



## **Risk Management Plan**

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# Risk Management Plan

Risk management is an essential part of this project as it has the biggest impact on overall project success. It's important to have a good risk analysis in order to analyze all of the major and minor risks to the project. These risks are organized into four categories namely financial risks, customer risks, technical risks and schedule risks.

We will use the following procedure to manage risks:

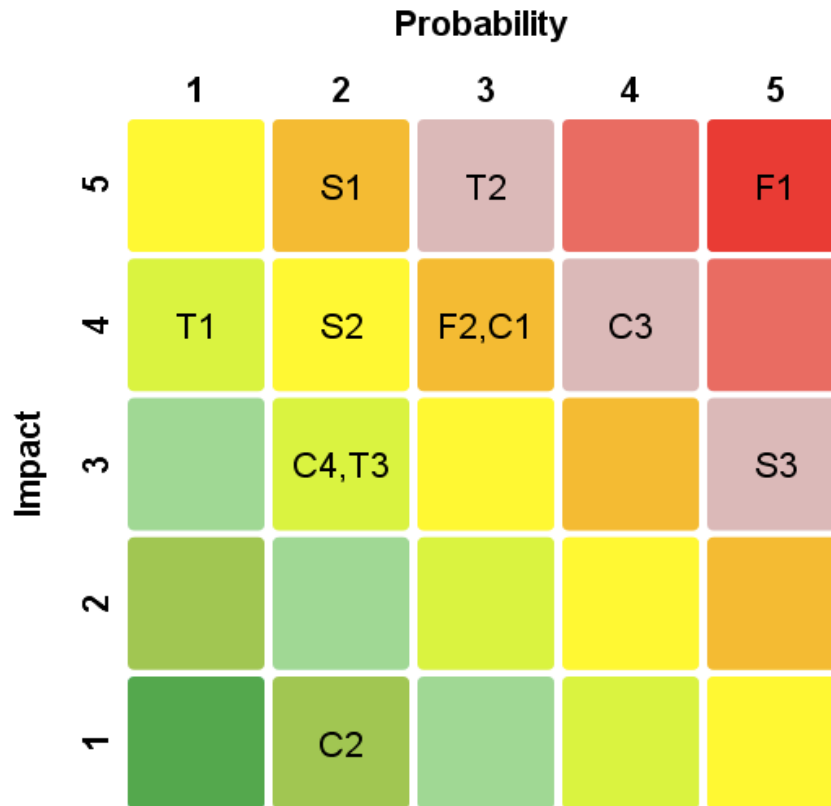
1. Identify the risk
2. Determine the risk's probability of occurring and the severity to the project if the risk occurs.
3. Enter the risk probability and severity
4. Mitigate
5. Track the risk

Dealing with risks by using the most appropriate risk management strategy:

**Mitigation:** For the Mitigation strategy, we will take steps to decrease the severity of the risk and/ or the probability of the risk occurring.



# RISK MATRIX



## **Financial Risks**

- F1. Customer Investment
- F2. Hardware/Software Network Maintenance

## **Customer Risks**

- C1. Product Interest
- C2. Ease-of-use to Customer
- C3. Driver Distraction
- C4. Product Accessibility

## **Technical Risks**

- T1. Communication Protocol
- T2. Server Infrastructure
- T3. Hardware Failure

## **Schedule Risks**

- S1. Database Design
- S2. Application Development
- S3. Prototype /Test Phase



## Financial Risks

### **F1. Customer Investment (Probability: 5, Impact: 5)**

When developing an application like Traffic Wizard there is always the possibility of not being able to get enough customers to maintain the operations and as a result the impact for this risk is very high. Traffic Wizard cannot succeed if customers do not buy into it.

Expenses will be an ongoing process that will depend on marketing, financial decisions and with effective advertising.

In the market, companies like Tom-Tom, INRIX, Sygic, RAC Traffic (UK), Beat the traffic are in demand with their features and Traffic wizard will have to compete for its customers. This is risky but with the component features of Traffic Wizard it won't be difficult. The features that Traffic Wizard offers are the virtual checkpoint system (VCS) and personalized travel profile and no other known companies' competition have these features.

### **F2. Hardware/Software Network Maintenance (Probability: 3, Impact: 4)**

Server infrastructure is subject to few repairs and the network connecting drivers must be maintained properly. Since the foundation of the application lies in drivers' smart phones (as opposed to additional hardware), the probability of this is decreased. There will be hardware and software testing to ensure that the components are working properly and information is received properly to the smart phones.



## Customer Risks

### **C1. Product Interest (Probability: 3, Impact: 4)**

The price of our app is a major risk. Firstly, the cost of the product needs to be able to turn a profit for the business. Secondly, the product needs to be competitive in the market in order to attract potential customers. If the product cost is too low we may not have enough financial to support our Traffic Wizard app. But having the costs too high will not be able to attract enough customers to purchase the app. By setting the price to be standard with other companies that are in competition with effective marketing will be useful.

### **C2. Ease-of-use to Customer (Probability: 2, Impact: 1)**

The smart phone app can be customized according to the requirements of the driver. The features inclusive are personalized Smartphone application for traffic updates, user profile system for storing frequent routes. They can receive the analyzed stored routes before or during the travel time which shows the accurate travel information. With the virtual checkpoint system, the driver can receive efficient data exchange. It's low in cost, easy installation of the product into driver smart phones.

### **C3. Driver Distraction (Probability: 4, Impact: 4)**

Interaction with the app while driving is a high distraction risk and in turn may cause accidents. Since, Traffic Wizard's purpose is to provide notifications about traffic jams, accident spots this will save the time of the driver. With alpha and beta phases of testing, a suitable way is required to reduce the distraction of the app. This can be mitigated with a minimalistic interface that assists the driver with little to no physical interaction with the device.

With the personalized travel profile, the information is automatically updated and alert notifications are received depending on the frequency of time being set. This feature will help the driver to be alert and not use the smartphone all the time while driving.

### **C4. Product Accessibility (Probability: 2, Impact: 3)**

Not every driver has a smartphone to access and download the app. The smartphone market has been well analyzed and is expected to grow immensely. According to the market, worldwide sale of the smartphone in the year 2010 are \$54.6 million dollars but increased drastically in the year 2011 to \$100.9 million dollars. In 2010, 298 million smart phones were sold worldwide, up from 175 million in the year 2009, for a growth rate of 70% and the biggest growers were android suppliers. [2]

About 118 million smart phones were sold in the year 2011. An estimation of smartphone sales will rise to 982 million in the year 2015. [1]

According to the data shown, there will be less probability and impact of the risk of drivers having a smartphone.



## Technical risks

### **T1. Communication protocols (Probability: 1, Impact: 4)**

Communications between a device and the cloud are designed to occur within small time frames. With cloud designing, providing software, data access, storage services which can handle massive information and information sent to the smartphones. Latency will negate the usefulness of traffic data. Virtual Checkpoints can be dynamically relocated with respect to roads and traffic patterns. Traffic Wizard's virtual checkpoint system will assist with efficient information exchange.

### **T2. Server Infrastructure (Probability: 3, Impact: 5)**

The configuration and design of the server infrastructure must be able to compile and distribute data to connected drivers. The server will have to be efficiently scalable in design. Traffic Wizard is expected to hold the potential to connect with manufacturer telematics to assist with future scalability.

### **T3. Hardware Failure (Probability: 2, Impact: 3)**

A hardware failure of an application device can cause problems. The probability is less, which depends on the issues with the hardware problem, and the impact will continue until the hardware problem is solved.

The inevitable risk of technical issues due to hardware failure will be present in Traffic Wizard's operations. Sensible upkeep and maintenance should prove to mitigate this factor.



## **Schedule risks**

### **S1. Database design (Probability: 2, Impact: 5)**

Traffic Wizard database will maintain databases on speed limit and will updated through the connections sent to the app. The database schema consists of user, profile of the user, payment information, statistics of the route, time and location and virtual checkpoint information.

Traffic Wizard's virtual checkpoint system will require initial latitude and longitude information to observe and use as virtual checkpoints in critical areas. This is necessary to act as the foundation for traffic analysis. The impact for this risk is high because there's a lot of information that needs to be stored and accessed. The information should be secure for security reasons for the driver profiles.

### **S2. Application Development (Probability: 2, Impact: 4)**

Implementation and development of the app may be delayed due to various reasons. The impact is high as to problems occurring in the stage of the development. The best practices will be provided in the software development process, which will help mitigate these issues in functionality.

### **S3. Prototype / testing phase (Probability: 5, Impact: 3)**

This phase is heavily dependent on the quality of execution of the product. Without the proper development there is high risk in the testing phase and can erupt many problems. Design issues must be resolved in this stage and the program must be proven to work. The testing are two types namely alpha and beta testing. The alpha testing is interaction of the driver profile, server and functionality testing. With the beta testing, virtual checkpoint re-allocation is tested, verification of the data transmitted to the driver and checking the functionality of the server.





## Sources

- [1] Brownlow, Mark. "Smartphone Statistics and Market Share." (November 2011). Email Marketing Reports. Retrieved from <http://www.email-marketing-reports.com/wireless-mobile/smartphone-statistics.htm>
- [2] According to the Quirks mode, Smartphone sales 2010-vendors. Retrieved from [http://www.quirksmode.org/blog/archives/2011/02/smartphone\\_sale.html](http://www.quirksmode.org/blog/archives/2011/02/smartphone_sale.html)