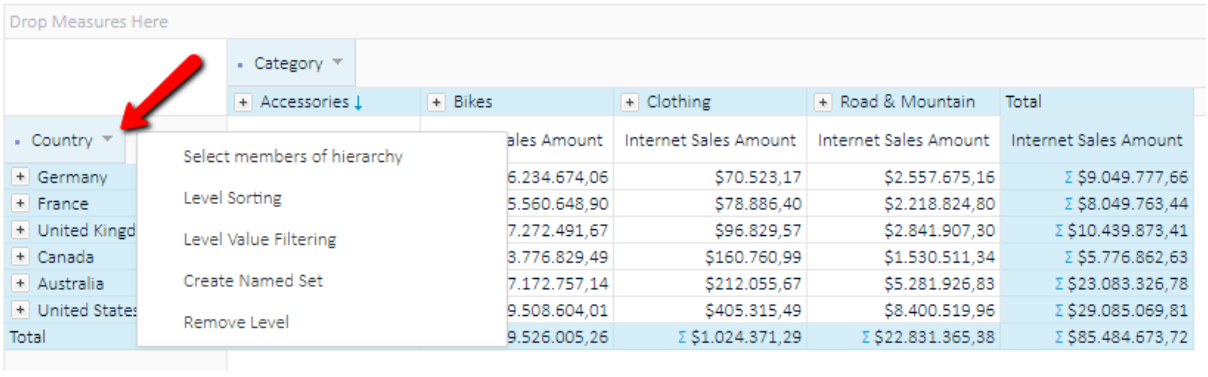


Drop Measures Here

	Category				
	Accessories	Bikes ↑	Clothing	Road & Mountain	Total
Country	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
United States	$770.630,34	$19.508.604,01	$405.315,49	$8.400.519,96	Σ $29.085.069,81
Australia	$416.587,14	$17.172.757,14	$212.055,67	$5.281.926,83	Σ $23.083.326,78
United Kingdom	$228.644,87	$7.272.491,67	$96.829,57	$2.841.907,30	Σ $10.439.873,41
Germany	$186.905,28	$6.234.674,06	$70.523,17	$2.557.675,16	Σ $9.049.777,66
France	$191.403,34	$5.560.648,90	$78.886,40	$2.218.824,80	Σ $8.049.763,44
Canada	$308.760,82	$3.776.829,49	$160.760,99	$1.530.511,34	Σ $5.776.862,63
Total	Σ $2.102.931,79	Σ $59.526.005,26	Σ $1.024.371,29	Σ $22.831.365,38	Σ $85.484.673,72

3.13. Sorting members on a particular dimension level

The analysis grid has options to set sorting for each added dimension level individually. For example, one level could be sorted using one measure values, while other for different measure values and third could be sorted alphabetically, for example. Click the arrow beside added dimension level, level context menu will appear and select **Level sorting**.



On a picture below, we see 'Country' level members are sorted by 'Accessories' ascending, but members of 'State-Province' are sorted by 'Bikes' in descending order. It is possible to create sorting for every added dimension level on both axes.

Drop Measures Here

		Category				
		Accessories ↓	Bikes	Clothing	Road & Mountain	Total
Country ↓	State-Province ↑	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
+ Germany		$186.905,28	$6.234.674,06	$70.523,17	$2.557.675,16	Σ $9.049.777,66
− France	+ Somme	$1.670,88	$60.262,93	$1.398,20	$24.907,91	Σ $88.239,92
	+ Pas de Calais	$1.782,11	$23.903,65	$676,94	$12.874,39	Σ $39.237,09
	+ Charente-Maritime	$2.019,09	$66.196,75	$549,51	$34.199,69	Σ $102.965,04
	+ Nord2	$2.184,46	$67.394,92	$1.159,07	$18.832,23	Σ $89.570,67
	+ Loir et Cher	$2.210,41	$38.479,87	$1.055,47	$22.174,48	Σ $63.920,23
	+ Val de Marne	$2.896,39	$59.287,55	$1.606,85	$27.890,60	Σ $91.681,39
	+ Garonne (Haute)	$3.548,62	$110.564,37	$1.309,59	$41.294,49	Σ $156.717,07
	+ Val d'Oise	$5.201,90	$100.512,26	$1.210,25	$41.686,19	Σ $148.610,61
	+ Seine et Marne	$6.858,13	$229.128,84	$1.737,31	$91.942,96	Σ $329.667,24
	+ Loiret	$7.024,15	$186.619,95	$2.458,89	$80.907,37	Σ $277.010,37
	+ Moselle	$7.576,93	$211.215,29	$2.106,16	$85.302,77	Σ $306.201,15
	+ Essonne	$15.914,90	$593.505,52	$8.297,80	$222.320,11	Σ $840.038,33
	+ Yveline	$16.624,60	$587.424,52	$4.926,36	$252.340,03	Σ $861.315,51
	+ Hauts de Seine	$18.476,41	$588.667,52	$7.023,90	$222.128,90	Σ $836.296,73
	+ Nord	$27.582,54	$721.355,05	$12.582,76	$292.441,34	Σ $1.053.961,70
	+ Seine Saint Denis	$29.903,90	$801.755,81	$13.606,68	$315.041,75	Σ $1.160.308,14
	+ Seine (Paris)	$39.927,88	$1.114.374,08	$17.180,65	$432.539,57	Σ $1.604.022,18
	Total	Σ $191.403,30	Σ $5.560.648,88	Σ $78.886,39	Σ $2.218.824,79	Σ $8.049.763,35
+ United Kingdom		$228.644,87	$7.272.491,67	$96.829,57	$2.841.907,30	Σ $10.439.873,41
+ Canada		$308.760,82	$3.776.829,49	$160.760,99	$1.530.511,34	Σ $5.776.862,63
+ Australia		$416.587,14	$17.172.757,14	$212.055,67	$5.281.926,83	Σ $23.083.326,78
+ United States		$770.630,34	$19.508.604,01	$405.315,49	$8.400.519,96	Σ $29.085.069,81
Total		Σ $2.102.931,79	Σ $59.526.005,26	Σ $1.024.371,29	Σ $22.831.365,38	Σ $85.484.673,72

3.14. Pivot

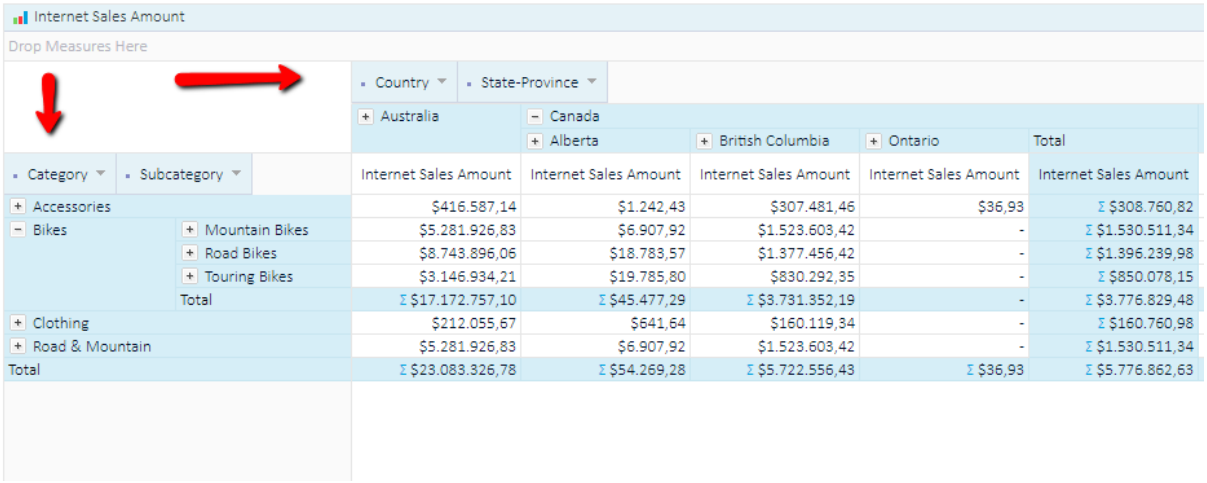
Anytime while analyzing data in Kyubit BI application, a user has the possibility to switch dimension hierarchies on the categories and series axis. For many reasons, switching axes could be very practical while analyzing and visualizing data, especially when working with the chart analysis and switching back and forth to the grid analysis.

To select the **Pivot** action, right click on the empty grid area. After the menu pops up, click on the **Pivot**.

Internet Sales Amount

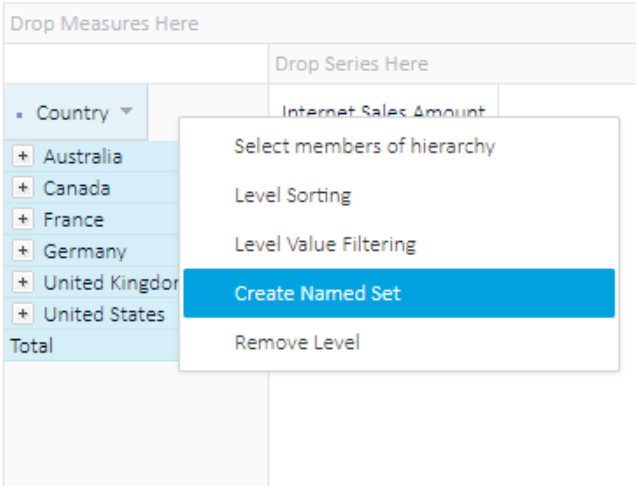
Drop Measures Here

		Category	Subcategory			
		Accessories	Bikes			
			Mountain Bikes	Road Bikes	Touring Bikes	Total
Country	State-Province	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
+ Australia		$416.587,14	$5.281.926,83	$8.743.896,06	$3.146.934,21	Σ $17.172.757,10
− Canada	+ Alberta	$1.242,43	$6.907,92	$18.783,57	$19.785,80	Σ $45.477,29
	+ British Columbia	$307.481,46	$1.523.603,42	$1.377.456,42	$830.292,35	Σ $3.731.352,19
	+ Ontario	$36,93	-	-	-	-
	Total	Σ $308.760,82	Σ $1.530.511,34	Σ $1.396.239,98	Σ $850.078,15	Σ $3.776.829,48
+ France		$191.403,34	$2.218.824,80	$2.302.615,67	$1.039.208,43	Σ $5.560.648,89
+ Germany		$186.905,28	$2.557.675,16	$2.419.676,54	$1.257.322,35	Σ $6.234.674,04
+ United Kingdom		$228.644,87	$2.841.907,30	$2.806.517,70	$1.624.066,65	Σ $7.272.491,65
+ United States		$770.630,34	$8.400.519,96	$7.028.188,08	$4.079.895,93	Σ $19.508.603,98
Total		Σ $2.102.931,79	Σ $22.831.365,38	Σ $24.697.134,03	Σ $11.997.505,72	Σ $59.526.005,13



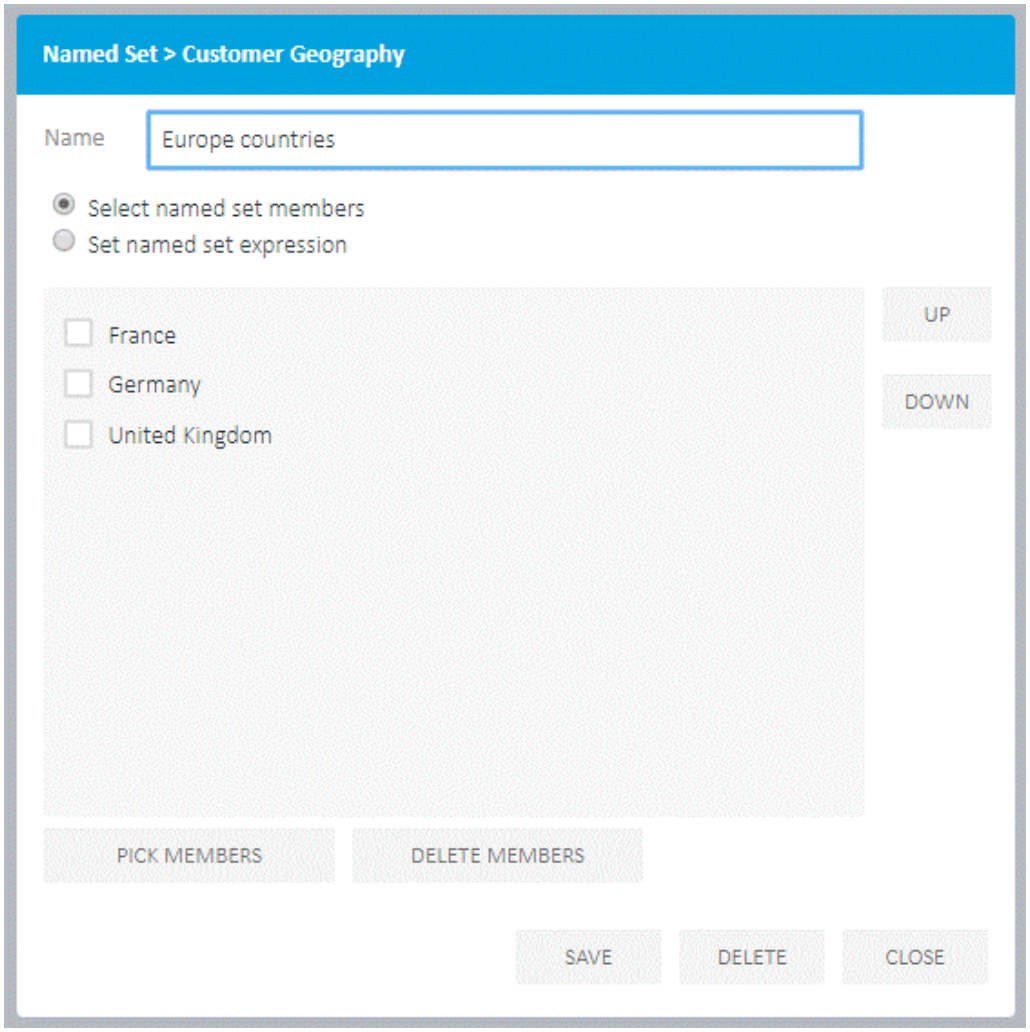
3.15. Create and manage ad-hoc User Named sets (OLAP)

While analyzing data with the grid analysis, any user could use OLAP database defined **Named set** or **create** ad-hoc **User Named Set** that will be stored in Kyubit BI application and could be reused in a different analysis and shared with other users. To create ad-hoc 'User Named Set' drag dimension hierarchy to any of the grid axes, click dimension hierarchy arrow and from the hierarchy context menu select "Create Named Set". After saving the User Named Set, OLAP Cube structure (metadata) tree will be refreshed to include the new User Named set.



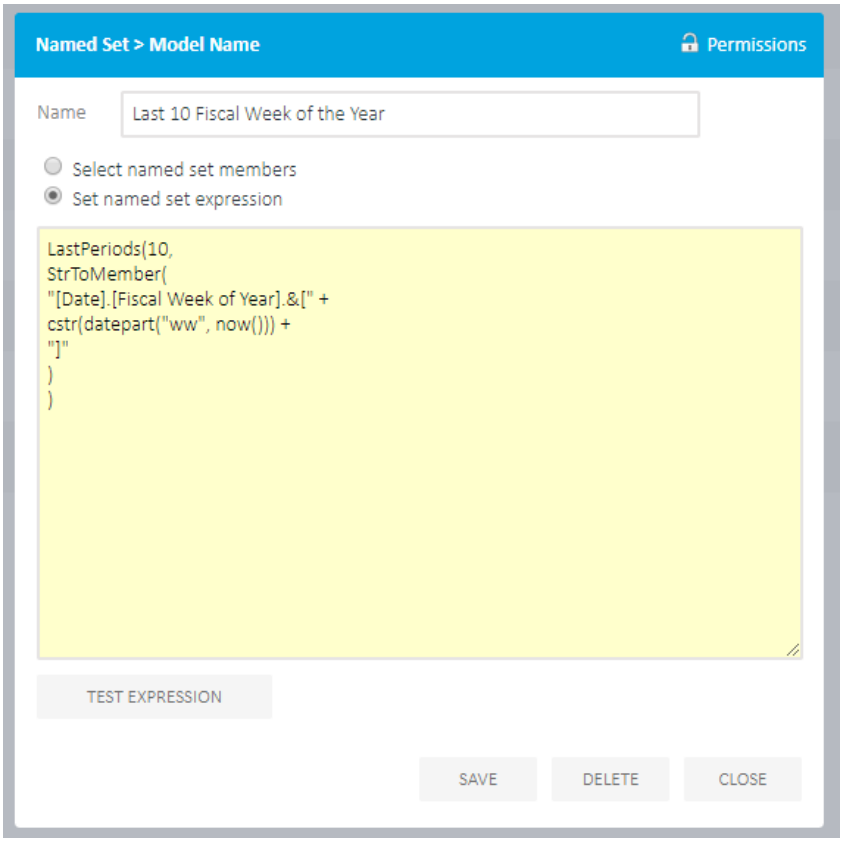
3.15.1. Create Named Set by picking members

To create a named set with static members of certain dimension hierarchy, select 'Select named set members', click 'Pick members' and browse through dimension hierarchy or use the search members feature to find required members for the named set.



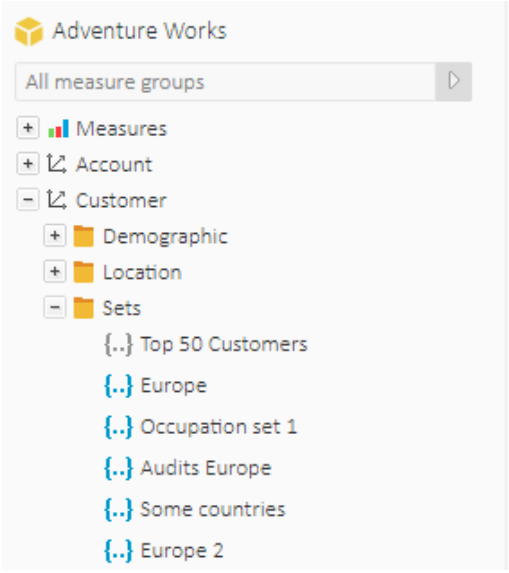
3.15.2. Create Named Set by expression

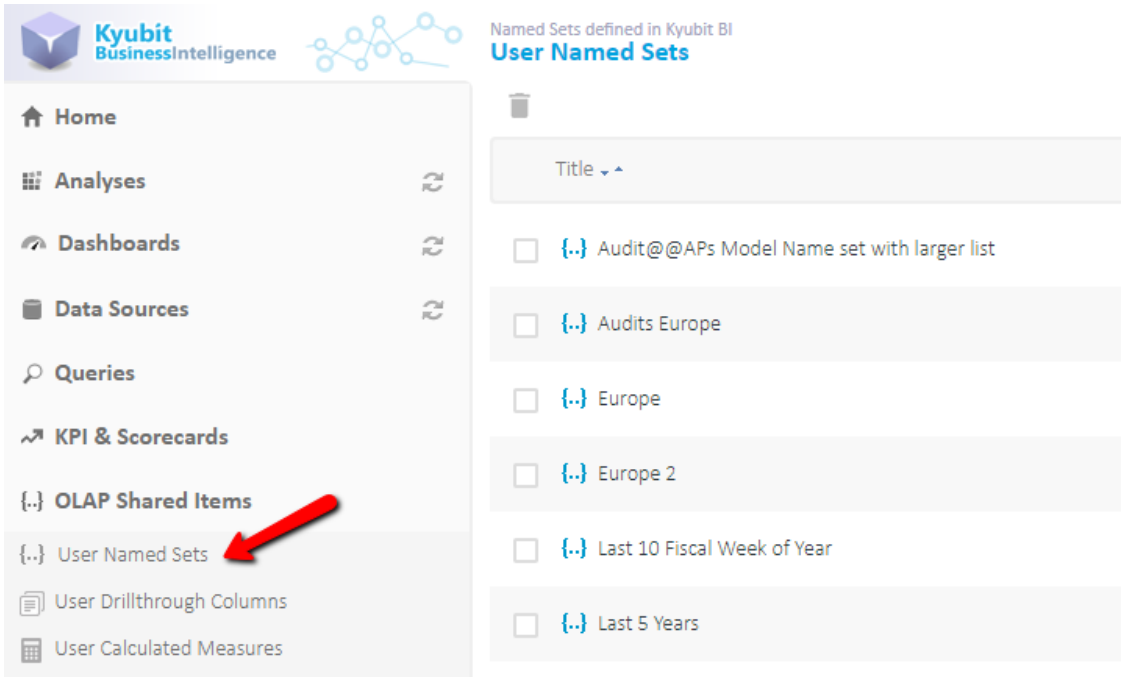
To create expression-based **Named set**, select 'Set named set expression' and enter an MDX expression that will be used to dynamically return members evaluated by the expression. Select 'Test expression' to validate MDX expression input. After saving the named set, every time named set is used, the expression will be executed in the analysis scope to return members and be used within the analysis.



3.15.3. Edit existing User Named Sets

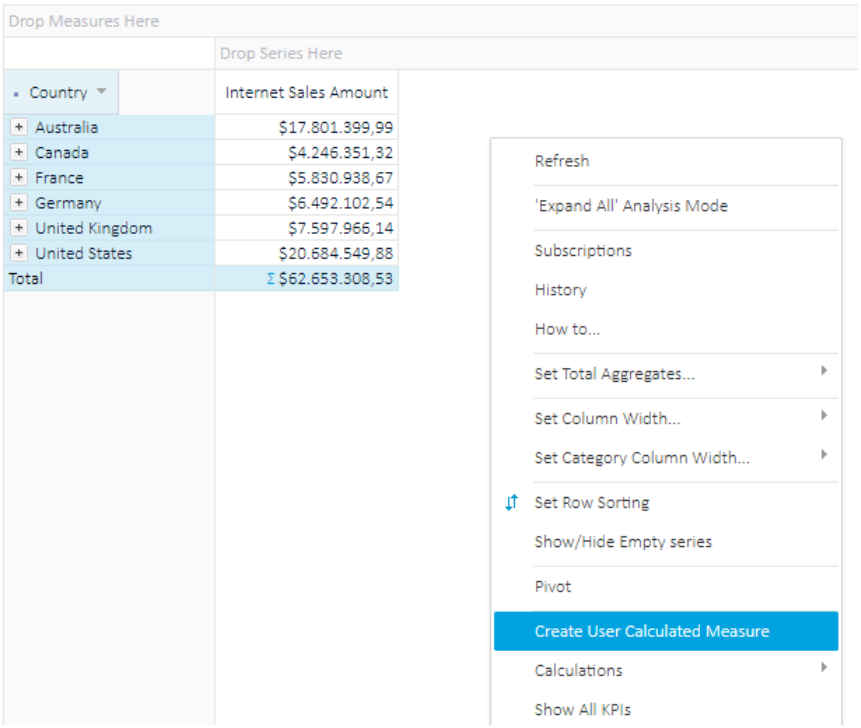
While in the grid analysis, authorized users could edit existing **User Named Sets** by right-click on the User Named set in the OLAP Cube structure tree or in Main Menu -> Shared Items -> User Named Sets. Gray named sets are those defined in the OLAP database, blue Named sets are those defined in the Kyubit BI application.





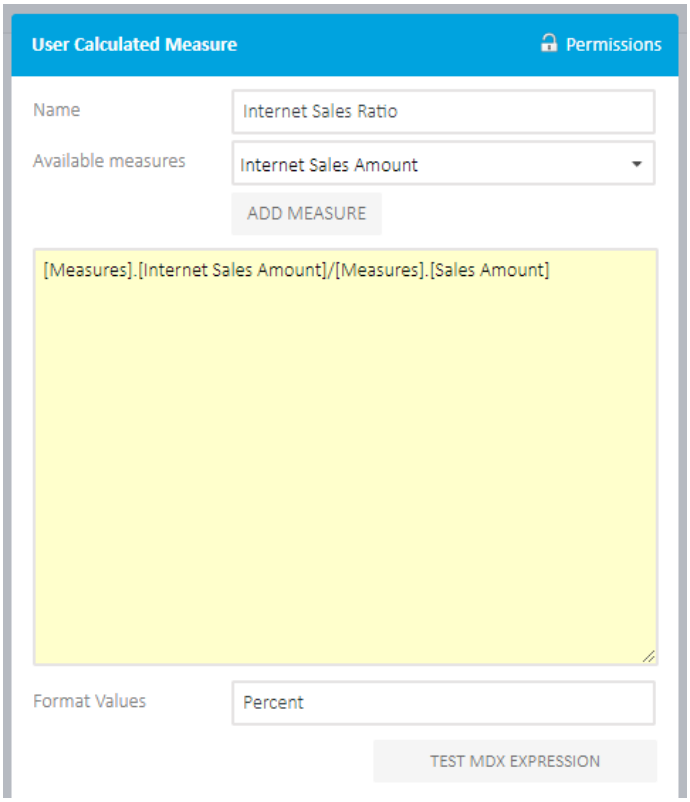
3.16. Create and manage ad-hoc User Calculated Measures (OLAP)

While analyzing the data with the grid analysis, any user could use OLAP database defined **calculated measures** or **create** ad-hoc **User Calculated Measures** that will be stored in the Kyubit Business Intelligence application and could be reused in a different analysis and shared with other users. To create ad-hoc "User Calculated Measure", right-click the grid analysis area (or Options) and select 'Create User Calculated Measure'.

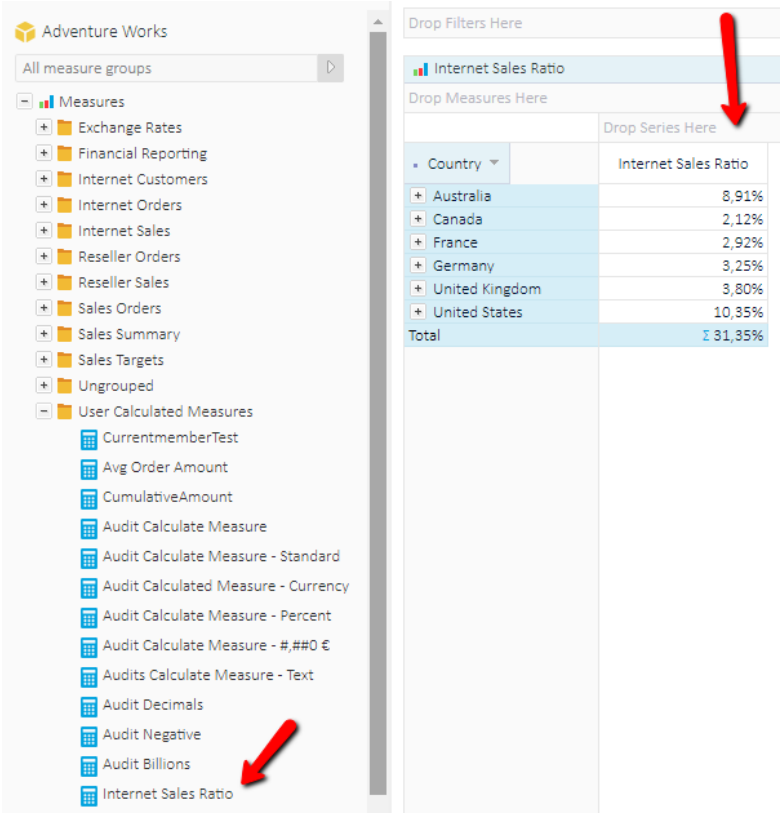


Enter the MDX expression that will be used for the **User Calculated Measure**. Select measures and click "Add Measure" to add measure unique name to the expression. After you form complete expression, validate the expression by selecting "Test MDX expression". Enter appropriate MDX value for "Format values", for example,

"Standard", "Currency", "Percent" or any other valid MDX format values expressions. (Check official MDX documentation for available "Format values" parameters).

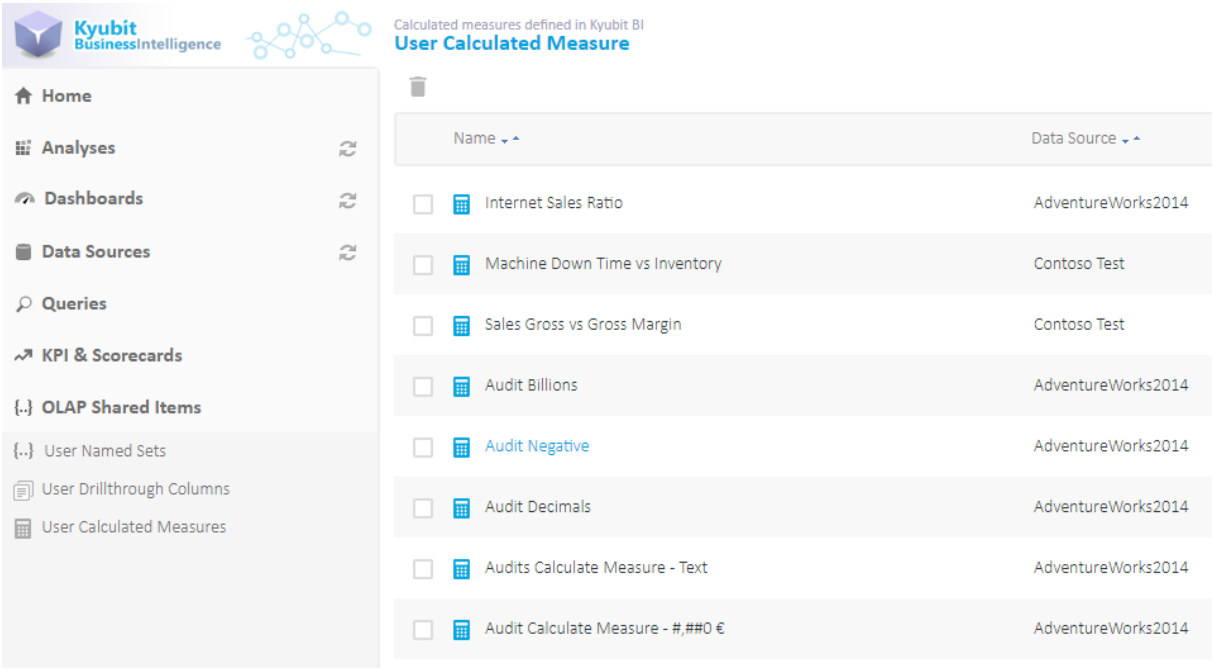


After you create the **User Calculated Measure**, OLAP cube structure tree will be refreshed to show new User Calculated Measure, which then could be used in the analysis or shared to be available for other users.



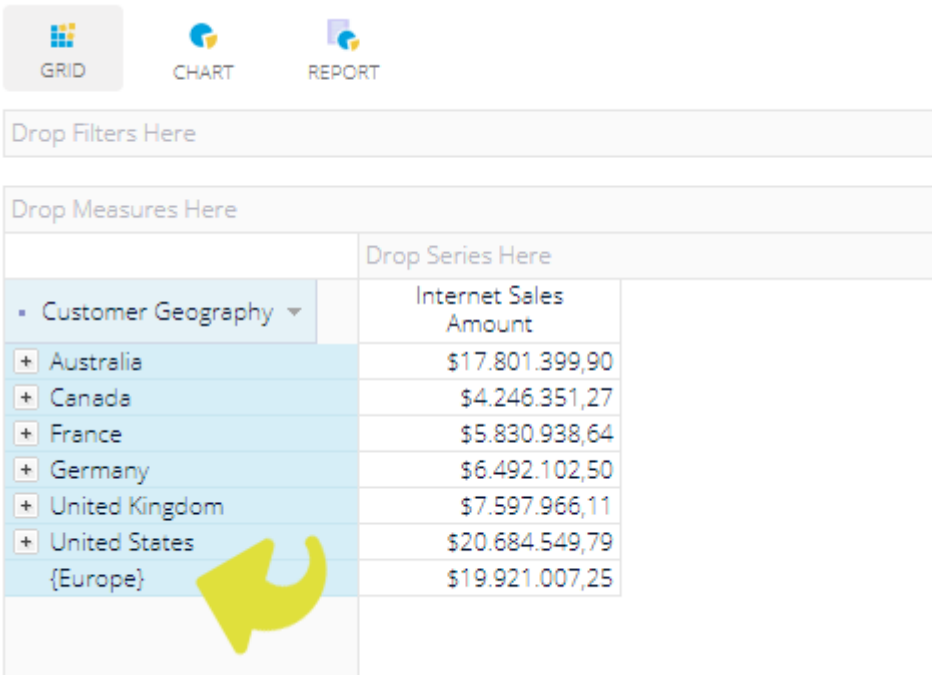
3.16.1. Edit existing User Calculated Measures

To edit an existing **User Calculated Measure**, right-click User Calculate Measure in OLAP cube structure tree while in the grid analysis and select "Edit User Calculated Measure" or go to the Main Menu -> Share Items -> User Calculated Measures.

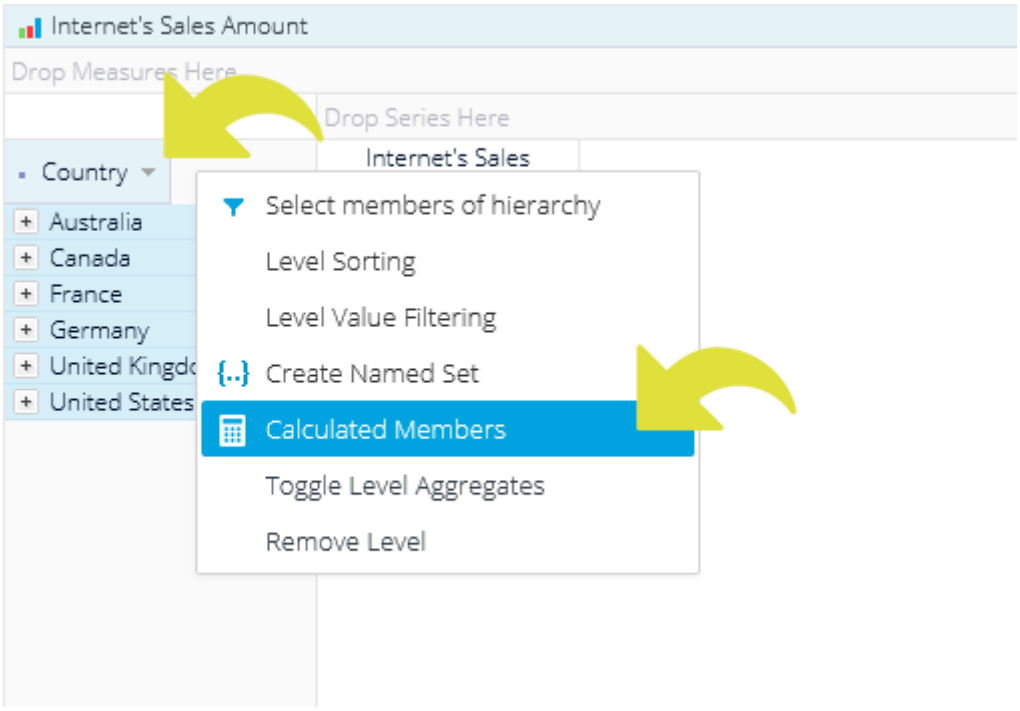


3.16.2. Use Named Set as a 'Calculated Member'

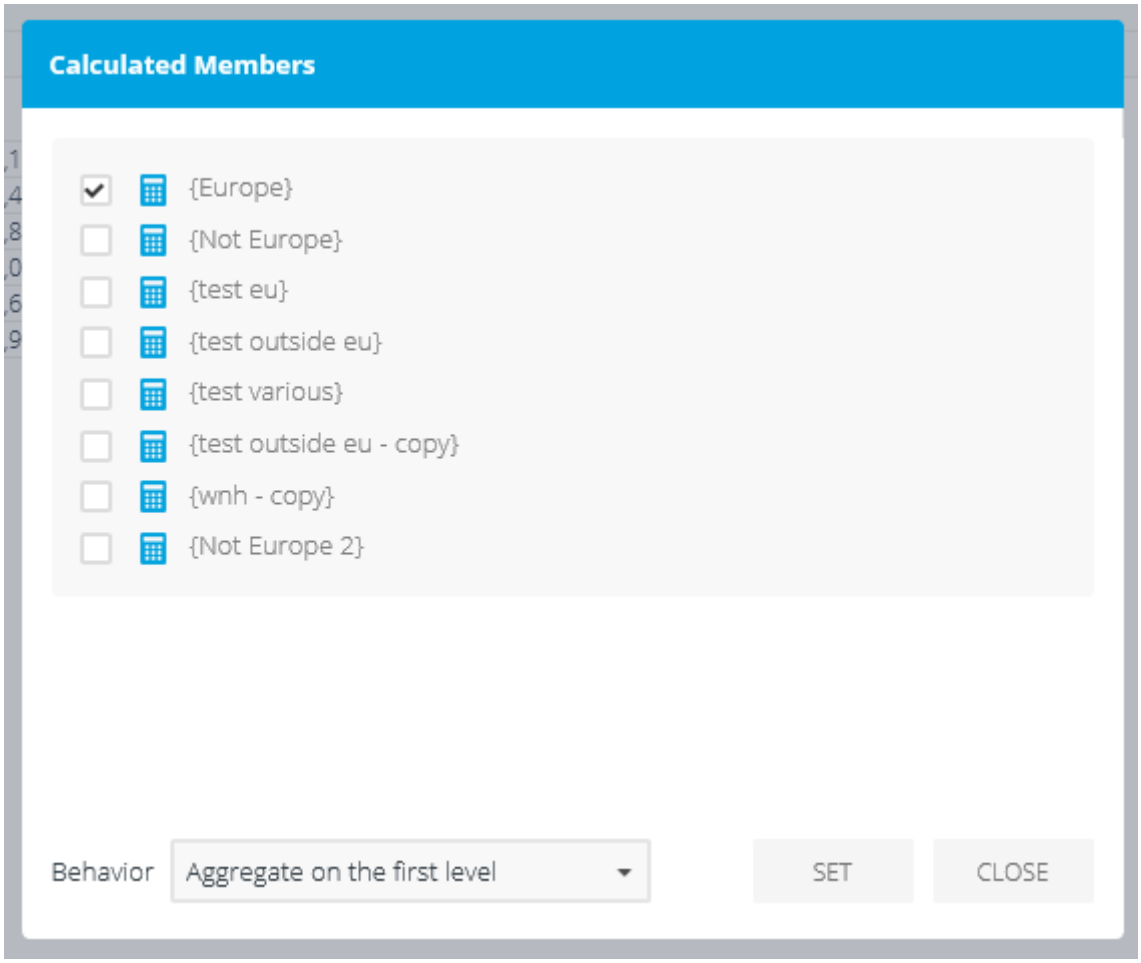
Display a Named set created in the Kyubit application as a Calculated Member in grid/chart analysis. Use Named set displayed as an aggregated item along with other members to compare values between individual items and grouped items that are related on some basis.



Click on the arrow on the added dimension level and choose 'Calculated Members' ...



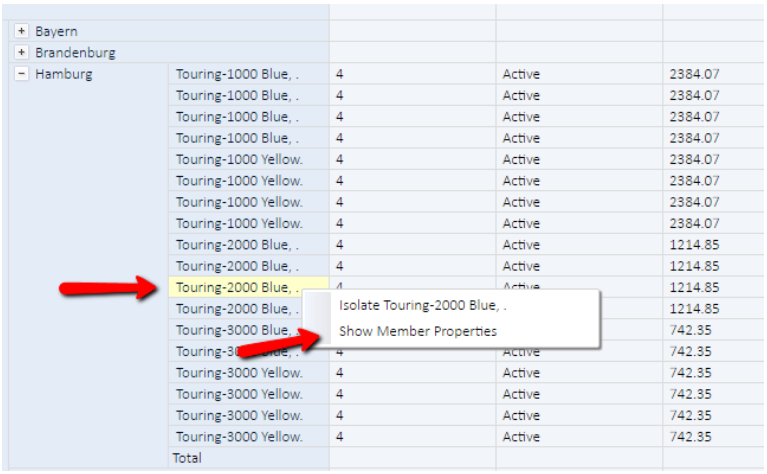
Select any Named set that is associated with the same dimension level to be displayed as a 'Calculated Member'.

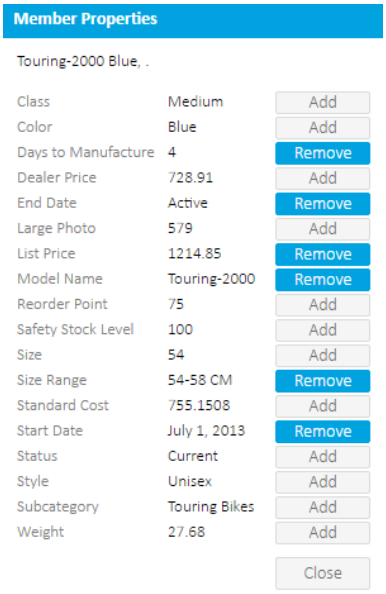


3.17. Member Properties (OLAP)

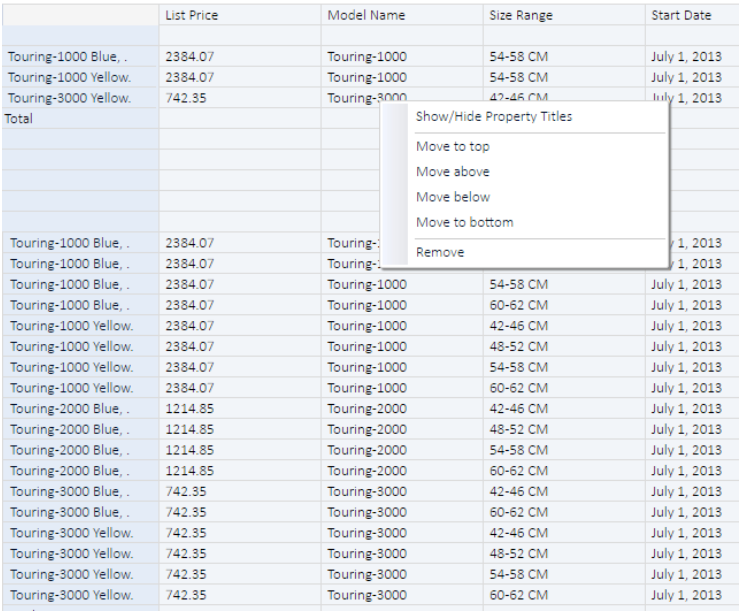
Display 'Member Properties' for a single OLAP dimension member or add 'Member Properties' to your OLAP analysis/report as columns with member property values for multiple OLAP dimensions.

To show 'Member Properties' for a single member, right-click on the member on the category axis while in the analysis 'Grid View' and select 'Show Member Properties'. Member properties form will open displaying 'Member Property' values for a single member.





To add/remove 'Member Properties' to OLAP grid/report columns, select individual 'Member Properties' from Member properties form clicking on the 'Add' or 'Remove' button.



At any time, edit displayed 'Member Properties' order of appearance by right-click on member property columns on the grid and choose appropriate action. If you hide 'Member Properties' titles, properties column width will be more narrow, saving space area on the screen.

3.18. Save analysis state

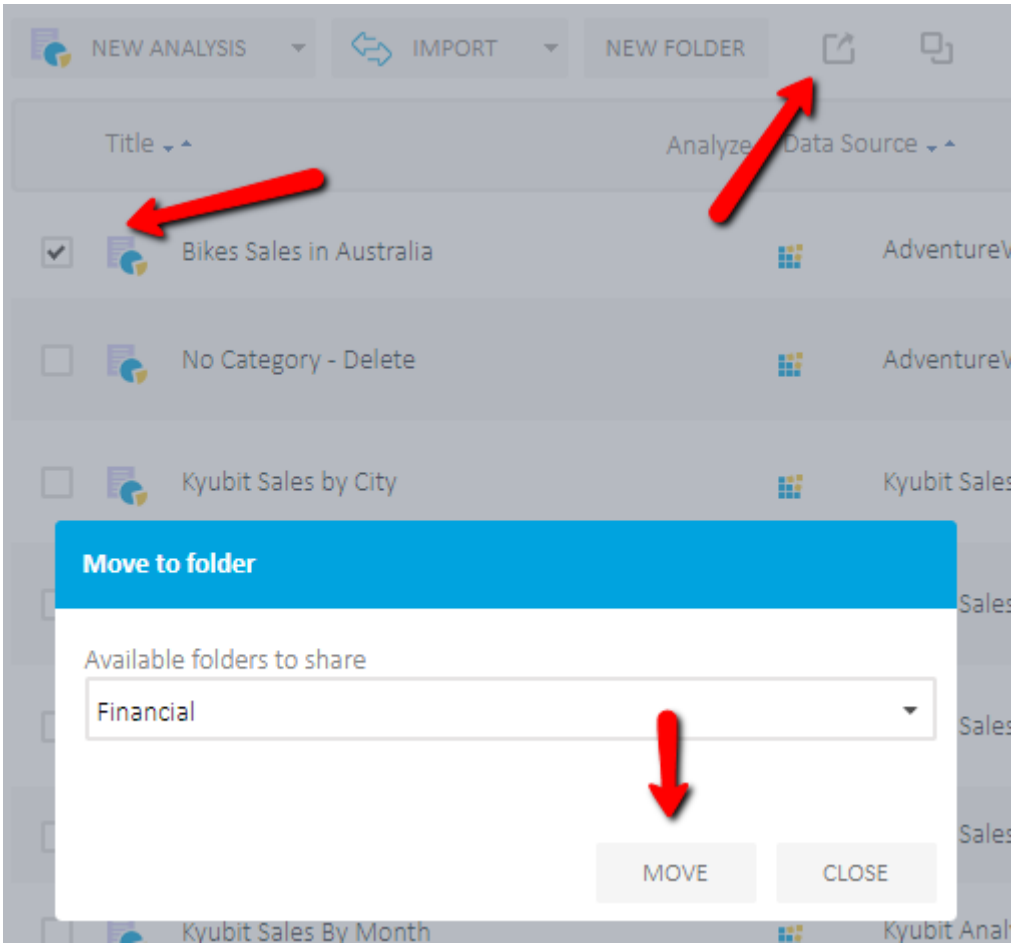
In Grid or Chart view, after every analysis action, it is possible to save the current state of analysis and run it again from the Analysis application section. By default, when saved, the analysis will be located in "My analysis" folder, visible only to the user who created analysis. An existing analysis could be saved under a different name, using "Save As" option. To open (analyze) again the same analysis, open Folders, then **My Analysis** folder and click on the analysis icon.

3.19. Sharing an analysis

To make analysis visible to other users, open an existing analysis and select "Share" option available on the top-right corner. Select one of the available folders and click the **Share** button. From now on current analysis will be located in the designated folder and will not be visible in "My analysis". Sharing with the folder does not mean that this analysis could be visible to everyone, but only to the users with permission on a particular folder. Furthermore, users with given permissions on the folder will see that analysis with the given name exists, but when they try to execute one, same users additionally must have permissions in OLAP database itself to successfully run analysis and see actual values from the OLAP database (OLAP role-based security).

Typically, folders would be created to separate analysis for different business units, sectors or teams, to separate points of interest and appropriately assign the permissions.

Option to share analysis is available in the grid and charts view, if the analysis is previously saved.

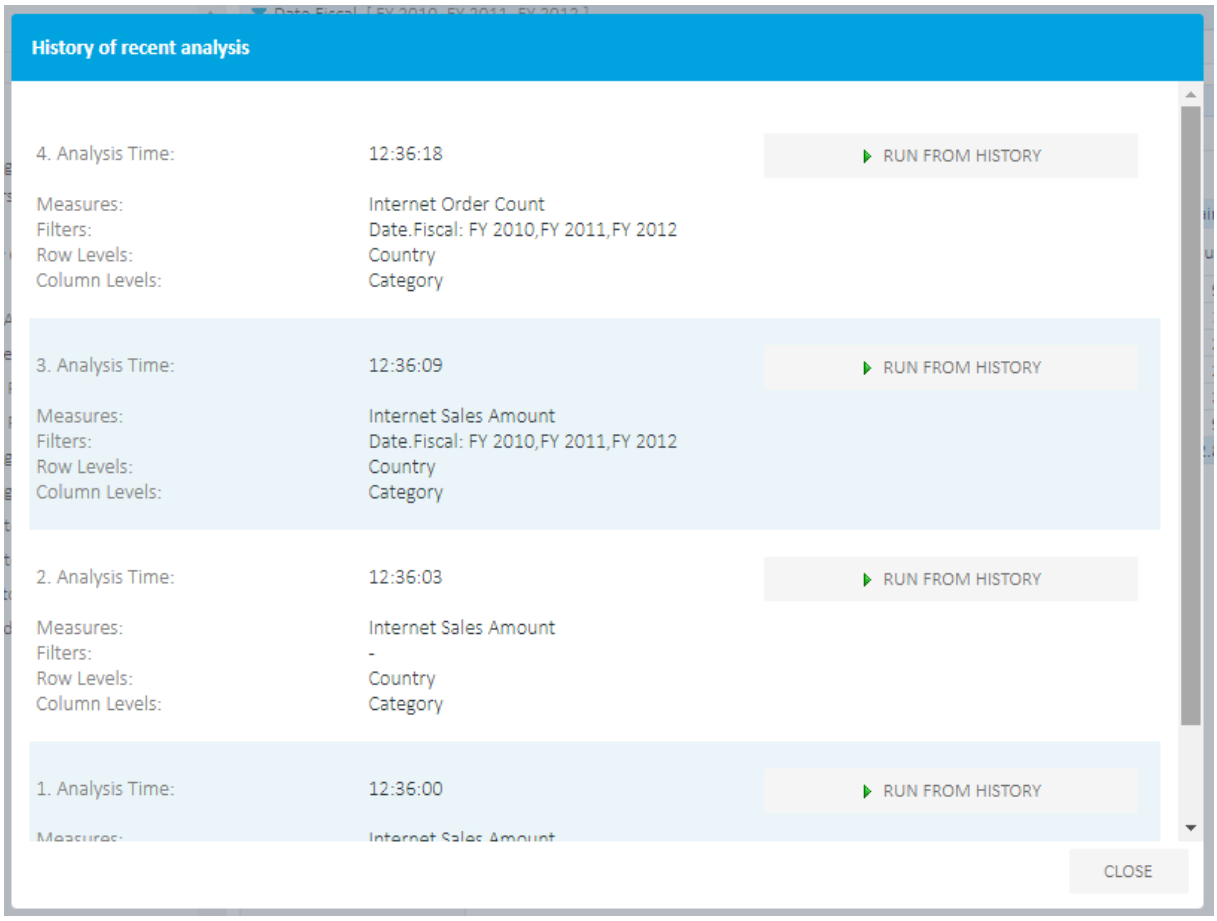


3.20. Analysis history, move back and forward

After every analysis action in the grid or charts view, analysis state is saved in the memory and could be used to move **Back** or **Forward** through the analysis **history**, which would reproduce particular analysis states from the memory.

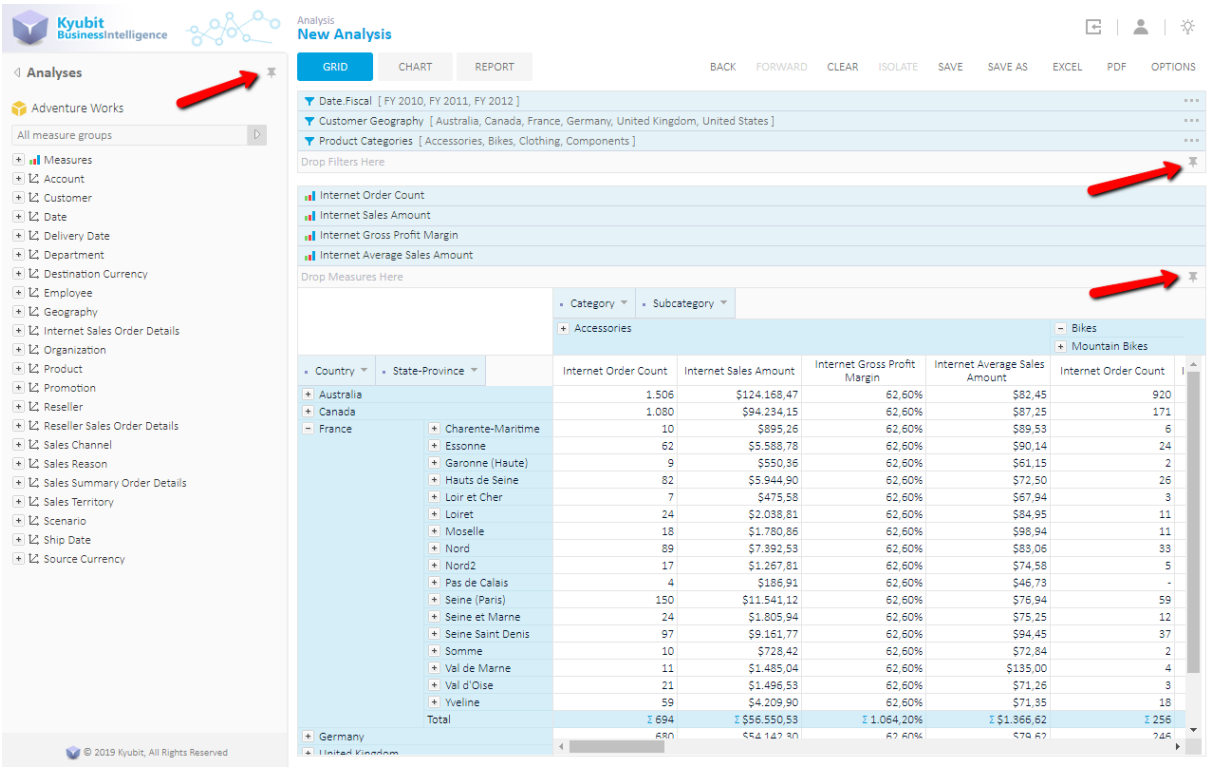
Additionally, the user can select "History" option and see all available analysis states (up to 10), that exists in memory and could be run again, either by "Back" and "Forward" options or by explicitly clicking on the green arrow beside each analysis state in the history panel. The history panel additionally shows basic elements of a certain analysis state: measures, filters, category and series dimension hierarchies and time of the execution.

Analysis history is resetting with each new analysis (or 'Clear' action).

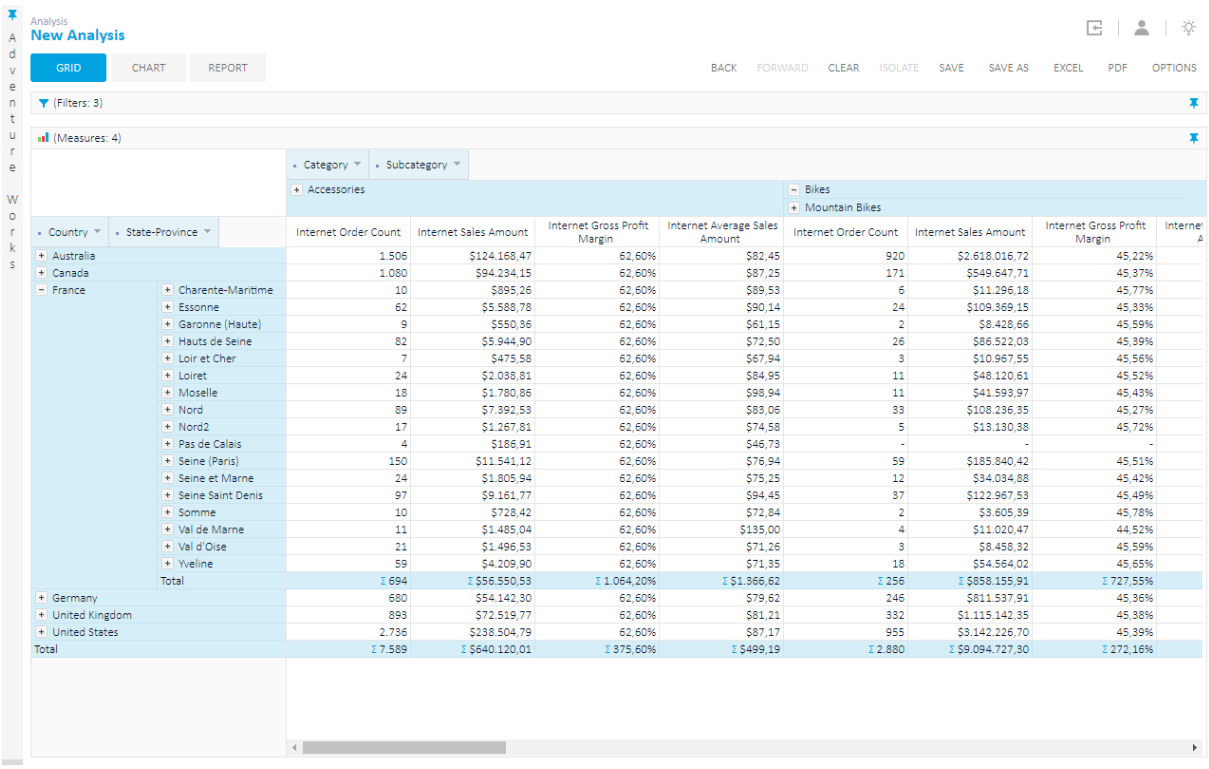


3.21. Show/Hide Grid Analysis Panels

Toggle (show/hide) filters, measures and cube structure panels within the grid Analysis to have more space for data values, while analyzing data on smaller screens. The analysis with many filters and measures lacks screen space when used on laptops or smaller monitors. The cube structure on the left side also is taking a lot of screen space that could be alternatively used for analyzing data instead. Toggle buttons available aside tree structure, filters and measures panel could be used at any time to show or hide the same panels leaving more space for analysis data cells in the main screen section.

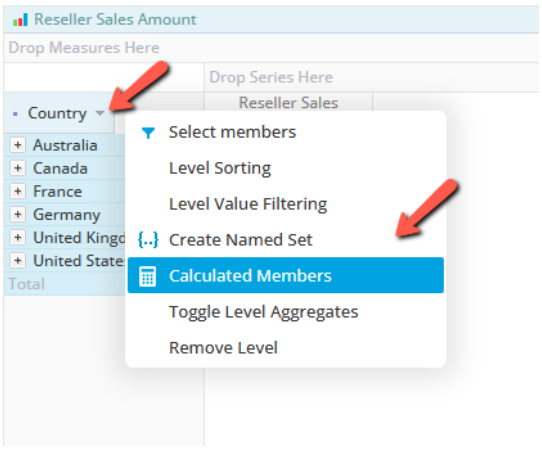


After minimizing the panels …

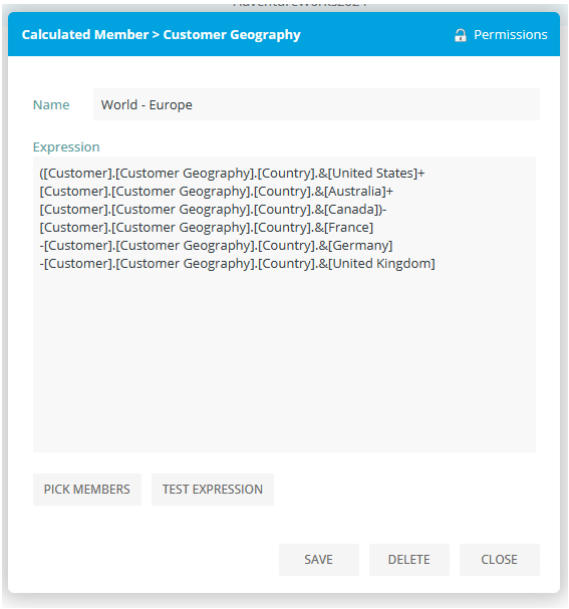


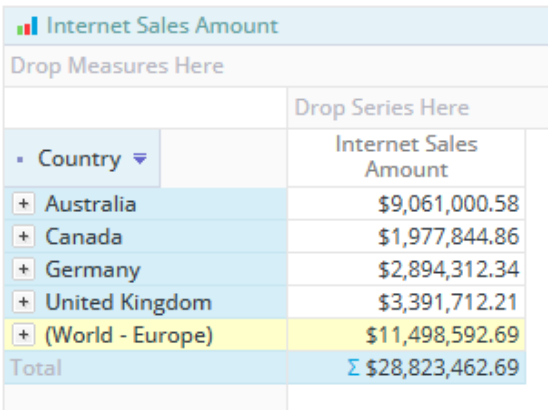
3.22. Create ad-hoc Calculated Members

Create OLAP Calculated Members on the application level and share them with other users. Created ad-hoc Calculated Members on the application level are all listed in the OLAP Share Items section.



Use the 'Pick Members' button to select existing members and their unique member names required for the calculated member expression. Set the 'Calculated Members' expression and use it immediately in the analysis. To find out member unique name required for the expressions, either use 'Pick Members' or simply click on the members that are already on the analysis to include their unique names into the Calculated Member expression.





4. Chart analysis features

To analyze data visually, switch analysis view to the **Chart view**. Chart view and grid view show same analysis data following the concept that first dimension hierarchy on the category axis in the grid view will be displayed on the category (X-axis) in the chart view, values for each measure will be shown on the Y-axis and finally first dimension hierarchy on the series axis in the grid view will be displayed as series in the charts view.

In the grid analysis, it is possible to select more dimension hierarchies for each axis. Chart view will accept (display) only the first dimension hierarchy for both axes.

While doing chart analysis, Grid analysis is also refreshed in the background, so a user could combine both views to execute the required analysis and to apply required actions. It is the same set of analysis data. If you switch to the grid view, you will see that analysis values for your actions are automatically reflected in both analysis views.

Chart analysis could display up to 3 measures. Each measure will be shown on the separate chart, one above other. Unlike the grid analysis, chart analysis uses right-click-context menu that pops up and show available actions to select elements from the OLAP/Analytic Model structure and to perform particular analysis actions.

4.1. Categories

To start chart analysis, at the minimum, dimension level for the category has to be selected. To select particular dimension level for Categories, Series or Filters, first, the menu will show available dimensions, and after click on certain dimension, other menu pops up with all available dimension levels for previously selected dimension. Category dimension hierarchy members will be displayed on the X-axis (horizontal).

To change the category, right-click on an empty chart area and select "Change Category" action from the menu. Select dimension and dimension levels for the category axis.

4.2. Series

To set series dimension level, right-click on empty chart area and select "Set Series" action from the menu. Select dimension and dimension level for the series axis. Series dimension level members will be displayed above chart with a different color for each Series member.

4.3. Change or add the measure

It is possible to change the current measure in chart view or add new measures (Up to 3). To remove certain measure, use the grid view, removing measure is not supported in the chart view.

To change or add the measure, right-click on an empty chart area and select "Change Measure" or "Add Measure" action from the menu. Select measure group and then the particular measure.

While working with multiple measures, the chart will be displayed one above other, so that category members vertically line up for a measure value comparison.

4.4. Pivot chart

To switch members from the categories to series and vice-versa, right-click on an empty chart area and select the **Pivot** action from the menu.

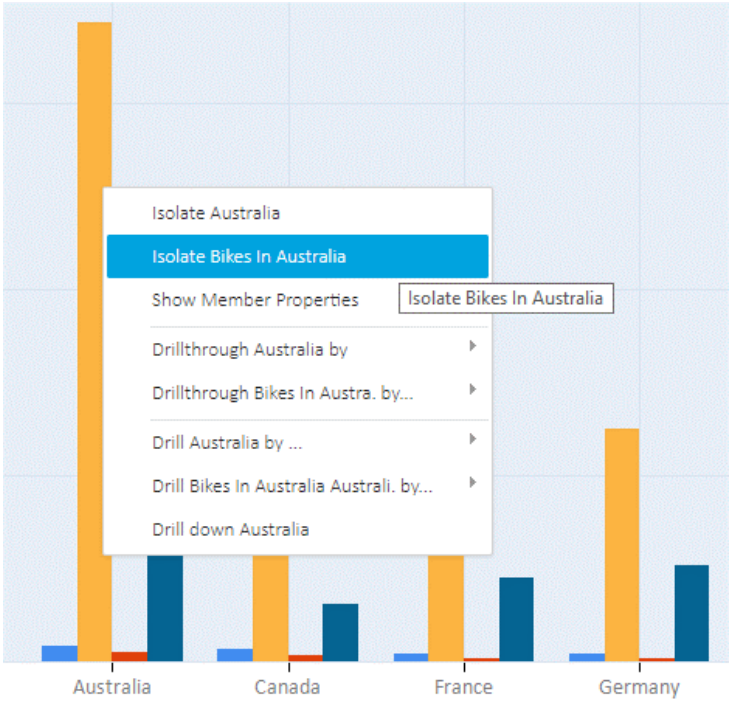
4.5. Isolating

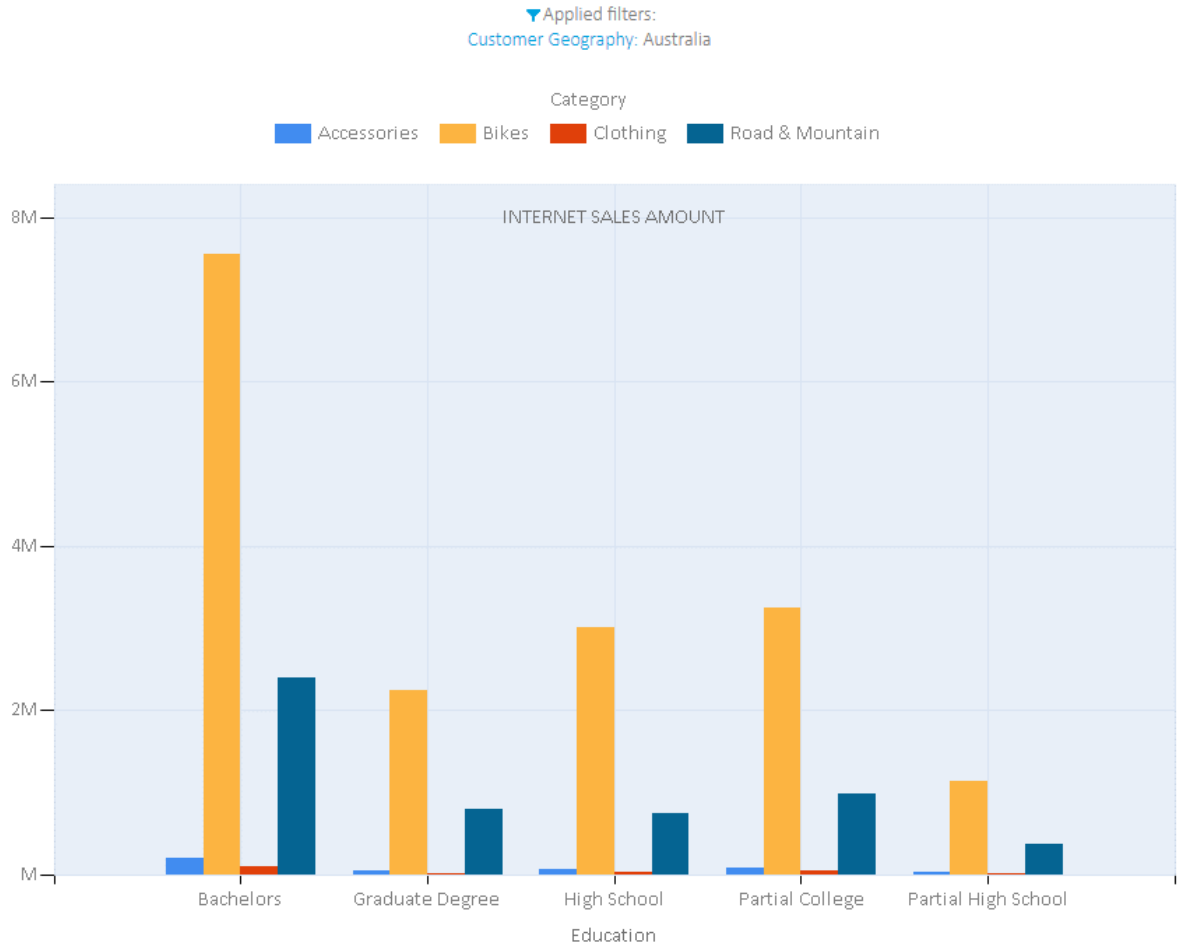
To isolate certain member values right-click on the member values (Column, Bar, Line, etc.) and select the **Isolate** action. Note, that it is possible to isolate category members or if exists, a series member within the category member.

To isolate series member, right-click on the series legend (above chart) member and select the isolate action. The isolate action will set addition filter for the analysis.

4.6. Drill category member values (Slice)

To further analyze data and go "deeper" into the desired point of interest for a certain category member, right-click on the member value (Column, Bar, Line, etc.) and select **Drill** action, and select **Slice** dimension level that will be used to slice the current values. Selected category member will be automatically isolated and set in the filters panel. "Slice" dimension level will become category dimension level. Note, that if series exists, it is possible to "Slice" category member or series member within selected category member.

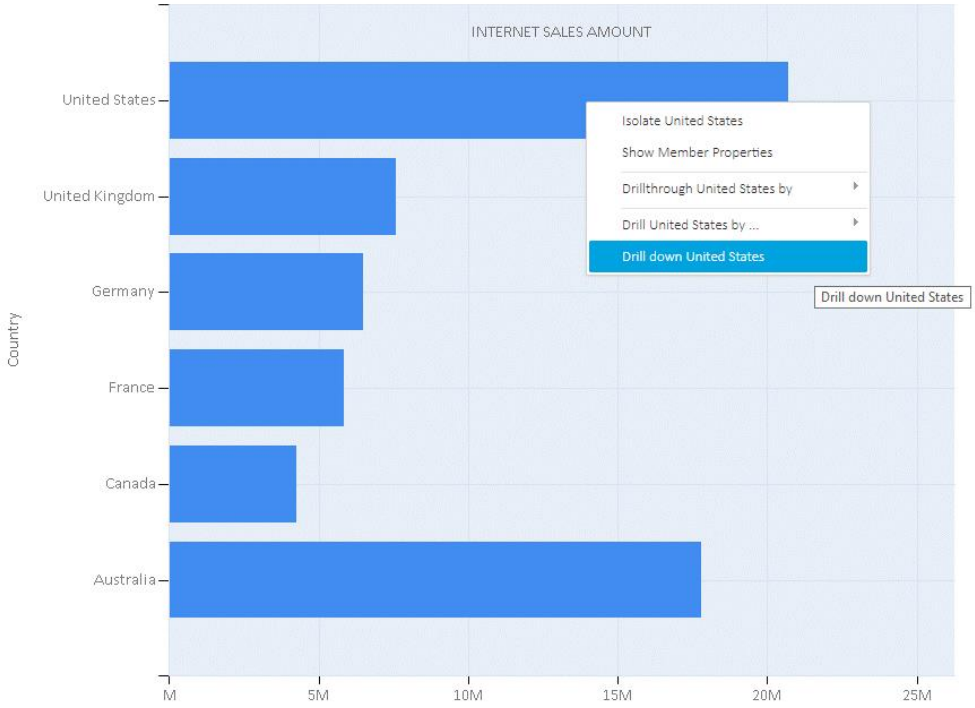




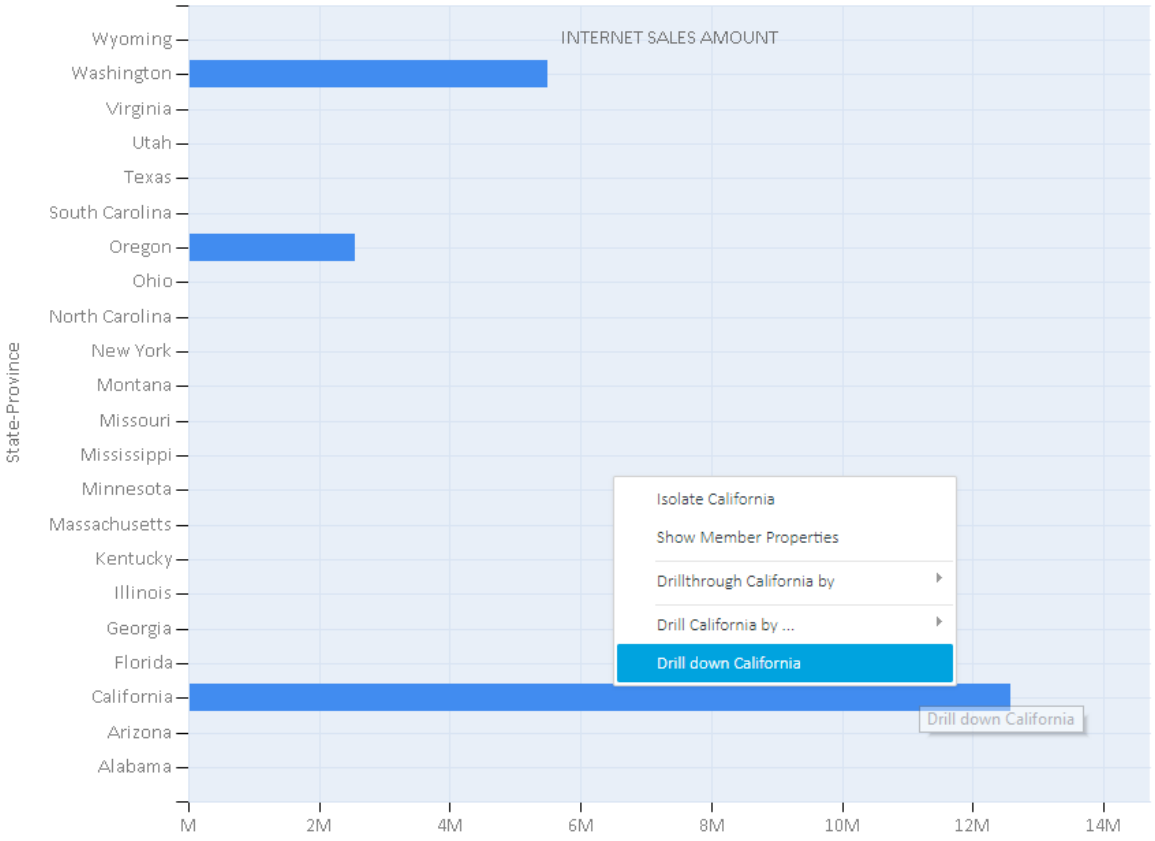
"Slicing" category member values could be repeated as many times it is required.

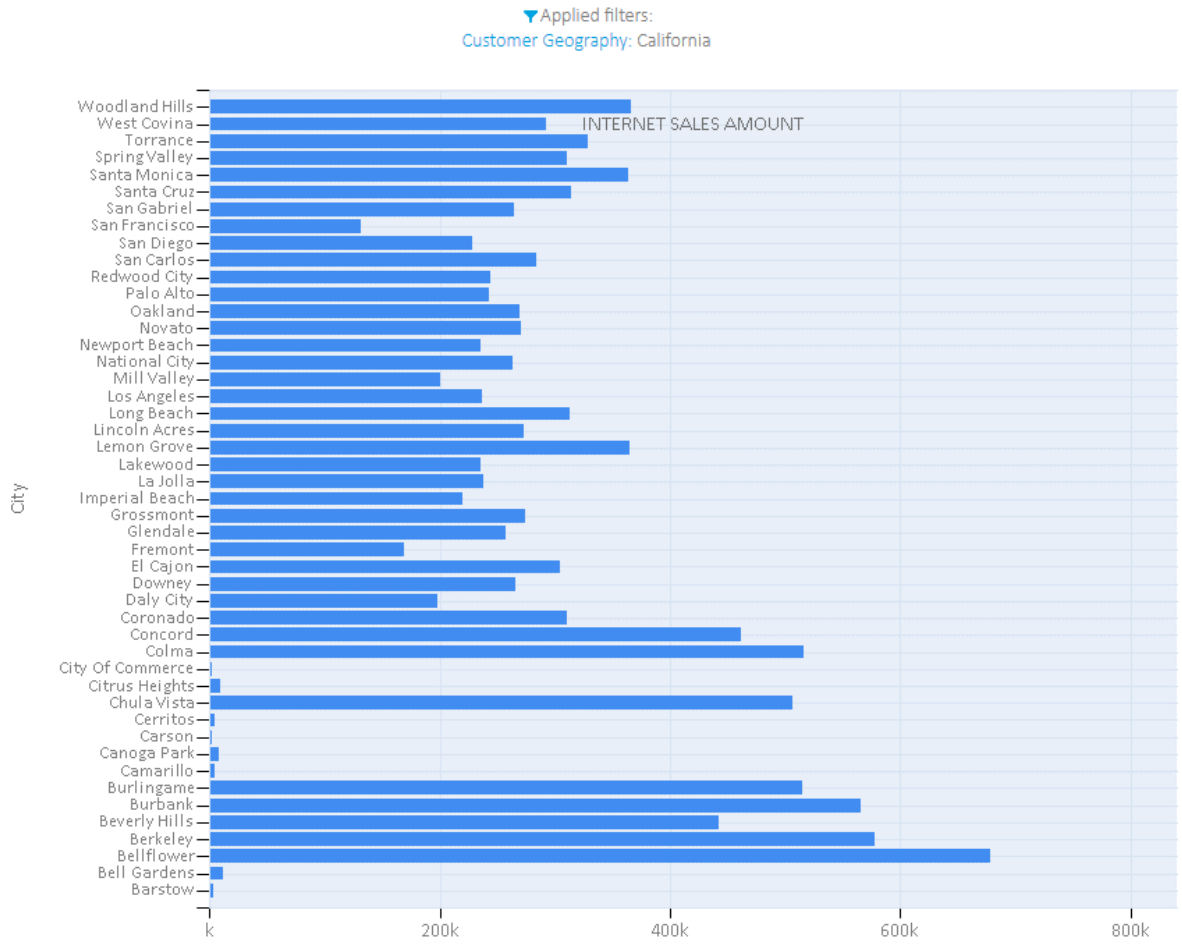
4.7. Drill-down

If the category dimension hierarchy consists of more levels, **Drill-down** option will be available in the action menu. Drilling-down will replace dimension hierarchy with its child level. For example, Country to State or State to City. Right-click on the member value (Column, Bar, Line, etc.) and select the "Drill-Down" action.



Applied filters:
Customer Geography: United States





4.8. Chart visuals

There are 6 different and independent visual elements, which could be set up to optimize visualization and perception of chart analysis data. The user should try several combinations to find the most appropriate visual elements, which best suits for a given analysis. Changing chart visuals does not impact analysis data/values in any way.

4.8.1. Chart Types

There are 14 different chart types that could be selected for any chart analysis.

- Lines
- Splines
- Bars
- Stacked Bars
- Stacked Bars 100
- Columns
- Stacked Columns
- Stacked Columns 100
- Areas
- Stacked Areas
- Stacked Areas 100
- Pie
- Doughnut
- Radar

4.8.2. Palette

Defines color sets that could be used to display chart values.

- Brigth
- Grayscale
- Excel
- Light
- Pastel
- EarthTones
- Semitransparent
- Berry
- Chocolate
- Fire
- SeaGreen
- BrightPastel

4.8.3. Theme

Defines background color for the chart area.

- Blue
- White
- Warm

4.8.4. Enable 3D view

Apply 3D view for given chart analysis and defined chart visuals.

4.8.5. Semi-transparent option

Value elements (Lines, Columns, Bars, etc.) could be visually semitransparent above the chart area.

4.8.6. Show values option

Values could be presented with numbers beside each member value element

4.8.7. Pie/Doughnut details

For pie and doughnut chart types, a special setting is provided to support different value presentation options, due to these chart type specifics.

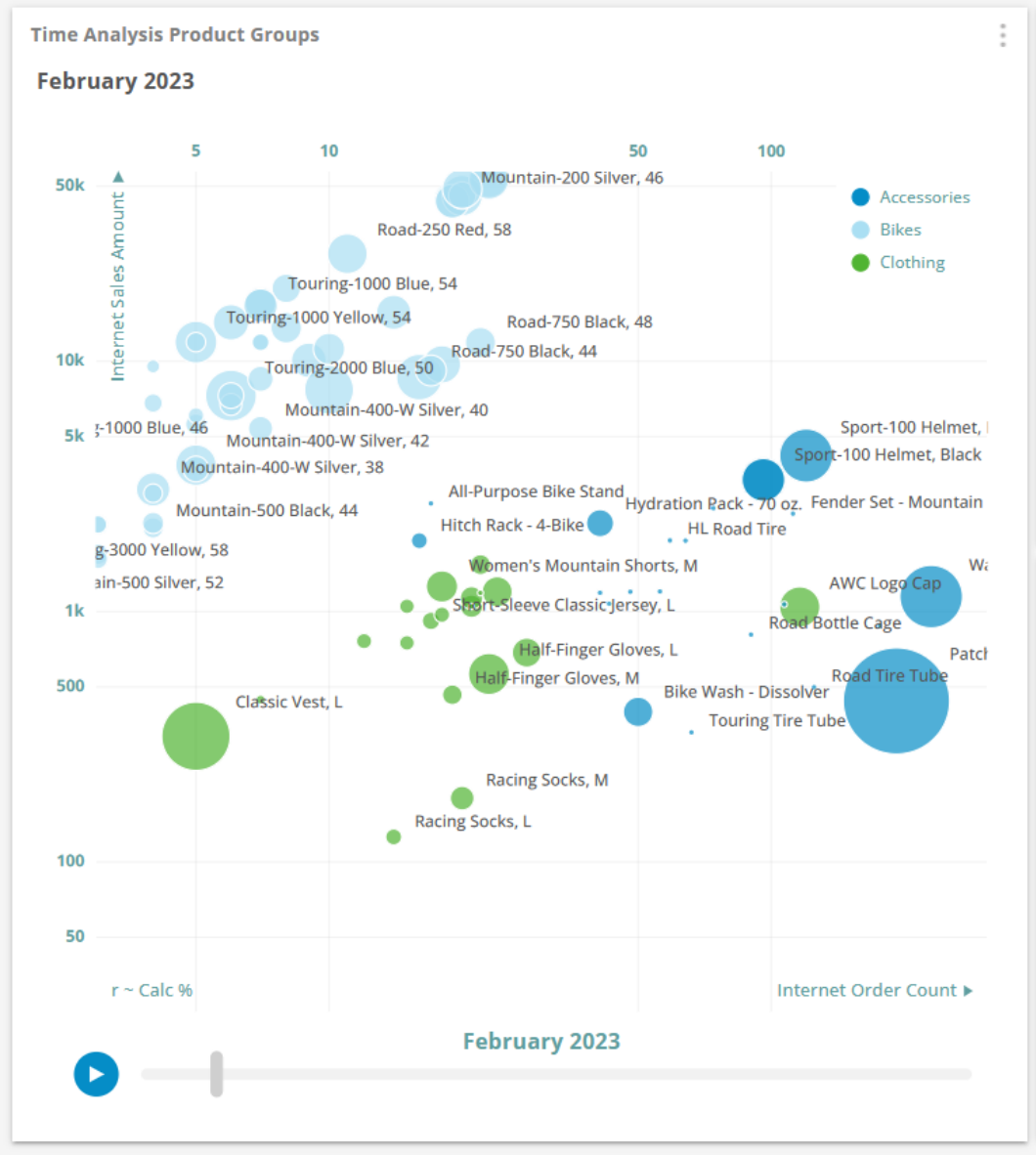
4.9. Time Animated Charts

A set of charts that display data changes through time. The time axis on the bottom of the chart presents the time period in which data has been changed. While the chart is in play mode, the animation transforms chart visual elements to illustrate the changing of given values through the time period. At any time, pause the animation or click on the time axis to transition to any particular time period and visualize its data. Right-click on the chart to open a special set of time analysis options for the time-animated chart. All time animated charts could display data on a **linear** or **logarithmic** axis. All time-animated charts could be **exported and used as standalone HTML files** that could be opened in the browser outside of the Kyubit application or embedded into another web application or website.

To open the animated chart while in the grid analysis view, choose Options > **Time Analysis** > Animated Bubble Chart | Animated Bar Chart | Animated Butterfly Chart.

4.9.1. Animated Bubble Chart

Animated Bubble chart displays transformations of values based on 2 or 3 measures for given elements (dimension members) in time. At any time pause the animation and zoom into the chart values for clarity. While observing the values for a particular element, click on it and display the **'History line'** that will show all previous values for the same element presented with additional (historic) bubbles and the line chart. Use the **'Compare Analysis'** to compare values between two periods. Use the **'Progress Analysis'** to display what elements are best performers in a given time period.

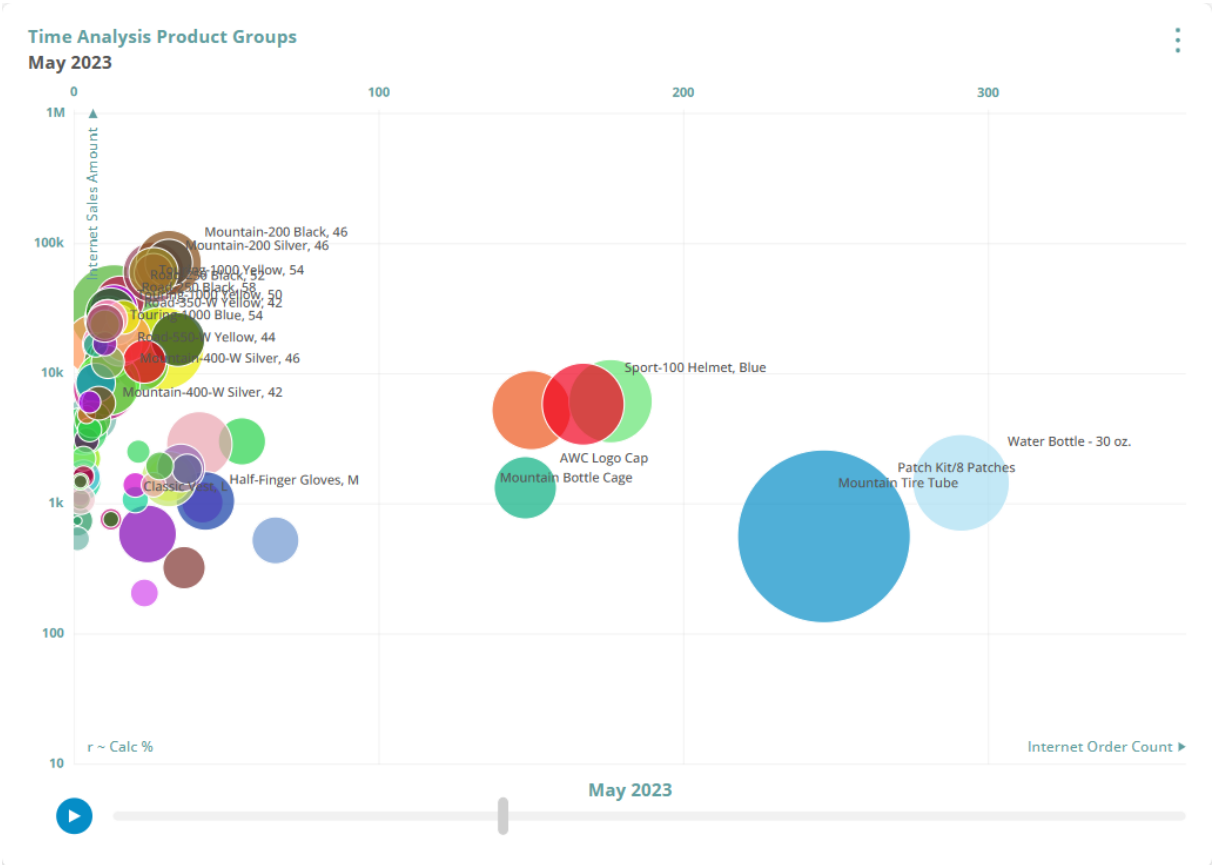


Animated Bubble Chart expects a certain structure of the related analysis. Related analysis has to be based on the **2 or 3 measures**. It should refer to **one or two category levels** and **time periods added to the series** axis of the analysis.

Example 1 – Single category attribute (level)

Internet Order Count
Internet Sales Amount
Calc %
Drop Measures Here

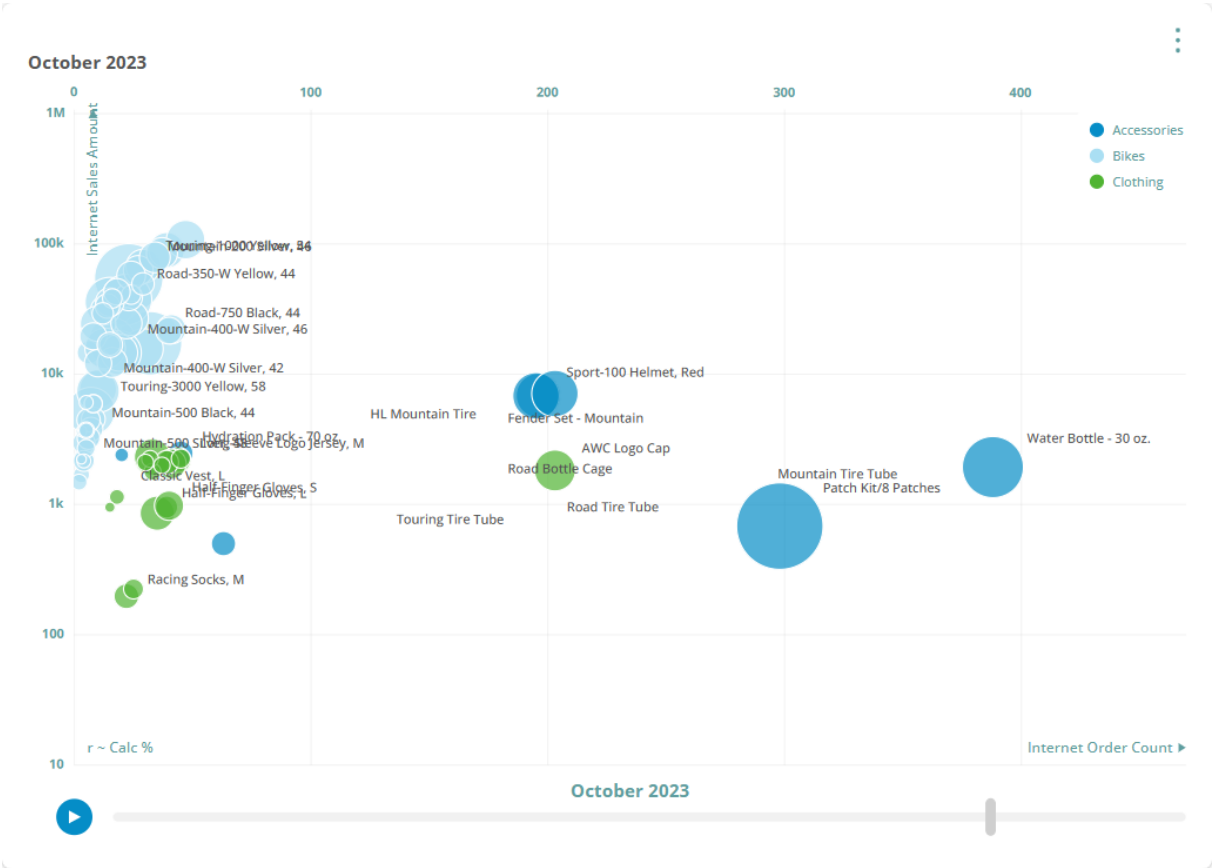
Product	Month: January 2023			Month: February 2023		
	Internet Order Count	Internet Sales Amount	Calc %	Internet Order Count	Internet Sales Amount	Calc %
Hitch Rack - 4-Bike	7	$840,00	5,64%	16	$1.920,00	7,78%
All-Purpose Bike Stand	3	$477,00	-	17	$2.703,00	-
Mountain Bottle Cage	40	$399,60	-	107	$1.068,93	-
Road Bottle Cage	50	$449,50	-	90	$809,10	-
Water Bottle - 30 oz.	80	$399,20	61,82%	230	$1.147,70	116,61%
Bike Wash - Dissolver	16	$127,20	12,51%	50	$397,50	25,97%
Fender Set - Mountain	38	$835,24	-	112	$2.461,76	-
Sport-100 Helmet, Black	33	$1.154,67	38,52%	96	$3.359,04	59,35%
Sport-100 Helmet, Blue	43	$1.504,57	48,04%	96	$3.359,04	54,26%
Sport-100 Helmet, Red	32	$1.119,68	37,68%	120	$4.198,80	84,28%
Hydration Pack - 70 oz.	10	$549,90	10,25%	41	$2.254,59	22,01%



Example 2 – Two category attributes (levels). In this scenario, the first attribute (level) presents a grouping of elements on the animated bubble chart that is also displayed with a particular group color indicated on the bubble chart legend.

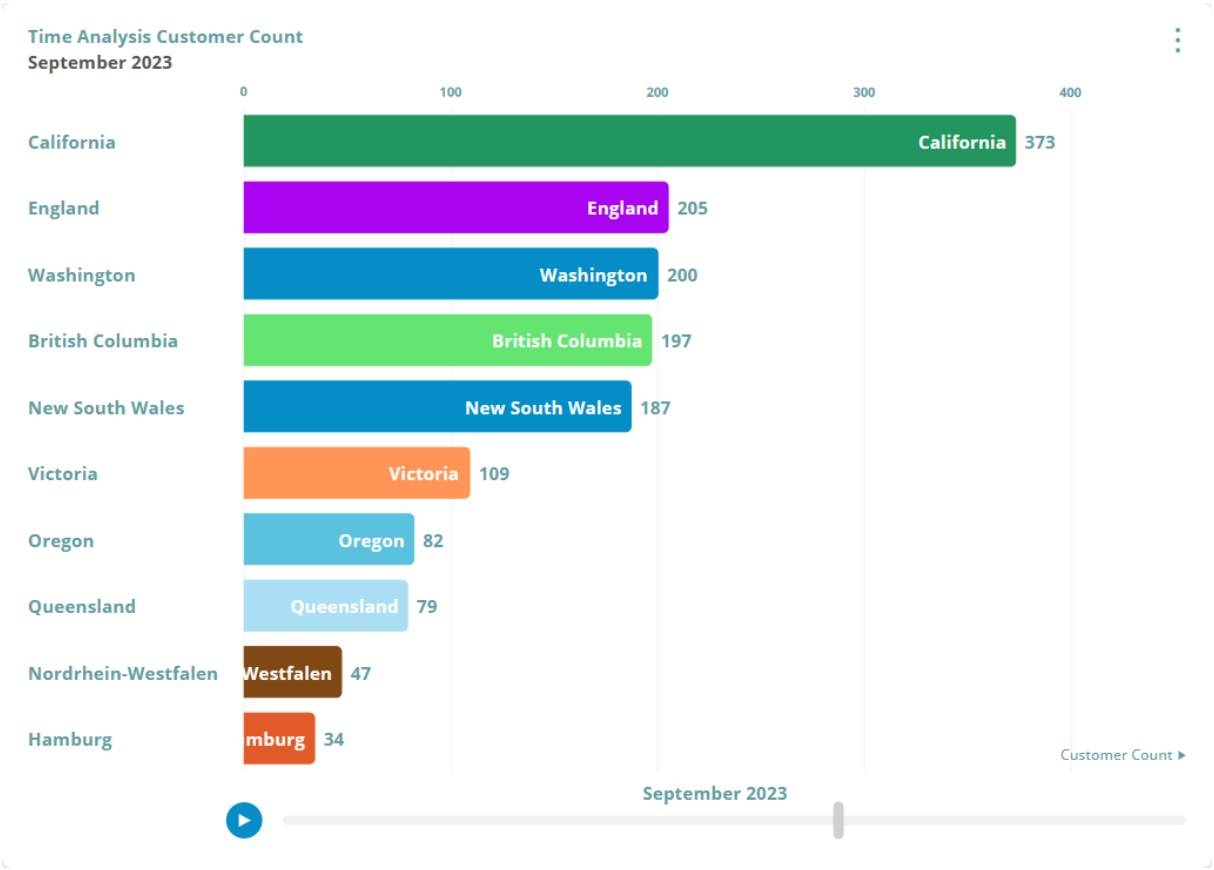
Internet Order Count
Internet Sales Amount
Calc %
Drop Measures Here

		Month					
		January 2023			February 2023		
Category	Product	Internet Order Count	Internet Sales Amount	Calc %	Internet Order Count	Internet Sales Amount	Calc %
Accessories	Hitch Rack - 4-Bike	7	$840,00	5,64%	16	$1.920,00	7,78%
	All-Purpose Bike Stand	3	$477,00	-	17	$2.703,00	-
	Mountain Bottle Cage	40	$399,60	-	107	$1.068,93	-
	Road Bottle Cage	50	$449,50	-	90	$809,10	-
	Water Bottle - 30 oz.	80	$399,20	61,82%	230	$1.147,70	116,61%
	Bike Wash - Dissolver	16	$127,20	12,51%	50	$397,50	25,97%
	Fender Set - Mountain	38	$835,24	-	112	$2.461,76	-
	Sport-100 Helmet, Black	33	$1.154,67	38,52%	96	$3.359,04	59,35%
	Sport-100 Helmet, Blue	43	$1.504,57	48,04%	96	$3.359,04	54,26%
	Sport-100 Helmet, Red	32	$1.119,68	37,68%	120	$4.198,80	84,28%
	Hydration Pack - 70 oz.	10	$549,90	10,25%	41	$2.254,59	22,01%
	HL Mountain Tire	18	$630,00	-	74	$2.590,00	-
	HL Road Tire	20	$652,00	-	59	$1.923,40	-
	LL Mountain Tire	2	$49,98	-	48	$1.199,52	-
	LL Road Tire	15	$322,35	-	56	$1.203,44	-
	ML Mountain Tire	4	$119,96	-	64	$1.919,36	-
	ML Road Tire	14	$349,86	-	43	$1.074,57	-
	Mountain Tire Tube	16	$79,84	-	176	$878,24	-
	Patch Kit/8 Patches	34	$77,86	67,46%	192	$439,68	335,54%
	Road Tire Tube	28	$111,72	-	125	$498,75	-
	Touring Tire	9	$260,91	-	41	$1.188,59	-
	Touring Tire Tube	7	$34,93	-	66	$329,34	-
	Total	Σ 519	Σ $10.545,97	Σ 281,91%	Σ 1.919	Σ $36.924,35	Σ 705,79%
Bikes	Mountain-200 Black, 38	18	$41.309,82	48,39%	20	$45.899,80	22,20%
	Mountain-200 Black, 42	16	$36.719,84	43,72%	19	$43.604,81	34,40%
	Mountain-200 Black, 46	24	$55.079,76	105,26%	20	$45.899,80	48,31%
	Mountain-200 Silver, 38	28	$64.959,72	78,75%	23	$53.359,77	47,33%
	Mountain-200 Silver, 42	11	$26.540,00	42,64%	22	$53.359,77	40,17%



4.9.2. Animated Bar Chart

The main purpose of the Animated Bar Chart is to present the 'Race to the top' animation and analysis based on a single measure. The user observes what are the top performers for any time period and the way the top performers are changing through time.



Expected Analysis must include a single measure, single category attribute (level) and observed time dimension periods on the analysis series axis.

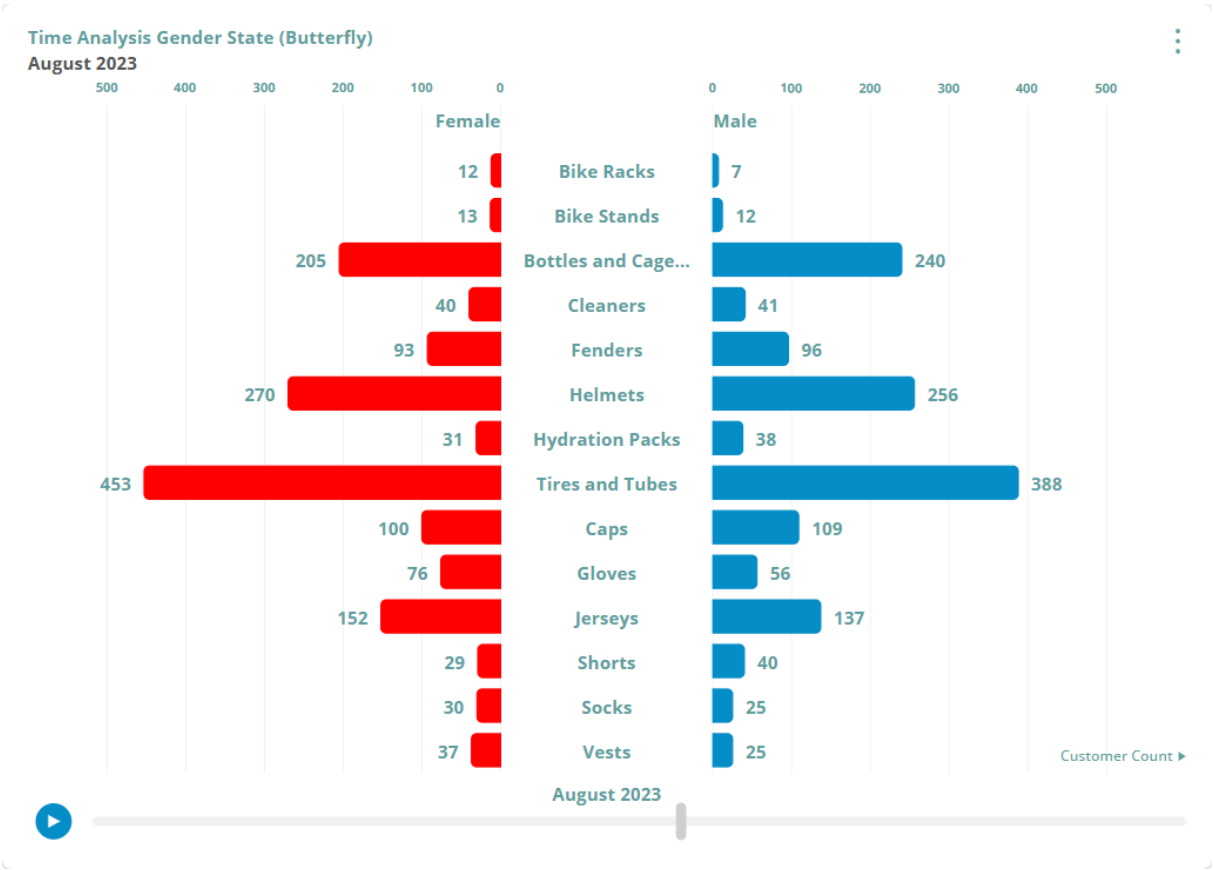
Customer Count

Drop Measures Here

	Month				
	January 2023	February 2023	March 2023	April 2023	May 2023
State-Province	Customer Count	Customer Count	Customer Count	Customer Count	Customer Count
New South Wales	53	88	153	165	144
Queensland	20	43	79	74	89
South Australia	16	15	19	24	24
Tasmania	3	11	13	12	14
Victoria	36	61	79	74	95
Alberta	-	1	-	1	1
British Columbia	21	151	194	180	198
Ontario	-	1	-	-	-
Charente-Maritime	1	-	2	1	3
Essonne	6	7	11	10	13
Garonne (Haute)	-	4	1	2	2
Hauts de Seine	3	10	17	15	18
Loir et Cher	-	2	2	-	1
Loiret	2	2	6	5	6
Moselle	1	3	3	4	3
Nord	6	22	26	21	24
Pas de Calais	-	1	1	3	-
Seine (Paris)	11	29	28	22	32
Seine et Marne	2	3	8	5	3
Seine Saint Denis	9	10	22	21	15
Somme	1	-	2	3	3
Val de Marne	-	3	1	2	2
Val d'Oise	3	3	2	2	3
Yveline	5	6	18	14	8
Bayern	3	12	17	14	27
Brandenburg	-	-	3	4	1

4.9.3. Animated Butterfly Chart

A bi-directional bar chart compares the values of the same items that belong to two different entities (groups) by a single measure through time.



The expected analysis structure for the animated butterfly chart consists of a single measure, 2 category attributes/levels (the first level presents a grouping of items under a certain entity (Gender in the above example), the second level presents actual items for the chart), the time dimension period on the analysis series axis.

Customer Count

Drop Measures Here

		Month			
		January 2023	February 2023	March 2023	April 2023
Gender	Subcategory	Customer Count	Customer Count	Customer Count	Customer Count
Female	Bike Racks	5	6	13	12
	Bike Stands	2	10	14	12
	Bottles and Cages	48	119	166	164
	Cleaners	9	28	25	29
	Fenders	19	51	70	75
	Helmets	62	166	223	229
	Hydration Packs	4	24	27	27
	Tires and Tubes	53	274	371	372
	Caps	18	54	82	86
	Gloves	8	27	55	56
	Jerseys	32	79	128	134
	Shorts	-	22	49	43
	Socks	2	18	20	25
	Vests	2	8	17	19
	Total	Σ 264	Σ 886	Σ 1.260	Σ 1.283
Male	Bike Racks	2	10	22	8
	Bike Stands	1	7	6	11
	Bottles and Cages	42	139	179	179
	Cleaners	7	22	44	39
	Fenders	19	61	85	74
	Helmets	46	144	246	226
	Hydration Packs	6	17	31	37
	Tires and Tubes	40	245	375	383
	Caps	22	62	89	53
	Gloves	7	43	56	54
	Jerseys	27	80	119	110
	Shorts	4	33	41	38
	Socks	2	16	23	16
	Vests	8	16	19	17

5. Calculations

Default analysis view is a display of values as they are in the data sources. In many occasions, it is practical to see how values relate to each other in the same view. Calculations view on the analysis data answers additional questions on how certain values correspond with the same value for other member or measures. It is used for comparison or better insights into the impact of a certain value in overall presented data.

5.1. No calculations (Default view)

Drop Measures Here

	Fiscal Year				
	FY 2010	FY 2011	FY 2012	FY 2013	Total
Country	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
Australia	$1.287.612,88	$2.177.740,89	$5.124.843,21	$9.211.203,01	Σ $17.801.399,99
Canada	$143.203,02	$624.910,42	$1.053.209,27	$2.425.028,61	Σ $4.246.351,32
France	$177.095,56	$520.300,24	$1.807.416,52	$3.326.126,35	Σ $5.830.938,67
Germany	$237.697,85	$523.187,49	$1.852.331,25	$3.878.885,94	Σ $6.492.102,54
United Kingdom	$290.738,53	$592.013,50	$2.377.963,61	$4.337.250,50	Σ $7.597.966,14
United States	$1.085.320,15	$2.145.251,97	$5.469.462,10	$11.984.515,66	Σ $20.684.549,88
Total	Σ $3.221.667,99	Σ $6.583.404,51	Σ $17.685.225,96	Σ $35.163.010,07	Σ $62.653.308,53

The values are rendered as they are, with no mutual comparison.

5.1. % of Columns total

Drop Measures Here

	Fiscal Year				
	FY 2010	FY 2011	FY 2012	FY 2013	Total
Country	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
Australia	39,97%	33,08%	28,98%	26,20%	28,41%
Canada	4,44%	9,49%	5,96%	6,90%	6,78%
France	5,50%	7,90%	10,22%	9,46%	9,31%
Germany	7,38%	7,95%	10,47%	11,03%	10,36%
United Kingdom	9,02%	8,99%	13,45%	12,33%	12,13%
United States	33,69%	32,59%	30,93%	34,08%	33,01%
Total	100,00%	100,00%	100,00%	100,00%	100,00%

The same values (cells) are represented as percent of the column total.

5.2. % of Rows Total

Drop Measures Here

	Fiscal Year				
	FY 2010	FY 2011	FY 2012	FY 2013	Total
Country	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
Australia	7,23%	12,23%	28,79%	51,74%	100,00%
Canada	3,37%	14,72%	24,80%	57,11%	100,00%
France	3,04%	8,92%	31,00%	57,04%	100,00%
Germany	3,66%	8,06%	28,53%	59,75%	100,00%
United Kingdom	3,83%	7,79%	31,30%	57,08%	100,00%
United States	5,25%	10,37%	26,44%	57,94%	100,00%
Total	5,14%	10,51%	28,23%	56,12%	100,00%

The same values (cells) are represented as percent of the row total.

5.3. % of Grand Total

Drop Measures Here

	Fiscal Year				
	FY 2010	FY 2011	FY 2012	FY 2013	Total
Country	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
Australia	2,06%	3,48%	8,18%	14,70%	28,41%
Canada	0,23%	1,00%	1,68%	3,87%	6,78%
France	0,28%	0,83%	2,88%	5,31%	9,31%
Germany	0,38%	0,84%	2,96%	6,19%	10,36%
United Kingdom	0,46%	0,94%	3,80%	6,92%	12,13%
United States	1,73%	3,42%	8,73%	19,13%	33,01%
Total	5,14%	10,51%	28,23%	56,12%	100,00%

The same values (cells) are represented as percent of the grand total.

5.4. Running totals for categories

Drop Measures Here

	Fiscal Year				
	FY 2010	FY 2011	FY 2012	FY 2013	Total
Country	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
Australia	$1.287.612,88	$2.177.740,89	$5.124.843,21	$9.211.203,01	$17.801.399,99
Canada	$1.430.815,90	$2.802.651,31	$6.178.052,48	$11.636.231,62	$22.047.751,30
France	$1.607.911,46	$3.322.951,55	$7.985.469,00	$14.962.357,97	$27.878.689,97
Germany	$1.845.609,31	$3.846.139,03	$9.837.800,26	$18.841.243,91	$34.370.792,51
United Kingdom	$2.136.347,84	$4.438.152,53	$12.215.763,86	$23.178.494,41	$41.968.758,65
United States	$3.221.667,99	$6.583.404,51	$17.685.225,96	$35.163.010,07	$62.653.308,53
Total	$3.221.667,99	$6.583.404,51	$17.685.225,96	$35.163.010,07	$62.653.308,53

The cell values are represented as running totals, cumulating the values of category members.

5.5. Running totals for series

Drop Measures Here

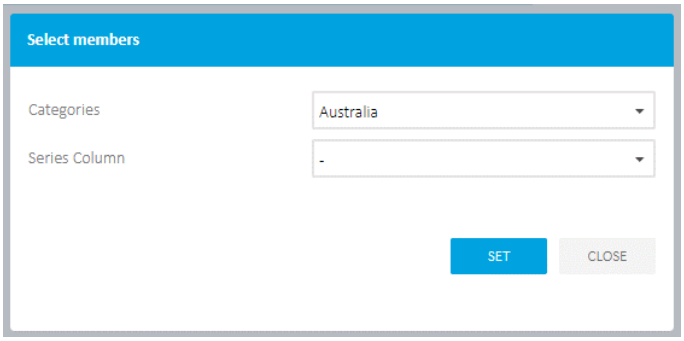
	Fiscal Year				
	FY 2010	FY 2011	FY 2012	FY 2013	Total
Country	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
Australia	$1.287.612,88	$2.177.740,89	$5.124.843,21	$9.211.203,01	$17.801.399,99
Canada	$1.430.815,90	$2.802.651,31	$6.178.052,48	$11.636.231,62	$22.047.751,30
France	$1.607.911,46	$3.322.951,55	$7.985.469,00	$14.962.357,97	$27.878.689,97
Germany	$1.845.609,31	$3.846.139,03	$9.837.800,26	$18.841.243,91	$34.370.792,51
United Kingdom	$2.136.347,84	$4.438.152,53	$12.215.763,86	$23.178.494,41	$41.968.758,65
United States	$3.221.667,99	$6.583.404,51	$17.685.225,96	$35.163.010,07	$62.653.308,53
Total	$3.221.667,99	$6.583.404,51	$17.685.225,96	$35.163.010,07	$62.653.308,53

The cell values are represented as running totals, cumulating the values of series members.

5.6. % of value

Shows how other values are related to chosen cell, column or row on the analysis grid.

5.6.1. % of the category

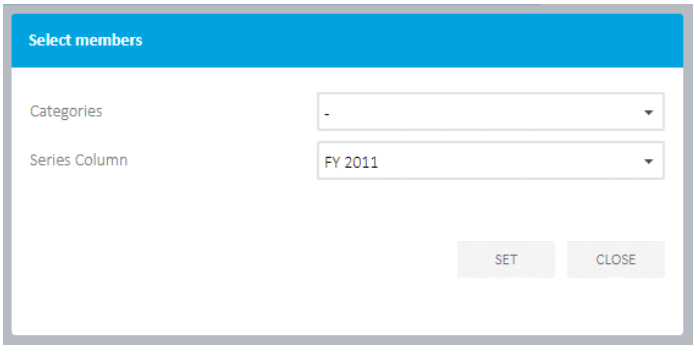


Other cells are represented as % of the selected category (row) = Australia.

Drop Measures Here

	Fiscal Year				
	FY 2010	FY 2011	FY 2012	FY 2013	Total
Country	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
Australia	100,00%	100,00%	100,00%	100,00%	100,00%
Canada	11,12%	28,70%	20,55%	26,33%	23,85%
France	13,75%	23,89%	35,27%	36,11%	32,76%
Germany	18,46%	24,02%	36,14%	42,11%	36,47%
United Kingdom	22,58%	27,18%	46,40%	47,09%	42,68%
United States	84,29%	98,51%	106,72%	130,11%	116,20%
Total	250,20%	302,30%	345,09%	381,74%	351,96%

5.6.2. % of the series

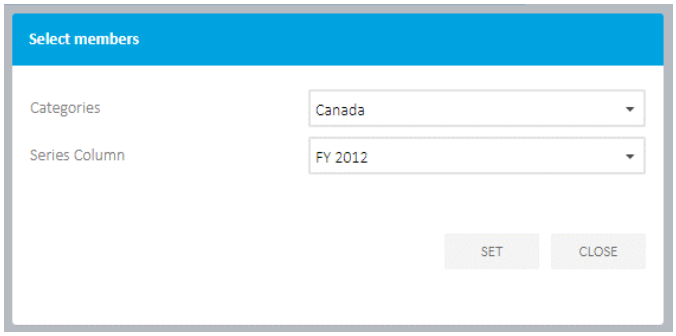


Other cells are represented as % of the selected series (column) = FY 2011.

Drop Measures Here

	Fiscal Year				
	FY 2010	FY 2011	FY 2012	FY 2013	Total
Country	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
Australia	59,13%	100,00%	235,33%	422,97%	817,43%
Canada	22,92%	100,00%	168,54%	388,06%	679,51%
France	34,04%	100,00%	347,38%	639,27%	1120,69%
Germany	45,43%	100,00%	354,05%	741,40%	1240,87%
United Kingdom	49,11%	100,00%	401,67%	732,63%	1283,41%
United States	50,59%	100,00%	254,96%	558,65%	964,20%
Total	48,94%	100,00%	268,63%	534,12%	951,69%

5.6.3. % of the cell values



Other cells are represented as % of the selected cell, defined as category = 'Canada' and series = 'FY 2012'.

Drop Measures Here

	Fiscal Year				
	FY 2010	FY 2011	FY 2012	FY 2013	Total
Country	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
Australia	122,26%	206,77%	486,59%	874,58%	1690,21%
Canada	13,60%	59,33%	100,00%	230,25%	403,18%
France	16,81%	49,40%	171,61%	315,81%	553,64%
Germany	22,57%	49,68%	175,87%	368,29%	616,41%
United Kingdom	27,61%	56,21%	225,78%	411,81%	721,41%
United States	103,05%	203,69%	519,31%	1137,90%	1963,95%
Total	305,89%	625,08%	1679,17%	3338,65%	5948,80%

5.7. The Difference from …

Same as above calculation view '% of the value', 'Difference from' displays the pure difference between column, rows or cells in the analysis grid.

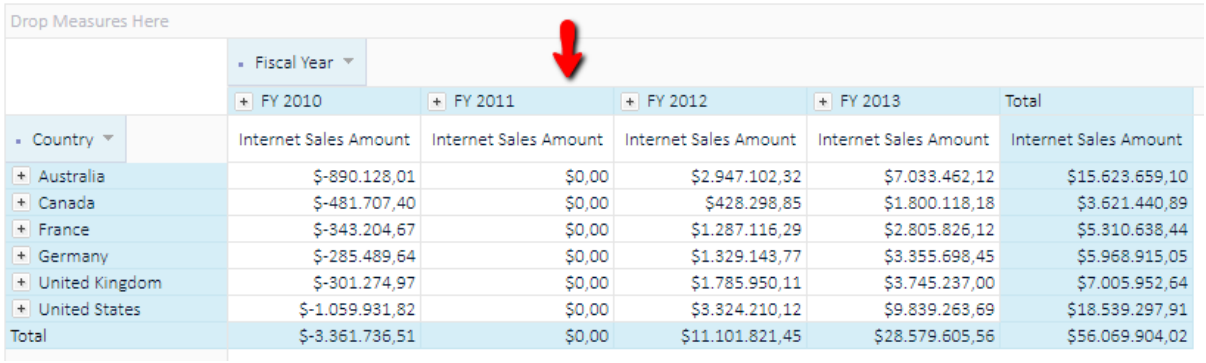
5.7.1. The Difference from the selected row

Drop Measures Here

	Fiscal Year				
	FY 2010	FY 2011	FY 2012	FY 2013	Total
Country	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
Australia	$996.874,35	$1.585.727,39	$2.746.879,60	$4.873.952,51	$10.203.433,85
Canada	$-147.535,51	$32.896,92	$-1.324.754,34	$-1.912.221,89	$-3.351.614,82
France	$-113.642,97	$-71.713,26	$-570.547,09	$-1.011.124,15	$-1.767.027,47
Germany	$-53.040,68	$-68.826,01	$-525.632,35	$-458.364,56	$-1.105.863,60
United Kingdom	$0,00	$0,00	$0,00	$0,00	$0,00
United States	$794.581,62	$1.553.238,47	$3.091.498,49	$7.647.265,17	$13.086.583,74
Total	$2.930.929,46	$5.991.391,01	$15.307.262,35	$30.825.759,57	$55.055.342,39

The difference view from the selected row = 'United Kingdom'.

5.7.2. The Difference from the selected column

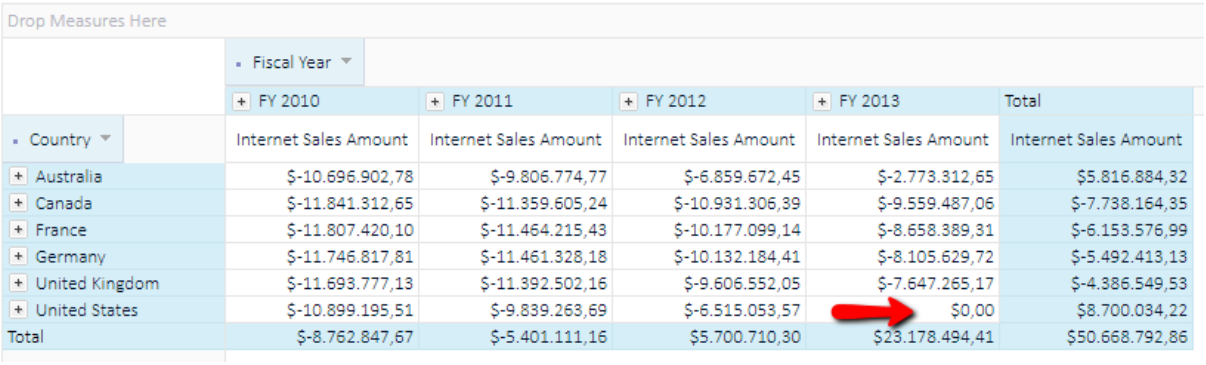


Drop Measures Here

Country	Fiscal Year: FY 2010	FY 2011	FY 2012	FY 2013	Total
	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
Australia	$-890.128,01	$0,00	$2.947.102,32	$7.033.462,12	$15.623.659,10
Canada	$-481.707,40	$0,00	$428.298,85	$1.800.118,18	$3.621.440,89
France	$-343.204,67	$0,00	$1.287.116,29	$2.805.826,12	$5.310.638,44
Germany	$-285.489,64	$0,00	$1.329.143,77	$3.355.698,45	$5.968.915,05
United Kingdom	$-301.274,97	$0,00	$1.785.950,11	$3.745.237,00	$7.005.952,64
United States	$-1.059.931,82	$0,00	$3.324.210,12	$9.839.263,69	$18.539.297,91
Total	$-3.361.736,51	$0,00	$11.101.821,45	$28.579.605,56	$56.069.904,02

The difference view from the selected column = 'FY 2011.

5.7.3. The Difference from the selected cell



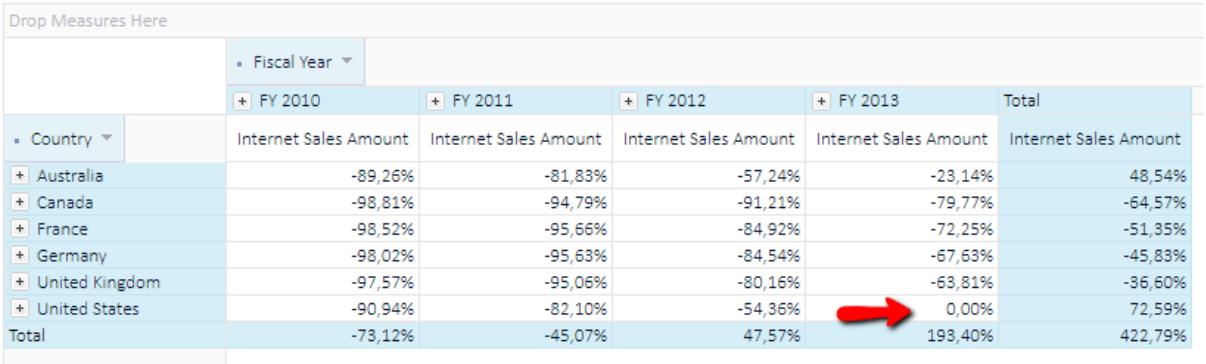
Drop Measures Here

Country	Fiscal Year: FY 2010	FY 2011	FY 2012	FY 2013	Total
	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
Australia	$-10.696.902,78	$-9.806.774,77	$-6.859.672,45	$-2.773.312,65	$5.816.884,32
Canada	$-11.841.312,65	$-11.359.605,24	$-10.931.306,39	$-9.559.487,06	$-7.738.164,35
France	$-11.807.420,10	$-11.464.215,43	$-10.177.099,14	$-8.658.389,31	$-6.153.576,99
Germany	$-11.746.817,81	$-11.461.328,18	$-10.132.184,41	$-8.105.629,72	$-5.492.413,13
United Kingdom	$-11.693.777,13	$-11.392.502,16	$-9.606.552,05	$-7.647.265,17	$-4.386.549,53
United States	$-10.899.195,51	$-9.839.263,69	$-6.515.053,57	$0,00	$8.700.034,22
Total	$-8.762.847,67	$-5.401.111,16	$5.700.710,30	$23.178.494,41	$50.668.792,86

The difference view of the selected cell, defined as a category (row) = 'United States' and series (column) = 'FY 2013'.

5.8. % Difference from

This calculation view works the same as above explained (Difference from), except that the difference between values is displayed as a percentage.



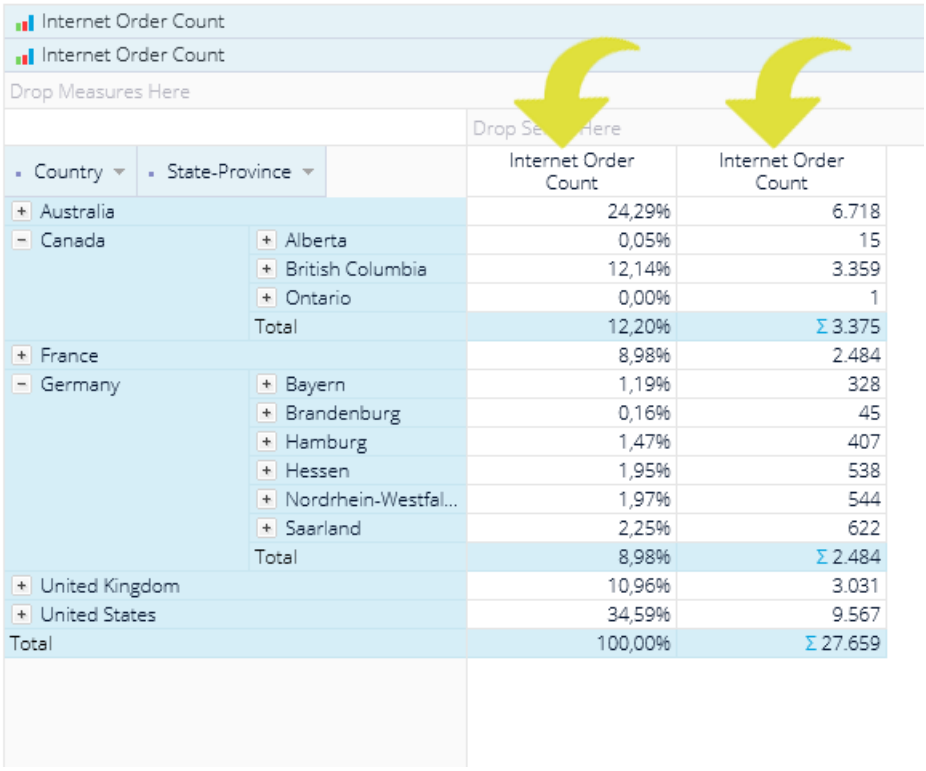
Drop Measures Here

Country	Fiscal Year: FY 2010	FY 2011	FY 2012	FY 2013	Total
	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
Australia	-89,26%	-81,83%	-57,24%	-23,14%	48,54%
Canada	-98,81%	-94,79%	-91,21%	-79,77%	-64,57%
France	-98,52%	-95,66%	-84,92%	-72,25%	-51,35%
Germany	-98,02%	-95,63%	-84,54%	-67,63%	-45,83%
United Kingdom	-97,57%	-95,06%	-80,16%	-63,81%	-36,60%
United States	-90,94%	-82,10%	-54,36%	0,00%	72,59%
Total	-73,12%	-45,07%	47,57%	193,40%	422,79%

The percentage difference view of the selected cell, defined as a category (row) = 'United States' and series (column) = 'FY 2013'.

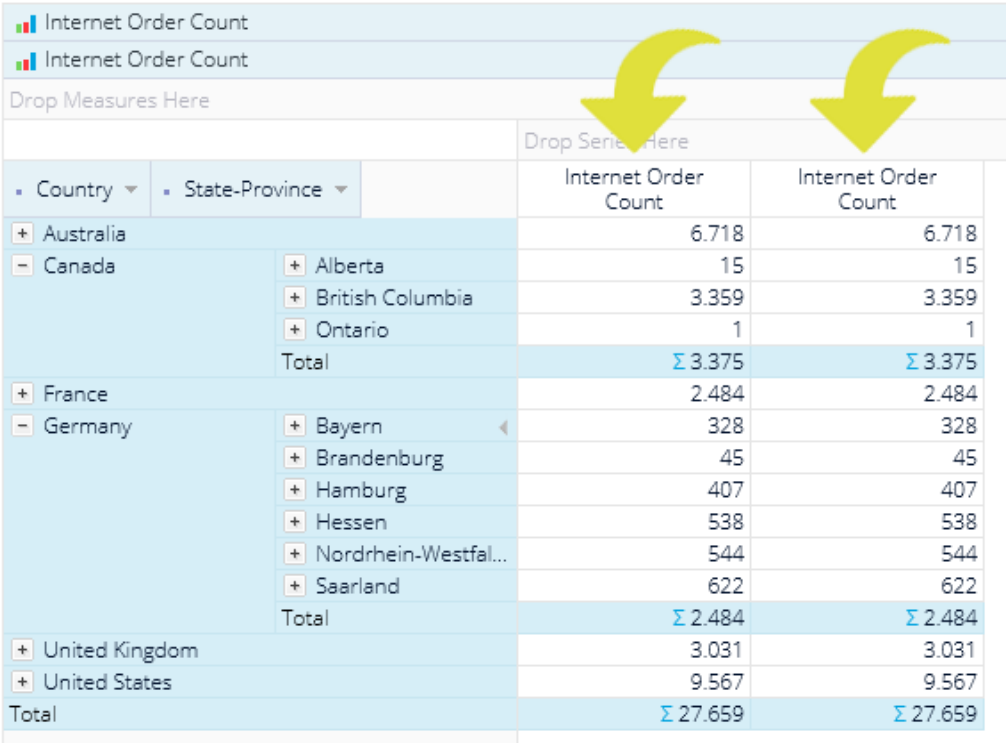
5.9. Combine Calculated View with plain values

Ability to add the same measure multiple times to the same analysis, so calculated view could be applied on one measure column, while other measure column displays original values. For example, now you can quickly see the percentage of the same measure in one column and actual values in the column beside.



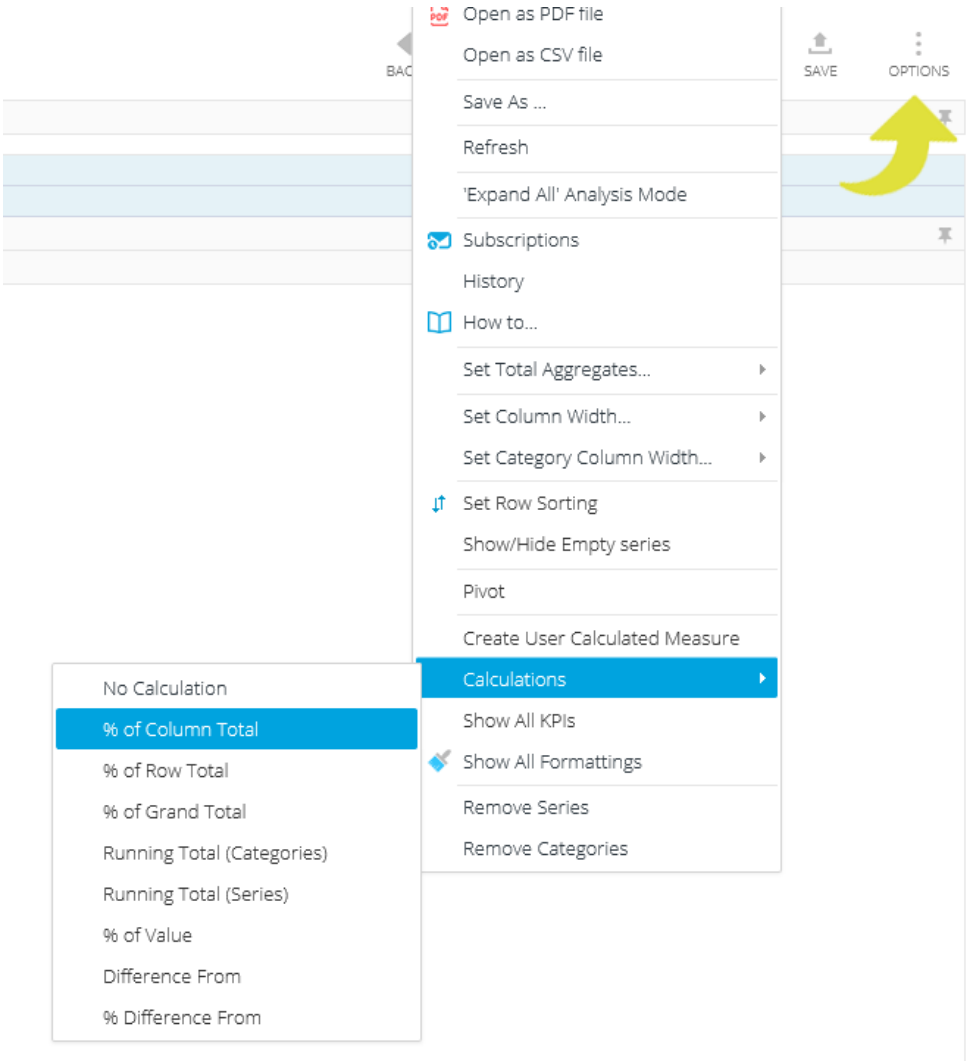
Country	State-Province	Internet Order Count	Internet Order Count
Australia		24,29%	6.718
Canada	Alberta	0,05%	15
	British Columbia	12,14%	3.359
	Ontario	0,00%	1
	Total	12,20%	Σ 3.375
France		8,98%	2.484
Germany	Bayern	1,19%	328
	Brandenburg	0,16%	45
	Hamburg	1,47%	407
	Hessen	1,95%	538
	Nordrhein-Westfal...	1,97%	544
	Saarland	2,25%	622
	Total	8,98%	Σ 2.484
United Kingdom		10,96%	3.031
United States		34,59%	9.567
Total		100,00%	Σ 27.659

Add the same measure twice to the analysis

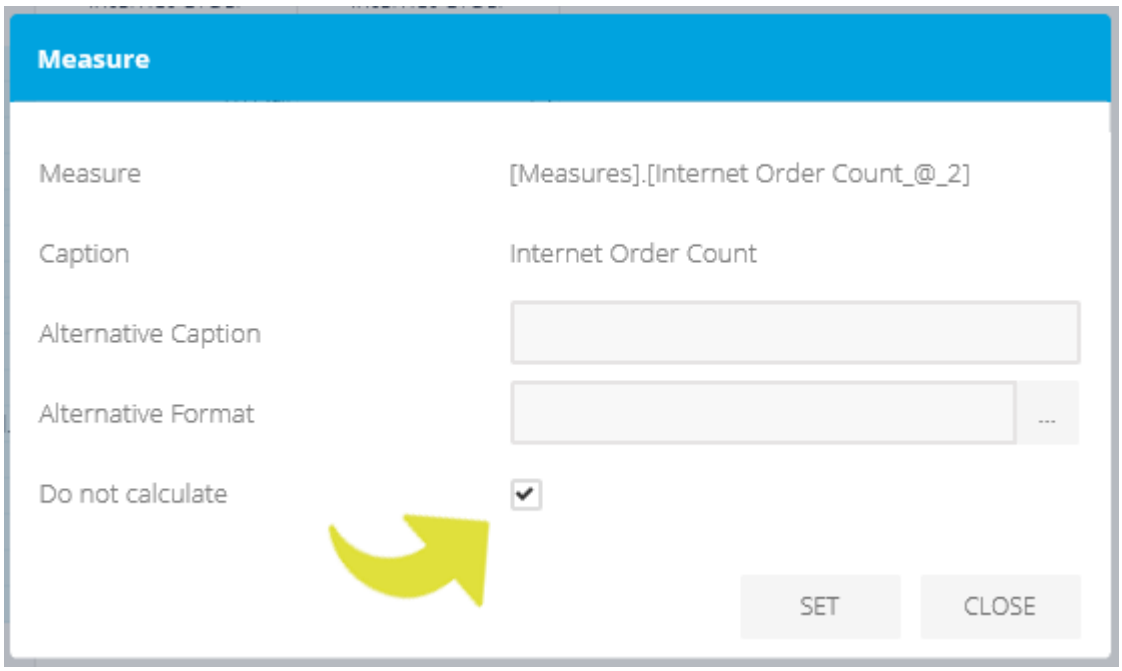


Country	State-Province	Internet Order Count	Internet Order Count
Australia		6.718	6.718
Canada	Alberta	15	15
	British Columbia	3.359	3.359
	Ontario	1	1
	Total	Σ 3.375	Σ 3.375
France		2.484	2.484
Germany	Bayern	328	328
	Brandenburg	45	45
	Hamburg	407	407
	Hessen	538	538
	Nordrhein-Westfal...	544	544
	Saarland	622	622
	Total	Σ 2.484	Σ 2.484
United Kingdom		3.031	3.031
United States		9.567	9.567
Total		Σ 27.659	Σ 27.659

Set Calculated View



Set measure instance not to use calculation and display plain values.

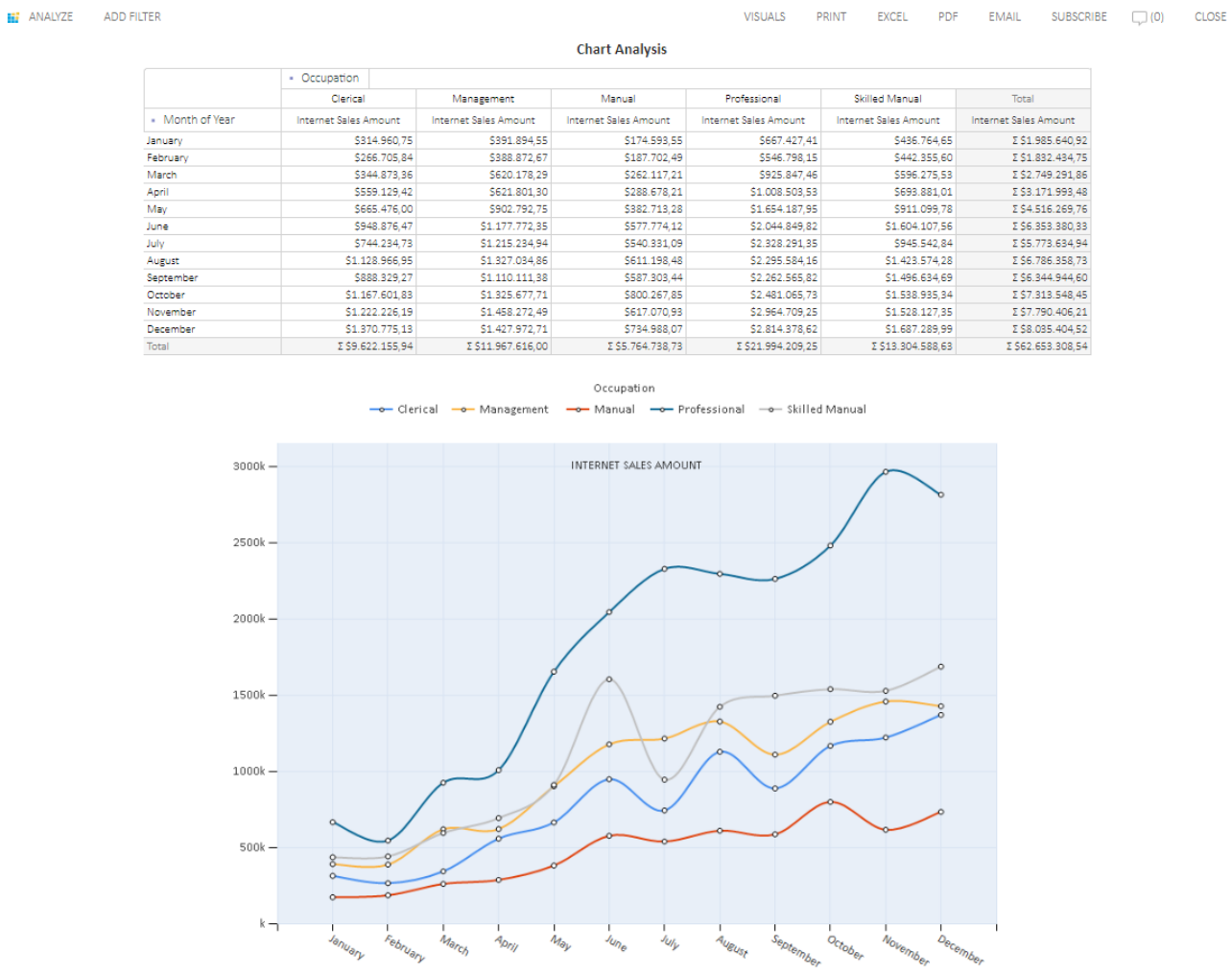


6. Report view

After analysis gets shape and data we want, we often want to show it to the other people. Many users we would like to show analysis are not familiar with OLAP/Analytic Model and analysis technology concepts. To get the analysis view that would be as simple and straightforward as possible, showing only business valuable data without all possible actions, OLAP cube/Analytic Model structure etc., we switch to "Report view" that would show only final analysis data. Report view hides almost all Kyubit Business Intelligence interface (header, menu, etc.) and show plain analysis data values, which are ready to present to other users or send directly to the printer.

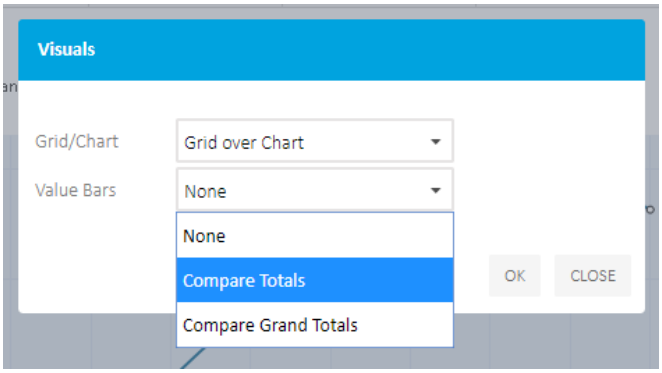
In Report view, following actions are available:

- Switch to full analysis view (if users wants to open analysis with full feature)
- Update Filters
- Toggle display of chart/grid
- Toggle display of value bars (next section explains)
- Send to print
- Export to Excel/PDF
- Email as a link to a colleague
- Subscribe to receive same report on the email at the scheduled time
- Participate in discussions related to this report and add your comments



6.1. Report 'Value Bars'

Report view can show 'Value Bars', which are visual indicators that visually present the impact of the value for each cell compared to column totals or to a grand total of the analysis. The 'Value bars' can be configured to display at analysis design-time (Grid Analysis), but also while using by the end users (Report). Select 'Visuals' button in the report view to display 'Value Bars'.



		Gender					
		Female		Male		Total	
Month of Year	Occupation	Internet Sales Amount	Internet Order Count	Internet Sales Amount	Internet Order Count	Internet Sales Amount	Internet Order Count
January		$976.084,54	950	$1.009.556,39	949	Σ $1.985.640,93	Σ 1.899
February		$976.155,47	941	$856.279,29	884	Σ $1.832.434,76	Σ 1.825
March	Clerical	$162.340,62	137	$182.532,74	161	Σ $344.873,35	Σ 298
	Management	$334.363,47	178	$285.814,82	189	Σ $620.178,29	Σ 367
	Manual	$134.101,32	129	$128.015,89	122	Σ $262.117,21	Σ 251
	Professional	$501.566,31	343	$424.281,15	298	Σ $925.847,46	Σ 641
	Skilled Manual	$257.335,53	229	$338.940,01	266	Σ $596.275,53	Σ 495
	Total	Σ $1.389.707,24	Σ 1.016	Σ $1.359.584,61	Σ 1.036	Σ $2.749.291,85	Σ 2.052
April		$1.643.175,71	994	$1.528.817,78	994	Σ $3.171.993,49	Σ 1.988
May		$2.313.859,34	1.078	$2.202.410,43	1.095	Σ $4.516.269,77	Σ 2.173
June	Clerical	$434.070,31	189	$514.806,16	218	Σ $948.876,47	Σ 407
	Management	$614.024,87	190	$563.747,47	205	Σ $1.177.772,35	Σ 395
	Manual	$290.045,85	158	$287.728,28	153	Σ $577.774,12	Σ 311
	Professional	$1.055.477,75	383	$989.372,08	376	Σ $2.044.849,82	Σ 759
	Skilled Manual	$792.436,40	342	$811.671,16	341	Σ $1.604.107,56	Σ 683
	Total	Σ $3.186.055,18	Σ 1.262	Σ $3.167.325,14	Σ 1.293	Σ $6.353.380,32	Σ 2.555
July		$2.956.635,68	1.149	$2.816.999,27	1.160	Σ $5.773.634,95	Σ 2.309
August	Clerical	$511.271,07	185	$617.695,88	227	Σ $1.128.966,95	Σ 412
	Management	$657.109,79	208	$669.925,07	228	Σ $1.327.034,86	Σ 436
	Manual	$309.756,02	128	$301.442,45	152	Σ $611.198,47	Σ 280
	Professional	$1.055.519,62	371	$1.240.064,54	386	Σ $2.295.584,16	Σ 757
	Skilled Manual	$731.093,81	276	$692.480,47	292	Σ $1.423.574,28	Σ 568
	Total	Σ $3.264.750,31	Σ 1.168	Σ $3.521.608,41	Σ 1.285	Σ $6.786.358,72	Σ 2.453
September		$3.181.092,31	1.153	$3.163.852,30	1.185	Σ $6.344.944,60	Σ 2.338
October		$3.735.444,10	1.337	$3.578.104,37	1.328	Σ $7.313.548,46	Σ 2.665
November		$3.908.568,49	1.303	$3.881.837,73	1.316	Σ $7.790.406,22	Σ 2.619
December		$4.028.676,27	1.391	$4.006.728,26	1.392	Σ $8.035.404,53	Σ 2.783
Total		Σ $31.560.204,66	Σ 13.742	Σ $31.093.104,00	Σ 13.917	Σ $62.653.308,65	Σ 27.659

7. Exporting options

While analyzing the data, there are two exporting options always available:

- Export to **Excel** file (.xlsx format) or **CSV** file

The grid data and chart image will be exported to Excel cells with the related analysis elements or as simple (comma delimited) CSV file.

- Export to a **PDF** file

The grid data and chart image will be exported to PDF file with the related analysis elements.

7.1. Exporting to an Excel file

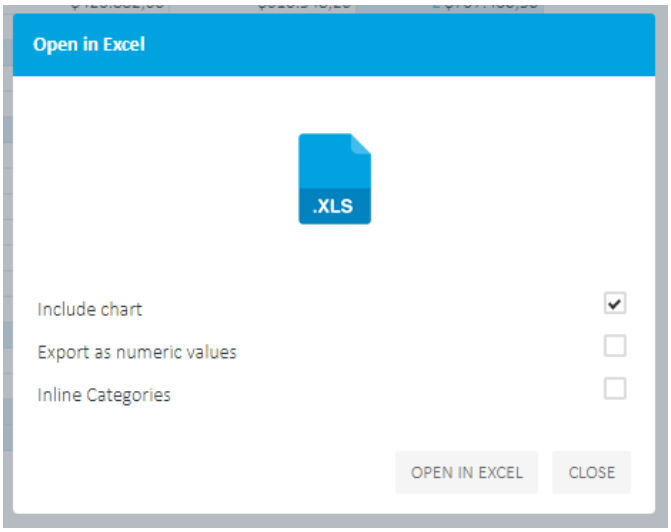
Complete analysis based on OLAP/Analytic Model data could be exported into the Excel file, which would include analysis title, description, including filters, grid analysis and optionally chart image.

Education [Bachelors, Graduate Degree, High School, Partial College]
Occupation [Clerical, Management, Manual, Professional]
Drop Filters Here

Internet Sales Amount
Drop Measures Here

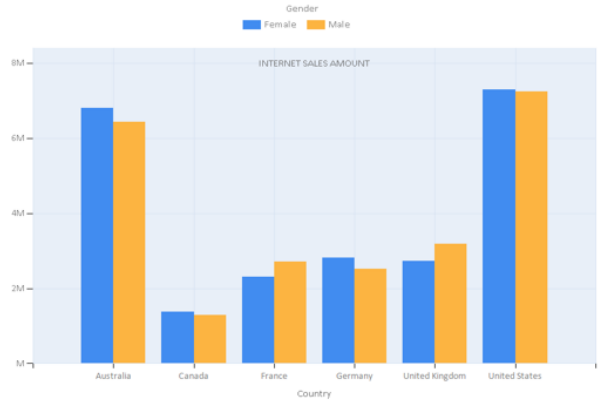
			Gender		
			Female	Male	Total
Country	Category	Subcategory	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
+ Australia			$6.797.433,99	$6.428.810,75	Σ $13.226.244,73
− Canada	+ Accessories		$86.515,66	$99.289,43	Σ $185.805,09
	− Bikes	+ Mountain Bikes	$538.375,28	$521.579,55	Σ $1.059.954,82
		+ Road Bikes	$423.882,30	$313.548,20	Σ $737.430,50
		+ Touring Bikes	$280.735,55	$301.792,97	Σ $582.528,52
		Total	Σ $1.242.993,12	Σ $1.136.920,72	Σ $2.379.913,84
	+ Clothing		$44.325,05	$51.068,95	Σ $95.394,00
	+ Road & Mountain		$538.375,28	$521.579,55	Σ $1.059.954,82
	Total		Σ $1.912.209,12	Σ $1.808.858,65	Σ $3.721.067,77
+ France			$2.304.033,05	$2.708.796,22	Σ $5.012.829,27
+ Germany			$2.821.718,03	$2.529.005,18	Σ $5.350.723,21
+ United Kingdom			$2.726.409,95	$3.195.055,54	Σ $5.921.465,49
− United States	+ Accessories		$253.431,50	$248.699,59	Σ $502.131,09
	− Bikes	+ Mountain Bikes	$3.217.698,11	$3.283.431,67	Σ $6.501.129,79
		+ Road Bikes	$2.286.161,04	$2.091.552,66	Σ $4.377.713,69
		+ Touring Bikes	$1.414.649,52	$1.499.980,41	Σ $2.914.629,93
		Total	Σ $6.918.508,67	Σ $6.874.964,74	Σ $13.793.473,41
	+ Clothing		$124.290,79	$124.377,84	Σ $248.668,63
	+ Road & Mountain		$3.217.698,11	$3.283.431,67	Σ $6.501.129,79
	Total		Σ $10.513.929,09	Σ $10.531.473,86	Σ $21.045.402,95
Total			Σ $23.319.659,87	Σ $23.396.989,03	Σ $46.716.648,90

Select Excel exporting options …



Exported values in Excel file …

Measures:	Internet Sales Amount	
Categories:	Country,Category,Subcategory	
Series:	Gender	
OLAP Data Source:	Adventure Works (Cube Last Processed Time: 4.9.2018. 10:07:06)	
Filters:		
Education:	Bachelors, Graduate Degree, High School, Partial College	
Occupation:	Clerical, Management, Manual, Professional	



Country	Category	Subcategory	Female	Male	Total
			Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
Australia			$6.797.433,99	$6.428.810,75	$13.226.244,73
Canada	Accessories		$86.515,66	$99.289,43	$185.805,09
	Bikes	Mountain Bikes	$538.375,28	$521.579,55	$1.059.954,82
		Road Bikes	$423.882,30	$313.548,20	$737.430,50
		Touring Bikes	$280.735,55	$301.792,97	$582.528,52
		Total	$1.242.993,12	$1.136.920,72	$2.379.913,84
	Clothing		$44.325,05	$51.068,95	$95.394,00
	Road & Mountain		$538.375,28	$521.579,55	$1.059.954,82
	Total		$1.912.209,12	$1.808.858,65	$3.721.067,77
France			$2.304.033,05	$2.708.796,22	$5.012.829,27
Germany			$2.821.718,03	$2.529.005,18	$5.350.723,21
United Kingdom			$2.726.409,95	$3.195.055,54	$5.921.465,49

Sheet1 Sheet2 Sheet3

Values could be exported as **numeric values**, in which case it would be formatted as numeric within the Excel file or as non-numeric, in which case they would be of a textual character in the Excel file. Both approaches have advantages and disadvantages depending on the requirements.

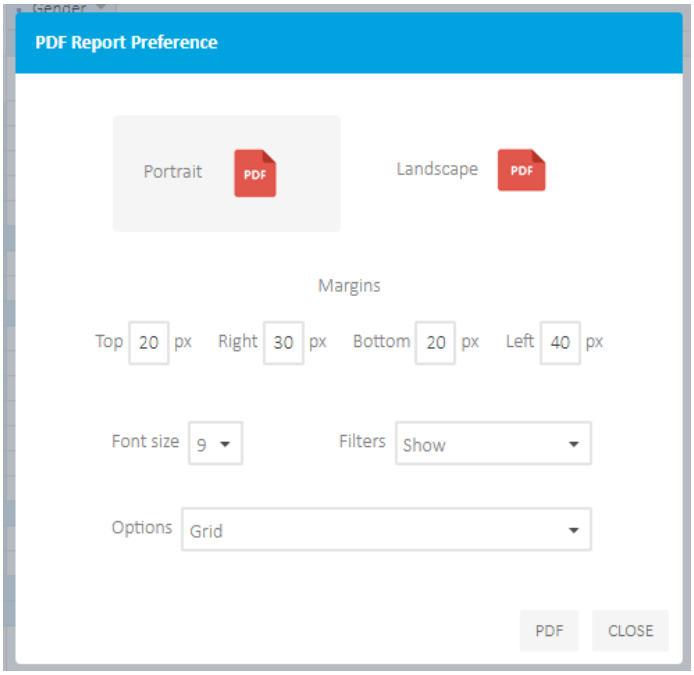
Expanded category items could be displayed) the same way as in analysis grid (expanded-collapsed) or category items could be displayed **inline**, in which case expanded items will be repeated one above the other, so it would be clear to which parent each category items belongs looking at each row of data.

Inline categories export …

Country	Category	Subcategory	Female	Male	Total
			Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
Australia	-	-	$6.797.433,99	$6.428.810,75	$13.226.244,73
Canada	Accessories	-	$86.515,66	$99.289,43	$185.805,09
Canada	Bikes	Mountain Bikes	$538.375,28	$521.579,55	$1.059.954,82
Canada	Bikes	Road Bikes	$423.882,30	$313.548,20	$737.430,50
Canada	Bikes	Touring Bikes	$280.735,55	$301.792,97	$582.528,52
Canada	Bikes	Total	$1.242.993,12	$1.136.920,72	$2.379.913,84
Canada	Clothing	-	$44.325,05	$51.068,95	$95.394,00
Canada	Road & Mountain	-	$538.375,28	$521.579,55	$1.059.954,82
Canada	Total	-	$1.912.209,12	$1.808.858,65	$3.721.067,77
France	-	-	$2.304.033,05	$2.708.796,22	$5.012.829,27
Germany	-	-	$2.821.718,03	$2.529.005,18	$5.350.723,21
United Kingdom	-	-	$2.726.409,95	$3.195.055,54	$5.921.465,49
United States	Accessories	-	$253.431,50	$248.699,59	$502.131,09
United States	Bikes	Mountain Bikes	$3.217.698,11	$3.283.431,67	$6.501.129,79
United States	Bikes	Road Bikes	$2.286.161,04	$2.091.552,66	$4.377.713,69
United States	Bikes	Touring Bikes	$1.414.649,52	$1.499.980,41	$2.914.629,93
United States	Bikes	Total	$6.918.508,67	$6.874.964,74	$13.793.473,41
United States	Clothing	-	$124.290,79	$124.377,84	$248.668,63
United States	Road & Mountain	-	$3.217.698,11	$3.283.431,67	$6.501.129,79
United States	Total	-	$10.513.929,09	$10.531.473,86	$21.045.402,95
Total	-	-	$23.319.659,87	$23.396.989,03	$46.716.648,90

7.2. Exporting to a PDF file

PDF export has additional dialog to setup some PDF export preferences, such page margins and orientation, font-size, option to show/hide filters and to selected export of grid and/or chart report elements.



Exported analysis to the PDF file …

Data Source
Measures
Filters

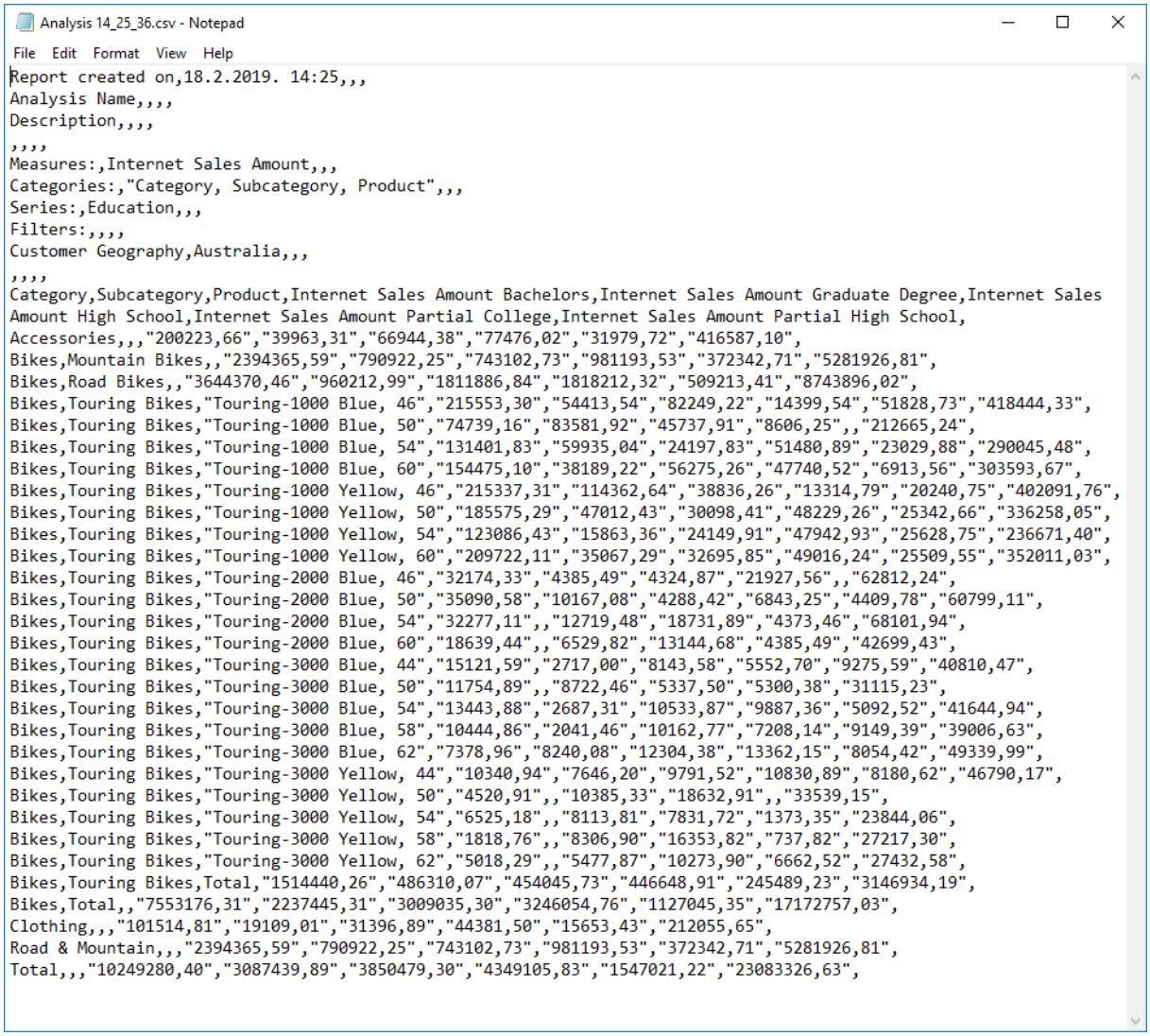
Adventure Works
Internet Sales Amount
Education: Bachelors, Graduate Degree, High School, Partial College
Occupation: Clerical, Management, Manual, Professional

Report created on 18. veljača 2019.

			Gender		
			Female	Male	Total
Country	Category	Subcategory	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
Australia			$6.797.433,99	$6.428.810,75	Σ$13.226.244,73
Canada	Accessories		$86.515,66	$99.289,43	Σ$185.805,09
	Bikes	Mountain Bikes	$538.375,28	$521.579,55	Σ$1.059.954,82
		Road Bikes	$423.882,30	$313.548,20	Σ$737.430,50
		Touring Bikes	$280.735,55	$301.792,97	Σ$582.528,52
		Total	Σ$1.242.993,12	Σ$1.136.920,72	Σ$2.379.913,84
	Clothing		$44.325,05	$51.068,95	Σ$95.394,00
	Road & Mountain		$538.375,28	$521.579,55	Σ$1.059.954,82
	Total		Σ$1.912.209,12	Σ$1.808.858,65	Σ$3.721.067,77
France			$2.304.033,05	$2.708.796,22	Σ$5.012.829,27
Germany			$2.821.718,03	$2.529.005,18	Σ$5.350.723,21
United Kingdom			$2.726.409,95	$3.195.055,54	Σ$5.921.465,49
United States	Accessories		$253.431,50	$248.699,59	Σ$502.131,09
	Bikes	Mountain Bikes	$3.217.698,11	$3.283.431,67	Σ$6.501.129,79
		Road Bikes	$2.286.161,04	$2.091.552,66	Σ$4.377.713,69
		Touring Bikes	$1.414.649,52	$1.499.980,41	Σ$2.914.629,93
		Total	Σ$6.918.508,67	Σ$6.874.964,74	Σ$13.793.473,41
	Clothing		$124.290,79	$124.377,84	Σ$248.668,63
	Road & Mountain		$3.217.698,11	$3.283.431,67	Σ$6.501.129,79
	Total		Σ$10.513.929,09	Σ$10.531.473,86	Σ$21.045.402,95
Total			Σ$23.319.659,87	Σ$23.396.989,03	Σ$46.716.648,90

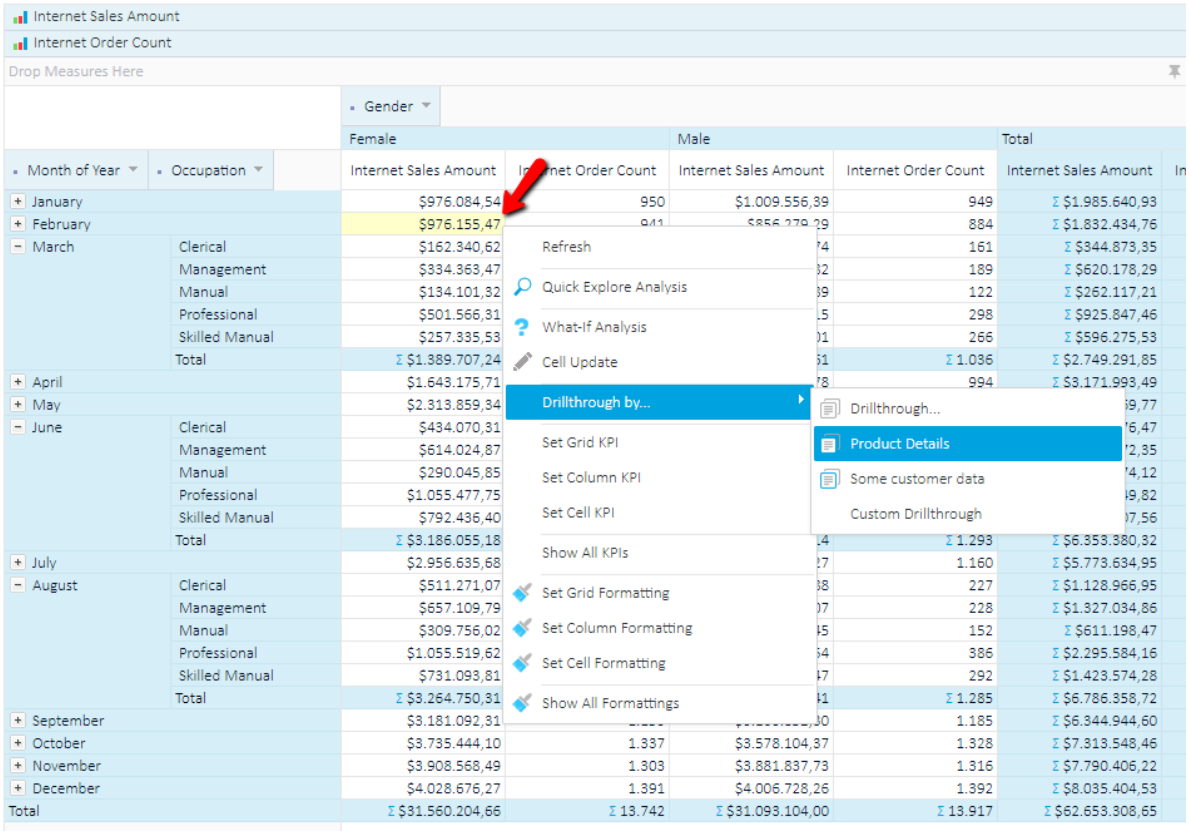
7.3 Exporting to a CSV file

CSV file export will simply export all analysis data into a flat CSV file (comma delimited). It will include analysis details, applied filters and grid analysis data. Each information of the grid analysis is simply divided into rows and (comma separate) columns.



8. Drill-through features

Usually, analysis means exploring aggregated values for some business topics. Drilling and slicing functionalities will narrow analysis to a particular point of interest. But, at the certain moment we all want to see exact information, who, when and what, for an aggregated piece of the data. For example, with the analysis we found that certain product is best-selling product in some city in the last quarter of the year, but now we are very interesting to see details: names, dates and other purchasing details available in the OLAP/Analytic Model structure. The drill-through action gives us the possibility to see details for the given analysis values. The drill-through action is available in the grid and chart view and can be executed over any values already existing in our analysis. In the grid view, right-click on the cell will give us Drill-through options or right-click on the chart value elements (Lines, Columns, Bars, etc.) in the chart view. Drill-through action could be defined in the OLAP database or created in the Kyubit BI application for OLAP or Analytic Models data sources. Note, that drill-through actions for certain users could be restricted by the OLAP database permissions (OLAP role-based security).



Drillthrough results

Data Source	Adventure Works (Cube Last Processed Time: 4.9.2018. 10:07:06)
Measure	Internet Sales Amount
Total	$976.155,47
Filters	Month of Year: **February** Gender: **Female**

SET DRILLTHROUGH COLUMNS | OPEN IN EXCEL | CLOSE

Category	Large Photo	Model Name	Product	Style	Subcategory	Internet Sales Amount	Internet Extended Amount
Bikes	313	Road-150	Road-150 Red, 52	Unisex	Road Bikes	3576,8386	3576,8386
Bikes	347	Mountain-100	Mountain-100 Silver, 48	Unisex	Mountain Bikes	3398,63	3398,63
Bikes	346	Mountain-100	Mountain-100 Silver, 44	Unisex	Mountain Bikes	3398,63	3398,63
Bikes	334	Road-650	Road-650 Black, 60	Unisex	Road Bikes	698,8185	698,8185
Bikes	311	Road-150	Road-150 Red, 44	Unisex	Road Bikes	3576,8386	3576,8386
Bikes	312	Road-150	Road-150 Red, 48	Unisex	Road Bikes	3576,8386	3576,8386
Bikes	310	Road-150	Road-150 Red, 62	Unisex	Road Bikes	3576,8386	3576,8386
Bikes	312	Road-150	Road-150 Red, 48	Unisex	Road Bikes	3576,8386	3576,8386
Bikes	336	Road-650	Road-650 Black, 62	Unisex	Road Bikes	698,8185	698,8185
Bikes	314	Road-150	Road-150 Red, 56	Unisex	Road Bikes	3576,8386	3576,8386

8.1. Custom drill-through

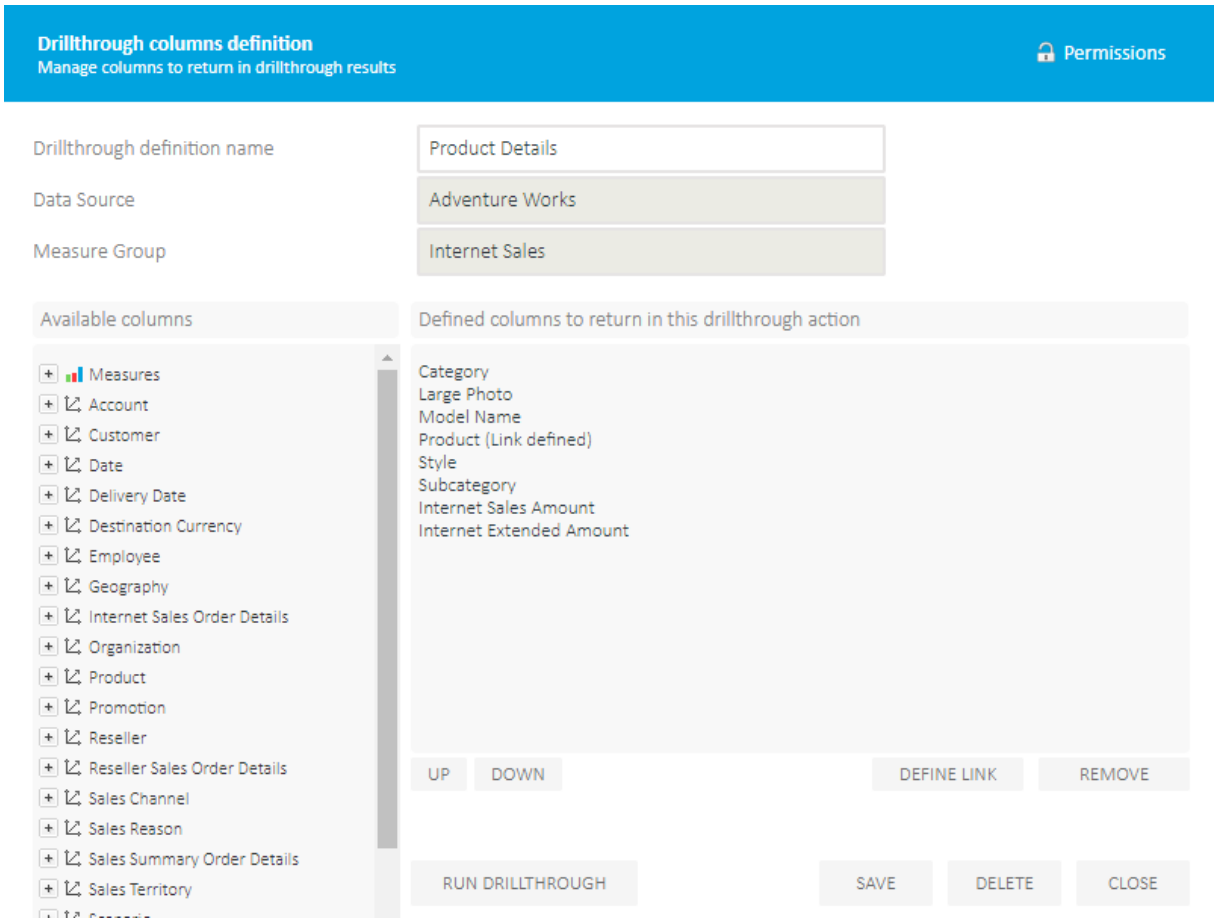
Custom drill-through action, which can be selected anytime in the grid and chart view. Right-click on some value, select Drill-through and then **Custom drill-through** action. New 'Drill-through results' window will open, showing elements of this drill-through: OLAP cube/Analytic Model, measures, filters, total. Total presents value for a given measure that we want to drill-through. Filters present all OLAP cube/Analytic Model dimension levels that were set to filters to get this result.

Now, we have to set which drill-through columns we want to include by selecting the 'Set drill-through columns' button. A new window will open 'Drill-through columns definition' in which we select drill-through columns from all available dimensions that are associated with measure group to which drill-through measure belongs to. Which dimensions are associated with which measure group is implicitly set inside OLAP cube structure (in the case of OLAP data source).

In the 'Drill-through columns definition', browse for interesting dimension levels (columns) on the left side of the screen (Tree view) and click on interesting to include in the drill-through. After we click on it, it will be displayed in the list of selected columns on the right side of the screen. We can add, remove or change the order of the selected columns.

After required columns are selected, **Run drill-through** button should be clicked to test the results. The 'Drillthrough columns definition' window will close, and in the window 'Drillthrough results' drill-through will be executed and results will be displayed. Depending on the number of result items, drill-through could take a while before it is finished and displays all the results.

Drill-through result table could be sorted by clicking on the column header and could be exported to the Excel file. The user can redefine drill-through columns to return, as many times it is required.



8.2. Drill-through results links

Drill-through results could contain links that would lead us to some site/application, which would show us anything related to drill-through data. For example, we could see for each work order its details in a time tracking application, which exists on the intranet.

To set up links in drill-through results, in 'Drill-through columns definition' while defining which columns to return in the drill-through action, click on the required column (to highlight it) and then click **Define link** button. A new window will open, 'Drill-through column link' which allows us to define the link for the selected column. In the field Link (HREF), it is expected to provide URL to some external resource. For the variable query string element click on some dimension level on the left.

For example, define the following link URL:
http://timetracking/Workorder.aspx?Workorder={[WorkOrder].[WorkOrderId]}

Part of this URL is static and another part (between brackets) is dynamic in the drill-through results. Finally, when we get the drill-through results we could click on each work order and open web application that shows us full details about the given work order object. Of course, such application should exist, but this is just a tip on how and why we could use links with the drill-through feature.

8.3. Saving drill-through columns and reuse

Typically, for certain business situations, we would like to get a certain set of drill-through columns. Set of drill-through columns could contain dozens of columns and, of course, we do not like to pick them again every time we run drill-through for the given situation. Once picked and defined, we could save them in Kyubit Business Intelligence application for later use.

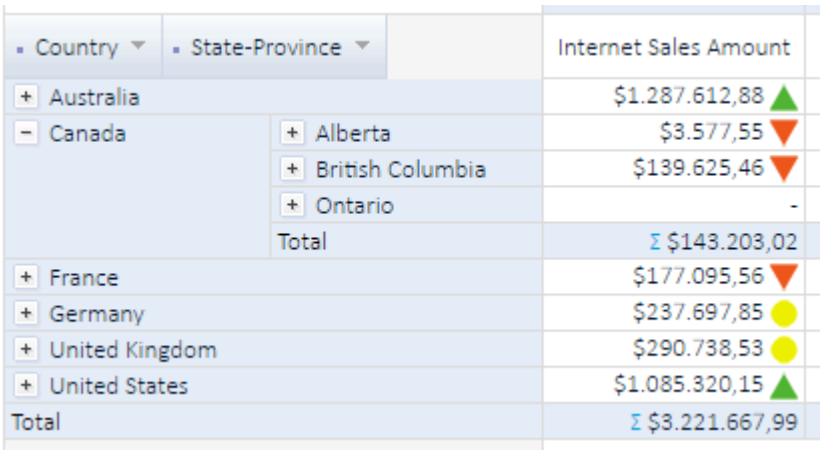
Saved set of drill-through columns is associated with measure group and anytime in any analysis we could run drill-through with a saved set of drill-through columns if the value we would like to drill-through is from a measure that belongs to the same associated measure group. (This applies only to OLAP data sources)

To reuse saved set of drill-through columns, right-click in the analysis on some value and within Drill-through options, all available sets of drill-through columns will be shown.

Outside of analysis, saved set of drill-through columns could be viewed and edited in the Main Menu under menu tab **OLAP Shared Items** -> **User Drillthrough columns**.

9. Grid KPI functionalities

The Key Performance Indicators gives a quick overview of analysis results and categorize returned values as good or bad. Kyubit Business Intelligence offers functionalities to define the performance thresholds for a certain analysis and shape them as the KPI with returned values. The KPI threshold can be defined for whole analysis grid level, column or a cell level. The KPI is saved along with the analysis and each time is executed it shows KPIs for defined elements.



Country	State-Province	Internet Sales Amount
+ Australia		$1.287.612,88 ▲
− Canada	+ Alberta	$3.577,55 ▼
	+ British Columbia	$139.625,46 ▼
	+ Ontario	-
	Total	Σ $143.203,02
+ France		$177.095,56 ▼
+ Germany		$237.697,85 ●
+ United Kingdom		$290.738,53 ●
+ United States		$1.085.320,15 ▲
Total		Σ $3.221.667,99

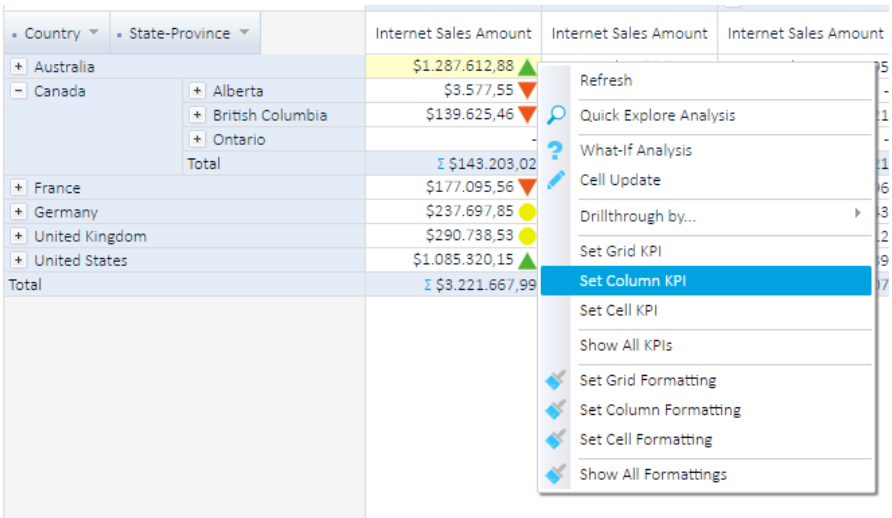
9.1. Define KPI

KPI can be defined and used only in the analysis grid view. After a certain analysis is executed and the results are displayed in the grid view, right-click on any cell will show the options to define the KPI threshold for:

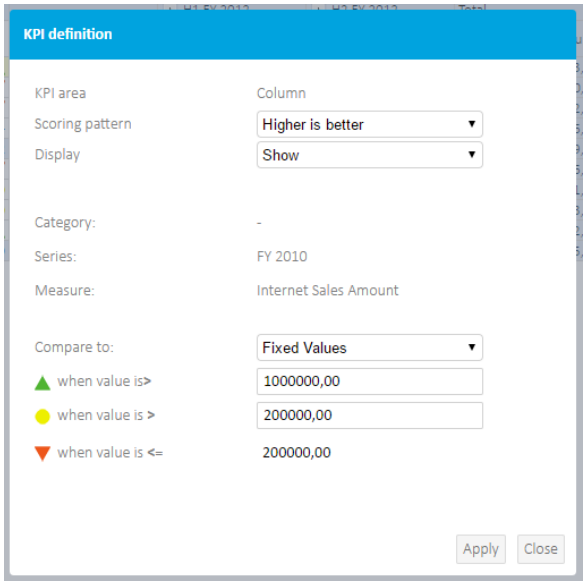
- Grid view KPI - for every value in the grid KPI will be displayed based on a single KPI threshold on grid level
- Column KPI - for every value in specified column KPI will be displayed based on a KPI threshold on a given column
- Cell KPI – KPI will be displayed for a specified cell with the threshold that is defined uniquely for that cell

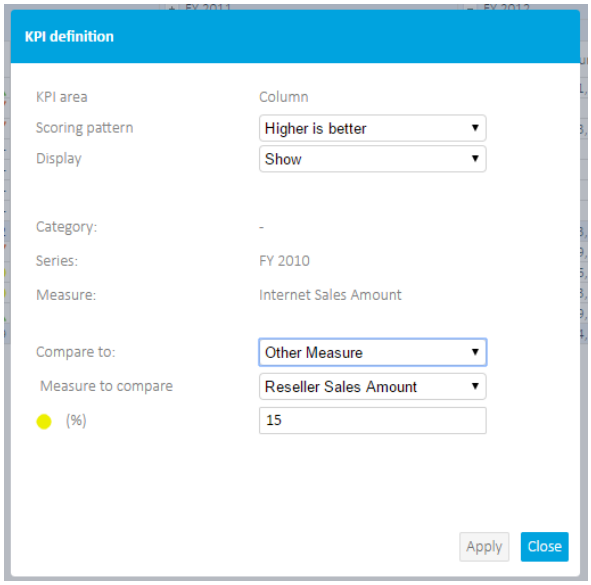
KPI definition panel will show up with KPI details for a given element. To define a KPI it is necessary to define:

- Scoring pattern - **Higher is better** (higher values are better), **Lower is better** (lower values are better).
- "Good" threshold – values over this limit are displayed with "Success" KPI icon,
- "Bad" threshold – values below this limit are displayed with "Fail" KPI icon.
- "Compare To" – choose fixed values or values from another measure on the analysis grid.



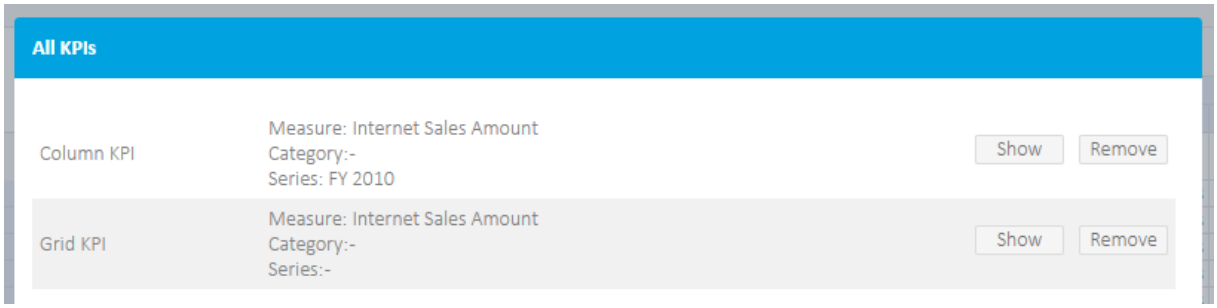
Analysis Grid KPI definition could be based on the fixed values or values from another measure on the same analysis.





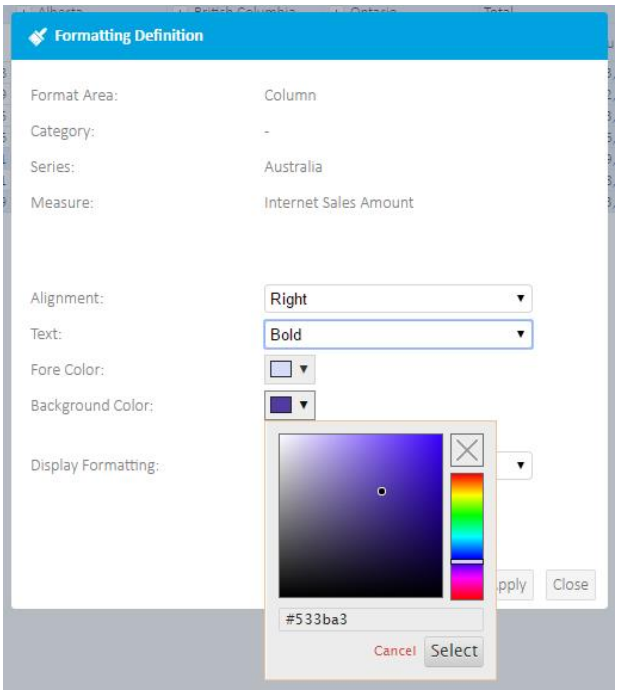
9.2. Using KPI

To see all defined KPIs for a certain analysis, open the analysis, right-click on the empty area and select "Show all KPI's" from the context menu. A list with all defined KPI thresholds will be displayed with the indicator for which grid element this KPI is associated with. To view or change KPI details, open the KPI definition panel from the list.



10. Grid cell formatting options

To emphasize certain cells or columns on the grid analysis, the user can define certain formatting/visualization options for the cells. At any time, right-click on a cell and choose to format: **single cell**, a **single column** or **whole grid** and define formatting options that could include: **Text style**, **Text alignment**, **Fore Color** and **Background Color** for the cell.



Formatting is immediately rendered in the analysis and report view.

Internet Sales Amount

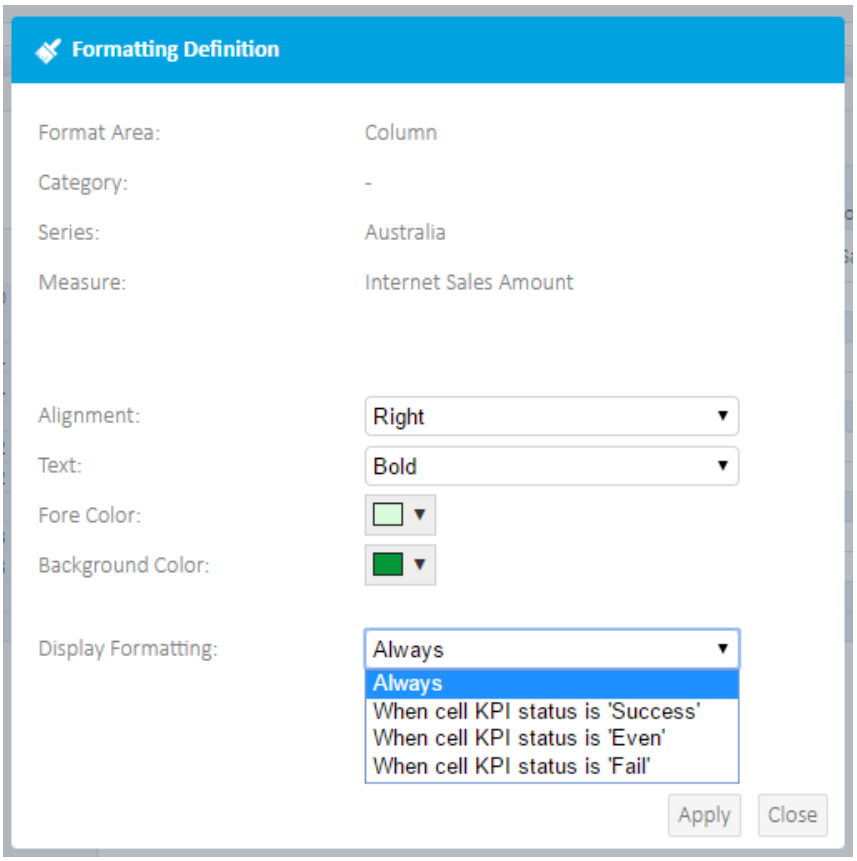
Drop Measures Here

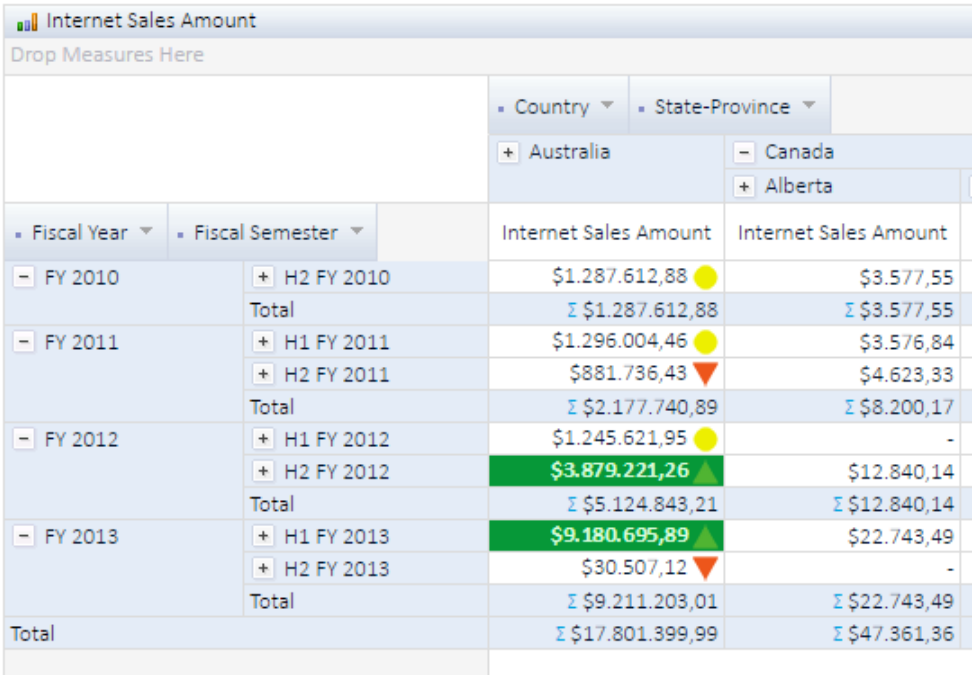
		Country / State-Province: Australia	Canada / Alberta
Fiscal Year	Fiscal Semester	Internet Sales Amount	Internet Sales Amount
FY 2010		$1.287.612,88	$3.577,55
FY 2011		$2.177.740,89	$8.200,17
FY 2012	H1 FY 2012	$1.245.621,95	-
	H2 FY 2012	$3.879.221,26	$12.840,14
	Total	Σ $5.124.843,21	Σ $12.840,14
FY 2013		$9.211.203,01	$22.743,49
Total		Σ $17.801.399,99	Σ $47.361,36

		Country / State-Province: Australia	Alberta
Fiscal Year	Fiscal Semester	Internet Sales Amount	Internet Sales Amount
FY 2010		$1.287.612,88	$3.577,55
FY 2011		$2.177.740,89	$8.200,17
FY 2012	H1 FY 2012	$1.245.621,95	-
	H2 FY 2012	$3.879.221,26	$12.840,14
	Total	Σ $5.124.843,21	Σ $12.840,14
FY 2013		$9.211.203,01	$22.743,49
Total		Σ $17.801.399,99	Σ $47.361,36

10.1. Cell formatting based on grid KPI status

More useful usage of cell formatting is to display formatting conditionally based on the selected grid KPI status. This way color and formatting will be applied only on those cells that meet defined criteria.

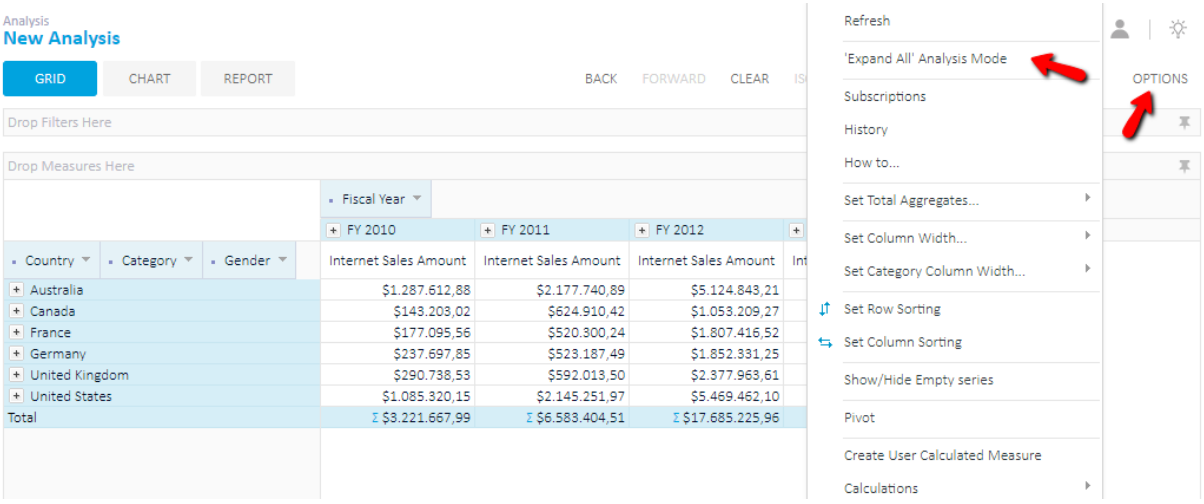




		Country	State-Province	
		Australia	Canada	
			Alberta	British Columbia
Fiscal Year	Fiscal Semester	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
FY 2010	H2 FY 2010	$1.287.612,88 ●	$3.577,55 ▼	$139.625,46 ●
	Total	Σ $1.287.612,88	Σ $3.577,55	Σ $139.625,46
FY 2011	H1 FY 2011	$1.296.004,46 ●	$3.576,84 ▼	$424.587,98 ▲
	H2 FY 2011	$881.736,43 ▼	$4.623,33 ▼	$188.544,00 ●
	Total	Σ $2.177.740,89	Σ $8.200,17	Σ $613.131,98
FY 2012	H1 FY 2012	$1.245.621,95 ●	-	$114.253,21 ●
	H2 FY 2012	**$3.879.221,26** ▲	$12.840,14 ▼	$926.078,99 ▲
	Total	Σ $5.124.843,21	Σ $12.840,14	Σ $1.040.332,20
FY 2013	H1 FY 2013	**$9.180.695,89** ▲	$22.743,49 ▼	$2.368.365,10 ▲
	H2 FY 2013	$30.507,12 ▼	-	$33.920,02 ▼
	Total	Σ $9.211.203,01	Σ $22.743,49	Σ $2.402.285,12
Total		Σ $17.801.399,99	Σ $47.361,36	Σ $4.195.374,76

11. Expand All – Analysis Mode

Default analysis mode is 'Step-by-step' which allows a user to expand, collapse, drill-down particular members. Each time the user performs analytic action Kyubit sends an MDX query to the OLAP cube and renders the results. If analysis has a lot of members and expanding operations, to expand all members on the category axis will take more time and resource. 'Expand all' analysis mode will simply take added category levels and display all expanded category items at once (with a single MDX query). If you have a lot of category items you wish to display all expanded this analysis mode will give better performance. The disadvantage is that series levels cannot be expanded in this mode and category levels cannot of the same dimension category.



Expanded all category items …

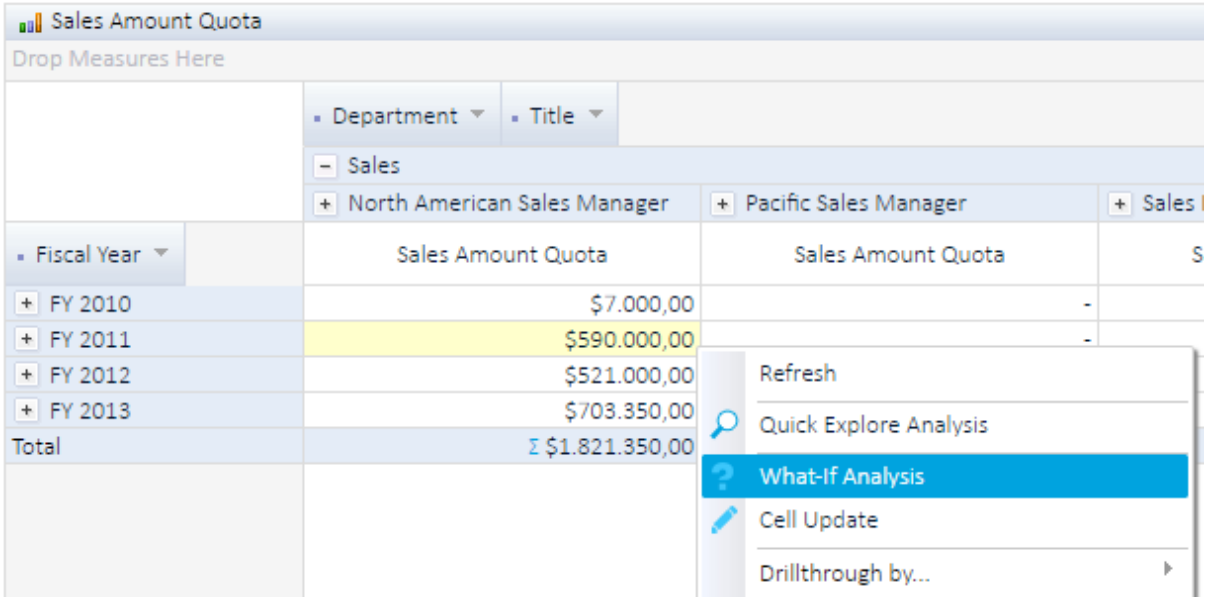
Drop Measures Here

			Fiscal Year			
			FY 2010	FY 2011	FY 2012	FY 2013
Country	Category	Gender	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount	Internet Sales Amount
Australia	Accessories	Female	-	-	$62.551,36	$147.915,77
		Male	-	-	$61.617,10	$144.502,90
	Bikes	Female	$644.589,29	$1.148.666,08	$2.521.069,68	$4.514.819,57
		Male	$643.023,58	$1.029.074,80	$2.417.220,34	$4.254.293,75
	Clothing	Female	-	-	$29.712,61	$75.551,68
		Male	-	-	$32.672,08	$74.119,29
	Road & Mountain	Female	$145.504,55	$368.408,13	$867.479,19	$1.375.385,97
		Male	$148.978,53	$293.485,72	$794.160,58	$1.288.524,13
Canada	Accessories	Female	-	-	$42.784,41	$107.735,57
		Male	-	-	$51.449,74	$106.791,09
	Bikes	Female	$88.537,10	$317.189,27	$426.553,27	$1.121.236,70
		Male	$54.665,91	$307.721,15	$487.994,88	$972.931,19
	Clothing	Female	-	-	$20.010,10	$56.165,39
		Male	-	-	$24.416,85	$60.168,64
	Road & Mountain	Female	$13.496,59	$40.257,52	$233.774,70	$493.750,47
		Male	$6.771,60	$39.423,80	$215.923,50	$487.113,16
France	Accessories	Female	-	-	$25.577,03	$69.227,46
		Male	-	-	$30.973,51	$65.625,33
	Bikes	Female	$84.960,04	$264.939,82	$737.641,64	$1.546.370,85
		Male	$92.135,52	$255.360,41	$986.644,38	$1.592.596,22
	Clothing	Female	-	-	$12.164,03	$26.578,95
		Male	-	-	$14.415,92	$25.727,50
	Road & Mountain	Female	$13.519,55	$57.972,97	$340.211,47	$713.290,92
		Male	$13.518,88	$54.613,59	$378.319,46	$647.377,96
Germany	Accessories	Female	-	-	$27.627,51	$65.105,50
		Male	-	-	$26.514,78	$67.657,48
	Bikes	Female	$103.387,91	$301.338,03	$941.652,94	$2.000.119,85
		Male	$134.309,94	$221.849,46	$836.626,67	$1.695.389,26

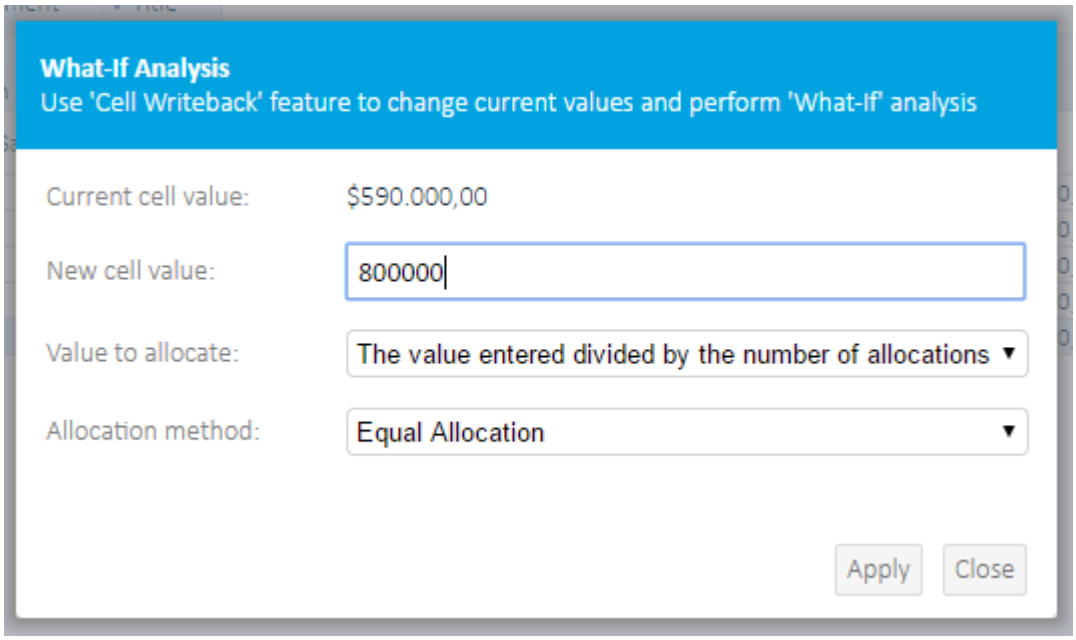
At any time, switch from 'Step-by-step' analysis to 'Expand all' and back.

12. Cell writeback

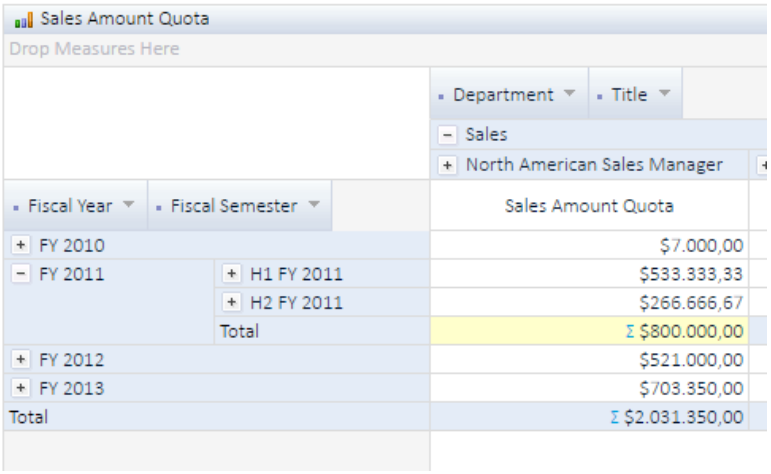
While using grid analysis, the user can select a certain grid cell and change its value using cell writeback feature. Changed value is at first rendered only in a user session, which is suitable to perform "What-If" analysis, playing with the values and outcomes as a result of the temporary changes. If the OLAP cube and its partitions are designed so values could be written back to the OLAP database, a user can select 'Publish' to permanently write back values to the OLAP cube.



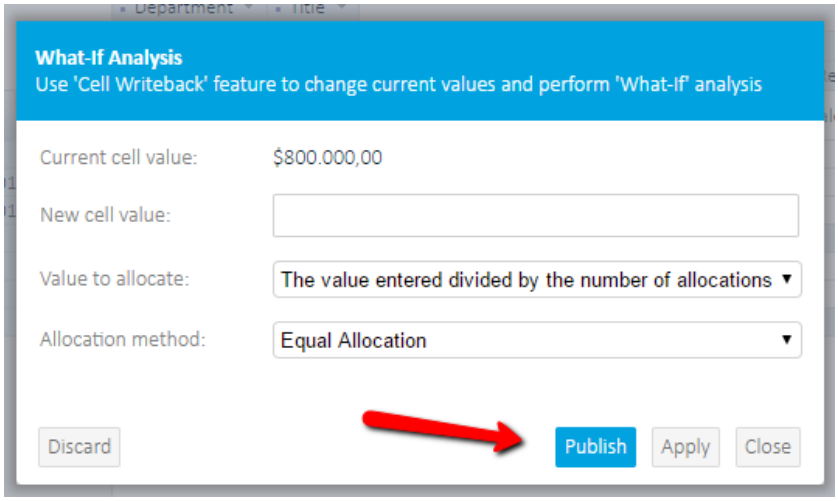
While changing the cell value a user has options to choose values for 'Value to allocate' and 'Allocation method', which will set how values would be divided into child cells based on new value. Both options are standard SSAS features only used by the Kyubit application.



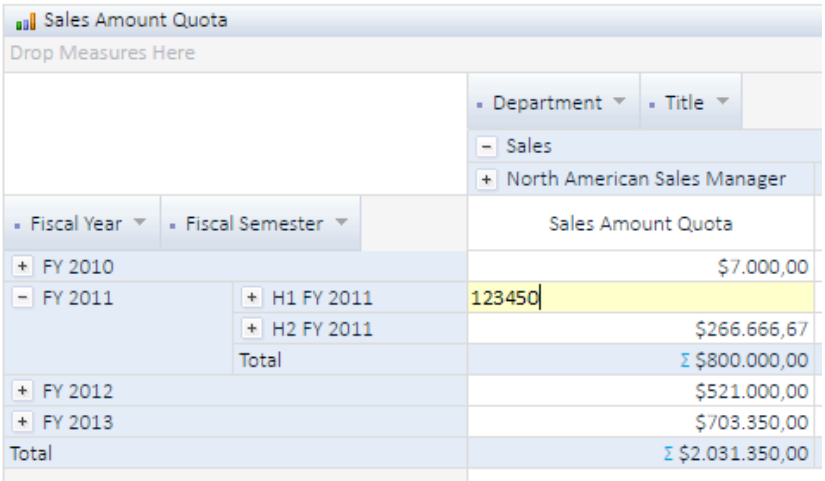
Grid automatically renders new cell value with the option to analyze all implications of the changed cell value.



If your OLAP structure and permissions allow, 'Publish' push changes into the OLAP database directly from the Kyubit application.



Fast way to use the cell writeback feature is to double click the cell and enter value directly in the grid and press enter to publish value back to the OLAP cube.

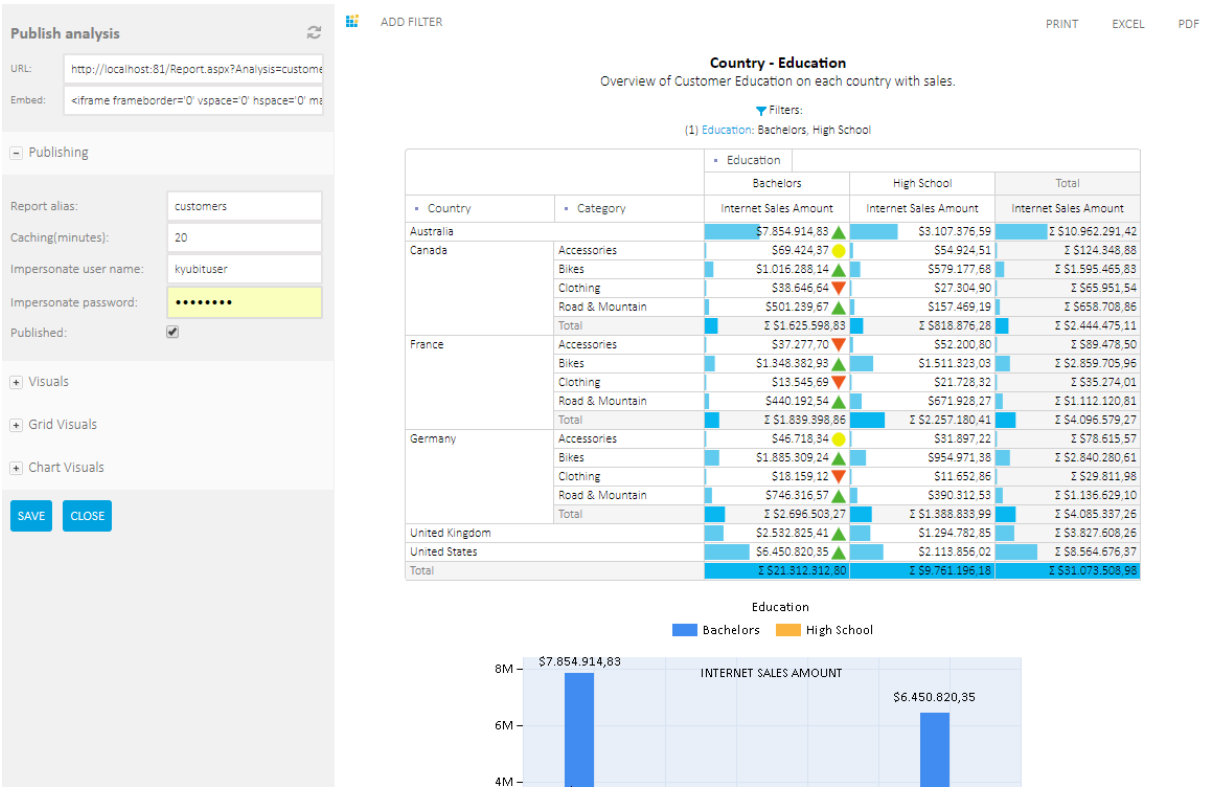


13. Publishing Features

Publishing Features provides functionalities to publish certain analysis and make it available on a designated URL for integration purposes with other web applications and services. This way it is possible to merge your analyses grids, charts and KPIs in other sites and apps, with additional analysis appearance, caching and security configuration for optimal visual and data integration.

13.1. Publish Analysis

In any moment of data analyzing, it is possible to publish the current state of analysis. On "Report" tab of analysis, select the **Publish** option and the new window will appear with all publishing details. Publishing details give a lot of options and parameters that help us to fine tune the analysis outlook and set caching, security and other options.



13.1.1. Publishing URL and EMBED string

While we are configuring publishing options, we can see the URL and EMBED string that we can use later to see the published analysis from other HTML pages.

13.1.2. Report Alias

This is a unique identifier for the published analysis. When we set "Report Alias" we know on which URL our published analysis will be available. For example, for "Report Alias" with a value of "Alias1" URL will be http://KyubitBI/report.aspx?Analysis=Alias1

13.1.3. Caching

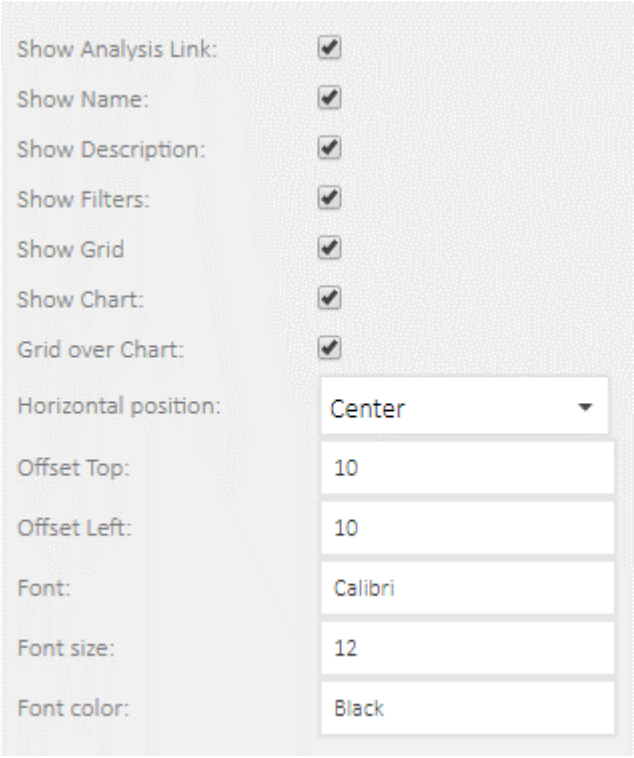
It is possible to set up the caching time of published analysis in minutes. This way users on some external website will see the analysis from the memory without the need to directly connect to the OLAP data source every time someone opens the page with the same analysis, and thus, speeds up the whole experience with the published analyses.

13.1.4. Impersonate

If many people would request the published analysis, and we are not sure if all of them have necessary OLAP permissions to see all analysis elements, it is possible to impersonate the request for the published analysis. In this way, we will use one windows user name and the password that we are sure has all required OLAP permissions (OLAP role-based security) to connect and provide published analysis.

13.1.5. Visuals

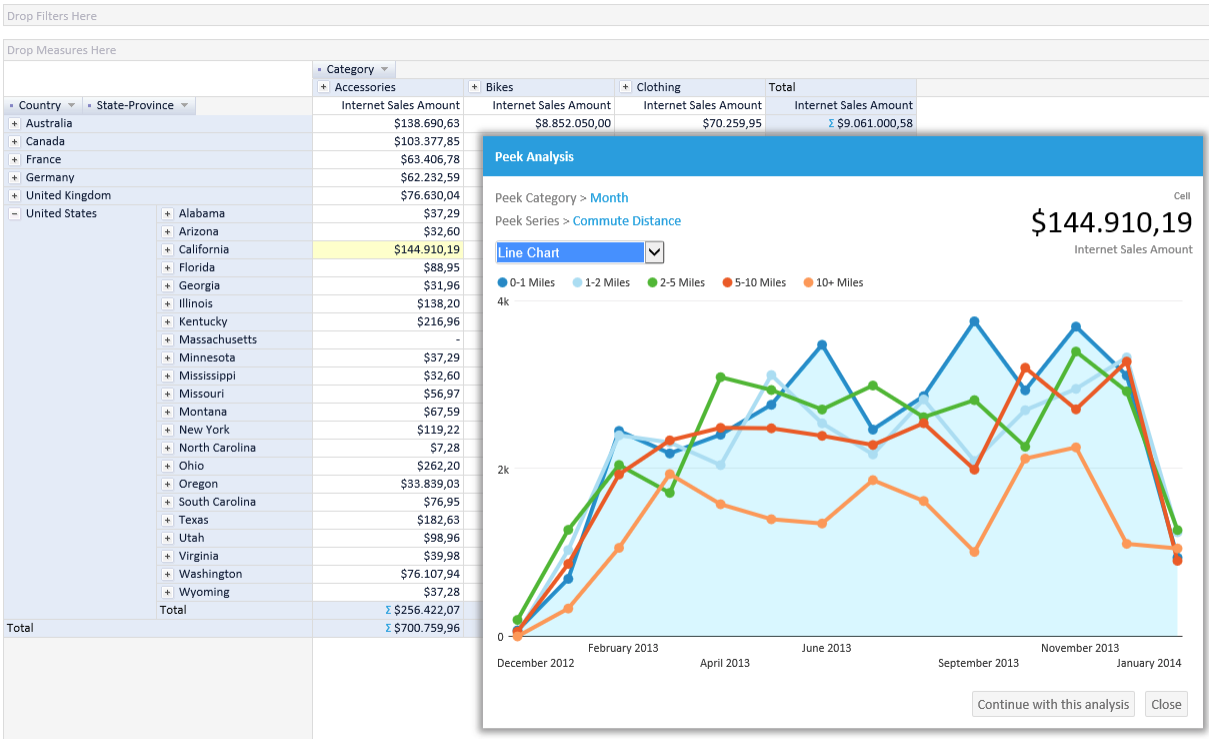
"Visual elements", "Grid Visuals" and "Chart Visuals" panels provide a lot of visual elements we can customize while publishing the analysis. We will configure which elements to show or hide, fonts, colors, alignments and other elements to fine tune the published analysis appearance.



14. 'Peek Analysis'

While analyzing OLAP data in the grid analysis view, 'Peek Analysis' feature comes handy for many situations where a user would like to get quick further insight to the cell data, without leaving or changing the main analysis in the grid view.

In the following example, we see that 'Accessories' sold in the 'California' sum is $144,910.19 in the main analysis grid. If we right-click the same cell and choose 'Peek Analysis' a new window will be opened that will show sub-analysis of the cell data. By default, Time dimension will be used to show drill of the analysis, but the user can select any of existing dimensions for the sub-analysis category and series. This way the user has explored cell value using other dimensions without losing analysis in the grid view. Furthermore, the user can quickly go from cell to cell to display 'Peek analysis' and at any time choose to transform 'Peek analysis' to the main grid analysis.



Different type of 'Peek Analysis' chart visualizations can be selected that best matches the 'Peek analysis' nature. Selected Category dimension for the 'Peek analysis' is saved with the analysis for future use.

15. Decomposition Analysis

Unlike standard Grid/Chart analysis, Decomposition analysis enables data analysis in multiple steps, while the user can see all the steps at the same time and has the ability to change each step definition at any time.

15.1. OLAP/Analytic Model analysis in multiple decomposition steps

The decomposition Analysis consists of analysis levels (steps) added with the option to select level members that we would like to explore in the subsequent levels we are about to add to see details of analysis interest. This is data drill-down in multiple steps, with great possibility to change selected members of any level, at any time. After you click any level member, it will be included in the level selection and complete decomposition tree will be recalculated and visualized with the new selection. The decomposition analysis can be saved and shared with other authorized users, collaborate by adding comments and decomposition leaf (last) level can be used to visualize data on the dashboards. Saved decomposition analysis are displayed in the 'Analysis' section of the application with its characteristic icon.

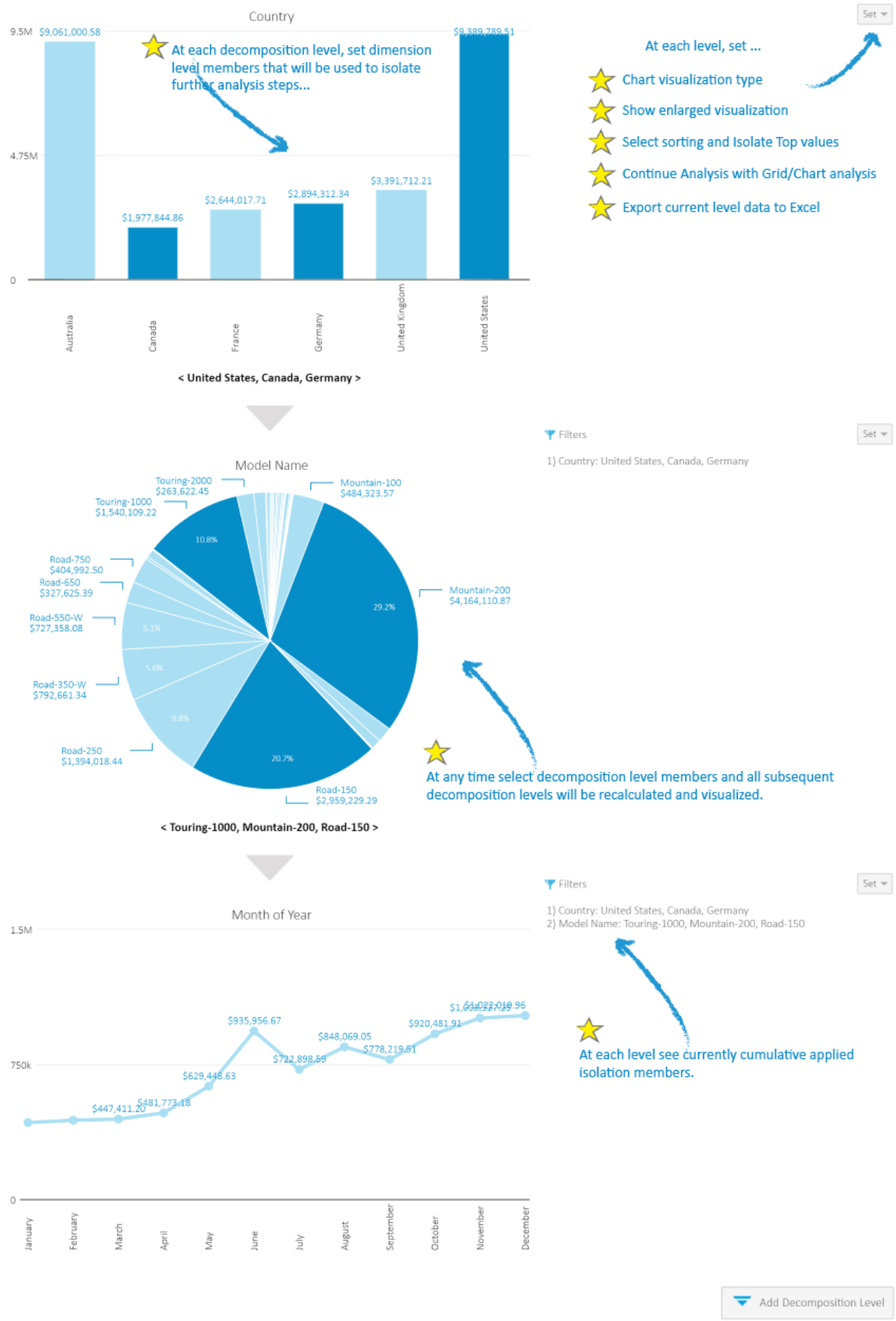
15.2. Decomposition Options

At each decomposition level, the user can select visualization type that best fit with current data and nature of the analysis (Column Chart, Line Chart, Pie Chart, Doughnut Chart, Table Chart). Level members can be sorted and members can be isolated by TOP n items to narrow level members display of dimensions hierarchies with lots of members. Each Level can be opened in the enlarged view with options to visualize and explore decomposition level using the whole screen, export decomposition level data in Excel file (with or without chart visualization) or perform Drill-Through actions built-in OLAP cube or created ad-hoc in Kyubit Business Intelligence application. If appropriate at a certain point, continue particular decomposition level analysis with the standard Grid/Chart analysis in a separate window tab. All decomposition levels can be isolated with additional filters that are added on the top of the analysis and are applied to all visible data on the decomposition tree.

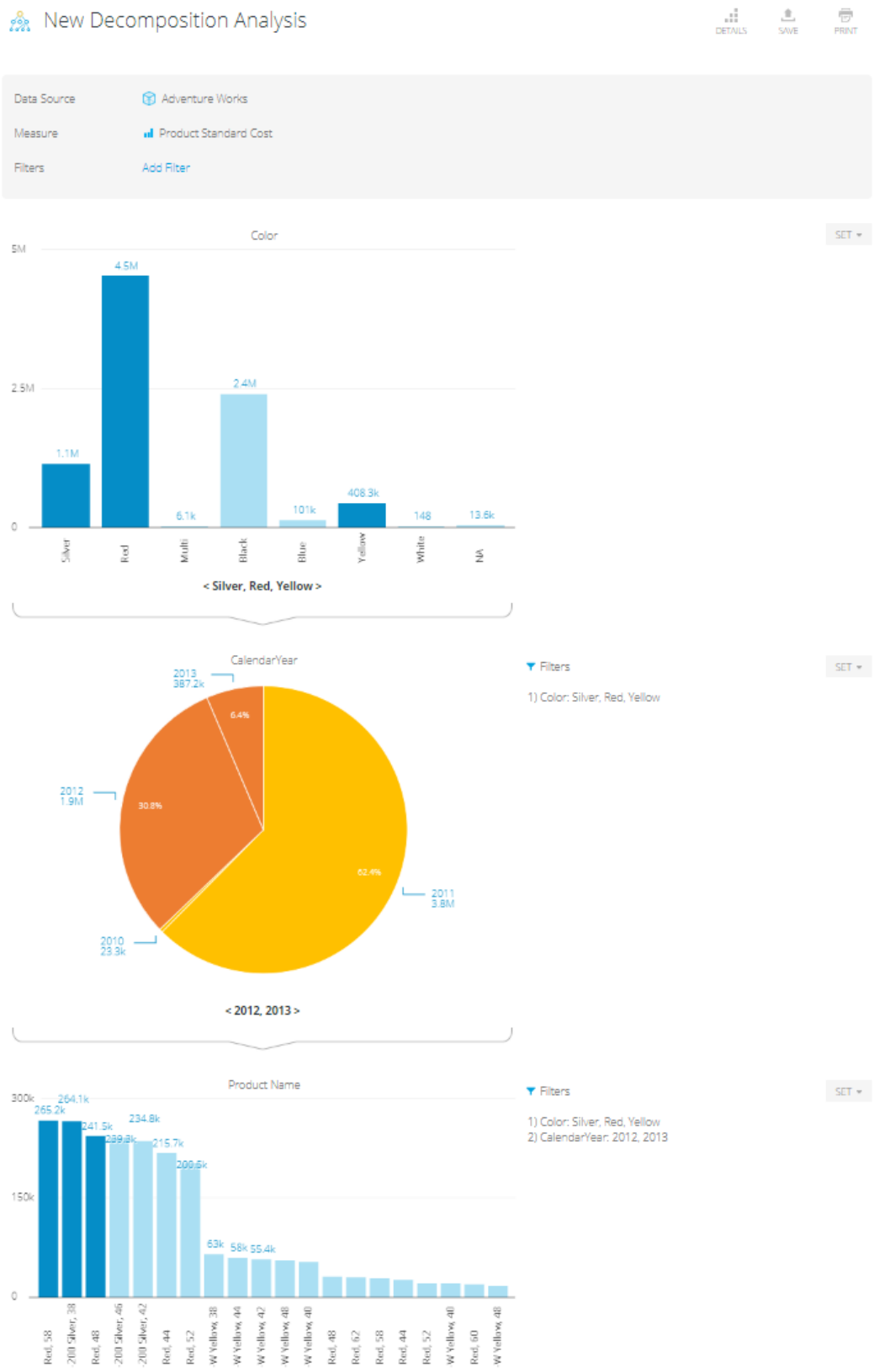
15.3. Sample Decomposition Steps

To create a decomposition analysis, select 'New Decomposition Analysis' option in 'Home' or 'Analysis' view of Kyubit BI application.

- Select the appropriate OLAP/Analytic Model data source
- Select Measure for analysis. The single measure could be selected and changed at any time.
- Select 'Add Decomposition Level' button on the bottom to choose the dimension level that will be used for the first decomposition level. The level chart will immediately appear.
- Select 'Add Decomposition Level' for each additional dimension level you wish to analyze in subsequent analysis steps.
- Selecting members on a certain decomposition level will automatically filter all subsequent (child) levels with the current selection. At any time, change the selection for each added decomposition level.
- If complete decomposition level should be filtered (sliced) with additional data, select 'Add Filters' to add appropriate slicers.
- On each decomposition Level, select 'Sorting', isolate top N members, change the chart type, open chart in large view or continue analysis in Grid/Chart analysis.
- On each decomposition Level, export data to the Excel file.


Country
9.5M
4.75M
0
$9,061,000.58
$1,977,844.86
$2,644,017.71
$2,894,312.34
$3,391,712.21
$9,389,789.51
Australia
Canada
France
Germany
United Kingdom
United States
At each decomposition level, set dimension level members that will be used to isolate further analysis steps...
< United States, Canada, Germany >
Set
At each level, set ...
Chart visualization type
Show enlarged visualization
Select sorting and Isolate Top values
Continue Analysis with Grid/Chart analysis
Export current level data to Excel
Filters
1) Country: United States, Canada, Germany
Model Name
Touring-2000 $263,622.45
Mountain-100 $484,323.57
Touring-1000 $1,540,109.22
Road-750 $404,992.50
Road-650 $327,625.39
Road-550-W $727,358.08
Road-350-W $792,661.34
Road-250 $1,394,018.44
Mountain-200 $4,164,110.87
Road-150 $2,959,229.29
10.8%
29.2%
5.1%
5.6%
9.8%
20.7%
At any time select decomposition level members and all subsequent decomposition levels will be recalculated and visualized.
< Touring-1000, Mountain-200, Road-150 >
Filters
1) Country: United States, Canada, Germany
2) Model Name: Touring-1000, Mountain-200, Road-150
Month of Year
1.5M
750k
0
$447,411.20
$481,773.18
$629,448.63
$935,956.67
$722,898.59
$848,069.05
$778,219.61
$920,481.91
January
February
March
April
May
June
July
August
September
October
November
December
At each level see currently cumulative applied isolation members.
Add Decomposition Level

New Decomposition analysis UI and options are available in the Kyubit BI version 5.0 as well as support for Decomposition analysis on Analytic Models.

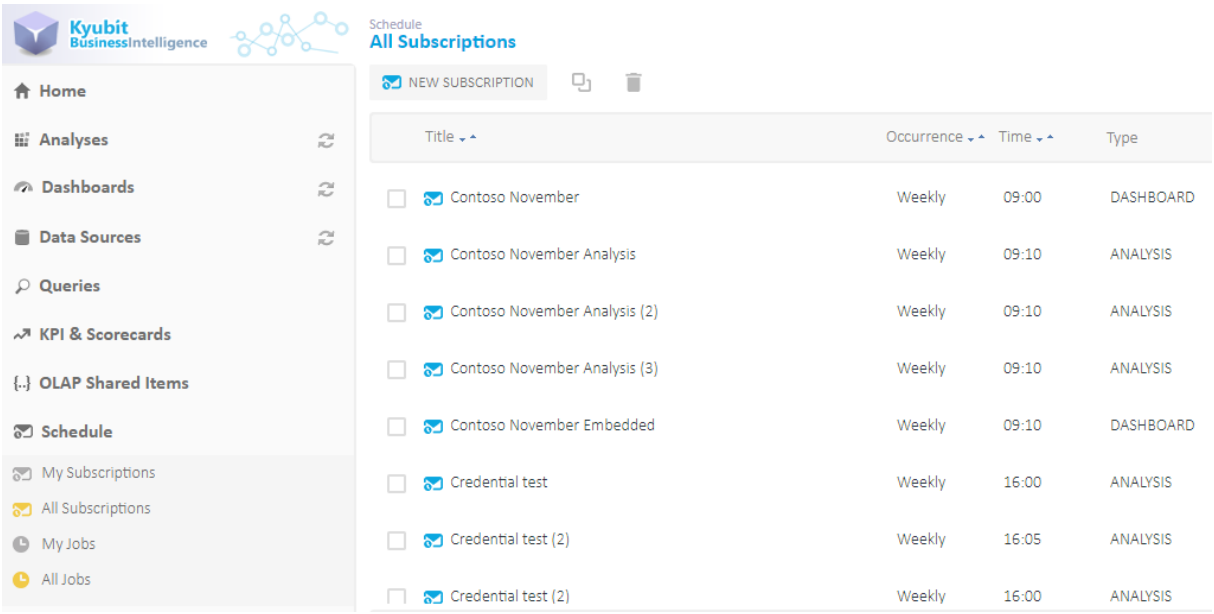


16. Subscriptions

An Important aspect of Kyubit Business Intelligence analysis usage is to deliver analysis reports to users using the email subscriptions, which contain OLAP/Analytic Model analysis data in the form of HTML with embedded analysis images or attached PDF/Excel file. Every user of Kyubit Business Intelligence with at least 'Read' permission has the privilege to make a subscription to OLAP/Analytic Model analysis and receive an analysis report on the email within the scheduled time of the delivery. To create the subscription, the user needs to update his 'email address' and 'credentials' in the user settings form (upper left icon in the 'Home' page).

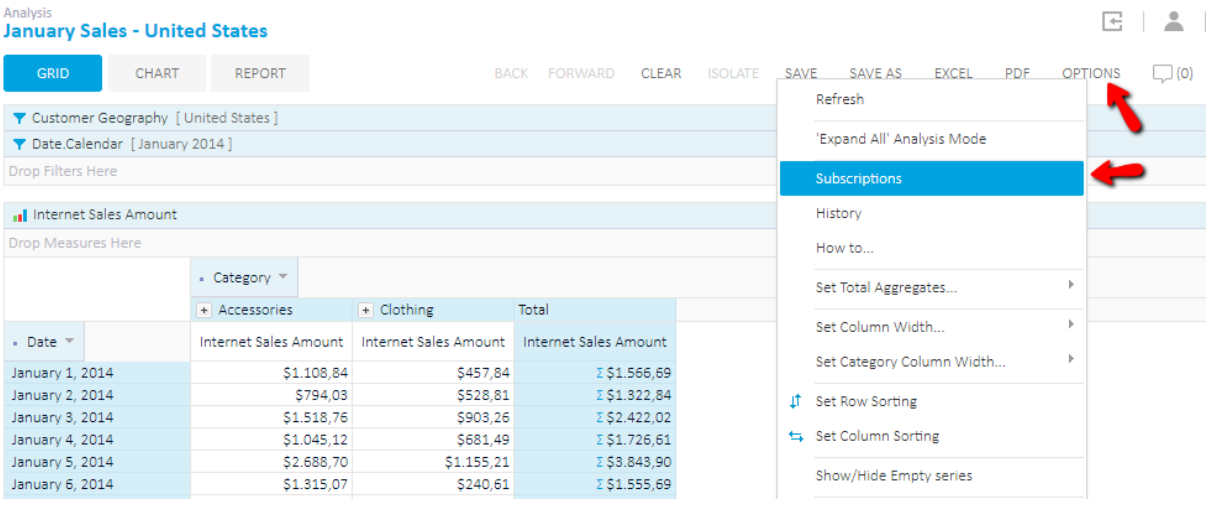
16.1. My subscriptions

Every user can see all his own subscriptions (Analysis and Dashboards) in the Kyubit Business Intelligence - > **Schedule** section, where all his subscriptions could be managed.

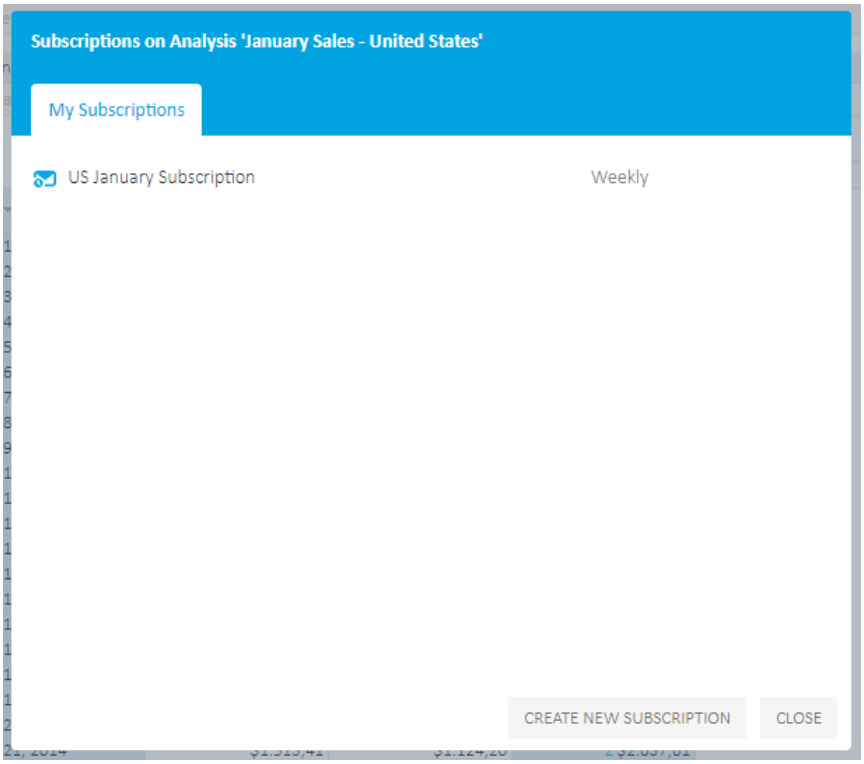


16.2. Subscriptions within analysis

When user opens a certain OLAP/Analytic Model analysis, he can immediately see if he already has some subscriptions created to the analysis.

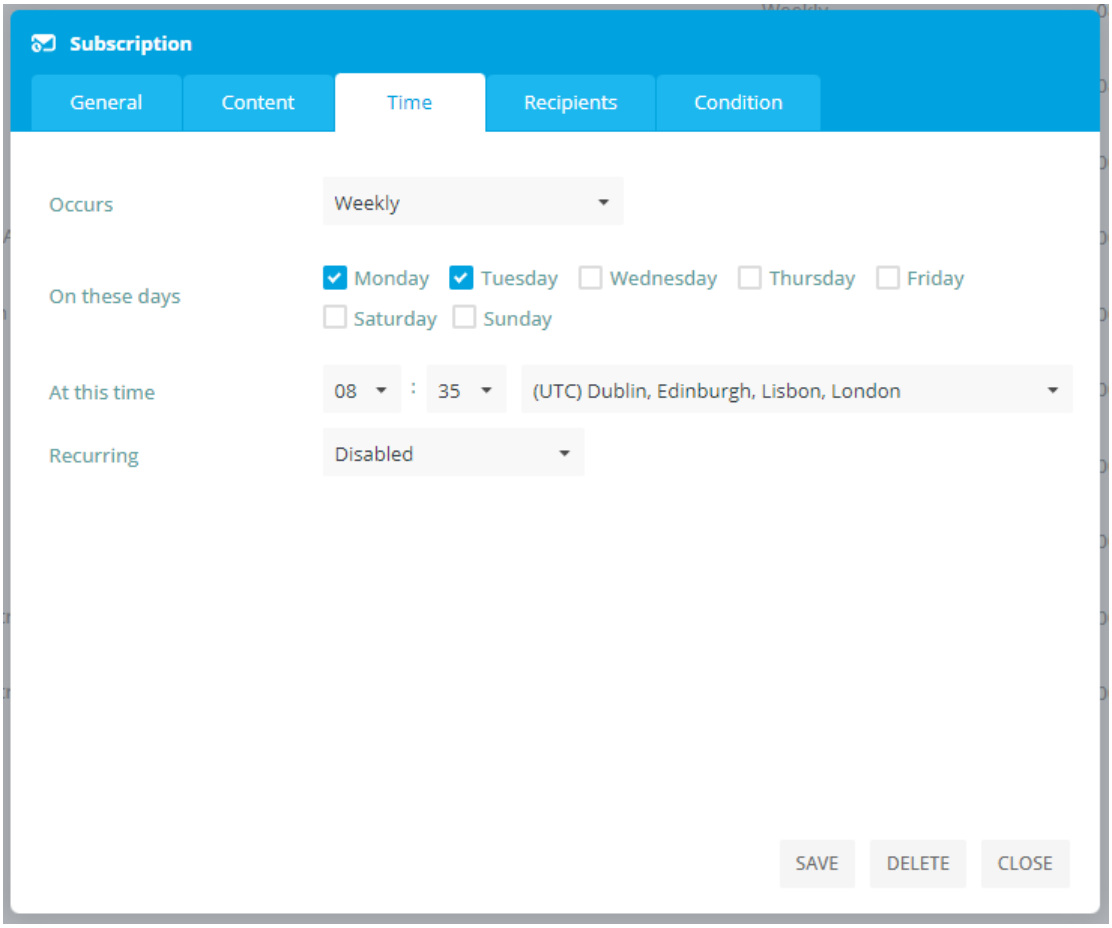


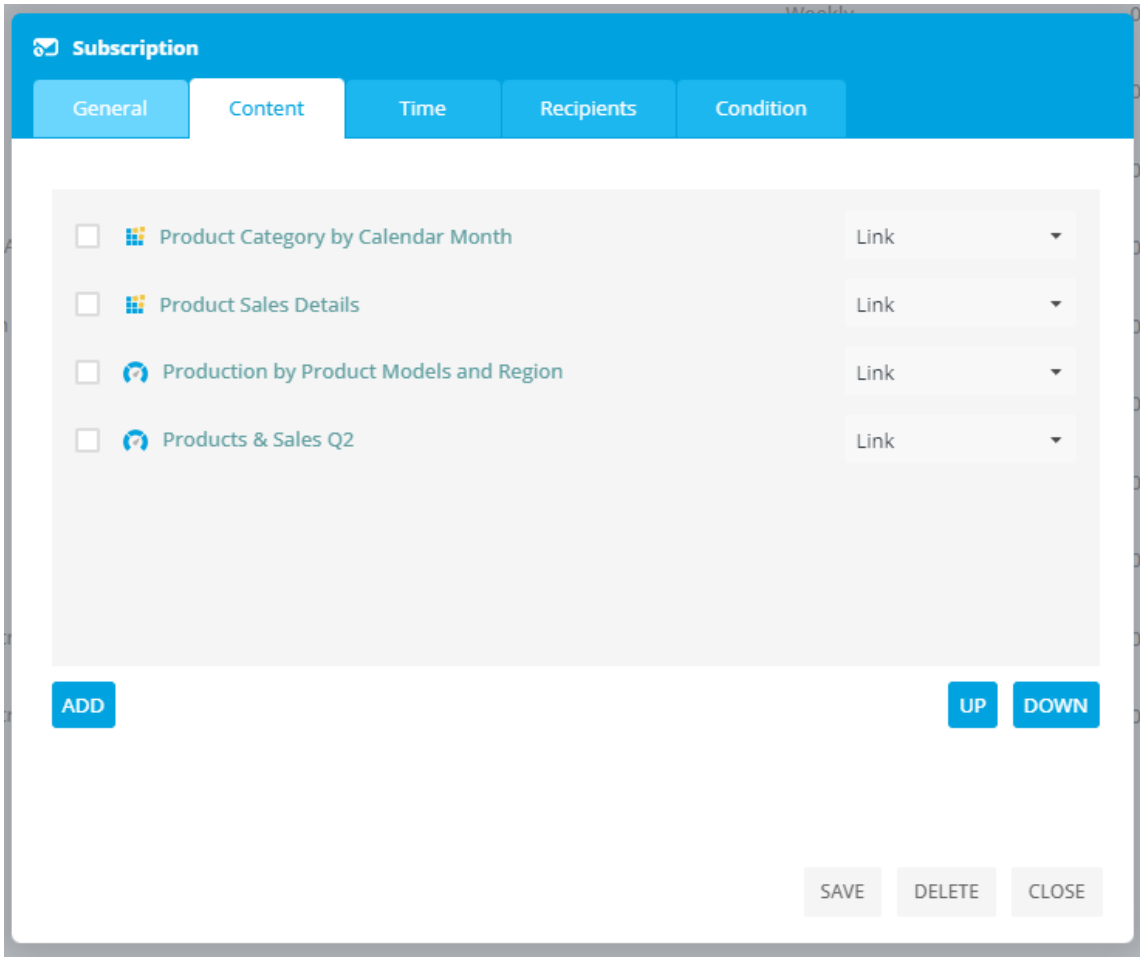
By click on "Subscribe" link, form with existing subscriptions of the current user will be displayed with an option to create the new subscription, edit or delete the existing.

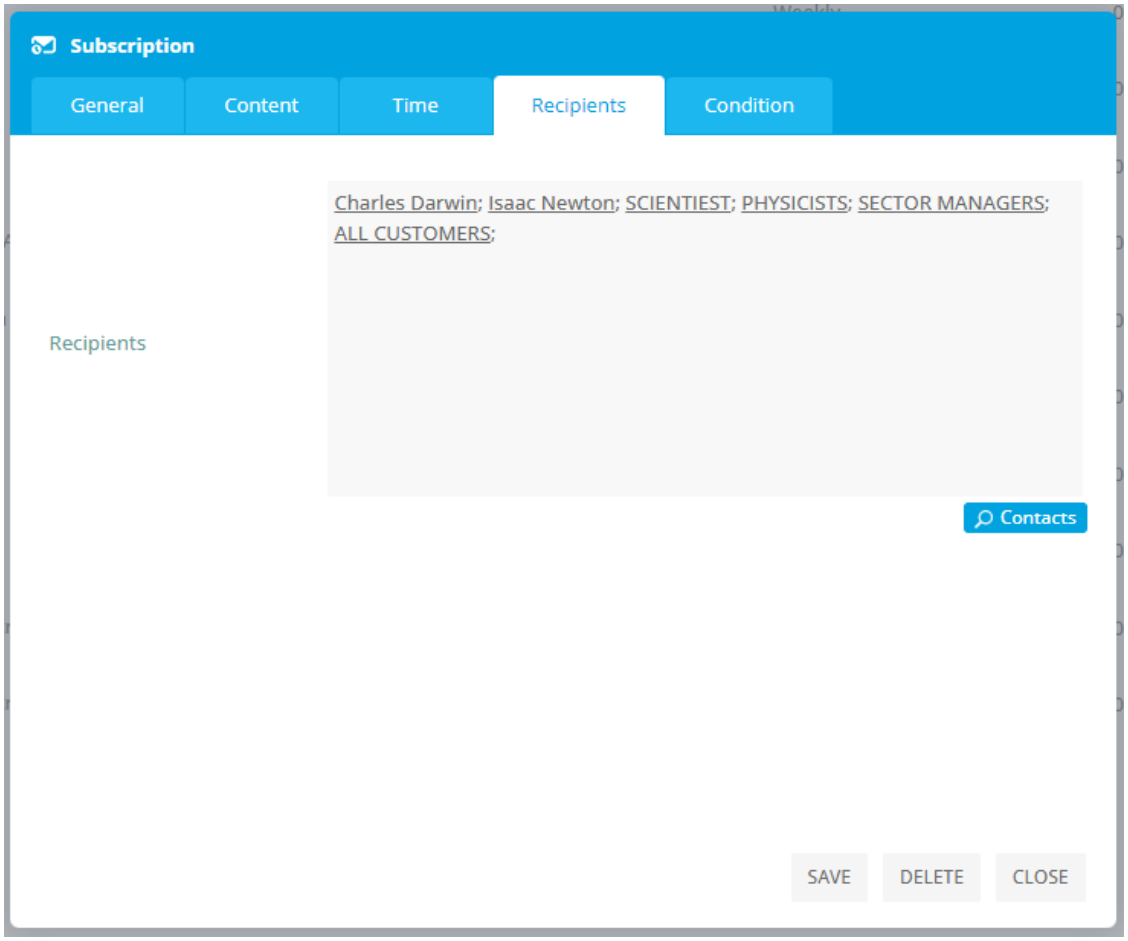


16.3. Subscription details

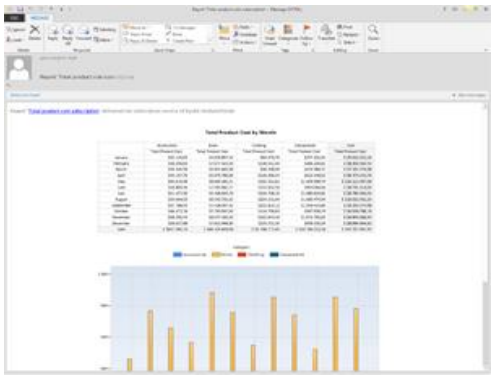
There are several subscription settings that could impact the way users are receiving subscriptions.




Subscription
General
Content
Time
Recipients
Condition
Product Category by Calendar Month
Link
Product Sales Details
Link
Production by Product Models and Region
Link
Products & Sales Q2
Link
ADD
UP
DOWN
SAVE
DELETE
CLOSE


Subscription
General
Content
Time
Recipients
Condition
Charles Darwin; Isaac Newton; SCIENTIEST; PHYSICISTS; SECTOR MANAGERS; ALL CUSTOMERS;
Recipients
Contacts
SAVE
DELETE
CLOSE

- **Subscription title**, sets the name that will appear when delivering dashboard/analysis inside the email message.
- **Subscription items**, selects Kyubit Business Intelligence content (Analysis, Dashboard or SQL/MDX query) to deliver within the subscription. The user can subscribe to all content with at least 'Read' permissions.
- **Occurs,** defines scheduled time to deliver subscription. There are three different time scheduling categories:
    - **Weekly,** set the weekdays to deliver subscription
    - **Monthly,** set the month days to deliver subscription
    - **Once,** set a single the day to deliver subscription
- **Time,** sets time within day to deliver subscription
- **Recipients,** set the contacts, contact groups and email addresses that will be used to send subscriptions.
- **Include,** type of delivered content
    - **Only link** to Kyubit Business Intelligence analysis
    - **Embedded** (user immediately sees analysis image when opens email message)

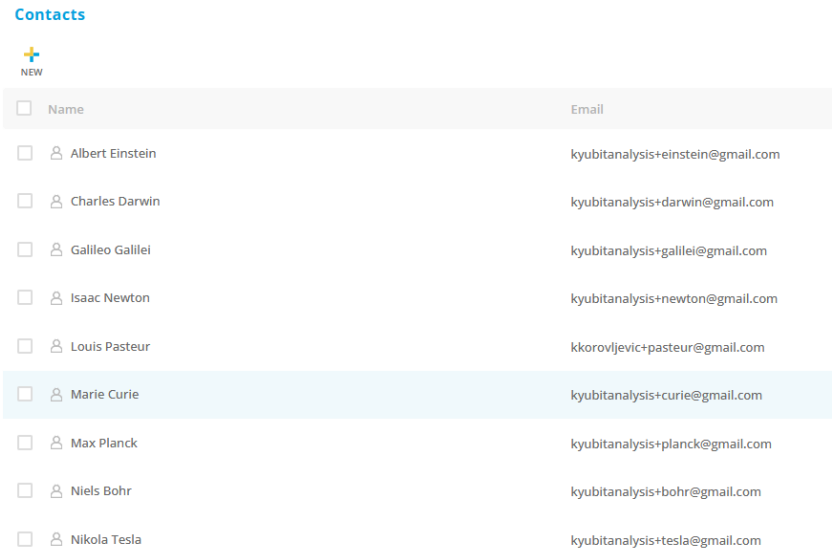


    - Analysis as **PDF attachment**
    - Analysis as **Excel attachment**

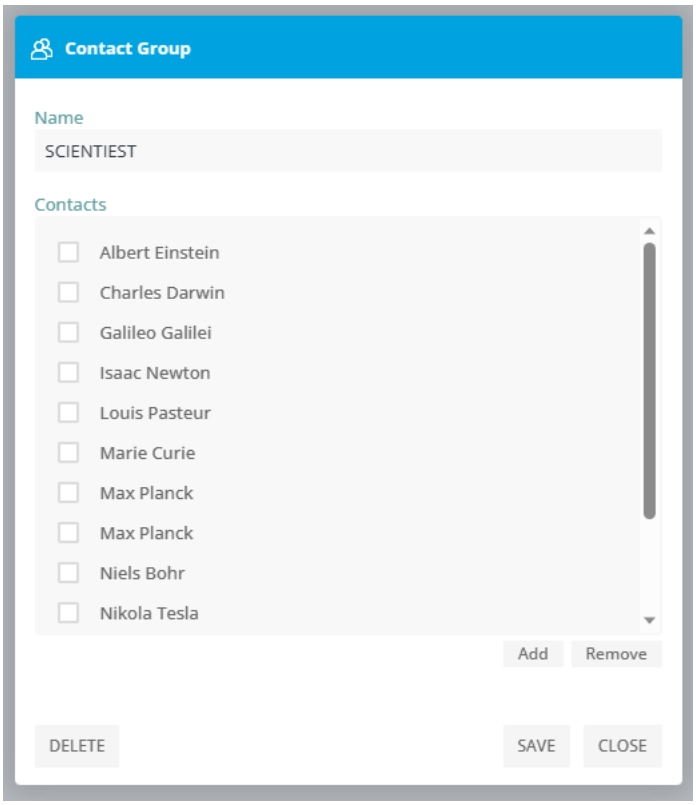
- **Disable,** all subscriptions marked disable will not be delivered at the scheduled time.
-

16.4. Contacts and Contact Groups

The 'Contacts' is a list of persons with their first name, last name, and email address that is shared by all application users. For Kyubit users who are preparing scheduled reports/dashboards to deliver by email to other individuals (often not even Kyubit users), contacts and contact groups can save a lot of time. Instead of adding the email address of each person to receive the email to the subscription, now the application supports creating contacts and contact groups for rapid subscription email setup. You can create a contact that is easily searched and added to every new subscription and not remember his email address for each new scheduled report. If a subscription contains multiple contacts to send to, it will be sent for each contact separately.

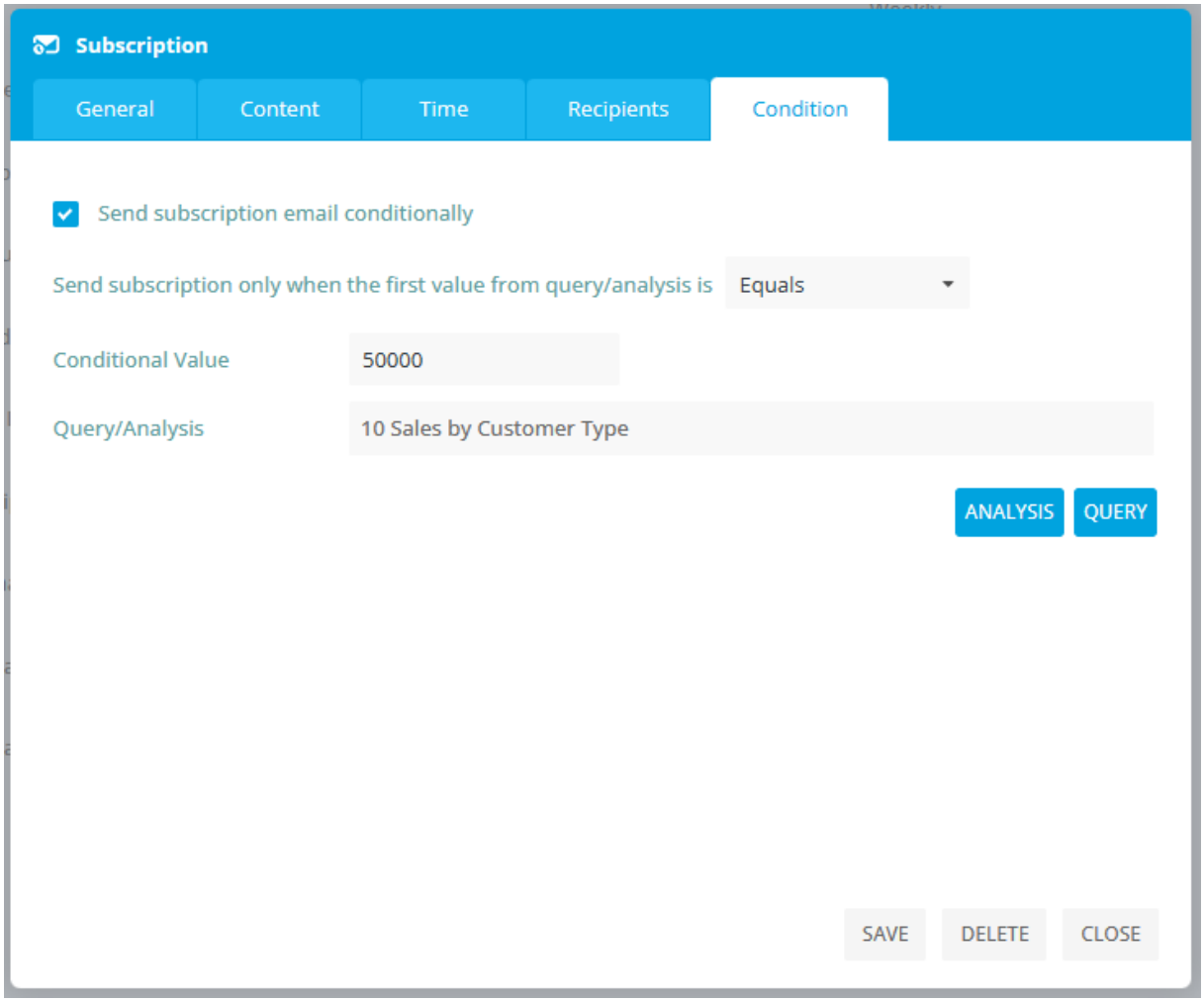


The strongest feature is to create and manage contact groups, which can save a lot of time while preparing subscriptions for larger groups of people. For example, you can add 100 users to a group and quickly add it to every new subscription.



16.5. Conditional Subscriptions

Created subscription could be send conditionally, only when the defined criterion is met. Defined numeric value will be compared to the first cell value from the selected analysis or query. Only if the condition is true, subscription is being sent.



16.6. Personalized Circular Subscriptions

Creating a single report subscription that has to be sent to many users (contacts) in a such way that each recipient (contact) receives the content (report) personalized for him. This is achieved by applying report filters that are related to 'User Properties'. Each contact can be assigned with 'User Properties' that holds values related to the him. Open the 'Contacts' entity to manage 'User Properties' for the particular contact.