ISCG8022 Managing IT Projects

Assignment 2

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1. Business Case

For implementing a new Cloud-based integrated System

The Issue

Due to the lack of integration between the systems, the incorrect information has led to a loss of 25% market share accompanied by revenue reduction and customer dissatisfaction.

The Problem Statements

Currently, the same data are input into multiple systems, we use batch files to manage these multiple data entries and update it at intervals to ensure the system can run up.

Analysis of the Situation

These measures of remediation are inefficient and error-prone. Once these errors occur, we have to sacrifice our revenue to fix them and what we got is extreme customer dissatisfaction. By July 2017 Sandra formed a task force to quickly scan and analyse all the data in the systems and have them all cleaned and reset. The operations were back to normal but this is due to the reduction in our sales and data volumes coming down. We should take this chance to implement a readily available cloud-based solution.

Solution Options

Adopting a centralized cloud-based administrative platform will increase the operation efficiency of the whole company and completely solve the information inconsistent problem. After completing an initial study of the requirements, ARS has provided the following quotation to Star Car Rentals.

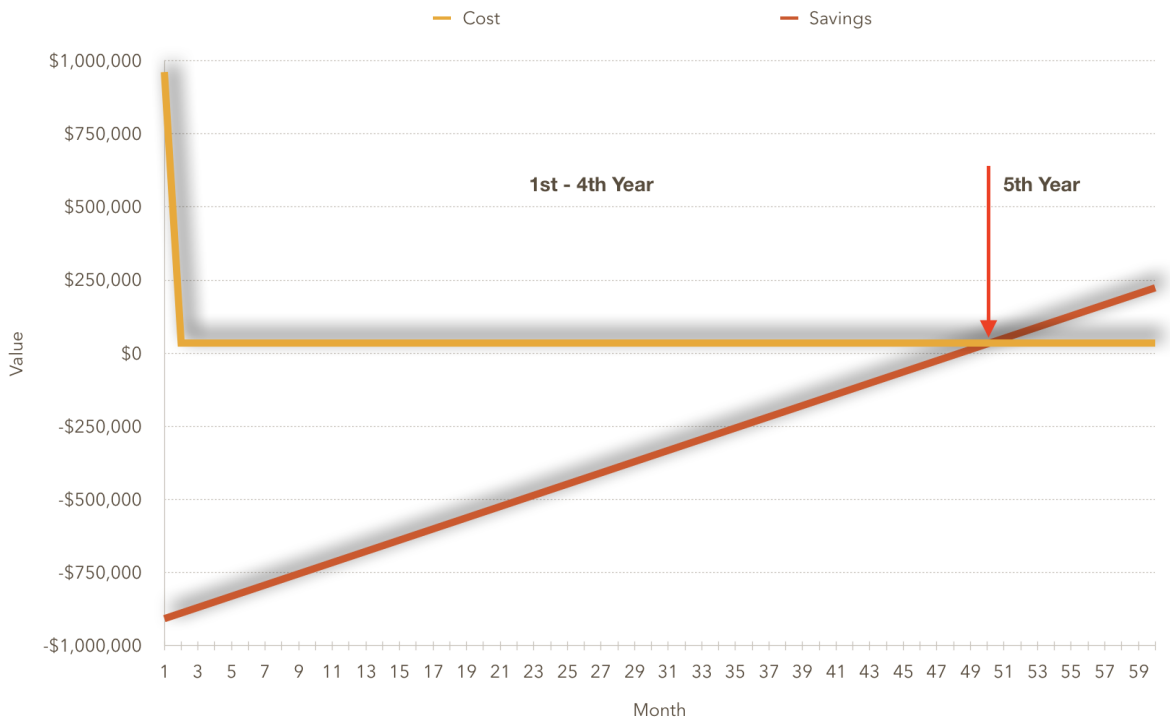
Another option is to optimize and upgrade our current system. However, this is not a better option. Because cloud computing the modern trend. and it has many modern characteristics such as flexibility, disaster recovery, work from anywhere and Capital-expenditure Free etc.

Cost-benefit Analysis

In ARS quotation, the one-time cost for setting up the system is $510,000 and the recurring cost is $35,000 per month.

The estimated benefit could be $650,000 per year by eliminating lost sales and improving operating efficiencies.

.Project Phase	ARS Quotation - 1st Part	SCR Resources - 2nd Part						
	Original Budget	Role	Person Months	Working Housrs(20*8)	Rate Per	Original Subtotal	Original Budget	Budget Performed
Requirements Analysis	$150,000	Project Manager	2	320	$135	$43,200	$78,400	**$228,400**
		Business Analyst	2	320	$110	$35,200		
Configuration and Testing	$200,000	Project Manager	3	480	$135	$64,800	$100,000	**$300000**
		Business Analyst	2	320	$110	$35,200		
User Acceptance Testing	$80,000	Project Manager	3	480	$135	$64,800	$159,200	**$239200**
		Business Analyst	1	160	$110	$17,600		
		Testers	6	960	$80	$76,800		
Implementation including user training	$50,000	Project Manager	2	320	$135	$43,200	$113,600	**$163600**
		Business Analyst	4	640	$110	$70,400		
Setup cost for networking and communication	$30,000							**$30000**
	$510,000						**$451,200**	**$961,200**



As the diagram shows, by the 49th month, the saved money will cover the total cost including the monthly cost. and leave us around $19,000 per month.

Recommendations

- The project can be divided into four phases:
- Requirements Analysis
- Configuration and Testing
- User Acceptance Testing
- Implementation including user training

The following three characters need to accomplish the project together.

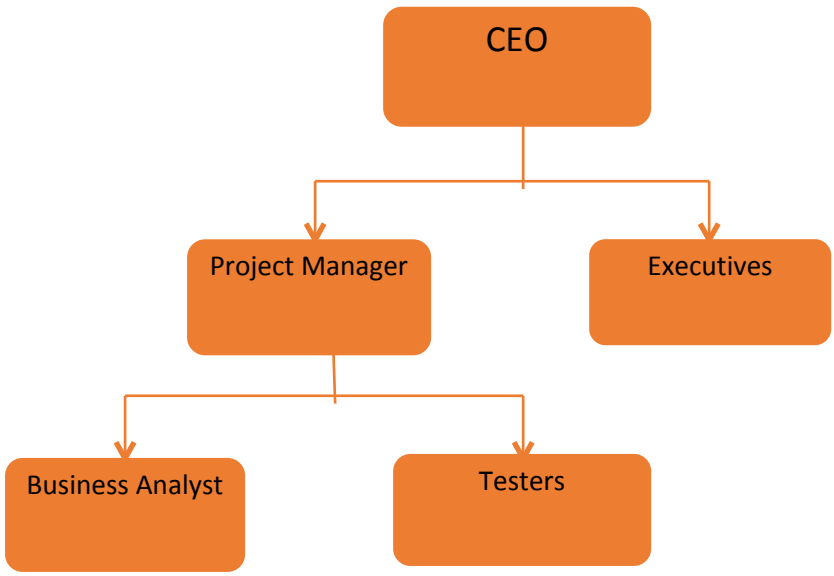
- Project Manager
- Business Analyst
- Testers

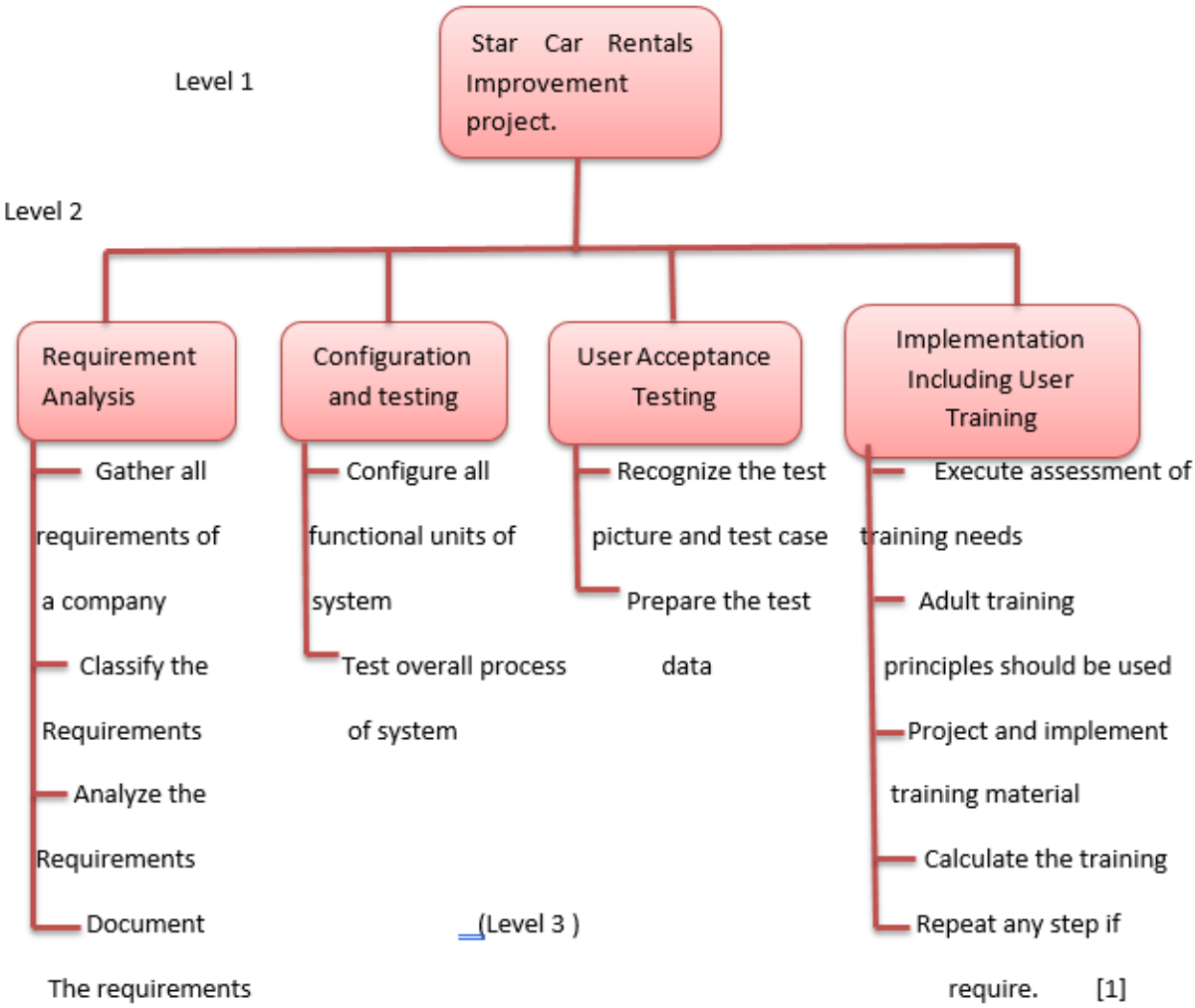
The total estimated elapsed time would be 25months. Indeed, it is long term strategic of our company, it is critical to us future, we must put enough resources and attention to it.

2. System Implementation

a. Project organization structure

The project Organization of Star Car Rentals is the structure that makes smooth the path of harmonization and execution of the project activities. This structure promotes collaboration among the team members. An organization structure is an important decision of Star Car Rental. One of the main purposes of this structure is to decrease ambiguity and confusion that usually may occur at the starting phase of project. The structure describes the interactions among the members of project management of Star Car Rentals and the relationships with outside environment. The following organization chart displays where each person is engaged in the project structure.





b. Work breakdown structure

c. Project deliverables

The project's deliverable is a tangible or intangible services and goods which manufactured because of a project which is projected to be delivered to a client. Project deliverables may have internal or external. A deliverable could be a document, a report, a software product etc. A deliverable may be consisting of multiple smaller deliverables. The deliverable for the completed project comprises of some special-purpose electronic device and its controlling software. The list of project deliverable is below mentioned.

Deliverable	Deliverable Description	Project Step
1.	Initial project plan	At project beginning
2.	Project Charter	At project beginning
3.	Risk management	In commencing of project
4.	Requirement description document	At the end of step 1
5.	Documentation of gap analysis	At the end of step 2
6.	Customization specification	At the end of step 3
7.	Specification of configuring the product	At the end of step 4
8.	Report specification	At the end of step 6
9.	Planning for testing of system and integration testing	At the end of step 6

10.	Plan for training	At the end of step 6
11.	Configuration and testing of modules of system	At the end of step 9
12.	Integration testing of system	At the end of step 10
13.	User acceptance testing	At the end of step 10
14.	Implementation plan	At the end of step 10
15.	Traceability plan	At the end of step 11

d. Activities

	Project Activities	Roles	Time(Person months)
1.	Planning and execution of gathering requirements activities.	Project manager	2 months
1.1	Planning of requirement analysis activities.	Business Analyst	2 months
1.2	Create the framework for future activities.	BA	
1.3	Generate requirements traceability matrix.	BA	
2.	Configuration and testing	Project Manager	3 months
2.1	Review test scripts	Business Analyst	2 months
3.	Create schedule for user acceptance testing.	Project manager	3 months
3.1	Understand the functional of system	Project manager	
3.2	Identify User Acceptance business	Business analyst	1 months
3.3	Create training material	BA	
3.4	Provide the training to team	BA	
3.5	Review the test script	BA	

3.6	Plan go /no go meeting	Project manager	
4.	Schedule implementation activities	Project manager	2 months
4.1	Create project status report	Project manager	
4.2	Perform risk management	Project manager	
4.3	Manage change management process	Business analyst	4 months

e. Project Schedule

	Activities	Start Date	Finish Date	Who is responsible?
Requirements Analysis	1. Planning of requirement analysis activities	26 June 2017	15 July2017	Project Manager
	2. Create the framework for future activities	15 July 2017	26 July 2017	Project Manager
	3. Generate requirements traceability matrix	26 July 2017	26 August 2017	Business Analyst
Configuration and Testing	1. Review test scripts	26 August 2017	26 November 2017	Project Manager Testers
User Acceptance Testing	1. Understand the functional of system	26 November 2017	19 December 2017	Project Manager
	2. Identify User Acceptance business	20 December 2017	10 January 20188	Business Analyst
	3. Create training material	10 January 2018	23 January 2018	Project Manger

	4. Provide the training to team	23 January 2018	5 February 2018	Testers
	5. Review the test script	5 February 2018	10 February 2017	Testers
	6. Plan go /no go meeting	10 February 2018	26 February 2018	Project Manager
Schedule implementation activities	7. Create project status report	26 February 2018	26 March 2018	Project Manager
	8. Perform risk management	26 March 2018	10 April 2018	Project Manager
	9. Manage change management process	10 April 2018	26 April 2018	Project Manager Business Analyst

f. Risk

Risk	Activities Undertaken
New cloud system crashes	One major risk that can occur in this project is once the new cloud system has been implemented, this new system can crash or fail. To reduce of this risk happening certain steps are required to foreseen. An example of this is making sure to do a prototype version first. Prototyping is first testing out the system before applying the real system so testing out methods first is one important steps to see if errors will occur.
Executives may fail to support project	Project team may lack the authority to achieve project outcomes. In this case executives of Star Car Rentals support are fundamental. To stop this from occurring, it is important to make sure executives are part of this project and that they are supporting the project team through the entire project. Also making sure they are part of the decision making and communicating daily.
Conflict between IT Manager and CEO	Conflict may arise between John Lambert CEO and Sandra Hall. Disagreements and poor decision can occur. To prevent this the CEO and IT Manager must be able to communicate well with each other. They must have excellent decision-making skills too. And lastly, making sure they have regular meetings always.

Stakeholder disagreement	As mentioned before conflicts and disagreements can also occur between stakeholders. To prevent this, it is important to schedule meetings. This way stakeholders can gather together and discuss about the progress of the project. Staying in touch and committed is crucial for every stakeholder in this project.
Lack of skills	In every field it is important to require a certain number of skills. In this case, a project like this requires many skills between the stakeholders/people involved. However, some of those individuals may lack the skills necessary to complete this project. For some, it could be a new experience for them, for others they do not have the experience. To achieve this outcome, it is important to hire to proper people with the accurate set of skills. Also, these individuals must have experience.

g. Quality control activities

The focus of quality control is on the deliverables of the project. Quality control monitors project deliverables to verify that the deliverables are of acceptable quality and the customer is satisfied.

To successfully perform the Quality Control, we need to identify the deliverables that will be tested for. We also need to understand the relevant quality standards and customer satisfaction criteria. After we defined the Quality Control Activities, the frequency of each activity and who is responsible for it is also important

QUALITY CONTROL

No.	Project Phase	Project Deliverable	Deliverable Quality Standards/ Customer Satisfaction	Quality Control Activity	Frequency/Interval	Who is Responsiblle
1	Requirements Analysis	The Project Requirement	Clearly defined in detail	1. Make sure the relevant deportments have reported the current issues and requirements to Business Analyst. 2. Investigate the analysis report and use it to get feedback from necessary stakeholders.	2/week	Sandra Hall and or Business Analyst
2	Configuration and Testing	The prototype software	Free of defects, No error, No system or network pending.	1. Check all the business logic within the functions. 2. Perform standard software and system test. 3. Invite staff to involve in the teat activities	1/day	Manager of department using the corresponding function
		Testing Result and Feedback	Clearly define all the problem, Must have a fix plan.	1. Follow up the bug fix and requirement revise and stick to the fix plan.	2/week	Sandra Hall
	networking and communication	All Networking Setup for shops and the headquarter	All the shop can connect to the cloud base system fluently. Must pass the Network Stress Test	1. Do network Stress Test 2. Do hardware test	1/week	System Administrator of SCR
		The cloud-based Software	The web base software response in an acceptable time. Must pass the load test	1. Do standard web test 2. Do special load test	1/day	System Administrator of SCR
3	User Acceptance Testing	Acceptance Testing Result	Test must be comprehensive, Follow the standard test process	1. Double confirm all the test points are covered and passed.	2/day	Sandra Hall
4	Implementation including user training	All application perform desirable functions	All the old data are synced to the new system, Necessary data are migrated to new system, The new data are consistent with old data, Old system is running as a backup Once the new system is not available, the business can temperately use the old system.	1. Migrate old data to the new system, 2. Check data consistency. 3. Do online stress test again. 4. Invite some relevant staffs to the test 5. Do system failure test, make sure that when the new system is not available, the old system can support the business	2/day	System Administrator of SCR
		Training Activities	All application functions are understand by relevant staffs. All the system configurations are acquired by SCR system administrators.	1. Test staffs if they all understand how to operate the new system. 2. Apply a test to the relevant staffs to make sure they know how to operate the new system 3.	2/week	Sandra Hall
		System handbook	Clear and comprehensive	1. Make all the relevant staffs have read this handbook and repot their questions 2. Try the trouble shooting in Handbook.	1/week	Sandra Hall

3. Communication Plan

Purpose

- A communication plan, in a project management aspect, is a policy-driven approach that provides stakeholders with detailed information about a project. This plan usually defines

the roles of specific information to each certain stakeholder, when that information should be delivered and communication types that will be used to deliver.

- Project Managers is the one in charged with guiding aspects of the project, including communication plan document.

- The purpose of providing a communication plan is that it helps managers realize the plan's goals. It is also important because it defines who needs to be aware of and informed about the project, how often the communication will be distributed and who is responsible for each distribution.

- The Star Car Rentals Communications Plan will define the project's structure and methods of information collection, screening, formatting, and distribution and outline understanding among project teams regarding the actions and processes necessary to facilitate the critical links among people, ideas, and information that are necessary for project success.

Stakeholder Identification and Analysis

- Identifies the key stakeholders of the project
- Analysis aspects of each individual key stakeholder such as communication and approach

Stakeholder	Description	Communication Role	Vehicle/Approach
John Lambert	CEO of Star Car Rentals	Organises meeting with IT	Email

		Manager Sandra Hall	Face-to-face
Sandra Hall	IT Manager of Star Car Rentals	Meetings with Alpha Rentals (ARS) about new Cloud system	Email Phone Meetings
Executives	Senior Member of the project	Schedules meetings with CEO John Lambert and discusses project issues and opportunity	Email
Alpha Rental Software (ARS)	Cloud based solution software that provides the software and related service to Star Car Rentals	Regular meetings with IT Manager Sandra Hall for the new Cloud system	Face-to-face Phone Meetings
-Project Manager	Responsibility of the planning, procurement and execution of a project.	Meetings with Sandra Hall and CEO of the progress of the project.	Email Weekly Meetings
Project Team	A team compromising of different individuals that forms different groups that are assigned to activities for the same project.	Meetings with Project Manager and Executives who then communicates to Project Manager.	Email Face-to-face
Business Partners (Booking Ltd)	Where customers can make bookings for vehicles from Star Car Rentals.	Communicate with customers when customers make bookings for vehicle and Sandra Hall IT Manager when purchasing vehicles.	Online Bookings Email Phone
Staff	Everyone that is employed in the Star Car Rentals business.	Meetings with John Lambert CEO. Customer enquiries and IT Manager Sandra Hall.	Email Face-to-face
Administration	Responsible for cover most areas of its operations, such as Customer Relationship Management, Reservation Management, Vehicle Pickup etc.	Meetings and communications by IT Manager Sandra Hall to use this IT system.	Email Face-to-face Phone

Communication Objectives

- To produce a wide variety of communication approaches towards stakeholders
- Communicate with respect and use clear language when engaging in conversation
- Updates with progress report and identify changes in activities between individuals
- Improve internal and external communication

Approach

Email: Every individual will have email addresses and there will be emails sent out to each member of the company for scheduling meetings and details.

Face-to-face: There will be face-to-face communication where individuals will talk to each other directly to each other in a physical appearance.

Phone: Stakeholders will have contact numbers such as mobile and/or house numbers. They can simply talk to each other over the phone if the individual is not present and can update them on the progress of the project.

Communication Matrix

- A communication matrix is a tool that designed to pinpoint exactly how individuals is communication and to provide a framework for communication goals of a project.

Communication Type	Description	Approach	Frequency	Audience	Owner	Deliverable
Meeting Kick-off	Introduces the project team and the project. Reviews project objectives and management approaches.	Face-to-face	Once	- Project Team - Executives	John Lambert (CE0) Sandra Hall (IT Manager)	Meeting Minutes Agenda
Project Team Meetings	Review status of the project with the team.	Face-to-face	Weekly	- John Lambert (CEO) - Project Team	Project Manager	Project Schedule Agenda
Technical Design Meetings	Discusses project phases and develop technical design solutions for the project.	Face-to-face Conference Meetings	Weekly	- Sandra Hall (IT Manager) - Executives - Project Team	Alpha Rental Software (ARS)	Meeting Minutes Agenda
Monthly Project Status Meetings	Report on the status of the project to management.	Email	Monthly	- John Lambert (CE0) - Executives	Sandra Hall	Slides Updates
Project Status	Status report of	Email	Monthly	- Sandra Hall	Project	Project

Reports	the project including progress, costs, activities and issues.	Face-to-face Conference Meetings		- Alpha Rental Software (ARS) - Project Manager	Manager	Schedule Project Progress Report

Action Plan

Tools: Tools such as facts sheets, articles, question and answer sheets, report documents, presentations, briefs and social media will be used as a source of communication.

Channels: Social Media, conference meetings and project phase meetings will be used as channels of communication

4. Earned Value Analysis

4.1.1 Original Budget

- ARS Quotation: Total $510,000

STEP 1 - ORIGINAL BUDGET

Project Phase	ARS Quotation - 1st Part	SCR Resources - 2nd Part	Total
	Original Cost	Original Cost	
Requirements Analysis	$150,000	$78,400	
Configuration and Testing	$200,000	$100,000	
User Acceptance Testing	$80,000	$159,200	
Implementation including user training	$50,000	$113,600	
Setup cost for networking and communication	$30,000	$0	
	$510,000	**$451,200**	**$961,200**

- Total resources from Star Car Rentals converted to money: $451,200

4.1.2 Revised Budget (BAC)

- After the increase of analysis phase and configurations and testing phase: $527,500
- The additional business analyst has been brought to support the configuration and testing, but we do not have to use this for arriving at the revised budget.
- The BAC: $978,700

STEP 2 - REVISED BUDGET (BAC)

Project Phase	ARS Quotation - 1st Part			SCR Resources - 2nd Part	Total
	Original Cost	Revise	Revised Cost	Original Cost	
Requirements Analysis	$150,000	5%	$157,500	$78,400	
Configuration and Testing	$200,000	5%	$210,000	$100,000	
User Acceptance Testing	$80,000	0	$80,000	$159,200	
Implementation including user training	$50,000	0	$50,000	$113,600	
Setup cost for networking and communication	$30,000	0	$30,000	$0	
			$527,500	**$451,200**	**$978,700**

4.1.3 Budgeted Cost of Work Performed (EV)

- Earned Value : $349,500 + $158,400 = $507,900

STEP 3 - BUDGETED COST OF WORK PERFORMED (EV)

Project Phase	ARS Quotation - 1st Part			SCR Resources - 2nd Part			Total EV
	Revised Cost	Percentage Completed	EV	Original Cost	Percentage Completed	EV	
Requirements Analysis	$157,500	100%	$157,500	$78,400	100%	$78,400	
Configuration and Testing	$210,000	80%	$168,000	$100,000	80%	$80,000	
User Acceptance Testing	$80,000	0%	$0	$159,200	0%	$0	
Implementation including user training	$50,000	0%	$0	$113,600	0%	$0	
Setup cost for networking and communication	$30,000	80%	$24,000	$0	0%	$0	
			$349,500			**$158,400**	**$507,900**

4.1.4 Budget Cost of Work Scheduled

Giving that:

a. Elapsed time: 4 months

STEP 4 - BUDGET COST OF WORK SCHEDULED (PV)

Project Phase	ARS Quotation - 1st Part			SCR Resources - 2nd Part			Total PV
	Revised Cost	Percentage Completed	PV	Original Cost	Percentage Completed	PV	
Requirements Analysis	$157,500	100%	$157,500	$78,400	100%	$78,400	$235,900
Configuration and Testing	$210,000	66.7%	$140,000	$100,000	66.7%	$66,667	$206,667
User Acceptance Testing	$80,000	0%	$0	$159,200	0%	$0	$0
Implementation including user training	$50,000	0%	$0	$113,600	0%	$0	$0
Setup cost for networking and communication	$30,000	66.7%	$20,000	-	-	-	-
			$317,500			**$145,067**	**$442,567**

4.1.5 Expected to Complete (ETC)

- Assuming working 20 days per month and 8 hours a day.

STEP 6 - EXPECTED TO COMPLETE (EC)

Project Phase	ARS Quotation - 1st Part			SCR Resources - 2nd Part				Total EC
	Revised Budget (8%)	Percentage Uncompleted	EC	Role	ETC in Person Months	Rate Per Hour	EC	
Requirements Analysis	$162,000	0%	$0					
Configuration and Testing	$216,000	20%	$43,200	Project Manager	1	$135	$21,600	
				Business Analyst	2	$110	$35,200	
User Acceptance Testing	$80,000	100%	$80,000	Project Manager ($140 from 7th Month)	1	$135	$21,600	
					2	$140	$44,800	
				Business Analyst	1	$110	$17,600	
				Tester	6	$80	$76,800	
Implementation including user training	$50,000	100%	$50,000	Project Manager	2	$140	$44,800	
				Business Analyst	4	$110	$70,400	
Setup cost for networking and communication	$30,000	20%	$6,000					
			$179,200				**$332,800**	**$512,000**

4.2 EAC

PROJECT SCORE SHEET

	Description	Detail	
PV	Budgeted cost of work scheduled	4 months (Complete: Phase 1st = 100%, Phase 2nd and 5th = 2/3)	$442,567
EV	Budgeted cost of work performed	Complete: Phase 1st = 100%, Phase 2nd and 5th = 80%	$507,900
AC	Actual cost of work performed	Money spent	$550,800
ETC	Estimate to complete	6 months left, ARS Budget Revised 8%, SRS Project Manager add $5 per hour from the 7th month	$512,000
EAC	Estimate at Completion	AC + ETC	$1,062,800
BAC	Budget at Completion	My original cost estimate	$978,700
SV	Schedule Variance	EV – PV	$65,333.33
SPI	Schedule Performance Index	EV / PV	114.8%
CV	Cost Variance	EV – AC	-$42,900.00
CPI	Cost Performance Index	EV / AC	92.2%
PC	Percentage Work Completed	EV / BAC	51.9%
PS	Percentage Money Spent	AC / BAC	56.3%

- The EAC is $1,062,800

5. References

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