This year, ITS had the pleasure of hosting over 150 CIOs and other technology leaders from the top 70 liberal arts colleges in the country for the annual CLAC Conference. The event featured two dynamic keynote speakers: Angel Mendez ’82, trustee and former Senior VP of Transformation at Cisco, and James Higa, who reported directly to Steve Jobs at Apple and NeXT for nearly three decades. James is also the parent of a current Lafayette student. Both speakers brought provocative perspectives from influential positions in the tech sector, and used the platform to deliver messages about collaboration, leadership, and organizational transformation. They also discussed the massive disruption that has occurred across multiple sectors of the economy and around the globe, raising questions about how we lead in such disruptive times.

After hearing each of them speak, I was left with a renewed sense of the strategic importance of IT in the ongoing national conversation about the future of higher education. But how can we ensure that we are serving our institutions appropriately as we navigate these changes? Are our IT organizations well-positioned to operate in this environment?

In order to answer these questions, we must develop more meaningful strategic collaborations with others beyond our campus. As a result, ITS is already building these relationships. Through our work locally with LVAIC, within Pennsylvania as part of the newly formed PCLA, or nationally with Internet2, we seek opportunities to not only participate in these types of consortia, but to lead them as well. As a result, Lafayette will be able to navigate the challenges ahead from a position of strength.

In the next several years, we will continue to see the transformation of Lafayette specifically and higher education more broadly. I am humbled and honored by the opportunity Lafayette has given me to play a role in that transformation.
This year ITS partnered with Assistant Professor of Civil Engineering Michael McGuire to implement a new, cutting edge LIDAR system and the infrastructure to support it. The LIDAR system is used to create three-dimensional scans of the physical world. These scans can then be used to make virtual models of the scanned environment. The initial setup included software licensing and server space to store terabytes worth of information. This setup in Professor McGuire’s lab enabled him to complete some preliminary research using these new tools. It also exposed this technology to students working in various engineering classes. Soon, other possible uses of the technology began to emerge.

What started as a small project request submitted to the IT governance process in the fall, eventually blossomed to include Engineering, Computer Science and Foreign Languages and Literatures. Professor McGuire, along with Professor of German Margarete Lamb-Faffelberger, and Assistant Professor of Computer Science Amir Sadovnik, were able to conceive of a collaboration that would leverage this capability in order to create a scan of the Bachmann Tavern in downtown Easton. This project also involved student programmers working with ITS staff to create a web front-end for the building scans. It is expected that the web platform will be accessible to students and researchers across the globe. The initial building scans were completed this summer and development of the web site will continue into the fall.

One of the longer term outcomes of this project will be establishing a new model for ITS to support faculty-led projects involving student programmers. We hope to be able to offer this service to faculty some time next year.

ADDITIONAL ACCOMPLISHMENTS IN THIS STRATEGIC AREA INCLUDE:

• Implementing a digital badge credentialing system in partnership with Foreign Languages and Literatures.

• Collaborating with Geology and Computer Science to maintain field applications developed for iOS.

• Partnering with professors and students from the Biology 490 Capstone course to provide poster design best-practices and semester-long critiques.

• Designing or upgrading 22 technology-enabled classrooms, including the Arts Campus, OCGE, Van Wickle 015, and Pardee 402.
As the College’s data management service begins to take root and grow, our data assets are improving in quality. With that improvement, it becomes more critical to develop the tools used to access and visualize those assets. While not yet complete, the new data warehouse and business intelligence architecture that is being designed and implemented for Development will drastically improve the College’s ability to turn our transactional data into meaningful key performance indicators, reports, and dashboards. Having instant, easy to understand access to this data will help department heads and division leaders learn more about trends in student success and retention, financial health, giving rates, and other important dimensions of the College.

This architecture includes two key components: a data warehouse, and a reporting capability. The data warehouse is a place where data from Banner can be combined with data from other external systems and sources. The resulting combination of data creates a whole new set of information that can be analyzed. It also creates a repository of historical data that allows the College to perform longitudinal analysis and comparison. This data transformation work involves partnerships with the Office of Institutional Research as well as various departments that collect data elements as part of business processes they oversee. With the data warehouse in place we can then overlay a reporting architecture. This technology provides quick and easy access to a number of visualization and reporting tools designed to show trends and conduct other analyses of the data in the warehouse.

As we conclude this pilot in 2015-16, it is our hope to expand this capability to other offices over the next several years.
Every year, the Office of General Counsel leads a paper-based, manual process to track and update the College’s compliance with various local, state, and federal regulations. This process documented the responsible party for each regulation, a brief summary of the regulation, a due date, and if/when we met compliance for a given year. It was cumbersome for both the staff in the Office of General Counsel as well as the individuals required to update the information collected as part of the process. This led to an IT project request, submitted last fall.

When the IT directors reviewed the request, we realized that there was a way to help improve the process using existing tools rather than purchasing and implementing a new system. As a result, IT and the staff in the Office of General Counsel came together to map out the desired workflow, leading to a fuller understanding of the process on both sides. With that in hand, ITS was able to develop an online workflow using our Qualtrics survey tool. This new web-based process captured and tracked all of the required information and enabled new capabilities for the staff in the Office of General Counsel as well. One improvement was to enable email notifications to individuals who are responsible for completing the work required to comply with each regulation. We also established a back-end report for the staff in the Office of General Counsel so they could see what was completed, by when, and what remained outstanding. This dramatically improved the process for everyone involved, and did so without adding to the complexity or cost of our IT application and infrastructure environment.

### ADDITIONAL ACCOMPLISHMENTS IN THIS STRATEGIC AREA INCLUDE:

- Developing a new trustee web site using Moodle to electronically distribute board materials.
- Implementing a housing information management system to manage our housing inventory.
- Implementing a web-based system for community service tracking and managing volunteer opportunities.
- Establishing a web community of practice to help site managers build and maintain web sites.
Lafayette and its peers have watched the rise of MOOCs and other forms of online education very closely. The critical question to consider was determining, how, if, or when such models might be relevant to a private, residential, liberal arts experience such as the one we offer. In an attempt to consider some of the answers to these questions, we piloted a program called Lafayette ConnectEd in January. This program attempted to find a place for these forms of instruction within the context of our mission and values. It established a non-credit bearing program that brought together Lafayette students on campus with alumni participating online across the globe. To support the program, partnerships were formed between faculty, EXCEL and thesis students, librarians, and instructional technologists. In addition to scheduled class time and online curated extra-curricular reading and support materials, each module featured live discussion sessions allowing traditional students and alumni to exchange ideas and debate concepts introduced in the course.

The pilot Lafayette ConnectEd program was conceived by President Byerly and included three, one-week sessions taught by the President, Assistant Professor of English and Associate Director of the College Writing Program Tim Laquintano, and Professor of Chemistry Chip Nataro. This year, we hope to assemble a group of faculty who are willing to participate in Lafayette ConnectEd 2016 who can build on the success of this year’s pilot. The next cluster of offerings could establish a series of thematically connected modules, such as The Arts in New York, Environmental Science, Shakespeare, or topics in Engineering.

ADDITIONAL ACCOMPLISHMENTS IN THIS STRATEGIC AREA INCLUDE:

- Implementing a new Alumni online community integrated with the College’s portal, “My Lafayette.”
- Designing and connecting IT infrastructure between our New York City investment office and our campus in Easton.
- Completing our migration to a new Voice over IP phone system.
- Launching a new web site to support the capital campaign, Live Connected, Lead Change.

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COMMUNICATION AND COLLABORATION BETWEEN AND AMONG THE COLLEGE AND MEMBERS OF ITS COMMUNITY

86% OF ALL INCOMING EMAIL is identified as spam and blocked

1417 NEW SURVEYS have been created in Qualtrics

PORTAL VISITS INCREASED

106% from spring 2014 to spring 2015
Although our capital budget was slightly less, we were able to successfully implement a number of key initiatives including the website redesign, network upgrades, and increases to our networked storage capacity.

Fiscal Year 2014-15 concluded within the planned allocation for capital budgets, and with a slight deficit of approximately $23,000 on the operating budget. The operating budget deficit was a result of funding several small, unplanned initiatives that emerged out of the budget cycle but were critically important. To solve this problem for the coming year, we have earmarked a small budget allocation to accommodate requests like these in the future.

The ITS operating budget for FY 2015-16 will be increased by $634,395. The largest part of this increase will fund lease payments for administrative computers installed in 2014-15, as well as an almost $250,000 increase in software licenses. Software licensing continues to be the largest single expense within the ITS operating budget, a trend that will likely continue over the next several years. These license fees include both increases to existing licenses, as well as ongoing costs for systems implemented in the concluding fiscal year. In the past, these costs were not properly captured as part of the budgeting and approval process. Going forward, the approval process will capture these costs and consider them when making decisions about which projects to undertake.

Our capital budget was slightly less this past fiscal year than it was in 2013-14. Nonetheless, we were able to successfully implement a number of key initiatives including the website redesign, network upgrades, and increases to our networked storage capacity. This budget also funded the usual upgrades to faculty and lab computers. Next year’s capital budget will be increased by $229,500 to $2,296,500. In addition to the projects outlined in the Major Initiatives section of this report, we will be funding almost $400,000 of lab computers. This continues to be the largest line item in the ITS capital budget on an annual basis.
Information Technology Services (ITS) develops capabilities that support faculty teaching, research, and student learning; supports the creation of and access to digital assets and data; promotes the efficient use of technology through community partnership; and supports communication and collaboration between and among the College and members of its community. In addition, ITS is responsible for overseeing Lafayette’s academic and administrative systems and the robust information technology infrastructure that supports them.

Heavily invested in the open-source model for application development and support, staff often contribute code and other enhancements to the developer community at large. Building and maintaining open and standards-based systems has been a cornerstone of our approach to providing IT services to the College community. IT staff also remain actively engaged in the broader IT community, presenting and publishing various works at Educause, the ACM SIGUCCS conference, and Internet2’s annual member conference among others.

There were a number of vacancies filled this year, as the total number of ITS staff remained at 36. Our new colleagues include Bill Thompson, director of Digital Infrastructure; Todd Walton, instructional technologist; and Hannah Tatu, user services specialist.

ITS is comprised of six departments: Office of the CIO, Digital Infrastructure, Enterprise Data Management and Systems (EDMS), Instructional Technology, User Services, and Web Applications Development.

OFFICE OF THE CIO
The Office of the CIO is responsible for the strategic leadership of the Division of ITS. With a staff of three, this group also manages IT planning, analysis, communications, portfolio and project management, long-term planning, procurement, and other administrative support functions for the Division.

DIGITAL INFRASTRUCTURE
With a staff of nine, the Digital Infrastructure team maintains and extends the College’s technology infrastructure across two data centers. This includes a robust virtualized network with a vCloud boundary, iGo connectivity to the desktop, and the wireless network available in all campus buildings. This highly-redundant network architecture features two geographically diverse Internet connections and a connection to Internets, a high-speed research network for higher education. Digital Infrastructure also supports a virtual server architecture, storage systems, the Zimbra collaboration suite, file services, the Voise over IP phone system, and the databases that support all College applications. Our industry-leading identity management infrastructure as well as account provisioning and de-provisioning processes are also managed by the team. Developing programs to integrate and automate maintenance of these systems is a critical aspect of their work.

ENTERPRISE DATA MANAGEMENT AND SYSTEMS (EDMS)
With a staff of seven, EDMS maintains the College’s ERP system (Banner) and supports all administrators, faculty, and students in its use. EDMS also offers data management and complex report building services to the College community. Our Banner environment consists of the Internet Native Banner (INB) suite and full complement of Banner Self-Service and Workflow products. As extensions to our Banner environment, EDMS supports applications used for reporting, degree audit management for faculty and students, electronic student refunding and an e-commerce marketplace, document imaging and management and specialized electronic form development and deployment. A host of auxiliary business systems is supported jointly by EDMS and Digital Infrastructure, including applications for event scheduling, recreation center management, dining services, counseling, center management, judicial management, alumni volunteer fundraising, management, and electronic medical records management for the health center and sports medicine.

INSTRUCTIONAL TECHNOLOGY
Instructional Technology supports the training and use of technology by faculty, students, and staff. It also instructs instructional technologists, an arts campus technology coordinator, engineering computing coordinator, a systems engineer, and a systems specialist. These staff instruct faculty and students in the use of technology for teaching, learning, and research. The group supports the classroom and lab facilities required to teach classes, maintaining presentation technology installed in nearly 100 locations throughout 18 buildings. Instructional Technology offers individualized training on classroom technology operation, consultation on presentation technology purchases and installations, and operational support for the College’s videoconferencing room.

USER SERVICES
With a staff of seven, User Services supports the use of technology by all faculty, students, and staff. The team manages the College’s desktop environment as well as the use of mobile technology through hardware and application standardization and deployment. The team collaborates with academic departments and library staff to support over 45 academic and public labs as well as their Instructional Technology colleagues to support nearly 100 smart classroom systems. User Services staff coordinate help desk and Tech Lounge services in addition to various training initiatives and community education programs. User Services staff provide support for numerous hosted services as well as technical consultation on the selection and purchase of technology for all College constituencies on an individual basis or as part of the Project Intake process.

WEB APPLICATIONS DEVELOPMENT
With a staff of three, Web Applications Development supports, develops, and maintains the College’s web applications and services. This includes Moodle (our learning management system), WordPress (our content management system), and Drupal (our web application engine used to power the calendar, directory, and other web-based applications). The group evaluates new web technologies, integrates disparate web applications, and conducts usability testing of new and existing web sites. The developers work closely with the Communications Division to maintain public facing web sites with Instructional Technology to provide training and support for College web applications, and with Network and Systems to maintain the server infrastructure.

WHO WE ARE

FOR MORE INFORMATION about the IT Master Plan and other IT projects, visit the IT website at http://its.lafayette.edu.