05 Task Performance 1

Software Engineering 2

Instructor:

Ms. Brenda Roxanne Besedillas

Submitted By:

Brandez, Dianne Chrystalin

Date:

6 December 2022

Task Performance
Billing System

Objective:

At the end of the exercise, the students should be able to:

- Describe the activities involved in system implementation and deployment

Software Requirements:

- MS Word
- MS PowerPoint

Instruction:

1. Read the case study entitled "Hudsonbanc Billing System Upgrade" below.

   Two regional banks with similar geographic territories merged to form HudsonBanc. Both banks had credit card operations and operated billing systems that had been internally developed and upgraded over three decades. The systems performed similar functions, and both operated primarily in batch mode on mainframe computers. Merging the two billing systems was identified as a high-priority cost-saving measure. HudsonBanc initiated a project to investigate how to merge the two billing systems. Upgrading either system was quickly ruled out because the existing technology was considered old, and the costs of upgrading the system were estimated to be too high. HudsonBanc decided that a new component-based, Web-oriented system should be built or purchased. Management preferred the purchase option because it was assumed that a purchased system could be brought online more quickly and cheaply. An RFP (request for proposal) was prepared, many responses were received, and after months of business modeling and requirements activities, a vendor was chosen. Hardware for the new system was installed in early January. The software was installed the following week, and a random sample of 10 percent of the customer accounts was copied to the new system. The new system was operated in parallel with the old systems for two months. To save costs involved with complete duplication, the new system computed but didn't print billing statements. Payments were entered into both systems and used to update parallel customer account databases. Duplicate account records were checked manually to ensure that they were the same. After the second test billing cycle, the new system was declared ready for operation. All customer accounts were migrated to the new system in mid-April. The old systems were turned off on May 1, and the new system took over the operation. Problems occurred almost immediately. The system was unable to handle the greatly increased volume of transactions. Data entry and customer Web access slowed to a crawl, and payments were soon backed up by several weeks. The system wasn't handling certain types of transactions correctly (e.g., charge corrections and credits for overpayment). Manual inspection of the recently migrated account records showed errors in approximately 50,000 accounts. It took almost six weeks to adjust the incorrect accounts and update functions to handle all transaction types correctly. On June 20, the company attempted to print billing statements for the 50,000 corrected customer accounts. The system refused to print any information for transactions more than 30 days old. A panicked consultation with the vendor concluded that fixing the 30-day restriction would require more than a month of work and testing. It was also concluded that manual entry of account adjustments followed by billing within 30 days was the fastest and least risky way to solve the immediate problem. Clearing the backlog took two months. During that time, many incorrect bills were mailed. Customer support telephone lines were continually overloaded. Twenty-five people were reassigned from other operational areas, and additional phone lines were added to provide sufficient customer support capacity. System development personnel were reassigned to IS operations for up to three months to assist in clearing the billing backlog. Federal and state regulatory authorities stepped in to investigate the problems. HudsonBanc agreed to allow customers to spread payments for late bills over three months without interest charges. Setting up the payment arrangements further aggravated the backlog and staffing problems.

2. Answer the following questions. Place your answers in MS Word.

    a. What type of installation did HudsonBanc use for its new system? Was it an appropriate choice?
    b. How could the operational problems have been avoided?

3. Create a PowerPoint presentation about it.

4. Present your output in class.

GRADING RUBRIC:

Criteria	21–25	16–20	11–15	6–10	1–5	Score
Content	Content is accurate, and information is presented in a logical order.	Content is accurate; some information is not presented in a logical order but is still generally easy to follow.	Content is accurate, but the information is not presented in a logical order, making it difficult to follow.	Content is questionable, and information is not presented in a logical order, making it difficult to follow.	Content is inaccurate, and information is not presented in a logical order, making it difficult to follow.	/25
Slide Creation	The presentation flows well and logically, reflects an extensive use of tools in a creative way, and has the correct number of slides.	The presentation flows well; tools are used correctly; the number of slides is correct; overall presentation is interesting.	The presentation flows well; some tools are used to show acceptable understanding; the number of slides is correct.	The presentation is unorganized; tools are not used in a relevant manner; the number of slides is lacking.	The presentation has no flow; there are no tools used; the number of slides is insufficient.	/25
Delivery	Good volume and energy; proper pace and diction; avoidance of distracting gestures.	Good volume and energy; good pace and diction; few or no distracting gestures.	Adequate volume and energy; generally good pace and diction; few or no distracting gestures	More volume/energy needed at times; pace too slow or fast; some distracting gesture or posture	Low volume or energy; pace too slow or fast; poor diction; distracting gesture or posture	/25
Images & Layout	Images are appropriate; the layout is pleasing to the eyes.	Images are appropriate; the layout is cluttered.	Most images are appropriate.	Images are inappropriate.	No images used.	/25
Total						**/100**

a. What type of installation did HudsonBanc use for its new system? Was it an appropriate choice?

Based on the case study, the deployment method that HudsonBank used for its system is the Parallel Deployment because the new system that was purchased was operated in parallel with the old system for two months as several changes were made. I believe this was not the appropriate choice due to the fact that there are two existing old system involved, which is one on each regional bank before they were merged to form HudsonBanc. Therefore, using the parallel deployment was not the optimal choice in this case since despite being similar systems, they have different processes and modules which should've been considered first before deciding to go shutdown the old system. Parallel Deployment is not a bad deployment method but in this case, the management failed to consider the fact that the two old system has a different process and cannot be easily combined into one to take over all immediately.

b. How could the operational problems have been avoided?

The management failed to consider two things, one is that there are two old and different system which cannot be replaced easily with one new system due to the difference in their structure and process, and the fact that combining two banks would mean more users will be using the system. If I were part of the management team I would do things differently compared to how they handled it.

First is in regards to solving the first problem, which is that there are two different old systems. Despite the fact that they are similar systems used for banking processes, it is still significantly different, which we must consider if we want to combine them into one new system. Instead of a purchasing a system and deploying it through Parallel Deployment, I will decide to build a new system instead and use the Phased Deployment. Now why a Phased Deployment? Because through Phased Deployment, we install the new system step by step, meaning we gradually add each module or phase of the system before the old system is removed and the new system takes place. This is the more ideal deployment method because we have two old and different system, we can focus first on replacing and taking over the first system and once we conducted significant amount of tests, we can shutdown the first old system and let our new system take place. Once we ensured there are no existing problems, we can continue with the development for the second old system's operations while the new system is running in parallel replacing the first old system. After conducting a significant and successful amount of tests as the new system is also developing to replace the second old system's operation, we can start deploying the second phase of the new system which was designed to replace the second old system. Once it is deemed to be error free, we can now shut down the second old system to ensure smooth transitions but before the second old system is shut down, this brings us to my solution of the second problem I have mentioned.

The second problem is that the management team failed to realize that merging two banks will mean more users. Before we can use the new system to successfully replace both systems, there should be a stress testing conducted. Through this, we will test the system if it can handle more users than their old system counterparts. We should be able to stress test the system that it can cater to the average users of both old systems combined. Through this we can ensure that before we deploy the new system, it will not slow down or crash down due the heavy traffic of users.

In conclusion, a lot of the operational problems could have been avoided with proper planning, testing, and deployment method. I believe it is better to spend a little more on the preparation and development of the system earlier rather than incurring the heavy costing of the consequences of a failed system later on.