Annual Report for Fiscal Year 2009-2010

Loyola Marymount University
Information Technology Services

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Overview

Year in Review

When the Princeton Review recently reported that students rated LMU as possessing "Great Computing Facilities," it served as undeniable validation of our work in previous years to lay a solid foundation for a robust technology infrastructure. This characterization of the technology available to students and faculty was certainly marked by the first year of the William H. Hannon Library and the implementation of its cutting-edge technology. The "Apple Orchard" (or "Information Commons" to the unaware) was immensely popular amongst our student body, and the Faculty Innovation Center, staffed by LMU's team of talented Instructional Technologists, was an in-demand destination for faculty.

In Fiscal Year 2010, however, evidence of LMU's technology infrastructure, strong partnerships forged with other units across campus, and close alignment with university strategic priorities was visible well outside of the walls of the William H. Hannon Library.

The Decision Support Environment project began yielding results that made information readily available to decision makers. In partnership with the Office of Decision Support, Information Technology Services built the first phase of a data warehouse that provides decision makers at LMU with fact-based insight into some of the more complex issues facing the campus. These issues include student retention, faculty workload, and recruitment metrics of incoming classes.

Another strategic priority at LMU is recruiting students in a fiercely competitive landscape. To this end, Information Technology Services facilitated process improvement conversations between the Department of Admissions, the Department of Financial Aid, Student Accounts, Student Housing, the Deans' offices, and other stakeholders. This analysis lead to an applied use of technology to dramatically upgrade the services offered to both prospective and incoming students at LMU.

These strategic projects were carried out by the same Information Technology Services team that is primarily charged with "keeping the lights on." A significant percentage of work undertaken by Information Technology Services staff is devoted to less visible projects like upgrading the Financial and Human Resources systems, upgrading the Student Information System, and ensuring that the Learning Management System is properly patched and current. Balancing this mix of maintenance and strategic projects is no small challenge, but it is made possible by an outstanding leadership team and committed staff.

Financial Review for Fiscal Year 2010

A review of the Information Technology Services department's expenses for Fiscal Year 2010 indicates that the department continues to positively contribute to keeping University expenses under control. The expenses from Fiscal Year 2009 to Fiscal Year 2010 increased by only .9%, which compares favorably to the 1.4% increase between Fiscal Year 2008 and Fiscal Year 2009. The small increase for Fiscal Year 2010 is partially explained by comparatively small number of laptops and desktops replaced as part of the Resource Management Plan, a program that systematically keeps this inventory current.

Figure 1: Expense Allocations reveals the allocation of expenses for Fiscal Year 2010. Staffing includes all temporary help, contractor expenses, and staffing and benefits expenses. RMP, as noted above, is the "Resource Management Plan." The "Software Maintenance" includes all maintenance obligations incurred when entering into a contract to buy software licenses. This category includes both software licenses to run LMU's core business systems (SungardHE's Banner product or Oracle's eBusiness Suite) as well as academic software from vendors like Apple or Adobe. The "Hardware Maintenance" category includes recurring expenses incurred when making network equipment purchases or server purchases from vendors like Cisco or Hewlett-Packard.

One conclusion to be drawn from the Expense Allocation summary is that very little of the non-capital Information Technology Services budget can be controlled without cutting services or FTE. The 6% "Operations" expense for Fiscal Year 2010 represents that cost over which Information Technology Services exerts some discretionary control.
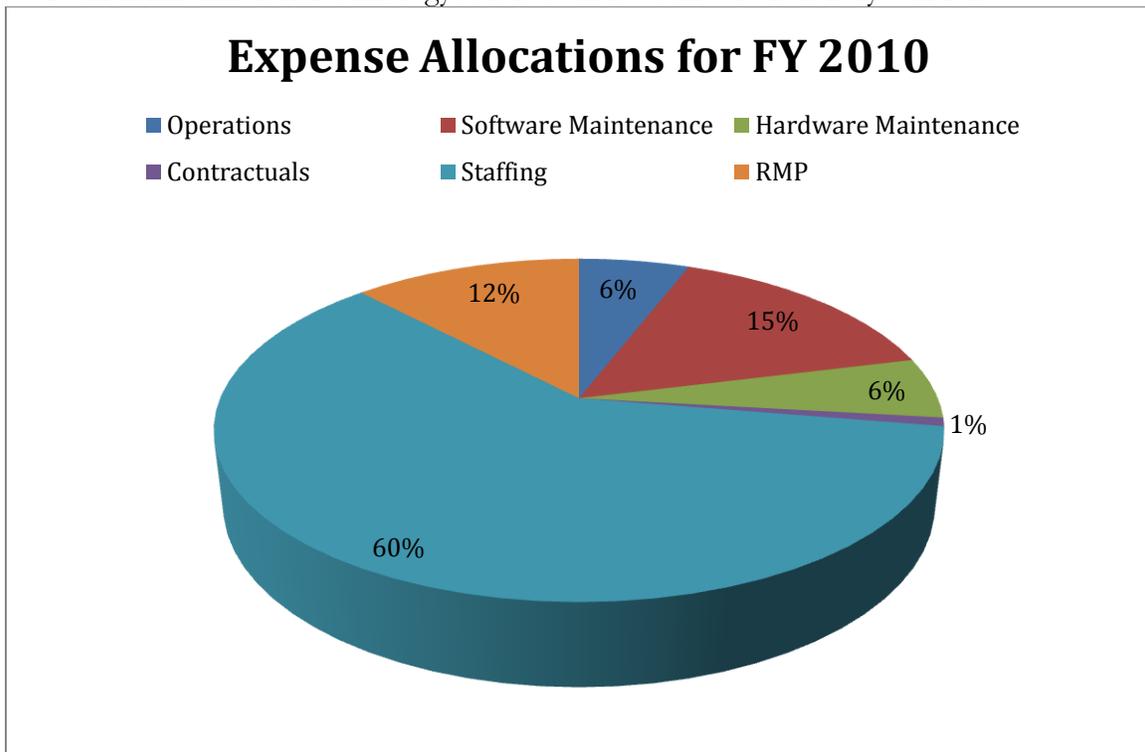

Figure 1: Expense Allocations

Highlighted Initiatives

William H. Hannon Library First Year

The technology in the William H. Hannon Library was designed to ensure that students have access to all of the digital resources and communication tools they need in today's learning environment. With 33 group study rooms (all with electronic room reservations), over 100 Apple computers (dual boot into Windows), five large networked printers including one color printer, and three library instruction rooms, the Library is capable of meeting a wide varierty of student technology needs. The group study rooms all have LCD monitors that students can connect to their laptops for sharing with a study group group (some rooms have additional components for viewing videos or cameras for making video of presentations, and two rooms are designed just for "listening"). The students' overall response to the Library has been amazingly positive as they find wireless access everywhere and receive the support they need from the Information Commons. Students have access to an expanded arrary of software in the Information Commons, such as Adobe Creative Suite 4, Final Cut Pro, and SPSS. The technology-equipped classrooms and spaces throughout the library have been used for a wide range of events, from Faculty book presentations to social gatherings featuring "movies" to collaborative instructional endeavors with instructors at other universities and colleges.

Figure 2: The Information Commons at Finals

Decision Support Environment

The collaboration between Information Technology Services and the Office of Academic Planning and Effectiveness was crucial in creating an appropriate strategy, selecting effective technology partners, and building adequate environments that allowed development of academic data marts. These data marts have enabled the creation of dashboards and reports that will provide strategic and operational information to the Deans, Associate Deans, and other decision makers.

With the infrastructure and tools now in place, LMU has established the foundation to create an enterprise data warehouse and build additional subject-specific data marts to provide even more strategic information. Figure 3: Recruitment Statistics Dashboard
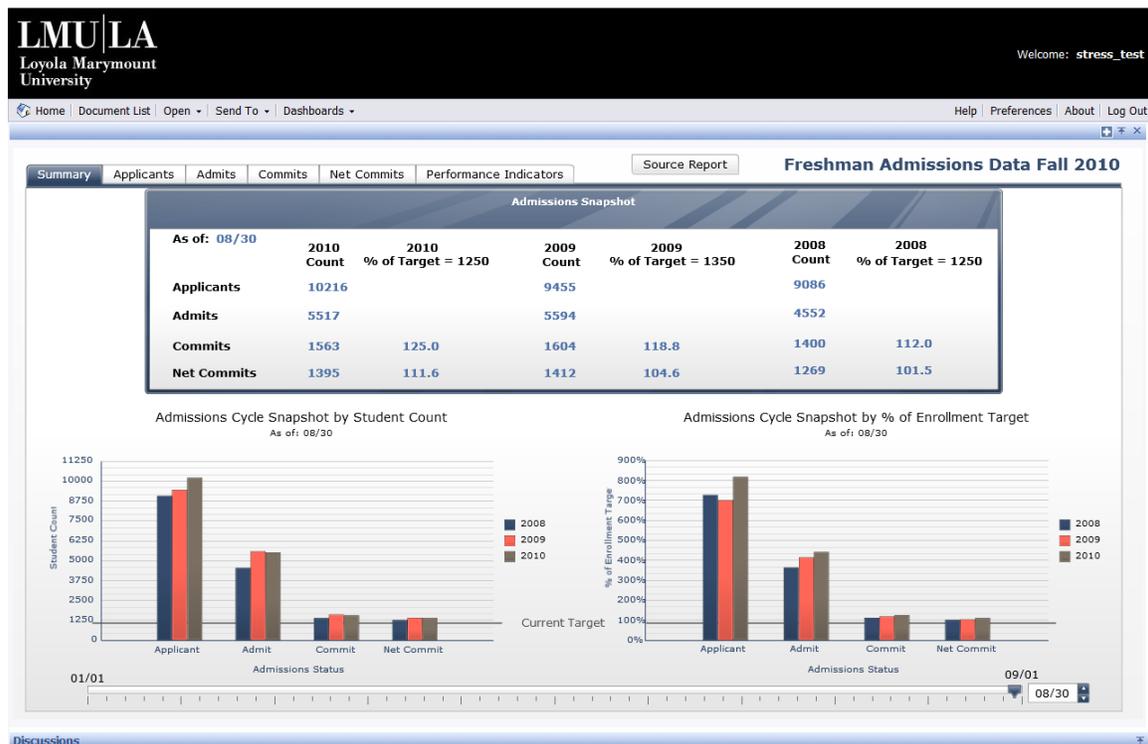
Figure 3: Recruitment Statistics Dashboard

MYLMU Connect Upgrade

LMU has used the Learning Management System from Blackboard, Inc. since 2002, and it has been a relativity "out of the box" implementation. During the summer of 2009, Information Technology Services engaged in a major project to both upgrade the application to the latest version and migrate away from a Microsoft-based infrastructure to a Linux-based infrastructure. After months of testing and preparation of training materials Blackboard 9.0 went live in August 2009.

This move was significant in a number of ways, but most importantly for the functionality it provides faculty wishing to incorporate additional technology and communication in their courses. The new version of Blackboard gave us the opportunity to redefine and rebrand the

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system, and, in order to keep it consistent with other LMU systems, it is now called MYLMU Connect. This creates a close tie-in with the University's main campus system, MYLMU. In addition to the new features within courses, MYLMU Connect now allows organizations of faculty, staff, or student groups to take advantage of the online functionality and communication that was previously reserved for courses.

	Fall 2009	Total		Spring 2010	Total		Fall 2010*	Total	
Active Students	6808	7888	86.3%	6654	7720	86.2%	7050	8124	86.8%
Active Instructors	399	919	43.4%	394	898	43.9%	401	969	41.4%

*Data is preliminary until the close of the semester

Academic Technology Achievements

Online Orientation

Last year, Information Technology Services offered assistance and provided leadership in working with the Director of Admission to implement a pilot project that would capture students who deposited but then enrolled elsewhere. This year, the project was taken to the next level. With over 500 hours of work from the Instructional Technology team, LMU again launched Online Orientation for freshmen and, for the first time, transfer students.

Faculty Innovation Center

Along with the other important benefits that the William H. Hannon Library has provided LMU, the opening of the new Faculty Innovation Center (FIC) has been a great success. The FIC facilitates technology-enhanced teaching and research through a combination of one-on-one support, multimedia development assistance, workshops, and collaboration using the latest hardware, software and best practices. Managed under the Director of Academic Technology, with guidance from the Academic Technology Committee and staffed by Instructional Technology Analysts, the FIC has had over 500 visits in the first year (August 2009-May 2010), with nearly 300 unique individuals coming to the Center.

In order to support faculty in every way possible, the FIC is fully staffed on a daily basis by highly trained Instructional Technology experts. In addition to daily supported hours, 50 workshops were offered over the past year. These included such titles as Creating Successful PowerPoint and Keynote Presentations, Digital Storytelling, Excel for Assessment 101, Livescribe Pulse Pens in the Classroom and variety of MYLMU Connect workshops.

The "Serious Play: Teaching With Technology" workshops have now become a requested staple of the FIC. To date, 60 faculty members have participated in these day-long workshops, which take participants on a sampling of instructional technologies available to them.
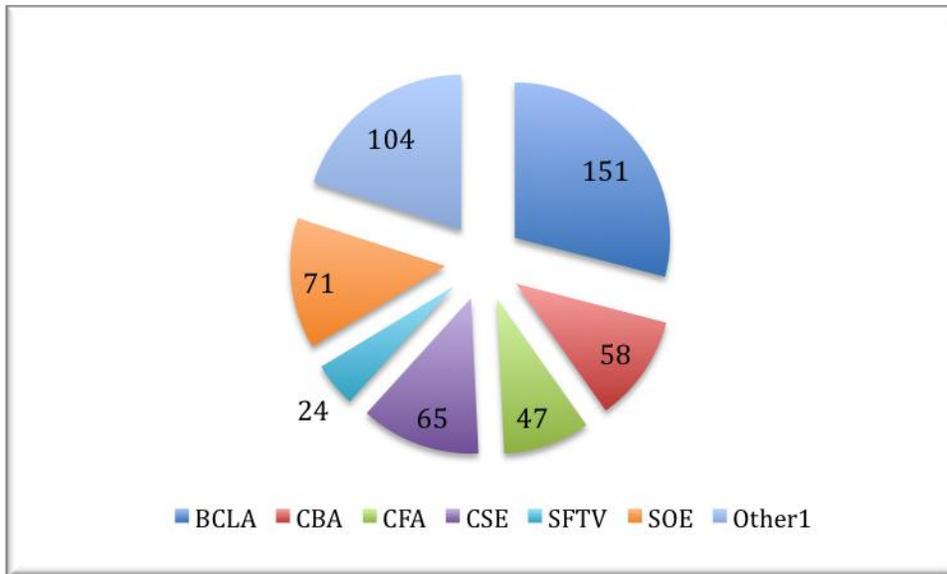
Figure 4: Visits to the FIC, August 2009-May 2010

Classroom Capture

Last year, Classroom Capture was included in the annual report, as Information Technology Services had concluded a successful pilot phase and selected Echo 360 as the vendor to continue installing across campus. In Summer and Winter 2009, additional Echo 360 units were installed, and a total of 14 locations now have Echo 360 capability. These systems allow faculty to capture classroom activities on a regular basis. Feedback on the systems continues to be very positive, and faculty members are now working to have their classes moved into spaces that have the systems installed.

The snapshot for the year:
- 1,032 individual captures
- 29 courses captured
- 42 special captures (training, speakers, group presentations, or a single class session)
- 3,873 views

IT Infrastructure Achievements

Campus Desktop Computing Inventory

A major achievement for the Client Services team this year was the completion of a full campus inventory of desktop computing hardware. Although previous inventories had been conducted, this was the first to integrate barcodes and scanning at each location. Client Services now controls the entire life-cycle management process, from purchasing to disposal.

Key results from the 2010 inventory include:

• There are 3,300 active computers on campus
• There are 1,168 active printers

Client Services by the Numbers

A summary of the resolution time of tickets submitted to the Client Services team follows. The Client Services team continues to quickly resolve issues presented by students, faculty, and staff.

Client Services Resolution Time Comparison

	FY2010	FY2009	FY2008
> 7 Days	11.67%	16.66%	14.77%
< 7 Days	2.12%	2.16%	2.51%
< 6 Days	2.15%	2.62%	2.73%
< 5 Days	4.09%	3.39%	3.23%
< 4 Days	4.83%	5.16%	4.46%
< 3 Days	10.38%	8.65%	8.46%
< 1 Day	61.59%	58.54%	60.94%
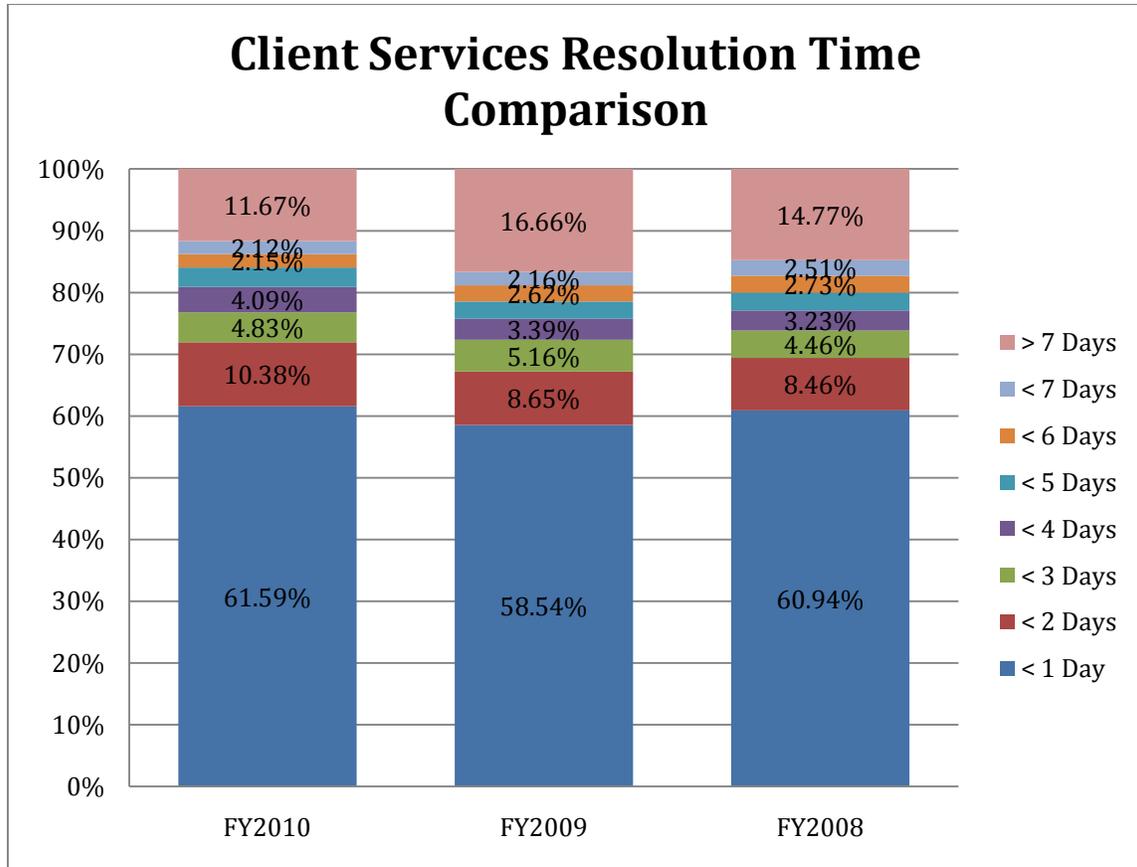
Figure 5: Client Services Resolution Time Comparison

Other numbers of note include:
• Satisfaction scores were nominally higher than FY 2009
• The average speed to answer the phones is currently less than 1 minute
• The average queue wait time is 1 minute, 15 seconds
• Malware jumped into the Top 15 categories for the first time this year (358)

Email Upgrade

In February 2010, after months of planning, architecting, training and installation, the System Administration team successfully moved all faculty and staff to Exchange 2007. Not

only has the team created a high-availability, high-speed email environment, but the newer mail system server configuration has also allowed Information Technology Services to increase standard mailbox sizes to 2.5GB (a substantial increase from the standard 225MB on the older mail system). Communications were sent out to each user group before migration, warning them of when their mailbox would be moved and returned to service. All mail was successfully held and delivered with no losses. Many users have noted the increased responsiveness and much-improved web access interface. The new system also improved speed and security for mobile devices that natively connect through Microsoft's Active-Sync, such as iPhones, iPod Touches, Windows Mobile devices and Google Android devices. When ready, the current infrastructure will allow Information Technology Services to seamlessly move to the newest Exchange system, Exchange 2010, without any hardware changes.

Windows 7

After extensive initial testing with Information Technology Services staff, volunteer faculty and staff beta testers, the Client Services group certified Windows 7 for use on LMU systems. This process included testing and verifying all University applications, isolating upgradable instances and building unique install parameters where necessary. Since the start of the project in January 2010, over 60 people have elected to upgrade and, when necessary, Windows 7 is used as a preferred fix for corrupted operating systems. With the confirmed testing, all lab refreshes and all new faculty and staff computers will be installed with the new Windows 7 operating system.

Back-Up Environment

Over the past year the System Administration Team has trained, architected and installed new solutions that have greatly improved the backup environment. The first step was the purchase and installation of two disk-based backup targets. The "Exagrid" device allows for high-speed transfer of backup data. Once on the "Exagrid" device, the data is processed and compressed. The "Exagrid" compression algorithm in backup target devices allows us to house over 250 terabytes of data (nearly two months' worth) for quick access and speedy restores. From there, long-term archives are stored on tape and sent to Iron Mountain safe storage. To further the speed and stability of the backup environment, the System Administration team installed new servers running the newest version of Symantec Netbackup. These improvements have helped decrease both time to backup and time to restore.

Enterprise Applications Achievements

Business Process Improvement Initiatives

This year, Information Technology Services successfully completed several initiatives designed to directly improve support services at LMU. In addition to achieving their direct goals, these three initiatives served to foster awareness and create a path for Enterprise Architecture at LMU. By mapping LMU processes, Information Technology Services can

help the entire institution see the vital interconnection between offices and take a critical look at each area with the ultimate goal of improving service to our constituencies.

Financial Aid

In the first of these undertakings, Information Technology Services joined the Office of Financial Aid to review key Financial Aid processes and implement required improvements as determined by a Business Process Analysis. This initiative covered several of the activities performed by the Office of Financial Aid.

By looking at each of the tasks executed by the Financial Aid staff, the Information Technology Services team was able to create a detailed process map, understand the use of technology, identify the areas with problems, and measure the amount of time and effort required to accomplish each process. As part of the analysis, the joint Financial Aid/Information Technology Services team identified areas of improvement, documented the business knowledge that exists in the office, and discovered a number of tasks that could be automated.

The final implementation of this initiative resulted in a daily savings of 6-8 hours of manual work and faster turnaround processing for all financial aid applications. These results were achieved by automating several of the tasks normally performed manually by the staff. In addition to improved efficiency, this outcome provides better service to the applicants and students, as well as accurate and easy access to the information by the staff.

Student Services

For its BPI project, the Student Accounts department requested that Information Technology Services assist them in improving their system of collecting and presenting information related to tuition, room, board and other fees. The goal of the initiative was to facilitate a clear and timely payment schedule for students.

The analysis of the prior process showed:
- A paper form based system
- Manual processing of the information collected from the paper form
- High levels of error in the information collected
- A cumbersome process of payment and scheduling
- A large number of staff hours spent processing the information collected

Information Technology Services implemented business process improvements that achieved two efficiency goals. First, we created a new payment system connected in real time to the student system (Banner), which eliminated the need for re-calculations of charges. Secondly, some of the processes were relocated to other areas of the university, improving efficiency and accuracy as a result. The final implementation has eliminated the entire manual and paper process. Students now have full control of payment and billing using web portal technology. The accuracy and timeliness of the information was a key component to the solution, coupled with improving access to the information available to the Student Accounts department.

Applicant Recruitment

Information Technology Services completed two separate but related projects to produce a streamlined Applicant "Onboarding" process. The Enterprise Technology Committee (ETC) started a Business Process analysis of the Student Life Cycle. One of the issues identified in our analysis was multiple communications from different offices to students during the application cycle. At the same time we conducted this analysis, the Admissions Office requested from Information Technology Services the creation of a seamless connection to the admission system from MYLMU. In partnership with Admissions, Information Technology Services expanded this initial request and used the ETC analysis to look for a Business Process Improvement in the communication process.

The solution was to extend the MYLMU web portal to allow a seamless "onboarding" process, linking several offices that were initially disconnected and overlapping their communication to applicants. Using MYLMU as the portal, Admissions, Financial Aid, the Office of the Registrar, Housing, and Student Accounts are now using the same space to guide prospective students through the application process.

Alumni Fundraising

University Relations requested that Information Technology Services evaluate alternatives to improve the system used for donations, or implement a new solution that could provide better opportunities to reach donors. After an initial analysis of the requirements it became clear that a new system was necessary to fulfill the department's strategy for fundraising.

Convio was chosen for its ability to provide robust online fundraising capability, flexible marketing, email communications, and an integrated system with strong reporting capabilities. In addition, Convio was also fully integrated with the LMU donor system (Advance).

The project was completed in a very short period of time (3 months), including a successful system integration and first donation campaign. Collaboration and clear understanding of the business requirements allowed Information Technology Services and Alumni Relations to select and implement the right solution to increase overall fundraising and create strong communication campaigns with LMU's constituencies. The results have been fairly impressive: From March, 2010 (when University Relations went live with Convio), through the end of August, 2010, a total of 680 unique donors made contributions through the online web site. In the year prior, without the Convio application, a total of 364 unique donors made contributions.

R12 Upgrade

This year, LMU's Oracle E-business Suite was due for an upgrade to the latest version, R12. With over 2,600 hours of work time, the involvement of three to four Information Technology Services personnel, as well as consulting engagement and heavy client side engagement, the project truly had campus-wide reach. Given the scope of the change to the Financials component of the Oracle eBusiness Suite, it was a testament to the collaboration

between the Controllers' Office and Information Technology Services that the few issues that did come up were addressed quickly.

Information Security Achievements

Credit Card Processing

In conjunction with the Controller's Office, Information Technology Services recently performed a review of LMU's Payment Card Industry Data Security Standards (PCI-DSS) compliance. One result of this review was the implementation of a PCI policy that encourages the discontinuation of manual credit card processing in favor of more secure online credit card processing when appropriate. By reducing the frequency of LMU staff handling credit cards, the updated policy abates the risk of credit card fraud and creates more efficient business processes.

Disaster Recovery Site Collaboration

During the past year Information Technology Services completed the third phase of the Disaster Recovery Project. This project was initiated to provide more efficient and effective data backups for the Banner Student Information System as well as Oracle E-business Financials and the Human Resources system. As part of the project, Information Technology Services implemented two backup sites for these systems to be used in the event that the primary servers become unavailable. The second site is located at a secondary data center at LMU and, through an agreement with the University of San Francisco, LMU installed the necessary hardware at USF's data center to host a third instance of Banner and the Oracle E-business suite. As a direct result of this project, Information Technology Services was able to reduce LMU's Recovery Point Objective (RPO) from days to minutes and the Recovery Time Objective (RTO) from days to hours.

Layer 7 Firewall

The implementation of this new generation firewall provides LMU the ability to screen and filter network traffic at the most detailed level. The Layer 7 firewall protects LMU computers from various vulnerabilities and viruses that cannot be detected with traditional firewalls. This new firewall can also been credited with decreasing DMCA copyright violation notifications from 100 a year to zero, thereby significantly reducing LMU's cost to investigate and respond to these notices.

Outreach and Communication

EduSoCal10

In lieu of an EDUCAUSE (the largest higher education technology conference) Western Regional Conference in San Francisco this year, Dr. Crista Copp, the Director of Academic Technology Services at LMU, headed up a small group of volunteers to organize a one-day conference in Los Angeles on Wednesday, May 19 that brought EDUCAUSE to the campus

of Loyola Marymount University. Over 150 IT staff and administration from 30 schools joined us for an inexpensive, accessible, and fun day on the use of information technology in higher education. The program was sponsored by 20 different technology vendors. A keynote by Michelle Pancasky-Brock, a well-known blogger, Educational Consultant, Co-Owner of Teaching Without Walls and an independent contractor for @One started off the day. Nine panel discussions that covered topics such as virtualization, portfolios, Campus Portals, User Services, Learning Management Systems, and Technology Leadership followed the keynote. The day was a great success for all those who attended and a wonderful way to highlight the great work of Information Technology Services at LMU.

Computer Donation Program

In partnership with the School of Education, Information Technology Services continued to participate in an ongoing program that donates computers to schools in the Los Angeles area. This partnership allows for assets that have reached the end of their useful life at LMU to be used by schools that have little to no resources available for creating technology-enabled learning environments. In addition to benefiting schools, the program provides a responsible outlet for extraneous equipment and adds to LMU's reputation as an environmental steward. In Fiscal Year 2010, the program donated 347 computers to schools in the Los Angeles area (compared to 184 computers donated in Fiscal Year 2009).

Web Site Redesign

In response to requests by Faculty and Staff for a more transparent and functional web site, a working group of Information Technology Services staff designed and developed an internal web site. Transparency and ease of use were the primary design principles. Features of the new web site include a live system status, which automatically presents the status of LMU's web based applications, a service catalog that outlines what services are provided and how to procure them, answers to Frequently Asked Questions, and more. Early reviews have been very positive.

AJCU-CITM

LMU was an active participant in the Association for Jesuit Colleges and University Conference on Information Technology Management (AJCU-CITM). This year, Information Technology Services leadership focused on ways to collaborate with other AJCU colleges and universities to pool resources to provision Learning Management services.

Information Technology Services Committees

University Technology Council

Fiscal Year 2010 marked the first full fiscal year where the University Technology Council, LMU's IT steering committee met. Accomplishments during Fiscal Year 2010 include the recommendation and subsequent passage of the Information Security Policy, policies relating

to the Resource Management Plan, and Faculty and Staff Desktop security policies. The committee also provided valuable input in discussions about mobile computing, alignment of Information Technology Services priorities with University priorities, and communication about Information Technology Services projects across departments.

Enterprise Technology Committee

The Enterprise Technolgy Committee was instrumental in providing guidance and input to the Business Process Improvement initiatives discussed earlier in this report. The chair of the Enterprise Technology Committee, Michael Sun, the Information Technology Services Director of Enterprise Programming and Architecture, created a working group from the Enterprise Technology Committee that collaborated in creating business process analysis documents that spanned silos. This work was invaluable in not only creating a representation of an "as-is" state but in allowing for an ideal state to be architected.

Academic Technology Committee

The Academic Technology Committee began reviewing wide-ranging academic technology policies that would cover the activities of Faculty wishing to use technology to enhance their pedagogy. Secondly, the ATC awarded six Academic Technology Grants, whose purpose is to provide resources for Faculty wishing to use technology in their teaching.

Internal Operations and Staffing

Staffing

The last Fiscal Year was significant for both the addition of new staff but also of the unfortunate loss of one Information Technology Services' very best. The Decision Support Environment team joined Information Technology Services team in Fiscal Year 2010. Gary Chen and Damon Chiarenza are already providing invaluable database administration and system analysis help to the DSE team.

Unfortunately, the year was marked by the loss of a beloved LMU and Information Technology Services employee. In April, Julio Arambula, who worked on the Desktop Support team for several years, ultimately succumbed after a long and valiant fight against cancer. Julio is remembered for his smile, his eagerness to help people overcome technology obstacles, and most importantly, for his friendship.

Project Governance

Information Technology Services, with input from the University Technology Council, rolled out an enhanced process for approving new project requests for the existing project portfolio. The new project intake process enables a more agile response to technology demands across campus.

Telecom Merge

Though not technically a part of Fiscal Year 2010, a recent resignation has made it possible for LMU to merge its Telecom group into the Network Services, Client Services, and System Administration teams. The same merge has allowed for Information Technology Services to fund an Information Security Analyst position, which will be of significant importance in

allowing Information Technology Services to maintain a secure technology landscape at LMU.

Conferences and Associations

Conferences and Training

- Advanced Backup School One-Day Seminar
- AJCU 2010
- Apple Executive Briefing
- Apple Software
- Argos Report
- Blackboard World 2010
- Broadcast Education Association (BEA) /National Assocation of Broadcasters (NAB)
- Business Objects Enterprise Administration and Security
- Business Process Management Conference
- Business Writing
- CampusEAI Annual Conference
- CampusEAI Portlet & Annual Conference
- CCNP Training
- Cisco Live
- Collaborate 2010 - Oracle E-Business
- Computer Using Educators (CUE) Conference
- Educause National Conferences
- EduSoCal Western Regional Conference
- Engage 2010 – Nolijweb
- Exchange 2010 training
- Gartner Application Architecture, Development & Integration Summit
- Gartner Customer 360 Summit
- HP Tech Forum 2010
- InfoComm 2010
- Jboss Application Server Training
- JesuitNet: CADE Training on Online Courses
- Lilly West 2010 Conference | Co-Presenter for "Online Exams: Good, Bad, Just Different?"
- Microsoft Dot Net Framework - New Features
- MobilEd Conference
- New Media Consortium (NMC) Conference
- Oracle Openworld 2009
- Oracle Service Oriented Architecture
- Oracle Warehouse Builder 10g

- Pink Elephant
- Red Hat Linux Training
- Relational Database Design, Tools and Techniques
- Rocksapalooza
- SANS: Network Penetration Testing and Ethical Hacking
- SunGard Annual Conference - Argos Training
- Symantec NetBackup Training
- TDWI BI Essentials
- TechEd Conference
- Touchnet Conference
- Treasury Institute: PCI-DSS Workshop
- VMWorld
- VSphere training
- WASC Training
- Windows 7 Deployment
- Windows Intelligence Seminar

Group Associations

- AJCU Conference on Information Technology Management
- Educause
- Educause Learning Initiative
- Educause Center for Applied Research
- New Media Consortium (NMC): sparking innovative learning and creativity
- Los Angeles Oracle User Group
- Southern California Banner Interest Group