Vision and Scope Document

for

PostOffice

Version 1.0

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1. Business Requirements

1.1. Background

The current state of web application for post office requires for every company to manually develop its own web application, to spend a lot of money for developers, testing and maintaining the system.
The solution will provide the unified service for postal companies where they can manage orders and for post office clients who can check the order status. So this system will allow companies to spend more time for their own needs, for optimizing processes and improving clients pleasure. Clients also will get good comfortable stable real-time system for all their needs.

1.2. Business Opportunity

This product will be valuable to the postal companies because it can help to decrease costs for developing and maintaining their own web application and therefore they will be more focused on their business. Clients also will get stable real-time system.

1.3. Business Objectives and Success Criteria

The main business objective is to create b2b service and give SaaS solution to postal companies.
Success for the project will be measured on such criterias:

- the product will be used by 100 postal companies 1 year after start
- the product will be used worldwide and on every continent

1.4. Customer or Market Needs

The product can help small companies to optimize their costs and so they will be more effective and competitive.
The system will be also very useful for post office employees and for clients. Reasons:

- the employees can easily manage orders and change their location progress, so clients can check this information by TTN order number and be aware of order status,
- the system also notifies clients by sms with TTN number when order was created, so clients always have information about order and their are no needs to communicate with employees out of the system (by phone or some other way)

At this stage, all of the above functions are provided in a lot of different applications, but they are all different and each new company needs to create the new version of these functions on their web application.
We offer the unified platform that will be useful for postal companies as well as their clients.

1.5. Business Risks

The following is a list of items that threaten the success of the project and the source of the risk:
Risk - 1
There are too many features to implement.

Source: The long-term vision of the software is very unclear.
Mitigation: Clearly define the scope of the project.

Risk - 2
A software product is built that does not satisfy stakeholders needs.
Source: Lack of communication with stakeholders.
Mitigation: Often make different polls and also use another methods to communicate with stakeholders.

Risk - 3
The interface of software product is not intuitive.
Source: Lack of communication with stakeholders and absence of UI/UX designer.
Mitigation: Communicate with stakeholders and hire UI/UX designer.

2. Vision of the Solution

This section establishes a long-term vision for the system to be built to address the business objectives. This vision will provide the context for making decisions throughout the course of the product development life cycle.

2.1. Vision Statement

The PostOffice will be the platform for postal companies where they will be able to manage orders and their clients in an easy way. So, they will increase their efficiency and optimize resources. This software product also will bring new opportunities for small postal companies that have lack of resources and are not always competitive, so they will be able to focus on more business problems and to be more successful.

2.2. Major Features

1. Creating order in 3 steps with all needed information by post office employee.
2. Sending sms with TTN number to inputted phone number by post office employee when order is created.
3. Displaying all orders with valid TTN number and with their statuses for post office employees.
4. Managing orders by post office employees.
5. Getting TTN number in sms by the client.
6. Displaying order timeline by TTN number got from sms for the client.
7. Completing order if it has already been delivered to the client.
8. Displaying saved by an employee or client changes dynamically.

2.3. Assumptions and Dependencies

The system will be developed by using .NET Core platform with C# language.
Other dependencies will also include:

- Angular
- SignalR
- MongoDB
- Redis
- Azure Functions

- Docker

Angular framework will be used, so the system will work only as a native app without reloading the page.
Another constraint is that the system will be available and usable in Chrome, Opera, Mozilla Firefox and Safari browsers, but not in Internet Explorer.
The system may also have an adaptive design for small screens (smartphones, tablets).

3. Scope and Limitations

The new system will incorporate an online registration form, and administrators' portal, a backend database to store and process user's information and orders data. In the sections that follow, the scope of this project will be defined in terms of major features that will be implemented and those that will not.

3.1. Scope of Initial Release

The initial release of the new system will include an administrators' portal and a backend database to process and store orders' information. A detailed Software Requirements Specification (SRS) will be developed to capture the specific requirements for this project.

The major features that will be implemented in the PostOffice version 1 are:
- Creating order in 3 steps with all needed information by post office employee;
- Displaying all orders with valid TTN number and with their statuses for post office employee;
- Managing orders by post office employee;
- Completing an order if it has already been delivered to the client.

3.2. Scope of Subsequent Releases

The major features that will be implemented in the subsequent PostOffice versions are:

- Sending SMS with TTN number to an inputted phone number by post office employee when order is created;
- Getting TTN number in SMS by the client;
- Displaying order timeline by TTN number got from SMS for the client;
- Displaying saved by employee or client changes dynamically.

3.3. Limitations and Exclusions

It is impossible to list everything that will not be implemented in the PostOffice version 1 or 2, as the list is infinite. This section lists desirable features that are outside of the scope of this project, but could be implemented in the future:
- Notification of changes in order status via email or phone call;
- Possibility of returning cargo to the initial sender;
- Possibility for a user to cancel his order;
- Opportunity to make a payment for an order through PostOffice app.

4. Business Context

This section summarizes some of the business issues around the project, including profiles of major customer categories, assumptions that went into the project concept, and the management priorities for the project.

4.1. Stakeholder Profiles

Stakeholder	Priority	Major Value	Attitudes	Major Interests	Constraints	Communication
Non-digitized Postal Companies	*Manage closely*	*(Product) To increase customer engagement, To save budget, To improve workflow*	*(Product) **Highly positive** -See product as a possibility to improve and digitalize workflow*	*(Product) Speed up the process of managing orders by the employees, give access to see and manage orders to the end customer, handle and save a much larger amount of data in one place*	*(Product) The different workflow in each company, Bad network connection in the warehouses and offices, integration with their existing systems and CRM*	*On a weekly basis to analyze their pain point, needs, "as-is" workflows and creating "to-be" workflows in collaboration*
Customers of Postal company services	*Keep Satisfied*	*(Product) To be able to track and manage own orders*	*(Product) **Highly positive** - Possibility to have a high-quality service by the lower price*	*(Product) Avoid lines in the post offices, be aware of the order state anytime and anywhere*	*---*	*Periodically send surveys or questionnaires and conduct interviews to learn their needs*
Digitized Postal Companies	*Monitor*	*---*	*(Product) **Negative** -Potential competitor on the market, that may take % of their customers*	*(Product) To analyze the feature that the product will provide and provide customers with an alternative to keep them*	*----*	*Before the development starts, the series of competitor analysis activities should be conducted and regularly checking them to be informed about any changes in the market*
Sponsor	*Manage closely*	*---*	*(Project) **Interested** -Funding social project helps with advertisement and social support*	*(Project) To be in a positive light in the media, stick to the budget and timeline*	*(Project) Funding of the project; Time limitation*	*Once a month to check the progress and budget*

University (Teacher/ Lecturer)	*Keep informed*	*(Project) To give students a real-life example of building the product on their own*	*(Project)* ***Interested*** *-See the product as one of the most effective methods of teaching*	*(Project) To increase student awareness and understanding of creating a system and managing all project activities*	*(Project) Time limitation*	*Once a week to check the progress and on-demand when there is a blocking question or advice*

4.2. Project Priorities

Dimension	***Driver (state objective)***	***Constraint (state limits)***	***Degree of Freedom (state allowable range)***
Schedule	*release 1.0 to be available by 10/1, release 1.1 by 12/1*		
Features			*70-80% of high priority features must be included in release 1.0*
Quality		*Quality metrics should pass on each deployment. Test coverage > 90%.*	*90-95% of user acceptance tests must pass for release 1.0, 95-98% for release 1.1*
Staff		*maximum team size is 6 developers + 4 testers*	
Cost			*budget overrun up to 15% acceptable without executive review*

4.3. Operating Environment

- *The system will be deployed and ran on Azure WebApp instances.*
- *Users are grouped by geographic locations and for each location will be chosen best Availability Zone.*
- *The system mostly is used during day time.*
- *Maximum time response should be not about 2-3 seconds, more than 10 seconds is not critical, but may affect user experience. It depends on external services dependencies.*

5. Process Model

For the project **Waterfall** model will be used. In a waterfall model, each phase must be completed before the next phase can begin and there is no overlapping in the phases.

The sequential phases in Waterfall model are −

- Requirement Gathering and analysis − All possible requirements of the system to be developed are captured in this phase and documented in a requirement specification document.
- System Design − The requirement specifications from first phase are studied in this phase and the system design is prepared. This system design helps in specifying hardware and system requirements and helps in defining the overall system architecture.
- Implementation − With inputs from the system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality, which is referred to as Unit Testing.
- Integration and Testing − All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.
- Deployment of system − Once the functional and non-functional testing is done; the product is deployed in the customer environment or released into the market.
- Maintenance − There are some issues which come up in the client environment. To fix those issues, patches are released. Also to enhance the product some better versions are released. Maintenance is done to deliver these changes in the customer environment.

All these phases are cascaded to each other in which progress is seen as flowing steadily downwards (like a waterfall) through the phases. The next phase is started only after the defined set of goals are achieved for previous phase and it is signed off, so the name "Waterfall Model". In this model, phases do not overlap.

The advantages of waterfall development are that it allows for departmentalization and control. A schedule can be set with deadlines for each stage of development and a product can proceed through the development process model phases one by one.

Development moves from concept, through design, implementation, testing, installation, troubleshooting, and ends up at operation and maintenance. Each phase of development proceeds in strict order.

The disadvantage of waterfall development is that it does not allow much reflection or revision. Once an application is in the testing stage, it is very difficult to go back and change something that was not well-documented or thought upon in the concept stage.