Project Plan

Company 10

Martin Ruzicka
Version 0.5

Status

Reviewed	Martin Ruzicka, Hans Sanell, Jonas Mattsson, Henrik Nilsson, Vamsi Seshabhattaru	2010-02-03
Approved	Sebastian Rehnby (PM)	2010-02-05

Project identity

Company 10, 2010
Chalmers University of Technology, MPSEN

Name	Responsibility	Phone	E-mail
Martin Ruzicka	Software Architect	070 219 20 81	ruzicka@student.chalmers.se
Jonas Mattsson	Database Designer	070 58 18 095	emattsso@student.chalmers.se
Hans Sanell	Software Architect	073 53 55 210	hansn@student.chalmers.se
Sebastian Rehnby	Project Manager	0735 080 850	
Vamsi Seshabhattaru	Quality Manager	0739 190 703	vamsi@student.chalmers.se
Henrik Schulze Nilsson	Graphical Designer	0733 643 501	henrnil@student.chalmers.se

suit-group-10@googlegroups.com

Client: Central Operative & Independent Retailers Acquirer, 9 Downing St, Westminster, London SW1A, UK
Client Contact: Peter Arch, +44 333 757589, peter.arch@coira.com
Supervisor: Per Zaring

Content

Document History

Version	Date	Changes	Responsible	Approved
0.5	2010-02-05	Final overlook	MR	SR
0.4	2010-02-03	Updated from review	MR	SR
0.3	2010-02-03	Change in template	MR	SR
0.2	2010-02-02	Merged to Word-template	MR	SR
0.1	2010-02-01	First version	SR, VS	SR

1. Client

Central Operative & Independent Retailers Acquirer (Coira).

2. Overall project description

Coira wants a web-based portal where customers from all corners of the world can purchase products. This portal should consist of three parts. The portal itself, called MUW (Mall Unlimited Well), that contains the interface towards the customer and the database of available products. A system for handling the suppliers and the purchases, called PUW (Purchase Unlimited Well), that contains the list of approved suppliers and their products. Also, a system for transporters and logistics is needed, called LUW (Logistics Unlimited Well), that contains all approved transporters and there routes. These systems cooperate so that when a customer orders something through MUW, a request is sent to PUW to order the goods from the supplier and a separate request is sent to LUW to book a transport for the purchased goods from the supplier to the customer. All systems should be fault tolerant and provide high availability. All systems must be secure and the integrity of customers, suppliers and transporters must have the highest priority.

MUW handles all interaction with the customer. MUW displays all available products; there details, their price and how long it will take to deliver. MUW also handles the customers orders, displays information and options about orders, such as where they are and if there is any problems, and notifies the customer if there is any hiccups along the way. MUW's graphical interface will provide context-sensitive help at all levels of the interface. At purchase, MUW should find an optimal combination of supplier and transporter. MUW contains the database of available products, their status and suppliers, as well as the customer register. MUW must support several languages and it must be easy to extend the number of languages supported. MUW will also collect statistics about purchases and use these to make predictions about demands and ask PUW to make sure that there is enough supply to satisfy the demand.

PUW is, upon purchase, to contact the chosen supplier and book the products specified. PUW will also keep track of suppliers and update there status in MUW's database. PUW will select suppliers that should undergo a quality review given certain conditions. PUW also has to notify Coira employees if there is not enough suppliers in the system to meet the demand as predicted by MUW, so that new suppliers may be acquired. PUW will also handle delivery notes and send all required data to Coiras financial system.

LUW will be responsible for handling logistics and transportation and keeps track of transporters and their routes. Upon purchase, LUW will book suitable transportation and produce all the needed papers, such as bills of lading and import licenses. LUW is responsible for updating the status of orders and where a particular order is physically. To be able to do this, LUW must accept input

from a number of different sources so that the companies that handle the actual transport can update regardless of internal system used. LUW shall utilize a GIS company to compute distances and time consumption. LUW must also make sure that each transport is as profitable as possible with very few, but existing, exceptions. LUW must also allow independent transporters to use the system to plan transports and routes. This includes transports that have nothing to do with Coira. In this case the system is called "Logistics at Transporters" (LaT). In case the system is used this way, the content in the transporters area must be exclusive to that transporter. LUW should notify MUW and Coira personnel in case any hiccups occur.

2.1. Purpose

For Coira to be able to reach and service worldwide customers and to streamline and enhance the process from placed order to delivery, in a way that is as cost efficient and fast as possible.

2.2. Deliverables

- Project Directives
- Project Plan
- Development plan
- Software Requirements
- Test Plan
- Test Report
- Project Report
- Final software system
- System documentation

This system will be delivered to Coira and Company 10 will assist in the final deployment and integration of the system with Coira's existing infrastructure.

2.3. Demarcations

The project is to be executed with limited resources including human resources and development time. The main concentration area of our company given the limited scope is to focus on the basic but the most relevant and the core functionality of the project including the three main concepts of the systems i.e. MUW, LUW and PUW.

3. Phases

The project has been divided into various phases and the team members given individual tasks during the various phases of the project

3.1. Pre-project activities with time budget

The pre-project activities include formal team meeting of the team members and discussing the project related issues such as the roles of each team member.

3.2. Project activities with time budget

After the completion of the pre-project activities, the project activities will be started including the project planning, development planning, software

requirement specifications, requirement analysis, design and development of project, validation, verification and testing and documentation of the project.

3.3. Post-project activities with time budget

After the project activities have been completed, the post project activities which include reporting the updates of the project and the demonstration of the final product to the client/acquirer and incorporation of minor modifications or alterations suggested by the client wherever feasible.

4. Organization plan

The organization of the team will be consistent throughout the project. Depending on workload and phase, team members should offer assistance to the person responsible for the highest prioritized task/deliverable. In nothing else is specified, the responsibility for each activity should be determined by the roles specification.

4.1. Organization per phase

The different phases will not change the responsibilities for a given task, but assistance should be offered to the member responsible based on the nature of the tasks in each phase. A visualization of the organizational structure is shown in Figure 1.

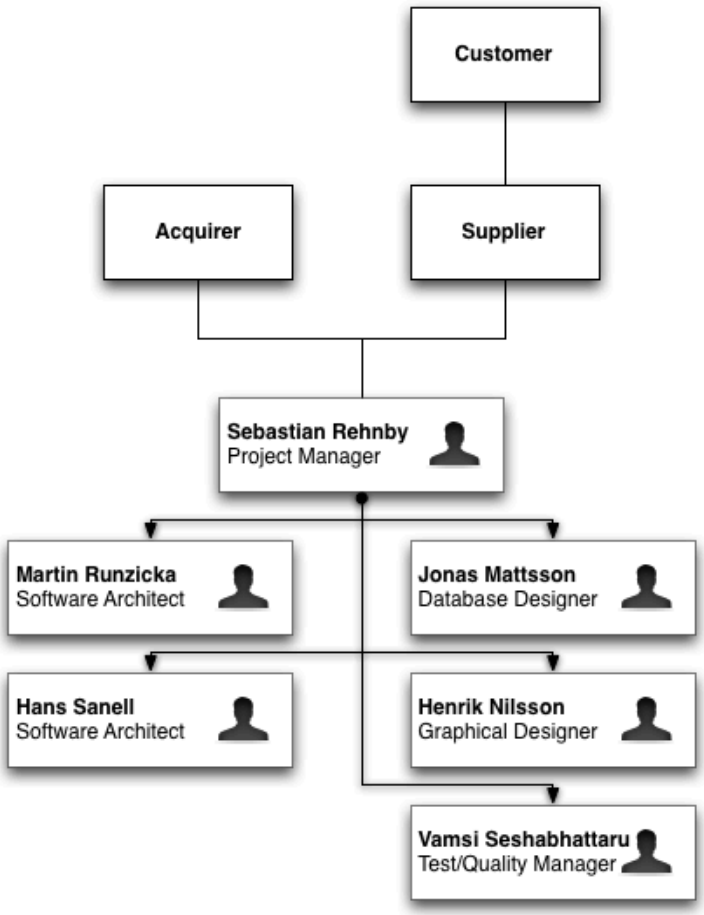

Figure 1 - Organizational structure.

4.2. Work breakdown structure and responsibility areas

The project has been divided into various key role areas and the tasks have been allocated to the team members accordingly. Each team member has been given a primary role and a back up or a secondary role as a risk mitigation step.

The main key roles and the team members for each of the phases has been distributed as follows:

Role	Lead	Second
Project Manager	Sebastian Rehnby	Martin Ruzicka
Software Architecture	Hans Sanell	Martin Ruzicka
Database Designer	Jonas Mattsson	Henrik Schulze Nilsson
Test/Quality Manager	Vamsi Seshabhattaru	Hans Sanell
Graphical Designer:	Henrik Schulze Nilsson	Jonas Mattsson
Clerical Role	The clerical role is to be distributed to all the team members on a rotational time bound schedule.	

5. Document plan

The following table describes the document deliverables and their deadlines.

Document	Approved by	Purpose	Distributed to	Deadline
Project Directives	PM/Team	Define the project background and goals	Team	2010-01-28
Project Plan	PM	Outline execution of project and estimate resources	Team	2010-02-05
Development Plan	PM	Define and estimate tasks related to developing the proposed system	Team	2010-02-10
Software Requirements	PM/Client	Gather system requirements from the project description and prioritize them	Client/Team	2010-02-05
Test Plan	TM	Define the level of testing and test cases for the system	Team	2010-02-17
Test Report	TM	Analyzing test results and feedback to developers, and also to prove the quality of the system to client	Client/Team	2010-02-24

Project Report	PM	Summarize the project and evaluate the final result	Client/Team	2010-03-03
System Documentation	PM/Client	A manual for the system user	Client	2010-03-03

6. Development approach

The project will be developed using an incremental development approach, where each iteration is a variation of the V-model development process. This means that each iteration will itself contain activities such as designing, implementation and testing. The big difference from the complete V-model process in each iteration is that the requirements analysis will be completed before the first iteration of the development cycle. Figure 2 shows the graphical visualization of the development process.

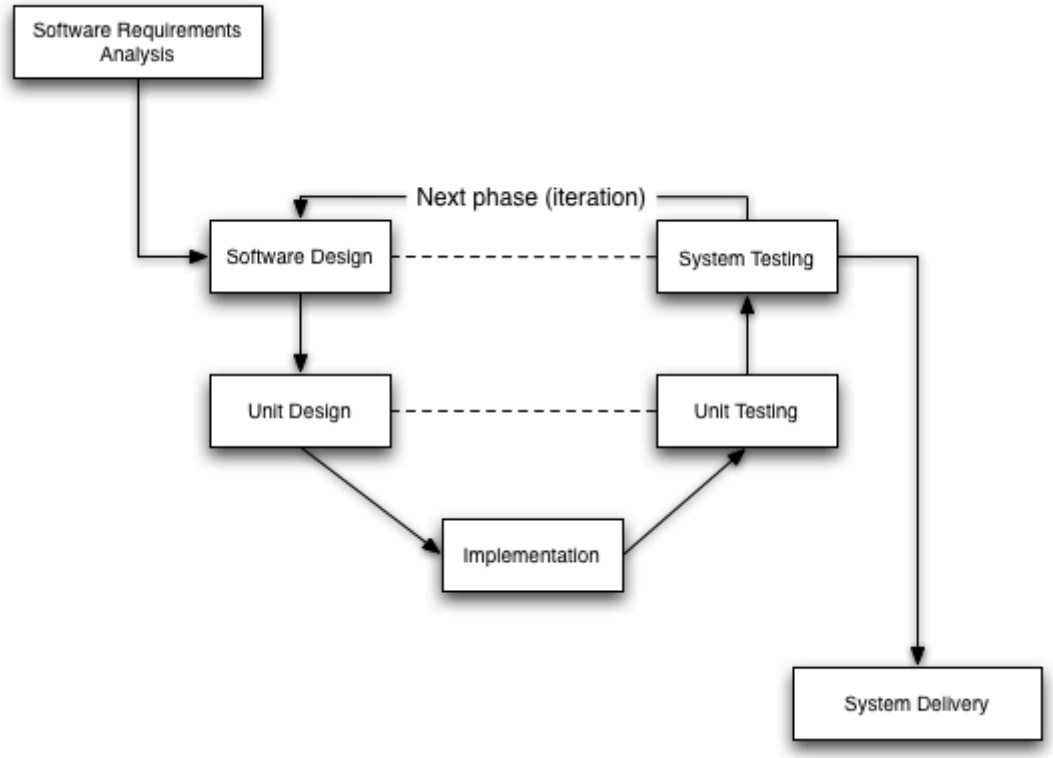

Figure 2 - The development process.

7. Plan for training and competence development

The group roles distribution is based on each of the members' previous experiences and areas of expertise.

7.1. Internal training

The team members will be allowed to take part in any task or activity that they feel they can benefit from in order to increase their level of competence in a certain technological area.

7.2. Client training

It will be possible for the client to establish a post-delivery support agreement, to provide the client with support after the integration and initial stages of deployment. Company 10 will not provide any training besides the user documentation.

8. Report routines

Every Monday morning at 8.00AM at the latest, each team member will submit a weekly status report to the PM. The report should include a time sheet for the previous week for hours spent on the project, as well as a description of the project progress and issues.

9. Meeting routines

The time for each meeting will be decided beforehand on the preceding meeting, and added to the official project calendar. A group room should be reserved beforehand and the reservation should be communicated to the group.

The clerical function for the meetings will be rotated week wise. The person responsible will take notes and upload the protocol to the common Subversion repository in the folder 'protocols'. Any questions regarding the content of the protocols should be communicated to the Project Manager, and the protocol should be revised accordingly.

10. Resource allocation plan

Resources needed for the execution of the project will be provided by Company 10 and Chalmers University of Technology.

10.1. People

The entire work force at Company 10 will be committed to this project, focusing on their respective area of responsibility.

10.2. Equipment

Company 10 will use its own resources in terms of equipment for the execution of this project. Tools and equipment required will include desktop computers and development servers.

10.3. Facilities

Facilities required for meetings and collaborative development sessions will be provided by Chalmers University of Technology.

10.4. Finance

No financing is required for this project. Any unexpected costs will be covered by the client.

11. Milestones and decision gates

The project defines a set of milestones and decision gates to keep the project on track. The following sections describes these.

11.1. Milestones

A number of milestones have been defined to be able to measure project progress. In most cases, milestones are related to the completion of various deliverables.

	Description	**Date**
M1	Project organization defined and approved	2010-01-20
M2	Project Directives verified and approved	2010-01-25
M3	Project activities defined	2010-01-28
M4	Project plan verified and approved	2010-02-05
M5	Completed Software Requirements Specification	2010-02-05
M6	Development process defined and approved	2010-02-08
M7	Development Plan verified and approved	2010-02-10
M8	Design specification completed and approved	2010-02-15
M9	Implementation proposal completed	2010-02-15
M10	Test plan completed and approved	2010-02-17
M11	System implementation completed	2010-03-02
M12	System testing and verification successfully completed	2010-03-02
M13	System demonstration completed	2010-03-03
M14	System documentation finalized and approved	2010-03-03
M15	Project completed, entering maintenance mode	2010-03-03

11.2. Decision gates

A continuous evaluation of the passing of milestones will be done by using a number of internal Decision Gates (DG). To be able the pass most DGs, some deliverables need to be completed beforehand. These deliverables are defined in the description column in the following table.

#	**Description**	**Date**
0	Approve Project Directives	2010-01-25
1	Approve Project Plan	2010-02-01
2	Approve Software Requirements Specification	2010-02-05
3	Approve Development Plan	2010-02-10
4	Approved Test Plan	2010-02-17
5	Review test execution results	2010-02-24
6	Review Project Report and Postmortem Analysis	2010-03-02

12. Estimations/activity

The terminology used for this project is defined as follows. Higher order phases are referred to as activities. The work packages included in each activity are referred to as tasks. Each task includes a number of features (for development tasks) or deliverables (for management tasks).

An example would be the activity of "System design". In this case, a task would be to "Develop system diagrams (ERD, Class Diagrams)", and a development task would be "Develop ordering ERD-diagram" or "develop Class Diagram for MUW". The activities are described in the following table and a detailed time plan can be found in Appendix A.

#	**Activity**	**Description**	**Estimated time (h)**
1.	Organize project team	The initial process of defining the team organization and roles distribution	28
2.	Analyze project background and goals	This activity is concerned with gathering information and getting familiar with the project specification and the purpose and goals of the project.	48
3.	Project Planning	This activity of dealing with the outlay of the project with estimations related to resources required, and the overall plan of the project and also the timing issues and the various deadlines to be decided.	60
4.	Development Planning	This activity is concerned with defining the features of each tasks, and producing a development timeline.	64
5.	Analyze system requirements	This phase of project would be to look into the specific requirements of the project and analysis of the same. This phase is one of the most crucial and important phases of the whole project as it deals with understanding and analysis of the project requirements.	178
6.	System design	This activity deals with defining the software architecture and test plan of the system to be implemented.	82
7.	System implementation & testing	This phase of the project deals with the implementation of the software design, and also the process of testing the implemented system.	202
8.	System demonstration	Demonstrating the final system to the client and other stakeholders.	52
9.	Documentation	This phase of the project deals with the documentation of the system and producing a final project report.	46

13. Time plan

See Appendix A.

14. Test plan

Testing is an important part of any project and it is the same for our product as well. But due to the limited resources and time available, the testing phase would mainly be concerned with the basic functional requirements and design requirements as defined in the Software Requirements Document of this project. The main focus would be to individually test the three different components of the project, the accessibility of the web portal on various operating systems and the availability of the web-based system. Also the security of the system will be tested to check that the system information is secure and make sure it provides a secure pathway for the customers/users to make financial transactions and the availability of complete product information to the customers. These are some of the areas in which we plan to test extensively but given the time limitations we will only test the high-prioritized requirements.

The project plan defines an iterative development approach and testing should be carried out in each iteration. One of the main concerns is the limited time frame available and hence testing the product and its component in each iteration will help in developing a better product and a thoroughly tested and a reliable system. Company 10 will also test the final integrated model at the end of the final iteration.

15. Risk analysis

15.1. Risks

Given the limited timeframe of this project, the by far greatest risk is the one of not having the time to fully implement the complete system by the delivery date. This is a risk that both Company 10 and the client is fully aware of, and several meetings and discussions have been held in order to find a solution an minimize the probability and impact of this scenario.

The client and Company 10 have agreed, based on the incremental development process chosen, that the client will be taking an active role in the prioritizing of system requirements. Through this process, the client will identify the key requirements most important to the client. Company 10 will aim to deliver a system meeting the highest priority requirements by the delivery date.

Also, the risk of not passing a decision gate (DG) at the targeted deadline date is very probable. The proposed solution for this is to not consider these deadlines as written in stone, but to give an estimate of when during the project timeline a DG should be passed. If two DG:s are closely coupled or dependent, it might make more sense to push the date on one of them in order to complete the work needed for both. Then both of them can be passed rather quickly.

15.2. Issues

No obvious issues can be foreseen.

References

[1] Unlimited Well, Project Specification, 2010
[2] Internal Requirements Specification draft, 2010
[3] SWEBOK, 2004
[4] Project Directives, 2010

Appendix A. Project Timeplan

Timeplan

Project:	The Unlimited Well
Project group:	Company 10
Orderer:	Central Operative & Independent Retailers Acquirer (Coira)
Course:	EDA382
Date:	2010-02-02
Version:	1
Responsible:	Sebastian Rehnby

Approved:

#	ACTIVTIES AND MILESTONES	TIME	WHO	WHEN (week numbers)							
	Description	Hours	Initials	3	4	5	6	7	8	9	
1.	**Organise project team**	28									0
1.1	Assign project manager	12	All	12							12
1.2	Implement group agreement	12	All	12							12
1.3	Detail project organisational structure	4		4							4
	M1: Project organisation defined and approved										0
2.	**Analyse project background and goals**	48									0
2.1	Create background description	16	VS/JM/HN	16							16
2.2	Describe aims and goals of the project	20	VS/JM/HN	20							20
2.3	Identify decision gates and deadlines	6	SR	6							6
2.4	Identify project deliverables	6	SR	6							6
	M2: Project Directives verified and approved										0
3.	**Project planning**	60									0
3.1	Perform resource and time allocation	14	SR/VS		14						14
3.2	Define meeting and coordination plan	12	SR/VS		12						12
3.3	Define project activities	6	SR/VS		6						6
	M3: Project activities defined										0
3.4	Define areas of responsibilites throughout project	8	SR	4	4						8
3.5	Define and verify milestones	20	SR/VS		20						20
	M4: Project plan verified and approved										0
4.	**Analyse system requirements**	178									0
4.1	Analyse project description	44	MR/HS/JM	20	24						44
4.2	Collect functional system requirements	38	MR/HS/JM		8	30					38
4.3	Collect functional subsystem requirements	24	MR/HS/JM		8	16					24
4.4	Collect non-functional system requirements	24	MR/HS/JM		8	16					24
4.5	Define use cases	24	HN		8	16					24
4.6	Prioritize requirements	24	MR/HS/Client		4	20					24
	M5: Completed Software Requirements Specification										0
5.	**Development planning**	64									0
5.1	Define development approach	8	SR/MR		4	4					8
5.2	Define development activities	20	SR/MR			4	16				20
	M6: Development process defined and approved										0
5.3	Define tasks for each development activity	14	SR/MR			4	10				14
5.4	Allocate and estimate time resources for tasks	8	SR				8				8
5.5	Prioritize tasks int o phases according to requirements P0-Px	10	SR/MR				10				10
5.6	Verify development timeline and deliverables	4	SR/MR				4				4
	M7: Development Plan verified and approved										0
6.	**System design**	82									0
6.1	Make high level key design choices. Platforms, languages etc	20	MR/HS			10	10				20
6.2	Produce low level design documentation. Diagrams etc	20	MR/HS				20				20
6.3	Identify implementational phases according to system requirements	10	MR/HS				10				10
	M8: Design specification completed and approved										0
6.4	Identify system dependencies within the design	6	MR/HS				6				6
6.5	Define order of implementation for system/subsystem components	6	MR/HS				6				6
	M9: Implementation proposal completed										0
6.6	Define test cases based on implementation proposal	8	VS				8				8
6.7	Prioritize test cases according to implementational phases in design specification	12	VS/MR/HS				12				12
	M10: Test plan completed and approved										0
7.	**System implementation & testing**	202									0
7.1	Analyse implementation proposal	16	MR/HS/JM/HN					16			16
7.2	Implement system components according to proposal and phases defined, Phase X	140	MR/HS/JM/HN/SR					80	60		140
7.3	Develop system tests for phase X	20	VS					10	10		20
7.4	Execute Phase X test suite	8	VS					4	4		8
7.5	Analyse test result	4	VS					2	2		4
7.6	Produce test reports and feedback to developers	10	VS					6	4		10
7.7	Verify successful testing for Phase X	4	VS					2	2		4
	M11: System implementation completed										0
	M12: System testing and verification successfully completed										0
8.	**System demonstation**	52									0
8.1	Deploy system in demo environment	12	MR/HS/JM/HN							12	12
8.2	Prepare promotional material & documentation	32	SR/MR						12	20	32
8.3	Demo project for client and additional stakeholders	8	SR							8	8
	M13: System demonstation completed										0
9.	**Documentation**	46									0
9.1	Collect and package system documentation	4	HN/VS/JM						4		4
9.2	Produce final Project Report	22	All						22		22
9.3	Deliver required documentation to client and stakeholders	4	MR/HS							4	4
	M14: System documentation finalized and approved										0
9.4	Perform postmortem project analysis and evaluation	16	All							16	16
	M15: Project completed, entering maintenance mode										0
		760		100	120	120	120	120	120	60	760