Information Technology 2018-2019

The Information Technology Department (IT) is responsible for ensuring that all computer, network, phone, email, and related services are up and running at all times. In our modern age of internet connectivity this is a critical component of any organization. Communication channels depend on email being available 24/7 and indeed our society at large has come to expect this kind of "always on" service.

Our IT Department believes it is not enough to just have these services available to use, they must be of sufficient capacity levels to insure that staff, faculty and students can perform their respective duties quickly and efficiently within the constraints of budget and human resources.

The department has two full time staff members (2 fte). These two individuals replace, replenish and update all computer hardware, laptops and desktops, update software, and act as helpdesk support for the organization. All network related functions are either directly run or contracted by this department for example servers, network wiring, the switching, phones, printing, etc. We may contract for switch programming which is usually a specialized skill.

The Director is responsible for budget oversight, directing daily workloads, long range planning for department and college needs which is facilitated by being a member of the Leadership team. Since there are only two of us the Director works closely with the staff to provide desktop support for staff and students, deploy phones, setup new accounts and coordinate contracted work.

Currently the department has an IT Coordinator position that assists with website upgrades, switch troubleshooting and programming, desktop support for staff and students and deploying upgrades to labs, student available equipment and network troubleshooting. Much of the student email account creation while automated does take time and this position does most of that.

The person in this position has tendered her resignation and part of the reason is that she is underpaid and does not feel utilized to her potential. My dilemma has and is that people need someone to call for help and we have a constant need to upgrade laptops, computers and deploy equipment for new users.

The truth is that we do not have a large need to specialized people and that need can be met by contractors. In fact our departing Coordinator is going back to being a contractor and has suggested she could fill the role for us as well.

In doing a careful review of our needs it appears to me and all I have asked that we really need on the ground helpdesk support. Due to our size contracting the helpdesk is too limiting to meet our needs and therefore is not cost effective. We will advertise for a helpdesk support position as quickly as possible to meet the needs of our staff, faculty, and students.

2/13/2020

This coming year will see a large increase in the need to Audio Visual implementation and support. The college is looking to incorporate Zoom into classrooms to make more types of classes available to a broader audience. This will require some creative thinking to meet this new demand. Some colleges have spent large amounts of money to make or setup rooms to handle this kind of two way delivery. What we have found so far is that no "one size" fits all. We have developed a plan and will have to adjust as we move forward to see what works best for our organization.

Two Factor Authentication has become the next big answer for security. We are looking to implement such a solution but this is a challenge as we have many standalone systems and logins that have to be standardized.
Service Area Outcomes (SAO) for our department change on a yearly basis in response to the college needs.

2017-2018 SAOs
      Upgrade classroom technology
      Evaluate and update software and equipment
      Put out RFP for new phone system
Our projects are measured by completion and whether they do the job and customer satisfaction with what has been supplied. We try to quantify this with surveys and results.

Our classroom upgrade consisted of installing interactive projectors in all of the classrooms. We tested one and let people try it out. We then started installing in classrooms one at a time. Faculty got so excited they wanted them in all of the classrooms. The student reaction was unexpected, they wondered what took us so long to implement something they were used to seeing their entire school career.

All computers, servers and network equipment is upgraded and replaced on a schedule. Sometime the schedule doesn't account for unexpected hardware failure but we have maintenance agreements on critical systems or hot spares (a unit that is setup to do the same function but is only used if needed) wherever we can. Software is a constant issue as it goes end of life on a regular cycle and many times the hardware that supports it is then forced to be refreshed as well. Hence the refreshment cycle on hardware.

Sometimes we have the best of intentions with very unexpected results. This happened with our phone system RFP. This was an example of software dictating hardware replacement but we started the process ahead of a forced replacement. We put out an RFP and nearly all were for hosted systems. These were too expensive on a monthly basis and our topography makes outages just common enough to create a reliability problem. By having an in house solution we can communicate with in the building even if external connectivity is broken.

We went out for RFP again and specified an internal system. Prices were outside of our budget but a sister college told us of their solution so we chose to pursue that option. This brings us to the next year of 2018-2019.

2/13/2020

2018-2019

       Phone system upgrade
       Upgrade Servers
       Single Sign On (SSO)
       Security Assessment
       Website refresh

The phone system has been completely replaced and should fill our needs for at least the next five years. It is an open source system so we can upgrade as we require new features or feel the hardware is wearing out. A bonus with the new system is the ability to do emergency broadcasts that actually works!

To facilitate upgrading servers I bought two to start moving off of our oldest servers that were running critical loads. One is to facilitate and move to Jenzabar One which is the newest version of our ERP software. This server allows for remote login which greatly reduces the time it takes us to deploy quarterly upgrades to our ERP software. The other server is to be deployed this year as our new Active Directory Server. Once that is complete we can move forward with the single sign on project which I will address next.

Multi-factor authentication is now the way many organizations are trying to combat cyber criminals. Moving to this is not feasible when a person has to log in to several different systems with a different password for each. To try to solve both problems for both staff and students, I include faculty with staff, we need not only Single Sign on but identity management as well. To this end we are building a new Active Directory (A.D.) server and system that will now include students. The A.D. system will determine the roles for each person who logs in then they can use the multi-factor authentication to log in to multiple systems. We are in the process of implementing this solution at the writing of this document.

We are working with our firewall company to apply patches to make sure they are not vulnerable. We have been working with a company called KnowBe4 to set up training for employees about how to avoid phishing emails. That is still deemed the number one method for attackers to breach a system. We will continue to monitor and apply fixes as needed in our continued fight against cyber criminals. The ongoing fight will include all methods and best practices to secure our network, organization and people.

It has been a few years now since we hired a firm to build our new website and it is time for it to be refreshed. Now that we have a marketing person and a person in the IT department who understands websites we are working to update both the backend software it runs on and the front facing look. We have implemented software to insure the website is accessible and ADA compliant. We have a new eCatalog software which will be linked to pertinent areas of our website to allow for searching and make more information not only available but more accurate.

2/13/2020

2019-2020

The IT Coordinator is leaving in October which leaves the department with the question of what do we need for staffing? It is becoming more and more apparent that we need help desk and hardware support.

Technology has advanced to the point where it is more feasible to contract for specific specialty services than to hire it done in house when your organization is a small as ours. We now have hosted email, hosted eCatalog, hosted Learning Management System, Policy site and hosted Website. While we do some management on each system the day to day maintenance is part of the contract.

Desktop and laptop refreshes are done each year to keep them from being too large of a burden for both the physical replacement and the budget expenditure. We are hiring new faculty who will require equipment to do their jobs which will need to be purchased, setup and deployed. The final Windows 7 machines must be replaced with computers capable of running Windows 10.

One of our strategic projects is to assist Student Services with a way to text students. Our new ERP has the capability to send texts to students with the right service. We have the service identified which we plan to use then the extraction of student populations must be done. These extractions must be setup so they are easy to use for those identified to send the messages for them to be effective.

We will continue to work with faculty to support their efforts to more fully engage a wider range of students with visual aids. The projectors we installed have many more capabilities to interact with students but faculty must be made aware of the capabilities then shown how to take advantage of those capabilities.