



Regulus case study

*Example of software project life cycle managed with
Regulus*

Version 1.1

1- Document objectives

The present document represents an example of a software project life cycle in support of the Regulus online demo.

Here are the data related to the project called “My Portal”. This project has been developed following the Extreme Programming methodology and has been managed using Regulus.

This document analyses the project starting from specific requirements.

Here you can find all the entities involved in the various phases of the project, from first evaluation, to planning and advanced stages.

Starting from the activities derived from the requirements of the project, the document exposes to the user a series of data related to planning and tracking activities, that have to be inserted into Regulus.

Afterwards, the results about measurements over process advancement on time and cost are here exposed.

2- Case study description

“My Portal” is a project aimed to implement a system that will help the link between people searching a job and job offers from companies.

In particular, the following are the functional requirements:

- User Registration
 - × Registration
 - × Access the system with username and password
 - × Edit user data
 - × Add and Edit CV data
 - × Remove user from system
 - × Search Published Offers from Companies
- Company registration
 - × Registration
 - × Access the system with username and password
 - × Edit company data
 - × Insert job offers
 - × Search among users who have made public their CVs

The following are the non-functional requirements:

- Usability
Each user can use the system without having read any preliminary instruction
- Reliability
The application have to be reliable against failures on the system, that is data loss have to be minimised: periodic backups
- Performance
The time response have to be minimised: performing hardware

1.1- Prerequisites

In order to be able to insert the data from this case study, it is necessary to make some

preliminary actions in the administration area. Have to be inserted data related to the professional figures, the users involved in the project, the organization area in which context the project will be developed, and the project “My portal” itself:

- Professional Figures (name and daily cost)
 - x Senior 100€/d
 - x Junior 50€/d
 - x DBA (db administrator) 100€/d
- Users (name, associated professional figure, role covered in the project)
 - x user1 Senior role → Developer
 - x user2 Junior role → Developer
 - x user3 DBA role → Developer
 - x Tom Senior role → Area Manager
 - x Jerry Senior role → Coach
- Organization areas (name and area manager)
 - x Web Development area manager → Tom
- Project (name, area and applied process)
 - x My portal (Web Development) process → XP Process

1.2- Activities derived from project functional requirements

Considering a subset of the functional requirements exposed above, we create a possible economic evaluation of the project with the following activities:¹:

- User Registration (50 J – 25 S – 15 DB / Tot: 90)
 1. Registration **10J 5S 5DBA**
 2. Access the system with username and password **10J 10S 0DBA**
 3. Edit user data **10J 10S 0DBA**
 4. Add and Edit CV data **10J 0S 5DBA**
 5. Remove user from system **5J 0S 0DBA**
 6. Search Published Offers from Companies **5J 0S 5DBA**

1.3- Additional costs derived from non-functional requirements

Also, we consider one non-functional requirement to satisfy the following entry from the economic evaluation prospect:

- Performance
 - × Performing Hardware → Cost name: **Hardware** Cost estimated: **500€**

¹ On the right side of the list there are the effort estimated for the implementation of each activity in man-hour; J=Junior, S=Senior, DBA= DB Administrator

1.4- Planning

Let us consider now a possible planning for the real activities needed to satisfy the ones listed in the economic evaluation prospect. Given that we are following an XP Process, we consider the following entities²:

- Release 1 (from **29 Apr 09** to **12 May 09**)
- Iteration 1 (from **29 Apr 09** to **06 May 09**)
- User Stories:
 - x User registration (**24 J – 8 S – 8 DB**)
 - x Authentication management (**16 J – 36 S – 8 DB**)
- Tasks for *User registration*:
 - x Create User Registration Page (**24 J**)
 - ◆ Owner: *user2*
 - x Create DB and User Table (**8 DB**)
 - ◆ Owner: *user3*
 - x Create User Registration Action (**8 S**)
 - ◆ Owner: *user1*
- Tasks for *Authentication management*:
 - x Create Login Page (**8 J**)
 - ◆ Owner: *user2*
 - x Create Login Action (**24 S**)
 - ◆ Owner: *user1*

² On the right the effort estimated for each entity in man-hour

x Estimated: $50h(J)/8h * 50€/d + (25h(S) + 15h(DBA))/8h * 100€/d = 812.5€$

x Actual (from the tracking phase):

- ◆ J $38.4h/8h * 50€/d = 240€$
- ◆ S $38.4h/8h * 100€/d = 480€$
- ◆ DB $9.6h/8h * 100€/d = 120€$

Tot. 840€

- ◆ Estimated remaining (see calculations in the previous point)

312.5/593.75€

Tot. 1152.5/1433.75€

x Deviation value on estimated costs = Estimated – Actual:

- **MIN: 340.00€**
- **MAX: 621.25€**