



Earned Value Management with GenAI

Proof of concept and practical approach

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Agenda

Section	Topics
1	Tools used Chat GPT 4o/ PMI Infinity
2	Epic Introduction and tested User Stories
3	Prompting
3	Acceptance Criteria
4	Main Takeaways
5	Conclusion, Q&A



AI POC Group Background and Introduction



Meeting for several months in 2024 to brainstorm and implement proofs-of-concept for Generative AI applications in PM

POC #1 – Earned Value Management

POC #2 – Status Reporting

POC #3 – Risk Management

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AI POC Volunteer Group

EVM POC



Status Reporting



Risk Management



Some of our volunteers for the AI POCs. Many others have taken part in the proofs of concept who are not pictured.

Survey Question

What are your expectations for this webinar?
Why are you here today?



Go to [menti.com](https://www.menti.com) to answer

What's New at RefineM

Upcoming Free Webinar	Date
Generative AI and Status Reporting	August (TBD)

RefineM Products	Self-Paced Online Training
<u>Essential Gear for Project Managers</u> RefineM.com/products/	<u>Agile Fundamentals Self-Paced Course</u> RefineM.com/course/agile
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<u>Agility Assessment</u> Agility.RefineM.com	<u>Agile BusReqs Self-Paced Course</u> https://vimeo.com/ondemand/refinembusreq
<u>PDU Bundle</u> https://vimeo.com/ondemand/refinempdus	<u>Backlog Grooming Self-Paced Course</u> Udemy.com/course/backlog-grooming-for-agile-requirements/

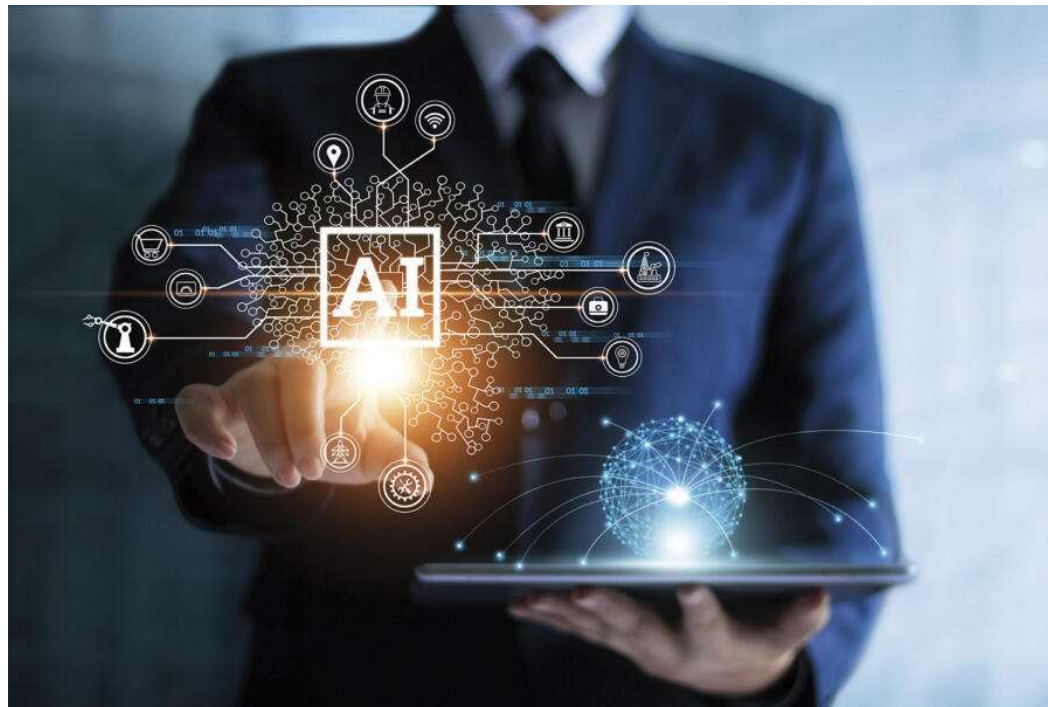
Survey Question

What is your level of confidence about your GenAI skills in relation to Earned Value Management?



Go to [menti.com](https://www.menti.com) to answer

POC #1: Earned Value Management



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Bios



Natalie Gonzalez Brandlova, PMP **SCM Project Manager (iWMS Global)**

SCM Project Manager

- Logistics Control Tower Implementation Projects
- WMS Implementation and Deployment Projects
- Strategic Sourcing Projects
- Process Improvements through Business Intelligence Solutions



Phillip George, PMP, CSM **Project Manager, ATP INSTRUCTOR (RefineM)**

Experienced Project Manager and Instructor for AI and PMP courses

- Over 10 years of PM and Agile experience
- Instructor for RefineM's AI for Project Managers course



Nevila Luzi, PMP **International Project manager, (Freelance)**

Experienced PM in Strategic Projects

- Over 15 years of PM in business growth, transformation
- Former Interim COO, DigitALB SH.A. , Digital Media Platform, OTT
- Former Sales Director, DIGICOM, Telco

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What is Earned Value Management (EVM)?

Earned Value Management uses three key variables to track current progress, efficiency trends, and forecast – EV (Earned Value) – accrued on tasks in progress



PV (Planned Value) – value that should have been accrued by this point in time – equal to Budget At Completion at task/project end

AC (Actual Cost) – actual spend on task/project to achieve current progress

Tracking current progress (Cost/Schedule Variance), efficiency trend (Cost/Schedule Performance Index) and forecast (Estimate At / To Completion)



Using AI in Earned Value Management (EVM)

Objective: Determine whether Generative AI tools can effectively provide Earned Value reporting.



Initial Assumption:

EVM uses structured data - AI uses unstructured data (e.g., transcripts, notes from standups)

Benefits of AI:

- Enhanced ability to get latest updates instantly
- Efficiency of AI-enhanced EVM (up to 40-50% time savings – 3-6 hours per week)
- Minimization of human error

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Why This Proof of Concept?

Our goal was to show that two popular Generative AI tools – ChatGPT 4o and PMI Infinity – could perform basic EVM tasks.

There are many exciting possibilities, but we first wanted to capture the basics and confirm the capability.



User Stories

Story #1:

"As project manager, I would like to have a fast answer whether or not my project is at or exceeding costs."

Story #2:

"As project manager, I would like to know my cost variance."

Story #3:

"As project manager, I would like to be able to use the AI tool to assess project health using the traffic light system."

User Stories Brainstorming:

Our group focused on the above user stories derived from an Epic.

Execution: Story 1

"As project manager, I would like to have a fast answer whether or not my project is at or exceeding costs."

The tested tools provided answers; when we have not provided complete input to calculate earned value, it advised so.

a) On purpose, we didn't provide complete input


b) We provided all needed input


Result: acceptance criteria met



Execution: Story 1 (insights from ChatGPT)

Chat GPT provides insights about how the results can be calculated. It points out that we need more information:

 Can you calculate my earned value? there are 3 tasks that need to be completed , task 1 is 10% done, task 2 is 20 % done task 3 is 50% done

 Sure, I can help you calculate the earned value (EV) for your tasks. Earned Value (EV) is a project management metric that represents the value of work actually performed up to a specific point in time.

First, let's assume the planned values (PV) for each task. Typically, this would be based on the budgeted cost for each task. If you can provide the budgeted costs for each task, I can give you a more accurate calculation. If not, I'll assume equal budgeted costs for simplicity.

Could you provide the budgeted cost for each task?

PMI Infinity Insights: Story 1

- *Explains result calculation*
- *Assumptions for missing data*

"As project manager, I would like to have a fast answer whether or not my project is at or exceeding costs."



To calculate the Earned Value (EV) for your project, we need to know the Budget at Completion (BAC) for each task. However, since the BAC is not provided, I will explain the process assuming hypothetical values for BAC.

Let's assume the following BAC for each task:

- Task 1: \$100
- Task 2: \$200
- Task 3: \$300

Now, we can calculate the EV for each task based on the percentage of completion provided:

Task 1:

- BAC: \$100
- Percentage Complete: 10%
- $EV = BAC * Percentage\ Complete = \$100 * 10\% = \$10$

Task 2:

- BAC: \$200
- Percentage Complete: 20%
- $EV = BAC * Percentage\ Complete = \$200 * 20\% = \$40$

Task 3:

- BAC: \$300
- Percentage Complete: 50%
- $EV = BAC * Percentage\ Complete = \$300 * 50\% = \$150$

Finally, we sum the EV of all tasks to get the total EV for the project:

- $Total\ EV = EV(Task\ 1) + EV(Task\ 2) + EV(Task\ 3) = \$10 + \$40 + \$150 = \$200$

In summary, the Earned Value (EV) for your project, given the assumed BAC values, is \$200. If you have the actual BAC values for each task, you can substitute them into the calculations above to get the precise EV.

Execution: Story 1 ChatGPT

I continue to prompt.

Can you calculate my EV? I have my budget in hours to complete, task one to be completed in 150 hrs, task two in 120 hrs and task three in 90 hrs. My costs are \$20 per hr. The total of those available hours is my budget. My current burn overall is 200 hrs. The developers shared their progress: task 1 is 10% done, task 2 is 30% done and task 3 is 50% done. what is my EV and am I on budget?



To calculate the Earned Value (EV) and assess whether you are on budget, we need to follow these steps:

1. **Calculate Planned Value (PV):** This is the budgeted cost for each task based on the percentage of work that should be completed by now.
2. **Calculate Earned Value (EV):** This is the value of work actually performed.
3. **Calculate Actual Cost (AC):** This is the cost incurred for the work performed so far.

Let's start with the given information:

- Task 1: 150 hours, 10% done
- Task 2: 120 hours, 30% done
- Task 3: 90 hours, 50% done
- Cost per hour: \$20
- Total hours: 200 hours burned so far

Execution: Story 1 - Chat GPT

Step 1: Calculate the Planned Value (PV)

Since we have the percentages of completion for each task, the PV for each task is:

$$PV_1 = 150 \text{ hours} \times \$20 = \$3000$$

$$PV_2 = 120 \text{ hours} \times \$20 = \$2400$$

$$PV_3 = 90 \text{ hours} \times \$20 = \$1800$$

The total planned value is the sum of these:

$$\text{Total PV} = \$3000 + \$2400 + \$1800 = \$7200$$

Step 2: Calculate the Earned Value (EV)

The EV for each task based on the percentage completed is:

$$EV_1 = 150 \text{ hours} \times 10\% \times \$20 = 15 \text{ hours} \times \$20 = \$300$$

$$EV_2 = 120 \text{ hours} \times 30\% \times \$20 = 36 \text{ hours} \times \$20 = \$720$$

$$EV_3 = 90 \text{ hours} \times 50\% \times \$20 = 45 \text{ hours} \times \$20 = \$900$$

The total earned value is the sum of these:

$$\text{Total EV} = \$300 + \$720 + \$900 = \$1920$$

Step 3: Calculate the Actual Cost (AC)

The actual cost is the number of hours burned multiplied by the cost per hour:

$$AC = 200 \text{ hours} \times \$20 = \$4000$$

Step 4: Assessing the Budget

Now, we compare the Earned Value (EV) to the Actual Cost (AC):

- Earned Value (EV): \$1920
- Actual Cost (AC): \$4000

Conclusion

Your Earned Value (EV) is \$1920, and the Actual Cost (AC) is \$4000. This means you have spent more than the value of the work completed so far. Therefore, you are over budget.

Would you like to see additional metrics like Cost Performance Index (CPI) or Schedule Performance Index (SPI) to get a more detailed understanding of your project status?

Execution: Story 1 PMI Infinity



To calculate your Earned Value (EV), we need to follow these steps:

Determine the Budget at Completion (BAC) for each task in cost units:

- Task 1: 150 hours * \$20/hour = \$3000
- Task 2: 120 hours * \$20/hour = \$2400
- Task 3: 90 hours * \$20/hour = \$1800

Calculate the EV for each task based on the percentage of completion:

- Task 1: 10% complete
 - EV(Task 1) = 10% * \$3000 = \$300
- Task 2: 30% complete
 - EV(Task 2) = 30% * \$2400 = \$720
- Task 3: 50% complete
 - EV(Task 3) = 50% * \$1800 = \$900

Sum the EV for all tasks to get the total EV for the project:

- Total EV = EV(Task 1) + EV(Task 2) + EV(Task 3)
- Total EV = \$300 + \$720 + \$900 = \$1920

Determine the Actual Cost (AC):

- Current burn overall: 200 hours * \$20/hour = \$4000

Compare EV with AC to determine if you are on budget:

- EV = \$1920
- AC = \$4000

In summary, your Earned Value (EV) is \$1920. Since your Actual Cost (AC) is \$4000, you are over budget. The EV indicates the value of the work completed, while the AC shows the actual expenditure. The fact that AC is significantly higher than EV suggests that the project is not on budget.

NOTE : Infinity AI uses PMBOK aligned terminology

Conclusion Story 1

Results: satisfactory in both tools tested

- First part of response was an explanation of approach
- Second part of the response was calculation and an answer to my question.
- Acceptance criteria met



Sources

This response is powered by PMI's KnowledgeBase.

- 1 [The Earned Schedule.](#)
Learning Library
- 2 [How to Make Earned Value Work on Your Project.](#)
Learning Library
- 3 [The Value Earned with Earned Value.](#)
Learning Library

Related

- What is the formula for calculating Budget at Completion (BAC) for each task? >
- How do you interpret the difference between Earned Value (EV) and Actual Cost (AC)? >
- What steps can you take to bring a project back on budget if the AC is higher than the EV? >

NOTE that Infinity AI provides the source of research as well as related topics to further explore.

Story 2 Execution Step 1 - PMI Infinity

“As project manager, I would like to know my cost variance.”

*I pasted a **dataset** from an Excel spreadsheet with some tasks missing completion rate and I received the below response.*



Based on the provided data, it appears that some tasks have gone over budget and some have not yet been started. To determine the overall budget status of the project, you can calculate the Cost Performance Index (CPI) and the Schedule Performance Index (SPI).

The CPI formula is $CPI = EV / AC$, where EV is the earned value and AC is the actual cost. The SPI formula is $SPI = EV / PV$, where PV is the planned value.

If the CPI and SPI are both greater than 1, it means that the project is under budget and ahead of schedule, respectively. If they are both less than 1, it means that the project is over budget and behind schedule, respectively. If one is greater than 1 and the other is less than 1, it means that the project is either over budget and ahead of schedule or under budget and behind schedule.

Based on the provided data, the CPI and SPI cannot be calculated for the entire project as some tasks have not yet been started. However, for the tasks that have been completed or are in progress, the CPI and SPI can be calculated to determine their individual budget and schedule status.

Story 2 Execution Step 2 - PMI Infinity

I corrected how I phrased my question to get CPI only for the tasks that are already in progress:

- The tool summarized calculations and provided **CPI** and **SPI** on task level.
- I realize the output is text heavy so I would like to continue to prompt the tool.
- I also realize the last sentence may require clarification: CPI under one means task is over budget and CPI = 1.88 is also over budget?



Sure, based on the provided data, the tasks in progress are:

- Development task 1: Estimated budget = \$2,000, Actual completion = 90%, Used budget = \$2,200
- Development task 2: Estimated budget = \$1,600, Actual completion = 80%, Used budget = \$1,600
- Development task 3: Estimated budget = \$3,200, Actual completion = 80%, Used budget = \$3,000
- Development task 4: Estimated budget = \$2,000, Actual completion = 70%, Used budget = \$1,800
- User acceptance test: Estimated budget = \$3,000, Actual completion = 5%, Used budget = \$80

To calculate the CPI and SPI for these tasks in progress, we need to use the following formulas:

- $CPI = EV / AC$, where EV is the earned value and AC is the actual cost
- $SPI = EV / PV$, where EV is the earned value and PV is the planned value

To calculate the earned value (EV) for each task, we can use the formula $EV = \% \text{ complete} * \text{estimated budget}$. To calculate the planned value (PV) for each task, we can use the formula $PV = \% \text{ planned} * \text{estimated budget}$, where % planned is the percentage of the task that was planned to be completed by the current date.

Using these formulas, we can calculate the CPI and SPI for each task in progress:

- Development task 1: $EV = 90\% * \$2,000 = \$1,800$, $PV = 90\% * \$2,000 = \$1,800$, $AC = \$2,200$, $CPI = \$1,800 / \$2,200 = 0.82$, $SPI = \$1,800 / \$1,800 = 1.00$
- Development task 2: $EV = 80\% * \$1,600 = \$1,280$, $PV = 80\% * \$1,600 = \$1,280$, $AC = \$1,600$, $CPI = \$1,280 / \$1,600 = 0.80$, $SPI = \$1,280 / \$1,280 = 1.00$
- Development task 3: $EV = 80\% * \$3,200 = \$2,560$, $PV = 80\% * \$3,200 = \$2,560$, $AC = \$3,000$, $CPI = \$2,560 / \$3,000 = 0.85$, $SPI = \$2,560 / \$2,560 = 1.00$
- Development task 4: $EV = 70\% * \$2,000 = \$1,400$, $PV = 70\% * \$2,000 = \$1,400$, $AC = \$1,800$, $CPI = \$1,400 / \$1,800 = 0.78$, $SPI = \$1,400 / \$1,400 = 1.00$
- User acceptance test: $EV = 5\% * \$3,000 = \150 , $PV = 100\% * \$3,000 = \$3,000$, $AC = \$80$, $CPI = \$150 / \$80 = 1.88$, $SPI = \$150 / \$3,000 = 0.05$

Based on these calculations, we can see that all tasks in progress are on schedule ($SPI = 1.00$), but some are over budget ($CPI < 1.00$). The user acceptance test task is significantly over budget ($CPI = 1.88$), which may require corrective action.

Story 2 Execution Step 3 - PMI Infinity

I requested the output to be summarized in a table which is easier to read:

Sure, here is a table summarizing the budget status of the tasks in progress:

Task Name	Estimated Budget	Actual Completion	Used Budget	CPI
Development task 1	\$2,000	90%	\$2,200	0.82
Development task 2	\$1,600	80%	\$1,600	0.80
Development task 3	\$3,200	80%	\$3,000	0.85
Development task 4	\$2,000	70%	\$1,800	0.78
User acceptance test	\$3,000	5%	\$80	1.88

Note that the SPI is not included in the table as it is 1.00 for all tasks in progress.

Sure, here is a summary of the results in a table format:

Task Name	Estimated Budget (\$)	Actual Completion (%)	Earned Value (EV) (\$)	Used Budget (\$)	Actual Cost (AC) (\$)
Initiation	800	100	800	800	800
Design Workshop	6000	100	6000	5600	5600
Requirement Analysis	3000	100	3000	3200	3200
Suggested Design Approval	1600	100	1600	800	800
Development Task 1	2000	90	1800	2200	2200
Development Task 2	1600	80	1280	1600	1600
Development Task 3	3200	80	2560	3000	3000
Development Task 4	2000	70	1400	1800	1800
Development Task 5	2400	0	0	80	80
Total	22600		18440	19080	19080
Cost Variance (CV)			-640		

Summary:

- Total Earned Value (EV): \$18,440
- Total Actual Cost (AC): \$19,080
- Cost Variance (CV): -\$640

➤ PMI Infinity provided results that are better aligned with PMBOK methodology.

➤ ChatGPT Provided satisfactory results. However, the responses have been more generic.

In both cases, the responses and response formatting was provided in matter of seconds.

Story 2 Execution Step 4 PMI Infinity

“Can you add in the above table which of my tasks are over budget and which are under budget and by how much



Sure, let's add the information about which tasks are over budget and by how much.

Summary Table with Budget Status

Task Name	Estimated Budget (BAC)	Actual Completion	Used Budget (AC)	CPI	Budget Status	Variance (\$)
Development task 1	\$2000	90%	\$2200	0.82	Over Budget	-\$400
Development task 2	\$1600	80%	\$1600	0.80	Over Budget	-\$320
Development task 3	\$3200	80%	\$3000	0.85	Over Budget	-\$640
Development task 4	\$2000	70%	\$1800	0.78	Over Budget	-\$600
User acceptance test	\$3000	5%	\$80	1.88	Under Budget	+\$70

Explanation

- **Development task 1:** Over budget by \$400 (CPI = 0.82)
- **Development task 2:** Over budget by \$320 (CPI = 0.80)
- **Development task 3:** Over budget by \$640 (CPI = 0.85)
- **Development task 4:** Over budget by \$600 (CPI = 0.78)
- **User acceptance test:** Under budget by \$70 (CPI = 1.88)

In summary, most tasks in progress are over budget, as indicated by their CPI values being less than 1. The user acceptance test is the only task under budget, with a CPI greater than 1. This suggests that corrective actions may be needed to bring the project back on budget.

Story 3

“As project manager, I would like to be able to use the AI tool to assess project health using the traffic light system.”

Conversation: The traffic light system is a common status indicator used for reporting to stakeholders. Green means cost and schedule are proceeding as planned. Yellow means that one indicator is lagging but is recoverable, and red means that one or both indicators are lagging and can no longer be met, necessitating change.

Can we have AI generate the status for us based on criteria we feed it? For example, yellow is a cost variance from -5% to -10%, and red is a variance greater than -10%.

Test: Load a sample project with 6 tasks, confirm the LLM correctly parses and returns the EV, AC, PV, CV, and CPI, then ask it to flag whether the project as a whole is green, yellow, or red.

Result: We generated traffic lights accurately in both ChatGPT and PMI Infinity.



Story 3 Execution Step 1 PMI Infinity

“Using the traffic lights system, can you assess the health of my project at the task level and overall? You can disregard the tasks that didn't start yet.”



Sure, let's add the information about which tasks are over budget and by how much.

Summary Table with Budget Status

Task Name	Estimated Budget (BAC)	Actual Completion	Used Budget (AC)	CPI	Budget Status	Variance (\$)
Development task 1	\$2000	90%	\$2200	0.82	Over Budget	-\$400
Development task 2	\$1600	80%	\$1600	0.80	Over Budget	-\$320
Development task 3	\$3200	80%	\$3000	0.85	Over Budget	-\$640
Development task 4	\$2000	70%	\$1800	0.78	Over Budget	-\$600
User acceptance test	\$3000	5%	\$80	1.88	Under Budget	+\$70

Explanation

- **Development task 1:** Over budget by \$400 (CPI = 0.82)
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In summary, most tasks in progress are over budget, as indicated by their CPI values being less than 1. The user acceptance test is the only task under budget, with a CPI greater than 1. This suggests that corrective actions may be needed to bring the project back on budget.

Story 3 Execution Step 2 PMI Infinity

“Using the traffic lights system, can you assess the health of my project at the task level and overall? You can disregard the tasks that didn't start yet.”

Overall Project Health

- **Total Estimated Budget (BAC):** \$23,200 (sum of BAC for tasks in progress and completed)
- **Total Actual Cost (AC):** \$19,080 (sum of used budgets for tasks in progress and completed)
- **Overall Completion:** Approximately 70% (based on the weighted average of completion percentages)

Given the above data, the overall project health can be assessed as follows:

- **Budget:** The project is currently over budget for several tasks in progress, indicated by the red traffic lights for those tasks.
- **Schedule:** The project appears to be on schedule for the tasks that have been started, but the overall completion is only about 70%, which may indicate potential delays if not managed properly.

Traffic Light for Overall Project

- **Overall Traffic Light: Yellow** (At risk)

In summary, while some tasks are on budget and on schedule, several key development tasks are over budget, which puts the overall project at risk. Corrective actions may be needed to bring the project back on track financially and ensure timely completion.

Story 3 Execution Step 3 PMI Infinity

“Can you color code the above table and have the rows shaded according to the traffic light status?”

 Sure, here is the color-coded table with rows shaded according to the traffic light status:

Task-Level Assessment

Task Name	Estimated Budget (BAC)	Actual Completion	Used Budget (AC)	CPI	Budget Status	Variance (\$)	Traffic Light
Initiation	\$800	100%	\$800	1.00	On Budget	\$0	Green
Design workshop	\$6000	100%	\$5600	1.07	Under Budget	\$400	Green
Requirement analysis	\$3000	100%	\$3200	0.94	Over Budget	-\$200	Yellow
Suggested design approval	\$1600	100%	\$800	2.00	Under Budget	\$800	Green
Development task 1	\$2000	90%	\$2200	0.82	Over Budget	-\$400	Red
Development task 2	\$1600	80%	\$1600	0.80	Over Budget	-\$320	Red
Development task 3	\$3200	80%	\$3000	0.85	Over Budget	-\$640	Red
Development task 4	\$2000	70%	\$1800	0.78	Over Budget	-\$600	Red
User acceptance test	\$3000	5%	\$80	1.88	Under Budget	\$70	Green

Story 3 Execution Step 3 PMI Infinity

Source and suggestions provided by Infinity:

Overall Project Health

- **Total Estimated Budget (BAC):** \$23,200 (sum of BAC for tasks in progress and completed)
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Sources

This response is powered by PMI's KnowledgeBase.

- 1 [The Standard for Portfolio Management - Fourth Edition.](#)
Standards

Related

What corrective actions can be taken to bring the project back on track financially? >

How can the project manager ensure timely completion of the remaining tasks? >

What are the potential risks if the project continues to be over budget? >

Story 3 Execution ChatGPT

ID	Task	Start	Finish	PV	% Complete	EV	AC	
0	1	A	7/1/2024	7/2/2024	\$1,000	100%	\$1,000	\$1,200.00
1	2	B	7/3/2024	7/7/2024	\$1,000	100%	\$1,000	\$1,000.00
2	3	C	7/8/2024	7/8/2024	\$1,000	100%	\$1,000	\$1,000.00
3	4	D	7/9/2024	7/9/2024	\$1,000	100%	\$1,000	\$900.00
4	5	E	7/10/2024	7/10/2024	\$1,000	75%	\$750	\$1,500.00

Let's sum up the values for EV, AC, and PV.

- Total EV = \$1,000 + \$1,000 + \$1,000 + \$1,000 + \$750 = \$4,750
- Total AC = \$1,200 + \$1,000 + \$1,000 + \$900 + \$1,500 = \$5,600
- Total PV = \$1,000 + \$1,000 + \$1,000 + \$1,000 + \$1,000 = \$5,000

Now we can calculate:

- Total Cost Variance (CV) = Total EV - Total AC = \$4,750 - \$5,600 = -\$850
- Total Schedule Variance (SV) = Total EV - Total PV = \$4,750 - \$5,000 = -\$250

So, the total Cost Variance (CV) is -\$850, and the total Schedule Variance (SV) is -\$250.

Daily limitation on data analysis factored in here, causing the limitation of 5 tasks at once

Story 3 Execution ChatGPT

Prompt: “If my project status uses traffic light system where a positive CV and SV means green, a CV and SV up to -5% is Yellow, and below – 5% is red, would the CV and SV of the project be green, yellow or red?”

If my project status uses a traffic light system where a positive CV and SV means green, a CV and SV of up to -5% is yellow, and below -5% is red, would the CV and SV of the project be green, yellow, or red?

To determine the status of the project using the traffic light system, we need to calculate the percentage deviation for Cost Variance (CV) and Schedule Variance (SV) relative to the Planned Value (PV).

The formulas for the percentage deviations are:

- **Cost Variance Percentage (CV%):** $CV\% = \left(\frac{CV}{PV}\right) \times 100$
- **Schedule Variance Percentage (SV%):** $SV\% = \left(\frac{SV}{PV}\right) \times 100$

From the previous calculations:

- Total CV = -\$850
- Total SV = -\$250
- Total PV = \$5,000

Now, we calculate the percentage deviations:

- **CV%:** $CV\% = \left(\frac{-850}{5000}\right) \times 100 \approx -17\%$
- **SV%:** $SV\% = \left(\frac{-250}{5000}\right) \times 100 = -5\%$

Using the traffic light system criteria:

- **Green:** CV and SV are positive
- **Yellow:** CV and SV are up to -5%
- **Red:** CV and SV are below -5%

For this project:

- **CV% is -17%**, which is below -5%, so the CV status is **red**.
- **SV% is -5%**, which is within the up to -5% range, so the SV status is **yellow**.

Thus, based on the traffic light system, the project status is:

- **CV: Red**
- **SV: Yellow**



Story 3 Execution ChatGPT – Table with Color Codes

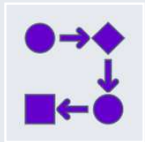
Task ID	Task	PV (\$)	% Complete	EV (\$)	AC (\$)	CV (\$)	SV (\$)	CV%	SV%	CV Status	SV Status
1	A (●)	1,000	100%	1,000	1,200	-200	0	-20%	0%	Red	Green
2	B (●)	1,000	100%	1,000	1,000	0	0	0%	0%	Green	Green
3	C (●)	1,000	100%	1,000	1,000	0	0	0%	0%	Green	Green
4	D (●)	1,000	100%	1,000	900	100	0	10%	0%	Green	Green
5	E (●)	1,000	75%	750	1,500	-750	-250	-75%	-25%	Red	Red
Total		5,000		4,750	5,600	-850	-250	-17%	-5%	Red	Yellow

Legend

- (Red): Tasks with a CV or SV percentage less than -5%
- (Yellow): Tasks with a CV or SV percentage up to -5%
- (Green): Tasks with positive CV and SV percentages



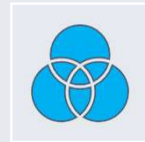
Main Takeaway Points



For all stories, acceptance criteria was met. We needed to make some prompt adjustments and use techniques like prompt chaining to break down the complex asks into more simple requests.



Infinity AI offers Sources and related topics to further explore.



Infinity AI is more aligned with PMBOK terminology and methodology.



ChatGPT was easier to use with file attachments and it did a good job interpreting Earned Value formulas. However, results may be more difficult to replicate for those using the free version – we quickly reached daily data analysis limits while working on Story 3. We also had to follow up to obtain insight on what sources it used to reach its conclusions.



PMI Infinity's answers were more suitable for our context as project managers, and the sources used were very helpful to trace back and confirm the answers.

Conclusions

Feature/Aspect	ChatGPT	PMI Infinity
Ease of Use	User-friendly with file attachments Interpreted Earned Value formulas well	Slightly complex interface Aligned with PMBOK terminology and methodology
Limitations	Free version has daily data analysis limits	Requires detailed input data
	Results may be hard to replicate	May not support all file formats
	Needed follow-up for source insights	Less intuitive for new users
Features	Provides quick responses	Offers sources and related topics for exploration
	Adapts to various project scenarios	Answers suitable for project managers
Benefits	Easy to integrate with existing workflows	Helpful for tracing back and confirming answers
	Can handle multiple prompts efficiently	Provides sources and related topics to explore
Results	Explanation of approach, calculation, and answers	Explanation of approach, calculation, and answers
	Acceptance criteria met	Acceptance criteria met

Quiz



[Answer on menti.com](https://www.menti.com)

Questions

Questions?

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Thanks for Attending!

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