accenture

Business Rules in HaleyAuthority vs. Siebel configuration

Graduate Thesis

Written by

Mark Suurland
's Hertogenbosch
September 2009 / January 2010

Graduate thesis version 1.0

Title page

Project name:
Business Rules in HaleyAuthority vs. Siebel configuration

Main research question:
What can Business Rules add and what are the possibilities of Business Rules versus Siebel configuration?

Written by:

Name:	Mark Suurland
Student number:	2095394
Post address:	Bruine Akkers 59
	6026 DL
	Maarheeze (Noord-Brabant).

Contact:	Tel:	+31 6 11090729
	Intern E-mail:	mark.suurland@accenture.com
	Home E-mail:	msuurland@gmail.com

Function:	Intern Accenture/ATS
Period:	Sept '09 till Jan '10

Commissioned by:

Company:	Accenture Technology Solutions
Department:	ATS, Oracle cluster
Cell:	Siebel
Address:	Hambakenwetering 5K, 2th floor.
	5231 DD 'sHertogenbosch (Noord - Brabant).

Contact:	Tel:	+31 20 593 9900
	Website:	www.accenturetechnologysolutions.nl

Stakeholders:

School:	1st docent (coach):	Mr. Hamers
	2th docent:	Mr. Van den Broek
	3rd docent:	Mr. Mulder

Accenture:	Accenture coach:	Mr. Hoijtink
	Sponsor:	Mr. Rotmensen

Change management

Version management

Version	Status	Date	Note
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0.1	Provisional	21 Sept. 2009	Start with first chapters of this essay.
0.2	Provisional	24 Sept. 2009	Change rapport after meeting appointments.
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0.7	Provisional	22 Oct. 2009	Start investigation about current configuration.
0.7.1	Provisional	02 Nov. 2009	Change thesis chapter order. New project scope, new order.
0.7.2	Provisional	13 Nov. 2009	Start with chapter 5, research question 3 and 4.
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0.9.3	Concept	30 Dec. 2009	First concept changes.
1.0	Final release	05 Jan. 2010	Create/change final changes.

Approval

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1.0	12 Jan. 2010	Fontys, Accenture/ATS, Rien Hamers, Niels Hoijtink

Foreword

In front of you is my graduate rapport, this is the end document for my graduation later this year at the Fontys University of Eindhoven. This document will give answers to my research questions and will give a view how I'm going to work for getting a satisfy end result. I have made this assignment commissioned by a big consultancy company named: Accenture Netherlands, department Accenture Technology Solutions (ATS). ATS asked me to investigate what Business Rules are and what the possibilities will be, compared with the Siebel (CRM package) configuration. It is my assignment to answer this question in five months time, working at the Accenture office in 'sHertogenbosch.

The reason I choose this assignment is the challenge to learn a new application (Siebel 8.0) and the research challenge of Business Rules as new functionality inside Siebel 8.0. The first time that I was reading the assignment, I knew the assignment was something for me. This project has got all aspects I like in an assignment: New definitions to learn, a challenge, a good working area, a good combination of technical and functional aspects.

In addition, this assignment had all aspects I have learned the past 3 years at the Fontys University Eindhoven. The assignment got an IT component like CRM package Siebel 8.0 and a functional component like the Business Rules and the whole research around it. This made the assignment a complete BI project with al lot of different challenges.

Before you will read this document, I will thank special my Accenture coach, Niels Hoijtink and my school coach, Rien Hamers. Also I will thank all the persons who helped me to get a satisfying end result: My family, the interviewed persons, my Accenture colleagues and the writers of the books and articles which I had used. They helped me a lot during the past 5 months at Accenture.

January 12th 2010   Mark Suurland

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Management summary

The results in this document are written for Accenture/ATS Netherlands, a company which delivers technical solutions for large companies. 800 employees working together to give customers IT related solutions with services like Quality and testing, CRM, BI, Oracle etc. My assignment is offered by the Oracle Siebel cell. The Oracle services can be offered with Oracle Siebel, a CRM package with many possibilities, like call centre software, portals, Self-service etc.

Oracle Siebel is a standard CRM package which can be optimized to the requirements of the customer. Integrated configuration tools as: Siebel Tools, Visual Basic, Workflows and program languages as JAVA and JavaScript, makes it possible to modify Siebel almost too every requirement or whish of the customer. A customer wish can be to implement Business logic into the Siebel environment. With a configuration tool like Visual Basic (with JavaScript) it is possible to insert Business Logic by inserting Business Rules. The main problem is the way to manage those Business Rules; it is most of the time a complex and time consuming process. This document compared the configuration methods with the possible solution: manage Business Rules with a Rule Engine, a rule based mechanism which create, deploy and import Business Rules into the Siebel environment. The meaning of this document was not to choose between both methods, but a clarification of the differences between both methods.

To get a good end result in this document, this thesis is based on 4 sub-research questions and which result in the answer of the main research question, integrated in the conclusion and recommendation. After answering the sub-research questions we know that Business Rules are a way to describe Business Logic like: policies, processes, constraints and regulations. This kind of Rules can be used as means to support business goals through simple 'natural English' statements. Business Rules are not able to change the lay-out of an application, but are only able to change Business logic. Siebel 8.0 use HaleyAuthority as Rule Engine to import Business Rules in an IT application. Business Rules in this Rule Engine are written on an understandable (natural English) way, so the rules are manageable for all kind of Business/IT people. Optimal use of Business Rules will work in the next four situations: Dynamic business processes (companies with lot of business process changes), Complex business processes (like law changes), Field validations (like data approval) and Auto-populating field values (relational fields which can change a lot). In these situations can Business Rules, in a Rule Engine, be used to calculate, validate, update etc. by readable English statements for ITers and non ITers. A project or project-situation with a lot of static Business Logic is better off with configuration. Business Rules are more manageable, but it takes a long time to set-up. Configuration is difficult to manage but is (relative) quicker to set-up.

Conclusion: Business Rules are more flexible and accessible than most configuration methods, but at this moment there are no international standards to organize the Rules. This disadvantage and the lack of information in terms of: time savings, features and practical use for non ITers will raise the question:"are Business Rules better, quicker and more accessible then current configurations"? At this moment it is not clear how Business Rules will act in Siebel projects at long term and if Business Rules are really a good alternative for configuration. A technical follow-up project will clarify those ambiguities.

Glossary

Name	explanation	explanation page
A		
Actions:	Produce output or modify data in the Siebel application.	Page: 2
Application configuration:	The optimization of Siebel	Page: 85
Auto populate field value:	Deep related Business Rules:	Page: 28
B		
BRE:	Business Rules Engine	Page: 24
Business logic:	Non-technical Business Rules description.	Page: 21
BRA:	Business Rules Approach, systematic way to describe Business Rules	Page: 21
Business Rules/BR:	Business logic, statements.	Page: 21
C		
C++	Scripting language	Page: 86
Complex Business process:	Complex changeable Business Rules	Page: 28
Condition:	Applicability condition for the statement	Page: 26
Configuration:	Customizing in Siebel with configuration tools	Page: 85
Customization configuration:	Way how experts create and manage Siebel with by workflows and scripting	Page: 85
CRM:	Customer Relationship Management.	Page: 20
D		
Dynamic business processes:	Frequently changeable Business data	Page: 28
E		
eScript:	Scripting method in Siebel Tools	Page: 86
F		
Field validation:	Data validation	Page: 28
Fit/GAP analysis:	A package selection method.	Page: 19
Functions:	Return a value from the Siebel application.	Page: 25
G		
Grit:	Project start up method.	Page: 17
H		
Haley:	Company which making Rules Engines.	Page: 24
HaleyAuthority:	Standard Rule Engine implemented inside Siebel 8.0.	Page: 24
I		
If:	Condition when in a statement Is at least one "qualifier" is true.	Page: 26
J		
JAVA:	Programming language	Page: 86
JavaScript:	Programming language integrated in a web browser	Page: 86

M

Module:	Map in HaleyAuthority for Business Rules	Page: 25
MoSCoW:	Scope method.	Page: 18

O

OMG:	Object management Group.	Page: 30
Only if:	Condition: Statement applies when at least one if qualifier is true.	Page: 26
Oracle:	Specializes in developing and marketing enterprise software products.	Page: 20

P

Predicates:	Statement which return a Boolean value.	Page: 25
PRINCE2:	Project organization method.	Page: 16

R

Rules:	Business Rules	Page: 21

R

Rules Engine:	Program to create and manage Business Rule.	Page: 24

S

Scripting:	Programming style	Page: 86
Siebel:	Company that is specializes in CRM packages.	Page: 20
Siebel Objects:	metadata that define Oracle's Siebel Business Applications	Page: 82
Siebel Tools:	Extern configuration application for Siebel	Page: 84
Siebel Visual Basic:	Scripting method in Siebel Tools	Page: 86
Siebel Workflow:	Configuration method in Siebel Tools	Page: 85
SQL:	Programming language	Page: 86
SRF File:	Siebel Repository File, a file with all the exceptions (customization).	Page: 88
Statement:	Business Rule statement	Page: 25

T

Tools configuration:	Customizing with Siebel Tools	Page: 85

U

unless:	Condition: Statement does not apply when unless qualifier is true.	Page: 26

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1.   Introduction

What, if there is a solution which is able to manage Business Logic in application quickly, cheap and without a lot of knowledge, accessible for almost everybody?

ATS (Accenture Technologies Solutions) is established from the global Accenture organization. Accenture is a global management consulting, technology services and outsourcing company. ATS contains several "Cells" like SAP and Siebel. The Siebel cell implements Siebel applications which contain in some cases a lot of Business Logic (from law details till Business goals).

Chang Business Logic in configuration (like scripting) takes mostly a lot of time and money. A Business Logic statement (a Business Rule) is most of time depending on other Business Rules. This makes Business logic not flexible to change, especially for organizations like governments which often have to deal with variable Business Logic. Maybe includes the Siebel 8.0 release the solution for this issue: HaleyAuthority. This is a Rule Engine application to import, manage and execute (on an organized way) Business Rules into Siebel. To offer customers a more flexible solution to implement their business logic and keep Siebel closer to its off-the-shelf functionality the sponsor want to know more about the role Rule Engines can fulfill to promote flexibility. This document will make clear in what kind of situation it is better to use Business Rules in HaleyAuthority or when to use the current configuration. Ended with a checklist which will help Project responsible (like Project Leaders) to choose between both methods.

The project strategy is based on a best practice of the PRINCE2 method, with 5 phases ended with control points. This document exist 6 chapters which will cover those 5 phases. This first chapter is the introduction of the project, followed with chapters 2 (company description) and 3 (assignment description with project background information).

Chapter 4 contains the literature study where you find information about Orade, Siebel, Rule Engine, HaleyAuthority and Business Rules. Also include this chapter information about the future, benefits, possibilities, limitations and uses of Business Rules. After this information research questions 1&2 can be answered: what are Business Rules and what are the possibilities and limitations.
Chapter 5 includes the research results. The chapter describes the differences between Business Rules and configuration (in this document are "Business Rules", the Business Logic implementing with HaleyAuthority and configuration the "configuration Business Rules"). Chapter 5 give describe also when to use which method and the explanation of the advice. This al results in the concept checklist with an explanation how to use it. Chapter 5 will answer research question 3&4.
Chapter 6 gives the condusion (the main research question) and recommendation of the project. This chapter will answer what Business Rules add and what the possibilities are compared with Siebel configuration. The last chapters are the literature list, project process and attachments. The Attachment contains: The PID, interview notes, redirection moment and explanation about Business Rule implementation and configuration. Readers of this document should be able to understand Siebel configuration, when not please see attachment F.

2. Company

This chapter is created to give, the reader of this document, a view into the project company. It describes global; the history, market position, company facts (number offices, employees etc.), subsidiary company's and the department of the project team.

2.1 History

In 1989 is Accenture established by a separation in the Arthur Andersen Company. At that time the name of the divisional company was Andersen Consulting. The company was obliged to give 15% of the profits away towards Arthur Andersen. This agreement, and the fact both companies had become competitors, where reasons for Andersen Consulting to make in the year 2000 a final split with Arthur Andersen. This was the moment for Andersen Consulting to make a name change into Accenture (Accent on Future), what in 2001 become definitive. Since 2001 is Accenture a fast growing company with worldwide employees, customers and reputation.

The slogan of Accenture is: "High performance. Delivered" Accenture accept the hardest projects for the biggest clients, because the company is convince that they are able to do the same as the competitors, but always with a little bit extra's (better). That is the accent on details.

Picture 1: Logo Accenture

2.2 Market position and offices

Accenture is one of the biggest companies with consultant roots. The main company and the subsidiary companies got more than 40 offices in the world with approximately 181.00 employees worldwide and 2600 in The Netherlands. Those employees are able to help customers in 120 countries all over the world. In the Netherlands have Accenture 3 offices: Almere, Amsterdam and 'sHertogenbosch.

2.3 Customers and products

One of the goals of Accenture is to serve the biggest companies in the world. Accenture serve (2006) 91 of the 100 Fortune global companies, such as IBM, Shell etc. Examples of customers in The Netherlands are KLM-AirFrance, NUON, Ministry of Defense and Cargill.

Accenture does not only give advice towards companies, but it creates also Technical solutions. Those technical solutions are touching a big working area around the world. All kind of technical solutions are in this scope, from Call Centers to CRM packages, from EBilling (Internet) to finance packages.

Because the big differences in products, Accenture got several workforces:

- Business Consulting (Consulting)
- Technology Solutions (ATS)
- Services (Business Process Outsourcing)

- Enterprise (HR, Finance, F&S, etc.)

2.4 Subsidiary companies

Accenture has a few subsidiary companies that are all 100% owned by Accenture:

- Accenture Navitaire (Build Airport solutions).
- Accenture Business Services for utilities.
- Accenture National Security Services (Direct services for the US government and US army).
- Accenture Technology Solutions (Create technology Solutions)

The company got also many alliances, without those alliances is Accenture not able to deliver high services and solutions. Companies like: Microsoft, Dell, Cisco systems, HP, Oracle, SAP, Verizon systems are alliances of Accenture. Except ATS are the other subsidiary companies not relevant for this document.

2.5 My department

My assignment is created and stored by the Accenture ATS department. This department is established in 2001 as part of the technology part of Accenture. There working about 800 employees in the Netherlands in two different locations: Almere and 'sHertogenbosch. Accenture Technology Solutions has deep expertise in application development, systems integration as well in application management. The employees are specialized in SAP, quality and testing, CRM & BI, Oracle, Java / J2EE, EAI and Services Component of the Global Delivery Network (Off shoring and Outsourcing Application Management). With those programs and with closely corporation with the Consulting department, ATS is able to create and manage all kind of technical solutions to the requirements of the customers.

ATS has a lot of different specialize; the department is split-up in different "Cell's". Because my project is a Siebel project, my position in the organization is: Accenture/ATS Siebel Cell. This cell has about 40 Siebel experts, been divided by several specializes as: Siebel designers, builders, persons for configuration etc. All these experts are able to build and manage Siebel applications like Call Centers, portals, eCommunications, eSales and many more.
Please see chapter 4 for more information about the possibilities of Siebel 8.0.
Please see the attachment D for a visual view of my position inside the organization.

Sources

Paragraph 2.1:
"Onze historie", official Accenture website, 2009
-http://careers3.accenture.com/Careers/netherlands/OverAccenture/OnzeHistorie/default.html

Paragraph 2.2:
"Company description", official Accenture website, 2009
-   accenture.com/Global/About_Accenture/Company_Overview/CompanyDescription.htm

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Paragraph 2.3:

> **"ATS Starterspresentatie sept. 2009", Accenture ATS, 2005**
> **"Client Successes", official Accenture website, 2009**
>
> *-http://www.accenture.com/Countries/Netherlands/Services/Client_Successes/default.htm*

Paragraph 2.4:

> **"Accenture", Wikipedia, 2009**
> - *http://nl.wikipedia.org/wiki/Accenture*
> **"Alliances Extend Accenture", official Accenture website, 2009**
> - *http://www.accenture.com/Global/Services/Alliances/Accenture-Alliance-List.htm*

Rest:

> **Niels Hoijtink, Accenture coach**
> - *Verify source information.*
> **Maika Cobussen and Carla Nienhuis, Recruitment Accenture ATS**
> - *both gave a presentation about Accenture ATS and answered several questions*

3. The assignment

Chapter 3, the assignment, will not only describe what the assignment description and problem definition is, but will also describe how the project team will work to get a satisfy end result. The problem, assessment, method, products, and reasons why chosen are processed in this chapter.

3.1 Description of the problem

Siebel is standard software, this means the software has a lot of possibilities to support business processes with standard functionality. There are many different configuration techniques/ possibilities to support a company's business processes with Siebel as a CRM application. Each requirement asks for a different approach. Every approach has its own advantages and disadvantages. This is something that has to be considered in the design phase. Sometimes the conclusion is that a certain requirement is difficult to (completely) meet with the standard available configuration options. This is typically the case with requirements concerning the implementation of company specific business logic. This could result in a compromising solution or perhaps a custom build solution. Aiming for the delivery of high performance solutions this is often not the most preferable situation. Customers mostly don't like to compromise and custom solutions can have various disadvantages. For example higher cost to build, maintain/ support and can be a risk when migrating to newer versions of Siebel. To offer customers a more flexible solution to implement their business logic and keep Siebel closer to its off-the-shelf functionality we want to know more about the role rules engines can fulfill to release this.

3.2 Objectives

This document will give answer if Business Rules are the solution for this problem. To be able to give an result, it is necessary to achieve several objectives; there are four sub objectives and one main objective.

3.2.1 Main Objective
- Investigate what business rules can add and what the possibilities can be versus Siebel configuration.

3.2.2 Sub objectives
- Define what Business Rules are.
- Define the possibilities and limitations of Business Rules in HaleyAuthority.
- Define the differences between Rules Engines and Siebel configuration.
- Define in what kind of situation Business Rules or Siebel configuration can be used.

3.2.3 End situation
The sponsor of this assignment wants to get a notion, based on these objectives, about the possibilities and limitations of Business Rules compared with configuration. When all objectives are achieved, is Accenture/ATS able to decide per project if they are going to work with Business Rules or the more

conventional ways like Configuration (scripting). A project leader (or responsible) will choose on basis of a checklist with the differences between the several options, supported by an advice. At the end of this project will the stakeholders discuss if the checklist is able to cover all requirement or if their needs a more technical investigation about Business Rules. In that case, will the checklist in this document be a concept version.

3.3   Research Questions

To achieve the described objectives and create a high quality advice, it is necessary to answer the next research questions:

The main question of the Siebel Rules Engines project is:

- *What can Business Rules add and what are the possibilities of Business Rules versus Siebel configuration?*

To answer the main question it is necessary to answer the next sub questions:

1   *What are Business Rules?*
2   *What are the possibilities and limitations of Business Rules in HaleyAuthority?*
3   *What are the differences between Business Rules and Siebel configuration?*
4   *In what kind of situation is it better to use Business Rules and when is it better to use Siebel Configuration?*

The next three chapters (4, 5 and 6) will explain the answers of these questions.

3.4   Description of the assignment

When Siebel got updated to version 8.0, this version featured: Rules Engines. Rules Engines are able to take over some parts from current Siebel configuration. The assignment is to write an recommendation to the sponsor. This recommendation will make clear if Rules Engines are able to be a good alternative instead of Siebel configuration and in which cases they can provide complementary functionality.

To get a high quality advice, the project must start with a definition of Oracle/Siebel, Business Rules, Rules Engines and HaleyAuthority. The definitions will be explained in the literature study.

The second step in the project is a desk research with the possibilities and limitations of Business Rules. When these results are clear, they will be compared with the current Siebel configuration, to make clear what the differences are inside Siebel 8.0 between those configurations.
With above questions answered it is possible to set up a (concept) checklist with the possibilities and limitations of both configurations. With this checklist is Accenture able to make a decision per project situation if the project will use (a combination of) Rules Engines or Siebel configuration.
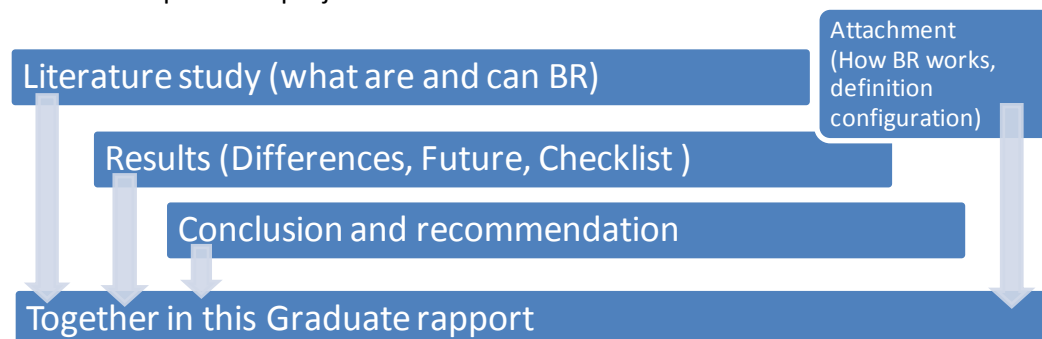
3.5   Products

Like written in the introduction there will be deliver 4 products combined in one Graduate rapport. Those products are created based in the PRINCE2 method with the associated control points.

This project includes the following products:
- Literature study.
  - o   Describes not only what Business Rules are and able to do, but also what Siebel 8.0 is.
- Results.
  - o   Describes the results of comparing Business Rules and configuration.
- Checklist:
  - o   This checklist can be used at the start of upcoming projects to answer the question: when to use which option? It is not a comparison but a support method for project leaders.
- Conclusion and recommendation.
  - o   This chapter describes the answer of the main research question and gives advice about how to use the checklist and conclusion.

Al these products are compared into this document, the graduate rapport. This document will describe what Business Rules are able to, what the possibilities/limitations are and what the results of the investigation are. How business Rules work and how they can be implemented in upcoming projects is *not* in the scope of this project.

Attachment (How BR works, definition configuration)

Literature study (what are and can BR)

Results (Differences, Future, Checklist)

Conclusion and recommendation

Together in this Graduate rapport

Picture 2: Product overview

3.6   Methods

3.6.1   PRINCE2.

This project use a best practice of PRINCE2 (PRojects IN a Controlled Environment). This method is build to design and assist all kind of projects. To use this method the project must have a clear end result and use different phases. Those phases must be implemented in a planning using the waterfall method. This method obligates that the parent phase must be finished before starting the next phase. To start with the successive phase the previous phase must be checked and be approved by the sponsor. This project will work with the following 5 phases:

- **Start-up/initiation Phase**
  This is the start-up phase of the project. It will give answers to the question: What is the end result of the project and how will the project team going to work. This will result into the PID (project Initiation Document). This document is created on basis of the Grit best practice method. It describes the way how to write a good PID. The literature study and secondary products (logbook, templates, graduate rapport etc.) are going to be created in this part. Finally this phase will answer research question number 1.

- **Business Rules possibilities and limitations phase**
  The Business Rules possibilities and limitations phase describes what Business Rules can and what they cannot. Also will this chapter describe the future of Business Rules and how Business Rules can be create and import (for the attachment) into Siebel . The end result in the answer for research question number 2. These will be written also into the literature study.

- **Business Rules and Siebel configuration phase**
  This is the important phase of the project, not only will be described what the current configuration contains (for the attachment), but also what the differences are between the current configuration and the possibilities of Business Rules. The end results will be a checklist so project leaders can choose which project situation needs what kind of a solution. This all results in the Result chapter, where is describe the results of research question number 3 and 4.

- **Finale Phase**
  This is the main phase of the project. It will give answer to the main research question and will give a conclusion and recommendation of the results. The literature study will attach into the graduate rapport. Also all the secondary products will complete and attach into the graduate rapport.

- **Completion phase**
  In this phase the final releases will be delivered to Accenture/ATS and school. Also the end results will be explained by a presentation to all stakeholders. This will lead to an end evaluation with the end mark.

Why chosen?

The project *"Business Rules in HaleyAuthority vs. Siebel configuration"* is a project with a clear start and end-point. Also there are phases which can be planned as a waterfall method. This is an ideal situation to use the PRINCE2 method as guideline for the project. Because PRINCE2 is a best practice method, this project has its own created phases and secondary products like: change management, communication management and milestones with control points in the planning. PRINCE2 is the perfect link between an, at school learned, method and this project.

The project order looks different then other project, here follows an explanation. There is a simple reason why this project first describes Business Rules and the possibilities and limitations (the –possible-future situation) and afterwards describes the current configuration (current situation). Before it is clear what the current configuration is, it is necessary to figure out what kind of components Business Rules

has. So it is possible to get comparable elements of both situations without the possibility of inserting irrelevant information in this document.

Please see attachment C. for a schematic representation of this PRINCE2 project.

Source: http://www.leren.nl/rubriek/zakelijk/organisatie_en_management/projectmatig_werken/prince2/

3.6.2   MoSCoW Rules

This project use the MoSCoW rules to define the scope of the project in four easy steps: Most have this, Should have this, Could have this and Would like this.

- **The end-product must have this**: A conclusion and recommendation about what business rules add and what the possibilities are versus Siebel configuration.
- **The end-product should have this if at all possible:** Answering the question: What kind of project needs what kind of configuration?
- **Could have this if it does not affect anything else:** A checklist which can be used by project managers to choose to right configuration method inside Siebel 8.0.
- **Would like to have but won't have this time around:** Technical research about the possibilities of Business Rules.

Why chosen?

The big problem of this project will be the scope of the research question. This project can be designed so small and large if the project team wants. It is possible to write 40 pages about Business Rules, but is all those information necessary for a good completion of the project? The MoSCoW rules describe on an easy way what the project bounds are (scope).

3.6.3   Others

Methods for information gathering

There is inside the Siebel Cell some limited information about Business Rules, but there is not a lot information about managing Business Rules in HaleyAuthority. Information about the definitions of Business Rules and Configuration will be collected in interviews with experts inside and outside the Siebel Cell. Also will the Siebel Bookshelf (a large document with al functionalities about Siebel describes in detail) be an important source for information gathering. Other resources will be: Books, artides and web pages with information about Business Rules and configuration.

Why chosen?

Internet sources are not always trustworthy; interviewing people in and outside Accenture will give an objective result of the research questions. Books, articles and the bookshelf will give facts about both methods.

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Information about Siebel Configuration and HaleyAuthority are facts, this project use the official documentation from Oracle and Haley. Information about Business Rules explains in several manners, this project will use books, articles and interview for an objective result about Business Rules.

3.7   Assignment, product, scope or method changes

In the PID is decided what kind of methods or strategy the project will use. During the project will methods and strategies be changed or disappeared. New knowledge and information which are gained during this project will contain that some (previously prepared) methods / strategies will no longer useful. The table below will describe all assignment, product, scope and/or methods changes.

Date	Type	Change note
Oct. '09	Method change	ADM (see PID) is too technical and doesn't have any more value, compared with the PRINCE2 method. The project will not use this method.
Nov. '09	Project change	The research starting-point will not lead to the end result, it is too technical. The project will not tell which option is the best; it will only be a helpful document for project leaders to make a choice.
Nov. '09	Method change	The fit/Gap analysis (see PID) is not the way to describe the differences between BR and configurations. The new method will compared using the thesis research advices and interviews.
Dec. '09	Research question change	Research question 2: What are the possibilities and limitations of Rule Engines is replaced by: *What are the possibilities and limitations of Business Rules in HaleyAuthority?* By answering the conclusion the writer of this document was realizing that the question scope was too large.
Dec. '09	Phase change	Enter phase number 6, the completing phase. Phase number 5 (the final phase) was not able to cover all final steps in the project.

4. Literature study

Chapter 4,the literature study, will give the reader of this document information about Oracle Siebel (chapt. 4.1), Business Rules (general and Siebel BR (chapt. 4.2/4,3)), Rule Engines and HaleyAuthority (chapt. 4.4)). After this definitions,will this chapter describe the possibilities of Business Rules (chapt. 4.5), uses of BR (chapt. 4.6) and the future of BR (chapt. 4.7). This all leads to chapters 4.8 and 4.9 with the benefits and limitations of Business Rules. At the end of this chapter is the reader able to answer research question 1 and 2:

1. What are Business Rules?
2. What are the possibilities and limitations of Business Rules in HaleyAuthority?

These questions will be answered in the chapter conclusion. With the answers should the reader be able to understand the necessary definitions in chapter 5.

4.1   Oracle Siebel 8.0

Siebel Systems is a leading provider of customer-facing solutions that deliver demonstrable business results and long-term competitive advantage. First of all a view words about the history: In 1993 Siebel was founded by Thomas Siebel, in the ninety's Siebel grew to a dominant vendor with a market-share of 45% in 2002. At that time was Oracle one of the largest software companies in the world, but without a big market-share with CRM solutions. To get a market-share in the CRM branch bought Oracle the Siebel Company in 2005 and till today is Siebel a brand name of Oracle.

Summarized is Siebel a Customer Relationship Management (CRM) system developed at this moment by Oracle. Siebel CRM makes a company able to collect information about customers and business relationships, from personal data to previous orders.

(Picture. 3: Logo Oracle Siebel)

So are companies able to offer personal services aimed at the personal requirements and whishes collected in the several CRM packages. Siebel has two types of CRM application types: An employee application type and a customers and partner application type.

4.1.1   Employee applications

Siebel has a lot of CRM applications and solutions, useful for more than 20 kinds of industries. A few examples of those applications and solutions are: Sales, Call Centre, Technology, CRM on Demand, Self-service and eBilling etc. With those applications and solutions, are companies able to get information about customers on an organized way of work. CRM is not only a system to get information about customers, but it also a system to serve customers with CRM solutions. The meaning behind CRM is so designed that customer's gets individual service and attention. To get an optimized application there is the possibility for the users to personalize these applications (with exceptions in several applications), this calls: High Interactivity Mode.

4.1.2 Customer and partner applications

The customers and partner application type is not used by Employees but by customers and partner. Examples of those applications can be: *e*Sales and Siebel Partner Portal. This are applications where user can communicate with each other in a, by Siebel experts, predesigned environment. This is a Standard Interactivity Mode which can only be changed by administrators.

Sources

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"**Introducing Siebel Application", Siebel Bootcamp presentation, 2009 (not public!)**
"8.0 Core Platform Enhancements", Siebel Bootcamp presentation, 2009 (not public!)
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4.2 Business Rules, general

Before the research will start it is good to explain a few definitions of Business Rules which have no direct influence on the research but are handy to understand. To start with a little bit about the history and general information about Business Rules.

Business Rules are dozens of years old and are the key to manage a company. For a company are they a way to describe their policies, processes, constraints and regulations. Business Rules can be expressed in several manners and have many types. A number of Business Rule types are: Constraints Rules (constraints descriptions), Guideline Rules (suggestions), computation Rules (calculations), inferred knowledge Rules (interim conclusions) and actions -enabler Rules (infer actions). Business Rules has big advances for companies for many years, but expressing Rules on several manners leads to unorganized situations to manage them. The lack of managing the Rules leads to: lost, unknown, inconsistent, inadequate or simply resident to change. The solutions to manage the Business Rules is; Business Rules Approach. This is a method (not a standard) to manage the Business Rules in an organized manner so Rule will work as the management intend. The BRA includes roles, tasks, and rule repository for business people, Rule Engines for automation and formal ways to express so non ITers can understand the Rules. To automate a Business Rule, companies use a Business Rule Management system like the HaleyAuthority Rule Engine. More about this topic please see chapter 4.4.

Business Rules are since the seventies executable for IT applications, but what is the reason companies want to have executable Business Rules? Currently are companies able to set business rules into an application with scripting or other programming languages. This mostly takes more time and money than available or necessary (sometimes a little change is the reason for a series of changes). In that case,

companies search for a cheaper and faster way to implement Business Rules in a more unified way of programming. This means that the company wants simple statements without difficult programming languages. Criteria for these simple statements can be by example: they must be reviewable by non-implementers, such as business analysts and project managers; also the Rules must be able to be executed into a program. Siebel 8.0 is able to fulfill these requirements.

Sources

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Niels Hoijtink, Accenture coach
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Oana Nicolae, Teaching assistant at BTU Cottbus.
- *General information about BR.*
Tom van Engers, Professor in Legal Knowledge Management
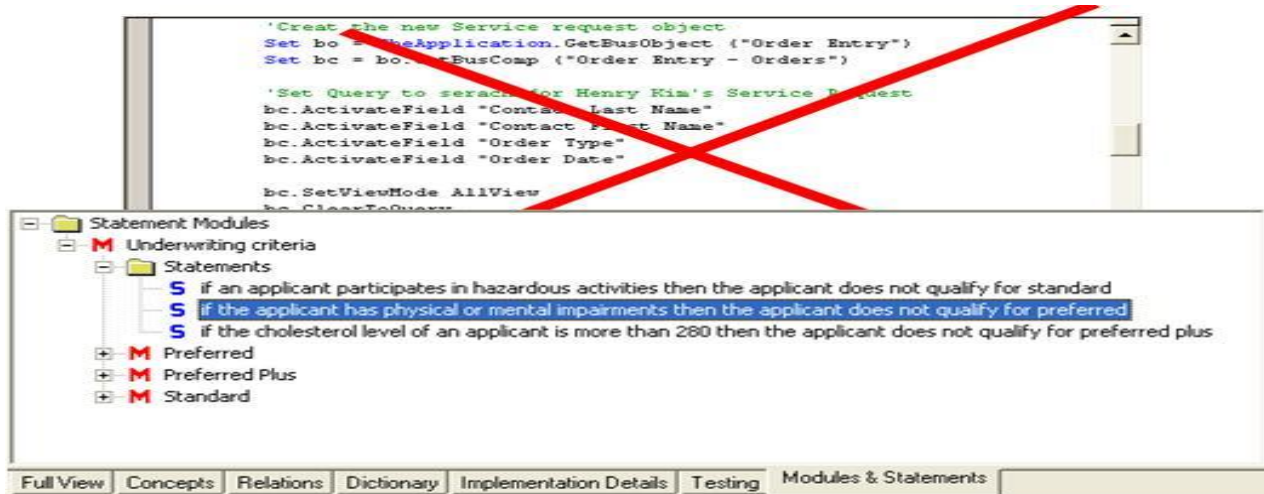- *General information about BR.*

4.3   Business Rules in Siebel 8.0

Like earlier written are Business Rules a way to describe policies, processes, constraints which are able to inserts into IT applications like the CRM software from Siebel. With Business Rules is a company able to connect Business Logic and CRM applications. To get a clear view about the method, first an example of Business Logic from the well known supermarket Albert Heijn: "Customers with a Bonus card gets 40% off." To make the Rules declaratively for the IT application the rules should be written in a systematic way, this is different in every IT application environment. An example of a Rule in Siebel is: "If customer has a discount card discount type is 40%" (see chapter 4.4.2 for more details). The systematic way to write Business Rules does not mean that there is a standard for writing Rules, every IT package with Business Rules implements the Rules on their own way.

When a company has the Oracle Siebel 8.0 application they are able to use the new feature: Business Rules, HaleyAuthority Rules Engine. A Rule Engine can provide the ability for companies to create[1], manage and enforce Rules that capture their business policies. A Rule Engine (chapter 4.4) like HaleyAuthority is able to create, change and execute policies, constraints, processes and regulations

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[1] A Rule Engine is not able to automate the creation of the Rules, a user of the Rule Engine must manually design and create the Rules!

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trough Business Rules. The Rules are written in natural English, using logic statements and they don't use any programming or scripting statements like SQL or Java.

Picture4. Business Rules in Siebel 8.0 don't use any scripting or programming statements

Summarized we are able to say: with Business Rules will some knowledge inside Siebel configuration be moved towards a Rules Engine. Through this, it is possible to import high level Business Rules into a CRM package trough using a Rules Engine.

4.3.1   When to use Business Rules?

There are a few moments when it is better for most organizations to use Business Rules. With Business Rules companies are able to change quickly, when necessary, and adjust several business statements when necessary. There are a lot of different companies and so there are a lot of different reasons to implement Business Rules. The most likely reasons to use Business Rules are:

- When a company has to deal with a lot of process changes.
- When an organization has to deal with a lot of external process changes (by example: law changes).
- With new market circumstances.

It is plausible to assume, that lot of process changes mostly mean a lot of scripting/configuration (see chapter 5.1) and this means mostly a lot of time and money (For detailed specification about this subject, please see up following projects). With Business Rules it is possible to catch al this negative elements into a quicker and cheaper solution. But money and time are not the only reasons to use Business Rules. As previously written are Business Rules readable and understandable for every employee in an organization. This does not mean that everybody without knowledge of BR can change and create it; a little additional lesson is necessary. A good reason to use Business Rules is when other people then programmers must be able to read and understand the Rules.
NOTE: It is impossible to create and manage complete projects with Business Rules; most of the time

there will be use a best practice between Business Rules and Configuration like scripting, workflows etc.
Please see chapter 5. for more details.

Sources

Paragraph 4.3:

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-https://kx.accenture.com/Repositories/ContributionForm.aspx?path=C14/59/77&mode=Read
"Siebel Business Rules administration guide", official Siebel 8.0 bookshelf, 2007

Paragraph 4.3.1:

"When is a Business Rules Engine used", James Taylor, 2009
-   http://stackoverflow.com/questions/778007/when-is-a-business-rules-engine-used
"Siebel Business Rules administration guide", official Siebel 8.0 bookshelf, 2007
Rob Swinkels, Accenture consultant
-   General information, when to use Business Rules

4.4   Rules Engines

With a Rules Engine it is possible to create, manage and finally execute the Business Rules (example: with a Run-Time Engine, please see Attachment E. for more details). The Rules are incorporated inside IT applications. The Rule Engine executes the rules and infers new facts (update the actual knowledge base). A Rules Engine creates concepts with the necessary statements, the Business Rules are written based on those concepts and statements. In an interview describe Oana Nicolae (PhD under the supervision of professor Wagner, Professor in Internet technology at the BTU Cottbus) the definition of a Rule Engine as: *"The purpose of a Rule Engine is to infer new knowledge based on some existing facts according to some pre-defined rules"* (O. Nicolae, 2009). Inside Siebel the main Rules Engine is HaleyAuthority, a separate third-party application used to examine and develop Siebel Business Rules.

4.4.1   HaleyAuthority

NOTE: This document is based on Siebel version 8.0 with HaleyAuthority.   *Picture 5: Oracle/Haley logo.*
In newer Siebel versions is HaleyAuthority named as OPA. This document will use HaleyAuthority, but OPA has the same possibilities.

New in Siebel 8.0 is the integration of HaleyAuthority as
standard Rule Engine inside the application. Before this Siebel version, Business Rules where written inside scripting or other programming language or where written in a Rule Engine which was not integrated in Siebel. This means that the Rule Engine most is integrate into a Siebel application by hand (programming). The coupling of Haley's business rules software proved to be so powerful, that tightly integrating of Business Rules into their next generation CRM software became the main focus of Siebel's CRM 8.0.

The Siebel Bookshelf 8.0 write about HaleyAuthority: *"HaleyAuthority is a set of tools for modeling business policies as rule statements in Natural English, without the need to employ programming languages."* With HaleyAuthority is the user able to test, implement, and deploy rule statements. In addition, HaleyAuthority generates and stores the corresponding concepts and statements in a separate database referred to as a knowledge base. Siebel calls HaleyAuthority the industry's fastest and most scalable business rules engine. It working with Siebel and is able to quickly and consistently apply the logic there are captured as business rules.

The four main functions of HaleyAuthority:

- Use HaleyAuthority as the authoring tool for rules in natural English language.
- HaleyAuthority Imports Siebel metadata definitions.
- HaleyAuthority generates code and associates with Siebel Application server.
- Haley Inference engine for runtime integration with Siebel.
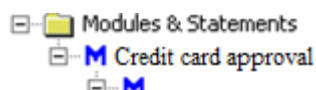
4.4.2   Rule explanation

Business Rules have a few requirements to work correctly in Siebel 8.0. They need to have a good structure with the correct statements and applicability's. HaleyAuthority don't use international standards, but has their own standard to create and execute Business Rules. In a few steps is below written how Business Rules are build up in HaleyAuthority.

Module

HaleyAuthority know a structured classification for the Business Rules. The structure is comparable with the "Windows explorer" map structure. The main map for a Business Rule is the Module map, this map describe the name of underlying Rules. By example: 'Module: Credited card approval'.

A module is a collection of rule statements that will deployed together. It can be necessary to create sub modules for more statements under one module. This will improve the dear structure of HaleyAuthority.
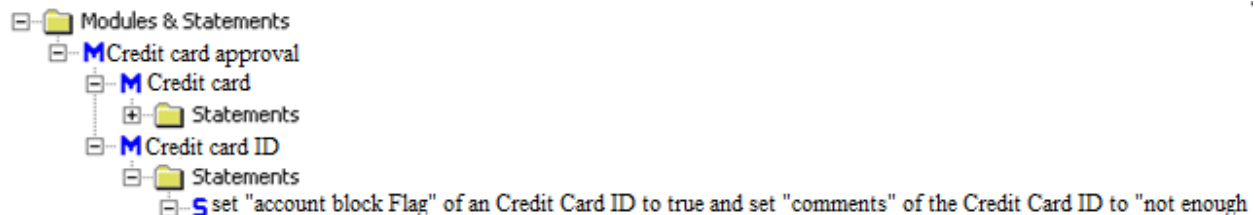

Picture 6: Module

Statements

Under a (sub) module is the rule statement. This is the main rule which tells 'what' there must be done by executing the rule. An example of an statement is: 'set "account block Flag" of an Credit Card ID to true and set "comments" of the Credit Card ID to "not enough'

There are two kinds of statements in Siebel Business Rules: a fact and an action statement. An example of a fact statement can be:"A Sales report is a valid Sales report". An action statement tells the rules to

"do" something, like: "Set Reimbursable Flag of a Sales item to true". In Siebel, there are three types of actions:

- Actions: Produce output or modify data in the Siebel application.
- Functions: Return a value from the Siebel application
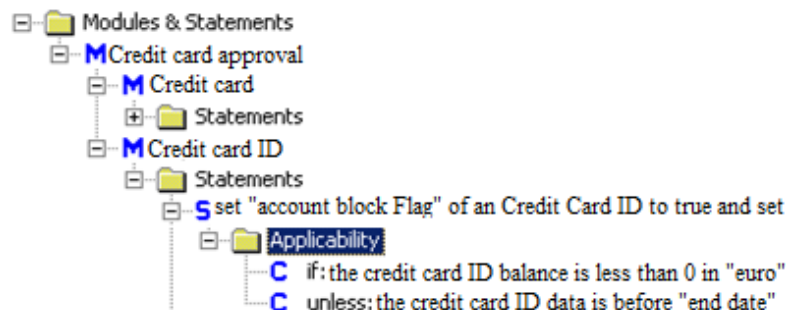- Predicates: return a Boolean value.

Picture 7: Statement

Applicability conditions

Where statement tells what there must be done in a situation, tells a condition 'when' the rule must be activated. There are three types of conditions:

- If condition: The conclusion that is associated with a set of if conditions is true if at least one of the' if statements' is true (or).
- Only if conditions: The conclusion that is associated with a set of only if conditions is true if all of the only 'if statements' are true (and).
- Unless conditions: The conclusion that is associated with a set of unless conditions is false if at least one of the 'unless statements' is true (*not*).
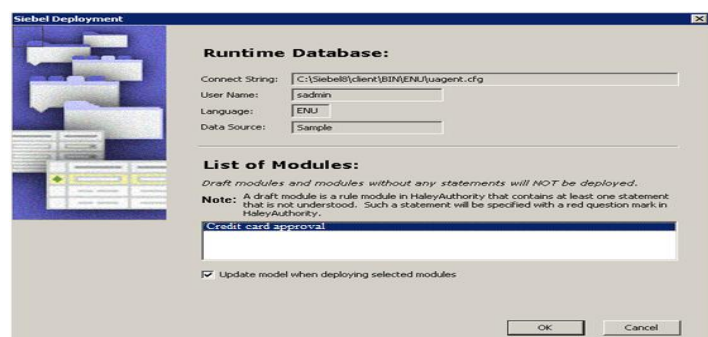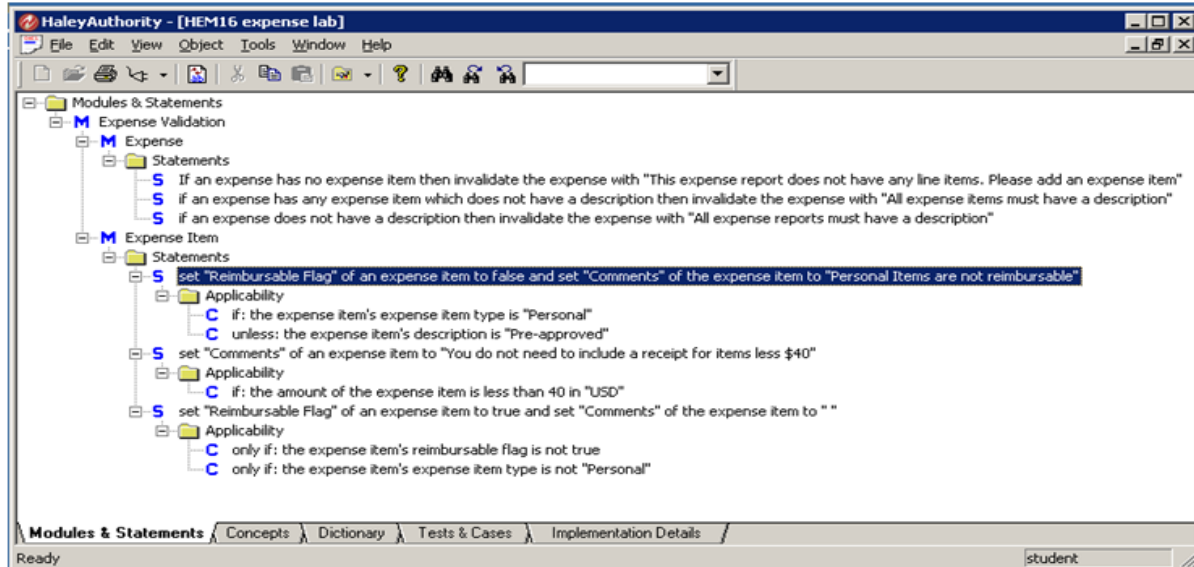

Picture 8: Condition

Implementation

When the user has set all the necessary statements in the associated (sub) modules, the rules are able to implement and execute into the regarding application. A short description about the implementation of Business Rules is findable in Attachment E. Also definitions as Object, Concepts, import wizard, runtime etc. will explain short in this attachment. For more technical possibilities of Business Rules, please see next project about this subject.

Picture9: Implementation

Example of Business Rules in HaleyAuthority

Below is an example of modules & statements window in HaleyAuthority with the associated sub modules and conditions (applicability's).

Picture 10: Example of HaleyAuthority Business Rules

Sources

"Siebel Business Rules administration guide", official Siebel 8.0 bookshelf, 2007
"Siebel Bootcamp presentation 45,46" official Accenture presentation, 2009
 "**Oracle Embeds Haley's Business Rules in Siebel CRM 8", N/A, 2007**
- 		http://www.ebizq.net/news/7670.html
"Haley Oracle Siebel datasheet", N/A, 2009
- 		http://www.ruleburst.com/members/pdf/Haley-Oracle-Siebel_datasheet.pdf (not available (Dec. 2009)).
Niels Hoijtink, Accenture coach
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Own experience in HaleyAuthority
"Oracle enterprise policy automation", Lex, 2009
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4.5   Possibilities of Business Rules in HaleyAuthority

The most important fact about Business Rules is that they cannot take action by them self. Writing Rules without consider the way the Rules Engine will read a process them will result in Rules that will not work. This is because Rules are dependant the way how Rules Engine read and interpret the statements and expressions. Every single Rules Engine has its own expression criteria, so it depends of the expression Business Rules of the language what they are able too. This document will explain the possibilities of Business Rules in HaleyAuthority. The possibilities in HaleyAuthority are large and varied

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from validation to calculation of data (Please see 4.6 for a detailed list). Business Rules in Siebel 8.0 HaleyAuthority are useable in a lot of different (project) situations. Summarized can Business Rules be used in four key situations: Dynamic business processes, Complex business processes, Field validations and Auto-populating field values.

4.5.1 Dynamic business processes.

There are business data, which change frequently like: customer contract prerequisites, Credit card approval, driver licenses requirements etc. These are examples of Dynamic business processes. With the possibility to create and manage business rules in Siebel 8.0, the company is able to change the business process without rewriting script logic or reconfigure the Siebel object. To deploy declaratively in Basic English, Business Rules are able to change such business Processes, without recompiling the Siebel Repository.

Dynamic Business processes are usually expressed in reaction/Event Condition Action rules (See chapter 4.2.2). By example: when the customer wants a credit card approval, then get the responsible employee an alert: Action > Reaction.

4.5.2 Complex business processes.

Sometimes there is a business process like a Law, which have a lot of decision branching that depends on results of earlier steps. In this case, when there must change a process, it usually takes lot of work and complex engineering to change all the associated business logic in a CRM application. The "Oracle *Business Rules Bookshelf 8.0"* describes the solution of this problem:
"*Rules allow more complex processing of data in order to generate more refined input values for decision-making. A change to the business logic governing the input is maintained declaratively, instead of relying on entirely scripted solutions."*

4.5.3 Field validations

Companies preferably only correct data in the associated CRM application. With Siebel Business Rules created and managed by the Rules Engine, it is easy to do validation of the data by writing several basic validation Rules. It is not only easy to write the necessary statements, the Rules Engine manage the validation across the whole Siebel applications during an upgrade.

Field validation can be done using the type of business rules: integrity rules (Example: deontic – expressing obligation and alethic – expressing necessity).

4.5.4 Auto-populating field value

With Business Rules, it is possible to declare populate fields, which are related and depending on other field values. This is useful when a company want to make changes in the populated fields. By scripting, it is necessary to modify the script and recompile the Siebel Repository. With the business Rules it is possible to making changes without these extra actions.

4.5.5   Summarized

The Siebel 8.0 Rules Engine; HaleyAuthority is able to create and changes Business Rules which can write and implement business logic into Siebel CRM package. Business Rules can be written in Natural English and almost everybody in an organization is able to read and understand the Rules. (Important: to change Business Rules it is necessary to follow a course). A Rule Engine is able to centrally develop and manage business logic like: Dynamic business processes, Complex business processes, Field validations and Auto-populating field values. HaleyAuthority Imports Siebel metadata definitions, this holds that the rules are easy to change and easy to update without recompiling the SRF file. Before the Rules will implement into the Siebel application, HaleyAuthority check the validation of the rules, incomplete or unknown statements will not accepted by the Rule Engine.

In the attachment is a little explanation about these requirements and the way Business Rules will import into Siebel applications.

Please see attachment E. for an explanation "how to import Business Rules into Siebel 8.0".

Sources

"About Siebel Business Rules Benefits", official Siebel bookshelf, 2007
"Earlier paragraphs"

4.6   Uses of Business Rules

Business Rules can be used for many different situations, they can not only validate, update and provide data in records, they can also implement dynamic read-only/required behavior, perform business calculations, determination etc.
Business Rules are flexible in use and can be used in several ways, below is a short list with the most common uses of Business Rules.

- Validate inserted data
- Provide default values for fields in records
- Provide default child records
- Updating records
- Implementing dynamic read-only/required behavior
- Compute values of parameters to be used in decision steps in workflow process and UI tasks
- Perform business calculations
- Determine if a warranty applies
- Determine if a customer is eligible for a discount or offer and explain why
- Approve or reject an application for insurance
- Compute a limit for loans or insurance coverage

Sources

Niels Hoijtink, Accenture coach
- *General information about BR*
"Siebel Business Rules administration guide", official Siebel 8.0 bookshelf, 2007

4.7 Future of Business Rules

4.7.1 Business Rules

This thesis describes the possibilities of Business Rules and if the Rules are able to replace configuration parts in the future. To write a good conclusion about this topic, it is necessary to analyze the future of Business Rules. Maybe are Business Rules able to replace some configuration parts, but when we at this moment already can conclude that Business Rules won't have a future, we have nothing about that conclusion. Nobody is able to get a view in the future, but experts can do a prediction about the future of Business Rules. For this thesis has Oana Nicolae (php under the supervision of Professor Wagner at the Cottbus University) and Professor Van Engers (University of Amsterdam) by e-mail interview answered the theorem: *"Business Rules has future as configuration language"*.

It is hard for Oana Nicolae to make a detailed prediction about the future of Business Rules. She thinks that Business Rules can have a future in an IT application, but only when the language will express in a natural way like we need in everyday life. Because Business Rules has no international standard is the risk to write "unreadable" statements high. When this happens, the whole idea of Business Rules will disappear and there will not extra value to use Business Rules. At this moment Oana Nicolae is not able to tell if Business Rules has the future, there are too much undear rules/thoughts around Business Rules.

Professor Tom van Engers opine that understanding the knowledge, which is representing Business Rules, will be more and more important. Because the technical restrictions (data redundancy, processor and memory capacity, computing speed) will be less relevant in the future, Rule based paradigm will win on popularity. Professor Tom van Engers thinks that the future of configuration will have opportunities for Business Rules, but a totally "takeover" of Business Rules is not realistic.

The biggest disadvantage for both experts is the lack of standardization in the Business Rule "world". But the most recent milestone in formalizing rules is the Semantics for Business Vocabulary and Business Rules (SBVR), an OMG standard for *"documenting the semantics of business vocabularies, business facts, and business rules"* These guiding principles can all be used together. However HaleyAuthority use their own systematic way of displaying Rules, a international standard can give Business Rule a big boost in popularity and acceptation.

Sources
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cibit.nl/site.nsf/page/kim_nieuws_informatiemanagement_business_rules_trends (offline, Dec. 2009)

Oana Nicolae, Teaching assistant at BTU Cottbus.
- 		*General information about BR.*

Tom van Engers, Professor in Legal Knowledge Management
- 		*General information about BR.*

4.8   Benefits of Business Rules

Oracle Siebel did not launch Business Rules without a good reason; there are several reasons and benefits to use Business Rules inside Siebel 8.0. The biggest benefit and main reason why Business Rules were implemented inside Siebel 8.0 is the big accessibility of Business Rules. Not only scripting experts can read the statements, but also non-scripting or programming expert are able to read and understand the Business Rules. With Business Rules project managers, business analysts etc. are able to read, create and understand Business Rules in HaleyAuthority. All this is possible because Business Rules are written in "natural English". This does not mean that any person can work with the Rules without (some) training. Business Rules know more benefits: HaleyAuthority contain a validation check, which check the Rule at errors before their will executed into the application. Another benefit is when the Siebel objects imported into HaleyAuthority, all the necessary HaleyAuthority metadata constructs (concepts, relations, and phrasings) will create automatically. You can immediately begin writing rules to reflect your business logic. Business Rules can implement in several mechanisms, such like: Runtime events, Siebel workflows, Siebel Task-based UI, Business services. Those mechanisms are all manners of configuration to create Siebel application.

Please see attachment E. for the explanation how to import Business Rules into Siebel.

Sources

"About Siebel Business Rules Benefits", official Siebel bookshelf, 2007
Rob Swinkels, Accenture consultant
Information from earlier chapters

4.9   Limitations of Business Rules

Business Rules do not only have possibilities, there are also a few limitations and disadvantages. If they are implemented right, they are able to work correct and efficiently. However, the road to this implementation is difficult and takes a long time to complete well. Every Rule is connected to another Rule, 'it is a large community of relations'. Business Rules can only be used optimal when all the statements are correct and have a consistent way of working. This can be a problem because it takes time to get the correct statement. The reason it takes time to create correct Rules, is because there is no (international) standardization for Business Rules. This is the main limitation of Business Rules," there are too many roads to Rome". This is confirmed by Oana Nicolae and Prof. Dr. Tom M. van Engers who are interviewed by mail for this graduate rapport. They both think that the lack of good standardization is the main problem of Business Rules. There is a group that is working at standardization; the OMG

(Object management Group), this is a group that is busy to create standardization about Business Rules, but they have not made any improvement yet. Without standardization, it can be difficult to create comprehensible Business Rules, which everybody understands and can change. An additional problem in this issue is losing Business Rules knowledge when a Business Rule expert leaves a company, when there is no good data manual inside the company.

One other problem of Business Rules is the balance between the way how to express the Business Rules and the IT complexity. The problem is that the designer wants to guarantee the computability. To do this it is hard to create good and extensive expressions.

All these limitations do not mean that the Business Rules are illegible for employees and externals. Business Rules are easy in use because everybody can read and understand them, but this is also a limitation, malevolent people can also read and (possible) change the Rules, a secured environment is in that case necessary.

Oana Nicolae, Teaching assistant at BTU Cottbus.
- *General information about BR.*
Tom van Engers, Professor in Legal Knowledge Management
- *General information about BR.*
"Trend / Business Rules", Silvie Spreeuwenberg, 2005
- *http://www.librt.com/downloads/0508-10Tre.pdf*
Information from earlier chapters

4.10 Chapter conclusion

Research in several sources as Siebel bookshelves, interviews, books, presentations etc. results in the following answers of the research questions:

1.   What are Business Rules?
Business Rules is a broad term and can be interpreted in many ways. Business Rules are a way to describe Business Logic like: policies, processes, constraints and regulations. An example of a Business Rule can be: *"Customers with a Bonus card gets 40% off".* This kind of Rules can be used as means to support business goals through simple 'natural English' statements. With A Rule Engine is a company able to connect the Business Logic with IT applications. A Rule Engine is a mechanism to import, deploy and manage Business Rules in an IT application. Siebel 8.0 use HaleyAuthority as Rule Engine to create Business Rules on an understandable way for all kind of Business/IT people.

2.   What are the possibilities and limitations of Business Rules in HaleyAuthority
Optimal use of Business Rules will work in the next four situations: Dynamic business processes (companies with lot of business process changes), Complex business processes (like law changes), Field validations (like approvals) and Auto-populating field values (relational fields which can change a lot). In these situations can Business Rules, in a Rule Engine, be used to calculate, validate, update etc. by readable English statements for ITers and non ITers.

Despite the many possibilities there are also limitations. Business Rules are not suitable for anything other than carry out the conversion of Business Logic in a Rule Engine. Business Rules cannot exert an influence on the physical structure and layout of an application. Also the lack on international standards can lead to losing knowledge and disorganized structure of the Business Rules. Although Business Rules are easily manageable, is creating a Business Rule setting a long and complex process, because almost every Business Rule depends on another Business Rule.

5. Results

With the new knowledge about Business Rules from chapter 4 and the existing configuration knowledge within the Siebel Cell (no knowledge about Siebel Configuration? Please see attachment F!) , it is possible to compare both methods. This chapter start with a describtion about the differences between BR and configuration. By four catogories ('manageable', 'structure', 'problem solution' and 'data & layout') will explain the differences between both methods, ended with a clear comparing table (chapt. 5.1). Chapter 5.2 will explain when to use which method, because not every situation is capable to use Rule Engine Business Rules. These results lead to requirements (project situations) which will explain when to use Business Rules or not. To support a project responsible choosing between Business Rules and configuration includes this document a checklist with those requirements. Every requirement contains an advice with a description which method is the best in what kind of situation. These Requirements and advices are described in chapter 5.3, followed by the checklist in chapter 5.4. After the research results, can the follow research questions be answered in the conclusion:

3. What are the differences between Business Rules and Siebel configuration?
4. In what kind of situation is it better to use Business Rules and when it's better to use Siebel Configuration?

NOTE: Ones more: more information about Siebel configuration, see attachment F.

5.1 Differences between Business Rules and configuration

The most important difference between Business Rules and configuration is the way how they behave. Business Rules describes "what" there must be done and configuration describes "how" it must be done. (Oana Nicolae, 2009). Like written earlier, a Business Rules statement tells what the Rule must do, followed by a Rule condition which tells when it must execute in which situation. Configuration like a Workflow explains how the data must act, by example when the user hits the "confirm" button in a search form. There are a lot of differences between HaleyAuthority/Business Rules configuration and scripting and workflows configuration. This does not mean that there several configuration can't work together. In chapter 4 is described that workflows are able to import HaleyAuthority for (by example) Rule validation.

To give the reader of this document a clear picture about the differences of both methods, this chapter will describe the most important differences, organized by the categories: 'manageable', 'structure', 'problem solution' and 'data & layout'. These categories will explain the most important differences based on the possibilities of Business Rules.

5.1.1 Manageable

When an application is created by the requirements of a customer, the application will be support (while the application is used) by intern or extern administrators. Managing the application is necessary to keep it up to date and change necessary details to the (new) requirements and whishes of the customers. There are a number of critical differences between Business Rules and Configuration, especially when we compare how they will be managed in the Rule Engine or scripting environment. With configuration (like scripting) is a specialist able to change almost everything in an application, from small till large changes in for and background of the application. Every single change in an application (large or small) result in an implementation action, called: Recompiling. This is a way to back up the

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created changes in a SRF (Siebel Repository File). To recompiling a SRF file it is necessary to close all the Siebel applications. At that moment, it is not possible the change or test the application. Exceptions by configuration are the workflow configuration and all the "application configuration" methods. Employees which are using a Rule Engine don't need to recompile the create changes and are able to change and test the application anytime.

There is also a difference how to manage the validation (when a user wants to insert data) into the application database. There are two types of validation: A validation to check the user input (By example: Is the typed address correct) and a validation to check the configuration statement/code by employee users. The check for importing statement/code configuration is almost the same; all the configuration manners (scripting, workflow, BR) will not accept incorrupt input into the configuration. There are differences in the user input validation, especially how to manage these validations. It is possible to import directly changes in the validation statements across the whole application, when they are implemented by a Rules Engine (by example, 5% tax will be 10%). By configuration, like workflow and scripting it is necessary to change all statements or codes separately and the application needs to recompile or activated.

Business Rules in HaleyAuthority are written in clear English, this does not mean that person without necessary knowledge can change the rules. But, comparing with JavaScript, takes it not so long to get knowledge about Business Rules. In a relative short time is almost everybody able to change the Business Rules in HaleyAuthority.

5.1.2 Structure

A major difference between Business Rules and Scripting is the way they are dawned. In first view seems a Business Rule (especially in HaleyAuthority) easier dawned then scripting, but this can be a deceived thought. Business Rules are sorted by Siebel objects and concepts, also are the Rules created with a Siebel standard (this is not an international standard). Trough this kind of standard it is possible to easy find statements, like numeric Business Rules (example: "When bank balance is less than 0 than no pin transaction available"). The disadvantage of this working method is the lack of international standards. It is possible that "outsiders" of Siebel can't find statements quickly, because they don't understand the structure. Otherwise by big scripts can it be difficult to find statements (like the early written numeric Business Rules), but good structure can help a lot. Trough an international scripting standard is the structure of the scripting easier for external specialists to understand. Both methods have the same outcome but a different road towards.

5.1.3 Problem solution

Scripting is based on international standards and a lot of people understand the structure. Also there are a lot of documentations and problem solutions inside and outside the organization available. The general accepted working methods, helps to find all kind of problem matching solutions. Not only official supported suppliers deliver solutions but also on individual persons on forums can help programmers a

lot. Problems with Business Rules will resolved most of the time with intern problem solutions and solutions from official partners (by HaleyAuthority: official Siebel or Haley documentation). There is always a solution possible, but though the lack of standardization it is harder to find solutions then by configuration like scripting. Where configuration has a lot of solutions outside the "official" channels is Business Rules missing that type of solutions.

5.1.4   Data & layout

Business Rules and workflows are excellent useful for data processing. Validate data, data implementation, change data etc. Scripting is also useful for those arguments, but is also a good instrument to manage the layout of an application. This is impossible with Business Rules and Workflows. The structure of Business Rules is not changeable in HaleyAuthority; change the structure, to the requirements of the customer, is possible in scripting.

5.1.5   Comparison table

Above are described the most important differences between Business Rules and Siebel configuration. To clarify those differences follows below a comparison table with all the important differences, categorized like above written. These differences are created by the research results in chapter 4 and by interview answers from Rob Swinkels from the Accenture project by IND Rijswijk.

	Business Rules	Configuration
Manageable		
Changeable	The change possibilities of Business Rules are limited in an application.	Can change almost everything in an application
Recompiling	It is not necessary to recompile the application after complete application changes.	By scripting is recompiling necessary after complete application changes.
Activation	It is not necessary to activate the application after complete application changes.	By workflows is activation necessary after complete application changes.
Validation	Directly import changes in the validation statements across the whole application.	Every update in needs to be changes manually, one by one.
Changeable	Without knowledge are persons able to understand the BR, but not yet able to change it.	Without knowledge it is impossible to change or understand the script
Structure		
Synoptic	Business Rules are synoptic ordered in HaleyAuthority.	In some cases looks scripts and workflow messy.
Standards	There are no international standards at this moment, (Siebel standards are available)	For configuration are international standards available
Findable	Business Rule statements are easier to find, also by a lot statements.	Business Rules statements are difficult to find in large scripts/workflows
understandable	By the lack of standards the structure can be not understandable for extern IT expert.	By good structure understandable for extern experts
Problem solution		
Soluble	Oracle offers a lot of solutions for BR problems inside HaleyAuthority.	Inside and outside Oracle are a lot of solutions available
Data & layout		

Layout	Cannot change the application layout	Can change the applications layout
Structure	The structure of BR cannot be changed	The structure of Business Rules can be changed

5.2   When to use which method?

It is not the meaning of this document to decide which method is the better option and when a project leader must use which method. This document is a guideline for project leaders; it will help to choose between Configuration and Business Rules. The earlier chapters has showed that configuration like scripting can create and do almost everything to customize an application like Siebel, but this method is not flexible and easy to Business Rules by Rule changes. By Business Rules takes it time to setup the Rule environment and the Rules has there restrictions in possibilities. In opposite to scripting are Business Rules excellent usable in a project with a lot of Rule changes. Between this two options stands the workflow configuration, this method is able to call Business Rules from the HaleyAuthority but has not the large possibilities of scripting. Workflows are readable for non ITers, but there are not able to change directly the Business Rules without intervention of a Rule Engine.

All the different configuration methods have their own (dis)advantages and can be used in several projects and situations, likely will be a use of best practice. To make clear when it is better to use Business Rules in which situation, you will find below three lists with project situations which will give answer on the question: "*Which option when?*"

Use configuration (scripting) in a project which:

- Have more customization changes then process changes.
- Have more Rules which don't change a lot then vice versa.
- Have Rules which only may check by employees with special knowledge.
- New employees the synoptic way of script must understand without extra course.

Use configuration (workflow) in a project which:

- The Rule is a part of a set validations or actions.
- Business Rules change average.

Use Business Rules in a project which:

- Involves lots of rules.
- Have rules that change often.
- Have rules that have a lot of Auto-populating field values.
- Is one that the business people want to use to change details without long term trainee period.
- Involves using predictive analytics / scores as part of the decision making.

After interviewing Rob Swinkels from Accenture/ATS can this chapter be summarized as: Business Rules best to use in project situations which will face a lot of Business Logic changes and use configuration in

project situations with a lot of static situations. The next paragraph will describe more project situations in details with an associated advice.

5.3   Checklist

The next pages will give an explanation how the checklist looks and will work. The first two pages give an introduction about the checklist and explain how it must be used. After this introduction follows an explanation about the used requirements and advices ended with an example of a completed checklist.

5.3.1   Checklist explanation

Helping project leaders to choose the best configuration for the Business Rules parts in a project, includes this document a checklist. The checklist will give an advice when to use Business Rules in HaleyAuthority or when to use configuration in a specific project situation. This advice is not definitive, because the checklist in this document is a concept version. A follow up project will research the technical abilities of Business Rules in HaleyAuthority. After this research can a definitive useable checklist be create.

This checklist consists two parts and must be used twice to get a good project individual result. The first part is an advice based on the research results in this document. It will give answer on the question how much the requirement is useful for Business Rules or configuration. This advice will help the project leader to answer the second table, if the project (situation) will use Business Rules or configuration. This is not the end advice; a second checklist will be a combination of the earlier advices and the wishes of the customer. The checklist contains the same requirements but, with the combined advices from checklist one. In consultation with the customers is the project leader able to make a final decision. The checklist is an advice and not obligatory, final results may differ from the advice.

NOTE1: Please see the digital attachment for a useable version of the checklist.
NOTE2: The checklist in this document is a concept; a follow-up project will deliver a more detailed, technical checklist.

Picture 11, see next page for an explanation

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Checklist with advice based on this thesis *(Please see the digital Microsoft Office 2007 Excel attachment for a useable checklist)*

Requirement	Useful with: (based on thesis)		Advice (based on project)	
	Configuration	Business Rules	Configuration	Business Rules
Business statements (like numerical values) must be easy to manage and find and in a configuration.	–	++		
The configuration contains parts with Business Logic, which are able to be monitored by non technical persons like a Business Manager.	–	+		
The configuration is accessibility without long term courses.	–	+		
Changes in the Auto-populating fields are possible without recompiling.	–	++		
Configuration must be able to update without recompiling.	–	++		
The product must be flexible by Business Logic changes.	–	++		
The end product will face, more than average, internal process changes (By example: changeable business logic).	-	++		
The end product will face, more than average, dynamic business processes (like credit card approval).	-	++		
The end product will face, more than average, Complex business processes. (By example: law, market circumstances changes).	-	++		
The configuration statements need a validation check before implementation.	+	++		
The configuration contains a synoptic manner to validate all types of data.	+	+		
Validation can be managed across the whole application during a Siebel update.	++	-		
The product must be flexible by Lay Out changes.	++	–		
International standards are a requirement to successful configuration.	++	–		
The end product contains a lot of static Business Logic.	++	–		
The configuration type must be able to manage "everything" in Siebel. (from interface till configuration data).	++	–		

Legend:
- Not useful
- Little useful
- Useful
- Very useful

X   Project leader advice

This checklist contains requirements, based on the research results of this document and based on experiences by project members at the IND Accenture project. These requirements are project situations and they all are useful in different ways. Sometimes the requirements are more useful with configuration and sometimes with Business Rules. This checklist contains an advice if a requirement is useful with Business Rules and when it is useful with configuration. This advice is also based on the research results in this document. The project leader is able to choose between Business Rules and configuration based on: advice, own experience and the extra knowledge "which requirements useful are for the project". Every project is different and contains different situations in a project; it is more than likely that the thesis advice will diverge from the advice of the project leader.

Empty checklist for a optimal end result

Requirement	Useful with: (based on thesis)		Final advice	
	Configuration	Business Rules	Configuration	Business Rules
Business statements (like numerical values) must be easy to manage and find and in a configuration.	Not useful	Very useful		
The configuration contains parts with Business Logic, which are able to be monitored by non technical persons like a Business Manager.	Not useful	Useful		
The configuration is accessibility without long term courses.	Not useful	Useful		
Changes in the Auto-populating fields are possible without recompiling.	Not useful	Very useful		
Configuration must be able to update without recompiling.	Not useful	Very useful		
The product must be flexible by Business Logic changes.	Not useful	Very useful		
The end product will face, more than average, internal process changes (By example: changeable business logic).	Little useful	Very useful		
The end product will face, more than average, dynamic business processes (like credit card approval).	Little useful	Very useful		
The end product will face, more than average, Complex business processes. (By example: law, market circumstances changes).	Little useful	Very useful		
The configuration statements need a validation check before implementation.	Useful	Very useful		
The configuration contains a synoptic manner to validate all types of data.	Useful	Useful		
Validation can be managed across the whole application during a Siebel update.	Very useful	Little useful		
The product must be flexible by Lay Out changes.	Very useful	Not useful		
International standards are a requirement to successful configuration.	Very useful	Not useful		
The end product contains a lot of static Business Logic.	Very useful	Not useful		
The configuration type must be able to manage "everything" in Siebel. (from interface till configuration data).	Very useful	Not useful		

Legend:

Not useful
Little useful
Useful
Very useful

X   Project leader advice

The second checklist is the "decision" checklist with a clear end result. The advice table is a combination of the checklist 1 results (see example: next page). Together with the customer, and based on the advice table, will the project leader make a final decision between configuration and Business Rules. The advices, added by check marks in the end "Final advice" table (the "X"), are for project situation conform the requirements and not intended for whole project (see the thesis conclusion).

5.3.2   Requirements and Advice explanation

In the previous chapters and paragraphs is explained what Business Rules are, what the differences between BR and configuration are, when to use which option etc. Every project has they own situations and point of interests and every project needs a different approach based on the requirements of the customers and experience by the project leader. This document will help a project leader (or other project responsible, in this document we call is project leader) choose between configuration and Business Rules in project situations where both methods are possible. Below follows a list with requirements based on the research in this document and based on experiences of project members from the Accenture project by IND in Rijswijk. Every requirement can be seen as a single situation in a project, every requirement has a unique advice special based on that situation. The advices are also based on the research in this document and based interviews with Oana Nicolae (php under the supervision of Professor Wagner at the Cottbus University), Professor Van Engers (University of Amsterdam) and Rob Swinkels, Accenture ATS consultant by the IND project in Rijswijk.

The requirements and advices will be used in the checklist, for more information please see chapter 5.3.1.

Explanation about the requirements and associated advice.	Configuration	BR in HaleyAuthority
Business statements (like numerical values) must be easy to manage and find in a configuration.	**Not useful**	**Very useful**

Requirement:

Sometime it can be necessary to find and change easily Business statements (like numeric statements) in a configuration environment. Good examples are ministries, almost every 4 years they face al lot of process changes, it is critical to find and change those statements quickly.

Advice:

Despite the lack of international standards are statements easier to find in HaleyAuthority then in JavaScript or other Configurations methods. By example: a numeric statement can be found by good module names in HaleyAuthority, in scripting are these statements a small part in the wilderness of scripting language. Si it is possible that some statements will be overlooked. However, for both situations will it be hard to find (quickly) statements when more Rules/Scripts will stored in the environment. Configuration is in this case not useful, because the wilderness of scripts and statements. Exception is the workflow configuration; this is a method with structure and clear overview. Business Rules (in HaleyAuthority) are more organized and in this case better useful.

The configuration contains parts with Business Logic, which can be monitored by non technical persons like a Business Manager.	**Not useful**	**Useful**

Requirement:

An organization like the IND has frequently changes in the Business Statements, due new policies of the government. They want a new department which only concern is to update the Business statements. This department contains employees such as: Account Managers, lawyers, Business Analysts etc.

Employees without knowledge of scripting languages. For a company it is a wasted of money to use a lot of programmers only for changes in Business Statements*.

Advice:

Business Rules are readable and understandable for non ITers, but this does not mean that non ITers can make changes in the Rules. Configuration methods are not understandable or changeable without specific knowledge and therefore not suitable for non ITers to manage.

Explanation about the requirements and associated advice.	Configuration	BR in HaleyAuthority
The configuration is accessibility without long term courses.	**Not useful**	**Useful**

Requirement:

Like above is written are there situations where non ITers must be able to understand and change Business Rules. Most of the times are these employees specialized in objects outside the IT. Assuming that they don't want weeks of trainees is a short trainee time a requirement.

Advice:

Configuration methods are not understandable or changeable without a long term course and therefore not suitable for non ITers to manage. With a relative short trainee time are non ITers able to understand and change Business Rules by a Rule Engine.

Auto-populating fields can be changed with clear overview of linked fields.	**Not useful**	**Very useful**

Requirement:

A change in an auto-populating field has direct consequences for lower field values. It can be hard in situations with a lot of auto-populating changes to change al the field values without errors. The possibility to forget a related field is a logic consequence.

Advice:

With Business Rule it is possible (though the imported Objects and concepts) to make a change in an auto-populating field which update al associated fields. The big benefit is that all depending fields will update correctly. It is hard to change auto-populating field with scripting, because there is no visual of linked relationship between the field values.

Configuration must be able to update without recompiling.	**Not useful**	**Very useful**

Requirement:

Recompiling is a way to back up the created changes in a SRF (Siebel Repository File). To recompiling a SRF file it is necessary to close all the Siebel applications. At that moment, it is not possible the change or test the application.

Advice:

Making little or big changes in a configuration environment as VB and JavaScript result always in recompiling. Business Rules which are changed in a Rule Engine don't need to be recompiled. Little changes or tests can be modified easy and quickly. Business Rules can be managed across the whole application during a Siebel update.

Explanation about the requirements and associated advice.	Configuration	BR in HaleyAuthority
The product must be flexible by Business Logic changes (short time period).	**Not useful**	**Very useful**

Requirement:

When the Business Rule statements get an update, it can be a requirement or whish that the application must change quickly to the new statements. The application must be flexible and be ready for more future Business Rule changes.

Advice:

Configuration is not flexible, by Business Rule statement changes. It takes time to prepare the application to be compatible with the changed Business Rules. Data which are change frequently can better be managed with a Rule Engine. A Rule Engine is flexible and is able to make automatic changes in related field values; this is not possible with configuration.

The end product will face, more than average, internal process changes (By example: changeable company policies).	**Little useful**	**Very useful**

Requirement:

Some companies use changeable policies or they do know, before a project start, that there will be upcoming changes in company policies. By some companies will these policies never change and by other companies it will change frequently.

Advice:

By frequent changes in the company policies are Business Rules a better solution than standard configuration methods. Manage Business Rules with a Rule Engine is more flexible than in a scripting environment. Building Business Rules with a configuration method is flexible, but mange Business Rules is more flexible with a Rule Engine.

The end product will face, more than average, dynamic business processes (like credit card approval).	**Little useful**	**Very useful**

Requirement:

By example: A credit card organization has requirements for interest clients, before they are allowed to use a credit card. It is possible that these requirements will change in the future, or that the credit card organization use flexible requirements (to get more clients).

Advice:

By frequent changes in the company dynamic business processes are Business Rules a better solution

than standard configuration methods. Manage Business Rules with a Rule Engine is more flexible than in a scripting environment. Building Business Rules with a configuration method is more flexible, but mange Business Rules is more flexible with a Rule Engine.

Explanation about the requirements and associated advice.	Configuration	BR in HaleyAuthority
The end product will face, more than average, Complex business processes. (By example: law, market circumstances changes).	**Little useful**	**Very useful**

Requirement:

The IND project is an example of a project with a lot of situations with changeable complex business process. Almost every 4 years are there new requirements for "new Dutchmen" to enter The Netherlands. This requires a flexible application environment.

Advice:

By frequent changes in the company Complex business processes are Business Rules a better solution than standard configuration methods. Manage Business Rules with a Rule Engine is more flexible than in a scripting environment. Building Business Rules with a configuration method is more flexible, but mange Business Rules is more flexible with a Rule Engine.

The configuration statements need a validation check before implementation.	**Useful**	**Very useful**

Requirement:

Only correct working Business Rules must be able to import into the application. Therefore have both methods a validation check before entering statements into the application.

Advice:

 Both methods are able to validate statements before they will be imported into the application. The difference between both methods is the "acceptation" border in the validation. Configuration validation checks if the statements are correct, but do not prevent that wrong statements will implemented into the application. The validation check in HaleyAuthority does not accept wrong statements and will not implement those wrong statements until there are written correct.

The product must be flexible by Lay Out changes.	**Very useful**	**Not useful**

Requirement:

Flexible lay out changes are changes in the application lay out such as a table change. Some organization face a lot of table changes in the future and want a flexible product.

Advice:

 It is not possible to make lay out change with HaleyAuthority. Configuration can not only change Business Rules, but also the lay out or tables in an application. In this situation it is more flexible than HaleyAuthority, which is only specified in Business Rules.

Explanation about the requirements and associated advice.	Configuration	BR in HaleyAuthority
International standards are a requirement for using configuration	**Very useful**	**Not useful**

Requirement:

In some cases want a company only products or methods which are created and manageable with international standards. These companies' want to be independent when they are choosing an external party to manage the applications. By example: JavaScript in Siebel can be managed by external employees, but HaleyAuthority can only be managed by intern HaleyAuthority experts.

Advice:

Business Rules have no international rules in all aspects of creating and managing the Rules. All the configuration methods (as described in this document) have international standards.

The end product contains a lot of static Business Logic.	**Very useful**	**Not useful**

Requirement:

Static business logic is non business process logic. An example of static business logic can be a change in the amount of a telephone characters (from 10 characters to 11).

Advice:

Create Business logic with configuration like scripting feels for experienced employees easier than create it with HaleyAuthority. Like earlier written: Create Business Rules in configuration can be a better solution, but mange the Rule is better with HaleyAuthority. In this case is configuration a must better method than Business Rules in HaleyAuthority. *

The configuration type must be able to manage "everything" in Siebel. (From interface till configuration data).	**Very useful**	**Not useful**

Requirement:

Some organizations don't want several applications, but the organizations want to have minimum of IT applications.

Advice:

Like earlier written are configuration methods able to create and manage everything in an application. Business Rules are statements and not a way to configure an application.

* This is an assumption; a technical follow up project will test the reality of this advice.

5.3.3   Checklist example

The next two pages explain how the checklist most be used in practice. The examples give a view of a complete checklist with advice of the project leader and the end result after a consideration with the customer.

Checklists example (1)

Requirement	Useful with: (based on thesis)		Advice (based on project)	
	Configuration	Business Rules	Configuration	Business Rules
Business statements (like numerical values) must be easy to manage and find and in a configuration.	–	++		X
The configuration contains parts with Business Logic, which are able to be monitored by non technical persons like a Business Manager.	–	+		X
The configuration is accessibility without long term courses.	–	+		X
Changes in the Auto-populating fields are possible without recompiling.	–	++		X
Configuration must be able to update without recompiling.	–	++		X
The product must be flexible by Business Logic changes.	–	++	X	
The end product will face, more than average, internal process changes (By example: changeable business logic).	-	++	X	
The end product will face, more than average, dynamic business processes (like credit card approval).	-	++	X	
The end product will face, more than average, Complex business processes. (By example: law, market circumstances changes).	-	++		X
The configuration statements need a validation check before implementation.	+	++		X
The configuration contains a synoptic manner to validate all types of data.	+	+	X	
Validation can be managed across the whole application during a Siebel update.	++	-		X
The product must be flexible by Lay Out changes.	++	–	X	
International standards are a requirement for configuration.	++	–	X	
The end product contains a lot of static Business Logic.	++	–	X	
The configuration type must be able to manage "everything" in Siebel. (from interface till configuration data).	++	–	X	

Legend:

Not useful
Little useful
Useful
Very useful

X   Project leader advice

The requirements based on project situations.

The advice based on this document research results.

Advice of the project leader.

The legend of the advice

This example makes clear that the project leader can advice something different then the thesis advice. The project leader is experiences and knows exact what necessary is for a specific project.

Checklists example (2)

Requirement	Useful with: (based on thesis)		Final advice	
	Configuration	Business Rules	Configuration	Business Rules
Business statements (like numerical values) must be easy to manage and find and in a configuration.		X		X
The configuration contains parts with Business Logic, which are able to be monitored by non technical persons like a Business Manager.		X		X
The configuration is accessibility without long term courses.		X		X
Changes in the Auto-populating fields are possible without recompiling.		X		X
Configuration must be able to update without recompiling.		X		X
The product must be flexible by Business Logic changes.	X			X(!)
The end product will face, more than average, internal process changes (By example: changeable business logic).	X		X	
The end product will face, more than average, dynamic business processes (like credit card approval).	X		X	
The end product will face, more than average, Complex business processes. (By example: law, market circumstances changes).		X		X
The configuration statements need a validation check before implementation.		X		X
The configuration contains a synoptic manner to validate all types of data.	X		X	
Validation can be managed across the whole application during a Siebel update.		X		X
The product must be flexible by Lay Out changes.	X		X	
International standards are a requirement for configuration.	X		X	
The end product contains a lot of static Business Logic.	X		X	
The configuration type must be able to manage "everything" in Siebel. (from interface till configuration data).	X		X	

Legend:
Not useful
Little useful
Useful
Very useful
X   Project leader advice

The requirements based on project situations.   Both advices combined.   The end result based on the advice and the customer wishes.   The legend of the advice

This checklist is a combination of advices and end decisions of the customer in consideration with Accenture. Note the (!) in the "final advice" table, even when both advices are pro configuration is the customer allowed to choose Business Rules. The checklist result includes the thesis advice, project leader advice and customers advice/wishes.

Sources

Own research verified by:
-       Oana Nicolae, Teaching assistant at BTU Cottbus.
-       Tom van Engers, Professor in Legal Knowledge Management.
-       Niels Hoijtink, Accenture coach.
-       Rob Swinkels, Accenture consultant.

5.4   Chapter conclusion

3.   What are the differences between Business Rules and Siebel configuration?
Business Rules and configuration can produce the same end results, but the way how to create and manage those end products is totally different of each other. By configuration like scripting of workflow it is necessary to recompile or (re)activated the application, this is not necessary by Business Rules in a Rule Engine. Change Business Rules in a Rule Engine has effect to a related Business Rules in the whole application; by configuration it is necessary to update all related Rules separately. A major difference between Business Rules and Scripting is the way they are dawned. Business Rules has a (in first view) clear structure but don't have international standards, configuration looks messy (for non ITers), but work with clear structure based on international standards. This results that external (IT) people are better able to solve configuration problems than by Business Rules problems in a Rule Engine. But the two biggest differences between both methods are "configuration can change lay-out" and "the Business Rules are readability for non ITers".

4.   In what kind of situation is it better to use Business Rules and when it's better to use Siebel Configuration?
When a project or project-situation will face a lot of Business Logic changes (like law changes) it is better to use Business Rules stead Configuration. A project or project-situation with a lot of static Business Logic is better off with configuration. Business Rules are better manageable, but it takes a long time to set-up. Configuration is difficult to manage but is quicker (relative) to set-up.

6. Conclusion and recommendation

Chapter 6, Conclusion and recommendation, is the final chapter in this thesis. All the investigations in the previous chapters will come together in this chapter and are the basis of the end result. The main research question is based on the 4 sub research questions. These research questions will be repeated before the main research question wil be answerd.
The conclusion is the answer of the main research question:
What can Business Rules add and what are the possibilities of Business Rules versus Siebel configuration?
This leads to an conclusion, opinion/dicussion and a recommendation.

6.1 Conclusion

Research question 1. What are Business Rules?
Business Rules is a broad term and can be interpreted in many ways. Business Rules are a way to describe Business Logic like: policies, processes, constraints and regulations. An example of a Business Rule can be: *"Customers with a Bonus card gets 40% off".* This kind of Rules can be used as means to support business goals through simple 'natural English' statements. With A Rule Engine is a company able to connect the Business Logic with IT applications. A Rule Engine is a mechanism to import, deploy and manage Business Rules in an IT application. Siebel 8.0 use HaleyAuthority as Rule Engine to create Business Rules on an understandable way for all kind of Business/IT people.

Research question 2. What are the possibilities and limitations of Business Rules in HaleyAuthority
Optimal use of Business Rules will work in the next four situations: Dynamic business processes (companies with lot of business process changes), Complex business processes (like law changes), Field validations (like approvals) and Auto-populating field values (relational fields which can change a lot). In these situations can Business Rules, in a Rule Engine, be used to calculate, validate, update etc. by readable English statements for ITers and non ITers.
Despite the many possibilities there are also limitations. Business Rules are not suitable for anything other than carry out the conversion of Business Logic in a Rule Engine. Business Rules cannot exert an influence on the physical structure and layout of an application. Also the lack on international standards can lead to losing knowledge and disorganized structure of the Business Rules. Although Business Rules are easily manageable, is creating a Business Rule setting a long and complex process, because almost every Business Rule depends on another Business Rule.

Research question 3. What are the differences between Business Rules and Siebel configuration?
Business Rules and configuration can produce the same end results, but the way how to create and manage those end products is totally different of each other. By configuration like scripting of workflow it is necessary to recompile or (re)activated the application, this is not necessary by Business Rules in a Rule Engine. Change Business Rules in a Rule Engine has effect to a related Business Rules in the whole application; by configuration it is necessary to update all related Rules separately. A major difference between Business Rules and Scripting is the way they are dawned. Business Rules has a (in first view) clear structure but don't have international standards, configuration looks messy (for non ITers), but work with clear structure based on international standards. This results that external (IT) people are

better able to solve configuration problems than by Business Rules problems in a Rule Engine. But the two biggest differences between both methods are "configuration can change lay-out" and "the Business Rules are readability for non ITers".

Research question 4.   In what kind of situation is it better to use Business Rules and when it's better to use Siebel Configuration?
When a project or project-situation will face a lot of Business Logic changes (like law changes) it is better to use Business Rules stead Configuration. A project or project-situation with a lot of static Business Logic is better off with configuration. Business Rules are better manageable, but it takes a long time to set up. Configuration is difficult to manage but is quicker (relative) to set-up.

Main research question:
What can Business Rules add and what are the possibilities of Business Rules versus Siebel configuration?

Business Rules in Siebel can do what HaleyAuthority can do but not the other way around. Both methods can do the same, but both have a different approach to manage the Business Logic. Business Rules are able to take over Siebel configuration Business Logic parts, but will not replace configuration total in the future. By using a Rule Engine are Business Rules is more flexible to import, deploy and manage in an IT Application than the current Siebel configuration. Business Rules in HaleyAuthority makes it possible for an organization to manage the Rules by non ITers. Instead non ITers (like account managers, Business experts etc.) tells ITers what the changes will be, they are able to manage the Rules by them self. At his moment the criterion to choose between Business Rules and configuration within Accenture is: Static Business Logic with configuration and Dynamic Business Logic with Business Rules.

6.2   Opinion / Discussion

The people that have been interviewed during my literature study concluded all the same: Business Rules are dozens of years old and there will be a future for Business Rules in combination with applications. Business Rules will be able to take over some configuration parts, but it is not clear what the technical feasibility of BR is and if it actually could meet the anticipated benefits. The HaleyAuthority integration in Siebel is a new feature and programmers will need time to get use to it. Because Business Rules are more manageable, but take more time to build than the configuration Business Rules. It is a point of vigilance to convince programmers of the possibilities of Business Rules, to take care every body's understand the possibilities and benefits of Business Rules. So we are able to say that Business Rules can replace configuration, but in what kind of context and in what kind of content size is not clear yet.

6.3   Recommendations

This document explains what Business Rules and what the possibilities and limitations of these Rules are. This document didn't tell what the technical possibilities are and if Business Rules really save money and time in a project. The Rules are more flexible and accessible than most configuration methods, but at this moment there are no international standards to organize the Rules. This disadvantage and the lack of information in terms of: time savings, features and practical use for non ITers will raise the question: "are Business Rules better, quicker and more accessible then current configurations?" At this moment it is not clear how Business Rules will act in Siebel projects at long term and if Business Rules are really a good alternative for configuration.

6.3.1   Recommendation 1

The concept checklist in this document will help project leaders to choose in specific project situations between Business Rules and Siebel configuration in the future. This checklist is designed to get clear standard decision requirements for all kind of Siebel projects. Also is the checklist able to answer the main research question and compare both methods on a functional manner. This checklist must be seen as a concept version, the checklist in this document is not (yet) able to help project leaders making definitive decisions.

6.3.2 Recommendation 2

The second recommendation (and main recommendation) is to start a follow up project (by example: a new internship project) based on this document and checklist. The checklist in this document is an excellent set-up for an up following project where the technical feasibility will be examined and specific answer can be given if Business Rules are really profitable compared to configuration. This new project must answer if the functional and theoretical descriptions in this document can be supported by technical feasibility in practice.

Every situation in a project needs a different approach; some situations are better off with Business Rules and other situations with Configuration.

"Don't start with the rules, start with the DECISIONS." (James Taylor, 2008).

Evaluation

The evaluation will reflect my own working method, experiences, what I have leanerd, what in my opion went well and what the most import "lessons" where in this project.

In June 2009, I discussed my assignment in the second interview with Eddy Rotmensen. Now, almost 7 months later I finished my project with a total different end result than originally in the assignment stood. This is my first learning experience: Don't take the assignment literally and give it a personal twist. The first draft of the assignment was, in my opinion, to technical for an unknown method. To get a good technical view, my opinion is that first the functional possibilities should be described (what are Business Rules, what are the able to etc.). After this scope change, I was sleeping one week in a hotel in Almere for a Bootcamp Siebel 8.0. This was an experience in itself, where I have learned a lot about Siebel and Accenture.

The most difficult (to write in the PID and project overall) was to define the scope of the project. If I had the time, it was possible to write books about this subject. So broad are the available sources and is the available information. I used the MoSCoW method to define the scope; it was the perfect method to capture the scope in this project. It was nice to see that Accenture and school let me personalize the project without restrictions.

Except the introduction about Business Rules during Siebel 8.0 Bootcamp, I didn't know anything about Business Rules and configuration in Siebel before the start of this project. Finding information about both methods wasn't hard, but get the correct and relevant information was difficult. By interviewing Business Rules experts I did get clear view about Business Rules and Siebel configuration. With the combined research results I have tried to write an objective condusion and recommendation about the possibilities of Business Rules compared with Siebel Configuration. It was hard to get clear answers from intern Accenture people. Sometimes they don't understand the assignment, because they use other words or meanings of the used definitions. My opinion was that people outside Accenture directly understand my questions and thoughts. My Accenture coach helped me to get information inside Accenture to make first contact with interview candidates. I have learned to think better before interviewing people, by example about want kind of information do I want and how do I get the necessary answers without irrelevant extra information. This was a good learning moment.

My strongest point in this project was taking a lot of self initiative, but I don't was shamed to ask help when needed. I didn't have English lessons since the middle school so this was my weakness point in this project. I have learned a lot from my Accenture coach about the English language and I am grown in English as the project proceeds.

This internship is an eye-opener for me. I did not only learned a lot about Business Rules, configuration methods (Scripting, workflows etc.), project organization, self initiative, Accenture and working in a business company, but now I know that I'm relative do not know much compare to what I will learn in the future. This graduate period is just the start of my learning process at the start of my future career.

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Literature list

Books/articles

Reference	Writer	Book title	Edition	Publishers	Date
Chap.4,5	N/A	*ATS Siebel 8.0 Essentials module 1.0 till 56.6.*	n/a	Accenture/ATS	n/a
Chap 4	N/A	*Bookshelf for Oracle's Siebel business Applications. Chap: Components of the Siebel Programming Environment*	8.0	Oracle	2007
Chap 4	N/A	*Bookshelf for Oracle's Siebel business Applications. Chap: Other Ways to Customize Application Behavior*	8.0	Oracle	2007
Chap 4	N/A	*Bookshelf for Oracle's Siebel business Applications. Chap: Overview of Configuring Siebel Application*	8.0	Oracle	2007
Chap 4	N/A	*Bookshelf for Oracle's Siebel business Applications. Chap: About Siebel Business Rules Benefits*	8.0	Oracle	2007
	N/A	*Bookshelf for Oracle's Siebel business Applications. Chap: Siebel Business Rules administration guide*	8.0	oracle	2007
Chap.4	Oracle	*Bookshelf for Oracle's Siebel business Applications*	8.0	Oracle	2007
Chap 4	Barbara Von Halle, Larry Goldberg	*The Business Rule Revolution (ebook)*	1.0	Happy About	2006
Chap 4	Martijn Schilperoort	*Business Rules komen van Mars, Processen van Venus (http://fngpubli.nl.winweb1.exchange.cysonet.com/ Files/Billeder/vip/pdfs%20artikelen/Vip0408MarsVenus.pdf)*	n/a	n/a	2008
Chap 4	Silvie Spreeuwenberg	*Trend/ Business Rules (http://www.librt.com/downloads/0508-10Tre.pdf)*	n/a	LibRT	2005

Persons

Reference	Persons	Function	Interview type	Date
Chap.4&5	Prof. Dr. Tom M. van Engers	*Professor in Legal Knowledge Management. University of Amsterdam/faculty of law.* *Did write articles about BR.*	Written	09 Oct. '09
Chap.4&5	Prof. G. Wagner	*Professor in Internet technology. Brandenburg University of Technology at Cottbus (DE) Institute of Informatics.* *Did researched BR.*	Email	07 Oct. '09
Chap.4&5	Oana Nicolae	*Teaching assistant at BTU Cottbus.* *PhD under the supervision of professor Wagner.*	Email	13 Oct. '09
Chap. 4&5	Niels Hoijtink	*Coach and Siebel expert Accenture*	Physic	26 Oct. '09
Chap. 4&5	Rob Swinkels	*Accenture consultant ate the IND project, Rijswijk*	Physic	09 Dec. '09

Audio

Reference	Last date used	Subject	Source
Chap. 4	*22 Dec. '09*	BR	*http://www.oracle.com/applications/podcasts-siebel.html*

World Wide Web

Reference	Last date used	Subject	Source
Chap. 2	22 Dec. '09	Accenture	http://www.accenture.com/Countries/Netherlands/About_Accenture/
Chap. 2	22 Dec. '09	Accenture	http://accenture.com/Countries/Netherlands/Services/Client_Successes/default.htm
Chap. 2	22 Dec. '09	Accenture	http://www.accenture.com/Global/Services/Alliances/Accenture-Alliance-List.htm
Chap. 2	22 Dec. '09	Accenture	Accenture.com/Global/About_Accenture/Company_Overview/CompanyDescription.htm
Chap. 2	22 Dec. '09	Accenture	careers3.accenture.com/Careers/netherlands/OverAccenture/OnzeHistorie/default.htm
Chap. 4	22 Dec. '09	Siebel	https://kx.accenture.com/Products/Pages/SiebelMethods.aspx
Chap. 4	22 Dec. '09	Siebel	http://www.oracle.com/us/products/applications/siebel/index.htm
Chap. 4	22 Dec. '09	Siebel	http://www.oracle.com/us/corporate/press/017631_EN
Chap. 4	22 Dec. '09	Siebel	http://siebel-essentials.blogspot.com/2009/05/oracle-enterprise-policy-automation.html
Chap. 4	07 Sept. '09	BR	cibit.nl/site.nsf/page/kim_nieuws_informatiemanagement_business_rules_trends
Chap. 4	22 Dec. '09	BR	http://keywen.com/en/BUSINESS_RULES
Chap. 4	22 Dec. '09	BR	http://www.ebizq.net/news/7670.html
Chap. 4	22 Dec. '09	BR	http://www.brcommunity.com/
Chap. 4	22 Dec. '09	BR	http://www.lambert-tech.com/brlinks.htm
Attach. E	22 Dec. '09	Workflow	http://siebelunleashed.com/siebel-workflow-process-an-introduction/
Attach. E	22 Dec. '09	Workflow	http://siebelhacker.blogspot.com/2009/04/workflow-vs-server-script.html
Chap. 3	22 Dec. '09	PRINCE2	leren.nl/rubriek/zakelijk/organisatie_en_management/projectmatig_werken/prince2/
Attach. E	22 Dec. '09	Scripting	http://improvedsolutions.com/programming/
Attach. E	22 Dec. '09	Config.	http://siebel-answers.blogspot.com/2007/10/siebel-configuration-overview.html
Chap. 4	22 Dec.'09	Difference	http://stackoverflow.com/questions/778007/when-is-a-business-rules-engine-used

PDF

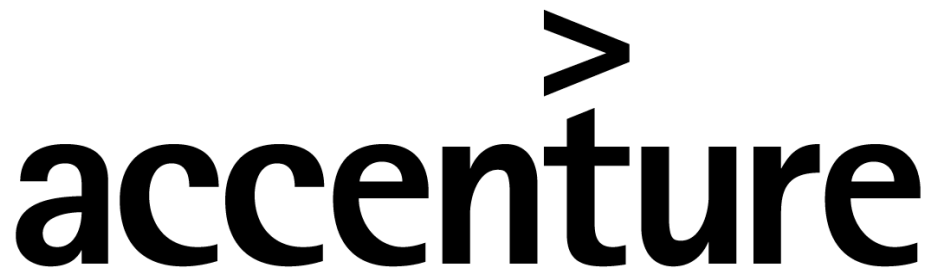| Reference	Last date used	Subject	Source
Chap. 4	30 Sept. '09	Haley	http://www.ruleburst.com/members/pdf/Haley-Oracle-Siebel_datasheet.pdf
Attach. E	22 Oct. '09	Config.	Bookshelf: About Configuring Siebel Applications.pdf

Presentation

Reference	Last date used	Subject	Source
Chap. 2	18 Sept. '09	Accenture	ATS Starterspresentaties sept 2009 stagiaires
Chap.4	22 Dec. '09	BR	accenture.com/Repositories/ContributionForm.aspx?path=C14/59/77&mode=Read
Chap. 4	30 Sept '09	Siebel, BR	8.0 Core Platform Enhancements
Chap. 4	12 Oct '09	Siebel	01ESS_IntroducingSiebelApplication
Chap. 5	22 Dec.'09	Scripting	http://www.scribd.com/doc/7044152/Siebel-Scripting-1

Others

Reference	Last date used	Subject	Source
FrontPage	22 Dec. '09	Logo	*http://www.citi.ru/images/logo_accenture.gif*
All pages, chap. 3	22 Dec. '09	Picture 1.	*http://idannyb.files.wordpress.com/2008/09/sighp_sz3_blk_nof_mac_accenture.jpg*
Chap. 3	22 Dec. '09	Picture 2.	*Own creation*
Chap. 4	22 Dec. '09	Picture 3.	*http://www.access.net.pk/images/oracle_siebel_logo.jpg*
Chap. 4	22 Dec. '09	Picture 4.	*8.0 Core Platform Enhancements, page 23.*
Chap. 4	22 Dec. '09	Picture 5.	*http://siebel-essentials.blogspot.com/2009/05/oracle-enterprise-policy-sssautomation.html*
Chap. 4	22 Dec. '09	Picture 6 till 10	*Own creation*
Chap. 5	22 Dec. '09	Picture 11	*Own creation*
Attach. C	22 Dec. '09	Picture 12	*ATS Starterspresentaties sept 2009 stagiaires.ppt*
Attach. C	22 Dec. '09	Picture 13	*ATS Starterspresentaties sept 2009 stagiaires.ppt*
Attach. D	22 Dec. '09	Picture 14	*Bootcamp presentation week 3*

Attachments

Attachment A.   PID

Business Rules vs. Siebel configuration.
Project Initiation Document

Written by

Mark Suurland
Accenture Technology Solutions
Intern Accenture/ATS (period Sept '09 till Jan '10)
mark.suurland@accenture.com
Tel: +31 6 11090729
Post address: Bruine Akkers 59 6026DL Maarheeze

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Change management

Version management

Version	Status	Date	Note
0.01	Provisional	02 Sept. 2009	Set-up PID template.
0.1	Provisional	03 Sept. 2009	
0.2	Provisional	04 Sept. 2009	
0.3	Provisional	08 Sept. 2009	This week was the Bootcamp Siebel 8.0.
0.4	Provisional	14 Sept. 2009	
0.5	Provisional	15 Sept. 2009	
0.7	Provisional	15 Sept. 2009	First concept available to be checked. First design.
0.8	Provisional	17 Sept. 2009	Second concept.
0.9	Provisional	21 Sept. 2009	New added details.(Version was distributed as version 1.01)
1.0	Provisional	24 Sept. 2009	Change the meeting comments.
1.5	Provisional	07 Oct. 2009	Change problem description.
2.0	Definitive	09 Oct. 2009	Change last notes, coach. Final check release PID.

Approval

Version	Approval date	Name	Function	Initials
0.01	08 Sept. 2009	Rien Hamers	School coach	RH
0.9	23 Sept. 2009	Rien Hamers, Niels Hoijtink	School coach, Accenture coach	NH, RH
1.0	01 Oct. 2009	Rien Hamers	School coach	RH
1.5	09 Oct. 2009	Niels Hoijtink	Accenture coach	NH
2.0	09 Oct. 2009	Rien Hamers, Niels Hoijtink	School coach, Accenture coach	NH, RH

Distribution list

Version	Date	Forward to:
0.2	04 Sept. 2009	Rien Hamers
0.8	15 Sept. 2009	Rien Hamers and Niels Hoijtink
0.9	21 Sept. 2009	Rien Hamers and Niels Hoijtink .(Version was distributed as version 1.01
1.0	24 Sept 2009	Rien Hamers and Niels Hoijtink
1.5	07 Oct. 2009	Niels Hoijtink
2.0	09 Oct. 2009	Fontys University Eindhoven, A. Barten.

Table of Contents

Graduate thesis version 1.0

1. Introduction and project background

1.1   Introduction

This document is the set-up for the project: *Business Rules vs. Siebel configuration*. This project has a maturity of 5 months/20 weeks and will be written by Mark Suurland, student of the Fontys University Eindhoven.

This document will describe the project organization, objectives, assignment, project definition, activities, planning and the expected results. Also will this document will describe supporting processes like: Scope, Costs, benefits, risks and the planning.

1.1.1   Project name

The project name is: Business Rules vs. Siebel configuration. The reason why I'm chose this title is simple to declare: The title includes all the important elements of the project and it stands for the end result of this project.

1.2   Project background

1.2.1   Company description

The sponsor of the project is Accenture Technology Solutions department ATS. Accenture had their own company description:

 "Accenture is a global management consulting, technology services and outsourcing company. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world's most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. With approximately 177,000 people serving clients in over 120 countries, the company generated net revenues of US$23.39 billion for the fiscal year ended Aug. 31, 2008.

Our "high performance business" strategy builds on our expertise in consulting, technology and outsourcing to help clients perform at the highest levels so they can create sustainable value for their customers and shareholders. Using our industry knowledge, service-offering expertise and technology capabilities, we identify new business and technology trends and develop solutions to help clients around the world:

-        Enter new markets.
-        Increase revenues in existing markets.

- Improve operational performance.
- Deliver their products and services more effectively and efficiently.

We have extensive relationships with the world's leading companies and governments and work with organizations of all sizes—including 96 of the Fortune Global 100 and more than three quarters of the Fortune Global 500. Our commitment to client satisfaction strengthens and extends our relationships. For example, of our top 100 clients in fiscal year 2008, based on revenue, 99 have been clients for at least five years and 87 have been clients for at least 10 years. "

In the attachment C. you will find an organization chart of the relevant departments for this project.

1.2.2   Department ATS, Siebel Cell

The Siebel specialists are experts in the creation and management of all layers of the Siebel products. Those specialists have a lot of knowledge about several Siebel components which results in products like: Call Centers, Sales Force Automation, Case Management, Siebel Analytics, etc.

1.2.3   Company culture

Accenture have in all layers and departments of the company an "open" culture. Managers or Employees, everybody talks in the same kind of language. The corporate clothing is standard a blouse with trouser and without tie.

1.2.4   Accenture coach and Sponsor

The responsible sponsors are Eddy Rotmensen and Niels Hoijtink from the department ATS. Eddy Rotmensen is end responsible for the Siebel Cell. Niels Hoijtink is programmer in that Siebel Cell. On behalf of Accenture Niels Hoijtink will be responsible for the assessments and coaching of the several end products. The end responsible of the project is sponsor Eddy Rotmensen; he is allowed to make radical decisions about the project.

1.2.5   Contractor

The contractor of this project is Mark Suurland, student of the Fontys University Eindhoven. This person is responsible for a high quality end result, with the necessary documents included.

1.2.6   School coach

The school's school coach is Rien Hamers, docent at the Fontys University of Eindhoven. In this project he will coach and attend the contractor. He is the first person to communicate about the products for school.

Graduate thesis version 1.0

2. Project definition

2.1 Description of the problem

Siebel is standard software, this means the software has a lot of possibilities to support business processes with standard functionality. There are many different configuration techniques/ possibilities to support a company's business processes with Siebel as a CRM application. Each requirement asks for a different approach. Every approach has its own advantages and disadvantages. This is something that has to be considered in the design phase. Sometimes the conclusion is that a certain requirement is difficult to (completely) meet with the standard available configuration options. This is typically the case with requirements concerning the implementation of company specific business logic. This could result in a compromising solution or perhaps a custom build solution. Aiming for the delivery of high performance solutions this is often not the most preferable situation. Customers mostly don't like to compromise and custom solutions can have various disadvantages. For example higher cost to build, maintain/ support and can be a risk when migrating to newer versions of Siebel. To offer customers a more flexible solution to implement their business logic and keep Siebel closer to its off-the-shelf functionality we want to know more about the role rules engines can fulfill to release this.

2.2 Objectives

There are a several objectives for this project; there are a few sub objectives and one main objective.

2.2.1 Main Objective

- Investigate what business rules are and what the possibilities are versus Siebel configuration.

2.2.2 Sub objectives

- Define what Business Rules are.
- Define the possibilities and limitations of Business Rules
- Define the differences between Rules Engines and Siebel configuration.
- Define in what kind of situation Business Rules or Siebel configuration can be used.

2.2.3 Research Questions

To achieve the described objectives and create a high quality advice, it is necessary to answers the next research questions:

The main question of the Siebel Rules Engines project is:

- *What can and are the possibilities of Business Rules versus Siebel configuration?*

To answer the main question it is necessary to answer the next sub questions:

1 *What are Business Rules?*
2 *What are the possibilities and limitations of Rules Engines?*
3 *What are the differences between Business Rules and Siebel configuration?*
4 *In what kind of situation is it better to use Business Rules and when it's better to use Siebel Configuration?*

2.3   Description of the assignment

With the release of Siebel version 8.0 a new configuration technique was added: Business rules using a rule engine. This was based on simplified version of HaleyAuthority that is shipped with the installation. This Rule Engine is able to take over some parts from current Siebel configuration. The assignment is to write an advice to the sponsor. This advice makes clear if Rules Engines are able to be a good alternative instead of Siebel configuration.

To get a high quality advice, the project must start with a definition of Business Rules, Rules Engines and the Siebel configuration. Those definitions will be posted in the literature study.

The second step in the project is a desk research with the possibilities and limitations of Business Rules. When these results are clear, they will compare with the current Siebel configuration, to make clear what the differences are inside Siebel 8.0 between those configurations.

With above answers it possible to create a checklist with the possibilities and limitations of both configurations. With this checklist Accenture is able to make a decision per project if they will use Rules Engines or Siebel configuration to meet a certain (set of) requirement(s).

3. Project activities

3.1 Start-up/initiation Phase

Answering the sub research question: 1.   *what are Business Rules?*

3.1.1 Create PID

- Create project team.
- Interview project manager
- Making concept PID.
- Getting feedback project manager.
- Repair concept PID.
- Making final release PID.

3.1.2 Research information

- Follow a course Siebel 8.0 at Accenture Almere.
- Research project information.
- Decide scope project.
- Getting project information and tips from project manager.
- Search for Rules Engines.
- Create source list

3.1.3 Literature study

- Create literature study (describe the definitions of: Business Rules).

3.1.4 School

- Create Essay
- Create logbook

3.2 Business Rules possibilities and limitations phase

Answering the sub research question: 2.   what are the possibilities and limitations of Rules Engines?

3.2.1 Literature study

- Research what Business Rules are (not) able to.
- Interview Business Rules experts
- Appeal to my source list.
- Getting feedback Accenture coach and school coach.
- Create finale release.

3.3   Business Rules and Siebel configuration phase

Answering the sub research questions: 3.   what are the differences between Business Rules and Siebel configuration?

4.   In what kind of situation is it better to use Business Rules and when it's better to use Siebel Configuration?

3.3.1   Literature study

- Cooperate with a Siebel expert summated by Niels Hoijtink.
- Compare the differences trough the package selection method.
- Getting feedback Accenture coach and school coach.
- Create checklist
- Getting feedback Accenture coach and school coach.
- Create finale releases.

3.4   Finale Phase

Answering the main research question: *What can and are the possibilities of Business Rules versus Siebel configuration?*

3.4.1   Completion

- Create concept advice witch the answer of the main research questions.
- Getting feedback project manager.
- Create final release.

3.4.2   Evaluation

- Presentation advice.
- Getting feedback.
- Implementation advice results.

3.4.3   School

- Completing Essay.
- Defending Essay.
- Graduate

4. Scope and constraints

4.1 Scope

4.1.1 Project scope

The start date of the project is Tuesday 2 September 2009. The project will end at least on the 15th of January 2010.

This project is going to give an advice about the software Oracle Siebel 8.0. The area of advice is the Siebel Cell from Accenture Netherlands department ATS which working with Oracle Siebel 8.0. The possibilities and limitations of Rules Engines will be compared with the current Siebel configuration.

4.1.2 Product scope

The end-product must have this: An advice about, what business rules are and what the possibilities are versus Siebel configuration.

The end-product should have this if at all possible: Answering the question: What kind of project needs what kind of configuration?

Could have this if it does not affect anything else: A checklist which can be used by project managers to choose to right configuration method inside Siebel 8.0.

Would like to have but won't have this time around: Technical research about the possibilities of Business Rules.

4.2 Conditions

To get a high quality of end results, the company and the project team must ante up some conditions. Without those conditions the project will ends with low quality or will be canceled before the normal end date.

- Every project member is from Monday till Friday available from 9.00am till 5.00 pm. unless otherwise is agreed.
- Every two weeks a meeting with the project team and sponsor.
- If a new project member without knowledge of Siebel oracle 8.0 starts the project, this team member needs to get a Siebel 8.0 Boot camp given by Accenture Netherlands.
- The project team needs all necessary software and hardware conform market conditions.
- The project team needs a good accommodation to work with all the necessary conditions. This means that the project team needs access to all necessary software and hardware in accordance with the requirements described in chapter 6 of this document.

- Accenture Netherlands department ATS allowed the project team to scan necessary documents and use them where possible.
- Accenture Netherlands department ATS allowed the project team.
- Sufficient participation of the managers and other involved people during interviews and meetings.
- The project team needs a quickly response from the sponsor by important questions. (24 hour at workday's).

5. Products

5.1 Start-up/initiation Phase

- Concept PID.
- Final PID.
- Literature study (definitions).
- Communication plan.
- Create Source list.
- Risk analysis.
- Create set-up Essay (school)
- Create logbook (school)

5.2 Business Rules possibilities and limitations phase

- Concept literature study (Possibilities and limitations)
- Interview rapports.

5.3 Business Rules and Siebel configuration phase

- Concept literature study (comparing Business Rules and Siebel configuration)
- Checklist

5.4 Finale Phase

- Concept advice
- Final Advice + Conclusion and recommendation
- Presentation

5.5 Others

- Logbook (weekly)
- Essay(school)
- Interim rapport
- Presentation
- Feedback

6. Quality of results

6.1 Quality end product

Troughs answering the research questions and combine those together, there will be a quality advice with all necessary information and recommendations. The project team is going to show the results by presentation to the sponsor and stakeholders. Also, there will be a separate presentation towards the Siebel Cell of Accenture/ATS. After received the necessary documents, the sponsor and school coach will grade the results of the project.

To achieve the described quality of the end products, the project team will work with concepts. These concepts will be distributed to Niels Hoijtink (Accenture, ATS) and Rien Hamers (Supervisor, Fontys). They are going to check the documents and give feedback of the several products.

The project is failed when the "must have" (chapter 4.1.2) charge isn't invoked into the end-product.

6.2 Quality intermediates

There will be a several grad points during the duration of the project. Every concept version will be send to the sponsor and stakeholders. After one or two evaluation the final release will be yielded. With this format the project team excludes unexpected grades and can guarantee the end quality.

6.3 Control

The project team must report every week to the school coach a logbook with the weekly work. Also must they return just on time the concept/final versions of the several products. During review sessions are ambiguities and errors going to be noted. This gives the project team the time to recover ambiguities and errors.

6.4 Standards and techniques

The project team will work with the following standers:

- Standard template for documents and presentations.
- Working days from 9.00 am till 17.00 pm, midweek's.
- Project methods
  - PRINCE2/ADM(best practice)
  - PID method: Grit (best practice).
  - MoSCoW (Most have this, Should have this, Could have this and Would like this)
  - Fit/Gap analysis.

The project team will work with the following Software and hardware:

Graduate thesis version 1.0

- Documentations and presentations: Microsoft Office 2007.
- OS: Microsoft Windows Vista Enterprice.
- Analyze software: Oracle Siebel 8.0, with HaleyAuthority tool.
- Laptop: HP Compaq 6910p.

7. Project organization

7.1 Functions and persons

7.1.1 Project team

Project Member	Function	Task
Mark Suurland	Project leader	Performer, responsible for a high quality advice.
Niels Hoijtink	Accenture coach, companion	Coach, responsible for accompaniment.
Eddy Rotmensen	Final chief, sponsor	Sponsor of the assignment.

7.1.2 School coach

Graduation Teacher	Function	Task
Rien Hamers	Coach	Person between school and intern.

7.2 Availability

All the project members and stakeholders are midweek's available from 9.00 am till 5.00 pm. unless otherwise is agreed.
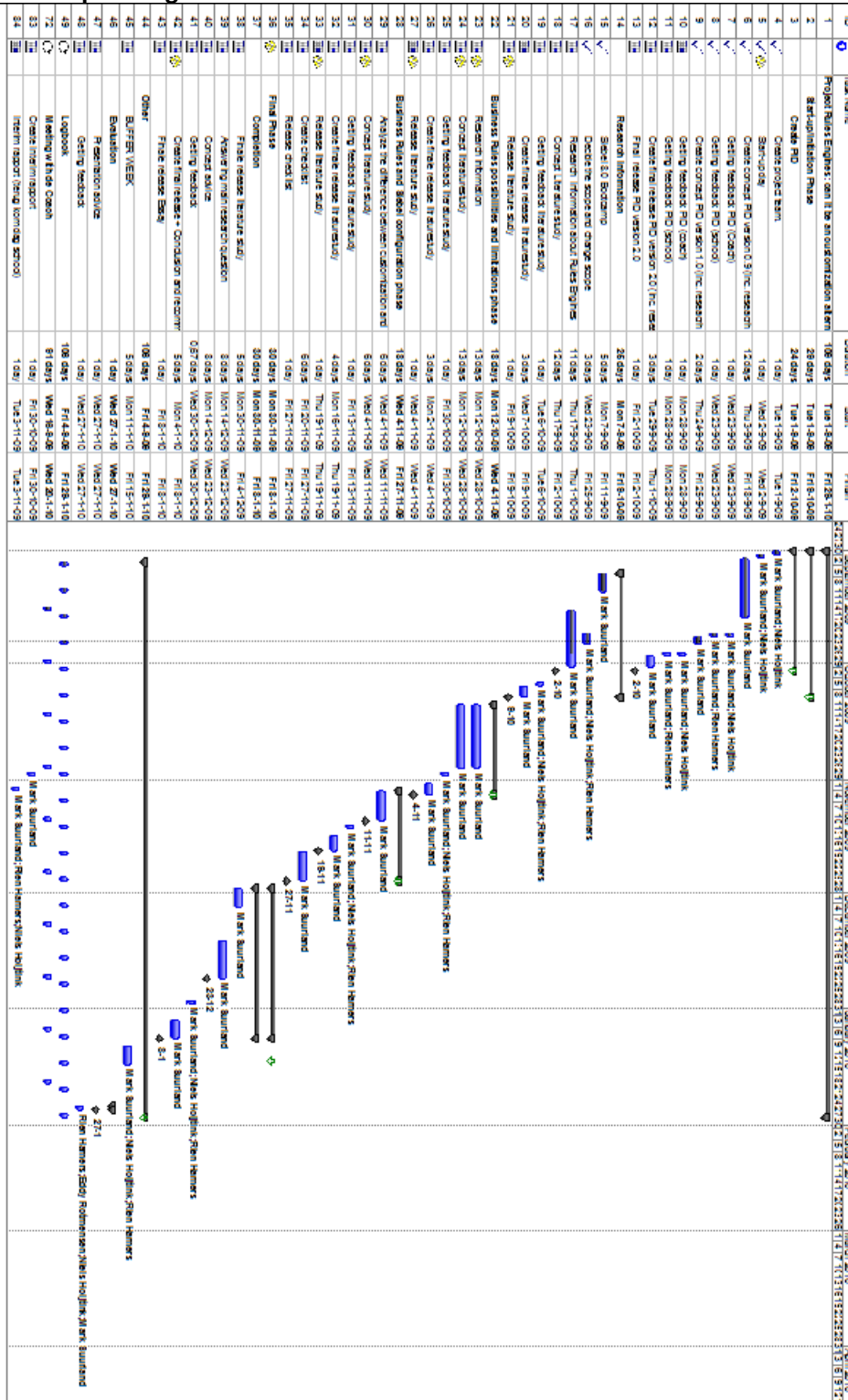
7.3 Powers

Project Member	Powers
Mark Suurland	Create, change project products
Niels Hoijtink	Control, analyze project product
Eddy Rotmensen	Can make decision with large impact out of the project.
Rien Hamers	Can make decision with large impact out of Fontys.

7.4 Reporting

Mark Suurland must report all the concept and final documents towards Niels Hoijtink and Rien Hamers. The final releases must send towards internship coordinator. See the communication plan (Attachment A.) for the reporting requirements of the weekly logbook.

8. Planning

This planning is the Millstone/product view of the project**. Please see attachment D. for a better and more detailed planning.**

9. Costs and benefits

9.1 Costs

It is not possible to declare the amount of costs for this project. The costs will be express in the benefits of the project result.

9.2 Benefits

At the end of this project there will be a clear view about the possibilities of Rules Engines in the new version of Oracle Siebel. Based on this document we can't directly say if there will be saved costs at the end of the project. This is not possible because it is a possibility that the end advice will be negative for Rules Engines. In this case the costs of the customers will stay at the same level as now. When Rules Engines are a good alternative for customization, the end product will give a project team a good overview about the possibilities of Rules Engines. So they can those easily between Rules Engines and Custom made products.

- The biggest benefit for the sponsor is a high quality advice made in a short period without a lot of money.
- The biggest benefit for the team leader (Mark Suurland) is the learning process and (hopefully) a good end result for the end graduate.

10. Risk

10.1 Intern risks

- Inexperience project members.
- The project goal is not achievable within the project time.
- Insufficient knowledge by project members about Siebel 8.0.
- Insufficient input/accompaniment Accenture coach.
- Large distance between project member and Accenture coach (Rijswijk > s' Hertogenbosch).
- Conflicts between project member and project Accenture coach.
- English written documentation.
- One or more project members get sick for a long time.
- By don't make any back-ups it is possible to lose important data.

10.2 Extern risks

- The scope is too large.
- Insufficient collaboration from the sponsor and project Accenture coach.
- The project member doesn't get enough information about the project object.
- The project member doesn't get necessary soft and hardware.
- Changes in the project team.
- No wiliness to make time for the project member.
- Broken laptop or software.

Attachment PID

PID Attachment: Communication plan

A.1   Intern

Project Member	Location	Email	Phone	Available
Mark Suurland	Den Bosch	mark.suurland@accenture.com	+31 6 11090729	Mo. till Vr.
Niels Hoijtink	Rijswijk	niels.hoijtink@accenture.com	+31 6 22218444	Mo. till Vr.
Eddy Rotmensen	Almere	eddy.rotmensen@accenture.com	+31 6 52367809	Mo. till Vr.

A.1.1 Recourses to communicate

- Microsoft MSN Live.
- Microsoft Office Communicator 2007.
- Microsoft Office Outlook 2007.
- Apple Iphone.
- Meetings.

A.2   Extern

Project Member	Location	Email	Phone	Available
Rien Hamers	Eindhoven	z.hamers@fontys.nl	+31 77870909	Mo. till Vr.

A.3   Logbook and appointments

There will be every two weeks a meeting with the sponsor. This meeting is held in Rijswijk by IBM Netherlands at 11 o'clock. They are no weekly physical meeting with the school coach. But there will be every week contact in the form of a logbook. The project leader will send this logbook every Friday. The only contact moments with the school coach are in week 3, 10, 15 of the project.

This is the logbook template:

Week 1: 1 Sept. – 4 Sept.	Work	Note
Di 1 September	Introduction day Accenture at Almere.	I did make appointments with my Accenture coach.

PID Attachment. Sources list

During this project I can access the following sources to use and complete my project.

B.1   Siebel resources

- Siebel Bootcamp (week 2)
- Siebel 8.0 Essentials
- Siebel Application and tools
- Siebel Bookshelf (http://www.oracle.com/technology/documentation/siebel.html)
- Oracle University (//education.oracle.com)
- Oracle website (//metalink3.oracle.com)
- Technical account manager (TAM)
- Oracle Expert Services
- Help Resources provided by Accenture
    - Siebel practice Home Page (//kx.accenture.com/Products/Pages/CRM-1269.aspx)
    - Siebel Methods (//kx.accenture.com/Products/Pages/SiebelMethods.aspx)
    - Siebel Estimator
    - myLearning

B.2   General Resources

- Google (Google.nl, translate.google.com, gmail.com)
- Portal.accenture.com
- www.oracle.com
- 8.0 Core Platform Enhancements (Oracle Siebel 8.0 presentation).
- ATS Starterspresentaties Sept 2009 stagiaires
- http://forums.oracle.com/forums/thread.jspa?threadID=871229&tstart=0
- http://www.oracle.com/us/corporate/press/017631_EN
- http://jadex.informatik.uni-hamburg.de/rules/bin/view/Resources/Rule+Engines
- http://onlineappsdba.com/index.php/2009/04/27/oracle-policy-automation-modeling-earlier-haley-office-rules-determination/
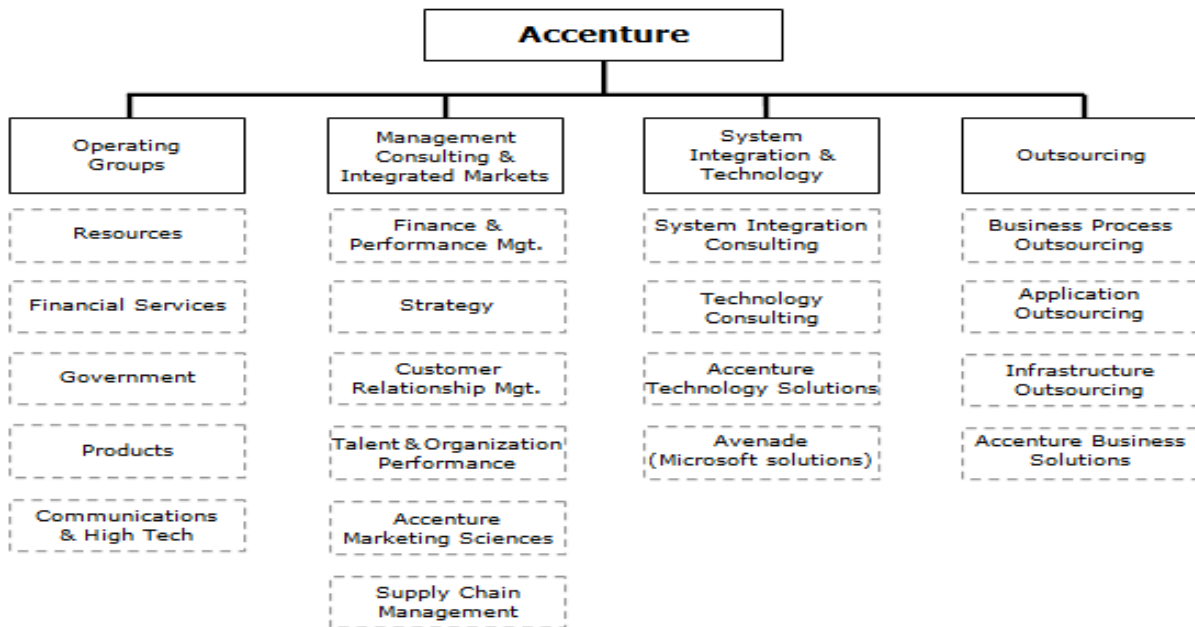
B.3   Books

- Course books (Bootcamp)
- Roel Grit – Project Management
- School library

B.4   Others

- School coach
- Rolf Kramer (Siebel Expert)
- External people like professors and Siebel experts.

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PID Attachment. Company structure

This is the department structure of Accenture.

My Cell in my department Accenture ATS NL.

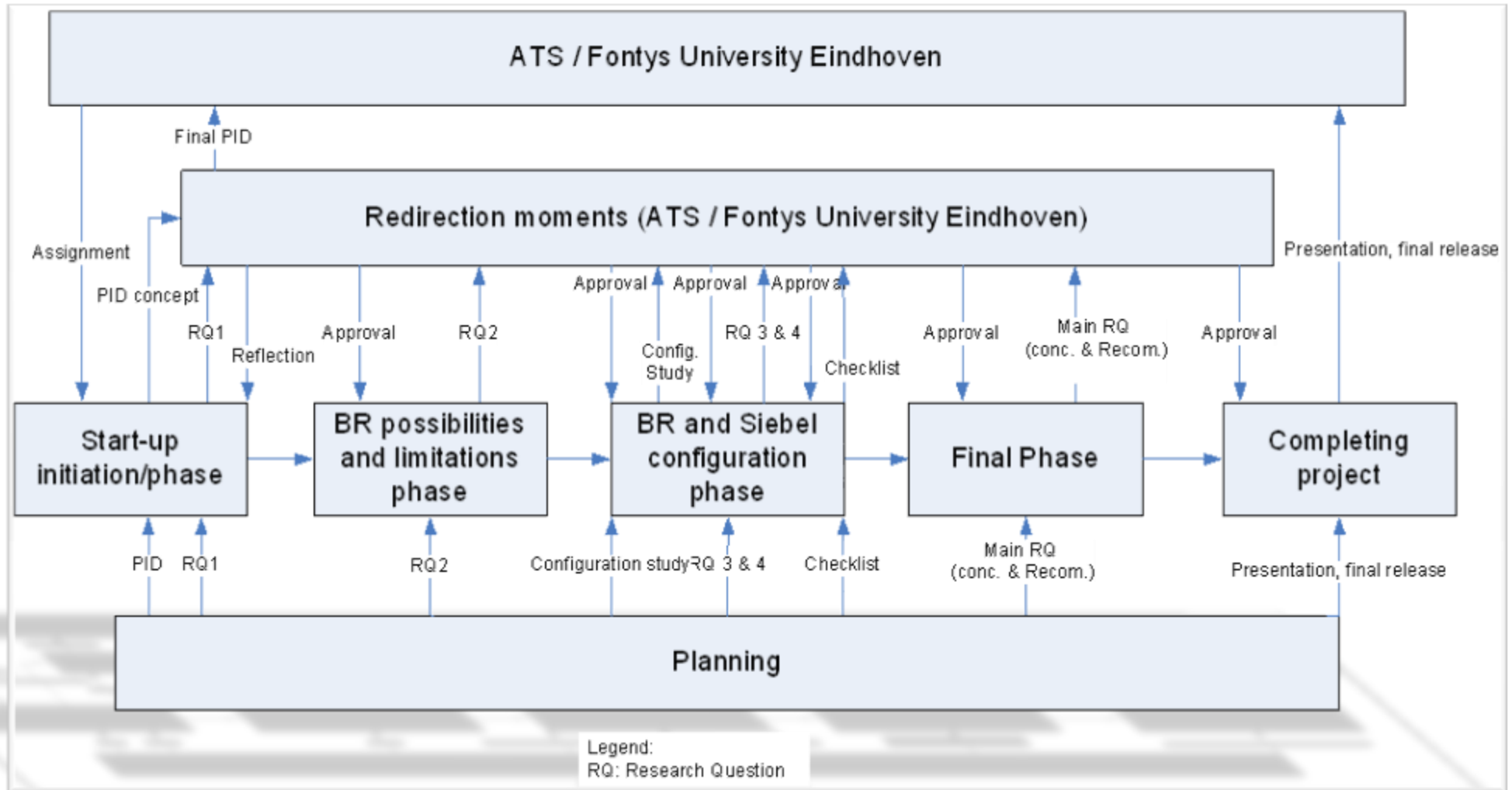## *Attachment B.   Redirection moments*

There were 3 evaluation moments during this project with the school coach to evaluate the project process. Also I had weekly contact with my Accenture coach to discuss the project; halfway through the project I had an evaluation with my Accenture coach and school coach. Every Friday I had summarized my daily activities in a logbook; at the bottom of this chapter you will find an example of my logbook.
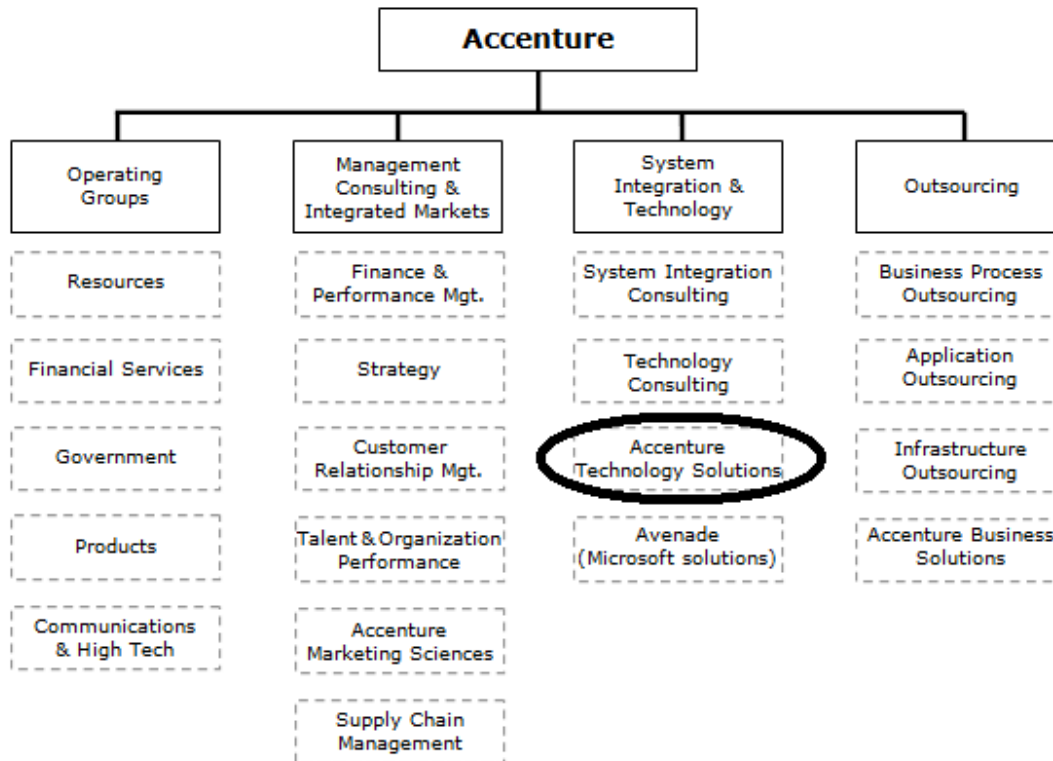
The evaluation moments with my school coach helped me to define a scope, order my document and advice me with little details for a better thesis. The biggest redirection in this project was the scope change; my scope was too large for a period of 5 months. After a meeting with my school coach and Accenture coach I change the scope to a more functional project, without extra research about customization by customers of Accenture. The other 2 redirection moments result is many little structure and content changes.

By the meeting with the Accenture school coach we have decide to create a concept checklist, to get a physic end product of the project. This checklist will be a set-up for a follow up project. The weekly meetings with my Accenture coach helped me to hold myself of the project scope and keep me alert on content error and spelling errors.

An example of a logbook:

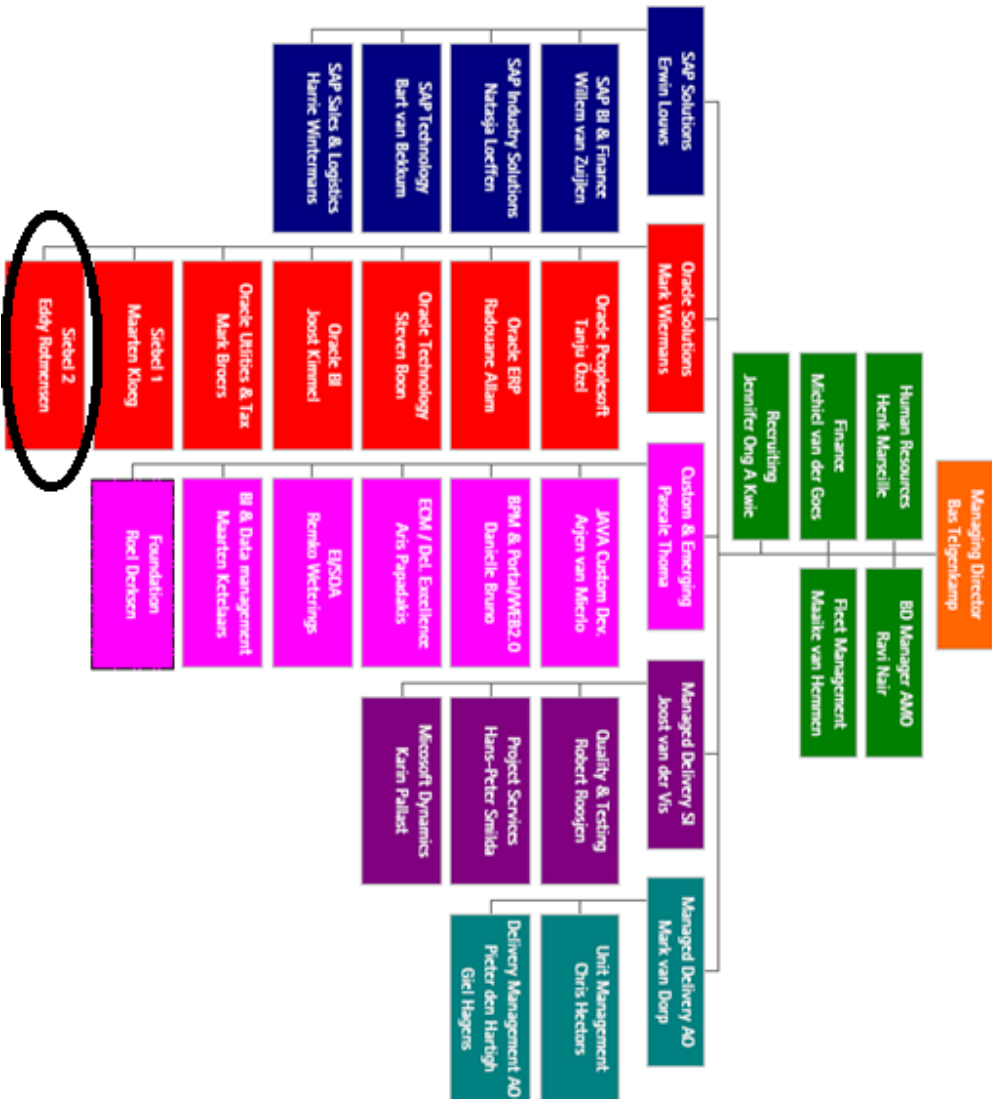| Week 10: 02 Nov. – 06 Nov.	Work	Note
Mo 02 November	Change Thesis rapport after notes Rien. Create first evaluation document project. Change chapter order thesis.	*Source list* *For tomorrow at the comeback day at school.*
Tu 03 November	First evaluation day at school	Not at office, but at the Fontys University Eindhoven.
We 04 November	**Morning:** continued with configuration details **Midday:** Meeting in Rijswijk	With Niels Hoijtink and Eddy Rotmensen.
Th 05 November	**Morning:** . Change details in thesis. Create evaluation. **Midday**: Continued with configuration.	Notes from Niels and Rien
Vr 05 November	**Morning:** Finish concept configuration. **Midday:** Check configuration facts.	By Bootcamp presentations.

Attachment C.   *PRINCE2 best practice*

Attachment D.   Company overview

Overview Accenture:

Picture 12: Accenture overview (2008)

Department Accenture/ATS overview

Picture 13: ATS overview (2008)

Attachment E. Description How to import Business Rules in Siebel 8.0 Object Importer

In the HaleyAuthority, it is possible to create Rules, but before that, it is necessary to specify the rules details. In the Object Importer (or in Haley the Import Wizard) it is possible to:

- Importing Siebel object definitions by helping a user to pick only the subset of objects that is needed to define rules. When the user picks a business object, all of the business components belonging to the business object are listed. The user can drill down and pick individual business components and fields.
- Synchronizing the HaleyAuthority knowledge base with the Siebel Master Repository; so they will create the HaleyAuthority concepts and relations that represent imported Siebel objects consistent with the current Siebel object model.
- Initializing a new knowledge base by adding a set of concepts, relations, procedures, verbs, and verb phrasings that are required for implementing rules in Siebel applications.

When you import Siebel objects into HaleyAuthority, Siebel Object Importer builds the following HaleyAuthority objects:

- HaleyAuthority concepts that represent Siebel business components and fields
- HaleyAuthority relations that are generated from links, or 1:M relations, between Siebel business components. Phrasings are generated for such relations, such as "*An Credit Card has a Credit Card item*".
  - HaleyAuthority relations that are generated between Siebel business components and child fields. Phrasings are generated for such relations, such as "*An account has a name*".

Siebel Deployment plug-in

When the rules are created it is necessary to set those rules into a runtime Table (see next paragraph). The Deployment plug-in gives users the power to select modules to be deployed, compiles selected rule modules and deploys them into the Siebel runtime environment.

About Siebel Rules Runtime

Rules Runtime Administration screen

Rules Runtime is a way to invoke the Rules Engine in a Siebel Application. At this point, the Rules are created and set into a Run Time table, ready to executed and get in service. Before the Rules can be executed, it's necessary to activate the Rules. This is an option in the Rules Runtime Administration screen, this screen also provides: configuration and inactivation of deployed rule modules. Before the Rules can be activated, the Rules must be configured. At this point, the rule module will be connected to the associated business object, with the necessary data provided to the run-time rules engine. After the above step is it possible to activate the Rules, the next step is to execute the rules and get in service.

Rules invocation

The first step to execute the Rules is to invoke the Rules Engine by creating a Run-Time Event Action set. A Rune-Time Event action can be seen as integration between the Haley inference engines with Siebel Object Manager. It has the following functions:

- Passes Siebel runtime data to the Haley inference engine.
- Manages Haley's runtime knowledge base (a Siebel Object Manager instantiation), which it loads with rule modules.
- Manages working memory, which is used to load runtime data that the rule module is run against.
- Handles invocations into the Haley inference engine.
- Performs rule execution results from the Haley inference engine in the Siebel application.
- Provides tracing and logging.

Run-Time Inference Engine

The Rune-Time Inference Engine pas data forwards and executes it to the chosen Siebel application. Also it is possible to log and trace the Rules in Run-Time Inference engine.

Additional ways to invoke the Business Rules

Instead of the Siebel Rules Runtime there are two other ways to invoke the Rules Engine into a Siebel Application: In Custom scripts and in Siebel Workflows. Those ways to invoke will not discuss further in this document.

Invoking Business Rules into Siebel 8.0

There are several mechanisms in Siebel 8.0 which can use Business Rules from HaleyAuthority:

- Runtime events
- Siebel workflows
- Siebel Task-based UI
- Business services

NOTE: Please see upcoming projects for a more technical extensive research about the Siebel Business Rules possibilities!

Source

"ATS Siebel 8.0 Essentials module 1.0 till 56.6" , official Oracle Bootcamp books, 2007
"About Developing and Deploying Siebel Business Rules", official Siebel Bookshelf, 2007
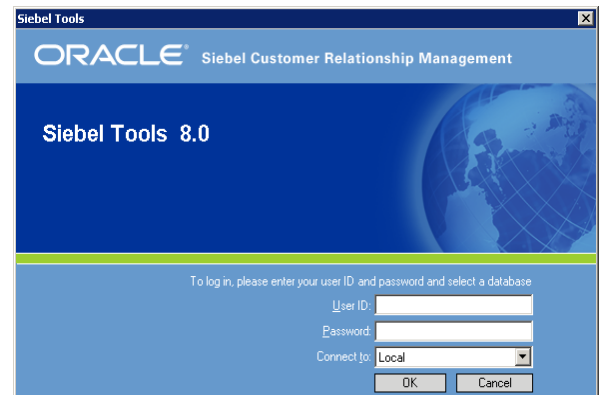
Attachment F.   Siebel 8.0 configuration

> *NOTE BEFORE: the definition of Siebel 8.0 configuration for this document stands for all possible configuration and customization made by user and/or Siebel expert. In this chapter there will be a description about the most common configuration methods in Siebel 8.0.*

Siebel knows al lot of different types of configuration for customizing, which all can be modified in several ways. In this document, the most common configuration in Siebel will be split in two types: "Customization configuration" and "Applications Configuration". "Customization configuration" is the way how Siebel experts create, manage and deploy custom made products by the configuration application Siebel Tools or other configuration mechanisms. This is an application to configure Siebel CRM packages by several programming types and languages. "Applications Configuration" can be seen as the optimization of the Siebel application, like the table positions or other lay-out configurations. To understand the differences between "HaleyAuthority Business Rules" and "configuration Business Rules" will this attachment also (short) describe how Business Rules are used inside the configuration parts.

Siebel Tools

Siebel Tools is a configuration tool for modifying and creating new Siebel objects (metadata that define Oracle's Siebel Business Applications) performed by Siebel experts. Siebel Tools is a separate program for Siebel experts with direct access in the associated Siebel environment. In the tool it is possible to customize/optimize an application non programming configuration. We are able to say that Siebel Tools a flexible program is, with al lot of functionalities to assist the configuration requirements of the customer. In this thesis we will specify the customization methods scripting and workflow which are used in "Customization configuration". It is also possible to configured (by example: the lay-out) Siebel applications in Siebel tools without direct scripting, but with "point and click".
Like earlier written it is not in the scope of this project to explain in detail the technical details about to topic.

Customization configuration

picture 14: Login screen Siebel Tools

Siebel Workflow

Workflow is one of the most commonly used functionality in Siebel Tools. With Workflow it is possible to create and manage simple and complex business process without much trouble. A Workflow works literally as the name says: You create the workflow by "painting" a workflow in Siebel Tools. Siebel Workflow is a typical functional way to configure customizations specially compared with technical scripting. It is not necessary to recompile a workflow after making a change, but the workflow needs to be activated, called from the repository.

Siebel workflow with Business Rules

Siebel workflow is not able to create and manage Business Rules, but the tool invokes HaleyAuthority to use Business Rules in a workflow. All the possibilities of Business Rules like, validation, process changes etc. are useful in a workflow. Changes in the Rules must be done in HaleyAuthority, because a Workflow will only use the Business Rules possibilities.

Scripting

The goal of Siebel is to deliver standard applications where is no need to program extra functionality, in the "real world" doesn't work this theory. Company's wants most of the time extra and personal features in their ordered programs, this is possible with Scripting.

Scripting is a wide term and got several explanations. Easy written is scripting the cross-beams of an application, with good scripting fails or stands an application. With written codes and statements in predetermined order and language are programmers able to customize/change applications to the requirements of the sponsor. This thesis will describe the most important facts about scripting, the way how the script types works and in what kind of Siebel Object use which kind of script is not in the scope of the project.

There are a lot of different Scripting languages and manners to implement these into Siebel. Roughly written we can split scripting in two types: Server side and browser side. Like the name says: Server side is scripting which is running on a server and is able to reaches a lot of clients (computer account). Browser side is running on client level. Both types have it own language and code to script.

Server side uses the following programming applications in Siebel:

- Siebel Visual Basic
  - This is a scripting program which is based on the Microsoft VB version, including special Siebel statements. The most common language of this script is C++ and SQL; this is the way for a program to read and understand the created statements.
- eScript
  - eScript is another kind of programming in Siebel Tools. eScript is compatible with the programming language JavaScript.

Browser side uses the following programming application in Siebel:

- Browser script (JavaScript)
  - JavaScript is in a Web Browser (like Internet Explorer and Firefox) integrated programming language which makes an application interactive.

NOTE: To make a clear difference between eScript and JavaScript notion the next statement: eScript = JavaScript but JavaScript is not eScript!

Scripting with Business Rules

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All kinds of scripting have the possibility to create, manage and use Business Rules with and without intervention of HaleyAuthority. Business rules in scripting have the same opportunities as Haley Authority Business Rules, but the main difference is that they are written in programmer language instead of natural English.

For a list with differences between HaleyAuthority Business Rules and scripting Rules, please see chapter 5.

Uses of "customization configuration"

Assumption: "customization configuration" is able to create, modify and manage every kind of Siebel 8.0 application in every single requirement of a customer. This means that the list could be endless with possible "uses" of "customization configuration". Like above is written there are different types of "customization configuration", all these types had their own possibilities and uses. So are Siebel VB and Siebel eScript able to be used into program enhancements kinds as:

- *"**Data validation routines.** These routines enforce specific business rules before or after performing record manipulation operations. Validation routines are performed before the user performs an update or an insert. The intent is to make sure that illogical or incomplete data is not entered into the database.*
- ***Data manipulation and computational routines.** These routines can be used to modify or analyze data.*
- ***Data transport routines.** These routines import and export small volumes of data between Siebel applications and other applications.*
- ***Application launching routines.** These routines launch external applications on the server side in response"*
  (Source: Siebel bookshelf 8.0: Overview of Configuring Siebel Applications - About Scripting and Object Interface)

These options are not suitable for the browser side language; JavaScript. This program language can be used to create and modify requirements at application level for Siebel customer applications, like: Table positions, Add favorites to a sidebar, change font size etc. The possibilities of JavaScript are endless with the goal to personalize the application to the user preferences.

Examples of the workflow possibilities are: Edit Business policies, routing and assigning work, processing work and enforcing authorization and transition rules.

Benefits and limitations of "Customization configuration"

Above is written what the definition of server side, browser side scripting and workflows are and what they are able to, all these facts results in a number of benefits and limitations. By scripting is the biggest benefit at the same time the biggest limitation: With scripting it is (almost) possible to create and modify all aspects of a Siebel application, limitation is the time to manage all these possibilities. Not only

takes it time to manage the scripting but every single change mains that the script must be re-compiled[2] (except Browser scripts). Depends the size of changes, recompiling can take a lot of time.

There are standards for the several scripting methods in Siebel. So it is possible for new employees with the good qualifications to enter in existing Siebel projects without extra classes. Understanding scripts like eScript and JavaScript take time and a lot of classes, without knowledge it is impossible to understand and manage scripting language. All the programming languages have their own standards to create statements and scripting, but every company (and maybe every employee?) has their own techniques to import these statements into the program.

Like earlier written has "customization configuration" the possibility to import Business Rules. Despites of the standardization it can be a hard job to modify Business Logic in a scripting, the possibility of forget a statement is likely.

Opposite of scripting (like above is written) is the Workflow. This is an understandable way of "scripting" for layman, with dear "painted" processes. The biggest benefit of workflows is the synoptic way of business process description designed in a chart, especially when there is a lot of numerical Business Logic to implement. When a workflow is modified, it is necessary to activate it.

Application Configuration

Almost every customer has its own home lay-out and character and wants to implement that into their ordered application. When an application is created and customized with scripting, it is possible to optimize the application (to the customer requirements) at "application" level. (It is usual in large projects that a project is "split up" in several Siebel parts, so it is possible that at the same project experts work at both configuration method at the same time).

By (application) configuration (generally) the most of the time takes it to modify a Siebel application, this takes more time than create the application by scripting. The reason about this fact is that configuration is able to make small lay-out changes until large lay-out improvements.

The configuration method can be compared with Windows wizards and "point and click" changes. This configuration can be done without the need of any scripting or other complex programming. It uses visual options to change the layout structure by installing additional application wizards. Where the "Customization configuration" can be managed in several ways (there is no unique way to script) the "application configuration" has only one manner to be implemented.

It is depending of the kind of optimization in the application, how the configuration will be done. It is possible with Siebel Tools or directly in the application. Not all the configuration needs to be done with Siebel Tools, the most of "point and click" configuration can be done by other mechanisms in Siebel like; Siebel Personalization, Siebel SmartScript, Siebel Business Process Designer, Siebel Assignment

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[2] By changes in the script the changes must be compiled in a SRF (Siebel repository file). This contains al compiled data of the Siebel application, useful by back-ups.

Manager, State Model, and Siebel ePricer. These mechanisms can be managed by Siebel Expert as Administrators and are able to configured functional requirements of the customers. The working of those mechanisms will not farther discuss in this project.

Application configuration and Business Rules

HaleyAuthority is a perfect example of an "application configuration" mechanism. Like earlier written (in chapter 4) is HaleyAuthority a "plug-in" program inside Siebel 8.0. With this program is the user able to configure Business Rules without any program language.

Uses of "applications configuration"

Where "customization configuration" is able to create and modify large changes, is "application configuration" a way to optimize the created scripted/programming configuration. The way of modifying is depending of the requirements of the customers. Example of requirements from customers for configuration can be:"adding text box controls (and their underlying fields), create new user interfaces and business entities" (*Source: Oracle Bookshelf 8.0, About Configuring Siebel Applications*).
NOTE: "application configuration" cannot implement Business Rules and will therefore not futures discuss in the research results of this document.

Benefits and limitations of "Application Configuration"

Customers can get an applications totally personalized to the house design of the organization. Not only administrators can modify, also are users and managers able to make individual change in the application. With "application configuration" it is possible to customize the design. This type of configuration is understandable for every single user without extra classes. It also is not necessary to recompile the data after modifying the program. Limitation is the long configuration time to make a good end product conform the wishes of the customers.
NOTE: "application configuration" cannot implement Business Rules and will therefore not futures discuss in the research results of this document.

Future of Configuration

Where companies are, are applications and where application are, is configuration in all kind of ways. We are able to assume that configuration never will disappear; it is only possible that the kind of configurations will change. Although designers of CRM application as Siebel, stay searching for the perfect application which is useful for all customers, it is unrealistic that configuration will disappears in the future. Oana Nicolae and Professor Tom van Engers agreed that configuration like scripting always will be necessary to customize application too customers requirements.

Conclusion

However the policy of Siebel is to minimize scripting and modifying, it is often necessary to create customization for customers for an optimal use of al functionalities inside the Siebel applications. Siebel

is changeable by "Configuration" on application level and "Customization configuration" like Scripting and Workflows. By an "application configuration" tool like HaleyAuthority it is possible to create, manage and use Business Rules. These are the same possibilities as by scripting, but scripting use programming language instead of natural English.

Sources

" Bookshelf" , official Oracle bookshelf, 2007
- 		*Chapters: Components of the Siebel Programming Environment, Other Ways to Customize Application Behavior, Overview of Configuring Siebel Application and About Configuring Siebel Applications.pdf*
" Siebel workflow process, an introduction" , N/A, 2008
- 		http://siebelunleashed.com/siebel-workflow-process-an-introduction/
" Programming" , N/A, 2007
- 		http://improvedsolutions.com/programming/
"**Siebel configuration, an overview", Neel, 2007**
- 		http://siebel-answers.blogspot.com/2007/10/siebel-configuration-overview.html
"Siebel scripting part 1", N/A, 2008
- 		http://www.scribd.com/doc/7044152/Siebel-Scripting-1
"Workflow vs. Server Script", Mike M. Lin, 2009
- 		http://siebelhacker.blogspot.com/2009/04/workflow-vs-server-script.html

Attachment G.   Interview logs

Interview number:	1
The reason of the interview:	Get information about Business Rules
Interviewed person:	Oana Nicola, PhD under the supervision of professor Wagner at BTU Cottbus University.
Location:	Digital, by email.
Date:	12 Oct. 2009

1   Can I assume the next line? Business Rules are the translation, through a Rule Engine, from Business Logic to IT applications.

Answer:

Usually, business rules are used to express regulations, constraints or policies inside of an IT application. The business rules engine (for example JBossRules or Jess) manage them (conforming to an algorithm - for example Rete) and finally executes them. Business rules are incorporated inside of IT applications. The rule engine executes them and infers new facts (thus update the actual knowledge base). Rule-based approaches are called declarative (they describe "what needs to be done") in contrast to the imperative programming languages such as: C, C++ or Java. This described "how" things should be done. Therefore I am not agreeing with your definition.

2   Is it right that the name of this methodic Business Rules Approach is? (From business to IT) (I found a lot of information about BRA, but I wasn't able to make a good definition for myself).

Answer:

BRA supposes a declarative approach. Therefore you may think to use these words into the title in order to make it more intuitive. An example could be: Towards a declarative approach of Siebel.

5   Can I assume the next line? Business Rules can be written in natural English (trough statements) and can take the following actions (in a Rule Engine):

- Manage Dynamic business processes
- Manage Complex business processes
- Field validation
- Automatic change of relational fields by changes. (Auto-populating field values.)

Answer:

Yes, OMG's SBVR for example is a standardized, natural controlled language that supposes a well-known controlled English dialect. Dynamicity is usually expressed using ECA rules or reaction rules. Yes, business rules are used to manage complex behaviors of business processes due to their changing

facility. Field validation can be done using another type of business rules: integrity rules (deontic – expressing obligation and alethic – expressing necessity).

3b   Are there more ways to use Business Rules into Rule Engines?

Answer:

There are different types of rules, each of them has a specific semantic and therefore a particular use inside of an application e.g integrity rules, derivation rules, production rules and reaction rules.

6   What are the most likely limitations of Business Rules?

Answer:

I think that the lack of standardization in the field of business rules. SBVR is standardized, but how many tools (proprietary or from the academia) are using it? They choose to use different rule languages and of course different rule-engines to execute them. The inter-operability then is very costly and therefore very hard to achieve.

7   What is your opinion about the future of Business Rules?

Answer: I cannot give any prediction, but they will find always a place in any IT application, as they express in very natural way regulations that we need in everyday life.

5b   Are Business Rules able to replace comparable features of scripting?

Answer:

The notion of scripts was developed by Shank and Abelson for the purpose of language processing and understanding of knowledge structures. Business rules (taking into account their definition and usage) are therefore suitable to replace them. I did not work very much with scripts. My answer takes into account only the high-level definition and aspects.

Interview number:	2 (In DUTCH!)
The reason of the interview:	Get information about Business Rules
Interviewed person:	Prof. Dr. Tom M. van Engers. Professor in Legal Knowledge Management. University of Amsterdam faculty of law. Did write articles about BR.
Location:	Digital, by email. (He didn't have time for a physic interview).
Date:	15 Oct. 2009

7.   Kan ik het volgende stellen?: Business Rules is de vertaling, doormiddel van een Rule Engine, van Business Logic naar IT applicaties.

Antwoord:

Dat is wel erg kort door de bocht. Business Rules zijn een middel om een wereld te beschrijven. Veelal (maar lang niet altijd!) wordt de eis gesteld dat het formalisme dat daarvoor gebruikt wordt executeerbaar moet zijn. In het geval van regels heet het mechanisme dat die regels uitvoerd een Rule Engine. Ook zonder regelgebaseerd paradigma toe te passen (maar bijvoorbeeld een imperatieve taal te gebruiken, zoals Java of C++, of een functionel, zoals LISP of Scheme of Haskell) kun je Busibess Logic naar IT toepassingen vertalen (dat op zich is ook niet bijzonder and doen we al een jaar of vijftig/zestig).

2.   Klopt het dat Business Rules Approach de naam voor deze methodiek is? (van Business naar IT).

Antwoord:

Er is nogal was buzz rond business 93arad, met name door een commercieel georiënteerd groepje rond Ron Ross. Veel is echter opnieuw verpakte ideeen uit de jaren zeventig (een executeerbare vorm van eerste-orde predikaten logica, met name Prolog), maar nu herverpakt en van gepoogt voor minder IT-onderlegden appetijtelijk te maken. Merkwaardig genoeg wordt veel aandacht besteed aan het standaardiseren van zo'n business 93arad taal (bijv in BRML) zonder dat voldoende aandacht besteed wordt aan de formele semantiek daarvan . Ook zien we in bijv BRML weinig aandacht voor onderscheid naar te representeren kennis, terwijl CommonKads (jaren negentig werk) al laat zien dat een dergelijk onderscheid zinvol en noodzakelijk is.

3.   Kan ik het volgende stellen?: Business Rules kunnen in gewone schrijftaal (doormiddel van statements) de volgende acties ondernemen:

• Beheer dynamische business processen
• Beheer complexe business processen
• Veld validatie
• Automatisch aanpassen van relationele velden bij wijziging in een statement.

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Antwoord:

Rules kunnen geen acties ondernemen! Je kunt 94arad gebruiken als uitdrukkingsvorm. Of het geschikt is om processen te beschrijven of iets anders hang af van de uitdrukkingskracht van de taal. In algemene zin is daarover niets te vertellen.

4.   Wat zijn voorkomende beperkingen van business Rules?

Antwoord:

In algemeen geldt voor alle representatie talen dat een afweging bestaat tussen uitdrukkingskracht en computationele complexiteit. Graag willen we berekenbaarheid (completeness and soundness) kunnen garanderen, maar dat stelt beperkingen aan uitdrukkingskracht (en herbruikbaarheid cq taakonafhankelijkheid van de expressies).

5.   Wat is uw mening over de toekomst van Business Rules?

Antwoord:

Omdat inzicht in de kennis die vertegenwoordigd wordt van groot belang wordt geacht en omdat een aantal technische beperkingen (bijv dataredundantie, processor en geheugencapaciteit, rekensnelheid ed.) minder relevant lijken te zijn geworden, zal het regelgebaseerde 94aradigm(manier van programmeren) aan populariteit winnen.

8.   Zijn Business Rules in staat om vergelijkbare vormen van scripting te vervangen?

Antwoord:

Ja (hoewel op het onderste niveau natuurlijk alles in machineinstructies wordt vertaald)

Interview number:	3
The reason of the interview:	Get information about uses of Business Rules in the IND project from Accenture.
Interviewed person:	Rob Swinkels, consultant by Accenture.
Location:	Rijswijk in the IND building.
Date:	09 Dec. 2009

Questions

What kind of Business Logic are in use in this project (in which situation)?
All kind of data like: Law Rules, Business data etc.

Is this Business Logic inserted by a Rule Engine or by script?
This is different in every situation. Configuration is better in situations with static Business Logic. Changeable Business Logic (in a short period) is better manageable with a Rule Engine.

What are the requirements, in a project situation, why there is chosen for a Rule Engine/Configuration?
The main rule is this project is: Changeable Business Logic will be created with a Rule Engine.

How is the decision reached?
Business Rules are more flexible then configuration methods (especially manage components). In deliberation with the customer have Accenture desired to import Business Rules with BEinformed (just like HaleyAuthority is this Rule Engine). The reason of this choice is the large changeable data in an organization as the IND.

What is the main advantage to implement Business Rules (in the several situations) in this project?
It is more flexible (by situations which must be manage) than configuration methods, like scripting. Scripting is quicker to create and a more common practice by employees, a Rule Engine is "slower" to build but better to manage.

Is it important that non ITers are able to analyze the Business Rules?
The Business Rules will be managed after this project by a new created workgroup. Even Business Rules are understandable by non ITers. Persons are not able to change the Rule without a short education, but the education period is a lot shorter then learning all about configuration methods like JavaScript scripting.

What is the biggest benefit of a Rule Engine?
It is flexible, easy to change.

What is the biggest disadvantage of a Rule Engine?
- There no clear policy for the Business Rule structure. In large projects it will be hard to create a uniform structure and Rules.

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- The data transfer from Siebel to Beinformed is circumlocutory and takes (relative) long time. It is not clear if this also appliers by HaleyAuthority.
- It is not clear if Business Rule can perform the same results as configuration.

Is validation necessary before the Business Rule implementation?
Yes it is necessary.

Are all scripting method able to create and/or use Business Rules?
Yes

Theorem: A Rule Engine works easier than Business logic in a script.
This is not true and not untrue. Both have disadvantage and advantage. Business Rules are understandable, but don't have a clear structure. Configuration is less understandable but has a clear structure.

Remainder

Future
At this moment: The customer asks Accenture for a problem solution with a BR product. The customer gets the solution, but without testing if the product will be the solution for the problem. In the future will the Business Rules work as an advice. With a small Business Rules solution environment is the customer able to see possible results of the solution. This advice environment will make clear if a solution will get the expected result or not.