

Development Plan

Company 10

Sebastian Rehnby
Version 0.1

Status

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Project identity

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Document History

Version	Date	Changes	Responsible	Approved
0.1	2010-02-11	First version	SR	SR

1. Abbreviations

A number of key abbreviations and acronyms are used heavily throughout this document. These are listed in the table below.

Abbr.	Explanation
UW	The Unlimited Well (The whole system)
MUW	Mall at the Unlimited Well (The web-portal)
PUW	Purchase at the Unlimited Well (Supplier portal)
LUW	Logistics at the Unlimited Well (Transportation)
SRS	System Requirement Specification

1. Background

1.1. Client

Central Operative & Independent Retailers Acquirer (Coira).

1.2. 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 their 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; their 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 their 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 Coira's 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.

1.1. 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. Development Approach

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

2.1. Terminology

The development process will consist of a number of **phases**. Each phase is an individual development cycle, consisting of a number of **activities**. Each activity, (e.g. software design or implementation) consists of a number of **tasks** as defined in the Time Plan (See Appendix A in the Project Plan^[2]). Each task consists of a number of **features**, a form of work package resulting in a document or implementation unit. Features usually refer to a specific requirement defined in the SRS.

2.2. Phases

The development process will be divided into phases. These phases are incremental development cycles, each containing a number of development activities, tasks and features. The phases of the project is defined in the SRS document, by the prioritization of the specified requirements. Requirements are prioritized from P0 (Highest) and on all the way to PX (Lowest prioritized set of requirements). This way, our process will adapt well to changing requirements and the phase tasks are clearly defined by the content of the SRS.

2.3. Process

The project will be developed using an incremental development approach, where each phase (iteration) is a variation of the V-model development process. This means that each phase will itself contain activities such as design, implementation and testing. The big difference from the complete V-model process in each phase is that the requirements analysis will be completed before the first phase of development. Fig.1 shows a visualization of the development process.

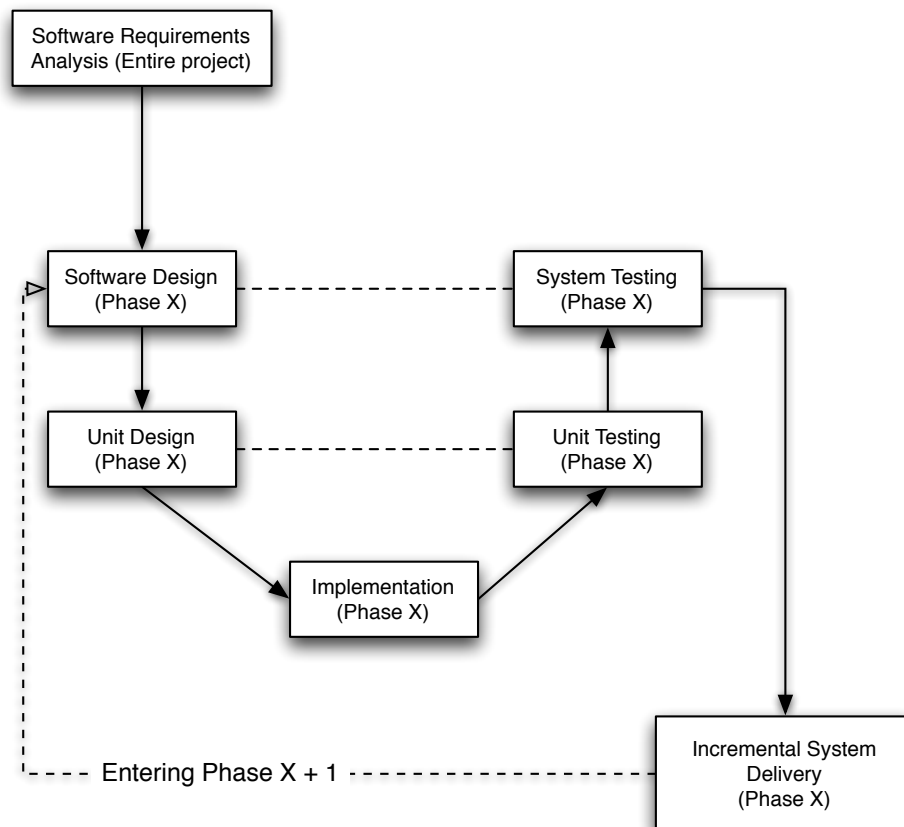


Figure 1. Development Process

2.4. Delivery

Each phase will yield an incremental official delivery to the client, including the corresponding test plan and test report. The system delivered should be thoroughly tested according to the test plan, and transparency of test results and possible issues with a delivery should be clearly communicated to the client.

2.1. Roles and Responsibilities

The roles and responsibilities are the same throughout the project, as shown in the following table:

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 Seshabhatharu	Hans Sanell
Graphical Designer	Henrik Schulze Nilsson	Jonas Mattsson

3. Development Monitoring

A set of mechanisms will be used to monitor and assess the overall project progress, both during and after the completion of the individual phases.

3.1. Progress Assessment

Project progress will be measured by the milestones and time estimations defined in the Development Time Plan (Appendix A).

3.1. Reporting

Reporting will continue as usual during the development phases, but the team members will refer the specific feature(s) they have been working in their weekly time reports. The reason for this is to be able to do a post-phase evaluation of the time estimations projected in the Development Time Plan (Appendix A).

3.2. Documentation

Each development cycle (Phase) will yield a number of phase specific documents. The implementation proposals will be used as a design reference during implementation, while the test related documents would be subject to quality evaluation to assess the extent to which they comply with the SRS.

Document	Approved by	Purpose	Distributed to
Implementation Proposal	PM/SA	To define and motivate design choices. To be used as a reference during implementation	Team
Test Plan	TM	Define the level of testing and test cases for the system	Team
Test Report	TM	Analyzing test results and feedback to developers, and also to prove the quality of the system to client	Client/Team

4. Milestones

The development milestones defined in the project time plan will be repeated for each new phase. They can also be found for phase 9 in the Development Time Plan (Appendix A).

	Description
M9	Implementation proposal completed
M10	Test plan completed and approved
M11	System implementation completed
M12	System testing and verification successfully completed

5. Estimations

The time estimations for phase 0 in the Development Time Plan (Appendix A) are based on the P0 requirements in the SRS, as well as past experiences of similar projects, in terms of size and available resources. The time estimations of subsequent phases should be analyzed and defined after the completion of each individual phase. This will make it easier to more accurately predict the resources and time needed, as it is based on past experiences. We are able to use this approach since the only pre-defined time frame is for phase 0.

6. References

- [1] Unlimited Well, Project Specification, 2010
- [2] Project Plan, 2010
- [2] System Requirements Specification, 2010
- [3] SWEBOK, 2004

Appendix A. Development Time Plan