

---

# **Software Project Management Plan**

**for**

# **Transit Pakistan**

**Version 1.0 approved**

**Prepared by Sajjad, Moaz, Haris**

**Bahria University**

**27-January-2016**

## Revision History

Name	Date	Reason For Changes	Version
Haris	270116	Initial.	1.0

## Table of Contents

<b>1. Introduction.....</b>	<b>1</b>
1.1 Project Overview .....	1
1.2 Project Deliverables.....	1
<b>2. Project Organization .....</b>	<b>2</b>
2.1 Software Process Model .....	2
2.2 Roles & Responsibilities .....	2
2.3 Tools & Techniques .....	2
<b>3. Project Management Plan.....</b>	<b>3</b>
3.1 Tasks.....	3
3.1.1 API Development.....	3
3.1.2 APP Development.....	4
3.2 Assignments .....	4
3.3 Time Table: .....	5

# **1. Introduction**

## **1.1 Project Overview**

Everyday 2 Million residents of Karachi uses public transport. There are a number of options available to these commuters including Buses, Mini Buses, Coaches, Chingchis, Rickshaws & Taxies. Yet an average commuter still wastes around 20 minutes per day waiting at the bus stop doing absolutely nothing which amounts to wasting 10 days per year. Moreover, vast majority of these commuters have obscure information about public transport routes. Transit will enable people's access to public transportation information like bus routes along with other cost effective travel options like cab service. This will empower commuters and increase the reach of urban transport. Transit will enable people's access to public transport information like bus routes along with other cost-effective travel options like cab service. The project will cover public transport routes, ride options, cost effective route & ride option, average time for each route along with a responsive highlighted visual representation of route on Map.

## **1.2 Project Deliverables**

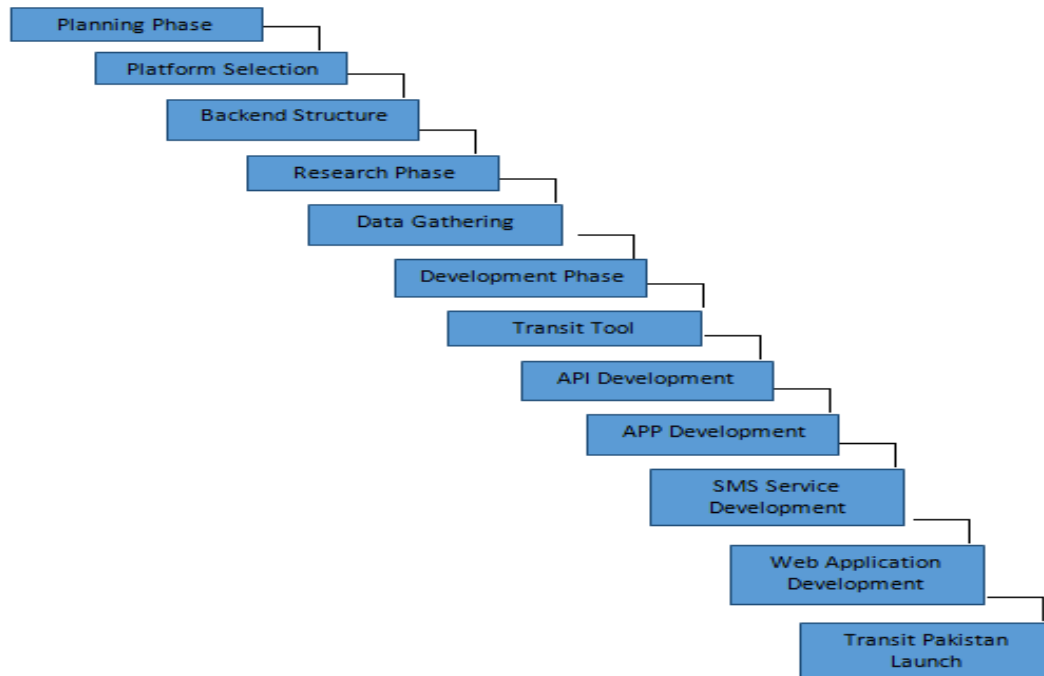
The Project Deliverables of Transit Pakistan are as follows.

- Transit Tool
- API (Application Programming Interface)
- Android App
- SMS Service

## 2. Project Organization

### 2.1 Software Process Model

Our project will follow an incremental development model such as waterfall model. The development will be done in several phases with certain part of the project completed at the end of each phase.



### 2.2 Roles & Responsibilities

Name	Email	Mobile	Role & Responsibilities
Sajjad Arif	<a href="mailto:sajjadarifgul@gmail.com">sajjadarifgul@gmail.com</a>	03320307817	Team Lead
Moaz Hassan	<a href="mailto:maaz773@hotmail.com">maaz773@hotmail.com</a>	03332579199	Developer
Muhammad Haris Ali	<a href="mailto:mharisali739@gmail.com">mharisali739@gmail.com</a>	03453280363	Developer

### 2.3 Tools & Techniques

The tools and techniques that we are using to develop Transit Pakistan are as follows.

- Microsoft Visual Studio
- Android Studio
- Xtensible Markup Language (XML as API Response)
- File System Database as Information Processing Server Backend.
- MySQL to keep track of API usage.
- PHP to process API Queries.
- GSM Modem for SMS Services.

## 3. Project Management Plan

### 3.1 Tasks

Our Project consist of many task that are described as follows

#### 3.1.1 API Development

##### 3.1.1.1 Description

To ensure that the information of the public transport will be access to us, we use API mechanism so that we can access the information easily to any platform. For the development of our project's API, we developed the tool named as Transit Tool. Transit Tool is the main tool that is used to create the backend structure for API. Transport related information is feed into this tool which in turn formats this information to XML markup & file based database. Transit Tool is developed on Visual Studio format using C# Programming language. These XML markup files are incorporated into API on Transipt.pk's online information processing server. This server comprises of combination of MySQL Database & File Based Database. This will provides API access to database via PHP.

##### 3.1.1.2 Deliverables & Milestones

The Deliverables and milestones of the API task are as follows.

- Transit Tool
- XML Base API

##### 3.1.1.3 Resources Needed

The resources that we need to develop working API are as follows.

- Transport related Information
- Microsoft Visual Studio
- My SQL
- File System Database
- PHP
- Information Processing Server (Domain + Hosting)

##### 3.1.1.4 Dependencies & Constraints

The dependencies of the API are as follows.

- Accurate Information related to Transport Routes & Rides, their Fares, average cost & time.
- Web server for hosting API backend & process algorithms.

The Constraint of the API Task are as follows.

- If the user do not have internet so that the API will not response

##### 3.1.1.5 Risks & Contingencies

The risk that might occur in the API task are as follows.

- The user may enter wrong starting and point names.

We reduce this risk by adding all possible location names in our information processing server.

### 3.1.2 APP Development

#### 3.1.2.1 Description

Transit App will be a mobile application develop for Android Smartphones. Users will enter their Starting Point & Destination Point details in the app which will send the query to online server at Transit.pk via its API. The Information processing server at Transit.pk will process the information & apply its algorithms. The results of these processes will be sent back to user on his/her smartphone. Android app will be developed on Android Studio using Java Programming language & XAML.

#### 3.1.2.2 Deliverables & Milestones

The Deliverable and milestones of the App task are follows.

- Working Android App.
- SMS Service
- Documentation
- Research Paper

#### 3.1.2.3 Resources Needed

The resources needed for the android app are as follows.

- Android Studio
- XAML
- Google Maps
- Java
- Transit Pakistan API

#### 3.1.2.4 Dependencies & Constraints

The Dependencies of the App task are as follows.

- API
- Android platform

The constraint of this App task are as follows.

- If the user do not have internet service on their smart phone so they can use our app

#### 3.1.2.5 Risks & Contingencies

The Risk in our App are as follows.

- The App may not be installed in user's smart phone due to the low memory.

The Contingency plan of our App are as follows.

- We develop our app in such a way that it also work in a low configuration mobiles..

## 3.2 Assignments

Assignments	Team Members
Make a Plan	Sajjad
SRS	Sajjad, Haris, Moaz
Data Collection	Haris, Moaz
Transit Tool	Sajjad, Haris, Moaz
Information Processing Server	Sajjad
Develop API	Sajjad, Haris, Moaz
API Testing	Haris, Moaz
Webpage API Response	Sajjad, Moaz

### 3.3 Time Table:

The time table of our Project phases & completion is illustrated with the use of Gantt Chart as follows.

