«Interactive Dashboard» report

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1 «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:

Business Analysis Tool (Report Module) - http://localhosi	:8204/	- • ×							
Application Module Reports Report Dashboar	d View Tools Help								
🗄 📳 🥐 Edit 💊 🌔 🔊 🖒 🕹 💽 🛛									
Dashboard2 (Version 1)		x							
Settings Search	Dashboard								
Admin's ^	Reseller by Country - Reseller Order Quantity vs Internet 🕼 🌮 🏷 👘 Specialty BikeShop 🗾 Value A	dded Reseller							
List Dashboard	Australia Canada Warehouse								
Dashboard_VIP	4.95K 41.8K 33M								
Reports Dashboard_old	▼ 8,19 % ▼ 69,14 % 30M								
Dashboard_Sales									
Dashboard_new	27M								
Dashboard_Sales	24M								
Shared ^	14.3K 7.38K O								
Dashboard	▼ 23.76 % ▼ 12.22 % g 18M								
	Subcate Reseller Orde Reseller Sales Reseller Order Quantity vs Inter								
	Bib-Shorts 390 \$167K								
	Bike Sta								
	Bottles 444 \$7.48K 32.21 % ▼ 6M								
	Bottom 248 \$51.8K								
	Brakes 295 \$66K								
	Caps 1.19K \$31.5K 279.50 %	,							
	Chains 250 \$9.38K Bikes	Components							
	Cleaners 419 \$11.2K 265.53 %	Ny I							
Login: john Server: http://localhost:8204/									

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».

1.1 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									Dast	board Desig	ner								(
Home																				\sim
H						Ø				7		AB		AB	es		G	I.C.		
Save	Undo Redo	Pivot	Grid Cha	rt Scatter Chart	Pies	Gauges	Cards	Treemap	Range Filter	Filter Elements *	Images	Text Box	Group	Title	Currency	Edit Colors	Automatic Updates	Update	Parameters	
File	History						Ins	ert								Das	hboard			
Data So																				
Advent	ture Works	•											Rese	eller						멉
	X \$																			
- 🗊	Adventure Works	*																		
F.	Measures																			
	Account																			
	Customer																			
	Date																			
	Delivery Date																			
	Department																			
	Destination Curr	e																		
	Employee																			
	Geography					1						1				the second second				
	Internet Sales C	r							a dashb	oard item	to your	dashboal	ra, ciick	the co	rrespond	ing button	In the Ki	bbon or	the Toolba	
F	Crganization																			
	Product																			
	Promotion																			
	Reseller																			
1.1	Reseller Sales O	rd																		
	Sales Channel																			
	Sales Reason	U																		
-	Sales Summary	Dr																		
-	Sales Territory																			
4	Scenario	▼ ↓																		

1.2 Basic dashboard navigation

We will take a previously-created dashboard as an example of navigation:



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				
H	\land Undo 寸	±۲		
Save	🇭 Redo 🐳	Pivot	Grid	Chart
File	History			
File Data Sou Adventi	History urce ure Works	•		
File Data Sou Advent Advent AW	History urce ure Works ure Works	-		

Note: In order for a dashboard to have several data sources you should contact an administrator.

1.3 Dashboard elements

Dashboard designer window consists of following elements:

- ✓ Pivot
- ✓ Grid
- ✓ Chart
- ✓ Scatter Chart
- ✓ Pies
- ✓ Gauges
- ✓ Cards
- ✓ Treemap
- ✓ Ghoropleth Map
- ✓ Geo Point Maps
- ✓ Range Filter
- ✓ Filter Elements
- ✓ Images
- ✓ Text Box
- ✓ Group

1.4 Create, delete, convert to, duplicate and other possibilities

1.4.1 **Create**

In order to create a new dashboard element, you need to click a respective icon in dashboard designer window:



1.4.2 **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:



1.4.3 **Convert To**

It is possible to modify one dashboard element into another by choosing a respective item in the toolbar:



1.4.4 **Duplicate**

In order to duplicate an existing dashboard element, you need to click an icon in a toolbar:



1.4.5 Transpose

For such dashboard element as pivot, chart, scatter chart, diagram there is a possibility to transpose lines and columns for a grid, parameters and sets of diagrams, axes "X" and "Y" of a chart:



1.5 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:

9	Pivoi: Tools			Dashboard Design	er												
Home	Data Design								\sim								
Save File	↔ → → Pivot G History	Srid Chart Scatter Chart Pies Gauges	Cards	 Treemap Range Filter Filter Element 	 Images ▼ A Text Box s ▼ Group 	 Duplicate Delete Remove Data Item Item 	S \$\$ -	AB Title Currency Edit Colors	6								
Data So	burce	DATA ITEMS	î			Reseller			Ċ								
		Reseller Sales Amount		Pivot 1					ф \$\$								
-	Adventure Works	* Reseller Gross Profit			Grand Total	D											
+	Measures	Treacher or out of the		h Australia	Reseller Sales A	(¢100K)											
	Account	Value		 Ausuralia Canada 	\$1.55M	(\$109K) \$178K											
	Customer			Erance	\$4.61M	(\$37.3%)											
	Date	Columns										France	\$1.98M	(\$111K)			
	Delivery Date	Column				 United Kingdom 	\$4.28M	\$6.38K									
	Department			United States	\$53.6M	\$543K											
	Department	Rows		Grand Total	\$80.5M	\$470K											
	Employee	Country	U														
+	Geography	† Category															
+	 Internet Sales Or Organization 	Row															
•	Product		-														

1.5.1 Expand/minimize

By clicking **D** and **D** buttons, you can expand/minimize data to needed extent.

1.5.2 Layout type

The Pivot layout can be:

• Compact

Pi	vot 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			
 Australia 	Accessories	\$23.9K	\$8.98K			
	Bikes	\$1.32M	(\$132K)			
	Clothing	\$42.9K	\$748			
	Components	\$204K	\$13.7K			
Australia Total		\$1.59M	\$1.59M (\$109K)			
- Canada	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:

<u>©</u>	Pivoi	Tools						Dashboard	Designer	
Home	Data	Design								
	A	b	1			F		Ē		\mathbf{Q}
Show Capt	ion Edit	Names	Initial State 🔻	Totals	Grand Totals ▼	Layout	Row Totals Position ▼	Column Totals Position ▼	Values Position ▼	Reset Layout Options
0	Common		Initial S		-	c	ompact			
Data Sou	rce			DATA ITE	EMS	√ Т	abular			

1.5.3 **Totals**

You can control the visibility of totals and grand totals for the entire Pivot dashboard item:

()	Pivo	Tools								Dashboard	Designer
Home	Data	Design									
Show Capti	A on Edit	b Names	Initial	Totals	Grand	Layout	Row Totals	Column Totals	Values	Reset Layout	
C	ommon		Initial S		Totals		La	yout	1 OSIGOT	options	

1.5.4 Initial state

"Initial State" of a pivot may be the following:

<u>(</u>		Pivoi	Tools					
Home	D	ata	Design					
Show Cap	tion	A	b Names	Initial	Totals	Grand	Lavout	Row Totals
chen cap	Comr	non		State •	→ Trand Colu	Totals •	*	Position -
	com	IIOTT		Exp	and Colu	mn Group	S	- ·
Data Sou	irce	✓ Expand Row Groups						
Advent	ureW	/orks		•	Values			

- Expand Column Groups
- Expand Row Groups

By ticking this functionality box, we will always see an expanded level:

		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	\$1788	
	Accessories	\$118K	\$40.6K	
	Bikes	\$11.6M	(\$112K)	
	Clothing	\$379K	\$53.2K	
	Components	\$2.24M	\$1968	
Ŧ	France Total	\$4.61M	(\$37.3K)	
	Accessories	\$48K	\$15.9K	
	Bikes	\$3.56M	(\$136K)	
	Clothing	\$128K	\$15.5	
	Components	\$871K	\$66.8K	
Ŧ	Germany Total	ermany Total \$1.98M		
	Accessories	\$35.1K	\$12.18	
	Bikes	\$1.54M	(\$136K)	
	Clothing	\$71.6K	(\$882)	
	Components	\$334K	\$13.3K	
Ŧ	United Kingdom T	\$4.28M	\$6.38K	
	Accessories	\$42.6K	\$14.5	
	Bikes	\$3.41M	(\$79.2K)	
	Clothing	\$119K	\$13.4	
	Components	\$712K	\$57.7	
Ŧ	United States Total	\$53.6M	\$543	
	Accessories	\$304K	\$104	
	Bikes	\$44.8M	(\$396K)	
	Clothing	\$1.04M	\$1518	
	Components	\$7.43M	\$685	
Gr	and Total	\$80.5M	\$470k	

1.5.5 Grand Totals

In the pivot table, you can enable or disable grand totals:

<u>©</u>	Pivoi	: Tools						Dashboar	d Designer	
Home	Data	Design								
	A	b						Ē	Ĩ	
Show Capt	tion Edit I	Names	Initial State ▼	Totals	Gran Total	nd s •	Row Totals Position ▼	Column Totals Position ▼	Values Position ▼	Reset Layout Options
(Common		Initial S		\checkmark	Show Colun	nn Grand Tot	tals		
Data Sou	irce			DATA ITE	\checkmark	Show Row G	Frand Totals			

1.5.6 **Totals**

For the pivot of the tabular type (s. 1.5.2), you can enable and disable totals for the highest level:

0	Pive)t Tools						Dashboar	d Designer	
Home	Data	Design								
	4	Ab						Ē	P	2
Show Cap	tion Edit	Names	Initial State ▼	Totals •	Grand Totals ▼	Layout	Row Totals Position ▼	Column Totals Position ▼	Values Position ▼	Reset Layout Options
(Common		Initial S	√ s	how Colur	nn Totals	La	yout		
Data Sou	irce			√ s	how Row 1	fotals	2			

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)		Components	\$204K	\$13.7K
	Accessories	\$118K	\$40.6K	Grand	A second second	+++0/	+40.04
	Bikes	\$11.6M	(\$112K)		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

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	Pivot 1					
		CY 2017		CY 2018		0.17.11
Reseller Gross Profit 💽		Reseller Sales A	Reseller Gross P	Reseller Sales A	Reseller Gross P	Grand Total
Value	Format	\$847K	(\$97.7K)	\$747K	(\$11K)	\$1.59M
	Show Values	\$15.6K	\$5.83K	\$8.36K	\$3.15K	\$23.9K
Columns	Chan Tatala	\$681K	(\$112K)	\$643K	(\$20.1K)	\$1.32M
✓	Show Lotals	\$26.1K	\$296	\$16.8K	\$452	\$42.9K
1 Calendar Year	Show Grand Totals	\$125K	\$8.21K	\$78.6K	\$5.49K	\$204K
Column	Add Format Rule	\$5.65M	\$43.1K	\$2.39M	\$32.2K	\$8.04M
E.	Edit Rules	\$58.1K	\$19.8K	\$32.4K	\$11.9K	\$90.5K
Rows	Clear Puler	\$4.42M	(\$74.7K)	\$1.91M	(\$11.5K)	\$6.33M
	Clear Rules	\$178K	\$21.9K	\$77.5K	\$7.55K	\$255K
T Country	Rename	\$998K	\$76.1K	\$371K	\$24.3K	\$1.37M
1 Category	✓ France Total	\$2.37M	(\$56.1K)	\$1.38M	(\$4.95K)	\$3.75M
	Accessories	\$26.6K	\$8.64K	\$16.3K	\$5.88K	\$42.9K
ROW	Bikes	\$1.79M	(\$104K)	\$1.11M	(\$27.4K)	\$2.91M

1.5.7 Totals Position

If necessary, you can change the Pivot dashboard item's totals/grand totals position:

		F		Ð			
	Row Totals Colu Position T Po	Row Totals Position ▼	Column Total Position	Posit			
	Top ✓ Bottom		La	Near ✓ Far	,		
		Grand Total				Grand Total	
		Reseller Sales A	Reseller Gross P			Reseller Sales A	Reseller Gross P
Grand Total		\$80.5M	\$470K	- Australia	Accessories	\$23.9K	\$8.98K
 Australia 	a Total	\$1.59M	(\$109K)		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)
	Components	\$204K	\$13.7K	- Canada	Accessories	\$118K	\$40.6K
- Canada	Total	\$14.4M	\$178K		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

1.5.8 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	. (\$132k \$42.9 \$74 \$204 \$13.7 \$118 \$40.6 \$11.6 \$11.6 \$379
	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	\$2.24M	\$196K			Reseller Gross P	\$196K

1.5.9 **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 "Change 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 Tota		
			Reseller Sal	es A	Reseller Gross P
👻 Australia		Show Caption	7	.9K	\$8.98K
		Show Caption		32M	(\$132K)
	Ċ	Duplicate		.9K	\$748
	×	Delete		04K	\$13.7K
Australia Total	3	Convert To		▶ 59M	(\$109K)
▹ Canada		Remove Data It	ems	.4M	\$178K
▶ France	14	T	citis	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
	U				
	153	Clear		_	
	G	Update Reset Layout Options			
	ଚ୍ଚ				
		Maximize			
		Print Preview			
		Export To PDF			
		Export To Imag	e		
		Export To Excel			
		Export Dashboa	rd	•	

Only those hierarchies, which are present in the report, may be a filter for a Pivot:

Fi	lter Editor	×
	Country	-
	Country	
	Category	
	V Australia	63
	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			•
Category			
(Show All)			
Accessories			
Z Bikes			
Clothing			
Components			
	ОК	Cancel	Apply

Pivot will look the following:

		Grand Total	
		Reseller Sales A	Reseller Gross P
 Australia 	Bikes	\$1.32M	(\$132K)
	Clothing	\$42.9K	\$748
	Bikes	\$11.6M	(\$112K)
	Clothing	\$379K	\$53.2K
✓ France	Bikes	\$3.56M	(\$136K)
	Clothing	\$128K	\$15.5K
✓ Germany	Bikes	\$1.54M	(\$136K)
	Clothing	\$71.6K	(\$882)
✓ United Kingdom	Bikes	\$3.41M	(\$79.2K)
	Clothing	\$119K	\$13.4K
✓ United States	Bikes	\$44.8M	(\$396K)
	Clothing	\$1.04M	\$151K
Grand Total		\$68.1M	(\$758K)

1.5.10 Format

In order to change the format of a calculating value, you need to open context menu:

Values		1			
Reseller Sales Amount	Θ		Pivot 1	_	
Reseller Gross Profit		Fo	rmat		
Value	\checkmark	Show Values			
	✓ Show Totals				
Columns	\checkmark	Sh	Show Grand Totals		
Column	Add Format Rule			k	
	B	Ed	lit Rules	k	
Rows	疁	CI	ear Rules	k	
1 Country		Re	name	k	
Category			• Onited tengeom	Clo	
Row				Bik	
		-		Clo	

A numeric-format form will open:

ric Format		
Format type:	Currency	•
Unit:	Auto	•
Precision:		2 🌲
Currency:	Use dashboard settings	•
Culture:	Use dashboard settings	~
	\$1.23B (\$1.23B)	
	OK	Cance

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.

1.5.11 Formatting

Upon opening value context menu, it is possible to create a formatting rule (highlighting):

Values				_				_	
Reseller Sales Amount	0		Pivot 1						
		Fo	mat			Gr	and Total		
Reseller Gross Profit		FU	imat	_		Re	eseller Sales	A	Reseller Gross P
Value	\checkmark	Sh	ow Values		kes		\$1	.32M	(\$132K)
	\checkmark	Sh	ow Totals		othin	g	\$4	2.9K	\$748
Columns	1	Sh	ow Grand Totals		kes		\$1	1.6M	(\$112K)
	-				othin		+	279К	\$53.2K
Column		Ad	d Format Rule		X	Value	•	6M	(\$136K)
-	5	Ed	it Rules		۰.	Top/Bottom	•	28K	\$15.5K
Rows	疁	Cle	ear Rules		\overline{x}	Average	•	4M	(\$136K)
1 Country		Re	name		Ŧ	Expression		6K	(\$882)
(A	-		- onicca rangaom		-			1M	(\$79.2K)
Category				С	S	Icon Ranges	•	.9K	\$13.4K
Row				Bi	₽	Color Ranges	;)	8M	(\$396K)
	_			С		Gradient Ran	ges 🕨	4M	\$151K
HIDDEN DATA ITEMS		•	Grand Total		÷	Bar		1M	(\$758K)
Dimensions					₽	Bar Color Rar	nges 🕨		
Dimension					2	Bar Gradient	Ranges 🕨		

In abstract 1.18 a process of creation of formatting rules is described in more details.

1.5.12 **Title**

Before saving a created pivot let us rename its title.

This may be done in two ways:

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 Total	
		Reseller Sales A	Reseller Gross P
	Riber	\$1.32M	(\$132K)
	Show Caption	\$42.9K	\$748
👻 Canada 📋	Duplicate	\$11.6M	(\$112K)
*	Delete	\$379K	\$53.2K
	Convert To	\$3.56M	(\$136K)
	Demons Data Harris	\$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	3	\$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:

Names	X
Dashboard item name	
Sales Amount/ Gross Profit by Country	
Values	
Reseller Sales Amount	
Reseller Gross Profit	1
OK Cance	1
	Names Dashboard item name Sales Amount/ Gross Profit by Country Values Reseller Sales Amount Reseller Gross Profit OK Cance

Now a pivot title looks the following:

Sales Amount/ G	iross Profit by	Country	
		Grand Total	
		Reseller Sales A	Reseller Gross P
 Australia 	Bikes	\$1.32M	(\$132K)
	Clothing	\$42.9K	\$748
	Bikes	\$11.6M	(\$112K)
	Clothing	\$379K	\$53.2K
	Bikes	\$3.56M	(\$136K)
	Clothing	\$128K	\$15.5K
✓ Germany	Bikes	\$1.54M	(\$136K)
	Clothing	\$71.6K	(\$882)
✓ United Kingdom	Bikes	\$3.41M	(\$79.2K)
	Clothing	\$119K	\$13.4K
✓ United States	Bikes	\$44.8M	(\$396K)
	Clothing	\$1.04M	\$151K
Grand Total		\$68.1M	(\$758K)

If needed, title may not be displayed:



Before closing a pivot should be saved by clicking a "Save" icon in the toolbar:

6	Pivot	Tool	5
Home	Data	Des	ign
H	🔄 Undo	•	<mark>ک</mark>
Save	🇭 Redo	•	Pivot
File	History		

Or an application will offer to save a pivot itself:



Edit 🤅	s 👘 🔊 C 🕹 🛐		nep			
	Dashboard2 (Version 1)					×
Settings	₽ Search				Reseller	D
1	Admin's ^	Sales Amount/g	ross Profit by	Country		D
List	Dashboard			Grand Total		
				Reseller Sales A	Reseller Gross P	
	Dashboard_VIP	v Australia	Bikes	\$1.32M	(\$132K)	
Reports	Dashboard_old		Clothing	\$42.9K	\$748	
	Dashboard_Sales	✓ Canada	Bikes	\$11.6M	(\$112K)	
	Dashboard new		Clothing	\$379K	\$53.2K	
4	Darkhand Calas	✓ France	Bikes	\$3.56M	(\$136K)	
	Dashboard_Sales		Clothing	\$128K	\$15.5K	
	📑 My 🔷	✓ Germany	Bikes	\$1.54M	(\$136K)	
	Reseller	1	Clothing	\$71.6K	(\$882)	
		✓ United Kingdom	Bikes	\$3.41M	(\$79.2K)	
	Shared ^		Clothing	\$119K	\$13.4K	
	Dashboard	✓ United States	Bikes	\$44.8M	(\$396K)	
			Clothing	\$1.04M	\$151K	
		Grand Total		\$68.1M	(\$758K)	

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:



1.5.13 **Export**

If needed you can export a pivot into PDF, Excel or a picture format by clicking the right mouse button in a pivot:

				Grand Total		
				Reseller Sales A	 Reselle	er Gross P
- Australia	Bike					(\$132K)
	Clot		Show C	aption		\$748
- Canada	Bike	ſ	Duplica	te		(\$112K)
	Clot	×	Delete			\$53.2K
 France 	Bike	3	Conver	t To	•	(\$136K)
	Clot	~	Remov	a Data Items		\$15.5K
✓ Germany	Bike		~	e Data items		(\$136K)
	Clot	3	Transpo	ose		(\$882)
 United Kingdom 	Bike		Edit Ru	es		(\$79.2K)
	Clot	Ab	Edit Na	mes		\$13.4K
 United States 	Bike					(\$396K)
	Clot	T	Ealt Filt	er		\$151K
Grand Total		153	Clear			(\$758K)
		C	Update			
		ଚ୍ଚ	Reset La	ayout Options		
			Maximi	ze		
		- [Print Pr	eview		
		1	Export	To PDF		
		1	Export	To Image		
			Export	To Excel		
			Export I	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 v	
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 - S	ales Amount/Gross Profit by Cou 🗙
Excel Format:	XLSX
Separator:	;
Indude:	Filters Parameters
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:

Image Format:	PNG 🔻
Show Title:	\checkmark
Title:	Sales Amount/Gross Profit by Cour
Resolution (dpi):	96 🗘
Include:	Filters Parameters

- 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.

1.6 Grid

Let us add a new element called 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		Grid 1		Ċ \$3
		Category	Reseller Sales Amount	
Reseller Sales Amount Σ		Accessories		\$571K
		Bikes		\$66.3M
New Column		Clothing		\$1.78M
		Components		\$11.8M
Sparkline				
Argument				
HIDDEN DATA ITEMS				
Dimensions				
Dimension				
Measures				
Measure				

1.6.1 Column type

Columns in a grid may be of the following type:

Columns	
Category] 12,
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;
- ✓ 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.

1.6.2 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 Auto	Show: Value Bar Value type: Result indication: Threshold type: Threshold value:	Absolute variation Greater is good Percent	▼ ▼ 0 \$	
		OK Cancel	Apply	

In a column field two new fields – "Actual" and "Target" appear. Let's choose a "Reseller Internet 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:

	Cal
mns	LOIL
mns	COIL

Concentration				
1 Category	T ta	Grid 1		L 53
		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 Oursethu		Clothing	\$1.78M	-55.4K
Internet Order Quantity		Components	\$11.8M	
Reseller Order Quantity				Delta Values
	_			Delta Indication
New Column	A			
Sparkline	1			
Argument				
HIDDEN DATA ITEMS				
Dimensions				
Dimension				
Measures				
Measure				

A delta value type may be the following:

Column Options			×
Column type: Dimension Measure Delta Sparkline Hyperlink	Show: Value Bar Value type: Result indication: Threshold type: Threshold value:	Absolute variation	
		OK Cancel Appl	y

- 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 have the following value:

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 Apply	

- 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.

Column type:	Show:	
O Dimension	 Value 	
O Measure	🔘 Bar	
 Delta 	Value type:	Absolute variation 🔻
O Sparkline	Result indication:	Greater is good 🔻
O Hyperlink	Threshold type:	Percent 🔻
	Threshold value:	Absolute Percent

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 Cance	el Apply

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			
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				
1 Category		Column Options		×
Reseller Sales Amount	Σ	Column type:	Show: Value	
Internet Order Quantity		O Measure		
Reseller Order Quantity		 Delta Sparkline 	Always show zero level	
New Column	A	O Hyperlink		
Sparkline				
Argument				
HIDDEN DATA ITEMS Dimensions			OK Cancel Ap	ply
Grid 1			[ר בי
Coherent	- Calas A	Tabana Tabana	at Order Overfitzung Dasseller Order Overfitz	

Category	Reseller Sales Amount	Internet Order Quantity vs Reseller Order Quantity	
Accessories	\$571K		
Bikes	\$66.3M		
Clothing	\$1.78M		
Components	\$11.8M		

1.6.3 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			
Columns	Column Options		
1 Category	Column Options		
Reseller Sales Amount \sum	Column type:	Show start/end values	
Internet Order Quantity	O Measure	Sparkline view type: Line 🔻	
Reseller Order Quantity	O Delta	Highlight min/max points	
Reseller Order Count	Hyperlink	Highlight start/end points	
Sparkline			
Argument		OK Cancel App	ply
HIDDEN DATA TIEMS			

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.

Fill out the form in the following way:

Column Options	×
Column type: Dimension Measure Delta Sparkline Hyperlink	✓ Show start/end values Sparkline view type: Area ✓ Highlight min/max points ✓ Highlight start/end points
	OK Cancel Apply

Then in the "Sparkline" field, drag the "Month of Year" dimension. As a result, we get the following report:

Columns					
T Category ta		Grid 1			Ċ 53
		Category	Reseller Sales Amount	Internet Order Quantity vs Reseller Order Quantity	Reseller Order Count
Reseller Sales Amount		Accessories	\$571K		60 119
		Bikes	\$66.3M		179 - 285
Internet Order Quantity		Clothing	\$1.78M		127 221
Internet Order Quantity		Components	\$11.8M		97 257
Reseller Order Quantity					
Reseller Order Count					
New Column	1				
Sparkline					
1 Month of Year	1				
HIDDEN DATA ITEMS					
Dimensions					
Dimension					
Measures	÷				
The following data is displayed in the sparkline column:



1.6.4 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.

1.6.4.1 Data Field Containing Uri Values

For example, take the data source of type excel-table, which contains the following fields:

E1	1 *	$\times \checkmark f_x$		
4	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 12,	Column Options			×
1 Link	Column type:			
Reseller Sales Amou	1 O Measure O Delta	URI Pattern:	lder	
New Column	O Sparkline			
Sparkline Argument	e Hyperlink			
HIDDEN DATA ITEMS Dimensions		_	3	
Dimension			OK Cancel	Apply

The Grid displays column values as clickable hyperlinks allowing you to navigate to the Wiki's pages:

Grid 1					
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:

1 Name	ť2,
Reseller Sales An	nou Σ
New Column	
arkline	4
Argume	ent

Grid 1	Ċ \$3	
Name	Reseller Sales Amount (Sum)	
Australia		1.59M
Canada		14.4M
France		4.61M
Germany		1.98M
United Kingdom		4.28M
United States		53.6M

and change its type to "Hyperlink":

Column Options			x
Column type: Dimension Measure Delta Sparkline Hyperlink Auto	URI Pattern:	Insert Placeholder	
		OK Cancel	Apply

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				
1 Name	1 tz	Grid 1	Grid 1	
		Name	Reseller Sales Amount (OfficialName
Receller Sales Amou	5	Australia	1.59M	Commonwealth of Australia
Reseller Sales Amou		Canada	14.4M	Canada
A Officially and		France	4.61M	French Republic
	ABC	Germany	1.98M	Federal Republic of Germany
Link	<u></u>	United Ki	4.28M	United Kingdom of Great Britain and No
		United St	53.6M	United States of America
New Column	A			

1.6.4.2 URI

In this case, a specified URI pattern is used to generate links. Create the following grid:

Columns				
↓ Name	l tz	Grid 1	Grid 1	
		Name	Reseller Sales Amount (Sum)	
Receller Sales Amou	2	United States		53.6M
Reseller Sales Aniourn		United Kingdom		4.28M
	A	Germany		1.98M
New Column		France		4.61M
		Canada		14.4M
Argument		Australia		1.59M

Click the "<u>Column Type</u>" 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: 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		Ċ \$3
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

1.6.5 **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	14
1 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				
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 - Accessor	ies		ப் 🄊 🕄
Subcategory	Reseller Sales A	Internet Order Quantity vs	Reseller Order Count
Bike Racks	\$198K		24 45

1.6.6 Additional grid properties

In a "Design" tab of a Grid dashboard element the following toolbar is available:

9	Grid	Tools		Dashboard Designer								
Home	Data	Design										
Show Capt	A ion Edit	Names	Horizontal Lines	Vertical Lines	Banded Rows	Merge Cells	Column Headers	A Word Wrap	AutoFit to Contents	AutoFit to Grid	Manual	
Common				Style			Layout			Column Width Mode		

- ✓ Horizontal Lines show horizontal grid lines;
- ✓ Vertical Lines show vertical grid lines;
- ✓ 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
	Mountain Bikes	\$26.5M		63 63
Bikes	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							D	
Category	Su	AB	Fibbs Contract	ales A	Internet Orde	Reseller Order Count		
	Bi	H H	Fit to Content	\$198K		24 2	4 🔺	
	Bi	HOH	Fix Width			0 • 0		
	В		Column Width	\$7.48K		26 2	6	
	C		Add Earmai	Add Format Rule	\$11.2K		27 2	7
Accession	Fe		Add Tormat Rule			0 • 0		
Accessories	H	瞈	Edit Rules	\$259K		54 5	4 [≡]	
	H	疁	Clear Rules	\$65.5K		16 1	6	
	Lc	Add Total	Add Total	\$16.2K		11 1	1	
	PL			\$13.5K		12 1	2	
	Ti		Clear Totals	\$925		2 2		
	Mo	untai	in Bikes	\$26,5M		63 👝 🏊 🚈 6	3	

- ✓ 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 1.18);
- ✓ Edit Rules possibility to change the existing highlighting rules;
- ✓ Clear Rules deletion of all the highlighting rules;
- ✓ Add Total possibility to display:



✓ 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	5		🗅 🕈 🖸
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
Cleaners	\$11.2K		27
Fenders			0 • • • 0 _
			• •
	Min = \$925		
	Max = \$259K		

1.6.7 **Export**

A grid can be exported into PDF, Excel or a picture format. Way are described in abstract 1.5.13.

1.7 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	ulo		rîn
Values (Pane 1)			
Value	di i	Chart 1	Û ŠŽ
Arguments			
Argument			
Series			
Series			
HIDDEN DATA ITEMS			
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:

Reseller Sales Amount	di.
Value	dt

A window of the following view will open:

Se	ries Opti	ons						x
	Series T	ype Cor	nmon Optic	ons Poi	nt Label Op	otions		
	Гистогра	ммы						
	Точки / Л	инии						
	0 0 0 0 0 0 0	\swarrow	***	***	٦°٦	S		
	Области							
	Диапазо	ны						
	Jb							
	Пузырьк	и						
	000							
	Финансо	вые						
	ţţţţ	ļ ļļ	111					
						ОК	Cance	:

The first tab "Series Type" allows redefining a chart type. Among all the suggested options, let us choose "Full-Stacker Bar":

eries Options			2
Series Type	Common Options	Point Label Options	
Гистограммы			

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	
Series Type Common O	ptions Point Label Options
Point label options	
Content:	None 🔻
Overlapping mode:	Hide overlapping labels
Orientation:	Default 👻
Bar options	
Show for zero values:	
Position:	Outside 🔻
	OK Cancel

- ✓ Content:
 - Select All
 - Argument
 - Series Name
 - 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:

Series Options		X
Series Type Common O	ptions Point Label Options	
Point label options		
Content:	Value -	
Overlapping mode:	Hide overlapping labels	
Orientation:	Default 👻	
Bar options		
Show for zero values:		
Position:	Outside 🔻	
	OK Canc	el

As a result, the report will have the following view:



Let us add one more data panel:

DATA ITEMS	- Ib
Values (Pane 1)	
Reseller Sales Amount]
Value	h [
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:

Series Options	x
Series Type Common Options Point Label Options	
 Plot on secondary axis Ignore empty points Show point markers 	
Series Options	x
Series Type Common Options Point Label Options	_
Point label options	
Content: Value 🔻	
Overlapping mode: Reposition overlapping labels	
Orientation: Default -	

As a result, we will get the following chart:



1.7.1 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:

X-Axis Settings	x
Reverse	
Enable zooming	
Show X-axis	
Show title	
Oefault text	
O Custom text	Category
Limit visible points	10 🌲
	OK Cancel
	Carter

- ✓ Reverse display values in descending order;
- ✓ Enable zooming
- ✓ Show X-axis
- \checkmark Show title
 - Default text dimension name
 - Custom text text, entered by a user
- \checkmark Limit visible points a number of visible point on an axis.

For "Y"-axis, the following parameters are available:

Axis Settings	
Pane 1	•
Always show zero level	
Reverse	
Show grid lines	
Show axis	
Show title	
Oefault text	
O Custom text	Reseller Sales Amount
Logarithmic scale	10 🐨
	OK Cancel

- ✓ Always show zero level
- ✓ Reverse rotate an axis at 180°
- \checkmark Show grid lines to display or not to display grid lines
- ✓ Show axis show/hide an axis
- ✓ Show title to display or not to display a title;
 - Default text dimension name
 - Custom text text, entered by a user
- ✓ Logarithmic scale to display or not to display a logarithmic scale.

1.7.2 **Legend**

To change the location of the legend, go to the "Design tab":

0	Citari To	lols		Dashboard Designer										x
Home	Data D	lesign												
Show Cap	tion Edit Nam	nes Rota	e X-Axis Settings	Y-Axis Settings	Show Legend					< + + +	Global Colors	Local Colors	Edit Colors	
Common Diagram						Legend			Series Type	Coloring				

The following functionality will be available on the toolbar:

- ✓ Show Legend to display or not to display a legend;
- ✓ Legend location:

Show Legend				 ↓ ↓
	Leger	nd	-	

Inside Ho	rizontal	٨
Inside Ve	rtical	
Outside H	lorizontal	
Outside V	/ertical	

1.7.3 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				
° • • • ° • •	\swarrow		X.	ู่ไำ	
F					
Area					
Range					
Bubble					
•••					
Financial					
ţţţ	ļ ļ	$t_1 t_1$			÷

1.7.4 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:

0	Chart Tools		Dashboard Designer											
Home	Data Design													
Show Cap	ion Edit Names	Rotate X-Ax Settin	is Y-Axis gs Settings	Show Legend			<	Global Colors	Local Colors	Edit Colors				
(Common	Diag	am		Legend	Series Type	Coloring							

Way 2. Click the same icon in the toolbar of the dashboard designer window:

0	Ciart Tools		Dashboard Designer																						
Home	Data Design	n																							
H		E			00						7		AB	ļ,	ß	×	/			AB	6		G	C	
Save	Undo Redo	Pivot	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							Inse	ert								Item					Dast	board		

In the window that appeared, select the required element and set the color for it:

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	
	3 More Colors
New Value	OK Cancel Apply

1.7.5 Drill Down

Such a function as **Drill Down** is possible for charts. It is described in abstract 1.6.5 in more details.

1.7.6 **Export**

Charts can be printed and exported into PDF, Excel or an image. Ways to do this are described in abstract 1.5.13

1.8 Scatter Chart

In order to create a scatter chart click a "Scatter Chart" icon in "Dashboard Designer" window toolbar:

()	Scatter	Ciart Tools						
Home	Data	Design						
Save	4 +	Pivot Grid	Chart Scat	ter 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 To	ola						Dashboard Designer			
Home	Data	Design										~
	ب ا				•••		Ø		Treemap Range Filter	Images ▼A Text Box	Duplicate Duplicate Delete	Title 🐻
Save	A .	Pivot	Grid	Chart	Scatter Chart	Pies	Gauges	Cards	💡 Filter Elements 🕶	Group	🥒 Remove Data Items 🗳 🔻	Edit Colors
File	History						Insert				Item	Dashboard
Data So	urce			DAT	A ITEMS	-					Coattor	-t-
Advent	ureWorks		•	X-ax	is			_ 1			Scatter	<u>ت</u>
J₽ J	Z 😫					X-axis			Scatter Chart 1			± 00
- 🗊	Adventure	Works	î	Y-ax	is							
	Measur	es				Varia						
- F	Accoun	t				r-axis						
	Custom	ier		Weig	ht			_ 1				
	Date	Data				Weight						
	Deliver	y Date				weight						
	Departu	tion Curre	001	Argu	ments			_ 1				
	Employ	ee	incy			Argumen	¥					
	Geogra	ohv				Argumen						
	Interne	t Sales Or	der									
	🖂 Organiz	ation		HIDD	DEN DATA	ITEMS						
	Produc	t		Dime	insions							
-	Promot	ion			1	Dimensio	n					
1	Reselle	r										
I	💽 Reselle	r Sales Ord	der	Meas	sures							
1	💽 Sales C	hannel				Measure						
	Sales R	eason										
	💽 Sales S	ummary O	rde									
	💽 Sales T	erritory										
	💽 Scenari	o										
	tox		¥	1								

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:



Scatter Chart 1

As a result, a scatter chart will have the following view:

0M

20M

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:

40M

Sales Amount

60M

80M

100M



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:



After that, a scatter chart will get back to its initial view. However, after clicking "Bikes" product category again, we will get the following view of a scatter chart:



To return to the previous detail level (drill up), use the Drill Up button (the 🔊 icon).

1.8.1 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 1.7.1

1.8.2 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:

()	Scatter Cim	ri Tools					Dashbo	ard Designer				
Home	Data De	sign										
Show Capt	on Edit Name	es Rotate	X-Axis Settings	Y-Axis Settings	Point Labels	Show Legend			*	Global Colors	Local Colors	Edit Colors
C	ommon		Diagram		Labels	-	Legen	d			Colori	ng

As a result, a form with the following parameters will appear:

Show point labels:		
Content:	Argument	•
Overlapping mode:	Hide overlapping labels	•
Orientation:	Default	•
Position:	Outside	•

- \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 1.7.2 and 1.7.4.

1.8.3 Drill Down

For a Scatter Chart such functionality as "Drill Down" is also available. Its working principle is described in abstract 1.6.5.

1.8.4 **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 - Sca	tter Chart 1	x
Page Layout:	Portrait Landscape	
	O Auto	
Size:	Letter 🔻	
Show Title:	\checkmark	
Title:	Scatter Chart 1	
Size Mode:	 None Stretch Zoom 	
Include:	Filters	
Position:	Parameters Below	
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 1.5.13 ✓ Export to Image See abstract 1.5.13

1.9 Pies

In order to create Pies, click the following icon in a dashboard designer window:

<u>()</u>	Scatter	Citari: To	ola					Dashboard Designer	
Home	Data	Design							
	4 .				00			Range Filter	Images ▼ A Text Box
Save	<i>∲</i> •	Pivot	Grid	Chart	Scatter Chart	Pies Gauges	Cards	Filter Elements •	Group
File	History					Insert			

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:



1.9.1 **Layout**

In a "Design" tab, you can define the way to display pies elements:

0		Pies	Tools						
Home	Di	ata	Design						
Show Care	tion	A	b		A	Arrange in	Arrange	Count	3 🖕
Show Cap	uon	Eult	Names	ľ	uto Arrange	Columns	in Rows		
(Comn	non				Content A	rrangemen	nt	

 ✓ 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:

Pies Tools		Dashboard Designer		D X
Home Data Design				\$
Show Caption Edit Names Common	Arrange in Rows Columns Content Arrange	Data Labels Tooltps Show Pie Labels	Pie Donut Global Colors Style Colors	ors
Data Source	DATA ITEMS		Лашборд 1	rîa
AdventureWorks 👻	Values)	дашоорд 1	
₩2 ₩X 🕾	Gross Profit Margin	Pies 1		Ċ 23
♦2 ♦A ♥ Adventure Works > ## Aesoures > ## Customer > ## Customer > ## Calendar > ## Calendar Quarter ## Calendar Semest ## Calendar Veater ## Calendar Year ## Date.Calendar Weater ## Discal # Date.Calendar W ## Discal # Day of Month ## Day of Month # Day of Year ## Month of Year # Department ## Department # Department # Department # Department # Department # Department # Department # Department # Department<	Gross Proit margin Value Arguments	CY 2005 Accessories: 58 S: 12.62 % Clothing: 8.00 % Clothing: Bikes: 21.31 % Clothing: Sites: 21.32 % Component S: 12.62 % Clothing: Sites: 21.32 % Component Sites: 21.32 21.32 % Sites: 21.32 % Component Sites: 21.32 % Sites: 21.32 % S	CY 2006 Accessones: 42 Components 0 % Bikes: 10.97	CY 2007
▶ 10 Internet Sales Order Det *		L		

✓ Arrange in Rows – place the elements in the given number of rows:



1.9.2 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:



1.9.3 Data Labels Position

Data Labels Position may be as follows:



1.9.4 Style

Pie has two ways to display:



1.9.5 Edit Colors

Default colors can be edited if needed. This process is described in more details in abstract 1.7.4.

1.9.6 Drill Down

Such a function as **Drill Down** is available for pies. Its working principle is described in abstract 8.6.5.

1.9.7 **Export**

If needed, pies can be exported into PDF, Excel or an image. It is described in more details in abstract 1.5.13

1.10 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:

0	Pla	s Tools										Dashboard	d Designer
Home	Data	Design	1										
F		A	E			• •						7	Images ▼
Save	Undo T	Redo T	Pivot	Grid	Chart	Scatter Chart	Pies	Gauges	Cards	Treemap	Range Filter	Filter Elements ▼	Group
File	His	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	340
Reseller Sales Amount	246
Actual	*
Target	
Series	
Category	
Series	

As a result, we will get some gauges:



1.10.1 **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	1

A form with the following indicator parameters will appear:

Minimum value	0 🍦	🗸 Auto
Maximum value	60000000 🌲	🗹 Auto
Delta Options		
Value type:	Absolute variation	•
Value type: Result indication:	Absolute variation Greater is good	•
Value type: Result indication: Threshold type:	Absolute variation Greater is good Percent	•

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:

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 %

As a result, we will get gauges of the following view:



1.10.2 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 🗘

1.10.3 **Layout**

Different layout options are available for gauges. Principle and working method are described in abstract 1.9.1.

1.10.4 **Style**

The Gauge dashboard item allows you to select the gauge type:

9	Gauges Tools		Dashboard Designer													
Home	Data	Design														
	A	b	Α			Count 3 🗘										
Show Capti	on Edit	Names	Auto Arrange	Arrange in Columns	in Rows		Full Circular	Half-Circular	Left-Quarter Circular	Right-Quarter Circular	Three-Fourth Circular	Horizontal	Vertical	Show Gauge Captions		
Common			Content A	rrangemer	nt				Style				Labels			

1.10.5 Drill Down

Such a function ad "Drill Down" is available for indicators. Working principle of this functionality is described in abstract 1.6.5.

1.10.6 **Export**

You can print indicators as well as export them into PDF, Excel or an image. The ways are described in abstract 1.5.13.
1.11 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:



1.11.1 **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:

Card Settings		×
Layout Options De	Ita Options Diparkline Options Format Options	
Result indication:	Greater is good	•
Threshold type:	Percent	•
Threshold value:		0 🗘
	OK Cancel A	pply

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.



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.

1.11.2 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:



Sparkline itself has the following parameters:

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 App	ly

- ✓ 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.

1.11.3 Card Layouts

To change a card's layout, click the "Options" button (the icon) displayed next to the data item container in the <u>Cards</u> section:



In the form that opens, the following layouts are available on the "Layout Options" tab:

ayout Options Delta Options	Sparkline Optio	ons Format Options
elect template:	Min width:	200
Stretched	Max width:	
Centered Compact	Vicible	Value/Element
Lightweight	VISIDIE	Actual Value
		Title
		Subtitle
		Percent Variation
		Absolute Variation
	\checkmark	Delta Indicator
	\checkmark	Sparkline
	Apply to All C	Cards

✓ 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:

ayout Options	Delta Options	Sparkline Optio	ns Format Options
elect template:		Min width:	200 📥
Stretched		Marristalaha	0 Å F Autr
Centered		Max width:	0 - MI Auto
Compact		Visible	Value/Element
Lightweight		\checkmark	Actual Value 🗸
		\checkmark	Title
		\checkmark	Subtitle
		\checkmark	Percent Variation
		\checkmark	Absolute Variation
			Delta Indicator
			Sparkline
		Apply to All C	ards

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;
- ✓ 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
- ✓ Sparkline visualizes the variation of actual or target values.

1.11.4 Format Options

The Card dashboard item formats the actual and target values displayed within cards

using <u>format settings</u> specified for data items. Click the options buttons (the icon) displayed next to the data item container in the Cards section to change format settings for other values:

Reseller Total Product Cost	
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:

elect value type:			
Actual value Farget value Absolute variation Percent of target Percent variation	Format type: Unit: Precision: Currency: Culture: Include group	Currency Auto Use dashboard settings Use dashboard settings	▼ ₹ 2 ÷
		\$1.23B (\$1.23B)	

1.11.5 Cards Arrangement

The following display methods are available for the cards in the "Design" tab:

()		Cards	Tools				
Home	Da	ata	Design				
Show Cap	tion	A Edit I	b Names	Auto Arrange	Arrange in Columns	Arrange in Rows	Count 3 🌲
(Comn	non			Content A	Arrangemen	nt

The principle of functionality is similar to that of Pies – abstract 1.9.1

1.11.6 Drill Down

Such a function as Drill Down is available for Cards. The principle of this functional is described in abstract 1.6.5.

1.11.7 **Export**

Cards may be exported into PDF, Excel or an image. Ways to do this are described in abstract 1.5.13

1.12 Treemap

To create a Treemap, click the corresponding icon on the toolbar:

0								Dash	board Des	igner		
Home												
H	🖘 Undo 🔻	<mark>ک</mark> ا			• •						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		c¹ם
Values	Treemap 1	בי בא
Value	Bikes	Components
Arguments		
Category		
Argument		
HIDDEN DATA ITEMS		
Dimensions		
Dimension		
Measures		
Measure		
		Clothing

Now add a "Subcategory" hierarchy into an "Argument" fields:

DATA ITEMS		<u>ئ</u>
Reseller Sales Amount	Treemap 1	Ċ 23
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 Cloth Cl
		Frames Cl.m. C
		Compon Cl C
		- Wheels C C

Let us group the subcategories of one group of products:

Reseller Sales Amount	Treemap 1	
Value	Bikes - Road B	
guments		
Category	\odot	
Subcategory	Top N	
Argument	Color by 🕨	
-	Group Tiles	
	Rename	

Treemap 1		Ċ 53
Bikes		Components
Road Bikes	Mountain Bikes	Mountain Frames
		Road Frames
		Touring Frames
		Wh
Touring Bikes		Clothing A Jerm n n n Shan n n

As a result, a Treemap will look as follows:

1.12.1 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:



1.12.2 Labels

There are two types of labels in a Treemap:

- ✓ Tiles Labels
- ✓ Group Labels

()	Tr	eema	p Tools											
Home	Da	ita	Design											
		Ab	/				\mathbf{X}							
Show Cap	tion	Edit N	ames	Slice and Dice	Squarified	Striped	Layout Direction •	Labels	Tooltips	Labels	Tooltips	Global Colors	Local Colors	Edit Colors
0	Comm	on			Lay	out		Tile l	.abels	Group	Labels		Colori	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:



1.12.3 Edit Colors

For a treemap the Color Editor functionality is available. The principle of its functionality is described in abstract 1.7.4.

1.12.4 **Export**

Treemap may be exported into PDF, Excel or an image. The ways to do this are described in abstract 1.5.13

1.13 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:



The following filters are available in the drop-down list:

	Combo Box
	List Box
6	Tree View

✓ Combo Box - the Combo Box dashboard item allows to select a value(s) from the drop-down list.

1 Calendar Year	Combo Box 1	~
	(All)	
Dimension	(All)	
	CY 2005	
	CY 2006	
HIDDEN DATA ITEMS	CY 2007	
	CY 2008	
limensions		

On the "Design" tab for this filter, there are two ways to select values:

0	Fili	ter Ele	ement T	ools			
Home	D	ata	Design				
Show Cap	tion	A Edit I	b Names	Standard	Checked	Show 'All' Value	Enable Search
	Comr	non		Item	Туре	Item Se	ttings

• Standard – allows to select only a single value:

Years	
(All)	-
(All)	
CY 2015	
CY 2016	- 1
CY 2017	- 1
CY 2018	

• Checked - allows to select multiple values in the invoked drop-down list:

Years			
(All)			-
🖌 (All)			
V CY 2015			
V 2016			
V 2017			
V 2018			
	ОК	Cancel	

✓ List Box - the List Box dashboard item allows to select a value(s) from the list

(†	Calendar Year	List Box 1	K 3 K 3
<u> </u>		(All)	
	Dimension	CY 2005	
		CY 2006	
		CY 2007	
HIDDEN	DATA ITEMS	CY 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 7
	кя
(All)	
CY 2005	
CY 2006	
V CY 2007	
V CY 2008	

• Radio - allows to select only a single value in the radio group

List Box 1	K K	ĸ
(All)		
CY 2005		
CY 2006		
O CY 2007		
CY 2008		

In addition, there is a possibility to enable filtering for all elements:

8	Fili	ter Ele	ment T	ools			
Home	D	ata	Design				
Show Cap	tion	A Edit I	b Names	Checked	©- C- Radio	Show 'All' Value	Enable Search
-	Comr	non		Item 7	Гуре	Item Se	ttings

✓ Tree View - the "Tree View" dashboard item displays values in a hierarchical way and allows to expand/collapse nodes

Dimensions	
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
Dimensions	✓ June ► ✓ CY Q3
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:



Ť	Category	Tree View 1
Ϋ́	Subcategory	Bike
†	Product	→ ✓ Bike Racks
	Dimension	✓ Hitch Rack - 4-Bike
	Differsion	Bike Wash - Dissolver
IDDEN I imensio	DATA ITEMS ns	 ✓ Bikes ✓ Mountain Bikes ✓ Road Bikes ✓ Touring Bikes
	Dimension	Clothing
easure	s	Mountain Bike Socks, L
		Mountain Bike Socks, M

1.14 Range Filter

The "Range Filter" dashboard element as well as "Filtr" allows to apply filtering to other dashboard elements.



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:



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	$\uparrow \checkmark$	Add Custom Period
Last Year Last 2 Years Last 3 Years Last 5 Years This Year Last Quarter This Quarter Next Quarter Last Quarter Last 3 Months Last 6 Months Last 12 Months This Month Next Month	→	Caption	Period	Default
				Close

The list on the left shows the list of ready periods that you can filter:

Edit Period	İs		
Filter by Last Yea Last 2 Y Last 3 Y Last 5 Y	All All Year Quarter Month	Ģ	•
This Yea	r		
Next Yea	ar		
Loot Our	ortor		

In order to add the selected period, use the \supseteq button or simply drag the period in the field on the right:

Edit Periods				x
Filter by All	•	Edit Delete	• 1	Add Custom Period
Last Year		Caption	Period	Default
Last 2 Years Last 3 Years <u>Last 5 Years</u> This Year Last Quarter This Quarter Next Quarter Last Month Last 3 Months Last 6 Months Last 12 Months This Month Next Month		Last 5 Years	2014 - 2018	
				Close

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		× .	x
Filter by All 👻	Edit Delete	Add Cust	om Period
Last Year	Caption	Period	Default
Last 2 Years Last 3 Years	Last 5 Years	2014 - 2018	

Period	×
 Year Quarter 	 Previous Year This Year
O Month	🔘 Next Year
Custom	🔘 Last 1 🌲 years
	○ Next 1
	Indude current
	2019
	OK Cancel

As a result, a window appears in which you can add the following periods:

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.

Period			x
O Year O Quarter	Start point		
O Month O Custom	End point	None Fixed Flow	
		Entire Range	
		OK Cano	el

There is also a possibility to create a **Custom** period:

This period allows to specify a period with user boundaries ("Start" and "End" point):

Period			×
 Year Quarter Month 	Start point	None Fixed Flow	•
Oustom	End point	None Fixed Flow	• 1 ‡
	Ja	nuary 2019 - December 2019 Οκ	Cancel

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
 Year Quarter Month 	Start point	○ None	
Oustom	End point	 None Fixed Flow Interval: Month ✓ Offset: 2 ↓ 	
		January 2019 - June 2019 OK Cancel	

1.15 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:



Dimensions	
↑ Country	
↑ Category	✓ (All) ✓ Ø Australia
Dimension	Accessories
HIDDEN DATA ITEMS	Clothing Components
Dimension	

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":

Dimensions		
Category	Combo Box 1	
Dimension		·

The second filter will be called "List Box":

Dimensions		
† Subcategory	Combo Box 1	
	(All)	-
Dimension	List Box 1	к л к х
	🗹 (All)	*
HIDDEN DATA ITEMS	Bib-Shorts	0
Dimensions	Bike Racks	
	Bottles and Cages	
Dimension	Bottom Brackets	
	Brakes	
Measures	Caps	
	Chains	
Measure	Cleaners	
	Cranksets	
	Derailleurs	U

For a "List Box" on the "Data" tab disable "Ignore Master Filters" button:

9	Filter E	ement Tools	
Home	Data	Design	
7	R		8
Edit Filter	Clear	Cross-Data-Source Filtering	Ignore Master Filters
Filter	ing	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:



1.16 Images

An image can be one of the elements of a dashboard. To add an image, click the corresponding icon in the toolbar:



An «Interactive Dashboard» allows to create two types of image elements:



- ✓ Image
- ✓ Bound Image

1.16.1 Image

To add an "Image" element, choose the following sub-item:

📓 Images 🔻	3
🚨 Image	N
🚰 Bound In	nage

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:

0	Bo	and In	nage T	sola
Home	Design			
		A	2	
Show Caption		Edit N	lames	Import Image
Common			Open	

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 1.5.13.

1.16.2 Bound Image

To add a "Bound Images" item, select the following sub-item:



A new element appears in the designer window:

Attribute		
Attribute	Bound Image 1	ů ۵۵
HIDDEN DATA ITEMS		
Dimensions		
Dimension		
Measures		
Measure		

Next, you need to choose how to bind the data to the image by clicking the

"Options" button next to an attribute. The following options will be available in the opened window:

Image Binding Options	i	×
 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 Option	5	x
🔘 Binary Array 🎯 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						
1 Country		Sales by Count	t \$3			
- Country) =		Country	Reseller Sales Amount	Reseller Order Count	Reseller Freight Cost
Reseller Sales A	5		Australia	\$1.59M	<u>~~~</u>	▼ \$39.9K
			Canada	\$14.4M	~~~~	
Deseller Order C			France	\$4.61M	\sim	= \$115K
Reseller Order C			Germany	\$1.98M		▼ \$49.6K
			United Kingdom	\$4.28M	~~~•	= \$107K
Reseller Freight	Σ		United States	\$53.6M	~~~~•	🔺 \$1.34M
New Column	A					
Sparkline						
1 Month of Year		U				
HIDDEN DATA ITEMS						
Dimensions		Ŧ				

To start with, we will place the files with the corresponding image and name in the folder:

📙 🛃 📕 🖛 cou	intry			- 🗆 X
File Home	Share View			~ 😮
← → ~ ↑ 📙	→ This PC → Local Disk (C:)	> inetpub > bat > country ~	Ö Search country	Q
	▲ Name	^ Date modified	Туре	Size
Quick access	🛤 Australia	11.02.2019 9:50	PNG image	3 KB
🗸 💻 This PC	🛤 Canada	11.02.2019 9:50	PNG image	2 KB
> 📃 Desktop	Real France	11.02.2019 9:50	PNG image	1 KB
> 🗄 Documents	🔍 Germany	11.02.2019 9:51	PNG image	1 KB
> 📕 Downloads	🔍 United Kingdom	11.02.2019 9:51	PNG image	2 KB
> 👌 Music	🔍 United States	11.02.2019 9:51	PNG image	3 KB
> E Pictures				
Videos 6 items	*			

We will create a new "Bound Images" element with the "Country" attribute:

DATA ITEMS		Images	Australia	rîn
Attribute		Integeo	Hubdrand	
Country 🌣	Bound Image 1			Ċ \$3
HIDDEN DATA ITEMS				
Dimensions		No	image data	
Dimension				
Measures	<u> </u>			
Maagura	Sales by Count	ry		t 53
Measure	Country	Reseller Sales Amount	Reseller Order Count	Reseller Freight Cost
	Australia	\$1.59M	\sim	▼ \$39.9K
	Canada	\$14.4M	~~~ ~ •	
	France	\$4.61M	$\sim \sim $	
	Germany	\$1.98M		▼ \$49.6K
	United Kingdom	\$4.28M	$\sim \sim \sim \sim$	
	United States	\$53.6M	~~~~	▲ \$1.34M

The form of data binding will be filled with the following data:

Attribute	Image Binding Option	5		x
Country		-		
HIDDEN DATA ITEMS	Binary Array URI		The path to the folder containing the required	
Dimensions	0.0.0		images	
Dimension	URI Pattern:	C:\inetpub\bat\country		
Measures				
Measure				
		OK	Cancel Apply	

Now, all is left is to insert the data source field values into the $\{0\}$ placeholder position:

Image Binding Option	5	x
O Binary Array O URI	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
URI Pattern:	C:\inetpub\bat\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 23
Country	Reseller Sales Amount	Reseller Order Count	Reseller Freight Cost
Australia	\$1.59M	\sim	* \$39.9K
Canada	\$14.4M	~~~ ~ •	\$359K
France	\$4.61M	$\sim \sim $	— \$115K
Germany	\$1.98M	·•	▼ \$49.6K
United Kingdom	\$4.28M	$\sim \sim \sim \sim$	- \$107K
United States	\$53.6M	~~~·	▲ \$1.34M

1.17 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 Box Group
					I	nsert				

In the designer window, an empty text field appears:



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		Ů §3
	Show Caption	
đ	Duplicate	
*	Delete	
\$	Convert To	
1	Remove Data Items	
Ab	Edit Names	
9	Edit Filter	
8	Clear	
C	Update	
A	Edit	
011	Insert Field	
	Maximize	
	Print Preview	
	Export To PDF	
	Export To Image	

The text editing form with the following set of tools will appear:

0	Text Box Tools	5	Text: Box Editor		Dashboard Designer	
Home	Data Design	File Home	Insert Page Layout Design I	Layout Format		\sim
l	K Cut	Calibri	▼ 11 ▼ A A A ▼		≡ ≡ ¶ AaBbCcD AaBbCcD ↓ ♣ F	Find
Paste	Paste Special	B <i>I</i> <u>∪</u> <u>⊍</u>	$S = X^2 X_2 A \cdot ab \cdot ab$		I ‡I ▼ ≪ V ▼ ¶Normal Hyperlink ∓ AB R	Replace
	Clipboard		Font	4 Paragr	raph 🖌 Styles 🚄 Ed	diting

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)	Text Box 1	<u>ت</u> دي د
= 12 1X @ \$	UnitPrice (Sum)		
122 Month number	Description (Min)		
113 Quarter	Value		
123 Semester			
123 Year			
👻 🧮 DimGeography			
ab City	Dimensions		
ab Country	Dimension		
ab Province			
+ III DimProduct	Measures		
ab Class	Measure		
ab Description			
Madal			· · · · · · · · · · · · · · · · · · ·

Now move to the "Design" tab and click an "Edit" button:



In the text field, insert the following data:

Values		
Product (Min)	Text Box 1	± 53
UnitPrice (Sum)	Name: Price:	
Description (Min)	Description:	
Value		
HIDDEN DATA ITEMS Dimensions		
Dimension		
Measures		
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		Ċ 23
Name:	Show Caption	*
Descrip	Duplicate	
*	Delete	
\$	Convert To	
	Remove Data Items	
Ab	Edit Names	
9	Edit Filter	
8	Clear	
C	Update	
A	Edit	
¥.	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		ф 53
Name: <mark>Select value</mark> Price: Description:	Product (Min) UnitPrice (Sum/X Description (Min)	*

Repeat the same steps for the "Price" and "Description" fields:

Text Box 1	t S
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":

🌖 🛛 Text: Box Tools	Dashboard Designer				
Home Data Design			\sim		
Ab	A				
Show Caption Edit Names	Edit Insert Field				
Common	Editing				
Data Source SQL Data Source	Values		Ċ		
Query	Product (Min)	Text Box 1	Ċ1 00		
	UnitPrice (Sum)	Name:AWC Logo Cap Price:\$3.41B			
✓ ③ Sales	Description (Min)	Description:All-occasion value bike with our basic con safety features. Offers wider, more stable tires for a	mfort and ride around		
→	Value	town or weekend trip.			

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 ж к ж	Description	th 53
 (All) Accessories Bikes Clothing 		Name:Mountain-100 Silver, 44 Price:\$17.3M Description:Top-of-the-line con Performance-enhancing option Frame, super-smooth front sus	npetition mountain bike. Is include the innovative HL spension, and traction for all
Product	K 7	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, 44 Mountain-100 Silver, 44 Mountain-200 Black, 38 Mountain-200 Black, 42 Mountain-200 Black, 46 Mountain-200 Silver, 38 Mountain-200 Silver, 38 Mountain-200 Silver, 42 Mountain-200 Silver, 43 Mountain-200 Silver, 38 Mountain-200 Silver, 46 Mountain-200 Silver, 46 Mountain-400-W Silver, 38 Mountain-400-W Silver, 40 Mountain-400-W Silver, 40 Mountain-500 Black, 40 Mountain-500 Black, 41 			

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	к я к я	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		Photo 🟥 🖏
Mountain-200 Black, 38 Mountain-200 Black, 42 Mountain-200 Black, 42 Mountain-200 Black, 46 Mountain-200 Silver, 38 Mountain-200 Silver, 42 Mountain-400-W Silver, 44 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	

1.18 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									
Subcategory	ta.	Grid 1	Grid 1						
1 Subcategory		Subcategory	Subcategory		Sales Amount		Gross Profit		
Sales Amount		Bib-Shorts					\$167K		\$51.3K
		Dilue De elus	Dilus Disalus				\$237K		\$95K
	Format						\$39.6K		\$24.8K
Gross Profit	Add Fo	ormat Rule	X	Value		•	\$64.3K		\$38.2K
	File Edit Ru	dit Puller		T (D):		\$51.8K		\$13.5K	
New Column		103	Average			1	\$66K		\$17.1K
	Clear R	ules				•	\$51.2K		(\$1.2K)
Sparkline	Renam	e	Expression			\$9.3			\$2.42K
Argument		Cleaners	-	Icon Ranges			\$18.4K		\$8.54K
Argument		Cranksets		icon kanges	ges		\$204K		\$52.8K
	1	Derailleurs	-	Color Ranges		•	\$70.2K		\$18.1K
HIDDEN DATA ITEMS		Fenders		Gradient Rang	es	•	\$46.6K		\$29.2K
Dimension		Forks		Bar			\$77.9K		\$20.2K
		Gloves	-				\$243K		\$83.4K
		Handlebars	-	Bar Color Rang	ges	\$171K		\$44.2K	
		Headsets	L	Bar Gradient R	anges	•	\$60.9K		\$15.4K
		Lislandta	·	1			+ AD AL		toock.

Way 2. Right-click on the table header:

Grid 1						Ċ Č
Subcategory	Sales Amount		Gross	Profit		
Bib-Shorts		Fit to Content				\$51.3K
Bike Racks		Fix Width				\$95K
Bike Stands		Column Width				\$24.8K
Bottles and Cages	H-H	column Widdin.				\$38.2K
Bottom Brackets		Add Format Rule 🔸	X	Value	۲	13.5K
Brakes	鴫	Edit Rules		Top/Bottom	۲	17.1K
Caps	5	Clear Rules		Average		1.2K)
Chains				Avenage	,	2.42K
Cleaners		Add Total		Expression		8.54K
Cranksets	2	Clear Totals	P	Icon Ranges	۲	52.8K
Derailleurs		\$70.2K	-	Color Ranges		18.1K
Fenders		\$46.6K	-	color hanges		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	*	5226K

1.18.1 Format Rule: Value

Value can be one of the highlight rules:

X	Value N	•	Greater Than
1	Top/Bottom	•	Greater Than Or Equal To
x	Average	۲	 Less Than
f	Expression		Less Than Or Equal To
P	Icon Ranges	۲	😑 Equal To
-	Color Ranges	۲	≠ Not Equal To
	Gradient Ranges	۲	() Between
-2	Bar		11 Not Between
-	Bar Color Ranges	•	1 Between Or Equal To
1	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		Pivot 1						C1 2
			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	\$23K
lumns		CY Q2	\$91.8K	\$48.7K	\$213K	\$102K	\$46K	\$27.3K
		CY Q3	\$85.6K	\$39.8K	\$222K	\$95.7K	\$37.5K	\$21.3K
↑ Sales Territory Group		CY Q4	\$82.3K	\$42.6K	\$203K	\$96.4K	\$41.3K	\$24.18
Column			\$17.2M	\$3.16M	\$67.3M	\$3.92M	\$10.2M	\$3.44M
		CY Q1	\$3.95M	\$888K	\$15.4M	\$1.28M	\$2.66M	\$943K
WS		CY Q2	\$4.74M	\$1.05M	\$17.5M	\$907K	\$2.89M	\$1.02M
A		CY Q3	\$4.12M	\$403K	\$16.7M	\$447K	\$2.08M	\$5958
T Category		CY Q4	\$4.34M	\$818K	\$17.7M	\$1.28M	\$2.55M	\$877
1 Calendar Quarter of Year		✓ Clothing Total	\$401K	\$56.9K	\$1.6M	\$284K	\$113K	\$27.5
		CY Q1	\$71.2K	\$11.6K	\$260K	\$56.1K	\$24.3K	\$7.498
Row		CY Q2	\$100K	\$15.5K	\$413K	\$79K	\$30.7K	\$7.518
		CY Q3	\$129K	\$14.9K	\$523K	\$77K	\$30.5K	\$68
DDEN DATA ITEMS		CY Q4	\$102K	\$14.9K	\$407K	\$72.3K	\$27.7K	\$6.52
onsiene			\$1.92M	\$138K	\$9.68M	\$882K	\$204K	\$13.76
iensions		CY Q1	\$235K	\$18K	\$1.03M	\$107K	\$24.5K	\$1.898
Dimension		CY Q2	\$446K	\$33.9K	\$2.42M	\$222K	\$54.1K	\$3.6K
		CY Q3	\$796K	\$53.7K	\$3.83M	\$325K	\$83.9K	\$4.86
asures	U	CY Q4	\$440K	\$32.1K	\$2.4M	\$227K	\$41.2K	\$3.35K

Let us select the totals of those product categories for which the values of the "Sales Amount" measure are more than \$ 1 million:

Sales Amount	-		Pivot 1									Ċ Č
Suica Anount		- Farmer			1	Europe			North America		Pacific	
Gross Profit		Form	iat			Sales Amount G	ross F	Profit	Sales Amount	Gross Profit	Sales Amount	Gross Profit
Value	\checkmark	Show	Values		al	\$328K		\$169K	\$781K	\$369K	\$163K	\$95.8
	1	Show	/ Totals			\$68.3K		\$38.2K	\$142K	\$74.6K	\$37.6K	\$22.9
Columns	1	Show	Grand To	otals		\$91.5K		\$48.5K	\$213K	\$102K	\$46K	\$27.4
	<u> </u>					405 DV		\$40 3K	\$223K	\$96.3K	\$38K	\$21.6
1 Sales Territory Group		Add	Format Ru	ile 🕨	X	Value	•	≥ Grea	iter Than	\$96.1K	\$41K	\$24
Column	曝	Edit	Rules			Top/Bottom	•	Image: Second secon	ter Than Or Equal	To \$3.92M	\$10.2M	\$3.44
	5	Clear	Rules		x	Average		< Less	Than	\$1.27M	\$2.66M	\$944
ows		Rena	me		f	Expression		S Less	Than Or Equal To	\$913K	\$2.88M	\$1.02
(-	1	CIT	25					1.1.	\$464K	\$2.08M	\$595
T Category			CYC	Q4	0	Icon Ranges	•	E Equi	allo	\$1.27M	\$2.56M	\$880
1 Calendar Quarter of Yea	r		- Cloth	ning Total	-	Color Ranges	۲	🗲 Not	Equal To	\$284K	\$113K	\$27.5
• 105	=		CYC	Q1		Gradient Ranges	۲	() Betv	veen	\$56.1K	\$24.1K	\$7.46
Row			CYC	Q2	ها	Bar		II Not	Between	\$78.7K	\$30.7K	\$7.49
			CYC	Q3		D. C. I. D.	•	Between Or Equal To	\$77.4K	\$30.7K	\$6.08	
IDDEN DATA ITEMS			CYC	Q4	-	Bar Color Ranges				\$72.2K	\$27.7K	\$6.49
			- Comp	ponents To		Bar Gradient Ranges	•	II Not	Between Or Equal	\$882K	\$204K	\$13.7
imensions			CYC	Q1		\$233K		ab Text	that Contains	\$107K	\$24.5K	\$1.89
Dimension			CYO	Q2		\$448K		\$33.9K	\$2.42M	\$222K	\$54.1K	\$3.6
			CYC	Q3		\$796K		\$53.7K	\$3.83M	\$325K	\$83.9K	\$4.86
leasures		U	CYC	04		\$440K		\$32.1K	\$2.4M	\$227K	\$41.2K	\$3.35

The following form appears:

reater Than	×							
Format Sales Amount values that are greater than								
Penter a value >								
Appearance Icons								
	i I							
B I U Gr R Y G B								
Custom Appearance								
	<u> </u>							
Intersection mode								
(Auto)	•							
Row dimension Column dimension								
[Grand Total]	Ŧ							
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 va	lues that are greater than						
1000000							
Appearance Icons ↑ ↑ ↑ ↑ ↑ ↓ ↓ • ↑ ↑ ↑ ↑ ↓							
Intersection mode							
First level	•						
Row dimension	Column dimension						
[Grand Total]	[Grand Total]						
Apply to							
Apply to row	Apply to column						
ОК	Cancel Apply						

As a result, the "Pivot" table will look the following:

Pi	vot 1						Ć 🖞
		Europe		North America		Pacific	
		Sales Amount	Gross Profit	Sales Amount	Gross Profit	Sales Amount	Gross Profit
Ŧ	Accessories Total	\$328K	\$169K	\$781K	\$369K	\$163K	\$95.8
	CY Q1	\$68.2K	\$38.1K	\$143K	\$75K	\$37.9K	\$23
	CY Q2	\$91.8K	\$48.7K	\$213K	\$102K	\$46K	\$27.3
	CY Q3	\$85.6K	\$39.8K	\$222K	\$95.7K	\$37.5K	\$21.3
	CY Q4	\$82.3K	\$42.6K	\$203K	\$96.4K	\$41.3K	\$24.1
Ŧ	Bikes Total	\$17.2M	\$3.16M	\$67.3M	\$3.92M	\$10.2M	\$3.44N
	CY Q1	\$3.95M	\$888K	\$15.4M	\$1.28M	\$2.66M	\$943
	CY Q2	\$4.74M	\$1.05M	\$17.5M	\$907K	\$2.89M	\$1.02M
	CY Q3	\$4.12M	\$403K	\$16.7M	\$447K	\$2.08M	\$595
	CY Q4	\$4.34M	\$818K	\$17.7M	\$1.28M	\$2.55M	\$877
Ŧ	Clothing Total	\$401K	\$56.9K	\$1.6M	\$284K	\$113K	\$27.5
	CY Q1	\$71.2K	\$11.6K	\$260K	\$56.1K	\$24.3K	\$7.49
	CY Q2	\$100K	\$15.5K	\$413K	\$79K	\$30.7K	\$7.51
	CY Q3	\$129K	\$14.9K	\$523K	\$77K	\$30.5K	\$68
	CY Q4	\$102K	\$14.9K	\$407K	\$72.3K	\$27.7K	\$6.52
Ŧ	Components Total	\$1.92M	\$138K	\$9.68M	\$882K	\$204K	\$13.7
	CY Q1	\$235K	\$18K	\$1.03M	\$107K	\$24.5K	\$1.89
	CY Q2	\$446K	\$33.9K	\$2.42M	\$222K	\$54.1K	\$3.6
	CY Q3	\$796K	\$53.7K	\$3.83M	\$325K	\$83.9K	\$4.86
	CY Q4	\$440K	\$32.1K	\$2.4M	\$227K	\$41.2K	\$3.35

To edit an existing highlight rule, click the "Options" icon next to the measure:



Edit Rule	25		x
Ed	it Delete 🔨 🤟	Filter by:	Sales Amount 🔹
	Caption	Calculated By	Applies To
\checkmark	Greater Than (>1000000)	Sales Amount	Sales Amount
Add	calculated by Sales Amount		•
			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:

Edit	Rules	5			x
C	Edit	Delete 1	Filter by:	Sales Amount	•
		Caption	Calculated By	Applies To	
	\checkmark	Greater Than (>1000000)	Sales Amount	Sales Amount	
	Add	- calculated by Sales Amount			•
					Close

Edit Rules X Edit Delete Filter by: Sales Amount • $\wedge \downarrow$ Caption Calculated By Applies To Greater Than (>1000000) Sales Amount Sales Amount ✓ calculated by Sales Amount Add • Close

If necessary, the rule can be temporarily disabled by unchecking the corresponding rule:

1.18.2 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:

Sottom N	x
Format Sales Amount val	ues that rank in the bottom
N = 4	% of all values
Appearance Icons	
+ Z + X +	****
	X 🔮 🔒 😂 🔺
o 🔊 🧳 🖉 🖉	00
all at at at at	
Intersection mode	
Last level	•
Row dimension	Column dimension
[Grand Total]	[Grand Total] 🔹
Apply to	
Calcadas Overbar of Ver	_
Calendar Quarter of Yea	r
Calendar Quarter of Yea	Apply to column
Calendar Quarter of Yea	r ▼
Calendar Quarter of Yea	Apply 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	\$328	K \$169K	\$781K	\$369K	\$163K	\$95.8K
	CY Q1	\$68.2	K \$38.1K	\$143K	\$75K	\$37.9K	\$23K
	CY Q2	\$91.8	K \$48.7K	\$213K	\$102K	\$46K	\$27.3K
	CY Q3	\$85.6	K \$39.8K	\$222K	\$95.7K	\$37.5K	\$21.3K
	CY Q4	\$82.3	K \$42.6K	\$203K	\$96.4K	\$41.3K	\$24.1K
~	Bikes Total	\$17.2	4 \$3.16M	\$67.3M	\$3.92M	\$10.2M	\$3.44M
	CY Q1	\$3.95	4 \$888K	\$15.4M	\$1.28M	\$2.66M	\$943K
	CY Q2	\$4.74	M \$1.05M	\$17.5M	\$907K	\$2.89M	\$1.02M
	CY Q3	\$4.12	и \$403K	\$16.7M	\$447K	\$2.08M	\$595K
	CY Q4	\$4.34	4 \$818K	\$17.7M	\$1.28M	\$2.55M	\$877K
~	Clothing Total	\$401	K \$56.9K	\$1.6M	\$284K	\$113K	\$27.5K
	CY Q1	\$71.2	K \$11.6K	\$260K	\$56.1K	\$24.3K	\$7.49K
	CY Q2	\$100	K \$15.5K	\$413K	\$79K	\$30.7K	\$7.51K
	CY Q3 🔴	\$129	K \$14.9K	\$523K	\$77K	\$30.5K	\$6K
	CY Q4	\$102	K \$14.9K	\$407K	\$72.3K	\$27.7K	\$6.52K
~	Components Total	\$1.92	4 \$138K	\$9.68M	\$882K	\$204K	\$13.7K
	CY Q1	\$235	K \$18K	\$1.03M	\$107K	\$24.5K	\$1.89K
	CY Q2	\$446	K \$33.9K	\$2.42M	\$222K	\$54.1K	\$3.6K
	CY Q3	\$796	K \$53.7K	\$3.83M	\$325K	\$83.9K	\$4.86K
	CY Q4	\$440	K \$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:

Format Sales Amount values that rank in the top $N = 90.00\% regimes from the top format cons $ Appearance Icons Apply to Category Apply to row Apply to column Apply to column Apply to row Apply to column Apply Γop N	×	
N = 90.00 % Appearance Icons Ic	Format Sales Amount values that rank in the top	,
Appearance Icons Intersection mode (Auto) Row dimension [Grand Tota] Column dimension [Grand Tota] Apply to Category Apply to row Apply to column	N = 90.00 % 🗘 📝 % of all values	2
Appearance Icons		
Intersection mode (Auto) Row dimension [Grand Tota] (Grand Tota] (Grand Tota] Apply to Category Apply to row	Appearance Icons	_
Intersection mode (Auto) Row dimension [Grand Tota] Apply to Category Apply to row OK Cancel Apply to column Cancel Apply to column Cancel Apply to column Cancel Apply to column Cancel Apply	*****	÷ I
Intersection mode (Auto) Row dimension [Grand Total] Apply to Category Apply to row OK Cancel Apply to column Column Apply to column Cancel Apply Cancel App		
Intersection mode (Auto) Row dimension [Grand Total] Apply to Category Apply to row Apply to row Apply to row Apply to column Apply to row Apply to column		~
Intersection mode (Auto) Row dimension [Grand Tota] Column dimension [Grand Tota] Apply to Category Apply to row Apply to row Apply to column OK Cancel Apply		X
Intersection mode (Auto) Row dimension [Grand Tota] Column dimension [Grand Tota] Apply to Category Apply to row Apply to row Apply to column OK Cancel Apply		
Intersection mode (Auto) Row dimension [Grand Tota] Apply to Category Apply to row Apply to row Apply to column OK Cancel Apply		
(Auto) Row dimension Column dimension [Grand Total] Apply to Category Apply to row Apply to row Apply to column OK Cancel Apply	Intersection mode	
Row dimension Column dimension [Grand Total] [Grand Total] Apply to Category Apply to row Apply to row OK Cancel	(Auto)	•
[Grand Total] Apply to Category Apply to row Apply to row OK Cancel	Row dimension Column dimension	
Apply to Category Apply to row Apply to column OK Cancel Apply	[Grand Total] v [Grand Total]	Ŧ
Apply to Category Apply to row Apply to column OK Cancel Apply	Apply to	
Apply to row Apply to column	Category	-
Apply to row Apply to column		
OK Cancel Apply	Apply to row Apply to column	
OK Cancel Apply		
	OK Cancel App	ly

We get the following Pivot:

PI	vot 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	
~	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	
~	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.

1.18.3 Format Rule: Average

The "Average" format conditions allow you to highlight values above or below an average value:



1.18.4 Format Rule: Expression

An "Expression" format condition allows you to use complex conditions to apply formatting:

Expression		x
Format values that ma	atch the following condition	
Format values that ma	 atch the following condition Equals ✓ <enter a="" value=""> ✓ ⊗</enter> Equals ✓ Does not equal > Is greater than > Is greater than or equal to < Is less than < Is less than or equal to < Is less than or equal to < Is not between < Is not between < Is not null Is any of Is none of 	Appearance Icons Image: B Image: Construction Image: B Image: Construction Custom Appearance Image: Construction Image: Custom Appearance Image: Custom Appearance Image: Custom Appearance Image: Custom Appearance
		Apply to
		Apply to row Apply to column
		OK Cancel Apply

1.18.5 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	۲	
1	Top/Bottom	۲	
x	Average	۲	
Ŧ	Expression		
൙	Icon Ranges	•	2 Ranges
₽	Color Ranges	۲	1+ 1+ 00 XV 00
	Gradient Ranges	۲	3 Banges
-8	Bar		
₽	Bar Color Ranges	۲	
₽.	Bar Gradient Ranges	۲	4 Ranges
			5 Ranges

For example, let us select the 4-range highlight for the "Gross Profit" measure:

Values											_	
Sales Amount		Pivot 1										Û Š.
			Eu	rope			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	\$3	7.9K	\$23K
Columns	1	Show Totals		\$91.8K		\$48.7K		\$213K	\$102K		46K	\$27.3K
	×,	Show Totals		\$85.6K		\$39.8K		\$222K	\$95.7K	\$3	7.5K	\$21.3K
T Sales Territory Group	\checkmark	Show Grand Totals		\$82.3K		\$42.6K		\$203K	\$96.4K	\$4	1.3K	\$24.1K
Column	1000	Add Format Rule 🔹 🕨	X	Value	•	\$3.16M	0	\$67.3M	\$3.92M	\$10). 2M	\$3.44M
	暍	Edit Rules		Top/Bottom		\$888K		\$15.4M	\$1.28M	\$2.	66M	\$943K
Rows	-	Clear Rules		Average		\$1.05M		\$17.5M	\$907K	\$2.	89M	\$1.02M
t Category		-		Average	,	\$403K		\$16.7M	\$447K	\$2.	08M	\$595K
1 Category		Rename	<u></u>	Expression		\$818K		\$17.7M	\$1.28M	\$2.	55M	\$877K
Calendar Quarter of Year		 Clothing Total 	P	Icon Ranges	+	2 Ran	aes				113K	\$27.5K
Pow		CY Q1		Color Ranges	•						4.3K	\$7.49K
KUN		CY Q2		Gradient Rang	es 🕨	•	+1		×~ 00		0.7K	\$7.51K
		CY Q3		ordarent narry		3 Ran	ges				0.5K	\$6K
HIDDEN DATA ITEMS		CY Q4		Bar			+ +	L++ -		000	7.7K	\$6.52K
Dimensions		✓ Components …	-	Bar Color Rang	ges 🕨			1.0	00 5717+	196 196 196	204K	\$13.7K
6		CY Q1		Bar Gradient R	anges 🕨						4.5K	\$1.89K
Dimension		CY Q2	-	אטרדק		4 Ran	ges				4.1K	\$3.6K
		CY Q3		\$796K		4 2	74	+73.	t 00 00		3.9K	\$4.86K
Measures		CY Q4		\$440K		alat	atat				1.2K	\$3.35K
Measure						5 Ran	ges					
						↓ allat	→ ⊅ Iailai	* + % al		•••		

The following options are available in the appeared window:

-			
_			
/ Use %	anges	<u> </u>	75.00.9/
• ••	75.00.00	/=	75.00 %
2	/5.00 %	>=	50.00 %
2	50.00 %	>=	25.00 %
+	25.00 %	>=	0.00 %
Add	Delete		Reverse
torooti			
ntersecti (Auto)	on mode		
ntersecti (Auto)	on mode	Column d	imension
ntersecti (Auto) ow dime Grand T	nsion	Column d	imension Fotall
ntersecti (Auto) ow dime [Grand To	nsion otal] v	Column d	imension [otal]
ntersecti (Auto) ow dime [Grand Tr pply to	nsion ota[] v	Column d	imension [otal]
Auto) (Auto) ow dime (Grand Tr pply to Gross Pro	on mode nsion otal]	Column d	imension Total]

- ✓ 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:

1	100.00 %	>=	75.00 %
🤻 🆌	75.00 %	>=	50.00 %
		>=	
	No	Style	
1 7	+ 14 +	* *	+ 1 +
ΞŦ	▲ ✓ !	X 📀	Θ 🛛 🔺
🥠 🌘	0 ᡟ 🏴	00	•••
		\mathbf{O}	★ ☆ ☆
al al	att att att		

- ✓ 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 G	r <i>oss Profit</i> value	s using ra	nae conditions
Format st	tyle		· · · · · · · · · · · · · · · · · · ·
+ 14			•
Use 🤊	% 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	dimension
[Grand T	otal] –	[Grand	Total] 👻
Apply to			
Gross Pr	ofit		•
Apply	to row	Apply	to column

As a result, the pivot table will look the following:

P	vot 1						CD 23	
		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	∲	\$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	9 \$21.3K	
	CY Q4	\$82.3K	\$42.6K	\$203K	\$96.4K	\$41.3K	鵵 \$24.1K	
Ŧ	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	× \$447K	\$2.08M	× \$595K	
	CY Q4	\$4.34M	18K	\$17.7M	\$1.28M	\$2.55M	1 \$877K	
Ŧ	Clothing Total	\$401K	\$56.9K	\$1.6M	\$284K	\$113K	\$27.5K	
	CY Q1	\$71.2K	\$11.6K	\$260K	\$56.1K	\$24.3K	∲7.49K	
	CY Q2	\$100K	\$15.5K	\$413K	\$79K	\$30.7K	\$7.51K	
	СҮ Q3 🔴	\$129K	914.9K	\$523K	977K	\$30.5K	<u>\$</u> 6K	
	CY Q4	\$102K	\$14.9K	\$407K	\$72.3K	\$27.7K	\$6.52K	
Ŧ	Components 🚖	\$1.92M	\$138K	\$9.68M	\$882K	\$204K	\$13.7K	
	CY Q1 🔴	\$235K	\$18 K	\$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	

1.18.6 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):

Pivot 1

	Europe		North America		Pacific		
	Sales Amount	Gross Profit	Sales Amount	Gross Profit	Sales Amount	Gross Profit	Range Set
Accessories Total	\$328K	\$169K	\$781K	\$369k	\$163K	\$95.8K	
CY Q1	\$68.2K	🔰 \$38.1K	\$143K	\$75	\$37.9K	📜 \$23K	Format Gross Profit values using range conditions
CY Q2	\$91.8K	1 \$48.7K	\$213K	× \$102k	\$46K	1 \$27.3K	Format style
CY Q3	\$85.6K	1 \$39.8K	\$222K	\$95.7	\$37.5K	📜 \$21.3K	
CY Q4	\$82.3K	\$42.6K	\$203K	\$96.4	\$41.3K	🔰 \$24.1K	
Bikes Total	🛊 🥝 🕴 \$17.2M	\$3.16M	\$67.3M	\$3.92M	1 🥝 \$10.2M	\$3.44M	Use % ranges
CY Q1	\$3.95M	1 \$888K	\$15.4M	\$1.28M	\$2.66M	1 \$943K	∞ >= 800,000.00
CY Q2	\$4.74M	1.05M	\$17.5M	\$907	\$2.89M	1.02M	800.000.00 >= 100.000.00
CY Q3	\$4.12M	📕 \$403К	\$16.7M	\$447	\$2.08M	\$595К	
CY Q4	\$4.34M	1 \$818K	\$17.7M	\$1.28M	\$2.55M	\$877 K	100,000.00 >= 5,000.00
 Clothing Total 	\$401K	\$56.9K	\$1.6M	\$284	\$113K	\$27.5K	5,000.00 >= 0.00
CY Q1	\$71.2K	9 \$11.6K	\$260K	\$56.1	\$24.3K	\$7.49 K	
CY Q2	\$100K	9 \$15.5K	\$413K	\$79	\$30.7K	\$7.51K	
CY Q3	\$129K	9 \$14.9K	\$523K	\$77	\$30.5K	9 \$6K	
CY Q4	\$102K	9 \$14.9K	\$407K	\$72.3	\$27.7K	\$6.52K	Add Delete Revers
Components ¶	🕈 🥝 🕴 \$1.92M	\$138K	\$9.68M	\$882	\$204K	\$13.7K	
CY Q1	\$235K	\$18K	\$1.03M	\$107	\$24.5K	🔶 \$1.89K	Intersection mode
CY Q2	\$446K	\$33.9K	\$2.42M	\$222	\$54.1K	🔶 \$3.6K	Last level
CY Q3	\$796K	\$53.7K	\$3.83M	\$325	\$83.9K	🔶 \$4.86K	Row dimension Column dimension
CY Q4	\$440K	🔰 \$32.1K	\$2.4M	×227k	\$41.2K	🔶 \$3.35K	[Grand Total]

Apply to column

OK Cancel Apply

Apply to row

1.18.7 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	۲	
1	Top/Bottom	۲	
x	Average	۲	
Ŧ	Expression		
ூ	Icon Ranges	۲	
•	Color Ranges	۲	
	Gradient Ranges	•	2 Color Gradient Ranges
÷	Bar		
-	Bar Color Ranges	۲	
£.	Bar Gradient Ranges	۲	
			3 Color Gradient Ranges

The form of the gradient highlight looks the following

mber o	franges:		10
		Gene	rate Ranges
Use 9	6 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 %
ersect	on mode		
uto)			
w dime	nsion	Column d	limension
Frand T	otal] –	[Grand]	Fotal]
ply to	ofit		
033 FI	VIIC	_	
	to row	Apply	to column

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.

1.18.8 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:

ar	x
Format Gross Profit valu	ies using bar conditions
Min =	0 Automatic -
Max =	0 Automatic
Style Settings Neg	ative Style Settings
Custom Appearance	
Intersection mode	
(Auto)	•
Row dimension	Column dimension
[Grand Total]	[Grand Total]
Apply to	
Gross Profit	•
Apply to row	Apply to column
Allow negative axis	
Draw axis	
Show 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:

values						
Reseller Gross Profit 👻	Pivot 2					
			Accessories	Bikes	Clothing	Components
Value	- CY 2005	CY Q3	\$3.45K	\$118K	(\$813)	\$22.7K
		CY Q4	\$4.72K	\$151K	(\$1.1K)	\$31.3K
Columns	→ CY 2006	CY Q1	\$2K	\$132K	(\$549)	\$18.1K
Category		CY Q2	\$4.69K	(\$525K)	(\$1.24K)	\$32.3K
Column		CY Q3	\$11.9K	\$32.8K	\$58.8K	\$234K
		CY Q4	\$9.78K	\$128K	\$45.1K	\$142K
	→ CY 2007	CY Q1	\$4.87K	\$103K	\$25.9K	\$59.8K
Rows		CY Q2	\$9.84K	\$104K	\$46.4K	\$138K
1 Calendar Year		CY Q3	\$46.1K	(\$893K)	\$10.2K	\$127K
		CY Q4	\$39K	(\$95.5K)	\$16.6K	\$90.1K
T Calendar Quarter of Year	→ CY 2008	CY Q1	\$20.6K	(\$62.3K)	\$15.6K	\$49K
Row		CY Q2	\$38.8K	(\$182K)	\$17.6K	\$89.1K

Values								
Reseller Gross Profit	5	Pivot 2						
		rea at		1		Accessorie	s	
Value	FU	inid		Y Q3			\$3.	45
- 1	🗸 Sh	ow Values		YQ4			\$4.	72
Columns	🗸 Sh	ow Totals		YQ1				\$2
1 Category	🗸 Sh	ow Grand Totals		Y Q2			\$4.	69
Column	Ac	ld Format Rule	•	X O2	Value		+1	19
	暍 Ed	it Rules			Top/Botto	m	•	7
Rows	🚯 Cl	ear Rules		x	Average		۲	4
Calendar Year	Re	name		f	Expression	i.		1
1 Calendar Quarter of Year			0	P	Icon Rang	es	۲	6
Row			C	-	Color Ran	ges	۲	8
				-	Gradient R	langes	۲	
HIDDEN DATA ITEMS				÷	Bar 🔓			
Dimensions				-	Bar Color	Ranges	۲	
Dimension				Ł	Bar Gradie	nt Ranges	•	

Let us add a highlight rule for the "Reseller Gross Profit" measure:

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 Image: Custom Appearance Image: Custom Appearance
Intersection mode	Intersection mode
Last level	Last level 👻
Row dimension Column dimension	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:

		Accessories	Bikes	Clothing	Components
	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 Q1	\$2K	\$1 <mark>32</mark> K	(\$549)	\$18.1K
	CY Q2	\$4.69K	(\$525K)	(\$1.24K)	\$32 <mark>.</mark> 3K
	CY Q3	\$11.9K	\$32.8K	\$58 <mark>.</mark> 8K	\$2 <mark>34</mark> K
	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 <mark>.</mark> 1K	(\$893K)	\$10.2K	\$1 <mark>27</mark> K
	CY Q4	\$ <mark>8</mark> 9K	(\$95.5K)	\$16.6K	\$90 <mark>.</mark> 1K
 CY 2008 	CY Q1	\$20.6K	(\$62.3K)	\$15.6K	\$ <mark>4</mark> 9K
	CY Q2	\$38 <mark>.</mark> 8K	(\$182K)	\$17.6K	\$89.1K

1.18.9 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:



140

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	seller Gross Pro 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
Tabasastia			
(Auto)	mode		•
Row dimens	sion	Column o	limension
[Grand Tot	tal] –	[Grand	Total] 🔹
Apply to			
Reseller G	ross Profit		•
Apply to	o row	Apply	to column
Allow ne	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:

100.00 %	>=	75.00 %
75.00 %	>=	50.00 %
	>=	
No S	Style	
Custom Appearance		
(MULU)		

- ✓ 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.

1.18.10 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":

ar Gradie	ent Ranges		X
Format <i>Re</i> conditions	eseller Gross Pro	ofit values	using range bar
Number of	franges:		5 \$
		Gene	rate Ranges
🗸 Use %	ranges		
• •	100.00 %	>=	80.00 %
	80.00 %	>=	60.00 %
•	60.00 %	>=	40.00 %
	40.00 %	>=	20.00 %
•	20.00 %	>=	0.00 %
(Auto) Row dimer	nsion	Column d	- limension
[Grand To	otal] 🔹	[Grand	Total] 🔹 👻
Apply to			
Reseller (Gross Profit		•
Apply	to row	Apply	to column
Allow r	negative axis		
Draw a	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 %
	100.00.8/		75.00.0/
- /	100.00 %	>=	/5.00 %
	75.00 %	>=	50.00 %
-		>=	
	No	Style	
Custom A	ppearance		
(HOLO)			

- ✓ 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.

1.19*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):

Columns			
1 Subcategory	l ta	Grid 1	<u>ර</u> වී
		Subcategory	Order Count
Order Count	7	Bib-Shorts	390 -
Order Count		Bike Racks	796
(Bike Stands	249
New Column	A	Bottles and Cages	5.21K
		Bottom Brackets	248
Sparkline		Brakes	295
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
Measure		Headsets	137
incosore.		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	9.53K
		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:

Columns			
Subcategory	•	12	Grid 1
Order Count	₽\$ ₽X	Sort Aso Sort Des	cending scending
New Column		No Sort Sort by	ing •
Sparkline		Top N	
Argument		Add For	mat Rule 🕨
	職,	Edit Rul	es
HIDDEN DATA ITEMS	疁	Clear Ru	ules
Dimensions		Rename	2

The following parameters are available in the form:

🗹 Enable	d		
Mode:		Тор	•
Count:			5 🜲
Measure:		Order Count	•

- ✓ 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
C Enabled	
Mode:	Тор 🔻
Count:	7
Measure:	Order Count 🗸
	OK Cancel Apply

As a result, the table looks the following:

Grid 1	Di D
Subcategory	Order Count
Tires and Tubes	10K
Road Bikes	9.5 <mark>3</mark> K
Helmets	7.51K
Mountain Bikes	6.19K
Bottles and Cages	5.21K
Jerseys	4.78K
Caps	3.38K

And now let us add the "Category" dimension to the columns and we get the following result:

-			

Columns					
1 Category	ta .	Grid 1			Ċ \$3
i cutegory	-	Category	Subcategory	Order Count	
Subcategory	172	Accessories	Tires and Tubes		10K
Subcategory		Accessories	Helmets		7.51K
		Accessories	Bottles and Cages		5.21K
Order Count		Accessories	Fenders		2.12K
		Accessories	Cleaners		1.33K
New Column	A	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
Dimensions		Clothing	Gloves		2.42K
Dimensions		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.

1.20 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			ch 53
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		rîn 53
Category	Subcategory	Order Count
Components	Prokon	
Components	Diakes	23.
Clothing		4/0
Components	Saddles	526
Components	Wheels	716
Components	Pedals	756
Accessories	Bike Racks	796
Components	Mountain Frames	860
Components	Handlebars	1.01
Components	Road Frames	1.01
Accessories	Hydration Packs	1.07
Clothing	Vests	1.11
Clothing	Socks	1.14
Accessories	Cleaners	1.33
Clothing	Shorts	1.78
Accessories	Fenders	2.12
Clothing	Gloves	2.42
Bikes	Touring Bikes	2.65
Clothing	Caps	3.38
Clothing	Jerseys	4.78
Accessories	Bottles and Cages	5.21
Bikes	Mountain Bikes	6.19
Accessories	Helmets	7.51
Bikes	Road Bikes	9.53
Accessories	Tires and Tubes	10

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	•	12,	Grid 1
Subcategory	₽ ₽ Z	Sort Ase Sort De	cending
Order Count		No Sort Sort by	ing •
New Column		Top N	
Sparkline	₽\$	Edit Rul	es
Argument	疁	Clear R	ules
		Rename	e

By selecting the "Sort Descending" method, we get a table with category names sorted in a descending order:

1.01K 1.01K 860 756 716 526 295
1.01K 1.01K 860 756 716 526 295
1.01K 860 756 716 526 295
860 756 716 526 295
756 716 526 295
716 526 295
526 295
295
4.78K
3.38K
2.42K
1.78K
1.14K
1.11K
470
9.53K
6.19K
2.65K
10K
7.51K
5.21K
2.12K
1.33K
1.07K
796

If necessary, you can disable sorting:

Columns				
Category	•	14	Grid 1	
Subcategory	₽\$ ₽¥	Sort Asc Sort Des	ending	
Order Count	~	No Sorti Sort by	ing	•
New Column		Top N		
		Add For	mat Rule	۲
Sparkline	職	Edit Rul	es	
Argument	5	Clear Ru	iles	
		Rename		

OLAP Sorting specific:

₽	Sort Ascending	
₽Z	Sort Descending	
\checkmark	No Sorting	
	Sort by	(Value)
	Top N	(Display Text)
	Add Format Rule 🕨	(Key)
щ.	Edit Rules	(ID)
5	Clear Rules	Order Count
	Rename	

- \checkmark (Value) sorting is performed by member values;
- \checkmark (Display Text) sorting is performed by captions associated with members;
- \checkmark (Key) sorting is performed by member keys;
- ✓ (ID) sorting is performed by member IDs.

1.21 Formatting Data

1.21.1 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
		Category
Subcategory	ta l	Accessories
Cabladegery		Accessories
Order Count	~	Accessories
Order Count		Accessories
		Accessories
Sales Amount	• <u>Σ</u>	Accessories
	Format	N
New Column	Add Fo	rmat Rule
Sparkline	🖏 Edit Rul	es
Argument	🖏 Clear R	ules
	Renam	e

This invokes the "Numeric Format" window:

	Auto	
Unit:	Auto	
Precision:		2
Currency:	Use dashboard settings	
Culture:	Use dashboard settings	
	\$1.23B	

Types of formats can be as follows:

Numeric Format	X			
Format type:	Auto 👻			
Unit:	Auto			
Precision:	General Number			
Currency:	Currency Scientific			
Culture:	Percent			
🖌 Include group :	separator			
	\$1.23B (\$1.23B)			
	OK Cancel			

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.

1.21.2 Formatting Date-Time Values

Ť

For date and time values, this functionality has the following parameters:

FullDate (Year)	-				
	₽	Sort Ascending			
	₽Z	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
	暍	Edit Rules			Abbreviated
	疁	Clear Rules			
		Rename			

1.21.3 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
Format type:	Currency	•
Unit:	Auto 🗸	·
Precision:	2	
Currency:	EUR (Euro)	·
Culture:	EGP (Egyptian Pound)	^
V Include group sen	ETB (Ethiopian Birr)	
	EUR (Euro) FJD (Fijian Dokat)	
	FKP (Falkland Islands Pound) GBP (British Pound)	-
	€1.23B	
	(€1.23B)	
	OK Car	ncel

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 (Turks and Caicos Islands)	-
	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:	Currency 🔻	
Unit:	Auto 👻	
Precision:	2 🙏	
Currency:	USD (US Dollar)	
Culture:	Use dashboard settings	
🗹 Include group sep	AFN (Afghan Afghani) AFN (Afghani)	
	ALL (Albanian Lek) AMD (Armenian Dram)	
	¢1 23B	
	(\$1.23B)	
	,	
	OK Cance	

✓ 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:	USD (US Dollar)	•
Culture:	English (United States)	•
	\$123 (\$123)	
	ОК	Cancel

1.22 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:

Duplicate	X Delete	Remove Data Items	Yranspose Edit Rules Convert To ▼	AB Title S Currency	C Automatic Updates
		Item			ashboard

The following window opens:

Parameters	
Parameters	
Add Remove 1	OK Cancel

To add the parameter, click the «Add» button. The following parameters are displayed in the window:

Parameter 1		
	General	/
	Visible	Yes
	Allow Null	No
	Allow Multiselect	No
	Name	Parameter1
	Data	/
	Description	
1	Look-Up Settings	No Look-Up
	Select All Values	No
	Туре	String
	Value	
Add Remove +		

- ✓ 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.
- ✓ Description specifies the parameter's description displayed;
- ✓ Look-Up Settings specifies the parameter's look-up editor settings;
- ✓ Type specifies the parameter type;
- 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;
- ✓ 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.

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:

Columns				
↑ Subcategory	t.a	Grid 1		Ċ 53
1 Subcategory		Subcategory	Reseller Sales Amount	
Deceller Coles Amount	7	Bib-Shorts		\$167K 🔺
Reseller Sales Amount		Bike Racks		\$198K
		Bottles and Cages		\$7.48K
New Column	A	Bottom Brackets		\$51.8K
		Brakes		\$66K
Sparkline		Caps		\$31.5K
Argument		Chains		\$9.38K
		Cleaners		\$11.2K
		Cranksets		\$204K
HIDDEN DATA ITEMS		Derailleurs		\$70.2K
Dimensions		Forks		\$77.9K
		Gloves		\$208K
Dimension		Handlebars		\$171K
	1	Headsets		\$60.9K
Measures		Helmets		\$259K
Manaura		Hydration Packs		\$65.5K
Medsure		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		ET GAM

	General	~
	Visible	Yes
	Allow Null	No
	Allow Multiselect	No
	Name	Sales1
	Data	
	Description	Min value
	Look-Up Settings	No Look-Up
	Select All Values	No
	Type	Number (64 bit inte
	Value	500000
Add Remove +		OK Cancel
Add Remove		OK Cancel
Add Remove +		OK Cancel
Add Remove	General	OK Cancel
Add Remove	General Visible	OK Cancel
Add Remove	General Visible Allow Null	OK Cancel Ves No
Add Remove	General Visible Allow Null Allow Multiselect	OK Cancel
Add Remove	General Visible Allow Null Allow Multiselect Name	OK Cancel Ves No No Sales2
Add Remove	General Visible Allow Null Allow Multiselect Name Data	OK Cancel Ves No Sales2
Add Remove	General Visible Allow Null Allow Multiselect Name Data Data Description	Ves No No Sales2
Add Remove	General Visible Allow Null Allow Multiselect Name Data Data Description Look-Up Settings Select All Values	OK Cancel OK Cancel Yes No No Sales2 No Look-Up No
Add Remove	General Visible Allow Null Allow Multiselect Name Data Description Look-Up Settings Select All Values	OK Cancel Ves No No Sales2 No Look-Up No No No
Add Remove	General Visible Allow Null Allow Multiselect Name Data Description Look-Up Settings Select All Values Type	OK Cancel OK Cancel Yes No No Sales2 No No No Look-Up No No No No Sales2 No No No 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
Expression Format values that match the following condition And And	Appearance Icons
Image: reseller Sales Amount] Between (?, ?)	Custom Appearance 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 of the set of the	Appearance Icons Image: Second sec
Image: 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 And Reseller Sales Amount] Is between 2Sales And and <enter a="" value=""> And</enter>	Appearance Icons
× •	
double click	
	B I U Gr R Y G B
	Custom Appearance
+ +	
[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:

Grid 1	<u>دَ</u> نَ دَنَ
Subcategory	Reseller Sales Amount
Bib-Shorts	\$167K
Bike Racks	\$198K
Bottles and Cages	\$7.48K
Bottom Brackets	\$51.8K
Brakes	\$66K
Caps	\$31.5K
Chains	\$9.38K
Cleaners	\$11.2K
Cranksets	\$204K
Derailleurs	\$70.2K
Forks	\$77.9K
Gloves	\$208K
Handlebars	\$171K
Headsets	\$60.9K
Helmets	\$259K
Hydration Packs	\$65.5K
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 Frames	\$1.64M
Vests	\$224K
Wheels	\$679K

Now let us change the range of values: Sales1 =\$200 000, and Sales2 =\$2 million.

For this, click the "Options" icon in the toolbar:

Parameters		rtı √%
Grid 1		山 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
Sales2	2,000,000 🗘
Reset	Submit Cancel

Grid 1	בים בי
Subcategory	Reseller Sales Amount
Bib-Shorts	\$16
Bike Racks	\$19
Bottles and Cages	\$7.4
Bottom Brackets	\$51.
Brakes	\$6
Caps	\$31.
Chains	\$9.3
Cleaners	\$11.
Cranksets	\$20
Derailleurs	\$70.
Forks	\$77.
Gloves	\$20
Handlebars	\$17
Headsets	\$60.
Helmets	\$25
Hydration Packs	\$65.
Jerseys	\$57
Locks	\$16.
Mountain Bikes	\$26.
Mountain Frames	\$4.7
Pedals	\$14
Pumps	\$13.
Road Bikes	\$29.
Road Frames	\$3.8
Saddles	\$55.
Shorts	\$34
Socks	\$24.
Tights	\$20
Tires and Tubes	\$9
Touring Bikes	\$10.
Touring Frames	\$1.6
Vests	\$22
Wheels	\$67

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:

1.23 Hidden data items

Each dashboard element in the "Data Items" field contains an additional field – "Hidden Data Items":

DATA ITEMS		
Columns		
Category] 14	
Subcategory) tz	
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	Grid 1		Ċ 23
1 Category	Category	Subcategory	Order Count
Cubestaneru	Components	Brakes	295
Subcategory	Clothing	Tights	470
,	Components	Saddles	526
Order Count	Components	Wheels	716
	Components	Pedals	756
New Column [A 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:

t Catagory t	Grid 1		ப் 💈
	Category	Subcategory	Order Count
Cubratagory t	Accessories	Tires and Tubes	10
Subcategory	Accessories	Helmets	7.51
	Accessories	Bottles and Cages	5.21
Order Count 2	Accessories	Fenders	2.12
	Accessories	Cleaners	1.33
New Column	Accessories	Hydration Packs	1.07
	Accessories	Bike Racks	79
parkline	Bikes	Road Bikes	9.53
* Calendar Vear	Bikes	Mountain Bikes	6.19
i Caleridar fear	Bikes	Touring Bikes	2.65
	Clothing	Jerseys	4.78
IDDEN DATA ITEMS	Clothing	Caps	3.38
	Clothing	Gloves	2.42
limensions	Clothing	Shorts	1.78
Dimension	Clothing	Socks	1.14
	Clothing	Vests	1.11
leasures	Clothing	Tights	47
	Components	Road Frames	1.01
Measure	Components	Handlebars	1.01
	Components	Mountain Frames	86
	Components	Pedals	75
	Components	Wheels	71
	Components	Saddles	52
	Components	Brakes	29

Now, from the context menu (by a right-click), select "Edit Filter" icon:

Grid 1						Ċ S
Category		Subcategory			Order Count	
Accessories	_		Tires and Tubes			10K
Accessories		Show	Caption			7.51
Accessories	പ	Dunli	icate			5.21
Accessories	~	o upi	core			2.12
Accessories	×	Delet	e			1.33
Accessories	Ş	Conv	ert To	•		1.07
Accessories		Remo	ove Data Items			796
Bikes		Edit F	luler			9.53
Bikes		Luiti	(ules			6.198
Bikes	Ab	Edit N	Vames			2.65
Clothing	9	Edit F	ilter N			4.78
Clothing		Class	63			3.388
Clothing	188	Clear				2.42
Clothing	C	Upda	te			1.78
Clothing		Maxi	mize			1.14
Clothing		1110AL				1.11
Clothing		Print	Preview			470
Components		Expo	rt To PDF			1.01
Components		Expo	Export To Image			1.01
Components		Export to image				860
Components		Expo	Export To Excel			756
Components		Expo	rt Dashboard	•		716
Components			Saddles			526
Components			Brakes		T .	295

In the drop-down list, select the "Calendar Year" hierarchy:

Filter Editor		x
Subcategory		\odot
Subcategory Category		
Calendar Year Bike Racks	3	

And then specify the year:

Filter Editor		×
Calendar Year		•
(Show All)		٦
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		
	OK Cancel Apply	

Grid 1			Ċ
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:

1.24 Aggregations

In the interactive dashboard, the following aggregate functions are available:

1 Category	tz Grid	1
1 Category	Categ	gory Subcate
+ Subcategory	ta Acces	ssories Bike Rad
1 Subcategory	Acces	ssories Bottles
Colordana (Com)	Acces	ssories Cleaner
SalesAmount (Sum)	Acces	ssories Helmets
	Count	Hydrati
New Column	Count Distinct	t Tires an
	Sum	Mounta
Sparkline	V Sum	Road Bi
Argument	Min	Touring
Argument	Max	Caps
	Average	Gloves
HIDDEN DATA ITEMS	More	► StdDev
Dimensions	▲ Calculation	▶ StdDevP
Dimension	Format	Var
Measures	Add Format R	ule VarP
	Edit Rules	Median
Measure	Clear Rules	Mode

- 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 median
- Mode

1.25 Calculated Members

The «Interactive Dashboard» allows to add the following calculated elements based on the ready-made measures:

Values							
SalesAmount (Sum)	-	Pivot 1					
Value		Count		ccess	ories	Bikes \$544M	Clothing
Columns	1	Count Distinct Sum			\$260M	\$2.11B \$4.6B	\$2
Category Column		Min Max			\$170M \$430M	\$2.98B \$10.2B	\$1 \$3
Rows		Average More	•				
1 Year		Calculation		\checkmark	(None)		
1 Quarter		Format			Percent of	f Column Grand To	tal
Row	√ √	Show Values Show Totals			Percent of Percent of	f Row Grand Total f Grand Total	
HIDDEN DATA ITEMS	1	Show Grand Totals Add Format Rule	•		Running S Running S	Summary along Col Summary along Rov	umns vs
Dimension	۩; ۩;	Edit Rules Clear Rules			Difference Difference	e along Columns e along Rows	
Measures		Rename			Percentag	e Difference along	Columns
Measure					Percentag	e Difference along	Rows
					Rank alon	g Columns	
					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	¢
Category	ľ	Min			\$170M	\$2.98B	\$1
1 Category	-	Max			\$430M	\$10.2B	\$3
Column	_	Average					
Rows		More	۲				
1 Year		Calculation	•	\checkmark	(None)		
1 Quarter		Format			Percent of	f Column Grand To	tal
Row	1	Show Values			Percent of	f Row Grand Total	
	1	Show Totals			Percent of	f Grand Total	
HIDDEN DATA TIEMS	\checkmark	✓ Show Grand Totals Add Format Rule ▶			Running Summary along Columns Running Summary along Rows		
Dimensiona							
Dimensions	₽	Edit Rules			Difference	e along Columns	
Dimension	- 5	Clear Rules			Difference	along Rows	
Measures		Rename			Percentag	e Difference along	Columns
Measure				1	Percentag	je Difference along	Rows
					Rank alon	g Columns	
					Rank alon	ig Rows	
					Rank alon	g Cells	
					Custom		
						15	

As a result, "Customize Calculation" form appears:

Calculation Type:	
None Running Total Moving Calculation Difference Percent Of Total Rank Expression	The current measure has no calculation applied

1.25.1 Running Total

The "Running Total" calculation can be used to compute a cumulative total for the specified measure:

None	Running along:	Columns	-
Running Total		-	
Moving Calculation	Summary function:	Sum	•
Difference			
Percent Of Total			
Rank			
Expression			
	RunningSum(Sum([S	alesAmount]))	*
	E transformer and	- Education	

- 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	\$20 <i>7</i> M
	July	\$25.3M	\$233M
	November	\$177M	\$410M
	October	\$70.8M	\$48 1M
	September	\$63.3M	\$544M

1.25.2 Moving Calculation

The "Moving calculation" uses neighboring values to calculate a total:

Customize Calculation				x
Customize Calculation Calculation Type: None Running Total Moving Calculation Difference Percent Of Total Rank Expression	Moving along: Summary function: Start offset: End offset:	Columns Sum	-2 0	×
	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:

Sales	Moving		StartOffset=-1; EndOffset=1
	10	30	0+10+20
	20	55	10+20+25
	25	70	20+25+25
	25	70	25+25+20
	20	45	25+20+0

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 November October	July	\$25.3M	\$233M
	\$177M	\$326M	
	October	\$70.8M	\$273M
	Septem	\$63.3M	\$311M

1.25.3 Difference

The "Difference" calculation can be used to compute the difference between measure values:

ustomize Calculation			x
Calculation Type:			
None Remains Tabl	Calculate along:	Rows	•
Moving Calculation	Difference from:	Previous	-
Difference Percent Of Total Rank Expression	Sum([SalesAmount]) - Lookup(Sum([SalesAmount]), -1)		*
	Edit in Expressi	OK Cancel App	Ψ

- 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	1	D	20-10
25		5	25-20
25		D	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 October Septem	Novem	\$177M	\$152M
	October	\$70.8M	(\$106M)
	Septem	\$63.3M	(\$7.49M)

1.25.4 Percent Of Total

A calculation is used to compute a percentage of the total for the specified measure:

Customize Calculation			x
Calculation Type:			
None Running Total Moving Calculation Difference Percent Of Total Rank Expression	Percent of total by:	Rows	•
	ToDouble(Sum([Sales	sAmount])) / Total(Sum([SalesAmount])) n 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
2015	August	\$84.1M	0.76 %
	Decem	\$123M	1.12 %
	July	\$25.3M	0.23 %
	Novem	\$177M	1.61 %
	October	\$70.8M	0.64 %

1.25.5 **Rank**

Use the "Rank" calculation to compute rankings for the specified measure:

Customize Calculation			x
Customize Calculation Calculation Type: None Running Total Moving Calculation Difference Percent Of Total Rank Expression	Rank along: Rows Rank type: Competition Order: Image: Order and the second and the seco		×
	Edit in Expres	(Sum([SalesAmount]), 'asc') ssion Editor OK Cancel Ap	ply

- 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	Competition rank
10	1	10 20 20 25 25
20	2	12244
25	4	
25	4	1
20	2	1

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

1.25.6 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 Running Total	Calculate along:	Rows	•
Moving Calculation Difference Percent Of Total Rank Expression	Sum([SalesAmount])		4
	Edit in Expression	n Editor	*
		OK Cancel Ap	ply
In the window that appears, write the appropriate expression:

Expression Editor				
Sum ([SalesAmour	ıt])			
Columns	Enter text to search	Q		
Constants Operators Functions Aggregate DateTime Logical Math String Window		•		
			ОК С	ancel

1.26 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 Kicon).

You can prevent specific dashboard items from being affected by "Master Filters". To do this, use the "Ignore Master Filters" button:

6	Cards Tools					
Home	Data	Design				
7	R	8		Z	8	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

1.27 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
V Show Maste	er Hilter state	
Text:	Sales	
Alignment:	◯ Left	
	 Center 	
Image:		
	Load Import Remove	:
	OK Cancel Apply	

- \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;
- \checkmark 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{T}) , all master filters applied to the dashboard are displayed in the invoked popup:

Category
Accessories
Bikes

1.28 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	山 🏶 🗽 🏷 💱
\$26.5M	Ð	Duplicate	\$10.5M
QL01011	×	Delete	Ŷ10101
	\$	Convert To	
	1	Remove Data Items	
	Ab	Edit Names	
	9	Edit Filter	
	8	Clear	
	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
<u>~</u> ~~	/		

1.29 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:



1.30 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



1.31 Automatic and Manual Updates

The option "Automatic" 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:



1.32 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:

🟮 Business Analy	sis Tool (Report Mod	ule) - http://	127.0.0.1:8583/	
Application	Module Reports	Report D	ashboard View	Tool
📔 👰 Edit	5 🧣 🗊 🧔	1 🕹 🕻	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
	Dashboard (Version	1) Map (Ver	rsion 1)	
Settings	O DOMOK			
	- Hondelli			
	Admin's	Admin's		
List			3.3K	
	Dashboard		на зк	
Reports	Dashboard_VIP		2.7К	
	Dashboard_old		<u></u> තු 2.4K	ıg
	Dashboard_Sales		0 2.1K	
	Dashboard_new			
	Дашборд 1		Sese :	
	•		1.5K Accessor	ies
	🛄 Му	*	1.2K	
	Dashbord_Category	·	OM	21 Roco
	Dashboard_Sales	-		Rese
	Sales (group)	🥐 Edit		R
	Dashboard_VIP_my	🚱 Add		Jary
	Dashboard	Delete		arch
		Delete	All But This	Мау
		Delete	Delete All	
	Dashboard_Order 0	Share		July
	Trend	C Refresh	Data	nber
	Future trend	Autom	atic Data Refresh	ober
		Export	to PDF	hber
		Export	to Image	
		کې Print		

After that, other users and administrator will see your page in the list of shared dashboards.