**Monitoring and Controlling**

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| --- | --- | --- |
| Project Title | Project Manager | Customer Name |
| **MGT2\_KKM1: Monitoring & Controlling Task 3** | **Joette Damo** | **Synesthor Cloud Storage Migration Project** |

Synesthor Cloud Storage Migration Project in which Synesthor a major accounting firm implies at this the project scope will include only moving current databases.

This project involves five teams which are the following: 1) Premigration Planning, Sara Patel, 2) Storage, Sophia Miller, 3) off-site cloud system, Daniel Johnson, 4) testing, Talia Phan, and 5) Migration, Omar Thomas. This project will start on July 1st and need to be done by December 1st to avoid any conflicts during the tax season. I am the new project manager, just recently hired by the IT Director, Michael Garcia. It is obvious that communication is good evidenced by weekly project meetings on Wednesdays. My first assignment as project manager is to review status reports from the teams, review WBS, and make a Monitoring and Controlling Report. The Monitoring and Controlling Report will include the following: 1) Risk Assessment, 2) Gantt Chart, 3) Earned Value Analysis, 4) Earned Value Projections, 5) Burndown Chart, and 6) discussions of all analysis with mitigation strategies.

**A. Risk Assessment (see below)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Risk  Description | Likelihood  (L, M, H) | Impact  (L, M, H) | Responsible Person | Prevention/Mitigation Strategy |
| In new **location connectivity** new building power lines need to be rerouted because they originated in the old part of building structure. | **High** likelihood of risk occurring because power lines crucial of connectivity for cloud storage. | **High** impact of the risk because power lines if not connected project may fail. | Sara Patel | Prevention & mitigation strategy for risk for **facilities team** to check it out supposed to be on site for construction in September. |
| Enabling on all VPN servers two-factor authentication for end-user machines to meet compliance with all policies for **security**. | **High** likelihood of risk occurring because of security which needs two-factor authentication. | **High i**mpact of risk because of not meeting compliance with all policies. | Sophia Miller | Prevention & mitigation strategy for risk in **hiring additional personnel** to help finish enabling on all servers two-factor authentication. |
| Old backup system has duplicated files in which they cannot determine which **files to be removed**. | **Low** likelihood of risk occurring because no other files will be added for backup for new system will be in place. | **Low** impact of the risk because the risk of removing files would not impact the new system. | Daniel Johnson | Prevention & mitigation strategy for risk for **new hire training** to trouble-shoot problems with duplicated files and **removing duplicated files** by newly hired trained personnel. |
| In **testing the environment** QA automation engineers have not been added as authorized users; therefore, unable to migrate data for testing. | **High** likelihood of risk occurring because if testing is not done to migrate data problems may occur in migration. | **High** impact of the risk because of the need for authorized users such as QA automation engineers to test the environment for bugs. | Talia Phan | Prevention & mitigation strategy for risk to have a month to preventing risk by adding QA engineers as authorized users to **migrate data for testing.** |
| Issue of risk not having **system monitoring** during Thanksgiving holiday necessary to determine to have team member in office when company closed. | **Medium** likelihood of risk occurring because system monitoring may be handled through VPN connection. | **Medium** impact of the risk because it will be determined whether team member presence in office necessary in incoming planned scheduling. | Omar Thomas | Prevention & mitigation strategy for risk for having or not having team member in officed during holidays for **system monitoring** will be determined by the first week of October when schedules are planned. |
|  |  |  |  |  |

*Key: L=Low, M=Medium, H=High*

**B. Gantt Chart**

**Please see file upload for Gantt Chart (ProjectLibre Task3 PDF file)**

**C1. Earned Value Analysis**

**Please see file upload for Excel file (Earned Value Analysis Task 3 – see sheet tab C1)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Team | EV | AC | PV | CV | CPI | SV | SPI |
| Patel | $8,400 | $9,150 | $8,400 | ($750) | 0.92 | 0 | 1.00 |
|
| Miller | $6,264 | $7,425 | $7,200 | ($1,161) | 0.84 | ($936) | 0.87 |
|
| Johnson | $1,242 | $1,200 | $1,294 | $42 | 1.04 | ($52) | 0.96 |
|
| Phan | $2,670 | $2,400 | $1,369 | $270 | 1.11 | $1.301 | 1.95 |
|
| Thomas | 0 | 0 | $0 | 0 | 0 | $0 | 0 |
|
| **Total** | $18,576 | $20,175 | $18,263 | ($1,599) | 0.78 | $313 | 0.96 |
|

**C2. Earned Value Projections**

**Please see file upload for Excel file (Earned Value Analysis Task 3 – see sheet tab C2)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Team | EAC | ETC | Est. Dur. | Est. Completion Date |
| Patel | $9,130 | ($20) | 8 | 07/14/2021 |
|
| Miller | $12,857 | $5,432 | 21 | 07/28/2021 |
|
| Johnson | $19,808 | $38,608 | 67 | 09/15/2021 |
|
| Phan | $48,108 | $45,708 | 40 | 11/3/2021 |
|
| Thomas | $0\* | $0\*\* | 18 | 10/11/2021 |
|

\*EAC – Estimate at completion EAC = BAC/CPI (Use this if CPI is expected to be the same for the remainder of the project)  
This amount is currently expected to be spent by the end of the project which is an estimate.

\*\*ETC – Estimate to complete (ETC = EAC – AC)  
This amount will determine how much will likely be spent to finish the project.

Estimated Duration = (Planned Duration/SPI) (From Gantt Chart for Planned Duration)  
These are the estimate number of days left to complete the project.

Estimated completion date  
These are estimated dates to complete the project based upon the Gantt Chart and calendar year of 2021.

**C3. Discussion of Earned Value Analysis and Projections**

**Team Sara Patel** – which is over the budget by $750 according to CV (Cost Variance) which indicates this team spent more on labor by 10 hours, but this portion of the project is completed. According to CPI (Cost Performance Index) of 0.92 this team spent over the planned cost by 0.08 justifies what the number calculation stated in the CV metrics. On the other hand, SPI (Schedule Performance Index) of 1.00 calculation indicates this performance was exactly on schedule. For Projections of EV (Earned Value) the Patel team’s EAC (Estimation At Completion) indicated the amount of $9,130 an estimation at to be spent by the end of the project. On the other hand, the ETC (Estimate To Complete) indicated a negative dollar amount of $20 indicates the amount will determine how much will likely be spent to finish the project which is conflicting for this team’s portion of the project is completed being over budget by $750. The $20 amount is so small and not worth justifying in discussion.

**Team Sophia Miller** – which is over the budget by $1,161 overspent the planned cost according to CV which indicates this team spent the planned cost according to CV which indicates this team spent more on labor by approximately 15 hours. According to CPI of 0.84 this team spent over the planned cost by 0.16 justifies what the number calculation stated in the CV metrics. On the other hand, SPI 0.87 calculation indicates this team performance was behind of schedule plus Burndown Chart indicates being ahead of schedule in project to a certain date. For Projections of EV the Miller team’s EAC indicated the amount of $12,857 an estimation at to be spend by the end of the project. On the other hand, the ETC indicated a positive dollar amount of $5,432 with an estimated duration to complete project next 7 days on July 29, 2021; likewise, the Gantt Chart indicates this team should finish on July 28, 2021, indicating this team is behind of schedule by 1 day. This team overall is behind the budget by $1,161 and behind schedule by 1 day accordingly just after day 12 of the start of the project.

**Team Daniel Johnson** – under the budget by $42 according to CV which indicates this team was short by a half an hour in labor which is very nominal. According to CPI of 1.04 this team spent under the planned cost by 0.04 justifies what the number calculation stated in CV metrics. On the other hand, SPI of 0.96 calculation indicates this team performance was behind schedule plus Burndown Chart indicates being ahead of schedule to a certain date. For Projection of EV the Johnson team’s EAC indicated the amount of $19,808 an estimation of to be spend by the end of the project. On the other hand, the ETC indicated a positive dollar amount of $38,608 with an estimated amount how much likely to be spent to finish the project. The planned completion date is September 15th as indicated in comparison to Gantt Chart with 40 days estimated duration. The Johnson team budget was under by $42 accordingly just after day 12 of the start date of the project.

**Team Talia Phan** – under the budget by $270 according to CV which indicates this team was short by almost 4 hours. According to CPI of 1.11 this team spend under the planned cost of 0.11 justifies what the number calculation stated in CV metrics. On the other hand, SPI of 1.95 calculation indicates this team performance was ahead to schedule. For Projections of EV the Phan team’s EAC indicated the amount of $48,108 an estimation at to be spent by the end of the project. On the other hand, the ETC indicated a positive dollar amount of $45,708 with an estimated amount how much likely to be spent to finish the project. The variation planned completion date 11/3/2021 is the same in comparison to Gantt Chart date of completion. The Phan team budget was under $ $270 accordingly just after day 12 of the start date of the project.

**Team Omar Thomas** – for this team there was no EV metrics because this team has not started on the project. It indicates this team for the Migration Phase had been shadowing the other teams. The caveat therefore was that this team had several junior level team members being able to charge those shadowing hours to the company’s professional development budget instead of the planned budget of the project. EV projections indicates that the Thomas Team EAC is $0 and ETC $0 with an Estimate Duration of 18 days to be completed by 10/11/2021 with Gantt Chart completion date also on 10/11/2021.

**In conclusion** the team that is doing the worst is Omar Thomas because they have not started on their portion of the project. Team Talia Phan working on the Testing Phase would be the best of all the teams because the SPI of 0.98 calculation indicates team performance was close to schedule. Also, Phan’s team was under budget by $270 accordingly just after day 12 of the start date of the project. Their EAC was $48,108 and ETC $45,708.

Furthermore, EAC the Estimate at Completion amount is currently expected to be spent by the end of the project. Likewise, ETC the Estimate to Complete is how much will likely be spent to finish the project. CPI Cost Performance Index is a measure of the cost efficiency of budgeted resources expressed as the ratio of Earned Value to Actual Cost. And SPI Specific Performance Index is a measure of schedule efficiency expressed as the ratio of Earned Value to Planned Value.

**D1. Burndown Chart**

**Please see file upload for Excel file (Earned Value Analysis Task 3 – see sheet tab D1)**

**D2. Discussion of Burndown Chart**

The Burndown Chart indicates there are **17** tasks that are remaining to complete the project which measures the progress working through the project which only shows as estimation when a task is completed. The Burndown Chart takes into consideration the number of **86** days to complete the project, Ideal Burndown, and Actual Burndown of **8** tasks completed. As shown on the Burndown Chart the Actual Burndown line is below the Ideal Burndown line as to the 12th day from start date of July 5th indicating the project is ahead of schedule; yet indicating more tasks are remaining to the schedule. The Burndown Chart can be compared to the Earned Value analysis and Earned Value Projection in analysis which shows the SPI (Schedule Performance Index) for teams Patel and Phan are exactly or close to schedule. The SPIs for teams Miller, Johnson, Phan, and Thomas, which indicates that they are behind schedule indicating more tasks are remaining. The differences between the Burndown Chart and Earned Values analysis of SPI Specific Performance Index are that SPI takes into consideration the measure of schedule efficiency expressed as the ratio of Earned Value to Planned Value versus the Burndown Chart analysis of number of days to complete the project, Ideal Burndown, and the Actual Burndown. In analysis, team Thomas has not started work which compromises the analysis. In final thought of team performance, it was a good idea in Sophia Miller’s team to have interns help assuming the interns were not paid through the project. Also, in Omar Thomas’s team junior level team members’ labor were charged to professional development instead of the project. It would be recommended on my part to analyze tasks relatively enough in size to plan to analyze WIP (work in progress) to reduce work scheduled load for tasks.

**E. Mitigation Plan**

This section discusses **three mitigation strategies** for three teams Sophia Miller, Daniel Johnson, and Talia Phan.

**First strategy** is for Sophia Miller’s team. Miller’s team **issue** was that they were over the budget by $1,161. They were spending more money on labor to do the tasks according to the CPI (Completion Performance Index) of 0.84. As project manager I need to address my concerns to Miller’s team about budget discrepancy in a meeting. I am going to introduce a Mitigation Plan to evaluate the number of hours spend on a task or tasks. Also as reading the status report for Sophia Miller which stated the team had help from interns. The interns could be the factor for the over the budget labor costs because of training. Furthermore, I would try to **mitigate** the issue over the budget expenditure to compress the schedule if needed to have someone assigned to a task who works faster than interns who need training. Lastly, Miller’s team SPI (Schedule Performance Index) of 0.87 indicates this team is behind schedule. The Burndown Chart which showed Actual Burndown line below the Ideal Burndown line which shows tasks completed up to day 12 from start date this analysis shows that the Miller team completed about 3 tasks according to the Gantt Chart. Miller’s team will complete their portion of the project in 7 days behind schedule by only 1 day accordingly just after 12 days after the start of the project. The 1-day difference can be improved by having a team member who works faster or else divide the task to different sections assigned to several team members.

**Second strategy** is for Daniel Johnson’s team **issue** for SPI (Schedule Performance Index) of 0.96 indicates this team performance was behind schedule plus the Burndown Chart indicates team being ahead of schedule to a certain date. To **mitigate** the issue for Johnson’s team by changing the scope of the project to reduce or adjust things for the biggest impact. Since this team is not on the critical path according to the Gantt Chart I would have initiated working on tasks on the first day of the start of the total project. Likewise, in the Burndown Chart shows this team was only on schedule for 13% of the time and the rest of the days had shown that they were more tasks remaining behind schedule. It was apparent according to the status report this team was having problems with the old backup system locating possible duplicates of files. This team was not sure how to approach the issue of the old backup system. I was just hired 12 days after the project started so If I was hired before the start of the project I could have mitigated the old system backup problem with some advisement. It was apparent the IT director had no input or output for advising the team.

**Third strategy** for the team Talia Phan – under the budget by $270 according to CV which indicates this team was short by almost 4 hours. According to CPI of 1.11 this team spend under the planned cost of 0.11 justifies what the number calculation stated in CV metrics. On the other hand, SPI of 1.95 calculation indicates this team performance was ahead to schedule. Yet according to the Burndown Chart Phan’s team was below the Ideal Burndown line with Actual Burndown line also indicating more tasks remaining behind schedule. It was apparent after reading Phan’s status report that QA automation engineers were delayed because file conversions needed to be completed before they can proceed to their tasks. Another **issue** Phan addressed was that the QA automation engineers had not been added as authorized users in which they were unable to migrate data for testing sooner. To **migrate** Phan’s issue with CPI and SPI going forward to use prevention proactive strategies to reduce the chance of any delays happening in the immediate future such as using immediate action to address changing the scope of the project to reduce and or adjusting things for the biggest impacts to the project. To adjust things in scheduling I can use the structure of crashing the schedule by adjusting the number of people to help or use the structure of fast tracking in that tasks are started before its predecessor finished.

**In conclusion**, in performance it was evident that a lot of new employees were hired and in training not being placed to do the project until they were fully trained. Likewise, in scheduling it was apparent the overall SPI (Specific Performance Index) for the project was indicated by 0.96 which states that the project was close to schedule. Finally, as to the budget there was overspending on labor indicating the project by the overall CPI (Cost Performance Index) of 0.78.

F. References

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