

Assignment 5: Risk

Predict 475 Project Management

Professor: Dan Roth

Section 55

Winter Quarter

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School of Continuing Studies

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In Compliance with Master of Science Predictive Analytics

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### Project MetaGuest Scope Statement

#### 1. Project Objective:

Develop an automated, self-emailing, report that focuses specifically on the current state of the Target guest through trending key meta metrics about guest data. The project is to be fully completed, iterated, and user functional by December 2014 and resources are all to be derived internally at Target at no outside additional cost.

#### 2. Deliverables:

MetaGuest is a technical project that is better suited for a process breakdown structure (PBS) broken in to key phases. The deliverables will follow each major phase and are outlined below-

- Analysis – Establish key metrics to be trended overtime, and the time interval for which the analysis will be based. The metrics are not to exceed fifteen and shall have no less than ten in the report.
- Design – Have three different dashboard designs and feedback from key stakeholders and intended users.
- Construct – Final version of code vetted, documented, and synthesized with reoccurring reporting team.
- Test – Run report over four weeks, with at least three participating team member and no more than seven, to assess overall effectiveness as well as make iterations.
- Rollout – Schedule, present, and collect feedback on three different presentations for key stakeholders as well as intended users.

#### 3. Milestones:

In developing important milestones for MetaGuest, natural benchmarks within Target process flow are documented below-

- March 21 - Project Charter Acceptance, Manager
- March 31 – Multi-Department Project Acceptance
- May 14 – Key Metrics Established
- June 14 – Dashboard Design Approved
- July 30 – Final Documentation of Standardized Code

- August 18 – Final Iterations Complete
- September 15 – Presentations
- October 15 – End User Feedback
- November 15 – Hand in Completed Project Documentation

#### 4. Technical Requirements:

Target is in the midst of migrating from an IBM database to Teradata, and will require duplicative coding efforts and specifications in order to meet the project objective within the timeframe

- Establish how stable guest logic will be applied to MetaGuest
- Define where MetaGuest will reside post-project
- Create coding that minimizes creating irrelevant tables
- Define whether excel, SAS, or Tableau is the best dashboard tool
- Reporting requirements must meet specified bandwidth
- Table pulls must follow changing requirements
- Code needs to be written in an EDW and ADW format
- Delivery method must be a push rather than a pull for end users

#### 5. Limits and Exclusions:

In an effort to focus on the expectations of MetaGuest, the limits and exclusions are detailed below:

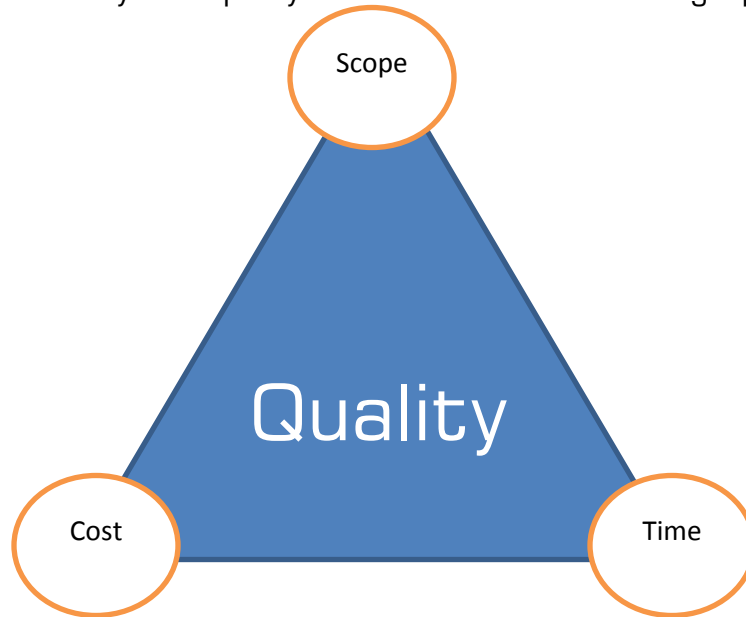
- MetaGuest will contain only Guest data, and no POS data
- The report is objective across all divisions without customization
- End users are responsible for ad-hoc additional metrics
- Creating a storage repository is not included in MetaGuest
- Intended end users are Guest Insights and Division Insights
- Healthcare data will not be included
- Target Canada data will not be included
- Email notification and centralize posting is the means of delivery

#### 6. Review with Management: James Nelson

Before moving forward, communication and iterations to the project scope statement must be resolved in an effort to be of one accord. Deadline for Review with Management resolve is 1/23/2013.

### MetaGuest Priority Matrix

Project efficacy is helpfully demonstrated from the graphic below:



The priority matrix below details how the three attributes are prioritized.

	Time	Performance	Cost
Constrain	X		
Enhance		X	
Accept			X

Accept: Tolerable *not* to meet the original parameters.

Enhance: During the project, enhancements can be made to this parameter.

Constrain: This parameter must be met.

### MetaGuest Communication Objectives

The project scope statement is the first communication piece that needs to be agreed upon by management. Additional information needed for the success of MetaGuest is detailed below:

Reporting Requirements- Desired metrics, calculations for metrics, and interval requirements need to be gathered in the analysis phase. The project manager will refine the requirements with the key manager and finally communicated to a few of the end users. The information will be stored on the project managers folder on Target's public hard drive space. Unless noted, the information is public, but does not need to be broadcasted. The final reporting requirements will be communicated with the end users at the end of the analysis phase in the monthly status meeting.

Design Information Communication – The Reporting Team will need to know the established reporting requirements prior designing the report for MetaGuest. A PowerPoint will be assembled by the Project Manager to communicate the reporting requirements, which will be stored in an Excel Table. There are no privacy concerns for the reporting team. The information will be communicated in a presentation with hard copied available and soft copies sent out after the meeting.

Construction Information Communication – Writing the code for MetaGuest will require a few analysts. SAS will be the primary tool for writing the code and communication will be done in person and through email. At this point authors of the code will include James Nelson, Jacob Yunker, Daniel Prusinski, and Senthilkumar Subramanian. It is vital that the code be well documented by each programmer so that collaboration ensues. Weekly iterations will be highlighted in an email with documentation communicating why the changes were necessary.

Testing Information Communication – As the report is tested, users will record comments and suggestive iterations on a provided form electronically. The goal is to have a seamless turnaround time, and not become bogged down with expansive changes. Potential changes will be vetted with management before making final iterations in a meeting with the project manager. The presentation will entail a PowerPoint presentation and soft copy in the form of word document tracking proposed changes.

Rollout Communication – The rollout will take place in a monthly team meeting, and management will introduce MetaReport to the whole team. This will be

done in a PowerPoint presentation, and the end users present will get a copy of the actual report during the meeting. At the end of the meeting, the end users will have a physically provided form to fill out seeking feedback and general comments. These comments will be synthesized by the project management into a Word document and shared with the manager in an in person meeting.

### Communication Plan

What Information	Target Audience	When	Method	Tool for Communication
Scope Statement	Project manager, key stakeholders	Once, first week	Email with hardcopy	Word
Project Plan	Key stakeholders, management	Once, mid March	Email, hardcopy	Word
Key Metric Findings	End Users	Weekly during analysis phase	Email, and presentation	Word, Powerpoint
Milestone Update	Project manager, key stakeholders	Biweekly	Email	Office
Project Update	Manager	Weekly	In person	Word
Cross-functional team update	Reporting, Guest & Division Insights	Monthly	In person meeting	PowerPoint with Word copy
Design Template	Manager, End Users	Weekly, during Design Phase	Working meeting, and email	PowerPoint and Word/Tableau
Developed Code	Data Analysts	When needed during construct and test phases	Email, text editor	SAS
Beta MetaReport	Manager, Testing Team	Weekly during testing phase	Email, in person	SAS, and email dashboard
Issues and Delays	Manager, key stakeholders	When needed	Email and meeting	Word, Office
Accepted Changes	Project Manager	When needed	Email or meeting	Word, Office
Final Product	End Users,	Weekly, in	Email or	SAS, or

	and Management	rollout phase	centralized location	Tableau
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### MetaGuest Register

STAKEHOLDER REGISTER for MetaGuest					
	Name	Designation/Title	Dept	Role	Interests
1	Colleen Theisen	Sr. Manager	MMBI	Manager	Team Head
2	James Nelson	Manager	MBI	Direct Manager	Key Benefactor
3	Mark VonOven	Director	BI&A	Key Stakeholder	Next Level of Analytics
4	Dan Ryks	Reporting Manager	MMBI	Oversees Reporting	Reporting Aspect
5	Jarrett Reed	Division Insights	MBI	End User	End User
	Name	Type/Frequency of Communication	Contact	Influence	Power
1	Colleen Theisen	Email / Monthly	E-mail	Management	Resouce and Authority
2	James Nelson	In Person / Weekly	E-mail	Resources	Direct Team Authority
3	Mark VonOven	Written out/ Quarterly	Email	Little	Manages all Aspects of Project
4	Dan Ryks	Template / Weekly	E-mail	None	Will run future reports
5	Jarrett Reed	Presentation / Daily	E-mail	Design	Little
	Name	Expectations	Internal/External		
1	Colleen Theisen	Keep Updated	Internal		
2	James Nelson	Key Point of Contact	Internal		
3	Mark VonOven	Only Key Updates	Internal		
4	Dan Ryks	Build Template	Internal		
5	Jarrett Reed	Testing and Roll Out	Internal		



## Appendix 1: Project Proposal

Target Corporation is a billion dollar retail company. With over 1,200 stores nationwide, millions of guests shop Target daily. One strategic initiative senior leadership has road-mapped for 2014 is deepening guest engagement. Management within my department, Merchandising and Marketing Business Intelligence (MMBI), has asked me to create a project plan for better defining and monitoring overall guest behavior data at target in the form of a report that shows key metrics about our guests over time.

I will name this project MetaGuest based on the overall desired outcome for information about guest data to be fed to team members in a concise report. As of January 8, 2013 my manager, James Nelson, is the official project sponsor. The current stakeholder groups include the following:

Guest Insights (GI) – Target's MMBI team that represents guest data.

Division Insights – Similar to GI, but works with merchandising divisional leadership on guest data requests.

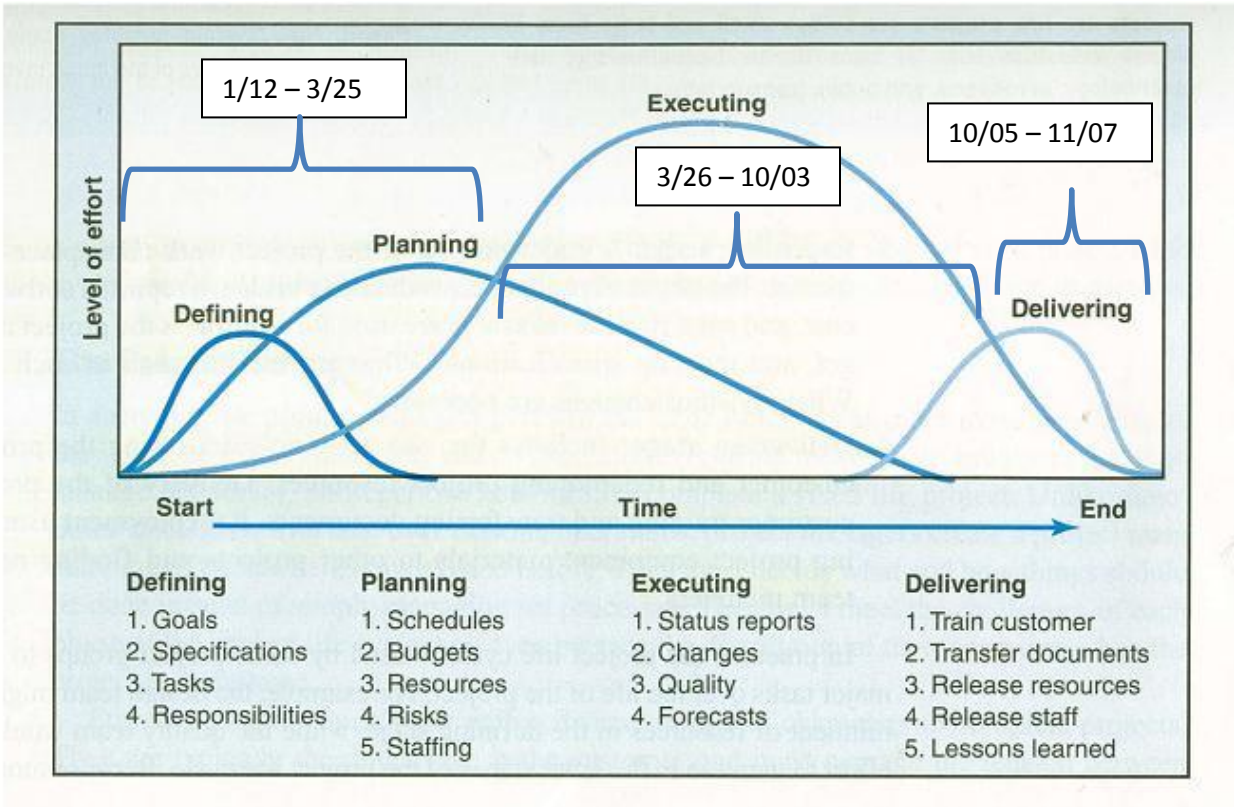
Reporting – Coordinates and executes reporting for MBI.

Business Data Quality (BDQ) – Represents Target's importation and cleaning of data.

Division Insight Leaders (DILs) – Communicate the desired outcomes for guest data.

As Target aims to meet growing consumer demands, understanding changing behaviors aptly translates to thriving and surviving in the retail environment. Currently, Target has built many tools for extracting guest information and classification categories for different types of guests. The next step for Target reaching its goal of deepening guest engagement through data-driven analytics is understanding changes in guest behavior and predicting future outcomes. The overall value project MetaGuest brings is the next step in analytical capability for Target through quantifying guest behavior through time.

The key project constraints at this point include cost, schedule, budget, and resources. Each constraint will require further iterations given that the project is being preliminarily scoped. The costs to Target at this point include no outside purchases of software, consulting, or products, but rather cost internal time, and resources. I would expect two hours a week for 2014 in regard to my personal schedule, as well as 2 hours a week of other team members through the process. Total time cost is estimated at 200 hours. Given that the new reporting to be established will take place within pre-existing innovation space via data tables and software, the costs are considered sunk costs and do not entail an extra cost. Over the next ten weeks further planning of project MetaGuest will take place and implementation will begin four weeks after the project plan is accepted. Preliminarily, March 25<sup>th</sup> is the planned date to begin implementing the project. Final feedback on the project is expected the first week of October. Please refer to the diagram below for a more detailed schedule.



- <http://filebox.vt.edu/users/alanma/bit3434/pm2chart.JPG>

The preliminary budget and resources can be seen below:

Item	Cost	Rationale
Microsoft Project	License Fee	Primary Tool for Communication
Meeting Rooms	NA	Team Meetings
Tables, Views, and Reports	Internal Team Time	End Product Development
Team Member Hours	200 Team Hours	Primary Work of Project

Overall expectations include: the project will include iterations, reporting development will require collaboration between the five stakeholders, and as the project develops additional resources will be allocated to fulfill needs. Assumptions include mutual buy-in from the stakeholders, flexibility in the reporting requirements, and mutual benefit to MMBI as the report becomes available. Given the data breach during the holiday season, impact reporting will be purposely excluded.

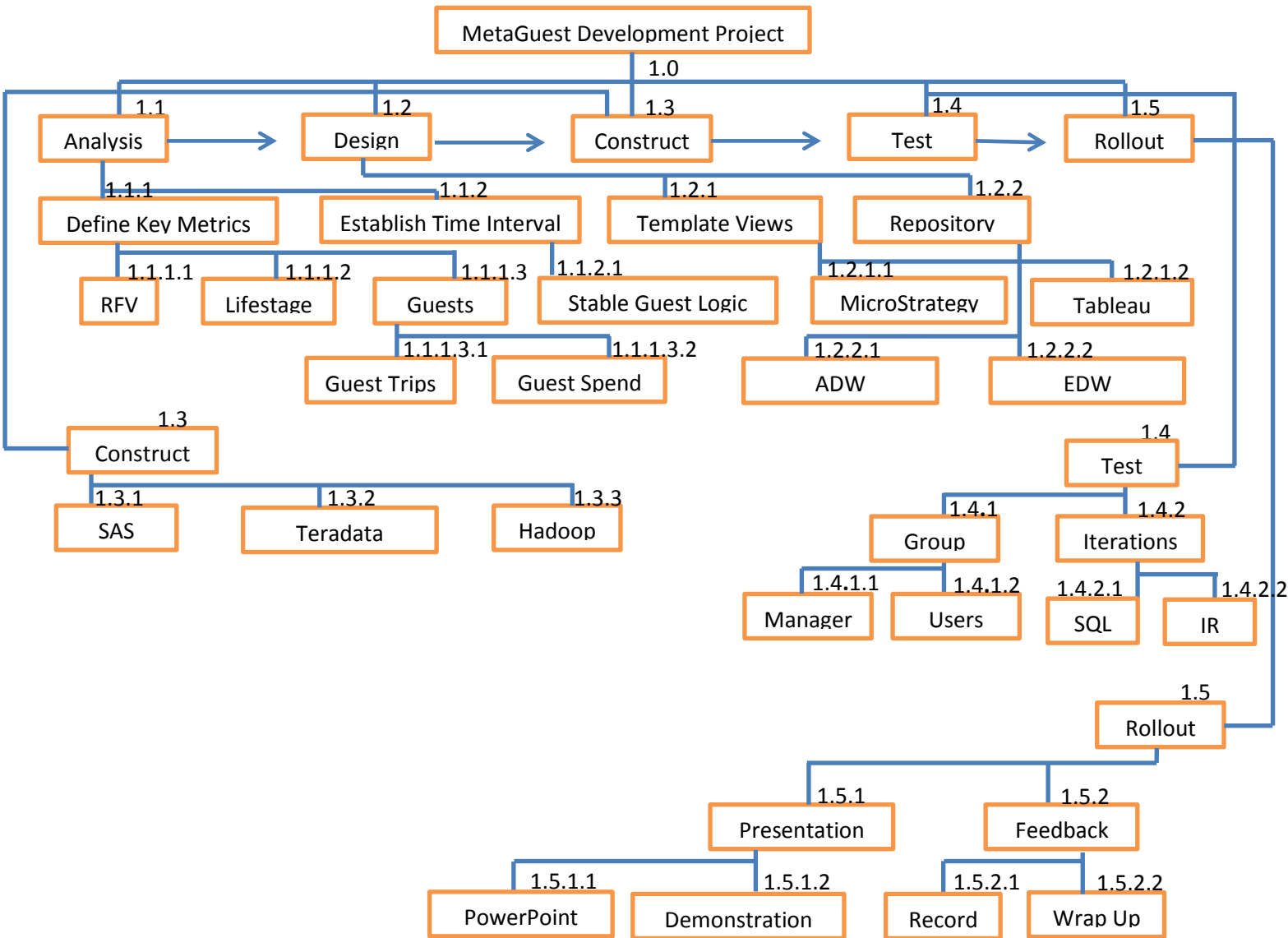
Project organization includes: Dan Prusinski – project manager, James Nelson – project funder, Jacob Yunker – guest data coordinator, Alex Miller – implementation coordinator, Ryan Ruffcorn – reporting coordinator, Carl Cooley

– division insights coordinator, Jarrett Reed – DIL coordinator. The responsibility matrix can be seen below:

Task	James	Dan	Alex	Jacob	Carl	Ryan	Jarrett
Identify Target Guest Metrics for Reporting	R	S		S	S		S
Develop Report Template		S				R	
Pilot Report		R				S	
Create re-occurring reporting schedule		S				R	
Present Reporting Tool		R	S				
Create Predictive Models based on Report	S	R		S	S		
Present Key Findings to Management	R	S					S
Provide Documentation for Iterations	S	R	S				
Responsible = R							
Support = S							

At this point in project MetaGuest, management is working closely with the project manager to develop and scope the overall plan. Iterations are expected to sharply shape the project planning in the next two weeks.

Process Breakdown Structure for project MetaGuest



Outputs:

Analysis Phase Deliverables: Analysis Document RFV Breakdown Lifestage Analysis Guest Trip Segmentation Guest Spend Segmentation Stable Guest Logic Interval	Design Phase Deliverables: MicroStrategy View Tableau View ADW Data Repository EDW Data Repository	Construct Phase Deliverables: SAS Code Written Teradata Code Written Hadoop Code Written
	Test Phase Deliverables: Test Document Manager Testing Feedback User Feedback Coding Iterations SQL Coding Iterations IR	Rollout Phase Deliverables: Physical/Electronic PowerPoint Pre-Code Embedded in PP Document Feedback from Users Iterate in SQL

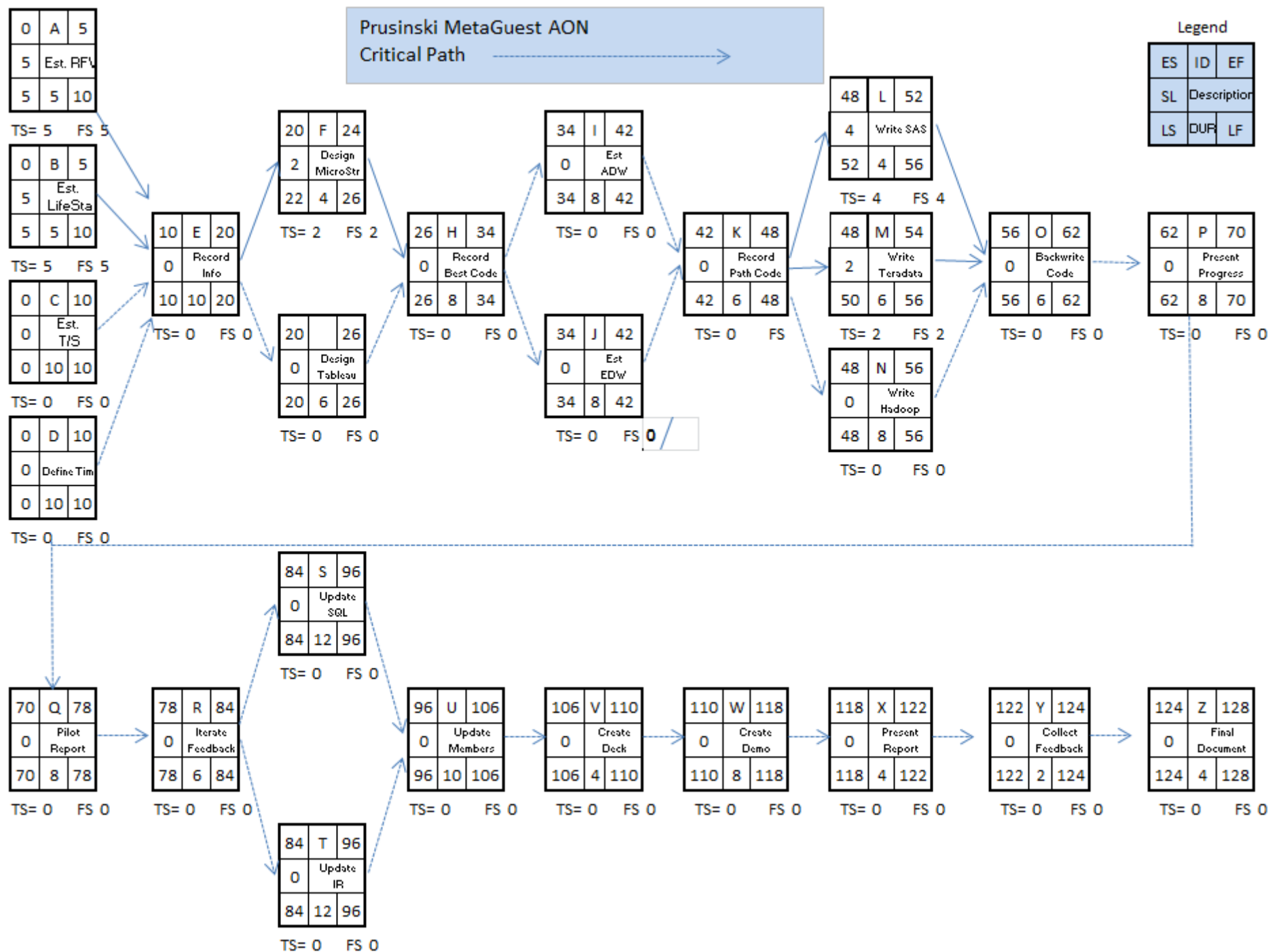
Time-Cost Labor Estimates								
WBS ID	Task Description	Estimate (hrs)	Estimating Approach	Estimated Duration (hrs)	Estimated Interruptions (hrs)	Total Duration (hrs)	Labor Rate \$/hr	Labor Cost Total \$
1.0	MetaGuest Project	200	Bottom Up (BU)	264.0	64.0	328.0	50, 65, 75, 150	\$ 24,200
1.1	Analysis	6	BU Template	6.0	2.0	8.0	\$65	\$ 520
1.1.1	Define Metrics (Calculate)	4	BU Template	4.0	4.0	8.0	\$65	\$ 520
1.1.1.1	RFV (Compile)	5	BU Template	5.0	1.0	6.0	\$50	\$ 300
1.1.1.2	Lifestage (Build)	5	BU Template	5.0	1.0	6.0	\$50	\$ 300
1.1.1.3	Guests (Assemble)	10	BU Template	10.0	2.0	12.0	\$75	\$ 900
1.1.1.3.1	Guest Trips (Calculate)	6	BU Template	6.0	2.0	8.0	\$75	\$ 600
1.1.1.3.2	Guest Spend (Compile)	4	BU Template	4.0	-	4.0	\$75	\$ 300
								\$ -
1.1.2	Establish Time (Compile)	2	BU Template	2.0	-	2.0	\$65	\$ 130
1.1.2.1	Guest Logic (Calculate)	8	BU Template	8.0	2.0	10.0	\$75	\$ 750
						-		\$ -
1.2	Design (Compile)	6	BU Template	6.0	2.0	8.0	\$65	\$ 520
1.2.1	Template Views (Build)	2	BU Template	2.0	-	2.0	\$65	\$ 130
1.2.1.1	Microstrategy (Build)	4	BU Template	4.0	-	4.0	\$50	\$ 200
1.2.1.2	Tableau (Build)	6	BU Template	6.0	1.0	7.0	\$75	\$ 525
			BU Template			-		\$ -

1.2.2	Repository (Document)		BU Template			-		\$ -
1.2.2.1	ADW (Build)	8	BU Template	8.0	2.0	10.0	\$75	\$ 750
1.2.2.2	EDW (Build)	8	BU Template	8.0	2.0	10.0	\$75	\$ 750
						-		\$ -
1.3	Construct (Document)	6	BU Template	6.0	1.0	7.0	\$65	\$ 455
1.3.1	SAS (Coding)	4	BU Template	4.0	-	4.0	\$75	\$ 300
1.3.2	Teradata (Coding)	6	BU Template	6.0	1.0	7.0	\$75	\$ 525
1.3.3	Hadoop (Coding)	8	BU Template	8.0	2.0	10.0	\$75	\$ 750
						-		\$ -
1.4	Test (Document)	4	BU Template	4.0	-	4.0	\$65	\$ 260
1.4.1	Group (Compile)	2	BU Template	2.0	-	2.0	\$65	\$ 130
1.4.1.1	Manager (Trial)	8	BU Template	16.0	4.0	20.0	\$150	\$ 3,000
1.4.1.2	Users (Trial)	8	BU Template	24.0	8.0	32.0	\$65	\$ 2,080
						-		\$ -
1.4.2	Iterations (Document)	10	BU Template	20.0	8.0	28.0	\$65	\$ 1,820
1.4.2.1	SQL (Coding)	12	BU Template	24.0	6.0	30.0	\$75	\$ 2,250
1.4.2.2	IR (Coding)	12	BU Template	24.0	6.0	30.0	\$75	\$ 2,250
						-		\$ -
1.5	Rollout (Document)	4	BU Template	6.0	1.0	7.0	\$65	\$ 455
1.5.1	Presentation (Build)	8	BU Template	8.0	2.0	10.0	\$65	\$ 650
1.5.1.1	PowerPoint (Compile)	4	BU Template	4.0	-	4.0	\$65	\$ 260
1.5.1.2	Demonstration (In Person)	6	BU Template	8.0	2.0	10.0	\$65	\$ 650
						-		\$ -

1.5.2	Feedback (Document)	4	BU Template	4.0	-	4.0	\$65	\$ 260
1.5.2.1	Record (Compile)	6	BU Template	8.0	2.0	10.0	\$65	\$ 650
1.5.2.2	Iterate (In Person)	4	BU Template	4.0	-	4.0	\$65	\$ 260
						-		\$ -
						-		\$ -
	<b>Top Down Estimation</b>							
1.3	Construct (Document)	2	Consensus	2.0	-	2.0	\$65	\$ 130
1.3.1	SAS (Coding)	4	Consensus	4.0	-	4.0	\$75	\$ 300
1.3.2	Teradata (Coding)	4	Consensus	4.0	-	4.0	\$75	\$ 300
1.3.3	Hadoop (Coding)	4	Consensus	6.0	1.0	7.0	\$75	\$ 525
	Total	14		16	1	17		\$ 1,255

Target's Business Intelligence has been building reports for over five years. MetaGuest has similar components to past projects based on the overall objective of creating a report. The analysis, coding, design, testing, and rollout aspects of the project have prior templates. The difference in this report is that the metrics being reported on are newly developed in addition to the Hadoop software interface. From researching in *Project Management* (Larson & Gray), the Template Method of Bottom-Up Approaches is the best suited method for estimation with MetaGuest. Given that many of the processes in the project have past information and templates, it is logical and efficient to use this estimation method.

In an effort to explore an additional estimation method, I used the Top-Down approach and the Consensus method. This project is small enough that the Delphi Method is not necessary. In my opinion, management shortchanged the project package. The issue is most evident in the Teradata and Hadoop coding aspects. Management is applying the same number of hours for all three coding languages. The issue is that Teradata and Hadoop are brand new languages to Target and the systems do not run as smoothly as SAS. The shortcoming is that management is not aware of this nuance and shortchanged this process.

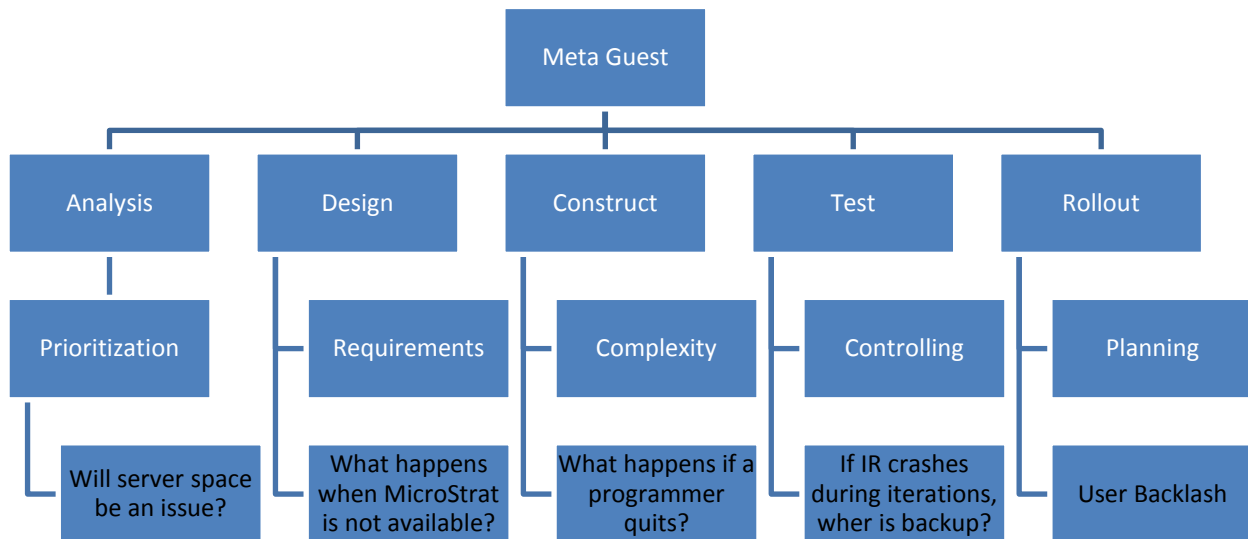




MetaGuest Activity Order				
Activity	WBS Code	Hours	Description	Preceding
A	1.1.1.1	5	Establish Guest RFV Breakdown from Demo Table Data	None
B	1.1.1.2	5	Establish Lifestage Breakdown from Guest Table	None
C	1.1.1.3	10	Guest Trips and Spend from Transaction Table (Very Similar Table)	None
D	1.1.2 1.1.2.1	10	Trend Stable Guest Logic for Weekly Interval	None
E	1.1 1.1.1	10	Document Key Metrics for MetaGuest as Best Practice (Milestone)	A,B,C,D
F	1.2.1.1	4	Design MicroStrategy Dashboard using Key Metrics	E
G	1.2.1.2	6	Design Tableau Dashboard using Key Metrics	E
H	1.2 1.2.1	8	Document Dashboard Code in Best Practice Format	F,G
I	1.2.2.1	8	Establish connection/network for Analytical Data Warehouse	H
J	1.2.2.2	8	Establish connection/network for Enterprise Data Warehouse	H
K	1.2.2	6	Document Data Warehousing Code in Best Practice Format	I,J

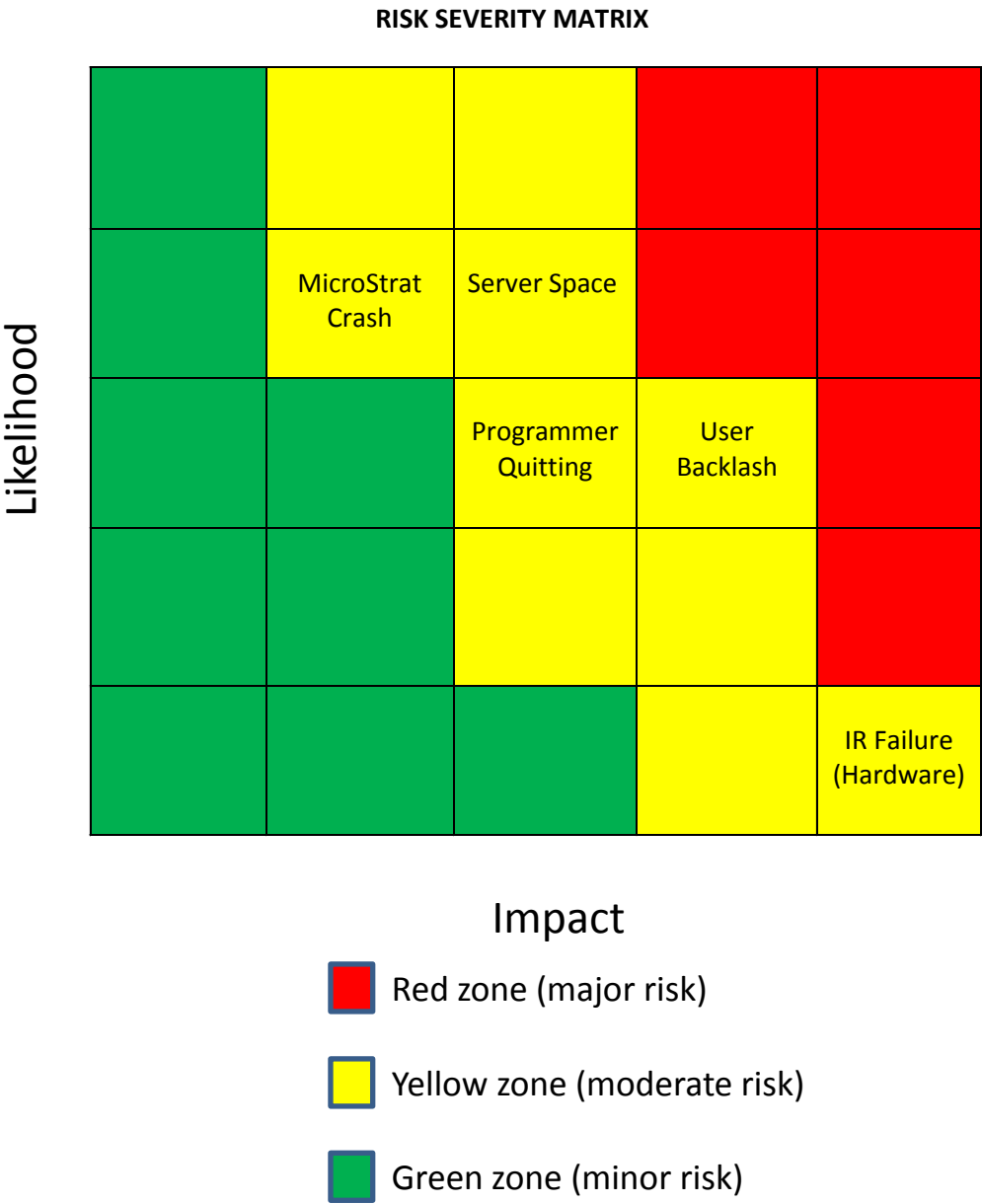
<b>MetaGuest Activity Order</b>				
<b>Activity</b>	<b>WBS Code</b>	<b>Hours</b>	<b>Description</b>	<b>Preceding</b>
L	1.3.1	4	Write SAS code for Dashboard/Key Metrics	K
M	1.3.2	6	Write Teradata code for Dashboard/Key Metrics	K
N	1.3.3	8	Write Hadoop code for Dashboard/Key Metrics	K
O	1.3	6	Back Interpret All Aspects of SAS, Teradata, Hadoop	L,M,N
P	1.4.1.1	8	Demonstrate/Explain Initial Report for Management	O
Q	1.4.1.2	8	Pilot Initial Report with Specific Users	P
R	1.4 1.4.1	6	Document Findings from Management and Users	Q
S	1.4.2.1	12	Make Iterations to Overall Project Utilizing SQL Language	R
T	1.4.2.2	12	Make Iterations to Overall Project Utilizing IR Language	R
U	1.4.2	10	Make Iterations Known to Management and Users	S,T
V	1.5.1.1	4	Create PowerPoint for Official Rollout Presentation	U
W	1.5.1	8	Create Demonstration and Integrate into PowerPoint	V
X	1.5.1.2	4	Run Presentation with Management and Users	W
Y	1.5.1.2	2	Collect Feedback from Management and Users	X
Z	1.5	4	Wrap-up All Aspect of Project into Electronic and Physical Copies	Y

## Risk Breakdown Structure



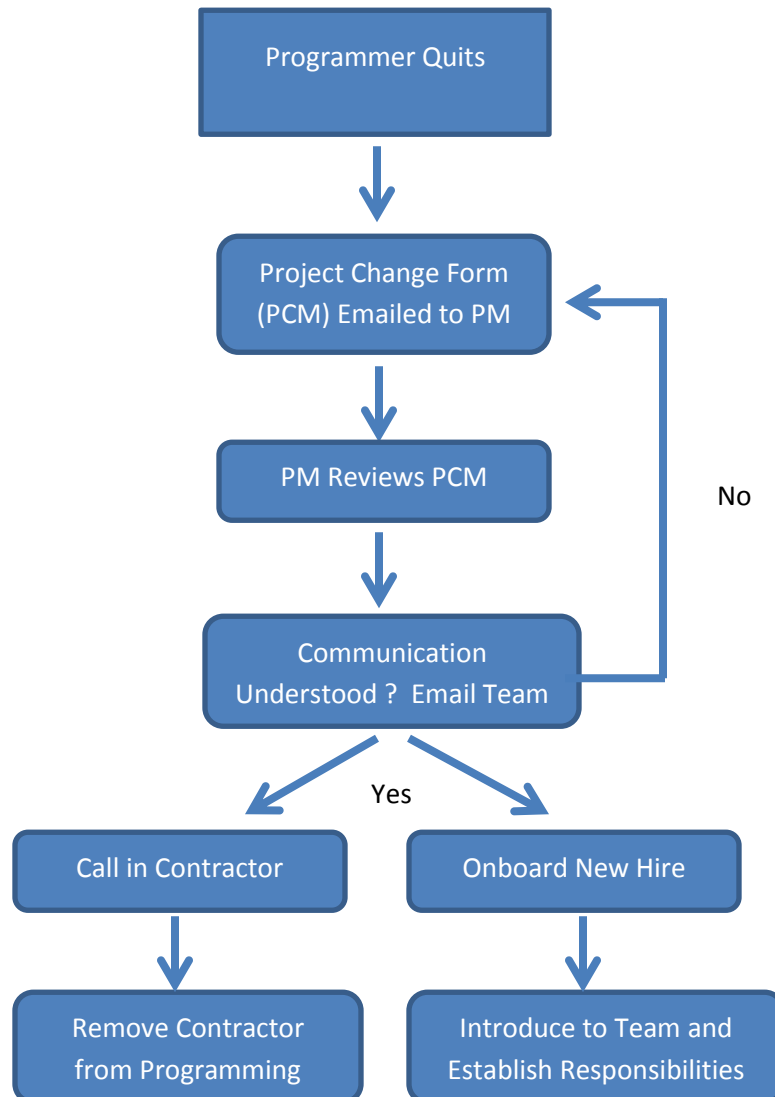
## RISK ASSESSMENT MATRIX

Risk Event	Likelihood	Impact	Detection Difficulty	When
Server Space	4	3	2	Start-Up, Rollout
MicroStrat Crash	4	2	5	Design
Programmer Quitting	3	3	3	Construct, Test, Rollout
IR Failure (Hardware)	1	5	5	Testing
User Backlash	3	4	2	Rollout



**RISK RESPONSE MATRIX**

Risk Event	Response	Contingency Plan	Trigger	Responsible Party
Server Space	Change data dump locations, contact TTS immediately	Upload initial design to Target Cloud Space	Exceed initial capacity	James Nelson with the Support of Daniel Prusinski
MicroStrat Crash	Submit tick to TTS	Run code through SAS environment	Too many reports running on system	Ryan Ruffcorn Dan Ryks
Programmer Quitting	Alert director	Have two contractors briefed.	Lack of communication and unknown	Daniel Prusinski Colleen Theisen
IR Failure (Hardware)	Transfer code to new hardware	Back up all code on externally	Hardware fails	Mark VonOven



### MetaGuest Change Form

Requestor Name: Kyle Kruegger Date: 2/6/2014 Request #: 1

Type of Request: Please put in Subject line of email along with Change Form:  
Urgent      Moderate      Low Impact

Change Requested by/Date: 2/18/2014

Description of Requested Change: Robert has decided to pursue opportunities elsewhere, I will begin the hiring process on Monday.

Reason for Change: Better commuting for his family.

Area of impact on project for proposed change (Please circle one or more)

Analysis      Design      Construct      Test      Rollout      Other: \_\_\_\_\_

Disposition

☐ Approve      ☒ Approve as Amended      ☐ Disapproved

Comments:

Lets' talk on Monday about who we want to hire.

\_\_\_\_\_

Funding Source

☐ Customer      ☒ Sponsor      ☐ Other: \_\_\_\_\_

Sign-off

Project Manager: DSP

Project Customer: \_\_\_\_\_

### Book Subjects

- Executive Summary - pg. 516
- Project Scope Statement - pgs. 102 - 106
- Priority Matrix - Fig 4.2
- Stakeholder Register - template in Course Content
- Work Breakdown Structure - pgs. 108 - 116 Fig 4.5
- Gantt chart (Baseline) - Fig 13.1
- AON Network Diagram Fig 6.8
- Project Baseline Budget - Fig 8-16
- Communications Plan - pgs 118 - 122
- Risk Assessment Matrix - Fig 7.6
- Risk Response Matrix - Fig 7-8
- Project Organization - various Chap 3, Fig 3.3
- Feasibility - answer the question, Is this project viable and what makes you think so?
- Integration - pgs. 11-23, 68, 70, 73

