Manual for Report Module Users

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1 Overview of the Report Module

Report module is the application for the reports viewing. It is only possible to view reports and add new pages to them, it is impossible to add or remove the report.

After launch of the application and successful log on you will see the main window of the report module:



You can see 2 tables to the left: "List" and "Settings". You can see all available reports in the tree view on the "List" tab. On the "Settings" tab you can find data about your PC and about the user under which you're logged on to Windows.

1.1 Language Selection

In order to change the language of the interface you need to enter the "Tools / Language" menu item and select the necessary language:



1.2 Themes

Theme (or skin) defines the outer view of the report module. You need to enter the "Tools/Look and Feel" menu item and select any theme of more than 10 possible themes:

💱 Business Analysis Tool (Report Module) - http://localhost:8001/										
<u>Application Module List</u>	T <u>o</u> ols <u>H</u> elp									
List 🖓 🔛	Language •									
Search	Look and <u>F</u> eel	✓ Space Gray	F							
Settings	<u>C</u> hange Password	Space Silver								
Polder/Report	Options	Space Blue	r							
	shboard (Version 1 from 1/14/2019	Caramel	Ľ							
List 🛛 🕅 Sa	les (Version 1 from 1/10/2019)	Black								
		Blue								
		Lilian								
Reports		iMaginary								
		London Liquid Sky								
		Office Blue								
		Office Black								
		Office Silver								
4										

2 Viewing Reports

There exist two kinds of reports - an interactive dashboard and a report:



Now let's have a look at each of them separately.

2.1 How to open a report?

You can open a report in one of the following ways:

🟮 Business Analys	sis Tool (Report Module) - http://localhost:8001/	_ D X
Application	Module List Mail Broadcast Tools Help	
🛛 List 🖓 📝	Mail Broadcast 🔞 🕼 🙀 🔞 🛸 🦓	
(iii)	Search	×
Settings	Folder/Report Notes	
	👻 🗁 Dashboard Reports	
	Dashboard (Version 1 from 1/14/2019)	
List	Sales (Version 1 from 1/10/2019)	
	Generate	
	Name A Mail Broadcast Next Run Status Type Modifi	ed By
	× ☑ ([Status] <> 'Deleted')	
	IK K X X X XI 🕼 🖉 🖣 🖗 👘 🕼	
	🛃 Please, specify your email address to be able to get reports by mail.	
Login: john Serv	ver: http://localhost:8001/	

In order to open a report you have to do one of the following actions:

- 1. Double click on the report with the left mouse button;
- 2. Make the report active in the list and press Enter.

3. Press the button «Generate» in the bottom part of the screen or in the toolbar, or in the context menu opened with the help of right mouse button click.

🏮 Business Anal	ysis Tool (Report Module) - http:	//localhost:8001/		_ D X
Application	Module Reports Report	Page View Data T	able Tools Help	
			🗥 🔿 🖎 94 000 😌 99 100% 🛪 🖽 Table and Chart 💌 📖	
an	Sales (Version 1)			х
Settings	Dimensions 🔍 🙋 🏭 🧎	Columna 🔚 🗕 🕇	Data Data Calandar 🗶 🙆 🗙	1
	► Sales			
	Account	Rows 😫 -+	Product/Product Categories 👻 🕵 🗙	
I	Customer	Bawa / Columna Filter	Sorting	
List	▶ 💽 Date	Rows / Columns Tritter		
	Delivery Date	Context	Product/Prod + CY 2005 + CY 2006 + CY 2007 + CY 2008	
	Department		► Bikes \$7.395.348.63 \$19.956.014.67 \$25.551.775.07 \$13.399.243.18	
Reports	Destination Currency		▶ Clothing \$34,376.34 \$485,587.15 \$871,864.19 \$386,013.16	
Reports	Employee		Components \$615,474.98 \$3,610,092.47 \$5,482,497.29 \$2,091,011.92	
	Le ter Geography			
	Measures Q - +			
	► 💼 KPI	Measures		
	Exchange Bates	Reseller Sales Amount 🔻 🗙	27,000,000.00	
			24.000.000.00	
	Internet Sales			
	Reseller Sales		21,000,000.00	
	Sales Quota			
	Sales Summary		18,000,000.00	
	Server E Min Date		15,000,000.00	
	ServerCalcDate	ur th to		
		nignlight	12,000,000.00	
	Sata O - +	Chart Properties	9,000,000,00	
	Calculated Sets		6,000,000.00	
	► Sets	🖬 bottom 🔻	3,000,000,00	
		Argument:		
		🔿 rows 🛛 🥥 columns		───
		legend labels	P. P. P.	2
		rotate by 909	505 505 505 505	5008
	Parameters Q	Inotate by 90-	Ch. Aussessies Ch. Billers Ch. Charles and	-
		Settings	Res Recessores Relikes Record Clothing Record Components	
		Table 1	л <u></u>	Creat -
				search 🔻
Login: john Se	rver: http://localhost:8001/ Row	ws: 4 Columns: 4 Evec T	Time: 00.1	
Login join Se	not in the part of the control of the not	Conditional A Execution		

When the report is opened, you will see an additional tab "Reports" added to the set of tabs:

All generated reports will be placed on this tab. Note: you can generate several reports simultaneously. All generated reports will be placed on separate tabs and their location can be changed:

🚯 Business Analysis Tool (Report Module) - http://localhost:8001/	_ • ×
Application Module Reports Report Page View Data Table Tools Help	
🕒 😋 🗇 💾 📴 📴 🎼 👘 🐩 🋸 😓 🛐 🎛 C 🌂 🕸 🍣 🗞 🛯 🕬 100% 🗸 🌐 Table And Chart	- 5
Sales (Version 1) Dashboard (Version 1)	×

You can close the report using the cross icon in the upper right corner.

3 Report Pages

Each report consists of several pages. To understand better what is the report page, let us recall how Excel document looks like: each page has a table with data. Pages are displayed as tabs in the bottom part of the window:



Each page can have one of the following types:

- Pages created by administrator (red color)
- Pages created by you (blue color)
- Pages created by you and shared with other users (blue color with green border)
- Pages created by other users which were shared with you (green color)



You can view administrator's pages and shared pages, and change their structure, but you have no right to save them. However, you can copy those pages and save yours.

You can add your own pages to any report. You can save all changes made on your own pages. You are the only one who can access your own pages (provided they are not shared by you), and no more users (even administrator) can view, modify or delete them. Next section of this document will show you how to create and delete pages.

You can also filter the viewed pages to see yours, administrator's or shared, by pressing one of the buttons:

6	😂 Business Analysis Tool (Report Module) - http://localhost:8001/											
	<u>Application</u>	<u>M</u> odule	<u>R</u> eports	Report	<u>P</u> age	<u>V</u> iew	<u>D</u> ata	<u>T</u> able	T <u>o</u> ols	<u>H</u> elp		
	G 🕤 🗄		3	(2	E G RE	¢	الله ال	చి 🖉	% 000	• €.0 .00 .00 →.0 100% ▼ ∰ Table And Chart	- 🖓 🖓

4 Working with reports

4.1 Basic Navigation on the Page

To demonstrate the page navigation let's open the report based on a test database of the retail sales:



In the opened window you can see the following blocks:

- Dimensions
- Measures
- Sets
- Parameters
- Context
- Measures

We can see the product families on rows and quarters of the year on columns. Inside the table the total amount of sales is displayed. The items which are in rows and columns (products, time, etc) are called dimensions. The values inside the table are called measures.

The section "Dimension" contains dimensions, hierarchies and levels:



The hierarchies can be of several types: regular, attribute and parent-child:



You can see levels under the hierarchies:



You can see the levels of a hierarchy by pressing "+":



With the help of "上" and "—" buttons you can expand the data to the desired level of details in the table as well:

Product/Product	▶ CY 2005	- CY 2006	CY 2006	FCX 2007	Þ	
Categories		P	H1 CY 2006	H2 CY 2006		
 Accessories 	\$20,235.36	\$92,735.35	\$16,579.48	\$76,155.87	\$296,532.88	
🚽 bikes	\$7,395,348.63	\$19,956,014.67	\$7,623,185.44	\$12,332,829.23	\$25,551,775.07	\$
Mountain Bikes	\$4,545,336.51	\$9,190,838.09	\$4,023,621.76	\$5,167,216.33	\$8,854,263.03	
မ္မိ ⊨ Road Bikes	\$2,850,012.12	\$10,765,176.58	\$3,599,563.68	\$7,165,612.90	\$11,294,381.37	
🚡 🕨 Touring Bikes					\$5,403,130.67	
 Clothing 	\$34,376.34	\$485,587.15	\$31,951.20	\$453,635.96	\$871,864.19	
 Components 	\$615,474.98	\$3,610,092.47	\$551,290.34	\$3,058,802.14	\$5,482,497.29	

The level of details can be set in another way. You can see two shelves in the top part of the page: "Rows" and "Columns". There are controls on them. Those controls allow us to know which data are displayed in the table. With the help of the dropdown you can set the necessary level of details:

Columns 🔚	- +	Date/Date.Calendar	- 🖸 x					
Rows 🗎	- +	Product/Product Cat	egories 🔫 🗔 🗙					
Rows / Columns Fi	Σ (Α	II)						
	• Ca	ategory	`	CV 0000	CV 0000		01/ 0007	
Context	Su	bcategory		- CY 2006	CY 2006		F CY 2007	⊢ CY
	. Dr	aduat			H1 CY 2006	H2 CY 2006		2008
	PD	ouuci		\$92,735.35	\$16,579.48	\$76,155.87	\$296,532.88	\$161
				\$19,956,014.67	\$7,623,185.44	\$12,332,829.23	\$25,551,775.07	\$13,399
	x		1.	\$485,587.15	\$31,951.20	\$453,635.96	\$871,864.19	\$386
		 Components 	\$615,474.98	\$3,610,092.47	\$551,290.34	\$3,058,802.14	\$5,482,497.29	\$2,091
Measures								
Reseller Sales Amount	• X							

If you select some level of details, e.g. "Subcategory",

Columns	+ Date/Date.Calendar - 😡 🗙]
Rows	– + Product/Product Categories 👻 🕵 🗙	

you'll be able to made detailing greater or smaller with the help of the buttons + and - (to the left of the control).

To search in the hierarchy tree of measures and sets of a specific level/measure/set, a quick search is provided:



4.2 Member Selection

4.2.1 Manual Member Selection

There is a possibility to set arbitrary selection of the items not only by levels, but also with the help of this button:

Columns	999	- + Date/Date.Calendar - 🕵
Rows	100 _	- + Product/Product Categories - 🕵 🗙

If you press it, you will get the member selector dialog. In this window there will be selected all those items which are displayed in the table:

🟮 Member Selector: Product/Product Categories	
Selection Filter Sorting Options	
Σ (All)	
- Category	
Subcategory	
Show Search >>	
	Grand
OK	Cancel

You can see the whole level "Subcategory" selected. You can select several levels at once, for example:



After you press «OK» you will get all three levels displayed in the rows of the table:

Product/Product Categories			Þ	CY 2005	Þ	CY 2006	Þ	CY 2007	Þ	CY 2008
-	Ac	cessories		\$20,235.36		\$92,735.35		\$296,532.88		\$161,794.33
	-	Bike Racks						\$118,428.47		\$79,307.69
	Bi	Hitch Rack - 4-Bike						\$118,428.47		\$79,307.69
	-	Bottles and Cages						\$4,481.33		\$2,995.27
	В	Water Bottle - 30 oz.						\$4,481.33		\$2,995.27
	-	Cleaners						\$6,733.09		\$4,455.28
	Cl	Bike Wash - Dissolver						\$6,733.09		\$4,455.28
	-	Helmets		\$20,235.36		\$74,281.39		\$113,443.66		\$50,752.52
		Sport-100 Helmet, Black		\$6,681.73		\$5,416.35				
		Sport-100 Helmet, Black				\$19,449.16		\$12,417.67		
		Sport-100 Helmet, Black						\$25,988.56		\$17,961.90
		Sport-100 Helmet, Blue		\$7,114.14		\$6,217.44				
		Sport-100 Helmet, Blue				\$20,228.81	Γ	\$13,566.45		
		Sport-100 Helmet, Blue					Γ	\$26,107.56		\$17,818.46
	ets	Sport-100 Helmet, Red		\$6,439.49		\$4,945.69				
	<u>E</u>	Sport-100 Helmet, Red				\$18,023.94		\$11,007.42		
	Ŧ	Sport-100 Helmet, Red						\$24,356.00		\$14,972.16
	-	Hydration Packs						\$41,531.96		\$23,986.79
	Н	Hydration Pack - 70 oz.						\$41,531.96		\$23,986.79
	-	Locks				\$10,084.70		\$6,140.52		
	L	Cable Lock				\$10,084.70		\$6,140.52		
ц.	-	Pumps				\$8,369.26		\$5,145.43		
So	Ρ	Minipump				\$8,369.26		\$5,145.43		
Se	Ŧ	Tires and Tubes						\$628.42		\$296.78
Å	Ti	Patch Kit/8 Patches						\$628.42		\$296.78

Member selector can show the selected items in two ways: using levels and using elements. In order to view the selection using elements you have to select "Show Elements" in the context menu:

Member Selector: Product/Product Categories							
Selection	Filter	Sorting	Options				
- Σ (All)						
	 Categ 	orv			7		
- · ·	🗸 Su	Sho	w Elements				
	* 🗸	Sele	ct Subtree	63			
Unselect Subtree							
		Find					
	L						

After this you will see the following:

Member Selector: Product/Product Categories									
Selection	Filter	Sorting	Options						
-Σ	- E All Products								
🕞 🔍 🔽	Access	sories							
🔶 🕨 🗸	Bikes								
🕨 🍚 🔽 Clothing									
F 🎱 🔽	Components								

The list of categories is displayed by elements. Please, pay attention to the icons near the elements and sets.

In the member selector window you can set the selection with combining levels and elements:

🏮 Member 9	elector: Produ	ct/Produc	t Categorie	25	
Selection F	Filter Sorting	Options			
🚽 Σ) 📃 All F	Products				
	Accessories				
- 🔍 🗹	Bikes		-		
	Subcategory	-	- Lev	el	
	Clothing Bib-Shorts				
F ()	Gloves				
► 🎱	🗸 Jerseys 🔫	_	- Me	mbers	
→ 🎱	Shorts				
► ○	🗸 Socks 🛛 🚄				
	Tights				
	Vests				
	Components				
Show Sear	rch >>				
				OK	Cancel

In order to make the selection as shown above you need to use the context menu which can be different depending on where you pressed the right mouse button: on the element or on the level:

Image: Selector: Product/Product Categories							
Selection Filter ✓ ∑ All Produ → ④ ✓ Acce → ④ ✓ Bikes → ● ✓ Clott → ● ✓ Com	tor: Product/Product Categories Sorting Options Collapse Siblings to Set Collapse Subtree to Set Select Siblings Select Subtree Unselect Siblings Unselect Subtree						
	Find (Ctrl+F)						

Context menu for the level looks like this:

🏮 Membe	Member Selector: Product/Product Categories							
Selection	Filter Sort	ng Options						
- Σ 🔲 Α	ll Products							
	Accessories							
O .	Bikes							
		Show Elements						
	📃 Bit	Select Subtree						
	Ca	Unselect Subtree						
	Gl							
	Je 🗸 Je	Find (Ctrl+F)						
► 🤇	Shorts							

Context menu for the element looks like this:

🟮 Member Selector: Product/Product Categories 🔹 🔍 🗙							
Selection	Filter	Sorting Options					
- Σ 📃 A	II Product	ts					
F 🥥 🗌	Access	sories					
🎱 🗸	Bikes						
) au	~~~	Collapse Siblings to Set					
- 🌒 🗸	Clo	Expand Subtree to Elements					
		Select Siblings					
		Select Subtree					
		Unselect Siblings					
		onsecce sistings					
		Unselect Subtree					
	► ● Eind (Ctrl+F)						
► ● vests							
⊦ 🎱 🗌	Compo	onents					

All actions in this menu are obvious – you can try any of them on your own.

Pr	oduct/Product Cat	CY 2005	F CY 2006	CY 2007	F CY 2008
👻 Bikes		\$7,395,348.63	\$19,956,014.67	\$25,551,775.07	\$13,399,243.18
	Mountain Bikes	\$4,545,336.51	\$9,190,838.09	\$8,854,263.03	\$3,902,246.74
ŝ	Road Bikes	\$2,850,012.12	\$10,765,176.58	\$11,294,381.37	\$4,448,636.90
B	Touring Bikes			\$5,403,130.67	\$5,048,359.55
-	Clothing	\$34,376.34	\$485,587.15	\$871,864.19	\$386,013.16
	▶ Caps	\$2,686.87	\$9,387.61	\$13,800.95	\$5,665.91
÷	Jerseys	\$28,255.57	\$110,243.77	\$290,004.73	\$150,804.63
ŏ	▹ Socks	\$3,433.89	\$3,139.50	\$10,793.76	\$7,271.66

As a result of the selection shown on the picture above you will get this report:

As we can see, the table has all elements of the level "Subcategory" under the "Bikes" element, and three elements selected separately under "Clothing" element.

4.2.2 Searching

In the member selector form you can search for necessary members:

🏮 Member Selec	tor: Produ	ct/Product Categ	ories					
Selection Filter	Sorting	Options						
You are currently in	offline mo	de.	Disable offline m	ode				
🚽 🎱 🗹 All Produc	ts							
- O Accessories								
- 🚽 🎱 🗹 He	elmets							
9 🗸	Sport-100) Helmet, Black						
. 🔍 🗸	Sport-100) Helmet, Black						
i 🔍 🗸	Sport-100) Helmet, Black						
i 🔍 🗸	Sport-100) Helmet, Blue						
i 🔍 🗸	Sport-100) Helmet, Blue						
i 🔍 🗸	Sport-100) Helmet, Blue						
i 🔍 🗸	Sport-100) Helmet, Red						
i 🔍 🗸	Sport-100) Helmet, Red		Ŭ				
i 🔍 🗸	Sport-100) Helmet, Red						
🚽 🎱 📃 Clothi	ng							
🚽 🎱 🔽 G	oves							
i 🔍 🗸	Full-Finge	er Gloves, L						
i 🖉 🗸	Full-Finge	er Gloves, M		Ŧ				
Search:	helmet;glo	oves		• X				
Search Level:				* X				
Search Mode:	Search by	name (translated)		7				
	Search by	name (translated)		13				
	Search by	/ key						
	Search by	name						
	Search by property 'Category'							
Hide Search <<	Hide Search << Search by property Class							
	Search by	property 'Days to M	lanufacture'	-				
	,	<u> </u>	ОК	Cancel				

The button "Show Search / Hide Search" below opens or closes the search panel. On the search panel you can set the phrase, the level in the hierarchy where search will be performed (if not specified – the searching will be done on all levels) and the search mode:

- Search by name: your phrase will be searched among member names;
- Search by key: your phrase will be searched among member keys;
- Search by property 'x': your phrase will be searched among values of the property 'x' of the members.

You can specify several words using ";". Each word can be started or ended with "*". For example, type touring* if you want to find all goods which start from touring. If you need to search for symbols "*" or ";" you have to specify \ before them, like this: «*» μ «\;». In order to search for "\" you should specify "\\".

The option "Approximate searching" makes so that the application will search the words approximately. Thus, searching for «helmet;gloves» with checkbox "Approximate searching" set to "ON" is the same as searching for "*helmet*;*gloves*" without it.

After successful searching of elements, the member selector turns into "offline mode". It means that the member selector will show ONLY the elements which are the search result plus their parents. You can unplug the "offline mode" pressing this button:

Member Selector: Product/Product Categories									х
Selection	Filter	Sorting	Options						
You are cur	rently in	offline mo	de.			Disable	offline mo	de	
- • • A - • • •	Il Produce Bikes T c V V V V V V V V V V V V V V V V V V V	ts uring Bikes Touring-1 Touring-1 Touring-1 Touring-1 Touring-1 Touring-1 Touring-1 Touring-2 Touring-2 Touring-2 Touring-2 Touring-2 Touring-2 Touring-2 Touring-2 Touring-3	000 Blue, 4 000 Blue, 5 000 Blue, 5 000 Blue, 6 000 Yellow, 000 Yellow, 000 Yellow, 000 Yellow, 000 Blue, 4 000 Blue, 5 000 Blue, 5 000 Blue, 4	46 50 54 50 55 55 56 50 54 50 54 50 54 50 54 50 54 50 54 50 54 50 54 50 54 50 54 50 54 56 50 54 56 56 56 56 56 56 56 56 56 56 56 56 56					•
Search:		touring*						T 3	×
Search Lev	el:							• 3	x
Search Mod	de:	Search by	name						•
		Approx	imate searc	:hing					
			Search	1		5	Search Ad	ld	
Hide Se	arch <<								
						ОК		Cancel	

In the offline mode you can show only those elements which you need. Using menu items "Refresh Children" and "Refresh Subtree" you can display all children of the selected element or all its subtree:

🟮 Member Selector: Product/Product Categories 🛛 🗖 🗙									
Selection	Filter	Sorting	Options						
You are curr	rently in	offline mo	de.			Disable	offline mo	de	
- () - () - ()		HL Tourin LL Tourin edals Tc addlk LL LL MI MI HL HL HL HL HL HL HL HL Tourin	g Handlebar g Handlebar Collapse Si Collapse Si Select Sibli Select Subt Unselect Si Unselect Si Unselect Si Refresh Ch Refresh Sul Find g Frame - Y	rs iblings to ubtree to ngs tree iblings ubtree ildren btree (Ctrl+F) ellow, 54	Set Set				- -
Search:		touring*						•	x
Search Leve	el:							•	x
Search Mod	le:	Search by	name (tran	islated)					•
		Approx	imate searc Search	thing			Search Ad	ld	
Hide Se	arch <<	:							
						ОК		Cancel	



4.2.3 Filtering of Selected Elements

You can filter those elements which you've selected on the tab "Selection". There is a second tab "Filter" which is used for this.

Let us make an example: let us choose all mountain bikes which are in the top 10 by the sum of sales in the first quarter of 2007. In order to select them, please do the following.

Choose all bicycles:



Create a new filtering group on the tab "Filter":

🏮 Member							
Selection	Filter	g Options					
Context dependency on previous hierarchies							
Groupsjoin	Groups join type						
And	🔘 Or	🔘 Except	O After	€ ₽ ₩			

Fill in the data in order to select top 10 as shown on the following picture:

Member Selector: Product/Product Categories						
Selection	Filter	Sorting	Options			
Context	depe	ndency o	n previous hie	rarchies	Active	
Groupsjointy	pe					
And	0	Or	C Except	O After	⇐킂╋╳	
Group 1						
Group name:		Group 1				
Conditions jo	intype	3				
And	0	Or	Except	🔘 After	╡ ╞ ┼	
Top 10 sales	5					
Name:	Тор	10 sales				
Level:	All levels 🔹					
Type:	By m	easure val	Je		•	
Condition:	x top	most mem	pers (TopCount)		•	
Measure:	The f	first measu	re among selecte	d	•	
X:		10	\$			
	🗸 Ig	nore empt	y values			
Override Co	ntext					
Override Context for Hierarchy						
Override Context for Hierarchy						
				ОК	Cancel	

In order to make so that the "Reseller Sales Amount" is to be computed using the 1st quarter of 2007 (but not all the time) you have to override context: press the button "Override Context for Hierarchy..."

Top 10 sales						
Name:	Top 10 sales					
Level:	All levels 🔹					
Туре:	By measure value 🔻					
Condition:	x topmost members (TopCount)					
Measure:	Reseller Sales Amount					
X:	10 🗘					
	☑ Ignore empty values					
Override Cor	ntext					
Override Context for Hierarchy						

Choose the time hierarchy:

🏮 Hierarchy	x
Please, choose a hierarchy:	
* Date/Date.Calendar	-
OK	Cancel

Choose the 1st quarter of 2007:

•	δ		All Periods
	►	۲	CY 2005
	►	۲	CY 2006
	-	۲	CY 2007
		-	H1 CY 2007
			🕨 🌑 🔽 Q1 CY 2007
			› 🎱 🔲 Q2 CY 2007
		►	H2 CY 2007
	►	۲	CY 2008
	►	۲	CY 2010

After pressing «OK» you will get this:

Top 10 sales					
Name:	Top 10 sales				
Level:	All levels 🔹				
Туре:	By measure value 🔹				
Condition:	x topmost members (TopCount)				
Measure:	Reseller Sales Amount 🔻				
X:	10 🗘				
☑ Ignore empty values					
Override Context					
Date/Date.Calendar: All Periods.CY 2007.H1 CY 2007.Q1 CY 2007					
Override Context for Hierarchy					

Add one more filtering condition:

🏮 Membe	🕅 Member Selector: Product/Product Categories 🛛 🗖 🗙					
Selection	Filter	Sorting	Options			
Conte	xt depe	ndency o	n previous h	ierarchies	Active	
Groupsjoin	type					
And	0	Or	C Except	t 🔘 After	⋞⋼⋕⋇	
Group 1						
Group nam	e:	Group 1				
Conditions	jointype	2				
And	0	Or	C Excep	t 🔘 After	€ → ×	
Top 10 sa	les					

In order to filter only mountain bikes fill in the following form:

Top 10 sales	In mountain
Name:	In mountain
Level:	All levels 🔹
Туре:	By property 🔹
Property:	Name (translated) -
Comparison:	as text 🔹
Condition:	members with values satisfying mask x 🔹
x	mountain*

All filtering conditions are set. In order to make so that both conditions are applied to selected members, you have to select the "And" join type:

🏮 Membe	Member Selector: Product/Product Categories						
Selection	Filter	Sorting	Options				
Conte	xt depe	ndency o	n previous	; hierar	chies		Active
Groupsjoin	Groups join type						
And	0	Or	O Exce	pt	🔘 After		⋹⋼⋕⋇
Group 1							
Group nam	Group name: Group 1						
Conditions	jointype	е					
And	0	Or	C Exce	ept	O After		⇐⇒⊹×
Top 10 sa	les In	mountain					

If you apply this filter, you will see the expected result:

Product/Product Categ	+ Q1 CY 2007	▶ Q2 CY 2007
Mountain-200 Black, 38	\$308,594.18	\$372,526.05
Mountain-200 Black, 42	\$272,227.61	\$313,512.02
Mountain-200 Black, 46	\$200,401.80	\$221,302.60
Mountain-200 Silver, 38	\$241,113.25	\$303,255.84
Mountain-200 Silver, 42	\$221,750.45	\$231,170.43
Mountain-200 Silver, 46	\$223,713.32	\$230,384.95

In the first condition you applied filtering by measure. In the second – using a property. When you're filtering by measure value, you can select one of the following conditions:

Top 10 sales	In mountain	
Name:	Top 10 sales	
Level:	All levels	•
Type:	By measure value	•
Condition:	x topmost members (TopCount)	N
Measure:	x topmost members (TopCount) x smallest members (BottomCount)	~~
X:	topmost members whose sum $>= x$ (TopSum)	
	topmost members whose sum $>= x$ (bottomsum) topmost members whose sum $>= x$ % of the total (TopPercent)	
Override Cor	smallest members whose sum>= $x\%$ of the total (BottomPercent) members with value = x	
Date/Date.Ca	members with value <> x	
	members with value $> x$	- []
	members with value $>= x$	- 11
Override Co	members with value $< x$	
overnue co	members with value $\leq x$	
l	members with $x \le value \le y$	2
	members with non-empty value	

The list of available conditions:

- Topmost members whose sum $\geq X\%$ of the total;
- Smallest members whose sum >= X% of the total;
- Topmost members whose sum >= X;

- Smallest members whose sum >= X;
- Members with value = X;
- Members with value <> X;
- Members with value > X;
- Members with value >= X;
- Members with value < X;
- Members with value <= X;
- Members with value in the range from X to Y;
- Topmost X members;
- Smallest X members;

If you filter elements by property, the list of conditions depends on the type of the property: is it text, numeric or date.

If the property type is numeric or date, the list of conditions is identical to the list for measure.

If the property is of text type, the list of conditions is as following:

- Members with values satisfying mask (the mask is case insensitive; you can use symbol «*» in the beginning and in the end of the mask);
- Members with values = X;
- Members with values <> X;
- Members with values > X;
- Members with values >= X;
- Members with values < X;
- Members with values <= X;
- Members with values in range between X and Y;
- Topmost X values;
- Smallest X values.

It is possible to change filter status:

🏮 Membe	t Categories			
Selection	Filter	Sorting	Options	
Context dependency on previous hierarchies			hierarchies Active	

4.2.4 Sorting of Selected Members

In most of the cases the dimension members are sorted by names, but you can override the method of member sorting.

Let us build the following report:

Columns 🗧 - + Date/Date.Calendar - 🔞 🗙					
Rows 📋 – + Product/Product Categories 🔻 🗔 🗙					
Rows / Columns Filter Sorting					
Context	Product/Product	FCX 2007	+ CY 2008		
	 Accessories 	\$296,532.88	\$161,794.33		
	 Bikes 	\$25,551,775.07	\$13,399,243.18		
	Clothing	\$871,864.19	\$386,013.16		
	+ Components	\$5,482,497.29	\$2,091,011.92		
	▶ Bottom Br	\$30,792.82	\$21,033.55		
	Brakes	\$45,187.31	\$20,831.40		
Measures	Chains	\$5,685.93	\$3,691.78		
Deceller Cales Amount - X	Cranksets	\$124,249.27	\$79,693.34		
Reseller Sales Amount + 🗙	 Derailleurs 	\$44,321.13	\$25,888.36		
	▹ Forks	\$28,259.07			
	Handlebars	\$88,710.99	\$28,237.63		
	Headsets	\$25,010.36			
	Mountain F	\$2,067,908.64	\$873,844.03		
	ي ⊢ Pedals	\$94,060.53	\$53,423.38		
	E → Road Fram	\$1,631,377.27	\$356,197.37		
	5 → Saddles	\$37,831.96	\$17,997.43		
	E > Touring Fr	\$1,032,154.04	\$610,173.64		
	ပိ 🕨 Wheels	\$226,947.94			

In order to set up sorting, open the member selector and choose the tab "Sorting":



There are 3 options here:

- Do not sort;
- Sort all levels by a single criterion;
- Sort each level by different criteria.

Let us sort the elements on the level Subcategory in descending order by Reseller Sales Amount in 2007. For this you have to select the last option – "Sort levels using different criterias". Then select the tab which corresponds to the level Subcategory and switch on the sorting for this level:

🟮 Member Selector: Product/Product Categories 🛛 🗖 🗙					
Selection Filter Sorting Options					
Context dependency on previous hierarchies					
O Do not sort					
O Sort all levels by a single criterion					
Sort each level by different criteria					
Defails Colored Coloritory					
Default Category Droduct					
Set sorting					
Ø By property					
Name (translated)	•				
O By measure					
The first measure among selected	-				
Override Context					
Override Context for Hierarchy					
Sort Order: Ascending Descending					
Z Save Hierarchy					
ок	Cancel				

Choose "by measure" and in the dropdown list choose "Reseller Sales Amount":

🚳 Member Selector: Product/Product Categories 🛛 🔍 🗙				
Selection Filter Sorting Options				
Context dependency on previous hierarchies				
O Do not sort				
Sort all levels by a single criterion				
Sort each level by different criteria				
Default Category Subcategory Product				
Set sorting				
O By property				
Name (translated)				
By measure				
Reseller Sales Amount				
Override Context				
Override Context for Hierarchy				
Sort Order: Ascending Descending				
Save Hierarchy				
OK Cancel				

In order to take into account the values for the year 2007, you have to override context. For this press the button "Override Context for Hierarchy":

Override Context for Hierarchy					
Sort Order: 🗹 Save Hierarchy	Ascending	O Descending			
		OK Cancel			
🏮 Hierarchy x Please, choose a hierarchy: -📄 Sales Þ 🕨 💓 Account 🕨 💓 Customer 👻 💽 Date 🚽 🚞 Calendar Date.Calendar Date.Calendar Weeks Date.Calendar Quarter of Year 🚦 Date.Calendar Semester of Year Date.Calendar Week of Year Date.Calendar Year 🕨 📄 Fiscal 🦹 Date.Date Date.Day Name Date.Dav of Month OK Cancel

In the dialog box select the "Date.Calendar" hierarchy and press «OK»:

Again press «OK». You will have a member selector form where you have to select the year 2007 and press «OK»:

🗿 Member Selector	: Date/Date.Calendar	
Selection Options		
O Date Range	O Tree	
 All Periods CY 2005 CY 2006 CY 2007 CY 2007 CY 2008 CY 2010 		
Show Search >>		
	ок	Cancel

Finally, choose the descending sort order and press «OK»:

🏮 Member Selector: Product/Product Categories 🛛 🔍 🗙							
Selection Filter Sorting Options							
Context dependency on previous hierarchies							
🔘 Do not sort							
◯ Sort all levels by a single criterion							
Sort each level by different criteria							
Default Category Subcategory Product							
Set sorting							
O By property							
Name (translated)							
By measure							
Reseller Sales Amount							
Date/Date.Calendar: All Periods.CY 2007							
Override Context for Hierarchy							
Sort Order: O Ascending O Descending							
Save Hierarchy							
OK Cancel							

After this you'll see that all elements of the level "Subcategory" inside each group are sorted in descending order by the value of "Reseller Sales Amount" in the year 2007.

If you expand another product category, you will see that the elements on the "Subcategory" level are sorted in the same way. That is, the sorting is applied to all members of the selected level (in this case – "Subcategory") inside the categories:

Pro	oduct/Produc	► CY 2007	Þ	CY 2008
	Accessories	#206 E22 99		¢161 704 22
P	Dileas	\$290,552.00	+	\$101,794.33
►	Bikes	\$25,551,775.07	\$:	13,399,243.18
-	Clothing	\$871,864.19		\$386,013.16
	Jerseys	\$290,004.73	h	\$150,804.63
	Shorts	\$179,301.33	L	\$113,639.82
	Vests	\$131,993.28	T	\$91,808.09
	Gloves	\$102,156.07	T	\$16,823.04
	 Tights 	\$78,937.08	T	
Bu	Bib-Shorts	\$64,876.99		
Ŧ	▶ Caps	\$13,800.95	ł	\$5,665.91
ŏ	 Socks 	\$10,793.76		\$7,271.66
-	Components	\$5,482,497.29	5	\$2,091,011.92
	Mountain	\$2,067,908.64	h	\$873,844.03
	Road Fra	\$1,631,377.27		\$356,197.37
	Touring F	\$1,032,154.04		\$610,173.64
	Wheels	\$226,947.94		
	 Cranksets 	\$124,249.27		\$79,693.34
	Pedals	\$94,060.53	T	\$53,423.38
	Handlebars	\$88,710.99	T	\$28,237.63
	 Brakes 	\$45,187.31	T	\$20,831.40
	 Derailleurs 	\$44,321.13	T	\$25,888.36
2	▹ Saddles	\$37,831.96		\$17,997.43
ent	▹ Bottom B	\$30,792.82		\$21,033.55
6	Forks	\$28,259.07		
Ē	Headsets	\$25,010.36	1	
ů	Chains	\$5,685.93		\$3,691.78

4.2.5 Additional options

4.2.5.1 Option "Show Parent Elements"

If you want to see for each element its parent elements, you don't obligatory need to include the parent elements into selection. You can use the option "Show Parent Elements" on the tab "Options" of the member selector form:

🏮 Membe	r Select	or: Produc	t/Produ	ct Categ	ories	
Selection	Filter	Sortin	Options	>		
☐ Offline ✓ Show p Top visibl	mode parent ek e level	ements	(All)			•
Display M Name Key ar Advan	ode: nd Name ced				odente de	
All:					Selected:	
Key Name Category Class Color Days to I Dealer Pr	/ Manufact rice	ture	The second secon	> <	Liements Tree	Up Down
					ОК	Cancel

If you select this option, you will be able to set up the topmost level of the visible elements:

Show parent elements		
Top visible level	(All)	-
	(All)	
	Category	
	Subcategory	
Display Mode:	Product	

Select the level "(All)", go to the first tab "Selection" and uncheck all parent elements:



Close the member selector form by pressing «OK». You will see that the parent elements are visible in the captions of the rows:

Pr	odu	ict	/Product Categ	P Q1 CY 2007	> Q2 CY 2007	> Q3 CY 2007	> Q4 CY 2007
Г		ŀ	Mountain Bikes	\$1,890,325.97	\$2,127,316.27	\$2,530,563.65	\$2,306,057.14
s	ŝ	Þ	Road Bikes	\$2,795,651.38	\$3,271,296.85	\$2,796,037.81	\$2,431,395.34
ţ	Ē	Þ	Touring Bikes			\$2,606,901.36	\$2,796,229.31
^b		Þ	Caps	\$1,780.88	\$2,924.48	\$5,270.04	\$3,825.55
P.	÷	Þ	Gloves	\$25,381.10	\$41,090.02	\$20,948.74	\$14,736.21
A	ŏ	Þ	Shorts	\$11,230.13	\$21,406.93	\$81,993.61	\$64,670.66

4.2.5.2 Option "Display Mode"

On the "Options" tab there is one more useful option – possibility to display properties of elements in the table.

Select any set of goods in the member selector, for example:



Member Selector: Product/Product Categories Sortin Options Filter Selection Offline mode Show parent elements Top visible level (All) • DisplayMode: O Name C Key and Name Advanced All: Selected: Elements Tree Кеу ۰ >> Up Name Category > Down Class Color < Days to Manufacture Dealer Price << OK Cancel

Open the "Options" tab. Select the radio button "Advanced":

Find the property "Standard Cost" and add it to the list of displayed properties, and press «OK»:



As a result, you will see prices near each product:

Pr	Product/Product Categories			Standa	+ Q1 CY 2007	> Q2 CY 2007				
		÷	Men's Bib-Shorts, L	37.1209	\$3,401.62	\$7,937.12				
		ŝ	Men's Bib-Shorts, M	37.1209	\$11,014.78	\$22,329.72				
		B	Men's Bib-Shorts, S	37.1209	\$7,127.21	\$13,066.55				
5					Full-Finger Gloves, L	15.6709	\$12,858.70	\$17,113.39		
ť										Full-Finger Gloves, M
b B	<u>p</u>	ŝ	Full-Finger Gloves, S	15.6709	\$1,344.85	\$2,894.84				
4	노토	Ŧ	÷	뒍	N N	Ŧ	Half-Finger Gloves, M	9.7136	\$2,105.21	\$4,838.85
¥.	ŏ	ŏ	50	50	Half-Finger Gloves, S	9.7136 낭	\$1,271.60	\$2,096.28		
				5	Standard Cost: 9.71	36				

You can set up several properties to display. Let us add the ID of the goods before its name. Go back to the "Options" tab and add the property KEY0 to the displayed list and move it before the "Elements Tree" using the "Up/Down" buttons:

🏮 Membe	r Select	or: Produ	ct/Produc	t Categ	ories	
Selection	Filter	Sorting	Options			
Offline	mode					
Show (oarent el	ements				
Top visibl	elevel		Categ	ory		Ŧ
Display M Name Key ar Advan All: Key Name Category Class 	ode: nd Name iced		ĵ	>>	Selected: Key Elements Tree Standard Cost	Up Down
Color Days to	Manufact	ture		<		
Dealer P	rice		-	<<		
					ОК	Cancel

Press «OK» and you will see the following report:

Кл	Product/Product Ca	Standa	> Q1 CY 2007	> Q2 CY 2007
461	Men's Bib-Shorts, L	37.1209	\$3,401.62	\$7,937.12
460	Men's Bib-Shorts, M	37.1209	\$11,014.78	\$22,329.72
459	Men's Bib-Shorts, S	37.1209	\$7,127.21	\$13,066.55
470	Full-Finger Gloves, L	15.6709	\$12,858.70	\$17,113.39
469	Full-Finger Gloves, M	15.6709	\$7,800.74	\$12,479.46
468	Full-Finger Gloves, S	15.6709	\$1,344.85	\$2,894.84
464	Half-Finger Gloves, M	9.7136	\$2,105.21	\$4,838.85
462	Half-Finger Gloves, S	9.7136	\$1,271.60	\$2,096.28

As you may see, to the left there are IDs of the goods, to the right – their prices.

You may have noticed that for quick displaying of the IDs and names there is a special mode "Key and Name":

🏮 Member Selector: Produ	ct/Produc	t Categories	
Selection Filter Sorting	Options		
Offline mode			
Show parent elements			
Top visible level	Categ	ory	~
Display Mode: Name Key and Name Advanced			
All:		Selected:	
Name Category Class Color Days to Manufacture Dealer Price End Date	* *	>> Key Elements Tree Standard Cost <	Up Down
		ОК	Cancel

4.3 Selection in the Table

You can select the necessary items with the help of context menu (opens with the right mouse button) in the table:



We invoked the popup menu for the "Bikes" item on the picture. Let us look at every possible action.

The action "Show By" changes the structure of the table. Therefore we will look at it in the next section.

4.3.1 Drill Up/Down

Operation "Drill down" makes so that the selection goes inside the element on the deeper level. If we apply it for "Bikes" we will see all product subcategories which belong to the "Bikes" category:

Product/Product	▶ CY 2005	▶ CY 2006	▶ CY 2007	▶ CY 2008
Mountain Bikes	\$4,545,336.51	\$9,190,838.09	\$8,854,263.03	\$3,902,246.74
Road Bikes	\$2,850,012.12	\$10,765,176.58	\$11,294,381.37	\$4,448,636.90
Touring Bikes			\$5,403,130.67	\$5,048,359.55

Operation "Drill Up" is the opposite one to "Drill Down".

4.3.2 Hide Item, Hide Siblings and Show All Children

Operation "Hide Item" hides the item from the selection. If we apply it to the "Road Bikes" (as it is shown on the picture):

Pr	oduct/Product Cat	EY 2005	CY 2006	
Þ	Accessories	\$20,235.36	\$92,7	35.
-	Bikes	\$7,395,348.63	\$19,956,0	14.
	Mountain Bikes	\$4,545,336.51	\$9,190,8	38.
s	Road Bikes	40.000 040 40	*** C 765 *	76.
¥	Touring Bikes	Drill by	•	
Þ	Clothing	Drill by on New	Page 🕨	87.
⊧	Components			92.4
		Drill Up		
		Drill Down		
		Hide Item		
		Keep Only This	;	
		Hide Siblings		

the element will disappear from the table:

Product/Product Cat	▶ CY 2005	▶ CY 2006	▶ CY 2007	▶ CY 2008
 Accessories 	\$20,235.36	\$92,735.35	\$296,532.88	\$161,794.33
👻 Bikes	\$7,395,348.63	\$19,956,014.67	\$25,551,775.07	\$13,399,243.18
글 🕨 Mountain Bikes	\$4,545,336.51	\$9,190,838.09	\$8,854,263.03	\$3,902,246.74
🚡 🕨 Touring Bikes			\$5,403,130.67	\$5,048,359.55
 Clothing 	\$34,376.34	\$485,587.15	\$871,864.19	\$386,013.16
 Components 	\$615,474.98	\$3,610,092.47	\$5,482,497.29	\$2,091,011.92

In order to show all hidden elements under "Bikes" you need to select the item "Show All Children" for the "Bikes" element:



Product/Product Cat	FCX 2005	FCX 2006	FCX 2007	FCX 2008
 Accessories 	\$20,235.36	\$92,735.35	\$296,532.88	\$161,794.33
👻 Bikes	\$7,395,348.63	\$19,956,014.67	\$25,551,775.07	\$13,399,243.18
Mountain Bikes	\$4,545,336.51	\$9,190,838.09	\$8,854,263.03	\$3,902,246.74
👸 🕨 Road Bikes	\$2,850,012.12	\$10,765,176.58	\$11,294,381.37	\$4,448,636.90
🚡 🕨 Touring Bikes			\$5,403,130.67	\$5,048,359.55
Clothing	\$34,376.34	\$485,587.15	\$871,864.19	\$386,013.16
 Components 	\$615,474.98	\$3,610,092.47	\$5,482,497.29	\$2,091,011.92

After that the element "Road Bikes" will become visible again:

The action "Hide All Siblings" works in the same way as "Hide Item" with the only difference that it hides not the element itself, but the siblings of the element.

Let us look at the example with more than 100 elements in the products list:

Columns 🖺 🗕 +	Date/Date.Calendar 🔻 🗔 🗙			
Rows 📒 - Pro	oduct 👻 🗔 🗙			
Rows / Columns Filter	Sorting			
Context	Product	+ CY 2007		
	AWC Logo Cap	\$4,705.36		
	AWC Logo Cap	\$9,095.59		0
	Bike Wash - Dissolver	\$6,733.09		
	Cable Lock	\$6,140.52		
	Chain	\$5,685.93		
	Classic Vest, L	\$457.20		
Measures	Classic Vest, M	\$48,971.08		
	Classic Vest, S	\$82,565.00		
Reseller Sales Amount 🔹 🗙	Front Brakes	\$31,576.61		
	Front Derailleur	\$26,903.77		
	Full-Finger Gloves, L	\$29,972.09		
	Full-Finger Gloves, M	\$20,280.20		
	Full-Finger Gloves, S	\$4,239.68		
	Half-Finger Gloves, L	\$1,667.21		
	Half-Finger Gloves, L	\$5,839.70		
	Half-Finger Gloves, M	\$6,944.06		
	Half-Finger Gloves, M	\$18,380.76		
	Half-Finger Gloves, S	\$3,367.88		
	Half-Finger Gloves, S	\$11,464.49		
	Hitch Rack - 4-Bike	\$118,428.47		
	HL Bottom Bracket	\$22,597.14		
	HL Crankset	\$87,145.10		
	HL Fork	\$23,545.67		
	HL Headset	\$8,307.02		
	HL Mountain Frame - Black, 38	\$89,809.75		
	HL Mountain Frame - Black, 38	\$118,224.96		
	HL Mountain Frame - Black, 42	\$152,382.12		
	HL Mountain Frame - Black, 42	\$234,830.40		
	HL Mountain Frame - Silver, 38	\$154,808.72		
Highlight	HL Mountain Frame - Silver, 38	\$249,229.20		
	HI Mountain Eramo Cilvor 42	612 20C 01		· ·
Treemap 🔛 Sort	Goptions 2 Basic	Scatter	 Search	•
ost:8001/ Rows: 266 Co	olumns: 1 Exec. Time: 00.1			

Let us assume we want to hide one of the products ("Cable Lock"):

Product		⊢ CY	2007
AWC Logo Cap			\$4,705.36
AWC Logo Cap			\$9,095.59
Bike Wash - Diss	olver		\$6,733.09
Cable Lock			140.52
Chain	Drill by		685.93
Classic Vest, L	Drill by on New	Page	+ 457.20
Classic Vest, N	,		971.08
Classic Vest, S	Drill Up		565.00
Front Brakes	Drill Down		576.61
Front Derailleu	DHILDOWH		903.77
Full-Finger Glo	Hide Item		972.09
Full-Finger Gld			280.20
Full-Finger Glo	Keep Only This		239.68
Half-Finger Glo	Hide Siblings		667.21
Half-Finger Glo			839.70
	Show All Childre	en	

After opening member selector again, we will see what products we've hidden:

🏮 Member Selector: Product			
Selection	Filter	Sorting	Options
- Σ (All)		
• •	Produc	ct	
📃 🔍 🖳	Cable	Lock	

This functionality is switched on only in the case when the group contains more than 100 elements.

4.4 Change of the Page Structure

4.4.1 Page Structure

Under the term "Page structure" we mean all that information which describes what is the selection on the columns and rows, what is displayed inside the page, what is the format of the numbers, what filters and sorting rules exist, etc. If you were given enough rights by administrator, you will be able not only select the elements (as shown above), but also to change the page structure.

First of all make sure that in the menu "View" under submenu "Designers" all designers are selected:

lho	st:8	001/									
1	<u>V</u> ie	w [<u>)</u> ata	<u>T</u> able	T <u>o</u> ols	<u>H</u> elp	þ				
à	\checkmark	Status	; Bar					€.0 .00	.00 0 10	0% -	靊
-	\checkmark	Dime	nsions	/ Measur	es	Ctrl+D					
	23	Only I	Data		Alt	+Enter					
	³ 분	Data a	and De	signers	Alt	+Enter					
-		Desig	ners				•		Show All		
ter	S	orting							Hide All		
		Produ	ct				⊦ C	1	Context		
		AWCI	Logo C	ар				V	CONTEXT		
		AWC I	Logo C	ар				\checkmark	Measure	s	
		Bike V	Vash-	Dissolve	r			· ,	-		
		Chain						\checkmark	Chart Pro	operties	
		Classi	c Vest	, L				1	Rows / C	olumn	5
		Classi	c Vest	, M							
		Classi	c Vest	, S				\checkmark	Filter		
		Front	Brake	5				\checkmark	Sorting		
•	×	Front	Deraill	eur				\$20,	903.77		

If not all are selected – choose "Data and Designers" menu item.

If you have no such menu items it means that administrator has restricted you from using the designers, so you may skip this section.

4.4.2 Designers

All pages can be divided into several zones:

🟮 Business Analysis Tool (Report Module) - http://localhost:8001/	_ – ×
Application Module Reports Report Page View Data Table Tools Help	
Ġ 💿 💾 🔢 🖼 🚱 🚱 😭 🕵 چ 😓 🗔 🛒 Ć 🌂 🗘 🍣 🇞 000 😪 🖇 100% 🗸 🌐 Table	- 12
Sales (Version 1)	~
Settings Dimensions 🔍 😰 🙏 🥍 Columns 🗮 - + Date/Date.Calendar 👻 🕵 🗙	
▶ M Account ▲	
Rows = - + Product/Product Categories - C ×	
List > [2] Date Rows / Columns Filter Sorting	
List → 12 Delivery Date Product/Prod → CY 2005 → CY 2006 → CY 2007	EX 2008
► Context Context + Accessories \$20,235.36 \$92,735.35 \$296,532.88	\$161,794,33
▶ Eikes \$7,395,348,63 \$19,956,014,67 \$25,551,775,07	\$13,399,243,18
Reports Fill Employee Foldering \$34,376.34 \$485,587.15 \$871,864.19	\$386,013.16
► Components \$615,474.98 \$3,610,092.47 \$5,482,497.29	\$2,091,011.92
▶ 1 Internet Sales Or	
🕨 💓 Organization	
Measures Measures	
Measures Q - + Reseller Sales Amount - X	
► REF	
Control C	
Server E Min Date	
Sets Q - +	
Galculated Sets	
▶ 🖻 Sets	
Highlight	
Treeman Sort Contions Contions 2 Basic TR Basic 2 Resident	Search
	Jearchin *
Login: john Server: http://localhost:8001/ Rows: 4 Columns: 4 Ever. Time: 00.1	

The area which is selected with red represents all dimensions and measures. You can drag and drop their elements to areas which are selected with blue. The latter are called "designers" – they defined the structure of the page.

There is the way to show or hide at once all designers in two ways:

- 1. To press Alt+Enter on the keyboard.
- 2. To press button "Data and Designers" or "Only Data" on the toolbar:

🟮 Business Analysis Tool (Report Module) - http://locall	ost:8001/	X
Application Module Reports Report Page	<u>V</u> iew <u>D</u> ata <u>T</u> able T <u>o</u> ols <u>H</u> elp	
🕹 🎕 🔊 🦻 📓 📰 🖼 🌀 😋 😂	🛐 🄢 🖸 🖏 🕸 📚 % 🚥 500 % 现 100% 🔽 🖶 Table	- 🖓 🕗
Sales (Version 1)	View only data (Alt+Enter)	x
Settinas Dimensions Q 🙋 🤼 🧎 Column		

3. Enter the "View" menu and select one of the items:



If you have hidden all designers, the report will look like this:

🏮 Business Analy	rsis Tool (Report Module) - http://localhost:8001/	
<u>Application</u>	<u>M</u> odule <u>R</u> eports Report <u>P</u> age <u>V</u> iew <u>D</u> ata <u>T</u> able T <u>o</u> ols <u>H</u> elp	
6 🛛 🗎	🔢 🔢 😺 6 6 6 1 20 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
	Sales (Version 1)	х
Settings	Product/Product Cat + CY 2005 + CY 2006 + CY 2007 + CY 2008	
	▶ Accessories \$20,235.36 \$92,735.35 \$296,532.88 \$161,794.33	
	- Bikes \$7,395,348.63 \$19,956,014.67 \$25,551,775.07 \$13,399,243.18	
	▶ Mountain Bikes \$4,545,336.51 \$9,190,838.09 \$8,854,263.03 \$3,902,246.74	
List	v ▶ Road Bikes \$2,850,012.12 \$10,765,176.58 \$11,294,381.37 \$4,448,636.90	
	\$5,403,130.67 \$5,048,359.55	
	Coming \$34,376.34 \$485,587.15 \$871,564.19 \$386,013.16	
	Components \$615,474.38 \$3,610,092.47 \$5,462,497.29 \$2,091,011.92	
Reports		
	Sales by Category Rate Treemap Sort Options Options 2 Basic 2 Scatter	Search 🔻
Login: john Ser	rver: http://localhost:8001/ Rows: 7 Columns: 4 Exec. Time: 00.6	

4.4.3 Designer "Rows / Columns"

This designer shows what is displayed on the rows and columns. It is located in the upper part of the window above the table:

🟮 Business Analysis Tool (Report Module) - http	r://localhost:8001/	_ – ×
Application Module Reports Report	<u>P</u> age <u>V</u> iew <u>D</u> ata <u>T</u> able T <u>o</u> ols <u>H</u> elp	
	🔊 چ 🛐 🔢 🖒 🏷 🏷 🃚 💸 % 000 500 300 100% 🔻 🏥 Table	- 14 0
Sales (Version 1)		x
Settings Dimensions 🔍 🙋 🚠 🏄	Columns 😫 – + Date/Date.Calendar 🔻 🗔 🗙	
→ D Account → D Customer	Rows 🗮 - + Product/Product Categories 🔻 🗔 🗙	
List	Rows / Columns Filter Sorting	

On our example we see that columns display time, and rows display products. Let's show how this can be changed.

Drag the item "Date.Calendar" on rows:

Columns		– + Date/Date.Calendar 🔻 🕵 🗙
Rows	111	- + Product/Product Categories - 🔍 🗙

During the movement process you can notice a vertical red line shown in the place where the item will be dropped. The result after the movement will be the following:

Columns	111	
Rows	999	– + Product/Product Categories 🔻 🗔 🗙 – + Date/Date.Calendar 🝷 🕵 🗙

Drag the element "Product" on columns in the same way. After these operations the page will look like this:

Columns 😫 - + Product/Product Categories 🔻 😡 🗙									
Rows 🗧 - + Date/Date.Calendar 🔹 🕵 🗙									
Rows / Columns Filter Sorting									
Context	Date/Date.	 Accessories 	🚽 Bikes	Bikes					
	Calendar			Mountain Bi	Road Bikes	Fouri			
	৮ CY 2005	\$20,235.36	\$7,395,348.63	\$4,545,336.51	\$2,850,012.12				
	+ CY 2006	\$92,735.35	\$19,956,014.67	\$9,190,838.09	\$10,765,176.58				
	▶ CY 2007	\$296,532.88	\$25,551,775.07	\$8,854,263.03	\$11,294,381.37	\$5,403,			
	+ CY 2008	\$161,794.33	\$13,399,243.18	\$3,902,246.74	\$4,448,636.90	\$5,048,			
			^						
Measures									
Reseller Sales Amount 🔻 🗙									

You can drag and drop "Dimensions" and "Measures" (in the left part) on rows and columns:

Dimensions 🔍 🔯 🏦 🧍	Columns 🚦 - + Product/Product Categories 👻 🕵 🗙
 ▶ 10 Account ▲ ▶ 10 Customer 	Rows 😫 - + Date/Date.Calendar - 😡 🗙
▶ Îvî Date	Rows / Columns Filter Sorting
Measures 🔍 – +	Context Date/Date. + Accessories + Bikes Bikes
🕨 💼 KPI	Calendar Mountain Bi Road Bikes Touri
▶	CY 2005 \$20,235.36 \$7,395,348.63 \$4,545,336.51 \$2,850,012.12
▶ 🚞 Finance	CY 2006 \$92,735.35 \$19,956,014.67 \$9,190,838.09 \$10,765,176.58
Internet Sales	CY 2007 \$296,532.88 \$25,551,775.07 \$8,854,263.03 \$11,294,381.37 \$5,403,
Reseller Sales	CY 2008 \$161,794.33 \$13,399,243.18 \$3,902,246.74 \$4,448,636.90 \$5,048,
> 🔂 Sales Quota	Measures
Sales Summary	Pesaller Sales Amount - X
Server F Min Date	
ServerCalcDate	
Sets Q - +	
Calculated Sets	
▶ 🛅 Sets	
Parameters Q	
	Highlight 4
	Treemap 🔛 Sort 🔛 Options 2 🔛 Basic 2 🔛 Scatter 🕢 Search 🔻

Let's drag the item "Reseller Type" on columns and drop it after "Product Categories". We will get the following page:

	Sales (Version 1)								х
	Dimensions 🔍 🙋 🏯	2	Columns 🗄 🗕 +	Product/Produc	t Categories 🔻 🗔	× – + Reseller/Re	eseller Type 🔻 🗔	×	ור
	↓ ♥ Reseller ▶	^	Rows 🖺 🗕 +	Date/Date.Cale	ndar 🔻 🕵 🗙				
	Sales Data		Rows / Columns Filter	Sorting					-
	Reseller		Context	Date/Date.	Accessories	· Value Added	Warahausa	 Bikes Specialty Bit In Value 	
	Business Type	-		 CY 2005 	Speciality Bl	\$8,760.94	\$11,474.42	\$879,671.38 \$2,74	 47,
ſ	Measures Q -	+		+ CY 2006	\$8,002.70	\$30,438.68	\$54,293.97	\$2,002,249.06 \$9,23	36,
1	> 🗊 KPI	*		+ CY 2007	\$45,294.17 \$11,828.60	\$84,431.87 \$51,371.33	\$166,806.84 \$98,594.41	\$1,933,355.66 \$12,20 \$1,264,841.63 \$6,70	^{39,}
	Finance		Measures				,		
-	Internet Sales	UI	Reseller Sales Amount 🔻 🗙						
4	Gales Quota			1					
	Sets Q -	+							
ľ	🕨 🔂 Calculated Sets								
	🕨 🧰 Sets								
	Parameters	a							
	T di diffe (CFS		Highlight		1				
			Treemap 😨 Sort	Options	Options 2	Basic 📑 Basic 2	Scatter	∢ → Search	-

The sets of "Reseller Type" and "Product Categories" are "crossjoined" and thus the page allows us to see which product was sold by which reseller.

In the same way you can combine arbitrary number of dimensions and measures on the rows or columns, getting arbitrary pivot table.

4.4.4 Context/Global context

"Context" is the designer that limits the data which you're watching. It is located to the left of the table:

Columns 🗎	- + -	Product/Produc	t Categories 🔻 🗔	x - + Reseller/F	Reseller Type 🔻 🕵	, x		
Rows 🗄	- + 1	Date/Date.Cale	endar 🔻 🕵 🗙					
Rows / Columns	Filter 5	Sorting						
Context		Date/Date.	 Accessories 			▶ Bikes		
		Calendar	Specialty Bi	▹ Value Added	Warehouse	Specialty Bi	Value Added	⊦ W
		+ CY 2005		\$8,760.94	\$11,474.42	\$879,671.38	\$2,747,138.35	\$3,7
		▶ CY 2006	\$8,002.70	\$30,438.68	\$54,293.97	\$2,002,249.06	\$9,236,034.37	\$8,7
		▶ CY 2007	\$45,294.17	\$84,431.87	\$166,806.84	\$1,933,355.66	\$12,209,159.69	\$11,4
		▶ CY 2008	\$11,828.60	\$51,371.33	\$98,594.41	\$1,264,841.63	\$6,700,021.91	\$5,4
Measures Reseller Sales Amou	unt • ×							
Highlight			۰					Þ
Treemap	🤹 Sort	2 Options	Options 2	Basic 🔝 Basic 2	2 🔛 Scatter	4	> Search	-

You can drag dimensions into context (the same when you do it with columns and rows).

🟮 Member Selector: Geography	
Selection Filter Options	
👻 🔄 All Geographies	
🕨 🍚 🦳 Australia	01
🕨 🎱 📃 Canada	
🕨 🎱 📃 France	
🕨 🌑 📃 Germany	
🕨 🌑 📃 United Kingdom	
🚽 🄍 📃 United States	
🕨 🌑 📃 Alabama	
🕨 🥥 📃 Arizona	
🕨 🎱 📃 California	
🕨 🥥 📃 Colorado	
🕨 🥥 📃 Connecticut	
🚽 🎱 📃 Florida	
Altamonte Springs	
Bradenton	
Clearwater	
> 🔍 🗌 Destin	
Hollywood	
Kendall	
Lakeland	
Merritt Island	
Miami	
North Miami Beach	
Orlando	
Sarasota	
Sunrise	T
Show Search >>	
	OK Cancel

Let's assume we are interested in sales for "Miami". Drag the dimension "Geography" from the "Dimensions" into "Context". The member selector dialog will pop up:

Select "Miami" and press «OK». You will get such report:

Columns	umns 🗄 🗕 + Product/Product Categories 🔻 🗔 🗙 — + Reseller/Reseller Type 👻 🕵 🗙											
Rows	Rows 🗧 - + Date/Date.Calendar - 😡 🗙											
Rows / Columns	Rows / Columns Filter Sorting											_
Context				Date/Date.	 Accessories 		⊦E	Bikes			Þ	CI
Geography		x		Calendar	Specialty Bi	Warehouse	+ 5	Specialty Bi	Value Added	Warehouse	Þ	Sp
deography		~		► CY 2005				\$4,685.80	\$2,566.42			
				F CY 2006	\$40.37	\$577.41		\$13,816.44	\$1,308.94	\$78,283.58		
				FCX 2007		\$3,617.36		\$21,742.39	\$64,993.31	\$193,138.12		
				F CY 2008	\$4.77	\$2,023.64		\$13,646.08	\$43,169.65	\$104,726.45		
L												
Measures	Measures											
Reseller Sales Amount 🔻 🗙												

There is an item "Geography" in the context. It means that the table is currently displaying data for one city – Miami. In the same way you can drag other dimensions into context for making the selection narrower.

"Global context" is the context which is applied to all the pages of the report:



Only administrator can enable/disable global context. User can edit the global context (the bar will be painted yellow), but user cannot save his settings. User can revert his changes quickly by

pressing the button or by selecting this menu item:

Report		ort	Page	View	Data	Table			
	8	Sav	e						
	3	Rol	lback to L	ast Saved	l View				
	B	Save to NRP File							
	5	Sav	e to Loca	Cube					
		Sho	w Admin	istrator P	ages				
		Sho	ow My Ow	/n Pages					
		Sho	w Pages	Shared by	y Other U	sers			

You can switch on/off the display of global context in the "View" menu:



Global context has lower priority over the context of the page: if the same hierarchy is present in the global context and in the page context, the MDX query will take into account the page context.

4.4.5 Time Selection

The page may contain time dimension in rows, columns or context:

Columns 🗮	– + Product/Product Categories 🔻 🗔 🗙 – + Reseller/Reseller Type 💌 🗔 🗙	
Rows 🗄	– + Date/Date.Calendar - 🗔 🗙	
Rows / Columns	Filter Sorting Date/Date.Calendar	
Context	Date/Date. Access Calendar Specia CY 2005, CY 2006, CY 2007, CY 2008, CY 2010 alt	y Bi 🕨 Valu

Member selector for time dimension will have additional functionality:

🏮 Membe	r Select	or: Date/	Date.Cale	ndar			
Selection	Filter	Sorting	Options				
Oate Rai	nge	🔘 Tr	ee				
Fixed pe	riod						
Ву		days	•				
From		begin	▼ to	now 🔻			
Floating Bac For Per By Last Offset	 ○ Floating period ◎ Back («in the past») ○ Forward («in the future») ○ Period By days ▼ Last 1 ↓ days √ including this day Offset from the current day: 0 ↓ days 						
Show pare	nt and d	hild eleme	nts on leve	ls:			
 All) Calendar Year Calendar Semester Calendar Quarter Month ✓ Date 							
				ОК	Cancel		

There are two radio buttons in the upper part of the dialog. If you select "Date Range" option you will have a possibility to set either fixed or floating time period.

Columns 🗄 🗕 +	Product/Product Categories 🔻 🗔	Member Selector: Date/Date.Calendar
Rows 😫 Date/I	Date.Calendar 🔻 🕵 🗙	Selection Filter Sorting Options
Rows / Columns Filter	Sorting	Date Range O Tree
Context	Date/Date. Accessories Calendar Specialty Bi	Fixed period
	CY 2005	By years 🔻
	CY 2006 \$8,002.70 CY 2007 \$45,294.17	0 From 2005 ▼ to 2007 ▼
Measures Reseller Sales Amount 🔻 🗙	<u><u><u></u></u></u>	 Floating period Back («in the past») Forward («in the future») Period By years * Last 14 + years including this year Offset from the current year: 0 + years

If you use fixed period, you can set "from-to" date range. After pressing «OK» you will see the same selection in the table:

The floating period allows the user to analyze not only the past period, but also to set the sample for the next days/weeks/months/years or specify the time interval. In addition to this, it became possible to set the offset in relation to the current date. Thus, each time you open a report, you will see information for the selected period in relation to the date when you opened the report.

💱 Member Selector: Date/Date.Calendar	
Selection Filter Sorting Options	
O Date Range	
By vears	
From 2005 T to 2007 T	
Floating period	
Back («in the past»)	
O Forward («in the future»)	
O Period	
By years 🔻	
Last 3 🗘 years 🗌 including this year	
Offset from the current year: 0	
· · · · · · · · · · · · · · · · · · ·	
Data will be shown from 1/1/2008 to 12/31/2010.	
Show parent and child elements on levels:	
(All)	
Calendar Year	
Calendar Semester	
Calendar Quarter	
Date	
OK	Cancel

Let's look at a report example. Let's say the current date is September 1, 2007. The problem is that we need to analyze every day of sales for the last 5 days, starting from August 25, 2007. For this, the following parameters must be specified in the elements selection:

🏮 Member	Select	or: Date/	Date.Cale	ıdar	
Selection	Filter	Sorting	Options		
Oate Range	ge	O Tr	ee		
O Fixed peri	iod				
Ву	[days	~		
From	[begin	⇒ to	now 👻	
 Floating p Back Forv Period By Last Offset for 	eriod c («ir vard («ir od	the past the future days 5 ¢ current d	e») days ay: <u>-7</u>	✓ including this o days	Jay 5/2007.
Show paren	t and ch	nild elemen	nts on level	s:	
Calenda	ar Year				
	ar Semes ar Quart	er			
Month					
				ОК	Cancel

A note for administrators:

In order to make it possible to select in "Date range" mode it is necessary to design the dimension in appropriate way. The day key must be in format YYYYMMDD, the month key – in format YYYYMM, the week key – YYYYWW, the quarter key – YYYYQ, the year key – YYYY. Moreover, there must be a description for the hierarchy which "tells" the application what level is responsible for the day, what for the month and what for the year. For example: « [YMD=Day, YM=Month, YQ=Quarter, QW=Week, Y=Year] ». Day is the name of the day level, Month – of the month level, Year – of the year level, Week is the name of the week level, Quarter is the name of the Quarter level. It's not necessary for all five level to be present in description. If the name of one of the levels contains spaces it should be enclosed in square brackets [...].

4.5 Measures Designer

This designer allows you to set the measures that will be displayed in the table. The picture below displays only one measure – the store sales:

Dimensions 🔍 💆 🔬 🧎	Columns 📇 - + Date/Date.Calendar 🔻 🕵 🗙 Reseller Sales Amount 🔹 🗙
Sales	Rows - + Product/Product Categories T 🗟 🗙
Customer	Rows / Columns Filter Sorting
▶ Date	Context > CY 2005 + CY 2006 + CY 2007 + CY 2008
Measures Q - +	t Categories Amount Amount Amount Amount Amount
F 💼 KPI	► Accessories \$20,235.36 \$92,735.35 \$296,532.88 \$161,794.33
Exchange Rates	▶ Bikes \$7,395,348.63 \$19,956,014.67 \$25,551,775.07 \$13,399,243.18
	Clothing \$34,376.34 \$485,587.15 \$871,864.19 \$386,013.16
Internet Sales	Components \$615,474.98 \$3,610,092.47 \$5,482,497.29 \$2,091,011.92
P Cales Reseller Sales Cales Quota Cales Quota Cales Summary Il Server F Min Date ServerCalcDate	Measures Reseller Sales Amount
Sets Q - +	
Calculated Sets	
Sets	
Parameters Q	
	Highlight
	Sort Sort Options Options 2 Search

Drag the measure "Reseller Order Count" from the list of the measures (to the left) onto the "Measures" designer:



As you see, the table has changed its view. Now it displays 2 measures "Reseller Sales Amount" and "Reseller Order Count" in different columns.

You can drag the measures from columns to rows:

Columns		– + Date/Date.Calendar 🔻 🕵 🗙 Reseller Sales Amount 🔹 🗙 Reseller Order Count 🔹 🗙
Rows	999	- + Product/Product Categories - 😡 🗙

After doing this you will get the following table:

Dimensions 🔍 🔯 🚠 🏅	Columns 📴 🗕 + 🛙	Date/Date.Calenda	ar 🔻 🕵 🗙						
Sales						_	=1		
Account	Rows 🗎 - + F	Product/Product Ca	ategories 🔻 🞑 🗙 Reseller	r Sales Amount 🔻 🕽	Reseller Order Co	ount 🔻 🗙			
Eustomer	Rows / Columps Filter S	Sorting							
▶ [o] Date			••	04.0005		04,0007			
▶ Î⊠ Delivery Date	Context	Product/Prod	Measures	► CY 2005	+ CY 2006	+ CY 2007	+ C		
Mazauraa 0 - +		► Accessories	Reseller Sales Amount	\$20,235.36	\$92,735.35	\$296,532.88	\$		
		Bikes	Reseller Sales Amount	47 205 249 62	410 0E6 014 67	531 #25 551 775 07	¢12		
Discount Amount		P DIKCS	Reseller Order Count	\$7,393,348.03	\$19,930,014.07	\$25,551,775.07	\$13 ₁		
Siscount Perce		Clothing	Reseller Sales Amount	\$34,376,34	\$485 587 15	\$871 864 19	¢		
🔇 Reseller Averag		, crothing	Reseller Order Count	242	644	963	Ψ		
🛸 Reseller Averag 🏻		Components	Reseller Sales Amount	\$615,474,98	\$3.610.092.47	\$5,482,497,29	\$2.		
Reseller Extend	Measures		Reseller Order Count	205	702	1,138	+-1		
Reseller Freight	Reseller Sales Amount 🔻 🗙					-,			
Reseller Gross	Reseller Order Count 🔹 🗙								
Reseller Gross	1								
Reseller Order									
Peseller Order		-							
Beceller Ratio t									
W Reseller Raud L									
Sets Q - +									
🕨 🔂 Calculated Sets									
File Sets									
Parameters Q									
	Highlight			۰			F		
	Sort Options	Options 2	Basic 📑 Basic 2 🛤	context is sele	ction 🛛 🗺 Sca 🖌	Search			
L						, Jouranni			
	11 1 11		1						
Note: the measures are displayed in rows (not in columns).									

4.6 Other Operations Changing the Page Structure

4.6.1 Virtual Hierarchies

The hierarchies can be of several types: regular, attribute and parent-child:



In the section 3 of this document we've already described the types of hierarchies. Let us look at the table where there are more than one attribute hierarchies:

Columns 🖺 🗕 +	Geography 🔻	🗔 🗙 Rese	eller Sales	Amount 🔻 🗙 Res	eller Freight Cost 🔻	×		
Rows 📒 - Pro	duct/Category	- 🕵 x -	– Date/D	ate.Calendar Year	- 🗔 🗙 — Produc	t/Color 🔻 🕵 🗙		
	0 II							
Rows / Columns Filter	Sorting							
Context	Product/Cat	Date/Dat	t t L	▶ Canada		United States		
	egory	e.Calend ar Year	Prodi /Colo	Reseller Sales Amount	Reseller Freight Cost	Reseller Sales Amount	Reseller Freight Cost	
	Accessories	CY 2005	Black	\$1,897.53	\$47.44	\$4,784.20	\$119.61	*
			Blue	\$1,635.11	\$40.88	\$5,479.03	\$136.98	0
			Red	\$1,614.92	\$40.37	\$4,824.57	\$120.62	Ť
		CY 2006	Black	\$5,963.77	\$149.09	\$16,302.48	\$407.56	
Measures			Blue	\$6,524.98	\$163.12	\$17,569.55	\$439.24	
Deceller Sales Amount			NA	\$4,763.25	\$119.08	\$11,677.41	\$291.94	
Reseller Sales Arrount			Red	\$5,243.16	\$131.08	\$15,714.46	\$392.86	
Reseller Freight Cost 🔹 🗙		CY 2007	Black	\$8,329.42	\$208.24	\$20,293.73	\$507.35	
			Blue	\$8,163.86	\$204.10	\$21,556.86	\$538.92	
			NA	\$26,180.02	\$654.50	\$70,443.32	\$1,761.09	
			Red	\$7,491.11	\$187.28	\$19,280.58	\$482.02	
			Silver	\$7,964.01	\$199.10	\$19,561.85	\$489.05	
		CY 2008	Black	\$3,843.78	\$96.09	\$8,314.99	\$207.88	
			Blue	\$3,224.20	\$80.61	\$9,198.05	\$229.95	
			NA	\$17,546.06	\$438.65	\$40,844.67	\$1,021.12	
			Red	\$3,338.02	\$83.45	\$7,029.84	\$175.75	
			Silver	\$4,404.14	\$110.10	\$10,639.64	\$265.99	
	Bikes	CY 2005	Black	\$507,901.19	\$12,697.53	\$2,332,825.50	\$58,320.64	
			Red	\$581,300.92	\$14,532.53	\$1,845,610.00	\$46,140.26	
			Silver	\$281,519.17	\$7,037.98	\$1,846,191.85	\$46,154.80	
		CY 2006	Black	\$1,625,381.48	\$4,2,634.55	\$6,314,977.53	\$157,874.47	
			Red	\$1,370,917.24	\$34,272.94	\$4,665,086.86	\$116,627.21	
			Silver	\$724,911.93	\$18,122.80	\$3,043,003.18	\$76,075.09	
			Yellow	\$217,073.33	\$5,426.83	\$693,736.58	\$17,343.42	
		CY 2007	Black	\$1,739,647.98	\$43,491.21	\$6,358,849.63	\$158,971.29	
			Blue	\$399,869.98	\$9,996.75	\$1,578,302.59	\$39,457.58	
			Red	\$605,779.65	\$15,144.50	\$2,189,360.17	\$54,734.03	
			Silver	\$718,004.88	\$17,950.13	\$2,567,325.63	\$64,183.16	
			Yellow	\$954,363.21	\$23,859.09	\$3,446,146.65	\$86,153.69	
		CY 2008	Black	\$605,109.85	\$15,127.75	\$2,446,852.45	\$61,171.34	
			Blue	\$287,780.51	\$7,194.52	\$1,366,761.47	\$34,169.05	
			Red	\$26,388.18	\$659.70	\$159,795.09	\$3,994.88	
			Silver	\$362,532.81	\$9,063.32	\$1,274,149.65	\$31,853.75	
Highlight	_		Yellow	\$627,898.27	\$15,697.46	\$2,703,776.89	\$67,594.45	-

Let us join all the attribute hierarchies into ohe virtual hierarchy by pressing these buttons:

Columns		– + Geography 🔹 🕼 🗙 Reseller Sales Amount 👻 Reseller Freight Cost 🔹 🗙
Rows	*	– Product/Category 🔻 🕵 🗙 – Date/Date.Calendar Year 👻 🗔 🗙 – Product/Color 👻 🕵 🗙

								 _	
Columns 📒 🗕 +	Geo	ogra	phy 🔻 🗔	× Reseller Sales A	mount 🔻 🗙 Resell	er Freight Cost 🔻	×		
Rows 🖳 🗕 🕇	Pro	duci	t/Category	🗔 🗙 🗕 🕂 Calen	dar Year 🗔 🗙 Col	or 🗔 🗙			
Rows / Columns Filter	Sort	ting							
Context	D,	od.		▶ Canada		United States			
Context	or	ν,	act categ	Reseller Sales	Reseller Freight	Reseller Sales	Reseller Freight		
	D	ate,	/Date.Ca	Amount	Cost	Amount	Cost		
	-	Ac	cessories	\$118,127.35	\$2,953.20	\$303,515.23	\$7,587.93		
		-	CY 2005	\$5,147.56	\$128.69	\$15,087.81	\$377.20	n	
			Black	\$1,897.53	\$47.44	\$4,784.20	\$119.61	0	
		2	Blue	\$1,635.11	\$40.88	\$5,479.03	\$136.98		
Measures		5	Red	\$1,614.92	\$40.37	\$4,824.57	\$120.62		
		-	CY 2006	\$22,495.16	\$562.38	\$61,263.90	\$1,531.61		
Reseller Sales Amount 🔹 🗙			Black	\$5,963.77	\$149.09	\$16,302.48	\$407.56		
Reseller Freight Cost 🔹 🗙		8	Blue	\$6,524.98	\$163.12	\$17,569.55	\$439.24		
		2	NA	\$4,763.25	\$119.08	\$11,677.41	\$291.94		
		רק ו	Red	\$5,243.16	\$131.08	\$15,714.46	\$392.86		
		-	CY 2007	\$58,128.43	\$1,453.22	\$151,136.35	\$3,778.43		
			Black	\$8,329.42	\$208.24	\$20,293.73	\$507.35		
			Blue	\$8,163.86	\$204.10	\$21,556.86	\$538.92		
			6	NA	\$26,180.02	\$654.50	\$70,443.32	\$1,761.09	
			2	Red	\$7,491.11	\$187.28	\$19,280.58	\$482.02	
			\ C	Silver	\$7,964.01	\$199.10	\$19,561.85	\$489.05	
			-	CY 2008	\$32,356.20	\$808.91	\$76,027.18	\$1,900.69	
			Black	\$3,843.78	\$96.09	\$8,314.99	\$207.88		
	ie,		Blue	\$3,224.20	\$80.61	\$9,198.05	\$229.95		
	Sol	8	NA	\$17,546.06	\$438.65	\$40,844.67	\$1,021.12		
	Se	8	Red	\$3,338.02	\$83.45	\$7,029.84	\$175.75		
	ĕ	5	Silver	\$4,404.14	\$110.10	\$10,639.64	\$265.99		
	-	Bil	kes	\$11,636,380.59	\$290,909.60	\$44,832,751.73	\$1,120,819.12		
		-	CY 2005	\$1,370,721.27	\$34,268.04	\$6,024,627.35	\$150,615.71		
		-	Black	\$507,901.19	\$12,697.53	\$2,332,825.50	\$58,320.64		
		8	Red	\$581,300.92	\$14,532.53	\$1,845,610.00	\$46,140.26		
		5	Silver	\$281,519.17	\$7,037.98	\$1,846,191.85	\$46,154.80		
		-	CY 2006	\$3,938,283.99	\$98,457.12	\$14,716,804.14	\$367,920.19		
			Black	\$1,625,381.48	\$40,634.55	\$6,314,977.53	\$157,874.47		
		00	Red	\$1,370,917.24	\$34,272.94	\$4,665,086.86	\$116,627.21		
		20	Silver	\$724,911.93	\$18,122.80	\$3,043,003.18	\$76,075.09		
		5	Yellow	\$217,073.33	\$5,426.83	\$693,736.58	\$17,343.42		
	S	-	CY 2007	\$4,417,665.71	\$110,441.68	\$16,139,984.68	\$403,499.75		
Highlight	¥	. :	Black	\$1,739,647.98	\$43,491.21	\$6,358,849.63	\$158,971.29		
) m	0	Di	+000 050 00	40.000 PC	±4 570 000 50	100 457 50		

As a result, out table will look like this:

Virtual hierarchies are easily recognizable: they are highlighted with a different color. You also have the option to Expand / Minimize all level elements for virtual hierarchies in a way similar to the usual hierarchies.

Let's, for example, minimize all the elements of the "Date.Calendar" "Year" level:



Columns 😫 🗕 +	Geo	graphy 🔻 🗔	× Reseller Sales A	mount 🔻 🗙 Resell	er Freight Cost 🔻	×
Rows 🖳 🗕 +	Pro	duct/Category	🕵 🗙 – 🕂 Calen	dar Year 🗔 🗙 Col	or 🗔 🗙	
Rows / Columns Filter	Sort	ing				
Context	Pr	oduct/Categ	Canada		United States	
	or Da	Y, ate/Date.Ca	Reseller Sales Amount	Reseller Freight Cost	Reseller Sales Amount	Reseller Freight Cost
	-	Accessories	\$118,127.35	\$2,953.20	\$303,515.23	\$7,587.93
	4	▶ CY 2005	\$5,147.56	\$128.69	\$15,087.81	\$377.20
	SO I	▶ CY 2006	\$22,495.16	\$562.38	\$61,263.90	\$1,531.61
	ĕ	▶ CY 2007	\$58,128.43	\$1,453.22	\$151,136.35	\$3,778.43
Measures	¥	▶ CY 2008	\$32,356.20	\$808.91	\$76,027.18	\$1,900.69
	v -	Bikes	\$11,636,380.59	\$290,909.60	\$44,832,751.73	\$1,120,819.12
Reseller Sales Amount 🔻 🗙		▶ CY 2005	\$1,370,721.27	\$34,268.04	\$6,024,627.35	\$150,615.71
Reseller Freight Cost 🔹 🗙		৮ CY 2006	\$3,938,283.99	\$98,457.12	\$14,716,804.14	\$367,920.19
	es	▶ CY 2007	\$4,417,665.71	\$110,441.68	\$16,139,984.68	\$403,499.75
	8	+ CY 2008	\$1,909,709.62	\$47,742.76	\$7,951,335.55	\$198,783.48
	-	Clothing	\$378,947.63	\$9,473.73	\$1,037,436.95	\$25,936.02
		৮ CY 2005	\$7,913.33	\$197.83	\$26,463.00	\$661.57
	2 C	৮ CY 2006	\$115,643.91	\$2,891.11	\$317,939.41	\$7,948.51
	Ē	▶ CY 2007	\$177,893.39	\$4,447.35	\$495,443.62	\$12,386.14
	ŏ	+ CY 2008	\$77,497.00	\$1,937.43	\$197,590.92	\$4,939.80
		Components	\$2,244,470.02	\$56,111.79	\$7,434,097.31	\$185,852.58
	:	৮ CY 2005	\$129,577.29	\$3,239.43	\$485,897.68	\$12,147.45
	E.	৮ CY 2006	\$746,576.15	\$18,664.41	\$2,526,542.06	\$63,163.58
	Ē	৮ CY 2007	\$997,617.89	\$24,940.47	\$3,284,551.84	\$82,113.87
	ပိ	৮ CY 2008	\$370,698.68	\$9,267.48	\$1,137,105.72	\$28,427.69

Now the report will look as follows:

4.6.2 Swapping Rows and Columns

There is a way to quickly swap rows and columns with the help of this button on the toolbar:

🟮 Business Analysis Tool (Report Module) - http://localhost:8001/												
	Application	Module	Reports	Report	Page	View	Data	Table	Tools	Help		
11	0 0 F		i 🚯 🚺	è er s		D G HK	C	1 1	C 🗞	% 000	€0 00 100% ▼ ∰t Table	- 🔹 🖓 🗊

4.6.3 Data Editing (Write Back)

Business Analysis Tool (Report Module) - http://localhost:8001/	
Application Module Reports Report Page View Data Table Tools Help	
	to D
Sales (Version 1)	Editing mode

This mode allows to edit data in the cubes. In order to edit data it is necessary for administrator to allow this functionality for the user, and it is necessary to have a measure group that supports the writeback mode.

During editing data it is possible to automatically update all the other data after finishing the edit operation:

💱 Business Analysis Tool (Report Module) - http://localhost:8001/						
Application Module Reports Report Page View Data Table Tools Help						
🕝 🗇 💾 📴 📴 🚱 🧐 😭 🕵 😓 🛅 🎛 C 🏷 🕸 🛠 % 🚥 號 9 100% 🗸 🌐 Table	- I 🖓 🕲 🗊 👪					
Sales (Version 1)	×					
Settings Dimensions Q 🙋 🙏 ? Columno 📁 🗖 Concernative 🗸 Decellar Salas Amount 👻 🛛 Decellar Excitate Conternational Salas Amount 👻 🖉 Decellar Excitate Conternational Salas Amount 👻 🖉	Automatic Data Refresh					

4.6.4 Removing Controls from Rows, Columns and Context

Each control on designers has a cross icon:

Columns 🖺 🗕 +	ite/Date.Calendar 🔻 🗔 🗙									
ows 📋 🗕 🕂 Product/Product Categories 👻 😡 🗙 Reseller Sales Amount 👻 Reseller Order Count 👻 🗙										
Rows / Columns Filter Sorting										
Context	Product/Prod Measures									
	▶ Accessories Reseller Sales Amount \$20,235.36 \$92,735.35 \$296,532.88 \$161,794.33									
	Reseller Order Count 135 356 531 293									
	▶ Bikes Reseller Sales Amount \$7,395,348.63 \$19,956,014.67 \$25,551,775.07 \$13,399,243.18									
	Reseller Order Count 345 850 1,234 724									
	▶ Clothing Reseller Sales Amount \$34,376.34 \$485,587.15 \$871,864.19 \$386,013.16									
	Reseller Order Count 242 644 963 561									
Measures	▶ Components Reseller Sales Amount \$615,474.98 \$3,610,092.47 \$5,482,497.29 \$2,091,011.92									
	Reseller Order Count 205 702 1,138 601									
Reseller Sales Amount 🔻 🗙										
Reseller Order Count 🔹 🗙										

By pressing it you can remove the control from the page. The corresponding dimension will not be displayed in the table after you delete its control.

4.6.5 Hiding Empty Rows and Columns

Sometimes it happens that the whole row or column has no data. To prevent the displaying of empty rows and columns on the page you can select the menu items "Hide Empty Rows" and "Hide Empty Columns" in the "Table" menu:

Tal	ole Tools Help	
靊	Swap Rows and Columns	Et i T
\checkmark	Hide Empty Rows	
\checkmark	Hide Empty Columns	
	View Mode 🕨	
	Group Measures	iount
	Set Size of Columns/Rows	
	Report Page Description)05
	Show Visual Totals	13
	Show Summary Columns at Begin	5,348.6
	Show Summary Columns at End	1,376.3
	Show Summary Rows at Begin	24
	Show Summary Rows at End	20
	Search Ctrl+F	
۵	Visualization	
1	Highlight	
8	Formatting	
2	Export to NRP	
8	Export to Excel	
7	Export to PDF	
٨	Print	

4.6.6 Grouping of Measures

Let us look at the report where there are several measures from one folder:

Columns 😫 Reselle	er Sales Amount	t 🔻 🗙 Resell	er Gross Profit Margi	in - x					
Rows 🗧 - + Date/Date.Calendar 🔻 🗔 🗙 - Date/Date.Month of Year 👻 🔀									
Rows / Columns Filter	Sorting								
Context	Date/Date. Calendar	Date/Date. Month of	Reseller Sales Amount	Reseller Gross Profit Margin					
	+ CY 2005	July	\$489,328.58	3.48%					
		August	\$1,538,408.31	4.48%		0			
		September	\$1,165,897.08	4.92%					
		October	\$844,721.00	3.27%		0			
		November	\$2,324,135.80	3.79%					
Measures		December	\$1,702,944.54	4.10%					
	+ CY 2006	January	\$713,116.69	3.18%					
Reseller Sales Amount 👻 🗙		February	\$1,900,788.93	3.70%					
Reseller Gross Profi 🔻 🗙		March	\$1,455,280.41	4.02%					
		April	\$882,899.94	3.20%					
		May	\$2,269,116.71	3.85%					
	*	June	\$1,001,803.77	-60.41%					
	10 10 10 10	July	\$2,393,689.53	2.33%					
		August	\$3,601,190.71	3.68%					
		September	\$2,885,359.20	5.18%					
		October	\$1,802,154.21	4.31%					
		November	\$3,053,816.33	4.41%					
		December	\$2,185,213.21	5.11%					
	FCX 2007	January	\$1,317,541.83	3.81%					
		February	\$2,384,846.59	3.22%					
		March	\$1,563,955.08	4.25%					
		April	\$1,865,278.43	4.45%					
		May	\$2,880,752.68	4.00%					
		June	\$1,987,872.71	5.05%					
		July	\$2,665,650.54	-6.82%					
Highlight		August	\$4,212,971.51	-5.95%		-			

There is a possibility of grouping them. In the menu "Table" select the item "Group Measures":



As a result, the table will become as following:

Columns 🔚 Reseller Sales Amount 🔻 🗙 Reseller Gross Profit Margin 👻 🗙										
Rows 🗧 - + Date/Date.Calendar 🔻 🕵 🗙 - Date/Date.Month of Year 💌 🕵 🗙										
Rows / Columns Filter Sorting										
Context	/	Date/Date.	Reseller Sales							
	Date/Date. Calendar	Month of Year	Reseller Sales Amount	Reseller Gross Profit Margin						
	▶ CY 2005	July	\$489,328.58	3.48%						
		August	\$1,538,408.31	4.48%						
		September	\$1,165,897.08	4.92%						
		October	\$844,721.00	3.27% 3.79% 4.10%						
Measures		November	\$2,324,135.80							
Decelles Coles Amount		December	\$1,702,944.54							
Reseiler Sales Amount 🔹 🗙	৮ CY 2006	January	\$713,116.69	3.18%						
Reseller Gross Profi 🔻 🗙		February	\$1,900,788.93	3.70%						
		March	\$1,455,280.41	4.02%						
		April	\$882,899.94	3.20%						

Grouping of measures means to display the folders as captions. Later you can rename and format the folders. If you click the right mouse button on the header, you will have this:

Columns 😫 Reseller Sales Amount 🔻 🗙 Reseller Gross Profit Margin 👻									
Rows 😫 - + Date/Date.Calendar + 🕵 🗙 - Date/Date.Month of Year + 🕵 🗙									
Rows / Columns Filter Sorting									
Context		/Date, Reselle	e Color]				
	Calendar Year	th of Resell Amour	Amour						
	▶ CY 2005 July	\$4	Je Sorting	•					
	Augu	ust \$1,5	7 Filter	•					
	Sept	tember \$1,1	E		Formatting for Reseller Sales				
	Octo	ber \$8	Formatting						
Measures		ember \$2,32	24,135.80	3.79%	Clear all formatting				
Piedou es	Dece	ember \$1,70	2,944.54	4.10%	clear an ronnacting				
Reseller Sales Amount 🔻 🗙	FCY 2006 Janu	ary \$71	3,116.69	3.18%					
Reseller Gross Profi 🔻 🗙	Febr	uary \$1,90	0,788.93	3.70%					
	Marc	ch \$1,45	5,280.41	4.02%					
	Apri	\$88	32,899.94	3.20%					
	May	\$2,26	9,116.71	3.85%					

In the "Formatting" dialog bot we have two tabs – "Header" and "Separators":

The first tab allows to change the name and set up the format rules for the header of the measure. The tab "Separators" allows to set up the size and color for rows/columns separators and to define the thickness and color of the lines.
4.6.7 Size of columns/rows

You can set the size of columns / rows on pages of the Table type. To do this, select "Set Size of Columns / Rows ..." from the "Table" main menu:

Tab	ole Tools Help						
中	Swap Rows and Columns						
\checkmark	Hide Empty Rows						
\checkmark	Hide Empty Columns						
	View Mode						
	Group Measures						
	Set Size of Columns/Rows						
	Report Page Description						
	Show Visual Totals						
	Show Summary Columns at Begin						
	Show Summary Columns at End						
	Show Summary Rows at Begin						
	Show Summary Rows at End						
	Search	Ctrl+F					
۵	Visualization						
1	Highlight						
8	Formatting						
2	Export to NRP						
	Export to Excel						
7	Export to PDF						
٩	Print						

This submenu allows the user to specify the same width for all columns and the same height for all rows of the table:

🟮 Size Of Columns/Rows 🛛 🗙							
Columns width:	96 🛟						
Rows height:	16 🜲						
OK	Cancel						

4.6.8 Description of a Page

For any report you can create a description using any text, used hierarchies and RTF formatting.

Let us look at the example:

Columns 🔋 Reseller Order Count 🔹 🗙 Reseller Sales Amount 🔹 🗙 Reseller Gross Profit 🔹 🗙 Reseller Gross Profit Margin 🔹 🗙						
Rows 😫 🗕 +	Geography 🔻 🗔 🗙 -	- + Product/Prod	luct Categories 🔻 🕻	x 🔊		
Rows / Columns Filter	Sorting					
Context	Geography	Product/Product t Categories	Reseller Order Count	Reseller Sales Amount	Reseller Gross Profit	Reseller Gross Profit Margin
Date/Date.Calendar	F Canada	Accessories	100	\$27,642.71	\$8,959.46	32.41%
 All Periods 		▶ Bikes	251	\$5,309,005.26	(\$25,647.77)	-0.48%
CY 2005		▹ Clothing	192	\$123,557.24	\$23,671.13	19.16%
CY 2006	France	Accessories	15	\$5,096.23	\$1,412.53	27.72%
CY 2007		Bikes	28	\$654,238.20	(\$3,826.06)	-0.58%
CY 2008		 Clothing 	22	\$27,843.63	\$6,461.22	23.21%
CY 2010	United Kingdom	 Accessories 	14	\$3,880.07	\$1,136.19	29.28%
		 Bikes 	27	\$646,688.34	\$18,160.04	2.81%
		 Clothing 	24	\$24,160.21	\$5,788.02	23.96%
	United States	 Accessories 	362	\$76,351.70	\$25,014.55	32.76%
		 Bikes 	889	\$20,741,431.50	\$46,898.49	0.23%
Measures	* *	 Clothing 	648	\$344,402.42	\$64,281.83	18.66%
Reseller Order Count 🔹 🗙						
Reseller Sales Amount 🔻 🗙						
Reseller Gross Profit 🔹 🗙						
Reseller Gross Profi 🔻 🗙						
Highlight						

In the "Table" menu select the "Report Page Description":

Tab	e Tools Help						
中	Swap Rows and Columns						
\checkmark	Hide Empty Rows						
\checkmark	Hide Empty Columns						
	View Mode						
	Group Measures						
	Set Size of Columns/Rows						
	Report Page Description						
	Show Visual Totals						
	Show Summary Columns at Begin						
	Show Summary Columns at End						
	Show Summary Rows at Begin						
	Show Summary Rows at End						

In the left part there is a list of hierarchies which are used on the report page. Using the mouse drag some hierarchies into the text:

Report Page Description			_ D X
Hierarchies • [2] Date • [2] Ceography • [2] Ceography • [2] Ceography • [2] [2] Product • [2] Product Categories	<pre>Show report page description Height: 120 Sales for the period: <<set.[date].[calendar]>> Country : <<set.[geography].[geography]>> Product category : <<set.[product].[product categories]="">></set.[product].[product></set.[geography].[geography]></set.[date].[calendar]></pre>	Back color:	Font
	Preview	ОК	Cancel

Let us set up the height of the description field equal to 140 pixels, set up the font color and the font parameters:

Color	X
Basic colors:	
	Hu <u>e</u> : 160 <u>R</u> ed: 149 <u>S</u> at: 0 <u>G</u> reen: 149
Define Custom Colors >>	Color <u>L</u> um: 140 Bl <u>u</u> e: 149
OK 🧖 Cancel	Add to Custom Colors

🖣 Font			x	Back color:
Text Color:	0, 0, 0		•	Font
Font Size:			14 🗘	
Font Name:	Tahoma		-	
Bold:	\checkmark			
Italic:				
Strikeout:				
Underline:				
This format given in Rtf	does not apply format.	/ if the text is		

In the "Report Page Description" window press «OK». As a result, the table will contain the page "Report Page Description" with the following text:

🏮 Business Analysi	is Tool (Report Module) - http://	/localhost:8001/						_ 		
<u>Application Module Reports Report Page View Data Table Tools H</u> elp										
🛛 😋 🐑 💾 🔢 🖼 🕼 🧔 😰 😰 😨 😨 😢 🛠 🏷 🏷 🏷 🖏 👘 100% 🗸 🌐 🖬										
	Sales (Version 1)									
Settings	Dimensions 🔍 🔯 🏦 🥻	Sales for the pe	riod: CY 200	5, CY 20	06					
	Country : Canada, France, United Kingdom, United States									
2.0	Product category - Accessories Rikes Clothing									
List List	→ 💽 Date	riouuce categoi	, I ACCC3301	ico, binco	, crothing					
	🗸 🗁 Calendar									
	▶ 🚆 Date.Calendar	Report Page Description F	tows / Columns Filter	Sorting						
	Date.Calen	Context		Product/Produc	Reseller Order	Reseller Sales	Reseller Gross	Reseller Gross		
Reports	Date.Calen	Date/Date Calendar X	Geography	t Categories	Count	Amount	Profit	Profit Margin		
	Date.Calen	All Designed	Canada	 Accessories 	100	\$27,642.71	\$8,959.46	32.41%		
	Date.Calen	All Periods		 Bikes 	251	\$5,309,005.26	(\$25,647.77)	-0.48%		
	▶ 👪 Date.Calen 🍸	CY 2005		 Clothing 	192	\$123,557.24	\$23,671.13	19.16%		
	Maagurag Q = +	► CY 2006	France	 Accessories 	15	\$5,096.23	\$1,412.53	27.72%		
4		CY 2007		Bikes	28	\$654,238.20	(\$3,826.06)	-0.58%		
	Reseller Gross 🔺	CY 2008		Clothing	22	\$27,843.63	\$6,461.22	23.21%		
	Reseller Gross	CY 2010	▶ United Kingdom	Accessories	14	\$3,880.07	\$1,136.19	29.28%		
	Reseller Order			Bikes	27	\$646,688.34	\$18,160.04	2.81%		
	Reseller Order			▶ Clothing	24	\$24,160.21	\$5,788.02	23.96%		
	🕥 Reseller Ratio t 🅥		United States	 Accessories 	362	\$76,351.70	\$25,014.55	32.76%		
1	Reseller Ratio t	Measures		 Bikes Clathing 	889	\$20,741,431.50	\$46,898.49	0.23%		
	Reseller Sales A	Peseller Order Count 💌 🗙	-	► Clothing	648	\$344,402.42	\$64,281.83	18.66%		
	Reseller Standa									
	🖬 Reseller Tax A 👻	Reseller Gross Profit • X								
	Sets Q - +	Reseller Gross Profi 🝷 🗙								
	Calculated Sets									
	> Gets									
	Parameters Q									
		Highlight								

Let us look at the way to set up description using RTF. Let us insert into the description field the prepared RTF text:



The table will have the following description:

🟮 Business Analy	💱 Business Analysis Tool (Report Module) - http://localhost:8001/							
Application	<u>M</u> odule <u>R</u> eports Report	<u>P</u> age <u>V</u> iew <u>D</u> ata <u>T</u> a	able T <u>o</u> ols <u>H</u> elp)				
6 🛛 🗎	II II II 6 6 6 6 5	5 S 🏗 🖸 💰	🕸 🏖 %	000 €.0 .00 0.€ 00. 000	100% 🔻 🌐	Table	- 🖓 🖑 🛛	
	Sales (Version 1)							х
		Contaxt						
Setungs	Dimensions 🔍 💆 📈 🦻	Date/Date Calendar'	from 2005 to 2006					
	Account	Dute, Dute.curendur.	10111 2003 to 2000					
1	Customer	Columns:						
List	- Date	Measures: Reseller Ord	er Count, Reseller S	ales Amount, R	eseller Gross Pro	fit. Reseller Gros	s Profit Margin	
	Calendar Calendar							
	Date.Calendar	Rows:						
	Date.Calen	Geography: Canada, Fr	ance, United Kinodo	m, United State	s			
Reports	Date.Calen	Product/Product Cate	jories: Accessories,	Bikes, Clothing	9			
	Date.Calen							
	→ Date.Calen	Report Page Description	Rows / Columns Filter	Sorting				
	Date.Calen	Context	Geography	Product/Product	Reseller Order	Reseller Sales	Reseller Gross	Reseller Gross
	Fiscal T	Date/Date.Calendar X	Geography	t Categories	Count	Amount	Profit	Profit Margin
	Measures Q - +	All Periods	F Canada	 Accessories 	100	\$27,642.71	\$8,959.46	32.41%
	Reseller Gross	► CY 2005		 Bikes Clothing 	251	\$5,309,005.26	(\$25,647.77)	-0.48%
	Reseller Gross	CY 2006	 France 	 Crothing Accessories 	192	\$123,557.24	\$23,671.13	19.16%
	Reseller Order	CY 2007	P Hance	 Bikes 	28	\$5,090.23	(\$3,826,06)	-0.58%
	Reseller Order	CY 2008		 Clothing 	20	\$27,843,63	\$6,461,22	23.21%
	Reseller Order	CY 2010	▹ United Kingdom	Accessories	14	\$3,880.07	\$1,136.19	29.28%
	Reseller Ratio t			Bikes	27	\$646,688.34	\$18,160.04	2.81%
	Reseller Raud L			 Clothing 	24	\$24,160.21	\$5,788.02	23.96%
	Reseller Sales A U		United States	 Accessories 	362	\$76,351.70	\$25,014.55	32.76%
	Reseller Standa	Measures		Bikes	889	\$20,741,431.50	\$46,898.49	0.23%
	Reseller Tax A	Predsules		 Clothing 	648	\$344,402.42	\$64,281.83	18.66%
	Sets Q - +	Reseller Order Count 🔹 🗶						
		Reseller Sales Amount 🔻 🗙						
	Calculated Sets	Reseller Gross Profit 🔹 🗙						
	Sets	Reseller Gross Profi 🔻 🗙						
	Parameters Q							
		Highlight						
		riigriiigrit						

If the RTF format is used, the formatting of the text and font is not applied. Tables with the description can be exported to Excel.

4.6.9 Displaying Totals

In order to explain what is "Visual Totals" let us build the following report. On the rows we will place the "Product Categories" hierarchy with the following selection:



On the columns let us place the years from the "Date.Calendar" hierarchy. Inside the table – the "Reseller Order Quantity" measure. You will get the following report:

Columns 🗄 - + Date/Date.Calendar 🔹 🗔 🗙 Reseller Order Quantity 🔹 🗙							
Rows 😫 - + Product/Product Categories 🔹 🗔 🗙							
Rows / Columns Filter Sorting							
Context	Developed and	FCX 2005	FCX 2006	FCX 2007	FCX 2008		
	Categories	Reseller Order Quantity	Reseller Order Quantity	Reseller Order Quantity	Reseller Order Quantity		
	▶ Bikes	6,126	22,231	31,310	15,348		
	- Clothing	2,132	16,927	31,623	13,815		
	: ⊧ Caps	520	1,853	2,677	1,071		
	👸 🕨 Jerseys	983	3,881	9,642	4,873		
Measures Reseller Order Qua • ×			·				

4.6.9.1 Summary Rows and Columns

You can add summary rows and columns to the report. These rows and columns will show the SUM of the elements on the topmost visible level in the report.

In the "Table" menu select the items "Show Summary Columns" and/or "Show Summary Rows":



Then you will get the following report:

Date doubt (Date doubt	▶ CY 2005	F CY 2006	▶ CY 2007	FCX 2008	
Categories	Reseller Order Quantity	Reseller Order Quantity	Reseller Order Quantity	Reseller Order Quantity	
 Bikes 	6,126	22,231	31,310	15,348	
👻 Clothing	2,132	16,927	31,623	13,815	
: F Caps	520	1,853	2,677	1,071	
ö ⊧ Jerseys	983	3,881	9,642	4,873	
Total	8,258	39,158	62,933	29,163	

As you may see, in the summary row there is a sum of "Bikes" and "Clothing".

4.6.9.2 Visual Totals

In the sample report (above) you can see that the row with "Clothing" there is a total of all kinds of clothing, but NOT just 2 selected elements ("Caps" and "Jerseys").

In order to see the totals for only visible elements, you have to select "Show Visual Totals" item in the "Table" menu:



If you switch on "Show Visual Totals", you will see this:

Product/Product Categories		F CY 2005	F CY 2006	▶ CY 2007	FCX 2008	
		Reseller Order Quantity	Reseller Order Quantity	Reseller Order Quantity	Reseller Order Quantity	
►	Bikes	6,126	22,231	31,310	15,348	
-	Clothing	1,503	5,734	12,319	5,944	
	▶ Caps	520	1,853	2,677	1,071	
ŏ	Jerseys	983	3,881	9,642	4,873	
То	tal	7 629	27 965	43 629	21 292	

Now in the row "Clothing" you may see summary values of ONLY two selected subitems – "Caps" and "Jerseys".

Columns 😫 🗕 +	Dat	e/Date.Calendar	r 🗔 🗙		
Rows 😫 🗕 +	Proc	duct/Product Categ	ories 🔻 🕵 🗙		
Rows / Columns Filter	Sort	ing			,
Context	Pr	oduct/Product	FCX 2007	FCX 2008	
	-	Accessories	\$590,242.59	\$568,844.58	
		Bike Racks	\$134,868.47	\$102,227.69	
		Bike Stands	\$18,921.00	\$20,670.00	
		Bottles an	\$27,761.60	\$36,513.19	
		Cleaners	\$9,777.94	\$8,629.03	
		Fenders	\$19,408.34	\$27,211.24	
Measures	5	Helmets	\$206,027.20	\$183,504.58	
Salas Amount	-i-	Hydration	\$58,303.91	\$47,522.51	
Sales Amount	SS	▹ Locks	\$6,140.52		
	ë	Pumps	\$5,145.43		
	¥	▶ Tires and T	\$103,888.18	\$142,566.34	
	•	Bikes	\$34,910,877.69	\$22,561,568.03	
	⊧	Clothing	\$1,010,112.16	\$587,537.80	
	⊧	Components	\$5,482,497.29	\$2,091,011.92	
Highlight					

Here is one more example of the visual totals:

Let us hide one of the elements from the group "Accessories":

Pr	oduct/Product	FCX 2007	FCA 50	08
-	Accessories	\$590,242.59	\$568	,844.58
	Bike Racks	\$134,868.47	\$102	,227.69
	Bike Stands	\$18,921.00	\$20	,670.00
	Bottles an	\$27,761.60	\$36	,513.19
	 Cleaners 	\$9,777.94	\$8	,629.03
	Fenders	\$19,408.34	\$27	,211.24
	Helmets	+000 007 00	÷+ 00	504.58
<u>,</u>	Hydration	Drill by	•	522.51
SO	▹ Locks	Drill by on New	Page 🕨	
ĕ	Pumps	,		
Å	Tires and	Drill Up		566.34
Þ	Bikes	Drill Down		568.03
⊧	Clothing	Dhir Down		537.80
⊧	Component:	Hide Item		011.92
		Keep Only This		

As a result, the report will look like this:

Pre	oduct/Product	FCX 2007	FCX 2008
-	Accessories	\$590,242.59	\$568,844.58
	Bike Racks	\$134,868.47	\$102,227.69
	Bike Stands	\$18,921.00	\$20,670.00
	Bottles and	\$27,761.60	\$36,513.19
	 Cleaners 	\$9,777.94	\$8,629.03
	Fenders	\$19,408.34	\$27,211.24
ц,	Hydration P	\$58,303.91	\$47,522.51
So	▹ Locks	\$6,140.52	
ë	Pumps	\$5,145.43	
Å	Tires and Tu	\$103,888.18	\$142,566.34
⊧	Bikes	\$34,910,877.69	\$22,561,568.03
►	Clothing	\$1,010,112.16	\$587,537.80
⊧	Components	\$5,482,497.29	\$2,091,011.92

The sum of this group of goods remains unchanged.

We'll use the visual totals to display the real summary of the selected goods:

🟮 Business Analysis Tool (Report Module) - http://localhost:8001/							
Application Module Reports Report P	age <u>V</u> iew <u>D</u> ata <u>T</u> able T <u>o</u> ols <u>H</u> elp						
a 19 🦻 🐉 🖾 🖾 🗳 🕒	😓 🛐 🏢 🙋 蝉 Swap Rows and Columns	🖿 Table 🔻 🖓 🖏					
Settings Settings List List Reports Reports Settings List Measures Corpanization Corpanization Measures Corpanization Corpanization Corpanization Measures Corpanization	Image: Swap Rows and Columns Image: Swap Rows and Columns View Hide Empty Rows Image: Columns Rows Rows / Columns Image: Context Show Visual Totals Show Visual Totals Show Summary Columns at Begin Show Summary Columns at End Show Summary Rows at Begin Show Summary Rows at End Show Summary Rows at End Show Summary Rows at End Show Summary Rows at End	Table					
Image: Construction of the second	Visualization Visualization Visualization Visualization Visualization Formatting Formatting Export to NRP Export to NRP Export to Excel Export to PDF Print	0.00 0.00					
	Highlight						

Now the report will look like this:

Pr	oduct/Product	FCX 2007	FCX 2008
-	Accessories	\$384,215.39	\$385,340.00
	Bike Racks	\$134,868.47	\$102,227.69
	Bike Stands	\$18,921.00	\$20,670.00
	Bottles and	\$27,761.60	\$36,513.19
	 Cleaners 	\$9,777.94	\$8,629.03
	Fenders	\$19,408.34	\$27,211.24
ië.	Hydration P	\$58,303.91	\$47,522.51
So	Locks	\$6,140.52	
ë	Pumps	\$5,145.43	
Å	Tires and Tu	\$103,888.18	\$142,566.34
►	Bikes	\$34,910,877.69	\$22,561,568.03
►	Clothing	\$1,010,112.16	\$587,537.80
⊧	Components	\$5,482,497.29	\$2,091,011.92

4.6.10 Operation "Show By" of the Context Menu

In the context menu there is an operation "Show By". Let us look at the example. Assume you have a report of the following structure:

Columns 😫 - + Date/Date.Calendar 🕶 🕵 🗙
Rows 🗄 - + Product/Product Categories 🕶 🕵 🗙
Rows / Columns Filter Sorting
Context Product/Product + CY 2007 + CY 2008
Mountain Bikes \$8,854,263.03 \$3,902,246.74
Road Bikes \$11,294,381.37 \$4,448,636.90
Touring Bikes \$5,403,130.67 \$5,048,359.55
Measures
Reseller Sales Amount 🔻 🗙
Highlight

Let us do the "Show By" operation in order to look the sum of sales for a specific product (for example, for "Road Bikes") by all countries.

	Data (Data Calendar	- 6 ¥								
Rows 🗄 - + Product/Product Categories - 😡 🗙										
Rows / Columns Filter S	Sorting									
Context	Product/Product	F CY 2007 F CY 200	8							
	Mountain Bike	es \$8,854,263.03 \$3,902,	246.74							
	Road Bikes		[26 00]							
	Touring Bike	Driii by	Account	•						
		Drill by on New Page 🕨	Customer	•						
		Drill Up	Date	•						
Measures		Drill Down	Delivery Date	•						
Reseller Sales Amount 🔻 🗙		Hide Item	Department	•						
		Keep Only This	Destination Currency	•						
		Hide Siblings	Employee	•						
		Show All Children	Geography	Geography						
			Internet Sales Order Details	Country						
		Show Level		Country						
		🔞 Member Selector	Organization	 State-Province 						
		Actions •	Product	 City 						
		Consulta Clinhanod	Promotion	Postal Code						
		Copy to Clipboard	Reseller	City						
		Sorting	Reseller Sales Order Details	Country						
		7 Filter	Sales Channel	Postal Code						
		Formatting 🕨 🕨	Sales Reason	State-Province						
			C-1 C O							

Select menu items Show $By \rightarrow Geography \rightarrow Country:$

As a result we will have the following report:

Columns 🗄 - + Date/Date.Calendar - 😡 🗙									
Rows 🖹 - + Geography - 😡 🗙									
Rows / Columns Filter Sorting									
Context	Geography	▶ CY 2007	▶ CY 2008						
Product/Product Categories	Australia	\$1,466.01	\$1,466.01						
All Dradusta	Canada	\$2,075,667.15	\$657,851.93						
- All Products	France	\$643,984.66	\$311,419.73						
Accessories	Germany	\$82,958.10	\$91,575.68						
- Bikes	United Kingdom	\$651,360.92	\$343,323.74						
Mountain Bikes	United States	\$7,838,944.52	\$3,042,999.81						
Road Bikes									
Touring Bikes									
Clothing									
Components									
Measures									
Reseller Sales Amount 🔹 🗙									

As we can see, we have a report of sales by countries. The "Product" hierarchy has come to the context. If you show the member selector for the context, you will see that the only one item is selected there – the one for which you've made the operation "Show By".

Therefore, we are watching sales only for "Road bikes".

In a similar way "Show by" is working for table cells. If you perform "Show by" on the cell where "Road Bikes" and "CY 2007" intersect, you will get a report which displays sales in all countries for Road Bikes in the calendar year 2007:

Columns 📒 🗕 + Date	e/Date.Calendar 🔻 🗔	×						
Rows 📒 - + Prod	luct/Product Categories	- 😡	×					
Rows / Columns Filter Sorti	ng							
Context	Product/Product Mountain Bikes Road Bikes Touring Bikes	▶ CY 2 \$8,85 \$11,20 \$5,4	2007 54,263. 24,381 D D A Si Si	CY 2008 CY 20	74 >	Account Customer Date Delivery Date Department Destination Currency Employee	* * * * *	
Reseller Sales Amount • ×			💇 🗖 🔣 Fi	ormatting		Geography	×	Geography
			 Note Note<!--</td--><td>xport to NRP xport to Excel xport to PDF rint</td><td></td><td>Internet Sales Order Details Organization Product Promotion Reseller Reseller Sales Order Details Sales Channel Sales Reason</td><td>* * * * * * *</td><td>Country State-Province City Postal Code City Country Postal Code State-Province</td>	xport to NRP xport to Excel xport to PDF rint		Internet Sales Order Details Organization Product Promotion Reseller Reseller Sales Order Details Sales Channel Sales Reason	* * * * * * *	Country State-Province City Postal Code City Country Postal Code State-Province

As you may see, the context has 2 items – "Road Bikes" and "CY 2007":

Columns 😫 Resell	er S	es Amount 🗙	
Rows 😫 🗕 +	Geo	raphy 🔻 🕵 🗙	
Rows / Columns Filter	Sort	g	
Context	v	Geography Reseller S Amount	Sales
Date/Date.Calendar	~	 Australia \$1, 	466.01
 All Periods 	n	▶ Canada \$2,075,	,667.15
CY 2005		 France \$643, 	,984.66
CY 2006		▶ Germany \$82,	,958.10
CY 2007	U	 United Kingdom \$651, 	,360.92
CY 2008		 United States \$7,838, 	,944.52
CY 2010	Ŧ		
Product/Product Categories	х		
 All Products 	*		
Accessories			
- Bikes			
Mountain Bi			
Road Bikes			
Touring Bikes	U		
Clothing	-		
Measures			
Reseller Sales Amount 🔹	x		

4.7 Data Refreshing on the Page

Each page has an important option – «Automatically change data when the structure is changed». If this option is on, after each change of the page structure the new data will be displayed. If this option is off, you can change the structure of the page first (data will not be automatically refreshed), and then you can manually refresh the data. During the time you make modifications the requests will not be automatically sent to the server.

This option is switched on/off by using this button:

🟮 Business Analysis Tool (Report Module) - http://localhost:8001/	_ _ X
Application Module Reports Report Page View Data Tab	: Tools Help
: 5 🕽 🎛 🖸 🍣 🧐 🥪 🔛 📰 📰 🕒 😳 🗏	🛪 🎕 % 🚥 號 100% 🔻 🏥 Table 🔹 🖓 🗊
Sales (Version 1)	x
Settings Dimensions 🔍 🗽 🤌 Columns 🚝 Reseller	Automatically refresh data when the structure is changed

Business Analysis Tool (Report Module) - http://localhost:8001/ <u>Application M</u>odule <u>R</u>eports Report <u>P</u>age <u>V</u>iew <u>D</u>ata Table Help 🕝 💿 💾 🔢 🔛 🚱 🍖 😭 🔊 😓 💽 🔢 C 🐮 🕸 🗞 % 🚥 😚 🕺 100% 🚽 🏥 Table - 🖓 🖓 I) Sales (Version 1) × Settings Dimensions 🔍 🔯 👬 🏄 Columns — 🕂 Date/Date.Calendar 🔻 🕵 🗙 💓 Internet Sales Ord... Rows 😑 🗕 🕂 Product/Product Categories 🔻 🕵 🗙 Image: Organization 🚽 💓 Product Rows / Columns Filter Sorting List 📄 Financial + CY 2008 Product/Prod... |+ CY 2007 Context History \$296,532,88 Accessories \$161.794.33 Stocking ▶ Bikes \$25,551,775.07 \$13,399,243.18
 Clothing
 \$25,557,77,600
 \$15,557,24,510

 ▶ Clothing
 \$871,864.19
 \$386,013.16

 ▶ Components
 \$5,482,497.29
 \$2,091,011.92
 Product Catego... Reports 📠 Product Model L... Product q. - + Measures Measures 🖬 Reseller Order ... 🔺 Reseller Sales Amount 🔻 🗙 🛸 Reseller Ratio t... Reseller Ratio t... 🗍 Reseller Sales A... . . . q - + Sets Calculated Sets Filler Sets Q, Parameters Highlight 🔢 description (2) 🔛 totals 🛛 🔛 visual totals 🖉 visual totals (2) Login: john Server: http://localhost:8001/ Rows: 4 Columns: 2 Exec. Time: 05.08

Let's assume we have the following page:

and upper mentioned option is turned off. Let's change the page structure by dragging more dimensions and measures into the designers:

🟮 Business Analysis	s Tool (Report Module) - http://	localhost:8001/	_ – ×
Application M	<u>A</u> odule <u>R</u> eports Report <u>R</u>	lage <u>V</u> iew <u>D</u> ata <u>T</u> able T <u>o</u> ols <u>H</u> elp	
3 🛛 🗎 🔢	a 19 🦻 6 🖬 🖬	💩 🛐 🄢 🖒 🏷 🕸 🏷 🔌 🖇 🕬 500 % 100% 🗸 🌐 Table	- 12 🖓 🗊
677h	Sales (Version 1)		x
Settings	Dimensions 🔍 🔯 👬 🧎	Columns 🗄 - + Date/Date.Calendar 🔹 🗔 🗙 - + Geography 🔹 🗔 🗙	
	Sales Data A Reseller Type	Rows 🚦 - + Product/Product Categories 🔻 🔀 - Reseller/Business Type 👻 🥵	
List	Reseller	Rows / Columns Filter Sorting	
	Number of Employ	Context Product/Prod CY 2007 CY 2008	
	Product Line	Accessories \$296,532.88 \$161,794.33	
1 March	I Reseller Sales Orde	Clothing \$25,551,775.07 \$15,599,245.18	
Reports	Sales Summary Ord	Components \$5,482,497,29 \$2,091,011,92	
	▶ 10 Scenario →		
	Measures Q – +	Measures	
	💼 Reseller Order 🔺	Reseller Sales Amount 🔻 🗙	
	🛸 Reseller Ratio t		
	🔇 Reseller Ratio t 🗍		
1	Reseller Sales A		
	Sets Q - +		
	Calculated Sets		
	Final Sets		
	Parameters 0		
		Highlight	
		description (2)	 ♦ Search
Login: john Serve	er: http://localhost:8001/ Rows	4 Columns: 2 Exec. Time: 05.08	

Note: after changing page structure you see old data. This happens because the option is off. If we press «Refresh Data» now:

🗳 Business Analysis Tool (Report Module) - http://localhost:8001/	_ – X
<u>Application M</u> odule <u>R</u> eports Report <u>P</u> age <u>V</u> iew <u>D</u> ata <u>T</u> able T <u>o</u> ols <u>H</u> elp	
🔾 💬 💾 🔢 🔢 🕵 🍖 😭 🎓 🗟 🖸 🎛 ⊄ 🏷 🕸 🌣 🗞 % 🚥 😚 🐝 100% 🗸 🌐 Table	- IÇ 🕛 I)
Sales (Version 1)	x
Sattinge Dimensione Q 12 4 1	

the data will be refreshed according to the new structure:

💱 Business Analysis Tool (Report Module) - http://localhost:8001/										
Application	Module Reports Report	Page View	Data T	able T <u>o</u> ols	Help					
		🔊 😂 🖸	K C C	∜ ∽ ∞	% 000 .00 →.0 10	0% ▼ 🛒 Tal	ble •	. 1997 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 191		
	Sales (Version 1)									x
(C)										
Settings	Dimensions 🔍 🔯 🚠	Columns	umns 📒 - + Date/Date.Calendar 🕆 🕵 🗙 - + Geography 🕆 💽 🗙							
	Bales Data	*								==111
	Reseller Type	Rows	≣ − +	Product/Product Ca	ategories 🔻 🛄 🗙 – Re	eseller/Business Type	- 🚺 🗙			
	Reseller	Rows / Colur	Filter	Sorting						
List	Business Type	- Kows / Colu		bording		01.0007				
	Number of Empl	Context		Product/Product	Reseller/Business	► CY 2007	Canada	- France	Comment	
	Product Line			L Categories	Specialty Bike Shop	Australia	¢9 E10 44	¢4.0E6.97	* Germany	<u>▶ 011</u>
1 / Presete	▶ 💕 Reseller Sales Orde			F Accessories	Value Added Reseller	\$4,009.39	\$0,510.44	\$1 483 44	\$3,481,22	
Reports	► 10 Sales Summary Ord	0			Warehouse	\$10,052.21	\$36,904,36	\$20,199,66	\$14,751,74	 ¢1
	Scenario	-		▶ Bikes	Specialty Bike Shop	\$138,458,60	\$296,077,35	\$170,628,06	\$68,510,43	\$13
					Value Added Reseller	\$321,025.36	\$1,790,549.89	\$402,857.82	\$260,016.12	\$76
	Measures 🔍 –	+ Measures	****		Warehouse	\$221,162.00	\$2,331,038.47	\$1,221,082.88	\$491,987.09	\$79
	Reseller Order	A Decelles Color	1	▹ Clothing	Specialty Bike Shop	\$7,946.81	\$31,718.36	\$12,119.86	\$4,604.46	\$
	🔍 🚫 Reseller Ratio t	Reseller Sales	Amount • 🗙		Value Added Reseller	\$16,637.50	\$42,392.92	\$7,772.35	\$9,569.84	\$2
	Reseller Ratio t	0			Warehouse	\$1,538.17	\$103,782.11	\$46,692.27	\$29,439.24	\$3
	Reseller Sales A			⊢ Components	Specialty Bike Shop	\$10,534.18	\$20,078.34	\$11,243.36	\$11,419.36	\$
	· · · · ·	•			Value Added Reseller	\$50,485.49	\$205,970.68	\$67,163.83	\$52,629.50	\$9
	Sets Q -	+			Warehouse	\$64,055.06	\$771,568.87	\$407,603.63	\$150,060.37	\$27
	Calculated Sets									
	Setc									
	,									
	Parameters 0	۹.								
		High	light							
			-							· ·
		descript	.on (2) 🛛 🔢 to	tals 🛛 🔛 visual to	tals 🛛 🙀 visual totals (2	!) 🔢 show by	💐 refresh 🛛 💐 S	catter	(-
	Ľ									
Login: john Server: http://localhost:8001/ Rows: 12 Columns: 12 Exec. Time: 00.2										

Do not forget to switch on this option for further reading.

There is also a possibility to «Refresh data on all pages» at once. It will take time dependently on the number and complexity of pages.

4.8 Charting

A chart is a part of a report. It may be not displayed, displayed alone or with a table. The view mode of a chart can be changed on the toolbar or in the "Table / View Mode" menu:



In the lower left corner you may see the chart parameters:

- Layout: influences where the chart will be displayed below the table or to the right of it.
- Argument. The chart displays the data which are in the table. On the screenshot above you may see "Argument = Columns". It means that the columns of the table will be placed on the X axis. If we change the argument on "Rows", we would see this:



• **Type**. This parameter sets up the type of the chart. Now you see bars, which can be changed onto lines:



and other types of chart. We propose you to make some experiments with the type of a chart on your own.

- **Properties**. Among the properties are: "Legend" (you see it in the top right corner), "Rotate by 90°" and "Labels" (labels are the numeric labels which are displayed over bars or lines).
- Settings.

4.8.1 Chart Settings

If you press the button "Settings" in the bottom of the page, you will see the following form:

Chart Settings		×
Data ^	Automatic type and argument Argument:	
Series	O rows O columns	
Appearance ^	Type: Manhattan Bar Maximum number of data items: 1000 🗘	
000 Measures	Rotate by 90°	
Automatic Preview	OK Cancel	

4.8.1.1 Maximum Number of Data Items

On the "Data" tab you may set the maximum number of items which can be displayed in the chart. Let us create the following example: put all the cities of the hierarchy "Geography":



On the columns we will display years, the measure "Reseller Sales Amount" will be displayed in the table. Switch on the chart:

Columns 😫 – +	Date/Date.Calend	ar 🔻 🗔 🗙				
Rows 🗮 - +	Geography 🔻 🕵	×				
Rows / Columns Filter S	Sorting					
Context	Geography	▶ CY 2005	► CY 2006	৮ CY 2007	৮ CY 2008	
	▶ Darlinghu			\$4,665.14	\$2,672.46	
	▶ Lane Cove			\$82,703.79	\$66,292.72	0
	▶ Lavender			\$168,955.65	\$109,435.51	0
	Malabar				\$2,860.88	
	Matraville			\$3,386.25	\$3,085.74	
	▶ Milsons P			\$89,960.91	\$55,446.83	
Measures	Newcastle			\$56,990.80	\$48,599.33	
	North Ryde			\$18,093.04	\$27,438.45	
Reseller Sales Amount 🔻 🗙	▶ North Sy			\$7,684.97	\$14,608.49	
	Rhodes			\$118,610.91	\$133,851.58	
	Silverwater			\$3,179.53	\$5,226.94	
	▹ Sydney			\$52,851.60	\$52,669.29	
	Hawthorne			\$21,039.37	\$18.032.11	*
		Too m	uch data:	1163 elem	ents.	
Highlight		Dra	w chart (it ca	n take some tim	e)	
Chart Properties		<u></u>	in chare the ca	in carte sonne ann	<u>~</u>	
Manhattan Bar			<u>Change ch</u>	<u>art settings</u>		
🖬 bottom 🔻						
Argument:						
🔘 rows 🛛 🥥 columns						
🗹 legend 📃 labels						
rotate by 90°						
Settings						

As you may see, there are 1163 elements on the chart. This is a big amount – bigger than the allowed number in the settings. In order to change the settings, press the button "Settings" and change the setting onto 1200:

🟮 Chart Settings		c
Data A Colors Appearance A Colors Labels Measures	Automatic type and argument Argument: orws or columns Layout: ightarrow bottom	
Automatic Preview	OK Cancel)

Columns 😫 - + Date/Date.Calendar - 😡 🗙								
Rows 🗄 - + Geography - 🕵 🗙								
Rows / Columns Filter S	Sorting							
Context	Geography	+ CY 2005	৮ CY 2006	▶ CY 2007	+ CY 2008			
	▶ Darlinghu			\$4,665.14	\$2,672.46			
	Lane Cove			\$82,703.79	\$66,292.72	0		
	Lavender			\$168,955.65	\$109,435.51			
	Malabar				\$2,860.88			
	 Matraville 			\$3,386.25	\$3,085.74			
	Milsons P			\$89,960.91	\$55,446.83			
Measures	 Newcastle 			\$56,990.80	\$48,599.33			
	North Ryde			\$18,093.04	\$27,438.45			
Reseller Sales Amount 👻 🗙	▹ North Sy			\$7,684.97	\$14,608.49			
	Rhodes			\$118,610.91	\$133,851.58			
	Silverwater			\$3,179.53	\$5,226.94			
	▹ Sydney			\$52,851.60	\$52,669.29			
	▶ Hawthorne			\$21.039.37	\$18.032.11	· ·		
						CY 2005		
	1,600,000.00 -					CY 2006		
	4 400 000 00					CY 2007		
	1,400,000.00 -					CY 2008		
	1,200,000.00 -							
	1 000 000 00							
	1,000,000.00 -							
Highlight	800,000.00 -							
Chart Properties	600,000.00 -							
Bar 🔻	400,000.00 -							
🖬 bottom 🔻	200,000.00 -							
Argument:								
rows O columns	0.00 -							
legend 🗌 labels			AA					
rotate by 90°		aring, ave	na atau	ewcast. Vorth	Wern Butto			
Settings		Urst	T Bay "	the stores	ale The			

After pressing «OK» you will see the following:

Pay attention to the fact that the chart can be painted for a long time in the case if there is a huge number of elements on the chart. In order to avoid waiting you can set up maximum amount of elements, so that the chart will be painted only when the number of elements is less than the maximum amount.

As you may see, when «Too much data» message is displayed, there are two available options: "Draw Chart" and "Change chart settings":

Too much data: 1163 elements.

Draw chart (it can take some time)

Change chart settings

If you press the link "Draw chart", the chart will be drawn but the settings will not change. The chart will be visible until you change the structure of the report. The link "Change chart settings" does the same as the button "Settings" in the bottom left corner of the page - it will open the form for changing the chart settings.

4.8.1.2 Scrolling

Sometimes we have a situation when the X axis contains too much elements. As a result, the chart becomes unreadable:



In order to correct the situation open the settings dialog:

Chart Properties
🔣 Line 🔻
🖬 bottom 🔻
Argument:
🔘 rows 🛛 🔘 columns
🗹 legend 📃 labels
rotate by 90°
Settings

On the tab "X-axis" switch on the scrolling on the X axis and set the number of elements equal to 20:

Chart Settings				x
Data ^ Q General P Series Olors	Enable scrolling of Automatic nu Number of visib	on X axis umber of visible items le items: ot cover more than	5 \$ 33 \$ % of the d	hart height
Appearance ^	Font Text Color: Font Size: Font Name: Bold: Italic: Strikeout: Underline:	0, 0, 0 Tahoma	▼ 8 * ▼	Orientation
Automatic Preview				OK Cancel

After this action, the chart will become much more readable and you will be able to scroll it using the scrolling on the X axis:



4.8.1.3 Minimal and Maximal Values for a Chart

There are several ways how we can set up the axis range on the Y axis:

- Full;
- From minimum to maximum;
- From some [Value1] to maximum;
- From minimum to [Value2];
- From [Value1] to [Value2].

4.8.1.4 Coloring Series

Let us look at the example of setting the colors for chart series. Let us assume we have the following table with a chart:





Let us color the whole category Acessories and all the subcategories into green, and let us color "Closing" into yellow. Click the right mouse button on the series or on the item in the legend:

In this window do the following:

As a result we will get the following chart:





Let us move one level below:

Each category and all elements below it now have its own color which can be changed.

🏮 Chart Settings x 🏮 Series Color Color ~ Data Apply series colors rules Member O Measure Product/Product Categories/Tourning Bikes Product/Product Categories/Road Bikes and descendants Product/Product Categories/Bikes Product/Product Categories/Bikes Product/Product Categories/Clothing and descendants 🔍 General Apply to descendants ➢ Series ⊧ ¦Σ (All) * Colors Category - Subcategory Appearance \wedge 🕨 🌒 Bike Racks 🕨 🌒 Bike Stands Titles Bottles and Cages E Legend Cleaners Fenders Abels 🕨 🌒 Helmets X-axis Hydration Packs Measures Lights 🕨 🌒 Locks Y-axis Panniers Pumps Ires and Tubes Mountain Bikes Modify Up Down Add Delete Road Bikes Þ 🕨 🌒 Touring Bikes Bib-Shorts Automatic Preview OK Cancel OK Cancel



You can also set the color for every element of a group:

4.8.2 Settings for Displaying of Measures

Let us look at how several measures are displayed on a chart on the following example of a report:

On the rows we have all months of the years 2006 and 2007 selected:



On the columns there are "Sales Amount" and "Reseller Sales Amount":



In the context we have "Road Bikes" selected:



Columns 🗮 Sales Amount	🔹 🗙 Reseller Sales A	mount 🔻 🗙		
Rows 📙 - + Date/D)ate.Calendar 🔻 🗔 🗙			
Rows / Columns Filter Sorting				
Context	Date/Date.Calendar	Sales Amount	Reseller Sales	
Product/Product Categories	January 2006	\$816,421.02	\$341,624.10	
- All Products	February 2006	\$1,292,294.19	\$802,402.31	
	March 2006	\$1,062,958.87	\$550,898.28	
Pikee	► April 2006	\$946,476.12	\$421,583.42	
Dikes	▶ May 2006	\$1,406,096.07	\$884,864.42	
Mountain Bikes	> June 2006	\$1,125,880.24	\$598,191.15	
Road Bikes	> July 2006	\$1,4/7,793.70	\$1,088,593.24	
Touring Bikes	August 2000 September 2006	\$2,012,100.32	\$1,599,092.91	
Clothing	October 2006	\$1,407,180.29	\$1,141,204.30	
Components	November 2006	\$1,758,096,16	\$1515 723 88	
	December 2006	\$1,275,985,89	\$931,313,73	
Measures	January 2007	\$921,581.84	\$672,148.88	
Sales Amount 🔹 🗙	February 2007	\$1,616,227.28	\$1,345,479.74	
Reseller Sales Amount 🔹 🗙	March 2007	\$1,045,187.78	\$778,022.75	
	1 800 000 00			
	1,000,000.00		_	
	1,500,000.00			
Highlight	1,200,000.00			
Chart Properties	900,000.00			
Chart Properties	600,000.00			
📊 Bar 🔻	300,000,00			
	0.00			
Dottom •	0.00			· · · · · · · · · · · · · · · · · · ·
Argument:	12.	1. 1.	44 50	1 2 3 3
rows O columns	"TUG	2 VA 34	2 TA 10 10	Tem Than Stor Stranger
🗹 legend 🔲 labels		200 500	8 8 8	1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
rotate by 90°		v		No No -
Settings	💋 Sales Amount	Reseller Sales /	Amount	

The report shows us the sales amount of road bikes by month of the years 2006 and 2007:

But in case we have 2 measures displayed on the chart it is difficult to analyze how the reseller sales amount change. It would be nice if the summary sales are displayed by line over the bars.

Let us change the way how the "Sales Amount" is displayed. Press the button on the "Sales Amount" control which opens the settings for this measure, as shown on the picture:

Context	Date/Date.Calendar S
Product/Product Categories	× January 2006
All Products	February 2006
	▶ March 2006
Accessories	► April 2006
→ Bikes	▶ May 2006
Mountain Bikes	▶ June 2006
Road Bikes	▶ July 2006
Touring Bikes	► August 2006
Clothing	▶ September 2006
Components	October 2006
·	November 2006
	December 2006
Measures	January 2007
Sales Amount	February 2007
Override type	
Apply	Cancel

Check the box "Override type" and select the line type:

Measures	5		> January	/ 2007	\$921,581.84	-
Sales Amo	unt	- X	Februar	ry 2007	\$1,616,227.28	\$
Table	Chart				1,045,187.78	
Display:						
On Pane	1			•		
Overr	ide type			4		
📊 Bar				-		
2D						*
		•••••	<u> </u>	•		
		\ge	Line			~
4						11.

Press the button "Apply". The chart now looks like this:



You can also display charts for different measures on different panes. In the same settings dialog for "Sales Amount" set the parameter "Display" equal to "On Pane 2":

Measures						
Sales Amount 🔻			- X			
Table	Chart					
Display:						
On Pane 1						
Don't show						
On Pan	e2		N			
On Pane 3 On Pane 4				3		
	Apply				Cancel	
Арріу					Contect	



Press the button "Apply". You will get the following chart:

You can display each measure on one of four available panes, or you can also select «Don't show» option in order to avoid displaying a measure on the chart.

Let us look at the chart where one of the measures displays the percentage growth. Let us select all the months of the year 2007 on rows:

,	Σ	All Periods								
	►	۲		CY	200	5				
	►	۲		CY	200	6				
	-	۲		CY	200	7				
		-		Calendar Semester						
			-	🕹 📃 Calendar Quarter						
				Þ	33	~	Month			
	►	۲		CY	200	8				
	►	۲		CY	201	0				

Put the measures "Reseller Sales Amount" and "Reseller Sales Amount Growth%" onto columns:

Columns 🔚	Reseller Sales Amount	• x	Reseller Sales Amount Growth %	•	x	
-----------	-----------------------	-----	--------------------------------	---	---	--






🏮 Chart Settings					x
Data ^	Select Measure:	Reseller Sales Amount G	irowth %	-	
Reneral					
➢ Series	Display:	On Pane 2		<u> </u>	
Colora	Туре:	Don't show			
U Colors		On Pane 2			
Appearance ^	Labels:	On Pane 3 On Pane 4			
🚇 Titles		🔘 always hide			
E Legend	Y Axis:	Default	•	Axis Settings	
Labels					
📰 X-axis					
📲 Measures					
Y-axis					
Automatic Preview				ОК	Cancel
Automatic Preview				ОК	Cancel
Automatic Preview				ОК	Cancel
Automatic Preview Chart Settings Data ^	Select Measure:	Reseller Sales Amount G	Growth %	OK	Cancel
Automatic Preview Chart Settings Data ^ General	Select Measure: Display:	Reseller Sales Amount G	Growth %	OK	Cancel
Automatic Preview Chart Settings Data A General Series	Select Measure: Display: Type:	Reseller Sales Amount G On Pane 2	Growth %	ОК •	Cancel
Automatic Preview Chart Settings Data A General Series Colors Colors	Select Measure: Display: Type:	Reseller Sales Amount G On Pane 2	Growth %	ОК •	Cancel
Automatic Preview Chart Settings Data A General Series Colors Appearance Appearance	Select Measure: Display: Type: Labels:	Reseller Sales Amount G On Pane 2 Override	Growth %	ОК •	Cancel
Automatic Preview Chart Settings Data Data General Series Colors Appearance Titles	Select Measure: Display: Type: Labels:	Reseller Sales Amount G On Pane 2 Override Our effault	Growth %	ОК 	Cancel
Automatic Preview Chart Settings Data Data General Series Colors Appearance Titles Legend	Select Measure: Display: Type: Labels: Y Axis:	Reseller Sales Amount G On Pane 2 Override Our override	Growth %	OK	Cancel
Automatic Preview Chart Settings Data Colors Appearance Titles Legend Series Legend Series Legend Series Legend Series Labels	Select Measure: Display: Type: Labels: Y Axis:	Reseller Sales Amount G On Pane 2 Override Ouse default Ouse default Image: Image and the second secon	Frowth %	OK Axis Settings	Cancel
Automatic Preview Chart Settings Data Colors Appearance Appearance Colors Elegend Legend Saries Legend X-axis	Select Measure: Display: Type: Labels: Y Axis:	Reseller Sales Amount G On Pane 2 Override Ouse default always show always hide Default Default Separate axis	Frowth %	OK	Cancel

Put it onto pane 1 (the same pane where the measure "Reseller Sales Amount" is):

Now let us set up the axis:

🏮 Settings of axis	"Axis 1 (Reseller Sales Amou	int Grow	th %)" 🛛 🗙
Display Range: Full			•
Display:	Left side 🕞	🗸 Sho	ow grid lines
Font	Don't show		Orientation
Text Color:	Right side	•	
Font Size:		8 🜲	.*
Font Name:	Tahoma	•	Text
Bold:			
Italic:			*··•
Strikeout:			0 Degrees
Underline:		×	
			OK Cancel





We have a chart with two measures at once, each measure has its own axis.

4.8.3 Additional Possibilities of Charts

Since the bars (points, sectors, etc.) of the chart display values of the table, you can use the operations like "Drill through" and "Show by" on them. These operations are available in the context menu:



Also you can print the chart from the context menu or save it as an image in PNG format.

Columns 😫 - + Product/Product Categories 👻 🗔 🗙						
Rows 🗄 - + Date/Date.Calendar - 🕵 🗙						
Rows / Columns Filter	Sorting					
Context	Date/Date.Calendar	 Accessories 	Bikes	 Clothing 	Components	
	- CY 2005	1,003	7,139	2,132	1,574	*
	H2 CY 2005	1,003	7,139	2,132	1,574	1
	N 2 03 CY 2005	423	2,842	931	637	Ŭ
	G \ → Q4 CY 2005	580	4,297	1,201	937	
	- CY 2006	5,207	24,908	16,927	13,876	
	+ H1 CY 2006	822	8,143	1,952	1,331	
Measures	+ Q1 CY 2006	245	3,808	/34	397	
Order Quantity 🔹 🗙	± ↓ Q2 C1 2006	5//	4,335	1,218	12 545	
	03 CY 2006	4,305	9.017	8 676	7 828	
	X Y 04 CY 2006	1.760	7,748	6,299	4,717	
	- CY 2007	28,161	37,020	35,331	24,103	
	: - H1 CY 2007	2,698	14,296	9,905	6,612	
	R : ► Q1 CY 2007	872	6,638	3,545	2,040	
	상 ቿ → Q2 CY 2007	1,826	7,658	6,360	4,572	Ŧ
Highlight	40,000 35,000 25,000 20,000 15,000				AF	
Charl Descertion	10,000					
Chart Properties	5,000					
	0					
bottom 🔻	E 000					
Argument:	-5,000					>
orws O columns	0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,					
Viegend labels						
rotate by 90°	-5.	5005 TO	500 5000	500 5003	503 503	0,
Settings	လ Accessories 🔦 Bikes 📎 Clothing 📎 Components					

Three is a possibility to choose which levels to display on the chart. Let us look at the example:

All levels are displayed by default. But we have a possibility to display the following options:

- First Visible Level
- Last Visible Level
- All Levels

For each hierarchy of the report there is a possibility to choose between:

- Fist Visible Level
- Last Visible Level
- All Levels
- By Default

Let us display just the years without half-years and quarters. To do this, select "First Visible Level" for the hierarchy "Date/Date.Calender":



As a result we'll get the following visualization:

Date/Date.Calendar	 Accessories 	▶ Bikes	Clothing	Components	
+ CY 2005	1,003	7,139	2,132	1,574	
_: + H2 CY 2005	1,003	7,139	2,132	1,574	0
R : + Q3 CY 2005	423	2,842	931	637	0
රි 🖁 → Q4 CY 2005	580	4,297	1,201	937	
+ CY 2006	5,207	24,908	16,927	13,876	
- H1 CY 2006	822	8,143	1,952	1,331	
+ Q1 CY 2006	245	3,808	734	397	
_ 〒 → Q2 CY 2006	577	4,335	1,218	934	
g 🚽 H2 CY 2006	4,385	16,765	14,975	12,545	
₩ F Q3 CY 2006	2,625	9,017	8,676	7,828	
ີ ບີ 🖞 → Q4 CY 2006	1,760	7,748	6,299	4,717	
👻 CY 2007	28,161	37,020	35,331	24,103	
_: - H1 CY 2007	2,698	14,296	9,905	6,612	
ຊິ : ⊧ Q1 CY 2007	872	6,638	3,545	2,040	
갑 ቿ ▶ Q2 CY 2007	1,826	7,658	6,360	4,572	Ŧ
35,000 30,000 25,000 20,000 15,000 5,000 0	- tong	Campanerts	C. RANI	C-RUGO	
Accessones '	Bikes 🔍 Clothin	g 🔍 Components			

You can change the settings of the chart:

	🔨 Spline 👻
	bottom 👻
	Argument:
	or rows O columns
	🗹 legend 🔲 labels
	rotate by 90°
	Settings
🟮 Chart Settings	x
Data ^	Hierarchy: Date/Date.Calendar (changed)
🔍 General	Which level to show on the chart?
Series	O By Default
Colors	O All Levels
	First Visible Level
	O Last Visible Level
Titles	O Custom Levels
E Legend	
A Labels	
🔜 X-axis	
Measures	
Y-axis	
	Reset all settings for hierarchies and set "by default"
Automatic Preview	OK Cancel

Chart Properties

Here you can add the restrictions for specific hierarchies or to reset all the settings. Let us add the restriction and display only the quarters on the chart:

🏮 Chart Settings	x
Data Image: Object of the second s	Hierarchy: Date/Date.Calendar (changed) Which level to show on the chart? By Default By Default All Levels First Visible Level Calendar Year Calendar Year Calendar Semester Calendar Semester Month Date Reset all settings for hierarchies and set "by default"
Automatic Preview	OK Cancel

As a result, we'll get the following report:

Date/Date.Calendar	 Accessories 	Bikes	 Clothing 	▹ Components	
+ CY 2005	1,003	7,139	2,132	1,574	*
: + H2 CY 2005	1,003	7,139	2,132	1,574	Π
R : + Q3 CY 2005	423	2,842	931	637	0
රි 🖁 → Q4 CY 2005	580	4,297	1,201	937	
+ CY 2006	5,207	24,908	16,927	13,876	
- H1 CY 2006	822	8,143	1,952	1,331	
: + Q1 CY 2006	245	3,808	734	397	
덮 → Q2 CY 2006	577	4,335	1,218	934	
ලී 🚽 H2 CY 2006	4,385	16,765	14,975	12,545	
N : + Q3 CY 2006	2,625	9,017	8,676	7,828	
ີ 🖸 🕨 Q4 CY 2006	1,760	7,748	6,299	4,717	
+ CY 2007	28,161	37,020	35,331	24,103	
_: - H1 CY 2007	2,698	14,296	9,905	6,612	
N : P Q1 CY 2007	872	6,638	3,545	2,040	
`ර ፰ ⊨ Q2 CY 2007	1,826	7,658	6,360	4,572	Ŧ



5 Creation, Saving and Restoring of Pages

5.1 Creating a New Page

A report can have arbitrary number of pages. In order to add an empty page you have to do one of the following:

1. Press the button "Add New Page" in the toolbar:



2. Or select the item "Add" in the "Page" menu:

<u>P</u> ag	je <u>V</u> iew	<u>D</u> ata	<u>T</u> able
	Initializatio	n Paramet	ers
6	Add		
P	Сору		
er	Rename		
	Delete		
	Delete All B	ut This	
	Delete All		
	Share		
	Page Descri	iption	
	Print		

After doing this you will get a dialog box which will let you input the name for a new page and select its type:

🏮 Report Page				x
Name: * Table 1				
Page Type:				
Table/Chart	Treemap	Scatter-diagram	Мар	Dashboard
				OK Cancel

🟮 Business Analys	is Tool (Report Module) - http:/	//localhost:8001/				_ – ×
Application	<u>M</u> odule <u>R</u> eports Report	<u>P</u> age <u>V</u> iew <u>D</u> ata	<u>T</u> able T <u>o</u> ols	<u>H</u> elp		
668	2 10 7 20 20 20 20 20	5 3 🛪 🖬 🕼	(🗇 📚 😵 🛛	% 000 €.0 .00 10	0% 🔻 🌐 Table	- IZ 🖓 D
	Sales (Version 1)					x
Settings	Dimensions 🔍 🔯 🚠 🗄	Columns 📙				
	▶ 💓 Account ▲	Rows 😫				
List	▶ İ∑ Date I ⊘ Delivery Date	Rows / Columns Filter	Sorting			
	 Department 	Context		Drop dimension, hierar	rchy or level here	
Reports	▶ [™] Destination Curre ▶ [™] Employee ▶ [™] Geography ▶ [™] Geography ▶ [™] Organization ▶ [™] Corganization ▶ [™] Fichange Rates ▶ [™] Exchange Rates ▶ [™] Finance ▶ [™] Finance ▶ [™] Finance	Measures	Drop dimension			
	 Reseller Sales Sales Quota Sales Summary Server F Min Date Sets Calculated Sets Sets Parameters 	Highlight	hierarchy or level	Drop measure here		
		coloring series	ashures/charts	meashures/charts 2	🙀 chart 4 🛛 🙀 Table 2	Scat 🕢 🕨 Search 🔻
Login: john Serv	ver: http://localhost:8001/ Row	/s: 0 Columns: 0 Exec.	Time: 00.0			

After pressing «OK» the new page will become available:

5.2 Copying the Existing Page

You can create an exact copy of any page. This can be done using context menu for the corresponding tab:

🟮 Business Analy	sis Tool (Report Module) - http	://localhost:8001/		x
Application	<u>M</u> odule <u>R</u> eports Report	<u>P</u> age <u>V</u> iew <u>D</u> ata	<u>T</u> able T <u>o</u> ols <u>H</u> elp	
0 0 F		🕹 🖬 📰 🖒 🖄	😫 🐟 📚 % 🚥 😓 🕺 100% 👻 🕮 Table And Chart 💌 🖏 🗐	
(C)	Sales (Version 1)			×
Settings	Dimensions 🔍 🙋 🏦 🏅	Columns 🗮 🗕 +	Product/Product Categories 💌 🕵 🗙	
	🔸 💓 Account 🗠			=111
	🕨 💓 Customer	Rows E - +	Date/Date.Calendar 👻 🐧 🗶	
List	▶ 🔯 Date	Rows / Columns Filter	Sorting	
	Delivery Date	Context	Date/Date.Calendar + Accessories + Bikes + Clothing + Components	
	Department		- CY 2005 1,003 7,139 2,132 1,574	
11/14	Estimation curret		+ H2 CY 2005 1,003 7,139 2,132 1,574	
Reports	 iii Geography 		N : Q3 C1 2005 423 2,842 931 637 Ci P • 04 CY 2005 580 4 297 1 201 937	
	 iiii Internet Sales Or 		CY 2006 5,207 24,908 16,927 13,876	
	 i Organization - 		+ H1 CY 2006 822 8,143 1,952 1,331	
		Measures	+ Q1 CY 2006 245 3,808 734 397	
	Measures Q - +	Order Quantity 🔹 🗙	Image: Provide with the state of	
	🕨 kpi 🚖		N : + 03 CY 2006 2.625 9.017 8.676 7.828	
	Exchange Rates		C ♀ ↓ Q4 CY 2006 1,760 7,748 6,299 4,717	
	Finance		- CY 2007 28,161 = Initialization Darameters 24,103	
	Internet Sales		H1 CY 2007 2,698 6,612	
	Reseller Sales	Highlight	N : > Q1 CY 2007 872 G Add 2,040 C - - 0.2 CY 2007 1.926 -	
	Sales Summary	Chart Properties	() [] / Q2 C1 2007 1,020 Copy	
	Server E Min Date _	Soline x	15,000	
	Sets Q - +	bottom 🔻	10,000	
	Calculated Sets	Argument:	Delete All But This	
	File Sets	or rows of columns	5,000 Delete All	
		🖌 legend 🗌 labels	Share	
	Parameters Q	rotate by 90°		
		Settings	Accessories 🔍 Bikes 🍋 Clothing 🍋 C	
		coloring series [🌆 m	eashures/charts 2 iii chart 4 Scatter 4 Search	-
Login: john Ser	ver: http://localhost:8001/ Ro	ws: 24 Columns: 4 Exe	c. Time: 00.1	

After that the application will ask you to enter the name of the new page:

🏮 Report Page		x
Name: * <mark>chart 4 (</mark> 2		
	0	K Cancel

After pressing «OK» the page will become available:



You can also copy a page using corresponding item of "Page/Copy" menu or by pressing a button on the toolbar:

Ô	Business Analy	sis Tool (R	eport Mod	ule) - http:	//localh	ost:80
	<u>Application</u>	<u>M</u> odule	<u>R</u> eports	Report	<u>P</u> age	<u>V</u> iew
	00 🗎		3 6	Q 🖻 🖉	3	23
		Sales (V	ersion 1)		urrent o	age
	Settings	Dimensi	ione O ta	copy c		Jgc _

Attention!

All the changes you perform over the structure of your own pages are saved on the server. All the changes you make to the administrator's pages will be lost after you close the report. That's why you should use page copying as an efficient way to save the structure you need for further viewing.

5.3 Pages Saving

If you are the author of the page than that page is marked with a blue color and when you move the mouse pointer over it you will see a hint «Page created by …»:



You can see four pages on the picture: first two are the administrator's pages and the last one is yours.

You can save the structure of your own pages using one of the approaches:

1. Press "Save Report" button on the toolbar:



2. Use the "Page/Save" item from the main menu.

Attention!

- 1) You can save only your own pages. If you perform any changes to the administrator's pages and save all pages of the report, you will lose all the changes you made to administrator's pages.
- 2) When you are saving a report, the structure of the report is saved (the information about what is placed on the rows and columns etc.), but not data. It is saved on the server, so if you will login to the Report Module on the other computer you will see all the pages you saved.

5.4 Undo Action

While working with a report sometimes you'll need to rollback one or more previous changes you made, i.e. return the report to the state it was in before you made those changes. To perform such rollback there is an "Undo" button on the toolbar:



After undoing some changes you can return them back (i.e. perform the changes once again) using "Redo" button:



5.5 Report Restore

There is a way to restore a pages structure. It means that all your changes on the page will be lost and you will get the last saved (by you or administrator) version.

Here is an example. Suppose, the page was looking like this when you opened it:



You changed it structure – for example, altered the selection on rows and columns, so that the page now looks like this:

🏮 Business Analy	sis Tool (Report Module) - http	://localhost:8001/						_ • ×
Application	<u>M</u> odule <u>R</u> eports Report	<u>P</u> age <u>V</u> iew <u>D</u> ata	<u>T</u> able T <u>o</u> ols	<u>H</u> elp				
				0/ 000 €.0 .0	00 1008/ -	Et Tabla	- 178	ി പ
				% 000 .00 →	.0 100% +			an an
	Sales (Version 1)							×
Cottings	Dimonsions Q to the				-	_		1
Securitys		Columns 🚊 🗕 +	Date/Date.Calend	ar 🔻 🞑 🗙 – +	Geography 🔻 🞑	×		
	Account ^	Pows 😂 🗕 +	Product/Product C	atenories 💌 🔟 🗙				
1.0	Customer		, rodacy, rodace o	acgones 🛵	1			
List	▶ 💽 Date	Rows / Columns Filter	Sorting					
	Delivery Date	Context	Product/Prod	▶ CY 2005		▶ CY 2006		
	🕨 🕨 Department	Context	uct Categori	▶ Canada	+ United States	Canada	France	▶ United Kin
	Destination Curre		Bike Racks					*
Reports	Employee		 Bottles a 					0
	👻 📃 Geography		▶ Cleaners					
	🕨 👬 Geography		▶ Helmets	\$5,147.56	\$15,087.81	\$17,731.90	\$3,904.74	\$3,05
	⊢ City –		Hydration			+0.005.04	+000.00	
	1 Margaret 0	Measures	LOCKS			\$2,695.24	\$600.00	\$45
	Measures 4 - +	Reseller Sales Amount 🔻 🗙	Fumps Tires and			\$2,000.01	\$591.49	\$37
	🔆 Reseller Gros 🔺		Mountain	\$677 138 20	\$3,868,198,31	\$1 651 174 99	\$216 198 71	\$353.04
	Reseller Orde	-	Road Bikes	\$693,583.07	\$2,156,429.04	\$2,287,108,99	\$438,039,49	\$293,64
	Reseller Orde	1	Fouring B	+	+-,,	+-,	4	
	🔅 Reseller Ratio		▶ Bib-Shorts			\$25,352.88	\$6,902.67	\$5,53
	Reseller Ratio		▶ Caps	\$727.75	\$1,959.13	\$2,310.76	\$420.43	\$31
	Reseller Sales		Gloves			\$19,089.00	\$4,842.06	\$5,58
	Reseller Stan		Jerseys	\$6,672.34	\$21,583.23	\$27,021.35	\$5,002.76	\$4,05
	🖬 Reseller Tax 🚽		> Shorts			\$11,870.41	\$3,203.47	\$2,55
			Socks	\$513.25	\$2,920.65	\$497.40	+7 /70 0/	
	Sets Q - +		Vests			\$29,502.11	\$7,472.24	\$6,12
	Calculated Sets		» Vests					
	Final Sets		 Brakes 					
			▶ Chains					
			Cranksets					
	Parameters Q		▶ Derailleurs					
		Highlight	Forks	1 -	1	#10 004 0E	45 000 40	40 EA
			ashures/charte	meashures /cha	arts 2 de chart 4	chart 5	Scati 4	aarda —
		tooming series	cashures/cridits	the ashules/cha			3 June q ► Se	arch 👻
La sincialma de C		22 Column 10 5	T					
Login: John Ser	rver: http://localhost:8001/ Ro	ows: 33 Columns: 18 Exe	ec. Time: 00.2					

If you wish to undo all your changes and return to the version saved on the server select "Page / Rollback to last save view" from the main menu:



5.6 Export of Pages and Data

5.6.1 Data Export to Word, Excel, PDF.

To export pages data to the Word, Excel or PDF file, you'll need to perform one of the next actions:

- 1. Select "Table / Export to Excel" (Word or PDF) from the main menu;
- 2. Press the right mouse button inside the table to call the context menu and then select "Export to Excel" (Word or PDF):



When the export is completed you will be asked if you want to open the created file.

5.6.2 Saving the Pages to NRP file

NRP is a file format developed for compact and secure report saving. There is a special NRP files viewer available on the pages of Business Analysis Tool portal:

	mpulse iness more intelligent	DEU ENG <u>FRA NLD RUS UKR LAT ZHO</u> Logout
You are here	:: Business users	
3	Report Module Installer Important! After you download this archive, extract its content to a Launch BATReportInstall.exe from this folder and follow the install Download	single folder on your local hard drive. lation instructions.
	NRP Viewer NRP is a file format of reports saved to the hard drive. If you would lidrive you will need this program to view these reports.	ike to save reports to your local hard
	Local Cube Viewer Local cubes are files with data which can be generated in the report of difference from NRP is the fact that you can analyse data without cor Download	module or administrative moduel. The nnection to the application server.
		Copyright © 2005-2019 BIT Impulse

After downloading and installing this viewer you will be able to view NRP files, just the way you do it with PDF, DOC and other document files types.

To save your page to an NRP file you need to select "Report / Save to NRP File" from the main menu.

The window will appear where you'll be able to set some advanced saving settings:

🟮 Pages to Export			x
description (2) (The data must be refreshed on t	•	Select All	
totals (The data must be refreshed on the page)			51
visual totals (The data must be refreshed on the		Unselect All	
show by (The data must be refreshed on the part		Current Page	
refresh (The data must be refreshed on the page			
dart			
chart 2			
✓ coloring series			
meashures/charts			
meashures/charts 2			
chart 4	U		
Chart5	Ŧ		
CompressionLevel: Normal	•		
Password:			
	OK	Cancel	

NRP file format supports the saving of multiple pages into one file. In the «Save to File» window you can select the page you want to save, set the compression level and set the password required to open a saved file. The compression level does not affect the data you are saving, it only affects the size of the resulting file (the bigger is compression level, the smaller will be the file size). If you'll set the password for the file no one will be able to open it without the password.

6 Advanced Report Designing Options

6.1 Detailed View (Drill Through operation)

Drill through (detailed view) enables you to view the piece of data from DB that some value from the table is based on.

Let's perform the drill through operation on our example report page. Select an arbitrary cell from the table on which you wish to perform a detailed view. Now press the right mouse button on that cell and select "Drill Through" from the context menu:



able	MDX						
ag a c	olumn header here to gr	oup by that colum					
	Sales Summary						
#	Order Quantity	Unit Price	Extended Amount	Standard Product Cost	Total Product Cost	Sales Amount	
	1	2024.994	2024.994	1898.0944	1898.0944	2024.994	
	2 3	2024.994	6074.982	1898.0944	5694.2832	6074.982	
	3	2024.994	2024.994	1898.0944	1898.0944	2024.994	
	4	2039.994	2039.994	1912.1544	1912.1544	2039.994	
	5	2039.994	2039.994	1912.1544	1912.1544	2039.994	
	6	2039.994	4079.988	1912.1544	3824.3088	4079.988	
	7	2039.994	2039.994	1912.1544	1912.1544	2039.994	
	8	3 2024.994	6074.982	1898.0944	5694.2832	6074.982	
	9	2 2024.994	4049.988	1898.0944	3796.1888	4049.988	
1	0	2024.994	8099.976	1898.0944	7592.3776	8099.976	
1	1	2039.994	4079.988	1912.1544	3824.3088	4079.988	
1	2	2 2024.994	4049.988	1898.0944	3796.1888	4049.988	
1	3	2039.994	2039.994	1912.1544	1912.1544	2039.994	
1	.4	2024.994	8099.976	1898.0944	7592.3776	8099.976	
1	5	2 2024.994	4049.988	1898.0944	3796.1888	4049.988	
1	6	2039.994	6119.982	1912.1544	5736.4632	6119.982	
1	7	2039.994	2039.994	1912.1544	1912.1544	2039.994	
1	8	2024.994	2024.994	1898.0944	1898.0944	2024.994	
1	9	2039.994	2039.994	1912.1544	1912.1544	2039.994	
2	0	2 2024.994	4049.988	1898.0944	3796.1888	4049.988	
2	1 :	2 2024.994	4049.988	1898.0944	3796.1888	4049.988	
						+	

As a result you will see first 1000 rows from the data base table:

You can export those results to an Excel file.

Attention!

- 1) It is possible that you don't have enough rights to perform drillthrough (if an administrator didn't allow you to). In that case you won't be able to see the corresponding menu item.
- 2) The drill through operation may be not configured on the corresponding cube on the server. In this case trying to perform the operation you will get an appropriate message.

6.2 Data Highlighting

Highlighting helps you to better analyze data. Let's prepare the table of the next structure:

Columns 🚊 🗕 +	Date/Date.Calendar 🔻 🗔 🗙			
Rows 📒 – Pro	duct/Product Categories 🔻 🞑	x		
Rows / Columns Filter	Sorting			
Context	Product/Product Catego	+ CY 2007	FCX 2008	
	Touring-1000 Blue, 46	\$637,968.79	\$527,004.40	
	Touring-1000 Blue, 50	\$387,649.78	\$326,140.78	
	Touring-1000 Blue, 54	\$207,414.09	\$154,487.74	
	Touring-1000 Blue, 60	\$759,596.65	\$611,187.58	
	Touring-1000 Yellow, 46	\$483,060.26	\$533,252.57	
	Touring-1000 Yellow, 50	\$292,191.62	\$329,001.66	
Measures	Touring-1000 Yellow, 54	\$135,987.35	\$154,487.74	
Deceller Coles Amount - Y	Touring-1000 Yellow, 60	\$570,404.24	\$613,959.06	
Reseller Sales Amount 🔹 🗙	Touring-2000 Blue, 46	\$175,973.94	\$145,053.09	
	Touring-2000 Blue, 50	\$78,722.28	\$78,722.28	
	Touring-2000 Blue, 54	\$364,777.66	\$300,617.55	
	Touring-2000 Blue, 60	\$293,136.02	\$244,184.85	
	Touring-3000 Blue, 44	\$45,916.20	\$48,104.28	
	Touring-3000 Blue, 50	\$156,394.59	\$156,554.12	
	Touring-3000 Blue, 54	\$125,421.89	\$123,823.98	
	Touring-3000 Blue, 58	\$83,113.51	\$85,518.72	
	Touring-3000 Blue, 62	\$39,669.33	\$48,104.28	
	Touring-3000 Yellow, 44	\$156,765.69	\$157,557.55	
	Touring-3000 Yellow, 50	\$124,570.04	\$123,378.57	
	Touring-3000 Yellow, 54	\$79,667.15	\$81,510.03	
	Touring-3000 Yellow, 58	\$47,903.85	\$48,104.28	
	Touring-3000 Yellow, 62	\$156,825.74	\$157,604.47	
Highlight				



On the rows – "Product Categories" dimension with a whole "Product" level selected under the "Touring Bikes" element:

on columns – years 2007 and 2008. Inside the table – "Reseller Sales Amount" measure. Say, we need to emphasize somehow the sales amount larger than 500,000. To do that, perform one of the following actions:

- 1. Select "Table / Highlight" from main menu.
- 2. Select the corresponding item from the context menu of the table:



3. Press the Highlight button at the bottom of the editor:



The window will appear containing highlight rules (there are no rules at the moment):

🟮 Highlight Rules	x
Press "Add" button for new highlight rule.	
OK Can	:el

Press the Add button and a new tab with a highlight rule will appear.

Let's name the rule "More than 500K" and fill in all the fields as it is shown on the picture below:

🏮 Highlight Rules	x					
More than 500 K						
Name:	More than 500 K					
Measure to analyse:	Reseller Sales Amount					
Type of analysis:	Exception O Gradient					
Null values:	Ignore 🔻					
Value:	Greater					
Preview:	AaBbCcYyZz Select					
Measure to paint:	 The same as analysed All Custom 					
	KPI Exchange Rates Finance Internet Sales Reseller Sales Sales Quota Sales Summary					
Add	Copy < < > > Remove					

According to the configured rule, the "Reseller Sales Amount" measure will be analyzed. The type of analysis is Exception (exceptional situation), empty fields will be ignored and the values bigger than 500,000 will be colored green. After pressing «OK» button you will see that all values bigger than 500,000 are highlighted with a green color:

Product/Product Catego	FCX 2007	FCX 2008
Touring-1000 Blue, 46	\$637,968.79	\$527,004.40
Touring-1000 Blue, 50	\$387,649.78	\$326,140.78
Touring-1000 Blue, 54	\$207,414.09	\$154,487.74
Touring-1000 Blue, 60	\$759,596.65	\$611,187.58
Touring-1000 Yellow, 46	\$483,060.26	\$533,252.57
Touring-1000 Yellow, 50	\$292,191.62	\$329,001.66
Touring-1000 Yellow, 54	\$135,987.35	\$154,487.74
Touring-1000 Yellow, 60	\$570,404.24	\$613,959.06
Touring-2000 Blue, 46	\$175,973.94	\$145,053.09
Touring-2000 Blue, 50	\$78,722.28	\$78,722.28
Touring-2000 Blue, 54	\$364,777.66	\$300,617.55
Touring-2000 Blue, 60	\$293,136.02	\$244,184.85
Touring-3000 Blue, 44	\$45,916.20	\$48,104.28
Touring-3000 Blue, 50	\$156,394.59	\$156,554.12
Touring-3000 Blue, 54	\$125,421.89	\$123,823.98
Touring-3000 Blue, 58	\$83,113.51	\$85,518.72
Touring-3000 Blue, 62	\$39,669.33	\$48,104.28
Touring-3000 Yellow, 44	\$156,765.69	\$157,557.55
Touring-3000 Yellow, 50	\$124,570.04	\$123,378.57
Touring-3000 Yellow, 54	\$79,667.15	\$81,510.03
Touring-3000 Yellow, 58	\$47,903.85	\$48,104.28
Touring-3000 Yellow, 62	\$156,825.74	\$157,604.47

You can set multiple highlight rules.

The highlight can also be of gradient type. Open the highlight rules window once again and change the highlight settings as it is shown on the picture:

🏮 Highlight Rules	x
More than 500 K	
Name:	More than 500 K
Measure to analyse:	Reseller Sales Amount
Type of analysis:	O Exception O Gradient
Null values:	Ignore 🔻
Paint:	Background O Foreground
Preview:	Select
Measure to paint:	 The same as analysed All
	O Custom
	> 🗊 KPI 🔺
	→ 🗋 Sales Summary 👻
Add	Copy < > > > Remove
	OK Cancel

After that the table will look like this:

Product/Product Catego	FCX 2007	FCX 2008
Touring-1000 Blue, 46	\$637,968.79	\$527,004.40
Touring-1000 Blue, 50	\$387,649.78	\$326,140.78
Touring-1000 Blue, 54	\$207,414.09	\$154,487.74
Touring-1000 Blue, 60	\$759,596.65	\$611,187.58
Touring-1000 Yellow, 46	\$483,060.26	\$533,252.57
Touring-1000 Yellow, 50	\$292,191.62	\$329,001.66
Touring-1000 Yellow, 54	\$135,987.35	\$154,487.74
Touring-1000 Yellow, 60	\$570,404.24	\$613,959.06
Touring-2000 Blue, 46	\$175,973.94	\$145,053.09
Touring-2000 Blue, 50	\$78,722.28	\$78,722.28
Touring-2000 Blue, 54	\$364,777.66	\$300,617.55
Touring-2000 Blue, 60	\$293,136.02	\$244,184.85
Touring-3000 Blue, 44	\$45,916.20	\$48,104.28
Touring-3000 Blue, 50	\$156,394.59	\$156,554.12
Touring-3000 Blue, 54	\$125,421.89	\$123,823.98
Touring-3000 Blue, 58	\$83,113.51	\$85,518.72
Touring-3000 Blue, 62	\$39,669.33	\$48,104.28
Touring-3000 Yellow, 44	\$156,765.69	\$157,557.55
Touring-3000 Yellow, 50	\$124,570.04	\$123,378.57
Touring-3000 Yellow, 54	\$79,667.15	\$81,510.03
Touring-3000 Yellow, 58	\$47,903.85	\$48,104.28
Touring-3000 Yellow, 62	\$156,825.74	\$157,604.47

You can easily notice that the bigger is value in the cell, the more saturated is its color. If you press the "Select" button in the highlight rule's settings window,

🏮 Highlight Rules		x			
More than 500 K					
Name:	More than 500 K				
Measure to analyse:	Reseller Sales Amount				
Type of analysis:	O Exception				
Null values:	Ignore 🔹				
Paint:	Background O Foreground				
Preview:	Select				
Measure to paint:	The same as analysed				
	KPI Exchange Rates Finance Internet Sales Reseller Sales Sales Quota Sales Summary				
Add	Copy < < > > Remove				
	OK Cancel				

then the other window will appear where you can set the gradient settings:

🏮 Gradient H	lighlight			×
One-color		Two-color	🔘 Rainbow	
1	1 1	· · ·	т т т т Т	
Steps	10 🗘		Show m	ore >>>
			ОК	Cancel

You can set one-color, two-color or rainbow highlight, set the number of steps, etc.

6.3 Text Formatting

Apart from highlighting there exists a possibility to «paint» the text on rows, columns and inside the table. To do that select «Table / Formatting» in main menu or the similar item in the table's context menu. The following form will appear:



Columns 😫 - + Date/Date.Calendar 🕶 🕵 🗙								
Rows 🖹 - + Product/Product Categories 🔹 🗔 🗙								
Rows / Columns Filter Sorting								
Context Produc	ct/Pro	duct Cat + CY 2005		Formatting for Category				
→ Acc → Bike	e	Drill by		Formatting for Product/Product Categories				
	4	Drill by on New Page 🔸		Grev Alternating				
		Drill Up		Red Alternating				
► Clot		Drill Down		Orange Alternating				
Measures		Hide Item		Yellow Alternating				
		Keep Only This		Green Alternating				
-		Hide Siblings		Cyan Alternating				
		Show All Children		Blue Alternating				
		Show Level		Violet Alternating				
	9	Member Selector		Grey				
		Actions •		Red				
		Copy to Clipboard		Orange				
	17	Sorting		Yellow				
	7	Filter •		Green				
Highlight	8	Formatting		Cyan				
chart 4 🎼 chart5 🙀 drill through 📑 highlighting 🛤 fc				Blue				
				Violet				
7 Columns: 4 Exec. Time: 00.2	2			Clear all formatting				

You can do the same thing from the context menu of the table:

or

	Columns			Date/Da	te.Caler	dar	- 🔂 X	
	D	-		Deaderabl	Dec al cat		Convert to set	
l	ROWS	=		 Product/ 	Product	8	Formatting	
	Rows / Column	s	Filter	Sorting				3

When the user enters in menu "Formatting", he will get a dialog box with the tree open at the left side. The tree will be open up to the level which was selected by the user:

🏮 Formatting		x
Table Hierarchies Measures		
12 A 3	Header Body Separators	
> 🔁 Sales	Apply Formatting	
Account	Layout	
► I Customer - ÎSÎ Date	Orientation: * Auto	
v 🗁 Calendar		
👻 🏭 Date.Calendar		
Σ (All)	Vertical Align: * Top	
Calendar Year	Font	
Calendar Sem	Text Color: *	-
# Month		
Date	235, 236, 239	<u> </u>
Date.Calendar W	Alternating: *	
Date.Calendar Qu	Alternative Back Color:* 0, 0, 0, 0	
Date.Calendar W	Font Size: *	8 🌲
Date.Calendar Year	Font Name: * Verdana	~
Fiscal	Bold: *	
Date.Date	Italic: *	
Date.Day of Month	Strikeout: *	
Date.Day of Week	Underline: *	
Date.Day of Year		
Date.Month of Year Image: The second secon		
 Department 		
Destination Currency	·	
• • • • •		
	ОК Са	ancel

If we use the main menu to get into this dialog box, we'll see the following:

Table Hierarchies Measures ✓ Use interface theme settings Body background:	🏮 Fo	rmatting		x
✓ Use interface theme settings Body background:	Table	Hierarchies	Measures	
Body background: Header background: Table line color: Font Text Color: Black Font Size: 8 Font Name: Tahoma Bold: Italic: Strikeout: Underline:	🗹 u	se interface them	e settings	
Header background:	E	Body background	:	
Table line color: Font Text Color: Black Font Size: 8 Font Name: Tahoma Bold: Italic: Strikeout: Underline:		Header backgrou	nd:	
Font Text Color: Black Font Size: 8 Font Name: Tahoma Bold: Italic: Strikeout: Underline:	,	Table line color:		
Text Color: Black Font Size: 8 + Font Name: Tahoma Bold: Italic: Italic: Italic: Strikeout: Italic: Underline: Italic:				
Text Color: Black Font Size: 8 Font Name: Tahoma Bold: Italic: Italic: Strikeout: Underline:		Font		
Font Size: 8 Font Name: Tahoma Bold: . Italic: . Strikeout: . Underline: .		lext Color:	Black	
Font Name:TahomaBold:Italic:Strikeout:Underline:		Font Size:	8 🌲	
Bold:Italic:Strikeout:Underline:		Font Name:	Tahoma 👻	
Italic: Strikeout: Underline:		Bold:		
Strikeout: Underline:		Italic:		
Underline:		Strikeout:		
		Underline:		
OK Cancel			OK Cancel	

The tab "Table" is used to set up the color of the lines. The rest two tabs are used to format hierarchies, levels and measures.

6.3.1 Hierarchy Formatting

Each hierarchy has a set of settings for automatic coloring of its levels. Let us look at the example. Click the right mouse button on the hierarchy "Product/Product Categories" and select "Formatting":

Columns 😫 🗕 +	Dat	e/Date.Calendar	▼ 🕵 🗙 – + Ge	ography 🔻 🗔 🗙
Rows 🗄 🗕 +	Pro	duct/Product Cate	gorie Conver	t to set
Rows / Columns Filter	Sort	ing	😽 Format	ting
Context	Pr	oduct/Product	▶ CY 2007	F CY 20 3
	Ca	ategories	F Canada	▶ Canada
	I -	Accessories	\$58,128.43	\$32,356.20
		→ Bike Racks	\$21,405.68	\$16,089.98
		▶ Bottles a	\$856.53	\$502.16
		▶ Cleaners	\$1,219.93	\$887.97
		▶ Helmets	\$23,984.40	\$10,406.00
Measures	<u>ie</u>	+ Hydration	\$7,964.01	\$4,404.14
medsures	So I	▶ Locks	\$1,515.00	
Reseller Sales Amount 🔻 🗙	l Se	Pumps	\$1,067.47	
	Ă	▶ Tires and	\$115.42	\$65.95
	-	Bikes	\$4,417,665.71	\$1,909,709.62
		▶ Mountain	\$1,666,549.71	\$727,933.91
	es	▶ Road Bikes	\$2,075,667.15	\$657,851.93
	ā	▶ Touring B	\$675,448.85	\$523,923.79
	-	Clothing	\$177,893.39	\$77,497.00
		▶ Bib-Shorts	\$15,478.73	
		▶ Caps	\$3,058.36	\$1,054.30
		▹ Gloves	\$21,443.10	\$3,224.17
		Jerseys	\$57,156.67	\$28,743.43
		▹ Shorts	\$37,517.22	\$24,549.83
	B	▹ Socks	\$1,711.99	\$1,024.21
	Ę	▶ Tights	\$18,231.81	
Highlight	1 U	Vests	\$23,295.52	\$18,901.08
Highlight	-	Components	\$997,617.89	\$370,698.68

In the window below let us set up the following parameters for the level "Product Categories":



The table will look like this:

Product/Product		FCX 2007	FCX 2008	
Categories		▶ Canada	Canada	
~	Accessories	\$58,128.43	\$32,356.20	
	Bike Racks	\$21,405.68	\$16,089.98	
	 Bottles a 	\$856.53	\$502.16	
	Cleaners	\$1,219.93	\$887.97	
	 Helmets 	\$23,984.40	\$10,406.00	
Ë	Hydration	\$7,964.01	\$4,404.14	
SO	Locks	\$1,515.00		
ë	Pumps	\$1,067.47		
Åc	Tires and	\$115.42	\$65.95	
~	Bikes	\$4,417,665.71	\$1,909,709.62	
	Mountain	\$1,666,549.71	\$727,933.91	
es	Road Bikes	\$2,075,667.15	\$657,851.93	
B	Touring B	\$675,448.85	\$523,923.79	
	Clothing	\$177,893.39	\$77,497.00	
	Bib-Shorts	\$15,478.73		
	▶ Caps	\$3,058.36	\$1,054.30	
	 Gloves 	\$21,443.10	\$3,224.17	
	Jerseys	\$57,156.67	\$28,743.43	
	 Shorts 	\$37,517.22	\$24,549.83	
E.	 Socks 	\$1,711.99	\$1,024.21	
÷	 Tights 	\$18,231.81		
ŏ	 Vests 	\$23,295.52	\$18,901.08	
	Components	\$997,617.89	\$370,698.68	

If we select the topmost level as well:

Image: Selector: Product/Product Categories								
Selection Filter Sorting Options								
- E All Products								
- Category								
Subcategory								
the table will look like this:

Product/Product			FCX 2007	FCX 2008
Ca	teg	gories	▶ Canada	▶ Canada
~	All	Products	\$5,651,305.43	\$2,390,261.51
	-	Accessories	\$58,128.43	\$32,356.20
		Bike Racks	\$21,405.68	\$16,089.98
		 Bottles a 	\$856.53	\$502.16
		 Cleaners 	\$1,219.93	\$887.97
		 Helmets 	\$23,984.40	\$10,406.00
	ц.	Hydration	\$7,964.01	\$4,404.14
	SS	Locks	\$1,515.00	
	ë	Pumps	\$1,067.47	
	¥	Tires and	\$115.42	\$65.95
	-	Bikes	\$4,417,665.71	\$1,909,709.62
		Mountain	\$1,666,549.71	\$727,933.91
	ŝ	Road Bikes	\$2,075,667.15	\$657,851.93
	ā	Touring B	\$675,448.85	\$523,923.79
	-	Clothing	\$177,893.39	\$77,497.00
		Bib-Shorts	\$15,478.73	
		▶ Caps	\$3,058.36	\$1,054.30
		 Gloves 	\$21,443.10	\$3,224.17
5		Jerseys	\$57,156.67	\$28,743.43
ų,		 Shorts 	\$37,517.22	\$24,549.83
bo	n,	Socks	\$1,711.99	\$1,024.21
Ч	÷	 Tights 	\$18,231.81	
¥.	ŏ	Vests	\$23,295.52	\$18,901.08

Columns 🖺 🗕 + Date/Da	te.Calendar 🔻 🗔 🗙 – 🕂 Geograpi	hy 🔻 🕵 🗙
Rows 🗧 - + Product/	Product Categories 🔻 🗔 🗙	
Rows / Columns Filter Sorting		
Context Produ Categ	ct/Product + CY 2007 + CY ories + Canada + Ca	Formatting for Category
→ Acc	Bik Drill by	Formatting for Product/Product Categories
3 4	Bot Drill by on New Page 🕨	Grey Alternating
	Hel Drill Up	Red Alternating
Measures	Hyc Drill Down	Orange Alternating
Reseller Sales Amount 🔻 🗙 🖡	Pur Hide Item	Yellow Alternating
o ∢ ⊧ Bik	Tire Ac Keep Only This	Green Alternating
	Moi Hide Siblings	Cyan Alternating
i ∢ sikes	Roa Show All Children	Blue Alternating
U Clo	thii Show Level	Violet Alternating
► E	Bib Car 🔞 Member Selector	Grey
	Glo Actions	Red
	ler Actions	Orange
	Copy to Clipboard	Yellow
	Tig 🗊 Sorting 🕨 🕨	Green
Highlight Cor	np 7 Filter	Cyan
meashures/charts 2	4 Formatting	Blue

Format dialog can also be called from the context menu:

Let us look at one more example. Let us put the "Geography" and "Date/Date.Calendar" hierarchies on rows and let us put the hierarchy "Product/Product Categories" in context. Select "Bikes" in context:

Columns							
Rows	- + -	Geo	gra	phy	/ + 🔯 x –	+ Date/Date	e.Calendar 🔻 🕵 🗙
Rows / Columns	Filter 5	Sorti	ing				
Context		Ge	eog	ra	ohy	Date/Date	
Product/Product Ca	atea X	Ŧ	Au	str	alia	CY 2007	\$680,645.96
riodacy rodace of	negin					FCX 2008	\$643,174.77
			-	Ne	w South	CY 2007	\$477,607.72
				Wa	ales	FCX 2008	\$433,044.27
				Þ	Darlinghur	FCX 2007	\$3,589.79
					st	FCX 2008	\$2,672.46
Measures				Þ	Lane Cove	FCX 2007	\$66,561.04
						FCX 2008	\$54,116.84
Reseller Sales Amo	unt 🔻 🗙			Þ	Lavender Bay	FCX 2007	\$131,703.05
						FCX 2008	\$84,059.47
				Þ	Malabar	FCX 2008	\$2,860.88
		1		Þ	Matraville	FCX 2007	\$2,195.37
						FCX 2008	\$3,085.74
				Þ	Milsons	FCX 2007	\$68,693.28
					Point	FCX 2008	\$41,417.71
				Þ	Newcastle	CY 2007	\$47,540.40
						FCX 2008	\$41,933.18
				Þ	North Ryde	CY 2007	\$15,023.78
			es			FCX 2008	\$25,830.95
			¥a	⊧	North	▶ CY 2007	\$2,105.90
			÷		Sydney	FCX 2008	\$7,775.79
		alia	100	⊧	Rhodes	▶ CY 2007	\$95,512.14
L Bakkata		str	3			FCX 2008	\$122,459.42
Highlight		Au	Ne	⊧	Silverwater	▶ CY 2007	\$3,179.53

If the automatic level coloring is set for hierarchy "Geography", but is not set for hierarchy "Date/Date.Calendar", we will see the following table:

Geography			Da	ate/	Date		
😞 Australia				CY	2007	\$680,645.96	
					CY	2008	\$643,174.77
	-	Ne	w South	Þ	CY	2007	\$477,607.72
		Wa	ales	Þ	CY	2008	\$433,044.27
		⊧	Darlinghur	Þ	CY	2007	\$3,589.79
			st	Þ	CY	2008	\$2,672.46
		⊧	Lane Cove	Þ	CY	2007	\$66,561.04
				Þ	CY	2008	\$54,116.84
		⊧	Lavender	Þ	CY	2007	\$131,703.05
			Bay	Þ	CY	2008	\$84,059.47
		⊧	Malabar	Þ	CY	2008	\$2,860.88
		⊧	Matraville	Þ	CY	2007	\$2,195.37
				Þ	CY	2008	\$3,085.74
		Þ	Milsons	Þ	CY	2007	\$68,693.28
			Point	Þ	CY	2008	\$41,417.71
		⊧	Newcastle	⊧	CY	2007	\$47,540.40
				Þ	CY	2008	\$41,933.18
		Þ	North Ryde	Þ	CY	2007	\$15,023.78
	le			Þ	CY	2008	\$25,830.95
	×.	⊧	North	⊧	CY	2007	\$2,105.90
	£		Sydney	Þ	CY	2008	\$7,775.79
alië	20 20	Þ	Rhodes	Þ	CY	2007	\$95,512.14
str	3			Þ	CY	2008	\$122,459.42
Au	Re	Þ	Silverwater	Þ	CY	2007	\$3,179.53

The format rules are going "through" another hierarchy for which they are not defined. If we set up the format rules for "Date/Date.Calendar" which is placed to the right side of "Geography", we will get this:



_				_			
Geography			Da	ate/I	Date		
😞 Australia				⊬	CY	2007	\$680,645.96
					CY	2008	\$643,174.77
	- New South				CY	2007	\$477,607.72
		Wa	ales	Þ	CY	2008	\$433,044.27
		Þ	Darlinghur	Þ	CY	2007	\$3,589.79
			st	Þ	CY	2008	\$2,672.46
		Þ	Lane Cove	Þ	CY	2007	\$66,561.04
				Þ	CY	2008	\$54,116.84
		Þ	Lavender	Þ	CY	2007	\$131,703.05
			Bay	Þ	CY	2008	\$84,059.47
		Þ	Malabar	Þ	CY	2008	\$2,860.88
		Þ	Matraville	Þ	CY	2007	\$2,195.37
				Þ	CY	2008	\$3,085.74
		Þ	Milsons	Þ	CY	2007	\$68,693.28
			Point	Þ	CY	2008	\$41,417.71
		⊧	Newcastle	⊬	CY	2007	\$47,540.40
				Þ	CY	2008	\$41,933.18
		Þ	North Ryde	⊬	CY	2007	\$15,023.78
	le			Þ	CY	2008	\$25,830.95
	¥,	⊧	North	⊬	CY	2007	\$2,105.90
	£		Sydney	Þ	CY	2008	\$7,775.79
alië	30	Þ	Rhodes	⊬	CY	2007	\$95,512.14
str	3			Þ	CY	2008	\$122,459.42
Au	Re	Þ	Silverwater	Þ	CY	2007	\$3,179.53

Geography	Da	ite/	'Da	ate.Calendar	
😞 Australia	~	CY	20)07	\$680,645.96
			•	Q3 CY 2007	\$342,806.87
			J	▶ July 2007	\$39,902.50
			0	August 2007	\$103,881.43
		~	ö	September 2007	\$199,022.94
		8	•	Q4 CY 2007	\$337,839.09
	6	2	J	October 2007	\$51,635.39
	ĕ.	ú	ú	November 2007	\$106,464.38
	ò	Ŧ	Ş.	December 2007	\$179,739.31
		CY	20	008	\$643,174.77
			•	Q1 CY 2008	\$307,762.01
			J.	January 2008	\$61,364.99
			ú	February 2008	\$63,843.85
		~	õ	▶ March 2008	\$182,553.17
		ë.	•	Q2 CY 2008	\$335,412.76
	80	2	y.	▶ April 2008	\$54,279.61
	Ň	Ú	Ú	⊦ May 2008	\$98,422.81
	δ	Ξ	ö	▶ June 2008	\$182,710.33
▼	~	CY	20)07	\$477,607.72
			•	Q3 CY 2007	\$247,843.85
			y.	▶ July 2007	\$33,055.83
			Ú m	August 2007	\$74,779.73
			ö	September 2007	\$140,008.29
		8	*	Q4 CY 2007	\$229,763.87
e e	8	2	Y.	October 2007	\$38,611.58
X al	Ň	Ú	Ú T	November 2007	\$71,038.37
÷	6	Ξ	ð	December 2007	\$120,113.92
out	~	CY	20)08	\$433,044.27
tra S		U.	-	Q1 CY 2008	\$207,636.47
lew	X	Ξ	4	January 2008	\$55,804.27
a Z	0	I	0	▶ February 2008	¢41 670 30

The right formatting rule has priority over the left formatting rule. If we have several levels displayed in the "Date/ Date.Calendar" hierarchy, it will look like this:

6.3.2 Formatting for Levels

For every level of the tab "Hierarchies" you can set up parameters of the body and the header. Let us look at the example:

Columns 🔋 – + Date/Date.	Calendar 🔻 🗔 🗙 – 🕂 Geography 👻 🗔 🗙
Rows 😫 - + Product/Pro	oduct Categories 🔻 🗔 🗙
Rows / Columns Filter Sorting	
Context Product/	/Produc + CY 2007 + CY 2008
t Catego Acces	rries
: ► Hel	mets ¢23.984.40 ¢10,406.00
8 - Loc	Drill by
li → Pur Bikes	Drill by on New Page 09,709.62
Measures	Drill Up 27,933.91
Reseller Sales Amount 🔻 🛣 🕨 Roa	57,851.93 Drill Down 77,497.00
▶ Bib	Hide Item
	\$1,054.30 Keep Only This \$3,224.17
▶ Jer	Hide Siblings
E Shi	Formatting for Subcategory
	Formatting for Product/Product Categories
🕹 Comp	Show Level
► For	Member Selector
	Actions
Š ► Mo	Copy to Clipboard
	Yellow Alternating
	Green Alternating
	Cyan Alternating
	Blue Alternating
	Violet Alternating
Highlight	Grey
	Red

▼ Formatting Table Hierarchies Measures V Organization	Let us select the following parameters on the tab "Header":						
Table Hierarchies Measures Id Apply Formatting Image: Product Image: Product Product Image: Product Categories Image: Product Category Image: Subcategory Subcategory Image: Product Product Product Image: Product Category Image: Product Product Product Image: Product Product Product Image: Product	🟮 Formatting				x		
¹ Δ ¹ Organization ¹ Organization ¹ Product ¹ Financial ¹ Product ¹ Stocking ¹ Category ¹ Subcategory ¹ Style ¹ Sales Summary Order Det <td>Table Hierarchies Measures</td> <td></td> <td></td> <td></td> <td></td>	Table Hierarchies Measures						
Organization Organization	te: 🔬 🏹	Header Body S	eparators				
OK Cancel	 Organization Product Financial History Stocking Stocking Product Categories Σ (All) Category Subcategory Product Product Model Lines Product Category Large Photo Model Name Product Line Style Subcategory Easeller Subcategory Sales Summary Order Details Senario Ship Date Source Currency Virtual Hierarchy Default Level 	Apply Formatting Layout Orientation: * Horizontal Align: * Vertical Align: * Font Text Color: Back Color: Alternating: Alternative Back Color: Alternative Back Color: Font Size: Font Size: Font Name: Bold: Italic: Strikeout: Underline:	Auto Left Top * 255, 0, 0 192, 192, 192 * 0, 0, 0, 0, 0 * 2 * 2 * 0 • 2 • 2 • 2 • 2 • 2 • 2 • 2 • 2				
				ОК	Cancel		

Set us "Apply header formatting to body":



As a result, the table will look like this:

Pr	oduct/Product	CY 2007	FCX 2008
Ca	itegories	Canada	▶ Canada
	Accessories	\$58,128.43	\$32,356.20
	Helmets	*#######	*#######
Ses	Locks	*#######	
Å0	Pumps	*#######	
	Bikes	\$4,417,665.71	\$1,909,709.62
.:) E	*#######	*#######
÷.) E	*#######	*#######
	Clothing	\$177,893.39	\$77,497.00
) E	:#######	
	Caps	*#######	*#######
	Gloves	:#######	*#######
	Jerseys	:#######	*#######
B	Shorts	:#######	*#######
Ē	Socks	*#######	*#######
ŏ	Tights	:#######	
~	Components	\$997,617.89	\$370,698.68
	Forks	*#######	
23	►	:#######	*#######
en	Headsets	*#######	
5	►	*#######	*#######
Ē	►	*#######	*#######
ů	Wheels	:#######	

If we increase the height and width of cells, we'll get a readable version:

Product/Product		CY 2007	CY 2008
Ca	itegories	▶ Canada	⊦ Canada
~	Accessories	\$58,128.43	\$32,356.20
	Helmets	\$23,984.40	\$10,406.00
cess	Locks	\$1,515.00	
Ac	Pumps	\$1,067.47	
*	Bikes	\$4,417,665.71	\$1,909,709.62
es	🕨 Mountai	\$1,666,549.71	\$727,933.91
÷.	Road Bi	\$2,075,667.15	\$657,851.93
~	Clothing	\$177,893.39	\$77,497.00
	Bib-Sho	\$15,478.73	
	Caps	\$3,058.36	\$1,054.30
	Gloves	\$21,443.10	\$3,224.17
	Jerseys	\$57,156.67	\$28,743.43
p.	Shorts	\$37,517.22	\$24,549.83
Ē.	Socks	\$1,711.99	\$1,024.21
ဗိ	Tights	\$18,231.81	
۰	Components	\$997,617.89	\$370,698.68
	Forks	\$5,424.63	
	Handleb	\$15,886.89	\$4,683.71
nts	Headsets	\$5,443.00	
one	Mountai	\$384,818.02	\$168,460.01
đ	Road Fr	\$347,954.18	\$75,976.48
ů	Wheels	\$41,116.51	

The selection looks like this:

6	Member Selector: Product/Product Categories						
5	Selection Filter Sorting Options						
ľ+.	Σ		All Products				
	-	-	Category				
			🗸 🚥 🔽 Subcategory				
			🛔 🗹 Product				
	Pr	ho	uct/Product Categories	▶ CY 2007	▶ CY 2008		
				Canada	▶ Canada		
		Ac	cessories	\$58,128.43	\$32,356.20		
		-	Bike Racks	\$21,405.68	\$16,089.98		
			Hitch Rack - 4-Bike	\$21,405.68	\$16,089.98		
		*	Bottles and Cages	\$856.53	\$502.16		
			Water Bottle - 30 oz.	\$856.53	\$502.16		
		*	Cleaners	\$1,219.93	\$887.97		
			Bike Wash - Dissolver	\$1,219.93	\$887.97		
		-	Helmets	\$23,984.40	\$10,406.00		
			Sport-100 Helmet, Black	\$2,837.13			
			Sport-100 Helmet, Black	\$5,492.30	\$3,843.78		
			Sport-100 Helmet, Blue	\$3,561.51			
			Sport-100 Helmet, Blue	\$4,602.35	\$3,224.20		
			Sport-100 Helmet, Red	\$2,321.45			
			Sport-100 Helmet, Red	\$5,169.66	\$3,338.02		
		-	Hydration Packs	\$7,964.01	\$4,404.14		
			Hydration Pack - 70 oz.	\$7,964.01	\$4,404.14		
		-	Locks	\$1,515.00			
			Cable Lock	\$1,515.00			
	s	-	Pumps	\$1,067.47			
	Ē		Minipump	\$1,067.47			
	cess	-	Tires and Tubes	\$115.42	\$65.95		
	ĕ		Patch Kit/8 Patches	\$115.42	\$65.95		
		Bi	kes	\$4,417,665.71	\$1,909,709.62		
	es	-	Mountain Bikes	\$1,666,549.71	\$727,933.91		
	Ť		Mountain-200 Black, 38	\$134,011.02			

So, the rule is next: the settings for body of the table have higher priority than setting for the hierarchy.

Let us add one more level:

🟮 Выборка элементов: Product/Product Categories										
Выборка	Фильтр	Сортировка	Опции							
-Σ	All Products									
·	 Category 									
	👻 🚥 🔽 Subcategory									
	🚁 🔽 Product									

Pr	odu	uct/P	roduct Categorie	s		► CY 2007 ► Canada		⊢ CY 2 ⊢ Cana	008 ada	
*	All Products Accessories		roducts Drill by		\$2	2,390,261.51				
			Deill bu an Navi Dana			\$32,356.20				
		⊤ E	like Racks		Unit	by on New Page		: :	\$16,089.98	
		H	litch Rack - 4-Bil		Drill	Up			\$16,089.98	
		÷ ₽	lottles and Ca		Drill	Down			\$502.16	
		V	Vater Bottle - 30		01111				\$502.16	
		÷ (leaners		Hide	ltem			\$887.97	
		E	Bike Wash - Disso		Кеер	Only This			\$887.97	
		₹ F	lelmets		- Hida	Siblings			\$10,406.00	
		S	Sport-100 Helme		Thue	Sibilitys				
	Sport-100 Helme		Show All Children				Formatting fo	or (All)		
		S	Sport-100 Helme		Show Level		•		C	No Des du et Ceterraria
		S	Sport-100 Helme	6	Mem	ber Selector			Formatting to	or Product/Product Categories
		S	Sport-100 Helme	19	wich	ber bereeton			Grey Alter	nating
		S	port-100 Helme		Actio	ns	•		Red Altern	nating
		₹ F	lydration Pack		Сору	to Clipboard			Orange Al	ternating
		H	lydration Pack -	~=		•			Orange A	licenating
		₹ L	.ocks	Û.	Sorti	ng			Yellow Alt	ternating
		C	Cable Lock	7	Filter		•		Green Alte	ernating
	es	÷ P	umps	8	Form	atting	•		Cyan Alte	rnating
	sori	N	1inipump ¹			\$1,0	67.47		Blue Alter	nating
cts	ces	÷ T	ires and Tube	5	\$115.42			Dide Alten		
npo	Ac	P	atch Kit/8 Patche	hes		\$1	15.42		Violet Alte	ernating
Pro	*	Bike	es -			\$4,417,6	65.71		Grey	
R	ā	÷ N	1ountain Bikes			\$1,666,54	9.71		Pad	

🏮 Formatting	x
Table Hierarchies Measures	
ter A H	Header Body Separators
 Organization 	Apply Formatting
👻 📴 Product	Layout
Financial	
History	Orientation: Auto
Product Categories	Horizontal Align: * Left •
Σ (All)	Vertical Align: * Top 🗸
Category	East
Subcategory	
- Product	Text Color: * 🔲 0, 0, 0 🔻
Product Model Lines	Back Color: 255, 0, 0 🗸
Category	Alternating: *
Large Photo	
Model Name	
Product Line	Font Size: * 8 📮
▶ Style	Font Name: * Verdana ·
Subcategory	Bold: *
Promotion	Italic: *
 Image: Reseller Reseller Sales Order Details 	Strikeout: *
 iii Sales Summary Order Det 	
 Image: Scenario 	
🕨 🔯 Ship Date	
Image: Source Currency	
Σ Virtual Hierarchy	
"≥ Default Level	
	OK Cancel



Product/Product Categories			(Product Categories	+ CY 2007	FCX 2008
				⊢ Canada	Canada
-	All	Pr	oducts	\$5,651,305.43	\$2,390,261.51
	Ŧ	Ac	cessories	\$58,128.43	\$32,356.20
		-	Bike Racks	\$21,405.68	\$16,089.98
			Hitch Rack - 4-Bike	\$21,405.68	\$16,089.98
		-	Bottles and Cages	\$856.53	\$502.16
			Water Bottle - 30 oz.	\$856.53	\$502.16
		-	Cleaners	\$1,219.93	\$887.97
			Bike Wash - Dissolver	\$1,219.93	\$887.97
		-	Helmets	\$23,984.40	\$10,406.00
			Sport-100 Helmet, Black	\$2,837.13	
			Sport-100 Helmet, Black	\$5,492.30	\$3,843.78
			Sport-100 Helmet, Blue	\$3,561.51	
			Sport-100 Helmet, Blue	\$4,602.35	\$3,224.20
			Sport-100 Helmet, Red	\$2,321.45	
			Sport-100 Helmet, Red	\$5,169.66	\$3,338.02
		-	Hydration Packs	\$7,964.01	\$4,404.14
			Hydration Pack - 70 oz.	\$7,964.01	\$4,404.14
		-	Locks	\$1,515.00	
			Cable Lock	\$1,515.00	
	s	-	Pumps	\$1,067.47	
	ö		Minipump	\$1,067.47	
器	es:	-	Tires and Tubes	\$115.42	\$65.95
Ę	Αc		Patch Kit/8 Patches	\$115.42	\$65.95
F	-	Bi	kes	\$4,417,665.71	\$1,909,709.62
F	ā	-	Mountain Bikes	\$1,666,549.71	\$727,933.91

As a result, the table will look like this:

We can conclude that formatting for a specific level overrides the settings for the whole hierarchy.

6.3.3 Measures Formatting

Let us look at measure formatting:

Columns	這 -+	Date/Da	te.Calendar 🔻 🕵 🗙 – 🕂 Geog
Rows	😫 🕇 Pro	oduct/Pro	duct Categories 🔻 🗔 🗙
Rows / Colur	nns Filter	Sorting	
Context		Produ	ct/Product Categories
		🔶 All	Products
		- /	Accessories
			 Bike Racks
			Hitch Rack - 4-Bike
Measures			 Bottles and Cages
Reseller Sales	Am ' **		Water Bottle - 30 oz.
	S Form	natting	eaners
	3	·	Dike Wash - Dissolver
			- Helmets

There is one more tab "Representation" in the dialog where you can set set the number of digits before the decimal point, the currency symbol, the color and the font parameters for the measure. Let us set up the following parameters for the "Reseller Sales Amount" measure:

🌍 Formatting		x
Table Hierarchies Measures		
- +	Body Header Representation Separa	tors
🕨 💼 KPI	Format	
Exchange Rates	Change representation settings	
Internet Sales	Measure value type: Number	•
Reseller Sales Reseller Sales Mount % Discount Amount	Display as: * Number	•
Discount Percentage	Decimal Places:	2 🛟
Reseller Average Unit Price	Decimal Point: * Comma	•
Reseller Extended Amount	1000 Separator: * Dot	•
Reseller Freight Cost Reseller Gross Profit Reseller Gross Profit Margin Reseller Order Count Reseller Order Quantity Reseller Order Quantity Reseller Ratio to All Produ Reseller Ratio to Parent P Reseller Sales Amount Reseller Tax Amount Reseller Total Product Cost Sales Quota Sales Summary Server E Min Data	Currency Symbol: * \$ (United S	ates) 🔻
ServerCalcDate		
🔥 Default		
		OK Cancel

The table will look like this:

_				+ CY 2007	CY 2008
Pro	odu	lct	/Product Categories	▶ Canada	▶ Canada
~	All	Pr	roducts	5.651.305,43	2.390.261,51
	-	Ac	cessories	58.128,43	32.356,20
		-	Bike Racks	21.405,68	16.089,98
			Hitch Rack - 4-Bike	21.405,68	16.089,98
		-	Bottles and Cages	856,53	502,16
			Water Bottle - 30 oz.	856,53	502,16
		-	Cleaners	1.219,93	887,97
			Bike Wash - Dissolver	1.219,93	887,97
		-	Helmets	23.984,40	10.406,00
			Sport-100 Helmet, Black	2.837,13	
			Sport-100 Helmet, Black	5.492,30	3.843,78
			Sport-100 Helmet, Blue	3.561,51	
			Sport-100 Helmet, Blue	4.602,35	3.224,20
			Sport-100 Helmet, Red	2.321,45	
			Sport-100 Helmet, Red	5.169,66	3.338,02
		-	Hydration Packs	7.964,01	4.404,14
			Hydration Pack - 70 oz.	7.964,01	4.404,14
		-	Locks	1.515,00	
			Cable Lock	1.515,00	
	S	-	Pumps	1.067,47	
	öĽ		Minipump	1.067,47	
ŝ	ess	-	Tires and Tubes	115,42	65,95
ň	Acc		Patch Kit/8 Patches	115,42	65,95
Pr	-	Bi	kes	4.417.665,71	1.909.709,62
₹	ā	-	Mountain Bikes	1.666.549,71	727.933.91

6.3.4 Formatting for Virtual Hierarchies

The virtual hierarchies are accessible on the tab "Hierarchies":

Formatting	x
Table Hierarchies Measures	
te a c	Apply Formatting
🕨 🧰 Sales	Automatic level colors
► 📴 Account	Grev Alternation
► 🛃 Customer	
► 🔯 Delivery Date	bold font on all levels except last visible
 i Department 	
Destination Currency	
🕨 📴 Employee	
Figure Geography	
Internet Sales Order Details	
 Product 	
Promotion	
🕨 🝺 Reseller	
Reseller Sales Order Details	
Sales Summary Order Details	
▶ ÎSÎ Shin Date	
 Implementation Implementation Source Currency 	
Σ Virtual Hierarchy	
Σ Default Level	
	OK Cancel

Let us make an example using a virtual hierarchy with levels "Date/Date. Month" of "Year" and "Product/Color":

Columns 😫 🗕 +	Date/Date.Calendar 🔻	🗔 🗙 🗕 Date/Da	te.Month of Year 🔻	🗔 🗙 – Product,	/Color 🔻 🕵 🗙	
Rows 🗄 🗕 +	Geography 🔻 🗔 🗙					
Rows / Columns Filter 9	Sorting					
Context		FCY 2007				
Product/Product Categ X	Geography	January	January			
All Deaduate		Black	Red	Silver	Yellow	Bla
+ All Products	▶ Canada	\$94,420.46	\$46,192.93	\$41,014.11	\$17,407.61	
Accessories	France	\$25,927.94	\$1,879.18	\$2,485.70		
 Bikes 	▹ United Kingdom	\$13,222.25	\$13,210.86		\$5,402.36	
Clothing	United States	\$440,395.57	\$253,942.45	\$147,179.34	\$69,030.19	
Components						
Measures						
Reseller Sales Amount 🔻 🗙	-					

Let us set the default settings for all levels:

🏮 Formatting	(x
Table Hierarchies Measures		
te a te	Header Body	
▹ ☐ Sales ▶ 10 [*] Account	Layout	
Customer	Orientation: * Auto	
 Date Delivery Date 	Horizontal Align: * Left -	
Department	Vertical Align: Top	
Employee	Font	
Geography	Text Color: * 0, 0, 0	
Internet Sales Order Details If Organization	Back Color: 255, 192, 192	
Image: Imag	Alternative Back Color:* 0, 0, 0, 0	
Reseller	Font Size: * 8 ¢	
 Sales Summary Order Details Sales Summary Order Details 	Font Name: * Verdana •	
▶ iei Scenario ▶ io Date	Bold: *	
Source Currency	Strikeout:	
Σ Virtual Hierarchy	Underline: *	
	Set custom formatting for all levels	
	OK Cancel	

🏮 Formatting	x
Table Hierarchies Measures	
14 A 3	Heade Body
Sales Mathematical Solution Math Math Math Math Math Math Math Math Math <td< td=""><td> Do not apply formatting to body Apply header formatting to body Specify custom formatting for body </td></td<>	 Do not apply formatting to body Apply header formatting to body Specify custom formatting for body
	Set custom formatting for all levels
	OK Cancel

The table will look like this:

)ate/Date.Calendar 🔻	🕵 🗙 🗕 Date/Dai	te.Month of Year 💌	🗔 🗙 – Product,	/Color 🔻 🕵 🗙	
Geography 🔻 🗔 🗙					
orting					_
▶ CY 2007					
Geography	January	January			
	Black	Red	Silver	Yellow	Bla
🕨 Canada	\$94,420.46	\$46,192.93	\$41,014.11	\$17,407.61	
France	\$25,927.94	\$1,879.18	\$2,485.70		
United Kingdom	\$13,222.25	\$13,210.86		\$5,402.36	
United States	\$440,395.57	\$253,942.45	\$147,179.34	\$69,030.19	
		·	·		
	ate/Date.Calendar aeography Geography Canada France United Kingdom United States	ate/Date.Calendar ▼ 😡 × - Date/Date acography ▼ 🖗 × orting Geography Black	Ante/Date.Calendar	Date/Date.Calendar Date/Date.Month of Year X – Product, Geography Y <	Date/Date.Calendar

Let us set up formatting for virtual hierarchies:

Table Hierarchies lieasures
🔯 🔬 🤌 🔽 Apply Formatting
 Sales Account Customer Customer Date Delivery Date Department Department Destination Currency Employee Geography Internet Sales Order Details Organization Reseller Reseller Sales Summary Order Details Source Currency Sinip Date Source Currency Virtual Hierarchy Default Level
OK Cancel

At the first sight this action changes nothing. But as soon as we merge two hierarchies, the table will look like this:

Columns 🖳 – + Date/Date.Calendar 👻 🤄 + Date/Date.Month of Year 🗔 🗙 Color 🗔 🗙									
Rows 🗄 - + Geography 🔹 🕵 🗙									
Rows / Columns Filter Sorting									
Context		FCX 2007							
Product/Product Categ X	Geography	🚽 January	January				~		
All Dradusta			Black	Red	Silver	Yellow	ъ		
→ All Products	Canada	\$199,035.11	\$94,420.46	\$46,192.93	\$41,014.11	\$17,407.61			
Accessories	France	\$30,292.82	\$25,927.94	\$1,879.18	\$2,485.70				
Bikes	United Kingdom	\$31,835.47	\$13,222.25	\$13,210.86		\$5,402.36			
Clothing	United States	\$910,547.55	\$440,395.57	\$253,942.45	\$147,179.34	\$69,030.19	- 5		
Components				-					
Measures									
Reseller Sales Amount 🔻 🗙									

As our experience shows, there is only one virtual hierarchy in most of the cases. But if there are two or more of them, the settings will be applied just to the most right of them.

Example:

Columns 🗄 - + Geography - 🚱 ×								
Rows 🖷 - + Product/Model Name 🥨 🗙 Style 🕵 🗙 - + Date/Date.Calendar 🔻 🗔 🗙 - + Product/Color 🗔 🗙 Month of Year 🧕 🗙								
Rows / Columns Filter Sorting								
Context	Product/Model Name, Produ	Date/Date	Product/Colo	⊦ Canada	France	▶ United King	United States	
	🚽 Men's Bib-Shorts	৮ CY 2006	🚽 Multi	\$25,352.88	\$6,902.67	\$5,530.10	\$64,077.06	
			July	\$3,883.97	\$1,781.80	\$647.93	\$10,926.66	
			August	\$6,705.84	\$2,259.18	\$1,781.80	\$15,433.72	
			September	\$6,070.04	\$377.96	\$809.91	\$15,886.09	
			October	\$2,537.72	\$1,079.88	\$994.61	\$6,047.33	
			November	\$3,077.66	\$1,403.84	\$917.90	\$5,939.34	
Measures			🚽 December	\$3,077.66		\$377.96	\$9,843.93	
aallas Calas Assaust - X		CY 2007	🚽 Multi	\$15,478.73	\$3,856.29	\$3,293.63	\$42,248.34	
eseller Sales Amount 🔹 🔺			January	\$1,943.78	\$593.93	\$323.96	\$3,671.59	
			February	\$2,159.76	\$971.89	\$485.95	\$4,859.46	
			March	\$593.93	\$107.99		\$5,831.35	
	-		April	\$2,807.69	\$886.62	\$863.90	\$6,803.24	
	-		😑 May	\$4,319.52	\$1,295.86	\$1,511.83	\$10,011.60	
			🚽 June	\$3,654.04		\$107.99	\$11,071.09	
	Mens	+ CY 2006	🚽 Multi	\$25,352.88	\$6,902.67	\$5,530.10	\$64,077.06	
			July	\$3,883.97	\$1,781.80	\$647.93	\$10,926.66	
			August	\$6,705.84	\$2,259.18	\$1,781.80	\$15,433.72	
			September	\$6,070.04	\$377.96	\$809.91	\$15,886.09	
			October	\$2,537.72	\$1,079.88	\$994.61	\$6,047.33	
	t		November	\$3,077.66	\$1,403.84	\$917.90	\$5,939.34	
	<u>q</u>		✓ December	\$3,077.66		\$377.96	\$9,843.93	
	N I	+ CY 2007	🚽 Multi	\$15,478.73	\$3,856.29	\$3,293.63	\$42,248.34	
	Bit		January	\$1,943.78	\$593.93	\$323.96	\$3,671.59	
			- February	\$2,159.76	\$971.89	\$485.95	\$4,859.46	
Highlight	Aer		March	\$593.93	\$107.99		\$5,831.35	
	~	1	<u> </u>					

This version is more readable:									
Columns 🗄 - + Geography - 😡 ×									
Rows 😼 - + Product/Model Name 😡 × - + Style 😡 × - + Color 😡 × Month of Year 😡 ×									
Rows / Columns Filter Sorting									
Context Product/Model Name, Product > Canada > France > United King > United States									
Context	-	Men's	Bib-Shorts	\$40,831,61	\$10,758,95	\$8,823,74	\$106,325,41		-
		🚽 Me	ens	\$40,831.61	\$10,758.95	\$8,823,74	\$106,325.41		1
		-	Multi	\$40,831.61	\$10,758.95	\$8,823.74	\$106,325.41		0
			January	\$1,943.78	\$593.93	\$323.96	\$3,671.59		
			February	\$2,159.76	\$971.89	\$485.95	\$4,859.46		
			March	\$593.93	\$107.99		\$5,831.35		
Measures			April	\$2,807.69	\$886.62	\$863.90	\$6,803.24		
			May	\$4,319.52	\$1,295.86	\$1,511.83	\$10,011.60		
Reseller Sales Amount 🔻 🗙			June	\$3,654.04		\$107.99	\$11,071.09		
	12		July	\$3,883.97	\$1,781.80	\$647.93	\$10,926.66		
	Ę.		August	\$6,705.84	\$2,259.18	\$1,781.80	\$15,433.72		
	<u>ة</u> .		September	\$6,070.04	\$377.96	\$809.91	\$15,886.09		
	10		October	\$2,537.72	\$1,079.88	\$994.61	\$6,047.33		
	-u	E S	November	\$3,077.66	\$1,403.84	\$917.90	\$5,939.34		
	ž	žΣ	December	\$3,077.66		\$377.96	\$9,843.93		
	~	Men's	s Sports Shorts	\$20,319.50	\$5,975.00	\$3,887.35	\$51,716.77		
		🚽 Me	ens	\$20,319.50	\$5,975.00	\$3,887.35	\$51,716.77		
		-	Black	\$20,319.50	\$5,975.00	\$3,887.35	\$51,716.77		
	£		January	\$863.86	\$395.93	\$287.95	\$2,015.66		
	Ę.		February	\$1,295.78	\$611.90	\$71.99	\$1,943.68		
	5		March	\$719.88		\$107.98	\$2,915.51		
	F		April	\$1,898.18	\$467.92	\$359.94	\$3,527.41		
	ß		May	\$2,123.65	\$1,259.79	\$431.93	\$4,535.24		
I E-LE-LA	n's	2 상	June	\$1,547.74	\$35.99	\$71.99	\$5,147.14		
Highlight	Me	Bla	July	\$2,332.00	\$1,007.83	\$539.91	\$4,457.55		-
			1 A 1						

6.3.5 Formatting priorities

There are several rules:

- Highlight rules have the biggest priority;
- The measure body formatting have the middle priority;
- Level formatting rules have the lowest priority.

If there are several format rules and some of them are in rows, then the priority belongs to the object which is at the right side.

If there are two hierarchies – one of them is on rows, the other one is on columns, the higher priority will belong to the one which is on rows.

6.3.6 Table Separators

There is one more tab for levels, measures and measure headers: the "Separators" tab. The tab allows to set the thickness and color for the lines and separators.

Let us look at the example with the following selection on rows and columns:



The columns have this:

🏮 Membe	r Select	or: Geogr	aphy						
Selection	Filter	Sorting	Options						
-Σ 🔲 Α	- Σ All Geographies								
> • • [🕨 🕘 📃 Australia								
> • • •	Canad	a							
→ 🎱 🗋	France	2							
→ 🎱 🗌	Germa	ny							
🛛 🕞 🎱 🔽	🕨 🎱 🔽 United Kingdom								
→ 🎱 🗌	United	States							

The context contains "Bike" category, measures "Reseller Sales Amount" and "Reseller Gross Profit Margin" are groupped on columns. There are some formatting rules in this report:

Columns 🔋 - + Geography 🔻 🖏 🗙 Reseller Sales Amount 🔹 🗙 Reseller Gross Profit Margin 🔹 🗙									
Rows 🗄 + Date/Date.Calendar 🕶 🕵 🗙									
Rows / Columns Filter Sorting									
Context		▶ Canada		United Kingdo	m				
Product/Product Category Reseller Reseller									
All Products		Reseller Sales R Amount Pi	teseller Gross rofit Margin	Reseller Sales Amount	Reseller Gross Profit Margin				
Accessories	😞 All Periods	\$11,636,380.59	-0.96%	\$3,405,747.21	-2.33%				
 Bikes 	: ► July 2005	\$99,240.99	2.06%			0			
Clothing	0 → August 2005	\$293,581.57	3.20%			0			
Components	September 2005	\$182,503.16	4.86%						
	🖞 🔁 🔃 🕨 October 2005	\$210,463.22	2.63%						
	🕺 🖸 🖸 🕨 November 2005	\$356,669.19	1.60%						
	는 단 상 → December 2005	\$228,263.14	3.24%						
	January 2006	\$154,028.98	1.87%						
	February 2006	\$257,729.62	2.13%						
Measures	8 5 → March 2006	\$317,344.58	4.02%						
Deceller Coles Amount	🔁 📑 🕨 April 2006	\$204,146.65	1.49%						
Reseller Sales Amount •	ပ်ပ် 🕞 May 2006	\$351,100.57	2.16%						
Reseller Gross Profi 🔻 🗙	₩ 3 June 2006	\$153,851.87	-85.73%						
	📑 🕞 July 2006	\$479,438.41	-0.08%	\$51,957.40	-14.07%				
	0 ► August 2006	\$492,292.14	-1.62%	\$129,609.83	4.68%				
	September 2006	\$423,524.25	4.54%	\$163,802.95	5.53%				
	🖉 🔁 🔃 🕨 October 2006	\$279,912.93	2.87%	\$52,619.97	-3.35%				
	November 2006	\$418,694.64	-0.11%	\$113,601.65	3.98%				
	ဗ္မပ် H 🗸 🕨 December 2006	\$406,219.35	4.22%	\$135,096.55	5.62%				
	2 6 . January 2007	\$199,035.11	2.84%	\$31,835.47	-2.70%				
LE-LE-LA	🚆 💫 👸 😳 🕨 February 2007	\$317,133.88	-0.31%	\$110,483.24	4.14%				
Highlight	ਵ ਨੇ ਜ ਨੇ ► March 2007	\$364,260.16	3.74%	\$101,555.55	4.05%	-			

Let us set up the following parameters for separators and levels:

🏮 Formatting		x
Table (Hierarchies) Measures		
te a p	Header Body Separators	
> 🔁 Sales	Row separator	
▶ 💓 Account	Thickness:	3 ▲
E Customer		→ •
- Calendar	Color: 128, 128, 1	
→ ♣ Date.Calendar	Column separator	
Σ (All)	Thickness:	2 🙏
Calendar Year Calendar Sem	Color: Transparent	· · · · · ·
🖧 Calendar Quar	🗹 Row line	
# Month	Thickness:	2 🛊
Date Date	Color: Black	
Date.Calendar Qu	_	
Date.Calendar Se	Column line	
▶ Date.Calendar W	Thickness:	2 📩
Date.Calendar Year	Color: Black	~
Formatting		x
Formatting Table Hierarchies Measures		x
Formatting Table Hierarchies Measures	Header Body Separators	X
Formatting Table Hierarchies Measures Lateral Lateral Lateral Sales Lateral Lateral	Header Body Separators	x
Formatting Table Hierarchies Measures Line Account	Header Body Separators	× 2 *
Formatting Table Hierarchies Measures Image: Image	Header Body Separators	2 *
Formatting Table Hierarchies Measures Table Account	Header Body Separators Header Body Separators Row separator Thickness: Color: 192, 192, 192	2 🗘
Formatting Table Hierarchies Measures Table Sales Customer Customer Calendar Calendar Calendar Calendar	Header Body Separators Row separator Thickness: Color: 192, 192, 19 Column separator	2 🗘
Formatting Table Hierarchies Measures Δ Δ Δ <	Header Body Separators Row separator Thickness: Color: Column separator Thickness:	2 ÷
 Formatting Table Hierarchies Measures Δ Account Δ Account Δ Customer Δ Date Calendar Σ (All) Calendar Year 	Header Body Separators ✓ Row separator Thickness:	2
Formatting Table Hierarchies Measures Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image:	Header Body Separators Row separator Thickness: Color: 192, 192, 192, 192 Column separator Thickness: Color: Transparent	
Formatting Table Hierarchies Measures Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales <	Header Body Separators Row separator Thickness: Color: 192, 192, 192, 192 Column separator Thickness: Color: Transparent Color: Transparent Row line Transparent	
Formatting Table Hierarchies Measures Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales <	Header Body Separators Row separator Thickness: Color: 192, 192, 192, 192, 192, 192, 192, 192,	
Formatting Table Hierarchies Measures Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales	Header Body Separators ✓ Row separator Thickness:	
Formatting Table Hierarchies Measures Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image:	Header Body Separators Row separator Thickness: Color: 192, 192, 192, 192 Column separator Thickness: Color: Transparent Row line Thickness: Color: Black	
Formatting Table Hierarchies Measures Image: Table Hierarchies Measures Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales I	Header Body Separators ✓ Row separator Thickness:	
Formatting Table Hierarchies Measures Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sales Image: Sal	Header Body Separators Row separator Thickness: Color: 192, 192, 192, 192, 192, 192, 192, 192,	

Formatting			x
Table Hierarchies Measures			
- +	Header Separat	tors	
 KPI Exchange Rates Finance Internet Sales Reseller Sales Sales Quota Sales Summary Server F Min Date ServerCalcDate Default 	 Row separator Thickness: Color: Column separate Thickness: Color: Row line Thickness: Color: Color: Color: Color: 	Transparent	2 ↓ ✓ 2 ↓ ✓ 2 ↓ ✓
	Thickness:		2 🜲
	Color:	Black	•
Formatting Table Hierarchies Measures			×
- +	Body Header	Representation Separators	
KPI Exchange Rates Difference Internet Sales	Row separator Thickness: Color:	Transparent	2 🖕
Reseller Sales Amount %	Column separat	tor	
Discount Amount Discount Percentage Reseller Average Sales A	Thickness: Color:	Transparent	2 🖕
Reseller Average Unit Price Reseller Extended Amount Reseller Freight Cost Reseller Green Breft	Row line Thickness:	Black	2 🖕
Reseller Gross Profit Reseller Gross Profit Margin Reseller Order Count Reseller Order Quantity	Column line		2 🛊
Reseller Ratio to All Produ Reseller Ratio to Parent P Reseller Sales Amount Reseller Standard Produc	Color:	Black	•

Columns 🗄 - + Geography 🔻 🕵 🗙 Reseller Sales Amount 🔹 🗙 Reseller Gross Profit Margin 🔹 🗙									
Rows 🗄	Rows 🗄 🕇 Date/Date.Calendar 👻 🕵 🗙								
Rows / Columns	Rows / Columns Filter Sorting								
Context		Canada							
Product/Product Cate	x	Date/	Date Calendar	Reseller		Reseller			
- All Products		Date		Reseller Sales	Reseller Gross	Reseller Sales	Reseller Gross		
	20			Amount	Profit Margin	Amount	Profit Margin		
P Accessorie	23	→ All	Periods	\$11,636,380.59	-0.96%	\$3,405,747.21	-2.33%		
✓ Dikes			_: ► July 2005	\$99,240.99	2.06%				
			G ▶ August 2005	\$293,581.57	3.20%				
Component	nts		September 2005	\$182,503.16	4.86%				
		50	🔁 🗄 🕨 October 2005	\$210,463.22	2.63%				
		5	Ο Ο → November 2005	\$356,669.19	1.60%				
		<u>5</u>	T or ► December 2005	\$228,263.14	3.24%				
			. : ► January 2006	\$154,028.98	1.87%				
Measures			↓ February 2006	\$257,729.62	2.13%				
Decelles Coles Amount	+ - X		영 <mark>강</mark> ▶ March 2006	\$317,344.58	4.02%				
Reseller Sales Amount			R : 🕨 April 2006	\$204,146.65	1.49%				
Reseller Gross Profi	. • X		ີ ບໍ່ ▶ May 2006	\$351,100.57	2.16%				
			∃ C→ June 2006	\$153,851.87	-85.73%				
			_: ► July 2006	\$479,438.41	-0.08%	\$51,957.40	-14.07%		
			G ► August 2006	\$492,292.14	-1.62%	\$129,609.83	4.68%		
			September 2006	\$423,524.25	4.54%	\$163,802.95	5.53%		
		80	💟 🗄 🕨 October 2006	\$279,912.93	2.87%	\$52,619.97	-3.35%		
		50	UUN November 2006	\$418,694.64	-0.11%	\$113,601.65	3.98%		
		<u>v</u>	⊥ ở → December 2006	\$406,219.35	4.22%	\$135,096.55	5.62%		
		-iod	: : > January 2007	\$199,035.11	2.84%	\$31,835.47	-2.70%		
LE-LE-LE		Pel	ວິບິ ⊧ February 2007	\$317,133.88	-0.31%	\$110,483.24	4.14%		
Highlight		≣ ≿ :	∃ 🗗 ト March 2007	\$364,260.16	3.74%	\$101,555.55	4.05%		

Our report will now look like this:

Let us move the dimension from context to columns and change the selection:



Formatting		x
Table Hierarchies Measures		
ter A 🔅	Header Bod Separators	
(e) Organization (f) Organization (f) Product (f) Financial (f) History	Row separator Thickness: Color: Transparent	*
 Extreme Stocking Product Categories Σ (All) 	Column separator	•
Category Subcategory	Color: 128, 64, 0	•
Product Product Model Lines Product	Row line Thickness: 2	A. T
 Category Large Photo 	Color: Black	-
 Model Name Product Line 	Column line Thickness: 2	\$
 ▶ Style ▶ Subcategory 	Color: Black	•

Then let us configure the following settings for separators:

The report will look like this:

Columns 📋 🗕 + Product/Product Categories 🔻 🗔 🗙 – + Geography 💌 🗓 🗙 Reseller Sales Amount 👻 Reseller Gross Profit Margin 💌 🗙											
Rows 📇 🕇 Da	Rows 📙 + Date/Date.Calendar 🔻 🕵 🗙										
Rows / Columns Filter	Sorting										
Context		 Accessories 				▶ Bikes					
		F Canada		United Kingdo	m	F Canada		↓ United Kingdo	m		
	Date/Date.Calendar			Reseller		Reseller		Reseller			
		Reseller Sales	Reseller Gross	Reseller Sales	Reseller Gross	Reseller Sales	Reseller Gross	Reseller Sales	Reseller Gross		
		Amoune	Profic Margin	Amount	Profit Margin	Amount	Profit Margin	Amount	Profit Margin		
	All Periods	\$118,127.35	34.41%	\$42,593.03	34.10%	\$11,636,380.59	-0.96%	\$3,405,747.21	-2.33%	^	
	_: ► July 2005	\$302.80	40.42%			\$99,240.99	2.06%			. U	
	G ► August 2005	\$847.83	40.42%			\$293,581.57	3.20%				
	B B + September 2005	\$908.39	40.42%			\$182,503.16	4.86%				
	🖁 🔁 🔃 🕨 October 2005	\$524.85	40.42%			\$210,463.22	2.63%				
	November 2005	\$1,413.06	40.42%			\$356,669.19	1.60%				
	\	\$1,150.63	40.42%			\$228,263.14	3.24%				
	: > January 2006	\$201.87	40.42%			\$154,028.98	1.87%				
Measures	C February 2006	\$645.97	40.42%			\$257,729.62	2.13%				
Reseller Sales Amount 🔻 🗙	g 등 ト March 2006	\$403.73	40.42%			\$317,344.58	4.02%				
Reseller Gross Profi 🔻 🗙	April 2006	\$363.36	40.42%			\$204,146,65	1,49%				
	ר אמע 2006 א May 2006	\$1,056.06	39.64%			\$351,100.57	2.16%				
		\$1,069.88	40.42%			\$153,851.87	-85.73%				
	: > July 2006	\$2,502.00	15.19%	\$444.06	14.06%	\$479,438.41	-0.08%	\$51,957.40	-14.07%		
	\ August 2006	\$4,598.73	30.52%	\$1,259.11	31.25%	\$492,292.14	-1.62%	\$129,609.83	4.68%		
	8 🖧 🕨 September 2006	\$4,296.20	30.69%	\$345.82	31.25%	\$423,524.25	4.54%	\$163,802.95	5.53%		
	8 💦 : 🕨 October 2006	\$1,809.04	30.81%	\$502.69	31.25%	\$279,912.93	2.87%	\$52,619.97	-3.35%		
	🛛 🖧 ບໍ່ ບັ 🕨 November 2006	\$2,876.77	31.25%	\$1,146.71	31.25%	\$418,694.64	-0.11%	\$113,601.65	3.98%		
		\$2,671.55	30.59%	\$181.68	31.25%	\$406,219.35	4.22%	\$135,096.55	5.62%		
	i b Japuary 2007	\$1 412 26	31.25%	\$340.64	31 25%	¢100.035.11	2 84%	\$31,835,47	-2 70%		
	B B b February 2007	\$1,560.52	31.25%	\$316.41	31.25%	\$317,133,88	-0.31%	\$110,483,24	4.14%		
	2 6 7 7 March 2007	\$899.29	31.25%	\$510.41	5112570	\$364,260,16	3.74%	\$101,555,55	4.05%		
Highlight	April 2007	\$2 192 81	28.47%	\$449.01	24.86%	\$331,660,60	2.67%	\$36 593 19	-3.78%		
riigillight	₹ 0 ± 0 + May 2007	\$2,692,74	30.92%	\$1 318 05	30 58%	\$383,633,35	-1 14%	\$88 345 05	3.55%	-	

Separator Priority Rules

- 1) Separators of the higher level have priority over separators on the lower level. By "higher" we mean the "higher visible level that is at the left on rows/columns".
- 2) At the same level the separator has higher priority over the line

6.4 Using Advanced Designers

In the chapter "Change of the Page Structure" we have already reviewed the definition of a designer and the ways of using basic designers. Now let's review the advanced designers: "Filter" and "Sorting". Those two designers are situated near the "Rows / Columns" designer:

Columns 😫 🗕 +	Date/Date.Calend	ar 🔻 🕵 🗙						
Rows 🗄 - + Product/Product Categories 🔻 🗔 🗙								
Rows / Columns Filter Sorting								
Context	Product/Pro	FCX 2006	EY 2007	FCX 2008				
	Bike Racks		\$118,428.47	\$79,307.69				
	Bottles a		\$4,481.33	\$2,995.27				
	▶ Cleaners		\$6,733.09	\$4,455.28				
	Helmets	\$74,281.39	\$113,443.66	\$50,752.52				
	► Hydration		\$41,531.96	\$23,986.79				
	▶ Locks	\$10,084.70	\$6,140.52					
Measures	Pumps	\$8,369.26	\$5,145.43					
Decelles Coles Annual an Ar	▶ Tires and		\$628.42	\$296.78				
Reseller Sales Amount 🔻 🗙	Mountain	\$9,190,838.09	\$8,854,263.03	\$3,902,246.74				
	Road Bikes	\$10,765,176.58	\$11,294,381.37	\$4,448,636.90				
	Fouring B		\$5,403,130.67	\$5,048,359.55				
	▹ Bib-Shorts	\$101,862.71	\$64,876.99					
	F Caps	\$9,387.61	\$13,800.95	\$5,665.91				
	F Gloves	\$88,796.06	\$102,156.07	\$16,823.04				
	▶ Jerseys	\$110,243.77	\$290,004.73	\$150,804.63				
	▹ Shorts	\$49,261.57	\$179,301.33	\$113,639.82				
	▹ Socks	\$3,139.50	\$10,793.76	\$7,271.66				
	Tights	\$122,895.93	\$78,937.08					
	Vests		\$131,993.28	\$91,808.09				
	▹ Bottom B		\$30,792.82	\$21,033.55				
	 Brakes 		\$45,187.31	\$20,831.40				
	Chains		\$5,685.93	\$3,691.78				
	 Cranksets 		\$124,249.27	\$79,693.34				
	 Derailleurs 		\$44,321.13	\$25,888.36				
	Forks	\$49,672.62	\$28,259.07					
	Handlebars	\$53,642.70	\$88,710.99	\$28,237.63				
	Headsets	\$35,931.84	\$25,010.36					
	Mountain	\$1,400,331.68	\$2,067,908.64	\$873,844.03				
Highlight	Pedals		\$94,060.53	\$53,423.38				
	h.	¢1 618 301 51	¢1 631 377 27	¢356 107 37				

6.4.1 Filter

"Filter" can be invoked both from the context menu of the header:

Columns 🖹 🗕 + I	Date/Date.Calend	ar 🔻 🕵 🗙					
Rows 😫 🗕 + I	Product/Product C	ategories 🔻 🕵 🗙					
Rows / Columns Filter 5	Sorting						
Context	Product/Pro	CY 2006	▶ <u>CY 2</u>	2007	CY 2008		Top 10
	Bike Racks			Drill by			Top 50
	▶ Bottles a			D.:III.	N. D.		T 400
	▶ Cleaners			Drill by on	New Page	·	1 op 100
	Helmets	\$74,281.39		Drill Up			Тор Х
	Hydration			D.:			Top 90%
	▶ Locks	\$10,084.70		Drill Down			100 00%
Measures	▶ Pumps	\$8,369.26		Hide Item			Top X%
Reseller Sales Amount 🔻 🗙	Fires and			K 0	This		Rottom V
	Mountain	\$9,190,838.09		Keep Only	Inis		bottom x
	Kodu bikes	\$10,765,176.58	\$.	Hide Siblin	gs		Bottom 20%
	Bib-Shorts	¢101 862 71	-	Show All C	hildren		Bottom X%
	Elb Shorts	\$101,802.71		SHOW AILC	march		
	Gloves	\$88,796.06		Show Leve	I	•	Non-empty values
	▶ Jerseys	\$110,243,77	6	Member Se	elector		Empty values or 0
	▹ Shorts	\$49,261.57		memberov	ciccionini -	_	1.5
	▹ Socks	\$3,139.50		Actions		►	= X
	▶ Tights	\$122,895.93		Complex CI			<> X
	Vests			Copy to Ci	ippoard		
	▶ Bottom B		1	Sorting		►	> X
	▶ Brakes			Filter			>= X
	▹ Chains		Y=	Filter		·	- v
	▶ Cranksets		🌄	Formatting)	► -	`^
	Derailleurs	+ + + + + + + + + + + + + + + + + + + +	 		φ20,00	0.50	<= X
	▶ Forks	\$49,672.62	\$2	28,259.07	+20.02	7.65	X <= Value <= Y
	Handlebars	\$53,642.70	\$2	38,710.99	\$28,23	7.63	
	Mountain	\$35,931.04 ¢1.400.331.68	¢2.04	23,010.30	¢973.94	4.05	Custom Condition
Highlight	Pedals	\$1,400,551.00	\$2,00	94,060.53	\$53,42	3.38	Add Filter of Rows (Expert Mode)
	<u>k</u>	¢1 618 301 51	¢1.65	21 277 27	¢356 10	7,37	
📑 chart 4 📑 chart5	🔝 drill through	ighlighting	🤮 forr	mating 🛛 🔢	formating 2		Remove All Filters of Rows
						-	Deactivate All Filters of Rows
Columns: 3 Exec. Tim	e: 00.1						Activate All Filters of Rows
							Activate All Filters of Rows

and from the context menu of the tab "Filter":

Columns					
Rows	Add Filter	of Rows			
Rows / Columns Filter	Remove A	II Filters of Rows			
Context	Deactivate	All Filters of Rows		2007	▶ CY 2008
	Deactivati	An fincers of now.	í 1	18,428.47	\$79,307.69
	Activate A	II Filters of Rows		\$4,481.33	\$2,995.27
	Cleaners			\$6,733.09	\$4,455.28
	 Helmets 	\$74,281.39	\$1	13,443.66	\$50,752.52
	Hydration		\$	41,531.96	\$23,986.79
	Locks	\$10,084.70		\$6,140.52	
Measures	Pumps	\$8,369.26		\$5,145.43	
Decelles Coles Assessed	Tires and			\$628.42	\$296.78
Reseiler Sales Amount 👻 🗶	Mountain	\$9,190,838.09	\$8,8	54,263.03	\$3,902,246.74
	Road Bikes	\$10,765,176,58	\$11.2	94.381.37	\$4,448,636,90

Columns Rows			Add F	ilter of Columns ve All Filters of Col	umns		
Rows / Columns	Filter	Sorti	Deacti	vate All Filters of C	Columns		
Context		Pr	Activa	te All Filters of Col	umns	3.47	► CY 2008 \$79,307,69
		+	Bottles a		\$4,48	1.33	\$2,995.27
		Þ	Cleaners		\$6,73	3.09	\$4,455.28
		Þ	Helmets	\$74,281.39	\$113,443	3.66	\$50,752.52
		Þ	Hydration		\$41,53	1.96	\$23,986.79
		Þ	Locks	\$10,084.70	\$6,14	0.52	
Measures		►	Pumps	\$8,369.26	\$5,14	5.43	
Deceller Celes Arres		• F	Tires and		\$62	8.42	\$296.78
Reseiler Sales Amo	unit 👻 J	•	Mountain	\$9,190,838.09	\$8,854,263	3.03	\$3,902,246.74
		Þ	Road Bikes	\$10,765,176.58	\$11,294,38	1.37	\$4,448,636.90

There are several filtering options here:

Columns 😫 🗕 +	Date/Date.Calenda	ar 🔻 🕵 🗙						
Rows 🗮 🗕 +	Product/Product C	ategories 🔻 🕵 🗙						
Rows / Columns Filter	Sorting							
Context	Product/Pro	CY 2006	⊢ CY	200	7 CY 2008		Top 10	
Context	Bike Racks		\$		Drill by	+	Top 50	
	Bottles a			1		.	- -	
	Cleaners			1	Drill by on New Pa	ige 🕨	Top 100	1
	 Helmets 	\$74,281.39	\$		Drill Up		Тор Х	
	Hydration						T 90%	
	Locks	\$10,084.70		1	Drill Down		1 op 80%	
Measures	Pumps	\$8,369.26]	Hide Item		Top X%	
Peceller Sales Amount - X	Tires and				The term		D. 11. V	
Reseller Sales Amount + 🗙	Mountain	\$9,190,838.09	\$8,		Keep Only This		Bottom X	
	Road Bikes	\$10,765,176.58	\$11,		Hide Siblings		Bottom 20%	2
	Touring B		\$5,				D-th	-
	Bib-Shorts	\$101,862.71			Show All Children		Bottom X%	
	▶ Caps	\$9,387.61			Show Level	•	Non-empty values	
	For the second seco	\$88,796.06	\$	-	SHOW LEVEL	·		3
	▶ Jerseys	\$110,243.77	\$	0	Member Selector.		Empty values or 0	
	Shorts	\$49,261.57	\$		A		- X	
	▹ Socks	\$3,139.50			Actions		- ^	
	▶ Tights	\$122,895.93			Copy to Clipboard	4	<> X	
	 Vests 		\$		copy to enproute		× X	
	▶ Bottom B			1	Sorting	►	~ ~	
	Brakes			-	Eilter		>= X	4
	Chains			Y =	Filler	· ·	< X	
	 Cranksets 		\$	8	Formatting	►		
	▶ Derailleurs			\$		50.50	<= X	
	Forks	\$49,672.62		\$28,2	259.07		X <= Value <= V	
	Handlebars	\$53,642.70		\$88,7	10.99 \$28,23	37.63	X se value se t	
	Headsets	\$35,931.84		\$25,0	10.36		Custom Condition	5
	Mountain	\$1,400,331.68	\$2,	067,9	908.64 \$873,84	44.03		
Highlight	Pedals			\$94,0	60.53 \$53,42	23.38	Add Filter of Rows (Expert M	ode)
🔯 chart 4 🛛 🎼 chart 5	🔝 drill through	ti 618 301 51	en 🔝	ormati	ng 356 10	2 137 2 13 fi	Remove All Filters of Rows	_
							Deactivate All Filters of Rows	s 6
Columns: 3 Exec. Tim	ne: 00.1						Activate All Filters of Rows	

In the sections 1 - 4 there are quick filters:

- Top 10 10 biggest values;
- Top 50 50 biggest values;
- Top 100 100 biggest values;

- Top X X biggest values;
- Top 80% the biggest values whose sum is not less than 80% of the total sum;
- Top X% the biggest values whose sum is not less than X% of the total sum;
- Bottom X X bottom values;
- Bottom 20% the lowest elements whose sum is 20% of the values;
- Bottom X% the lowest elements whose sum is X% from the total sum;
- Non-empty values show all elements except those which have empty values;
- Empty values or 0 show all elements which are either empty or 0;
- =X values equal to X;
- <> X values not equal to X;
- > X values more than X;
- >= X values more or equal to X;
- < X values less than X;
- <= X values less or equal to X;
- X <= value <= Y values in the range from X to Y.

If you select "Custom Condition..." you will get a window which allows to select the filtering condition and the arguments:

🏮 Quick Filt	er X
Condition:	x topmost members (TopCount)
Measure:	Reseller Sales Amount
X:	1 🔹
	Ignore empty values
	OK Cancel

The context menu in section 6 allows to switch on/off all filtering at once.

Columns 😫 🗕 +	Date/Date.Calendar 🔻	🕵 🗙		
Rows 😫 -+	Product/Product Categor	ies 🔻 🕵 🗙		
Rows / Columns Filter	Sorting		r	
	Pre-duct/Pre- L. CV	2006	2007	Top 10
Context	Product/Pro F C1	2006 F C1	■ Drill by	
	Bike Racks	\$	1 5111 59	1 op 50
	Cleaners		Drill by on New Page 🕨	Top 100
	Helmets	t74 201 20 t	1 Drill Up	T V
	Hydration	\$74,201.35 \$		торх
	► Locks	\$10.084.70	Drill Down	Top 80%
	Pumps	\$8,369,26	Hide Item	Top X%
Measures	▶ Tires and	+	ride item	iop xio
Reseller Sales Amount 🔻 🗙	▶ Mountain \$9,	190,838.09 \$8,	8 Keep Only This	Bottom X
	▶ Road Bikes \$10,	765,176.58 \$11,	2 Hide Siblings	Bottom 20%
	▶ Touring B	\$5,	4	bottom 2010
	▹ Bib-Shorts \$	101,862.71	Show All Children	Bottom X%
	▶ Caps	\$9,387.61	\$ Show Level ▶	Non-empty values
	▶ Gloves	\$88,796.06 \$	1	Non empty values
	▶ Jerseys \$	110,243.77 \$	2 🔯 Member Selector	Empty values or 0
	▶ Shorts	\$49,261.57 \$	1 Actions	- Y
	▹ Socks	\$3,139.50	\$	- ^
	▶ Tights \$	122,895.93	Copy to Clipboard	<> X
	▶ Vests	\$		> X
	▶ Bottom B		s i sorting	
	Brakes		🖇 🍢 Filter 🔹 🕨	>= X
	Cranksets		Eormatting	< X
	Derailleurs	\$	444 201 12 605 880 24	. V
	► Forks	\$49 672 62	\$744,321,13 \$23,000,30 \$28,259,07	<= X
	Handlebars	\$53,642,70	\$88 710 99 \$28 237 63	X <= Value <= Y
	Headsets	\$35,931,84	\$25,010,36	
	► Mountain \$1.	400,331.68 \$2,	067,908.64 \$873,844.03	Custom Condition
Highlight	▶ Pedals		\$94,060.53 \$53,423.38	Add Filter of Rows (Expert Mode) 📐
	L d1	618 301 51 ¢1	631 377 27 d356 107 37	
🟥 chart 4 🔢 chart5	🔝 drill through 🛛 🔢 l	nighlighting 🛛 🔝 fi	ormating 🛛 🎲 formating 2	Remove All Filters of Rows
	1			Deactivate All Filters of Rows
Columns: 3 Exec. Tin	ie: 00.1			Activate All Filters of Rows
				Activate All Filters of Nows

It is worth to look at item "Add Filter of Rows (Expert Mode)...":

There will be a form for setting up a filter:

🏮 Filter of F	Rows			x
Name: *	Filter 1			Active
	Show	🔘 Hide		
Condition:	x topmost members (TopCount)		•
Measure:	The first measure am	ong selected		•
X:	1 🔹			
	Ignore empty valu	es		
Columns				
The conditio	on must be satisfied f	or:		
For the	sum of columns			
O For at	least one of the colum	ns which are consi	dered (see below)	
O For eac	ch column of those wh	ch are considered	(see below)	
Which colum	ins consider:			
All visib Selecte	ole columns			
Selecte				
Date/Date	e.Calendar: All Periods	.CY 2007		x 🔊
Override Cor	ntext			
Override Co	ontext for Hierarchy			
			ОК	Cancel

This dialog allows not only to select the conditions for filtering and the argument, but also the set of columns to which it is applied:

- All visible columns
- Selected columns

Besides, the condition can be met for:

- For the sum of columns;
- For at least one of the columns which are considered (see below);
- For each column, of those which are considered (see below).

Let us look at several examples.

Let us assume we want to show only 5 subcategories of goods which were best sold in 2007. Let us compile the report as on the picture below:

Columns 🗧 - + Date/Date.Calendar 🔻 🕵 🗙								
Rows 🗧 🗕 + Product/Product Categories 👻 😡 🗙								
Rows / Columns Filter	Sorting							
Context	Product/Pro + CY 2007 + CY 2008							
	Bike Racks \$118,428.47 \$79,307.6							
	▶ Bottles a \$4,481.33 \$2,995.2							
	▶ Cleaners \$6,733.09 \$4,455.2							
	▶ Helmets \$113,443.66 \$50,752.5							
	▶ Hydration \$41,531.96 \$23,986.7							
	▶ Locks \$6,140.52							
Measures	▶ Pumps \$5,145.43							
Deceller Sales Amount - X	▶ Tires and \$628.42 \$296.7							
Reseller Sales Amount + 🗙	Mountain \$8,854,263.03 \$3,902,246.7							
	Road Bikes \$11,294,381.37 \$4,448,636.9							
	Touring B \$5,403,130.67 \$5,048,359.5							
	▶ Bib-Shorts \$64,876.99							
	▶ Caps \$13,800.95 \$5,665.9							
	▶ Gloves \$102,156.07 \$16,823.0							
	Jerseys \$290,004.73 \$150,804.6							
	Shorts \$179,301.33 \$113,639.8							
	▶ Socks \$10,793.76 \$7,271.6							
	▶ Tights \$78,937.08							
	Vests \$131,993.28 \$91,808.0							
	Bottom B \$30,792.82 \$21,033.5							
	▶ Brakes \$45,187.31 \$20,831.4							
	▶ Chains \$5,685.93 \$3,691.7							
	▶ Cranksets \$124,249.27 \$79,693.3							
	▶ Derailleurs \$44,321.13 \$25,888.3							
	▶ Forks \$28,259.07							
	▶ Handlebars \$88,710.99 \$28,237.6							
	▶ Headsets \$25,010.36							
	Mountain \$2,067,908.64 \$873,844.0							
	▶ Pedals \$94,060.53 \$53,423.3							
	▶ Road Fra \$1,631,377.27 \$356,197.3							
	▶ Saddles \$37,831.96 \$17,997.4							
	Touring F \$1,032,154.04 \$610,173.6							
	▶ Wheels \$226,947.94							
Columns 🖹 - + Date/Date.Calendar 🔻 🕵 🗙								
---	---------------------------------	---------------	---------------------	------------------------------------	--	--	--	--
Rows 🗄 - + Product/Product Categories - 😡 🗙								
Rows / Columns Filter S	Rows / Columns Filter Sorting							
Context	Product/Pro	FCX 2007	▶ CY 2008					
	Bike Racks	\$11 D	rill by	•				
	 Bottles a 	\$	- New Deere					
	 Cleaners 	\$	rill by on New Page	Top 10				
	 Helmets 	\$11 D	rill Up	lop to				
	Hydration	\$4		Top 50				
	Locks	\$ D	rill Down	Top 100				
Measures	Pumps	\$ _	lide Item					
Decelles Celes Amount - X	Tires and		nuc nem	Тор Х				
Reseller Sales Amount • 🗙	Mountain	\$8,85 K	eep Only This	Тор 80%				
	Road Bikes	\$11,29	lide Siblings					
	Touring B	\$5,40	nue sibilitys	Top X%				
	Bib-Shorts	\$6 S	how All Children	Bottom V				
	Caps	\$1	have been	bottomx				
	Gloves	\$10. 5	now Level	Bottom 20%				
	Jerseys	\$29 🔞 N	lember Selector	Bottom X%				
	Shorts	\$17		bottom x/s				
	Socks	\$1 A	ctions	Non-empty values				
-	Tights	\$7	ony to Clinhoard					
	Vests	\$13	opy to Cipboard	Empty values or 0				
	Bottom B	\$3 🏦 S	orting	► = X				
	 Brakes 	\$4						
	Chains	\$ 1= 1	ilter	<> X				
	 Cranksets 	\$12 🛃 F	ormatting	▶ >×				
	 Derailleurs 	\$4-,521.1						
	Forks	\$28,259.0	7	>= X				
	Handlebars	\$88,710.9	9 \$28,237.63	< X				
	Headsets	\$25,010.3	6					
	Mountain	\$2,067,908.6	4 \$873,844.03	<= X				
	Pedals	\$94,060.5	\$53,423.38	X <= Value <= Y				
	Road Fra	\$1,631,377.2	\$356,197.37					
	▹ Saddles	\$37,831.9	6 \$17,997.43	Custom Condition				
	► Touring F	\$1,032,154.0	4 \$610,173.64	Add Filter of Rows (Expert Mode)				
Highlight	, wheels	\$220,947.9		Remove All Filters of Power				
				Deactivate All Filters of Rows				
🔛 chart 4	🛃 drill through	highlighting	[[formating	for Deactivate All Filters of Rows				
				Activate All Filters of Rows				

Let us invoke the context menu for the header CY 2007 and select the item "Filter / Add Filter of Rows (Expert Mode)...":

There will be a dialog for filter settings on the screen:

🏮 Filter of F	Rows			x
Name: *	Filter 1			Active
	Show	🔘 Hide		
Condition:	x topmost members (1	opCount)		•
Measure:	The first measure amo	ong selected		-
X:	<u>s</u>			
	Ignore empty value	es		
Columns				
The condition	on must be satisfied fo	r:		
For the	e sum of columns			
O For at	least one of the column ch column of those whi	is which are consi th are considered	dered (see belov (see below)	w)
Which colum	ins consider:		(See Belony	
O All visib	ole columns			
 Selecter 	ed columns			
Date/Dat	e.Calendar: All Periods	.CY 2007		🔍 🔊
Override Co	ntext			
Override C	ontext for Hierarchy			
			ОК	Cancel

The selected function "X topmost members (TopCount)" is exactly what we need. In the Columns section it is said "For the sum of columns", but we have just one column, so the filtering will be done for the year of 2007. Press «OK» and look at the report:

Columns 😫 - + Date/Date.Calendar 🔹 🗔 🗙						
Rows 🗧 - + Product/Product Categories - 🖸 🗙						
Rows / Columns 7 Filter Sorting						
Context	Product/Product C	▶ CY 2007	FCX 2008			
	Road Bikes	\$11,294,381.37	\$4,448,636.90			
	Mountain Bikes	\$8,854,263.03	\$3,902,246.74			
	Touring Bikes	\$5,403,130.67	\$5,048,359.55			
	Mountain Frames	\$2,067,908.64	\$873,844.03			
	Road Frames \$1,631,377.27		\$356,197.37			
Measures						
Reseller Sales Amount 🔻 🗙						

There is an icon on the tab Filter that shows us that there is a new filter there. If we look at this tab, there is a filter with a name "Filter 1". The table contains exactly 5 categories that are sold best in the year 2007.

Let us make the task more complicated. Assume we want to see those 5 products which are best sold in the sum of years of 2007 and 2008. Click on this icon:

Columns					
Rows 🔽	Filter 1 😡	×			
Rows / Columns	7_ Filter	Sorting			
Context		Product/P	Product C	FCX 2007	FCA 5008
		Road B	likes	\$11,294,381.37	\$4,448,636.90
		▹ Mounta	ain Bikes	\$8,854,263.03	\$3,902,246.74
		Fouring	g Bikes	\$5,403,130.67	\$5,048,359.55
		Mounta	ain Frames	\$2,067,908.64	\$873,844.03
		Road F	rames	\$1,631,377.27	\$356,197.37
	[
Measures					
Reseller Sales Amou	unt 🔻 🗙				

🚯 Filter of Rows	x	🟮 Member Selector	: Date/Date.Calendar	
Name: * Filter 1	Active	Selection Options		
Show O Hide		You are currently in of	fline mode.	Disable offline mode
Condition: Uterrent explore (TerCourt)		O Date Range	Iree	
Measure: The first measure among selected X: 5 \$		 ✓	Collapse Siblings to Set Collapse Subtree to Set	t t
Ignore empty values			Select Siblings	
Columns The condition must be satisfied for:			Unselect Siblings	
 For the sum of columns For at least one of the columns which are considered (see below) For each column of those which are considered (see below) 	ow)		Unselect Subtree	
Which columns consider: All visible columns			Find (Ctrl+F)	
Date/Date.Calendar: All Periods.CY 2007	×			
Override Context				
		Show Search >>		
Override Context for Hierarchy				OK Cancel
ОК	Cancel			

and do the following actions there:

In this window we have to select "For the sum of columns", then click on the member selector for date dimension and select CY 2007 and CY 2008 by first pressing "Refresh Children":

🔘 Date Range	Iree
🚽 🎱 📃 All Periods	
) 🎱 📃 CY 2005	
) 🎱 📃 CY 2006	
🕨 🎱 🔽 CY 2007	
🕨 🔍 🗸 CY 2008	
) 🎱 📃 CY 2010	

After pressing "OK" the filed for Date dimension will look like this:

Columns	
The condition must be satisfied for:	
O For the sum of columns	
\bigcirc For at least one of the columns which are considered (see below)	
\bigcirc For each column of those which are considered (see below)	
Which columns consider:	
 All visible columns 	
Selected columns	
Date/Date.Calendar: (Multiple Selection)	😡 🔊

This means that several members are selected. If you press "OK" the report will look like

Columns 📋 – + Date/Date.Calendar 🔻 🕵 🗙								
Rows 📒 – -	Rows 😫 - + Product/Product Categories - 🕵 🗙							
Rows / Columns 7 Filter Sorting								
Context	Product/Product C	+ CY 2007	FCX 2008					
	Road Bikes	\$11,294,381.37	\$4,448,636.90					
	Mountain Bikes	\$8,854,263.03	\$3,902,246.74					
	Touring Bikes	\$5,403,130.67	\$5,048,359.55					
	Mountain Frames	\$2,067,908.64	\$873,844.03					
	Road Frames	\$1,631,377.27	\$356,197.37					
Measures								
Reseller Sales Amount 🔻 🕽								

Only those product categories which are sold best by the sum of two columns will be displayed.

Filters can be switched on and off:

this:

Columns		<u></u>				
Rows	Filter 1 🕵	×				
Rows / Columns	7_ Filter	Sorting				
Context		Product/F	Product C	▶ CY 2007	▶ CY 2008	
		▹ Road E	Bikes	\$11,294,381.37	\$4,448,636.90	
		Mountain Bikes		\$8,854,263.03	\$3,902,246.74	
		Tourin	g Bikes	\$5,403,130.67	\$5,048,359.55	
		▹ Mounta	ain Frames	\$2,067,908.64	\$873,844.03	
		Road F	rames	\$1,631,377.27	\$356,197.37	
Measures						
Reseller Sales Amou	unt 🔻 🗙					

The selected check box means that the filter is switched on. If you switch it off, it will remain in the report configuration but the filter won't be active, so that the rows will not be filtered.

Using the previous example let us set up the following parameters:

🏮 Filter of F	Rows	x
Name: *	Filter 1	🗹 Active
Condition:	topmost members whose sum >= x (TopSum)	•
Measure:	The first measure among selected	•
X:	12,000,000. 🗘	
	Ignore empty values	
Columns		
The condition	on must be satisfied for:	
O For the	e sum of columns	
For at	least one of the columns which are considered	(see below)
Which colum	ans consider:	
O All visit	ble columns	
Selecter	ed columns	
Date/Dat	te.Calendar: (Multiple Selection)	x 💭
Override Co	ntext	
Override C	Context for Hierarchy	
		OK Cancel

The hierarchy "Date/Date.Calendar:(Multiple Selection)" contains 2007 and 2008 as before. We will get:

Columns 📒	– + Date/Date.Calendar 🔻 🕵 🗙						
Rows 😫	- + -	– + Product/Product Categories – 🕵 🗙					
Rows / Columns	Rows / Columns 7 Filter Sorting						
Context		Product/Product	▶ CY 2007	▶ CY 2008			
		Road Bikes	\$11,294,381.37	\$4,448,636.90			
		Mountain Bikes	\$8,854,263.03	\$3,902,246.74			
		Touring Bikes	\$5,403,130.67	\$5,048,359.55			
Total		Total	25,551,775.07	13,399,243.18			

Here we see the OR-principle: the row will remain in table if one of the columns meets the condition.

If we filter using the parameters below:

🏮 Filter of F	Rows			x
Name: *	Filter 1			🗸 Active
	Show	🔘 Hide		
Condition:	topmost members v	vhose sum >= x (To	pSum)	•
Measure:	The first measure a	mong selected		•
X:	12,000,000. 🗘]		
	Ignore empty va	lues		
Columns				
The conditio	on must be satisfied	for:		
O For the	sum of columns			
O For at	least one of the colu	mns which are cons	dered (see below)	
For each	ch column of those w	hich are considered	(see below)	
Which colum	ins consider:			
🔘 All visib	ole columns			
Selecte	ed columns			
Date/Dat	e.Calendar: (Multiple	Selection)		× 🧾
Override Cor	ntext			
Override C	ontext for Hierarchy			
			ОК	Cancel

We will get the following result:

Columns 🗎	- + 1	Date/Date.Calendar 🔻	X		
Rows 🗎	- + 3	Product/Product Catego	ories 🔻 🗔 🗙		
Rows / Columns	7_ Filter	Sorting			
Context		Product/Product	FCX 2007	FCX 2008	Total
		Road Bikes	\$11,294,381.37	\$4,448,636.90	15,743,018.26
		Mountain Bikes	\$8,854,263.03	\$3,902,246.74	12,756,509.77
		Total	20,148,644.40	8,350,883.64	28,499,528.04
Measures					
Reseller Sales Amou	unt 🔻 🗙				

It is obvious that the last element was removed since it did not meet the condition by two years simultaneously (the AND principle).

Attention!

Filters are the part of page structure. If you create filters on the administrator's page and close the report, all those filters will disappear. If you wish to keep your filters, make a copy of the page and save it.

6.4.2 Sorting

Let's show how to sort rows in the table on the following example report:

Columns 闊 🗕 +	Date/Date.Calend	ar 🔻 🕵 🗙	
Rows 🗎 🗕 +	Product/Product C	Categories 🔻 🗔 🗙	
Rows / Columns Filter	Sorting		
Context	Product/Pro	▶ CY 2007	FCX 2008
	Bike Racks	\$118,428.47	\$79,307.69
	Bottles a	\$4,481.33	\$2,995.27
	▶ Cleaners	\$6,733.09	\$4,455.28
	Helmets	\$113,443.66	\$50,752.52
	Hydration	\$41,531.96	\$23,986.79
	▶ Locks	\$6,140.52	
Measures	Pumps	\$5,145.43	
Deceller Coles Amount 📼 🗙	Tires and	\$628.42	\$296.78
Reseller Sales Amount 🔹 🔺	Mountain	\$8,854,263.03	\$3,902,246.74
	Road Bikes	\$11,294,381.37	\$4,448,636.90
	▶ Touring B	\$5,403,130.67	\$5,048,359.55
	Bib-Shorts	\$64,876.99	
	▶ Caps	\$13,800.95	\$5,665.91
	▹ Gloves	\$102,156.07	\$16,823.04
	Jerseys	\$290,004.73	\$150,804.63
	▶ Shorts	\$179,301.33	\$113,639.82
	► Socks	\$10,793.76	\$7,271.66
	Tights	\$78,937.08	
	▶ Vests	\$131,993.28	\$91,808.09
	▶ Bottom B	\$30,792.82	\$21,033.55
	▶ Brakes	\$45,187.31	\$20,831.40
	Chains	\$5,685.93	\$3,691.78
	▶ Cranksets	\$124,249.27	\$79,693.34
	▶ Derailleurs	\$44,321.13	\$25,888.36
	Forks	\$28,259.07	
	Handlebars	\$88,710.99	\$28,237.63
	Headsets	\$25,010.36	
	Mountain	\$2,067,908.64	\$873,844.03
	Pedals	\$94,060.53	\$53,423.38
	▶ Road Fra	\$1,631,377.27	\$356,197.37
	Saddles	\$37,831.96	\$17,997.43
	► Touring F	\$1,032,154.04	\$610,173.64
r 1			

Filters are turned off. Product subcategories are on the rows, years – on the columns.

Columns 🖺 🗕 +	Date/Date.Calend	ar 🔻 🕵 🗙			
Rows 🖺 🗕 +	Product/Product C	Categories 🔻 🕵 🗙	:		
Rows / Columns Filter S	Sorting				
Context	Product/Pro	CY 2007	EY 2008		1
	Bike Racks	\$118,42	Drill by		
	Bottles a	\$4,48			
	▶ Cleaners	\$6,73	Drill by on New Page	e 🕨	
	Helmets	\$113,44	Drill Up		
	Hydration	\$41,53			
	Locks	\$6,14	Drill Down		
Measures	Pumps	\$5,14	Hide Item		
Receller Coles Amount	Tires and	\$62	ride item		
Reseller Sales Amount 🔹 🗙	Mountain	\$8,854,26	Keep Only This		
	Road Bikes	\$11,294,38	Hide Siblings		
	▶ Touring B	\$5,403,13	ride biblings		
	Bib-Shorts	\$64,87	Show All Children		
	▶ Caps	\$13,80	Show Level		
	▹ Gloves	\$102,15	SHOW LEVEL	·	
	Jerseys	\$290,00 🔞	Member Selector		
	▶ Shorts	\$179,30	A		
	▶ Socks	\$10,79	Actions		
	▶ Tights	\$78,93	Copy to Clipboard		
	▶ Vests	\$131,99	copy to enpround		
	▶ Bottom B	\$30,79	Sorting	- F	Sort Ascending (break hierarchy)
	▶ Brakes	\$45,18	Filter	•	Sort Descending (break biorarchy)
	Chains	\$5,68			Soft Descending (break filerarchy)
	Cranksets	\$124,24	Formatting	- F	Sort Ascending (do not break hierarchy)
	Derailleurs	\$44,321.13	φ23,000.30		Sent Dessen die nicht besch biererbeit
	+ Forks	\$28,259.07	t20,007,00		Soft Descending (do not break hierarchy)
	 Headsets 	\$00,/10.99	\$20,237.03		Add Sorting of Rows (Expert Mode)
	Mountain	\$25,010.30	¢873 844 02		2
	Pedals	\$94,007,508.04	\$53,044.03		Remove Sorting of Rows
	Road Fra	\$1.631.377.27	\$356,197,37		Deactivate Sorting of Rows
	▶ Saddles	\$37,831,96	\$17,997,43		
	► Touring F	\$1.032.154.04	\$610,173,64		
Highlight	▶ Wheels	\$226.947.94			
		+			

Using this example report let's sort the rows in the table in the descending order of sales in 2007. Press the right mouse button over the CY 2007 column header:

Select "Add Sorting of Rows (Expert Mode)" from the context menu as shown on the picture above. You will get a dialog that looks like the one you were using to create the filter:

🏮 Sort o	f Rows			x
Name:	* Sorting 1		🗹 Active	
	O Ascending	O Descending	Save Hierarch	(
Columns				
Date/Date	.Calendar: All Periods.CY 20	07		🞑 X
				- 1
				- 1
Override	Context			
Measures:	(The first measure among s	elected)		• X
				- 11
				- 11
				- 1
Overrid	e Context for Hierarchy			
			Cano	e

Note that the time is already selected correctly (that's because we called the context menu for the CY 2007 element). Let's change the sorting order to "Descending" (as in the picture) and leave the field "Save Hierarchy" unchecked. Press OK. You will get the table with the values in the CY 2007 column sorted descending:

Columns 🗄 🗕 +	Date/Date.Calend	ar 🔻 🕵 🗙	
Rows 🗎 🗕 +	Product/Product C	ategories 🔻 🕵 🗙	
Rows / Columns Filter	🗊 Sorting		
Context	Product/Pro	▶ CY 2007	▶ CY 2008
	Road Bikes	\$11,294,381.37	\$4,448,636.90
	Mountain Bi	\$8,854,263.03	\$3,902,246.74
	Touring Bikes	\$5,403,130.67	\$5,048,359.55
	Mountain Fr	\$2,067,908.64	\$873,844.03
	Road Frames	\$1,631,377.27	\$356,197.37
	Touring Fra	\$1,032,154.04	\$610,173.64
Measures	Jerseys	\$290,004.73	\$150,804.63
	Wheels	\$226,947.94	
Reseller Sales Amount 🔹 🗙	Shorts	\$179,301.33	\$113,639.82
	Vests	\$131,993.28	\$91,808.09
	Cranksets	\$124,249.27	\$79,693.34
	Bike Racks	\$118,428.47	\$79,307.69
	Helmets	\$113,443.66	\$50,752.52
	Gloves	\$102,156.07	\$16,823.04
	Pedals	\$94,060.53	\$53,423.38
	Handlebars	\$88,710.99	\$28,237.63
	Tights	\$78,937.08	
	Bib-Shorts	\$64,876.99	
	Brakes	\$45,187.31	\$20,831.40
	Derailleurs	\$44,321.13	\$25,888.36
	Hydration P	\$41,531.96	\$23,986.79
	Saddles	\$37,831.96	\$17,997.43
	Bottom Brac	\$30,792.82	\$21,033.55
	Forks	\$28,259.07	
	Headsets	\$25,010.36	
	Caps	\$13,800.95	\$5,665.91
	Socks	\$10,793.76	\$7,271.66
	Cleaners	\$6,733.09	\$4,455.28
	Locks	\$6,140.52	
	Chains	\$5,685.93	\$3,691.78
	Pumps	\$5,145.43	
	Bottles and	\$4,481.33	\$2,995.27
Highlight	Tires and Tu	\$628.42	\$296.78

Note the "Sorting 1" sign that appeared in the "Sorting" designer on rows. You can perform the same actions with it as you did with the filters: activate, deactivate, edit and remove.

The same sorting can be created easier using one of the quick sorting options. To use it call the context menu for the CY 2007 element and select "Sort Descending (break hierarchy)" from it:

Columns 😫 🗕 + I	Date/Date.Calendar 🔻 🗔 🗙		
Rows 🗄 🗕 +	Product/Product Categories 🔻 🗔 3	ĸ	
Rows / Columns Filter S	Sorting		
Context	Product/Pro CY 2007	CV 2008	7
	Bike Racks \$118,42	Drill by	
	Bottles a \$4,48	Drill by on New Page	
	Cleaners \$6,73	bill by officer ruge	
	Helmets \$113,44	Drill Up	
	Hydration \$41,53	Dill Davia	
	Locks \$6,14	Drill Down	
Measures	▶ Pumps \$5,14	Hide Item	
Decelles Cales Assessed as X	▶ Tires and \$62		
Reseller Sales Amount 🔹 🗙	Mountain \$8,854,26	Keep Only This	
	Road Bikes \$11,294,38	Hide Siblings	
	Touring B \$5,403,13		
	Bib-Shorts \$64,87	Show All Children	
	▶ Caps \$13,80	Show Level	
	▶ Gloves \$102,15	Show Eerer	
	▶ Jerseys \$290,00 🔯	Member Selector	
	▶ Shorts \$179,30	Actions	
	▶ Socks \$10,79	Actions	
	▶ Tights \$78,93	Copy to Clipboard	
	▶ Vests \$131,99		
	▶ Bottom B \$30,79 3	Sorting •	Sort Ascending (break hierarchy)
	Brakes \$45,18 7	. Filter 🕨 🕨	Sort Descending (break bierarchy).
	▶ Chains \$5,68		Sole Descending (break metaleny)
	Cranksets \$124,24	Formatting •	Sort Ascending (do not break hierarchy)
	Derailleurs \$44,321.13	\$25,888.35	Sort Descending (do not break bierarchy)
	▶ Forks \$28,259.07		Soft Descending (do not break merarchy)
	Handlebars \$88,/10.99	\$28,237.63	Add Sorting of Rows (Expert Mode)
	Mountain \$25,010.36	t +072 044 02	
	Pedals \$2,067,908.64	+ \$8/3,844.03	Remove Sorting of Rows
	Road Fra \$1,631,377,37	7 ¢356 107 37	Deactivate Sorting of Rows
	Saddles \$37,831,577,27	¢ \$350,197.37	
	Touring E \$1 032 154 0/	\$ \$17,337.43	
Highlight	Wheels \$226.047.04	φ010,173.04 1	
Highlight	\$220,947.94	T	

As you could notice, there are 4 options of quick sorting available:

- Ascending, breaking hierarchy;
- Descending, breaking hierarchy;
- Ascending, preserving hierarchy;
- Descending, preserving hierarchy.

6.5 Calculated Members

If you are granted with appropriate rights by an administrator then in report designer you will be able to create your own dimension members and measures based on the existing ones, both for usual reports and for "Interactive Dashboard" reports. Let's take a deeper look at the process of creating calculated measures and dimension members.

6.5.1 Calculated Measures

You can create your own calculated measures and use them just the way you do it with ordinary measures. To create a new calculated measure press the right mouse button anywhere in the measures list. You will see the context menu, which will give you an ability to add calculated measures:



After pressing "New Measure on Report…" or "New Measure on Cube…" item you will see a wizard that will help you to create calculated measure:

🟮 Calculated Measure	x
Step 1 Choose the way how to set up the calculated measure	
The way to set up the calculated measure: Relationship Examples: Ratio, Difference, % of difference, % of markup	
O Parallel Period Example: parallel period by years	
Growth Example: growth by years	
Rolling Examples: sum/average of N last elements	
Period to date Examples: total since beginning of the year	
Custom MDX	
Cancel < Back Next > Finish	

The wizard lets you choose the type of a new calculated measure from six different options:

- Relationship;
- Parallel Period;
- Growth;
- Rolling;
- Period to date;
- Custom MDX;

The last option is for experts that are familiar with MDX querying language. All other options will let you create new measures in an easy wizard mode.

For example, let's create a calculated measure of an average sales amount by orders – the ratio of sales amount to orders count. Select a "Relationship" measure type:

Calculated Measure	x
Step 1	
Choose the way how to set up the calculated measure	
The way to set up the calculated measure:	
Relationship Examples: Ratio, Difference, % of difference, % of markup	
O Parallel Period Example: parallel period by years	
Growth Example: growth by years	
O Rolling Examples: sum/average of N last elements	
Period to date Examples: total since beginning of the year	
Custom MDX	
Cancel < Back Next > Finish	

Press "Next" and fill in the fields in the next window as it is shown in the picture:

Calculated Measure	- Relationship	x
Measure Name: *	Average Sales Amount by Order	
Non-empty Behavior:		• X
Folder:	My Calculations	• X
Format String:	Currency 🔻	
Formula type		
Ratio of other measure	'e	
Ratio of SUM over row	vs/columns	
Ratio of parent memb	er	
O Difference		
O Percent of difference		
O Percent markup		
Ratio formula:		
× * Reseller	Sales Amount	
Y = Reseller	Order Count	
Example: Avg Price = Sa	les / Units	
Cancel	<back next=""> Fini</back>	sh

After pressing "Finish" you will see the folder for calculated measures in the measures list and it will contain a new measure:



Now you can use that calculated measures the same way you use the other measures. Just drug the new measure into the "Measures" designer and you will get the expected result:

Columns 😫 Reselle	er Sales Amount 🔻 🗙 Reseller Order Count 👻 🗙 Average Sales Amount by Order 👻 🗙
Rows 🗄 🗕 +	Product/Product Categories 🔻 🗔 🗙
Rows / Columns Filter	Sorting
Context	Product/Produc t Categories Amount Count Average Sales Amount Double Count Amount by Or
	▹ Accessories \$571,297.93 1,315 \$434.45
	Bikes \$66,302,381.56 3,153 \$21,028.35
	▶ Clothing \$1,777,840.84 2,410 \$737.69
	▶ Components \$11,799,076.66 2,646 \$4,459.21
Measures Reseller Sales Amount * X Reseller Order Count * X	
Average Sales Amo • ×	

To edit or delete calculated measure just click the right mouse button on the corresponding measure in the list and select "Edi" or "Delete", respectively:

Measures	q – +
Wy Calculatio Ave Ave Finance Tinance Reseller	ns New Measure on Report Level New Measure on Cube Level Copy Edit Delete Share This Measure Move Measure to Cube Level Edit Folders

Besides, users can allow or forbid the shared access to the measures. Depending on who was the measure creator and if it was shared or not, it would be displayed using different icon:



- 1 a measure created by this user on a report level;
- 2 a shared measure created by this user on a cube level;
- 3 a measure created by a different user on a cube level and shared with this user;
- 4 a measure created by administrator on a cube level;

5 - a measure created by administrator on the report level and available just for this report.

6.5.1.1 Parallel Period

In the previous chapter you created a calculated measure of "Relationship" type. In this chapter you will see the example of measure of "Parallel Period" type.

For example, let's create a measure showing the value of "Reseller Sales Amount" in the same month of the last year, and use this measure to compare the bikes sales in different months of this and previous year.

Add a new measure to the measures list using the corresponding context menu option:



When creating a new calculated measure select "Parallel Period" measure type and press Next:

🟮 Calculated Measure	x
Step 1	
Choose the way how to set up the calculated measure	
The way to set up the calculated measure:	
Relationship Examples: Ratio, Difference, % of difference, % of markup	
Parallel Period Example: parallel period by years	
O Growth Example: growth by years	
O Rolling Examples: sum/average of N last elements	
O Period to date Examples: total since beginning of the year	
Custom MDX	
Cancel < Back Next > Finish	

In th	he next	window	fill ir	all	fields	as	it is	shown	in	the j	picture:
-------	---------	--------	---------	-----	--------	----	-------	-------	----	-------	----------

👌 Calculated Measure - Parallel Period 🛛 🔍						
Measure Name: *	Reseller Sales Amount Parallel Period					
Base Measure: *	Reseller Sales Amount 👻					
Hierarchy: *	Date/Date.Calendar 🔹					
Level: *	Month					
Periods: *	12 🗘					
Non-empty Behavior:	- x					
Folder:	My Calculations 🔹 🗙					
Format String:	#,0.00 -					
Parallel period type						
Value from parallel	period					
O Growth						
O Growth %						
Cancel	< Back Next > Finish					

The selected Parallel period type at the bottom (*Value from parallel period*) means that the value of the measure selected in the "Base Measure" field ("Reseller Sales Amount") will be shown. The Time "Hierarchy" field points to the hierarchy that will be used to count the parallel period. And the values in the "Level" and "Periods" fields mean that the data for a time period, that was 12 month before the current period, will be shown.

After filling in all fields press «OK» and you will see a newly created measure in the measures list:



Place the months of the year 2007 on the columns of your table:

•	Σ		All	Peri	ods	
	►	۲		CY	2005	
	►	۲		CY	2006	
	-	۲		CY	2007	
		-			Calenc	lar Semester
			-	Δ.	Ca	lendar Quarter
				Þ	ss 🗸	Month
	►	۲		CY	2008	
	Þ	۲		CY	2010	

Place the "Bikes" category from "Product Categories" hierarchy into the context, thus you will see only the sales data for bikes:



After that place two measures on rows: "Reseller Saves Amount" and newly created "Reseller Sales Amount Parallel Period". You will get the following report:

Columns 🗄 - + Date/Date.Calendar - 😡 🗙									
Rows 😫 Reseller Sale	s Amount 👻 Reseller Sales Amount Pa	arallel Period 🔻 🗙							
Rows / Columns Filter Sorting	9								
Context	Measures	▶ January 2007 ▶ February 20	▶ March 2007 → April 2007						
Product/Product Categories	Reseller Sales Amount	\$1,171,710.95 \$2,154,368.36	\$1,359,898.04 \$1,509,883.27						
- All Products	Reseller Sales Amount Parallel Pe	687,178.08 1,814,374.32	1,375,940.84 813,847.26						
Pikes									
Clathing									
Components									
Measures									
Reseller Sales Amount 🔹 🗙									
Reseller Sales Amount Pa 🔻 🗙									

Add a chart to your report. Set the argument to columns and remove the legend:

Chart Properties
📕 Bar 🔻
🖬 bottom 🔻
Argument:
O rows O columns
egend labels
rotate by 90°
Settings



After that you will get the report like this:

In the chart you can see that two bars are corresponding to every month: red one stands for the current "Reseller Sales Amount" value and a blue one – for the value of that measure in the same month of a previous year.

6.5.1.2 Growth

Calculated measure type "Growth" lets you create a measure that will show an absolute or relative growth of another measure.

Let's create a measure that will show a relative growth in percents of "Resellers Sales Amount" measure in this month comparing to the previous month, and use that measure to show the sales growth of bikes. Add a new calculated measure of "Growth" type:

🟮 Calculated Measure	x					
Step 1 Choose the way how to set up the calculated measure						
The way to set up the calculated measure:						
Relationship Examples: Ratio, Difference, % of difference, % of markup						
O Parallel Period Example: parallel period by years						
Growth Example: growth by years						
© Rolling Examples: sum/average of N last elements						
Period to date Examples: total since beginning of the year						
Custom MDX						
Cancel < Back Next > Finish						

In the next step fill in the fields as it is shown in the picture:

🏮 Calculated Measur	e - Growth	x					
Measure Name: *	Reseller Sales Amount Growth%						
Base Measure: *	Reseller Sales Amount	•					
Hierarchy: *	Date/Date.Calendar	-					
Non-empty Behavior:		×					
Folder:	My Calculations						
Format String:	0.00%						
Growth type							
As percent change	As percent change						
O As absolute change	2						
Cancel	< Back Next > Finish						

"Base Measure" field points to the measure the growth of which we are interested in. The Time Hierarchy field is for selecting the hierarchy that will be used to count growth, in most cases the time hierarchy (like "Date.Calendar") should be selected here. After filling in all fields press «OK» and you will see the new calculated measure in the list:



In the report from the previous chapter remove the "Reseller Sales Amount Parallel Period" measure from rows:

Columns		– + Date/Date.Calendar 🝷 🕵 🗙	4
Rows	100	Reseller Sales Amount 🔻 🗙 Reseller Sales Amount Parallel Period 💌	×

Place the newly created measure "Reseller Sales Amount Growth %" instead. You will get the following report:



In the chart for every month you can clearly observe the sales amount and its growth in percent comparing to the previous month.

6.5.1.3 Rolling Measure

Rolling measure type is used to show an average or total value of some measure in a certain time period.

For example, you can create a measure that will show an average profit for the last three month. To do that, create a new calculated measure of "Rolling" type:

🟮 Calculated Measure	x					
Step 1						
Choose the way how to set up the calculated measure						
The way to set up the calculated measure:						
Relationship Examples: Ratio, Difference, % of difference, % of markup						
O Parallel Period Example: parallel period by years						
O Growth Example: growth by years						
Rolling Examples: sum/average of N last elements						
Period to date Examples: total since beginning of the year						
Custom MDX						
Cancel < Back Next > Finish						

In the next window fill in the fields as it is shown in the picture:

Calculated Me	Calculated Measure - Rolling						
Measure Name:	*	Gross Profit Rolling					
Base Measure:	*	Gross Profit	•				
Hierarchy:	*	Date/Date.Calendar	•				
Periods:	*		3 🗘				
Non-empty Behav	ior:		• X				
Folder:		My Calculations	• X				
Format String:		#,0.00 ~					
Operation type							
O Total							
Average							
Cancel		< Back Next > Finish	1				

The Operation type selected at the bottom (Average) means that the average value of a measure, set in the "Base Measure' field, will be calculated, in our case – "Gross Profit". Values in fields "Periods" and "Time Hierarchy" state that the average should be calculated over the last 3 month in the "Date.Calendar" hierarchy.

After filling in the fields press «OK» and you will see a new measure in a measures list:



To try that new measure in practice, create a new page of the structure, described below. Put months of 2007 on columns:

,	Σ		All	Peri	ods		
	►	۲		CY	200)5	
	►	۲		CY	200)6	
	-	۲		CY	200)7	
		-			Ca	lend	ar Semester
			-	Δ.		Cal	endar Quarter
				F		~	Month
	►	۲		CY	200	8	
	⊧	۲		CY	201	10	

Put two measures on rows: "Gross Profit" and "Gross Profit Rolling". Next, add a chart to the page and change the chart properties like this:

Chart Properties					
🔨 Spline 🔻					
🖬 bottom 🔻					
Argument:					
🔘 rows 🛛 🙆 columns					
labels					
rotate by 90°					
Settings					



You will get a page looking like this:

Profit for a current month is displayed with a red line, and the blue line shows the average profit for the last three consecutive months. As you can notice, the line corresponding to the calculated measure is more flat, it doesn't display the sharp rises and falls of profit. It looks more like a tendency, because the average value of profit in three months is taken into account.

6.5.1.4 Period to date

"Period to Date" calculated measure type is used to show a total or average value of some existing measure from the beginning of some period to the current date.

For example, if you need to draw a chart representing the growth of total sales amount during a year, you can create a calculated measure, showing the total amount of sales from the beginning of the year to a current date. Let's create such a measure. While creating a new measure, select "Period to Date" measure type:

Calculated Measure	x
Step 1 Choose the way how to set up the calculated measure	
The way to set up the calculated measure:	
Relationship Examples: Ratio, Difference, % of difference, % of markup	
Parallel Period Example: parallel period by years	
Growth Example: growth by years	
Rolling Examples: sum/average of N last elements	
Period to date Examples: total since beginning of the year	
Custom MDX	
Cancel < Back Next > Finish	1

Measure Name:	*	Reseller Sales Amount Period to Date
Base Measure:	*	Reseller Sales Amount
Hierarchy:	*	Date/Date.Calendar
Level:	*	Calendar Year
Non-empty Behav	ior:	
Folder:		My Calculations
Format String:		#,0.00 •
Operation type		
O Total		
O Average		

Press «Next» and fill in all fields in the next window as shown:

Operation type selected at the bottom defines that the total value of the measure selected in the "Base Measure" field ("Reseller Sales Amount" in our case) will be shown. In the "Time Hierarchy" field you have to select the time hierarchy. The total value will be calculated starting from the beginning of the corresponding period from the level set in the "Level" field. If you set the "Calendar Year" level, you will get the totals from the beginning of the year.

Press «OK» and the new calculated measure will be added to the measures list:



Let's create the charts of total sales growth during the year 2007 for every country outside the Americas. First drag the "Date.Calendar" hierarchy on columns and select all month of the year 2007:

Ŧ	δ		All	Peri	ods		
	►	۲		CY	200	5	
	►	۲		CY	200	6	
	-	۲		CY	200	7	
		-			Cal	end	ar Semester
			-	Δ.		Cal	endar Quarter
				Þ	33	~	Month
	Þ	۲		CY	200	8	
	Þ	۲		CY	201	0	

Then drag the "Geography" hierarchy on rows and select all countries except "Canada" and "United States":



Drop a just created "Reseller Sales Amount Period to Date" measure inside the table. And put the hierarchy "Product Category" with only "Bikes" category selected into the context. Your page should look like this:

Columns 🗄 🗕 + Date/Date.Calendar 🔻 🗔 🗙					
Rows 😫 🗕 + Geog	raphy 🔻 🕵 🗙				
Rows / Columns Filter Sortin	ng				
Context	Geography	January 2007	February 20	March 2007	► April 2007
Product/Product Categories X	Australia				
- All Products	▶ France	30,292.82	144,950.28	199,375.11	240,716.86
Accessories	Germany				
Bikes	United Kingdom	31,835.47	142,318./1	243,874.25	280,467.44
Clothing					
Components					
Measures					
Reseller Sales Amount P 🔻 🗙					
Highlight		1			Þ

Change the view mode from table to chart, using the corresponding option from the toolbar:

Table	*
Table	
Chart	
Table And Chart	6

In Chart Properties select the columns as an argument and change the type of the chart to Line:

Chart Properties		
🔀 Line	-	
bottom	-	
Argument:		
O rows O columns		
🗹 legend 🗌 labels		
rotate by 90°		
Settings		

You will get this kind of report with the charts of total sales growth of bikes in different countries:

Columns 😫 - + Date/Date.Calendar 🛛 🖸 🗙				
Rows 🗄 - + Geography - 🕵 🗙				
Rows / Columns Filter Sortin	9			
Context				
Product/Product Categories ★ All Products	1,800,000.00			
Accessories Bikes	1,600,000.00			
Clothing Components	1,400,000.00			
1000	1,200,000.00			
Measures Reseller Sales Amount P * X	1,000,000.00			
	800,000.00			
Highlight	600,000.00			
Chart Properties	400,000.00			
Line	200,000.00			
bottom 🔻	0.00			
Argument:	tany Man May July Sea Now			
	⁸ 7 - 70, ³ - 70, ⁵ - 70, ⁵ - 70, ⁶ - 70, ⁶ - 70, ⁶			
rotate by 90°	22 Z3			
Settings	📥 Australia 📥 France 📥 Germany 📥 United Kingdom			

6.5.2 Measure Folders

When users create their own measures, all of them are automatically placed to "My Calculations" folder:

🟮 Calculated Measu	rre - Rolling
Measure Name:	
Base Measure:	•
Hierarchy:	Date/Date.Calendar
Periods:	2 🗘
Non-empty Behavior:	- x
Folder:	My Calculations
Format String:	My Calculations
Operation type	
O Total	
O Average	
Cancel	
	-
	OK Cancel
	11.

Users can create their own trees of folders, but all of them will be under "My Calculations". Let us look at the example with measures that we've just created. In order to manage folders, click on any place in the list of folders and select "Edit Folders" from the context menu:



In the window below there is a list of previously created measures. Let us add a folder *«Folder 1»* by pressing "Create":

🟮 Folder Editing	
Folders: My Calculations	Measures: Average Sales Amount by Order Gross Profit Rolling Reseller Sales Amount Growth % Reseller Sales Amount Parallel Period Reseller Sales Amount Period to Date
rou may drag _drop measures from on	e rolder to another.
Create Rename Delete	OK Cancel

In the window that appears, enter the folder name:

New Folder	x
Folder Name: Folder 1	OK Cancel

Folder Editing	_ D X
Folders:	Measures:
👻 😭 My Calculations	
🗸 🗋 Folder 1	
You may drag drop measures from one	e folder to another.
Create Rename Delete	
	OK Cancel

As a result we have a subfolder with the name «Folder 1» with no measures in it:

Let us move the measure "Gross Profit Rolling" in the new folder. It is necessary to capture the measure using the mouse and to move it to the desired folder:

🏮 Folder Editing	
Folders:	Measures: Average Sales Amount by Order Gross Profit Rolling Reseller Sales Amount Growth % Reseller Sales Amount Parallel Period Reseller Sales Amount Period to Date
You may drag _drop measures from on	e folder to another.
Create Rename Delete	
	OK Cancel

🏮 Folder Editing		
Folders:	Measures:	
My Calculations Folder1	Gross Profit Rolling	
You may drag _drop measures from one folder to another.		
Create Rename Delete		
	OK Cancel	

If we click on *«Folder 1»*, we can see "Gross Profit Rolling" measure there:

The folders can be renamed and deleted, and new subfolders can be created:

🏮 Folder Editing		_
Folders:	Measures:	
👻 🍘 My Calculatio	ns 🛛 🛃 Gross Profit Rolling	
᠇ 🗋 Folder1		
	Create Subfolder	
	Rename	
	Delete	

If a folder is deleted and in the same time there are any measures in it, they are moved to the root folder:





6.5.3 Calculated Members

You have the possibility to create your own dimension members, based on the existing ones. To add calculated members to some hierarchy you have to click with the right mouse button on that hierarchy in the hierarchies list. In the context menu select "Calculated Members…":


After that a window will appear for managing the calculated members from the selected hierarchy:

🏮 Calculated Members: Date/Date.Cale	endar 🗖 🗙
A & 9 8	
	Close

To add a new calculated member, press the button as shown in the picture above. A wizard will appear that will help you to create a new member:

🚯 Calculated Member	x
Step 1	
Choose the way how to set up the calculated member	
The way to set up the calculated member:	
Function over set	
Custom MDX	
Cancel < Back Next > Finish	

In the first step you have two options:

- Function over set;
- Custom MDX.

The second option is for experts familiar with MDX querying language and enables you to create a calculated member with a custom MDX query.

Let's consider the first option. If you select it and press Next you will see the following form:

🟮 Calculated Member - Function over Set 🛛 🗙				
Member Name:	* Sum of Current Measure over Date.(Calenda		
Parent Hierarchy:	* Date/Date.Calendar	Ŧ		
Parent Member:	All Periods	• X		
Function:	* Sum	•		
Measure:	* Current Measure	•		
Format String:	Standard 🔹			
Solve Order:	0 🜲			
Set				
🔘 Date Range	Tree			
Cancel	<pre>< Back Next > Finite</pre>	ish		

Let's build the calculated member that will show the total value of the measures for the years 2005 and 2006. To do that, select "Sum" in the "Function" field. In the "Measure" field leave the value "Current Measure" to make the summary value calculated over the currently selected measure. In the bottom part of the window you can see an elements tree where you can select the elements whose values will be counted in the sum. Select "CY 2005" and "CY 2006" as shown in the picture:

💱 Calculated Member - Function over Set 🛛 🗙				
Member Name:	* Sum of Current Measure over Date	.Calenda		
Parent Hierarchy:	* Date/Date.Calendar	Ŧ		
Parent Member:	All Periods	• X		
Function:	* Sum	•		
Measure:	* Current Measure	•		
Format String:	Standard 🔹			
Solve Order:	0 韋			
Set				
 ✓ Edite Range ✓ All Periods ✓ CY 2005 ✓ CY 2006 ✓ CY 2007 ✓ CY 2008 ✓ CY 2010 				
Cancel	< Back Next > Fi	inish		

After pressing "Finish" the new calculated element will be created:



Now add the hierarchy with the new element ("Date.Calendar" in our case) to your report on rows or columns. Open the member selector and you will see a new calculated member there:

🏮 Membe	r Select	or: Date/	Date.Cale	ndar					x
Selection	Filter	Sorting	Options						
O Date Ra	nge) Tr	ee						
	Il Periods CY 200 CY 200 CY 200 CY 200 CY 200 Sum of	5 05 07 08 10 <u>f Current M</u>	leasure ove	r Date.Cale	ndar				
Show Se	earch >>								
						ок	С	ancel	

Add this element to the selection to see the result:

Columns 😫 - + Date/Date.Calendar - 🕵 🗙						
Rows 🗄 - + Product/Product Categories 👻 😡 🗙						
Rows / Columns Filter	Sorting					
Context	Product/Prod CY 2005 CY 2006 Sum of Current Measu					
	Accessories \$20,235.36 \$92,735.35 \$112,970.72					
	Bikes \$7,395,348.63 \$19,956,014.67 \$27,351,363.30					
	Clothing \$34,376.34 \$485,587.15 \$519,963.49					
	Components \$615,474.98 \$3,610,092.47 \$4,225,567.45					
Measures Reseller Sales Amount ×						

You can edit calculated members in the same management window that you used to add the member. There are buttons for editing and removing a member:

🏮 Calculated Members: Date/Date.Calendar 🗖 🗙
😪 🗞 🦻 🗭
~ ~ ~
Close

You can also edit the calculated members from the context menu:



If you share the member with other people, it will be surrounded by green rectangle:



Pay attention, that in the calculated members' management window you can see only elements from the hierarchy for which you opened that window. To see the elements from the other hierarchy click the right mouse button on that hierarchy and select the item "Calculated Members".

Let's edit our calculated member, so that it will show not the sum but the average value. To do that, select the element in the calculated members' management window and press the Edit button.

In the "Function" field change the value from "Sum" to "Average" and press «OK»:

🏮 Calculated Member - Function over Set 🛛 🔍				
Member Name:	* Average of Current Measure over Da	ate.Cale		
Parent Hierarchy:	* Date/Date.Calendar	Ŧ		
Parent Member:	All Periods	• X		
Function:	* Average	•		
Measure:	* Current Measure	•		
Format String:	Standard 🔹			
Solve Order:	0 🜲			
Set				
O Date Range	Iree			
 All Periods CY 2005 CY 2006 CY 2007 CY 2007 CY 2008 CY 2008 CY 2010 Sum of C 	Current Measure over Date.Calendar			
	OK Can	cel		

Now look at your report, it should show the average value for two selected years:

Columns 🗄 🗕 +	Date/Date.Calendar 🔻 🕵 🗙						
Rows 🗄 - + Product/Product Categories 🔻 😡 🗙							
Rows / Columns Filter	Sorting						
Context	Product/Prod CY 2005 CY 2006 Average of Current Me						
	▶ Accessories \$20,235.36 \$92,735.35 \$56,485.36						
	▶ Bikes \$7,395,348.63 \$19,956,014.67 \$13,675,681.65						
	▶ Clothing \$34,376.34 \$485,587.15 \$259,981.74						
	▶ Components \$615,474.98 \$3,610,092.47 \$2,112,783.73						
Messures							
Reseller Sales Amount 🕆 🗙							

This way you can create any number of calculated members in different hierarchies and use them in your reports.

6.5.4 Numeric parameters

You can create numerical parameters that allow the user to affect calculated measures, sets and members dynamically:

🟮 Business Analys	is Tool (Report Module) - http	://localhost:8001/					
<u>Application</u>	<u>M</u> odule <u>R</u> eports Report	<u>P</u> age <u>V</u> iew <u>D</u> ata	<u>T</u> able T <u>o</u> ols	<u>H</u> elp			
		N 🕹 🖬 🖭 🖒 🕅		% 000 € .0 .00	100% - #h	Table	- II, 🖓 🗊
				.000	100 A	- abic	
	Sales (Version 1)						х
Settings	Dimensions 🔍 🙋 🎄 🕴	Calumaa 🛤 Graad	Drofit Maroin 📼 🗙				1
	h 100 Internet Sales Or	Columns 😫 Grossi	Profit Margin + 🔺				
		Rows 😫 🗕 +	Product/Product Cate	gories 🔻 🗔 🗙			
1	- 1 Product						
List		Rows / Columns Filter	Sorting				
	Measures 🔍 – +	Context	Product/Product	Gross Profit	ABC		
Nh dH	My Calculations		Categories	Margin			
1.14	🕨 👩 Michael Jordan		 Accessories Bike Dacks 	49.88%	C		<u>_</u>
Reports	🕨 👘 KPI		Bike Stan	40.07%	C		
	Exchange Rates		Bottles a	59.48%	C		
	▶ ☐ Finance		Cleaners	46.39%	c		U
	Internet Sales	Measures	▶ Fenders	62.60%	С		
	Reseller Sales	Concer Des 64 Maneire	Helmets	46.77%	С		
	▶ □ Sales Quota		Hydration	46.34%	С		
	Final Sales Summary	ABC • X	s ⊧ Lights		A		
	Reseller Sales Amoun		E Locks	30.98%	С		
	Reseller Sales Amoun		Bumps	21.05%	A		
	Server F Min Date		Tires and	51.05%	C		
	ServerCalcDate		Bikes	11.11%	B		
			Mountain	16.28%	В		
			🖁 🕨 Road Bikes	9.95%	A		
			🚡 🕨 Touring B	1.52%	A		
	Sets Q - +		Clothing	17.42%	В		
	Calculated Sets	2	▶ Bib-Shorts	30.74%	c		
	Final Sets	- 0	Caps	-2.35%	A		
			lersevs	-12 35%	<u>ر</u>		
		Parameters C	→ Shorts	37.71%	c		
		A 11%	▶ Socks	40.89%	C		
			Fights	30.08%	С		
	Parameters Q			38.33%	C		
	X A	-	Components	8.75%	A		
	X B	B 25% 🗘	Bottom B	26.00%	С		
	· · ·		Brakes Chains	25.8/%	C		
			Cranksets	25.83%	C		
		Highlight	► Derailleurs	25,85%	c		
			Corke				T
		tormating 📑 formati	ing 2 🛛 🔙 formating	virtual 🛛 🛄 forma	ating virtual 2	separators	Search 🔻
Login: john Serv	rer: http://localhost:8001/ Ro	ws: 41 Columns: 2 Exec	. Time: 00.2				

To create a numeric parameter, right-click anywhere in the parameter list. A pop-up menu appears allowing you to add a parameter:



By clicking on the "New Parameter ..." menu item a wizard to create a numeric parameter appears:

🏮 Parameter				x
Name:	*			
Format:		Number		•
Decimal Places:				0 🗘
Default Value:	[0 🗘
Allowable Values:) All	🔘 Range	
	Descrip	otion >>	ОК	Cancel

In form that opened you should fill in the following fields:

- Name fill in the name of the parameter;
- Format choose the parameter format: numeric or percentage;
- Decimal Places select the number of decimal places;
- Default Value specify the default setting;
- Allowable Values –select all values or the value of the selected range with the ability to specify the step

Parameter			×
Name: *	New parameter	r	
Format:	Number		•
Decimal Places:			0 🗘
Default Value:			0 🗘
Allowable Values:	O All	Range	
Range of values			
Minimum:			0 🌲
Maximum:			100 🜲
Step Size:			1 🗘
Description:			
Parameter of ABC analysis			*
			Ψ.
Descri	otion <<	ОК	Cancel

• Description - You can briefly describe the essence of the parameter, if it is necessary.

This parameter can be used in calculated measures, members and sets:

Calculated Measure - Custom MDX				
Dim. Measures Sets Params Func.	Measure			
X A X B	Measure Name:	New Measure	Format String:	#,0.00 -
	Non-empty Behavior:	• X	Solve Order:	10 🗘
	Folder:	My Calculations 🔹 🗙	Property:	
	MDX:		Desc	cription >>
	<u> </u>			
				Check Formula
		Cancel < B	ack Next 3	Finish

Let us look at the following example. For instance, we need to analyze how the margin for the "Bikes" subcategory changes provided that the prime cost of goods increases by 10%. In order to do this, create a parameter "Product Cost":

🟮 Parameter					x
Name:	*	Product C	lost		
Format:		Percentag	je		•
Decimal Places:					<u>o</u> ‡
Default Value:					<u>0%</u> ‡
Allowable Values:		O All		Range	
Range of values					
Minimum:					0% 韋
Maximum:					90% 💲
🗹 Step Size:					10% 🗘
Description:					
Parameter of cost					<u>^</u>
L				-	Ψ
	Descri	ption <<	0	к	Cancel

After that, we need to create a measure for "Plan Gross Profit", which will calculate predictable margins using parameter "Product Cost":

🟮 Calculated Measure - Custom MDX			
Dim. Measures Sets Params Func.	Measure		
Xa A Xa B	Measure Name:	Plan Gross Profit	Format String: Standard 🔹
Not Cost	Non-empty Behavior:	- X	Solve Order: 10 🌲
	Folder:	My Calculations - X	Property:
	MDX:		Description >>
	[Measures].[Sales Ar	mount]-[Measures].[Total Product Cost]*(1+<< <u>PARAM.Product Cost>></u>)
	1		
	2		Charle Farmula
[]			
		Cancel < Ba	ack Next > Finish

Now let us create a report with the "Bikes`" subcategories on rows:



In columns it is December 2007:

🏮 Member Select	or: Date/Date.Cale	ndar 🗆 🗙			
Selection Filter	Sorting Options				
O Date Range	Iree				
🚽 Σ) 📃 All Periods					
🕞 🕨 📄 CY 20	5				
🕞 🔶 📃 CY 20	6				
🚽 🎱 📃 CY 20	7				
→ 🎱 📃 H1	CY 2007				
🚽 🎱 📃 H2	CY 2007				
► 🎱 🗔	Q3 CY 2007				
	Q4 CY 2007				
	October 2007				
November 2007					
► ○	 December 2007 				
> 🔍 📃 CY 20	8				
> 🎱 📃 CY 20	0				

Now let us add three measures to our row: "Sales Amount", "Gross Profit", "Plan Gross Profit". As a result, you will get the following report with parameter "Product Cost":

Columns 😫 🗕 +	Date/Date.Calendar 🔻	× 👰 🗙						
Rows 😫 🗕 + I	Rows 😫 🗖 + Product/Product Categories 🔻 🕵 🗙 Sales Amount 🔹 🗙 Gross Profit 🔹 🗙 Plan Gross Profit 🔹 🗙							
Rows / Columns Filter S	Sorting							
Context	Product/Product	Measures	▶ December 2					
	Mountain Bikes	Sales Amount	\$1,490,950.16					
		Gross Profit	\$365,378.21					
		Plan Gross Profit	\$365,378.21					
	Road Bikes	Sales Amount	\$1,357,042.74					
		Gross Profit	\$145,170.16					
Measures		Plan Gross Profit	\$145,170.16					
Sales Amount 🔹 🗙	Touring Bikes	Sales Amount	\$1,641,165.95					
Gross Profit 🔹 🗙	-	Gross Profit	\$121,509.33					
Plan Gross Profit 🔹 🗙		Plan Gross Profit	\$121,509.33					
Parameters C								
Product Cost								
0% 🗘								
Q								
Highlight								

Columns 😫 🗕 +	Date/Date.Calendar 🔻	× 👰 🗙			
Rows 📒 – +	Product/Product Catego	ories 🔻 🕵 🗙 Sales	s Amount 🔻 🗙 Gro	ss Profit 🔻 🗙 Plan Gross Profit 💌	×
Rows / Columns Filter S	Sorting				
Context	Product/Product	Measures	▹ December 2		
	Mountain Bikes	Sales Amount	\$1,490,950.16		
		Gross Profit	\$365,378.21		
		Plan Gross Profit	\$252,821.02		
	Road Bikes	Sales Amount	\$1,357,042.74		
		Gross Profit	\$145,170.16		
Measures		Plan Gross Profit	\$23,982.90		
Sales Amount 🔹 🗙	Touring Bikes	Sales Amount	\$1,641,165.95		
Gross Profit 🔹 🗙		Gross Profit	\$121,509.33		
Plan Gross Profit 🛛 🔻 🗙		Plan Gross Profit	(\$30,456.33)		
Parameters C					
Product Cost 10% ¢					
Highlight					

Let us increase "Product Cost" by 10%:

In this case the sales of Touring Bikes subcategory will go down.

6.5.5 Description of calculated measures, sets and parameters

Similarly to numeric parameters, it is possible to specify a description for the calculated measures and sets (of an arbitrary MDX type):

🏮 Calculated Measure - Custom MDX				
Dim. Measures Sets Params Func.	Measure			
Dim. Measures Sets Params Func. Image: Michael Jordan Image: Michael Jordan Image: Michael Jordan Image: Michael Jordan Image: KPI	Measure Measure Name: Non-empty Behavior: Folder: Description: Average weighted price for MDX:	Average 3 ✓ X My Calculations ✓ X	Format String: #,0.00 Solve Order: Property: Description <<	▼
			OK Car	ncel

After that, when pointing at a measure, you will see the following message:



6.6 Gauges

6.6.1 Creating Gauges

In order to create a gauge, it is necessary to click on the desired measure and select the visualization type as a gauge:

Columns	Internet Order Quantity 🔿 🗙					
Rows	=	+ D	ate/Da	te.Cale	endar 🔻	× 😥
Rows / Colu	mns Filter	S	orting			
Context			Date/ Calen	Date. dar	Interne Quantit	t Order /
			⊢ CY	2005		1,013
			⊢ CY	2006		2,677
			⊢ CY	2007		24,443
			⊦ CY	2008		32,265
Measures Internet Orde	er Qua💽	×				
Table	· · ·				1	
🔘 Text	0	Gaug	e)			
Туре						^
S Circle						•
	30 20 10	•	0 60 N 100	80 90		
						•
Show v	alue					
Goal						~
Scale						~
A	pply			(Cancel	

There are the following types of gauges:

Table	
O Text O Gauge	
Туре	^
S Circle	Ļ
S Circle	٦
Semicircle	
🛃 Left Quarter	
Night Quarter	
Three Quarter	
📟 Linear Horizontal	
Linear Vertical	
Traffic Lights	┛
•	F
Show value	
Goal	~
Scale	~
Apply Cancel	

The field "Goal" defines the measure which will be used as a target in data analysis. By default it is empty. If we don't select a measure in the "Goal" field, the analysis is done relatively to the fact measure (in our case this is "Internet Order Quantity").

Let us select the measure "Reseller Order Quantity" in the field "Goal":

Table		
◯ Te	xt 🥥 Gauge	
Туре		
Goal	•	
		-1
None	🕆 x	
	🍥 Discount Percentage	-
	🌍 Reseller Average Sales Amount	
	🌍 Reseller Average Unit Price	
	Reseller Extended Amount	
	Reseller Freight Cost	0
5	🚳 Reseller Gross Profit	
-	I Reseller Gross Profit Margin	
	Reseller Order Count	
	Reseller Order Quantity	
	Reseller Ratio to All Products	
	🏈 Reseller Ratio to Parent Product	U
	Reseller Sales Amount	
_	Reseller Standard Product Cost	
	Reseller Tax Amount	
	Reseller Total Product Cost	+
	OK Cancel	
E		

The next step will be to select the "Goal":

Table	
🔘 Text 💿 Gaug	je
Туре	~
Goal	^
Reseller Order Quantity	×
% of difference between fa	ect and goal
% of difference between fa Difference between fact an	act and goal d goal
Fact	5
Goal % of fact from goal	
Scare	
Apply	Cancel

Then select the way how the label will be rendered:

Table			
() Te	xt 🔘 Gauge	2	
Туре			~
Goal			^
Resel	ler Order Quantity		• X
Differ	ence between fact and	goal	•
VA	Less/more(more = goo	d)	·
VA VA	Less/more(more = goo Less/more(more = bad Lable "good" if more the Lable "bad" if more the	d)) Do	
Ч÷.	Lable "good" if less tha	n X	
1	Lable "bad" if less than None	х	
	Apply	(Cancel

And set the value of "X":

Table	
◯ Text	
Туре	~
Goal	^
Reseller Order Quantity	- x
Difference between fact and	goal 🔻
▼▲ Less/more(more = good) -
X: 0 🗘	
Scale	~
Analy	Cancel

By default the application offers its own scale, but the user can override the value of the minimum and maximum:

Table		
🔘 Text	Gaug	e
Туре		~
Goal		× ×
Scale		A
Autoscal	e for gauges	
Minimum:	0	Auto
Maximum:	50000	🗘 🗹 Auto
Ap	oply	Cancel

As a result of the selected parameters we will get the visualization with the icon on a gauge meaning the fact (Internet Order Quantity). In the center of the gauge there is a label which displays the difference between fact and the goal:



As we can see on the pictures, the goal were not met in the years of 2005 and 2006.

There is one more type of the gauges called "Traffic lights":

Columns 😫 Interne	et Order Quanti	ty 🔻 🗙
Rows 🗄 🗕 + 0	Date/Date.Cale	ndar 🔻 🗔 🗙
Rows / Columns Filter S	Sorting	
Context	Date/Date.	Internet Order
Geography X	Calendar	Quantity
	৮ CY 2005	1,013
All Geographies	+ CY 2006	2,677
Australia	+ CY 2007	24,443
🕨 🗹 Canada	+ CY 2008	32,265
France		
Germany		
United Kingdom		
United States		
Measures		
Internet Order Qua 🝷 🗙		

Select the traffic lights in the drop down:

Columns	Inter	net Order	Quanti	ty - x	
Rows	- +	Date/Da	te.Cale	ndar 🔻	🙀 🗙
Rows / Columns	Filter	Sorting			
Context		Date/ Calen	Date. dar	Interne Quantit	t Order y
All Geograp Austral	ohies ia	CY CY CY	2005 2006 2007		1,01 2,67 24,44
Canada Canada Canada France Germar United United United	a Ny Kingdom States	► CY	2008		32,26
Measures Internet Order Qu	a @ ×	•			
Table					
O Text	🧿 Ga	auge			
Туре					^
Traffic Ligh	nts				-
(
4					⊇ ⊧
Show value					
Goal					~
Apply			C	Cancel	

There are two kinds of visualizations for the traffic lights. In this type of the gauge the parameters are similar to the previous one: we can set the "Goal" if necessary. The difference is in the ranges which correspond to the color of the traffic lights.

Let us show the difference between the fact (Internet Order Quantity) and the goal (Reseller Order Quantity). The negative value of % of the difference will be displayed using red color, the difference from 0% till 100% will be displayed using yellow color, values of more than 100% will be displayed with green. Let us set up the following parameters:

Table	
🔘 Text 🛛 🔘 Gaug	e
Туре	~
Goal	~
Reseller Order Quantity	- x
% of difference between fa	ct and goal 🔹
More is good	.ess is good
Apply	Cancel



As a result, we will get the following report:

You can switch on or off displaying the values:

Table		
🔘 Text	Gauge	
Туре		^
Traffic Light	ts	•
↓ Show value Goal		*
Apply	Can	cel

Gauges can be built using two more ways: using the context menu and the toolbar. When the context menu is used, you can select the way of visualization:

Columns 🛅 Intern	et Order Quanti	ty - x	
Rows 🗄 🗕 +	Date/Date.Cale	ndar 🔻 🕵 🗙	
Rows / Columns Filter	Sorting		
Context	Date/Date. Calendar	Internet Order Quantity	
Geography X All Geographies Australia Canada France Germany United Kingdom United States	 ▶ CY 2005 ▶ CY 2006 ▶ CY 2007 ▶ CY 2008 	Drill by Drill by on New Page Drill Through Actions Search	*
		Visualization	► ✓ Text
Measures		🔮 Highlight	Gauge
Internet of der Quarter and		💱 Formatting	Circle
		😟 Export to NRP	Semicircle
		Export to Excel	属 Left Quarter
		📩 Export to PDF	🔈 Right Quarter
		🍃 Print	A Three Quarter
			🚍 Linear Horizontal
			Linear Vertical
			Traffic Lights

Here you can select the type of the gauge (circle, semicircle, etc.).

🟮 Business Analys	is Tool (Report Module) - http:	//localhost:8001/	
<u>Application</u>	<u>M</u> odule <u>R</u> eports Report	<u>P</u> age <u>V</u> iew <u>D</u> ata	Table Tools Help
6 🔘 🗎 🛛	2 10 9 2 2 2 2	🕹 💽 🎫 C	Swap Rows and Columns
	Sales (Version 1)		✓ Hide Empty Rows
Settings	Dimensions 🔍 🔯 🚠 🥻	Columns 📒 Inte	 Hide Empty Columns
	> 🔁 Sales	Rows 😫 💻	View Mode
1	Account		Group Measures
List	▶ 1⊗ Date	Rows / Columns Filter	Set Size of Columns/Rows
	 Delivery Date 	Context	Report Page Description
	Department	All Geographies	Show Visual Totals
Reports	 besunation curre temployee 	Australia	Show Summary Columns at Begin
	👻 📴 Geography	🕨 🗹 Canada	Show Summary Columns at End
	Geography	France	Show Summary Rows at Begin
	City	United Kingdom	Show Summary Rows at End
	Postal Code	United States	
	State-Province		Search Ctrl+F
	🔸 💓 Internet Sales Or	Measures	Visualization
	Organization	Internet Order Qua 🔻 🕽	Iighlight
	Product		💱 Formatting
	▶ 101 Reseller		Export to NRP
	🕨 😥 Reseller Sales Or		
	▶ 💓 Sales Summary O		Export to DDE
	► Tel Scenario T		
	Measures Q - +		Print

You can select the item "Visualization" from menu "Table":

The dialog window "Visualization settings" will open:

🟮 Visualization settings	_ ×
Measures	
My Calculations	
Michael Jordan	
🕨 💼 KPI	
Exchange Rates	
▶ 🛅 Finance	
🕨 🧰 Internet Sales	
Reseller Sales	
🕨 🧰 Sales Quota	
🕨 🧰 Sales Summary	
📅 Reseller Sales Amount парал	
🔀 Reseller Sales Amount перио	
Server F Min Date	
i ServerCalcDate	
	OK Cancel

In this window we have to select the fact measure, and then in the right part of the window select the type, goal and other parameters:

🏮 Visualization settings	_ x
Visualization settings Measures My Calculations Michael Jordan Michael Jordan Finance Finance Internet Sales Reseller Sales Reseller Sales Reseller Sales Reseller Sales Reseller Average Sales A Reseller Average Unit Price Reseller Freight Cost Reseller Gross Profit Reseller Order Quantity Reseller Ratio to All Produ Reseller Sales Amount Reseller Total Product Cost Reseller Total Product Cost Sales Quota Sales Summary Reseller Sales Amount napan Server F Min Date ServerCalcDate	Text ype Circle Image: Circle
	OK Cancel

6.6.2 Export of Gauges

The gauges can be exported to NRP, PDF and Excel. While exporting to Excel the gauges are not exported: the cells of Excel table will contain the numbers instead of the gauges.

6.7 Other Report Page Types

Apart from the pages of the table/chart form, you have the possibility to add to your report two more types of pages: Treemap, Scatter-diagram, Map and Dashboard. Those two types of pages allow you to perform advanced visual data analysis. Let's review those two types of pages in more details.

6.8 Treemap

To add a Treemap page to your report press the "Add new page" button on the toolbar:



In the appeared dialog select the "Treemap" page type and fill in the name of a new page:



Press «OK» and an empty treemap-page will be created.

6.8.1 Designers

Business Analysis Tool (Report Module) - http://localhost:8001/ _ **D** X Application Module Reports Report Page View Data Treemap T<u>o</u>ols <u>H</u>elp 🖉 🗢 ⊅ 🖄 🕲 🔢 🖬 🚱 🔂 😭 🖓 👘 🖉 🔘 😓 Sales (Version 1) × Settings nsions 🔍 🔯 🚠 Levels 💓 Geography Grouping 10 Internet Sales Or... 🥑 Organization Context List Product Promotion 🛒 Reseller Reseller Sales Or... Reports 💓 Sales Summary O... 1 Scenario q leasures 🗎 Exchange Rates Finance Internet Sales Reseller Sales Drop dimension, hierarchy or level here 📋 Sales Quota 📋 Sales Summary Size Decollor Color Am ۹ -+ Sets Color 🔂 Calculated Sets Sets Parameters q, Text X A 🔏 в 🍇 Product Cost ABC ABC 🤢 gauge 🌇 TreeMap 1 Scatter 💱 Search... + Login: john Server: http://localhost:8001/ Items: 0 Exec. Time: 00.0

We can divide the treemap-page into a number of zones:

Dimensions and measures are marked in red; they can be dragged into designers that are marked in blue and green.

The designers marked in blue are those where you can drag dimension members. At the top you can see "Levels" designer, you can drag the levels there and select the elements you would like to see in the diagram. Below it at the left you can see the Context designer, it works just the same way it did in the table page – it bounds the data shown in the report. You can drag hierarchies there.

The designers where you can drag the measures are marked in green. There are three of them:

- Size determines the measure from which the areas of rectangles on the diagram will depend;
- Color determines the measure from which the colors of rectangles will depend;
- Text determines the measures the values of which will be written inside the rectangles in the diagram.

6.8.2 Building a Report

To understand how the treemap page works and what it displays, let's build an example report.

Into the Levels designer drag the levels "Product.Category" and "Product.Subcategory". You will get a diagram constructed of the same number of rectangles as the number of elements in the "Subcategory" level:

Dimensions 🭳 💆 🏦 🏄	Levels – Cat	egory 🔻 🕵 🗙	- + Subca	tegory 🔻 🔞 🔅	×		
History	Grouping	2	-	2			
▶ D Stocking							
Product Categor	Context	Accessories	Accessories	Clothing	Clothing	Accessories	Accessories
3≥ (All)		Cleaners	Fenders	Shorts	SOCKS	Heimets	Bottles an
- Category							
Subcategory							
A Product		Accessories	Bikes	Bikes	Clothing	Clothing	Clothing
Product Model Li		Panniers	Mountain	Road Bikes	Jerseys	Tights	Vests
Product							
Category							
Large Photo		Accessories	Clothing	Components	Components	Components	Components
Model Name		Bike Racks	Bib-Shorts	Cranksets	Headsets	Mountain F	Derailleurs
Measures 🔍 – +							
Exchange Rates			Clathing	Compone IC	Components	Accessories	Accessories
▶ inance		- Accessories Bike Stands	Caps	Handlebars V	Vheels	Lights	Locks
Internet Sales	Circo.	Dike Stands					
Reseller Sales	bize						
Sales Quota				/	Accessori C	omponents (Components
Sales Summary	Color	Bikes	Accessories	Compone	fires and R	oad Frames F	Pedals
Decollor Salas Amou		Touring Bi	Pumps	Doctorin D			
Sets Q – +							
Calculated Sets					C	omponents	Compo
Sets	Text	Clothing	Compone	Compone	Accessori Fo	orks	Touring
		Gloves	Chains	Brakes	lydratio		
Parameters Q					C	omponents	
X A					5	addies	
Х в							
X Product Cost	ABC Rarameter	🤹 gauge	TreeMap 1	Scatter 3		∢ → Sea	rch 🔻

Levels - Category • 🕵 X - + Subcategory • 🕵 X								
Context	Components Accessories							
	Forks	Headsets	Mountain F	Bike Racks	Bike Stan	Bottles a		
	Pedals	Road Frames	Saddles	Cleaners	Fenders	Helmets		
	Touring Fram	Bottom Br	Brakes	Hydration	Locks	Panniers		
	Wheels	Chains	Deraill	Links	Durana	Timesed		
Size	Handlebars	Cranksets		Lignis	Pumps	nres and		
Color								
	Clothing	1 -		1	Bikes			
Text	Bib-Shorts	Gloves	Shorts	Tights	Mountai	Road Bi		
	Caps	Jerseys	Socks	Vests	Touring I	Bikes		

Move the grouping pointer to the right to group up the elements by product categories:

As you can see all the rectangles are grouped by categories. But all the rectangles still have the same area because we did not set the measure determining the area of elements. Drag the "Reseller Gross Profit" measure into the "Size" designer:



Now the area of each rectangle became proportional to the corresponding value of "Reseller Gross Profit" measure for the element. Negative values are hatched.

Levels – Categ	jory ▼ 😡 🗙 🔸 Subcategory ▼	Q X				
Context	Bikes Mountain Bikes \$1,419,292.04 5.36%	Touring Bikes (\$1,237,594,98) -11,84%	Components Mountain Frames \$487,845.26 10.35%			
			Wheels Cran Han \$175,340.35 \$52, \$44. 25.82% 25.8 25 Pedals Fo Road Frames \$38,25 \$2 \$138,871.18 3.61% \$38			
Size Reseller Gross Profit			Clothing Acces Jerseys Shorts Helme	ts		
Reseller Gross Profit Margin > Text Reseller Gross Profit > Reseller Gross Profit Margin >	<pre>Road Bikes (\$1,172,396,95) -3.99% </pre>		Vests Tights Bike R \$77,127.55 \$60,714 35.59° 34.46% Bib-S \$ Gloves \$51,2 \$ \$61,489,62 \$0,74% \$	% 		

Drag the measure "Reseller Gross Profit Margin" into the "Color" designer:

The two colored gradient highlighting will be added, that will show us how large (more green color) or small (closer to red) is the profit from selling the products of each category.

You can change the highlight rule by pressing the button that is showing the gradient:

Size	
Reseller Gross Profit	x
Color	
Reseller Gross Profit Margin	x
Text	
Reseller Gross Profit	x
Reseller Gross Profit Margin	x

The window for setting up the gradient will appear, exactly the same as you could see when setting up the gradient for highlighting in the table:

🏮 Color S	etti	ngs										x
One-colo	or			0 T	wo-co	lor		(🔘 Ra	inbow		
	I	I	ı	I	I	Ó	I	ı	1	I	I	
Steps										Show	v more 3	>>>
									ОК		Cano	el

And finally, using "Context" designer, let's bound the data to show only the sales in the territory of "United States". For that purpose, add the "Geography" hierarchy into the context and select only the element "United States" there:

🏮 Membe	r Selector: Geography	
Selection	Filter Options	
- Σ 🗌 A	ll Geographies	
F 🔍 🗌	Australia	
F 🔍 🗌	Canada	
F 🔍 🗌	France	
F 🔍 🗌	Germany	
F 🔍 🗌	United Kingdom	
> 🎱 🔽	United States	

Thus we created the report, showing the profit from selling products of different categories in "United States". Every product subcategory is shown with the rectangle on the diagram. The area of each rectangle is proportional to the value of gross profit from selling the products of corresponding subcategories. And the color of a rectangle depends on the value of that profit in percents. The closer color is to green the bigger is the value, while closer to red, means the value is smaller:

Levels Catego Grouping	ory 🔻 🕵 🗙 🕂 Subcategory 🔻	X		
Context	Bikes		Components	
Geography X	Mountain Bikes	Road Bikes	Mountain Frames	
 All Geographies Australia Canada France Germany United Kingdom 	\$960,464.74 5.00%	(\$789,635.70) -3.80%	\$331,877.62 10.58%	
United States			Wheels	Han Cra
			\$123,152.39 25.91%	\$28 \$27 25 Pedals Fo
			Road Frames	\$23,7 \$1
	2		\$95,220.55	He B Sa
Size			3.79%	De B0 10
Reseller Gross Profit 🛛 🗙			Clothing	Acces
Color	1		Shorts Jersey	Helm
Reseller Gross Profit Margin 🗙			\$66,396.56	\$49,4
	Touring Bikes		31.88% -20.81	32.91
Text	-11.72%		Tights Glo	Bib Bike
Reseller Gross Profit 🛛 🗙			\$39,684 \$36	\$3 \$33,6
Reseller Gross Profit Margin 🛛 🗙			Vests 28	30 35.72
			\$37,280	H L P

6.8.3 Navigation on the Page

You can perform the navigation on the treemap-page and change the page using the options from context menu:

Levels - Catego Grouping	ry ▼ 🕵 🗙 🕂 + Subcategory ▼ 🕵 🗙			
Context Geography × All Geographies Australia Canada	Bikes Mountain Bikes \$960,464.74 5.00%	Road Bikes (\$789,635.70) -3.80%	Components Drill by Drill by on New Page Drill Up	nes
 France Germany United Kingdom Vnited States 			Drill Down Hide Item Keep Only This Hide Siblings	Han Cra \$28 \$27 25 25
Size		•	Show Siblings Drill Through Actions	Pedals Fo \$23,7 \$1 He B Sa
Reseller Gross Profit × Color Reseller Gross Profit Margin ×	Touring Bikes	₹	Highlight Formatting Export to NRP	Acces 1756/135 \$49,4 10.81% 32.91
Text Reseller Gross Profit X Reseller Gross Profit Margin X	(\$567,078.99) -11.72%	2 2 2 3 2 3 2 3 3 3 3 3 3 3 3 3 3 3 3 3	Export to PDF Export to PNG Print	lo Bib Bike 36 \$3 \$33,6 3 30 <u>35.72</u> H L P

You should be already familiar with all these options from the description of the page of Table/Chart type. They do exactly the same thing as the options of the context menu called for the rows or columns headers in the table.
For example let's use some of the available options for navigation. Let's hide all elements that are not contained in the "Bikes" product group. To do that click the right mouse button on the "Bikes" group header and select the option "Hide Siblings":



You will get the following report:

Levels -+ Catego Grouping	xry ▼ 🕵 🗙 🕂 Subcategory ▼ 🕵 🗙	
Context	Bikes	
Geography X All Geographies Australia Canada France Germany	\$960,464.74 \$.00%	(\$567,078,99) -11.72%
United States		
Size Reseller Gross Profit × Color Reseller Gross Profit Margin ×	(\$789,635.70) -3.80%	
Text Reseller Gross Profit X Reseller Gross Profit Margin X		

And now let's find out which bikes from the "Mountain Bikes" group bring more and which bring less profit. To do that, you have to select all elements from the lower level under the "Mountain Bikes" element. To do exactly that action "Drill Down" operation is available:

Levels - + Categor	ry 🔻 🕵 🗙 — 🕂 Subcategory 👻 🕵	×	
Grouping			
Context	Bikes		
Geography X	Mountain Bikes \$960-464-74	Drill by	Touring Bikes
All Geographies Australia	5.00%	Drill by on New Page 🕨	-11.72%
Canada		Drill Up	
France		Drill Down .	
Germany United Kingdom		Hide Item	
 United States 		Keen Only This	
		Hide Siblings	
		Show Siblings	
		Dill Through	
		Drill Inrougn P	
Size	Road Bikes	Actions	
Reseller Gross Profit X	-3.80%	ダ Highlight	
Color		😚 Formatting	
Reseller Gross Profit Margin 🗙		Export to NRP	
		Export to PDF	
Text		Export to PNG	
Reseller Gross Profit 🛛 🗙		Drint	
Reseller Gross Profit Margin 🛛 🗙			

Here is the expected result:

Levels - + Catego Grouping	ry 🔻 🗔 🗙 – Product 🔹 (x			
Context	Bikes Mauntain 200 Black 20	Mauntain 200 Cilua	Maustain 200 Bla	Mauntain 200 Cil	Mauntain 200 Bl
Geography X All Geographies Australia Canada France Germany United Kingdom Vuited States	Mountain-200 Black, 38 \$99,867.33 9.98% Mountain-200 Black, 42 \$88,247.07 = 9.68%	Mountain-200 Silve \$79,991.82 9.89% Mountain-200 Blac \$79,109.69 8.48%	Mountain-200 Bla \$68,001.40 9.86% -Mountain-200 Black \$58,988.02 8.76%	Mountain-200 Sil. \$66,818.57 8.67% Mountain Moi \$27,061.36 \$26 7.53% 7.3	Mountain-200 B \$65,830.53 8.17% untain 5,360 4% 7.65%
Size Size Reseller Gross Profit X Color Reseller Gross Profit Margin Text Reseller Gross Profit X Reseller Gross Profit X Reseller Gross Profit Margin X	= Mountain-200 Silver, 42 \$81,402.28 9.98%	Mountain-200 Silve \$78,426.41 9.88%	Mountain-200 Silver \$54,909.36 8.81% Mountain-200 Silver \$51,139.90 8.27%	Mountain-3 M \$22,888.64 7.42% Mount Mou (\$16, \$9,1 -1.83% 9.08 Mount \$13,7 \$13,7 \$7,5 0,96	Mountain Mountai (19,062 (\$17,22 .97% -1.88% Mou Mou \$7,4 \$7,1 \$7,4 \$7,1 \$6,0 \$6,0 Mou Mou \$6,0 \$6,0 \$6,0 \$5,5 \$7,4 \$7,1 \$7,4 \$7,1 \$7,4 \$7,1 \$7,4 \$7,1 \$8,79 9,0.8 \$9,0.8 \$0 Mou Mou \$5,5 \$\$4 \$1,0

We could also perform a "Drill Down" not only for the single element "Mountain Bikes", but for all the selected elements together. To do that you have to press the plus button near the element corresponding to "Subcategory" level in the "Levels" designer:

Levels	– + Category 🔻 💽 🗙 🚽 + Subcategory 💌 💽 🗙
Grouping	

Then you would get the diagram, showing all the products under the selected subcategories, all bikes in our case:

Levels - + Catego	ry 🔻 🗔 🗙 – Pro	oduct 👻 🔯 🗙							
Grouping	Û								
Context	Bikes								
Geography X	Touring-1000	Road-650 Red.	Mountain-20	0 Mour	ntain-2	. Mountai	n-2 Mo	untain-2	Touring-10.
👻 📃 All Geographies	(\$114,927,43)	(\$83,771.33)	\$78,426.41	\$68,	001.40	\$66,818	.57 \$6	5,830.53	(\$62,836
Australia	223.73%	-20.4/%	9.88%	9.86	7/0	8.07%	8.1	. / %	-20,02%
Canada									
France		Road-350-WX	Mountain	Touring	-10R	oad-250	Road-2	5Road-3	5 Touring
Germany		(462 758 40)	\$58,988.02	(\$36,72	2.5. (\$	34,912	(\$29,66	(\$29,05	3. (\$27,81
United Kingdom	Touring-1000	-9.31%	8.76%	-5,49%		.23%	-3.85%	-6,23%	-5.39%
United States	(\$100,528.36)			Mount	Road	Road	Moun	Touri. To	ооп., Тоыл.,
	-18.89%		Mountain-	\$27,0	(\$24,	. (\$24,	\$22,8	(\$22,(\$	22,(\$21
		Mountain-200	¢54 909 36	Mount	Road-	Road-	Road-	Road-OM	
		\$81,402.28	8.81%	#0011	(\$21.	(\$18.	(\$18.	(\$17. (5	07. (\$16.
		9.98%		7.34%	-6.319	Tour	nad Mr	Tour	Roa Roa
Size	Mountain-200		Road-350-	Mount	Road-	(516 (\$14 \$1	3. (\$1)	(\$1 (\$1
Deceller Cross Profit X	\$99,867.33	Mauratain 200	(\$52.357	\$25,5	(\$19,.	<u>-15.0</u>	o. Roa	Tou Ro	RouRou
	9.98%	Mountain-200	-6.81%	7.65%	Road-	Tour. (\$	(49 (48	148 (4
Color		9.89%		Road	(\$19,.	(\$16.	<u>300</u> M	М М]	M M To
Reseller Gross Profit Margin 🗙			Mountain	(\$25,0.	Road-	Mou	200 (\$00)	R. T. R	T Mo R.
	Mountain-200	_	\$51,139.90	Boad-	(\$19,	(\$16.	¢ 47	AS R M	Mo R. Mo
Text	#00111a11-200	Mountain-200	8.27%	1674 8	Road-	Roa	💥 М	R	ale le le le
Reseller Gross Profit X	9.68%	\$79,109.69		-5.43%	(\$19,	(\$16. 🗖	\$7 000 \$7	M 200	RotoR R
Deceller Cross Profit Margin		8.48%	Road-250	Tourin	Moun	-6.0 Roa	\$	M	RoM RolR
			(\$38,243,	(\$24,7	(\$19	(\$15	10 R	R M	
			-6.0/%	-18 400	1.67	86585	9 候		

6.8.4 Diagram Export

The treemap-diagram can be exported to NRP, PDF and PNG. To do that, select the required option from the context menu or from the Treemap main menu:

Levels – Catego	ory 🔻 🕵 🗙 🛛 🕂 Subcatego	ry 🔻	x 🔊			
Grouping	0					
Context	Bikes			Components		
	Mountain Bikes		Touring Bikes	Mountain Frames	i i	
	\$1,419,292.04 5.36%		Drill by	\$487,845.26 10.35%		
			Drill by on New Page 🔸			
			Drill Up			
			Drill Down			
			Hide Item	Wheels	Cran	Han
			Keep Only This	25.82%	25.8	\$44
			Hide Siblings		Peda	als Fo
	E Contraction of the second se		Show Siblings	Road Frames	\$38,	25 \$2
	2	10000	D 11 TI I	\$138,871.18 3.61%	Der	.⊓⊃ -¢1 ¢1
Size		1	Drill Through •	5.01%	Bra	Bo 🙍
Reseller Gross Profit 🛛 🗙			Actions •	Clothing	rte	Acces
Color		2	Highlight	(\$132.699 \$11)	1.29	\$85.3
Reseller Gross Profit Margin 🛛 🗙	Road Bikes	8	Formatting	-22.91% 32.5	2%	32.99%
	(\$1,172,396.95) -3.99%	2	Export to NRP			Rike D
Text		7	Export to PDF	Vests Tight	s	\$70.3
Reseller Gross Profit 🛛 🗙		22	Export to PNG	\$77,127.55 \$60, 34.46% <u>30.0</u>	714 8%	35.59%
Reseller Gross Profit Margin 🛛 🗙		2	Print	Gloves Bib-S	S	Hy L P
			*****	\$61,489.62 \$51, 30.7	4%	\$2 C B

After that you have to select the place where to store the file and the name of that file.

6.9 Scatter-diagram

To add a scatter diagram to your report press the "Add new page" button on the toolbar:



In the appeared dialog select the Scatter-diagram page type and fill in the name of a new page:

🏮 Report Page				x
Name: * Scatter 1				
Table/Chart	Treeman	Cratter diagram	Man	Dashboard
				OK Cancel

Press «OK» and an empty scatter-diagram will appear.

6.9.1 Designers

Scatter-diagram has the following structure:

Dimensions 🔍 🙋 🚠 🍹		- +
 ▶ 100 Employee ▲ ★ 100 Geography 		1
	Structure Selection 2	
Measures Q - +	Details 3	Drag any level into details and measures on the axes
Reseller Gros U I Reseller Orde Reseller Orde Pageller Batte Sets Q - +	Color 4	
Calculated Sets	_Size 5	
Parameters Q	7	
X A	Reverse	6
X Product Cost	ineasure 4 interasure 5	🛃 ABC 🛛 🛄 Parameter 🔄 gauge 🛃 TreeMap 1 🛃 Scatter 1 🔛 Scatt 🕢 🕨 Search 🔻

At the left side dimensions and measures are marked in red. The designers are marked in blue.

Here is the set of designers available in the scatter-diagram:

- 1. Pages designer. Here you can drop the selection of elements from one level. Every page of the diagram corresponds to one element.
- 2. Context designer. It does the same thing as the corresponding designer in the table and treemap pages, bounds the data shown in the report.
- 3. Details designer. Here you can drop the elements that will be shown as circles in the diagram.
- 4. Color designer. Determines the color of the circles in the diagram.
- 5. Size designer. Determines the sizes of the circles in the diagram.
- 6. X axis designer. Determines the measure, the values of which will be put on the X axis.
- 7. Y axis designer. Determines the measure, the values of which will be put on the Y axis.

Thus on the scatter-diagram you can simultaneously track the changes of four measures: on both axes, by color and size.

6.9.2 Building the Report

Let's build the report that will show the values of "Reseller Sales Amount" and "Reseller Gross Profit Margin" for product subcategories sold in Australia. To do that, drop the "Reseller Sales Amount" measure on X axis, and "Reseller Gross Profit Margin" – on Y axis. To the "Details" designer drag the "Subcategory" level from the" Product Categories" hierarchy:



🟮 Member Selector: Geography Selection Filter Options - Σ 📃 All Geographies 🕨 🔍 🗸 Australia Canada Þ France Germany United Kingdom United States Show Search >> Cancel OK

Drop the "Geography" hierarchy into the context and select the element Australia there:



Every circle on the diagram corresponds to the element from the selection made in Details designer, in our case it corresponds to one product subcategory. If you drag the mouse over the circle, you'll see the hint, showing, which element this circle corresponds to. On the axes you can see the values corresponding to the selected element.

You will get the following report:

6.9.3 Color Designer

Using the Color designer you can determine on what colors of the circles on the diagram will be dependent.

You can drop into the Color designer the level, used in details or one of its parent levels. For example, drop the "Product. Category" level into the Color designer and the products from different categories will be colored with different colors:



Also you can drop a measure into the Color designer, and then the color of the circle will be dependent on the value of that measure for the corresponding element. Remove the level "Product.Category" from "Color" designer and add the measure "Reseller Gross Profit Margin" there. You will see how the color of the circles changes from the bottom to the top corresponding to the colors of three-colored rainbow. You can change the gradient type by pressing the corresponding button, the same way you did it in the treemap-diagram or in the table:



6.9.4 Size Designer

Using the "Size" designer you can set the measure, the values of which for every element will determine the size of the corresponding circle.

Drag the "Reseller Freight Cost" measure into the "Size" designer:



As you can see, the sizes of different circles became consistent with the values of freight cost.

You can adjust the sizes of the circles on the diagram by setting the range of sizes in the "Size" designer. The smallest and the largest circle sizes can be set using the special control:



Also you can make the dependency of the size from the measure value reversed by checking the "Reverse" option:



6.9.5 Logarithmic Axes

Often you can end up with the case when there is a set of elements on the diagram with very small values on one of the axes in comparison with the values of other elements. In such case the circles corresponding to those elements are situated very closely to each other and drown one over another, and that fact makes the analysis of such diagram very complicated. Here is a great example of such case:



To be able to see the relative positions of circles situated closely to the minimal coordinate you can change the corresponding axis type to logarithmic. Then the coordinates on that axis will be changing not linearly but exponentially.



In the example report turn on the logarithmic mode on the "X" axis:

Now you can clearly see different elements. Pay attention to the scale on the "X" axis, the values are changing exponentially but not linearly, as they used to.

6.9.6 Pages Designer

In the upper part of the report page you can see the Pages designer. You can drop there the selection of elements from some level and analyze the data page by page. Every page corresponds to one element from the selection and shows the data bounded by that element.

Add the "Month" level from "Date.Calendar" hierarchy to the "Pages" designer. Then open the member selector and select the following set of elements:





Press «OK» and you will see the following diagram:

Now press "Play" button and you will see how the circles began to move and one page is changing another:

L		- + 1	Month	- + July 2007								•
T	< >	0-	1	1		1	1	1	1	1	1	1

To stop the pages changing press the "Stop" button:

J 🔳 ,	- +	Month			• 🔯 X	- + Oct	ober 2007			•
< >		1		0	1		1	1	 1	

You can adjust the speed of changing the pages:

- + Month						▼ 🗔 🗙 - + July 2007 - ▼						
	1	1	1	1		1	1	1				

Also you can change the pages manually, using next/previous buttons:

L	- + 1	1onth			• 🗔 X	- + July	y 2007	 	•
Y									
	Ŷ		1						

or selecting the page from the list:

- + Month - 😡 🗙	- + July 2007 -			
	July 2007 August 2007			
Structure Selection	September 2007 October 2007			
Context	November 2007 by December 2007			
→ All Geogra A 0	January 2008			
Australia				
Details R				

or using the scroll bar:

6		— + Mo	nth			- 🗔 x	- + Oct	ober 2007		•
T	< >			••	K					

6.9.7 Selection on Scatter-diagram

Next to the "Structure" tab, where the designers are, you can find the "Selection" tab:





On this tab you can select some elements or groups of elements in the diagram. For example, select "Bikes" category:

As you can see, the circles from that category are drawn brightly. At the same time, the other elements are half transparent. The level of transparency of other elements can be adjusted using a special scroll bar:



Before selecting the groups you can change the grouping level from the list:



You also have the possibility to select separate elements (circles) at the diagram. You can do that by simply clicking your mouse on the circle. Also you can select the elements from the list.

Select the Bikes group and under the list of all elements check the "From selected groups" box, so you could see only the elements from selected groups (only bikes):





Now among the elements from the "Bikes" category select the element "Touring Bikes". You will see the hint appearing over that element:

You can turn off the hints by unselecting the option "Show hints".



After you selected the element, press "Play" button. You will see the pages changing, but the trail is left after the selected element:

You can clear the trails using the "Remove" trail button:



Or you can turn off the drawing of trails at all by unchecking the "Trail" option:

From selected groups	eseller Gr	
Trail Remove trail	Re	0 Reseller



This way you can select multiple elements and follow their movements on the diagram during the changing of pages:

6.9.8 Context Menu of the Diagram

If you press the right mouse button on any of the circles in the scatter-diagram then you will see the context menu with a set of operations, which can be used for page navigation, changing the page, printing or exporting:



The set of operations in the context menu is the same as in a treemap-diagram or table headers menus. Therefore there is no need to describe them once again. If you'll have any questions, please refer to the descriptions of the corresponding operations in the chapters dedicated to table and treemap-diagram.

6.10 Map

To add a map to your report press the "Add new page" button on the toolbar:



In the appeared dialog select the Map page type and fill in the name of a new page:

🏮 Report Page				x
Name: * Map 1				
Page Type:		P r 2008		
Table/Chart	Treemap	Scatter-diagram	Мар	Dashboard
			ОК	Cancel

Press «OK» and an empty map will appear.

6.10.1 Designers

Map has the following structure:



At the left side dimensions and measures are marked in red. The designers are marked in blue.

Here is the set of designers available in the map:

- 1. Context designer. It does the same thing as the corresponding designer in the table and treemap pages, bounds the data shown in the report.
- 2. Items designer. Here you can drop the hierarchy of geography.
- 3. Latitude/Longitude designer. Latitude / Longitude measures, which are specified on a cube and correspond to the geographical coordinates of the selected geography hierarchy.
- 4. Color designer. Determines the color of the circles in the map.
- 5. Size designer. Determines the sizes of the circles in the map.

6.10.2 Building the Report

Let's build the report that will show those cities of the United Kingdom, where the value of the Reseller Sales Amount measure for all products in 2018 is more than 100 thousand. To do that, drop the "Geography / Country" to the context designer and select "United Kingdom", then drag in the context designer "Date / Date.Calendar Year" and select 2018. In the item designer, drop the "City". To the "Latitude/Llongitude" drag "Latitude" and "Longitude " measures, "Reseller Sales Amount" measure drop in the color designer:



Now let's create a filter that displays only cities on the map, for which the value of the "Reseller Sales Amount" is more than 100 thousand. To do this, add the following filter in the "City" hierarchy:



After that you will see the following:



6.10.3 Map types

There are two types of map:

✓ Bubble

We have built this type of maps with you earlier:





Let's display the "Reseller Order Count" measure for product categories for the map displayed above. To do this, drag the "Category" hierarchy into the "Items" designer, and drop the "Reseller Order Count" measure into the "Size" designer:



6.10.4 Color Designer

Using the Color designer for Bubble type maps you can use the gradient to set the color of the circles on the map



You can change the highlight rule by pressing the button that is showing the gradient:

Items	+
– City 🔻 🤅	x
111111	
Latitude	
Latitude	x
Longitude	
Longitude	x
Color	-
Reseller Sales Amount	x
Size	
5120	*
\bigcirc	
Reverse	

The window for setting up the gradient will appear, exactly the same as you could see when setting up the gradient for highlighting in the table:

🏮 Color Settings		x
One-color	C Two-color	Rainbow
Number of colors Reversed Steps	3 🜲	Show more >>>
		OK Cancel
6.10.5 Size Designer

Using the "Size" designer you can set the measure, the values of which for every element will determine the size of the corresponding circle.

Let's go for the Bubble card, which we created earlier drag the "Reseller Order Count" measure into the "Size" designer:



You can adjust the sizes of the circles on the diagram by setting the range of sizes in the "Size" designer. The smallest and the largest circle sizes can be set using the special control:

Size	+
Reseller Order Count	×
Revince	

Also you can make the dependency of the size from the measure value reversed by checking the "Reverse" option:



6.10.6 Labels

To display the labels of elements on the map, click on the "Show labels" button:



York Leeds Bikes Preston Components Wakefield Clothing Sheffield Manchester Accessories Liverpool Lincoln Bangor St Asaph Chester Nottingham Stoke-on-

Pie maps allow you to display the values of labels of one or more elements on the map. To display the values of several labels, use the Ctrl + mouse combination:



Brighton

6.10.7 Legend

For Pie maps, you can to display or not to display a legend:



6.10.8 Kinds for map

The following kinds for map are available to you:



✓ Basic



✓ Cyclemap



✓ Hot



✓ GrayScale



✓ Transport



6.10.9 Context Menu of the Map

If you press the right mouse button on any of the circles in the map then you will see the context menu with a set of operations, which can be used for page navigation, changing the page, printing or exporting:



The set of operations in the context menu is the same as in a treemap-diagram or table headers menus. Therefore there is no need to describe them once again. If you'll have any questions, please refer to the descriptions of the corresponding operations in the chapters dedicated to table and treemap-diagram.

6.11 Dashboard

Dashboard is a kind of a page which allows to display several components: tables, treemaps, scatter diagrams, maps. In order to add a dashboard to your report, press "Add new page" on your toolbar:



In the window below select the type "Dashboard" and enter its name:



Press «OK» and you will have an empty dashboard on your screen.

6.11.1 Designers

The structure of the dashboard is as following:



On the left side you can see dimensions and measures (marked with red rectangle). The editors are shown with blue rectangle:

- 1. Context editor does the same thing that the similar designer in the table, treemap. scatter diagram and map: it sets the context for all components of the dashboard.
- 2. Page editor: allows to set up the contents of the dashboard.

6.11.2 Building a Dashboard

There are two ways of how to build the dashboard:

1. You can add new elements to it

Add	
Table/Chart	
Treemap 😼	
Scatter-diagram Table/Chart	
S Map	
Existing Page	
🔛 Parameter 🛛 🛄 gauge 🦷 😪 Карта 1 🛛 🌄 TreeMap 1 🛛 👯 Scatter 1	🔊 dashboard

Context	Table/Chart
Add	
🔹 Table/Chart	
Treemap	
Scatter-diagram	
Map	
Hage Existing Page	
Parameter 🔯 gauge	Карта 1 TreeMap 1 Scatter 1 Oddshboard Image: Search Image: Se

Select the necessary type of the object anf drag&drop to the dashboard area:

As a result you will get a familiar window where the table is already selected:



After you press «OK» you will have the table designer opened. Construct the following

report:

🏮 Dashboard Designer - dash	hboard (Table 1)	
Report <u>V</u> iew <u>D</u> ata	Table	
	照 🖸 🗞 🕸 % 🚥 蜿 🕺 100% 🔻 🌐 Table 🔹 🎼 🥘 画〕	
Dimensions Q 🙋 🚠 🥻	Columns 🗮 - + Date/Date.Calendar 🔻 😡 🗙	
Employee	Rows 😑 - + Product/Product Categories - 😡 🗙	
Geography	Rows / Columns Filter Sorting	
Internet Sales Ord Organization	Context Product/Prod → CY 2005 → CY 2006 → CY 2007 → CY 2008 ▲ cressories ↓ 505 80 ↓ 53 318 40 ↓ 57 413 36 ↓ 64 044 88	
Product	► Bikes \$184,883.75 \$498,900.48 \$638,794.59 \$334,981.23	
 Promotion Image: Image Promotion Image: Image Promotion 	► Clothing \$859.41 \$12,139.72 \$21,796.70 \$9,650.38 ► Components \$15,386.88 \$90,252.35 \$137,062.55 \$52,275.37	
Reseller Sales Orde		
Sales Summary Ord	Measures	
Measures Q - +	Reseller Freight Cost 🔻 🗙	
My Calculations Michael Jordan KPI Exchange Rates Finance Finance Finance Sales Quota Sales Summary Reseller Sales Amo Server F Min Date Sets Calculated Se		
X A		
Product Cost	Highlight	
Sales Version: 1 Rows: 4	Columns: 4 Exec. Time: 00.1	

Save and close it:

🏮 Dashboard Designer - dashl	ooard (Table 1)			
Report <u>V</u> iew <u>D</u> ata]	able			
🛛 😋 💭 💾 😓 🖪 🗷	S 🕲 🛠 🕸 🕅	€.0 .00 .00 →.0 100%	6 🔻 🖶 Tab	le
Dimensions 🤉 🖄 🕺	Columns 🗮 🗕 + Da	ate/Date.Calendar	• • 🔯 x	
 Destination Currency Employee 	Rows 🖹 - + Pr	oduct/Product Cat	tegories 🔻 🕵 🗙	
Geography	Rows / Columns Filter So	orting		
Internet Sales Ord Organization	Context	Product/Prod	+ CY 2005	⊢ CY 2
Product		 Bikes 	\$184.883.75	ب \$49

🏮 Business Analy	/sis Tool (Report Module) - http://localhost:8001/
Application	Module Reports Report Page View Data Dashboard Tools Help
3 🗇 💾	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Sales (Version 1)
Settings	Dimensions Q 12 A Context Table 1
	Product/Prod + CY 2005 + CY 2006 + CY 2007 + CY 2008
	► Accessories \$505.89 \$2,318.40 \$7,413.36 \$4,044.88
	▶ Bikes \$184,883.75 \$498,900.48 \$638,794.59 \$334,981.23
List	→ Ulothing \$859.41 \$12,139.72 \$21,795.70 \$9,550.38 → Ø Date \$15,386,88 \$40,027,35 \$457,057,37
	▶ 10 Department
Reports	[1] Destination Currency
	▶ 💓 Employee
	▶ iể Geography ▼
	Measures Q - +
	My Calculations
	1 > 🔂 Michael Jordan
	→ 🙀 KPI
	Exchange Rates
	▶ C Finance
	Internet Sales
	Reseller Sales
	Sales Quota
	Sales Summary
	Reseler Sales Amo
	A Reserver Sales Amo
	Sets Q - +
	Calculated Sets
	Sets Treman
	Scatter-diagram
	Parameters Q Q Map
	X A Existing Page
	🐐 Product Cost 👻 🔛 Parameter 🔡 gauge 😪 Kapra 1 🛃 TreeMap 1 👯 Scatter 1 🔕 dashboard 🕢 Search 🔻
Login: john Se	rver: http://localhost:8001/ Sheets: 1

As a result, on the dashboard page you will see the constructed table:

When we add objects to a dashboard, we can set up their future position. Let us add a treemap on the dashboard:

🏮 Business Analy	/sis Tool (Report Module) - http://	localhost:8001/			
Application	Module Reports Report F	Page View Data Da	ashboard Tools	s Help	
66 1		2 3 🛪 🖬 🕹	4 C 🗞		
					~
()	Sales (Version 1)				
Settings	Dimensions 🔍 🔯 👬 🥻	Context	Table 1		
	▶ 🛅 Sales 🔶		Product/Prod	+ CY 2005 + CY 2006	
	Account		Bikes	\$184,883.75 \$498,90	
List	Customer		▶ Clothing	\$859.41 \$12,13	
	Date 👻		 Components 	\$15,386.88 \$90,25	
	Measures Q - +				and the second second
1 Parata	My Calculations				
Reports	🕨 🕞 Michael Jordan				
	🛛 🕨 👘 KPI				Treemap
	🔹 🕨 🧰 Exchange Rates				
	E Finance				
	Internet Sales		-		
	Reseller Sales		10 10 10 10		
	Sales Quota				
	Sales Summary				
	Reseller Sales Amo Reseller Sales Amo				
	Server E Min Date				
	Sets Q - +	Add			
	Calculated Sets	Table/Chart			
	Sets	Treemap			
		Scatter-diagram			
	Parameters Q	😪 Мар			
	X A	🔛 Existing Page			
	Х в 🕕			.	
	🄏 Product Cost 🔹	Harameter Harameter	е 😽 Карта 1	IreeMap 1	Mashboard Search
Login: John Se	rver: http://localhost:8001/ Sheet	ts: 1			

The area marked with yellow shows that the treemap will be located exactly in that area:

🏮 Business Analysi	Tool (Report Module) - http://localhost:8001/		
Application N	lodule Reports Report Page View Data	a Dashboard Tools Help	
I 🕝 🔘 💾 📗) III 😺 🌾 😭 🔊 🔝 III C	; 🐹 🗇 😎 🧟	
	Sales (Version 1)		x
Settings	Dimensions Q 10 4 5 Context	Table 1 C 🐮 🥜 💥 TreeMap 1	🗙 🔦 ೫ 🕽
		Product/Prod CY 2005 CY 2006 United States	
	h 10° Account	Accessories \$505.89 \$2,311 \$53,607,801.21	
	• 10° Customer	▶ Bikes \$184,883.75 \$498,901 \$543,157.79	
List	▶ jog Date	Components \$15,386,88 \$90,25	
		\$13,380.88 \$90,23.	
	Measures Q – +		
Reports	My Calculations		
	Michael Jordan		
	KPI		
1	Einange Kates		
	Internet Sales		
	Reseller Sales		
	Sales Quota		
	Sales Summary		
4	🔂 Reseller Sales Amo		
	🧱 Reseller Sales Amo		
	Server F Min Date	Canada	France United
	Sets Q - +	\$14,377,925.60	\$4,607, \$4,279,
	Calculated Sets	\$170,227.05	(\$37,30 \$0,381
	Sets Table/Chart		
	Treemap		
	Parameters Q O Man		Germany Australia
	X A Existing Page		\$1,983,9 \$1,594.
	X B		(\$111,25(\$108,
	🔏 Product Cost	gauge 🛛 🗞 Карта 1 🛛 🎆 TreeMap 1 🛛 👯 Scatter 1 💽 dashboard 🛛 🤞	▶ Search ▼
	Lu. (/I		
Login: John Serve	r: http://iocainost:8001/ Sheets: 2		

2. You can create new Dashboard objects using existing pages: Select "Existing Page" as shown below and drop it on the dashboard area:

Add				\$178,227.09
📑 Table/Chart				
🌇 Treemap				
🚼 Scatter-diagram				
😪 Мар				
🔛 Existing Page 🛛				
			•	
Parameter [🙀 gauge	😪 Карта 1	🌇 TreeMap 1	Scatter 1	🔕 dashboard

In the next dialog select one of existing pages:

Search		3
Administrator Pages		
Table 1		
My Pages		
Sales by Categor	ry	
Treemap		
Sort		
Options		
Options 2		
Basic		
Basic 2		
context		
selection		
virtual hierarchie	s	
grouping of meas	sures	
description		
rtf		
rtf (2)		
description (2)		

We'll get the following dashboard:





One after another let us add a treemap and a scatter. After that we'll get this:

6.11.3 Navigation on the Dashboard

You can perform navigation on the dashboard and change it using the context menu:



All these options of the context menu were earlier described in this manual.



You can edit every component of the dashboard separately by pressing the following button



There is a context menu with the "Edit" item on the header of the component:

This context menu has a set of other actions, for example "Make Multiple Copies". Let us look more closely at this action.

Let us assume that we're interested in getting sales by days of the week. Let us edit the following component:



In the designer for this component put the "Date.Day of Week" into context and select the first day of the week:

Member Selector: Date/Date.Day of Week	
Selection Filter Options	
👻 💭 All Periods	
2	
3	
a 🖉 🛄 4	
5	
6	
7	



As a result we'll get the following report:



Save this component and close it. Now let us create several components based on that:

In the member selector window select all the rest days of the week:

) Creation of multiple copies of a component			
Select a hierarchy from the list and elements to make a copy on them			
Prefix for Component Name: Table 1			
Hierarchy:	Date/Date.Day of Week 🔹		
Selection Filter Sortin	g Options		
 All Periods 1 			
 2 3 			
 4 5 			
•••			

As a result we'll get this warning:



Pressing «Yes» will add a scrolling to the dashboard. The dashboard will look like this:



6.11.4 Exporting a Dashboard

You can save the dashboard as a picture in PNG format. Select the menu item "Export to PNG..." from the context menu or from the main menu "Dashboard":



After that you have to select the file on the disk. You will get the image of the dashboard.

6.12 Shared Pages

All the pages created by administrators, this user and other users have different icons:



Users can share their pages with other users. In order to share a page, press the right mouse button on the page and select the appropriate menu item. Other users and administrators will see this page with green icon:



If you click in the "Search" bar, you will be able to see who is the owner of the page:



Let us look at the example of sharing a page. User John opens a report. He opens the context menu and selects "Share":



The page will look like this:

	Clotning Components	\$7,038.58	\$9,487.17	\$98,212.74	\$2,141,39		
Add		<i>Q111/020102</i>	<i>Q1717020102</i>	0122/001102	<i>Q2/11103</i>		
📑 Table/Chart							
Treemap Scatter-diagram	3,000,000.00					CY 2005	
😪 Map 🔯 Existing Page	2,000,000.00					CY 2007 CY 2008	Ŧ
ABC Parameter	🤹 gauge 🛛 🛐 T	reeMap 1 🛛 🚼 Sca	tter 1 🚺 🔕 dashbo	oard 🔕 dashboar	d 2 🔹 🔹	Search	-

When the user Mike opens the same report, he will see this: 🔢 Table 1 🛛 💀 TreeMap 🛛 😭 Scatter 🛛 🌄 Treemap 🖉 🐽 dashboard 2 Search... • Login mike Server: http://localhost:8001/ Rows: 4 Columns: 4 Exec. Time: 00.8 Shared access can be removed at any time by choosing the "Cancel Sharing" menu item:

1,000,000.00 0.00 B Initialization Parameters... Table 12 × G Add CY 2005 CY 2006 CY 2007 Product/Prod... Accessories P Copy \$5,577.84 \$3.593.20 \$33,72 ▶ Bikes \$1,413,253.52 \$2,082,726.08 \$3,045,65 er Rename Clothing \$7,038.58 \$9,487.17 \$98,21 \$114,523.02 Delete Components \$171,325.62 \$422,06 Add Delete All But This 🙀 Table/Chart Delete All 🌄 Treemap 3,000,000.00 005 强 Scatter-diagram Cancel Sharing 006 😪 Мар 007 Page Description... 2,000,000.00 🔣 Existing Page 008 lange Print... ABC 🔝 Parameter 🧾 gauge 🌄 TreeMap 1 Scatter 1 A dashboard 🕥 dasnboard 2 Search... -

You can select which type of the pages to look at:



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7 Broadcasting Reports by Mail

After you create your report in BAT you will have the ability to set up the automatic broadcasting of those reports to the users' e-mails. Users will receive the reports in the special NRP format.

7.1 NRP files

NRP is the file format, developed for compact and safe storing of reports. There is a special NRP-files viewer, which you can find at the Business Analysis Tool web portal:



After downloading and installing the viewer you will be able to view NRP-files the same way as you do it with PDF, DOC and other types of files.

7.2 Setting Up the Mail Broadcast

Switch to the "List" tab and select the report for which you would like to set up a mail broadcast. Now press the "New Report Broadcast" button:

🏮 Business Analy	sis Tool (Report Module	e) - http://localhost:8001	1			_
<u>Application</u>	<u>M</u> odule <u>L</u> ist Mail	<u>B</u> roadcast T <u>o</u> ols <u>H</u> e	lp			
🛛 List 🖓 📝	Mail Broadcast	a e 🖻 🕏 🥝 b	<u>୍</u> ଷ୍ଣ			
(B)	Search					×
Settings	Folder/Report			*	Notes	
	🚽 🗁 Dashboard Re	eports				
	🔊 Dashboar	d (Version 1 from 1/14/2019)				
List	 Sales (Ver 	rsion 1 from 3/19/2019)				
Reports						
	4					
	•					
		> > 👌 🖬				
	Name 🔺	Mail Broadcast	Next Run	Status	Type	Modified By
	★ ☑ ([Status] <> 'Deleted')					
	<u> </u>	I 🕼 🗷 🛃 📢 🕼 🖉 🤇	2			
Login: john Ser	rver: http://localhost:8001	I/ New report bi	roadcast			

🏮 Mail Broadcast		X
General Periods	Format Pages Condition	Description
Status:	Mail Broadcast is active	Occurs every 1 weeks on at 00:00. Schedule will be used starting on 4/15/2019.
Name:	🗹 Use report name	
	Redefined name	
Cube Language:	Default	
Notes:	Here can be your notes	
		Next Pup
		Never.
		OK Cancel

A form for mail broadcast settings will appear:

On the tab "General" you can select the status of the mail broadcast (you can change it later if necessary), assign a name to this broadcast, choose the language of the cube or to use the report name instead, and to add the notes.

🏮 Mail Broadcast		_ X
General Periods	Format Pages Condition	Description
General Periods Mode Once Daily Weekly Monthly	Properties Repeate every Monday Tuesday Wednesday Friday Saturday Sunday	Occurs every 1 weeks on Thursday at 00:00. Schedule will be used starting on 4/15/2019. Next Run Next run will be: 4/18/2019 00:00.
Time		
Run once	00:00 🗘	
O Repeat	1 🗍 Hours from 00:00 🗍 till 00:00 ‡	
Interval		
First start: 4	/15/2019 ▼ ○ End 4/15/2019 ▼	
	endless	
		OK Cancel

On the tab "Periods" use the section "Mode" to select one of the scheduling modes:

In the section "Properties" set up the date and periods. In the lower left zone there is a possibility to set up the desired time, or to set up "send every N hours". Also there is a possibility to set up the end date of the mail broadcast. In the right part of the window there is a description that tells about when the mail broadcast will be working and what is the first date and time when it will run.

On the tab "Format" you will have to select the file type that will be sent:

Mail Br	oadcast			
General	Periods	Format	Pages	Condition
Native R	eport Form	at (NRP)	•	
Native R	6			
Portable)F)			



The tab "Pages" is used to select the set of pages that will be sent to the user:

There exist three types of pages: administrator pages, user pages and shared pages. It is possible to set up the desired type of page and to select the specific pages:

🌍 Mail Broadcast						
General	Periods	Format	Pages	Condition		
Owner typ Admi User Shar Page typ	pe: inistrator s ed e:					
Table	e/Chart map ter-diagram nboard		🗌 Мар			
O All pag	jes ed pages	1				
Search						
My Pa My Pa S Micha S	ages catter 1 ael Jordan catter					

In the edit box "Search" there is a way to quickly select the pages by name:

🟮 Mail Broadcast							
General	Periods	Format	Pages	Condition			
Owner typ ✓ Admi ✓ Users ✓ Share	oe: nistrator s ed						
Page type Table Tree Scatt Dash	Page type: ✓ Table/Chart ✓ Map ✓ Treemap ✓ Scatter-diagram ✓ Dashboard						
O All pag	 All pages Selected pages 						
forma							
My Pa √ fc √ fc √ fc √ fc	ages ormating ormating 2 ormating vir ormating vir	rtual rtual 2					
The tab "Condition" allows to set up optional condition that will be checked to decide if to send the mail or not to send:

🏮 Mail Broadcast		_ X
General Periods Format Pages C	ondition	Description
Mode: Unconditional Conditional What to run? MDX Create		Occurs every 1 weeks on Thursday at 00:00. Schedule will be used starting on 4/15/2019.
O Page		
Create	Copy of an existing page	
What test to perform?		
Query should return at least one cell		
Query should not return any cells		
Query should return at least one men	ber on rows/columns	Next Due
Query should not return any member	s on rows/columns	Next run will be: 4/18/2019 00:00.
		OK Cancel

By default there are no conditions. It means that the mail broadcast will work always. But you can change it here:

1	🏮 Mail Br	oadcast				
	General	Periods	Format	Pages	Condition	
	Mode: O Un O Co	conditional				

- Unconditional: the report will be sent always;
- Conditional: the report will be sent only if the condition is met.

If you selected "Conditional", you have to set up the condition using one of the ways:

What to run?		
	Create	
O Page		
	Create	Copy of an existing page

• MDX: you can write an arbitrary MDX by pressing the button "Create"



• you can create a new page or to use an existing page. If you create a new page, the window for page type selection will appear:

Report Page			x
Page Type:			
Table/Chart	Treemap	Scatter-diagram	Мар
			OK Cancel

In the case if you select an existing page, there will be another window:

Page Selector	
Search	x
Administrator Pages	
Table 1	1
My Pages	
Sales by Category	
Treemap	
Sort	U
Options	
Options 2	
Basic	
Basic 2	
context	
selection	
virtual hierarchies	
grouping of measures	
description	
rtf	
rtf (2)	-
description (2)	Ŧ
ОК	Cancel

In both cases a new designer form will be open.

Then you have to define how the condition is checked. There are 4 ways:

- Query should return at least one cell;
- Query should not return any cells;
- Query should return at least one member on rows/columns;
- Query should not return any members on rows/columns.

The report will be sent only in the case if the condition is met.

Administrator also has a choice to select the user context under which the test will be performed:

- **Current user**: the check will be made in the context of the user for whom the report is generated;
- Administrator: the check is performed in context of administrator.

Note: to make sure the user gets the report by mail, their e-mail should be specified. Report module users also have a possibility to create mail broadcasts. But for the report users there are some restrictions: they can create mail broadcasts only for themselves, but not for other users. Therefore the tab "Users" is not shown for the users.

Let us set up the schedule so that all users will get a report *«Report 1»* on the first and third Monday of May every 2 hours till 6pm in NRP format, including just pages *«Table 1»*. To achieve this goal, fill in the forms as shown:

🏮 Mail Broadcast				
General Periods	Format Pages Condition			
Status:	Mail Broadcast is active			
Name:	Use report name			
	Report 1			
Cube Language: Default 🗸				
Notes:	It's important			
	*			

The tab "Periods":

🏮 Mail Broadcast		_ x
General Periods	Format Pages Condition	Description
Mode	Properties	Occurs every First, Third Monday in May at 10:00 and each
O Once	O Day of month	4/15/2019 - 5/31/2019.
O Daily	1 9 17 25	
O Weekly	2 10 18 26	
Monthly		
	6 14 22 30	
	8 16 24 Last	
	every	
	First Monday	
	Second Tuesday	
	Third Wednesday	
	Fourth Thursday	Next Run
	Saturday	Nextrain will be. 5/6/2019 10:00.
	Sunday	
	Month 🗌 All	
	January April July October	
	🗌 February 🗹 May 🔲 August 🔛 November	
	March June September December	
Time		
O Run once	00:00 🐥	
Repeat	2 🗘 Hours from 10:00 🛟 till 18:00 🗘	
Interval		
First start:	4/15/2019 V 💿 End 5/31/2019 V	
	O Endless	
		OK Cancel

Select NRP on the tab "Format". Select the necessary pages on the "Pages" tab:

🏮 Mail Br	oadcast			
General	Periods	Format	Pages	Condition
Owner typ Admi User Shar Page type Table Tree Scatt Dash	pe: s ed e: e/Chart map ter-diagram aboard	1	🗌 Мар	
 All pag Selected 	es ed pages			
Search				
Admir	nistrator Pa able 1	iges		

🗿 Mail Broadcast - X Description Periods Format Pages Condition General Occurs every First, Third Monday in May at 10:00 and each 2 hour(s) till 18:00. Schedule will be used between 4/15/2019 - 5/31/2019. Mode: Unconditional Conditional What to run? MDX Create O Page Create Copy of an existing page What test to perform? Query should return at least one cell O Query should not return any cells O Query should return at least one member on rows/columns Next Run O Query should not return any members on rows/columns Next run will be: 5/6/2019 10:00. OK Cancel

The tab "Condition" should be like this:

After pressing «OK» you will get a new record in the list of mail broadcasts:



Let us assume we need to get the report "Sales Loss" only in the case if the loss had place.

We want to make so that this report comes by mail every first day of every month at 10:00am, but only in the case if the sales of "Bikes" decreased in France in comparison with the previous month. If the sales did not decrease, it is not necessary to send the report.

To impromote this task for as the mote as obtief as	То	implement t	his task	let us t	fill in tl	he tab	"General"	':
---	----	-------------	----------	----------	------------	--------	-----------	----

🏮 Mail Broadcast				
General Periods	Format Pages Condition			
Status:	Mail Broadcast is active			
Name:	Use report name			
Sales Loss				
Cube Language:	Default 🔹			
Notes:	Here can be your notes			
	· · · · · · · · · · · · · · · · · · ·			

On the tab "Periods" set the following parameters:

🗿 Mail Broadcast					
General Periods F	ormat Pages	Condition			
Mode	Properties				
 Once Daily Weekly Monthly 	 Day of mont 1 2 3 4 5 6 7 	h 9 10 11 12 13 14	All 17 18 19 20 21 22 22	25 26 27 28 29 30	
		15	23	Last	
	 Every All First Second Third Fourth Last 		 All Monday Tuesday Wednesday Thursday Friday Saturday Sunday 		
	Month M January February March	☑ April ☑ May ☑ June	☑ July ☑ August ☑ September	All Cotober November December	
Time					
Run once Research	10:00 🗘	Hours from	00.00 Å #II V	20-00 Å	
O Repeat	1 -	Hours from	00:00 - till (00:00	

Select NRP on the tab "Format". Select the necessary pages on the the tab "Pages":

🏮 Mail Br	oadcast				
General	Periods	Format	Pages	Condition	
Owner typ Admi User Shar Page type Table Tree Scatt Dash	pe: nistrator ed e: e/Chart map ter-diagram iboard es	1	🗌 Мар		
Selecter	ed pages				
Sales					
My Pa ✓ S	ages ales by Cat	egory			

Select "Conditional" on the tab "Condition":

🏮 Mail Br	oadcast							
General	Periods	Format	Pages	Condition				
Mode:								
🔘 Un	conditional							
🔘 Co	nditional							
What to r	un?							
	x							
		Create						
Pag	e							
		Create	- * -	Сору о	f an existing page			
What test	to perform	m?						
🥥 Qu	iery should	return at le	east one o	ell				
O Qu	iery should	not return	any cells					
0 Qu	Query should return at least one member on rows/columns							
O Qu	iery should	not return	any memb	ers on rows/col	umns			

Now we have a goal – to set up the condition "if the sales decreased in comparison with the previous month, then send the report, otherwise don't send".

The condition will be implemented using a regular table (like in regular reports). This table will contain a filter which checks the loss of sales. If the table returns at least one row, it means that the condition is met and the report should be sent.

Let us show how this should be set up:



In the page designer let us select the following data:

Columns	999	- Geo	ography/Co	ountry 🔻 🕵 🗙	
Rows	999	- +	Product/Pr	roduct Categories 🔻 🕵 🗙	
Rows / Colum	ins F	ilter	Sorting		
Context			Produc	France	
Date/Date.Cal	endar	х	▶ Bikes	s -46.07%	
Measures					
Reseller Sales	Amo	• X			

To set up the date it is preferable to use the "floating period":

🜍 Member Selector: Date/Date.Calendar	
Selection Filter Options	
Date Range O Tree	
O Fixed period	
By months -	
From 06 - 2008 - to 06 - 2008 -	
Floating period	-
O Back («in the past»)	
 Forward («in the future») 	
O Period	
By months 🔻	
Next 1 🗘 months 🗹 including this month	
Offset from the current month: 0 🔶 months	
	_
Data will be shown from 6/1/2008 to 6/30/2008.	
ОК	Cancel

The rows contain the "Bikes" category, the columns contain France. The date is in context.

Let us set up the	e filter:			
Columns 📒 🗕 Geo	graphy/Country	- 🞑 x		
Rows 📒 - + P	Product/Product Ca	tegorie	s 🕶 🗔 🗙	
Rows / Columns Filter S	orting			Тор 10
Context	Produc Franc	e	Drill by	Top 50
Date/Date.Calendar X	+ Bikes	-	Drill by on New Page	Тор 100
			Dillu-	Тор Х
			Drill Op	Top 80%
			Drill Down	Тор Х%
Measures			Hide Item	Bottom X
Reseller Sales Amo 🔻 🗙			Keep Only This	Bottom 20%
			Hide Siblings	Bottom X%
			Show All Children	Non-empty values
			Show Level	Empty values or 0
-		9	Member Selector	= X
			Actions •	<> X
			Copy to Clipboard	> X
		17	Sorting •	>= X
		7	Filter •	< X 🕟
		8	Formatting •	<= X
				X <= Value <= Y
				Custom Condition
Highlight				Add Filter of Rows (Expert Mode)
	🏮 Quick Filter	r		x
	Condition: n	nembers	s with value < x	
	Measure:	eseller	Sales Amount Growth %	•
	X:		0. 🗘 %	
		Ignor	e empty values	
			ОК	Cancel

This filter will return a row only in the case if the sales of bikes in the last month decreased in one of the countries in comparison to the previous month. Then let us save and close the page.

IL.

🟮 Member Selector: Date/Date.Calendar	
Selection Filter Options	
Date Range O Tree	
O Fixed period	
By months -	
From 04 - 2019 - to 04 - 2019 -	
Floating period	
Back («in the past»)	
O Forward («in the future»)	
Period	
By months 🔻	
Last 1 🗘 months 🗌 including this month	
Offset from the current month: 0 🔷 months	
Data will be shown from 3/1/2019 to 3/31/2019.	
ОК	Cancel

In the schedule settings in "What test to do" we have to select "Query should return at least one cell" (we know that the report will return data only in the case if there is a loss of sales):

After you press «OK» the list of mail broadcasts will have a new record:

	Name 🔺	Mail Broadcast	Next Run	Sta	Туре	Modified By
Þ	Sales Loss	Occurs 1 days in January, February, March, April, May, June, July, August, September, October, November, D	5/1/2019 10	Active	Report (John Connor(john)

8 «Interactive Dashboard» report

Dashboard is a type of a report with the following components: "Pivot", "Grid", "Chart", "Scatter Chart", "Pies", "Gauges", "Cards", "Treemap", "Filter Elements", "Images", "Text Box", "Group".

Upon starting a program, a dashboard-type report appears in reports tree.



Note: this one must be created by administrator.



When the report type «Interactive Dashboard» is opened, the following window appears:

The list of all the reports will be shown on the left:

- Admin's reports created by administrator
- My owner's reports
- Shared reports shared with other users.

Dashboard elements themselves are shown on the right.

As we can see, there is no My Dashboards list. Let us create an «Interactive Dashboard».

8.1 How to create an «Interactive Dashboard»

There are several ways to create an «Interactive Dashboard»:



Way 1. In a "Dashboard" menu choose "Add".

Way 2. Click "Add new Dashboard" button in a toolbar.

A window appears, where you should write a name for the «Interactive Dashboard»:



As a result, a dashboard designer window will appear:

0					Dashboard Desig	ner				(
Home											\diamond
Save Undo Redo Pr	vot Grid Ch	art Scatter	Pies Gauges	Cards Treemap	Range Filter	Images Text Box	Group Title	Currency Edit Co	lors Automatic Upd	ate Parameters	
• •		Chart	nes obege	coros recinop	Filter Elements *	*	oroup nac	contency conten	Updates		
File History				Insert					Dashboard		
Data Source							Reseller				rîa
Adventure Works] -										
👻 📦 Adventure Works	A										
► 👊 Measures											
Account											
Eustomer											
Date											
Delivery Date											
Department											
Destination Curre											
Employee	1		1								
E Geography	÷		1	To add a	dashboard item	to your dashboar	d click the co	rresponding but	ton in the Ribbon	or the Toolba	r
Internet Sales Or				10 000 0		to your dashboar	a, clot the co	responding bat			
 Image: Image: Organization 											
Product											
Promotion											
Reseller											
Image: Reseller Sales Ord											
Image: Main Main Main Main Main Main Main Main											
Isales Reason	0										
▶ 🔯 Sales Summary Or											
Image: Sales Territory											
► Tor Scenario	*										

8.2 Basic dashboard navigation

We will take a previously-created dashboard as an example of navigation:

0	Dashboard Designer	x
Home		\diamond
Save Undo Redo File History	Grid Chart Scatter Pies Gauges Cards Treemap Range Filter Images Text Box Group Insert Insert Insert Dashboard	
Data Source Adventure Works	Reseller	5
 ♦Z ♦A Adventure Works 		
 a) Measures Account Customer Customer Date Delivery Date Department Destination Curre E Employee Geography E Geography Internet Sales Or Organization Product Product Promotion E Reseller 	I To add a dashboard item to your dashboard, click the corresponding button in the Ribbon or the Toolbar	

A toolbar with dashboard elements is located in the upper part of the window:

- Pivot
- Grid
- Chart
- Scatter Chart
- Pies
- Gauges
- Cards
- Treemap
- Range Filter
- Filter Elements
- Images
- Text Box
- Group

The following functionality is available for dashboard elements:

- Title
- Currency
- Edit Colors
- Parameters

In the left part of the window there is a data source (OLAP DB) with respective hierarchies, dimensions. One dashboard can have several data sources:

Home					
F	🖘 Undo 🕞	E			
Save	🊧 Redo 🖂	Pivot	Grid	Chart	
File	History				_
File Data Sou Adventu	History Irce Ire Works	•			
File Data Sou Adventu Adventu AW	History Irce Ire Works Ire Works	•			
File Data Sou Adventu Adventu AW	History Irce Ire Works Ire Works Adventure Works	•			

Note: In order for a dashboard to have several data sources you should contact an administrator.

8.3 Dashboard elements

Dashboard designer window consists of following elements:

- ✓ Pivot
- ✓ Grid
- ✓ Chart
- ✓ Scatter Chart
- ✓ Pies
- ✓ Gauges
- ✓ Cards
- ✓ Treemap
- ✓ Range Filter
- ✓ Filter Elements
- ✓ Images
- ✓ Text Box
- ✓ Group

8.4 Create, delete, convert to, duplicate and other possibilities

8.4.1 Create

In order to create a new dashboard element, you need to click a respective icon in dashboard designer window:

		_						4	7	🏙 Images 🔻
		Chart	Conther			Canda	Terrer	Y	U	A Text Box
PIVOT	Grid	Chart	Chart	Ples	Gauges	Cards	Treemap	Filter	Elements 🔻	📑 Group

8.4.2 Delete

In order to delete a dashboard element, you need to click an icon in a toolbar:



In order to quickly delete all the filled fields of one of a dashboard element (grid, chart, etc.) you need to click an icon:



8.4.3 Convert To

It is possible to modify one dashboard element into another by choosing a respective item in the toolbar:



8.4.4 Duplicate

In order to duplicate an existing dashboard element, you need to click an icon in a toolbar:



8.4.5 Transpose

For such dashboard element as pivot, chart, scatter chart, pie there is a possibility to transpose lines and columns for a grid, parameters and sets of diagrams, axes "X" and "Y" of a chart:



8.5 Pivot

Pivot is a multidimensional array of data.

Let us take a "Pivot" that shows volume of sales and profit by product category in each country as an example. For this we choose "Pivot" in the toolbar, in the value field we will have "Reseller Sales Amount" and "Reseller Gross Profit" measures, on the rows of the "Country" and "Category" hierarchy. The pivot will look the following:

0	Pivo	: Tools		Dashboard Designer										
Home	Data	Design												\sim
Save	≪ • ⊯ •	Pivot	Grid	Chart	Scatter Chart	Pies	Gauges	Cards	 Treemap Range Filter Filter Element 	 Images ▼ A Text Box s ▼ Group 	 Duplicate Delete Remove Data 	Items	AB Title Currency Edit Colors	6
File	History						Inser	t			Item	1	Dashboard	d
Data So Advent	urce tureWorks		•	DATA Values	ITEMS			î.			Reseller			Ċ
I I A I I	Z 😓				Reseller Sz	ales Amor	int		Pivot 1					ф 53
		Walla								Grand Total				
-	Adventure	WORKS	0		Reseller G	Gross Prot	it			Reseller Sales A	Reseller Gross P			
	eu Measur	es			Va	lue			Australia	\$1.59M	(\$109K)			
۲.	💽 Accoun	t							⊦ Canada	\$14.4M	\$178K			
•	Custom	er		Colum	ns				France	\$4.61M	(\$37.3K)			
- F	💽 Date			1	Col	ump			▶ Germany	\$1.98M	(\$111K)			
	💽 Deliver	y Date			0	unn			United Kingdom	\$4.28M	\$6.38K			
F	💽 Depart	ment		Rows					United States	\$53.6M	\$543K			
	🔯 Destina	tion Curre	"				_		Grand Total	\$80.5M	\$470K			
F 1	💽 Employ	ee		1	Co	ountry								
	💽 Geogra	phy		Ť	Cat	tegory								
	🔯 Interne	t Sales Or		_			_							
F	💽 Organia	ation			R	011								
•	💽 Produc	t	Ŧ	HIDDE		EMC		-						

8.5.1 Expand/minimize

By clicking **D** and **D** buttons, you can expand/collapse the data to the desired level.

8.5.2 Layout type

The Pivot layout can be:

• Compact

Pi	Pivot 1									
		Grand Total								
		Reseller Sales A	Reseller Gross P							
Ŧ	Australia Total	\$1.59M	(\$109K)							
	Accessories	\$23.9K	\$8.98K							
	Bikes	\$1.32M	(\$132K)							
	Clothing	\$42.9K	\$748							
	Components	\$204K	\$13.7K							
Ŧ	Canada Total	\$14.4M	\$178K							
	Accessories	\$118K	\$40.6K							
	Bikes	\$11.6M	(\$112K)							
	Clothing	\$379K	\$53.2K							
	Components	\$2.24M	\$196K							
Ŧ	France Total	\$4.61M	(\$37.3K)							
	Accessories	\$48K	\$15.9K							
	Bikes	\$3.56M	(\$136K)							
	Clothing	\$128K	\$15.5K							
	Components	\$871K	\$66.8K							

• Tabular

Pivot 1			
		Grand Total	
		Reseller Sales A	Reseller Gross P
	Accessories	\$23.9K	\$8.98K
	Bikes	\$1.32M	(\$132K)
	Clothing	\$42.9K	\$748
	Components	\$204K	\$13.7K
Australia Total		\$1.59M	(\$109K)
	Accessories	\$118K	\$40.6K
	Bikes	\$11.6M	(\$112K)
	Clothing	\$379K	\$53.2K
	Components	\$2.24M	\$196K
Canada Total		\$14.4M	\$178K
	Accessories	\$48K	\$15.9K
	Bikes	\$3.56M	(\$136K)
	Clothing	\$128K	\$15.5K
	Components	\$871K	\$66.8K
France Total		\$4.61M	(\$37.3K)

Use the "Layout" button in the "Design" ribbon tab to change the Pivot layout:

()	Pivo	i Tools						Dashboard	Dashboard Designer				
Home	Data	Design											
	A	b								2			
Show Capt	ion Edit	Names	Initial State ▼	Totals Totals	Grand Totals ▼	Layout	Row Totals Position ▼	Column Totals Position ▼	Values Position ▼	Reset Layout Options			
(Common		Initial S		-	C	ompact						
Data Sou	rce			DATA ITE	MS	🗸 Ta	abular						

8.5.3 Totals

You can control the visibility of totals and grand totals for the entire Pivot dashboard item:

<u>(</u>)	Pi	ot Tools								Dashboard	Designer
Home	Data	Design									
		Ab				F		Ē		2	
Show Cap	tion E	dit Names	Initial State ▼	Totals Totals	Grand Totals ▼	Layout T	Row Totals Position ▼	Column Totals Position 🔻	Values Position ▼	Reset Layout Options	
	Commor	1	Initial S	Layout							

8.5.4 Initial state

"Initial State" of a pivot may be the following:

6			Pivoi	Tools						
	Home	D	ata	Design						
			A	b		3				
Sł	now Cap	tion	Edit I	Names	Initia State	al ▼	Totals Totals	Grand Totals ▼	Layout •	Row Totals Position ▼
	(Comr	non			Expa	and Colu	mn Group	s	La
	Data Sou	urce			\checkmark	Expa	and Row	Groups	6	
	AdventureWorks						Values			

- Expand Column Groups
- Expand Row Groups

By ticking this functionality box, we will always see an expanded level:

Pi	Pivot 1								
		Grand Total							
		Reseller Sales A	Reseller Gross P						
-	Australia Total	\$1.59M	(\$109K)						
	Accessories	\$23.9K	\$8.98K						
	Bikes	\$1.32M	(\$132K)						
	Clothing	\$42.9K	\$748						
	Components	\$204K	\$13.7K						
-	Canada Total	\$14.4M	\$178K						
	Accessories	\$118K	\$40.6K						
	Bikes	\$11.6M	(\$112K)						
	Clothing	\$379K	\$53.2K						
	Components	\$2.24M	\$196K						
-	France Total	\$4.61M	(\$37.3K)						
	Accessories	\$48K	\$15.9K						
	Bikes	\$3.56M	(\$136K)						
	Clothing	\$128K	\$15.5K						
	Components	\$871K	\$66.8K						
-	Germany Total	\$1.98M	(\$111K)						
	Accessories	\$35.1K	\$12.1K						
	Bikes	\$1.54M	(\$136K)						
	Clothing	\$71.6K	(\$882)						
	Components	\$334K	\$13.3K						
-	United Kingdom T	\$4.28M	\$6.38K						
	Accessories	\$42.6K	\$14.5K						
	Bikes	\$3.41M	(\$79.2K)						
	Clothing	\$119K	\$13.4K						
	Components	\$712K	\$57.7K						
-	United States Total	\$53.6M	\$543K						
	Accessories	\$304K	\$104K						
	Bikes	\$44.8M	(\$396K)						
	Clothing	\$1.04M	\$151K						
	Components	\$7.43M	\$685K						
Gr	and Total	\$80.5M	\$470K						

8.5.5 Grand Totals

In the pivot table, you can enable or disable grand totals:

()		Pivoi	Tools							Dashboa	rd Designer	
Home	Da	ata	Design									
		A	b									2
Show Ca	ption	Edit I	Names	Initial State ▼	Totals Totals	Gra Tota	nd Is ▼	yout	Row Totals Position ▼	Column Totals Position ▼	Values Position ▼	Reset Layout Options
	Comm	non		Initial S		\checkmark	Sh	iow Colum	n Grand Tot	als		
Data So	ource				DATA ITE	\checkmark	Sh	iow Row G	rand Totals			

8.5.6 Totals

For the pivot of the tabular type (s. 8.5.2), you can enable and disable totals for the highest level:

(Pivo	i Tools						Dashboar	d Designer	
Home	Data	Design								
	A	b								$\overline{\mathbf{O}}$
Show Cap	tion Edit	Names	Initial State ▼	Totals Totals	Grand Totals ▼	Layout T	Row Totals Position 🔻	Column Totals Position ▼	Values Position ▼	Reset Layout Options
(Common		Initial S	√ s	how Colur	nn Totals	L	ayout		
Data Sou	urce			√ s	how Row 1	Fotals	4			

For instance, the image below displays the Pivot dashboard item with the disabled row totals:

		Grand Total					
		Reseller Sales A	Reseller Gross P			Grand Total	
→ Australia	Accessories	\$23.9K	\$8.98K			Reseller Sales A	Reseller Gross P
	Bikes	\$1.32M	(\$132K)	 Australia 	Accessories	\$23.9K	\$8.98K
	Clothing	\$42.9K	\$748		Bikes	\$1.32M	(\$132K)
	Components	\$204K	\$13.7K		Clothing	\$42.9K	\$748
Australia Total		\$1.59M	(\$109K)		Componente	£20.4K	£12 7V
	Accessories	\$118K	\$40.6K		components	φ20π	\$10.7K
	Bikes	\$11.6M	(\$112K)	🔻 Canada	Accessories	\$118K	\$40.6K
	Clothing	\$270K	452 DV		Bikes	\$11.6M	(\$112K)
	ciouning	\$J/3K	\$JJ.2K		-1.1.		
Components		\$2.24M	\$196K		Clothing	\$379K	\$53.2K
Canada Total		\$14.4M	\$178K		Components	\$2.24M	\$196K

Moreover, you can control the visibility of totals for individual dimensions/measures by using the data item's context menu ("Show Totals" and "Show Grand Totals" options):

Values								
Reseller Sales Amount		P	ivot 1					
				CY 2017		CY 2018	Grand Tatal	
Reseller Gross Profit	<u>.</u>			Reseller Sales A Reseller Gross P		Reseller Sales A Reseller Gross P		Granu Total
Value		Form	at	\$847K	(\$97.7K)	\$747K	(\$11K)	\$1.59M
	✓ Show Values		Values	\$15.6K	\$5.83K	\$8.36K	\$3.15K	\$23.9K
Columns	`,	Chau	Totala	\$681K	(\$112K)	\$643K	(\$20.1K)	\$1.32M
			/ TOLdis	\$26.1K	\$296	\$16.8K	\$452	\$42.9K
↑ Calendar Year		Show	/ Grand Totals	\$125K	\$8.21K	\$78.6K	\$5.49K	\$204K
Column		Add I	Format Rule	\$5.65M	\$43.1K	\$2.39M	\$32.2K	\$8.04M
	E lot	Edit F	Rules	\$58.1K	\$19.8K	\$32.4K	\$11.9K	\$90.5K
Rows		Clear	Pules	\$4.42M	(\$74.7K)	\$1.91M	(\$11.5K)	\$6.33M
	-9	Cicai	Kules	\$178K	\$21.9K	\$77.5K	\$7.55K	\$255K
T Country		Rena	me	\$998K	\$76.1K	\$371K	\$24.3K	\$1.37M
1 Category		-	France Total	\$2.37M	(\$56.1K)	\$1.38M	(\$4.95K)	\$3.75M
Daw	1		Accessories	\$26.6K	\$8.64K	\$16.3K	\$5.88K	\$42.9K
Row		:	Bikes	\$1.79M	(\$104K)	\$1.11M	(\$27.4K)	\$2.91M

8.5.7 Totals Position

If necessary, you can change the Pivot dashboard item's totals/grand totals position:

					É		
	Row Totals Position ▼ Po	mn Totals sition ▼	Row Totals Position ▼	Column Totals Position	Column Totals Val Position Posit		
	Тор		La	Near	1		
	✓ Bottom			√ Far			
		Grand Total				a 17.11	
Reseller Sales A F		Reseller Gross P	seller Gross P		Grand Total	Deceller Cross D	
Grand Total		\$80.5M	\$470K	A contraction	A constant of the	Reseller Sales A	Reseller Gross P
→ Australia	Total	\$1.59M	(\$109K)		Accessories	\$23.9K	\$8.98K
Australia	Accessories	\$23.9K	\$8.98K		Bikes	\$1.32M	(\$132K)
	Bikes	\$1.32M	(\$132K)		Clothing	\$42.9K	\$/48
	Clothing	\$42.9K	\$748		Components	\$204K	\$13. /K
	Components	\$204K	\$13.7K	Australia Iotal		\$1.59M	(\$109K)
- Canada T	iotal	¢14.4M	¢15.7K		Accessories	\$118K	\$40.6K
	otai	ויוד דו ק	\$170K		Bikes	\$11.6M	(\$112K)
Canada	Accessories	\$118K	\$40.6K		Clothing	\$379K	\$53.2K
	Bikes	\$11.6M	(\$112K)		Components	\$2.24M	\$196K
	Clothing	\$379K	\$53.2K	Canada Total		\$14.4M	\$178K
	Components	\$2.24M	\$196K	Grand Total		\$16M	\$69.5K

8.5.8 Values Position

The Pivot dashboard item allows you to control the position of headers used to arrange summary values corresponding to different measures:



							Grand Total
				👻 Australia	Accessories	Reseller Sales A	\$23.9K
						Reseller Gross P	\$8.98K
					Bikes	Reseller Sales A	\$1.32M
						Reseller Gross P	(\$132K)
					Clothing	Reseller Sales A	\$42.9K
						Reseller Gross P	\$748
		Grand Total			Components	Reseller Sales A	\$204K
		Reseller Sales A	Reseller Gross P			Reseller Gross P	\$13.7K
→ Australia	Accessories	\$23.9K	\$8.98K	👻 Canada	Accessories	Reseller Sales A	\$118K
	Bikes	\$1.32M	(\$132K)			Reseller Gross P	\$40.6K
	Clothing	\$42.9K	\$748		Bikes	Reseller Sales A	\$11.6M
	Components	\$204K	\$13.7K			Reseller Gross P	(\$112K)
	Accessories	\$118K	\$40.6K		Clothing	Reseller Sales A	\$379K
	Bikes	\$11.6M	(\$112K)			Reseller Gross P	\$53.2K
	Clothing	\$379K	\$53.2K		Components	Reseller Sales A	\$2.24M
	Components	Components \$2.24M \$196				Reseller Gross P	\$196K

8.5.9 Filter

In the tab "Data" it is possible to create a quick filter for the whole pivot. It could be done in two ways:

Way 1. Click "Edit Filter" button in "Data" tab in dashboard design window.



Way 2. Open context menu (click the right mouse button) at any place of a pivot.

			Grand Total		
			Reseller Sale	s A	Reseller Gross P
👻 Australia		Show Caption		.9K	\$8.98K
		Show Caption		32M	(\$132K)
		Duplicate		.9K	\$748
	×	Delete		D4K	\$13.7K
Australia Total	\$	Convert To	•	59M	(\$109K)
▶ Canada		Remove Data It	ems	.4M	\$178K
France		Transmass		51M	(\$37.3K)
▶ Germany	•	Transpose		98M	(\$111K)
United Kingdo		Edit Rules		28M	\$6.38K
United States	Ab	Edit Names		.6M	\$543K
Grand Total	7	Edit Filter		.5M	\$470K
		Class			
	188	Clear		_	
	G	Update			
	ଚ୍ଚ	Reset Layout O	ptions		
		Maximize			
		Print Preview			
		Export To PDF			
		Export To Imag	e		
		Export To Excel			
		Export Dashboa	ird 🕨 🕨		

Only those hierarchies, which are present in the report, may be a filter for a Pivot:

Filter Editor	x
Country	-
Country	
Category	
V Australia	13
🗹 Canada	
France	
Germany	
🗹 United Kingdom	
☑ United States	

Let us display, for instance, values "Reseller Sales Amount" and "Reseller Gross Profit" for product categories "Bikes" and "Clothing":

Filter Editor	×
Category	-
(Show All)	
Accessories	
Bikes	
Clothing	
Components	
OK Cancel	Apply

Pivot will look the following:

		Grand Total	
		Reseller Sales A	Reseller Gross P
👻 Australia	Bikes	\$1.32M	(\$132K)
	Clothing	\$42.9K	\$748
👻 Canada	Bikes	\$11.6M	(\$112K)
	Clothing	\$379K	\$53.2K
	Bikes	\$3.56M	(\$136K)
	Clothing	\$128K	\$15.5K
	Bikes	\$1.54M	(\$136K)
	Clothing	\$71.6K	(\$882)
	Bikes	\$3.41M	(\$79.2K)
	Clothing	\$119K	\$13.4K
	Bikes	\$44.8M	(\$396K)
	Clothing	\$1.04M	\$151K
Grand Total		\$68.1M	(\$758K)

8.5.10 Format

In order to change the format of a calculating value, you need to open context menu:

Values				
Reseller Sales Amount	Θ		Pivot 1	
Reseller Gross Profit		Fo	rmat	
Value	\checkmark	Sh	ow Values	k
	\checkmark	Sh	ow Totals	lc
Columns	\checkmark	Sh	ow Grand Totals	k
Column		Ad	ld Format Rule 🔹 🕨	. Ic
	₿.	Ed	it Rules	le
Rows	5	Cl	ear Rules	k
1 Country		Re	name	lo
Category			Onrea Rangaom	olk Ck
Row	1		✓ United States	Bik
				Clo

A numeric-format form will open:

Numeric Format		x
Format type:	Currency	-
Unit:	Auto	-
Precision:		2 🖕
Currency:	Use dashboard settings	-
Culture:	Use dashboard settings	~
🗹 Indude grou	p separator	
	+4 225	
	\$1.23B (\$1.23B)	
	ОК	Cancel

The form contains following fields:

✓ Format type – format type may be:

Auto
General
Number
Currency
Scientific
Percent

✓ Unit – Date and currency format type may have the following presentation:

Auto	
Ones	
Thousands	
Millions	
Billions	

- ✓ Precision number of symbols after comma;
- ✓ Currency currency will use toolbar parameters by default (interface language), or you could choose specific currency type from a dropdown list;
- ✓ Culture reference culture for a region should be specified;
- ✓ Include group separator turn a space on/off.

8.5.11 Formatting

Upon opening value context menu, it is possible to create a formatting rule (highlighting):

Values								_		
Reseller Sales Amount	$\overline{\mathbf{O}}$		Pivot 1							
		Eo	rmat			Gr	and Total			
Reseller Gross Profit		FU	inid			Reseller Sa		ales A		Reseller Gross P
Value	\checkmark	Sh	ow Values		kes		\$1	1.3	2M	(\$132K)
	\checkmark	Sh	ow Totals		lothing	9		\$42.9K		\$748
Columns	1	Sh	ow Grand Totals		kes		\$1	11.	6M	(\$112K)
					athing			121	79K	\$53.2K
Column		Ac	Id Format Rule	•	X	Value	•		6M	(\$136K)
_	E .	Ed	it Rules 🕫		1	Top/Bottom	•		28K	\$15.5K
Rows 👘 Clear Rules		ear Rules		🗵 Average		•		4 M	(\$136K)	
1 Country		Re	name		Ŧ	Expression			6K	(\$882)
A Calanny			· onice rangeom						1M	(\$79.2K)
1 Category				С	a,	Icon Kanges	•		.9K	\$13.4K
Row				В	-	Color Ranges	s 🕨		8M	(\$396K)
				С		Gradient Ran	ges 🕨 🕨		4M	\$151K
		-	Grand Total		-2	Bar			1M	(\$758K)
Dimensione					-	Bar Color Rar	nges 🕨			
Dimensions					e.	Bar Gradient	Ranges N			
Dimension						bar Gradient	nunges v			

In abstract 8.18 a process of creation of formatting rules is described in more details.

8.5.12 Title

Before saving a created pivot let us rename its title. This may be done in two ways: Way 1. In "Decign" teh press "Edit Nemes" icon

Way 1. In "Design" tab press "Edit Names" icon.



Way 2. Open context menu in a pivot (click the right mouse button) and choose "Edit Names" from the list.

Pivot 1				
		Grand Tota	al	
		Reseller Sa	ales A	Reseller Gross P
- Australi-	Rikes		\$1.32M	(\$132K)
	Show Caption		\$42.9K	\$748
👻 Canada 📋	Duplicate		\$11.6M	(\$112K)
*	Delete		\$379K	\$53.2K
👻 France	Convert To		\$3.56M	(\$136K)
<i>~</i>	Demons Data Itaria	·	\$128K	\$15.5K
👻 German 🌌	Remove Data Items		\$1.54M	(\$136K)
3	Transpose		\$71.6K	(\$882)
👻 United I 🔠	Edit Rules		\$3.41M	(\$79.2K)
Ab	Edit Names		\$119K	\$13.4K
✓ United	2		\$44.8M	(\$396K)
Y	Edit Filter		\$1.04M	\$151K
Grand Tota 🕵	Clear		\$68.1M	(\$758K)
C	Update			
Ø	Reset Layout Option	s		
	Maximize			
	Print Preview			
	Export To PDF			
	Export To Image			
	Export To Excel			
	Export Dashboard	•		

In an appeared form enter the following data:

Edit Names X
Dashboard item name
Sales Amount/ Gross Profit by Country
Values
Reseller Sales Amount
Reseller Gross Profit
OK Cancel
OK Cancel

Now a pivot title looks the following:

		Grand Total		
		Reseller Sales A	Reseller Gross P	
 Australia 	Bikes	\$1.32M	(\$132K)	
	Clothing	\$42.9K	\$748	
👻 Canada	Bikes	\$11.6M	(\$112K)	
	Clothing	\$379K	\$53.2K	
	Bikes	\$3.56M	(\$136K)	
	Clothing	\$128K	\$15.5K	
	Bikes	\$1.54M	(\$136K)	
	Clothing	\$71.6K	(\$882)	
	Bikes	\$3.41M	(\$79.2K)	
	Clothing	\$119K	\$13.4K	
	Bikes	\$44.8M	(\$396K)	
	Clothing	\$1.04M	\$151K	
Grand Total		\$68.1M	(\$758K)	

Sales Amount/ Gross Profit by Country

If needed, title may not be displayed:



Before closing a pivot should be saved by clicking a "Save" icon in the toolbar:



Or an application will offer to save a pivot itself:



🏮 Business Analysis To	ool (Report Module) - http://localho	st:8204/				- 0 %
Application Modu	ule Reports Report Dashbo	ard View Tools	Help			
🗄 💾 🕐 Edit 🛛 🍕	🖸 🍝 O ≩ 河 🌡	XK				
	Dashboard2 (Version 1)					×
Settings	✓ Search				Reseller	ß
	🔝 Admin's 🔷 🐴	Sales Amount/g	ross Profit by Cou	ntry		B
List	Dashboard	1		Grand Total		
	Dashboard VIP			Reseller Sales A	Reseller Gross P	
		v Australia	Bikes	\$1.32M	(\$132K)	
Reports	Dashboard_old		Clothing	\$42.9K	\$748	
	Dashboard_Sales	v Canada	Bikes	\$11.6M	(\$112K)	
	Dashboard_new		Clothing	\$379K	\$53.2K	
1	Dashboard Sales	✓ France	Bikes	\$3.56M	(\$136K)	
	-	1	Clothing	\$128K	\$15.5K	
	My ^	v Germany	Bikes	\$1.54M	(\$136K)	
	Reseller][Clothing	\$71.6K	(\$882)	
	Chaund A	 United Kingdom 	Bikes	\$3.41M	(\$79.2K)	
4	Silared		Clothing	\$119K	\$13.4K	
	Dashboard	 United States 	Bikes	\$44.8M	(\$396K)	
			Clothing	\$1.04M	\$151K	
		Grand Total		\$68.1M	(\$758K)	
Login: john Server:	r: http://localhost:8204/					

A new dashboard element — a pivot Reseller will be the result:

For next dashboard element editing it is needed to click an "Edit" icon in the toolbar:



Export 8.5.13

If needed you can export a pivot into PDF, Excel or a picture format by clicking the right mouse button in a pivot:

Sales Amount/Gross Profit by Country						
				Grand Total		
				Reseller Sales A		Reseller Gross P
👻 Australia	Bike		Show Caption			(\$132K)
	Clot	D			\$748	
	Bike		Duplicate Delete Convert To			(\$112K)
	Clot	×			\$53.2K	
	Bike	3			(\$136K)	
	Clot		Remove	a Data Items		\$15.5K
✓ Germany	Bike	-	Transpose		(\$136K)	
	Clot				(\$882)	
	Bike		Edit Rul	es		(\$79.2K)
	Clot	Ab	Edit Na	mes		\$13.4K
	Bike	9	E-DA Elland		(\$396K)	
	Clot			t Filter		\$151K
Grand Total		153	Clear			(\$758K)
		G	Update			
		ଚ	Reset La	ayout Options		
			Maximi	ze		
			Print Pr	eview		
		1	Export 1	To PDF		
		1	Export 1	[o Image		
			Europet 1	To Even		
		્ય	Export	O EXCEI		
			Export [Dashboard	•	•
✓ Export To PDF

The following options are available when exporting the Pivot dashboard item to a PDF:

Export To PDF - Sales Amount/Gro	oss Profit by Country	x
Page Layout:	 Portrait Landscape 	
Size:	Letter 🔻	
Show Title:	\checkmark	
Title:	Sales Amount/Gross Profit by Cour	
Print Headers on Every Page:	\checkmark	
Scale Mode:	None 🔻	
Scale Factor:	1 📩	
Auto Fit Page Count:	1 📩	
Include:	Filters	
	Parameters	
Position:	Below 🔻	
Reset	Export Cancel	

- Page Layout page orientation;
- Size page size;
- Show Title to display or not to display page title;
- Title name of page title;
- Print Headers on Every Page to print or not to print a title on every page;
- Scale Mode zoom mode;
- Scale Factor specifies the scale factor (in fractions of 1) by which a dashboard is scaled;
- Auto Fit Page Count specifies the number of horizontal/vertical pages spanning the total width/height of a dashboard;
- Include Filters / Parameters allows you to include master filter values / parameter values to the exported document;
- Position specifies the position of the master filter and parameter values in the exported document.

✓ Export To Excel

While exporting into Excel the following options are available:

Export To Excel - Sa	ales Amount/Gross Profit by Cou 🗙
Excel Format: Separator:	XLSX 🗸
Include:	Filters
Position:	Below
Reset	Export Cancel

- Excel Format xlsx, xls, csv formats;
- Separator specifies the string used to separate values in the exported CSV document;
- Include Filters / Parameters allows you to include master filter values / parameter values to the exported document;
- Position specifies the position of the master filter and parameter values in the exported document.
- ✓ Export to Image.

While exporting into a picture format the following options are available:

Export To Image - Sa	les Amount/Gross Profit by Co 💌
Image Format:	PNG
Show Title:	\checkmark
Title:	Sales Amount/Gross Profit by Cour
Resolution (dpi):	96 韋
Indude:	 Filters Parameters
Reset	Export Cancel

- Image Format PNG, JPEG, GIF formats;
- Show Title specifies the image format in which the dashboard item is exported;
- Title name of a pivot title;
- Resolution(dpi) specifies the resolution (in dpi) used to export a dashboard;
- Include Filters / Parameters allows you to include master filter values / parameter values to the exported document.

8.6 Grid

Let us add a new element Grid to an already-existing dashboard.

For this we first click an "Edit" icon on a dashboard toolbar, and then in a dashboard design window click a "Grid" button:



Let us look at the grid, which will display the results of sales by product categories. In the column move a "Category dimension and a "Reseller Sales Amount" measure:

Columns				
1 Category 12		Grid 1		Ċ :
		Category	Reseller Sales Amount	
Reseller Sales Amount Σ		Accessories		\$571K
		Bikes		\$66.3M
New Celuma		Clothing		\$1.78M
New Column		Components		\$11.8M
Sparkline				
Argument	Ī			
HIDDEN DATA ITEMS				
Dimensions				
Dimension				
Measures				
Measure				

8.6.1 Column type

Columns in a grid may be of the following type:

Columns	
Category) tz
Reseller Sales Amount	Σ
New Column	Ą

Column Options	x
Column type: Dimension Measure Delta Sparkline Hyperlink Auto	No options available for this column type.
	OK Cancel Apply

- ✓ Dimension a column shows DB dimension;
- ✓ Measure a column shows measure value;
- ✓ Delta a column, which shows a delta of two measures, where one is an actual and the other – a target;
- \checkmark Sparkline a chart, which shown a measure value in a given interval (date and time);
- ✓ Hyperlink a *hyperlink* column allows you to display hyperlinks in the Grid dashboard item;
- ✓ Auto a column type is defined automatically.

8.6.2 Delta column

Let us create a column of a "Delta" type. Choose the type and click an «OK» button:

Column Options			x
Column type: Dimension Measure Delta Sparkline Hyperlink	Show: Value Bar Value type: Result indication: Threshold type:	Absolute variation Greater is good Percent	▼ ▼ ▼
Auto	Inreshold Value:	OK Cancel	Apply

In a column field two new fields – "Actual" and "Target" appear. Let's choose a "Internet Order Quantity" measure for real values (actual), and a "Reseller Order Quantity" measure will be a target. We will get a new column, which will show a delta value and its indicator:

Columns				
1 Category	l ta	Grid 1		Ċ \$3
		Category	Reseller Sales Amount	Internet Order Quantity vs Reseller Order Quantity
Reseller Sales Amount	Σ	Accessories	\$571K	+10.3K
		Bikes	\$66.3M	-59.8K 💙
Internet Order Quantity		Clothing	\$1.78M	- <u>55.4K</u>
Internet Order Quantity		Components	\$11.8M	
Reseller Order Quantity				Delta Values
	_			Delta Indication
New Column	A			
C		1		
Sparkline				
Argument				
HIDDEN DATA ITEMS				
Dimensions				
Dimension				
Measures				
Measure				

A delta value type may be the following:

Caluma

Column Options			x
Column type: Dimension Measure Delta Sparkline Hyperlink	Show: Value Bar Value type: Result indication: Threshold type: Threshold value:	Absolute variation	
		OK Cancel Apply	

- Actual value an actual measure value;
- Absolute variation difference between an actual and a target;
- Percent variation percent of difference between an actual and a target;
- Percent of target percent of an actual and a target.

An	indicator	may l	have	the	folle	owing	value:
1 111	malcutor	may	inu v C	une	10110	, mine	vurue.

Column Options			x
Column type: Dimension Measure Delta Sparkline Hyperlink	Show: Value Bar Value type: Result indication: Threshold type: Threshold value:	Absolute variation Greater is good Greater is good Less is good Warning if greater Warning if less No indication	
		OK Cancel App	bly

- Greater is good «good» a target is achieved (an actual is bigger than a target);
- Less is good «bad» a goal is not achieved (an actual is less than a target);
- Warning if greater a target is bigger than an actual;
- Warning if less a target is less than an actual;
- No indication indication is not displayed.

For the delta, you can set the threshold value, which will indicate the excess of the actual above the target.

umn Options			2
Column type: Dimension	Show:		
O Delta	Value type:	Absolute variation 🔻	
🔘 Sparkline	Result indication:	Greater is good 🔹	
() Hyperlink	Threshold type: Threshold value:	Percent Absolute Percent	
		OK Cancel	Apply

Let's get back to our grid and see if the target is achieved as a percentage. For this, let's fill out the form as follows:

Column Options			x
Column type: Dimension Measure Delta Sparkline Hyperlink	Show: Value Bar Value type: Result indication: Threshold type: Threshold value:	Percent variation Greater is good Percent 0.00 % ↓	
		OK Cancel Appl	у

The threshold can be of the following type:

As a result, we will see a delta column in which all the values exceeding the target are highlighted with a green indicator, and the red values are those that have not reached a target:

Grid 1		<u>تَ</u> تَ
Category	Reseller Sales Amount	Internet Order Quantity vs Reseller Order Quantity
Accessories	\$571K	+39.68 % 🔺
Bikes	\$66.3M	-79.73 % 💙
Clothing	\$1.78M	-85.89 % 💙
Components	\$11.8M	

Obviously, the target was achieved only for "Accessories" category. The delta value can be displayed not only as text, but also as a diagram:

Columns			
Category	ta.	Column Options	x
Reseller Sales Amount	Σ	Column type:	Show:
	_	O Dimension	
Internet Order Quantity		O Measure	(a) Bar
Reseller Order Ouantity	Δ	Oelta	Always show zero level
		🔘 Sparkline	
New Column	Α	O Hyperlink	
Sparkline			
Argument			
HIDDEN DATA ITEMS			
Dimensions			OK Cancel Apply

Grid 1

Ċ 23

Category	Reseller Sales Amount	Internet Order Quantity vs Reseller Order Quantity	
Accessories	\$571K		
Bikes	\$66.3M		
Clothing	\$1.78M		
Components	\$11.8M		

8.6.3 Sparkline Column

Let's create a column of a "Sparkline" type. For this, let's consider how the quantity of orders for product categories changed depending on the month of the year. For this, we will insert the "Reseller Order Count" measure in the columns and select the "Sparkline" column type:

DATA ITEMS	A	
Columns T Category Z,	Column Options	x
Reseller Sales Amount \sum	Column type: Dimension Show start/end values	
$\begin{tabular}{ c c c c } \hline Internet Order Quantity & & \\ \hline \hline & & \\ \hline \hline & & \\ \hline \hline & & \\ \hline & & \\ \hline \hline & & \\ \hline \hline & & \\ \hline & & \\ \hline & & \\ \hline \hline \hline \\ \hline & & \\ \hline \hline \hline \\ \hline \hline \hline \\ \hline \hline \hline \\ \hline \hline \hline \hline$	Measure Sparkline view type: Line Delta Image: Highlight min/max points Sparkline Highlight start/end points	•
Reseller Order Count	3 Hyperlink	
Sparkline		
Argument	OK Cancel	Apply
HIDDEN DATA ITEMS		

The following settings will be available in the opened form:

- ✓ Show start/end values species whether or not to display sparkline start/end values within a grid cell;
- ✓ Sparkline view type:
 - Line
 - Area
 - Bar
 - Win/Loss a column-type graph (of the same size) with a Win (maximum value) mark and a Loss (minimum value) mark.
- ✓ Highlight min/max points
- ✓ Highlight start/end points.

Column Options	X
Column type: Dimension Measure Delta Sparkline Hyperlink	 Show start/end values Sparkline view type: Area Highlight min/max points Highlight start/end points

Then in the "Sparkline" field, drag the "Month of Year" dimension. As a result, we get the following report:

Columns				
1 Category 12	Grid 1			± 53
	Category	Reseller Sales Amount	Internet Order Quantity vs Reseller Order Quantity	Reseller Order Count
Reseller Sales Amount	Accessories	\$571K		60
	Bikes	\$66.3M		179
Tabarat Order Overfite	Clothing	\$1.78M		127 221
Internet Order Quantity	Components	\$11.8M		97 257
Reseller Order Quantity				
Reseller Order Count				
New Column	-			
Sparkline				
↑ Month of Year				
HIDDEN DATA ITEMS				
Dimensions				
Dimension				
Measures	-			

Fill out the form in the following way:

The following data is displayed in the sparkline column:



8.6.4 Hyperlink column

A hyperlink column allows you to display hyperlinks in the Grid dashboard item.

You can provide hyperlinks as a separate data column or they can be automatically created at run-time from any column using the specified URI pattern.

8.6.4.1 Data Field Containing Uri Values

For example, take the data source of type excel-table, which contains the following fields:

E1	1 *	$\times \checkmark f_x$		
	А	В	с	D
1	Name	Link	Reseller Sales Amount	
2	Australia	https://en.wikipedia.org/wiki/Australia	1,594,335.38	
3	Canada	https://en.wikipedia.org/wiki/Canada	14,377,925.60	
4	France	https://en.wikipedia.org/wiki/France	4,607,537.94	
5	Germany	https://en.wikipedia.org/wiki/Germany	1,983,988.04	
6	United Kingdom	https://en.wikipedia.org/wiki/United Kin	4,279,008.83	
7	United States	https://en.wikipedia.org/wiki/United Sta	53,607,801.21	
8				

Now let's create a table and fill it with the following data:

Columns			
↑ Name 🖾	Column Options		x
1 Link	Column type:		
Reseller Sales Amou \sum	1 O Measure O Delta	URI Pattern: Insert Placeholder	
New Column	🔘 Sparkline		
Sparkline Argument	e Hyperlink 2		
HIDDEN DATA ITEMS Dimensions			
Dimension		OK Cancel Apply	

The Grid displays column values as clickable hyperlinks allowing you to navigate to the Wiki's pages:

Grid 1		Ċ 23
Name	Link	Reseller Sales Amount (Sum)
Australia	https://en.wikipedia.org/wiki/Australia	1.59M
Canada	https://en.wikipedia.org/wiki/Canada	14.4M
France	https://en.wikipedia.org/wiki/France	4.61M
Germany	https://en.wikipedia.org/wiki/Germany	1.98M
United Kingdom	https://en.wikipedia.org/wiki/United Kingdom	4.28M
United States	https://en.wikipedia.org/wiki/United States	53.6M

You can bind the display value and URI value to different data fields. Click the "New Column" data item placeholder:

Columns				
1 Name 12		Grid 1		Ċ \$3
		Name	Reseller Sales Amount (Sum)	
Reseller Sales Amou	2	Australia		1.59M
Reseller Sales Alliou		Canada		14.4M
Num Column	A	France		4.61M
New Column		Germany		1.98M
Sparkline Argument		United Kingdom		4.28M
		United States		53.6M

and change its type to	o "Hyperlink":	
Column Options		x
Column type: Dimension Measure Delta Sparkline Hyperlink Auto	URI Pattern: Insert Placeholder	
	OK Cancel Appl	у

Drag and drop the "OfficialName" field to the display value data item placeholder to display official country names. Drag and drop the "Link" field to the Uri data item placeholder to specify URIs.

The Grid displays official country names with links obtained from the Link data source field:

Columns						
↑ Name	l ta	Grid 1				
		Name	Reseller Sales Amount (OfficialName		
Bosollor Salos Amou	~	Australia	1.59M	Commonwealth of Australia		
Reseller Sales Aniou		Canada	14.4M	Canada		
A OfficialName		France	4.61M	French Republic		
	ABC	Germany	1.98M	Federal Republic of Germany		
Link	100	United Ki	4.28M	United Kingdom of Great Britain and No		
		United St	53.6M	United States of America		
New Column	A					

8.6.4.2 URI

In this case, a specified URI pattern is used to generate links. Create the following grid:

Columns		
↓ Name tz	Grid 1	בֹם בַּא
	Name	Reseller Sales Amount (Sum)
Peseller Sales Amou	United States	53.6M
	United Kingdom	4.28M
	Germany	1.98M
New Column	France	4.61M
	Canada	14.4M
Sparkline	Australia	1.59M
Argument	1	

Click the "Column Type" indicator button next to the "Name" data item and change its type to "Hyperlink". Specify the URI Pattern option as follows: https://en.wikipedia.org/wiki/{0}

Column Options		x
Column type: O Dimension Measure Delta Sparkline Hyperlink	URI Pattern:	https://en.wikipedia.org/wiki/{0} Insert Placeholder
		OK Cancel Apply

The {0} placeholder is replaced with the "Name" data item value. The links are generated for country names and displayed in the grid as illustrated in the following picture:

Grid 1	t t
Name	Reseller Sales Amount (Sum)
United States	53.6M
United Kingdom	4.28M
Germany	1.98M
France	4.61M
Canada	14.4M
Australia	1.59M

8.6.5 Drill Down

Let's see what product subcategories in the "Accessories" category were of positive dynamics. For this, in the "Data" tab on the toolbar, click the "Drill Down" icon



and in the grid itself, in the "Columns" field under the "Category" hierarchy, drag the "Subcategory" hierarchy:

Columns	
Category	ť2,
↑ Subcategory	12,
Reseller Sales Amount	Σ
Internet Order Quantity	
Reseller Order Quantity	
Reseller Order Count	~~~~
New Column	A

Now by clicking the "Accessories" product category, we will see all the product subcategories that it includes:

Grid 1 - Accessories			白 🔊 🗄
Subcategory	Reseller Sales A	Internet Order Quantity vs	Reseller Order Count
Bike Racks	\$198K		24
Bike Stands			0 • 0
Bottles and Cages	\$7.48K		26 47
Cleaners	\$11.2K		27
Fenders			0 • 0
Helmets	\$259K		54 90
Hydration Packs	\$65.5K		16 🛻 30
Locks	\$16.2K		11 22
Pumps	\$13.5K		12 22
Tires and Tubes	\$925		2 13

In order to get back to the initial grid view click a grid icon:

Grid 1 - Accessories			ப் <mark>5</mark> 🕄
Subcategory	Reseller Sales A	Internet Order Quantity vs	Reseller Order Count
Bike Racks	\$198K		24

8.6.6 Additional grid properties

In a "Design" tab of a Grid dashboard element the following toolbar is available:

0	Gri	d Tools		Dashboard Designer							
Home	Data	Design	1								
Show Capt	ion Ed	Ab it Names	Horizontal Lines	Vertical Lines	Banded Rows	Merge Cells	Column Headers	A Word Wrap	→I I← AutoFit to Contents	AutoFit	Manual
C	Common			Style		Layout			Column Width Mode		

- ✓ Horizontal Lines show horizontal grid lines;
- ✓ Vertical Lines show vertical grid lines;
- \checkmark Banded Rows banded rows are not supported when cell merging is enabled;

Category	Reseller Sales Amount	Internet Order Quantity vs Reseller Ord.		Reseller Order Count		
Accessories	\$571K			60 60		
Bikes	\$66.3M			179 179		
Clothing	\$1.78M			127 127		
Components	\$11.8M			97 97		

✓ Merge Cells – merge adjacent cells with identical data ("Drill Down" has to be off);

Category	Subcategory	Reseller Sales Amount	Internet Order Quantity vs Re	Reseller Order Count
	Bike Racks	\$198K		24 24
	Bike Stands			0 • 0
	Bottles and Cages	\$7.48K		26 26
	Cleaners	\$11.2K		27 27
Accessories	Fenders			0 • 0
Accessories	Helmets	\$259K		54 54
	Hydration Packs	\$65.5K		16 16
	Locks	\$16.2K		11 11
	Pumps	\$13.5K		12 12
	Tires and Tubes	\$925		2 2
Bikes	Mountain Bikes	\$26.5M		63 63
	Road Bikes	\$29.4M		93
	Touring Bikes	\$10.5M		23 23

- ✓ Column show column headers;
- ✓ Word Wrap;
- ✓ AutoFit to Contents;
- ✓ AutoFit to Grid;
- ✓ Manual adjust the width of columns manually.

By clicking a grid title, the following functionality will be available:

Table1								5	9	
Category	Su	AB	Eit to Contor	- " -	ales A	Internet Orde	Reseller Order Count			
	Bi	H++H	Fit to Conter	ii.	\$198K		24	24	*	
	Bi	HOH	Fix Width				0 •	-• 0		
	В	 ₩ ₩	Column Widt	h	\$7.48K		26	2 6		
Cl Fe	Add Format Dula	\$11.2K		27	e 27					
	Fe		Additionnach	Nuic P			0 •	-•0		
Accessories	H		Edit Rules		\$259K		54	- 54	=	
	H	H 🗐	5	Clear Rules		\$65.5K		16	- 1 6	
	Lc		Add Total	•	\$16.2K		11	▶ 11		
	Pι	-					12	> 12		
	Ti	5	Clear Totals		\$925		2	e 2		
	M	ounta	in Bikes		\$26.5M		63 👝 📥 🖊	* 63		

- ✓ Fit to Content fit the column width to its content;
- ✓ Fit Width specify the column width and fix it;
- ✓ Column Width specify the fixed column width;
- ✓ Add Format Rule possibility to choose one of the formatting ways form a dropdown list (the process is described in more details in abstract 8.18);
- ✓ Edit Rules possibility to change the existing highlighting rules;
- ✓ Clear Rules deletion of all the highlighting rules;
- ✓ Add Total possibility to display:

6	Min
ß	Max
∑⁄∩	Average
Σ	Sum
N	Count

✓ Clear Totals – delete all summaries.

Let's display the minimum and maximum value of the "Reseller Sales Amount" measure in our grid:

Grid 1 - Accessories			白 🔊 🖾
Subcategory	Reseller Sales A	Internet Order Quantity vs	Reseller Order Count
Bike Racks	\$198K		24 45 🔺
Bike Stands			0 • • 0
Bottles and Cages	\$7.48K		26
Cleaners	\$11.2K		27 39
Fenders			0 • • 0 .
	Min = \$925		
	Max = \$259K		

8.6.7 Export

A grid can be exported into PDF, Excel or a picture format. Way are described in abstract 8.5.13.

8.7 Chart

To create a chart, you need to click a "Chart" icon in the dashboard designer window on the toolbar:



As a result, a new dashboard element appears:

DATA ITEMS	10		rîa
Values (Pane 1)			
Value	dt	Chart 1	<u>с</u> р 23
Arguments			
Argument			
Series			
Series			
HIDDEN DATA ITEMS			
Dimensions			
Dimension			
Measures			
Measure			

The left item contains the following chart parameters:

- Values measure, data is displayed on the Y-axis;
- Argument dimension, data is displayed on the X-axis;
- Series dimension, data that is used to create series.

In the field on the right there will be a chart itself.

Let us create a chart, which will show the sales volume of product categories by year. Having filled in the fields as in the picture below, you will get the following chart:



Let us change its type:



A window of the following view will open:

Se	eries Optio	ons						x
	Series Tv	/De Cor	nmon Ontic	ons Poir	nt Label Or	tions		
	Гистогра	ммы			it caper op			
	Точки / Л	Іинии						
	0 0 0 0 0 0 0	$\not>$	***	\sim	ئ ا	\mathcal{I}		
	Области							
	Диапазон	ны						
	Пузырьки	И						
	00							
	Финансов	зые						
	ţţŀţ	ļ¢ļ	$\dagger 1_{\rm J}$					
						ОК	Cance	1

The first tab "Series Type" allows redefining a chart type. Among all the suggested options, let us choose "Full-Stacker Bar":



A "Common Options" tab offers following possibilities:



- ✓ Plot on secondary axis data is displayed secondary axis
- \checkmark Ignore empty points not to display zero values in a chart;
- ✓ Show point markers for a chart of an "Area" type point markers are displayed.

We will not change anything here.

In a "Point Label Options" tab, the following possibilities are available:

Series Options				x
Series Type Common Op	otions	Point Label Options		
Point label options				
Content:	None		•	
Overlapping mode:	Hide o	overlapping labels	•	
Orientation:	Defau	ılt	•	
Bar options				
Show for zero values:				
Position:	Outsi	de	Ŧ	
		ОК	Cance	1

- ✓ Content:
 - Select All
 - Argument
 - Series Name
 - Value
 - Percent
- ✓ Overlapping mode:
 - Hide overlapping labels hide overlapping labels;
 - None display all the labels;
 - Reposition overlapping labels hide overlapping labels regime is off (all the labels without overlapping will be shown).
- ✓ Orientation:
 - Default labels are located horizontally;
 - Rotate to the Right labels rotation for 90 degrees clockwise;
 - Rotate to the Left labels rotation for 90 degrees counterclockwise.
- ✓ Bar options:
 - Show for zero values to display or not to display zero values;
 - Position labels position either outside or inside (for Histograms and Bubbles).

Fill out the following tab as shown below:

Se	ries Options							x
	Series Type	Common O	ption	Point La	bel Optio	ns		
1	beneb type	Contract of						
	Point label	options						
	Content:		Value				•	
	Overlappin	g mode:	Hide o	verlappin	g labels		-	
	Orientation	:	Defau	lt			•	
	Bar options	1						
	Show for ze	ero values:						
	Position:		Outsid	le			Ŧ	
						1		
						ж	Cance	1

As a result, the report will have the following view:



Let us add one more data panel:

DATA ITEMS	1 6
Values (Pane 1)	
Reseller Sales Amount	
Value	di.
Arguments	
Category	
Argument	

To the existing chart, we add one more panel that displays the number of orders for all the same product categories by year. For this, drag the "Reseller Order Count" measure to the value bar, select the "Spline" type of the chart and set the following parameters on the remaining tabs:

Se	eries Options		x
	Series Type Com	mon Options Point Label Options	
	 Plot on secon Ignore empty Show point m 	dary axis points arkers	
Se	eries Options		x
	Series Type Com	mon Options Point Label Options	
	Point label option	s	
	Content: Overlapping mod	Value	
	Orientation:	Default 🔻	

As a result, we will get the following chart:



8.7.1 X/Y – Axis settings

The chart in the dashboard has two axes – "X" and "Y". The "X"-axis is the axis of the arguments, and the "Y"-axis is the numerical axis of the measure value. The following options for chart are in the "Design" tab:



- ✓ Rotate rotate the diagram at 90°
- ✓ "X" Axis Settings
- ✓ "Y" Axis Settings

Let us have a look at the settings for each axis.

For "X"-axis, the following parameters are available:

Category
10 🖕
OK Cancel

- ✓ Reverse display values in descending order;
- ✓ Enable zooming
- ✓ Show X-axis
- ✓ Show title
 - Default text dimension name
 - Custom text text, entered by a user
- ✓ Limit visible points a number of visible point on an axis.

For "Y"-axis, the following parameters are available:

Pane 1	•
Always show zero level	
Reverse	
🗹 Show grid lines	
🖌 Show axis	
🗹 Show title	
Oefault text	
Custom text	Reseller Sales Amount
Logarithmic scale	10 -

- ✓ Always show zero level
- ✓ Reverse rotate an axis at 180°
- ✓ Show grid lines to display or not to display grid lines
- ✓ Show axis show/hide an axis
- \checkmark Show title to display or not to display a title;
 - Default text dimension name
 - Custom text text, entered by a user
- \checkmark Logarithmic scale to display or not to display a logarithmic scale.

8.7.2 Legend

To change the location of the legend, go to the "Design" tab:

	•			0	.0	0					
6	Chart Tools				Dashboard Designer						D
Home	Data Design									\sim	
Show Cap	tion Edit Names	Rotate X-A Setti	ris Y-Axis ngs Settings	Show Legend			 ✓ ✓ ✓ 	Global Colors	Local Colors	Edit Colors	
(Common	Diag	Iram		Legend	Series Type			Colorin	g	

The following functionality will be available on the toolbar:

- ✓ Show Legend to display or not to display a legend;
- ✓ Legend location:



Inside Ho	rizontal	*
Inside Ve	rtical	
Outside H	lorizontal	
Outside V	/ertical	
		~

8.7.3 Series Type

You can change the type of the row on the toolbar in a "Design" tab.



The following chart types are available in the drop-down list:

Bar					*
Point / Lin	ie				
° • • ° • •	\gg	***	·····	ٵؖؠ	
S					
Area					
Range					
J					
Bubble					
•					
Financial					
ţţţ	ļ¢∮	† []]			-

8.7.4 Edit Colors

You can change the color of the chart elements in two ways: Way 1. Click an "Edit Colors" icon in the "Design" tab toolbar:

	Cincit Tools			Dashboard Designer						x
Home	Data Design	1		busilburd besigner						\$
Show Caption	n Edit Names	Rotate X-Axis Settings	Y-Axis Settings	Show Legend		< ₽ ₽	Global Colors	Local Colors	Edit Colors	
Co	Common Diagram			Legend	Series Type		Coloring			
	Way 2. Click an "Edit Colors" icon in the "Home" tab toolbar:									

()				Dashboard Designer																					
Home	Data Design	n																							
H					00		Ø				7		AB			×	Ì		ø	AB	S		G	C	
Save	Undo Redo	Pivo	Grid	Chart	Scatter Chart	Pies	Gauges	Cards	Treemap	Range Filter	Filter Elements ▼	Images •	Text Box	Group	Duplicate	Delete	Remove Data Items	Transpose	Convert To 🔻	Title	Currency	Edit Colors	Automatic Updates	Update	Parameters
File	History							Ins	ert								Item				-	Dash	board		

Global Color Scheme	x
Adventure Works: Calendar Year MeasureNames	Delete New Color Table
Value	Color
CY 2015 Reseller Order Count	Auto
CY 2015 Reseller Sales Amount	Palette index: 7
CY 2016 Reseller Order Count	Automatic
CY 2016 Reseller Sales Amount	-
CY 2017 Reseller Order Count	Palette Colors
CY 2017 Reseller Sales Amount	
CY 2018 Reseller Order Count	
CY 2018 Reseller Sales Amount	
	More Colors
New Value	OK Cancel Apply

8.7.5 Drill Down

Such a function as **Drill Down** is possible for charts. It is described in abstract 8.6.5 in more details.

8.7.6 Export

Charts can be printed and exported into PDF, Excel or an image. Ways to do this are described in abstract 8.5.13

8.8 Scatter Chart

In order to create a scatter chart click a "Scatter Chart" icon in "Dashboard Designer" window toolbar:

()	Scatter	Chart Tools	ols Dashboard Designer								
Home	Data	Design									
Save		Pivot Grid	Chart	Scatter Chart	Pies	(Gauges	Cards	 Treemap Range Filter Filter Elements • 	 Images ▼ A Text Box Group 		
File	History		Insert								

An empty scatter chart will appear:

0	Scatter Chart Tools						Dashboard Designer							1 X		
Home	Data	Design														\sim
Save File	✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓<	Pivot	Grid	Chart	Scatter Chart	Pies	Gauges Insert	Cards		 ITreemap Range Filter Filter Elements ▼ 	 Images ▼ A Text Box Group 	Duplicate Delete Remove Data Items Item	 ★ ★ 	AB Title S Currency Edit Colors Dashboard	6	
Data So Advent	urce tureWorks		•	DAT X-a	A ITEMS							Scatter				Ċ
I↓2 I	🖁 😫	Works				X-axis				Scatter Chart 1					<u>t</u>	1 8 3
+	Measur	es t	[Y-a:	xis	Y-axis										
•	 ▶ Weight ▶ Date 															
	Leivery Date Weight Department Arguments															
	💽 Employ 💽 Geogra	ee phy				Argumen	t									
) 	💽 Interne	t Sales Or ation	der	HID	DEN DATA	ITEMS										
•	Implication Implicati															
	👿 Resellei 🔯 Resellei	r Sales Oro	der	Mea	sures											
	过 Sales C 🔯 Sales R	eason	rde			measure	2									
	Sales Si Sales To Scenari	erritory o	iue (
	tox		-	·												

A scatter chart contains the following fields:

- ✓ "X"-Axis contains the data item against which the X-coordinates of data points are calculated;
- ✓ "Y"-Axis contains the data item against which the Y-coordinates of data points are calculated;
- ✓ Weight contains the data item whose values are used to calculate the weight of data points;
- ✓ Argument contains data items providing scatter chart arguments that are used to create data points.

Let us build a scatter that will display the values of the "Sales Amount" measure and "Gross Profit Margin" measure for product categories, and the size of the circle will correspond to the value of the "Gross Profit" measure.

To do this, drag the "Sales Amount" measure to the "X"-axis, "Gross Profit Margin" measure to the "Y"-axis, "Gross Profit" to the "Weight" field, and drop the "Category" hierarchy into the argument:



By default, a scatter chart does not contain the elements coloring. In order to color the elements, you need to select "Hue" from the drop-down list by right-clicking the "Category" hierarchy in the context menu:





As a result, a scatter chart will have the following view:

Let us find out which subcategories of products of the "Bikes" category gave such a high profit. To do this, select the "Subcategory" hierarchy in the argument field, and enable the "Drill Down" in the "Data" tab:





By clicking the "Bikes" product category, we will see the number of product subcategories that it includes, and the corresponding measures values for them:

Let us turn "Hue" on for subcategories as well:





To return to the previous detail level (drill up), use the Drill Up button (the 🔊 icon).

8.8.1 X/Y – Axis settings

In a "Design" tab, there are the following scatter chart parameters:



✓ Rotate - rotate at 90°

- ✓ "X"-Axis Settings
- ✓ "Y"-Axis Settings

Note: axis properties are described in more details in abstract 8.7.1

8.8.2 Point Labels

In order to display points, values in a scatter chart, you need to click the following icon in "Design" tab in a toolbar:

0	Scatter	Chart Te	ala					Dashbo	ard Designer					
Home	Data	Design												
Show Cap	tion Edit	Names	Rotate	X-Axis Settings	Y-Axis Settings	Point Labels	Show Legend			▲ ▼ ₹	Global Colors	Local Colors	Edit Colors	
	Common			Diagram		Labels		Leger	nd			Colorir	ng	

As a result, a form with the following parameters will appear:

Point Label Settings	x	
Show point labels:		
Content:	Argument 👻	
Overlapping mode:	Hide overlapping labels -	
Orientation:	Default 🔹	
Position:	Outside 🔹	
	OK Cancel	

- \checkmark Show point labels to display or not to display labels;
- ✓ Content labels values
 - Argument point labels show argument values;
 - Weight point labels show the weight summary value;
 - Values point labels show summary values from "X" and "Y"-axes;
 - Argument and weight point labels show the argument value and the corresponding weight summary value;
 - Argument and values point labels show argument values and corresponding summary values.
- ✓ Overlapping mode
 - Hide overlapping labels if two or more labels overlap, some of them are automatically hidden to avoid overlapping;
 - None the overlapping resolving algorithm is disabled;
 - Reposition overlapping labels the default algorithm to re-position point labels in a random way, and avoid overlapping labels.
- ✓ Orientation:
 - Default A point label is displayed in its default orientation;
 - Rotate to the Right A point label is rotated 90 degrees clockwise;
 - Rotate to the Left A point label is rotated 90 degrees counter clockwise.

- ✓ Position
 - Outside labels are located inside a point;
 - Insite labels are located outside a point.

For a scatter chart, you can also change legend's location and redefine coloring for toolbar elements. This process is described in more details in abstracts 8.7.2 and 8.7.4.

8.8.3 Drill Down

For a Scatter Chart such functionality as "Drill Down" is also available. Its working principle is described in abstract 8.6.5.

8.8.4 Export

When it is necessary, you can print or export a Scatter Chart into PDF, Excel or an image.

✓ Export To PDF

While exporting, the following options are available:

Export To PDF - Scat	tter Chart 1 X
Page Layout:	 Portrait Landscape Auto
Size:	Letter 🔻
Show Title:	\checkmark
Title:	Scatter Chart 1
Size Mode:	 None Stretch Zoom
Include:	Filters
Desitions	Parameters
Position:	Delow
Reset	Export Cancel

- Page Layout specifies the page orientation used to export a Scatter Chart dashboard item;
- Size specifies the standard paper size;
- Show Title specifies whether or not to apply the dashboard item caption to the exported document title;
- Title specifies the title of the exported document;
- Size Mode specifies the export size mode for the Scatter Chart dashboard item;
- Include Filters / Parameters allows you to include master filter values / parameter values to the exported document;
- Position specifies the position of the master filter and parameter values in the exported document.
- ✓ Export to Excel See abstract 8.5.13
- ✓ Export to Image See abstract 8.5.13

8.9 Pies

In order to create Pies, click the following icon in a dashboard designer window:

0	Scatter	Citari To	ols					Dashboard Designer	
Home	Data	Design							
E Save	4 +	Pivot	Grid	Chart	Scatter	Pies Gauges	Cards	 Treemap Range Filter Filter Elementa - 	 Images ▼ A Text Box Crown
					Chart			T Hiter Liements •	ella group
File	History					Inser	t		

Let us create pies that will display the gross profit margin by product categories. For this, let us move the "Gross Profit Margin" measure into a value field, and "Category" into an argument:





Now let us have a look how "Gross Profit Margin" measure value has changed through the years. For this, let us move "Calendar Year" into rows:

If necessary, you can quickly swap the value of an argument and a row by using the following icon on the toolbar:



8.9.1 Layout

In a "Design" tab, you can define the way to display pies elements:

0	Pies	Tools				
Home	Data	Desigr	1			
Show Cap	tion Edit	Names	Auto Arrange	Arrange in Columns	Arrange in Rows	Count 3 🌲
(Common			Content A	rrangemen	it

 ✓ Auto Arrange – by default, the "Auto Arrange" option is enabled, which automatically resizes pies to fit within the dashboard item;



✓ Arrange in Columns – place the elements in the given number of columns:





8.9.2 Labels

Pies display "data labels" that contain descriptions for pie segments, and provide "tooltips" with additional information:



In "Data Labels" and "Tooltips" drop-down lists, you can choose one of the ways to display data values:

	None
	Argument
	Value
	Argument And Value
	Percent
	Value And Percent
\checkmark	Argument And Percent
	Argument, Value And Percent

Let us display the value of "Gross Profit Margin" in the data signatures of our pies, while in the tooltips - the share value, and display the signatures to the pies itself:



Pies will look the following:



8.9.3 Data Labels Position

Data Labels Position may be as follows:



8.9.4 Style

Pie has two ways to display:



8.9.5 Edit Colors

Default colors can be edited if needed. This process is described in more details in abstract 8.7.4.

8.9.6 Drill Down

Such a function as **Drill Down** is available for pies. Its working principle is described in abstract 8.6.5.

8.9.7 Export

If needed, pies can be exported into PDF, Excel or an image. It is described in more details in abstract 8.5.13

8.10 Gauges

In order to create a dashboard element called "Gauges" you need to click the following icon in a designer window toolbox of a dashboard:

6	Pla	s Tools										Dashboard	d Designer
Home	Data	Desig	n										
						•••		Ø				Ţ	Images • A Text Box
Save	Undo T	Redo •	Pivot	Grid	Chart	Scatter Chart	Pies	Gauges	Cards	Treemap	Range Filter	Filter Elements ▼	Group
File	Hist	tory						I	nsert				

Gauges is a kind of an indicator, which displays the following values: target, actual, delta value.

Target is a gauges arrow, "Actual" is a gauges sign on the scales, "Delta" is an indicator sign on a gauges.

Let us have a look at gauges that have "Reseller Sales Amount" measure as a target, and "Internet Sales Amount" as a actual, and analyze them in terms of product categories. For this, fill in the fields in the following way:

DATA ITEMS							
Gauges							
Internet Sales Amount							
Reseller Sales Amount							
Actual							
Target	~						
Series							
Category							
Series							

As a result, we will get some gauges:



8.10.1 Delta

By default, a gauge shown the difference between an actual and a target. This difference is called delta:



In order to change delta settings you need to click the following icon:

Internet Sales Amo	
Reseller Sales Amo	Ť.

A form with the following indicator parameters will appear:

Minimum value	0 🌲 🗹 Auto
Maximum value	60000000 🌲 🗹 Auto
Delta Options	
Value type:	Absolute variation
Result indication:	Greater is good 🔹
Threshold type:	Percent -
in contra type	

Value type:

- ✓ Actual Value value of an actual measure;
- ✓ Absolute Variation difference between an actual and a target;
- ✓ Percentage Variation percent of difference between an actual and a target;
- ✓ Percentage of Target percent of an actual and a target.

Result indication:

- ✓ Greater is Good The 'good' indication is displayed if the actual value exceeds the target value; if the target value exceeds the actual value, the 'bad' indication is displayed;
- ✓ Less is Good The 'bad' indication is displayed if the actual value exceeds the target value; if the target value exceeds the actual value, the 'good' indication is displayed;
- ✓ Warning if Greater A warning is displayed if the actual value exceeds the target value; otherwise, no indication is displayed;
- ✓ Warning if Less A warning is displayed if the target value exceeds the actual value; otherwise, no indication is displayed;
- ✓ No Indication Indication is not displayed.

For the delta, you can set the threshold value, which will indicate the excess of the actual above the target. The threshold type can be percent or absolute.

Let us display the percentage of difference between an actual and a target for our gauges. We are interested in those values for which the percentage of difference is greater than zero. For this, fill out the form as follows:

auge Options	
Scale Options	
Minimum value	0 🌲 🗹 Auto
Maximum value	60000000 🌲 🗹 Auto
Delta Options	
Value type:	Percent variation 🔹
Result indication:	Greater is good 🔹
Threshold type:	Percent 🔹
Threshold value:	þ.00 % 🗘
	OK Cancel

As a result, we will get gauges of the following view:



8.10.2 Gauge Scale

By default, the Gauge dashboard item automatically determines the range of the gauge scales based on the values they display.

You can override this behavior and specify maximum and minimum values on the scale:

Scale Options	
Minimum value	0 🏮 🗹 Auto
Maximum value	60,000,000. 🗘 🗌 Auto
Delta Options	
Value type:	Percent variation 🔹
Result indication:	Greater is good 🔹
Threshold type:	Percent 🔹
Threshold value:	0 🛟
	OK Cancel

8.10.3 Layout

Different layout options are available for gauges. Principle and working method are described in abstract 8.9.1.

8.10.4 Style

The Gauge dashboard item allows you to select the gauge type:

0	Gauge	s Tools		Dashboard Designer												
Home	Data	Design														
	A	b /	Α			Count	3 1									
Show Capti	on Edit	Names	Auto Arrange	Arrange in Columns	Arrange in Rows			Full Circular	Half-Circular	Left-Quarter Circular	Right-Quarter Circular	Three-Fourth Circular	Linear Horizontal	Linear Vertical	Show Gauge Captions	
C	ommon			Content A	rrangemer	nt		Style Labels								

8.10.5 Drill Down

Such a function ad "Drill Down" is available for indicators. Working principle of this functionality is described in abstract 8.6.5.

8.10.6 Export

You can print indicators as well as export them into PDF, Excel or an image. The ways are described in abstract 8.5.13.

8.11 Cards

To create a "Cards" dashboard element, click the toolbar icon in the dashboard designer window:



A "Cards" dashboard element is a series of cards, each of which displays the difference between two values (measures).

Let's show the difference between the two measures "Reseller Sales Amount" and "Reseller Total Product Cost" for subcategories of products. For this, fill in the fields as follows:



As a result, we received several cards that display:



8.11.1 Delta

In order to set or change the delta value, you must click (the 🌞 icon):



In the opened form "Card Settings" go to the "Delta Options" tab:

Ca	ord Settings		×
	Layout Options	elta Options Dparkline Options Format Options	
	Result indication:	Greater is good	-
	Threshold type:	Percent	•
	Threshold value:		0 🌲
		OK Cancel A	vpply

Then, specify the following settings:

- ✓ Result indication:
- Greater is good the 'good' indication is displayed if the actual value exceeds the target value; if the target value exceeds the actual value, the 'bad' indication displays



• Less is good – the 'bad' indication displays if the actual value exceeds the target value; if the target value exceeds the actual value, the 'good' indication displays



• Warning if greater – a warning is displays only if the actual value exceeds the target value



• Warning if less – a warning is displays only if the target value exceeds the actual value; otherwise, no indication is displayed



• No Indication – indication is not displayed.

\$25.1M	\$30.5M
Mountain Bikes	Road Bikes
Bikes	Bikes
-5.36 %	+3.99 %
-1.42M	+1.17M

For the delta, you can set a threshold value, which will indicate an excess of an actual above a target.

The threshold type can be percent or absolute.

8.11.2 Sparkline

Sparklines can be used to visualize the variation of actual or target values (for instance, over time).

Let us analyze the change in actual value in terms of months of the year. For this, move the "Month of Year" hierarchy into the "Sparkline" field:

DATA ITEMS	^		rîn.
Cards			
Reseller Total Product Cost		Cards 1	<u>ٹ</u> 23
Reseller Sales Amount		\$25.1M v	\$30.5M
Actual			
Target		Mountain Bikes	Poad Bikes
Series	l	Mountain Dikes	Rodu Dikes
Series		DIKes	BIKES
Category			
1 Subcategory			
Series		-5.36 %	+3.99 %
		-1.42M	+1.17M
Sparkline		\sim \sim \sim	
↑ Month of Year	Ŧ		· · · · ·

Card Settings	x
Layout Options Delta Options Sparkline Options Format Options	
Sparkline view type: Line 🔹	
☑ Highlight min/max points	
Highlight start/end points	
OK Cancel Apply	

Sparkline itself has the following parameters:

- ✓ Sparkline view type defines the sparkline's view type. Sparkline data points can be represented as area, line, bars, or win and loss squares.
- ✓ Highlight min/max points specifies whether to highlight the minimum/maximum points of a sparkline;
- ✓ Highlight start/end points specifies whether to highlight the start/end points of a sparkline.

8.11.3 Card Layouts

To change a card's layout, click the "Options" button (the icon) displayed next to the data item container in the Cards section:



In the form that opens, the fo	ollowing layou	s are available	on the "Layout	Options" tab:
Card Settings				x
Select template: Stretched Centered Compact Lightweight	Sparkline Options Min width: Max width: Visible Visibl	Format Options Value/Element Actual Value Title Subtitle Percent Variation Absolute Variation Delta Indicator Sparkline	0	200 🛟
	Apply to All Car	ds		Reset
		ОК	Cancel	Apply

✓ Stretched – the Stretched layout template arranges card elements so that they occupy an entire card area



✓ Centered – the Centered layout template is used to center card elements so that they occupy a specified width/height



✓ Compact – the Compact layout template is used to arrange card elements so that they occupy the minimum area



✓ Lightweight – the Lightweight layout template displays the minimum set of elements within a card



For all layout types, you can change the visibility of its elements, or you can specify the display value type for data-bound elements:

Layout Options	Delta Options	Sparkline Optio	ns Format Options		
Select template:		Min width:			200 *
Stretched		- In the contract of the contr			
Centered		Max width:		0 📮	V Auto
Compact		Visible	Value/Element		
Lightweight		\checkmark	Actual Value		•
			Title		
		\checkmark	Subtitle		
		\checkmark	Percent Variation		
		\checkmark	Absolute Variation		
			Delta Indicator		
		\checkmark	Sparkline		
		Apply to All C	ards		Reset

On the "Layout Options" tab, select the required layout type in the "Select template" list and specify its settings:

- Min width specifies the minimum width of the card content;
- Max width specifies the maximum width of the card content. Use the "Auto" option to determine the maximum width automatically;

You can show/hide the following values and visual elements within the card:

- ✓ Actual Value a summary value for a measure placed in the Actual placeholder;
- ✓ Title displays values of the last (bottommost) dimension placed in the Series section;
- ✓ Subtitle displays combined values of all dimensions except the last (bottommost) dimension;
- ✓ Percent Variation a percent difference between the actual and target value;
- \checkmark Absolute Variation an absolute difference between the actual and target value;
- ✓ Delta Indicator indicates whether the actual value is less or greater than the target value
- \checkmark Sparkline visualizes the variation of actual or target values.

8.11.4 Format Options

The Card dashboard item formats the actual and target values displayed within cards using format settings specified for data items. Click the options buttons (the settings icon) displayed next to the data item container in the Cards section to change format settings for other values:

Reseller Total Product Cost) ₂₄₀
Reseller Sales Amount	

In the invoked "Card Settings" dialog, go to the "Format Options" tab and use the "Select value type" option to specify which values' format settings should change:

a)out op dono	Delta Options	Sparkline Options	Format Options	
elect value type:				
Actual value Target value		Format type:	Currency	•
Absolute variation	n	Unit:	Auto	-
Percent variation		Precision:		2 🖕
		Currency:	Use dashboard settings	•
		Culture:	Use dashboard settings	Ŧ
		🗹 Include group	separator	
			\$1.23B (\$1.23B)	

8.11.5 Cards Arrangement

The following display methods are available for the cards in the "Design" tab:

()	C	ards	Tools					
Home	Dat	ta	Design					
Show Capi	tion	Al L	b Names	Auto Arrange	Arrange in	Arrange	Count	3 🖕
				_	Columns	in Rows		
(Commo	on			Content A	rrangemen	nt	

The principle of functionality is similar to that of Pies – abstract 8.9.1

8.11.6 Drill Down

Such a function as Drill Down is available for Cards. The principle of this functional is described in abstract 8.6.5.

8.11.7 Export

Cards may be exported into PDF, Excel or an image. Ways to do this are described in abstract 8.5.13

8.12 Treemap

To create a Treemap, click the corresponding icon on the toolbar:

()								Dash	board Des	igner		
Home												
P	🖏 Undo 🔻	<u>ک</u>			••		Ø			•••	7	images ▼
Save	🊧 Redo 🔻	Pivot	Grid	Chart	Scatter Chart	Pies	Gauges	Cards	Treemap	Range Filter	Filter Elements ▼	Group
File	History						I	nsert				

Let us display the volume of sales by product categories. Having filled in the fields as in the picture below, we get a treemap of the following view:

DATA ITEMS		гîл
Values		
Reseller Sales Amount	Treemap 1	Ċ Š.
Value	Bikes	Components
Value		
Arguments		
Category		
Argument		
HIDDEN DATA ITEMS		
Dimensions		
Dimension		
Dimension		
Measures		
Measure		
		(1)-(1)-(1)-(1)-(1)-(1)-(1)-(1)-(1)-(1)-
		Clothing
		Clothing

Now add a "Subcategory" hierarchy into an "Argument" fields:

DATA ITEMS

Values		<u> </u>
Reseller Sales Amount	Treemap 1	רַם רַיַ
Value	Bikes - Road Bikes	Bikes - Touring Bikes
Arguments		
Category		
Subcategory		
Argument		
HIDDEN DATA ITEMS		Components - Mountain
Dimensions		Frames
Dimension	Bikes - Mountain Bikes	
Measures		Components - Road Frames
Measure		
		Compon - Touring Frames Cl

Let us group the subcategories of one group of products:

Values	
Reseller Sales Amount	Treemap 1
Value	Bikes - Road Bi
Arguments	
Category	D
Subcategory	Top N
Argument	Color by 🕨 🕨
	Group Tiles
	Rename
HIDDEN DATA ITEMS	-

Treemap 1		Ċ 23
Bikes		Components
Road Bikes	Mountain Bikes	Mountain Frames
		Road Frames
		Touring Frames
		Wh
Touring Bikes		Clothing Shame Shame

As a result, a Treemap will look as follows:

8.12.1 Layout

The following methods of displaying Treemap tiles are available on the "Design" tab:



- ✓ Slice and Dice this layout algorithm divides the space between items, slicing it in the specified direction depending on item value;
- ✓ Squarified the Squarified algorithm arranges tiles so that their width/height ratio will be closer to 1;
- ✓ Striped this algorithm is a modified version of the Squarified algorithm. The difference here is that tiles are drawn side by side as columns or rows;

✓ Layout Direction - you can also set a layout direction to specify an arrangement of tiles depending on their sizes:



8.12.2 Labels

There are two types of labels in a Treemap:

- ✓ Tiles Labels
- ✓ Group Labels

()	Tre	emap Tools											
Home	Dat	a Design											
		Ab				\mathbf{X}							
Show Capt	tion I	Edit Names	Slice and Dice	Squarified	Striped	Layout Direction •	Labels •	Tooltips •	Labels	Tooltips •	Global Colors	Local Colors	Edit Colors
Common				Lay	out		Tile I	abels	Group	Labels		Colorir	ng

The Treemap displays labels that contain descriptions for tiles and groups, and provide tooltips with additional information:



Use buttons within the "Tile Labels" / "Group Labels" ribbon groups to manage tile and group labels, respectively. These buttons invoke the drop-down menu, which is similar for all buttons:



8.12.3 Edit Colors

For a treemap the Color Editor functionality is available. The principle of its functionality is described in abstract 8.7.4.

8.12.4 Export

Treemap may be exported into PDF, Excel or an image. The ways to do this are described in abstract 8.5.13

8.13 Filter Elements

Filter elements represent a special type of dashboard item that allows you to apply filtering to other dashboard items.

To create a Filter dashboard element, click the icon:

Pivot	Grid	Chart	Scatter Chart	Pies	Gauges	Cards	Treemap	Range Filter	Filter Elements ▼	 Images ▼ A Text Box Group
					I	nsert				

The following filters are available in the drop-down list:

	Combo Box
	List Box
ťa	Tree View

✓ Combo Box – the Combo Box dashboard item allows to select a value(s) from the drop-down list.

Dimensions		
Calendar Year	Combo Box 1	- ~
	(All)	
Dimension	(All)	
	CY 2005	
	CY 2006	
HIDDEN DATA TIEMS	CY 2007	
HIDDEN DATA TEND	CY 2008	
Dimensions		

On the "Design" tab for this filter, there are two ways to select values:

()	Fili	er Ele	ament To	oola			
Home	D	ata	Design				
Show Cap	tion	A Edit I	b Names	©− O− Standard	Checked	Show 'All' Value	Enable Search
Common			Item	Туре	Item Se	ttings	

• Standard – allows to select only a single value:

Years	
(All)	-
(All)	
CY 2015	
CY 2016	
CY 2017	
CY 2018	

• Checked - allows to select multiple values in the invoked drop-down list:

Years	
(All)	•
🗹 (All)	
CY 2015	
V 2016	
V 2017	
V 2018	
OK Cancel	11.

✓ List Box - the List Box dashboard item allows to select a value(s) from the list

Dimensio	ns		
Γ <u>†</u>	Calendar Year	List Box 1	к я К 9
	Dimension	✓ (All)	
	Dimension	CY 2005	
		CY 2007	
HIDDEN	DATA ITEMS	V 2008	

On the "Design" tab for this filter, there are two ways to select values:



• Checked – allows to select multiple values in the list box

List Box 1	K 3
🔲 (All)	
CY 2005	
CY 2006	
V 2007	
V 2008	

• Radio - allows to select only a single value in the radio group

List Box 1	K K	ж Ж
(All)		
CY 2005		
CY 2006		
OCY 2007		
CY 2008		

In addition, there is a possibility to enable filtering for all elements:



✓ Tree View - the "Tree View" dashboard item displays values in a hierarchical way and allows to expand/collapse nodes

Dimensions	
1 Calendar Year	Tree View 1
↑ Calendar Quarter of Year	 ✓ (All) ▶ ✓ CY 2015
1 Month of Year	 ▶ ✓ CY 2016 ▼ ✓ CY 2017
Dimension	F V CY Q1 → V CY Q2
HIDDEN DATA ITEMS	April May June
Dimension	 ▶
Measures	
Measure	

You can manage the initial expanded state of filter values using the "Auto Expand" button in the "Design" ribbon tab:



Auto Expansion – the tree will be in the expanded state. For all types of filter available quick search:



DATA ITEMS	
Dimensions	
↑ Category	Tree View 1
Subrategory	Bike 🛞
1 Subcategory	Accessories Accessories Accessories
↑ Product	Hitch Rack - 4-Bike
Dimension	- 🗹 Cleaners
	Bike Wash - Dissolver Bikes
HIDDEN DATA ITEMS	Mountain Bikes
Dimensions	Road Bikes
Dimension	✓ Touring Bikes
Dimension	→ 🗹 Socks
Measures	Mountain <mark>Bike</mark> Socks, L
Measure	✓ Mountain Bike Socks, M

8.14 Range Filter

The "Range Filter" dashboard element as well as "Filtr" allows to apply filtering to other dashboard elements.

Pivot	Grid	Chart	Scatter Chart	Pies	(Gauges	Cards	Treemap	Range Filter	Filter Elements ▼	Images ▼ ▲ Text Box Group
					I	nsert			-	

This element displays a chart with selection thumbs that allow you to filter out values displayed along the argument axis:



This filter can be used for cross-filter data sources. For this, use the "Cross-Data-Source-Filters" button on the "Data" tab:



You also can not apply end-to-end filters to this element:

8	Rangel	Filter Tools	
Home	Data	Design	
7	R		8
Edit Filter	Clear	Cross-Data-Source Filtering	Ignore Master Filters
Filter	ing	Interactivity	v settings

You can create your own ranges of data. To do this, use either the context menu (right mouse button) or click on the icon in the "Argument" field:



As a result, the "Edit Periods" window appears:

Edit Periods				x
Filter by All		Edit Delete 🚺	L	Add Custom Period
Last Year Last 2 Years Last 3 Years Last 5 Years This Year Next Year Last Quarter Next Quarter Next Quarter Last Month Last 3 Months Last 6 Months Last 12 Months This Month Next Month	<i>></i>	Caption	Period	Default
				Close

The list on the left shows the list of ready periods that you can filter:

Edit Perio	ls		
Filter by Last Yea Last 2 Y Last 3 Y Last 5 Yea Next Yea	All All Year Quarter Month r ar	6	•

In order to add the selected period, use the \supseteq button or simply drag the period in the field on the right:

dit Periods			
Filter by All	- Edit	Delete	Add Custom Period
Last Year	Caption	Period	Default
Last 2 Years Last 3 Years Last 5 Years	Last 5 Years	2014 - 2018	
This Year Next Year			
This Quarter			
Next Quarter	\rightarrow		
Last Month			
Last 6 Months			
Last 12 Months			
This Month			
Next Month			

This period will be added to the right pane of the Edit Periods dialog. The following settings are available for the added period:

- Caption title name for the period;
- Period displays the time interval of the date corresponding to the period;
- Default allows to use the selected period as the default value in the element of the Range Filter panel.

You can create your own period. To do this, use the "Add Custom Period ..." button in the "Edit Periods" window:

Edit Periods		`	×
Filter by All 👻	Edit Delete	Add Cu	istom Period
Last Year	Caption	Period	Default
Last 2 Years Last 3 Years	Last 5 Years	2014 - 2018	

Period	x
() Year	O Previous Year
O Quarter	O This Year
O Month	🔘 Next Year
Custom	🔘 Last 1 🖕 years
	🔘 Next 1 📮 years
	Indude current
	2019
	OK Cancel

For the year, quarter and month it is possible to set to display:

- Previous Year/Quarter/Month;
- This Year/Quarter/Month;
- Next Year/Quarter/Month;
- Last Year/Quarter/Month;
- Next Year/Quarter/Month.

As a result, a window appears in which you can add the following periods:

		-	
Period			x
O Year O Quarter	Start point		
O Month O Custom	End point		
		Entire Range	
		OK Can	cel

This period allows to specify a period with user boundaries ("Start" and "End" point):

Period		x
 Year Quarter Month 	Start point O None O Fixed O Flow January 2019	
 Custom 	End point O None Fixed Flow Interval: Year Offset: 1 +	
	January 2019 - December 2019 OK Cance	

There is also a possibility to create a **Custom** period:

For start and end points, you can set the following parameters:

- None the start and end points will be equal to the start and end values from the visible range;
- Fixed possibility to select a specific value in the calendar;
- Flow allows to specify a floating period with interval and offset. "Interval" indicates the interval between the current date and the required date, "Offset" the number of such intervals:

Period			x
O Year	Start point	None Fixed Flow	
O Month			
 Custom 	End point	 None Fixed Flow Interval: Month ▼ Offset: 2 2 	
		January 2019 - June 2019 OK Cancel	

8.15 Group

The "Group" dashboard element allows you to merge several elements into a single group. To create a Group element, click the icon:



Let us have a look at the working principle of this element on the example of two groups. First, we create two elements of the dashboard - a chart (of a "Spline Area" type) and a filter (of a "Tree View" type). For each of them, fill in fields with appropriate data:





Now create the first group (click the icon of the same name in the toolbar) and drag the chart and filter into it:



Thus, we got a group, elements of which can interact with each other within this group and outside it.

On the "Data" tab:



- ✓ The "Master Filter" button allows you to specify whether the current group allows you to filter external dashboard items using master filter items contained within the group. If this option is disabled, master filter items contained within the group can filter only dashboard items from this group;
- ✓ The "Ignore Master Filters" button allows you to isolate dashboard items contained within the group from being filtered using external master filter items.

For the first group, let us leave the filter on – "Ignore Master filters".
Now let us create the second group. It will consist of a chart and two filters ("List Box" and "Combo Box"):



We paint subcategories of the same groups of products in the same color:



Now let us create a filter – "Combo box":



The second filter will be called "List Box":

Dimensions		
1 Subcategory	Combo Box 1	
Dimension	(All)	•
Unichsion	List Box 1	K 7 K 7
	🗹 (All)	A
HIDDEN DATA ITEMS	Bib-Shorts	0
Dimensions	🗹 Bike Racks	
	Bottles and Cages	
Dimension	Bottom Brackets	
	Brakes	
Measures	Caps	
	Chains	
Measure	Cleaners	
	Cranksets	
	Derailleurs	0

For a "List Box" on the "Data" tab disable "Ignore Master Filters" button:

()	Filter El	ement Tools	
Home	Data	Design	
7	R	7	8
Edit Filter	Clear	Cross-Data-Source Filtering	Ignore Master Filters
Filtering		Interactivity	settings

Create a second group and drag the chart and filters into it:



For this group on the "Data" tab, we also leave an active "Ignore Master Filters" filter.





The first shows the sales volume of the groups of products depending on the month of the year and country, and the second shows the sales volume of a particular group of products by subcategories:



8.16 Images

An image can be one of the elements of a dashboard. To add an image, click the corresponding icon in the toolbar:

E			••		Ø			∙ ₽	7	Images ▼
Pivot	Grid	Chart	Scatter Chart	Pies	Gauges	Cards	Treemap	Range Filter	Filter Elements ▼	Group
					I	nsert				

An «Interactive Dashboard» allows to create two types of image elements:



- ✓ Image
- ✓ Bound Image

8.16.1 Image

To add an "Image" element, choose the following sub-item:



An empty field appears in the dashboard designer window:



Now, to add an image, go to the "Design" tab and click an "Import Image" icon:



In the opened form, specify the location of the file and click an «OK» button. As a result, the dashboard will look the following:



If necessary, the size and location of the image can be changed:



An image may be exported into PDF or an image. The ways to this are described in abstract 8.5.13.

8.16.2 Bound Image

To add a "Bound Images" item, select the following sub-item:

2		AB	
Imag T	es	Text Box	Group
	lm	age	
1	Во	und Image	

A new element appears in the designer window:

Attribute		
Attribute	Bound Image 1	נה א ניא
HIDDEN DATA ITEMS		
Dimensions		
Dimension		
Measures		
Measure		
1		

Next, you need to choose how to bind the data to the image by clicking the

"Options" will be available in the opened window:

Image Binding Options	;	x
 Binary Array URI 		
URI Pattern:	Insert Placeholder	
	OK Cancel Apply	

 \checkmark Binary Array – use this mode if images are stored in the data source as byte arrays;

✓ URI – use this mode to locate images accessible by a predefined URI. In this case, the data source field should return strings that are parts of URIs to these images.

For instance, the URI pattern in the form below specifies the path to the folder containing the required images:

Image Binding Options	
O Binary Array	
O URI	
URI Pattern: http://adventure:8510/country/[0}.png	
Insert Placeholder	
OK Cancel Apply	

Data source field values will be inserted to the position of the {0} placeholder. Thus, the Bound Image maps the current dimension value with the image placed at the specified URI.

For example, let us display flags for each country for the following table:

Columns							
Country	ta.		Sales by Country				
			Country	Reseller Sales Amount	Reseller Order Count	Reseller Freight Cost	
Reseller Sales A	Σ		Australia	\$1.59M	·~~~•	▼ \$39.9K	
			Canada	\$14.4M	~~~~ ^ •	\$359K	
Receller Order C			France	\$4.61M	\sim	- \$115K	
Reseller Order C	m4-44		Germany	\$1.98M	· · · · · · · · · · · · · · · · · · ·	▼ \$49.6K	
	-		United Kingdom	\$4.28M	~~~•	- \$107K	
Reseller Freight	Σ	÷	United States	\$53.6M	$\sim \sim $	▲ \$1.34M	
New Column	A						
Sparkline							
1 Month of Year		U					
HIDDEN DATA ITEMS							
Dimensions		*					

📙 🛃 📕 🖛 cou	ntry			- 0	×
File Home	Share View				~ 🕐
\leftrightarrow \rightarrow \checkmark \uparrow	> This PC ⇒ Local Disk (C:) ⇒	inetpub > bat > country ~	Search country		Q
Ouiskaanse	^ Name	Date modified	Туре	Size	
Quick access	🛤 Australia	11.02.2019 9:50	PNG image	3 KE	3
🗸 💻 This PC	🛤 Canada	11.02.2019 9:50	PNG image	2 KE	3
> 📃 Desktop	🛤 France	11.02.2019 9:50	PNG image	1 KE	3
> 🔮 Documents	🔍 Germany	11.02.2019 9:51	PNG image	1 KE	3
> 🕹 Downloads	💻 United Kingdom	11.02.2019 9:51	PNG image	2 KE	3
> 🁌 Music	🛤 United States	11.02.2019 9:51	PNG image	3 KE	3
> 💽 Pictures					
Videos 6 items	~				

To start with, we will place the files with the corresponding image and name in the folder:

We will create a new "Bound Images" element with the "Country" attribute:

DATA ITEMS		Images Australia				
Attribute						
Country 🔅	Bound Image 1			Ć 23		
HIDDEN DATA ITEMS						
Dimensions		No	image data			
Dimension						
Measures						
Мезецге	Sales by Countr	γ		ti Sã		
Measure	Country	Reseller Sales Amount	Reseller Order Count	Reseller Freight Cost		
	Australia	\$1.59M	$\sim \sim \sim \sim$	* \$39.9K		
	Canada	\$14.4M	~~~~ ^ •	\$359K		
	France	\$4.61M	\sim	- \$115K		
	Germany	\$1.98M	· · · · · · · · · · · · · · · · · · ·	▼ \$49.6K		
	United Kingdom	\$4.28M	~~~•			
	United States	\$53.6M	~~~~·	▲ \$1.34M		

The form of data binding will be filled with the following data:

Country	Image Binding Options	;	x
HIDDEN DATA ITEMS Dimensions	O Binary Array	The path to the folder containing the required images	
Dimension	URI Pattern:	C:\inetpub\bat\country	
Measures		Insert Placeholder	
Measure			
		OK Cancel Apply	

Now, all is left is to insert the data source field values into the $\{0\}$ placeholder position:

Image Binding Option	s X
 Binary Array URI 	
UKI Pattern:	C: \netpub \pat\country \{\0}.png
	Insert Placeholder 3".png"
	OK Cancel Apply

As a result, we will get an interactive dashboard in which the table with the "Country" hierarchy will be linked to the image:

Bound Image 1			Ċ 23
Sales by Count	rγ		Ċ Č
Country	Reseller Sales Amount	Reseller Order Count	Reseller Freight Cost
Australia	\$1.5		• 🔻 \$39.9K
Canada			La rais
	\$14.		• \$ 359K
France	\$14.		= \$359K
France Germany	\$14. \$4.6 \$1.9		— \$359K — \$115K ▼ \$49.6K
France Germany United Kingdom	\$14. \$4.6 \$1.9 \$4.2		S359K \$115K \$49.6K \$107K

8.17 Text Box

"Text Box" can be one of the elements of the dashboard. Click the corresponding icon on the toolbar:

Pivot	Grid	Chart	Scatter Chart	Pies	(Gauges	Cards	Treemap	Range Filter	Filter Elements ▼	Mages ▼A Text BoxGroup
Insert										

In the designer window, an empty text field appears:

Text Box 1	Ċ \$3

To insert or edit text, go to the "Design" menu tab and click an "Edit" icon:



Or use the corresponding item in the context menu:

Text Box 1		ф 53
	Show Caption	
D	Duplicate	
*	Delete	
\$	Convert To	
1	Remove Data Items	
Aþ	Edit Names	
9	Edit Filter	
R	Clear	
C	Update	
A	Edit	
	Insert Field	
	Maximize	
	Print Preview	
	Export To PDF	
	Export To Image	
	Export Dashboard	

The text editing form with the following set of tools will appear:

0	Text Box Tools		Text Box Editor	Dashboard Designer		
Home	Data Design	File Home	Insert Page Layout Design L	ayout Format		\sim
Paste	Cut Copy Paste Special	Calibri B I U U	$ \begin{array}{c c} \bullet & & \\ \hline \bullet & & \\ \hline \bullet & & \\ \hline \bullet & \\ \hline \bullet & \\ \hline \bullet & \\ \hline \bullet & \\ \hline \hline \hline \\ \hline \hline \hline \\ \hline \hline \hline \\ \hline \hline \hline \\ \hline \hline \hline \hline \\ \hline \hline \hline \hline \\ \hline \hline \hline \hline \hline \\ \hline	E E E E E I I I I I I I I I I I I I I I	AaBbCcD AaBbCcD More AaBbCcD AaBbCcD AaBbCcD AaBbCcD AaBbCcD AaBbCcD AaBbCcD AaBbCcD AaBccd A	

The **Text** can be exported into PDF or an image.

The "Text" element can be bound to the data of other dashboard elements. Let us add a "Text" element to the dashboard, and let's alternately drop the following values of "Product", "Unit Price" and "Description" in the value field:

Data Source		DATA ITEMS			rîa
SQL Data Source	•	Values			
Query	•	Product (Min)	ĺ.	Text Box 1	Ć3 Ć3
= 42 4X 🐵 😫		UnitPrice (Sum)			
123 Month number	*	Description (Min)			
123 Quarter	n	Value			
123 Semester		:			
123 Year		HIDDEN DATA ITEMS	Ē		
👻 🧮 DimGeography					
ab City		Dimensions			
ab Country		Dimension			
ab Province					
👻 🧮 DimProduct		Measures			
ab Class		Measure			
ab Description					
Madal	Ŧ				Ψ

Now move to the "Design" tab and click an "Edit" button:

(1	ext B	ox Tools	5		
Home	Data		Design			
Show Capt	tion	A Edit I	b Names		A Edit	Insert Field
Common					Edit	ing

In the text field, insert the following data:

Values		
Product (Min)	Text Box 1	t Sa
UnitPrice (Sum)	Name: Price:	<u>^</u>
Description (Min)	Description:	
Value		
HIDDEN DATA ITEMS Dimensions		
Dimension		
Measure		
		· ·

Then place the cursor at the end of the "Name" text and right-click on it. Select "Insert Field" from the context menu:

Text Box 1	L			ф «Я
Name: Price:		Show Caption		*
Descrip	ſ	Duplicate		
	×	Delete		
	\$	Convert To	•	
	Ø	Remove Data Items		
	Ab	Edit Names		
	7	Edit Filter		
	8	Clear		
	C	Update		
	Α	Edit		
	E :	Insert Field		
		Maximize		
		Print Preview		
		Export To PDF		
		Export To Image		
		Export Dashboard	•	
				-

Now click on the "Select value" field and select the "Product" value:

Text Box 1		Ċ	к ж К Ж
Name: <mark>Select value</mark> Price: Description:	Product (Min) UnitPrice (Sumy Description (Min)		*

Repeat the same steps for the "Price" and "Description" fields:

Text Box 1	Ċ	к 3
Name:Product (Min)		-
Price:UnitPrice (Sum)		
Description:Description (Min)		

Now click on the "Edit" button again to exit the edit mode. The following data will be displayed in the "Text Box":

(<u>)</u> T	ext Box Tools			C)ashboar	d Designer		
Home Da	ata Design							\sim
	Ab	Α						
Show Caption	Edit Names	Edit	Insert Field					
Comn	ion	Ed	iting					
Data Source SQL Data So	urce	•	DATA IT Values	EMS				Ċ
Query		-		Product (Min)		Text Box 1		ф 83
	Z 🔞 🚍	Ţ		UnitPrice (Sum)		Name:AWC Logo Cap Price:\$3.41B		
v 💽 Sales	N G	^		Description (Min)		Description:All-occasion valu safety features. Offers wide	e bike with our basic comfor r. more stable tires for a ride	t and around
- 📰 D	mDate			Value		town or weekend trip.	,	
at	Month				-			
0	FullDate							

Let's use filters to make the "Text Box" field more dynamic. Add two filters of the List type with the following fields to the dashboard:

Category	к я К Я	Description	Ċ 53
 (All) Accessories Bikes Clothing 		Name:Mountain-100 Silver, 44 Price:\$17.3M Description:Top-of-the-line competition mountain Performance-enhancing options include the innova Frame, super-smooth front suspension, and tractic	bike. ative HL on for all
Product	5.5	terrain.	
 Mountain-100 Black, 38 Mountain-100 Black, 42 Mountain-100 Black, 44 Mountain-100 Black, 44 Mountain-100 Black, 48 Mountain-100 Silver, 38 Mountain-100 Silver, 42 Mountain-100 Silver, 44 Mountain-200 Black, 38 Mountain-200 Black, 46 Mountain-200 Black, 46 Mountain-200 Black, 46 Mountain-200 Silver, 38 Mountain-200 Silver, 38 Mountain-200 Silver, 42 Mountain-200 Silver, 42 Mountain-200 Silver, 38 Mountain-400-W Silver, 38 Mountain-400-W Silver, 40 Mountain-400-W Silver, 42 Mountain-400-W Silver, 42 Mountain-500 Black, 40 Mountain-500 Black, 42 Mountain-500 Black, 42 			

And, finally let's add the "Images" element with the data binding and we throw the "LargePhoto" in the value field:

Category	к я к я	Description
 (All) Accessories Bikes Clothing 		Name:Mountain-100 Silver, 42 Price:\$14.5M Description:Top-of-the-line competition mountain bike. Performance-enhancing options include the innovative HL Frame, super-smooth front suspension, and traction
Product	кя	for all terrain.
 Mountain-100 Black, 38 Mountain-100 Black, 42 Mountain-100 Black, 44 Mountain-100 Black, 48 Mountain-100 Silver, 38 Mountain-100 Silver, 42 	Î	
 Mountain-100 Silver, 44 Mountain-100 Silver, 48 		Photo 📋 💈
 Mountain-200 Black, 48 Mountain-200 Black, 38 Mountain-200 Black, 42 Mountain-200 Black, 46 Mountain-200 Silver, 38 Mountain-200 Silver, 42 Mountain-200 Silver, 42 Mountain-400-W Silver, 44 Mountain-400-W Silver, 44 Mountain-400-W Silver, 44 Mountain-500 Black, 40 Mountain-500 Black, 42 Mountain-500 Black, 44 	8 0 2 6	

8.18 Conditional Formatting

For "Grid" and "Pivot" dashboard elements, it is possible to set the format rules. You can create a new format rule in two ways:

Way 1. Click an "Option" button next to the appropriate dimension/measure:

Columns									
1 Subcategory	Grid 1			c†:	к я К Я				
	Subcategory	Subcategory					Gross Profit		
Sales Amount		Bib-Shorts					\$167K	\$51.	3К 🔺
	Dilue Diselve	1				\$237K	\$9	5K	
	Format.						\$39.6K	\$24.	вк
Gross Profit	Add Fo	rmat Rule 🕨	X	Value		•	\$64.3K	\$38.	2K
Edit Bu		les		Top/Rott			\$51.8K	\$13.	5K
New Column							\$66K	\$17.	1K
	👘 Clear R	ules	x	Average		•	\$51.2K	(\$1.2	к
Sparkline	Renam	e 🛃 Expressi		Expressio	n \$9.3		\$9.38K	\$2.4	2К
Argument		Cleaners		Icon Ran	nec.		\$18.4K	\$8.5	4К
Argument		Cranksets	•	icon Kang	Jes		\$204K	\$52.8	8K
	1	Derailleurs	-	Color Rar	nges	•	\$70.2K	\$18.	1K
HIDDEN DATA ITEMS		Fenders		Gradient	Ranges	•	\$46.6K	\$29.3	2K
Dimensione		Forks	ھ ا	Bar			\$77.9K	\$20.2	2К
Dimensions	Gloves	-		_		\$243K	\$83.4	4K	
Dimension	Handlebars	📄 📴 Bar Color		Kanges	•	\$171K	\$44.1	2K	
		Headsets	E.	Bar Gradi	ent Ranges 🕩		\$60.9K	\$15.4	4K 📗
		and the second second					+ 40 MZ	100	e14

Way 2. Right-click on the table header:

Could 1							eta A
Grid I							<u> </u>
Subcategory	Sales Amount			Gross	Profit		
Bib-Shorts	H	<u>AB</u> ↓ ↓	Fit to Content				\$51.3K
Bike Racks	0	4 0 H	Fix Width				\$95K
Bike Stands			Column Width			:	\$24.8K
Bottles and Cages	H	+++	column widdia.	_			\$38.2K
Bottom Brackets			Add Format Rule 🔸	X	Value	×	13.5K
Brakes		1 67	Edit Rules 😼	1.	Top/Bottom	×	17.1K
Caps		5	Clear Rules		Average		1.2K)
Chains					- ·		2.42K
Cleaners			Add Total	f	Expression		8.54K
Cranksets	1	5	Clear Totals	0	Icon Ranges	×	52.8K
Derailleurs			\$70.2K		Color Ranges		18.1K
Fenders			\$46.6K	-			29.2K
Forks			\$77.9K		Gradient Ranges	•	20.2K
Gloves			\$243K	-2	Bar		83 .4 K
Handlebars			\$171K	-	Bar Color Ranges	•	44.2K
Headsets			\$60.9K				15.4K
Helmets			\$484K		Bar Gradient Ranges	•	\$226K

8.18.1 Format Rule: Value

Value can be one of the highlight rules:

X	Value	•	Greater Than
†_	Top/Bottom	×	Greater Than Or Equal To
x	Average	×	 Less Than
f	Expression		🧉 Less Than Or Equal To
ூ	Icon Ranges	×.	😑 Equal To
-	Color Ranges	×	🕖 Not Equal To
	Gradient Ranges	×	() Between
÷	Bar		11 Not Between
₽	Bar Color Ranges	•	Between Or Equal To
₽.	Bar Gradient Ranges	•	🕦 Not Between Or Equal To
			ab Text that Contains

Let us have a look at it on an example of the pivot table:

Sales Amount		FIVOLI						· Ľ	
Cross Draft			Europe		North America		Pacific		
Gross Profit			Sales Amount	Gross Profit	Sales Amount	Gross Profit	Sales Amount	Gross Profit	
Value		 Accessories Total 	\$328K	\$169K	\$781K	\$369K	\$163K	\$95.8	
		CY Q1	\$68.2K	\$38.1K	\$143K	\$75K	\$37.9K	\$23	
ากร		CY Q2	\$91.8K	\$48.7K	\$213K	\$102K	\$46K	\$27.3	
		CY Q3	\$85.6K	\$39.8K	\$222K	\$95.7K	\$37.5K	\$21.3	
Sales Territory Group		CY Q4	\$82.3K	\$42.6K	\$203K	\$96.4K	\$41.3K	\$24.1	
Column			\$17.2M	\$3.16M	\$67.3M	\$3.92M	\$10.2M	\$3.44	
		CY Q1	\$3.95M	\$888K	\$15.4M	\$1.28M	\$2.66M	\$943	
	1	CY Q2	\$4.74M	\$1.05M	\$17.5M	\$907K	\$2.89M	\$1.02	
Colorent		CY Q3	\$4.12M	\$403K	\$16.7M	\$447K	\$2.08M	\$59	
Category		CY Q4	\$4.34M	\$818K	\$17.7M	\$1.28M	\$2.55M	\$87	
Calendar Quarter of Year			\$401K	\$56.9K	\$1.6M	\$284K	\$113K	\$27.5	
Dani		CY Q1	\$71.2K	\$11.6K	\$260K	\$56.1K	\$24.3K	\$7.49	
ROW		CY Q2	\$100K	\$15.5K	\$413K	\$79K	\$30.7K	\$7.51	
		CY Q3	\$129K	\$14.9K	\$523K	\$77K	\$30.5K	\$6	
EN DATA ITEMS		CY Q4	\$102K	\$14.9K	\$407K	\$72.3K	\$27.7K	\$6.52	
siona			\$1.92M	\$138K	\$9.68M	\$882K	\$204K	\$13.7	
ISIOFIS		CY Q1	\$235K	\$18K	\$1.03M	\$107K	\$24.5K	\$1.89	
Dimension		CY Q2	\$446K	\$33.9K	\$2.42M	\$222K	\$54. 1K	\$3.6	
		CY Q3	\$796K	\$53.7K	\$3.83M	\$325K	\$83.9K	\$4.86	
ures		CY Q4	\$440K	\$32.1K	\$2.4M	\$227K	\$41.2K	\$3.35	

Let us select the totals of those product categories for which the values of the "Sales Amount" measure are more than \$ 1 million:

Values			_											
Sales Amount	-	Pi	vot 1											
	-	F			1	Europe				North America		Pacific		
Gross Profit	Gross Profit Format			Sales Amount	Gross	s Pr	ofit	Sales Amount	Gross Profit	Sales Amount	Gross Profit			
Value	√	Show	/ Val	ues	al	\$328K			\$169K	\$781K	\$369K	\$163K	\$95.8K	
	\checkmark	Show	/ Tot	tals		\$68.3K			\$38.2K	\$142K	\$74.6K	\$37.6K	\$22.9K	
Columns	1	Show	/ Gra	ind Totals		\$91.5K			\$48.5K	\$213K	\$102K	\$46K	\$27.4K	
	÷		-			605 DV			¢40.3K	¢223K	\$96.3K	\$38K	\$21.6K	
↑ Sales Territory Group		Add	Form	nat Kule 🔹 🕨		Value	•		≥ Grea	ater Than	\$96.1K	\$41K	\$24K	
Column	5	Edit F	Rules	5		Top/Bottom	•	·	Image: Second secon	ter Than Or Equal	To \$3.92M	\$10.2M	\$3.44M	
	5	Clear	Rul	es	Ī	Average	•	.	Less	Than	\$1.27M	\$2.66M	\$944K	
Rows		Rena	me		F	Expression			[≶] Less	Than Or Equal To	\$913K	\$2.88M	\$1.02M	
A				0.65					17	\$464K	\$2.08M	\$595K		
T Category			L	CY Q4	9	Icon Ranges	•	1	Equ	allo	\$1.27M	\$2.56M	\$880K	
1 Calendar Quarter of Year	r		-	Clothing Total	₽	Color Ranges	•	·	≠ Not	Equal To	\$284K	\$113K	\$27.5K	
	=		L	CY Q1		Gradient Ranges	•	.	🕕 Betv	veen	\$56.1K	\$24.1K	\$7.46K	
Row				CY Q2	ه ا	Bar			II Not	Between	\$78.7K	\$30.7K	\$7.49K	
				CY Q3		Des Calas Deserve			D Bety	veen Or Equal To	\$77.4K	\$30.7K	\$6.08K	
HIDDEN DATA ITEMS				CY Q4	-	Bar Color Ranges					\$72.2K	\$27.7K	\$6.49K	
Dimonsions			-	Components To	. 🖻	Bar Gradient Rang	ges 🕨	·	INOT	Between Or Equal	\$882K	\$204K	\$13.7K	
Dimensions				CY Q1		\$233K			ab Text	that Contains	\$107K	\$24.5K	\$1.89K	
Dimension				CY Q2		\$448K			\$33.9K	\$2.42M	\$222K	\$54.1K	\$3.6K	
				CY Q3		\$796K			\$53.7K	\$3.83M	\$325K	\$83.9K	\$4.86K	
Measures		0		CY Q4		\$440K			\$32.1K	\$2.4M	\$227K	\$41.2K	\$3.35K	
Maarina		-												

The following form appears:

Greater Than X
Format Sales Amount values that are greater than
Kenter a value >
Centrel & Folder
Appearance Icons
Custom Appearance
Intersection mode
(Auto) 👻
Row dimension Column dimension
[Grand Total]
Apply to
Sales Amount 🔹
Apply to row Apply to column
OK Cancel Apply

This form contains the following parameters specific to Pivot:

- ✓ Format values that are greater than... set value;
- ✓ Appearance/Icons the "Appearance" tab allows you to choose the predefined background color/font, the "Icons" tab allows you to add the predefined icon;
- ✓ Intersection mode the level at which the highlight will be applied. The levels can be as follows:
 - Auto identifies the default level. For the Pivot dashboard item, auto identifies the "First Level";
 - First level first level values are used to apply conditional formatting;
 - Last level the last level values are used to apply conditional formatting;
 - All levels all pivot data cells are used to apply conditional formatting;
 - Specific level values from the specific level are used to apply conditional formatting.
- ✓ Row/Column dimension –

if you specified the Intersection mode as "Specific Level", use the "Row dimension" and "Column dimension" combo boxes to set the specific level;

- ✓ Apply to to which element (measure, hierarchy) of the Pivot table the conditional formatting should be applied;
- ✓ Apply to row/column apply to the entire row / to the entire column.

Fill out this form as follows:

Greater Than X
Format Sales Amount values that are greater than
1000000
Appearance Icons
Intersection mode
First level -
Row dimension Column dimension
[Grand Total] 🔹 [Grand Total]
Apply to
Sales Amount
Apply to row Apply to column
OK Cancel Apply

As a result, the "Pivo	t" table will	look the	following:
------------------------	---------------	----------	------------

Pi	vot 1						Ċ Č		
		Europe		North America		Pacific			
		Sales Amount	Gross Profit	Sales Amount	Gross Profit	Sales Amount	Gross Profit		
Ŧ	Accessories Total	\$328K	\$169K	\$781K	\$369K	\$163K	\$95.8K		
	CY Q1	\$68.2K	\$38.1K	\$143K	\$143K \$75K \$37.9K \$213K \$102K \$46K \$222K \$95.7K \$37.5K		\$23K		
	CY Q2	\$91.8K	\$48.7K	\$213K			\$27.3K		
	CY Q3	\$85.6K	\$39.8K	\$222K			\$21.3K		
	CY Q4	\$82.3K	\$42.6K	\$203K	\$96.4K	\$41.3K	\$24.1K		
-	Bikes Total	\$17.2M	\$3.16M	\$67.3M	\$3.92M	\$10.2M	\$3.44M		
	CY Q1	\$3.95M	\$888K	\$15.4M	\$1.28M	\$2.66M	\$943K		
	CY Q2	\$4.74M	\$1.05M	\$17.5M	\$907K	\$2.89M	\$1.02M		
	CY Q3	\$4.12M	\$403K	\$16.7M	\$447K	\$2.08M	\$595K		
	CY Q4	\$4.34M	\$818K	\$17.7M	\$1.28M	\$2.55M	\$877K		
Ŧ	Clothing Total	\$401K	\$56.9K	\$1.6M	\$284K	\$113K	\$27.5K		
	CY Q1	\$71.2K	\$11.6K	\$260K	\$56.1K	\$24.3K	\$7.49		
	CY Q2	\$100K	< \$15.5K	\$15.5K	\$15.5K	\$413K	\$79K	\$30.7K	\$7.51K
	CY Q3	\$129K	\$14.9K	\$523K	\$77K	\$30.5K	\$6K		
	CY Q4	\$102K	\$14.9K	\$407K	\$72.3K	\$27.7K	\$6.52K		
-	Components Total	\$1.92M	\$138K	\$9.68M	\$882K	\$204K	\$13.7K		
	CY Q1	\$235K	\$18K	\$1.03M	\$107K	\$24.5K	\$1.89K		
	CY Q2	\$446K	\$33.9K	\$2.42M	\$222K	\$54.1K	\$3.6K		
	CY Q3	\$796K	\$53.7K	\$3.83M	\$325K	\$83.9K	\$4.86K		
	CY Q4	\$440K	\$32.1K	\$2.4M	\$227K	\$41.2K	\$3.35K		

To edit an existing highlight rule, click the "Options" icon next to the measure:



Ed	it Rule	5					x
	Edi	t Delete 🔨 🧎		Filter by:	Sales	s Amount	•
		Caption	Calculated By			Applies To	
	\checkmark	Greater Than (>1000000)	Sales Amount			Sales Amount	
	Add	- calculated by Sales Amo	unt				•
							Close

In the window that appears, double-click the rule or click an "Edit" button:

To delete the format rule, select the necessary format rule in the list in the "Edit Rules" window and click the "Delete" button:

Ed	Edit Rules X							
	Edi	t Delete 个	V	Filter by:	Sales	a Amount	•	
		Caption	Calculated	d By		Applies To		
	\checkmark	Greater Than (>1000000) Sales Amo	ount		Sales Amount		
	Add	- calculated by Sales	Amount				•	
							Close	

t Rules X						
Edi	it Delete 🔨 🗸		Filter by:	Sales	Amount	
	Caption	Calculated By			Applies To	
	Greater Than (>1000000)	Sales Amount			Sales Amount	
Add		unt				
					Close	

If necessary, the rule can be temporarily disabled by unchecking the corresponding rule:

8.18.2 Format Rule: Top N / Bottom N

The "Top-Bottom" format conditions allow you to highlight a specific number of topmost/bottommost values. You can specify this number as an absolute or percent value:



For example, let us select 4 quarters for which the "Sales Amount" measure values were the worst. Select the type of "Bottom N" highlight and fill out the form as follows:

JOLLOIN N	x
Format <i>Sales Amount</i> values that $N = 4$	t rank in the bottom % of all values
Appearance Icons	
$\begin{array}{c} \uparrow \downarrow \downarrow \downarrow \downarrow \downarrow \uparrow \uparrow \downarrow \downarrow \uparrow \uparrow \downarrow \downarrow \uparrow \downarrow \downarrow \downarrow \downarrow $	≭ + ⊻ + ⊼ ⊘ 8 ⊗ ▲
al al al al al al 💷	
Intersection mode	
Intersection mode	
Intersection mode Last level Row dimension Colure	▼ nn dimension
Intersection mode Last level Row dimension Colur [Grand Total]	▼ nn dimension nd Total] ▼
Intersection mode Last level Row dimension Colur [Grand Total] Total Apply to	▼ nn dimension nd Total] ▼
Intersection mode Last level Row dimension Colur [Grand Total] Apply to Calendar Quarter of Year	nn dimension and Total] v
Intersection mode Last level Row dimension Colur [Grand Total] Apply to Calendar Quarter of Year Apply to row A	▼ mn dimension and Total] ▼ pply to column
Intersection mode Last level Row dimension Colur [Grand Total] [Grand Total] [Gra	▼ nn dimension and Total] ▼ pply to column

Pivot will look like this:

Pivot 1

		Europe		North America		Pacific	
		Sales Amount	Gross Profit	Sales Amount	Gross Profit	Sales Amount	Gross Profit
~	Accessories Total	\$328K	\$169K	\$781K	\$369K	\$163K	\$95.8K
	CY Q1	\$68.2K	\$38.1K	\$143K	\$75K	\$37.9K	\$23K
	CY Q2	\$91.8K	\$48.7K	\$213K	\$102K	\$46K	\$27.3K
	CY Q3	\$85.6K	\$39.8K	\$222K	\$95.7K	\$37.5K	\$21.3K
	CY Q4	\$82.3K	\$42.6K	\$203K	\$96.4K	\$41.3K	\$24.1K
~	Bikes Total	\$17.2M	\$3.16M	\$67.3M	\$3.92M	\$10.2M	\$3.44M
	CY Q1	\$3.95M	\$888K	\$15.4M	\$1.28M	\$2.66M	\$943K
	CY Q2	\$4.74M	\$1.05M	\$17.5M	\$907K	\$2.89M	\$1.02M
	CY Q3	\$4.12M	\$403K	\$16.7M	\$447K	\$2.08M	\$595K
	CY Q4	\$4.34M	\$818K	\$17.7M	\$1.28M	\$2.55M	\$877K
v	Clothing Total	\$401K	\$56.9K	\$1.6M	\$284K	\$113K	\$27.5K
	CY Q1	\$71.2K	\$11.6K	\$260K	\$56.1K	\$24.3K	\$7.49K
	CY Q2	\$100K	\$15.5K	\$413K	\$79K	\$30.7K	\$7.51K
	CY Q3 🔴	\$129K	\$14.9K	\$523K	\$77K	\$30.5K	\$6K
	CY Q4 🔴	\$102K	\$14.9K	\$407K	\$72.3K	\$27.7K	\$6.52K
v	Components Total	\$1.92M	\$138K	\$9.68M	\$882K	\$204K	\$13.7K
	CY Q1 🔴	\$235K	\$18K	\$1.03M	\$107K	\$24.5K	\$1.89K
	CY Q2	\$446K	\$33.9K	\$2.42M	\$222K	\$54.1K	\$3.6K
	CY Q3	\$796K	\$53.7K	\$3.83M	\$325K	\$83.9K	\$4.86K
	CY Q4	\$440K	\$32.1K	\$2.4M	\$227K	\$41.2K	\$3.35K

Now let us check those product categories, the profit from which amounted to 90% of the total profit. For this, select the "Top N" highlight type and fill out the form as follows:

Top N 🛛						
Format <i>Sales Amount</i> values that rank in the top						
N = 90.00 % T M % of all values						
Appearance Icons						
Intersection mode						
(Auto)						
Row dimension Column dimension						
[Grand Total]						
Apply to						
Category T						
Apply to row Apply to column						
OK Cancel Apply						

We get the following Pivot:

Pi	vot 1							
		Europe	Europe			Pacific		
		Sales Amount	Gross Profit	Sales Amount	Gross Profit	Sales Amount	Gross Profit	
v	Accessories Total	\$328K	\$169K	\$781K	\$369K	\$163K	\$95.8K	
	CY Q1	\$68.2K	\$38.1K	\$143K	\$75K	\$37.9K	\$23K	
	CY Q2	\$91.8K	\$48.7K	\$213K	\$102K	\$46K	\$27.3K	
	CY Q3	\$85.6K	\$39.8K	\$222K	\$95.7K	\$37.5K	\$21.3K	
	CY Q4	\$82.3K	\$42.6K	\$203K	\$96.4K	\$41.3K	\$24. 1K	
v	Bikes Total 🛛 🔺	\$17.2M	\$3.16M	\$67.3M	\$3.92M	\$10.2M	\$3.44M	
	CY Q1	\$3.95M	\$888K	\$15.4M	\$1.28M	\$2.66M	\$943K	
	CY Q2	\$4.74M	\$1.05M	\$17.5M	\$907K	\$2.89M	\$1.02M	
	CY Q3	\$4.12M	\$403K	\$16.7M	\$447K	\$2.08M	\$595K	
	CY Q4	\$4.34M	\$818K	\$17.7M	\$1.28M	\$2.55M	\$877K	
v	Clothing Total	\$40 1K	\$56.9K	\$1.6M	\$284K	\$113K	\$27.5K	
	CY Q1 🔴	\$71.2K	\$11.6K	\$260K	\$56.1K	\$24.3K	\$7.49K	
	CY Q2	\$100K	\$15.5K	\$413K	\$79K	\$30.7K	\$7.51K	
	CY Q3 🔴	\$129K	\$14.9K	\$523K	\$77K	\$30.5K	\$6K	
	CY Q4 🔴	\$102K	\$14.9K	\$407K	\$72.3K	\$27.7K	\$6.52K	
v	Components ★	\$1.92M	\$138K	\$9.68M	\$882K	\$204K	\$13.7K	
	CY Q1 🔴	\$235K	\$18K	\$1.03M	\$107K	\$24.5K	\$1.89K	
	CY Q2	\$446K	\$33.9K	\$2.42M	\$222K	\$54. 1K	\$3.6K	
	CY Q3	\$796K	\$53.7K	\$3.83M	\$325K	\$83.9K	\$4.86K	
	CY Q4	\$440K	\$32.1K	\$2.4M	\$227K	\$41.2K	\$3.35K	

Two product categories - "Bikes" and "Components" - gave 90% out of all profits.

8.18.3 Format Rule: Average

The "Average" format conditions allow you to highlight values above or below an average value:



8.18.4 Format Rule: Expression

An "Expression" format condition allows you to use complex conditions to apply formatting:

Expression	x
Format values that match the following condition	
And \bigcirc \bigcirc [Sales Amount] = Equals \checkmark <enter a="" value=""> \checkmark \bigotimes = Equals \nleftrightarrow Does not equal > Is greater than \geqslant Is greater than or equal to \lt Is less than or equal to \triangleleft Is between \bigtriangleup Is not between</enter>	Appearance Icons Image: Second sec
 ○ Is null ● Is not null ● Is any of ● Is none of 	Intersection mode (Auto) Row dimension Column dimension [Grand Total] Apply to Sales Amount Apply to row Apply to column
	OK Cancel Apply

8.18.5 Format Rule: Icon Ranges

Icon "Ranges" allow you to use predefined or custom sets of icons to apply conditional formatting to different ranges of values:

X	Value	•	
†_	Top/Bottom	×	
x	Average	×	
f	Expression		
ூ	Icon Ranges	\mathbf{F}	2 Ranges
-	Color Ranges	×	
	Gradient Ranges	×.	3 Ranges
-8	Bar		
₽	Bar Color Ranges	×	
Ł	Bar Gradient Ranges	•	4 Ranges
			5 Ranges

For example, let us select the 4-range highlight for the "Gross Profit" measure:

Values										
Sales Amount		Pivot 1								Ċ 23
	-		Eu	irope			North America		Pacific	
Gross Profit	•		Sa	les Amount	Gross Pro	fit	Sales Amount	Gross Profit	Sales Amount	Gross Profit
Value		Format		\$328K		\$169K	\$781K	\$369K	\$163K	\$95.8K
	1	Show Values		\$68.2K		\$38.1K	\$143K	\$75K	\$37.9K	\$23K
Columns	Ľ,	Show Totals		\$91.8K		\$48.7K	\$213K	\$102K	\$46K	\$27.3K
	۷,	Show Totals		\$85.6K		\$39.8K	\$222K	\$95.7K	\$37.5K	\$21.3K
T Sales Territory Group	\checkmark	Show Grand Totals		\$82.3K		\$42.6K	\$203K	\$96.4K	\$41.3K	\$24. 1K
Column		Add Format Rule	X	Value	•	\$3.16M	\$67.3M	\$3.92M	\$10.2M	\$3.44M
	職	Edit Rules	1	Top/Bottom	•	\$888K	\$15.4M	\$1.28M	\$2.66M	\$943K
Rows	65	Clear Rules		Average		\$1.05M	\$17.5M	\$907K	\$2.89M	\$1.02M
1 Category		-		Average .	,	\$403K	\$16.7M	\$447K	\$2.08M	\$595K
1 Category	L	Rename		Expression		\$818K	\$17.7M	\$1.28M	\$2.55M	\$877K
Calendar Quarter of Year			_ P	Icon Ranges	+	2 Ran	ges		113K	\$27.5K
Row		CY Q1	۹ 🗗	Color Ranges	•			Y	.4.3K	\$7.49K
		CY Q2		Gradient Rang	es 🕨	-	*T	~~ 00	0.7K	\$7.51K
		CY Q3	.	,		3 Ran	iges		0.5K	\$6K
HIDDEN DATA ITEMS		CY Q4	- =	Bar		++	+ +++ -		000 ^{7.7} K	\$6.52K
Dimensions		 Components 	1 -	Bar Color Rang	ges 🕨 🕨		● X ! ✓ 6		104K	\$13.7K
		CY Q1	 E 	Bar Gradient R	anges 🕨	4.0			4.5K	\$1.89K
Dimension		CY Q2		אטרדק		4 Kan	iges		4. 1K	\$3.6K
		CY Q3		\$796K		+ >	★ ★ ★ ★ ★ ★	↑ ●●●●	●●●● 3.9К	\$4.86K
Measures		CY Q4		\$440K		- allat	latlati 🔨 👘		-1.2K	\$3.35K
Measure						5 Ran	ges			
						↓ ≯ atlat	→?			

The following options are available in the appeared window:

Range Set			x
Format Gr	<i>oss Profit</i> value	es using rai	nge conditions
Format sty	/le		
↓ <u></u>	.		-
🗹 Use %	ranges		
+ •	100.00 %	>=	75.00 %
	75.00 %	>=	50.00 %
1	50.00 %	>=	25.00 %
+	25.00 %	>=	0.00 %
Add	Delete		Reverse
Intersectio	on mode		
(Auto)			•
Row dimer	nsion	Column d	limension
[Grand To	otal] 🔹	[Grand]	Total] 🔹
Apply to			
Gross Pro	fit		•
Apply	to row	Apply	to column
	ОК	Cance	Apply

- ✓ Format style the "Format Style" combo box allows you to change the icon set used to apply formatting;
- ✓ Use % ranges the "Use % ranges" check box specifies whether the percent or absolute scale is used to generate ranges;
- ✓ Range field with set values:





Use the «Add» and «Delete» buttons to add new ranges or delete the selected range respectively. Note that new range is added below the selected range:

To change the icon displayed for values corresponding to the specified range, click the button next to the required icon and select a new icon:

100.00 %	>= 75.00 %
75.00 %	>= 50.00 %
	>=
M	No Style
	+ * * + * +
	! 🗙 🔮 😣 🔺
🎮 🤎 🧖	0 0 0 🔵 🔴
🛑 🔵 🖨 🤇	
all all all all a	al 22 22 22 22 2 2

- ✓ Intersection mode the level at which the highlight will be applied. The levels can be as follows:
 - Auto identifies the default level. For the Pivot dashboard item, "Auto" identifies the "First Level";
 - First level first level values are used to apply conditional formatting;
 - Last level the last level values are used to apply conditional formatting;
 - All levels all pivot data cells are used to apply conditional formatting;
 - Specific level values from the specific level are used to apply conditional formatting.
- ✓ Row/Column dimension if you specified the Intersection mode as "Specific Level", use the "Row dimension" and "Column dimension" combo boxes to set the specific level;
- ✓ Apply to to which element (measure, hierarchy) of the Pivot table the conditional formatting should be applied;
- ✓ Apply to row/column apply to the entire row / to the entire column.

Fill in the form with the following data:

Range Se	t		X						
Format Gross Profit values using range conditions									
Format style									
▼ ★¥¥↓ ★									
Use 9	% ranges								
1	00	>=	800,000.00						
	800,000.00	>=	100,000.00						
1	100,000.00	>=	5,000.00						
+	5,000.00	>=	0.00						
Add	Delete		Reverse						
Intersect	ion mode								
Last leve			-						
Row dime	ension	Column o	dimension						
[Grand 1	Fotal] –	[Grand Total]							
Apply to									
Gross Pr	ofit		•						
Apply	r to row	Apply	r to column						
	ок	Cance	Apply						

As a result, the pivot table will look the following:

Pi	vot 1						Ċ \$3	
		Europe		North America		Pacific		
		Sales Amount	Gross Profit	Sales Amount	Gross Profit	Sales Amount	Gross Profit	
*	Accessories Total	\$328K	\$169K	\$781K	\$369K	\$163K	\$95.8K	
	CY Q1	\$68.2K	🔰 \$38.1K	\$143K	∲75K	\$37.9K	\$23K	
	CY Q2	\$91.8K	🔰 \$48.7K	\$213K	> \$102К	\$46K	\$27.3K	
	CY Q3	\$85.6K	\$39.8K	\$222K	95.7K	\$37.5K	\$21.3K	
	CY Q4	\$82.3K	942.6K	\$203K	\$96.4K	\$41.3K	🔰 \$24.1K	
*	Bikes Total 👘 🔺 🛉	\$17.2M	\$3.16M	\$67.3M	\$3.92M	\$10.2M	\$3.44M	
	CY Q1	\$3.95M	1 \$888K	\$15.4M	1.28M	\$2.66M	1 \$943K	
	CY Q2	\$4.74M	1.05M	\$17.5M	1 \$907K	\$2.89M	1.02M	
	CY Q3	\$4.12M	, \$403К	\$16.7M	🚬 \$447К	\$2.08M	×595K	
	CY Q4	\$4.34M	18K \$818	\$17.7M	1.28M	\$2.55M	1 \$877K	
Ŧ	Clothing Total	\$40 1K	\$56.9K	\$1.6M	\$284K	\$113K	\$27.5K	
	CY Q1 🥚	\$71.2K	911.6K	\$260K	🔰 \$56.1K	\$24.3K	\$7.49 K	
	CY Q2	\$100K	\$15.5K	\$413K	∲79K	\$30.7K	\$7.51K	
	СҮ Q3 📃	\$129K	9 \$14.9K	\$523K	⋟	\$30.5K	<u></u> \$6K	
	CY Q4 🛛 🔴	\$102K	9 \$14.9K	\$407K	∳72.3K	\$27.7K	∳6.52K	
*	Components 🚖	\$1.92M	\$138K	\$9.68M	\$882K	\$204K	\$13.7K	
	CY Q1 🔴	\$235K	\$18K	\$1.03M	, \$107К	\$24.5K	🔶 \$1.89K	
	CY Q2	\$446K	933.9K	\$2.42M	, \$222К	\$54.1K	🔶 \$3.6K	
	CY Q3	\$796K	\$53.7K	\$3.83M	, \$325К	\$83.9K	🔶 \$4.86K	
	CY Q4	\$440K	\$ 32.1K	\$2.4M	<mark>,</mark> \$227К	\$41.2K		

8.18.6 Format Rule: Color Ranges

To format values according to the required condition, click the data item menu button, select "Add Format Rule" | "Color Ranges" and choose the required color set:



The working principle is the same as for the "Format Rule: Icon Ranges" highlight rule (abstract 8.18.5):

Piv	vot 1									
		Europe		North America		Pacific				
		Sales Amount	Gross Profit	Sales Amount	Gross Profit	Sales Amount Gross Profit		Range Set 83		
v	Accessories Total	\$328K	\$169K	\$781K	\$369K	\$163K	\$95.8K	French Corres De Charles and the second		
	CY Q1	\$68.2K	\$38.1K	\$143K	🔰 \$75K	\$37.9K	🔰 \$23K	Format Gross Profit Values using range conditions		
	CY Q2	\$91.8K	🔰 \$48.7K	\$213K	📕 \$102К	\$46K	\$27.3K	Format style		
	CY Q3	\$85.6K	\$ 39.8K	\$222K	\$95.7K	\$37.5K	\$21.3K			
	CY Q4	\$82.3K	942.6K	\$203K	96.4K	\$41.3K	🔰 \$24.1K			
~	Bikes Total 🛛 🔺	\$17.2M	\$3.16M	\$67.3M	\$3.92M	\$10.2M	\$3.44M	Use % ranges		
	CY Q1	\$3.95M	\$888K	\$15.4M	1.28M	\$2.66M	1 \$943K	∞ >= 800,000.00		
	CY Q2	\$4.74M	1.05M	\$17.5M	1 \$907K	\$2.89M	1.02M	800.000.00 >= 100.000.00		
	CY Q3	\$4.12M	📕 \$403K	\$16.7M	📕 \$447К	\$2.08M	🗦 \$595К			
	CY Q4	\$4.34M	\$818K	\$17.7M	1.28M	\$2.55M	1 \$877K	100,000.00 >= 5,000.00		
✓ Clothing Total		\$401K	\$56.9K	\$1.6M	\$284K	\$113K	\$27.5K	5,000.00 >= 0.00		
	CY Q1 🔴	\$71.2K	\$11.6K	\$260K	\$56.1K	\$24.3K	\$7.49K			
	CY Q2	\$100K	\$15.5K	\$413K	\$79K	\$30.7K	\$7.51K			
	СҮ Q3 🔴	\$129K	🔰 \$14.9K	\$523K	🔰 \$77K	\$30.5K	🔰 \$6K			
	CY Q4 🔴	\$102K	🔰 \$14.9K	\$407K	\$72.3K	\$27.7K	\$6.52K	Add Delete Reverse		
\mathbf{v}	Components ★	\$1.92M	\$138K	\$9.68M	\$882K	\$204K	\$13.7K	Add Delete Reverse		
	CY Q1 🔴	\$235K	🔰 \$18K	\$1.03M	📕 \$107К	\$24.5K	🔶 \$1.89K	Intersection mode		
	CY Q2	\$446K	\$33.9K	\$2.42M	× \$222K	\$54.1K	🔶 \$3.6K	Last level 👻		
	CY Q3	\$796K	\$53.7K	\$3.83M	\$325K	\$83.9K	🔶 \$4.86K	Pow dimension Column dimension		
	CY Q4	\$440K	\$32.1K	\$2.4M	🗦 \$227К	\$41.2K	🔶 \$3.35K	[Grand Total]		
								Apply to		
								Gross Profit		

•

Apply to column

Cancel Apply

Apply to row

ОК

8.18.7 Format Rule: Gradient Ranges

"Gradient Ranges" allow you to use predefined color gradients to apply conditional formatting to different ranges of values. You can also use specific colors to generate custom gradients.:

X	Value	×	
⁺ ₊	Top/Bottom	×	
x	Average	×	
f	Expression		
P	Icon Ranges	×.	
-	Color Ranges	•	
	Gradient Ranges	\mathbf{F}	2 Color Gradient Ranges
-2	Bar		
Þ	Bar Color Ranges	×	
e.	Bar Gradient Ranges	×	
			3 Color Gradient Ranges

The form of the gradient highlight looks the following

Gradient R	anges			×			
Format Gross Profit values using range conditions							
Format Gro	Vuentes of second						
Number of	ranges:	10		-			
		Gene					
🗹 Use %	ranges						
• •	100.00 %	>=	90.00 %				
	90.00 %	>=	80.00 %				
	80.00 %	>=	70.00 %				
	70.00 %	>=	60.00 %				
•	60.00 %	>=	50.00 %				
	50.00 %	>=	40.00 %				
	40.00 %	>=	30.00 %				
	30.00 %	>=	20.00 %				
	20.00 %	>=	10.00 %				
•	10.00 %	>=	0.00 %				
Interestia	n mada						
(Auto)	nmode			•			
Row dimen	sion	Column d	limension				
[Grand To	tal] –	[Grand]	-				
Apply to	-			_			
Gross Pro	ht			•			
Apply t	o row	Apply to column					
	ОК	Cance	Apply				

The following options will be available in the appeared window:

- ✓ Number of ranges "Number of ranges" allows you to specify the number of ranges used to classify values. Click the "Generate Ranges" button to generate a new gradient scale according to the specified number of ranges;
- ✓ Use % ranges the "Use % ranges" check box specifies whether the percent or absolute scale is used to generate ranges;
✓ Range field with specified ranges:

•	100.00 %	>=	90.00 %
	90.00 %	>=	80.00 %
	80.00 %	>=	70.00 %
	70.00 %	>=	60.00 %
	60.00 %	>=	50.00 %
	50.00 %	>=	40.00 %
	40.00 %	>=	30.00 %
	30.00 %	>=	20.00 %
	20.00 %	>=	10.00 %
	10.00 %	>=	0.00 %

- ✓ Intersection mode the level at which the highlight will be applied. The levels can be as follows:
 - Auto identifies the default level. For the Pivot dashboard item, Auto identifies the "First Level";
 - First level first level values are used to apply conditional formatting;
 - Last level the last level values are used to apply conditional formatting;
 - All levels all pivot data cells are used to apply conditional formatting;
 - Specific level values from the specific level are used to apply conditional formatting.
- ✓ Row/Column dimension if you specified the Intersection mode as "Specific Level", use the "Row dimension" and "Column dimension" combo boxes to set the specific level;
- ✓ Apply to to which element (measure, hierarchy) of the Pivot table the conditional formatting should be applied;
- ✓ Apply to row/column apply to the entire row / to the entire column.

8.18.8 Format Rule: Bar

The "Bar" format condition allows you to visualize numeric values using bars. You can also paint bars corresponding to positive and negative values using different colors:



This dialog allows you to change the following options specific to the "Bar" format condition:

Bar	x
Format	Grass Profit values using bar conditions
Min =	0 Automatic 👻
Max =	0 Automatic 🔻
Style	Settings Negative Style Settings
Custo	om Appearance
Intersec	ction mode
(Auto)	•
Row dim	nension Column dimension
[Grand	Total] 🔻 [Grand Total] 👻
Apply to	0
Gross F	Profit 🔹
	ly to row 🔲 Apply to column
Allov	w negative axis
🗌 Drav	w axis
Sho	w bar only
	OK Cancel Apply

- ✓ Min/Max by default, lengths of the shortest and longest bars correspond to minimum and maximum values, respectively. If necessary, you can specify values corresponding to the shortest and longest bars manually. To do this, change the type of minimum/maximum value from "Automatic" to "Number or Percent", and specify the required values;
- ✓ Style Settings "Style Settings" and "Negative Style Settings" allow you to specify style settings used to color data bars corresponding to positive and negative values, respectively;
- ✓ Intersection mode the level at which the highlight will be applied. The levels can be as follows:
 - Auto identifies the default level. For the Pivot dashboard item, Auto identifies the "First Level";
 - First level first level values are used to apply conditional formatting;
 - Last level the last level values are used to apply conditional formatting;
 - All levels all pivot data cells are used to apply conditional formatting;
 - Specific level values from the specific level are used to apply conditional formatting.
- ✓ Row/Column dimension if you specified the Intersection mode as Specific Level, use the "Row dimension" and "Column dimension" combo boxes to set the specific level;
- ✓ Apply to to which element (measure, hierarchy) of the Pivot table the conditional formatting should be applied;
- ✓ Apply to row/column apply to the entire row / to the entire column;
- ✓ Allow negative axis the "Allow negative axis" option allows you to specify whether negative data bars are displayed in the direction opposite to the positive data bars;
- ✓ Draw axis the "Draw axis" option specifies whether to draw the vertical axis between positive and negative data bars;
- ✓ Show bar only the "Show bar only" option specifies whether to show bars without corresponding values.

Let us look at this type of highlight on the example of the "Pivot" table:

Deselles Cross Dreft	Pivot 2					
Reseiler Gross Pront			Accessories	Bikes	Clothing	Components
Value	→ CY 2005	CY Q3	\$3.45K	\$118K	(\$813)	\$22.7K
		CY Q4	\$4.72K	\$151K	(\$1.1K)	\$31.3K
	- CY 2006	CY Q1	\$2K	\$132K	(\$549)	\$18.1K
Category		CY Q2	\$4.69K	(\$525K)	(\$1.24K)	\$32.3K
		CY Q3	\$11.9K	\$32.8K	\$58.8K	\$234K
Column		CY Q4	\$9.78K	\$128K	\$45.1K	\$142K
	- CY 2007	CY Q1	\$4.87K	\$103K	\$25.9K	\$59.8K
		CY Q2	\$9.84K	\$104K	\$46.4K	\$138K
Calendar Year		CY Q3	\$46.1K	(\$893K)	\$10.2K	\$127K
1		CY Q4	\$39K	(\$95.5K)	\$16.6K	\$90.1K
ndar Quarter of Year	▼ CY 2008	CY Q1	\$20.6K	(\$62.3K)	\$15.6K	\$49K
Row		CY Q2	\$38.8K	(\$182K)	\$17.6K	\$89.1K

Let us add a highlight rule for the "Reseller Gross Profit" measure:

Values			_				_	
Reseller Gross Profit	•	Pivot 2						
		lormat			1	Accessories		
Value		onnat		Y Q3			\$3.	45k
	√ S	Show Values		Y Q4			\$4.	72
Columns	√ s	how Totals		Y Q1				\$2
Category	√ s	Show Grand Totals		Y Q2			\$4.	69k
Column	Å	Add Format Rule 🔷 🕨	•	X	Value		•	19k
	₩8 E	dit Rules		† _	Top/Botton	n	×	7
Rows	B (Clear Rules		x	Average		×	4
Calendar Year	F	Rename		f	Expression			1
Calendar Quarter of Year		→ CY 2008	c	ூ	Icon Range	s	F	64
Row			С	-	Color Rang	es	F	8
					Gradient Ra	nges	F	
HIDDEN DATA ITEMS				÷	Bar 🔓			
Dimensions				₽	Bar Color R	anges	F	
Dimension				2	Bar Gradien	t Ranges	•	

Fill out the form as follows:

Bar X	Bar X
Format <i>Reseller Gross Profit</i> values using bar conditions	Format <i>Reseller Gross Profit</i> values using bar conditions
Min = 0 Automatic -	Min = 0 Automatic -
Max = 0 Automatic -	Max = 0 Automatic -
Style Settings Degative Style Settings	Style Settings Negative Style Settings
Intersection mode Last level Row dimension Column dimension 	Intersection mode Last level Row dimension Column dimension
[Grand Total]	[Grand Total]
Apply to	Apply to
Reseller Gross Profit 🔹	Reseller Gross Profit 🔹
Apply to row Apply to column	Apply to row Apply to column
Allow negative axis	Allow negative axis
Draw axis	🗌 Draw axis
Show bar only	Show bar only
OK Cancel Apply	OK Cancel Apply

As a result, we will get the following table:

Pivot 2					
		Accessories	Bikes	Clothing	Components
→ CY 2005	CY Q3	\$3.45K	\$1 <mark>18</mark> K	(\$813)	\$22.7K
	CY Q4	\$4.72K	\$1 <mark>51</mark> K	(\$1.1K)	\$31.3K
→ CY 2006	CY Q1	\$2K	\$1 <mark>32</mark> K	(\$549)	\$18.1K
	CY Q2	\$4.69K	(\$525K)	(\$1.24K)	\$32.3K
	CY Q3	\$1 1 .9K	\$32.8K	\$58.8K	\$2 <mark>34K</mark>
	CY Q4	\$9.78K	\$1 <mark>28</mark> K	\$45.1K	\$1 <mark>42</mark> K
- CY 2007	CY Q1	\$4.87K	\$1 <mark>03</mark> K	\$25.9K	\$59 <mark>.</mark> 8K
	CY Q2	\$9.84K	\$1 <mark>04</mark> K	\$46 <mark>.</mark> 4K	\$1 <mark>38</mark> K
	CY Q3	\$46.1K	(\$893K)	\$10.2K	\$1 <mark>27</mark> K
	CY Q4	\$ <mark>8</mark> 9K	(\$95.5K)	\$16.6K	\$90 . 1K
	CY Q1	\$20.6K	(\$62.3K)	\$15.6K	<mark>\$4</mark> 9К
	CY Q2	\$38.8K	(\$182K)	\$17.6K	\$89.1K

8.18.9 Format Rule: Bar Color Range

"Bar Color Ranges" allow you to visualize numeric values using bars whose colors are contained in the specified color set:



This dialog allows you to change the following options specific to "Bar Color Ranges":

Color Rang	e Bar		x
Format <i>Res</i> range bar o	<i>seller Gross Pro</i> conditions	ofit values	using color
Format styl	e		
			•
🗹 Use %	ranges		
•	100.00 %	>=	75.00 %
	75.00 %	>=	50.00 %
	50.00 %	>=	25.00 %
	25.00 %	>=	0.00 %
Add	Delete		Reverse
Intersection	n mode		-
(Auto)	zian	Column	limensian
[Grand To	tall 🔻	[Grand]	Totall v
-	-	2	
Apply to			
Reseller G	ross Profit		•
Apply t	o row	Apply	to column
Allow n	egative axis		
Draw a:	xis		
Show b	ar only		
	ОК	Cance	Apply

The following options will be available in the appeared window:

- ✓ Format style the "Format Style" combo box allows you to change the color set used to apply formatting;
- ✓ Use % ranges the "Use % ranges" check box specifies whether the percent or absolute scale is used to generate ranges;

✓ Range field with specifies values:

-	100.00 %	>=	75.00 %
	75.00 %	>=	50.00 %
	50.00 %	>=	25.00 %
	25.00 %	>=	0.00 %

Use the «Add» and «Delete» buttons to add new ranges or delete the selected range respectively. Note that new range is added below the selected range:



To change the icon displayed for values corresponding to the specified range, click the button next to the required icon and select a new icon:



- ✓ Intersection mode the level at which the highlight will be applied. The levels can be as follows:
 - Auto identifies the default level. For the Pivot dashboard item, Auto identifies the "First Level";
 - First level first level values are used to apply conditional formatting;
 - Last level the last level values are used to apply conditional formatting;
 - All levels all pivot data cells are used to apply conditional formatting;

- Specific level values from the specific level are used to apply conditional formatting.
- ✓ Row/Column dimension if you specified the Intersection mode as "Specific Level", use the "Row dimension" and "Column dimension" combo boxes to set the specific level;
- ✓ Apply to to which element (measure, hierarchy) of the Pivot table the conditional formatting should be applied;
- ✓ Apply to row/column apply to the entire row / to the entire column;
- ✓ Allow negative axis the "Allow negative axis" option allows you to specify whether negative data bars are displayed in the direction opposite to the positive data bars;
- ✓ Draw axis the "Draw axis" option specifies whether to draw the vertical axis between positive and negative data bars;
- ✓ Show bar only the "Show bar" only option specifies whether to show bars without corresponding values.

8.18.10 Format Rule: Bar Gradient Ranges

Bar Gradient Ranges allow you to visualize numeric values using bars whose colors are contained in the specified color gradient:



This dialog allows you to change the following options specific to "Bar Gradient Ranges":

Bar Gradi	ent Ranges		x
Format <i>R</i> conditions	eseller Gross Pro s	<i>fit</i> values	using range bar
Number o	franges:		5 🗘
		Gene	rate Ranges
🗹 Use 🤊	6 ranges		
• •	100.00 %	>=	80.00 %
	80.00 %	>=	60.00 %
-	60.00 %	>=	40.00 %
	40.00 %	>=	20.00 %
	20.00 %	>=	0.00 %
(Auto) Row dime	nsion	Column d	▼ limension
Apply to Reseller	Gross Profit	Lorana	
Apply	to row	Apply	to column
Allow	negative axis		
Draw	axis		
Show	bar only		
	ОК	Cance	Apply

- ✓ Number of ranges "Number of ranges" allows you to specify the number of ranges used to classify values. Click the Generate Ranges button to generate a new gradient scale according to the specified number of ranges;
- ✓ Use % ranges the "Use % ranges" check box specifies whether the percent or absolute scale is used to generate ranges;
- ✓ Range field with specified values:

• •	100.00 %	>=	80.00 %
	80.00 %	>=	60.00 %
	60.00 %	>=	40.00 %
	40.00 %	>=	20.00 %
	20.00 %	>=	0.00 %

- ✓ Intersection mode the level at which the highlight will be applied. The levels can be as follows:
 - Auto identifies the default level. For the Pivot dashboard item, Auto identifies the "First Level";
 - First level first level values are used to apply conditional formatting;
 - Last level the last level values are used to apply conditional formatting;
 - All levels all pivot data cells are used to apply conditional formatting;
 - Specific level values from the specific level are used to apply conditional formatting.
- ✓ Row/Column dimension if you specified the Intersection mode as "Specific Level", use the "Row dimension" and "Column dimension" combo boxes to set the specific level;
- ✓ Apply to to which element (measure, hierarchy) of the Pivot table the conditional formatting should be applied;
- ✓ Apply to row/column apply to the entire row / to the entire column;
- ✓ Allow negative axis the "Allow negative axis" option allows you to specify whether negative data bars are displayed in the direction opposite to the positive data bars;
- ✓ Draw axis the "Draw axis" option specifies whether to draw the vertical axis between positive and negative data bars;
- ✓ Show bar only the "Show bar" only option specifies whether to show bars without corresponding values.

8.19 Top N

The "Top N" feature allows you to display only a limited number of values that correspond to the highest or lowest values of a particular measure

Let us consider the working principle of the given functionality on an example of a grid (the highlight rule - line color range):

f Subcategory Grid 1 Subcategory Order Count Subcategory Order Count Bib-Shorts Bike Racks Bike Racks Bike Stands Bottles and Cages Bottles and Cages Bottles and Cages Bottles and Cages Bottles and Cages	1 5 390 ▲ 796 249 5.21K 248 248 295
Order Count Subcategory Order Count Order Count Dib-Shorts Bike Racks Bike Stands Bike Stands Bottles and Cages Bottles and Cages Bottles and Cages	390 × 796 249 5.21K 248 295
Order Count Dib-Shorts Bike Racks Bike Racks Bike Stands Bites and Cages Bottles and Cages Bottom Brackets	390) 796 249 5.21K 248 295
New Column A Bike Racks Bike Stands Bottles and Cages Bottom Brackets	796 249 5.21K 248 295
New Column Bike Stands Bottles and Cages Bottles Bottom Brackets Bottom Brackets	249 5.21K 248 295
New Column A Bottles and Cages Bottom Brackets	5.21K 248 295
Sparkline Bottom Brackets	248 295
Sparkline	295
Brakes	
Argument Caps	3.38K
Chains	250
Cleaners	1.33K
HIDDEN DATA ITEMS Cranksets	261
Dimensions Derailleurs	283
Fenders	2.12K
Dimension Forks	133
Gloves	2.42K
Measures Handlebars	1.01K
Headsets	137
Helmets	7.51K
Hydration Packs	1.07K
Jerseys	4.78K
Locks	259
Mountain Bikes	6.19K
Mountain Frames	860
Pedals	756
Pumps	267
Road Bikes	9.5 <mark>3</mark> K
Road Frames	1.01K
Saddles	526
Shorts	1.78K
Socks	1.14K
Tights	470
Tires and Tubes	10K
Touring Bikes	2.65K 🚽

We display only 7 subcategories with the best values of "Order Count" measure:



The following parameters are available in the form:

Top N Values		x
Enabled		
Mode:	Тор	•
Count:		5 🗘
Measure:	Order Count	•
	OK Car	ncel Apply

- ✓ Enabled enables/disables this functionality;
- \checkmark Mode specifies whether top or bottom values should be displayed;
- \checkmark Count the number of values to be displayed;
- ✓ Measure the parameter according to which the top or bottom values will be determined.

Fill out the form as follows:

Top N Values	x
🗹 Enabled	
Mode:	Тор
Count:	7
Measure:	Order Count 🔻
	OK Cancel Apply

As a result, the table looks the following:

Grid 1	Į	3
Subcategory	Order Count	
Tires and Tubes	1	0K
Road Bikes	9.5	ЗK
Helmets	7.5	1K
Mountain Bikes	6.1	9K
Bottles and Cages	5.2	1K
Jerseys	4.7	8K
Caps	3.3	8K

And now let us add the "Category" dimension to the columns and we get the following t:

Columns					
1 Category		Grid 1			Ċ 53
		Category	Subcategory	Order Count	
Subcategory		Accessories	Tires and Tubes		10K
Subcategory		Accessories	Helmets		7.51K
		Accessories	Bottles and Cages		5.21K
Order Count 2		Accessories	Fenders		2.12K
		Accessories	Cleaners		1.33K
New Column		Accessories	Hydration Packs		1.07K
		Accessories	Bike Racks		796
Sparkline		Bikes	Road Bikes		9.53K
Argument		Bikes	Mountain Bikes		6.19K
Argument		Bikes	Touring Bikes		2.65K
		Clothing	Jerseys		4.78K
HIDDEN DATA ITEMS		Clothing	Caps		3.38K
		Clothing	Gloves		2.42K
Dimensions	1	Clothing	Shorts		1.78K
Dimension	-	Clothing	Socks		1.14K
		Clothing	Vests		1.11K
Measures		Clothing	Tights		470
		Components	Road Frames		1.01K
Measure		Components	Handlebars		1.01K
		Components	Mountain Frames		860
		Components	Pedals		756
		Components	Wheels		716
		Components	Saddles		526
		Components	Brakes		295

Now we have 7 best "Order Count" measure indicators for each product category.

8.20 Sorting

Let us sort the table obtained earlier in the decreasing order of the "Order Count" measure. For this, click in the right corner of the table next to an icon:

Grid 1			Ċ 23
Category	Subcategory	Order Count	
Accessories	Tires and Tubes		10K
Accessories	Helmets		7.51K
Accessories	Bottles and Cages		5.21K
Accessories	Fenders		2.12K

The column with the Order Count measure is sorted in a descending order:

Grid 1		± \$3
Category	Subcategory	Order Count 🔺
Components	Brakes	295
Clothing	Tights	470
Components	Saddles	526
Components	Wheels	716
Components	Pedals	756
Accessories	Bike Racks	796
Components	Mountain Frames	860
Components	Handlebars	1.01K
Components	Road Frames	1.01K
Accessories	Hydration Packs	1.07K
Clothing	Vests	1.11K
Clothing	Socks	1.14K
Accessories	Cleaners	1.33K
Clothing	Shorts	1.78K
Accessories	Fenders	2.12K
Clothing	Gloves	2.42K
Bikes	Touring Bikes	2.65K
Clothing	Caps	3.38K
Clothing	Jerseys	4.78K
Accessories	Bottles and Cages	5.21K
Bikes	Mountain Bikes	6.19K
Accessories	Helmets	7.51K
Bikes	Road Bikes	9.53K
Accessories	Tires and Tubes	10K

Having clicked again, we get the opposite result (an increase of the "Order Count" measure).

To sort the hierarchy alphabetically, you need to open the context menu:

Columns					
Category	•	2		Grid 1	
	₽₽	Sort	t Asc	ending	
Subcategory	₽¥	Sort	t Des	cending	
Order Court	_	No	Sorti	ing	N
Order Count		Sort	t by		•
New Column		Тор	N		
		Add	l For	mat Rule	•
Sparkline		Edit	Rul	es	
Argument	5	Clea	ar Ru	iles	
		Ren	ame		

By selecting the "Sort Descending" method, we get a table with category names sorted in a descending order:

Grid 1		ch 53
Category	Subcategory	Order Count
Components	Road Frames	1.01K
Components	Handlebars	1.01K
Components	Mountain Frames	860
Components	Pedals	756
Components	Wheels	716
Components	Saddles	526
Components	Brakes	295
Clothing	Jerseys	4.78K
Clothing	Caps	3.38K
Clothing	Gloves	2.42K
Clothing	Shorts	1.78K
Clothing	Socks	1.14K
Clothing	Vests	1.11K
Clothing	Tights	470
Bikes	Road Bikes	9.53K
Bikes	Mountain Bikes	6.19K
Bikes	Touring Bikes	2.65K
Accessories	Tires and Tubes	10K
Accessories	Helmets	7.51K
Accessories	Bottles and Cages	5.21K
Accessories	Fenders	2.12K
Accessories	Cleaners	1.33K
Accessories	Hydration Packs	1.07K
Accessories	Bike Racks	796

If necessary, you can disable sorting:

Columns			
Category	0	12,	Grid 1
Subcategory	₽5 ₽X	Sort Asc Sort Des	ending cending
Order Count	~	No Sorti Sort by	ing 🔪 🖡
New Column		Top N	
		Add For	mat Rule 🔸
Sparkline	₩.	Edit Rule	25
Argument	5	Clear Ru	lles
		Rename	

OLAP Sorting specific:

₽₹	Sort Ascending	
₽Z	Sort Descending	
\checkmark	No Sorting	
	Sort by	(Value)
	Top N	(Display Text)
	Add Format Rule 🕨	(Key)
₽.	Edit Rules	(ID)
5	Clear Rules	Order Count
	Rename	1

- ✓ (Value) sorting is performed by member values;
- \checkmark (Display Text) sorting is performed by captions associated with members;
- ✓ (Key) sorting is performed by member keys;
- ✓ (ID) sorting is performed by member IDs.

8.21 Formatting Data

8.21.1 Formatting Numeric Values

You can change the data format. This functionality is available on the "Dashboard Designer toolbar":



To specify a format for numeric values, select "Format" from the data item menu:

Columns				
1 Category	T ta	Grid 1		
Subcategory	T tz	Accessories		
babcategory		Accessories		
	~	Accessories		
Order Count		Accessories		
		Accessories		
Sales Amount	$-\Sigma$	Accessories		
	Format			
New Column	Add F	ormat Rule 🕨		
Sparkline	🖏 Edit R	ules		
Argument	🖏 Clear	Rules		
	Renar	ne		

This invokes the "Numeric Format" window:

Numeric Format		x
Format type:	Auto	•
Unit:	Auto	~
Precision:		2 🜲
Currency:	Use dashboard settings	~
Culture:	Use dashboard settings	
🗹 Include group	separator	
	\$1.23B (\$1.23B)	
	OK	Cancel

Types of formats can be as follows:

Numeric Format		
Format type:	Auto	
Unit:	Auto	
Precision:	General Number	
Currency:	Currency	
Cultures	Scientific Percent	
culture.		
🗹 Include group se	eparator	
	\$1.23B	
	(\$1.23B)	
	OK Cancel	Л

Other format settings are in effect for only specific format types:

- \checkmark Unit the unit to which values should be converted;
- \checkmark Precision the number of fractional digits that should be displayed;
- ✓ Currency defines the currency sign and format settings that should be used to display currency values;
- ✓ Culture for currencies used in a region with several cultures, specifies the culture that defines format settings
- ✓ Include group separator specifies whether or not separators should be inserted between digit groups.

8.21.2 Formatting Date-Time Values

† I

For date and time values, this functionality has the following parameters:

FullDate (Year)	-				
	₽₽	Sort Ascending			
	₽Å	Sort Descending			
		Sort by	×		
		Top N			
	\checkmark	Year			
		Quarter			
		Month			
		Day			
		More	×		
		Month-Year			
		Quarter-Year			
		Day-Month-Year			
		More	×		
		Exact Date			
		Format (Default)	•	\checkmark	Default
		Add Format Rule	•		Full
	₩.	Edit Rules			Abbreviated
	5	Clear Rules			
		Rename			

8.21.3 Currency Formatting Specifics

The «Interactive dashboard» allows you to specify a currency format at two levels: for the entire dashboard and for individual data items:

✓ Data Item Currency – to specify which currency to use for a particular data item, select "Format" from the data item menu:



In the "Numeric Format" dialog, select "Currency" in the "Format type" field and use the "Currency" combo box to select the required currency:

Numeric Format	x
Formathioa	Ourroppy
Format type:	currency +
Unit:	Auto 👻
Precision:	2 🌲
Currency:	EUR (Euro)
Culture:	EGP (Egyptian Pound) A ERN (Eritrean Nakfa)
🗹 Include group	ETB (Ethiopian Birr)
	FJD (Fijian Dolwr) FKP (Falkland Islands Pound) GBP (British Pound)
	€1.23B
	(€1.23B)
	OK Cancel

For regions with several cultures, you can also select the culture that will be used to format currency values:

Format type:	Currency	•
Unit:	Auto	•
Precision:		2 🌲
Currency:	USD (US Dollar)	•
Culture:	Cherokee (Cherokee)	-
🗹 Include group sep	English (Palau) English (Puerto Rico) English (Fuelo and Caisas Islando)	*
	English (United States) English (United States) English (US Minor Outlying Islands)	0
	English (US Virgin Islands) English (Zimbabwe)	-
	(€1.23B)	

You can also apply the default dashboard currency by selecting «Use dashboard settings» in the "Currency" field:

Numeric Format		x
Format type:		
theits	Auto	
Unit:	4000	
Precision:	2 🍦	
Currency:	USD (US Dollar)	
Culture:	Use dashboard settings	
	AED (United Arab Emirates Dirham)	
🗹 Include group sep	AFN (Afghani)	
	ALL (Albanian Lek)	
	AMD (Armenian Dram) ANG (Netherlands Antillean Guilder)	
	¢1 22B	
	\$1.250	
	(\$1.23B)	
	OK Cance	
L		

✓ Dashboard Currency

You can also specify the default currency for the dashboard. This setting will be applied to dashboard items that have no currency defined.

To set the dashboard currency, click the "Currency" button on the toolbar:



This invokes the Dashboard Currency window. In this window, select the required currency using the "Currency" combo box:

Dashboard Currency	Settings	x
Currency: Culture:	USD (US Dollar) English (United States)	
	\$123 (\$123)	
	OK Cance	el

8.22 Parameters

The parameter is a dashboard element that allows to dynamically influence the "Expression" highlight rule.

In order to create a parameter, click the toolbar icon:



The following window opens:

Parameters	
Parameters	
Add Remove	
	OK Cancel

To add the parameter, click the «Add» button. The following parameters are displayed in the window:

Parameters			
Parameter 1	•	₽↓	
	(General	^
		Visible	Yes
		Allow Null	No
		Allow Multiselect	No
		Name	Parameter1
	[Data	~
		Description	
		Look-Up Settings	No Look-Up
		Select All Values	No
	Ι.	Туре	String
		Value	
	L_		
Add Remove 🛧 🔸			
			OK Cancel

- ✓ Visible specifies whether or not the parameter editor is visible in the dashboard Parameters dialog;
- ✓ Allow Null –specifies whether or a not null value can be passed as a parameter value;
- ✓ Allow Multiselect specifies whether or not multi-selection is enabled for the current parameter. The following limitations are applied to parameters with multi-selection enabled.
 - Use the "is any of" or "is none of" operators to pass a multi-select parameter to a filter criteria or to the Expression format condition.
 - Use the "In" or "Not In" operators to pass a multi-select parameter to a calculated field expression.
 - Custom SQL queries do not support multi-select parameters.
 - Stored procedures used in SQL and Entity Framework data sources do not support multi-select parameters.
- ✓ Name Specifies the parameter name:
 - A name can contain letters, numbers and underscores.
 - A name cannot contain spaces.
 - A name cannot be an empty string.
 - The dashboard cannot contain parameters with the same name.
 - Names are case-sensitive. For example, you can create the names Parameter and PARAMETER.
- ✓ Description specifies the parameter's description displayed;
- ✓ Look-Up Settings specifies the parameter's look-up editor settings;
- ✓ Type specifies the parameter type;

 \checkmark Value – specifies the default parameter's value(s).

Note that when "Allow Multiselect" is set to "true", the "Value" option allows you to select multiple parameter values.

Let us create a setting that highlights the "Reseller Sales Amount" value of more than \$500,000, but less than \$1 million for all product subcategories.

First, we add a table with the following values:

Loiumns				
1 Subcategory	2	Grid 1		Ċ (
· · · · · · · · · · · · · · · · · · ·	-	Subcategory	Reseller Sales Amount	
Deceller Sales Amount	-	Bib-Shorts		\$167K
Reseller Sales Amount	-	Bike Racks		\$198K
	_	Bottles and Cages		\$7.48K
New Column	7	Bottom Brackets		\$51.8K
	_	Brakes		\$66K
arkline		Caps		\$31.5K
Argument		Chains		\$9.38K
	-	Cleaners		\$11.2K
		Cranksets		\$204K
DEN DATA ITEMS		Derailleurs		\$70.2K
ensions		Forks		\$77.9K
CHBIOHS		Gloves		\$208K
Dimension		Handlebars		\$171K
		Headsets		\$60.9K
asures		Helmets		\$259K
		Hydration Packs		\$65.5K
Measure		Jerseys		\$579K
		Locks		\$16.2K
		Mountain Bikes		\$26.5M
		Mountain Frames		\$4.71M
		Pedals		\$147K
		Pumps		\$13.5K
		Road Bikes		\$29.4M
		Road Frames		\$3.85M
		Saddles		\$55.8K
		Shorts		\$342K
		Socks		\$24.6K
		Tights		\$202K
		Tires and Tubes		\$925
		Touring Bikes		\$10.5M
		Touring Framos		€1.64M

s1	⊡≡₌ Z▼	
	General	~
	Visible	Yes
	Allow Null	No
	Allow Multiselect	No
	Name	Sales1
	Data	A
	Description	Min value
	Look-Up Settings	No Look-Up
	Select All Values	No
	Type	Number (64 bit inte
	Value	500000
dd Remove +		OK Cancel
d Remove +		OK Cancel
d Remove +		OK Cancel
d Remove +	General	OK Cancel
d Remove +	General Visible	OK Cancel
d Remove +	General Visible Allow Null	OK Cancel
rs 1 2	General Visible Allow Null Allow Multiselect	OK Cancel
Remove +	General Visible Allow Null Allow Multiselect Name	OK Cancel Ves No No No Sales2 No
ers	General Visible Allow Null Allow Multiselect Name Data	OK Cancel
d Remove +	General Visible Allow Null Allow Multiselect Name Data Description	Ves No No Sales2
rs	General Visible Allow Null Allow Multiselect Name Data Description Look-Up Settings	OK Cancel OK Cancel Ves No No Sales2 Max value No Look-Up
rs	General Visible Allow Null Allow Multiselect Name Data Description Look-Up Settings Select All Values	OK Cancel OK Cancel Ves Cancel No Sales2 Max value No Look-Up No No No No No Cancel
d Remove +	General Visible Allow Null Allow Multiselect Name Data Description Look-Up Settings Select All Values Type	OK Cancel OK Cancel Ves Cancel No Sales2 Max value No No Look-Up No No No No No Max value No No No No No No No No No No No

Create two parameters and fill in the fields as follows:

For "Reseller Sales Amount", create an "Expression" highlight rule with the following parameters:

Expression	x
Format values that match the following condition	
And And And And And And And And	Appearance Icons Image: Second sec
Reseller Sales Amount] Between(?, ?)	Apply to Reseller Sales Amount ▼ ✓ Apply to row
	OK Cancel Apply

As a result, the first parameter from the list is displayed in the value field:

Expression	x
Format values that match the following condition	
And Comparison (Reseller Sales Amount) Is between ?Sales (Reseller Sales Amount) Is between ?Sales (Reseller Sales Amount) (Reseller Sales (Reseller Sales Amount) (Reseller Sales (R	Appearance Icons Image: Second sec
Reseller Sales Amount] Between (?Sales1, ?)	Apply to Reseller Sales Amount
	OK Cancel Apply

Similarly, double-click the second value field:

Expression	x
Format values that match the following condition	
And 💿 🕤	Appearance Icons
[Reseller Sales Amount] Is between ?Sales 1 👔 and <enter a="" value=""> 💉 🔞</enter>	
double click	
	B I U Gr R Y G B
	Custom Appearance
4 >	
[Reseller Sales Amount] Between(?Sales1, ?)	Apply to
	Reseller Sales Amount 🔻
	Apply to row
	OK Cancel Apply

The first parameter will be displayed again, click it and select the "Sales2" parameter in the opened list:

Expression	x
Format values that match the following condition	
And (Reseller Sales Amount) Is between ?Sales1 Sales1 Sales2 Sale	Appearance Icons Image: Second sec
[Reseller Sales Amount] Between (?Sales1, ?Sales2)	Apply to Reseller Sales Amount
	OK Cancel Apply

It is only left to choose the color of highlight on the panel:



Now all the values of the "Reseller Sales Amount" measure that are higher than \$ 500 000
but lower than \$1 million for all product subcategories are highlighted in the table:

Subcategory Sib-Shorts Sike Racks Sottles and Cages Sottom Brackets Sottom Brackets Caps Chains Chains Cleaners Cranksets	Reseller Sales Amount \$167K \$198K \$7.48K \$51.8K \$66K \$31.5K \$9.38K \$11.2K \$204K \$70.2K
Bib-Shorts Bike Racks Bottles and Cages Bottom Brackets Brakes Caps Chains Cleaners Cranksets	\$167K \$198K \$7.48K \$51.8K \$66K \$31.5K \$9.38K \$11.2K \$204K \$70.2K
Bike Racks Bottles and Cages Bottom Brackets Brakes Caps Chains Chains Cleaners Cranksets	\$198K \$7.48K \$51.8K \$66K \$31.5K \$9.38K \$11.2K \$204K \$70.2K
Bottles and Cages Bottom Brackets Brakes Caps Chains Chains Cleaners Cranksets	\$7.48K \$51.8K \$66K \$31.5K \$9.38K \$11.2K \$204K \$70.2K
Bottom Brackets Brakes Caps Chains Chains Cleaners Cranksets	\$51.8K \$66K \$31.5K \$9.38K \$11.2K \$204K \$70.2K
Brakes Caps Chains Cleaners Cranksets	\$66K \$31.5K \$9.38K \$11.2K \$204K \$70.2K
Caps Chains Cleaners Cranksets	\$31.5K \$9.38K \$11.2K \$204K \$70.2K
Chains Cleaners Cranksets	\$9.38K \$11.2K \$204K \$70.2K
Cleaners Tranksets	\$11.2K \$204K \$70.2K
Tranksets	\$204K \$70.2K
an din interested	\$70.2K
Derailleurs	
orks	\$77.9K
Gloves	\$208K
landlebars	\$171K
leadsets	\$60.9K
lelmets	\$259K
lydration Packs	\$65.5K
lerseys	\$579K
.ocks	\$16.2K
1ountain Bikes	\$26.5M
Iountain Frames	\$4.71M
edals	\$147K
umps	\$13.5K
load Bikes	\$29.4M
load Frames	\$3.85M
Saddles	\$55.8K
horts	\$342K
Socks	\$24.6K
lights	\$202K
Tires and Tubes	\$925
ouring Bikes	\$10.5M
Fouring Frames	\$1.64M
/ests	\$224K
Vheels	\$679K

Now let us change the range of values: Sales1 = 200 000, and Sales2 = 2 million.

For this, click the "Parameters" icon in the toolbar:

	ſŢŢ_ ŶŶ	
Grid 1		Ċ 53
Subcategory	Reseller Sales Amount	
Bib-Shorts		\$167K 🔺
Bike Racks		\$198K
Bottles and Cages		\$7.48K

In the opened window enter the corresponding values for each parameter:

Dashboard Parameters	x
Parameter	Value
Min value	200000
Max value	2 000 000 🛟
Reset	bmit Cancel

Grid 1	ப்	к ж к ж
Subcategory	Reseller Sales Amount	
Bib-Shorts	\$	167K
Bike Racks	\$	198K
Bottles and Cages	\$7	.48K
Bottom Brackets	\$5	1.8K
Brakes	1	\$66K
Caps	\$3	1.5K
Chains	\$9	.38K
Cleaners	\$1	1.2K
Cranksets	\$	204K
Derailleurs	\$7	0.2K
Forks	\$7	7.9K
Gloves	\$	208K
Handlebars	\$	171K
Headsets	\$6	0.9K
Helmets	\$	259K
Hydration Packs	\$6	5.5K
Jerseys	\$	579K
Locks	\$1	.6.2K
Mountain Bikes	\$26	6.5M
Mountain Frames	\$4.	.71M
Pedals	\$	147K
Pumps	\$1	3.5K
Road Bikes	\$25	9.4M
Road Frames	\$3.	.85M
Saddles	\$5	5.8K
Shorts	\$	342K
Socks	\$2	4.6K
Tights	\$	202K
Tires and Tubes	9	\$925
Touring Bikes	\$10	0.5M
Touring Frames	\$1	.64M
Vests	\$	224K
Wheels	Ś	679K

As a result, we get a table where all the values of "Reseller Sales Amount" measure for more than \$ 200 000 but less than \$ 1 million are highlighted:

8.23 Hidden data items

Each dashboard element in the "Data Items" field contains an additional field – "Hidden Data Items":

DATA ITEMS					
Columns					
Category	ÎZ,				
Subcategory	12,				
Order Count	Σ				
New Column	A				
Sparkline					
Argument					
HIDDEN DATA ITEMS					
Dimensions					
Dimension					
Measures					
Measure					

Elements of this field can be used as a context.

Let us consider it on an example of one of the previous tables:

t Catagory	†л	Grid 1	Grid 1				
T Category	K,	Category	Subcategory	Order Count	*		
Culturation	÷л	Components	Brakes		295		
Subcategory	K,	Clothing	Tights		470		
	-	Components	Saddles		526		
Order Count	Σ	Components	Wheels		716		
		Components	Pedals		756		
New Column	Α	Accessories	Bike Racks		796		
		Components	Mountain Frames		860		
Sparkline		Components	Handlebars		1.01K		
Argument		Components	Road Frames		1.01K		
Argument		Accessories	Hydration Packs		1.07K		
		Clothing	Vests		1.11K		
HIDDEN DATA ITEMS		Clothing	Socks		1.14K		
-		Accessories	Cleaners		1.33K		
Dimensions		Clothing	Shorts		1.78K		
Dimension		Accessories	Fenders		2.12K		
		Clothing	Gloves		2.42K		
Measures		Bikes	Touring Bikes		2.65K		
		Clothing	Caps		3.38K		
Measure		Clothing	Jerseys		4.78K		
		Accessories	Bottles and Cages		5.21K		
		Bikes	Mountain Bikes		6.19K		
		Accessories	Helmets		7.51K		
		Bikes	Road Bikes		9.53K		
		Accessories	Tires and Tubes		10K		

We display the 7 best values of the "Order Count" measure for each product category only for year 2018. For this, drop the "Calendar Year" hierarchy into the "Hidden Data Items" field:

	Grid 1		r†1 53
T Category	Category	Subcategory	Order Count
	Accessories	Tires and Tubes	10
Subcategory	Accessories	Helmets	7.51
	Accessories	Bottles and Cages	5.21
Order Count 🔰	Accessories	Fenders	2.12
	Accessories	Cleaners	1.33
New Column	Accessories	Hydration Packs	1.07
	Accessories	Bike Racks	796
Sparkline	Bikes	Road Bikes	9.53
Colorador Year	Bikes	Mountain Bikes	6.19
T Calendar fear	Bikes	Touring Bikes	2.65
	Clothing	Jerseys	4.78
HIDDEN DATA ITEMS	Clothing	Caps	3.38
	Clothing	Gloves	2.42
Dimensions	Clothing	Shorts	1.78
Dimension	Clothing	Socks	1.14
	Clothing	Vests	1.11
Measures	Clothing	Tights	470
	Components	Road Frames	1.01
Measure	Components	Handlebars	1.01
	Components	Mountain Frames	860
	Components	Pedals	756
	Components	Wheels	710
	Components	Saddles	526
	Components	Brakes	29
			-

Now, from the context menu (by a right-click), select "Edit Filter" icon:

Grid 1							Ċ.
Category	ategory Subcategory		Order Count				
Accessories			Tires and Tube	s	_		108
Accessories		Show	Caption				7.51
Accessories	П	Dunli	cate				5.21
Accessories	<u> </u>	D up.	core				2.12
Accessories	*	Delet	e				1.33
Accessories	Ş	Conv	ert To	•			1.07
Accessories		Remo	ove Data Items				796
Bikes		Edit F	lules				9.53
Bikes		Luit	(ules		-		6.19
Bikes	АЬ	Edit N	lames				2.65
Clothing	$\overline{\mathbf{P}}$	Edit Filter				4.78	
Clothing		Class					3.38
Clothing	185	Clear					2.42
Clothing	C	Upda	Update				1.78
Clothing		Maxi	mize				1.14
Clothing							1.11
Clothing		Print	Preview				470
Components		Ехро	rt To PDF				1.01
Components		Export To Image				1.01	
Components		Event To Even			860		
Components		Export to Excel			750		
Components		Export Dashboard				710	
Components			Saddles				52
Components			Brakes				295

In the drop-down list, select the "Calendar Year" hierarchy:

Fi	ilter Editor		x
	Subcategory		O
	Subcategory Category		
	Calendar Year Ø Bike Racks	6	

And then specify the year:

Filter Editor			x
Calendar Year			•
(Show All)			
CY 2005			
CY 2006			
CY 2007			
CY 2008			
CY 2009			
CY 2010			
CY 2011			
CY 2012			
CY 2013			
CY 2014			
CY 2015			
CY 2016			
CY 2017			
CY 2018			
CY 2019			
	· · · · ·		
	ок 🧖	Cancel	Apply
Grid 1			cîa 5.5
-------------	-------------------	-------------	---------
dia 1			. K M
Category	Subcategory	Order Count	
Accessories	Tires and Tubes		10K
Accessories	Helmets		7.51K
Accessories	Bottles and Cages		5.21K
Accessories	Fenders		2.12K
Accessories	Cleaners		1.33K
Accessories	Hydration Packs		1.07K
Accessories	Bike Racks		796
Bikes	Road Bikes		9.53K
Bikes	Mountain Bikes		6.19K
Bikes	Touring Bikes		2.65K
Clothing	Jerseys		4.78K
Clothing	Caps		3.38K
Clothing	Gloves		2.42K
Clothing	Shorts		1.78K
Clothing	Socks		1.14K
Clothing	Vests		1.11K
Clothing	Tights		470
Components	Road Frames		1.01K
Components	Handlebars		1.01K
Components	Mountain Frames		860
Components	Pedals		756
Components	Wheels		716
Components	Saddles		526
Components	Brakes		295

Now the table displays the 7 best values of the "Order Count" measure for each product category for year 2018 only:

8.24 Aggregations

In the interactive dashboard, the following aggregate functions are available:

Columns				
Category	l tz	Grid 1		
		Category	Su	bcateg
1 Subcategory	ta .	Accessories	Bik	e Rad
1 Subcategory		Accessories	Bo	ttles a
ColorAmount (Cum)		Accessories	Cle	eaners
SalesAmount (Sum)		Accessories	He	lmets
	Count		Hy	dratio
New Column	Count	Distinct	Tir	es and
	/ Sum		Mo	ountair
Sparkline	V Sum		Ro	ad Bik
Argument	Min Max		То	uring E
Argument			Ca	ps
	Averag	e	Glo	oves
HIDDEN DATA ITEMS	More	N +	- StdDev	
Dimensions	A Calcula	tion •	StdDevP	
		uon ,	Stuberr	-
Dimension	Format		Var	
Manager	Add Fo	rmat Rule 🔸	VarP	
Measures	III. Edit Dui	las	Median	
Measure	Edit Kules		Mode	
	👘 Clear R	ules	mode	
	Renam	e		

- Count returns the number of values
- Count Distinct returns the number of distinct values
- Sum returns the sum of all values
- Min returns the minimum value across all records
- Max returns the maximum value across all records
- Average Returns the average of all the values in the expression.
- StdDev Mean Square Deviation
- StdDev P dispersion
- Var Non-shifted dispersion
- VarP returns the variance of a population where the population is the entire data to be summarized.
- Median
- Mode

8.25 Calculated Members

The «Interactive Dashboard» allows to add the following calculated elements based on the ready-made measures:

	_	Divot 1					
SalesAmount (Sum)	-	FIVOLI			P 4	et al :	
Value		Count		ccessories	Bikes	Clothing	
		Count Distinct			\$2,118		
Columns	1	Sum		\$260M	\$4.68	\$2	
1 Category		Min		\$170M	\$2.98B	\$1	
	-	Max		\$430M	\$10.2B	\$3	
Column	_	Average					
Rows		More					
		C L L C	,	6 m 1			
T Year		Calculation	•	V (None)			
1 Quarter		Format Show Values		Percent of	Percent of Column Grand Total Percent of Row Grand Total		
Row	\checkmark			Percent of			
	\checkmark	Show Totals		Percent of	f Grand Total		
	\checkmark	Show Grand Totals		Running Summary along Columns		lumns	
HIDDEN DATA ITEMS		Add Format Rule	F	Running S	Summary along Roy	WS	
Dimensions		Edit Rules		Difference	along Columns		
Dimension	, second	Clear Rules		Difference	along Pour		
	~	elear haies		Difference			
Measures	_	Kename		Percentag	Percentage Difference along Columns		
Measure	Measure			Percentage Difference along Roy		Rows	
				Rank alon	g Columns		
				Rank alon	g Rows		
				Rank alon	g Cells		
				Custom			

- Percent of Column Grand Total
- Percent of Row Grand Total
- Percent of Grand Total
- Running Summary along Columns
- Running Summary along Rows
- Difference along Columns
- Difference along Rows
- Percentage Difference along Columns
- Percentage Difference along Rows
- Rank along Columns

- Rank along Rows
- Rank along Cells

You can create your own computational element:

Values			_	_	_		
SalesAmount (Sum)	-	Pivot 1					
Value		Count		ccess	ories	Bikes	Clothing
Value		Count Distinct				\$544M	
Columns	1	Sum			\$260M	\$2.11B	e e
1 Category	ľ	Min			\$170M	\$2.98B	Ś
	_	Max			\$430M	\$10.2B	\$
Column	_	Average					
Rows		More	•				
1 Year		Calculation	×	\checkmark	(None)		
1 Quarter		Format			Percent of	f Column Grand To	tal
Row	√	Show Values			Percent of	f Row Grand Total	
	 ✓ 	Show Totals			Percent of	f Grand Total	
	\checkmark	Show Grand Totals			Running S	Summary along Col	umns
		Add Format Rule	×		Running S	Summary along Rov	WS
Dimensions		Edit Rules			Difference	along Columns	
Dimension	- 5	Clear Rules			Difference	along Rows	
Measures		Rename			Percentag	e Difference along	Columns
Measure					Percentag	e Difference along	Rows
Heddare					Rank alon	g Columns	
					Rank alon	g Rows	
					Rank alon	g Cells	
					Custom	Ν	
						6	

Customize Calculation		x
Calculation Type: None Running Total Moving Calculation Difference Percent Of Total Rank Expression	The current measure has no calculation applied	
	OK Cancel App	ly

As a result, "Customize Calculation" form appears:

8.25.1 Running Total

The "Running Total" calculation can be used to compute a cumulative total for the specified measure:

Customize Calculation			x
Calculation Type:			
None	Running along:	Columns	•
Running Total Moving Calculation Difference Percent Of Total Rank Expression	Summary function:	Sum	•
	RunningSum(Sum([S	alesAmount]))	* *
	Edit in Expressio	n Editor	
		OK Cancel Ap	ply

- Running along the direction that is used to calculate running totals;
- Summary function specifies a summary function used to apply calculation.

Sales	Running Total	
10	10	
20	30	20+10
25	55	25+20+10
25	80	25+25+20+10
20	100	20+25+25+20+10

In the table below, we can see sub-total sales for all months:

Year	Month	Sales	Running Total of Sales
2015	August	\$84.1M	\$84. 1M
	December	\$123M	\$207M
	July	\$25.3M	\$233M
	November	\$177M	\$410M
	October	\$70.8M	\$481M
	September	\$63.3M	\$544M

8.25.2 Moving Calculation

The "Moving calculation" uses neighboring values to calculate a total:

Customize Calculation			x
Calculation Type:	Moving along:	Columns	.
Running Total	Summary function	Sum	
Moving Calculation	Summary function:	Sum	
Difference Percent Of Total	Start offset:		-2 🗘
Rank	End offset:		0 🜲
Expression	WindowSum(Sum([S Edit in Expressio	alesAmount]), -2, 0) n Editor	* *
		OK Cancel	Apply

- Moving along specifies a window and direction used to apply a calculation;
- Summary function specifies a summary function used to apply calculation.

• Start/End offset – initial and final offsets from the current value in process:



In the table below, we can see the moving average for all months with an initial offset of -2 and a final offset of 0:

Year	Month	SalesAmount (Sum)	Moving of SalesAmount (Sum)
	August	\$84. 1M	\$84. 1M
	December	\$123M	\$207M
2015	July	\$25.3M	\$233M
2015	November	\$177M	\$326M
	October	\$70.8M	\$273M
	Septem	\$63.3M	\$311M

8.25.3 Difference

The "Difference" calculation can be used to compute the difference between measure values:

Customize Calculation			x
Calculation Type: None Running Total Moving Calculation Difference Percent Of Total Rank Expression	Calculate along: Difference from:	Rows Previous Percentage Difference	*
	Sum([SalesAmount])	- Lookup(Sum([SalesAmount]), -1) Editor	*
		OK Cancel Apply	

- Calculate along specifies a window and direction used to calculate differences;
- Difference from select value
 - ✓ Previous
 - ✓ Next
 - ✓ First

✓ Last

• Percentage Difference – show the percentage difference.

Sales	Difference		
10			
20		10	20-10
25		5	25-20
25		0	25-25
20		-5	20-25

In the table below, we can see an absolute value of the difference between the months (Difference from - Previous):

Year	Month	SalesAmount (Sum)	Difference of SalesAmount (Sum)
	August	\$84.1M	
	December	\$123M	\$39.2M
2015	July	\$25.3M	(\$98M)
2015	Novem	\$177M	\$152M
	October	\$70.8M	(\$106M)
	Septem	\$63.3M	(\$7.49M)

8.25.4 Percent Of Total

A calculation is used to compute a percentage of the total for the specified measure:

Customize Calculation			x
Calculation Type:		2	
Running Total Running Total Moving Calculation Difference Percent Of Total Rank Expression	Percent of total by:	Rows	·
	ToDouble(Sum([Sales	Amount])) / Total(Sum([SalesAmount])) Editor	* *
		OK Cancel Apply	

• Percent of total – specifies a window and direction used to apply a Percent of Total calculation.

Sales	Percent	
10	10.00 %	10/100*100%
20	20.00 %	20/100*100%
25	25.00 %	25/100*100%
25	25.00 %	25/100*100%
20	20.00 %	20/100*100%

Below we can see the table that displays the contribution of individual monthly sales to total sales:

Year	Month	SalesAmount (Sum)	Percent of SalesAmount (Sum) T
	August	\$84.1M	0.76 %
2015	Decem	\$123M	1.12 %
	July	\$25.3M	0.23 %
	Novem	\$177M	1.61 %
	October	\$70.8M	0.64 %

8.25.5 Rank

Use the "Rank" calculation to compute rankings for the specified measure:

Customize Calculation			x
Calculation Type: None Running Total Moving Calculation Difference Percent Of Total Rank Expression	Rank along: Rank type: Order: RankCompetition Edit in Expre	Rows Competition Ascending Descending n(Sum([SalesAmount]), 'asc') ession Editor	× •
		OK Cancel App	ly

- Rank along specifies a window and direction used to rank values;
- Rank type
 - ✓ Unique
 - ✓ Competition
 - ✓ Dense
 - ✓ Modified
 - ✓ Percentile

- Order ranking order
 - ✓ Ascending
 - ✓ Descending

Sales		Rank		Cor	mp	etiti	ion	rank	
1	0		1	10	20	20	25	25	
2	20		2	1	2	2	4	4	
2	25		4						
2	25		4						
2	20		2						

Below we can see the table that displays the ranking of sales for particular years in descending order:

Year	SalesAmount (Sum)	Rank of SalesAmount (Sum)
2015	\$544M	1
2016	\$2.11B	2
2017	\$5.08B	4
2018	\$3.29B	3

8.25.6 Expression

With such choice, you can create your own expression using the necessary functions. To do this, click the "Edit in Expression Editor" button:

Customize Calculation			x
Calculation Type:			
None Durania Tatal	Calculate along:	Rows	•
Moving Calculation	Sum([SalasAmount])		
Difference Percent Of Total	Sum([SalesAmount])		
Rank Expression			
			~
	Edit in Expression	Editor	
		OK Cancel App	ly

Expression Editor				x
Sum([SalesAmoun	t])			*
				· ·
Columns	Enter text to search	Q		
Constants Operators Functions Aggregate DateTime Logical Math String Window	 Sales DimDate Month FullDate Month number Quarter Semester Year 	Î 		
			ОК	Cancel

8.26 Interactive Dashboard Filtering

The «Interactive Dashboard» allows you to use any data aware dashboard item as a filter for other dashboard items:



To reset filtering, use the "Clear Master Filter" button (the $\mathbf{\overline{k}}$ icon).

You can prevent specific dashboard items from being affected by "Master Filters". To do this, use the "Ignore Master Filters" button:

()	Card	s Tools					
Home	Data	Design					
7	R	8		P	8		
Edit Filter	Clear	Single Master Filter	Multiple Master Filter	Drill Down	Cross-Data-Source Filtering	Ignore Master Filters	
Filter	ing	Ir	nteractivity		Interactivity settings		

8.27 Dashboard Title

The "Dashboard Title" is located at the top of the dashboard surface. It can contain text or image content:



You can change title settings by clicking the "Title" button:



This dialog allows you to specify the following options:

Dashboard Title		x
Show Maste	er Filter state	
Text:	Sales	
Alignment:	🔘 Left	
	Ocenter	
Image:		
	Load Import Rem	ove
	OK Cancel Ap	ply

- \checkmark Visible specifies whether or not the dashboard title is visible;
- ✓ Show Master Filter state specifies whether or not to show the state of master filter items in the dashboard title;
- ✓ Text title text;
- ✓ Alignment specifies the alignment of the dashboard title;
- \checkmark Images allows you to specify the image displayed within the dashboard title;

When you hover over the filter icon (\mathbf{Y}) , all master filters applied to the dashboard are displayed in the invoked popup:

Category
Accessories
Bikes

8.28 Dashboard Item Caption

The title of the dashboard element is located at the top of the dashboard and contains the following information:



To edit the title of the dashboard element, select the **Edit Names** item in the context menu of the element:

Sales by Subcategory	Ē	Show Caption	🟥 🏶 🗽 🀬 💱
¢26.5M	P	Duplicate	¢10.5M
\$20.3M	*	Delete	\$10.514
	\$	Convert To	
	2	Remove Data Items	
	Аþ	Edit Names	
	9	Edit Filter	
	8:	Clear 65	
	C	Update	
Mountai		Maximize	Touring Bikes
		Drill Up	
		Clear Master Filter	
	\checkmark	Reseller Sales Amount vs Reseller Total Product Cost	
		Reseller Order Count vs Internet Order Count	
		Print Preview	
		Export To PDF	
		Export To Image	
		Export To Excel	-10.59 %
		Export Dashboard	-1.24M
·~~~	/	$\checkmark \land	

8.29 Dashboard Items Layout

The "Dashboard Designer" provides the capability to arrange and resize dashboard items and groups in various ways, using simple drag-and-drop operations:





You can change the position of a dashboard item by using drag-and-drop:

8.30 Undo and Redo Operations

In the «Interactive Dashboard» it is possible to undo and redo the actions performed on the dashboard. To undo/redo the last action, use the following buttons:



To undo/redo several actions at once, click the arrow next to "Undo" / "Redo" button and select the actions in the list that you want to undo/redo



8.31 Automatic and Manual Updates

The option "Automatic Updates" is available on the toolbar of the «Interactive Dashboard»:



If this option is enabled, then all changes to the page structure will immediately display updated data. If this option is disabled, you can first modify the page as you like, and then click the button on the Button toolbar to send a request to the server for data:



8.32 Interactive shared dashboards

After you created a number of dashboards, you can share them. To do this, right-click on the name of the dashboard and select an appropriate menu item:



After that, other users and administrator will see your page in the list of shared dashboards.