



# **Technossus Manager Application Requirements Specifications**

Ryan Bell, Ada Guan, James Louie, Jay Patel, Carrie  
Shen

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# Revision History

Date	Version	Notes
1/23/15	1.0.0	First Draft
2/1/15	2.0.0	Second Draft
2/11/15	3.0.0	Final Draft

## Introduction

This document will provide information and specifications for the Technossus Manager mobile application software program. Any functions of the Technossus Manager are outlined in this document. This application will serve as a resource management tool for the company, specifically managing employees, clients, and projects, as well as the connections between each of these items. The existing system Technossus uses is functional, however it is not optimized for mobile use. The client desires a portable system that is usable on-site when meeting with potential clients, and informative to provide individuals using the system with vital information regarding the availability, skill, and current and past projects of all employees. This project management software will adapt to a pre-existing system and converge the information into a mobile application.

## Scope

This application will be used internally within Technossus. All levels of employees involved with software development will have access to this application, although each level will have their own goals and purposes in using this application. However, employees or managers that are on site with a client, to allow them ease of access to vital information in the field, will use this application. The scope of this project is to create a front-end, mobile interface to display the data from the framework that is already implemented online. In this context, the data that will be implemented in the application is information regarding people, clients, and projects, with a particular focus on which people are working on which projects and when they will be available.

## Overview/Executive Summary

This mobile application will provide vital resource management and additional communication methods to all levels of Technossus' management infrastructure. This application is designed be flexible enough for any level of employment to use for their specific uses. The two main functions of this application is to provide a method of searching for available resources, people, and allocating them in appropriate projects, as well as to serve as a dynamic feed of updates pertaining to projects. This application will serve as a way to make the system that is already in place much more accessible by employees and managers who are using their mobile device to access the information.

This application will only be used by Technossus employees, with each employee using their own personal credentials to login and out of the application. This database and authentication will not be in scope of this application, as it will use pre-existing technologies for these functions.

Two examples of use at different levels of the corporate structure are as follows. The CEO of the company could use the application to ensure that project managers are appropriately placing employees onto development teams based on their skill and availability,

and no other factors. Developers will use this tool to view any actions or posts made by their teammates on their project, just by looking at their live feed.

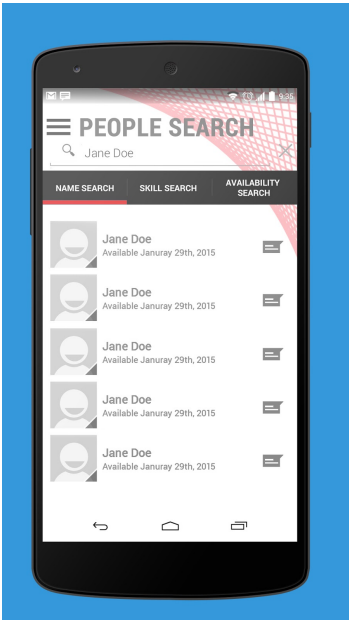
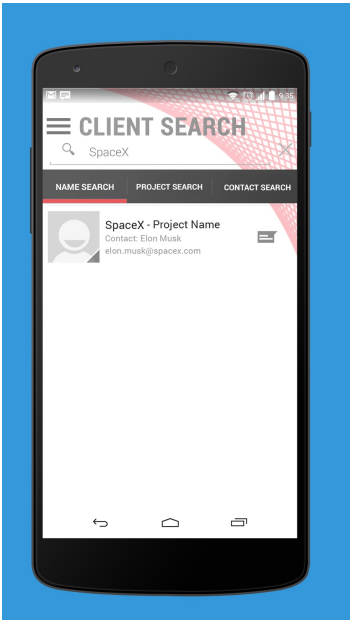
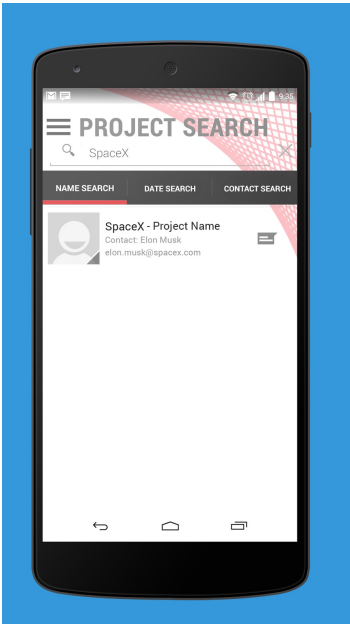
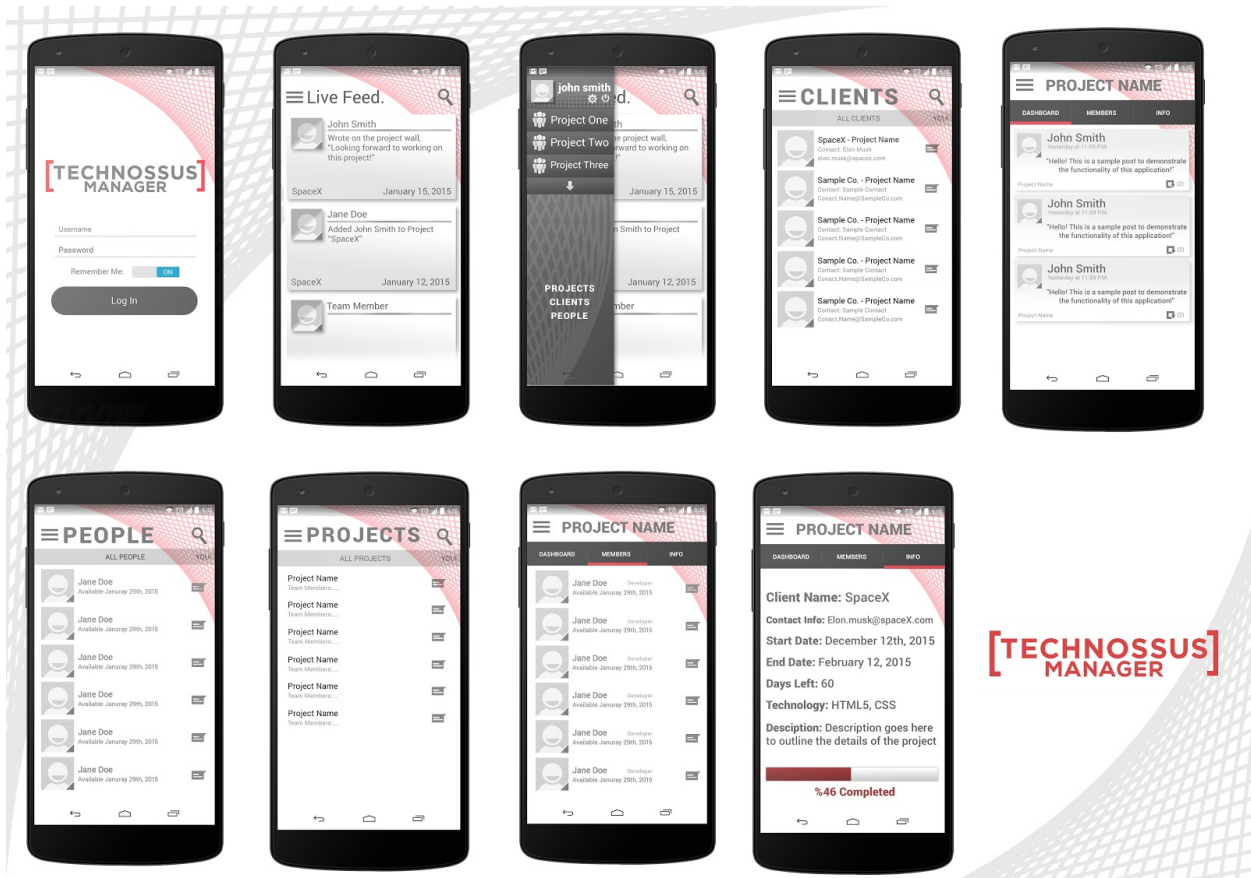
## Application Context and Constraints

The different views of the application consists of various elements. A live feed of the most relevant information, including any posts or actions made by teammates on the project pages that an individual is a member of. A project view, that allows you to see the details of a project and the communication associated with that project, any posts or actions taken by another team member. A list of all developers and their managers with their details, including their contact information, current availability, and a self uploaded image of the employee. The final main element is a list of clients that have projects with the company. This list will be comprehensive and will allow users to view any projects that are currently ongoing with this company. In addition to these main screens of the application, there will also be various connections between the three main “headers” of the application. For example, an individual’s page will include current and past projects. A sidebar will be accessible throughout the application that will provide easy navigation to different parts of the software, allowing the user to readily access any and all necessary information. There will also be a search functionality provided to the user, this will use a simple text based search to find information throughout the system and present the information to the individual in an organized format. The goal of this application is to provide a tool to the company that will improve team building and communication.

The application is already a fully-fledged web app, but Technossus is in need of a mobile version that can be used in the field or on the go. This application will be designed to run the Android mobile operating system. However since we are implementing this application using the cross platform development tool Xamarin, there exists a capability that it can be developed to be cross platform in the future. It is important that we leave the application open for this expansion due to the wide variety of mobile operating systems in use today.

The application is limited in several aspects, including functionality based on pre-established systems and security and credentials. Because the application operations parallel the databases, the application must be maintained to keep up with any and all updates to the databases. Log in credentials are not managed by the application itself, but instead we will be using a tool to communicate with the back end of the pre-existing web application to validate employee login credentials.

Mockups



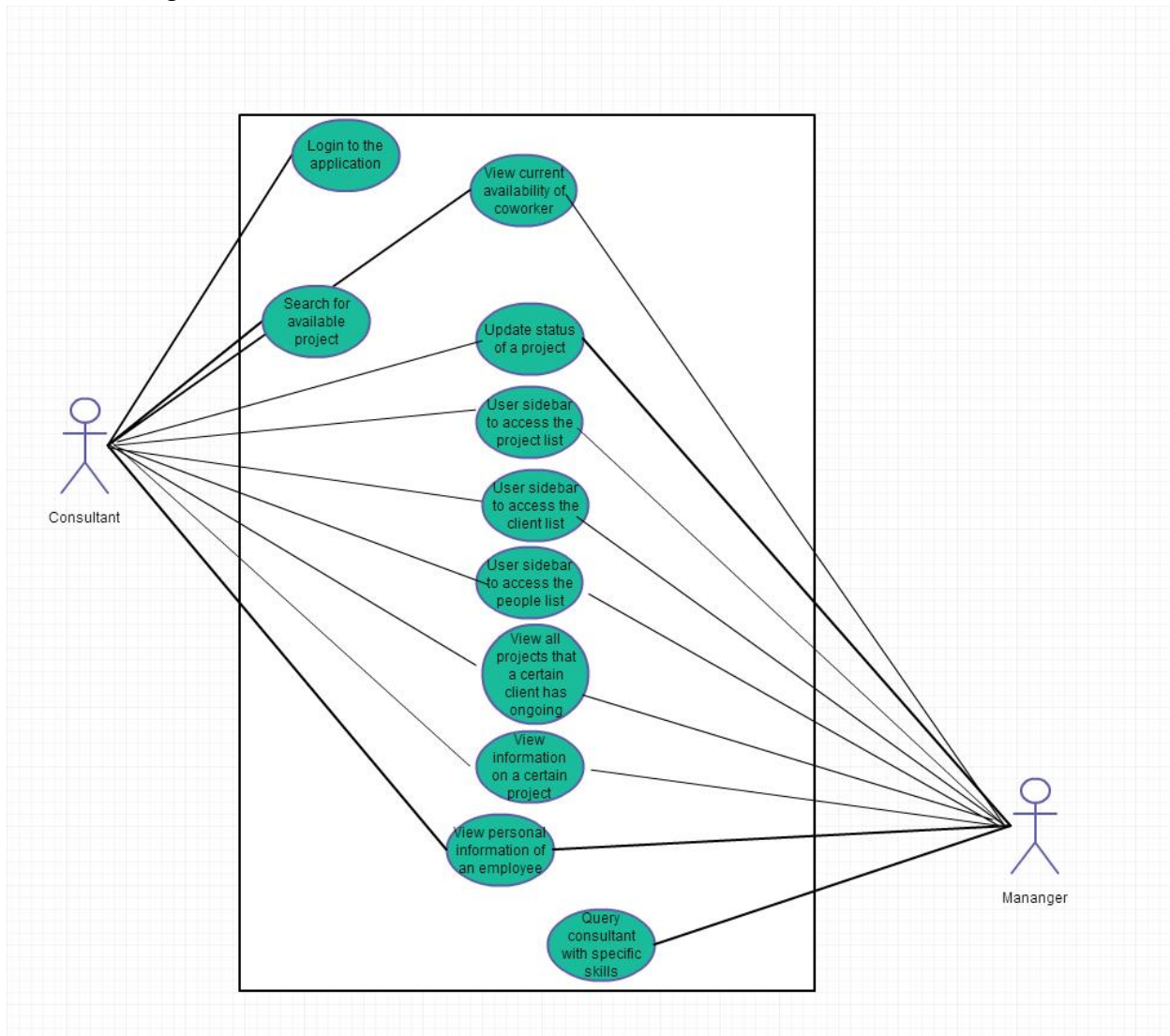
# Functional Requirements Specification

## Objective

The application will provide managers with portable access to background information for their current projects, as well as any information regarding the people working on those projects and the clients that are the recipients of the project in a mobile accessible format. The application will allow access to information vital to placing individuals on project teams and monitoring the communication within these teams.

Functionality	
<b>This system shall...</b>	Provide information regarding clients and their ongoing projects.
<b>This system shall...</b>	Provide information regarding employees including contact info and availability.
<b>This system shall...</b>	Provide information regarding projects, including any information posted to a project page by team members, which client the project is for, and a list of team members.
<b>This system shall...</b>	Quick links for accessing lists of people, clients, and projects with ease.
<b>This system shall...</b>	Communicate with the existing system to approve user credentials for login.
<b>This system shall...</b>	Allow access to user profiles including availability, contact info, and an image of the individual.
<b>This system shall...</b>	Provide a text search for users to find specific people, clients or projects.
<b>This system shall...</b>	Allow users to view employee skills to determine if they would match the needs of a particular project.
<b>This system shall...</b>	Allow the user to logout using a button in the sidebar

## Use Case Diagram



### Use Cases

#### Consultant

- Consultant – Login to the application
- Consultant – Search for available project to work on
- Consultant – Update Status of a project
- Consultant – View current availability of co-worker
- Consultant – View all projects for a certain client
- Consultant – Use sidebar to access the project list
- Consultant – Use sidebar to access the client list
- Consultant – Use sidebar to access the people list
- Consultant – View personal information of fellow employee
- Consultant – View information on a certain project



Consultant – View available information on a selected client

### Manager

Manager – Query consultant with specific skills

Manager – Update Status of a project

Manager – View personal information of an employee

Manager – View availability of an employee

Manager – Use sidebar to navigate to the project list

Manager – Use sidebar to navigate to the client list

Manager – Use sidebar to navigate to the people list

Manager – View all projects that a certain client has ongoing

Manager – Post on a project page for employees to see

## Walkthrough/User Story

### Consultant

- As a consultant, I want to be able to login to the app using my credentials.
- As a consultant, I want the application to be able to remember my credentials.
- As an consultant, I want to be able to view the most recent activities regarding my current projects.
- As a consultant, I want to be able to easily access information on all my current projects.
- As a consultant, I want to be able to view all posts made by my fellow teammates on our project's dashboard.
- As a consultant, I want to identify the days left on a current project.
- As a consultant, I want to be able to view the start and end date of the project.
- As a consultant, I want to be able to access a list of all clients that Technossus works with.
- As a consultant, I want to be able to access information on fellow teammates and coworkers.
- As a consultant, I want to be able to comment on posts made by other users.
- As a consultant, I want to be able to see when a post or comment was made, and by whom it was made.
- As a consultant, I want to be able to have access to images of my co workers and/or teammates.

### Manager

- As a manager, I want to be able to use my credentials to access the company application.
- As a manager, I want the application to be able to remember my credentials.
- As a manager, I want to be able to view the most recent activities of the projects that I am leading.
- As a manager, I want to be able to view the current conversations between team members on the dashboard.
- As a manager, I want to view a list of all members of a particular project.

- As a manager, I want to be able to identify the skills necessary for all members of a project to possess.
- As a manager, I want to look up contact information of a client that I am working with.
- As a manager, I want to search for an employee of Technossus with a specific set of skills to work on a project.
- As a manager, I want to search for a project in need of members to assign a consultant that is not currently working on any projects.
- As a manager, I want to update the status of a project with new information received from a consultant or client.

## Software Qualities and Non-Functional Requirements

The Technossus Manager application must include the following software qualities:

### I. Reliability

#### A. Accuracy

1. This application should provide the most up-to-date information available at the time such that when higher level management makes decisions, the information that they act on is valid. This app will retrieve the most recent data available by constantly making new web service calls upon loading each screen.

#### B. Error Tolerance

1. Because this tool will only be used internally, a small amount of errors is tolerable. However, errors on important information like contact and personal information are not allowed. A large amount of errors may cause employees to not use this platform, so it is important to keep this application error free as possible.

### II. Interoperability

#### A. Data Commonality

1. This application will share the same data as the pre-existing web interface. Due to a shared back-end, data must be processed correctly as to avoid potential harm or inconsistencies to the data.
2. This application will be written in C# through the Xamarin framework to ensure adaptability to various mobile platforms in the future.

### III. Flexibility

#### A. Expandability

1. As Technossus grows, additional features may need to be added, extending past its original purpose.
2. Due to using the Xamarin framework, there is the potential for the client to expand the functionality of this software at a later time to be compatible with other mobile operating systems.

## Assumptions and Risks

The following are assumptions about Technossus Manager,

- Beyond the scope of our course schedule, Technossus will continue to maintain this application inhouse
- The majority of the data is already present in their web application, and minor additional details need to be added in terms of database structure
- This application will only be used internally by Technossus employees
- This application can be used anywhere there is internet access
- Technossus will use existing systems for authentication of app users, so the app will send a validation request to the web server for authentication
- The only user generated information will be from the posting on projects

The following are major risks for Technossus Manager,

- Access of internal information through another medium
- Loss of personal credentials through application

## Priorities and Implementation Phases

- I. Must Have
  - A. Complete information from database
  - B. Display information about clients, employees and project
  - C. Search ability of employees
- II. Should Have
  - A. Ability to post and comment on projects
- III. Nice to Have
  - A. Advanced/Smart queries

## Future Directions and Expected Changes

As this will be the official internal application of Technossus, we can expect feature requests from all levels to help them with their daily tasks. Some additional features that are likely to be suggested include notifications for received messages on the phone itself, more customization of profiles, the ability to input more detailed information about project, messaging services within the application itself, ability to clock in/out, GPS tracking of location for information purposes, and video conferencing abilities. In addition, we are currently target to Android device. As users will have multiple mobile devices, this application should be able to be extended to other mobile platforms such as iOS and Windows Phone.