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# **Visual Portfolio Analysis Tool for Kommuninvest Project Plan**

**Version 1.0**

Visual Portfolio Analysis tool for Kommuninvest	Version: 1.0
Project plan	Date: 2017-10-24

## Revision History

Date	Version	Description	Author
2017-10-19	0.0	Initial Draft	Tim Liberg
2017-10-24	1.0	First official version	Luca Franceschetti

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## 1. Introduction

### 1.1 Purpose of this document

The purpose of this document is to give the reader a high level understanding of what the project is about, and to give some background information about the customer and the project group.

### 1.2 Document organization

The document is organized as follows:

- Section 2 *Background and objectives*, describes who the customer is and the purpose of the project from the customer's perspective.
- Section 3, *Impact*, describes who will be interacting with the system and how it will affect them.
- Section 4, *Project group*, presents the members of the team, including their contact info, roles and responsibilities.
- Section 5, *Development process*, describes the process consisting of SCRUM elements that the team has decided to use.
- Section 6, *Organization and communication*, describes how meetings are organized, how the team communicates, the team routines, how the work hours and results are reported, etc.
- Section 7, *Time plan*, presents a diagram that represents the project schedule.
- Section 8, *Quality assurance*, describes the planned activities for quality assurance of prototypes and the final product.
- Section 9, *Project risks*, presents the risks involved in developing this project..

### 1.3 Intended Audience

The intended audience for this document is:

- Supervisors
- Course responsables
- The customer
- Other project groups (if interested)

### 1.4 Scope

This document addresses the organizational details and the purpose of the project. It does not address requirements, design, etc. This document will provide an overview about the project, required actions to be done and also the development process which we will follow. This document will serve as a foundation for creating the document containing requirements analysis and design.

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## 1.5 Definitions and acronyms

### 1.5.1 Definitions

<b>Keyword</b>	<b>Definitions</b>
<i>Scrum Master</i>	A person in the team who is responsible for the development team.
<i>Project Owner</i>	A person in the team who is responsible for interacting with the customer.
<i>Customer</i>	A company or person (client) who needs the final product..
<i>User</i>	A person who is the target end-user of our project application.
<i>Sprint</i>	A repeatable work cycle which is known in the SCRUM dev. process.

### 1.5.2 Acronyms and abbreviations

<b>Acronym or abbreviation</b>	<b>Definitions</b>
<b>PO</b>	Project Owner
<b>SM</b>	Scrum Master
<b>MDH</b>	Mälardalens Högskola, Västerås, Sweden
<b>POLIMI</b>	Politecnico di Milano, Milan, Italy

## 1.6 References

Sutherland, Jeff. (2010). Jeff Sutherland's Scrum Handbook.

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## 2. Background and objectives

### 2.1 Background

The customer for this project is Kommuninvest, a Swedish local government funding agency based in Örebro, Sweden. Kommuninvest currently has a debt management system named KI Finans. This system can be used by their customers in order to track transactions, perform analysis and simulations, and extract exports.

The purpose of this project is to create a prototype for a visual analysis tool that can be used to show the performance of individual debt portfolios or compare portfolios from different customers with each other and/or financial markets. More precisely, the objective of the Visual Portfolio Project is to develop a web-based application where users can compare different types of bond portfolios using either time-series graphs or scatter plots. According to the client, the idea is to "give easy access to economic and financial key indicators". It should be easy to choose the peer-group benchmarks, which indicators to analyse and how the indicators should be displayed.

The project team will not develop the final product that Kommuninvest will use, just a prototype. The goal is that this project will produce well-defined requirements and design that can be used by a company to implement the final product.

### 2.2 Requirements

#### 2.2.1 Functional requirements

##### 2.2.1.1 High priority

1. Login
2. Choose an entity
  - a. municipality
  - b. municipality group (municipality + owned companies)
  - c. company
3. Filter the data by
  - a. Economic indicator
  - b. Peer group
  - c. Time period
  - d. etc.
4. Define user roles with respective interfaces, functionalities and information access
5. Data Cleansing / Cleaning
6. Visualize own portfolio
  - a. Customer users (municipality or companies)
7. Comparisons between own portfolio and average of peer groups
  - a. Customer users (municipality or companies)
8. Visualize any portfolio
  - a. Account managers (Kommuninvest employee)
9. Comparisons between any portfolios and/or peer groups
  - a. Account managers (Kommuninvest employee)
10. Create different type of custom chart
  - a. User could select specific data for the axis of the chart
11. Create different type of tables
12. Download displayed data, to be used in Excel and/or Powerpoint slides
  - a. Download as an image (e.g. JPEG)
  - b. Download as raw data (e.g. in a table)

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#### 2.2.1.2 *Low priority*

1. User Registration module
2. Additional filters for charts
3. Additional charts: provide a list and allow customer to choose.
4. Add more data to the application, e.g. upload Excel or CSV file, or add manually

### **3. Impact**

The system will be used by the customers of Kommuninvest. These users will have a limited access to information and features. It will also be used by account managers at Kommuninvest, who will have full access to all information and more advanced features.

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## 4. Organization

### 4.1 Project group

Our team is composed of 8 members located in 2 universities as follows:

Name	E-mail	Location
Eldar Alasgarov	<a href="mailto:eldar.alasgarov@hotmail.com">eldar.alasgarov@hotmail.com</a>	PoliMi - Italy
Stefano Cilloni	<a href="mailto:stefano.cilloni@mail.polimi.it">stefano.cilloni@mail.polimi.it</a>	PoliMi - Italy
Luca Franceschetti	<a href="mailto:luca.franceschetti@mail.polimi.it">luca.franceschetti@mail.polimi.it</a>	PoliMi - Italy
Rodrigo Coelho	<a href="mailto:rodrigopcoelho@hotmail.com">rodrigopcoelho@hotmail.com</a>	PoliMi - Italy
Valentina Menabue	<a href="mailto:valentina.menabue@gmail.com">valentina.menabue@gmail.com</a>	PoliMi - Italy
Tim Liberg	<a href="mailto:tlg16002@student.mdh.se">tlg16002@student.mdh.se</a>	MDH - Sweden
Aliya Hussain	<a href="mailto:ahn16022@student.mdh.se">ahn16022@student.mdh.se</a>	MDH - Sweden
Hamza Sabljaković	<a href="mailto:hsc16001@student.mdh.se">hsc16001@student.mdh.se</a>	MDH - Sweden

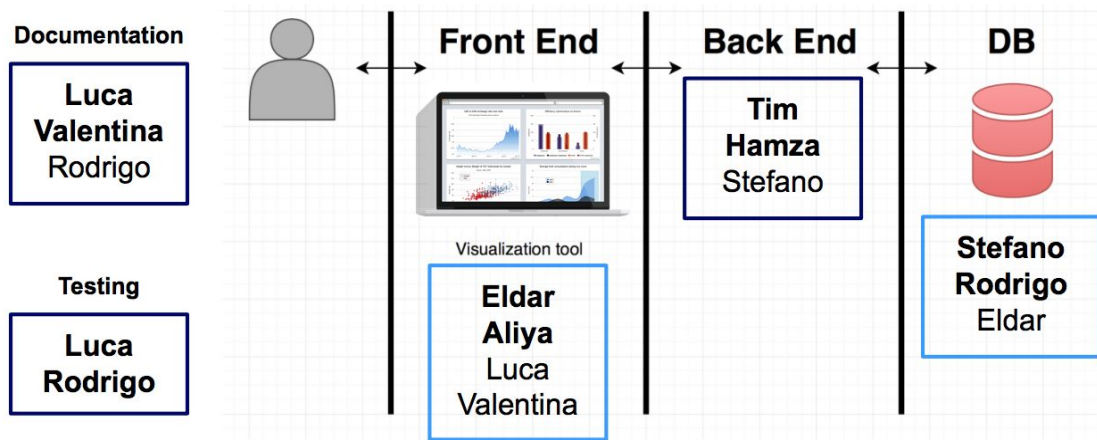
### 4.2 Roles

In our development process we will use SCRUM. The scrum roles are as follows:

- Product owner - Luca Franceschetti
- Scrum master:
  - We decided to assign this role dynamically.
  - Each week the SCRUM master will be one of the team members, apart from the Product Owner.
  - Assignment order is alphabetical by surname.
    1. Alasgarov Eldar
    2. Cilloni Stefano
    3. Coelho Rodrigo
    4. Hussain Aliya
    5. Liberg Tim
    6. Menabue Valentina
    7. Sabljaković Hamza

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### 4.3 Division of work



Marked Bold, are primary executors of the task/section. The others are there for support in case of additional workload. As you can see tasks are overlapping to mitigate the risk of Team Member absence (e.g. sickness)

### 4.4 Customer

The customers are:

1. Thijmen de Gooijer - Kommuninvest
2. Mattias Bokenblom - Kommuninvest

### 4.5 Supervisors

The team will have two supervisors for the project:

1. Omar Jaradat - MDH Sweden
2. Raffaella Mirandola - PoliMi Italy

### 4.6 Communication

The communication between the team members is done every day, mainly using Telegram, also a Slack group is created for more development related topics (e.g. share a snippet of code). This was thought to be the fastest way since the team members are in different countries.

For documentation purposes and when new updates are made at the code or documentation, Google Drive comes in help. The audio/video calls with the customer and supervisors are done using Skype (or Google Hangouts in case of the issues with the first one).

Each member keeps trace of the working hours and discussions done in the group and daily SCRUM meetings. There are weekly meetings with supervisors as well, over Skype, where they check our individual and weekly progress. Furthermore, there are weekly Skype meetings with the Customer as well, when they check our progress, answer our questions, and suggest new proposals.



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#### 4.7 Tools

Communication tool	Purpose
GitHub	Code repository, code sharing, version control.
Slack	Code and development discussions
E-mail	Official communication with supervisors and customer
Google Calendar	Shared calendar for scheduling team meetings
Telegram	General, informal chat within the team
Google Drive	Sharing of documentation and presentation slides
Skype	Communication with customer, supervisors and team members
Trello	Backlog and task management

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## **5. Development process**

The team is going to use the SCRUM development process [Sutherland, 2010]. Sprints will be one or two weeks long. A new scrum master will be selected for each sprint. Scrum will be used as the development process because it provides an Agile and customizable working framework. The whole communication and organization process is easily organizable and simplified so that the focus can be on the development. The possibility of changing roles gives the ability to reorganize the team for certain parts of the project if needed.

### **5.1 Sprint Planning**

We, as a team, decided that sprints will be done in a basis of 1 or 2 weeks. During these Sprints, the activities for the coming days will be discussed and there will be an estimation of the tasks, along with several meetings with all the team and scrum coaches. We will discuss the progress and work that should be done in the next week. Every team member will estimate the workload of each individual task, and volunteer for their desired tasks. The Scrum master will monitor the meeting and assure good teamwork.

### **5.2 Sprint Review**

Reviewing the work done so far which will help the team for doing a retrospective. All the non finished work and the high priority works will be scheduled for the next Sprint.

### **5.3 Sprint Retrospective**

A retrospective helps in the development process and it is done after the Sprint Review. This retrospective is needed as it helps in further improvements for the next Sprint.

### **5.4 Daily Scrum meeting**

Basically it is a short meeting where each team member needs to update his/her status on the project. What has been done, what is going to be done and what are the impediments. Also, to be pointed the role of the Scrum Master in this meeting as it is his/her job to help the team progress in the process.

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## 6. Time plan

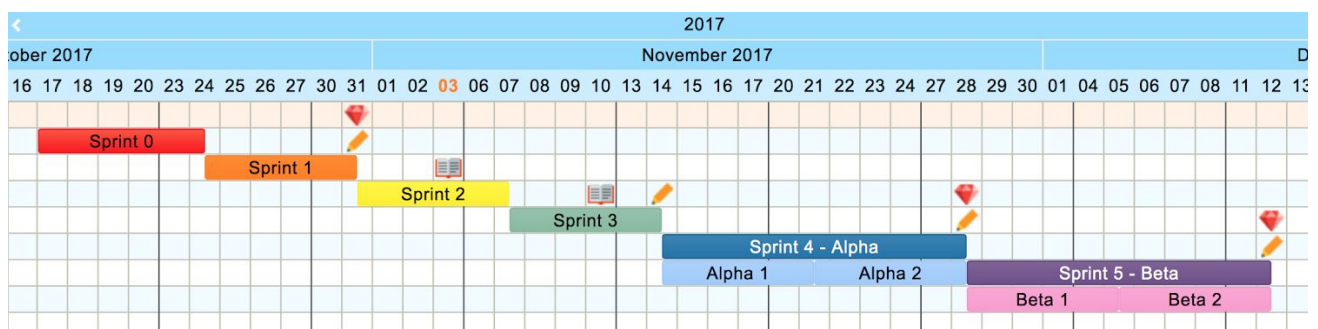
### 6.1 Milestones

1. Project plan - 2017-10-17
2. Requirements and design - 2017-10-31
3. Alpha prototype - 2017-11-28
4. Beta prototype - 2017-12-12
5. Presentable product - 2018-01-09

### 6.2 Deliverables

1. Project plan - 2017-11-03
2. Requirements definition - 2017-11-10
3. Design description - 2017-11-10
4. Acceptance test plan - 2017-12-22
5. Test report - 2018-01-19
6. Project report - 2018-01-19
7. Final product - 2018-01-19

### 6.3 Initial Sprint Plan



## 7. Deliverables description

- **Project Vision Presentation:** A presentation of general overview of our project and its structure.
- **Project plan document:** A more detailed document consists of introduction, scope and background of the project, team organization and development process with some additional information.
- **Project Requirements and Architecture:** A document describing all the requirements of the project, final product and the idea of its architecture need to be satisfied.
- **Design description document:** This document discuss in depth about the architecture, structure and accepted technology for the final product.
- **Alpha prototype:** The first presentation of project prototype. First release of the product. Not all functionalities have to work.
- **Beta prototype:** The second sample of the product which is close to the final product.
- **Testing report:** A document describing all the tests that the project must passed in order to be ready for releasing.
- **Final product:** Final version of the product, that will be working and complete.

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## 8. Quality assurance

- The quality of the product will be assured by team meetings and documentation.
- Every weekly scrum meeting will have a retrospective on the last week sprint.
- Everything what the team does will be documented and traceable.
- The Scrum Master will monitor the progress of the team.
- Product owner will assure that all customer goals are met.
- The whole GitHub project will be visible to all team members, supervisors and to the customer so that everything is transparent.
- Every week is scheduled a meeting with the customer
- We will validate that all requirements are satisfied..
- Git policy: every feature will be developed on separate branches and before merging to other branches every branch will first be merged with main branch.
- A user test will be performed with the customer using the beta prototype.
- The results from this test will be used in order to refine the graphical user interface and data presentation.

## 9. Project risks

Risk No.	Risk Description	Risk Mitigation	Priority
1	Lack of communication between members	Weekly meeting Instant messaging	High
2	Lack of knowledge	Study new technology Get help from team members and supervisors	High
3	Development of incorrect features	Project Owner, that will get in touch frequently with customers	Medium
4	Requirements not completely understood	Ask to supervisors and clients in order to clarify them	High
5	Team members are not available for meeting	Plan in advance meeting and use online tools to decide best schedule time for meetings	Medium
6	Milestone delays	Each team member should know their task, and the PO will help manage on-time delivery.	Medium
7	Scope Creep	Client asks for out of scope features or changes how a feature should be displayed.	Medium
8	Team member absence (e.g. vacation, sickness)	Project Roles are overlapping and substituting members are assigned to each task in case of the need	Medium