IT Centralization at CWRU: The Path from IT to [U]Tech

WHAT'S SO GOOD ABOUT CENTRALIZATION?

DISCOVERING THE VALUE

The benefits of centralization are many, and can be roughly categorized under the following headings:

- **MANAGEMENT AND REDUCTION OF RISK**

- **INFORMATION SECURITY, BUSINESS CONTINUITY AND DISASTER RECOVERY**

- **IMPROVED IT EXPERIENCE**

- **OPTIMIZATION OF INVESTMENTS**

- **PROFESSIONAL GROWTH & STAFF DEVELOPMENT**

A few highlights of this massive effort are worthy of putting front and center. By centralizing, UTech reallocated $1,590,350, between 2016 and 2018, and this was just what could be easily tracked at the time. Of this, $1,256,150 was recurring and $336,200 was one-time. With these re-allocated resources, UTech has been able to do much more without adding resources. The following list represents some of the larger projects implemented as a result of this re-allocated resources:

Development and implementation of Spartan Answers Personal Assistant
Staffing of Salesforce Customer Relationship Management (CRM) system
Purchase and pilot of Enterprise Data Lake
Implementation of new UTech Staff Mentoring Program
Expansion of university-wide IT professional development
Formation of HoloLens support group
Formation of HEC support group
Expansion of Google Suite support group
Development of Faculty Information System
Licensing of Enterprise PC Back-up

network is positively reflected in the decrease of network-based attack successes and permitting the Security Fusion Center team to focus more on cloud-based attacks on users.

- A research computing service was initiated to provide up to 400 new virtual machines (VM) for no-cost faculty use, significantly reducing the need for faculty to purchase and administer servers for research purposes. This new option also hosts faculty-administered research servers that are currently located throughout campus, leading to an additional reduction in the university's carbon footprint and

with UTech, the administrators were satisfied with results as new budget systems and reporting systems are put into place. This effort demanded a tremendous amount of collaboration and trust, and will go a long way to improve many users' interactions with various datasets. It will also provide a fluid method for sharing appropriate data between different management centers.

INFORMATION SECURITY, BUSINESS CONTINUITY AND DISASTER RECOVERY

- While noted in the 2015 REN-ISAC and the 2016 Security Program Review as chronically under-resourced, the Information Security Office was able to implement a Security Fusion Center, an operational monitoring capability, to support the increased size of UTech overall service footprint. These resources, primarily in staffing, were sourced by minor growth and re-purposed IT staffing within the overall UTech team. Notably, most of the new hires to the Information Security Office over this timeframe were from in-house talent, which is now being developed with security training and certifications.

- The Information Security team was able to re-purpose some UTech resource savings to apply to activities to develop the first full IT Business Continuity Plan (BCP) in 2017. Having completed the BCP, a rework of the Disaster Recovery Plan was started to account for the influx of new IT staff under a centralized UTech organization. The process of training a new cohort of IT leaders in the skills and processes needed for high-intensity IT operations is underway, something which was neither feasible nor available to IT staff outside of the infrastructure management teams. This is an important set of skills and leadership development needed for both the university and for the next generation of IT leaders.

IMPROVED IT EXPERIENCE

- UTech created a brand-new HoloLens support model leveraging existing staff, a model which also reached to the fine arts program by supporting HoloLens dance performances. This innovation led to the creation of a HoloAnatomy curriculum for use in the medical school.

- The School of Engineering's Virtual Desktop Initiative (VDI) Engineers were able to combine forces in support of

- The School of Dental Medicine (SODM) created and funded an Analytics position intended to focus primarily on SODM but established as a UTech employee and as such, is able to help establish the enterprise-wide Analytics group.

- UTech has launched the implementation of the Salesforce platform to improve the methods of student engagement as well as providing a consistent, effective enterprise relationship management platform for the university. This project will focus first on the Student Success Initiative and university marketing team. The student success navigators currently use multiple separate and distinct systems to support their student needs, and with this project that conglomeration will be reduced to one modern, intuitive platform with greatly increased functionality. Current communications efforts are carried out across campus without any insight on the effectiveness, or a total view of how many times the community is contacted by the various entities. This platform will greatly improve the ability of the university to gain insight into the effectiveness of marketing and comm .9 (a) 9.2 (s.6 (m) -4.61.7 2.3 ( ).9 (t) -4.) -

supporting email and identity management as add-on assignments continued. As the number of services grew, it became too much for the small group to support. The amount of services Google offered became a whole suite of products, and it became apparent that the service model needed to shift to a model encompassing subject matter experts. G-Suite support of the larger product offerings was expanded by reallocating headcount and scaling up to 33 people contributing to 13 different service areas. This allows the people with expertise to create a better customer experience with service excellence, while not overloading any one person. All of this became possible to implement through the centralization of UTech, as this allowed for a bigger pool of experts from which to select.

- Canvas Learning Management System (LMS) became the single LMS for the entire university, through cooperative effort by UTech Teaching and Learning Technologies staff and UTech centralized staff

to improve the learning experience. The additional benefit to streaming is that the students no longer need to install, configure, or update the software themselves. Students simply log into the web portal and launch the software package of the appropriate version and functionality that the Professor is already familiar with, reducing any potential discrepancies in the learning environment. This classroom need was met within hours and at no additional cost to the students or department.

- During the transition to UTech, two of three staff members supporting Ellucian's Advance and iModules applications moved to other positions. After hiring a service manager for the area, to support the remaining developer, the team will be built out further to support the University Relations and Development division. This is modeled after the ERP areas. Through the team building effort, the Advancement team developed a road map for the applications assuring ongoing support from the vendor and a clear strategic direction toward needed functionality.

- After looking for a new system for over five years, UTech staff supporting the medical school Faculty Information System worked together to create an entirely new enterprise Faculty Information System. Phase 1 was implemented and well-received by the clients.

- Three siloed event/space management systems were merged into one to serve the whole enterprise, eliminating EMS and ASTRA, and improving the user experience campus-wide. UTech consulted with the Office of Student Affairs in the implementation of Campus Groups to replace OrgSync and integrate with this unified event management system, thereby reducing redundancy and providing a much-improved feature set and mobile interface.

- The CWRU web hosting transition required teamwork from UTech. Existing web development staff in these groups worked with University Media & Communications (UMC) to complete the transition to Drupal.

- Centralization has allowed UTech to better serve academic units in identifying and supporting online learning initiatives. Greater collaboration between the schools and UTech is helping to promote a university-wide strategic plan for online learning.

- A Support Group for a large new health education campus facility was established that utilizes UTech staff from the medical, nursing and dental schools, and the Help Desk to create a unified support model. Centralization is helping to ensure that faculty, students, and staff are trained on academic technologies before the move so everyone was ready to successfully transition into the new campus.

- The UTech Service Management area collaborated with many different divisions throughout UTech and the campus to improve the online printing program called WEPA. To enhance the technology, UTech coordinated the replacement of printers in all of the WEPA kiosks across campus. In addition, UTech cross-trained the Desk Side support team to handle common WEPA issues. Also, WEPA alerts are now also being sent to the help desk email address and being assigned to the proper representative to handle the printer issue. WEPA signage is being redesigned to clearly promote how to get assistance with WEPA issues.

- A new central print server is up and running and serving all of the faculty and staff printers for the Law School. Also, several other schools have access and are beginning to set up printers. Historically each school, unit, or department, of the University had to manage its own printing. Many areas set up their own print servers, leading to a great deal of duplication of effort. Others set up direct connections from printers to each individual computer, a time-consuming prospect. When a printer changed, each impacted computer had to be touched. Across all of campus printing, there was no centralized monitoring, reporting, or support. When printing-related calls came into the service desk, the analyst typically did not have the access or scripts to handle the issue. Often it was even difficult to determine who managed printing for that area and appropriately route the ticket. The campus faculty and staff print server frees system administrators from each area from having to run and monitor individual print servers. It allows for a much more efficient management of printing for areas that did not have a print server in the first place. Finally, support can be much more effective, as the service desk and desk side services now have the training, documentation, access, and insight to handle campus-wide printing issues.

- Several managers whose areas were geographically close to one another on campus recognized that they could combine forces and help each other now that they were all on the same team. They created and implemented the "Zone Support System" in which any of the teams could respond to service requests from that shared physical area (North Quad) of campus. This innovation provided a deeper bench for support staff, lessening the possibility that there would be no team member available to respond and also providing consistent increased depth on the bench by joining forces.

OPTIMIZATION OF INVESTMENTS

- The UTech Director of IT at the Law School was able to add on the responsibilities of a suddenly vacant Director of IT position at The College of Arts and Sciences (CAS), saving in salaries and fringe benefits. By taking on the support and management of IT for the College of Arts & Sciences, with a faculty, staff & student population of 2,125, in addition to his pre-existing role with the Law School, this individual effectively supported both schools, cutting technology leadership personnel in half to both schools while also providing strategic planning and guidance to the senior leadership.

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- MediaVision and the Weatherhead School of Management's (WSOM) AV Team collaborated on a HuddleCam pilot project. The WSOM Classroom Technology and Facilities Department were seeking an alternative solution to using freelance and/or student videographers for recording classes. After testing and piloting, it was determined that the HuddleCam was in fact a viable solution to expensive external contracted employees.

- In a similar example, MediaVision staff (formerly decentralized)

supplying operational support and maintenance for the University's 100+ UGEN classrooms. The savings were immediate and breakdown as follows:

Building	Previous Cost	New Cost	Annual Savings
TVUC	$36,000	$15,214	**$20,786**
MPAC	$56,311	$25,848	**$30,464**

- A cross-campus UTech committee collaborated to develop endpoint standardization to provide quicker delivery of desktops, laptops and tablets to administrative users. By crafting a system that

Weatherhead will no longer have to spend approximately $25K per year in licensing costs specific to their old infrastructure and they are also escaping the need to refresh their old hardware.

- Before centralization, the WSOM AV team used an aging editing system for modifying videos. Leveraging the licensing, expertise and infrastructure in place at MediaVision allowed for upgrading the WSOM to the current standard.

of support while at the same time lowering annual costs. This creative change saves the university $50k/year over the current contract and $130k/year over the next five years. This is a great example of creatively managing existing resources.

- As a result of scale and centralization, the practice of billing schools and faculty for physical servers co-located in data centers was ceased.

PROFESSIONAL GROWTH & STAFF DEVELOPMENT

- The commitment to IT staff professional development has greatly increased since centralizing. By leveraging combined training budgets and negotiating quantity discounts, UTech has been able to send staff to approximately 260 sessions at Weatherhead Executive Education since 2016, and saved significantly on technical online training courses provided through New Horizons. UTech also had 15 staff participate in Weatherhead's Leadership Lab for Women in STEM, as well as 2 participants in the year-long Women's Staff Leadership Development Institute. Around 1046 individual trainings of one form or another have been consumed by UTech since centralization, plus there have been five all-staff trainings delivered.

- Making an investment to develop future leadership for the division, UTech sent every manager through a year-long training from the MOR Leaders Program. Going through this rigorous program as a group also helped cultivate relationships across the division and contributed to a new culture of "we." Approximately 40 people have received/are receiving this rigorous training.

- A unified strategic leadership group evolved with representation from all of the previous satellite IT shops and also the pre-existing core IT organization. Most of the members of this Strategy Group went through the aforementioned one-year MOR Leadership Development program. The group meets monthly to share resources/experiences/ideas across all schools, avoiding re-invention of the wheel for every new problem in every school and providing a Think Tank for creative problem solving and

innovation. The creation of this Think Tank showcases the newly created bonds and network within the new organization.

- An all-

drive gives access to the training materials to everyone across the division. Over time, additional templates are being added to the drive. This resulted in tremendous savings as well as common practices.

- Various Community of Interest groups, including a web management group, a strategy group, etc.,