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Case Study 1

1.)

Butler University decided to adopt an alternative system for handling their phone traffic based on several issues they had with SBC's Centrex phone service system. While the system had provided dependable service for years, it lacked modern features and flexibility. Most of the faculty and staff had single-line analog phones, which had no call waiting (intelligent call queuing), call rerouting, or caller ID. The single-line analog phones had to be physically rerouted by a service technician in order to change numbers. Thus, "as departments grew and personnel changed, moving phones and phone lines was a labor intensive process" (Book 144). The University also had no way of transmitting a campus-wide alert in the case of a time sensitive emergency. The old system caused inconveniences for students as well. For instance, "voicemail was provided by a Centigram 640 system that provided a single voice mailbox to each dorm room" (Book 144), so students had to share phone numbers and potentially personal messages with other students with access to their dorm room. On top of all the inconveniences the system provided, the Butler had frequent issues with SBC's billing system, which “required constant reconciliation efforts by Butler’s telecom coordinator," (Book 144). Thus, Butler formulated a list of requirements that they needed from a new phone service system. Improved handling of callers to high-volume call areas around campus. Improved communications with and among the student body, as well as the allotment of individual voice mailboxes. Modern features like Multi-line calling and Caller ID, and finally, to provide more immediate access to Butler personnel and stay competitive with peer institutions.

2.)

In March of 2004, Butler formed a Telephony Evaluation Team to begin researching alternative phone service systems. The research team quickly hired the Dietrich Lockard Group, as consultants on the project to help decide what type of system would best meet Butler's requirements. The IT department accompanied the new consultants to an IT conference, SUPERCOMM, in order to get a feel for the type of technology and options available to them. The consultant group then surveyed the faculty, staff, and students of the University and discovered that a great deal of the school was indeed displeased with the current system. Butler's IT department continued to work with the consultant group and, through cost-benefit analysis, narrowed the University's options down to 3 final alternative systems. First, Butler could continue with SBCs phone service under the original arrangement. Second, they can continue with SBCs phone services, but add a 50-seat IP-phone system for a small number of offices. Finally, the University can decide to implement a new VoIP PBX phone service in-house, using equipment from one of three possible network companies. Based on Butler's needs, and the cost-benefit analysis provided by the consulting firm, the IT department opted to implement their own in-house VoIP network using Cisco technologies. The IT department then continued to work together with Cisco and SBC to begin the long process of combining the entire campuses phone and internet data traffic onto one network. The IT department is then responsible for the continued upkeep and maintenance that goes into keeping the entire system working once the whole thing is set up, as well as encouraging users to adopt and enthusiastically learn and use this new system campus-wide.

3.)

The pilot program's overall objective was to "gain 'buy-in' from the user community" (Book 153) of Butler University. In other words, before the entire campus switched systems and people were forced to adopt a new type of interface, the IT department wanted users to be enthusiastic about learning the new system. Before the full scale implementation of the VoIP phone service, 40 VoIP phones were issued to certain high call-volume users, like high-level secretarial staff. Over the next three weeks, those users were able to test the features of the new phones and help the IT department to fine-tune any issues they may have with the new technology. As the 40 users of the new phones continued to use them, the hope was that their enthusiasm for the new technology would spread within their departments, thus gaining 'buy-in' with the user community. Some of the surveyed faculty and staff were apprehensive over the capabilities of the new phones. The fact that the volume and length of calls could be analyzed raised concerns that staff may be monitored more closely. Several problems occurred during the implementation of the pilot program that affected the overall progress of Butler’s system change. The IT department referred to one week during this process as 'the week from hell'. There was a software issue in the new system, and each multiline phone had to be manually registered consecutively by their MAC address. Telephony servers began behaving abnormally, and the server vendors decided to rebuild or replace every unit. 2000 student phone numbers were still lost in the transition process from SBC to Butler. Butler's food service and Bookstore offices surprisingly had no previous Ethernet wiring. On top of all this, the SBC service representative who had been working with Butler for 4 years abruptly resigned, and the husband of Butler's telecommunications coordinator was gagged, bound, and robbed at gunpoint!

4.)

Yes, I think that Butler made the right decision concerning their transition from SBC phone services to an in-house VoIP network. In the short term, the University may have several inconveniences in adopting a new system, and taking on a larger amount of responsibility for maintaining that system. In the long term, however, Butler will now have much more control and flexibility with their own phone system. Additions and changes to department locations or personnel will no longer require visits from phone technicians to reroute the phone lines. When faculty or staff moves offices, their number will simply follow the IP address associated with their phones. Students won't have to share voice mailboxes with their dorm mates, and will have a much more convenient way of reaching the staff and faculty of the University thanks to an online directory for the school which can be updated in real time. Altogether, their transition was a bit more costly than it would have been to simply remain with SBC phone service, but the overall benefits that the new system will provide are more than adequate.