

# Implementation of SaaS for Investment Inc.

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### **Overview**

Investment, Inc. is in the financial services industry that have licensed broker dealer who sell investments to clients. Investment Inc. is currently evaluating a new software platform to support its broker dealers in order to improve operation and to have better insight into their business. Currently, they use four system in order to get the information that is required to manage their operations. After evaluating systems in the marketplace, Investment Inc. has contacted the sales department to generate proposal for the system that would be compared with other vendors. The proposal will be evaluated under their internal evaluation procedures and the preferred vendor would be notified by July 6, 2015. The Project plan is due by June 8, 2015 along with additional documents. The additional documents requested were recent SSAE audit report, Business continuity policy (BCP) procedure document, web application assessment for the SaaS performed by an independent 3<sup>rd</sup> party, Certificate of current cyber security insurance and summary of coverage, Network penetration testing results for SaaS network perimeter performed by an independent 3<sup>rd</sup> party, Incident response and escalation procedure, and background check procedures for employees and contractors.

# **Objectives**

The objectives of this project is to enable Investment Inc. to consolidate their systems into a SaaS based solution to provide a one-stop shop for managing their operations.

1. The proposed system would allow brokers to interact with their clients efficiently.

2. The proposed system would allow Investment Inc. to have better insights into their business and help to ease management of their business.

Investment Inc. requires Software Inc. to deliver the proposed system within a period of six months. The nature of this deal is mutually benefitting. This implementation will enable Software Inc. to venture into new geographical market and increase the portfolio of clients. The new business would boost our revenue stream in the middle of slowing market. The success of this account would provide a good reference for our business in future in that geographical area since Investment Inc. are one of the biggest financial service providers in the area.

# **Project Scope**

The scope of this project is limited to initial RFP and implementation of the product. Investments Inc. will sign off the requirement specification. Implementation phase follows the requirements specification. Software Inc. will be responsible for the design, implementation, quality assurance, User Acceptance Testing (UAT) and customer deployment phases. The actual tasks that are a part of this implementation are described in the WBS work breakdown structure Appendix [A]. Any additional change requests will be treated as new requirements upon negotiation with the client. New requirement/scope creeps will be an additional effort on the baseline schedule and therefore, will affect the schedule and budget accordingly. Software, Inc. will manage technical infrastructure provided by DC cloud Inc. DC Cloud Inc., will provision the required environments for development, testing and production deployment phases. Investment Inc. will conduct the UAT and operation team at Investment Inc. will be involved in Project handoff.

# **Contractual Aspects**

Software Inc. has to deliver the proposed system within a period of six months. In case they miss the deadline, Investments Inc. will impose a penalty of \$10,000 for every two weeks of delay on Software Inc. At Software, Inc. product would be implemented as Software as a Service (SaaS). The work breakdown structure (WBS) in Appendix [A] gives the details of actual tasks that are a part of this proposed solution. Software, Inc. will outsource its datacenter to DC Cloud Inc. for all production implementation of their solution. This allows better management of production infrastructure and the ability to scale up the infrastructure. DC Cloud Inc. is responsible for provisioning and 24x7 monitoring of the infrastructure. Software, Inc. will manage technical infrastructure provided by DC cloud Inc. and if any issues arise, they are reported to Software, Inc. to decide on the solution. DC Cloud Inc. only provides support to the infrastructure and not the product hosted by Software, Inc. Any delay in the provisioning of the hardware/software infrastructure from DC Cloud Inc. will be liable for penalty. Software, Inc. resolves any issues related to the product.

# Schedule

As per the project plan, the implementation will begin on August 03, 2015 and the estimated project completion date is February 09, 2016.

Based on the project customer requirements, we came up with the Work Breakdown Structure (WBS) - Appendix [A]. The project milestone activities were identified from the WBS. In order to come up with most accurate estimates, optimistic, pessimistic and most likely estimates were used to come with the expected time i.e. PERT. Appendix [F] represents the detailed tasks, immediate predecessors, duration (optimistic, pessimistic, most likely, and PERT) variance and standard deviation along with the expected cost.

Based on the activity duration and its predecessor information, we created the Activity on node (AON) diagram for the project. Appendix [H] presents the AON diagram.

The critical path is highlighted in the AON diagram. The project duration is calculated based on the aggregate of the critical path activities. On initial analysis of the project, the project completion would take 147 days. However, the customer requirement dictates that the project be completed in 120 working days. The estimated completion date exceeds the required completion date by 27 days. This estimate gave us 0 % confidence interval for completing the project on schedule. In this case, wherein the project delivery deadline is prior to the project completion date, "resource crashing" technique was utilized to expedite the activities on the critical path to meet the project milestone deadline. The AON diagram shows the project duration as 121 working days. Since, this schedule is within the scope of the project, this schedule is treated as the project baseline schedule. The probability curve given in Appendix [I], based on the probability curve we are 50% confident of finishing the project in 121 days. Moreover, we are 95% sure that we can complete the project in 134 days. We used Gantt chart to comprehend project tasks and its start and finish dates. The milestone dates and project completion date were calculated based on the information in the Gantt chart Appendix [G].

| No. | Milestones  | Dates              |
|-----|---|--------------------|
| 1   | Setup Dev Environment   | September 15, 2015 |
| 2   | Implementation of Base System   | September 18, 2015 |
| 3   | Develop SSIS package  | September 18, 2015 |
| 4   | Deploy scripts and SSIS package   | September 21, 2015 |
| 5   | Implement and Deploy DB reports (new reports /modification to existing reports) | November 25,2015   |
| 6   | Setup Test Environment  | December 17, 2015  |
| 7   | Deploy in QA environment  | December 23.2016   |
| 8   | Setup Production Environment  | January 2, 2016    |
| 9   | Test application in QA environment  | January 4, 2016    |
| 10  | UAT at Software Inc.  | January 15, 2016   |
| 11  | Deploy in Production environment  | January 22, 2016   |
| 12  | Knowledge transfer to operations team   | January 26, 2016   |
| 13  | Project Handover  | February 9, 2016   |

The project milestones and the critical dates for the project are as listed in table below.

### **Resources**

The project will require 2176 working labor hours lasting over 120 days at a cost of \$117,537.6. The vendor will outsource its Data Center to another vendor for all production implementation of their solution. This would mean better management of production infrastructure and also the ability to scale up the infrastructure. They will provide 24X7 monitoring of the infrastructure and if any issues arise, they will be reported to this vendor.

Originally the project was taking a total of 147 days for completion at a cost of \$46,218.However, since the project was at most to be finished in 6 months vendor decided to crash the project. From the CPM activities on the critical path of the baseline were determined. The activities 1.1.1, 1.1.2, 1.2.2, 1.4.1, 1.4.3, 1.4.5, 1.4.6, 1.5.1, 1.5.2, 1.5.3, 1.6.1 and 1.8.2 were on CPM [Refer CPM-Appendix H1].

To crash a project, two simple principles are followed: First, focus on the critical path(s) when trying to shorten the duration of a project, with the exception when a resource used by an activity not on the critical path is needed for another project. Crashing a noncritical activity will not influence project duration. Second, when shortening a project's duration, select the least expensive way to do it.

Since, it is assumed that resources will be handling only one project at a time. The critical activities with the lowest cost were considered for crashing. Amongst the critical activities; the activities 1.1.1, 1.1.2, 1.5.3, 1.6.1 and 1.8.2 couldn't be crashed as those activities required the suggested amount of time. Adding more resources to those activities even wouldn't have brought significant difference. The reasons for such activities are mentioned below.

| Activities                          | Reason for not crashing   |
|-------------------------------------|---|
| 1.1.1 Setup Dev environment         | Dependent upon permissions and hardware.  |
| 1.1.2 Setup Test environment        | Dependent upon permissions and hardware.  |
| 1.5.3 UAT at Investment Inc.        | Done at the client side. Cannot control client's resources.                                     |
| 1.6.1 Deploy in QA environment      | Hardware dependent. Manual tracing is required.   |
| 1.8.2 Take over project projections | Can't fast track knowledge transfer. Once the vendor leaves, missed parts would not be covered. |

Hence, keeping above reasons in mind the rest of the activities were crashed starting with the least expensive.

7 activities were crashed by adding 1 extra resource to them respectively. 1 DBA each added to activities 1.2.2 and 1.4.1. 1 tester each was added to 1.4.5, 1.5.1 and 1.5.2. 1 developer was added to activity 1.4.6. 1 report author was added to the activity 1.4.3.

The resources required can be seen under the RACI matrix [Refer: Appendix B]. The cost associated with each activity can be seen under the cost sheet [Refer: Appendix E-Table1].

Once the project starts, using Earned value management cost and schedule can be monitored.

### Personnel

For this project, the coordination between the Investment Inc. and the vendors will be done by their respective PMs. The team members will report to their respective PMs if any issues arise. PMs will also be responsible for successful planning, organizing, leading and controlling the team. They will act as point of contact for major matters of importance.

Once the vendor PM has defined project scope, project plan and project schedule the developer starts developing the packages and scripts. His duties will include reviews of current system, ideas for improvements, producing detailed specifications and program codes, testing the product, deployment to the different environments, preparation of training manual and maintaining the system once it's up and running.

Databases are key to any organization's success. Vendor DBAs will look into the implementation of base system, creation of scripts, modifying DB based on requirements and testing it.

Network Engineers-Responsible for setting up development, QA and production environments at vendor site.

Vendor testers- are involved throughout the testing cycle. They are responsible for testing reports, application in QA environment, user acceptance testing and data feeds.

They monitor the testing and review each other's work, including test specifications, defect reports and test results.

Investment Inc. testers- Responsible for doing user acceptance testing at their end to verify requirements are met and quality assurance. They are also responsible for smoke testing once the project is deployed at their end.

Vendor Report Authors- Responsible for implementing new reports and modifying old reports to database.

Clearing firms- Responsible for setting up data feed from Investment Inc. to the vendor.

# Budgeting

The current project cost estimate is the most recent project cost estimate available during the entire project life cycle.

Budget was determined in steps. First RACI matrix was used to determine the utilization of resources for each activity. Then using the RACI we determined number of resources required for each activity. Hourly rate of each resource was also determined. Hence by multiplying the rate with number of hours utilized we figured out the total budget for each activity. [Appendix E-Table1] shows the budget calculated for each activity. As the project starts in August and finishes in February, monthly budget was also determined. Estimated budget for each month is shown in [Appendix E-Table2].

The total budget of the entire project is estimated to be \$117,537.60. An overhead cost was also calculated by keeping the margin as 20%. The fixed charges such as of setting up the environments comes to be \$17,880. Total cost of labor comes to \$83,048. Also, a delay clause was added for an additional penalty of \$10,000 per two weeks.

# **Project Monitoring and Control**

The earned value for the project will be monitored with every activity to make sure that the project is on time and budget. [Appendix K] shows the planned value table assuming 50-50 rule for all activities. The planned value table will provide the project manager a means to compare the progress of the project with the baseline. In addition, the two fundamental objectives- 1) Regulation of results through alteration of activities and 2) stewardship of organizational assets-will be achieved.

The best way to evaluate our project's status is to graph our results. A graph will be plotted with Planned Value (PV), Actual Cost (AC) and Earned Value (EV) against project duration. Any gap between Actual Cost, Planned Value, and Earned Value would clearly indicate project problems. To confirm graph's results, we will calculate Earned value ratios- CPI and SPI. Using these ratios we will forecast the completion of the project. If anything goes wrong then through this method condition of the situation can be determined and corrective actions can be taken.

Appendix L should the Cumulative total of the project budget along with monthly budget requirements. The two spikes in the monthly budget is due to the provisioning of hardware for the different environments.

### **Risk management**

In this section, we identify the project risks and the contingency plan to mitigate them:

- 1. **Data format changes:** Future format changes for the data feed files during the implementation phase.
- 2. **Constant alteration of requirements/ Scope creeps:** Risks in the form of constant changes to the requirement specifications or new requirements, which were not mentioned in the scope of the project, might cause delays.
- 3. **Technology:** These risks are derived from the software or hardware technologies that are being used as part of the system being developed. Acquisition of hardware / software resources critical to project success could be delayed in the procurement process.
- 4. **Personnel Shortfall**: Risks in the form of resources availability, skill level, and retention of the people on the development team.

### **Contingency plan**

In response to the risks identified above, following are the contingency measures:

- In case of any layout changes for data feed files in the middle of the implementation phase, the effort required to accommodate the layout change will be identified as additional effort and it will impact the schedule and the budget accordingly.
- Implementation phase will strictly follow requirement specification document with the sign off from the customers, in this case, Investment Inc.
- Hardware/software requirements will be contracted to third party vendor. Penalty will be applied in case of any delay.
- Risks regarding scope change will be addressed by upfront clear communication with the client and establishing the formal process to handle the requested changes. As a part of this process, scope change log will be maintained and used appropriately.
- Impact analysis will be done for every change request. If the change is big and requires considerable duration for completion, it will be treated as scope creep and pushed into next phase/iteration.
- Priority change request will be identified as an additional effort on the schedule and budget.

# **Project Termination & Evaluation**

For the scope of our project, the project will be deemed completed after integration at customer site and project handover to the operations team at Investment Inc. The scheduled project completion date is February 09, 2016. Project closing out phase generally consists of the evaluation and reporting of the outcomes of the project against the project charter. The project closing out phase comprises of the below activities and is usually the responsibility of the Project Manager and his team:

#### ✓ **Post Implementation Review**:

- o Ensure completion of work.
- Compare the actual project implementation with proposed implementation. Identify deviations between the baseline and the actual results, if any.
- Prepare the final presentation of the project results and lessons learnt from Studying and evaluating different aspects of the project management for future projects.
- Make recommendations for future projects. Scope change logs, dropped change requests and enhancements may be used to make recommendations.

#### ✓ **Customer Acceptance**:

- o Verify the customer deliverables against predetermined checklist.
- Ensure delivery and installation is accomplished
- Final acceptance: Get the final formal acceptance of the project results from customers

#### ✓ **Performance evaluation of team:**

• Provide performance feedback to the team members. This includes an evaluation of the team based on things that went well as well things that did not go well. The idea is to identify success-sustaining activities and to learn from past mistakes.

#### $\checkmark~$ Clear Source Code and dev environment:

- Repository cleanup: Clear out code/document change control, repositories. In this case, the team members should be notified and only the current versions should remain in the repository (all non-current (stale) versions should be removed from the repository) and archive reusable sources and documents).
- Remove project web site, folders, project shares etc.

#### $\checkmark~$ Resource Release and Re-allocation:

- During the project closure phase, the current project no longer has need for staff and hence, resources should be released from the current project and reallocated to other projects.
  - Start the process of releasing and reallocating the resources to other projects/tasks.
  - Plan ahead and ensure required staff support for the project completion phase
  - Release team members on good terms.

#### ✓ Accounts and finance:

• This phase involves finalizing finance related activities, completing accounts, transferring/releasing project assets.

#### ✓ **Project Archive:**

• The project archive phase involves systematic storing of project documents and artefacts. This is a key phase as the archive contains valuable information that may be used for future products.

#### $\checkmark$ Celebration:

• Project closure celebration is a fun event dedicated to acknowledging the successful completion of the project. Celebrate each significant milestone and goal achieved.

### **Appendices:**

#### A: WBS



# **B: RACI**

| Role<br>Activity                 | Developers<br>(SI) | System<br>Eng. (SI) | DBA<br>(SI) | N/w<br>Eng. | Testers<br>(SI) | Testers<br>(II) | Report<br>Author | PM<br>(SI) | PM<br>(II) | PM<br>(DCI) | Clearing<br>Firm |
|----------------------------------|--------------------|---------------------|-------------|-------------|-----------------|-----------------|------------------|------------|------------|-------------|------------------|
|                                  |                    |                     |             | (51)        |                 |                 | (51)             |            |            |             |                  |
| Setup Required<br>Environment    |                    |                     |             |             |                 |                 |                  |            |            |             |                  |
| Setup Dev<br>Environment         | C                  |                     |             | R           |                 |                 |                  | A/I        |            |             |                  |
| Setup Test<br>Environment        |                    |                     |             | R           | С               |                 |                  | A/I        |            |             |                  |
| Setup Production<br>Environment  |                    |                     |             | R           |                 |                 |                  | С          |            | A/I         |                  |
| Setup FTP Site                   |                    |                     |             | R           |                 |                 |                  | А          |            | Ι           |                  |
| Implementation of<br>Base System |                    |                     |             |             |                 |                 |                  |            |            |             |                  |
| Implement<br>Webpage/UI          |                    | C                   | R           |             |                 |                 |                  | A/I        |            |             |                  |
| Implement of<br>Database         | С                  |                     | R           |             |                 |                 |                  | A/I        |            |             |                  |
| Implement base<br>system reports | С                  |                     | R           |             |                 |                 |                  | A/I        |            |             |                  |
| Develop/Modify<br>ETL Packages   |                    |                     |             |             |                 |                 |                  |            |            |             |                  |
| Develop SSIS<br>package          | R/C                |                     |             |             |                 |                 |                  | A/I        |            |             |                  |
| Create automation scripts        | A/C                |                     | R           |             |                 |                 |                  | Ι          |            |             |                  |

| Deploy scripts and<br>SSIS package             | R   | С |     |   |   |     | Ι   |   |  |
|--|-----|---|-----|---|---|-----|-----|---|--|
| Test and load data                             | R   |   | A/C |   |   |     | Ι   |   |  |
| Develop/Modify DB<br>& Reports                 |     |   |     |   |   |     |     |   |  |
| Modify DB based on requirements                | А   | С | R   |   |   |     | Ι   |   |  |
| Test the DB for<br>updates and create<br>views | A/C |   | R   |   |   |     | Ι   |   |  |
| Implement new<br>reports                       |     |   |     |   |   | R   |     |   |  |
| Modify reports                                 |     |   |     |   |   | R   |     |   |  |
| Test reports                                   |     |   |     | R |   | A/C | Ι   |   |  |
| Deploy reports                                 | R   |   |     |   |   | A/C | Ι   |   |  |
| Modify webpage for<br>DB Updates               | С   | R |     |   |   |     | A/I |   |  |
| Quality Assurance<br>and UAT                   |     |   |     |   |   |     |     |   |  |
| Test application in<br>QA environment          |     |   |     | R |   |     | Ι   |   |  |
| UAT at Software<br>Inc.                        |     |   |     | R |   |     | Ι   |   |  |
| UAT at Investment<br>Inc.                      |     |   |     |   | R |     |     | I |  |
| Deployment                                     |     |   |     |   |   |     |     |   |  |
| Deploy in QA<br>environment                    | R/A | С |     |   |   |     | Ι   |   |  |
| Deploy in<br>Production<br>environment         | R/A | С |     |   |   |     | Ι   |   |  |

| Smoke testing in                         |     |   |   |   | R | Ι | А |   |   |
|--|-----|---|---|---|---|---|---|---|---|
| Production                               |     |   |   |   |   |   |   |   |   |
| Setup Clearing Firm                      |     |   |   |   |   |   |   |   |   |
| Set up data feed automation              |     | С | R |   |   | Ι |   |   |   |
| Test data feed automation                |     |   |   | R |   | Ι |   |   |   |
| IP white listing                         |     |   |   |   |   | Ι |   |   | R |
| Project Handover                         |     |   |   |   |   |   |   |   |   |
| Knowledge transfer<br>to operations team | R/C |   |   |   |   | Ι |   | А |   |
| Take over project operations             | R/C |   |   |   |   | Ι |   | А |   |
| Create user manual                       | R   |   |   |   |   | Ι |   |   |   |
|  |     |   |   |   |   |   |   |   |   |
|  |     |   |   |   |   |   |   |   |   |

### **C: Organization Chart**



### **D:** Aggregate Baseline Schedule

| Task Name  | Duration | Start Date   | Finish Date  | Predecessors |
|--|----------|--------------|--------------|--------------|
| Start  | 0 days   | Mon 8/3/15   | Mon 8/3/15   |              |
| Setup Dev Environment                                    | 30 days  | Mon 8/3/15   | Mon 9/14/15  | 1            |
| Setup Test Environment                                   | 15 days  | Fri 11/27/15 | Thu 12/17/15 | 19           |
| Setup Production Environment                             | 15 days  | Thu 12/24/15 | Fri 1/15/16  | 25           |
| Setup FTP Site   | 2 days   | Mon 8/3/15   | Tue 8/4/15   | 1            |
| Implement Webpage/UI                                     | 2 days   | Tue 9/15/15  | Wed 9/16/15  | 2            |
| Implement of Database                                    | 3 days   | Tue 9/15/15  | Thu 9/17/15  | 2            |
| Implement base system reports                            | 4 days   | Tue 9/15/15  | Fri 9/18/15  | 2            |
| PM (I) send data feed layouts and sample files to PM (S) | 30 days  | Mon 8/3/15   | Mon 9/14/15  | 1            |
| Develop SSIS package                                     | 4 days   | Tue 9/15/15  | Fri 9/18/15  | 9            |
| Create automation scripts                                | 5 days   | Wed 8/5/15   | Tue 8/11/15  | 5            |
| Deploy scripts and SSIS package                          | 4 days   | Mon 9/21/15  | Thu 9/24/15  | 10           |
| Test and load data                                       | 2 days   | Fri 9/25/15  | Mon 9/28/15  | 12           |
| Modify DB based on requirements                          | 18 days  | Fri 9/18/15  | Wed 10/14/15 | 7            |
| Test the DB for updates and create views                 | 5 days   | Thu 10/15/15 | Wed 10/21/15 | 14           |
| Implement new reports                                    | 16 days  | Thu 10/15/15 | Thu 11/5/15  | 14           |
| Modify reports   | 9 days   | Fri 11/6/15  | Wed 11/18/15 | 16,14        |
| Test reports   | 3 days   | Thu 11/19/15 | Mon 11/23/15 | 16,17        |
| Deploy reports   | 2 days   | Tue 11/24/15 | Wed 11/25/15 | 18           |
| Modify webpage for DB Updates                            | 15 days  | Thu 10/22/15 | Wed 11/11/15 | 6,15         |
| Deploy webpages updates                                  | 2 days   | Thu 11/12/15 | Fri 11/13/15 | 20           |
| Test application in QA environment                       | 6 days   | Thu 12/24/15 | Mon 1/4/16   | 25           |
| UAT at Software Inc.                                     | 9 days   | Tue 1/5/16   | Fri 1/15/16  | 22           |
| UAT at Investment Inc.                                   | 15 days  | Mon 1/18/16  | Mon 2/8/16   | 23           |

Following is the baseline schedule with milestone highlighted:

| Deploy in QA environment              | 4 days  | Fri 12/18/15 | Wed 12/23/15 | 3,21              |
|---------------------------------------|---------|--------------|--------------|-------------------|
| Deploy in Production environment      | 5 days  | Mon 1/18/16  | Fri 1/22/16  | 4,25              |
| Smoke testing in Production           | 4 days  | Mon 1/25/16  | Thu 1/28/16  | 26                |
| Set up data feed automation           | 2 days  | Wed 8/12/15  | Thu 8/13/15  | 11                |
| Test data feed automation             | 4 days  | Fri 8/14/15  | Wed 8/19/15  | 28                |
| IP white listing                      | 11 days | Wed 8/12/15  | Wed 8/26/15  | 11                |
| Knowledge transfer to operations team | 7 days  | Mon 1/18/16  | Tue 1/26/16  | 23                |
| Take over project operations          | 2 days  | Fri 1/29/16  | Mon 2/1/16   | 27,31             |
| Create user manual                    | 17 days | Tue 1/5/16   | Wed 1/27/16  | 22                |
| Finish                                | 0 days  | Tue 2/9/16   | Tue 2/9/16   | 13,29,30,32,33,24 |

### E: Bottom-up Time-phased budget

| Activities   | Туре           | No. of resources | No. of days | No. of hours | Cost  | Total |
|--|----------------|------------------|-------------|--------------|-------|-------|
|  |                |                  |             |              |       |       |
|  |                |                  |             |              |       |       |
| Start  |                |                  |             |              |       |       |
| Setup Dev Environment                                    | Infrastructure | 0                | 30          | 240          | 15000 | 15000 |
| Setup Test Environment                                   | Infrastructure | 0                | 15          | 120          | 1440  | 1440  |
| Setup Production Environment                             | Infrastructure | 0                | 15          | 120          | 1440  | 1440  |
| Setup FTP Site   | Resource       | 1                | 2           | 16           | 29    | 464   |
| Implement Webpage/UI                                     | Resource       | 1                | 2           | 16           | 30    | 480   |
| Implement of Database                                    | Resource       | 3                | 3           | 24           | 35    | 2520  |
| Implement base system reports                            | Resource       | 2                | 4           | 32           | 27.5  | 1760  |
| PM (I) send data feed layouts and sample files to PM (S) | Third Party    | 1                | 30          | 240          | 0     | 0     |
| Develop SSIS package                                     | Resource       | 2                | 4           | 32           | 32.5  | 2080  |
| Create automation scripts                                | Resource       | 1                | 5           | 40           | 29    | 1160  |
| Deploy scripts and SSIS package                          | Resource       | 1                | 4           | 32           | 32.5  | 1040  |
| Test and load data                                       | Resource       | 1                | 2           | 16           | 32.5  | 520   |

| Modify DB based on requirements          | Resource              | 3 | 18 | 144 | 35    | 15120  |
|--|-----------------------|---|----|-----|-------|--------|
| Test the DB for updates and create views | Resource              | 2 | 5  | 40  | 35    | 2800   |
| Implement new reports                    | Resource              | 3 | 16 | 128 | 27.5  | 10560  |
| Modify reports                           | Resource              | 2 | 9  | 72  | 27.5  | 3960   |
| Test reports                             | Resource              | 3 | 3  | 24  | 25    | 1800   |
| Deploy reports                           | Resource              | 2 | 2  | 16  | 27.5  | 880    |
| Modify webpage for DB Updates            | Resource              | 3 | 15 | 120 | 30    | 10800  |
| Deploy webpages updates                  | Resource              | 1 | 2  | 16  | 30    | 480    |
| Test application in QA environment       | Resource              | 3 | 6  | 48  | 27.5  | 3960   |
| UAT at Software Inc.                     | Resource              | 4 | 9  | 72  | 27.5  | 7920   |
| UAT at Investment Inc.                   | <b>Client Testing</b> | 0 | 15 | 120 | 0     | 0      |
| Deploy in QA environment                 | Resource              | 1 | 4  | 32  | 27.5  | 880    |
| Deploy in Production environment         | Resource              | 1 | 5  | 40  | 35    | 1400   |
| Smoke testing in Production              | Resource              | 1 | 4  | 32  | 32.5  | 1040   |
| Set up data feed automation              | Resource              | 1 | 2  | 16  | 29    | 464    |
| Test data feed automation                | Resource              | 2 | 4  | 32  | 29    | 1856   |
| IP white listing                         | Third Party           | 0 | 11 | 88  | 0     | 0      |
| Knowledge transfer to operations team    | Resource              | 1 | 7  | 56  | 32    | 1792   |
| Take over project operations             | Resource              | 1 | 2  | 16  | 32    | 512    |
| Create user manual                       | Resource              | 2 | 17 | 136 | 25    | 6800   |
|  |                       |   |    |     | Total | 100928 |

Table: Cost estimates for each activity

#### Monthly Estimated Budget

| Task Name   | Estimated   | August     | September  | October | November | December | January | February |
|-------------|-------------|------------|------------|---------|----------|----------|---------|----------|
|             | Budget      |            |            |         |          |          |         |          |
| Setup Dev   | \$15,000.00 | \$7,500.00 | \$7,500.00 | -       | -        | -        | -       | -        |
| Environment |             |            |            |         |          |          |         |          |
| Setup Test  | \$1,440.00  | -          | -          | -       | \$720.00 | \$720.00 | -       | -        |
| Environment |             |            |            |         |          |          |         |          |

| Setup           | \$1,440.00     | -          | -          | -                | -                | \$720.00 | \$720.00 | - |
|-----------------|----------------|------------|------------|------------------|------------------|----------|----------|---|
| Production      |                |            |            |                  |                  |          |          |   |
| Environment     |                |            |            |                  |                  |          |          |   |
| Setup FTP Site  | \$464.00       | \$464.00   | -          | -                | -                | -        | -        | - |
| Implement       | \$480.00       | -          | \$480.00   | -                | -                | -        | -        | - |
| Webpage/UI      |                |            |            |                  |                  |          |          |   |
| Implement of    | \$2,520.00     | -          | \$2,520.00 | -                | -                | -        | -        | - |
| Database        |                |            |            |                  |                  |          |          |   |
| Implement base  | \$1,760.00     | -          | \$1,760.00 | -                | -                | -        | -        | - |
| system reports  |                |            |            |                  |                  |          |          |   |
| PM (I) send     | -              | -          | -          | -                | -                | -        | -        | - |
| datafeed        |                |            |            |                  |                  |          |          |   |
| layouts and     |                |            |            |                  |                  |          |          |   |
| sample files to |                |            |            |                  |                  |          |          |   |
| PM (S)          |                |            |            |                  |                  |          |          |   |
| Develop SSIS    | \$2,080.00     | -          | \$2,080.00 | -                | -                | -        | -        | - |
| package         |                |            |            |                  |                  |          |          |   |
| Create          | \$1,160.00     | \$1,160.00 | -          | -                | -                | -        | -        | - |
| automation      |                |            |            |                  |                  |          |          |   |
| scripts         |                |            |            |                  |                  |          |          |   |
| Deploy scripts  | \$1,040.00     | -          | \$1,040.00 | -                | -                | -        | -        | - |
| and SSIS        |                |            |            |                  |                  |          |          |   |
| package         |                |            |            |                  |                  |          |          |   |
| Test and load   | \$520.00       | -          | \$520.00   | -                | -                | -        | -        | - |
| data            |                |            |            |                  |                  |          |          |   |
| Modify DB       | \$15,120.00    | -          | \$7,560.00 | \$7,560.00       | -                | -        | -        | - |
| based on        |                |            |            |                  |                  |          |          |   |
| requirements    | +2 2 2 2 2 2 2 |            |            | to 000 00        |                  |          |          |   |
| Test the DB for | \$2,800.00     | -          | -          | \$2,800.00       | -                | -        | -        | - |
| updates and     |                |            |            |                  |                  |          |          |   |
| create views    |                |            |            | <b>#F 000 00</b> | <b>#F 000 00</b> |          |          |   |
| Implement new   | \$10,560.00    | -          | -          | \$5,280.00       | \$5,280.00       | -        | -        | - |
| reports         |                |            |            |                  |                  |          |          |   |

| Modify reports   | \$3,960.00  | -          | - | -          | \$3,960.00 | -          | -          | - |
|------------------|-------------|------------|---|------------|------------|------------|------------|---|
| Test reports     | \$1,800.00  | -          | - | -          | \$1,800.00 | -          | -          | - |
| Deploy reports   | \$880.00    | -          | - | -          | \$880.00   | -          | -          | - |
| Modify webpage   | \$10,800.00 | -          | - | \$5,400.00 | \$5,400.00 | -          | -          | - |
| for DB Updates   |             |            |   |            |            |            |            |   |
| Deploy           | \$480.00    | -          | - | -          | \$480.00   | -          | -          | - |
| webpages         |             |            |   |            |            |            |            |   |
| updates          |             |            |   |            |            |            |            |   |
| Test application | \$3,960.00  | -          | - | -          | -          | \$1,980.00 | \$1,980.00 | - |
| in QA            |             |            |   |            |            |            |            |   |
| environment      |             |            |   |            |            |            |            |   |
| UAT at Software  | \$7,920.00  | -          | - | -          | -          | -          | \$7,920.00 | - |
| Inc.             |             |            |   |            |            |            |            |   |
| UAT at           | -           | -          | - | -          | -          | -          | -          | - |
| Investment Inc.  |             |            |   |            |            |            |            |   |
| Deploy in QA     | \$880.00    | -          | - | -          | -          | \$880.00   | -          | - |
| environment      |             |            |   |            |            |            |            |   |
| Deploy in        | \$1,400.00  | -          | - | -          | -          | -          | \$1,400.00 | - |
| Production       |             |            |   |            |            |            |            |   |
| environment      |             |            |   |            |            |            |            |   |
| Smoke testing    | \$1,040.00  | -          | - | -          | -          | -          | \$1,040.00 | - |
| in Production    |             |            |   |            |            |            |            |   |
| Set up data feed | \$464.00    | \$464.00   | - | -          | -          | -          | -          | - |
| automation       |             |            |   |            |            |            |            |   |
| Test data feed   | \$1,856.00  | \$1,856.00 | - | -          | -          | -          | -          | - |
| automation       |             |            |   |            |            |            |            |   |
| IP white listing | -           | -          | - | -          | -          | -          | -          | - |
| Knowledge        | \$1,792.00  | -          | - | -          | -          | -          | \$1,792.00 | - |
| transfer to      |             |            |   |            |            |            |            |   |
| operations team  |             |            |   |            |            |            |            |   |

| Take over   | \$512.00     | -           | -           | -           | -           | -          | \$256.00    | \$256.00 |
|-------------|--------------|-------------|-------------|-------------|-------------|------------|-------------|----------|
| project     |              |             |             |             |             |            |             |          |
| operations  |              |             |             |             |             |            |             |          |
| Create user | \$6,800.00   | -           | -           | -           | -           | -          | \$6,800.00  | -        |
| manual      |              |             |             |             |             |            |             |          |
| Total       | \$100,928.00 | \$11,444.00 | \$23,460.00 | \$21,040.00 | \$18,520.00 | \$4,300.00 | \$21,908.00 | \$256.00 |

# F: Tasks

| ID | Activities                  | Predece<br>ssors | Opti<br>misti | Most<br>likel | Pessi<br>misti | Pert Days | Standard<br>Deviation | Variance |
|----|-----------------------------|------------------|---------------|---------------|----------------|-----------|-----------------------|----------|
|    |                             |                  | С             | У             | С              |           |                       |          |
|    | Start                       |                  |               |               |                |           |                       |          |
| 1  | Setup Dev Environment       | 1                | 13.5          | 29.7          | 46.8           | 30        | 5.55                  | 30.8025  |
| 2  | Setup Test Environment      | 19               | 6.75          | 14.85         | 23.4           | 15        | 2.775                 | 7.700625 |
| 3  | Setup Production            | 25               | 6.75          | 14.85         | 23.4           | 15        | 2.775                 | 7.700625 |
|    | Environment                 |                  |               |               |                |           |                       |          |
| 4  | Setup FTP Site              | 1                | 0.9           | 1.98          | 3.12           | 2         | 0.37                  | 0.1369   |
| 5  | Implement Webpage/UI        | 2                | 0.9           | 1.98          | 3.12           | 2         | 0.37                  | 0.1369   |
| 6  | Implement of Database       | 2                | 1.35          | 2.97          | 4.68           | 3         | 0.555                 | 0.308025 |
| 7  | Implement base system       | 2                | 1.8           | 3.96          | 6.24           | 4         | 0.74                  | 0.5476   |
|    | reports                     |                  |               |               |                |           |                       |          |
| 8  | PM (I) send datafeed        | 1                | 13.5          | 29.7          | 46.8           | 30        | 5.55                  | 30.8025  |
|    | layouts and sample files to |                  |               |               |                |           |                       |          |
|    | PM (S)                      |                  |               |               |                |           |                       |          |
| 9  | Develop SSIS package        | 9                | 1.8           | 3.96          | 6.24           | 4         | 0.74                  | 0.5476   |
| 10 | Create automation scripts   | 5                | 2.25          | 4.95          | 7.8            | 5         | 0.925                 | 0.855625 |
| 11 | Deploy scripts and SSIS     | 10               | 1.8           | 3.96          | 6.24           | 4         | 0.74                  | 0.5476   |
|    | package                     |                  |               |               |                |           |                       |          |

| 12 | Test and load data          | 12        | 0.9  | 1.98  | 3.12  | 2  | 0.37  | 0.1369   |
|----|-----------------------------|-----------|------|-------|-------|----|-------|----------|
| 13 | Modify DB based on          | 7         | 8.1  | 17.82 | 28.08 | 18 | 3.33  | 11.0889  |
|    | requirements                |           |      |       |       |    |       |          |
| 14 | Test the DB for updates and | 14        | 2.25 | 4.95  | 7.8   | 5  | 0.925 | 0.855625 |
|    | create views                |           |      |       |       |    |       |          |
| 15 | Implement new reports       | 14        | 7.2  | 15.84 | 24.96 | 16 | 2.96  | 8.7616   |
| 16 | Modify reports              | 16,14     | 4.05 | 8.91  | 14.04 | 9  | 1.665 | 2.772225 |
| 17 | Test reports                | 16,17     | 1.35 | 2.97  | 4.68  | 3  | 0.555 | 0.308025 |
| 18 | Deploy reports              | 18        | 0.9  | 1.98  | 3.12  | 2  | 0.37  | 0.1369   |
| 19 | Modify webpage for DB       | 6,15      | 6.75 | 14.85 | 23.4  | 15 | 2.775 | 7.700625 |
|    | Updates                     |           |      |       |       |    |       |          |
| 20 | Deploy webpages updates     | 20        | 0.9  | 1.98  | 3.12  | 2  | 0.37  | 0.1369   |
| 21 | Test application in QA      | 25        | 2.7  | 5.94  | 9.36  | 6  | 1.11  | 1.2321   |
|    | environment                 |           |      |       |       |    |       |          |
| 22 | UAT at Software Inc.        | 22        | 4.05 | 8.91  | 14.04 | 9  | 1.665 | 2.772225 |
| 23 | UAT at Investment Inc.      | 23        | 6.75 | 14.85 | 23.4  | 15 | 2.775 | 7.700625 |
| 24 | Deploy in QA environment    | 3,21      | 1.8  | 3.96  | 6.24  | 4  | 0.74  | 0.5476   |
| 25 | Deploy in Production        | 4,25      | 2.25 | 4.95  | 7.8   | 5  | 0.925 | 0.855625 |
|    | environment                 |           |      |       |       |    |       |          |
| 26 | Smoke testing in Production | 26        | 1.8  | 3.96  | 6.24  | 4  | 0.74  | 0.5476   |
| 27 | Set up data feed automation | 11        | 0.9  | 1.98  | 3.12  | 2  | 0.37  | 0.1369   |
| 28 | Test data feed automation   | 28        | 1.8  | 3.96  | 6.24  | 4  | 0.74  | 0.5476   |
| 29 | IP white listing            | 11        | 4.95 | 10.89 | 17.16 | 11 | 2.035 | 4.141225 |
| 30 | Knowledge transfer to       | 23        | 3.15 | 6.93  | 10.92 | 7  | 1.295 | 1.677025 |
|    | operations team             |           |      |       |       |    |       |          |
| 31 | Take over project           | 27,31     | 0.9  | 1.98  | 3.12  | 2  | 0.37  | 0.1369   |
|    | operations                  |           |      |       |       |    |       |          |
| 32 | Create user manual          | 22        | 7.65 | 16.83 | 26.52 | 17 | 3.145 | 9.891025 |
| 33 | Finish                      | 13,29,30, |      |       |       |    |       |          |
|    |                             | 32,33,24  |      |       |       |    |       |          |

### G: Gantt chart

|   |            |              |              |                                  | August       |     |      |      | Sep  | tember |      |          | C     | (tober |       |          |       | Nover | nb |
|---|------------|--------------|--------------|----------------------------------|--------------|-----|------|------|------|--------|------|----------|-------|--------|-------|----------|-------|-------|----|
| Fask Name 👻   | Duration - | - Start -    | Finish       | <ul> <li>Predecessors</li> </ul> | 8/2          | 8/9 | 8/16 | 8/23 | 8/30 | 9/6    | 9/13 | 9/20     | 9/27  | 10/4   | 10/11 | 10/18    | 10/25 | 11/1  |    |
| Start   | 0 days     | Mon 8/3/15   | Mon 8/3/15   |                                  | <b>6</b> 8/3 |     |      |      |      |        |      |          |       |        |       |          |       |       |    |
| Setup Dev Environment   | 30 days    | Mon 8/3/15   | Mon 9/14/15  | 1                                |              |     |      |      |      |        | h    |          |       |        |       |          |       |       |    |
| Setup Test Environment  | 15 days    | Fri 11/27/15 | Thu 12/17/15 | 19                               |              |     |      |      |      |        |      |          |       |        |       |          |       |       |    |
| Setup Production Environment  | 15 days    | Thu 12/24/15 | Fri 1/15/16  | 25                               |              |     |      |      |      |        |      |          |       |        |       |          |       |       |    |
| Setup FTP Site  | 2 days     | Mon 8/3/15   | Tue 8/4/15   | 1                                | Ш.           |     |      |      |      |        |      |          |       |        |       |          |       |       |    |
| Implement Webpage/UI  | 2 days     | Tue 9/15/15  | Wed 9/16/15  | 2                                |              |     |      |      |      |        | Ň-   |          |       |        |       |          |       |       |    |
| Implement of Database   | 3 days     | Tue 9/15/15  | Thu 9/17/15  | 2                                |              |     |      |      |      |        | ľ    |          |       |        |       |          |       |       |    |
| Implement base system reports   | 4 days     | Tue 9/15/15  | Fri 9/18/15  | 2                                |              |     |      |      |      |        | Ľ.   |          |       |        |       |          |       |       |    |
| $PM\left(I\right)$ send datafeed layouts and sample files to $PM\left(S\right)$ | 30 days    | Mon 8/3/15   | Mon 9/14/15  | 1                                |              |     |      |      |      |        |      |          |       |        |       |          |       |       |    |
| Develop SSIS package  | 4 days     | Tue 9/15/15  | Fri 9/18/15  | 9                                |              |     |      |      |      |        | Ľ.   | h        |       |        |       |          |       |       |    |
| Create automation scripts   | 5 days     | Wed 8/5/15   | Tue 8/11/15  | 5                                | l 🎽          |     |      |      |      |        |      |          |       |        |       |          |       |       |    |
| Deploy scripts and SSIS package   | 4 days     | Mon 9/21/15  | Thu 9/24/15  | 10                               |              |     |      |      |      |        |      | <b>1</b> |       |        |       |          |       |       |    |
| Test and load data  | 2 days     | Fri 9/25/15  | Mon 9/28/15  | 12                               |              |     |      |      |      |        |      | ľ        | ,<br> |        |       |          |       |       |    |
| Modify DB based on requirements   | 18 days    | Fri 9/18/15  | Wed 10/14/15 | 7                                |              |     |      |      |      |        | Ĭ    | ,        |       |        | T     |          |       |       |    |
| Test the DB for updates and create views  | 5 days     | Thu 10/15/15 | Wed 10/21/15 | 14                               |              |     |      |      |      |        |      |          |       |        | Ĭ     | <b>.</b> |       |       |    |
| Implement new reports   | 16 days    | Thu 10/15/15 | Thu 11/5/15  | 14                               |              |     |      |      |      |        |      |          |       |        | Ľ.    |          |       | - h   | -  |
| Modify reports  | 9 days     | Fri 11/6/15  | Wed 11/18/15 | 16,14                            |              |     |      |      |      |        |      |          |       |        |       |          |       | 1     |    |
| Test reports  | 3 days     | Thu 11/19/15 | Mon 11/23/15 | 16,17                            |              |     |      |      |      |        |      |          |       |        |       |          |       |       |    |
| Deploy reports  | 2 days     | Tue 11/24/15 | Wed 11/25/15 | 18                               |              |     |      |      |      |        |      |          |       |        |       |          |       |       |    |
| Modify webpage for DB Updates   | 15 days    | Thu 10/22/15 | Wed 11/11/15 | 6,15                             |              |     |      |      |      |        |      |          |       |        |       | Ť        |       |       |    |
| Deploy webpages updates   | 2 days     | Thu 11/12/15 | Fri 11/13/15 | 20                               |              |     |      |      |      |        |      |          |       |        |       |          |       |       |    |
| Test application in QA environment  | 6 days     | Thu 12/24/15 | Mon 1/4/16   | 25                               |              |     |      |      |      |        |      |          |       |        |       |          |       |       |    |
| UAT at Software Inc.  | 9 days     | Tue 1/5/16   | Fri 1/15/16  | 22                               |              |     |      |      |      |        |      |          |       |        |       |          |       |       |    |
| UAT at Investment Inc.  | 15 days    | Mon 1/18/16  | Mon 2/8/16   | 23                               |              |     |      |      |      |        |      |          |       |        |       |          |       |       |    |
|   |            |              |              |                                  |              |     |      |      |      |        |      |          |       |        |       |          |       |       |    |

| November<br>11/1 11/8 11/15 11/2 | December<br>22 11/29 12/6 12/13 | January<br>12/20 12/27 1/3 1/10 | February<br>1/17 1/24 1/31 2/7 2/14 | Mar<br>2/21 2/28 |
|----------------------------------|---------------------------------|---------------------------------|-------------------------------------|------------------|
|                                  |                                 |                                 |                                     |                  |
|                                  |                                 |                                 |                                     |                  |
|                                  |                                 |                                 |                                     |                  |
|                                  |                                 |                                 |                                     |                  |











#### I: Probability Diagram



#### **K: Planned Value Table**

| Task Name                           | Duration | Start           | Finish          | Total Cost | 50 -<br>50 | 8/3/2015 | 8/10/2015 | 8/17/2015 | 8/24/2015 | 8/31/2015 |
|-------------------------------------|----------|-----------------|-----------------|------------|------------|----------|-----------|-----------|-----------|-----------|
| Start                               | 0 days   | Mon<br>8/3/15   | Mon<br>8/3/15   |            |            |          |           |           |           |           |
| Setup Dev<br>Environment            | 30 days  | Mon<br>8/3/15   | Mon<br>9/14/15  | 15000      | 7500       | 7500     |           |           |           |           |
| Setup Test<br>Environment           | 15 days  | Fri<br>11/27/15 | Thu<br>12/17/15 | 1440       | 720        |          |           |           |           |           |
| Setup<br>Production<br>Environment  | 15 days  | Thu<br>12/24/15 | Fri<br>1/15/16  | 1440       | 720        |          |           |           |           |           |
| Setup FTP<br>Site                   | 2 days   | Mon<br>8/3/15   | Tue<br>8/4/15   | 464        | 232        | 464      |           |           |           |           |
| Implement<br>Webpage/UI             | 2 days   | Tue<br>9/15/15  | Wed<br>9/16/15  | 480        | 240        |          |           |           |           |           |
| Implement of<br>Database            | 3 days   | Tue<br>9/15/15  | Thu<br>9/17/15  | 2520       | 1260       |          |           |           |           |           |
| Implement<br>base system<br>reports | 4 days   | Tue<br>9/15/15  | Fri<br>9/18/15  | 1760       | 880        |          |           |           |           |           |

| PM (I) send<br>datafeed<br>layouts and<br>sample files<br>to PM (S) | 30 days | Mon<br>8/3/15   | Mon<br>9/14/15  | 0     | 0    |     |     |  |  |
|---|---------|-----------------|-----------------|-------|------|-----|-----|--|--|
| Develop SSIS<br>package   | 4 days  | Tue<br>9/15/15  | Fri<br>9/18/15  | 2080  | 1040 |     |     |  |  |
| Create<br>automation<br>scripts                                     | 5 days  | Wed<br>8/5/15   | Tue<br>8/11/15  | 1160  | 580  | 580 | 580 |  |  |
| Deploy<br>scripts and<br>SSIS package                               | 4 days  | Mon<br>9/21/15  | Thu<br>9/24/15  | 1040  | 520  |     |     |  |  |
| Test and load<br>data   | 2 days  | Fri<br>9/25/15  | Mon<br>9/28/15  | 520   | 260  |     |     |  |  |
| Modify DB<br>based on<br>requirements                               | 18 days | Fri<br>9/18/15  | Wed<br>10/14/15 | 15120 | 7560 |     |     |  |  |
| Test the DB<br>for updates<br>and create<br>views                   | 5 days  | Thu<br>10/15/15 | Wed<br>10/21/15 | 2800  | 1400 |     |     |  |  |
| Implement<br>new reports  | 16 days | Thu<br>10/15/15 | Thu<br>11/5/15  | 10560 | 5280 |     |     |  |  |

| Modify<br>reports                           | 9 days  | Fri<br>11/6/15  | Wed<br>11/18/15 | 3960  | 1980 |  |  |  |
|---|---------|-----------------|-----------------|-------|------|--|--|--|
| Test reports                                | 3 days  | Thu<br>11/19/15 | Mon<br>11/23/15 | 1800  | 900  |  |  |  |
| Deploy<br>reports                           | 2 days  | Tue<br>11/24/15 | Wed<br>11/25/15 | 880   | 440  |  |  |  |
| Modify<br>webpage for<br>DB Updates         | 15 days | Thu<br>10/22/15 | Wed<br>11/11/15 | 10800 | 5400 |  |  |  |
| Deploy<br>webpages<br>updates               | 2 days  | Thu<br>11/12/15 | Fri<br>11/13/15 | 480   | 240  |  |  |  |
| Test<br>application<br>in QA<br>environment | 6 days  | Thu<br>12/24/15 | Mon<br>1/4/16   | 3960  | 1980 |  |  |  |
| UAT at<br>Software Inc.                     | 9 days  | Tue<br>1/5/16   | Fri<br>1/15/16  | 7920  | 3960 |  |  |  |
| UAT at<br>Investment<br>Inc.                | 15 days | Mon<br>1/18/16  | Mon<br>2/8/16   | 0     | 0    |  |  |  |
| Deploy in QA<br>environment                 | 4 days  | Fri<br>12/18/15 | Wed<br>12/23/15 | 880   | 440  |  |  |  |
| Deploy in<br>Production<br>environment      | 5 days  | Mon<br>1/18/16  | Fri<br>1/22/16  | 1400  | 700  |  |  |  |

| Smoke<br>testing in<br>Production              | 4 days  | Mon<br>1/25/16 | Thu<br>1/28/16 | 1040                | 520  |         |          |          |          |          |
|--|---------|----------------|----------------|---------------------|------|---------|----------|----------|----------|----------|
| Set up data<br>feed<br>automation              | 2 days  | Wed<br>8/12/15 | Thu<br>8/13/15 | 464                 | 232  |         | 464      |          |          |          |
| Test data<br>feed<br>automation                | 4 days  | Fri<br>8/14/15 | Wed<br>8/19/15 | 1856                | 928  |         | 928      | 928      |          |          |
| IP white<br>listing                            | 11 days | Wed<br>8/12/15 | Wed<br>8/26/15 | 0                   | 0    |         |          |          |          |          |
| Knowledge<br>transfer to<br>operations<br>team | 7 days  | Mon<br>1/18/16 | Tue<br>1/26/16 | 1500                | 00.0 |         |          |          |          |          |
| Take over<br>project<br>operations             | 2 days  | Fri<br>1/29/16 | Mon<br>2/1/16  | 512                 | 256  |         |          |          |          |          |
| Create user<br>manual                          | 17 days | Tue<br>1/5/16  | Wed<br>1/27/16 | 6800                | 3400 |         |          |          |          |          |
| Finish   |         |                |                | 100928              |      |         |          |          |          |          |
|  |         |                |                | Total               |      | 8544.00 | 1972.00  | 928.00   | 0.00     | 0.00     |
|  |         |                |                | Cumulative<br>Total |      | 8544.00 | 10516.00 | 11444.00 | 11444.00 | 11444.00 |

|   |              |                     |                     |            |         | Septembe<br>r | Septembe<br>r | Septembe<br>r | Septembe<br>r | October  |
|---|--------------|---------------------|---------------------|------------|---------|---------------|---------------|---------------|---------------|----------|
| Task Name   | Duratio<br>n | Start               | Finish              | Total Cost | 50 - 50 | 9/7/2015      | 9/14/201 5    | 9/21/201 5    | 9/28/201      | 10/5/201 |
| Start   | 0 days       | Mon<br>8/3/15       | Mon<br>8/3/15       |            |         |               |               |               |               |          |
| Setup Dev<br>Environment  | 30 days      | Mon<br>8/3/15       | Mon<br>9/14/15      | 15000      | 7500    |               | 7500          |               |               |          |
| Setup Test<br>Environment   | 15 days      | Fri<br>11/27/1<br>5 | Thu<br>12/17/1<br>5 | 1440       | 720     |               |               |               |               |          |
| Setup<br>Production<br>Environment                                  | 15 days      | Thu<br>12/24/1<br>5 | Fri<br>1/15/16      | 1440       | 720     |               |               |               |               |          |
| Setup FTP Site  | 2 days       | Mon<br>8/3/15       | Tue<br>8/4/15       | 464        | 232     |               |               |               |               |          |
| Implement<br>Webpage/UI   | 2 days       | Tue<br>9/15/15      | Wed<br>9/16/15      | 480        | 240     |               | 480           |               |               |          |
| Implement of<br>Database  | 3 days       | Tue<br>9/15/15      | Thu<br>9/17/15      | 2520       | 1260    |               | 2520          |               |               |          |
| Implement<br>base system<br>reports                                 | 4 days       | Tue<br>9/15/15      | Fri<br>9/18/15      | 1760       | 880     |               | 1760          |               |               |          |
| PM (I) send<br>datafeed<br>layouts and<br>sample files to<br>PM (S) | 30 days      | Mon<br>8/3/15       | Mon<br>9/14/15      | 0          | 0       |               |               |               |               |          |
| Develop SSIS<br>package   | 4 days       | Tue<br>9/15/15      | Fri<br>9/18/15      | 2080       | 1040    |               | 2080          |               |               |          |
| Create<br>automation<br>scripts                                     | 5 days       | Wed<br>8/5/15       | Tue<br>8/11/15      | 1160       | 580     |               |               |               |               |          |

| Deploy scripts<br>and SSIS<br>package          | 4 days  | Mon<br>9/21/15      | Thu<br>9/24/15      | 1040  | 520  |      | 1040 |     |  |
|--|---------|---------------------|---------------------|-------|------|------|------|-----|--|
| Test and load<br>data                          | 2 days  | Fri<br>9/25/15      | Mon<br>9/28/15      | 520   | 260  |      | 260  | 260 |  |
| Modify DB<br>based on<br>requirements          | 18 days | Fri<br>9/18/15      | Wed<br>10/14/1<br>5 | 15120 | 7560 | 7560 |      |     |  |
| Test the DB for<br>updates and<br>create views | 5 days  | Thu<br>10/15/1<br>5 | Wed<br>10/21/1<br>5 | 2800  | 1400 |      |      |     |  |
| Implement<br>new reports                       | 16 days | Thu<br>10/15/1<br>5 | Thu<br>11/5/15      | 10560 | 5280 |      |      |     |  |
| Modify reports                                 | 9 days  | Fri<br>11/6/15      | Wed<br>11/18/1<br>5 | 3960  | 1980 |      |      |     |  |
| Test reports                                   | 3 days  | Thu<br>11/19/1<br>5 | Mon<br>11/23/1<br>5 | 1800  | 900  |      |      |     |  |
| Deploy reports                                 | 2 days  | Tue<br>11/24/1<br>5 | Wed<br>11/25/1<br>5 | 880   | 440  |      |      |     |  |
| Modify<br>webpage for<br>DB Updates            | 15 days | Thu<br>10/22/1<br>5 | Wed<br>11/11/1<br>5 | 10800 | 5400 |      |      |     |  |
| Deploy<br>webpages<br>updates                  | 2 days  | Thu<br>11/12/1<br>5 | Fri<br>11/13/1<br>5 | 480   | 240  |      |      |     |  |
| Test<br>application in<br>QA<br>environment    | 6 days  | Thu<br>12/24/1<br>5 | Mon<br>1/4/16       | 3960  | 1980 |      |      |     |  |

| UAT at<br>Software Inc.                        | 9 days  | Tue<br>1/5/16       | Fri<br>1/15/16      | 7920                | 3960 |          |          |          |          |          |
|--|---------|---------------------|---------------------|---------------------|------|----------|----------|----------|----------|----------|
| UAT at<br>Investment<br>Inc.                   | 15 days | Mon<br>1/18/16      | Mon<br>2/8/16       | 0                   | 0    |          |          |          |          |          |
| Deploy in QA<br>environment                    | 4 days  | Fri<br>12/18/1<br>5 | Wed<br>12/23/1<br>5 | 880                 | 440  |          |          |          |          |          |
| Deploy in<br>Production<br>environment         | 5 days  | Mon<br>1/18/16      | Fri<br>1/22/16      | 1400                | 700  |          |          |          |          |          |
| Smoke testing<br>in Production                 | 4 days  | Mon<br>1/25/16      | Thu<br>1/28/16      | 1040                | 520  |          |          |          |          |          |
| Set up data<br>feed<br>automation              | 2 days  | Wed<br>8/12/15      | Thu<br>8/13/15      | 464                 | 232  |          |          |          |          |          |
| Test data feed automation                      | 4 days  | Fri<br>8/14/15      | Wed<br>8/19/15      | 1856                | 928  |          |          |          |          |          |
| IP white listing                               | 11 days | Wed<br>8/12/15      | Wed<br>8/26/15      | 0                   | 0    |          |          |          |          |          |
| Knowledge<br>transfer to<br>operations<br>team | 7 days  | Mon<br>1/18/16      | Tue<br>1/26/16      | 1792                | 896  |          |          |          |          |          |
| Take over<br>project<br>operations             | 2 days  | Fri<br>1/29/16      | Mon<br>2/1/16       | 512                 | 256  |          |          |          |          |          |
| Create user<br>manual                          | 17 days | Tue<br>1/5/16       | Wed<br>1/27/16      | 6800                | 3400 |          |          |          |          |          |
| Finish   |         |                     |                     | 100928              |      |          |          |          |          |          |
|  |         |                     |                     | Total               |      | 0.00     | 21900.00 | 1300.00  | 260.00   | 0.00     |
|  |         |                     |                     | Cumulative<br>Total |      | 11444.00 | 33344.00 | 34644.00 | 34904.00 | 34904.00 |

|   |              |                     |                     |            |         |             |             |                | Novembe  | Novembe  |
|---|--------------|---------------------|---------------------|------------|---------|-------------|-------------|----------------|----------|----------|
|   |              |                     |                     |            |         | October     | October     | October        | r        | r        |
| Task Name   | Duratio<br>n | Start               | Finish              | Total Cost | 50 - 50 | 10/12/201 5 | 10/19/201 5 | 10/26/201<br>5 | 11/2/201 | 11/9/201 |
| Start   | 0 days       | Mon<br>8/3/15       | Mon<br>8/3/15       |            |         |             |             |                |          |          |
| Setup Dev<br>Environment  | 30 days      | Mon<br>8/3/15       | Mon<br>9/14/15      | 15000      | 7500    |             |             |                |          |          |
| Setup Test<br>Environment   | 15 days      | Fri<br>11/27/1<br>5 | Thu<br>12/17/1<br>5 | 1440       | 720     |             |             |                |          |          |
| Setup<br>Production<br>Environment                                  | 15 days      | Thu<br>12/24/1<br>5 | Fri<br>1/15/16      | 1440       | 720     |             |             |                |          |          |
| Setup FTP Site  | 2 days       | Mon<br>8/3/15       | Tue<br>8/4/15       | 464        | 232     |             |             |                |          |          |
| Implement<br>Webpage/UI   | 2 days       | Tue<br>9/15/15      | Wed<br>9/16/15      | 480        | 240     |             |             |                |          |          |
| Implement of<br>Database  | 3 days       | Tue<br>9/15/15      | Thu<br>9/17/15      | 2520       | 1260    |             |             |                |          |          |
| Implement<br>base system<br>reports                                 | 4 days       | Tue<br>9/15/15      | Fri<br>9/18/15      | 1760       | 880     |             |             |                |          |          |
| PM (I) send<br>datafeed<br>layouts and<br>sample files to<br>PM (S) | 30 days      | Mon<br>8/3/15       | Mon<br>9/14/15      | 0          | 0       |             |             |                |          |          |
| Develop SSIS<br>package   | 4 days       | Tue<br>9/15/15      | Fri<br>9/18/15      | 2080       | 1040    |             |             |                |          |          |

| Create<br>automation<br>scripts                | 5 days  | Wed<br>8/5/15       | Tue<br>8/11/15      | 1160  | 580  |      |      |      |      |
|--|---------|---------------------|---------------------|-------|------|------|------|------|------|
| Deploy scripts<br>and SSIS<br>package          | 4 days  | Mon<br>9/21/15      | Thu<br>9/24/15      | 1040  | 520  |      |      |      |      |
| Test and load<br>data                          | 2 days  | Fri<br>9/25/15      | Mon<br>9/28/15      | 520   | 260  |      |      |      |      |
| Modify DB<br>based on<br>requirements          | 18 days | Fri<br>9/18/15      | Wed<br>10/14/1<br>5 | 15120 | 7560 | 7560 |      |      |      |
| Test the DB for<br>updates and<br>create views | 5 days  | Thu<br>10/15/1<br>5 | Wed<br>10/21/1<br>5 | 2800  | 1400 | 1400 | 1400 |      |      |
| Implement<br>new reports                       | 16 days | Thu<br>10/15/1<br>5 | Thu<br>11/5/15      | 10560 | 5280 | 5280 |      | 5280 |      |
| Modify reports                                 | 9 days  | Fri<br>11/6/15      | Wed<br>11/18/1<br>5 | 3960  | 1980 |      |      | 1980 |      |
| Test reports                                   | 3 days  | Thu<br>11/19/1<br>5 | Mon<br>11/23/1<br>5 | 1800  | 900  |      |      |      |      |
| Deploy reports                                 | 2 days  | Tue<br>11/24/1<br>5 | Wed<br>11/25/1<br>5 | 880   | 440  |      |      |      |      |
| Modify<br>webpage for<br>DB Updates            | 15 days | Thu<br>10/22/1<br>5 | Wed<br>11/11/1<br>5 | 10800 | 5400 |      | 5400 |      | 5400 |
| Deploy<br>webpages<br>updates                  | 2 days  | Thu<br>11/12/1<br>5 | Fri<br>11/13/1<br>5 | 480   | 240  |      |      |      | 480  |

| Test<br>application in<br>QA<br>environment    | 6 days  | Thu<br>12/24/1<br>5 | Mon<br>1/4/16       | 3960 | 1980 |  |  |  |
|--|---------|---------------------|---------------------|------|------|--|--|--|
| UAT at<br>Software Inc.                        | 9 days  | Tue<br>1/5/16       | Fri<br>1/15/16      | 7920 | 3960 |  |  |  |
| UAT at<br>Investment<br>Inc.                   | 15 days | Mon<br>1/18/16      | Mon<br>2/8/16       | 0    | 0    |  |  |  |
| Deploy in QA<br>environment                    | 4 days  | Fri<br>12/18/1<br>5 | Wed<br>12/23/1<br>5 | 880  | 440  |  |  |  |
| Deploy in<br>Production<br>environment         | 5 days  | Mon<br>1/18/16      | Fri<br>1/22/16      | 1400 | 700  |  |  |  |
| Smoke testing in Production                    | 4 days  | Mon<br>1/25/16      | Thu<br>1/28/16      | 1040 | 520  |  |  |  |
| Set up data<br>feed<br>automation              | 2 days  | Wed<br>8/12/15      | Thu<br>8/13/15      | 464  | 232  |  |  |  |
| Test data feed automation                      | 4 days  | Fri<br>8/14/15      | Wed<br>8/19/15      | 1856 | 928  |  |  |  |
| IP white listing                               | 11 days | Wed<br>8/12/15      | Wed<br>8/26/15      | 0    | 0    |  |  |  |
| Knowledge<br>transfer to<br>operations<br>team | 7 days  | Mon<br>1/18/16      | Tue<br>1/26/16      | 1792 | 896  |  |  |  |
| Take over<br>project<br>operations             | 2 days  | Fri<br>1/29/16      | Mon<br>2/1/16       | 512  | 256  |  |  |  |
| Create user<br>manual                          | 17 days | Tue<br>1/5/16       | Wed<br>1/27/16      | 6800 | 3400 |  |  |  |

| Finish |  | 100928     |          |          |          |          |          |
|--------|--|------------|----------|----------|----------|----------|----------|
|        |  | Total      | 14240.00 | 6800.00  | 0.00     | 7260.00  | 5880.00  |
|        |  | Cumulative |          |          |          |          |          |
|        |  | Total      | 49144.00 | 55944.00 | 55944.00 | 63204.00 | 69084.00 |

|   |              |                     |                     |            |         |                |                |                | Decembe       |                |
|---|--------------|---------------------|---------------------|------------|---------|----------------|----------------|----------------|---------------|----------------|
|   |              |                     |                     |            |         | November       | November       | November       | r             | December       |
| Task Name   | Duratio<br>n | Start               | Finish              | Total Cost | 50 - 50 | 11/16/201<br>5 | 11/23/201<br>5 | 11/30/201<br>5 | 12/7/201<br>5 | 12/14/201<br>5 |
| Start   | 0 days       | Mon<br>8/3/15       | Mon<br>8/3/15       |            |         |                |                |                |               |                |
| Setup Dev<br>Environment  | 30 days      | Mon<br>8/3/15       | Mon<br>9/14/15      | 15000      | 7500    |                |                |                |               |                |
| Setup Test<br>Environment   | 15 days      | Fri<br>11/27/1<br>5 | Thu<br>12/17/1<br>5 | 1440       | 720     |                | 720            |                |               | 720            |
| Setup<br>Production<br>Environment                                  | 15 days      | Thu<br>12/24/1<br>5 | Fri<br>1/15/16      | 1440       | 720     |                |                |                |               |                |
| Setup FTP Site  | 2 days       | Mon<br>8/3/15       | Tue<br>8/4/15       | 464        | 232     |                |                |                |               |                |
| Implement<br>Webpage/UI   | 2 days       | Tue<br>9/15/15      | Wed<br>9/16/15      | 480        | 240     |                |                |                |               |                |
| Implement of<br>Database  | 3 days       | Tue<br>9/15/15      | Thu<br>9/17/15      | 2520       | 1260    |                |                |                |               |                |
| Implement<br>base system<br>reports                                 | 4 days       | Tue<br>9/15/15      | Fri<br>9/18/15      | 1760       | 880     |                |                |                |               |                |
| PM (I) send<br>datafeed<br>layouts and<br>sample files to<br>PM (S) | 30 days      | Mon<br>8/3/15       | Mon<br>9/14/15      | 0          | 0       |                |                |                |               |                |

| Develop SSIS<br>package                           | 4 days  | Tue<br>9/15/15      | Fri<br>9/18/15      | 2080  | 1040 |      |     |  |  |
|---|---------|---------------------|---------------------|-------|------|------|-----|--|--|
| Create<br>automation<br>scripts                   | 5 days  | Wed<br>8/5/15       | Tue<br>8/11/15      | 1160  | 580  |      |     |  |  |
| Deploy scripts<br>and SSIS<br>package             | 4 days  | Mon<br>9/21/15      | Thu<br>9/24/15      | 1040  | 520  |      |     |  |  |
| Test and load<br>data                             | 2 days  | Fri<br>9/25/15      | Mon<br>9/28/15      | 520   | 260  |      |     |  |  |
| Modify DB<br>based on<br>requirements             | 18 days | Fri<br>9/18/15      | Wed<br>10/14/1<br>5 | 15120 | 7560 |      |     |  |  |
| Test the DB<br>for updates<br>and create<br>views | 5 days  | Thu<br>10/15/1<br>5 | Wed<br>10/21/1<br>5 | 2800  | 1400 |      |     |  |  |
| Implement<br>new reports                          | 16 days | Thu<br>10/15/1<br>5 | Thu<br>11/5/15      | 10560 | 5280 |      |     |  |  |
| Modify reports                                    | 9 days  | Fri<br>11/6/15      | Wed<br>11/18/1<br>5 | 3960  | 1980 | 1980 |     |  |  |
| Test reports                                      | 3 days  | Thu<br>11/19/1<br>5 | Mon<br>11/23/1<br>5 | 1800  | 900  | 900  | 900 |  |  |
| Deploy<br>reports                                 | 2 days  | Tue<br>11/24/1<br>5 | Wed<br>11/25/1<br>5 | 880   | 440  |      | 880 |  |  |
| Modify<br>webpage for<br>DB Updates               | 15 days | Thu<br>10/22/1<br>5 | Wed<br>11/11/1<br>5 | 10800 | 5400 |      |     |  |  |

| Deploy<br>webpages<br>updates               | 2 days  | Thu<br>11/12/1<br>5 | Fri<br>11/13/1<br>5 | 480  | 240  |  |  |     |
|---|---------|---------------------|---------------------|------|------|--|--|-----|
| Test<br>application in<br>QA<br>environment | 6 days  | Thu<br>12/24/1<br>5 | Mon<br>1/4/16       | 3960 | 1980 |  |  |     |
| UAT at<br>Software Inc.                     | 9 days  | Tue<br>1/5/16       | Fri<br>1/15/16      | 7920 | 3960 |  |  |     |
| UAT at<br>Investment<br>Inc.                | 15 days | Mon<br>1/18/16      | Mon<br>2/8/16       | 0    | 0    |  |  |     |
| Deploy in QA<br>environment                 | 4 days  | Fri<br>12/18/1<br>5 | Wed<br>12/23/1<br>5 | 880  | 440  |  |  | 440 |
| Deploy in<br>Production<br>environment      | 5 days  | Mon<br>1/18/16      | Fri<br>1/22/16      | 1400 | 700  |  |  |     |
| Smoke testing in Production                 | 4 days  | Mon<br>1/25/16      | Thu<br>1/28/16      | 1040 | 520  |  |  |     |
| Set up data<br>feed<br>automation           | 2 days  | Wed<br>8/12/15      | Thu<br>8/13/15      | 464  | 232  |  |  |     |
| Test data feed automation                   | 4 days  | Fri<br>8/14/15      | Wed<br>8/19/15      | 1856 | 928  |  |  |     |
| IP white<br>listing                         | 11 days | Wed<br>8/12/15      | Wed<br>8/26/15      | 0    | 0    |  |  |     |
| Knowledge<br>transfer to<br>operations      | 7 days  | Mon<br>1/18/16      | Tue<br>1/26/16      | 1702 | 896  |  |  |     |
| icani                                       |         |                     |                     | 1/92 | 0,0  |  |  |     |

| Take over<br>project<br>operations | 2 days  | Fri<br>1/29/16 | Mon<br>2/1/16 | 512        | 256  |          |          |          |          |          |
|------------------------------------|---------|----------------|---------------|------------|------|----------|----------|----------|----------|----------|
| Create user<br>manual              | 17 days | Tue<br>1/5/16  | Wed 1/27/16   | 6800       | 3400 |          |          |          |          |          |
| Finish                             |         | 1/0/10         |               | 100928     | 0100 |          |          |          |          |          |
|                                    |         |                |               | Total      |      | 2880.00  | 2500.00  | 0.00     | 0.00     | 1160.00  |
|                                    |         |                |               | Cumulative |      |          |          |          |          |          |
|                                    |         |                |               | Total      |      | 71964.00 | 74464.00 | 74464.00 | 74464.00 | 75624.00 |

|                                     |         |                |                |            |       | December  | December  | January  | January  | January  |
|-------------------------------------|---------|----------------|----------------|------------|-------|-----------|-----------|----------|----------|----------|
| Task Name                           | Duratio | Start          | Finish         | Total Cost | 50-50 | 12/21/201 | 12/28/201 |          | 1/11/201 | 1/18/201 |
| Tusk Nume                           | n       | Start          | TIIISII        | Total Cost | 50 50 | 5         | 5         | 1/4/2016 | 6        | 6        |
| Start                               | 0 days  | Mon<br>8/3/15  | Mon<br>8/3/15  |            |       |           |           |          |          |          |
| Setup Dev<br>Environment            | 30 days | Mon<br>8/3/15  | Mon<br>9/14/15 | 15000      | 7500  |           |           |          |          |          |
| Setup Test<br>Environment           | 15 days | Fri<br>11/27/1 | Thu<br>12/17/1 | 1440       | 720   |           |           |          |          |          |
| 0.1                                 |         | 5              | 5              | 1440       | /20   |           |           |          |          |          |
| Setup<br>Production<br>Environment  | 15 days | 12/24/1<br>5   | Fri<br>1/15/16 | 1440       | 720   | 720       |           |          | 720      |          |
| Setup FTP Site                      | 2 days  | Mon<br>8/3/15  | Tue<br>8/4/15  | 464        | 232   |           |           |          |          |          |
| Implement<br>Webpage/UI             | 2 days  | Tue<br>9/15/15 | Wed<br>9/16/15 | 480        | 240   |           |           |          |          |          |
| Implement of<br>Database            | 3 days  | Tue<br>9/15/15 | Thu<br>9/17/15 | 2520       | 1260  |           |           |          |          |          |
| Implement<br>base system<br>reports | 4 days  | Tue<br>9/15/15 | Fri<br>9/18/15 | 1760       | 880   |           |           |          |          |          |

| PM (I) send<br>datafeed<br>layouts and<br>sample files to<br>PM (S) | 30 days | Mon<br>8/3/15       | Mon<br>9/14/15      | 0     | 0    |  |  |  |
|---|---------|---------------------|---------------------|-------|------|--|--|--|
| Develop SSIS<br>package   | 4 days  | Tue<br>9/15/15      | Fri<br>9/18/15      | 2080  | 1040 |  |  |  |
| Create<br>automation<br>scripts                                     | 5 days  | Wed<br>8/5/15       | Tue<br>8/11/15      | 1160  | 580  |  |  |  |
| Deploy scripts<br>and SSIS<br>package                               | 4 days  | Mon<br>9/21/15      | Thu<br>9/24/15      | 1040  | 520  |  |  |  |
| Test and load<br>data   | 2 days  | Fri<br>9/25/15      | Mon<br>9/28/15      | 520   | 260  |  |  |  |
| Modify DB<br>based on<br>requirements                               | 18 days | Fri<br>9/18/15      | Wed<br>10/14/1<br>5 | 15120 | 7560 |  |  |  |
| Test the DB for<br>updates and<br>create views                      | 5 days  | Thu<br>10/15/1<br>5 | Wed<br>10/21/1<br>5 | 2800  | 1400 |  |  |  |
| Implement<br>new reports  | 16 days | Thu<br>10/15/1<br>5 | Thu<br>11/5/15      | 10560 | 5280 |  |  |  |
| Modify reports  | 9 days  | Fri<br>11/6/15      | Wed<br>11/18/1<br>5 | 3960  | 1980 |  |  |  |
| Test reports  | 3 days  | Thu<br>11/19/1<br>5 | Mon<br>11/23/1<br>5 | 1800  | 900  |  |  |  |
| Deploy reports  | 2 days  | Tue<br>11/24/1<br>5 | Wed<br>11/25/1<br>5 | 880   | 440  |  |  |  |

| Modify<br>webpage for<br>DB Updates         | 15 days | Thu<br>10/22/1<br>5 | Wed<br>11/11/1<br>5 | 10800 | 5400 |      |      |      |      |
|---|---------|---------------------|---------------------|-------|------|------|------|------|------|
| Deploy<br>webpages<br>updates               | 2 days  | Thu<br>11/12/1<br>5 | Fri<br>11/13/1<br>5 | 480   | 240  |      |      |      |      |
| Test<br>application in<br>QA<br>environment | 6 days  | Thu<br>12/24/1<br>5 | Mon<br>1/4/16       | 3960  | 1980 | 1980 | 1980 |      |      |
| UAT at<br>Software Inc.                     | 9 days  | Tue<br>1/5/16       | Fri<br>1/15/16      | 7920  | 3960 |      | 3960 | 3960 |      |
| UAT at<br>Investment<br>Inc.                | 15 days | Mon<br>1/18/16      | Mon<br>2/8/16       | 0     | 0    |      |      |      |      |
| Deploy in QA<br>environment                 | 4 days  | Fri<br>12/18/1<br>5 | Wed<br>12/23/1<br>5 | 880   | 440  | 440  |      |      |      |
| Deploy in<br>Production<br>environment      | 5 days  | Mon<br>1/18/16      | Fri<br>1/22/16      | 1400  | 700  |      |      |      | 1400 |
| Smoke testing in Production                 | 4 days  | Mon<br>1/25/16      | Thu<br>1/28/16      | 1040  | 520  |      |      |      |      |
| Set up data<br>feed<br>automation           | 2 days  | Wed<br>8/12/15      | Thu<br>8/13/15      | 464   | 232  |      |      |      |      |
| Test data feed automation                   | 4 days  | Fri<br>8/14/15      | Wed<br>8/19/15      | 1856  | 928  |      |      |      |      |
| IP white listing                            | 11 days | Wed<br>8/12/15      | Wed<br>8/26/15      | 0     | 0    |      |      |      |      |
| Knowledge<br>transfer to                    | 7 days  | Mon<br>1/18/16      | Tue<br>1/26/16      | 1792  | 896  |      |      |      | 896  |

| operations<br>team                 |         |                |                |                     |      |          |          |          |          |          |
|------------------------------------|---------|----------------|----------------|---------------------|------|----------|----------|----------|----------|----------|
| Take over<br>project<br>operations | 2 days  | Fri<br>1/29/16 | Mon<br>2/1/16  | 512                 | 256  |          |          |          |          |          |
| Create user<br>manual              | 17 days | Tue<br>1/5/16  | Wed<br>1/27/16 | 6800                | 3400 |          |          | 3400     |          |          |
| Finish                             |         |                |                | 100928              |      |          |          |          |          |          |
|                                    |         |                |                | Total               |      | 3140.00  | 0.00     | 9340.00  | 4680.00  | 2296.00  |
|                                    |         |                |                | Cumulative<br>Total |      | 78764.00 | 78764.00 | 88104.00 | 92784.00 | 95080.00 |

|                                    |          |                 |                 |            |         | January   | February |
|------------------------------------|----------|-----------------|-----------------|------------|---------|-----------|----------|
| Task Name                          | Duration | Start           | Finish          | Total Cost | 50 - 50 | 1/25/2016 | 2/1/2016 |
| Start                              | 0 days   | Mon<br>8/3/15   | Mon<br>8/3/15   |            |         |           |          |
| Setup Dev<br>Environment           | 30 days  | Mon<br>8/3/15   | Mon<br>9/14/15  | 15000      | 7500    |           |          |
| Setup Test<br>Environment          | 15 days  | Fri<br>11/27/15 | Thu<br>12/17/15 | 1440       | 720     |           |          |
| Setup<br>Production<br>Environment | 15 days  | Thu<br>12/24/15 | Fri<br>1/15/16  | 1440       | 720     |           |          |
| Setup FTP Site                     | 2 days   | Mon<br>8/3/15   | Tue<br>8/4/15   | 464        | 232     |           |          |
| Implement<br>Webpage/UI            | 2 days   | Tue<br>9/15/15  | Wed<br>9/16/15  | 480        | 240     |           |          |
| Implement of<br>Database           | 3 days   | Tue<br>9/15/15  | Thu<br>9/17/15  | 2520       | 1260    |           |          |

| Implement<br>base system<br>reports                                 | 4 days  | Tue<br>9/15/15  | Fri<br>9/18/15  | 1760  | 880  |  |
|---|---------|-----------------|-----------------|-------|------|--|
| PM (I) send<br>datafeed<br>layouts and<br>sample files to<br>PM (S) | 30 days | Mon<br>8/3/15   | Mon<br>9/14/15  | 0     | 0    |  |
| Develop SSIS<br>package   | 4 days  | Tue<br>9/15/15  | Fri<br>9/18/15  | 2080  | 1040 |  |
| Create<br>automation<br>scripts                                     | 5 days  | Wed<br>8/5/15   | Tue<br>8/11/15  | 1160  | 580  |  |
| Deploy scripts<br>and SSIS<br>package                               | 4 days  | Mon<br>9/21/15  | Thu<br>9/24/15  | 1040  | 520  |  |
| Test and load<br>data   | 2 days  | Fri<br>9/25/15  | Mon<br>9/28/15  | 520   | 260  |  |
| Modify DB<br>based on<br>requirements                               | 18 days | Fri<br>9/18/15  | Wed<br>10/14/15 | 15120 | 7560 |  |
| Test the DB for<br>updates and<br>create views                      | 5 days  | Thu<br>10/15/15 | Wed<br>10/21/15 | 2800  | 1400 |  |
| Implement<br>new reports  | 16 days | Thu<br>10/15/15 | Thu<br>11/5/15  | 10560 | 5280 |  |
| Modify reports  | 9 days  | Fri<br>11/6/15  | Wed<br>11/18/15 | 3960  | 1980 |  |
| Test reports  | 3 days  | Thu<br>11/19/15 | Mon<br>11/23/15 | 1800  | 900  |  |
| Deploy reports  | 2 days  | Tue<br>11/24/15 | Wed<br>11/25/15 | 880   | 440  |  |

| Modify<br>webpage for<br>DB Updates            | 15 days | Thu<br>10/22/15 | Wed<br>11/11/15 | 10800 | 5400 |      |  |
|--|---------|-----------------|-----------------|-------|------|------|--|
| Deploy<br>webpages<br>updates                  | 2 days  | Thu<br>11/12/15 | Fri<br>11/13/15 | 480   | 240  |      |  |
| Test<br>application in<br>QA<br>environment    | 6 days  | Thu<br>12/24/15 | Mon<br>1/4/16   | 3960  | 1980 |      |  |
| UAT at<br>Software Inc.                        | 9 days  | Tue<br>1/5/16   | Fri<br>1/15/16  | 7920  | 3960 |      |  |
| UAT at<br>Investment<br>Inc.                   | 15 days | Mon<br>1/18/16  | Mon<br>2/8/16   | 0     | 0    |      |  |
| Deploy in QA<br>environment                    | 4 days  | Fri<br>12/18/15 | Wed<br>12/23/15 | 880   | 440  |      |  |
| Deploy in<br>Production<br>environment         | 5 days  | Mon<br>1/18/16  | Fri<br>1/22/16  | 1400  | 700  |      |  |
| Smoke testing in Production                    | 4 days  | Mon<br>1/25/16  | Thu<br>1/28/16  | 1040  | 520  | 1040 |  |
| Set up data<br>feed<br>automation              | 2 days  | Wed<br>8/12/15  | Thu<br>8/13/15  | 464   | 232  |      |  |
| Test data feed automation                      | 4 days  | Fri<br>8/14/15  | Wed<br>8/19/15  | 1856  | 928  |      |  |
| IP white listing                               | 11 days | Wed<br>8/12/15  | Wed<br>8/26/15  | 0     | 0    |      |  |
| Knowledge<br>transfer to<br>operations<br>team | 7 days  | Mon<br>1/18/16  | Tue<br>1/26/16  | 1792  | 896  | 896  |  |

| Take over<br>project<br>operations | 2 days  | Fri<br>1/29/16 | Mon<br>2/1/16  | 512        | 256  | 256       | 256       |
|------------------------------------|---------|----------------|----------------|------------|------|-----------|-----------|
| Create user<br>manual              | 17 days | Tue<br>1/5/16  | Wed<br>1/27/16 | 6800       | 3400 | 3400      |           |
| Finish                             |         |                |                | 100928     |      |           |           |
|                                    |         |                |                | Total      |      | 5592.00   | 256.00    |
|                                    |         |                |                | Cumulative |      |           |           |
|                                    |         |                |                | Total      |      | 100672.00 | 100928.00 |

#### L: Planned Value Chart

