

Version 1.1

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# Introduction

## Purpose

The purpose of this document is to collect, analyze, and define high-level needs and features of the smartQueue. It focuses on the capabilities needed by stakeholders, and the target users, and why this needs exist. This helps defining every macro aspect of the project, defining its vision and scope. Once collected, analyze and defined, the system needs and features become the basis for more technic requirements.

## Scope

This document defines the business aspects of the smartQueue web application such as its goals, stakeholders and main features. It is the basis to the definition of the user requirements and it’s based on the business requirements.

## Definitions, Acronyms and Abbreviations

* ORT: Obshestvo Remeslenofo zemledelcheskofo Truda (The Society for Trades and Agricultural Labour)

## References

No references used.

## Overview

This document is divided in eleven sections, which contains business aspects such as the product definition, it’s positioning in the market, its features and precedence order, stakeholders definitions and necessities.

# Positioning

## Business Opportunity

People usually have a hard time deciding which restaurant to have their meals due to the enormous queues found on busy days. This factor makes people quit looking after their favorite restaurants in order to choose establishments that offer smaller queues. This also means the restaurant loss of a potential customer and part of its reputation. This problem creates an opportunity for any application that could improve the traditional way of joining a queue. This is the smartQueue cause: providing the customers who can’t stand waiting on standard queues a better queue experience and providing restaurants a new way of managing their enormous lines.

## Problem Statement

|  |  |
| --- | --- |
| The problem of | Wasting unnecessary time on restaurant queues, especially on busy days. |
| affects | Both restaurant and its customers. |
| the impact of which is | The unsatisfaction of the customer and the restaurant loss of income and reputation. |
| a successful solution would be | A virtual, efficient and dynamic queue that will optimize the customer’s use of time (which will reduce restaurant’s loss of income and reputation). |

## Product Position Statement

|  |  |
| --- | --- |
| For | The customers |
| Who | Are tired of wasting their time on queues |
| And for | The restaurants |
| Which | Lose money and reputation due to its customers’ quit |
| The smartQueue | Is a web application |
| That | Allows the customer to join a virtual queue and the restaurant to rescue and acquire clients. |
| Unlike | The traditional reservation system |
| Our product | Allows the customer to join the queue at any time, not requiring the anticipation usually requested by reservation systems. |

# 

# Stakeholder/User Descriptions

## Market Demographics

The market target segment are the restaurant customers who would rather use the virtual queue to solve waiting problems and restaurants who would like to improve their service to offer a differential to their customers.

Not every restaurant fit this category since “cheap” restaurants wouldn’t be able to use the application because of its necessity of having a computer, internet access and a staff to operate. Restaurants that already have a high number of clients also wouldn’t make use of the technology once the smartQueue solution wouldn’t bring any improvement. So, the target restaurant segment are the “ordinary” restaurants, which have an average budget and average popularity. The target customers are the customers who use the restaurants profile listed above services.

## Stakeholder Summary

|  |  |  |
| --- | --- | --- |
| **Name** | **Represents** | **Role** |
| Omega Group | *Planning team, documentation team, development team, and quality assurance team.* | Ensure every aspect of the project, which includes the development of the idea itself, its planning, implementation, testing, presentation and broadcast on the market. |
| Project Coordinator | *Team’s coach.* | Ensure the correct development of every aspect of the project, and provide useful information about technologies, product engineering, and project management. |
| ORT | *Project’s Evaluator.* | Evaluate the project itself, in order to determine the team’s success on its development, according to the minimum requirements for the technician graduation it offers. |

## User Summary

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Stakeholder** |
| Restaurant Customers | *Users of the “Restaurant’s Customers” module of the product.* | Represented by Stakeholder “Omega Group”. |
| Restaurants | *Users of the “Restaurant’s Customers” module of the product.* | Represented by Stakeholder “Omega Group”. |

## User Environment

The user environment consists on the usual city environment fulfilled of busy tasks and time necessities.

## Stakeholder Profiles

### Omega Group

|  |  |
| --- | --- |
| **Representative** | Ian Albuquerque Raymundo da Silva, Jean Carlo Ghissoni de Almeida and Luccas Laquintinie Amaral Pinto. |
| **Description** | Group responsible for every aspect of the development of the product and execution of the project. Basically, “the developers”, “planners” and “testers”. |
| **Type** | Business, planners, and developers. |
| **Responsibilities** | Ensure every aspect of the project, which includes the development of the idea itself, its planning, implementation, testing, presentation and broadcast on the market. |
| **Success Criteria** | Have the every feature of the project working and, if possible, have its application on the market. |
| **Involvement** | The entire project depends on this stakeholder. |
| **Deliverables** | Elevator Statement, Product Vision Box, Vision/Scope Document, Use Case Docs, Function Requirement List, Business Rules, Quality Attributes and all product versions. |
| **Comments / Issues** | None. |

### Project Coordinatior

|  |  |
| --- | --- |
| **Representative** | Rafael Pinho |
| **Description** | Stakeholder responsible for guiding the “Omega Group” in order to successfully accomplish its goals. |
| **Type** | Coordinator. |
| **Responsibilities** | Ensure the correct development of every aspect of the project, and provide useful information about technologies, product engineering, and project management. |
| **Success Criteria** | Have the team to learn how to develop a project, reflected on the success of the process. |
| **Involvement** | “Coach” of the group, which means that large part of the knowledge and help applied to the project was provided by this stakeholder. |
| **Deliverables** | Project management classes and guidance. |
| **Comments / Issues** | None. |

### ORT

|  |  |
| --- | --- |
| **Representative** | Teachers responsible for evaluating the Project on its presentation day. |
| **Description** | Institute of technology, who provides the technician course that created the necessity of developing the product. |
| **Type** | Evaluator Institute |
| **Responsibilities** | Evaluate the project itself, in order to determine the team’s success on its development, according to the minimum requirements for the technician graduation it offers. |
| **Success Criteria** | Have a visually working application meeting minimum technologic knowledge requirements, demonstrating all work and progress done by the group. |
| **Involvement** | Having the student’s group to prove their technical knowledge developing a real project. |
| **Deliverables** | Project evaluation. |
| **Comments / Issues** | None. |

## User Profiles

### Restaurant Customers

|  |  |
| --- | --- |
| **Representative** | None. |
| **Description** | People who eventually or usually have their meals on restaurants. |
| **Type** | Casual user. |
| **Responsibilities** | None. |
| **Success Criteria** | Have a functional, trustable, secure, soft, light, and easy-to-operate application that improves the waiting experience through a virtual queue. |
| **Involvement** | One of the two main users of the application. Basically, the target area of the project. |
| **Deliverables** | Application Feedback. |
| **Comments / Issues** | None. |

### Restaurants

|  |  |
| --- | --- |
| **Representative** | Medium-High Class Restaurants. |
| **Description** | Restaurants that lose money and reputation due to its customers’ quit. |
| **Type** | Corporative user. |
| **Responsibilities** | Control and manage their queues, through the use of the smartQueues tools. |
| **Success Criteria** | Have all theirs customers to join their queues, without any reclamations, and have an easy time managing their queues. |
| **Involvement** | One of the two main users of the application. Basically, the target area of the project. It has also the responsibility of controlling and managing their queues in order to provide feedback to the application. |
| **Deliverables** | Constant queue feedback and general application feedback. |
| **Comments / Issues** | None. |

## Key Stakeholder / User Needs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Need** | **Priority** | **Concerns** | **Current Solution** | **Proposed Solutions** | |
| Restaurants Availability | 10 | Classic problem of what was born first: the egg or the chicken. Customers won’t use the application if there are no restaurants on it and restaurants won’t use it if there are no customers registered. | None. | | None, yet. |
| Customers Popularity | 10 | None. | | None, yet. |
| Application must always be online. | 9 | Every time the application isn’t online the customers who would try to use it on that period of time would quit using the application. | Double hostage service. | | --- |
| Have a Correct and Fair Queue Management | 9 | Simply too crucial for the application success, | Algorithms not defined yet. | | Algorithms not defined yet. |
| Constant Feedback from Application | 8 | Team does not dominate technology. | SMS module and easy access to queue status through the website main page | | --- |
| Secured and Trustable Queue Status. | 8 | The team is not sure if the current solution is good enough. But it seems there is no other method to evaluate this aspect | Trust on restaurant’s queue control on their side of the application | | --- |
| Easy Accessibility and Navigation | 5 | None. | --- | | <This solution will be evaluated on developing process> |
| Interaction with Friends Network | 3 | Team does not dominate technology. | Integration with Facebook (Described on 5.3) | | --- |

## Alternatives and Competition

### Conventional Queue

Most of the users are used to the traditional queue; arriving at the restaurant and physically awaiting on it. It’s a simple system that anyone can enjoy without much effort. Unfortunately, they spend their precious time on it, while they could just do something more productive – and that’s where the smartQueue web application succeeds.

### Conventional Reservation System

This system is recommended for restaurant customers when there’s the need to ensure that tables will be available; such as for special meetings. Yet it invalidates one or more tables for some time – in other words, less people will be served. Anyway, it’s still the best option when making reservations with antecedence, since you can’t just ask for a large and secured number of tables just when you are about to eat.

# Product Overview

## Product Perspective

The smartQueue application isn’t related to any other project. However, it uses GoogleMaps, Facebook, and SMS modules of technology and interaction.

## Summary of Capabilities

**smartQueue Application**

|  |  |
| --- | --- |
| **Customer Benefit** | **Supporting Features** |
| Save time on entering a virtual queue instead of a physical queue. | Use of mobile (web and SMS) technologies |
| Have simplicity on application interaction. | Simple and instinctive user interface. |
| Not having to wait on the restaurant area. | SMS notification. |
| Being able to enter queue from anywhere. | Easy access to web and SMS technologies through mobile phones. |
| Retrieve lost clients and enhance popularity for restaurants. | Easy and free interaction between customer and application. |
| Find out and be connected to an entire new network of restaurants. | Comments, rank, and favorite options. |
| Retrieve information from chosen restaurants. | Easy access to restaurant profiles. |

## Assumptions and Dependencies

The browsers must support HTML5. GoogleMaps, Facebook Interface and SMS protocols also must be guaranteed.

## Cost and Pricing

* The application will be entirely free to restaurant’s customers (the only cost for them would be SMS and Internet prices).
* Restaurants will pay a tax to use the application (either only one payment or monthly costs)

## Licensing and Installation

No download needed; the protocols between the client and the server just must be validated.

# Product Features

## *Comment, Rank and Favorite Option*

## Customers must be able to comment restaurant pages, and view others people comments. Customers must also be able to evaluate and favorite restaurants through its pages generating restaurant ranks and suggestions, by categories. All users must be able to see this rank and favorite result as part of the “suggestion” section of the main page of the application.

## *Integration with Facebook*

## Customers must be able to integrate their account with Facebook. One of the forms of integration would be Facebook’s “Like” option. Another method would happen when a registered user joins a queue. He would be able to notify other people through Facebook profile. This way other could join the queue through an “instant event” on Facebook.

The same way, customer would be able to join restaurant queues through Facebook.

## *Easy Access to Restaurant Information and Queue Status*

## Customers must be able to access restaurant profiles and get information such as queue status, location, menu, and telephone. This access must be easy and instinctive.

## *Integration with Google Maps*

## Restaurant pages must have their location shown on Google Maps application.

## *SMS Module*

## Customers must be able to join queues through SMS. He also must receive notifications about the queue status through this module. Users must also be able to choose or not to receive notifications about their friends’ recent activities (friends related to Facebook profile).

## *E-Mail Notifications*

## Customers must receive notifications about their activities and interactions with the smartQueue web application.

# Constraints

The main constraints found are:

* The limits brought by the browser running the application
* The user’s necessity of speed and simplicity when running the application (this creates limitations when choosing what technology to use – a heavy feature would not meet this requirement)

# Quality Ranges

Quality ranges not specifically defined yet.

However, servers must be quick and sustains a high number of simultaneous user connections. Servers must also be online all the time.

# Precedence and Priority

## *Basic System Interface (Register, Log-In, Normal Join mode, Search Option…)*

## *Easy Access to Restaurant Information and Queue Status*

## *SMS Module*

## *Integration with Facebook*

## *Comment, Rank and Favorite Option*

## *Integration with Google Maps*

## *E-Mail Notifications*

# Other Product Requirements

## Applicable Standards

* This web application makes use of HTML
* No Operational System specification needed (once it's a web application)

## System Requirements

* Browser (Mozilla, Internet Explorer, Google Chrome, etc) which supports HTML 5.0 and CSS 3.0
* Cell phone able to send an SMS

## Performance Requirements

* The server has to support a large number of users using the service simultaneously
* Low response times from the server

## Environmental Requirements

* Once the server needs to support a lot of users, it’s necessary enough resources to handle this. Therefore the hosting server needs to count with them.
* It’s also necessary regular maintenance, in order to back up the data in case of problems that may cause the app to crash.

# Documentation Requirements

## User Manual

The user manual must explain all the steps necessary to use the smartQueue application in a simple language, allowing any client to understand. It also must contain another section for the restaurants, directed to its employees, teaching the knowledge necessary to use the system.

## On-line Help

The On-line help is the User Manual dedicated for each target user of the application (restaurants and restaurant’s customers). The application must also contain a page that sends to Omega Group any doubt/suggestion about the application.

## Installation Guides, Configuration, Read Me File

There is no installation guide because system doesn’t require installation. However the User Manual includes register and account configuration instructions.

## Labeling and Packaging

The entire application needs to maintain its unique style through all its pages. This includes the smartQueue logo, Omega Group logo and consistent graphics.