Scenario 3

Part 1

Scenario 3

Part 2

Your agency has a public facing website that traditionally serves an annual average of roughly 2 million visits per day.

The goal of the website is to have interactive and engaging features that draw visitors based on specific events. Because of this, there will be spikes in visits around specific events during the year. Unfortunately, there is no set schedule for when these spikes will occur or an estimate on how many anticipated visits there will be. However, the agency does want to see a steady increase in visits each year as a measure of their successful digital products.

Your agency has procured Amazon Web Services on a T&M basis. Look at the printed graph at your table. This graph compares the previous month (orange) to this month (blue) in traffic on a month to month basis. The numbers on the vertical axis represent how many people visited the site each day.

**Discussion Question: What can you conclude from the data presented in this chart?**

What the chart demonstrates is that the actual visits on a day to day basis are around 1 million, but there was an event in November that drew a peak of up to almost 3 million.

**Discussion Question: As a CO, if you projected that there would be an average of 2 million visits per day, are you safe in keeping this projection based on this chart? What should you do if October and November showed 3.5 million visitors per day?**

Scenario 3

Part 3a

Scenario 3

Part 3b

The current chart shows that, in general, the site traffic is below the average of 2 million visits per day for the majority of the two months shown.

If October and November had 3.5 million visits per day, then there may be more people visiting the site than planned. We would need to research why this was occurring and determine: 1) if there was an event that spiked the traffic during this one instance, and the levels were expected to return to 1 million in December; or 2) if there is something released or the new event was so significant that we expect traffic to continually be at the new 3.5 million visits per day.

For example 2, think about the HHS website prior to and after Healthcare.gov. In this example, the CO should increase provisions of the site.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Month** | **Start** | **Stop** | **T&M Ceiling** | **Forecast Plan** | **Actual Costs** | **Total Costs** | **Cost % to Ceiling** |
| 5 | 20-Sep | 19-Oct | $925,000 | $53,000 | $52,758 | $257,650 | 27% |
| 6 | 20-Oct | 19-Nov | $925,000 | $56,000 | $70,000 | $327,650 | 35% |
| 7 | 20-Nov | 19-Dec | $925,000 | $59,000 | $53,000 | $380,650 | 41% |

Examine the table above. Notice the T&M ceiling for a 12-month period of performance. Then, compare the forecasted plan with the actual costs of the service over months 5-7 of a 12-month POP.

**Discussion Question: If we are in month 7, what is your general sense of how the contract will perform (actual costs over a 12-month period) in comparison to the ceiling?**

Scenario 3

Part 4

Scenario 3

Part 5

This contract’s current actual costs are lower than anticipated in Months 5 and 7, but higher than anticipated in Month 6 (due to the spike in site visits shown in the previous chart). In general, the cost % to ceiling is lower than anticipated, as 58.33% of the POP has passed. The CO should consider the likelihood that other spikes will occur during the remaining five months of the POP, but it appears that no change to the ceiling would be necessary.

**Discussion Question: You are planning for the next year of the contract using this year’s data as a baseline. Assuming a 15% increase in site visits, what recommendations would you provide related to increasing or decreasing the current ceiling? What additional information would be helpful to determine this?**

With cloud, you should look at the number of daily visits over the course of an entire year and average out what is needed each month. The cost % to ceiling column in the table on Scenario 3, Part 4 is key as it shows that actual costs are running low on this contract, which may indicate that increasing the ceiling may not be needed to accommodate the 15% increase in site visits.

More analysis on the historical frequency and severity of spikes would also be interesting to the extent that history can be considered a predictor of the future.

Scenario 5

Part 1

Scenario 5

Part 2

Your team is working on an agile project that uses Kanban to track the team’s progress on user stories. One of the metrics you use to measure the team’s progress is cycle time (how long it takes for a user story to move through the entire process to be ready for production). The tables below show data from August 2013 (the beginning of the project) and May 2015.

Aug.

2013

May

2015

**Discussion Questions: In May 2015, is your team doing well? How can you tell?**







Yes, your team is doing well. The target cycle time for a user story has decreased from 22 days to 18 days. This likely indicates that your team has become more efficient, which is an outcome of a successful agile process. Note, that it could also mean that your team has more carefully or consistently scoped user stories.

In Kanban, it is a best practice to structure your user stories according to whether they are small, medium, or large based on the amount of time needed to complete them.

**Discussion Question: If your team did not group the user story cards, what could happen? If you have more user stories in the large group, what could you do to help them take less time?**

Scenario 5

Part 3

Scenario 5

Part 4

If you do not separate your user stories into small/medium/large groups, some user story cards will move quickly through the cycle while others will take a lot longer. It may also be harder to anticipate the amount of time needed left to complete the work.

If you have many large user story cards, one thing you can do is break them up into smaller, individual cards. This will move them more quickly through the cycle and help make the user story cards feel less daunting.

**Discussion Question: What other metric should be tracked along with the cycle time metric to know you’re getting quality product?**

Production bug rates is the other metric to use along with cycle time. In this example, bug rates in 2013 were 35% and in 2015, they were at 10%. This means as the team got faster, they also got better at delivering product. If the rates were reversed and the bug rates were getting larger as the cycle time was reduced, this is a clear indication of a problem with the agile process.

In this situation, possible causes of the bug rate increase could be: 1) not enough team members, 2) they lack in necessary skills, or 3) there are too many user stories in the backlog and they are putting pressure on the team to complete them faster, which leads to bugs.