# Executive Summary

## Project Overview

Management of the civilians around the city of Tirana has been very difficult during this last decade. People living in neighborhoods and flats have numerous problems and complaints about their habitat, but they don’t know where to address these problems. The municipality of Tirana has been trying to manage them, by setting administrators of buildings in order to take care of problems that citizens face everyday.

Our software will ease a communication between the civilians, building administrator and the municipality itself. The software aims to facilitate the reach of municipality from the citizens and also it aims to give a way to the numerous complaints that civilians have with the municipality; all this through the building administrator.

## Purpose and Scope of this Specification

The software’s purpose is to facilitate communication between the people and their municipality by a web service that will make needs of the people to be heard. People living in Tirana have many restrictions when it comes to reconstructing a part of their house, or where they should park the car etc. For everything, the municipality provides permits to civilians that file for a permit based on some criteria where the permit affects other people then the person itself.

Our software will make every service from the municipality as easy a click of a button, where everything file from the civilians will be structured through the administrator and sent to the municipality.

**2. Product/Service Description**

With the recent work of the Municipality of Tirana on regulating the home addressing system, the assignment of administrators to buildings and the general trend of easing the means of communication between citizens and state institutions, there have been numerous campaigns lately taking the first steps towards reaching the goal of a more efficient system to link citizens to institutions.

Our proposed platform, ABQ (Administrator-Bashki-Qytetar), will provide an efficient way for building administrators and citizens to establish an official communication with the Municipality, that is void of using the traditional ways such as the postal service, and that will moreover help both the Municipality employees and citizens to keep track of documents sent and received, the dates of receipt, and other information.

This platform should also help with the timely solution of minor problems that the citizens usually report to the Municipality, such as complaints for noise nuisances (sourced form construction work, loud neighbors etc.).

This software's implementation will be done in the form of a web app.

**2.1 Product context**

ABQ will be an independent software, closely related to the Municipality. It will be available to three types of users, namely: Administrators, Municipality employees, Citizens.

**2.2 User Characteristics**

There will be 3 types of users that will access and use the platform, Administrators, Municipality Employees, and Citizens. Below is an explanation of each type of user, in logical order.

a) Citizens  
     Citizens will be the most basic users of the platform. They will have to create an account of themselves, that will require a confirmation from the building Administrator. Through this account they can submit complaints, submit documents needed to receive a parking permit, and also submit other documentation needed in the case that a direct communication between the Citizen and the Municipality must be established. A Citizen will represent a family living in a building (one Citizen for every household).

b) Administrators

    Administrators will be responsible for confirming the accounts that Citizens will create on their buildings. The Administrator will also have to submit to the Municipality documents that require the signature of every Citizen in the building for them to be processed, such as receiving a permit for the building to be reconstructed, for its facade to be painted, if a family wants to do some certain construction work, as enforced by the law. Also, the Administrator will keep the official communication with the municipality, when the law predetermines so. The Administrator will first have to submit the respective documents to be recognized by the Municipality as Administrator of a specific building

c) Municipality Employees

    Municipality Employees will be responsible for reviewing requests that arrive through the ABQ platform. They will review if the documents received are enough for a request to be processed, they will notify if documents for a specific request are missing, and will also send (via the platform) documents to the concerned entity (Citizen or Administrator) after the request has been processed. They will also forward complaints to the Municipality Police, for such requests that require their intervention (e.g noise complaints).

**2.3 Assumptions**

It is assumed that building Administrators will confirm every Citizen account that comes to their building, if the information provided by the Citizen in his account is correct. 

It is assumed that Municipality employees will keep the "professional secret", of not sharing information of Administrators/Citizens that send requests to the Municipality, after signing a confidentiality contract.

**2.4 Constraints**

Since this will be a web application, it is vital for the users to have a stable Internet connection, since there will be data constantly transmitted over the Internet to the database, from the users to the database and vice-versa.

**2.5 Dependencies**

# Requirements

## Functional Requirements

1. The software will consists of three different user levels:
2. The civilian
3. Municipality representative
4. Administrator

*Each user will have different views for the software.*

1. Each level of user will have authentication required when entering the software.

*To distinguish the user privileges, different authentications will be implemented.*

1. An administrator can sign up giving the certified documents needed for the job

*Each administrator has specific certificates needed for him/her to be recognized by the Municipality.*

1. Administrator will be notified if a building is available for management.

*Given that some administrators may not have a building in management, the Municipality representative can assign them if buildings are in need of administration.*

1. The administrator will have the right to add and remove family representatives.

*Given the circumstances of families moving in or moving out of the building, the family representative may change, so the administrator will be in charge of these changes for the update of the software database.*

1. An administrator should be able to see links of available building locations to be managed. The link will redirect the administrator to a map view of the building location.

*In order to have the consent of the administrator for job availability, he/she should have information about the building whereabouts.*

1. Each family representative will be linked with the building when the administrator confirms him or her as part of the building

*The family member that lives in an administrated building will request to join a building the administrator manages and then will have a personal page.*

1. Each registered family member has the options of filing a complaint or a request to the administrator.

*Depending on their needs, the family member will have options with the required automated generated format for the Municipality.*

1. Each user will be able to see the process of their requests.

*By clicking their filed request, the user will be given a feedback from the software to see the progress of the request.*

1. The Municipality representative side will be able to see a list of all administrators, managing or not managing a building.

*Given this list, the Municipality member can keep track of managed buildings and can assign administrators to buildings.*

1. The Municipality member will be shown lists of complaints and requests divided in the respective sections from all administrators.

*Given the list, the municipality member will perform the actions needed for each type of filing, such as confirmation for request or take care of complaints.*

1. The system will not allow administrators that haven’t filed the required documents to file request for managing buildings.

*To be an certified administrator some documents should be uploaded by the administrator in order to be given full access of administrator page.*

1. The municipality member will be provided with a list of all administrators that lack documents required for being an administrator.

*If the documents are not certified and missing, the Municipality member shall notify the user to complete their documents.*

1. After each request is completed, it will be deleted from the list.

*In order to keep a clean list and keep track of work, completed requests will be deleted.*

## Non-Functional Requirements

### User Interface Requirements

The user interface will be accessible through every browser that the user can have.

Every user will have a login interface which he/she will enter the required fields to identify him/her as what type of user is logging in. Each user, after being authenticated will be directed to their specific layout view.

In case of an administrator logging in, their view will consist various fields, which include lists of family members and their contact information, tasks that they might have to do during the day and also a list of complaints and requests made from the family members.

In case of Municipality member logging in, he/she will have an interactive and organized view, which will display administrators that manage buildings with their requests and also administrators that what to manage a building.

In case of a family member logging in, the view will have simple functionalities such as information of what the Municipality services, and request buttons that will redirect into a page with a pre-prepared format to be recognized by the Municipality.

### Usability

The software will be easy to use as it tries to have a user friendly view for the family member providing all the buttons and help for any misleading information.

As family users aren’t very aware of what services they can require from the Municipality, a list of all services will be visible to these users.

Municipality users of this software require a minimum training, as the software will be an automated version of their previous workload and process.

As for the administrators as well as for family members all functionalities of their user level will be visible in a help section of their account.

### Performance

The software will be able to run on every browser that the user might want to use.

It is expected that multiple Municipality members and also other users can access their account in the same time.

The software process time will depend on hardware components of the users computers.

The software will upload requests from the administrator to the Municipality member in real time restricted in the working hours.

#### Capacity

Depending of the amount of users using the software, which will be built to support the city of Tirana, accessing the database when uploading requests to the Municipality will be the main capacity issue if not handled correctly.

#### Availability

The software will be designed that no requests after working hours can be filed.

To not overwork the system, and for the request to be able to be seen from the Municipality member, the requests will be restricted to the Municipality working hours.

The Municipality of Tirana will use this system so every geographical location governed by the Municipality will be in reach.

### Manageability/Maintainability

#### Monitoring

It is necessary that the system doesn’t lose any of the requests done by users.

However, certain malfunctions may occur and the team will try to make reliable system in order not to delay work processes.

#### Maintenance

We will use MySQL and Apache server to maintain data of the users.

In case of bugs and malfunctions the software will crush and need to reload to a login phase.

#### Operations

1. Notification of Municipality members of certain requests
2. Daily update on request lists
3. Add/Remove family members from the building administrator
4. Gathering of complaints and requests
5. Geographical view of the address specified

### System Interface/Integration

In order to keep safe the user data and not to disorganize the data, certified people of IT department of the Municipality should be in charge of system management.

### Security

#### Protection

User data will be hashed in the database in order to make it more secure.

If a family member is moving to a new building, both the old and the new administrator are to be notified.

Also when logging in, every specific field required for the action should be validated first in order to redirect the user too their appropriate account view.

## Domain Requirements

The system tends to be used from almost every citizen in the city of Tirana from the family member part, however it requires Internet access in order to function.

Also it will not accept wrong input of requests such as some that don’t fulfill the required format.