

Practical BI for Business

Overview of a current BI tool

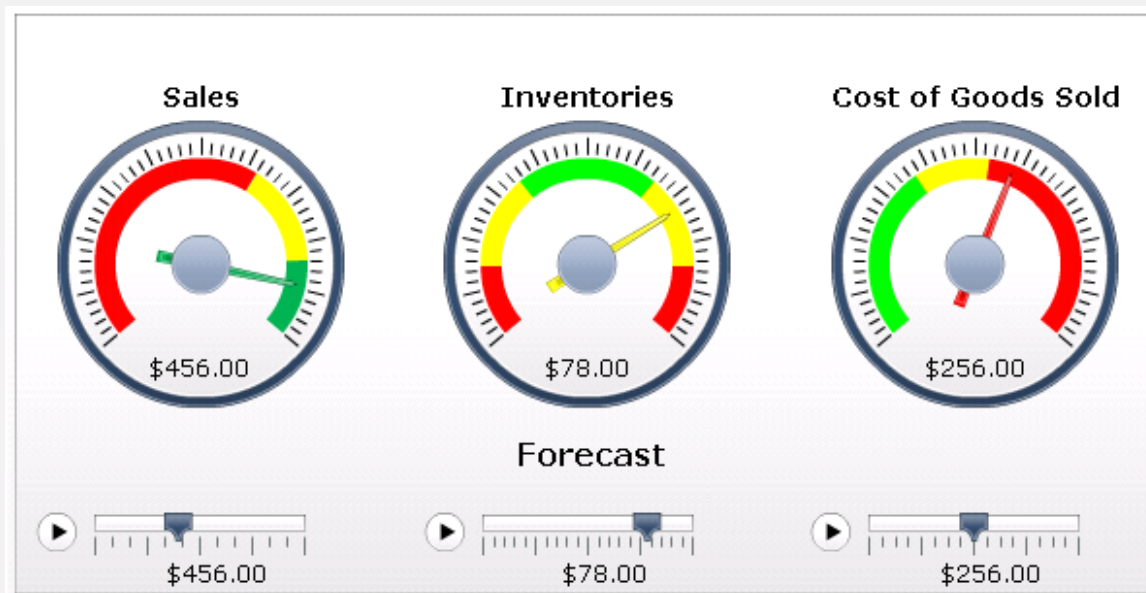
Ed Bosman BSc, MBA

Ebosman@bcit.ca

Dashboard definition

“A dashboard is a visual display of the most important information needed to achieve one or more objectives; consolidated and arranged on a single screen so the information can be monitored at a glance”

(Few, 2004)

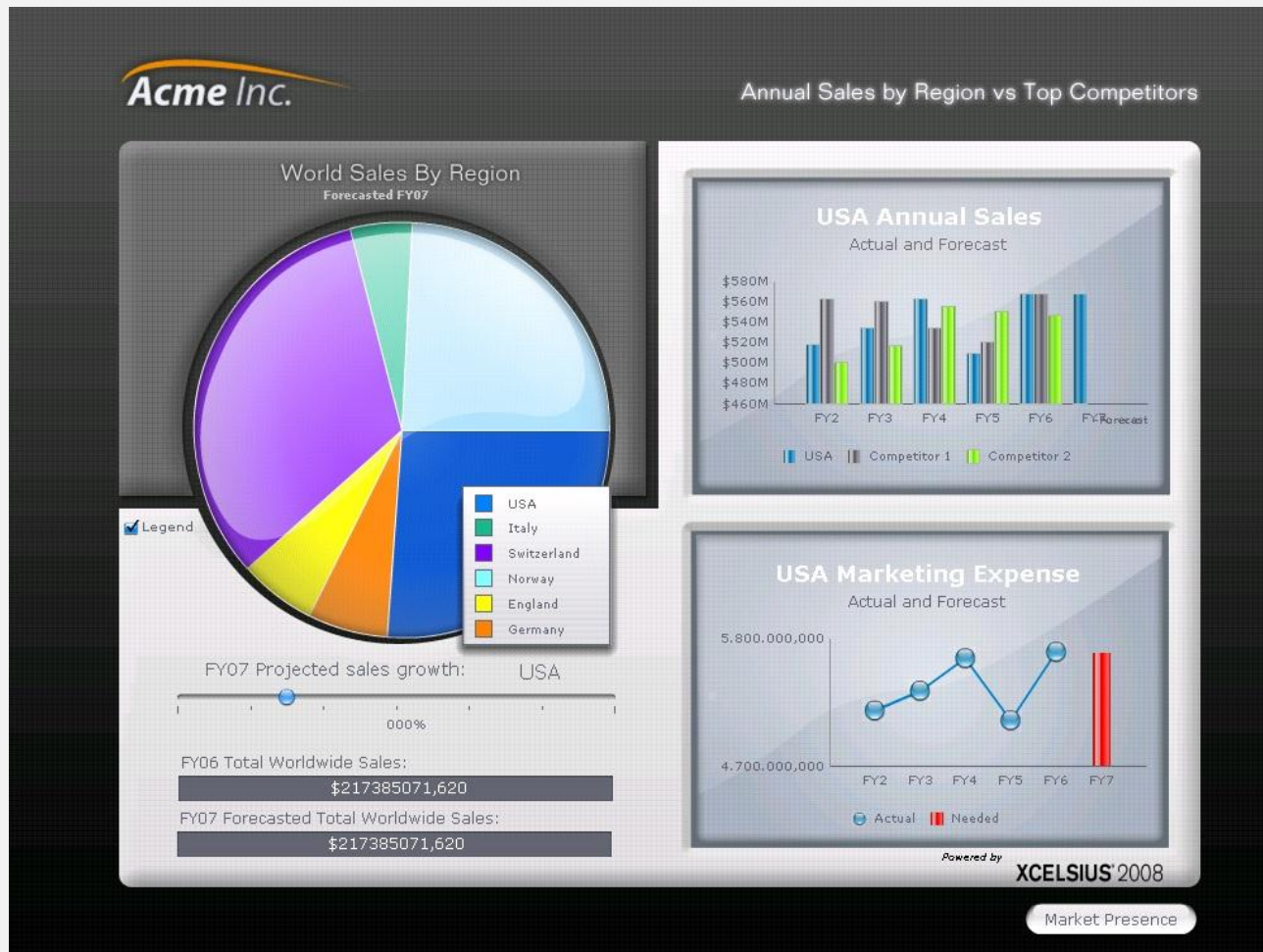


Example of a spreadsheet

	A	B	C	D	E	F	G	H	I	
1	World Sales Report	Includes competitor information - estimated.			Internal Company Data					
2	FY 2006				External Data. Not available on traditional systems.					
4	Author:	Jaime Zuluaga		Marketing						
7	2007 Forecast									
8	Country	Annual Sales	Country		Forecast	Growth (%)				
9	USA	\$ 56.885.970	USA		\$ 56.885.970	0				
10	Germany	\$ 13.533.423	Germany		\$ 13.533.423	0				
11	England	\$ 13.000.000	England		\$ 13.000.000	0				
12	Switzerland	\$ 70.952.911	Switzerland		\$ 70.952.911	0				
13	Italy	\$ 10.456.855	Italy		\$ 10.456.855	0				
14	Norway	\$ 52.555.913	Norway		\$ 52.555.913	0				
16	Total Company	\$ 217.385.072		Total Forecast		\$ 217.385.072				
19	Annual Sales				Marketing Investment					
20	Historic Data	FY02	FY03	FY04	FY05	FY06	FY07	FY02	FY03	FY04
21	USA	\$ 51.822.061	\$ 53.497.270	\$ 56.324.265	\$ 50.958.784	\$ 56.885.970	56.885.970,23	5.182.206,10	5.349.727,01	5.63
22	Germany	\$ 13.256.169	\$ 13.761.632	\$ 14.725.739	\$ 14.637.846	\$ 13.533.423	13.533.422,89	1.325.616,90	1.376.163,18	1.47
23	England	\$ 13.000.000	\$ 13.000.000	\$ 13.000.000	\$ 13.000.000	\$ 13.000.000	13.000.000,00	1.300.000,00	1.300.000,00	1.30
24	Switzerland	\$ 81.317.492	\$ 76.906.925	\$ 31.508.187	\$ 41.148.996	\$ 70.952.911	70.952.911,13	8.131.749,21	7.690.692,52	3.15
25	Italy	\$ 9.590.345	\$ 11.133.621	\$ 9.211.443	\$ 10.730.770	\$ 10.456.855	10.456.854,83	959.034,50	1.113.362,09	92
26	Norway	\$ 51.099.700	\$ 54.867.432	\$ 56.120.218	\$ 56.540.784	\$ 52.555.913	52.555.912,54	5.109.969,96	5.486.743,17	5.61
29	Competitor Information - EXTERNAL DATA									
30	- estimated Annual Sales per Competitor									
31	Competitor 1				Competitor 2					
32		FY02	FY03	FY04	FY05	FY06	FY02	FY03	FY04	FY05
33	USA	\$ 56.388.575	\$ 56.068.542	\$ 53.480.097	\$ 52.059.821	\$ 56.781.743	\$ 50.137.779	\$ 51.759.718	\$ 55.603.125	\$ 55
34	Germany	\$ 14.207.223	\$ 13.288.685	\$ 14.137.562	\$ 14.040.464	\$ 14.484.222	\$ 13.232.656	\$ 14.666.540	\$ 14.365.947	\$ 13
35	England	\$ 13.000.000	\$ 13.000.000	\$ 13.000.000	\$ 13.000.000	\$ 13.000.000	\$ 13.000.000	\$ 13.000.000	\$ 13.000.000	\$ 13
36	Switzerland	\$ 68.861.957	\$ 55.038.758	\$ 71.365.787	\$ 89.602.239	\$ 19.529.403	\$ 73.353.930	\$ 15.661.645	\$ 66.424.272	\$ 20
37	Italy	\$ 9.194.502	\$ 10.699.524	\$ 9.510.712	\$ 10.723.135	\$ 11.375.898	\$ 10.177.266	\$ 9.526.977	\$ 10.629.486	\$ 10
38	Norway	\$ 54.536.753	\$ 51.132.855	\$ 52.387.269	\$ 52.755.066	\$ 53.233.998	\$ 51.551.821	\$ 52.322.127	\$ 53.276.881	\$ 51

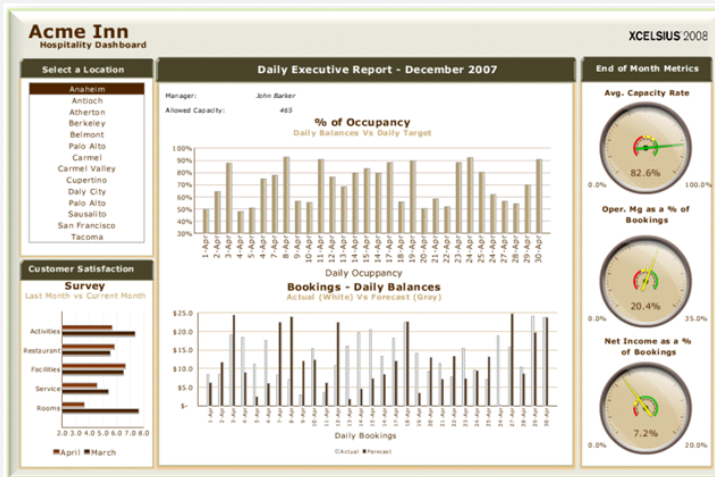
Source: <http://www.sap.com/solutions/sapbusinessobjects/sap-crystal-solutions/dashboards-visualization/demos/index.epx>

Example of a dashboard



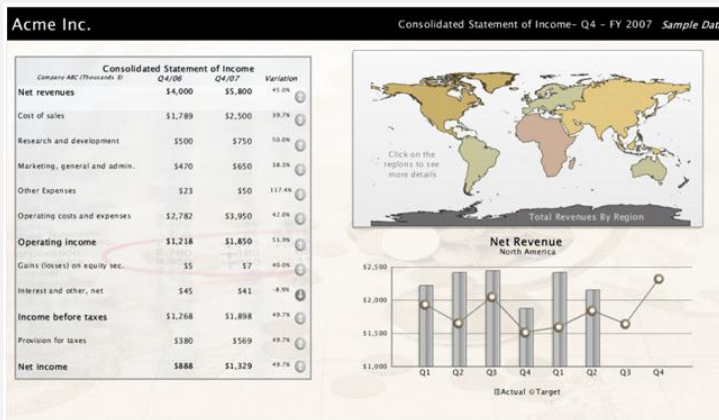
Source: <http://www.sap.com/solutions/sapbusinessobjects/sap-crystal-solutions/dashboards-visualization/demos/index.epx>

Other dashboard examples



Daily executive report

- Summarizes the daily status of a hospitality company's key performance indicators across different locations
- Gives the executive an interactive view of the daily and monthly metrics



Standard income statement

- Highlights a new way of presenting typical income statements
- By selecting a region from a map, the viewer can see its P&L and net income trend over the last six quarters and compare it with the target values

Source: <http://www.sap.com/solutions/sapbusinessobjects/sme/xcelcius/demos/index.epx>

Strategic Dashboards

- Used by executives
- Quick overview on the health of the business, including major high-level measures
- Few information, simple display mechanisms, static snapshots

Analytical Dashboards

- Used by analysts
- Support interaction with data, e.g. drill-down
- Complex data, sophisticated display mechanisms, static snapshots

Operational Dashboards

- Used to monitor operations
- Support alerting for critical events, interaction with data
- Detailed data, simple and clear display mechanisms, real-time data

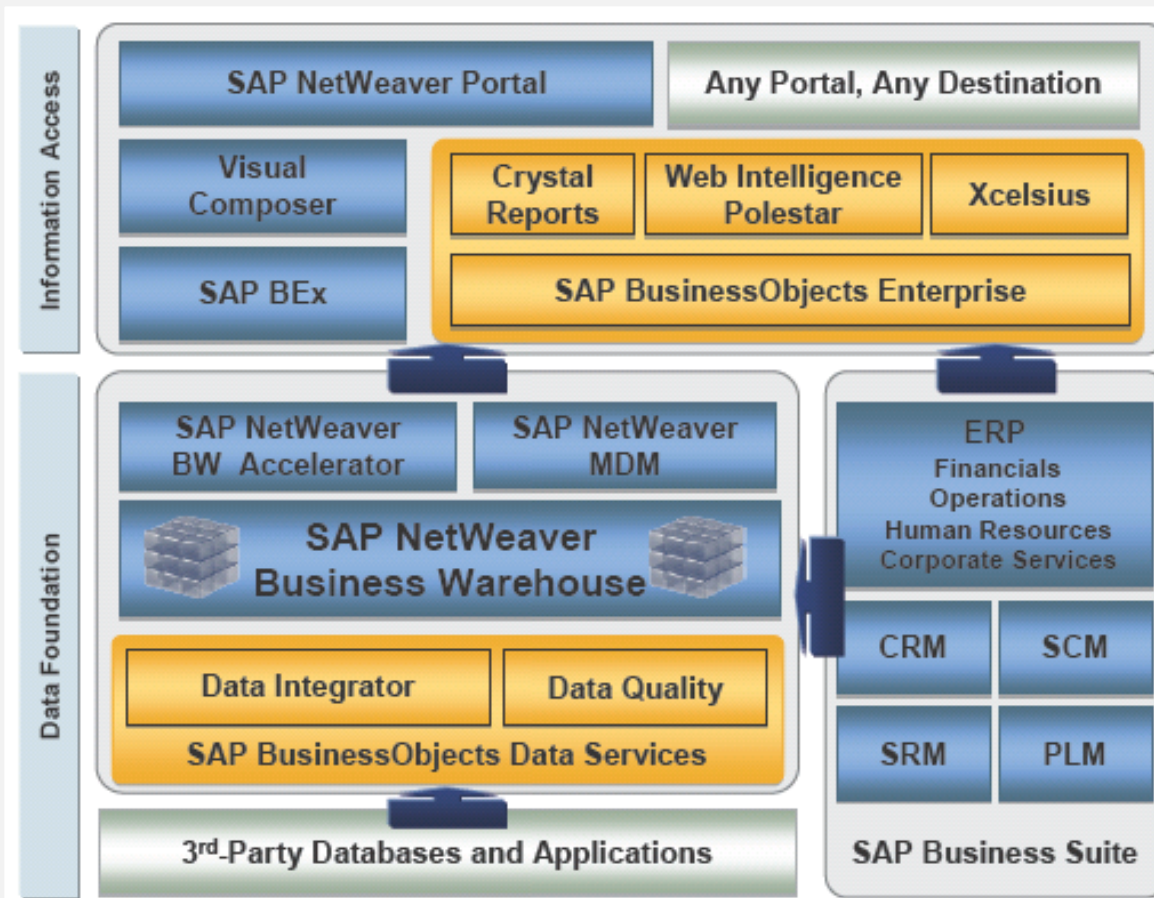
Source: (Few 2006, p. 40-42)

Dashboard versus Portal

- Portal = Focus on the integration of different contents under one user interface
- Dashboard = Focus on the compression of important facts and figures on one single screen

Dashboard versus Scorecard

- A scorecard is a specific dashboard including Key Performance Indicators (KPIs), usually used on a strategic level



- SAP Crystal Dashboard Design (formerly Xcelsius) is the flagship product for dashboarding and visualization
- Rapid development of dashboards by drag and drop
- Replacing SAP Bex Web Application Designer
- Connectivity through XML and webservice connectors

Source: (SAP AG 2009)

- Building dashboards for different purposes and different hierarchical levels or functions, including dynamic charts and graphs, data presentations and visual what-if scenarios
- Data presentation is based on Adobe Flash, export to different applications including PowerPoint, Acrobat 9, Adobe AIR, Adobe Flash, HTML, Business Objects Platform
- Dashboards use static data from Microsoft Excel spreadsheet models or live corporate data sources linked using various connectors
- Available connectors: Query as a Web Service (QaaWS), Web Service Connections, XML Data Connections, Excel XML Map, Live Office,...

The Workspace

The screenshot shows the SAP Xcelsius 2008 workspace. The main canvas area contains a dashboard titled "Global Bike Sales Cockpit" with a "Select Year" dropdown set to 2006. It features a line chart for "Worldwide Revenue per Region" and a bar chart for "Top 5 Bikes" for 2007. An embedded spreadsheet is visible at the bottom, showing quarterly revenue data for 2006 and 2007 across various regions.

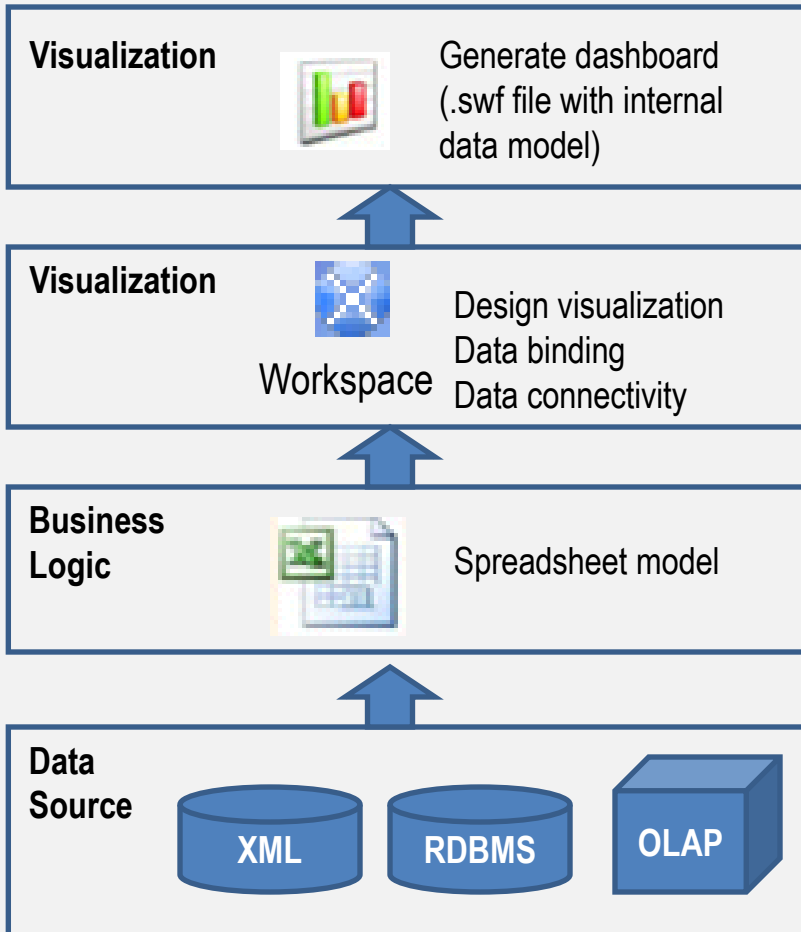
Callouts identify the following components:

- Canvas Area:** The main workspace where the dashboard is built.
- Component Browser:** A panel on the left showing various chart and widget options like Line Chart and Pie Chart.
- Object Browser:** A panel at the bottom left showing the hierarchy of objects on the canvas.
- Embedded Spreadsheet:** A data table at the bottom of the dashboard.
- Properties Panel:** A panel on the right showing configuration options for the selected chart, such as titles, axes, and data series.

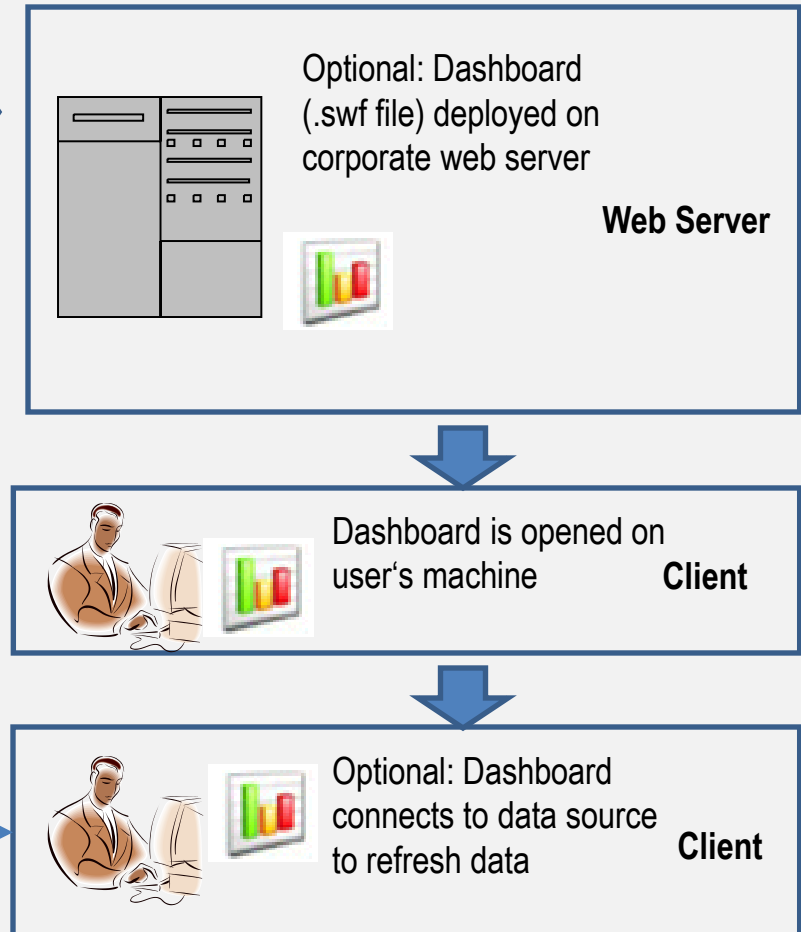
	2006 Q1	2006 Q2	2006 Q3	2006 Q4	
1					
2	Australia	4711.35	20753.59	10924.43	4108.39
3	Germany	3907.28	17114.88	9499.60	3513.36
4	USA	4220.07	18002.79	9276.62	3446.39
5	Total				
6					
	2007 Q1	2007 Q2	2007 Q3	2007 Q4	
7	Australia	4833.02	26673.05	13070.15	4477.05

Design time & Run time

Design time



Run time



Examples of BI Dashboards

- <http://explorer.sap.com/experience/html/Pages/index.htm>