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**Project: EBI Data Migration to the cloud Platform.**

**Summary:**

*EBI stands for Enterprise Batch Integration it is an open-ended project based on migrating the day-to-day data of the Employees and clients, like their recorded personal, professional and payroll information to the Accenture owned server which is located in different places of the world. This is a subpart of the project where the complete active platform is moved to cloud services to achieve flexibility, security, disaster recovery, increase collaboration etc. This case study is focuses on understanding and presenting Project Management techniques that are used in accomplishing the success of the Project.*

**Introduction:**

*EBI is an internal project that is sponsored and funded by Accenture to ensure Data Management and strong integration across the company. This project uses hardware, software, and networks to create a product, service, and result. Management and acquisition of resources is a major part of IT Project Management. This case study is focused on presenting the tools and techniques that are incorporated in this project. As most of the projects even this project is constrained in different ways like time, scope, and cost, efficient methodologies and tools are used by the team to complete the project by satisfying the given constraints. This process is studied in detail to present the strategies and plan that are used in the project.*

**Project Background:**

*Project consists of multiple teams like MRD (Master Repository Data Migration Team), ESB ( Enterprise Service Bus) , IF (Integration Factory) which support the process of data migrations. CIO (Chief Integration Organization) is the head of all the teams. EBI is mainly associated with production environment, server maintenance and Migrations. The whole project is deployed using SSIS (SQL server Integration services) which is a component of the Microsoft SQL Server database software that is mainly used to perform a broad range of Data Migration tasks.*

*As the venture went on the information began heaping up and the information administration undertaking wind up noticeably monotonous and expensive, subsequently CIO chose to move the task to cloud to pick up the advantages of cloud advances. Henceforth the leader of the CIO (Chief Integration Organization) thought of a group which comprised of Senior Managers and CEO's who has a place with the standard Management group of Accenture. They directed important dialogs and examinations with respect to the extent of the task and chose to support and start the Project exercises. The undertaking began Feb 2015 it went ahead to around 15 months and it was finished effectively in July 2016*

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*The Project involved many challenges and confusions regarding the cost, time and scope management. Few of the main challenges include:*

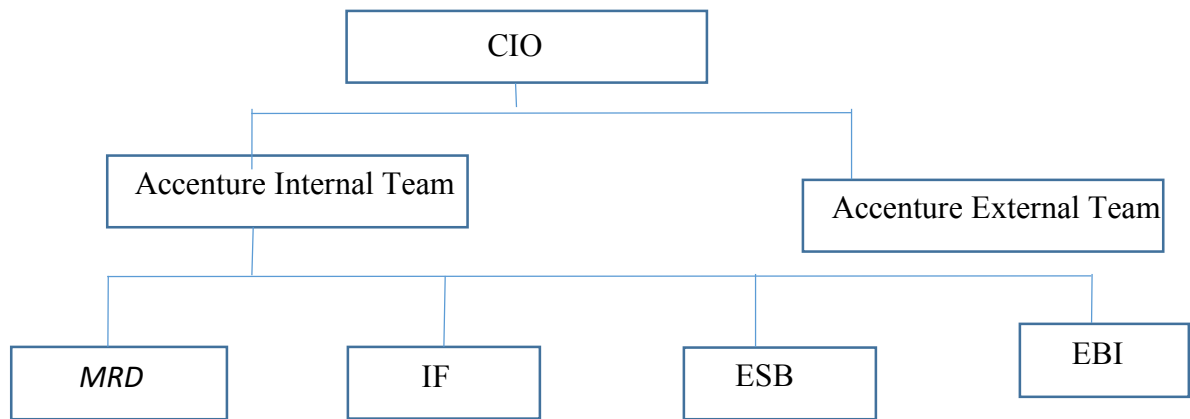
- *Budget/cost estimates for the project.*
- *Finding the SME's for the project.*
- *Understanding the required skill set for the project deliverable.*
- *Collaborating different teams to work together.*
- *Integration of the old and new software.*
- *Maintaining Backup of the data.*
- *Understanding the risk associated with the migration and coming up with a plan for the same.*

*I choose to take up this project for the case study as it involves implantation of best project management techniques to overcome the above challenges. An in depth description of the methodologies are described further.*

### **Project Organization:**

*CIO (Chief Integration Organization) is the head of all the integration management teams. They are the main people who sponsor all the projects which are related to data integration and migration. There are about 200 teams who come under CIO and all the projects are sponsored and controlled by the CEO's of the team among these 200 teams there are 2 major team Accenture Internal Team which concentrates on management of company's internal data and Accenture External team which mainly concentrates on the company's external data resource.*

*Accenture Internal Team consist of four main teams MRD (Master Repository Data Migration Team), ESB (Enterprise Service Bus), IF (Integration Factory) and EBI (Enterprise Batch Integration). MRD is responsible for monitoring and maintaining all the high priority data like the employee salary, Payroll, reimbursement etc. that is mostly all the cost and budget related data is taken care by MRD. IF team are the one who work on developing and testing the packages in the test environment. EBI, Enterprise integration is a technical field of enterprise architecture, which focused on the study of topics such as system interconnection, electronic data interchange, product data exchange and distributed computing environments this team is responsible for integrating and migrating the packages developed by IF team to production environment and make sure that it is tested for bugs. ESB is an enterprise service bus it implements a communication system between mutually interacting software applications in a service-oriented architecture this team supports the work of EBI through Azure services.*



**Fig1**

**Methodology:**

*Main Topics under it includes:*

**1. Project pre initiation and Project scope management activities:**

*The senior management team which included Managers and Team leads of all the sub projects came together to come up with an overview and estimations, which includes tasks as follows:*

- \* Determining the scope, time, and cost constraints for the project.*
- \* Identifying the project sponsor.*
- \* Select the project manager.*
- \* Develop a business case for a project.*
- \* Meet with the project manager to review the process and expectations for managing the project.*
- \* Determine if the project should be divided into two or more smaller projects.*

*All the above task is completed by the committee which was part of building the project. The global lead of the committee worked on all the major task of setting up the project. My project manager and team lead was part of the committee and every employee in the team who were part of the mission were updated by timely emails and calls to keep everyone informed regarding the progress and mission.*

*I closely worked with my TL in helping the team to develop a business case which has to be approved by the Accenture internal environment head who agreed on sponsoring the project. As for the necessity of the pre-initiation task, many people know from experience that it is easier to successfully complete a small project than a large one, especially for IT projects. It often makes sense to break large projects down into two or more smaller ones to help increase the odds of success. In this case, however, the team decided that the work could be done in one project that would last about 12 months. Because this project is relatively small and is for an internal sponsor, the business case did not turn out very complicated. Committee reviewed the business case with the project manager, and agreed that the project was definitely worth pursuing as the payback was estimated within a year and that the return on investment*

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was projected to be 110 percent. The project was approved by the committee to proceed with the formal initiation tasks, which are described in the next section.

### 2. Project Initiation:

The tasks in this phase were to identify all of the **project stakeholders** and to develop the **project charter**.

This task was assigned to the IF team as they closely worked with the Internal team head. The employees in the IF were assigned to set up calls and meetings to help identify all the potential teams who were impacted by the project, this includes the project sponsor, project team, support staff, customers, users, suppliers, and even opponents to the project.

My team received weekly emails and had on call meetings scheduled every 15 days to discuss the progress and also provide us any Knowledge Transfer materials as necessary.

After shareholders were identified the project manager documented the stakeholders, roles, names, organizations, and contact information in a stakeholder register, a document that includes details related to the identified project stakeholders.

**Example Stakeholders register looks like below:**

Stake holder Register					
Project Name	EBI Data Migration to the cloud Platform.			Date	11/11/14
Project Phase	Phase 1				
Name of stakeholder	Designation	Department	Role in project	Type of stakeholder	Type of communication
Garry Moore	VP of Accentente Internal team	Accenture Internalteam	sponsor	Internal	weekly video conference
Narendra Mane	Technical Manager	EBI	Manager	Internal	weekly emails and calls
Edward	Development lead	Integration Factory	Lead	internal	weekly emails and calls

**Fig2**

#### **Holding a Project Kick-Off Meeting:**

Experienced project managers know that it is crucial to get projects off to a great start. Holding a good kick-off meeting is an excellent way to do this. A kick-off meeting is a meeting held at the beginning of a project so that stakeholders can meet each other, review the goals of the project, and discuss the future plans. It was very crucial to have a kick off meeting for this project as it included many diversified teams which were distributed throughout the world. Even if some or all

*project stakeholders must meet virtually, it is still important to have a kick-off meeting. The agenda of Kick off meeting was set, it happened in the month of November 2014.*

***The template of the meeting and the agenda looked as below:***

Kick off Meeting	11/24/2014
Project: EBI Data Migration to the cloud	
Meeting Objective Platform: Introduction of stakeholders, teams, and users of the project	
Agenda: 1.Introduction of teams. 2. Discuss the project background. 3.Discuss the mission and the contract. 4. project organizational structure. 5. Team leads introduction. 6. other important tasks	
Date and Time of next meeting: 	

**Fig3**

### ***3. Project Management methodologies and tools:***

*The imperative part of the project manager is arranging the assets and the execution of the venture. In this venture the primary strategy utilized is critical path method (CPM) it is a well ordered task administration procedure for process arranging that defines critical and non-critical tasks with the objective of forestalling time or calendar issues and process bottlenecks. CPM smart sheets and stream diagrams were utilized as the deliverable. CPM uses a consolidated process where the tasks are defined and criticality of the task is specified.*

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*Main Steps in CPM include:*

### *\*Activity specification*

*Work Breakdown Structure (WBS) is used to identify the activities involved in the project. This is the main input for the critical path method. In activity specification, only the higher-level activities are selected for critical path method. When detailed activities are used, the critical path method may become too complex to manage and maintain.*

### *\* Establishing Activity sequence*

*In this step, the correct activity sequence is established. Which is more likely answering the below questions for each task of your list.*

- Which tasks should take place before this task happens.*
- Which tasks should be completed at the same time as this task.*
- Which tasks should happen immediately after this task.*

### *\*Creating Network diagram*

*Once the activity sequence is correctly identified, the network diagram is drawn Although the initial diagrams were drawn on paper, the Primavera software is used for this purpose.*

### *\* Estimation for each activity*

*This is a direct input from the WBS based estimation sheet. The project used 3-point estimation method for the initial activities of the project. The first is an in all likelihood (M)/best figure (BG) which is the normal measure of work the assignment may take if the colleague performed it 100 times. The second gauge is the cynical (P) assess which is the measure of work the errand may take if the negative elements they recognized do happen. The third gauge is the idealistic (O) evaluate which is the measure of work the undertaking may go out on a limb they recognized do happen.*

*For the task which involves design and development, COCOMO based (function points based) estimation methods were used for tasks estimation. such estimation information is used for identification of critical path.*

### *\* Identification of the critical path 8*

*For this, four parameters of each activity of the network are determined.*

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- *Earliest start time (ES) - The earliest time an activity can start once the previous dependent activities are over.*
- *Earliest finish time (EF) - ES + activity duration.*
- *Latest finish time (LF) - The latest time an activity can finish without delaying the project.*
- *Latest start time (LS) - LF - activity duration.*

*The float time for an activity is the time between the earliest (ES) and the latest (LS) start time or between the earliest (EF) and latest (LF) finish times. During the float time, an activity can be delayed without delaying the project finish date. The critical path is the longest path of the network diagram. The activities in the critical path have an effect on the deadline of the project. If an activity of this path is delayed, the project will be delayed.*

*\*Critical path diagram to show project progresses:*

*Critical path diagram is a live artefact, this diagram is updated with actual values once the task is completed. This gives more realistic figure for the deadline and the project manager can know whether they are on track regarding the deliverables.*

*Example of the Network diagram of the project:*

*Consider the following series of activities in a business planning to complete the migrations:*

<i>Task</i>	<i>Activity</i>	<i>Order</i>	<i>Duration (months)</i>
<i>A</i>	<i>Conduct basic sponsor and customer research</i>	<i>Starting Activity</i>	<i>2</i>
<i>B</i>	<i>Decide on project teams and management</i>	<i>Begin when A completes</i>	<i>2</i>
<i>C</i>	<i>Design the project concept</i>	<i>Begin when B completes</i>	<i>3</i>
<i>D</i>	<i>Design and test the project prototype</i>	<i>Begin when C completes</i>	<i>3</i>
<i>E</i>	<i>Develop and test production tooling</i>	<i>Begin when C completes</i>	<i>1</i>
<i>F</i>	<i>Notify the sponsors for project requirements</i>	<i>Begin when E completes</i>	<i>3</i>
<i>G</i>	<i>commence Production migration work</i>	<i>Begin when F completes</i>	<i>1</i>
<i>H</i>	<i>conduct launch</i>	<i>Begin when G completes</i>	<i>1</i>

**Fig4**

*Main components of network diagram is as below:*

*Node: A circle which represents an activity where it is started or finished, it is split into 3 sections the left part of the section is the unique node number, the top right section shows the early start time (EST) and the bottom right section is the Late Finish time (LFT) by which the previous activity must be completed.*

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*Activities: An activity is shown on the network as a line, linking the nodes. A letter representing the activity is usually shown above the relevant line.*

*Duration: The length of the time it takes to complete an activity.*

*Laid out in the correct sequence of activities, the network diagram would look like this*

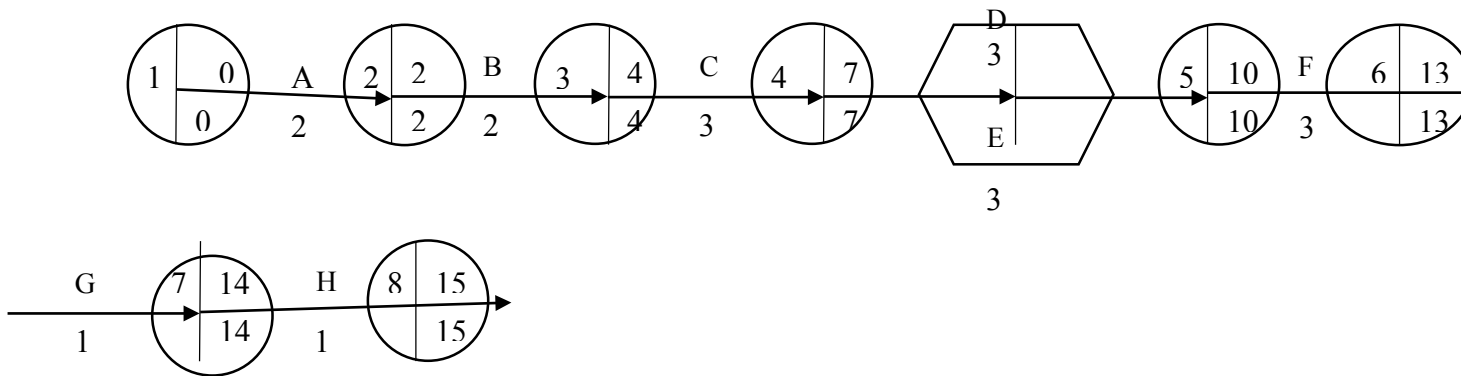


Fig5

### Advantages of Critical Path Method

- Offers a visual representation of the project activities.
- Presents the time to complete the tasks and the overall project.
- Tracking of critical activities.

#### 4. Project time management:

Venture plans become out of the essential records that start a task. The task contract regularly specifies arranged undertaking begin and end dates, which fill in as the beginning stages for a more definite calendar.

The committee followed a scrum based methodology for **project time management**. It is a perfect way to remove the tight controls of traditional project management and to liberate a team's creativity to address rapid client changing needs. Scrum methodology works with few key roles that need to be assigned: the product owner, the Scrum master, and the development team.

CIO is the product owner. The role of the product owner is to guide the team and encourage open



communication across all positions. A successful product owner is organized and available to most the team leads of every team who worked as scrum owner they answer questions and provide clarity throughout the life cycle of the project. Scrum Master removes roadblocks and facilitates handoffs where needed to keep the sprint running smoothly. The rest of the participants in a Scrum are members of the development team who are tasked with executing the product deliverables. Anyone who has a hand in creating the product is on the development team, including programmers, designers, writers, and platform-testers (also known as Quality Assurance (QA) experts).

Project time management involves defining activities like:

- \*Activity list – (Maintained by the team lead of every team)

- \*Activity attributes – (Assigning and updating the attributes and features)

- \*Milestone list – (specific milestones dates and details)

- \*Project management plan updates- (Maintained by every subproject manager)

The project manager followed few specific documents that he believed was just sufficient and not time consuming.

### 5. **Work Breakdown Structure (WBS)**, a key part of the scope baseline: <sup>9</sup>

A project budget is allocated to the top levels of the work breakdown structure, and department budgets are quickly calculated based on each project's work breakdown structure. Time and cost estimates are allocated to specific sections of the work breakdown structure, using this project schedule and budget are developed. As the project executes, specific sections of the work breakdown structure are tracked to identify project cost performance and identify issues and problem areas in the project organization.

work breakdown structures are used to identify potential risks in a given project. If a work breakdown structure has a branch that is not well defined then it represents a scope definition risk. These risks are tracked in a project log and reviewed as the project executes. By integrating the work breakdown structure with an organizational breakdown structure, the project manager identifies communication points and formulate a communication plan across the project organization.

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When a project is falling behind, referring the work breakdown structure will quickly identify the major deliverables impacted by a failing work package or late sub-deliverable. The work breakdown structure is also color coded to represent sub-deliverable status. Assigning colors of red for late, yellow for at risk, green for on-target, and blue for completed deliverables is an effective way to produce a heat-map of project progress and draw management's attention to key areas of the work breakdown structure. The main WBS for the project was created by Project manager and team. It was circulated among the stakeholders, the individual teams had to work on the chart to update it for the specific functionality that is assigned to the team.

After the WBS is created Project schedule, in the form of a Gantt chart with all dependencies and resources are entered. This document is to be submitted by all the team leads during the weekly scrum calls.

WBS for the project is as below:

### EBI DATA MIGRATION



	Task Name	Start Date	End Date	Duration	Predecessors	% Complete	Status
1	EBI Data migration to cloud platform	11/11/14	01/05/15	40d		100%	Completed
2	conduct basic sponsor and customer research	11/11/14	12/09/14	21d		100%	Completed
3	research about the project	12/10/14	12/31/14	16d	2	100%	Completed
4	identify stakeholders	01/01/15	01/05/15	3d	3	100%	Completed
5	Decide on project teams and management	01/06/15	03/09/15	45d	1	99%	Completed
6	identify the teams	01/06/15	01/23/15	14d		100%	Completed
7	identify the managers	01/26/15	02/11/15	13d	6	100%	Completed
8	communicating with all the teams and conducting meetings	02/12/15	03/06/15	17d	7	100%	Completed
9	kick off meeting	03/09/15	03/09/15	~0	8		Completed
10	Design the project concept	03/10/15	05/22/15	54d	5	100%	Completed
11	conduct technical research about the project	03/10/15	04/15/15	27d		100%	Completed
12	Design prototype for the project	04/16/15	05/22/15	27d	11	100%	Completed
13	Design and test the project prototype	05/25/15	08/19/15	63d	10	100%	Completed
14	Design prototype	05/25/15	06/18/15	19d		100%	Completed
15	test prototype	06/19/15	08/19/15	44d	14	100%	Completed
16	Develop and test production tools	05/25/15	07/31/15	50d	10	100%	Completed
17	Integrate requirements	05/25/15	06/09/15	12d		100%	Completed
18	Develop tools	06/10/15	06/30/15	15d	17	100%	Completed
19	perform test	07/01/15	07/31/15	23d	18	100%	Completed
20	Notify sponsors	08/03/15	11/19/15	79d	16	100%	Completed
21	communicate requirements	08/03/15	10/01/15	44d		100%	Completed
22	communicate progress	08/03/15	11/19/15	79d		100%	Completed
23	commence product migration task	11/20/15	12/31/15	30d	20	100%	Completed
24	migration	11/20/15	12/31/15	30d		100%	Completed
25	conduct launch	01/01/16	02/26/16	41d	23	100%	Completed
26	Launch event	01/01/16	02/26/16	41d		100%	Completed

Fig6

Gantt chart for the project is as below:

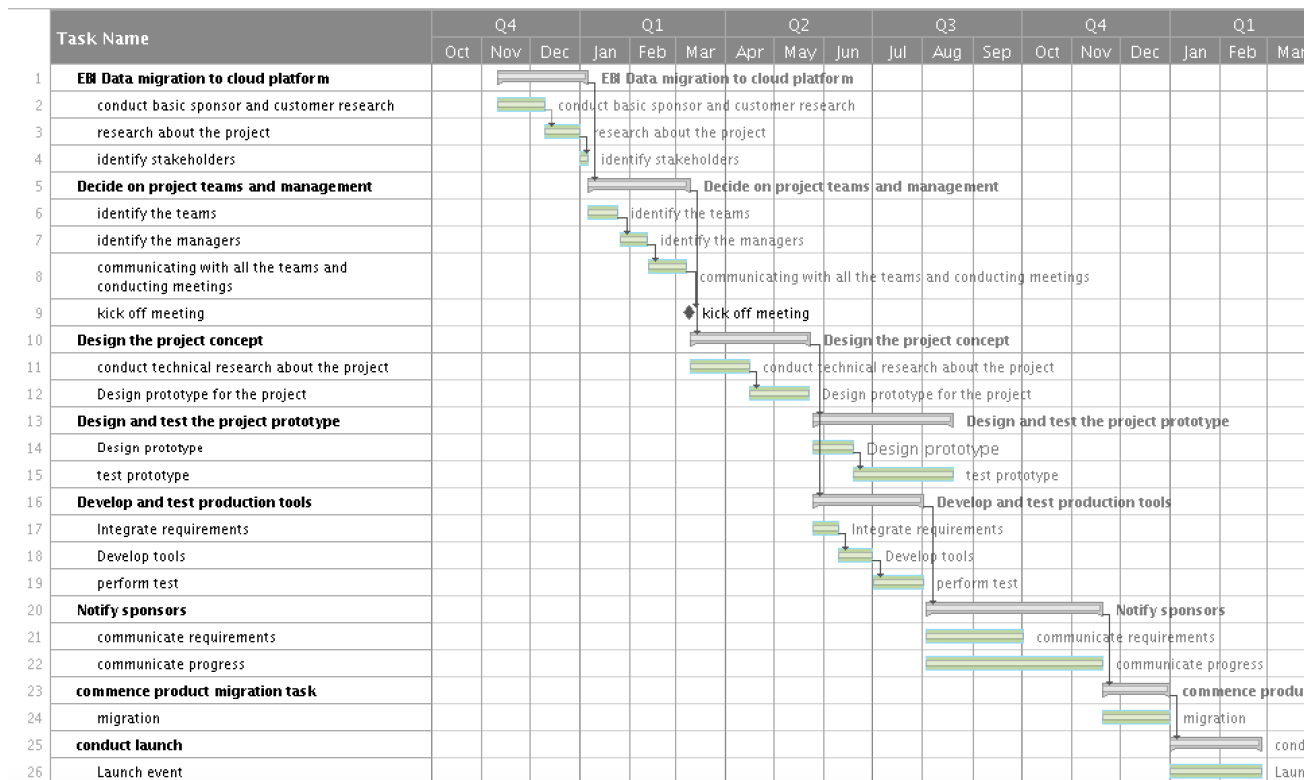


Fig7

## 6. Project cost Management:

The project followed ROM (Rough order of Magnitude as the cost estimate methodology) for the initial cost estimation. At the point when a task is begun and Requirements are not indicated in extraordinary detail, the correct project Budget can't be computed without botches because of the vulnerability. Solid numbers in this stage will prompt an inadequate circumstance in which the undertaking can encounter misfortune. To maintain a strategic distance from the likelihood of such an inadequate circumstance, a Rough Order-of-Magnitude (ROM) Estimate of expenses are performed. The ROM Estimate is based on Vision document that incorporates a rundown of Features like, staff-hours, Accuracy, Time estimates..., etc.

A Definitive Estimate for the project was prepared after a fully functional design plan is created for the project. The Accepted level of variance for this cost estimate is -10 to +10, Project lead of MRD team worked closely with all the teams to perform research in order to get the variation down in estimating the Definitive cost for the project. When it comes to computing the total cost of the project some estimates need to be done. Once the project schedule is ready and approved, a bottom-up procedure is used where for each activity of the project it is estimated a detailed

*cost. This way a total cost for each major phase and for the entire project gets computed. These initial costs of all of the planned activities will become the initial estimated budget.*

*cost baseline is a “time-phased budget that is used as a basis against which to measure, monitor, and control overall cost performance on the project.” But many factors can affect the cost performance of a project so the above estimated costs established during the planning phase might not be estimated that well. The true costs of certain tasks may not be well known at planning time. If a given price for materials, trainings or travel costs was taken into consideration at planning phase but at execution time these are increased there is an unforeseen additional cost, hence Definitive Estimate is very important.*

*A cash flow statement is created by every project manager to keep updates on the flowing cost. A cash flow statement is a listing of cash flows that occurred during the past accounting period. A projection of future flows of cash is called a cash flow budget. With respect to the cash flow statements an analysis of cash flow is made after every billing period. The cash flow analysis is often used for financial reporting purposes.*

## **7. Project Human Resource Management:**

*Human Resource Management (HRM) is of key and strategic importance to the project-oriented organization. Every time a new project or program is started, the human resource (HR) configuration of the organization changes.*

*Major Processes include:*

- \* Organizational Planning – Identify, document, and assign project roles, responsibilities, and reporting relationships*
- \* Staff Acquisition – Getting the human resources needed assigned to and working on the project*
- \* Team Development – developing individual and group competencies to enhance project performance.*

*The IT organization structure was studied and all the dependent teams were included by the senior management team. Responsibility Assignment Matrices was followed as part of managing the tasks and the team focus. All the team members were trained on the Project by providing regular Knowledge transfer sessions and documents.*

*Example Responsibility Assignment Matrices is as below:*

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A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
<b>Resource Responsibility</b> P - Primary Responsibility A - Approval Authority S - Supporting Responsibility (Contributor or Reviewer) I - Information Only  (Select from drop down list)	Project Director	Project Manager	Procurement Manager	Risk Manager	Administrative Manager	Administrative Staff Support	Financial Analyst	Contract Manager	team lead	Project Scheduler	Quality Manager	Technical Manager	System Engineer	Implementation Manager	Application Support Manager	Test Manager	Configuration Manager	Operations Manager	Customer Support Manager	Project Sponsor	Executive Steering Committee	CIO LEAD	Legal Counsel	IF team lead	MRD team lead	Federal Partners
<b>Project Funding</b>																										
Task/Deliverable 1	P																			P		P				
Task/Deliverable 2																										
<b>Acquisition Planning</b>																										
Task/Deliverable 1		P																								
Task/Deliverable 2																				A						
<b>Contracting</b>																										
Task/Deliverable 1																										
Task/Deliverable 2						A																				
<b>Requirements Analysis</b>																										
Task/Deliverable 1																										
Task/Deliverable 2										P																
<b>System Design</b>																										
Task/Deliverable 1				P																						
Task/Deliverable 2																			S							
<b>System Development</b>																										
Task/Deliverable 1									A																	
Task/Deliverable 2																										
<b>System Implementation</b>																										
Task/Deliverable 1																										
Task/Deliverable 2									P																	

**Fig8**

Example Knowledge transfer documents is attached below: (This is a security restricted information it is used only for demo, please do not share the document)



EBI IAW updated  
server

<https://drive.google.com/open?id=187VDJenRgrpZ3xTetITmb3PIZtnCfF3p>



Procedures\_on\_Ho  
w\_to\_Generate\_EBI

[https://drive.google.com/open?id=1\\_3bLvgrgW4dB0GHKScSJ\\_YbTIC2b9c9](https://drive.google.com/open?id=1_3bLvgrgW4dB0GHKScSJ_YbTIC2b9c9)

## 8. Project Communication Management:<sup>11</sup>

*Project Communications Management includes the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information.*

*The project manager takes an important role in ensuring effective communications on this project. All the communication requirements are documented in a communication matrix, which is a guide for what information to be communicated who is to do the communicating, when to communicate.*

*Project Team directory:*

*It is a document includes contact information of the team members*

*Example template is as below:*

Role	Name	Title	Organization/ Department	Email	Phone
Project Sponsor	A. White	VP of Technology	IT	a.white@abc.com	(555) 555-1212
Program Manager	B. Brown	PMO Manager	PMO	b.brown@abc.com	(555) 555-1213
Project Manager	C. Black	Project Manager	PMO	c.black@abc.com	(555) 555-1212
Project Stakeholders	See Stakeholder Register	See Stakeholder Register	See Stakeholder Register	See Stakeholder Register	See Stakeholder Register
Customer	J. Doe XYZ Corp.	Manager	IT	j.doe@xyz.com	(555) 555-8121
Project Team					
Technical Lead					

**Fig9**

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### Communication Matrix:

The following table identifies the communications requirements for this project.

Communication Type	Objective of Communication	Medium	Frequency	Audience	Owner	Deliverable	Format
Kickoff Meeting	Introduce the project team and the project. Review project objectives and management approach.	- Face to Face	Once	- Project Sponsor - Project Team - Stakeholders	Project Manager	- Agenda - Meeting Minutes	- Soft copy archived on SharePoint site and project website.
Project Team Meetings	Review status of the project with the team.	- Face to Face - Conference Call	Weekly	- Project Team	Project Manager	- Agenda - Meeting Minutes - Project Schedule	- Soft copy archived on SharePoint site and project website.
Technical Design Meetings	Discuss and develop technical design solutions for the project.	- Face to Face	As Needed	- Project Technical Staff	Technical Lead	- Agenda - Meeting Minutes	- Soft copy archived on SharePoint site and project website.
Monthly Project Status Meetings	Report on the status of the project to management.	- Face to Face - Conference Call	Monthly	- PMO	Project Manager	- Slide Updates - Project Schedule	- Soft copy archived on SharePoint site and project website.

**Fig10**

### Communication Escalation process:

Below table indicates the escalation procedure followed by the project:

Priority	Definition	Decision Authority	Timeframe for Resolution
Priority 1	Major impact to project or business operations. If not resolved quickly there will be a significant adverse impact to revenue and/or schedule.	Vice President or higher	Within 4 hours
Priority 2	Medium impact to project or business operations which may result in some adverse impact to revenue and/or schedule.	Project Sponsor	Within one business day
Priority 3	Slight impact which may cause some minor scheduling difficulties with the project but no impact to business operations or revenue.	Project Manager	Within two business days
Priority 4	Insignificant impact to project but there may be a better solution.	Project Manager	Work continues and any recommendations are submitted via the project change control process

**Fig11**

*project related documents were well organized and managed by the respective team leads. The process of monitoring and controlling communications throughout the entire project life cycle to ensure the information needs of the project stakeholders are met is managed by weekly reports, monthly meeting, regular email updates, virtual team calls on every Friday ...etc.*

### **9. Project Risk Management:**

*Risk Analysis and Management is a key project management practice to ensure that the least number of surprises occur while project is underway. While we can never predict the future with certainty, we can apply a simple and streamlined risk management process to predict the uncertainties in the projects and minimize the occurrence or impact of these uncertainties.*

*The risk management plan includes these guidelines:*

- *List of possible risk sources and categories*
- *Impact and probability matrix*
- *Risk reduction and action plan*
- *Contingency plan*
- *Risk threshold and metrics*

#### *Risk Identification:*

*Risk identification is one of the key topics in the regular project status and reporting meetings. Some risks may be readily apparent to the project team—known risks; others will take more rigor to uncover, but are still predictable. The medium for recording all identified risks throughout the project is the risk register, which is stored in the central project server.*

#### *Risk Category:*

*Risk category provides a list of areas that are prone to risk events. The organization recommends high-level, standard categories, which have to be extended based on the project type.*

<i>Risk Category</i>	
<i>Technical</i>	<i>Requirements, cloud Technology, Interfaces, Performance, Quality, production tools, SSIS configurations and development environment.</i>
<i>External</i>	<i>Customer, Contract , Market , Supplier etc.</i>
<i>Organizational</i>	<i>Project Dependencies, Logistics , Resources , Budget, etc.</i>



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<i>Project Management</i>	<i>Planning, Schedule, Estimation, Controlling, Communication etc.</i>
<i>Strategic Risk</i>	<i>technological changes, a powerful new competitor entering the market, shifts in customer demand, spikes in the costs of raw materials, or any number of other large-scale changes., etc.</i>
<i>Operational Risk</i>	<i>unexpected failure in company's day-to-day operations, natural disaster, a power cut, problem with your website host....,etc.</i>

**Fig12**

### *Risk Analysis:*

*Risk analysis involves examining how project outcomes and objectives might change due to the impact of the risk event. Once the risks are identified, they are analyzed to identify the qualitative and quantitative impact of the risk on the project so that appropriate steps can be taken to mitigate them. This project used the following guidelines are used to analyze risks.*

### *Probability of Risk Occurrence:*

- 1. High probability – (80 % ≤ Y ≤ 100%)*
- 2. Medium-high probability – (60 % ≤ Y < 80%)*
- 3. Medium-Low probability – (30 % ≤ Y < 60%)*
- 4. Low probability (0 % < Y < 30%)*

### *Risk Impact:*

- 1. High – Catastrophic (Rating A – 100)*
- 2. Medium – Critical (Rating B – 50)*
- 3. Low – Marginal (Rating C – 10)*

*Probability Impact Matrix with risk responses were proposed by the senior management team.*

## CASE STUDY

Example Risk register of the project is as below:

A	B	C	D	E	F	G	H
RISK REGISTER		Date:	10/1/15				
EBI Data Migration to the cloud Platform.							
Risk ID	Description	Category	Probability	Impact	Response	Owner	Status
1	Communication is a challenge which should not be underestimated. Our Team members need to communicate their ideas properly to each other, so that everyone of us are on the same page in the project.	People Risk	High	High	Set a clear communication strategy for the project, the meeting MOM's should be sent to each and every team member. Every team member should follow the communication requirement charter	Team Lead	Meeting was planned between the team Lead and other leads to set communication strategies and how to make use of them.
2	If collaboration of the divided work for the migration is not consistent and well understood it can result in huge risk for the final migration	Technology Risk	Medium	High	Design a proper plan for every team member to work and clear the requirement for everyone which will remove any chance of inconsistency.	Technical lead	No conflicts as of now.
3	Dependency is a major risk for delivering the project because at times one team member is assigned a task and if he doesn't complete it on time or doesn't do a satisfactory work, then the whole project is hampered because of him/her.	People Risk	Medium	High	Always try to assign two or more people to critical tasks so that if someone is not available other can takeover the task and complete it before the end date.	Project manager	According to the skills, every person will be assigned with the two or more tasks in the meeting which going to be held by next week
4	Misunderstanding the requirement of the project deliverables can really affect the project terribly because this can lead to delivering wrong output.	Market Risk	Low	Medium	Whenever a doubt arise for delivering the deliverables then it is important to discuss among the team and if that also doesn't solve the issue speak with the CIO team.	Team Lead, of all the divisions	Closed

### 10. Project Stakeholder Management:

Identifying stakeholders by creating stakeholder register as mentioned in the pre-initiation phase. Issue logs and change requests were created to manage them effectively.

### 11. Results and Analysis (SWOT Analysis):

This case study mainly concentrates on the Project management techniques and tools that are used in building the project. So far as depicted most of the techniques used are concentrated on the project domain and the complexity involved. The team worked really well to manage it fine, few of the analysis and pros and cons are mentioned as below:

1. The organizational division and management of the project was a high level and time consuming task for the project. More emphasis and time was spent on project analysis and management than implementation.
2. The Project Time estimates had highly unrealistic time estimates as the baseline was created by each Project manager of all the different teams.
3. The Risk Response was created by the senior Project manager of the complete project and not the individual team managers because of which minor risks were ignored.

<p><b>STRENGTH</b></p> <ul style="list-style-type: none"> <li>*unity in the senior management</li> <li>*Best strategies and tools</li> <li>*Effective team building</li> <li>*Timely communication</li> <li>*Management are incoming regarding innovative ideas.</li> <li>* High Importance given to team leads for talent acquisition.</li> <li>*SME's played a major role in assisting the engineers</li> </ul>	<p><b>WEAKNESS</b></p> <ul style="list-style-type: none"> <li>* Major authority and management decisions taken up by high organizational level.</li> <li>*High level of task dependency</li> <li>* communication acting as major task</li> <li>*Major time spent on management than implementation.</li> <li>*Time estimate dint turn out to be very accurate.</li> <li>*Over Budget issues.</li> <li>*Need for more resources who are proficient in the technology</li> </ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>*other company in the market providing better cloud infrastructure.</li> <li>*Advance features in SSIS technology.</li> <li>*reduced tax for companies using cloud technologies by the government.</li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>*Any natural disaster.</li> <li>*Degradation of cloud service provider.</li> <li>*SME moving companies for new opportunities.</li> </ul>

**Fig13****12. Lessons Learned:**

From this case it is prominent that the Project Management is quite strong in controlling uncertain factors of the project. Few of the main things that could be differently are as below.

1. More authority given to the Project lead regarding decision making, this will reduce the amount of time spent on communication and dependency on the senior project manager for every small thing.
2. Include SME in the CIO group, this is required as the SME are the best people to understand and communicate technology challenges faced by the project.
3. Following both CPM and Agile Methodology to manage the project, this will increase the output and integration as it is more collaborative to use both the methods hand in hand.

**13. Conclusion:**

I worked as a Software Engineer Analyst at Accenture, under EBI team throughout the migration process, I have written this case study with my experience and understanding of the project. The project was managed very efficiently by the internal team after adopting most of the significant

*tools and project management methodologies. Project followed agile and incremental process to develop the project. Resource and people management was outstandingly managed by the CIO team. My tasks in the project included data collection, documentation, querying specific functionality in SSIS etc. Team followed very efficient communication standards to keep every team member updated. The management team turned out to be very effective with planning, cost estimate and time management which in turn resulted in success of the Project with high ROI.*

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