Requirements Document

SE group

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1 Introduction

This document outlines the requirements for the Sustainable VVE Platform project. VVE is an abbreviation of 'Vereniging van Eigenaars', translated this means 'association of apartment owners' (hereafter the term VVE will be used). As an owner of an apartment you are, according to Article 125(2) of book 5 of the Dutch Civil Code, a member of a VVE organization of that apartment complex. All owners of an apartment will be denoted as VVE members. Within the VVE association there is a selected group which takes care of the VVE organization, by organizing meetings and executing the decisions made by the VVE, which are the VVE board members. A VVE is responsible for the maintenance and investments of the apartment complex. Some VVEs desire to make sustainable and especially profitable investments for their apartments. However, the board and the members of a VVE are usually poorly informed on sustainable investing and have in many cases little confidence in suppliers of sustainable products. Accordingly, there is a desire for a one-stop online platform that informs the VVEs easily and quickly on sustainable investments, and connects them to each other and to reliable suppliers. Moreover, there is a desire to make the market of suppliers and their products transparent.

2 Stakeholders

There are several interested parties with regard to this VVE project. These stakeholders are briefly explained below.

2.1 Project owner

Erik Hesselink is the initiator and project owner of this project. His goal is to fill the gap between the VVEs and the suppliers, between the VVE board members and VVE members, and among VVE's themselves so they have the best possible information to make fast, great value and low risk investment decisions regarding sustainability. Correspondingly, his desire is to fulfil this goal with a maintainable, frictionless, simple, user convenient and speedy web application.

2.2 VVE members

The owners of an apartment are the VVE members. Their desire is a convenient application to perceive insight in the investment process regarding sustainability, which includes gathering information, access to offer requests, decision-making and the planning of execution. Also they must have the ability to contact their VVE board members.

2.3 VVE board members

From the group of VVE members a selected group has the responsibility of executing the desires of the VVE. Respectively, their wish is to make improved decisions regarding apartment investing and inform the VVE members of the status regarding these decisions. Therefore, the application should improve the decision making of apartment investing by connecting the VVE board members to each other and the suppliers. Further, the VVE board should be able to communicate with the VVE members on the various sustainability topics.

2.4 Suppliers

The suppliers consist of the parties that offer investments for the VVEs. The variety of products and services range from insulation, consults, solar panels to heat pumps. The goal of the supplier is to offer and sell their products to the VVEs. Accordingly, the application should contain a marketplace to connect the VVE board with the suppliers. Furthermore, the VVE board members and suppliers should be able to contact each other. This communication should be established in the chat rooms separated by the sustainability topics.

2.5 Administrator

To control the platform an administrator environment is to be built, entailing an administrators role. As of the beginning of the platform, the administrator of the platform will be the project owner; Erik. However, with the intended success, the administrator should be viewed as an exclusive stakeholder. The administrator should have some functionality to update and control the platform. The exact functionality for the administrator is yet to be determined.

2.6 Future and current developers

The current developers are Aine, Dante, Hwajun, Rayyan and Erwin. Their goal is to build the web application for the project owner Erik Hesselink. The application should be developed according to the working method provided by the course Software Engineering at the University of Groningen. The future developers have an interest in maintainable code produced by the current developers in order to enable prospective development.

3 Requirements

In this software engineering project we, in consolation with the project owner, will prioritize the functional requirements according to the MoSCoW prioritization described in Software Engineering Principles and Practice (Vliet 2008). The MoSCoW prioritization acronym stands for Must haves, Should haves, Could haves and Won't haves. The non-functional requirements are specified criteria of the system and are not prioritized. The team is expected to meet these criteria, deviations will be discussed with the project owner. On approval of the project owner the requirements are adjusted accordingly.

3.1 Must haves:

- Registration and login for suppliers, VVE board members and VVE members

Before anyone can make use of the web platform, he or she must register themselves as an VVE board member, VVE member or supplier.

- Clickable map of all the VVEs in the Netherlands

The project owner desires to have a clickable map of all VVEs in the Netherlands. The map should look like Tesla's clickable map. Upon selection of a VVE, contact information and process status of the concerning VVE should show.

- Messaging system per sustainability topic

The web application should have a Facebook/LinkedIn like messaging system to serve communication between VVE board members and VVE members on the seven sustainability topics.

3.2 Should haves

- Login and control panel for administrator

To administrator and monitor the application, an administrator login and control panel should be created. In this control panel, manual verification of user

registrations (VVE board members, VVE members and suppliers) should be build.

- Notifications

The users should be notified through mail when they receive a message and/or update. These notifications should be able to be turned on and off.

- Password recovery

The users of the VVE platform may lose their password. For this instance, a password recovery system should be made in order to retrieve the password to the user.

3.3 Could haves

- Messaging system between VVE board members to suppliers (like Facebook/LinkedIn)

The web application could have a messaging system to provide communication between VVE board members and the suppliers.

- Information page on sustainable topics

The web application may have an information page on sustainable topic, covering information on products like insulation, solar panels and heat pumps.

- Sharing files through the messaging system

Making it possible to share files through the messaging system.

3.4 Won't haves

- Marketplace for products

A marketplace for the suppliers and the VVE board members could be build. In this marketplace, suppliers are able to offer their products by filling in a format. The VVE board members should be able to view these products and contact the supplier. Furthermore, the VVE board members should be able to give their review on the supplier. Accordingly, this should be visible to all VVE board members going through the marketplace. Additionally, a filter mechanism should be build in the marketplace. The marketplace will not be build during this project because of time limits.

- Payment system

The payment system for the marketplace will not be build within this project. The project goal is laying the foundation of the online platform and facilitate connection between various stakeholders. In prospective development a payment system may be integrated. This is taken into account throughout the development of the application.

- API framework

An API framework is not within the scope of this project as it is most likely not feasible in the spanning time of the project.

4 Non-functional requirements

- Speed

Google research has shown that loading times over 3 seconds are considered annoying. All time exceeding the 3 seconds waiting time increases the probability of users leaving the page promptly. For this reason all loading time of pages within the web application should be strictly less than 3 seconds (An 2017).

- Convenience

The application should be user-friendly and provide error messages when something went wrong. Every interaction with the system should provide a response.

- Simplicity

The application should be easy to use, therefore, the whole application should be self explanatory.

- Scalability

The system should be able to operate with 5000 registered users in 3 years.

- Maintainable code

The code should have a SonarQube grade A in reliability and maintainability.

- Application should work in (most used) web browsers

The web application should work in Mozilla Firefox, Google Chrome, Internet Explorer, Microsoft Edge and Apple Safari (up-to-date versions).

- Security

User passwords should be hashed. The code should have a SonarQube grade A in security.

5   Meeting Log

When	Decisions
04-03-2020	Gathering the initial requirements of the web application
26-03-2020	Confirm requirements, discuss MoSCoW ranking preferences of client, discussion on timeline of project, walk through the user cases, discussion on databasing and show what has been achieved till that point.
23-04-2020	Erik presents on frontend of website, the google maps api and chat are a high priority for the client.
05-05-2020	Client presents permissions that differ for apartment owner and board member. As well as explains what is on each sustainability page. Each topic of sustainability should have its own chat room. Each sustainability page should have three sub-pages: information, chat and marketplace.
22-05-2020	Team presents prototype to client. Confirming/optimizing the Axure prototype (minor changes), decided chat should be real-time and added distinction between marketplace for suppliers and the VVE shop.
29-05-2020	Adjustments of user's permissions.
01-06-2020	Present product as it will be presented in demo.

6 Change Log

Who	When	Which Section	What
Aine, Hwajun and Erwin	09-03-2020	Stakeholders, functional and non-function requirements	Create the first setup
Erwin	10-03-2020	Applied MoSCoW, reformulated requirements and wrote a draft introduction	Requirements and introduction
Aine, Dante, Hwajun, Rayyan and Erwin	22-03-2020	Adjusted requirements MoSCoW ranking according to the group meeting of 22-03	Requirements
Erwin	22-03-2020	Added explanation of stakeholders	Stakeholders
Erwin	23-03-2020	Added explanation of all requirements, updated format, created meeting log, revised stakeholders	Requirements, stakeholders, meeting log
Erwin	31-03-2020	Adjusted the requirements according to the meeting with Erik on 26-03	Requirements
Erwin	29-04-2020	Adjust requirements according to meeting on 27-04	Requirements
Erwin	01-06-2020	Adjust requirements according to meeting on 11-05	Requirements
Erwin	04-06-2020	Checked the full document if it is up-to-date and added administrator to the stakeholders	Whole document
Aine and Erwin	10-06-2020	Update client meeting logs	Client meeting log

7 Bibliography

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An, Daniel (2017). *Find out how you stack up to new industry benchmarks for mobile page speed.* URL: https://www.thinkwithgoogle.com/marketing-resources/data-measurement/mobile-page-speed-new-industry-benchmarks/. (accessed: 23.03.2020).