
Graduation Thesis

Xcelsius Examined

Company: Accenture Technology Solutions
Author: Paul Kox
Supervisor: Bart Roelofs
Date: January, 2010
Version: 1.2



Colophon

Document title : Xcelsius examined
version : 1.2
Date : January 10
Place : Den Bosch

Author : Paul Kox
Email : paul.kox@gmail.com
Phone number : 06-25590881
Education : Business Information Technology
Class : 8.0



School : Fontys Hogescholen
Place : Eindhoven
School mentor : Rien Hamers
Address : Rachelsmolen 1
Zip code : 5612MA
Phone number : 0877 877 877



Company : Accenture Technology Solutions
Department : SAP Business Intelligence
Intern coach (1) : Bart Roelofs (Bart.roelofs@accenture.com)
Intern coach (2) : Thomas Verstraeten (Thomas.verstraeten@accenture.com)
Address : Hambakenwetering 5K
Zip code : 5231 DD
Place : Den Bosch
Website : www.accenture.com

Foreword

To complete my education of Business Information Technologies at Fontys Eindhoven I needed an Graduation Assignment. I found this assignment at Accenture Technology Solutions (ATS). There were areas from my education in which I was more interested than others, Business Intelligence was one of those areas and ATS had an assignment in their Business Intelligence Cell which should be a good starting point.

The assignment was about Xcelsius in which I needed to create a dashboard with business case and write a thesis about how ATS can implement Xcelsius best at their clients and employees.

I applied for the assignment and got a meeting with Bart Roelofs. This meeting went well and I got the assignment. After 5 months of work I realized this project and combined the results in this thesis.

I want to thank Bart Roelofs and Thomas Verstraeten at ATS for coaching and helping me with my project and of course Rien Hamers for coaching me during the project.

Paul Kox
Den Bosch, February 2010

Table of contents

1.	Plan Stage.....	11
1.1	Assignment.....	11
1.1.1	Goal	11
1.1.2	Deliverables	12
1.1.3	Scope	12
1.1.4	Conditions.....	12
1.1.5	Approach	13
1.2	Accenture Delivery Method	13
1.2.1	Reasons for ADM	13
1.2.2	Plan stage.....	13
1.2.3	Analyze stage	13
1.2.4	Design stage.....	13
1.2.5	Build stage	13
1.2.6	Test stage.....	14
1.2.7	Deploy stage	14
2	Analyze and research stage	15
2.1	From Business Intelligence to dashboards (Theory).....	15
2.1.1	The process of BI	16
2.1.2	Why dashboards	16
2.2	Business Intelligence within ATS SAP BI Area (Practice).....	17
2.3	Xcelsius explained.....	18
2.3.1	Basic functionality of Xcelsius	19
2.3.2	Interface of Xcelsius	20
2.3.3	Key features	21
2.3.4	Information flow from source to published model.....	22
3	Design Stage.....	26
3.1	Designing the business case and dashboard.....	26
3.1.1	Creating the foundation.	26
3.2	Workflow and design of the business case	26
3.2.1	First step, the business roles in the company have to be determined	27
3.2.2	Second step, determine what features need to be shown in the examples.....	27
3.2.3	Third step, determine the KPI's that need to be shown	28
3.2.4	Fourth step, link KPI's and features to roles.....	29

4	Build stage.....	30
4.1	Building the dashboard and business case.	30
4.2	Components, features and techniques used	30
4.2.1	Top Bar	30
4.2.2	Sales page	31
4.2.3	Targets and Environment page.....	32
4.2.4	Password page	33
4.2.5	Accounting page.....	34
5	Deploy Stage	35
5.1	Research Questions	35
5.1.1	How do we make Xcelsius commercial interesting?	35
5.1.2	Best practice of creating dashboard.	36
5.1.3	What is the best application of Xcelsius within SAP BI.	36
5.1.4	What is needed to implement Xcelsius	37
5.2	Lessons learned	38
5.2.1	How to build a dashboard.	38
5.2.2	Creating Concept.....	38
5.2.3	Creating the source data	38
5.2.4	Building the dashboard	39
5.2.5	Publish the dashboard.....	39
5.2.6	Tips to keep in consideration.....	40
5.2.7	Findings.....	41
5.2.8	Improvement points.....	42
6	Conclusion.....	43
7	Process evaluation.....	44
8	List of references	45
9	Appendix.....	46
I	Project Initiation Document.....	46
II	Business case	46
III	Get started	46
IV	Presentation	46

Summary

Accenture Technology Solutions (ATS) is a company with the focus on application development, solution delivery, systems administration and software maintenance. ATS wrote an assignment to investigate the integration of Xcelsius with SAP BI and how this tool can be best implemented at clients. This assignment was written because Xcelsius offers quite obvious advantages and chances for their SAP BI area. A dashboard has to be build with a business case which highlights the advantages and features of Xcelsius.

This assignment is executed according to Accenture its own project method, called Accenture Delivery Method. This method has several stages which also reappear in this thesis.

The Business Intelligence (BI) refers to the skills, processes, technologies, applications and practices used to improve the gathering and analyzing of data and transforming into information for the decision making process. For this decision more data is needed and less time is given. This is called the BI –GAP. In order to close this gap a lot of distilled information (KPI's) is needed in single overview for efficient decision making. Such an overview is called a dashboard.

Xcelsius is a simple point-and-click data visualization tool to create dashboards and presentations. This flash based visualization tool uses excel files as a platform. It is one of the BI tools from "Business Objects". Xcelsius uses excel files as a platform to extract data from.

The design of the business case and dashboard is done by a 4 –step plan. These 4 steps link the features from Xcelsius with the KPI's of the business case. With this in mind the dashboard was built and the business case written about phone accessory retailer called Phony.

In order to make Xcelsius commercially interesting the features and key-selling points need to be promoted in a presentation. The best application of Xcelsius would be with the BO Enterprise solutions server. Another reason for choosing for Xcelsius would be when the dashboards need to be published to many users.

New users need to see the presentation (appendix V).and take a look at the business case with dashboard to get a good idea of what is possible with Xcelsius. When customers are familiar with the idea a simple course can bring them up to speed with the tool. After which they are ready for the tips, lessons learned, and findings. Also the improvement points can offer a better insight for dashboard developers.

Explanatory wordlist

ATS	Accenture Technology Solutions, subsidiary company of Accenture
Business Intelligence (BI)	The skills, processes, technologies, applications and practices used to support decision making process in businesses.
Business objects (BO)	Brand, Original producer of Xcelsius, later taken over by SAP
Components	In this context it's referred to as all the place able and programmable objects in Xcelsius (charts, graphs, buttons, etc)
Dashboard	Dial- and switch-board, in this context it's an information system user interface that is designed to be easy read.
Drill-down	In this context it is the further explanation of a particular piece of data/information.
ERP	Enterprise Resource Planning. A program to support business processes.
Excel	Spreadsheet program from Microsoft.
OLAP	Online analytical Processing, an approach to quickly answer multi-dimensional analytical queries.
Key performance Indicator (KPI)	A Key performance indicator is a measure used in an organization to define and evaluate its important and/or long-term goals
RSS	Really Simple Syndication, a digital newsfeed.
SAP	Software producer for ERP, CRM and HRM software, in this context it's referred to as the SAP software.
SAP BW	SAP, with the analytical and reporting Business Warehouse.
Xcelsius	Xcelsius is a point-and-click data visualization tool to create interactive analytics and dashboards
XML	Extensible Markup Language, A standard which contains information readable by people and machines. In this assignment the container for the RSS feed.

Introduction

We drown in data but with Xcelsius we can swim in information. Today's business intelligence landscape shifts from only developer to the less and less technical persons who also get a greater need for ad-hoc data analysis every day. More business people get just simple questions that need to be answered directly without the intervention of an IT specialist. Xcelsius is a dashboard creation tool which can do that.

Recently SAP has bought Business Objects in order to integrate the abilities of their software into SAP. One of those programs was Xcelsius which could be a good asset for the clients of SAP BI to create fast and simple dashboards. With this software everybody can create dashboards and not only the developers.

ATS knows that Xcelsius can be a valuable asset for their selves as well as their clients. To transcend the quality of this tool to the clients of ATS an example has to be created together with a business case and a presentation. To have the optimal implementation of this tool you need to know at what points it directly connects with the clients of ATS and show them how and why Xcelsius is valuable for them.

The project and thesis follow the Accenture Delivery Method of Plan, analyze, design, build, test and deploy. The Plan stage will describe what the assignment is, the goal, scope and of course how the project is executed. In the analyze stage some research is done in Business Intelligence and dash boarding to find out why dashboards are relevant in the first place and Xcelsius is explained. In the design stage the road to a successful business case and dashboard are described. In the Build stage the dashboard is built and explains the how's and why's. All research questions are answered in the last stage, the deploy stage. The last chapter also contains all the findings and lessons learned like the best practice of how to build a dashboard.

About the organization Accenture Technology Solutions

Accenture is a management consulting, technology services and outsourcing company. They serve clients to help them become high-performance businesses and governments. They are active in 52 countries worldwide with approximately 170,000 employees, including the Netherlands. There Accenture is headquartered in Amsterdam. Adjoining to this they have offices in Almere and 's Hertogenbosch. Accenture is stock listed on the New York Stock Exchange.

In 2001, Accenture Technology Solutions (ATS) established under the name eFactory to focus on providing workable solutions that will help clients become high-performance businesses and governments. In 2002 they changed their name to ATS. ATS is a wholly-owned subsidiary of Accenture. Nowadays ATS has over 650 employees in the Netherlands.

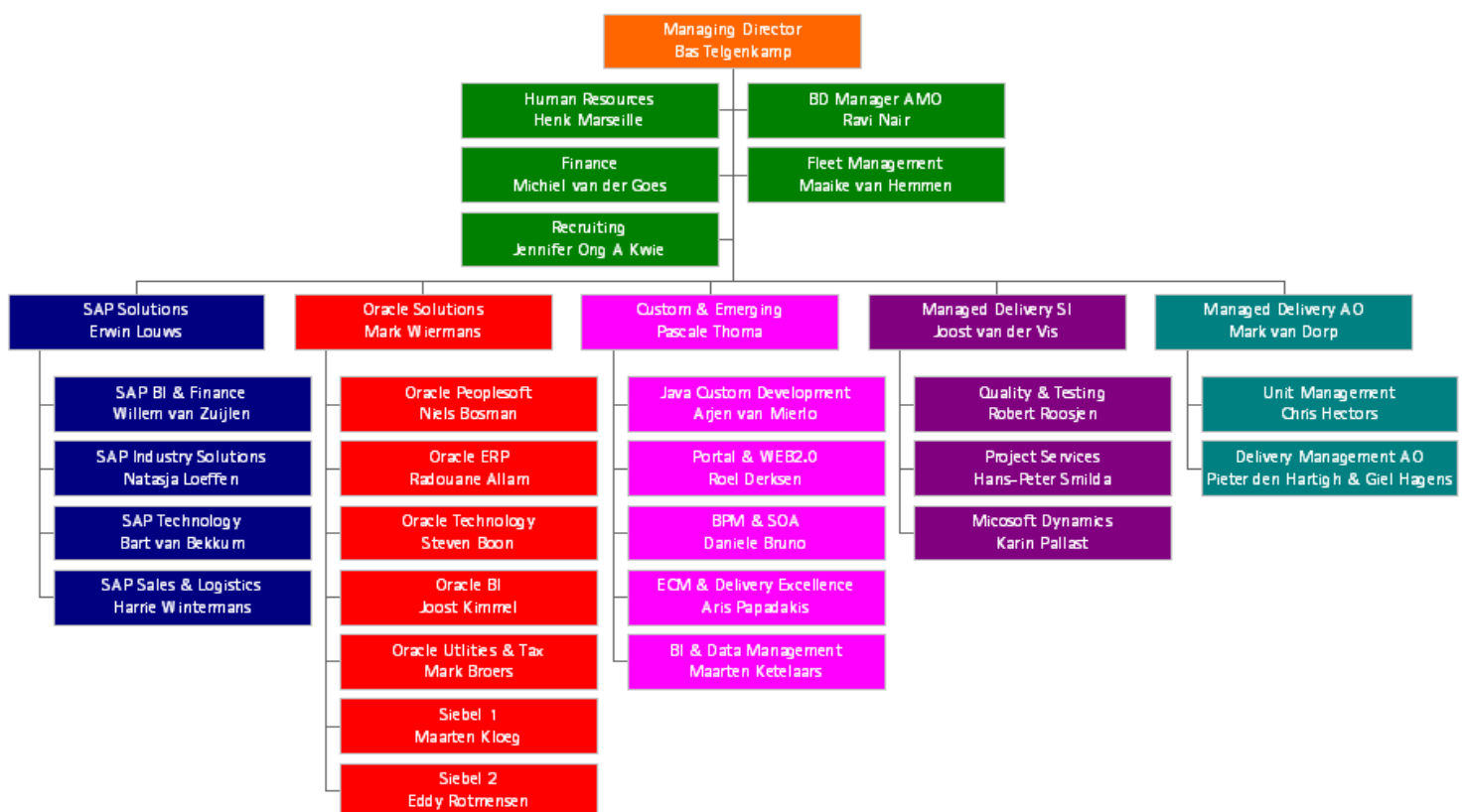


Figure 1 Organizational chart ATS

In figure 1 the organizational structure of ATS is depicted. It shows that ATS is build up in so-called clusters. A cluster is a group of cells/area's who collaborate together on related subjects. The size of these cells can differ between five and fifty employees, depending on the subject. The cells operate till some extend autonomic, but have to report to their cluster. The amount of cells that report to one cluster varies between one and seven. Within ATS, this thesis is written in order of the SAP BI & Finance area which falls within

the cluster SAP solutions. This area is working on providing solutions and implementations based on SAP Business Intelligence (BI); BI refers to skills, processes, technologies, applications and practices used to support decision making within companies (wikipedia).

Accenture has a powerful network of alliances, including SAP. SAP is the world's largest business software development corporation, which provides enterprise software applications to businesses of all sizes all over the globe. SAP is headquartered in Walldorf, Germany. They have Approximately 48,000 employees. Accenture implements these SAP software applications and best practice solutions for their customers, which are located all over the world. Altogether, Accenture collaborates with more than 150 technology market leaders which expand their solutions and capabilities.

1. Plan Stage

1.1 Assignment

The inducement for this assignment was the take-over of Business Objects (BO) by SAP to integrate the BO Business Intelligence tools into the SAP environment. One of these tools is Xcelsius which can be used to create dashboards and presentations. The SAP BI Finance area realized that Xcelsius can be a valuable asset to their customers but also themselves.

The goal of this assignment is giving ATS an advice about how Xcelsius can be best implemented at the clients of ATS and how to make this tool commercially interesting. To achieve this, a clear business case has to be written in which the advantages and key-features become instantly clear.

It's very important to ATS to serve their customers in the best way possible. Xcelsius is another tool in acquiring that goal. If one of their customers should ever have the need to create dashboards or presentations, ATS could offer a solution. Therefore it is important to know what Xcelsius is capable of. If they choose not to implement this tool there's a risk of decreasing their competition position and miss a chance at the opportunities this tool has to offer.

1.1.1 Goal

The goal of Business Intelligence is providing the right people with the right information for their decision making process to improve businesses. The general goal of the SAP BI is to create Business Intelligence solutions with SAP systems. Within this context we zoom in a little further on to the assignment.

The goal of the ATS is to be aware of the BI tools available and to build knowledge about the best solutions possible and, when commercial interesting, to implement those tools at the clients of ATS. Xcelsius is one of those tools which can be potentially interesting for ATS workers and their clients. In order for those people to see the potential of Xcelsius there has to be made an example dashboard accompanied by a business case to support background information which will also show the best practices of the program.

In addition to have a quick and smooth implementation people need to be instructed about this tool. They need to understand at-a-glance what's possible with this tool and what the limitations are. To realize this goal, a presentation and training material have to be created.

To get the most out of this tool, the connectivity with SAP has to be investigated because only when it's connected to a live "data-source" it can be a true Business Intelligence solution.

Here what ATS wants to accomplish by researching the integration of Xcelsius with SAP BI.

- How Xcelsius can be best implemented at the customers of ATS so that they get the most out of the application.
 - o What the customers (or ATS workers) need to know about Xcelsius in a presentation.
 - o How do we make Xcelsius commercial potential?
 - o A demo presentation of a business case
 - o Best practice of creating a dashboard.
 - o What is the connectivity of Xcelsius
 - o What is the best application of Xcelsius within SAP BI?
- What effort does it take to implement Xcelsius?
 - o What is needed to implement Xcelsius?
 - o What knowledge do people need in order to work with Xcelsius?
 - o Training material needs to be created

1.1.2 Deliverables

- A demonstrational dashboard which shows the functions and features of Xcelsius. It has to be graphic and contain a low level of detailed information. The function of the dashboard has to aim at the management. It has to have some common company departments and their Key Performance Indicators.
- A business case to support the dashboard to supply a good background story.
- A presentation to inform people about Xcelsius which also show the business case and the features of Xcelsius.
- Create training material to inform people about Xcelsius and which they can use to have a swift start.
- A thesis in which the research questions are answered.

1.1.3 Scope

The scope of this assignment has a commercial side; potential clients need to see for themselves what Xcelsius has to offer them. And it has an educational side; potential clients need to be aware of the concept Xcelsius and they need to be educated to work with the program. Potential clients are all the people that regularly work with presentable data or that might have dashboard needs.

The business case has to be written for the average business user or management. The average business user needs to be able to work with the program it's not meant for developers or the workers in the factory.

1.1.4 Conditions

Because of the international character of ATS, its workers and its customers all deliverables for ATS need to be in English.

Usually a dashboard is defined "good" when the BI process behind it is very good and it's KPI's are well chosen. In this business case a good dashboard when it's easily understandable and people can relate to the problems and solutions of the dashboard.

1.1.5 Approach

To bring this assignment to a successful end the approach needs to be described. The approach that is being used for this assignment will be the Accenture Delivery Method described in the next chapter.

1.2 Accenture Delivery Method

In this chapter the Accenture Delivery Method (ADM) will be described. ADM is the standard development approach for the projects of Accenture and the methodical accountability of this project. It helps in bringing this project to a successful end. This project is implemented per phase. ADM is a methodology aimed to standardize and provide a skeleton structure for any project at any stage it might be in. The best way to therefore structure it is by organizing it in the phases that you follow when executing the project.

1.2.1 Reasons for ADM

There are multiple reasons to choose for ADM. The biggest reason is that it is the standard within Accenture. Every project is handled according to this method. This gives the writer of this document a good chance to look into the “kitchen” of the company. Another good reason for choosing ADM is the large amount of information available within the company. There are many workflows available. The majority of the complete ADM are templates and checklists for rather large projects there for in this thesis only the global workflow of ADM will be used.

1.2.2 Plan stage

During this stage it has to be clear who is doing this assignment and what does he/she need in order to complete this. This stage was actually already completed by Accenture by writing the assignment paper and hiring the (right?) person for this assignment. But from executive point of view it meant documenting the problem, goals, scope and planning in the Project Initiation Document (appendix I).

1.2.3 Analyze stage

In the analyzing stage we investigate and create a context to execute the project by researching Business Intelligence, dashboards and ATS. Then the requirements for the program/dashboard need to be confirmed. Gather/learn information about Xcelsius and document what you want to have in your dashboard/business case. In this stage you got learn to work with Xcelsius and practice building dashboards. Verify the plan with customers. In the research context of this assignment I need to analyze the SAP BI area of ATS.

1.2.4 Design stage

With an understanding of all the requirements, the capabilities are realized in the design stage. For this project it meant writing the business case. The business case (appendix II) has to be in line with the dashboard because the business case contains the background information of the dashboard. What Components need to be in the dashboard and what KPI's need to be shown? Write chapter classification of the “get started” document (appendix III).

1.2.5 Build stage

In this stage, the dashboard is built. All the components need to be created together with the phony data. The business case is fine tuned in order to work out some errors. When the dashboard is (nearly) ready, the training material can be created in the form of a “get started” document (appendix III).

1.2.6 Test stage

This stage involves intensive testing of all aspects of the dashboard. From testing/reviewing each individual component to the entire dashboard. The data within the dashboard is small enough so that a performance test is irrelevant. All the created documents need to be reviewed by the company coach. In this thesis this chapter will not be discussed.

1.2.7 Deploy stage

Deployment completes the lifecycle methodology as the final stage. The business case, get started document and dashboard can be distributed to possible customers. The dashboard can also put online in the form of HTML file or send to as PDF or PowerPoint presentation. And of course a management presentation (appendix V) has to be given. For this document this means describing all the research results, findings and lessons learned.

2 Analyze and research stage

2.1 From Business Intelligence to dashboards (Theory)

Companies need information to be able to function well, when companies have the right information they can react correctly on events that happen externally (market changes) or things that happen internally (sales figures). Without good information a company can end up doing not-the-best or even the wrong thing. Business Intelligence (BI) refers to the skills, processes, technologies, applications and practices used to improve the gathering and analyzing of data and transforming into information for the decision making process.

Business Intelligence becomes more important because businesses start to produce and record more and more data every day which they need to maintain competitive. To turn this data into valuable information that can be used in the decision making process becomes more and more important. As time goes on, companies need more data for their decisions and get less time to do it in; this is called the BI-gap.

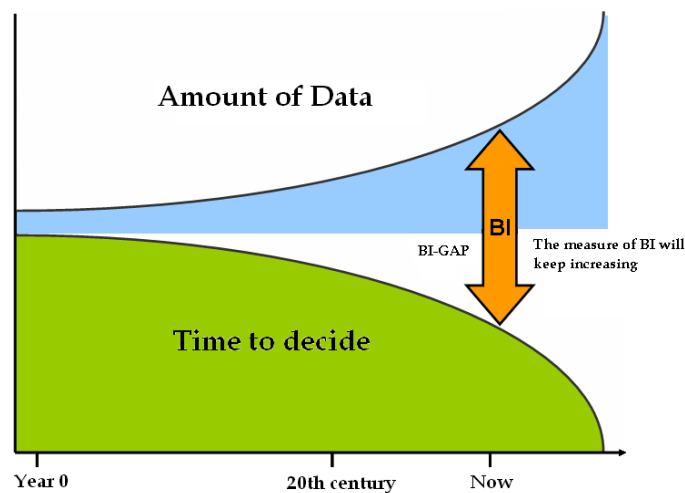


Figure 2 : amount of data increases and time to decide decreases, this problem is called the BI gap

Figure 2 shows that the BI-gap is not only getting bigger but also that the grow expands as time goes on, this keeps business intelligence a challenging area.

2.1.1 The process of BI

The repeating process of BI (cycle) changes more or less depending who you ask but the essence is always the same: the registering, gathering, analyzing and reacting to data/information. In practical use this means that companies gather, store data and monitor their entire business process closely. When this data is gathered it needs to be turned into information. Then it is spread to the users or the decision makers. This process is shown below. In this “bottleneck” information can be merged, linked or compared somehow; this is inherent to the BI process.

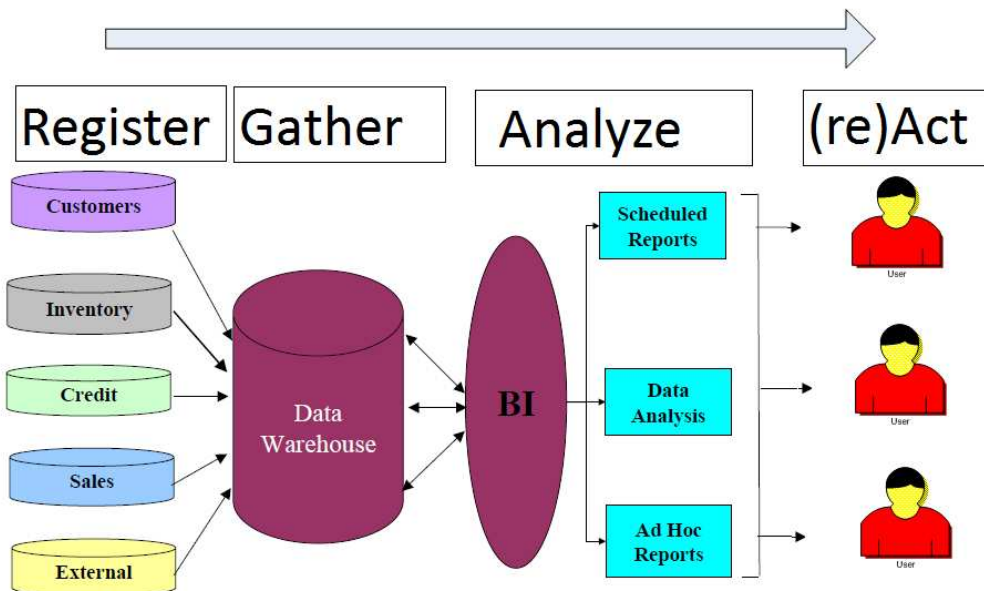


Figure 3 : The BI Process with underlying systems

2.1.2 Why dashboards

To make quick decisions (in order to close the BI-GAP) all relevant data needs to be accumulated in a single overview for fast decision making, such an overview is called a dashboard. The word dashboard is the contraction of the words Dial-and-switch board which was a control panel for vehicles and (large) machines. Now this control panel can be used to oversee, and sometimes control, a company/department or section. A well designed and applied dashboard poses the following advantages:

- Visual presentation of performance measures
- Ability to identify and correct negative trends
- Measure efficiencies/inefficiencies
- Ability to generate detailed reports showing new trends
- Ability to make more informed decisions based on collected BI
- Align strategies and organizational goals
- Save time over running multiple reports
- Gain total visibility of all systems instantly

(Wikipedia)

There are some requirements however to the data put in a dashboard. A dashboard can only be as good as the information it displays. Most of the information showed in a dashboard are the Key performance Indicators (KPI) of a company. The process of choosing the right KPI's is a true

business intelligence issue. Questions like relevancy and accuracy come up. Creating a good and functional dashboard is probably around 80 % Pre-building work and 20 % actual building.

2.2 Business Intelligence within ATS SAP BI Area (Practice)

In the previous chapter the BI process was explained, we will now take a look at how this entire story is applied in ATS.

The area that has given out this assignment is called SAP BI. SAP stands for the ERP program which they work with and extract the data from, BI stands for Business Intelligence the science they apply to improve businesses. This BI aspect is rather important and determines the context of this assignment.

SAP Business Intelligence (BI) comprises end-to-end data warehousing and analytics solutions designed to provide decision makers with the facts and information they need, presented in a way to make these analyses efficient and effective. SAP BI includes three main components: SAP Business Warehouse (BW), SAP Business Explorer Suite (BEx), and SAP Business Objects which comprised as SAP BI are a part of the overall SAP Information Management (IM) suite.

As SAP BI area they know dash boarding is an important issue for themselves as well as their customers. SAP took over BO and rebranded the BO programs as the BI tools for SAP later named SAP BO. These new tools therefore need to be explored and if possible their features need to be exploited. Xcelsius is one of those tools and will be explained in the next chapter.

2.3 Xcelsius explained

First let's start off with the things Xcelsius was actually designed for. The concept of Xcelsius described in one phrase.

Xcelsius is a simple point-and-click data visualization tool to create interactive analytics, dashboards and presentations.

Xcelsius is a reporting and dash boarding tool designed to consolidate views of key metrics so employee's can answer business questions at-a-glance and use data to make informed decisions. It can be used for creating dashboards as well as it can be used to present data in PowerPoint presentations. Xcelsius is an Excel based data visualization tool for data that is generated elsewhere.

This Business Intelligence tool is one of the three Business Intelligence reporting and analytic toolset from BO. The other two are, Crystal reports which is a scheduled-reporting tool designed for quantum enterprise reporting, and Web intelligence which is more of an ad-hoc querying and analyses tool. Xcelsius is a data presentation and visualization tool that can be used in combination with both of them. In the figure below an Xcelsius dashboard is shown.

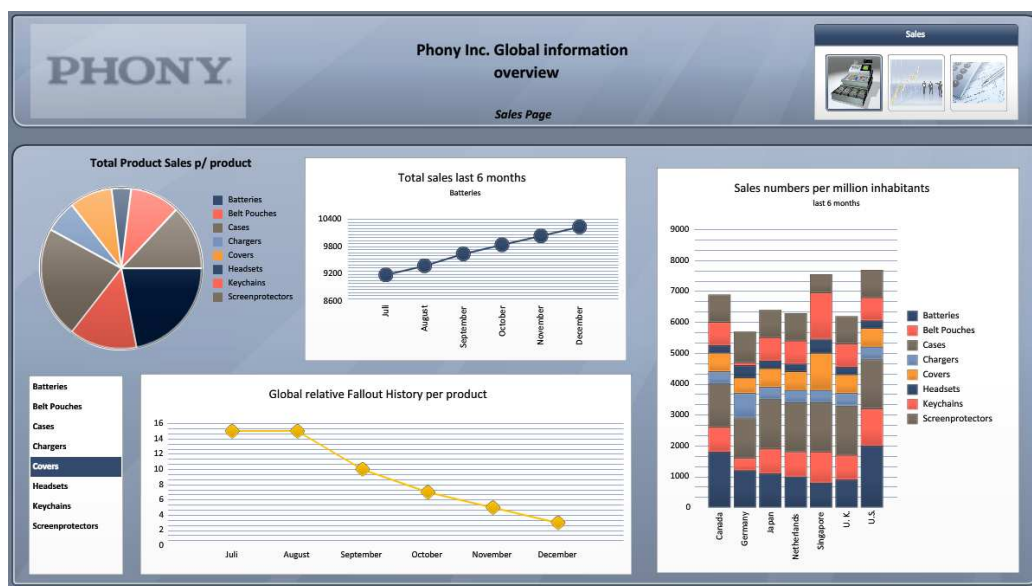


Figure 4 : Example of dashboard made with Xcelsius

2.3.1 Basic functionality of Xcelsius

Business data is usually complex enough that spreadsheets are needed to organize it in a meaningful way. However, spreadsheets aren't particularly useful when it comes to explaining this data to an audience that doesn't use Microsoft excel or work with formulas.

Xcelsius enables you to create engaging models simply and quickly based on your Excel spreadsheets. A Model is simply a visual representation (figure 6) of tabular data (figure 5). This data can be shown by components such as charts, gauges and radio buttons. A gathering of these components can be used for presentations, reports and dashboards. Excel serves as the mechanism to map data and formulas to the components in Xcelsius.

	A	B	C	D	E	F	G	H
16	sales per million inha	Canada	Germany	Japan	Netherlands	Singapore	U. K.	U.S.
17	Batteries	1800	1200	1100	1000	800	900	2000
18	Belt Pouches	800	400	800	800	1000	800	1200
19	Cases	1400	1300	1600	1600	1600	1600	1600
20	Chargers	400	800	400	400	400	400	400
21	Covers	600	500	600	600	1200	600	600
22	Headsets	250	400	250	250	450	250	250
23	Keychains	750	100	750	750	1500	750	750
24	Screenprotectors	900	1000	900	900	600	900	900
25								

Dynamic visibility Sales Accounting Targets environment Ledger RSS feed

Figure 5: How data exist in Excel

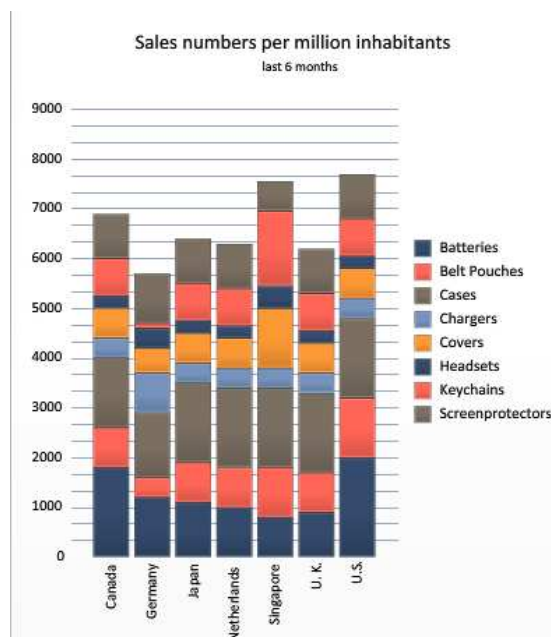


Figure 6: How data is shown in Xcelsius

2.3.2 Interface of Xcelsius

The interface of Xcelsius will be explained here, the numbers in the titles correspond with the red numbers in figure 7.

Components (2)

In this section all the components are listed in a tree view. From this section you're able to drag components to the canvas. Components are graphic objects such as charts, gauges, or radio buttons, that can be added to the canvas, then linked to data and/or formulas from the excel file. Components are the building blocks of the visual models.

Object browser (1)

In this section is a list of all the components which are on the canvas (upper center). The components can be cut, copied, pasted, deleted, brought forward, moved back, grouped, ungrouped and renamed by right clicking. Furthermore they can be locked (no editing possible) or temporally made invisible (for better overview) as you can see most of the components are grouped (again for better overview).

Canvas (5)

In this section you can drag, drop and see your components. Here you can edit what the user will see.

Excel preview (3)

In this part of the screen you see your imported excel data. When the data has to be mapped to the components you can select the according cells here.

Properties (4)

After a component is added to the canvas, the component must be configured using the properties windows. The data in Xcelsius can be local (imported from a normal excel file) , or can be pasted from online data via XML, live office or a Universe.

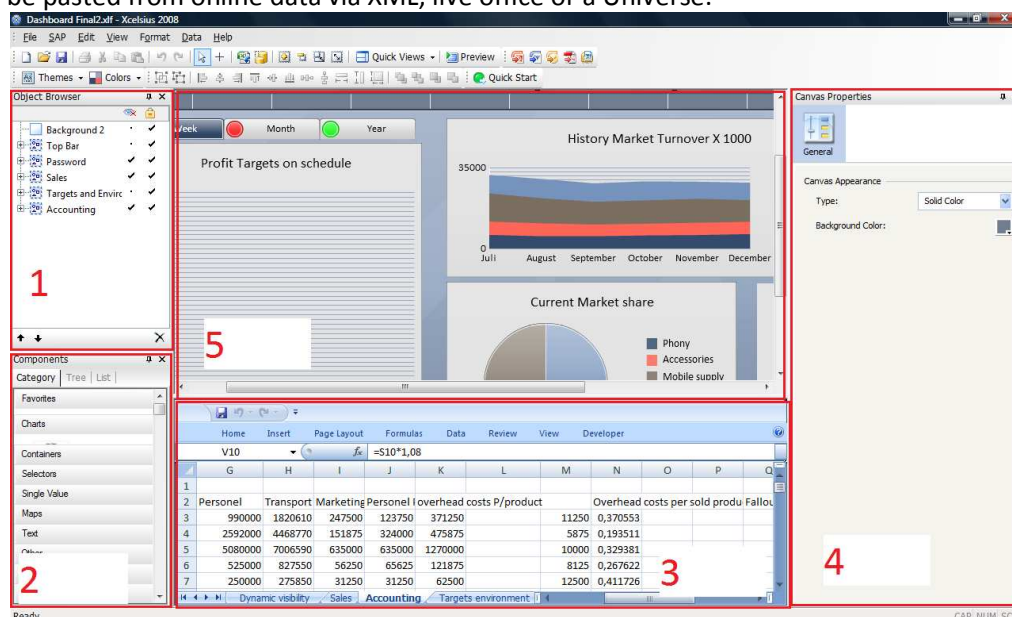


Figure 7 : Screenshot of Xcelsius

2.3.3 Key features

Here is a short description of all the key features will be given. This is where it differs from other dash boarding tools.

Export publish

The dashboards created with Xcelsius can be output to a lot of formats. The standard extension of a Xcelsius file is a XLF (Xcelsius Flash). When exporting however the following formats can be chosen, Macromedia Flash SWF and HTML to be opened in an internet browser. Microsoft PowerPoint Slide to imbed it in a presentation. Adobe PDF, Microsoft Outlook, Microsoft Word

Themes /skins/ global styles

Within Xcelsius it is possible to change the entire look and feel of the dashboard by a single click. Companies usually use a scheme of colors this is possible by changing the Themes. With global styles not only the colorscheme will change but also the appearance of the components.

Alerts

This is very important feature. The color of certain component(part)s will change according to the data. If a figure should drop below a certain threshold, the color of a component(part)s will change to red indicating this specific figures needs your attention.

Dynamic visibility

To be able to add more components and still remain overview it is possible to make some components (temporarily) invisible.

Drill down

Some components support “drill-down”. With this feature the user is able to drill down in the initial data in order to get a more specified view or insight about the data.

Save scenario

Dashboards function not only as an output but can also function as an input device. When the user changes something in the dashboard this will affect something elsewhere. Users can change multiple things in a dashboard in order to come to a certain output. This output can be saved as a scenario. Accordingly scenario's can also be loaded.

2.3.4 Information flow from source to published model.

The data in Xcelsius can come from many sources, the dashboard itself can be exported to many formats. In this chapter the data flow in to and from the program is explained schematically with the conditions and some (dis-)advantages. This is a purely explanatory chapter to give an idea how the BI data flow applies to Xcelsius and the BO tools.

Xcelsius can get its data from importing normal excel files. This data is then imported into the dashboard as a snapshot from the original excel file. When the data changes in the excel file you need to re-import it into your dashboard.

However it is also possible to use live data in your dashboard or create a link to a data source so that end-users do not need to manually re-import data into his/her dashboard. Live data can be imported in 12 different ways. Basically they are divided into two groups, Business Objects ways and the NON-Business Objects ways. Business Objects is the original creator of Xcelsius which also created a range of programs made for collaboration with each other and SAP software.

Business Objects	NON-Business Objects
Query as a Web service	Web service connection
Live office	XML data
Crystal report Data consumer	Portal data
Flash variables	LCDS connection (adobe)
FS commands	External interface connections
	Excel XML maps
	ADD on-google spreadsheet connector

Table 1 : List of Xcelsius connectivity sorted by BO or NON-BO way

From all these different types of connections only the Query as a web service, live office and crystal report data consumer will be described schematically. Through these connections it is possible to connect to the data sources that are available within ATS (SAP).

Describing all 12 connection types would fall outside the scope of this assignment. All the NON-BO connections are relative simple connections they all connect to a different source using a different protocol. Since these are quite independent and none of these are used with the systems used within ATS these will be skipped just like Flash variables and FS commands. In a later chapter the XML data connection will be explained since it has been used for the dashboard made for the business case.

In figure 8 the dataflow and possible connections are shown. In order to fully understand this figure the systems will be explained from left to right, the data source server, The Business Objects Enterprise Server, client and last how this client publishes its dashboard to the world. It is no coincidence that this figure has a lot of resemblance with figure 3.

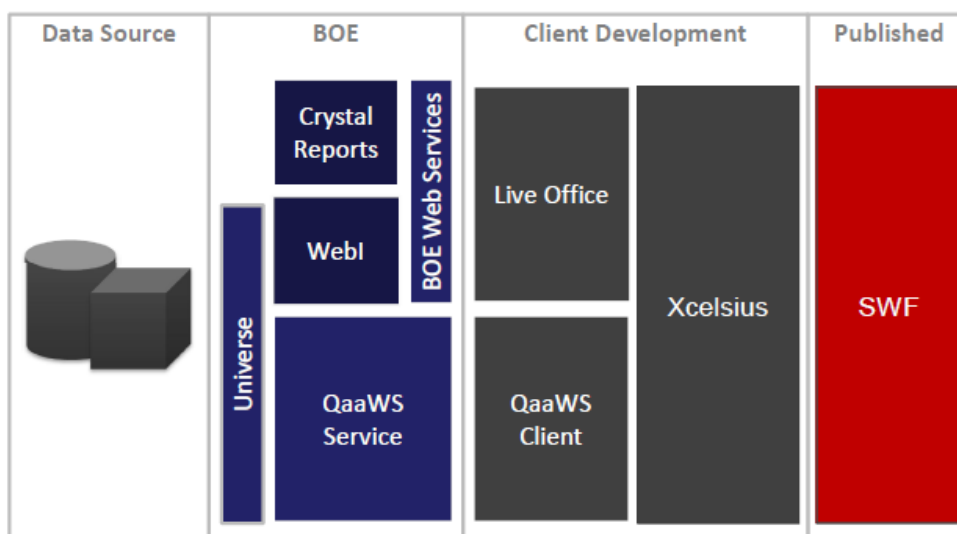


Figure 8 : Data flow from data source to Xcelsius to published model.

Data source

This is where all the information is stored. This can be a SAP Business Information Warehouse server. This server is in this case connected with the Business Objects Enterprise Server (second column from the left). Within the SAP server, queries can be used, which can be output with the help of crystal reports. It is also possible to use a “Universe” to build queries for later use with Qaaws or Webi.

Business Objects Enterprise Server (BOE)

This is the Business Objects Enterprise server, it has a Service Oriented Architecture and offers multiple BI solutions on a single platform. On this server run multiple tools like Crystal Reports, Webi, Qaaws and the Universes are configured here.

Universe

This Universe is a semantic layer running on the BOE server. This Universe is a semantic layer for better understandable information for end users. It hides the typical database structure from the user that can be in the reporting tools. This Universe can also connect to multiple data sources which appear to the user as a single source. If you want to work with SAP data in Xcelsius or Webi this layer is required.

Web Intelligence

This is a reporting and analyses tool from BO. With web intelligence users can analyze data from the universe to make ad-hoc decisions. With Webi it is possible to create queries by simply dragging data “objects”. These self made query outputs can also be used in dashboards.

Crystal reports

This is an enterprise quantum reporting tool. Which can extract information directly from SAP or an Universe. It can extract the data, reformat it and publish it in many ways. The data in one of these reports can be used in the dashboards.

Live office

The Live Office software integrates BO enterprise information within the Microsoft Office environment. Which means users can quickly embed accurate, refreshable data into documents, spreadsheets, and presentations. The result is a document that users can share with others for secure, collaborative decision making.

Query as a web service

With Query as a Web Service, you don't need programming knowledge to build queries. Instead, users use a simple wizard to create queries based on Business Objects universes—and then publish the results as BI web services ready for consumption. Any web service-enabled application can consume secure BI information simply by invoking the published web service. The two main components in QaaWS are the Client Tool and the Server. The QaaWS Client Tool gives the end user an easy to use wizard that allows them to create Universe queries and publish them as Web Services. Once the QaaWS is published, any user can securely access the data that the Web Service contains as long as they have access rights to that server.

Live office was created with the intention to make a smooth and easy Microsoft office integration. Qaaws was created as a efficient and universal connection type. These different techniques pose a different way to almost the same solution. Users have a choice in which they want to use. These are the reasons to choose for one or the other.

Reasons to choose for Live Office	Reasons to choose for Qaaws.
Intuitive what you see is what you get interface with Excel	Connect to multiple Universe(s)
Shows up as simple Excel toolbar (familiarity)	Universe contains ALL Logic
Scheduled reports (faster performance, does not hit data base)	Document & manage queries
Utilization of cross tabs (gain control over data formatting and layout)	Filter data to display ONLY what is needed
Use sub/combined queries and multi-cubes in Universe	Better for Universe developers
Fetch data from multiple reports and Universe within single dashboard	
<i>Crystal Reports can be utilized when there is no Universe</i>	

Table 2 source: everythingxcelsius.com data connectivity presentation

Xcelsius

Within Xcelsius you create a connection to any of the connection types described on page 22. The data can come through the BO enterprise server, or it can come directly from any of the other connection types (non-BO) that are pretty straight forward.

The information (structure) that is imported through any of the connection types needs to be pasted in the excel file in Xcelsius. In practice this means that the user selects X amounts of columns with Y amounts of rows to insert the data that comes from a previous created connection. When developing the dashboard the user selects the same amount of columns and rows to make a selection for the data source for the components. The data structure always needs to be pasted in an excel file in order for Xcelsius to understand it.

SWF

Once the dashboard is created it can be published. This publishing can be done in many formats. Technically it is always a Small Web Format in another container like a word, HTML or PDF file. Once published, the dashboard can connect directly to the data sources and there has to be no intervention of the developer. However end users do need login credentials for the source data when they want to access the data through live office. When the published model uses Qaaws as a communication protocol login credentials can be hard-coded in the dashboard, invisible for the end user. In the figure 9 it is shown how this schematically looks.

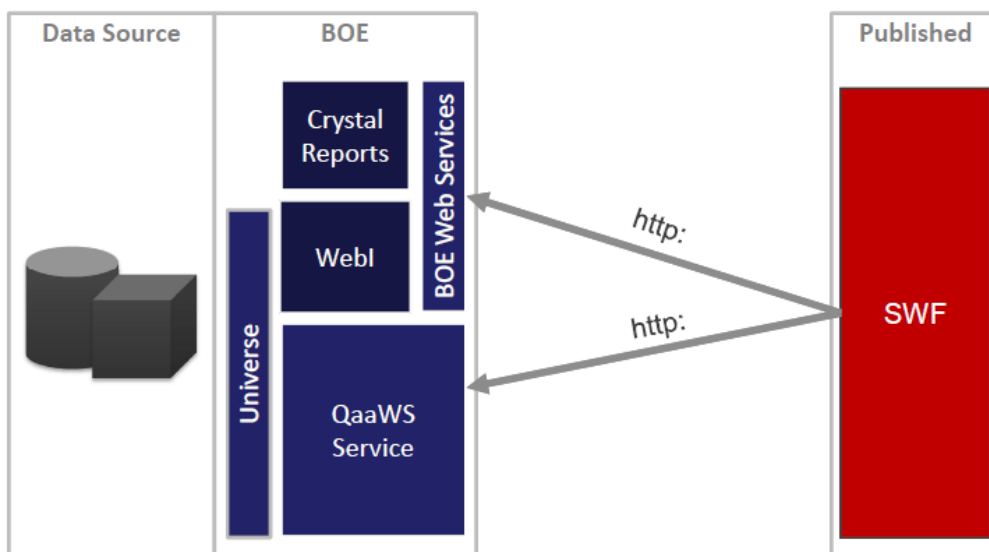


Figure 9 : Data flow after the dashboard is published

3 Design Stage

3.1 Designing the business case and dashboard.

In order to communicate the true meaning and potential of an application like Xcelsius it's convenient to create a business case which shows an example of a company in which Xcelsius provides the ideal solution to their problems. Before Xcelsius is implanted into the organization of customers there has to be a business case which proves all aspects of the project have been thought through.

The principle purposes of the formal business case process are:

- Introduce a way of thinking that causes people with the authority to recommend projects to firstly consider their value, risk and relative priority as a fundamental element of submitting the project proposal
- Require those proposing a project to justify its value to the firm and to self-cull any proposals that are not of demonstrable value
- Enable management to determine if the project proposed is of value to the business and achievable compared to the relative merits of alternative proposals.
- Enable management to objectively measure the subsequent achievement of the business case's benefits. (Wikipedia)

3.1.1 Creating the foundation.

In order to write an applicable business case it is important to know what the usual customers are of ATS and where they want to implement Xcelsius. A very obvious statement would be that the target would be the "average" business user. Xcelsius is a BI tool, so everyone that needs BI needs to be able to understand the business case. E.g. the developers and the production workers in the factory fall outside the scope of this business case.

Because the customers of ATS are usually large companies it would be logical to choose for a large company in the business case. But since that would make the business case unnecessary complicated and large, the company in the business case became smaller.

To simplify things further there has been chosen for a pretty straight forward business model, a trading company. After adding some personal interest and take in account that the company doesn't exist in real life the name became a collaboration of those two facts and the name Phony with the stage area was set.

3.2 Workflow and design of the business case

The requirements of this business case where that it had to promote Xcelsius. In order to do that all aspects and key features of Xcelsius have to be shown in a way the customers of ATS can relate to. Therefore three common roles were chosen in which customers could recognize themselves. The company and therefore these 3 people had "problems" which had to be solved with Xcelsius. An ideal Xcelsius situation had to be written. The business case has been created in four logical steps.

3.2.1 First step, the business roles in the company have to be determined

The business roles in the company have to be determined and it have to be roles which customers can relate to. The roles have to be different from each other in show the versatility of Xcelsius. Three roles were chosen.

Sales representative

This role is chosen because it has a more public role. A sales representative needs to show it's information in a more flashy way. Everything needs to look great because it's a "representation" of the company. A fast and easy understandable presentation is far more likely to sell products.

Accounting

This role is chosen due it's type of information. An accounting role is more likely to have large amounts of numbers which have to be shown in a understandable way so the data becomes information.

General Management

This role is chosen due it's general information displacement. There are two ways you can go with this role. The first one is when people need to show the company's most important information to the GM so this person can make informed decisions in the form of a presentation or dashboard. The second way is when the GM needs to inform everybody in the company about the latest information about the company. This person can combine all relevant information into one Xcelsius sheet and mail it to the workers in the company in form of a PDF format

3.2.2 Second step, determine what features need to be shown in the examples

To create a list of all the relevant and exceptional features some example were reviewed but the learners guide described all of them. There are many (very cool) plug-ins available for Xcelsius from third parties but standard components will do just fine. There are some Interesting components (map with selectable regions) and some less exciting (simple chart).

A list of all the components worth showing.

Fish eye Picture menu	Make a selection by clicking on a picture.
Label base menu	Make a selection by clicking on a tab.
Map with selectable buttons	View a geographic area in a map and make a selection by clicking on the region you want to see.
List builder	To create a list of items you want to see.
Play selector	To play or fast forward data (e.g. how figures evolve in time)
Table and list view	Ordinary table view.
Interactive calendar	Click on a date and see the according data.
Url link button	To Link to a specific website
Ticker	Bar which shows information that moves by (clickable)
What-if scenario	Changing one piece of data and see what effect it has on the rest of your data. This is not so much a component as a technique.
save scenario	Save that particular scenario.

Features that need to be used integral

Templates	Use of pre-defined templates. User has only to input numbers.
Global styles	Changes the entire color scheme.
alerts	When data crosses a certain threshold an event will happen.

Think of plot or problem.

This step is optional. In real world business cases you need to justify resources or a capital investment. In this case the build of the dashboard need to be justified so a “problem” was made up. It has become a very common problem: the economical declination.

3.2.3 Third step, determine the KPI’s that need to be shown

When you have determined the roles you can assign the relevant and interesting Key performance indicators (KPI’s) to them. These KPI’s will have to match the features I want to have in my examples. Some of the KPI’s were found on the internet in KPILibrary.com some of them were made up. To prevent the need to create a lot of fake data a lot of relative KPI’s were used (percentages). And the management page got better fitting name: Targets & environment.

Sales page

- Total product sales (last 6 months)
- Relative fallout per product (last 6 months)
- Sales numbers per million inhabitants (last 6 months)

Targets & environment page

- Profit target on schedule (per week, month, year)
- History market turnover (last 6 months)
- Current Market share
- Product capacity OEM
- News

Accounting

- Relative cost per country
- Profit per product
- Overall Costs

3.2.4 Fourth step, link KPI's and features to roles.

This is the hardest part. Key-features need to be presented but there's no need to show them multiple times. Instead it's more convenient to divide all the features over the roles and make 4 entirely different Xcelsius examples.

This is the point where is decided to create one dashboard with multiple pages instead of three separate dashboards.

Sales page

KPI	Component type
Total product sales (last 6 months)	Circle chart with drilldown line chart
Relative fallout per product (last 6 months)	List Box with drilldown linechart
Sales numbers per million inhabitants (last 6 months)	Stacked bar chart

Targets & environment page

KPI	Component type
Profit target on schedule (per week, month, year)	Label based menu with stacked column
History market turnover (last 6 months)	Stacked area chart
Current Market share	Pie chart
Product capacity OEM	Gauge
News	Ticker with Label and URL button

Accounting

KPI	Component type
Relative cost per country	Line chart, Combo box
Profit per product	Listbox, column chart
Overall Costs	What-if. Labels, sliders, scenario, print, icon

The general idea, KPI's and the features of the dashboard have been set. Construction can begin. The entire business case can be found in appendix II.

4 Build stage

4.1 Building the dashboard and business case.

Now that the functions of the dashboard are known composing can begin. There hasn't been a sketch or drawing since it was more about the showing features than design. However the dashboard could have been given a nicer look with the help of a graphic designer. The design came more or less naturally, there have been tried several looks, layouts and color schemes. The personal favorite was chosen. Also grey and blue remain the standard business colors therefore it's a safe choice. While building the dashboard a fine line had to be walked, on one hand the dashboard has to be as graphic is possible to create the "wow" effect, on the other hand an abundance of graphics works distracting for the information that is displayed and the business case/dashboard would bypass its goal.

The business case(appendix II) is written simultaneously with creating the dashboard. This in order to create a business case that "demands" the most of Xcelsius. Some parts of the business case were written in order to accommodate Xcelsius features. Some KPI's were created to maintain a logical business case.

4.2 Components, features and techniques used

Here a detailed description of the special features of the dashboard will be explained. How the components are applied technically. I will describe every technique only once.

4.2.1 Top Bar

The top bar in figure 10 contains a picture with a phony logo and the general title of the dashboard. On the right in the top bar there is a fisheye picture menu. This fisheye picture menu controls the dynamic visibility of the components in the lower part of the screen. There are three pictures for three different "pages" in the dashboard, the sales page, Targets and environment and accounting.



Figure 10 : The top bar in the dashboard with page selector at the right

Dynamic visibility

Enabling this feature within a visual model allows components to appear or disappear based on what the user selects, which in turn makes a model easier to view and digest. In the above example when the user clicks on the "sales page" icon, a certain value is inserted into a cell in excel. Other components have a "dynamic visibility parameter" that are linked to that specific cell and will appear only when that cell contains the right value.

4.2.2 Sales page

This page is shown when you start the dashboard or when clicked on the left icon in the fisheye picture menu. This page shows sales related KPI's.

The sales page (figure 11) contains the three KPI's mentioned earlier. In the top left of the lower part of the screen you see a circle diagram. When you click on any of the slices/products the history of the specified product will be showed in the line chart right next to it. The same goes for the listbox (lowerleft) and the line chart next to it. The stacked bar chart to the right is static.

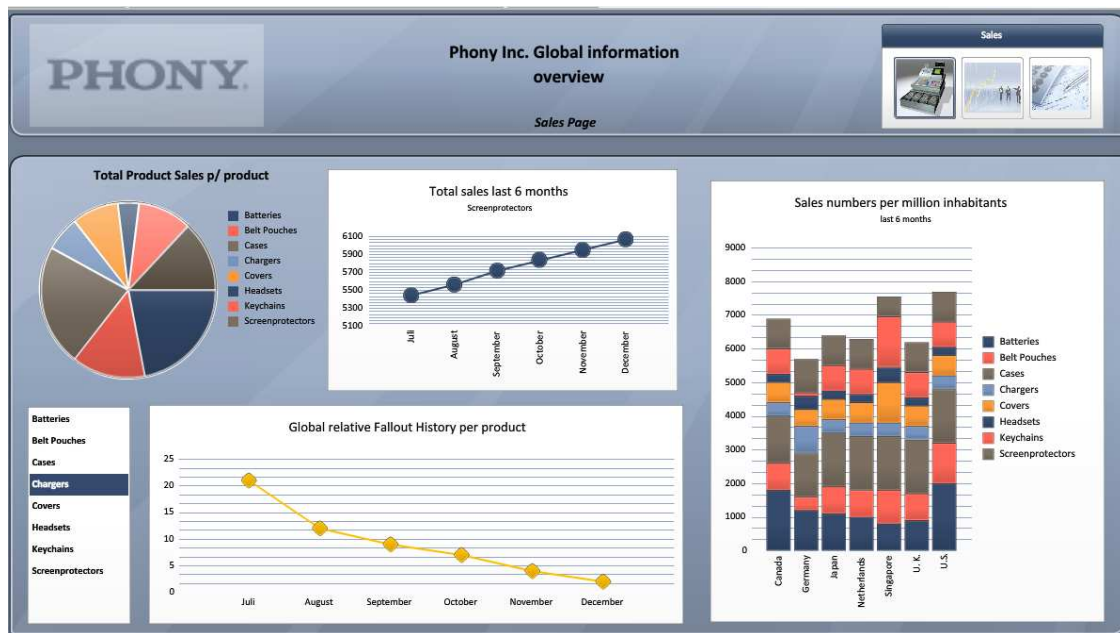


Figure 11 : The sales page of the dashboard

4.2.3 Targets and Environment page

This page (figure 12) is shown when clicked on the middle icon of the fisheye picture menu. The KPI's show management related KPI's/ information.

The “profits targets are on schedule” KPI will show directly if the targets are in line with the planning. It is directly visible that week targets are almost met, months targets are not met. When a user clicks on week, month or year it is instantly visible which country failed to meet its targets. The colors in the bar menu are chosen by its lowest value of the countries.

History market turnover, market share and production capacity are static charts.

In the bottom of screen there is a ticker visible with the latest news. The user can click on the headline and the article is shown in the right. When the user prefers he can click on the “read article” button and an Internet browser window will pop-up linking to the specified news page.

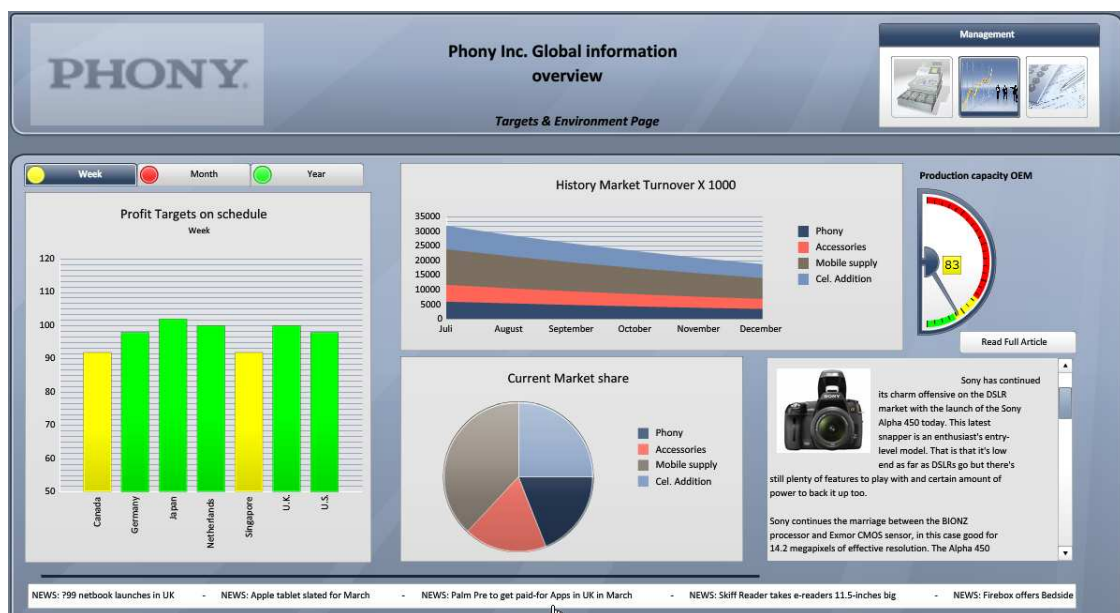


Figure 12 : Targets & Environment page

From RSS feed to XML map to dashboard information.

The information in the ticker comes from a RSS feed from pocket-line.com. This simple news feed is contained in a XML file on the internet. The link to this XML file is inserted as a XML map into the excel document. The headlines, news item and URL are linked to specified columns in the excel file. The ticker is linked to the “headlines column” the label is linked to the “news item column” and the button to the “URL column”. Every time the dashboard is started these columns are updated. In the appendix screenshots are available of the excel file.

4.2.4 Password page

This page (figure 13) is shown when right icon in the fisheye picture menu is clicked and the user wants to go to the accounting page. The accounting page contains “sensitive” information and is therefore protected. When the right code is entered the user will continue to the accounting page.



Figure 13 : Password enter field before accessing the accounting page

This password page is made with dynamic visibility. As described before, components will only appear if a cell contains the right value their dynamic visibility parameter is linked to. All the components in the accounting page will appear if the code “4321” is inserted into their dynamic visibility parameter. With this input text label you can enter that code.

The actual safety of this password protected page is unknown. It is only meant to show what “cool” things are possible with dynamic visibility.

4.2.5 Accounting page

This page (figure 14) is shown when the right code is entered in the password page. This page show cost and money related KPI's.

In the top left corner the overall costs are shown with their current values and sliders. These sliders can be moved left and right. Left, to decrease the value by a few percent, right, to increase this value by a few percent. These changes are calculated through in real-time which changes the Nett income value. When this value is dropped enough for the targeted value, the colored icon next to it will change to green indicating you have saved enough to meet your targets. It is possible to create different scenarios by adjusting the sliders in different ways but have the same result. These scenarios can be saved (and loaded) by clicking the scenario button.

It is also possible saving your adjustments by printing a screenshot by clicking the print button.

The relative cost per country KPI has a drop down box which selects different cost types. Accordingly the histories of these costs become visible in the line chart. In the right its visible how much profit each country makes selected by product.



Figure 14 : Accounting page

What-if scenario

The overall costs KPI is called a "what-if scenario". What if we change these costs a little bit, what impact would that have on other numbers? This looks pretty neat and can give a lot of insight in numbers or changes. In excel this is just a simple calculation in which the variables can be changed with the sliders. The properties of the sliders determine how much the values change, by increments of 1 or increments of 1000.

5 Deploy Stage

5.1 Research Questions

In this stage the entire project is yielded and the research results are answered in this chapter. All the questions are repeated and answered and the findings are described. All the deliverables were taken out of this chapter. Those can be found in the appendix.

- How Xcelsius can be best implemented at the customers of ATS so that they get the most out of the application.
 - o How do we make Xcelsius commercially interesting?
 - o Best practice of creating a dashboard.
 - o What is the best application of Xcelsius within SAP BI?
- What effort does it take to implement Xcelsius?
 - o What is needed to implement Xcelsius?
 - o What knowledge do people need in order to work with Xcelsius?

5.1.1 How do we make Xcelsius commercial interesting?

In order to make Xcelsius commercial interesting we need to know a few things about Xcelsius like, the key features, key selling points. But for ATS and the client its paramount that it is clear what you can and cannot do with Xcelsius, what it's meant for and what not. It is commercially not interesting to implement a tool which has a different purpose then the customers wishes. Xcelsius should be implemented with all these points. If the user introduced with the presentation about Xcelsius and has seen how the "reality" looks like with the business case and is aware of the ability of the program, potential clients can make a deliberate decision whether to buy Xcelsius or not.

When users start to work with Xcelsius the "get started" document (appendix III) shows them the first steps.

Key advantages and key selling points

When you're searching for a product to make your data presentations better-looking or to make your data more comprehensible for others Xcelsius is a program to consider.

- It's relative cheap, only € 200,- for the present version.
- Ease of use and good-looking output.
- Presentations become interactive. You're able to click on a chart or any other component and drill-down or view the data in another way.
- Bridges gap between data analyses and data presentation with "what-if" analyses.
- Easily distribution of STANDALONE presentation's via, PDF, HTML, PowerPoint and word.
- Offline and Online (real-time) data

Restrictions

Like all programs Xcelsius also has its restrictions. It's at least as important to know what you can't do with a tool as it is what you can do. Here there described some restrictions to keep in consideration.

- When you are using "offline" data. The data has to be in ONE excel file. The data can be on many sheets in that file.
- When selecting data for a single component, it has to be in "one" block. It's not possible to select data from multiple lines or rows with irrelevant data in between.
- There's a limit to the data that may be in the excel file. Data usually must have had some data analysis already.
- It is important to have good set-up excel files. If the data in the Excel file isn't classified logically with titles and color coding working with Xcelsius becomes much harder. So before the data is imported in Xcelsius a good Excel file has to be made.

An overview about the Pro's and Con's of Xcelsius can be found in the findings chapter.

5.1.2 Best practice of creating dashboard.

After studying and using Xcelsius A step-by-step plan was created to create a dashboard. This step-by-step plan can be found in the Lessons learned chapter under "how to build a dashboard".

5.1.3 What is the best application of Xcelsius within SAP BI.

Xcelsius is suited for simple visual presentations and small dashboards. Xcelsius can be used to create visual presentations or dashboard with local data. These presentations are usually meant for the one time use or they should be updated manually with an excel file. Xcelsius is a nice tool for this purpose when the user has basic knowledge of Xcelsius and excel however it is not were the true potential lies.

To get the most out of Xcelsius as a dashboard tool, users need to have a decent understanding about Business Intelligence. Xcelsius can be used for simple presentations or small ad-hoc dashboards. But there is more potential in dashboards with real-time information that would actually provide intelligence on the fly. A dashboard can only be as good as its KPI's and the information it shows. Xcelsius can visualize this information in a great way.

For the optimal implementation of Xcelsius with SAP BI a BO enterprise server is recommended because this server provides a semantic layer which is easier for the end-user. Xcelsius is a great data visualization tool but there is more potential with the integration with the BO enterprise server because with this integration a more elaborate BI solution is given through ease of use and data connectivity with SAP BI. This integration can be realized in two ways, through a Live Office or Qaaws connection. See chapter 2.3.4 for reasons to choose for one or the other.

5.1.4 What is needed to implement Xcelsius

To implement Xcelsius users will have to take notice of the concept of Xcelsius. For this general introduction a Presentation (appendix V) has been made with the business case to demonstrate what it is and what's possible. When people are familiar with the program they can start with the "get started" document (appendix III). This document describes the system requirements for the program and a dashboard building plan which also resides in the lessons learned.

(Minimal) System Requirements

In order to use Xcelsius you need a PC with at least a 1Ghz processor and 1 GB of RAM memory. As operating you need Windows XP or later and also office XP or later is required. If you want to Connect to live data you can SAP Business Objects Enterprise XI 3.0 or R2 SP2 + productivity pack.

Basic knowledge of Excel

In order to work with Xcelsius you certainly need to have some basic Excel knowledge. Xcelsius is only a way of displaying the Excel sheet in a nice way. But the actual data still comes from the Excel sheet as well as all the calculations you want to have in your dashboard.

Version choice

Quite obviously you need the program itself. There are 3 different versions to choose from. There is the Present version, the engage version and the server version. If the customers intend to work with offline excel files only, they can use the program itself (present or engage version) with the basic knowledge of excel. Together with a 2 day course and the dashboard creation plan (get started document) they are able to create pretty engaging dashboards.

When customers intend to work with data from their SAP system through a universe webi or QaaWS the engage of enterprise version is needed.

Training in working with Xcelsius

Just like any other program you need to know how the program works. This is not a hard task. There are excellent guides and tutorials to find all over the internet on how you should work with Xcelsius. It falls outside the scope of the assignment explain how to work with Xcelsius. This is described in already available lesson material. To get started you can take a course

- Business objects Xcelsius learners guide (comes additional to a course)
- Xcelsius for Dummies
- Tips, Lessons learned and findings in this thesis in the "get started" document

Also without these learning materials the average user can start working with the program because Xcelsius has built-in tutorials for a better understanding of the program. But with these materials users can learn much faster and they learn the entire program.

5.2 Lessons learned

5.2.1 How to build a dashboard.

When you're developing a presentation/dashboard there is a fixed sequence of steps you need to take. Here all steps will be described with an example KPI of revenue. This step-by-step plan is based on writers personal experience.

5.2.2 Creating Concept

1. Think of what data you want to show (Which tables/KPI's) and to who.
 - I want to show the revenue of the last six months per month.
2. Imagine HOW you want to show the data. Line-chart, stacked chart, Accordion menu.
 - I want to show how the revenue evolves in a line chart.
3. Can you consolidate/converge some of the KPI's? For space saving or showing a direct relation between several KPI's.
 - Are you showing revenue for per year somewhere else?
 - Can you combine it with costs, or revenue of another department?
4. When using drill-down KPI's or selectors, think of the data-flow that produces. E.G. clicking on a circle diagram will reveal the specific data from that particular slice in what chart will that data being showed.
 - When I click a certain month do I want to see how much each product contributes to this revenue?
5. When using dynamic visibility to create multiple "pages or tabs" in the dashboard, what are the KPI's sitting together? So you can group the source data.
 - Do I Show the revenue KPI with other sales KPI's or with revenue related KPI's?

5.2.3 Creating the source data

6. When using dynamic visibility, use the first tab of the excel sheet for the parameters.
 - If you intend to use dynamic visibility keep the first tab of your excel sheet clear.
7. Put all the data orderly in an Excel sheet over preferably as many tabs as is needed to keep overview. It doesn't matter if you're using local data or data from queries or external data source. Start at the second tab for the first tab is being used for dynamic visibility.
 - I put my revenue data in the second tap together with the other sales related KPI's
8. Highlight the temporarily fields for the selectors yellow.
 - I Highlight a column right next to table in the excel sheet for were the temporary information is stored like selection or drill-down purposes

5.2.4 Building the dashboard

9. Import the excel sheet with all the source data into Xcelsius.
 - I import my revenue data excel file into Xcelsius
10. Build the actual dashboard by dragging the components into canvas and link the source data to the components. Group the associating components when they are in place in the object browser.
 - Drag a line chart to the canvas and connect it to the revenue data.
 - Customize properties of the components
11. Use skins / themes / global styles to “customize” your dashboard.
 - I pick the color scheme of my company.

5.2.5 Publish the dashboard

12. The dashboard is now finished and ready for publication. Export to the appropriate format
 - I save the dashboard and export it to the PDF file format to mail it to my co-workers.

If these steps are not being followed systematically it is very easy to lose overview of the dashboard. This is especially true when using a lot of components/KPI's. When you keep changing the KPI's or the components it is very likely you need to change adjacent or related components/KPI's, which results in changing even more components/KPI's.

The hardest steps are the first 7 steps (creating concept and creating the source data). These steps will probably take several days. Off course the level of experience and complexity will make a great deal. The following steps will take a matter of hours / few days, again depending on the level of experience en complexity of the dashboard.

5.2.6 Tips to keep in consideration.

When building dashboards you create some experience. In this chapter I will dispense this experience in the form of advice hoping you don't make the same mistakes.

Limit the amount components

When you first start designing/building dashboards there's quite a temptation to put as many KPI's into your dashboard as possible. This is very well possible as long as the KPI's are relevant. However there is a maximum of components you're able to show. This maximum is not technical but has more of a human aspect. An ideal amount of components can be 3 or 4 in a single view, 6 at the most. Using more will not only crowd the screen but will also make creating the dashboard much more complicated.

It's an option to create multiple tabs/pages in your dashboard; this will create more overview for the user not for the developer. Developing dashboards with many pages will add complexity to the creating process. Therefore a maximum 3 maybe 4 pages per dashboard should be maintained. If you want to create a 10 page dashboard be very aware how to arrange your data!

Creating large dashboards has few disadvantages, not only are they hard to develop but they are slow as well as hard to publish due their size.

Use Plug-ins

Xcelsius supports plug-ins to add functionality to the program. When designing and developing a dashboard you should search the internet for plug-ins. There are many handy and rather beautiful plug-ins available for extra functionality. Keep in mind however, that they come at a price.

Use Combination charts

When you intend to use a line chart or a column chart it's better to use a combination chart. Sometimes in retrospect you realize that you'd wish you'd used another way of displaying data. This way you can switch between columns to line en vice versa.

Use fiddler to Debug in/out –put data

Fiddler is a web debugger which can be used to log http traffic. When using live data you can use fiddler to look into the data exchange between Xcelsius and your data source. All input/output data feeds become directly visible in fiddler. This is very handy when something appears to go wrong.

Never edit the Excel data in Xcelsius

Always open the excel file in excel when you want to edit the data. Then re-import it into Xcelsius. Otherwise you get an error explaining excel stopped responding. This is a bug of the program.

5.2.7 Findings

Xcelsius is good for

1. Creating simple or elaborate dashboards
2. Handling a bit of “What If Scenarios”
3. Dispensing/publishing to others
4. Drill down functionalities (on detailed and pre-summarized data rows)

Xcelsius is NOT good for

1. Straight reporting, i.e. commission reports, job costing
2. Complex Cross-Tab reports

Xcelsius is:

1. Xcelsius is a predominant dashboard tool and all about visualization, so it visualizes results
2. Xcelsius is interactive as it produces Macromedia Flash files (the content of a report or chart is output to Flash SWF which gives the report/chart the ability to be animated)
3. Comfortable with end-users as they can play with it

Xcelsius is not:

1. Xcelsius is NOT meant for ad-hoc querying and analysis
2. Xcelsius does not aggregate or summarize your data for displays in your dashboards.
3. Xcelsius does not create forecasts based on your actual data; it does not extrapolate. From back-end to front-end, data should be extrapolated by calculation in one of more of the following places:

Xcelsius is capable of:

1. Xcelsius can read data from: Excel sheet, SharePoint and SQL Server 2005 Reporting Services, Live Office, Query as a Web Service, connect to XML file (can refresh every x seconds to give real time), the latest Xcelsius is supposed to be able to use our universes and not just external data sources. From XIr2 on, it can handle both QaaWS as Live Office.
2. Xcelsius visualizations can be published in the following formats:
 - ◆ Macromedia Flash SWF, HTML, Microsoft PowerPoint Slide, Adobe PDF, Microsoft Outlook, Microsoft Word, Business Objects Enterprise,
 - ◆ Use Query As A Web Service to build Webi reports and access them as a web service (upgrade to SP2 and install Productivity Pack in order to use Xcelsius because of the Query as a Web Service feature)
 - ◆ In XI3.0, you can even embed Xcelsius into Crystal Reports.
3. Drill Down (-like) functionality with: the Xcelsius tab component (dashboards on different tabs are based on different data sets) and with click-on-geographical-map functionality (based on data tuples per country and per continent)
4. Handle plug-ins that extends the functionality of Xcelsius.

5.2.8 Improvement points

Here are some additions and points of improvement of which I would like to see in future versions.

Debug mode

When I started working with Xcelsius I felt the need to see what was going on in the background of my Excel sheet. If I could have a real-time look into the excel file when I was previewing the dashboard then I would be able to see if and where it would go wrong. There is however a devious solution to this problem. Use a table or label component in your dashboard to show what's going on in that specific cell.

Dual screen solution

When using Xcelsius you find yourself constantly searching for screen space. There are the canvas, components windows, excel preview, and the properties window. If you were able to move two of them to a second screen the user would have more space and a much better overview.

Dynamic Excel sheets and content.

Chances are when creating a dashboard you create a new excel file to put in all your source data. When having added source data for several components/KPI's, all this data is sitting in tables next to each other in a single excel sheet. It happens when you change this data the size of the table changes also, interfering with the data in the adjacent table, effectively corrupting that component. This problem can be solved by using a different tab in your excel file for every KPI, but the data for grouped KPI's is spread over all your tabs. If it was possible to paste data into the excel file, link it to a component and make it "disappear" until requested would shorten development time.

Stability

Xcelsius made the computer freeze up in a way the reset button had to be used. This was very annoying, because all the changes made needed to be redone. If the computer didn't freeze up completely it gave the error that excel stopped responding. Personally I got these errors up to seven times a day.

6 Conclusion

The kickoff for this assignment was the take-over of Business Objects by SAP to integrate the BO Business Intelligence functionality into the SAP ERP environment. The SAP BI finance Area realized that Xcelsius can be a valuable asset to their customers and also themselves.

There were a few goals ATS wanted to realize by researching Xcelsius. How Xcelsius can be best implanted at the customers of ATS so that they get the most out of the application. And what effort it takes to implement Xcelsius. These questions have been worked out in smaller sub questions and together with the ADM method the entire project was realized.

Xcelsius is a simple point-and-click data visualization tool to create interactive analytics, dashboards and presentations. It uses excel as a platform to get its data from. After some research the conclusion was that Xcelsius fulfils a need in ad-hoc data presentation for the average business user. However, together with other SAP BO products this tool can be more than just a simple data visualization tool and becomes part of a more integrate BI solution.

To get this message across, the business case together with the dashboard was created to give potential customers/users a good idea of what's possible with Xcelsius. This business case and dashboard gives a fairly simple solution to quite common business problems.

Throughout the project there was readily available information. But the presentations from ATS itself were the most informative and gave the best perspective on all the SAP BO tools. All the information, together with the personal experience that was build throughout the project, the answers to the research question came out quite naturally.

If there had to be given a recommendation it would be to sell Xcelsius to customers as part of a total BI solution. For further projects it would mean investigating how Xcelsius can be technically integrated / connected with the SAP BO server in order to create a seamless integration. An interesting question would be how well Xcelsius can be integrated with other (less compatible) BI solutions like Oracle and how to realize this technically.

7 Process evaluation

In retrospect the entire project went quite well. Everything went relatively smooth and according to plan, I had fun with my co-interns and was helped really well. However there were a few hick-ups along the way. Around the 16th week of the project I had some trouble making progress. Usually this shouldn't be a problem since I've been told I could ask anything. The problem however was that I was not really stuck but kept walking in a vicious circle.

I had to create a business case with a dashboard. Everything was thought out in front so a pretty clear path was laid out. I wanted to put every feature of Xcelsius in my dashboard with a sensible KPI. But when the business case was nearly complete and I started to work on the dashboard I realized that some of my KPI's just didn't make sense in the dashboard. With some of the components I realized that they require just too many data, didn't fit or were unable to put the data in the preferred components.

Every KPI/component was adjusted but when I changed component "A" it had an effect on component "B" and "C" which in turn had to be adjusted also which in turn had an effect on the entire functionality of the dashboard. Everything kept changing without making progress. Also the examples Bart showed were very advanced dashboards which I wanted to match with too little experience. After a meeting with Bart in which the slow progress came to discussion, he examined all my work and came to the conclusion that I was making it too hard for myself. Simplify the KPI's and components and just create a nice and simple dashboard.

This was actually a matter of experience, which at the beginning of this project quite obviously I didn't have. If I would do it all over again things would go much smoother especially with the step-by-step plan I made. But that being said you still just need to click around and play with the program to fully understand this tool. Starting users just have to build a few dashboards to create experience.

One of the more important things I learned was working according to a plan. Finish "A" before starting with "B" sort to speak. Also around the 16th week of this project I was working on too many products at the same time which had an impact on progress. This taught me to create a more accurate and detailed planning, and stick to it.

Trying to build a too elaborate dashboard, too casual planning and the underestimating the writing of the thesis led to the fact that I was unable to meet the deadline. This led to the creation of a new detailed day-to-day planning with which I completed the project two weeks after the original deadline.

The Accenture Delivery Method (ADM) I used wasn't specifically applied to my project. ADM exists of Protocols, checklists en templates which weren't suitable for my project. However I still used the stages as a guide. Every stage has a general meaning to it. This meaning I used in my project and thesis.

8 List of references

Accenture Development Method

ATS Knowledge Xchange <http://kx.accenture.com>

Tutorials and general information

<http://Everythingxcelsius.com>

www.youtube.com/xcelsius_gurus

SAP developers Network sap.sdn.com

Business Objects Crystal Xcelsius 4.5 Desinging Interactive Presentations Learners guide.

Key performance indicators

KPIlibrary.com

Research

[http://blogs.cioinsight.com/lundquist/content/computer/why_sap_bought_business_o
bjects.html](http://blogs.cioinsight.com/lundquist/content/computer/why_sap_bought_business_objects.html)

<http://www.teradata.com/library/pdf/IEEEComputerWatsonWixom.pdf>

<http://www.inforica.com/in/download/bipresentation.pdf>

Wikipedia - Management dashboards

Wikipedia - Key performance Indicators

Wikipedia – SAP

Daan van Beek “De intelligente Organisatie” (2004)

9 Appendix

- I Project Initiation Document**
- II Business case**
- III Get started**
- IV Presentation**

Project Initiation Document

Xcelsius Examined

Opdracht gever:
Accenture Technology Solutions

Auteur: Paul Kox
Begeleider: Bart Roelofs
Datum: 1 oktober 2009
Versie: 1.0



Voorwoord

In dit document bevindt zich het plan van aanpak dat opgesteld is als onderdeel van de projectrapportage van mijn afstudeeropdracht bij Accenture Technology Solutions in Den Bosch. Deze opdracht wordt uitgevoerd in het kader van de opleiding Bedrijfskundige Informatica en heeft als kerndoel de afstudeeropdracht te beschrijven en de condities aan te geven waarin het project wordt uitgevoerd.

De stage zal gedurende 5 maanden plaatsvinden van September 2009 tot en met januari 2010. Bij dezen wil ik de heer Roelofs van Accenture en de heer Hamers van de Fontys hogeschool bedanken voor hun bijdragen aan mijn afstuderen.

Contents

Voorwoord	2
Organisatie en Achtergronden	4
Project opdracht	6
Doelstelling	6
Probleemstelling	6
Opdrachtoomschrijving	7
Project activiteiten	8
Producten	9
Een Project Initiation Document (PID)	9
Business case	9
Onderzoeksrapport / scriptie	9
Demo / Trainingsmateriaal	9
Projectplanning	9
Kwaliteits bewaking	10
Kwaliteit eindproduct	10
Controles	10
Terugkoppelen	10
Normen en technieken	10
Projectorganisatie	11
Stagebegeleider: Bart Roelofs	11
Stagedocent: Rien Hamers	11
Stagiair: Paul Kox	11
Planning	12
Kosten-/batenoverzicht	13
Kosten	13
Baten	13
Risicoanalyse	14
Uitloop project	14
Te weinig betrokkenheid vanuit het bedrijf	14
Bijlage	15
Stage opdracht vanuit ATS	15

Organisatie en Achtergronden

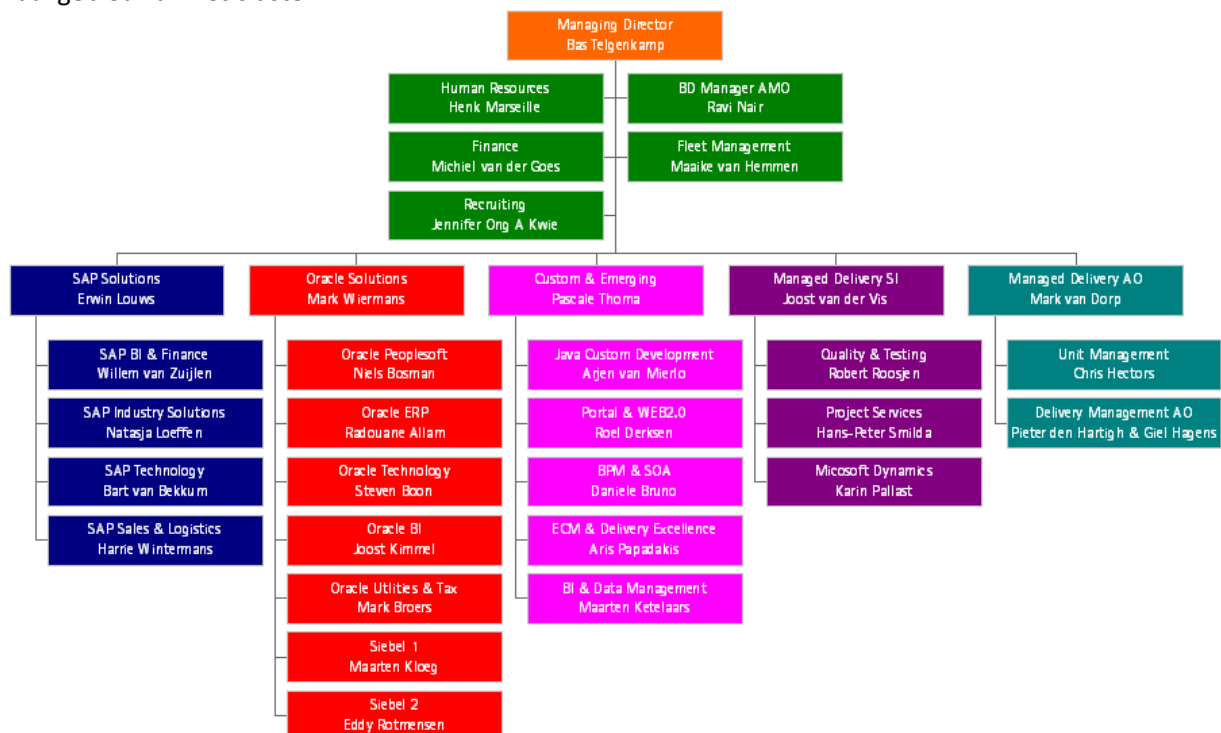
De organisatie en opdrachtgever van het project is Accenture, specifiek Accenture Technology Solutions (ATS). Accenture is een wereldwijd bedrijf voor management consulting, technology services en outsourcing. Accenture werkt samen met klanten om hen te helpen hun ambities te realiseren en tastbaar resultaat te leveren. Het bedrijf bevindt zich in 49 landen, verdeeld over 110 kantoren, waar ca. 181.000 medewerkers werkzaam zijn. Daarvan werken ongeveer 2600 medewerkers in Nederland.

Accenture is een internationaal opererende adviesorganisatie dat op basis van drie kernactiviteiten oplossingen biedt voor de haar opdrachtgevers: High Value Consulting, Technology en Outsourcing. Het bedrijf richt zich vooral op "Business Performance Improvement". Dit houdt in dat het organisaties helpt met het verbeteren van bedrijfsprocessen doormiddel van het aanbieden van haar kernactiviteiten.

De afstudeerstage vindt plaats binnen Accenture Technology Solutions (ATS). ATS is onderverdeeld in een aantal clusters. Er zijn vijf clusters die zich specialiseren op een betreffend vakgebied:

- SAP Solutions
- Customer & Data Solutions
- Oracle Solutions
- Technology
- Services

De clusters zijn op zichzelf weer opgedeeld in een aantal cellen. De cellen specialiseren zich op een Taakgebied van het cluster.



De cell waarin de opdrachtnemer zich bevindt is SAP BI. De SAP BI area richt zich op de Business Intelligence oplossingen van SAP.

Accenture heeft bij een groot aantal van zijn klanten business intelligence oplossingen geïmplementeerd met behulp van SAP BI en SAP SEM. SAP heeft recentelijk een aantal overnames gedaan. Een van deze overnames is die van Business Objects. Een van de belangrijke onderdelen van Business Objects is Xcelsius, een tool waarmee management dashboard rapportages worden gebouwd.

Men heet zich binnen de SAP BI cell gerealiseerd dat Xcelsius een zeer interessante tool kan zijn en wil daarom een onderzoek naar de integratie van Xcelsius met SAP BI en hoe deze het beste ingezet kan worden bij haar klanten.

Project opdracht

In dit onderdeel van het plan van aanpak wordt het te bereiken projectresultaat beschreven aan hand van de doelstellingen en de projectopdracht. Er wordt onder andere uitgelegd waarom het project wordt uigevoerd en wanneer het project als afgesloten beschouwd wordt.

Doelstelling

De algemene doelstelling van de SAP BI area richt zich op de Business Intelligence oplossingen van SAP. De doelstelling van Business Intelligence is de juiste mensen, op het juiste moment en de juiste plaats van de juiste informatie te voorzien. De achterliggende reden is de juiste beslissingen op het juiste moment door de juiste mensen te laten nemen. Met deze zeer algemene doelstelling in het achterhoofd zoomen we iets verder in op de opdracht.

Het doel van de opdracht is dat ATS een advies te geven over hoe Xcelsius het beste ingezet kan worden bij haar klanten en het programma commercieel interessant te maken. Hiervoor moet er een duidelijke Business case presentatie komen voor de klanten van ATS. In deze presentatie moeten klanten direct de voordelen van Xcelsius zien en moeten alle aspecten van Xcelsius terugkomen.

Om Xcelsius vervolgens snel en efficiënt te kunnen integreren moeten medewerkers van Accenture geïnstrueerd worden over deze tool. Bij deze mensen zal een duidelijk beeld moeten zijn over wat er wel en niet mogelijk is met deze tool. Hiervoor zal trainingsmateriaal gemaakt moeten worden welk bestaat uit documentatie en presentatie.

Verder is het van belang om te weten of en hoe Xcelsius geïntegreerd wordt met SAP. Dit omdat het de toepasbaarheid van het programma beïnvloed.

Probleemstelling

Hier zullen we beschrijven waarom ATS de opdracht uit laat voeren en wat ze er mee willen bereiken.

- Dat ze weten hoe Xcelsius het beste ingezet kan worden bij de klanten van ATS.
 - o Hoe komt de Business case eruit te zien?
 - o Hoe maken we Xcelsius commercieel interessant?
- Ze willen weten welke inspanning er nodig is voor het implementeren van Xcelsius.
 - o Wat hebben we nodig om Xcelsius te implementeren
 - o Wat is de kennis die de medewerkers nodig hebben voor implementatie?
- Ze willen weten hoe Xcelsius met SAP BI geïntegreerd kan worden.
 - o ATS wil weten hoe Xcelsius met SAP geïntegreerd wordt. De data uit SAP kan via meerdere manieren naar Xcelsius overgebracht worden. Welke manieren zijn er en wat zijn de voor en de nadelen van deze manieren?
 - o Wat is is er mogelijk en wat kost het?

Opdrachtomschrijving

- Een in de vorm van in een demonstratie uitgewerkte business case met betrekking tot de functionaliteiten van Xcelsius. Dit moet in Xcelsius zelf uitgewerkt worden. Deze presentatie moet aan de volgende eisen voldoen. Hij moet grafisch en snel zijn, een laag detail niveau bevatten maar het belangrijkste is dat het op het management gericht is. Alle veel voorkomende bedrijfsonderdelen moeten erin zitten samen met hun Key Performance Indicators.
- Maak demo/ training materiaal om interne mensen op te leiden. Dit zal moeten bestaan uit een PowerPoint presentatie en enkele documenten waarmee medewerkers zo aan de slag kunnen. Wellicht verwijzingen naar "Xcelsius voor dummies", of een "learners guide" met enkele webseminars.
- Schrijf een onderzoeksrapport (scriptie) met aanbevelingen en advies over hoe deze tool het best ingezet kan worden bij de klanten van ATS. Ook moet er beschreven worden welke inspanningen er nodig zijn voor de integratie en implementatie van Xcelsius met SAP BI.

Omdat deze tool door zowel nationale als internationale afnemers gebruikt moet gaan worden is het van belang dat de einddocumentatie, trainingsmateriaal en demo in het Engels opgeleverd worden.

De scope van de opdracht heeft een commerciële kant: Klanten van ATS moeten zelf in kunnen zien hoe waardevol een applicatie als Xcelsius voor hen kan zijn.

En de scope heeft een educatieve kant: Het intern mensen op de hoogte brengen van het concept Xcelsius en opleiden van deze personen.

Project activiteiten

1. opstellen PVA
 1. Opstellen concept PID
 2. Gesprekken met opdrachtgever / afstudeerbegeleider
 3. Definitief PID opleveren
2. Business Case
 1. Informatie zoeken
 2. Dictaat: Crystal Xcelsius 4.5 Designing Interactive Presentations door nemen
 3. Doorwerken aangeleverde documentatie
 4. Creëer een Business Case die gepresenteerd kan worden aan de klanten van ATS waarin het concept wordt uitgelegd met alle mogelijkheden
 5. Maak een presentatie die de Business Case begeleid met Xcelsius componenten ingebouwd
3. Demo / Trainingsmateriaal
 1. Informatie zoeken
 2. Doorwerken aangeleverde documentatie
 3. Trainingsmateriaal creëren/zoeken en dit combineren met ATS specifieke documentatie
4. Scriptie
 1. Onderzoek en beschrijf een advies hoe Xcelsius het beste ingezet kan worden bij klanten
 2. Onderzoek en beschrijf hoeveel inspanning er nodig is voor de implementatie
 3. Onderzoek en beschrijf Koppelingen tussen SAP en Xcelsius
5. Demo geven
 1. Presentatie maken voor scriptie verdediging
 2. Presentatie geven

Producten

Aan het einde van de stageperiode dienen de volgende producten gerealiseerd te zijn:

Een Project Initiation Document (PID)

Dit is de beschrijving van de aanpak van het project met de planning daarin opgenomen. Dit product wordt direct met de start van het project opgesteld. Het PID kan gedurende het project wijzigen en de planning zal steeds worden bijgesteld.

Business case

Om het concept van Xcelsius goed bij de klant over te kunnen brengen zal er een voorbeeld/demonstratie gemaakt moeten worden over Xcelsius in Xcelsius. Een real-time demonstratie waarin de klant direct kan zien wat de voordelen en bijzonderheden van Xcelsius zijn. Deze demonstratie zal begeleid worden door een uitgewerkte Business Case waarin een voorbeeld bedrijf beschreven staat.

Onderzoeksrapport / scriptie

In het onderzoeksrapport wordt de opdracht precies uitgewerkt. Hierin worden alle vragen beantwoord die onder het hoofdstuk opdracht beschreven staan. Inclusief enkele hoofdstukken die nodig zijn voor school zal dit tevens de scriptie zijn.

Demo / Trainingsmateriaal

Om de interne mensen snel en efficiënt op te leiden in het gebruik van deze tool zullen zij alle benodigde informatie zullen moeten kunnen benaderen. Wellicht wordt dit een combinatie van een PowerPoint presentatie met audio en screen recordings die iedereen via het internet kan volgen. Alsmede een gebundelde documentatie van verschillende bronnen.

Projectplanning

Een doorlopend persoonlijke planning die het hele project door wordt aangepast. Dit om te allen tijde inzicht te houden over de gemaakte voortgang. Mocht het project niet binnen de gestelde tijd gerealiseerd zijn dan kan er aan de hand van deze planning gezien worden waar en wanneer het fout is gelopen.

Kwaliteits bewaking

Om de kwaliteit van de uiteindelijke producten te waarborgen zullen er maatregelen genomen moeten worden en zal er nu bepaald moeten worden wat de kwaliteit van het eindproduct moet zijn. Deze maatregelen zullen bestaan uit controles, terugkoppelingen, en normen en technieken.

Kwaliteit eindproduct

Het eindproduct heeft een goede kwaliteit als de opgeleverde producten bruikbaar zijn voor het bedrijf. Als het trainingsmateriaal / demo en uitgewerkte business case goed gebruikt kunnen worden voor hun doel, verkoop en snelle implementatie van Xcelsius, dan is het project geslaagd. Dit zal beoordeeld door de stagebegeleider.

Controles

Logboek doordat de stagiair een logboek bijhoudt en deze wekelijks doorstuurt naar de stagedocent en stagebegeleider kunnen deze de voortgang bewaken en zonodig bijsturen.

Terugkoppelen

wekelijkse terugkoppeling met stagebegeleider. Ook zal de stagedocent het bedrijf bezoeken om de opdracht te bespreken en

Normen en technieken

Om de kwaliteit van de zelf geschreven documentatie te bewaken zal deze gecreëerd worden aan de hand van vooraf opgelegde documentatie. Denk hierbij aan "Project Management" van Roel Grit. Ook zal de documentatie gevolgd worden die vanuit school geleverd wordt. Denk hierbij aan het "Papyrus" scriptie voorbeeld. Om het projectverloop in goed banen te leiden zullen er meerdere methoden gebruikt worden zoals de Accenture Development Methode en de Prince2 methode.

Projectorganisatie

Het project zal uitgevoerd worden door de stagiair Paul Kox bij Accenture Technologie Solutions in Den Bosch. Het project zal van 2 september 2009 tot 15 januari 2010 lopen.

Stagebegeleider: Bart Roelofs

Accenture Technology Solutions
SAP Business Intelligence
Versterkerstraat 6, 1322 AP Almere
The Netherlands
Cell phone: +31 6 46105684
Bart.roelofs@accenture.com

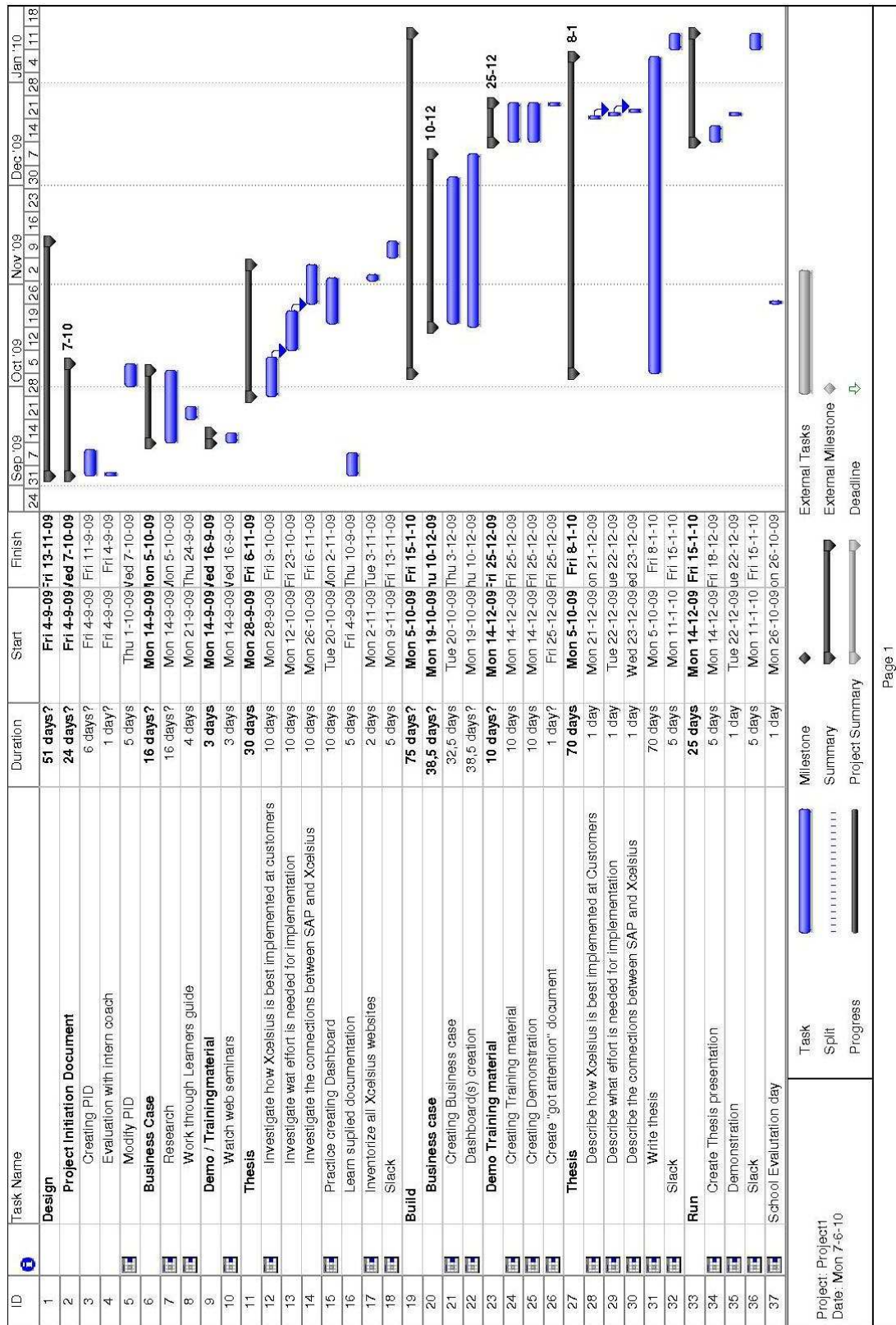
Stagedocent: Rien Hamers

Fontys Hogescholen
Rachelsmolen 1, 5600 AH Eindhoven
The Netherlands
Phone: +31-887 - 870 909
z.hamers@fontys.nl

Stagiair: Paul Kox

Intern SAP Business Intelligence
Hambakenwetering 5k, 5231 DD Den Bosch
The Netherlands
Cell Phone : +31-6-25590881
Paul.kox@accenture.com

Planning



Kosten-/batenoverzicht

In dit hoofdstuk zullen we de te verwachten kosten en opbrengsten weergeven van het project. Enkele kosten-/baten zullen niet uitgedrukt worden in euro's daar hier geen gegevens over bekend zijn.

Kosten

De meest directe kosten zijn de kosten voor de stagiair.

- Deze kost € 425,- per maand + reiskosten X 5 maanden.
- Afschrijving Laptop stagiair voor 5 maanden.
- Verder moet de stagebegeleider tijd vrij maken om de stagiair te begeleiden. Dit zal gemiddeld uitkomen rond de 2 uur per week.

Baten

De opbrengsten zullen bestaan uit de opgeleverde producten welke een kennis verrijking veroorzaken bij medewerkers van ATS. Het is niet mogelijk om uit te rekenen hoeveel geld Accenture met deze producten precies zal verdienen c.q. besparen. Mocht het zo zijn dat de producten die opgeleverd worden aan het einde van dit project echt gebruikt gaan worden dan zullen er hierdoor personeelskosten mee bespaard worden omdat anders een personeelslid deze opdracht uit had moeten voeren. Ook zal er extra omzet gecreëerd worden als het pakket goed verkoopt door een goede presentatie.

Risicoanalyse

De risico's die aan dit project zijn verbonden zijn vrij beperkt. Toch zullen er hier enkele scenario's worden beschreven en de bijbehorende gevolgen en oplossingen.

Uitloop project

Het project zal niet binnen de afgesproken tijd worden opgeleverd. Dit kan al vroegtijdig opgemerkt worden als de opdrachtnemer achter op de planning loopt. Mogelijke oorzaken hiervoor zijn, een te grote opdracht of verzanden in details. Door tussentijds de planning te evalueren samen met de voortgang kan dit voorkomen of bijgestuurd worden.

Te weinig betrokkenheid vanuit het bedrijf

De opdrachtnemer krijgt te weinig ondersteuning vanuit het bedrijf. Hierdoor kan de voortgang trager gaan en dreigt het project spaak te lopen als er een gebrek is aan technologische hulpmiddelen (b.v. test omgeving, documentatie) of persoonlijke ondersteuning. Als de opdrachtnemer dit tijdig aangeeft is er nog genoeg tijd over voor extra ondersteuning.

Bijlage

Stage opdracht vanuit ATS

Plaats in de organisatie

De SAP BI area richt zich op de Business Intelligence oplossingen van SAP. De doelstelling van Business Intelligence is de juiste mensen, op het juiste moment en de juiste plaats van de juiste informatie te voorzien. De achterliggende reden is de juiste beslissingen op het juiste moment door de juiste mensen te laten nemen.

Het mooie van Business Intelligence is dat alles samenkomt; kennis van de onderliggende bedrijfsprocessen, kennis van de (technische) hulpmiddelen waarin binnen deze bedrijfsprocessen gegevens worden vastgelegd, technische kennis van de SAP BI oplossingen en het afstemmen met de klant welke informatie nu echt zichtbaar moet zijn. Met andere woorden; een SAP Business Intelligence professional moet zich op meerdere zaken tegelijk kunnen richten. Het profiel van een SAP BI expert is dan ook niet louter technisch maar kent een duidelijk bedrijfskundige inslag. Andersom zal een louter bedrijfskundige niet succesvol kunnen zijn binnen dit expertisegebied. Vooral de veelzijdigheid, abstractie en complexiteit maken dit tot een enerverend vakgebied binnen SAP.

Afstudeeropdracht

Accenture heeft bij een groot aantal van zijn klanten business intelligence oplossingen geïmplementeerd met behulp van SAP BI en SAP SEM. SAP heeft recentelijk een aantal overnames gedaan. Een van deze overnames is die van Business Objects. Een van de belangrijke onderdelen van Business Objects is Xcelsius, een tool waarmee management dashboard rapportages worden gebouwd.

Naast Xcelsius heeft SAP ook al eigen producten die al sinds langere tijd gebruikt worden voor (dashboard) rapportages zoals de SEM Management Cockpit, Visual Composer en de Web Application Designer. Xcelsius gaat als een van de nieuwe tools van Business Objects geïntegreerd worden met de SAP BI oplossing.

Accenture is op zoek naar een stagiair die onderzoek gaat doen naar de integratie van Xcelsius met SAP BI en hoe deze tool het beste ingezet kan worden bij haar klanten.

Naast een scriptie verwachten we de volgende producten:

- Een in de vorm van een demonstratie uitgewerkte business case met betrekking tot de functionaliteiten van Xcelsius en de integratie met SAP BI.
- Demo/Training materiaal om intern mensen op te leiden.

Gezien het internationale karakter van Accenture, haar werknemers en klanten dienen deze producten in het Engels te worden opgeleverd.

De demonstratie en de verslaglegging van de stage moet alle aspecten van Xcelsius beschrijven. Vragen die o.a. moeten worden beantwoord zijn:

- Welke inspanning is nodig voor het implementeren van Xcelsius
- Hoe kan Xcelsius in combinatie met SAP BI het beste worden ingezet bij klanten van Accenture, zodat deze klanten het optimale kunnen halen uit SAP BI en Xcelsius.

Periode

September 2009 – januari 2010

Wij bieden/ wij vragen

- Marktconforme vergoeding
- Laptop
- Op maat aangeboden introductie- en trainingsprogramma
- Mogelijkheid tot het opdoen van allround kennis van verandertrajecten binnen organisaties
- Verschillende teamuitjes
- HBO- opleiding met belangrijk informaticacomponent. Hierbij moet gedacht worden aan Hogere, Technische en/of Bedrijfskundige Informatica
- Teamplayer, flexibel, creatief en een groot oplossingsvermogen
- Mogelijkheid tot thuiswerken.

Inlichtingen

Voor meer informatie kan je contact opnemen met Maika Cobussen van Recruiting, bereikbaar op 06-23918298 of per email: solutions.nl@accenture.com

Business Case for Xcelsius demo

Xcelsius Examined

Company: Accenture Technology Solutions
Author: Paul Kox
Supervisor: Bart Roelofs
Date: 6 November 2009
Version: 1.0



For whom this Business Case is intended

This is a fictional BC that is designed for anyone who is interested in considering buying or using Business Objects Xcelsius as a tool for-or-in their organization. This Business Case should help in conveying an idea about the concept Xcelsius and how Xcelsius can be used to improve your way of showing and using information.

Background and current state

This business case is about a company called Phony Inc. Phony is a mid-sized multinational company founded in 1997 which sells all kinds of phone accessories under their own brand name. There are offices in 7 countries divided over three continents, North America, Europe and Asia. The total employee count is about 520 people.

Cellular phone sales have risen exceptionally since the late nineties so did the sales of phone accessories. Phony has been able to sustain a constant growth in sales of 6 % a year since they founded the company. Phony never took a real effort to stimulate sales because they have profited from the strong growth of the mobile phone market.

However, due to the declining economy, sales have dropped quite a bit. The estimated sales growth for this year is only 2 %. But the economy is probably not the only reason for the drop in sales. Comparable companies also suffer from loss in sales but according to their annual accounts not as many as Phony. Complete branch sales dropped from 8 % rise last fiscal year to 4 % rise this fiscal year.

The general manager feels like that the relative larger fall-back is because there has been a poor production quality the previous year. There has been a high product fallout and product returns which go hand in hand with a lot of unsatisfied customers. But the source of the problem is solved by choosing a different Original End Manufacturer (OEM) 6 months ago. None of the retailers nor the customers know the quality has improved. They need to be informed about that. That would be a job for the sales divisions.

These problems were noticed too late due to the slow reporting process. If the numbers were brought under the attention of the management sooner they could have taken action and which would have saved money.

Here two tables with the countries Phony is established in and the products they sell.

Countries	Products
Canada	Batteries
Germany	Belt Pouches
Japan	Cases
Netherlands	Chargers
Singapore	Covers
United Kingdom	Headsets
United States	Keychains
	Pouches
	Screen protectors

Business objectives and strategic alignment

Phony has profited from the constant growth in the mobile phone market in the last decade. Sales grew almost parallel to the mobile phone market. There hasn't been a well thought of plan in case of set-back nor were there goals, targets or achievements to be met. The first strategic step is to set goals and monitor their status. The general manager thinks even in these times they should be able to maintain their 6% growth target. He sets a primary objective to increase net. Profit to 8% this fiscal year, and a secondary objective to get a market share of 20%. To realize these goals there needs to be sold more and there has to be cut costs.

To prevent these actions in the future, the GM wants to be alerted in time when targets are assumedly not met.

A meeting was set-up and some improvement points and preferences were noted.

- Report current financial status and sales + fallout numbers of the last six months
- Find out how to cut costs to realize the most of the primary objective of 8 % profit growth.
- Create a way for the GM which informs him if anything threatens to go wrong and when targets are not met.
- Inform and convince retailers about improved product quality and and show if this technique in improved sales.
- If the above is achieved the hopes are, market share grows, and realizing secondary objective of 20 % market share.
- Create internal Report and present to the management team about all the above.

Problem approach

The before mentioned improvement points are being assessed and worked out into Key Performance Indicators (KPI's) and tasks. An exact information requirement for sales and accounting is created. Also all the information that the GM requires is put out in KPI's.

Sales division takes care of the 6 % sales increase and present if they succeed in doing this. It's their job to convince the customers product quality has increased. Sales page is used to show sales history and global fallout rate per product, relative sales per product including history of the last 6 months.

Inform customers about product improvement and show if there's an effect. From the sales division they want to know the sales figures and if there's a relation between sales increase/decrease and fallout. Furthermore they want to know how much each country contributes to total sales.

- Fallout per product
- Total number of sales per country
- Product share of total sales.
- History of sales per product

From the Accounting division the financial status is requested and how they're going to cut costs to increase profit. The accounting page lists all the costs and work out how to get to the 8 % profit increase. Clear insight about what products produce the most profit.

- Show how to get to the 8 % profit increase + overall costs
- Relative costs for every country over the last 6 months
- Profit per product per country

The GM needs to know what's going on in the company and market, He wants to know if the company is going to meet its targets and how well it is doing in comparison to other companies.

- Are the targets on schedule for this week , month, year per country
- Current New about the market.
- Current market share + history

The assistant manager has just the tool for that. He requests all the above information in excel sheets and creates a single dashboard in which all the information is put. Not sure if all information should be able for everyone he creates a password protected page for the more "sensitive" accounting page.

Outcome

After the assistant manager is done creating the dashboard it can be sent to the GM and other local managers, so they are up to date as well.

The sales page learns 2 things. 1 there is a relation between fallout and sales because. 2 It's obvious which products sell well in what countries and which products don't, it's instantly clear in which countries they need to focus on what products.

What becomes clear at the sales page

- There's a direct relation between fallout and sales.
- It's clear how much each product contributes in the total sales
- How well the products sell in each country, as well as how the countries compare to each other

General Manager is better informed to make quick decisions. When he updates the dashboard, it becomes immediately clear if and where there is an issue that needs his attention.

What becomes clear at the targets & environments page

- Is there a target that's not on schedule, if so what country is not on schedule
- How big is the market and how did it evolve.
- What's Phony's market share
- Current new of Phony and the competing companies.

On the accounting page the costs and profit becomes clear.

- How much profit is gained by each product in every country
- what if we adjust the global costs.
- What are the total costs of every country of the last 6 months.

The dashboard can easily be published in PDF format or put on a HTML page for everyone to see.

Get Started with Xcelsius

Xcelsius Examined

Company: Accenture Technology Solutions

Author: Paul Kox

Supervisor: Bart Roelofs

Date: December 6, 2009

Version: 1.0



Contents

This is what you need to know when you are interested in Xcelsius.....	3
Requirements for working with Xcelsius	4
(Minimal) System Requirements	4
Basic knowledge of Excel	4
Version choice	4
Training in working with Xcelsius	4
What it can and cannot do	5
Xcelsius is good for	5
Xcelsius is NOT good for.....	5
Xcelsius is:	5
Xcelsius is not:	5
Xcelsius is capable of:	5
How to build a dashboard.....	6
Creating Concept	6
Creating the source data.....	6
Building the dashboard	7
Publish the dashboard	7
Tips to keep in consideration.	8

This is what you need to know when you are interested in Xcelsius.

This document is written with the intention to get acquainted with Xcelsius from SAP Business Objects. You're interested in data visualization and Xcelsius is a very good way to do that. The first thing that will be described is what you need when you want to work with Xcelsius followed by when it is suited for your needs and when it's not. After that will be described what the best way of creating a dashboard presentation followed by some tips & tricks and personal experience.

First let's start off with the things Xcelsius was actually designed for to do. The concept of Xcelsius described in one phrase.

Xcelsius is a simple point-and-click data visualization tool to create interactive analytics, dashboards and presentations.

Xcelsius is a reporting and dash boarding tool designed to consolidate views of key metrics so employee's can answer business questions at-a-glance and use data to make informed decisions. It can be used for creating dashboards as well as it can be used to present data in PowerPoint presentations. Xcelsius is a visualization tool for data that is generated elsewhere.

This Business Intelligence tool is one of the three Business Intelligence reporting and analytic toolset from BO. The other two are, Crystal reports which is a scheduled-reporting tool designed for quantum reporting, and Web intelligence which is more of a ad-hoc querying and analyses tool. Xcelsius is a data presentation and visualization tool that can be used in combination with them.

Requirements for working with Xcelsius

(Minimal) System Requirements

In order to use Xcelsius you need a PC with at least a 1Ghz processor and 1 GB of RAM memory. As operating you need Windows XP or later and also office XP or later is required. If you want to Connect to live data you can SAP Business Objects Enterprise XI 3.0 or R2 SP2 + productivity pack

Basic knowledge of Excel

In order to work with X you certainly need to have some basic Excel knowledge. X is only a way of displaying the Excel sheet in a nice way. But the actual data still comes from the Excel sheet as well as all the calculations you want to have in your DB.

Version choice

Quite obviously you need the program itself. There are 3 different versions to choose from. There is the Present version, the Engage version and the server version. Here a table to display the difference between versions.

Feature	Xcelsius Present	Xcelsius Engage	Xcelsius Engage Server
Basic data presentation components	●	●	●
Export to Adobe PDF and Microsoft Office	●	●	●
Dashboard creation components and export to Web and Adobe Flash		●	●
A single live data connection to an XML database or a Web service		●	●
Multiple live data connections to external data sources			●
Connectivity to ODBC data sources via Flynet			●
Connectivity to Adobe LiveCycle Data Services			●
Microsoft SharePoint integration			●
Connectivity to Microsoft Reporting Services			●
IBM WebSphere integration			●
Price	€ 195,-	€ 887,-	€ 6900,-

Training in working with Xcelsius

Just like any other program you need to know how the program works. This is not a hard task. There are excellent guides and tutorials to find all over the internet on how you should work with Xcelsius. It is irrelevant to start explaining here how Xcelsius works. To get started you can take a course in the program or you can watch the in-program tutorials which are very helpful.

- Business objects Xcelsius learners guide (comes additional to a course)
- Xcelsius for Dummies
- Websites with tutorials.

What it can and cannot do

Xcelsius is good for

1. Creating simple or elaborate dashboards
2. Handling a bit of “What If Scenarios”
3. Dispensing/publishing to others
4. Drill down functionalities (on detailed and pre-summarized data rows)

Xcelsius is NOT good for

1. Straight reporting, i.e. commission reports, job costing
2. Complex Cross-Tab reports

Xcelsius is:

1. Xcelsius is a predominant Dashboard tool and all about visualization, so it visualizes results
2. Xcelsius is interactive as it produces Macromedia Flash files (the content of a report or chart is output to Flash SWF which gives the report/chart the ability to be animated)
3. Comfortable with end-users as they can play with it

Xcelsius is not:

1. Xcelsius is NOT meant for ad-hoc querying and analysis
2. Xcelsius does not aggregate or summarize your data for displays in your Dashboards.
3. Xcelsius does not create forecasts based on your actual data; it does not extrapolate. From back-end to front-end, data should be extrapolated by calculation in one of more of the following places:

Xcelsius is capable of:

1. Xcelsius can read data from: Excel sheet, Sharepoint and SQL Server 2005 Reporting Services, Live Office, Query as a Web Service, connect to XML file (can refresh every x seconds to give real time), the latest Xcelsius is supposed to be able to use our universes and not just external datasources. From Xlr2 on, it can handle both QaaWS as LiveOffice.
2. Xcelsius visualizations can be published in the following formats:
 - ◆ Macromedia Flash SWF
 - ◆ HTML
 - ◆ Microsoft PowerPoint Slide
 - ◆ Adobe PDF
 - ◆ Microsoft Outlook
 - ◆ Microsoft Word
 - ◆ BusinessObjects Enterprise
 - ◆ Use Query As A Web Service to build Webi reports and access them as a web service (upgrade to SP2 and install Productivity Pack in order to use Xcelsius because of the Query as a Web Service feature)
 - ◆ In XI3.0, you can even embed Xcelsius into Crystal Reports.
3. Drill Down (-like) functionality with: the Xcelsius tab component (dashboards on different tabs are based on different data sets) and with click-on-geographical-map functionality (based on data tuples per country and per continent)
4. Handle plugins that extend the functionality of Xcelsius.

How to build a dashboard

Now you're familiar with Xcelsius and know what it is capable of you can start creating dashboards. However knowing about Excel and Xcelsius is a far cry from actually building dashboards. When building dashboards the focus shifts to the Key Performance Indicator's and the relevance of the data you want to display. A dashboard can ONLY be as good as it's KPI's. In this tutorial it is being assumed that the user is familiar with the business processes he wants to build dashboards about/for. Therefore being able to determine the right KPI's

When you're developing a presentation/dashboard there is a fixed sequence of steps you need to take. Here all steps will be described with an example KPI of revenue.

Creating Concept

1. Think of what data you want to show (Which tables/KPI's) and to WHO.
 - a. I want to show the revenue of the last six months per month.
2. Imagine HOW you want to show the data. Line-chart, stacked chart, Accordion menu.
 - a. I want to show how the revenue evolves in a line chart.
3. Can you consolidate/converge some of the KPI's? For space saving or showing a direct relation between several KPI's.
 - a. Are you showing revenue for per year somewhere else?
 - b. Can you combine it with costs, or revenue of another department?
4. When using drill-down KPI's or selectors think of the data-flow that produces. E.G. clicking on a circle diagram will reveal the specific data from that particular slice in what chart will that data being showed.
 - a. When I click a certain month do I want to see how much each product contributes to this revenue?
5. When using dynamic visibility to create multiple "pages or tabs" in the dashboard, what are the KPI's sitting together? So you can group the source data.
 - a. Do I Show the revenue KPI with other sales KPI's or with revenue related KPI's?

Creating the source data

6. When using dynamic visibility, use the first tab of the excel sheet for the parameters.
 - a. If you intend to use dynamic visibility keep the first tab of your excel sheet clear.
7. Put all the data orderly in an Excel sheet over preferably as many tabs as is needed to keep overview. It doesn't matter if you're using local data or data from queries or external data source. Start at the second tab for the first tab is being used for dynamic visibility.
 - a. I put my revenue data in the second tap together with the other sales KPI's
8. Highlight the temporarily fields for the selectors yellow.

- a. I Highlight a column right next to table in the excel sheet for were the temporary information is stored like selection or drill-down purposes

Building the dashboard

- 9. Import the excel sheet with all the source data into Xcelsius.
 - a. I import my revenue data excel file into xcelsius
- 10. Build the actual dashboard by dragging the components into canvas and link the source data to the components. Group the associating components when they are in place in the object browser.
 - a. Drag a line chart to the canvas and connect it to the revenue data.
 - b. Customize properties of the components
- 11. Use skins / themes / global styles to “customize” your dashboard.
 - a. I pick the colorscheme of my company.

Publish the dashboard

- 12. The dashboard is now finished and ready for publication. Export to the appropriate format
 - a. I save the dashboard and export it to the PDF file format to mail it to my co-workers.

If these steps are not being followed systematically it is very easy to lose overview of the dashboard. This is especially true when using a lot of components/KPI's. When you keep changing the KPI's or the components it is very likely you need to change adjacent or related components/KPI's, which results in changing even more components/KPI's.

The hardest steps are the first 7 steps (creating concept and creating the source data). These steps will probably take several days. Off course the level of experience and complexity will make a great deal. The following steps will take a matter of hours / few days, again depending on the level of experience en complexity of the dashboard.

Tips to keep in consideration.

When building dashboards you create some experience. In this chapter I will dispense this experience in the form of advice hoping you don't make the same mistakes.

Limit the amount components

When first starting designing/building dashboards there's quite a temptation to put as many KPI's into your dashboard as possible. This is very well possible as long as the KPI's keep relevant. However there is a maximum of components you're able to show. This maximum is not technical but has more of a human aspect. An ideal amount of components can be 3 or 4 in a single view, 6 at the most. Using more will not only crowd the screen but will also make creating the dashboard more complicated.

It's an option to create multiple tabs/pages in your dashboard; this will create more overview for the user not for the developer. Developing dashboards with many pages will add complexity to the creating process. Therefore a maximum 3 maybe 4 pages per dashboard should be maintained. If you want to create a 10 page dashboard be very aware how to arrange your data!

Creating large dashboards has few disadvantages, not only are they hard to develop but they are slow as well as hard to publish due to their size.

Use Plug-ins

When designing and developing a dashboard you should search the internet for plug-ins. There are many handy and rather beautiful plug-ins available for extra functionality. Keep in mind however, that they come at a price.

Use Combination charts

When you intend to use a line chart or a column chart it's better to use a combination chart. Sometimes in retrospect you realize that you'd wish you'd used another way of displaying data. This way you can switch between columns to line en vice versa.

Use fiddler to Debug in/out –put data

When using live data you can use fiddler to look into the data exchange between Xcelsius and your data source. All input/output data feeds become directly visible in fiddler.

Never edit the Excel data in Xcelsius

ALWAYS open the excel file in excel when you want to edit the data. Then re-import it into Xcelsius. Otherwise you get an error explaining excel stopped responding. This is a bug in the program.

Introduction Presentation

Xcelsius Examined

Company: Accenture Technology Solutions

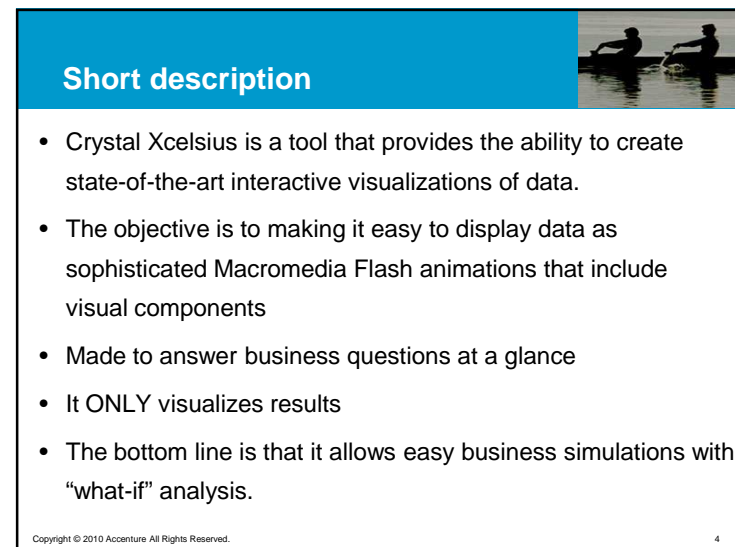
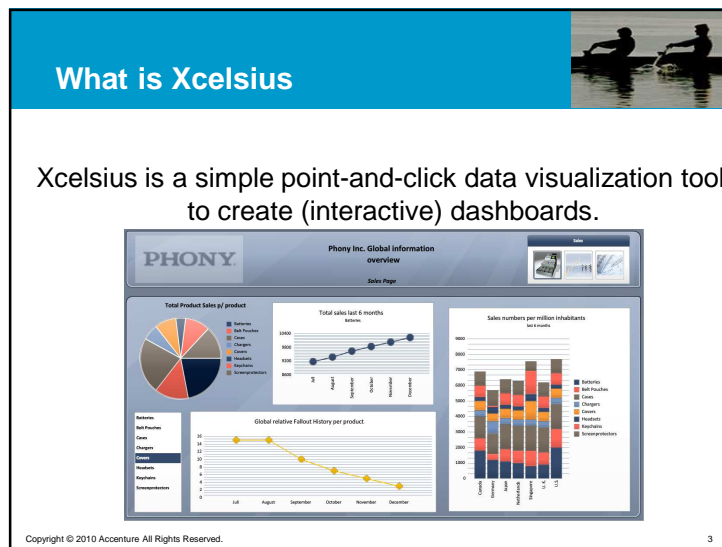
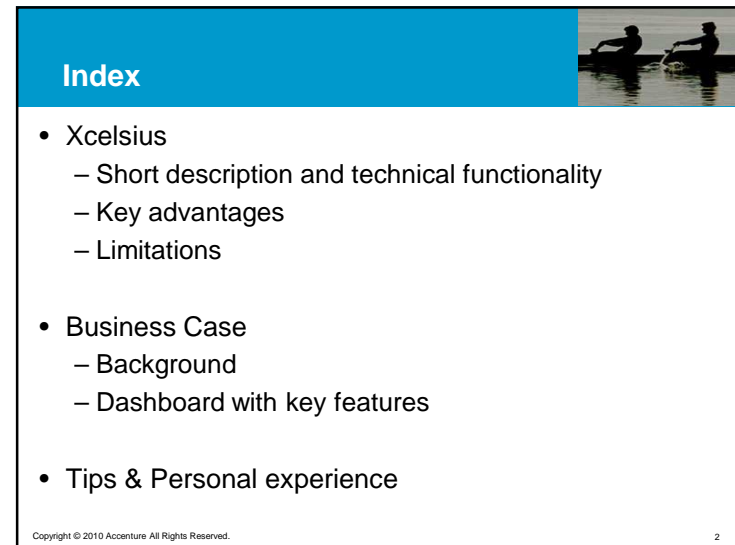
Author: Paul Kox

Supervisor: Bart Roelofs

Date: January 6, 2010

Version: 1.0





Technical functionality

- In Excel Ordinary tabular data in several tabs

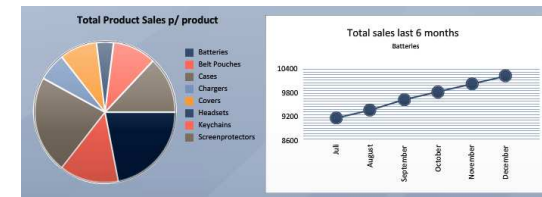
	A	B	C	D	E	F	G	H
1	Total Product Sales p/ product	total	July	August	September	October	November	December
2	Batteries	65600	9184	9380,8	9643,2	9840	10036,8	10233,6
3	Belt Pouches	40600	5684	5805,8	5968,2	6090	6211,8	6333,6
4	Cases	66900	9366	9566,7	9834,3	10035	10235,7	10436,4
5	Chargers	19200	2688	2745,6	2822,4	2880	2937,6	2995,2
6	Covers	25900	3626	3703,7	3807,3	3885	3962,7	4040,4
7	Headsets	11700	1638	1673,1	1719,9	1755	1790,1	1825,2
8	Keychains	29750	4165	4254,25	4373,25	4462,5	4551,75	4641
9	Screenprotectors	38900	5446	5562,7	5718,3	5835	5951,7	6068,4
10								
11								
12								
13								
14								
15								
16	sales per million inhab.		Canada	Germany	Japan	Netherlands	Singapore	U. K.
								U.S.

Copyright © 2010 Accenture All Rights Reserved.

5

Technical functionality

- In Xcelsius / presentation data its a flash chart.



Copyright © 2010 Accenture All Rights Reserved.

6

Key advantages 1/2

- It's relative cheap, only € 200,- for the present version.
- Ease of use and good-looking output(No developers needed)
- Presentations become interactive. You're able to click on a chart or any other component and drill-down or view the data in another way.
- Bridges gap between data analyses and data presentation with "what-if" analyses.

Copyright © 2010 Accenture All Rights Reserved.

7

Key advantages 2/2

- Offline and Online (real-time) data
- Easily distribution of STANDALONE presentation's via, PDF, HTML, PowerPoint and word.
- No need of installing additional software to see dashboards

Copyright © 2010 Accenture All Rights Reserved.

8

Limitations



- Data must be distilled and in the right format in excel.
- Max data size is 512 rows. For performing Dashboard only 300.
- Not meant for ad-hoc querying and analyses
- Not meant for data extrapolation or data editing

Business case



PHONY®

- Trading company in Phone accessories
- Always profited from the ever growing mobile market
- Due to probably bad OEMs and declining economy troubles with their sales

Troubles



- The managers are not provided with information
- Is there a relation between fallout and product sales?
- Not informed when targets are not met
- Don't know how to get to 8 % profit increase

The dashboard



What becomes clear at the sales page



- There's a direct relation between fallout and sales.
- It's clear how much each product contributes in the total sales
- How well the products sell in each country, as well as how the countries compare to each other
- Features
 - View additional information by clicking on components
 - View detailed info by hovering over charts

What becomes clear at the Targets and environment page



- Is there a target that's not on schedule, if so what country is not on schedule
- How big is the market and how did it evolve.
- What's Phony's market share
- Current new of Phony and the competing companies
- Features
 - Get informed by alerts
 - Use Live data for charts or news
 - Change/Play with numbers for (what-if) analyses

What becomes clear at the Accounting page



- How much profit is gained by each product in every country
- What if we adjust the global costs, and what is does to the profit per product
- What are the total costs of every country of the last 6 months.
- Features
 - Password protected pages with dynamic visibility
 - Change/Play with numbers for (what-if) analyses

Results



- There is a relation between fallout and sales
- Know on what products they need to focus
- People are provided with the right information and can instantly see if the targets are met.
- What products produce the most profit
- What countries have the highest costs
- Know how to get 8 % profit increase

Personal experience



- 1 Creating Concept
- 2 Creating excel sheet/data
- 3 Building the dashboard
- 4 Publish the dashboard

1 Creating Concept



- 1 Think of what data you want to show (Which tables/KPI's) and to who.
- 2 Imagine HOW you want to show the data. Line-chart, stacked chart, Accordion menu.
- 3 Can you consolidate/converge some of the KPI's? For space saving or showing a direct relation between several KPI's.
- 4 Dataflow
- 5 When using dynamic visibility to create multiple "pages or tabs" in the dashboard, what are the KPI's sitting together? So you can group the source data.

2 Creating excel sheet/data



- 6 When using dynamic visibility, use the first tab of the excel sheet for the parameters.
- 7 Put all the data orderly in an Excel sheet over preferably as many tabs as is needed to keep overview.
- 8 Highlight the temporarily fields for the selectors yellow.

3 Building the dashboard



- 9 Import the excel sheet with all the source data into Xcelsius.
- 10 Build the actual dashboard by dragging the components into canvas and link the source data to the components. Group the associating components when they are in place in the object browser.
- 11 Use skins / themes / global styles to "customize" your dashboard.

Publish the dashboard



- 12 The dashboard is now finished and ready for publication. Export to the appropriate format

TIPS



- Limit the amount of components
- Try finding/using plugins
- Use fiddler to for debug
- NEVER edit data in Excelsius
- Follow the guru's and communities on:
 - www.everythingexcelsius.com
 - www.youtube.com/xcelsiusgurus
 - www.Ryangoodman.net/blog

Closure



- Questions