TRANSIT DROID

Risk Management Plan

Transit Droid Team

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REVISION HISTORY

The Risk Management Plan document has been developed over an iterative process. The document is placed on an online team shared folder, where all team members have access to it. Once any change is done to this document, the Transit Droid team is notified. All team members are asked to give feedback on the current document version. Once done, the "Approved By" field in the table below is updated by the person who has done the latest changes.

Date	Version	Description
03/06/2013	1.0	Initial Risk Management Plan draft
03/08/2013	1.1	Risk Management Procedure, and Risk Monitoring and Control
03/09/2013	1.2	Minor Edits

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1 INTRODUCTION

1.1 PURPOSE OF THE RISK MANAGEMENT PLAN

A risk is an event or condition that, if it occurs, could have a positive or negative effect on a project's objectives. Risk Management is the process of identifying, assessing, responding to, monitoring, and reporting risks. This Risk Management Plan defines how risks associated with the Transit Droid project will be identified, analyzed, and managed. It outlines how risk management activities will be performed, recorded, and monitored throughout the lifecycle of the project and provides templates and practices for recording and prioritizing risks.

The Risk Management Plan is created by the Transit Droid Team in the Planning Phase and is monitored and updated throughout the project.

The intended audience of this document are the Transit Droid Team, the stakeholder i.e. STM, SOEN 490 Instructor and TAs.

2 RISK MANAGEMENT PROCEDURE

2.1 PROCESS

The Transit Droid Team and the project stakeholders will ensure that risks are actively identified, analyzed, and managed throughout the life of the project. Risks will be identified as early as possible in the project so as to minimize their impact. The steps for accomplishing this are outlined in the following sections. The Transit Droid team leader will serve as the Risk Manager for this project.

2.2 RISK IDENTIFICATION

Risk identification will involve the project team, appropriate stakeholders, and will include an evaluation of environmental factors, organizational culture and the project management plan including the project scope. Careful attention will be given to the project deliverables, assumptions, constraints, cost/effort estimates, test plan, management and control plan and other key project documents.

A Risk Management Log and Register will be generated and updated as needed and will be stored electronically in the project library located at Transit Droid SOEN490 Google Drive shared folder.

2.3 RISK ANALYSIS

All risks identified will be assessed to identify the range of possible project outcomes. Qualification will be used to determine which risks are the top risks to pursue and respond to and which risks can be ignored.

2.3.1 QUALITATIVE RISK ANALYSIS

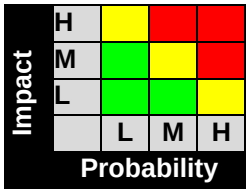
The probability and impact of occurrence for each identified risk will be assessed by the Transit Droid Team in sprint meetings using the following approach:

Probability

- High – Greater than *<70%>* probability of occurrence
- Medium – Between *<30%>* and *<70%>* probability of occurrence
- Low – Below *<30%>* probability of occurrence

Impact

- High – Risk that has the potential to greatly impact project cost, project schedule or performance
- Medium – Risk that has the potential to slightly impact project cost, project schedule or performance
- Low – Risk that has relatively little impact on cost, schedule or performance



Risks that fall within the RED and YELLOW zones will have risk response planning which may include both risk mitigation and a risk contingency plan.

2.3.2 Quantitative Risk Analysis

Analysis of risk events that have been prioritized using the qualitative risk analysis process and their effect on project activities will be estimated, a numerical rating applied to each risk based on this analysis, and then documented.

2.4 Risk Response Planning

Each major risk (those falling in the Red & Yellow zones) will be assigned to a project team member for monitoring purposes to ensure that the risk will not "fall through the cracks".
For each major risk, one of the following approaches will be selected to address it:

2.4.1 Avoid

Risk avoidance involves changing aspects of the overall project management plan to eliminate the threat, isolating project objectives from the risk's impact, or relaxing the objectives that are in threatened (e.g. extending the schedule or reducing the scope). Risks that are identified early in the project can be avoided by clarifying requirements, obtaining more information, improving communications, or obtaining expertise.

2.4.2 Mitigate

Risk mitigation involves reducing the probability and/or the impact of risk threat to an acceptable level. Taking early and pro-active action against a risk is often more effective than attempting to repair the damage a realized risk has caused. Developing contingency plans are examples of risk mitigation.

2.4.3 Accept

Acceptance is often taken as a risk strategy since it is very difficult to plan responses for every identified risk. Risk acceptance should normally only be taken for low-priority risks. Risk acceptance can be passive, where no action is taken at all, or active. The most common active approach to risk acceptance is to develop a cost and/or schedule reserve to accommodate known (or unknown) threats.

2.4.4 Transfer

Risk transference involves shifting the negative impact of a threat (and ownership of the response) to a third party. Risk transference does not eliminate a threat; it simply makes another party responsible for managing it.

For each risk that will be mitigated, the Transit Droid team will identify ways to prevent the risk from occurring or reduce its impact or probability of occurring. This may include prototyping, adding tasks to the project schedule, adding resources, etc.

For each major risk that is to be mitigated or that is accepted, a course of action will be outlined for the event that the risk does materialize in order to minimize its impact.

2.5 Risk Monitoring, Controlling, And Reporting

2.5.1 Risk Monitoring

Planned risk responses should be executed as required over the life-cycle of the project, but the project should also be continuously monitored for new and changing risks. During risk monitoring and control the following tasks are performed:

- Identify, analyze, and plan for new risks
- Keep track of identified risks and monitor trigger conditions
- Review project performance information (such as progress/status reports and issues).
- Re-analyze existing risks to see if the probability, impact, or proper response plan has changed
- Review the execution of risk responses and analyze their effectiveness
- Ensure proper risk management policies and procedures are being utilized

2.5.2 Risk Reporting

The results of risk monitoring and control should be documented in the risk register. The following information shall be entered in the register:

- Status – valid statuses are:
    - Identified – Risk documented, but analysis not performed
    - Analysis Complete – Risk analysis done, but response planning not performed
    - Planning Complete – Response planning complete
    - Triggered – Risk trigger has occurred and threat has been realized
    - Resolved – Realized risk has been contained
    - Retired – Identified risk no longer requires active monitoring (e.g. risk trigger has passed)
- Trigger Date – if the risk has been triggered
- Notes

APPENDIX A: GLOSSARY OF TERMS

The following table provides definitions for terms relevant to the Risk Management Plan.

Term	Definition
Risk Management	The process of identifying, assessing, responding to, monitoring, and reporting risks.
Monitor	The process of Tracking Risks.
Analyze	The process of examining and Studying Risks.
Risk identification	The process of noticing and pointing out Risks.
Avoid	The process of eliminating the threat by eliminating the cause.
Mitigate	The process of Identifying ways to reduce the probability or the impact of the risk.
Accept	The process of accepting and acknowledging that nothing further can be done to resolve a risk.
Transfer	The process of making another party responsible for the risk.
Trigger	A risk has been identified and a risk issue is created in the Risk Log.
Analysis Complete	The Risk analysis is done, but response planning not performed
Planning Complete	The risk planning response is done.
Resolved	The triggered and realized risk is completely controlled.
Retired	The identified risk doesn't require any more monitoring.
Probability	The possibility of an event to occur or happen.
Impact	How a specific risk occurrence will affect the project.