

Business Analytics - Report Studio - IBM Cognos

Med. AMNAI

Filière Master Cloud BIG DATA

Département d'Informatique

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Objetivs

1 Create Crosstab Reports

Objetivs

- 1 Create Crosstab Reports
- 2 Present Data Graphically

Objectives

- Format and sort crosstab reports
- Create complex crosstabs using drag and drop functionality
- Create crosstabs using unrelated data items

Create a Crosstab Reports

Create Complex Crosstab Reports

Query Items

Revenue	2007	2006
Golf Equipment	\$174,740,819.29	\$230,110,270.55
Camping Equipment	\$352,910,329.97	\$500,382,422.83

Measures

Add Measures to Crosstab Reports

Create Complex Crosstab Reports

- You can add measures to either the row or column edges of a crosstab report.
- You can add a default measure that is used in cells where the measure is not defined on the row or column edge.

Default measure

Defined measure for a crosstab node

Revenue	<#Quarter#>	<#Order method#>	
		<#Quantity#>	<#Quantity#>
<#Product line#>	<#1234#>	<#1234#>	<#1234#>
<#Product line#>	<#1234#>	<#1234#>	<#1234#>

Revenue values

Quantity values

Data Sources for Crosstabs

Create Complex Crosstab Reports

- Relational models have a basic metadata structure that looks like tables and columns in a database.
- Dimensionally Modeled Relational (DMR) models are built from relational data sources, but are modeled with a dimensional structure (like OLAP) consisting of measures and dimensions.
- Because crosstabs use rows and columns to define the basic structure and determine cell values, they are better suited to dimensional reporting.

Create a simple Crosstab Report

Create Complex Crosstab Reports

Demo : TP5


Revenue		Camping Equipment	Golf Equipment	Outdoor Protection	Personal Accessories	Mountaineering Equipment
Telephone	2010	80,467,596.88	44,244,120.93	8,141,169.76	45,940,692.79	
	2011	47,562,256.31	27,340,352.57	3,203,267.7	18,428,095.15	10,626,292.36
	2012	17,715,451.4	6,411,233.64	507,485.63	5,979,547.46	6,586,124.67
	2013	8,149,587.54	734,405.51	76,371.43	3,173,298.96	5,696,410.37
Web	2010	125,829,519.92	49,583,401.41	13,735,716.85	284,622,826.47	
	2011	270,463,415.88	116,939,694.38	16,479,270.8	411,577,877.16	65,855,489.46
	2012	426,353,675.75	203,385,896.61	8,570,078.91	568,668,077.83	132,736,443.67
	2013	311,192,071.84	157,698,057.23	4,166,745.33	427,367,391.98	117,010,256.92

Create Complex Crosstab Reports

Crosstab drop zones let you create a wide variety of crosstab layouts to meet your business requirements.

Add Region as a peer of Product line

Revenue	<#Order method type#>	<#Order method type#>
<#Product line#>	<#1234#>	<#1234#>
<#Product line#>	<#1234#>	<#1234#>




Revenue	<#Order method type#>	<#Order method type#>
<#Product line#>	<#1234#>	<#1234#>
<#Region#>	<#1234#>	<#1234#>

Create Crosstab Nodes and Members

When you add items to crosstabs, you create crosstab nodes and crosstab node members.

This crosstab node contains two crosstab node members: Region and City.



Revenue		<#Order method type#>		<#Order method type#>	
		<#Country#>	Total	<#Country#>	Total
Average(Product line)		<#1234#>	<#1234#>	<#1234#>	<#1234#>
<#Region#>	<#City#>	<#1234#>	<#1234#>	<#1234#>	<#1234#>
	<#City#>	<#1234#>	<#1234#>	<#1234#>	<#1234#>
<#Product line#>		<#1234#>	<#1234#>	<#1234#>	<#1234#>

Create Complex Crosstab Reports

Demo : TP6

		2010	2011	2012	2013	E-mail
Camping Equipment	Revenue	332,986,338.06	402,757,573.17	500,382,422.83	352,910,329.97	75,899,094.63
	Quantity	5,895,053	6,903,764	8,399,156	6,103,176	1,413,084
Outdoor Protection	Revenue	36,165,521.07	25,008,574.08	10,349,175.84	4,471,025.26	5,882,477.87
	Quantity	5,614,356	4,111,058	1,599,585	689,446	905,156
Personal Accessories	Revenue	391,647,093.61	456,323,355.9	594,009,408.42	443,693,449.85	42,651,086.54
	Quantity	7,572,339	8,567,357	10,706,015	8,061,994	791,905
Mountaineering Equipment	Revenue		107,099,659.94	161,039,823.26	141,520,649.7	7,476,451.96
	Quantity		2,644,713	3,700,262	3,555,116	199,214
Golf Equipment	Revenue	153,553,850.98	168,006,427.07	230,110,270.55	174,740,819.29	47,933,933.16
	Quantity	1,092,982	1,297,793	1,536,772	1,186,154	333,300
Australia	Revenue		19,270,852.15	38,968,802.62	29,323,674.25	600,979.72
Austria	Revenue	13,866,004.52	19,343,686.48	28,348,967.66	21,981,766.43	
Belgium	Revenue		21,554,248.84	27,345,821.17	19,822,994.69	
Brazil	Revenue	17,566,891.21	22,580,246.05	28,939,868.92	21,447,899.23	330,436.43

Format Crosstab Reports

You can specify formatting for cells displaying data for a specific row edge item, such as Product line or Region.

Gross profit	2007	
Personal Accessories	186,535,159.07	← Bold, Blue
Asia Pacific	<i>118,203,277.67</i>	← Bold, Italic, and Green

No formatting applied

Formatting applied to Crosstab Fact Cells

Add Unrelated Items to Crosstab Edges

You can create discontinuous crosstabs that have unrelated data in the row and column edges.

Node (points to 'Gross profit' row)

Nodes (points to 'Outdoor Shop' row)

Gross profit		2013	2012	Asia Pacific	
				Web	Sales visit
Camping Equipment		132,630,896.65	188,942,774.28	76,607,740.43	4,119,205.21
Mountaineering Equipment		56,718,814.19	64,233,527.4	27,637,142.47	1,164,152.17
Outdoor Protection		2,745,257.18	6,387,192.95	2,060,501.53	165,605.68
Personal Accessories		186,535,159.07	247,731,864.8	102,076,237.5	755,820.22
Golf Equipment		86,642,694.9	115,965,213.04	44,464,784.66	3,330,714.85
Outdoor Shop	1 for 1 Sports shop	484,120.49	728,163.87	1,212,284.36	
	Accapamento	701,788.7	1,100,243.6		
	AcquaVerde	1,178,508.6	1,185,922.36		
	Air frais	652,922.53	706,412.19		

Sort and Format a Crosstab Report

Demo : TP7

Revenue		2004	2005	2006	2007	Total
Personal Accessories	Binoculars	29,246,444.08	30,310,573.76	39,974,426.94	31,303,208.42	130,834,653.2
	Eyewear	154,310,479.02	208,648,605.39	282,226,165.14	221,939,948.93	867,125,198.48
	Knives	36,374,634.09	33,164,183.25	47,704,144.36	36,177,477.89	153,420,439.59
	Navigation	51,598,510.99	43,724,569.8	62,330,073.61	49,837,487.52	207,490,641.92
	Watches	120,117,025.43	140,475,423.7	161,774,598.37	104,435,327.09	526,802,374.59
	Personal Accessories	391,647,093.61	456,323,355.9	594,009,408.42	443,693,448.85	1,885,673,307.78
Outdoors Shop		226,148,611.02	353,312,717.17	506,856,636.95	407,201,378.24	1,493,519,343.38
Sports Store		251,401,637.11	299,649,268.91	381,884,219.14	288,347,271.83	1,221,262,596.99
Department Store		218,500,823.58	233,827,385.24	261,964,087.03	166,634,238.57	880,946,534.42
Golf Shop		81,198,300.88	117,365,629.83	165,385,412.36	128,119,126.89	492,068,469.76
Warehouse Store		72,272,305.99	75,242,324.03	75,473,902.44	41,619,942.57	264,608,475.03
Eyewear Store		37,778,913.44	48,904,339.83	65,791,448.99	59,022,366.43	209,497,068.69
Direct Marketing		20,577,679.9	21,318,284.71	21,916,720.66	11,132,072.24	74,944,757.51
Equipment Rental Store		6,474,331.8	11,575,640.44	16,598,673.33	15,259,877.5	49,908,523.07

Workshop

Present Unrelated Items in a Crosstab using a Discontinuous Crosstab.

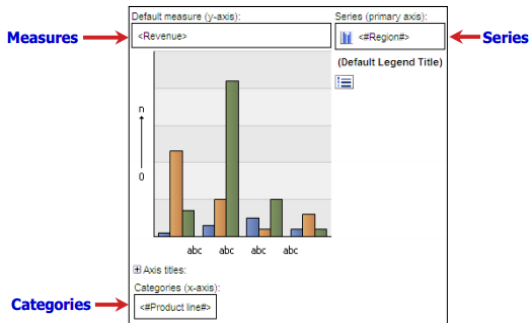
		Americas		Asia Pacific		Central Europe	
		Revenue	Quantity	Revenue	Quantity	Revenue	Quantity
Camping Equipment		481,445,781.04	8,101,682	421,639,391.62	7,366,131	343,645,848.36	5,904,428
Golf Equipment		217,262,995.22	1,544,411	193,677,873.68	1,338,406	153,632,833.39	1,071,235
Mountaineering Equipment		123,127,397.88	2,948,533	107,505,775.01	2,571,299	88,051,532.89	2,146,207
Outdoor Protection		23,002,647.68	3,619,457	19,716,018.32	3,114,960	17,488,870.77	2,800,923
Personal Accessories		132,249,058.98	2,730,299	116,715,219.51	2,397,747	1,540,675,699.15	27,771,811
2013	Q1	99,668,909.86	1,752,555	87,323,799.66	1,558,240	208,125,905.83	3,706,144
	Q2	98,828,777.21	1,699,239	86,438,349.68	1,504,142	218,251,618.31	3,830,700
	Q3	35,108,096.67	590,699	30,802,677.33	520,678	73,485,747.91	1,296,244
2012	Q1	72,919,470.22	1,269,166	61,699,029.76	1,101,646	151,653,156.66	2,677,762
	Q2	82,814,841.14	1,393,193	75,480,083.64	1,308,247	175,010,376.46	3,051,989
	Q3	79,628,210.68	1,319,021	71,904,554.16	1,197,936	168,066,493.55	2,948,132
	Q4	76,675,470.87	1,327,024	66,608,292.34	1,170,508	180,844,360.45	3,066,429

TP8

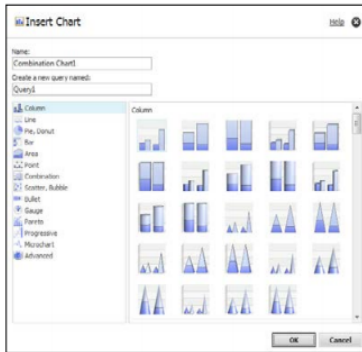
Objectives

- Create charts Containing peer and nested columns ;
- present data using different chart type options ;
- Create context to charts ;
- Create and reuse custom chart palettes ;
- Introduction to visualisation ;
- Present key adat in a single dashbord report.

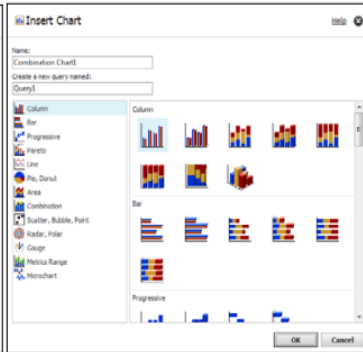
Create a Chart Report



Different Chart Options

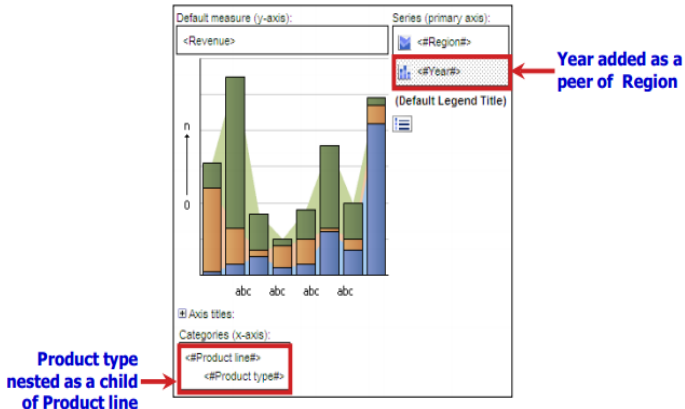


Default Charts

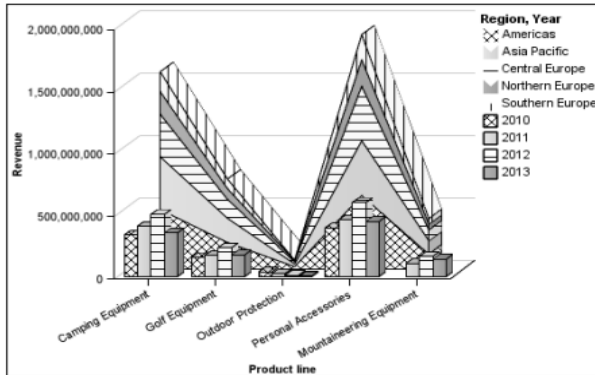


Legacy Charts

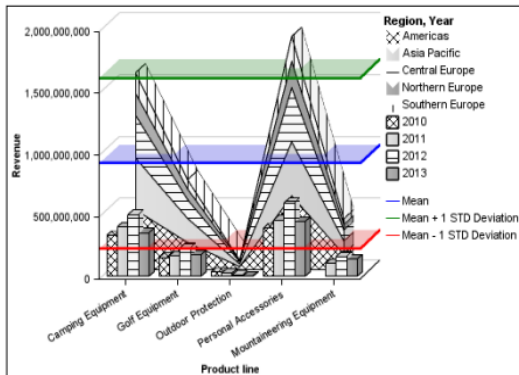
Create Charts Containing Peer and Nested Items



Create and Reuse Custom Chart Palettes

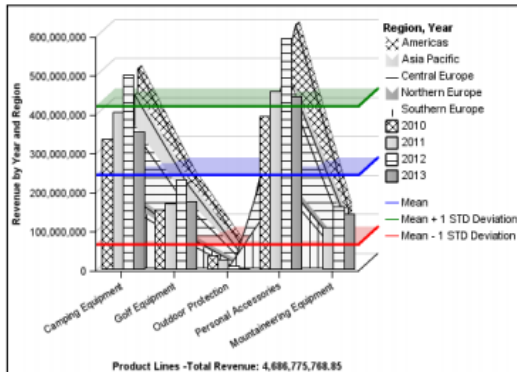


Add Data-Driven Baselines and Markers to Charts



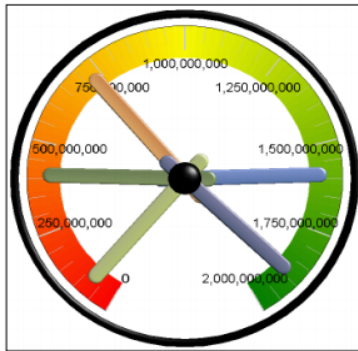
Create and Format a Chart Report

Demo : TP9

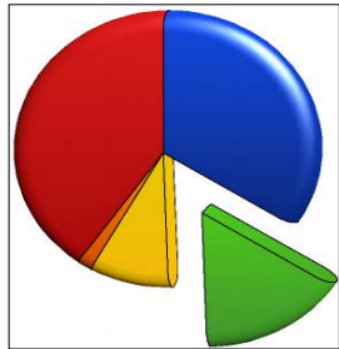


Using Gauge Charts and Pie Charts

Compare Values and Highlight Proportion Using Gauge Charts and Pie Charts



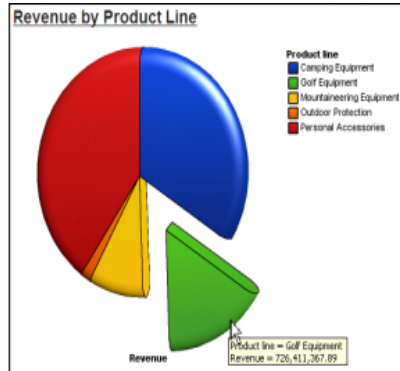
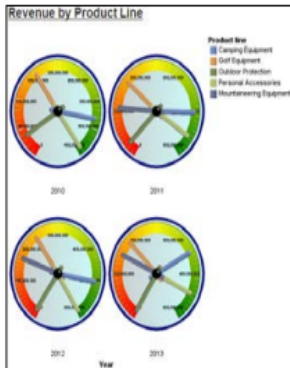
Gauge Chart



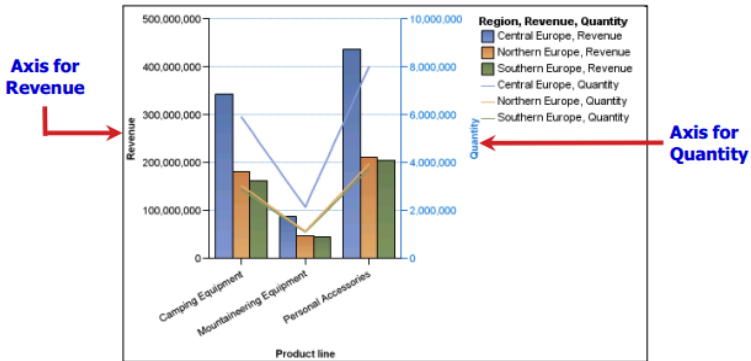
Pie Chart

Create a Gauge Report and a Pie Chart Report

Demo : TP10

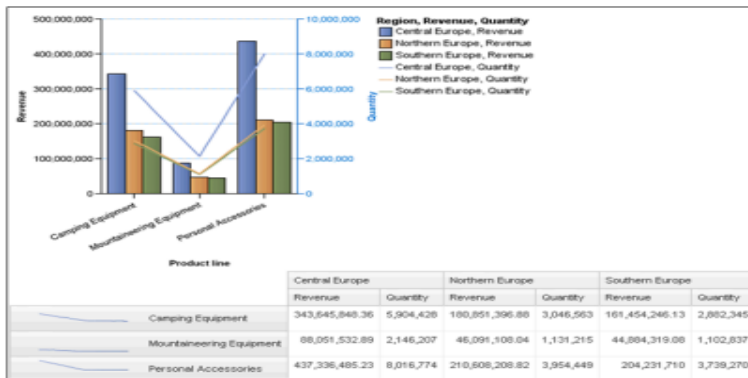


Display Items on Separate Axes

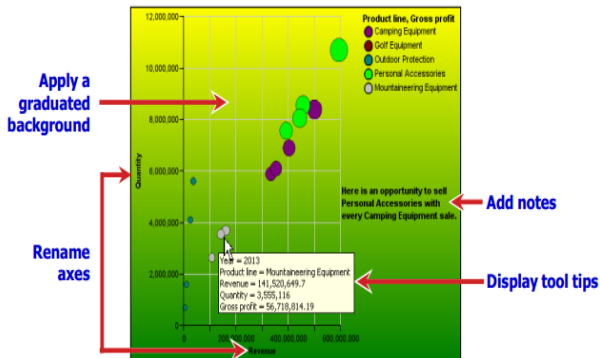


Show the same data Graphically and Numerically

Demo : TP11

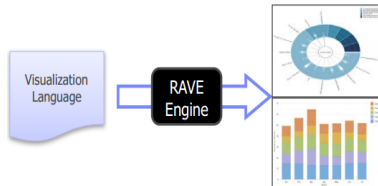


Customize Charts



What is RAVE

- RAVE : Rapidly Adaptive Visualisation Engine ;
- Globalized and accessible ;
- Use visJSON language to describe visualisation ;
- Flexible and extensible ;
- Interacts with animations.

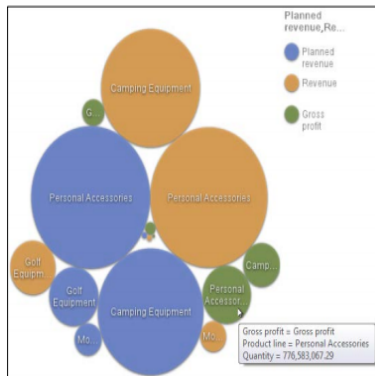


Visualization

- Intuitive ;
- Immediate ;
- Language-independent.

Display Visualizations

Demo : TP12



Create a Dashboard Report

Workshop : TP13

