

Run ...ongoing operations

Sample Service Volumes

- Daily**
- ▶ 550,000 E-Mails Received
 - ▶ 5,545 Faculty/staff mobile devices synched to e-mail
 - ▶ 12,780 logins to LOCUS
 - ▶ 5,550 total printed pages
 - ▶ 46,040 visits to luc.edu
- Weekly**
- ▶ 815 Help Desk tickets
 - ▶ 700 equipment checkouts from Media Lab
 - ▶ 230 classroom support calls
 - ▶ 475 VPN sessions
 - ▶ 130 Atomic Learning tutorials viewed
- Monthly**
- ▶ 363,000 logins to LMS(+118%)
 - ▶ 156,000 computer lab logins
 - ▶ 240 courses using lecture capture
 - ▶ 320 new videos to the video repository
- Annually**
- ▶ 9,000 Help Desk assisted password changes
 - ▶ 680 million network attacks blocked
 - ▶ 218,000 visits to mobile LOCUS
 - ▶ 24% visits to luc.edu are from mobile devices (+7%)

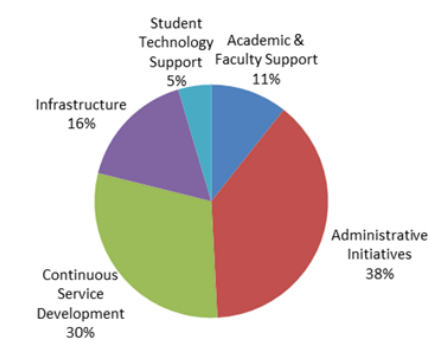
Infrastructure Highlights

- ▶ 6,300 workstations with approximately 27% available for student use.
- ▶ 300 technology-equipped classroom spaces.
- ▶ 675 digital surveillance cameras deployed campus-wide.

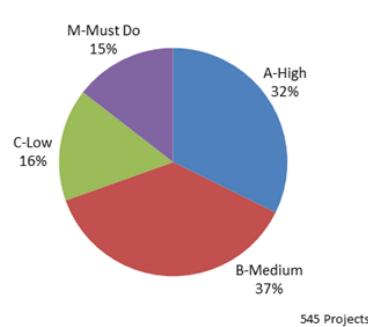
Portfolio Summary

The Information Technology Executive Steering Committee (ITESC) has provided ITS governance and project oversight since November 2006. The ITS project portfolio has averaged over 515 projects annually for the past five years and was at a new high in FY15 with 545 total projects. The ITS project portfolio size (effort of projects) has also grown 30% since FY12.

FY15 Projects by Strategic Alignment



FY15 Projects by Priority

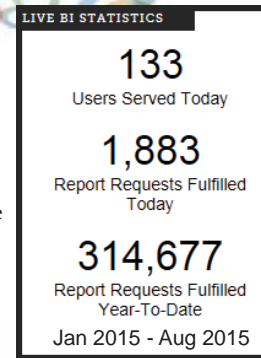


Strategic Category	FY15 Q1-Q2 Completed Projects	FY15 Q3-Q4 Completed Projects	FY15 Total Projects	FY15 % of Total
Academic & Faculty Support	5	6	11	7%
Administrative Initiatives	27	35	62	42%
Continuous Service Development	18	18	36	24%
Infrastructure	21	11	32	22%
Student Technology Support	3	3	6	4%
Total	74	73	147	100%

Grow ...information systems and services to optimize performance

Business Intelligence (BI/Analytics)

Since completing the initial work on the EDW (Enterprise Data Warehouse) last year which focused on student data from LOCUS and Faculty Instructional Activity data we have added several new data sources such as a datamart for the Advancement division and data from the learning management system Sakai. Additionally, we have built (8) other unique analysis data sets. Self-service requests are being handled by three main reporting tools: WebFocus, Tableau and Microsoft's Power BI. Utilization of the BI datasets has 150 unique users per day generating almost 2,000 reports per day and 500,000 reports annually. Visit the website at www.luc.edu/businessintelligence/



Disaster Recovery

In 2013, the BCDR Steering Committee approved the Information Technology Disaster Recovery plans based on system recovery priorities for the highest level of disaster recovery planning for enterprise systems ("Tier 1"). ITS is in the third year of the 3 year plan and has completed 65% of the 3-year plan. Disaster recovery projects that were initiated and/or completed in FY15 included partial failover and recovery of the LSC network, Lawson, Kronos, Cognos/Data Warehouse, WebFocus, Adobe Connect, VPN, Locus, and SQL. The remaining plans are in process and are tracking for completion by end of the FY16 fiscal year.

Information Security

The Information Security program at Loyola underwent several major improvements in FY15. Security Awareness sessions were conducted across the Lakeside and HSD campuses in an effort to expand the Loyola community's understanding of advanced information security threats and protection methods. These sessions have been well attended by faculty, staff and students and will continue with advanced online capabilities in FY16. Other advancements include a new security and information event management system (SIEM) deployed to centralize logging, streamlining incident response and security investigations. Cyber security attack and intrusion prevention systems (IPS) were advanced using newly acquired software and subscription services from Hewlett Packard (HP). HP published a whitepaper on Loyola's innovative use of its IPS tool Tipping Point. The IPS blocks over 250,000 individual network communication attempts/threats at Loyola on a daily basis.

Other Highlights

Efficiency and security was improved when we added an automated process of updating the Maxxess door security system for doors that control individual academic spaces. Class rosters are used to automatically update the security system each term eliminating a manual time consuming process.

A new password self-service management system was deployed in the spring term. The new system allows for individuals to change their password or unlock their account without the intervention of ITS while adding more conventional layers of security (i.e. using cell phones and alternate email address for verification). The new system allows for password changes at anytime from anywhere, further advancing the technology strategy of "Anytime, Anywhere Access". By the end of the fiscal year over 10,000 individuals had registered with the new system.

4.5 million documents stored in DocFinity. 27 deployments of DocFinity technologies were completed, 10 of which were in new departments.

Transform ...new technologies and processes that fundamentally promote change

Outbound Electronic Transcripts

The University went live with a new capability for students to electronically send their transcripts from Loyola to other schools or businesses. The solution, eTranscripts, was a collaboration with Registration and Records, ITS and the vendor, National Student Clearinghouse. Approximately 28,000 transcripts are sent annually. In the first 90 days, over 2800 requests have been fulfilled electronically with less than 12 requiring any manual intervention. Conservative projections estimated that 10% of transcript volume would be sent via eTranscripts in the first year saving time and mailing costs for the university, providing same day delivery and sent at no cost to the student. After the first three months adoption rate has been 36%.

Technology Support for Online Learning

Several technology improvements were made in support of the continued growth of online learning. Some FY15 enhancements included:



- ▶ Upgrading Sakai and adding new features including; integrating third party tools such as Panopto and Atomic Learning into Sakai and enhancements to provide an "alert mechanism" for instructors to be automatically notified on student lesson progress.
- ▶ Upgrading the Adobe Connect System used for online synchronous classroom sessions to version 9.4. Improvements include a more flexible interface for the instructor to better assist students during online synchronous sessions.
- ▶ Expansion of video-based tools and support. The Loyola Media backend was upgraded to Kaltura. Over 3,800 new videos were added to the repository and viewed over 30,000 times. Faculty contributed 47% of the new videos. Lecture capture usage grew by over 200% over the fiscal year.

Anytime Anywhere Access

"Technology at Loyola enables me to fulfill my relationship in a simple, secure and seamless way."

Schedules which are 24/7 in nature (Anytime)

An LUC Community which is mobile (Anywhere)

Straightforward and appropriate access to systems (Access)

	Current State	Future State
Accessibility	<ul style="list-style-type: none"> • Multiple sign-ons • Limited accessibility • Random application locations • Loyola assigned/approved devices • Multiple steps to accomplish a single task • Data is difficult to find 	<ul style="list-style-type: none"> • Single sign-on • Accessibility by role • Portal/home page • Device agnostic • Streamlined execution of tasks • Data easily locatable
Infrastructure	<ul style="list-style-type: none"> • Disparate infrastructure across campuses • Software delivery through LUC workstations • Partial DR plans and environments 	<ul style="list-style-type: none"> • Unified infrastructure across campuses • Virtualized desktop and application access • Defined, tested and maintained DR environments
Security	<ul style="list-style-type: none"> • Help desk password reset • Single/two factor authentication, VPN certificate • Basic information security awareness • Complicated security architecture • Reactive security actions/protection 	<ul style="list-style-type: none"> • Self service password reset • Multi-factor authentication • Information security education program • Simplified and transparent security architecture • Proactive risk-based security program/decisions
Services	<ul style="list-style-type: none"> • Content presentation is inconsistent • Support via direct contact • Ad-hoc service definitions • Decentralized technology services support • Institutional data dispersed 	<ul style="list-style-type: none"> • Content presentation is device/browser agnostic • Robust self-service support environment • Well defined service offerings • Centralized technology services support • Self-service reporting and Dashboards

FY15 FACTS

Data Centers & Networks

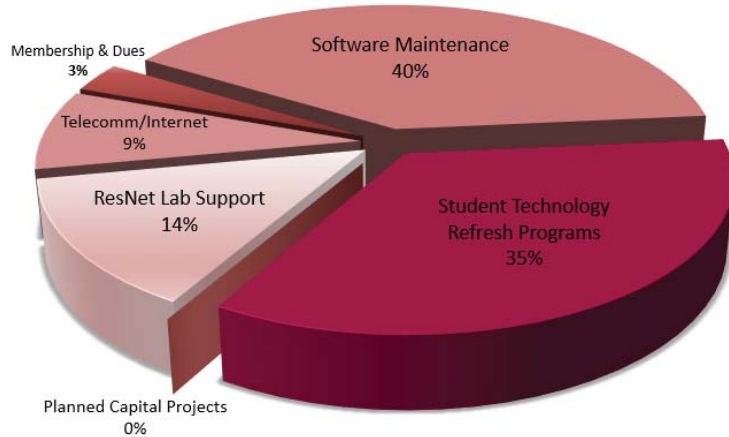
Loyola's two data centers house 700 devices including servers, appliances, and equipment:

- ▶ Over 615 Terabytes of online storage
- ▶ 85 physical enterprise class servers and over 340 virtual servers
- ▶ 2,425 wireless access points covering 95% of Loyola's buildings
- ▶ 37,000 devices registered on the wireless network
- ▶ 3 Gig connection for internet bandwidth
- ▶ 31,300 Student Devices Connecting to Sync to E-Mail
- ▶ 200 Terabytes of Email storage

Other Facts

- ▶ 42 presentations were delivered by ITS staff members at leading technology and higher education venues.
- ▶ 5 Staff Members awarded the LUC Commitment to Excellence Award.
- ▶ Awarded the 2015 EPEAT Purchaser Award. Awarded by the Green Electronics Council for purchasing environmentally safe computer products.

FY15 TECHNOLOGY FEE ALLOCATIONS



TECHNOLOGY SCORECARDS

An annual technology assessment based on the strategic categories is conducted each November. Subjective health ratings are assigned against a pre-defined healthy state to identify strengths and weaknesses as technology requirements evolve on our campus.

ITS Scorecard Summary	Health Index						Total Change (since FY07)
	FY11	FY12	FY13	FY14	FY15	FY14-15 Change	
Academic & Faculty Support Scorecard	3.9	3.9	3.8	3.8	3.8	0%	22%
Administrative Technology Scorecard	4.1	4.1	3.9	3.9	3.9	-1%	10%
Student Technology Scorecard	4.4	4.3	4.4	4.7	4.8	1%	20%
Infrastructure Scorecard	3.5	3.6	3.6	3.7	3.8	1%	20%
Continuous Service Improvement Scorecard	3.8	3.9	3.9	3.8	3.9	1%	41%
Governance & Funding Scorecard	3.9	4.0	3.9	3.9	3.9	0%	31%
Average Annual Score	4.0	4.0	3.9	4.0	4.0	0%	24%
Year to Year Improvement	2%	0%	-1%	2%	0%		

FY16 & BEYOND

MAJOR INITIATIVES - FY16 Q1-Q2

Academic and Faculty Support

- LOCUS Enhancements (10)
- Access Control & Security - Maxcess (3)
- Clicker Pilot
- Faculty Information System Suite Enhancements

Administrative Initiatives

- Online Performance Management System
- Lawson/Kronos Enhancements (5)
- Advancement Systems (2)
- Conference Services Software Evaluation
- Space and Asset Mgmt System Needs Analysis

Infrastructure

- Campus Construction Initiatives (14)
- Information Security Program (11)
- LUHS/LUC/HSD Technology Program (4)
- IT Disaster Recovery (8)

Student Technology Support

- Library Management Systems Migration
- WebCheckout Pilots (2)
- Installation/Activation of Point and Click Prescription Module for Students
- UPASS for Arrupe College Students

Continuous Service Development

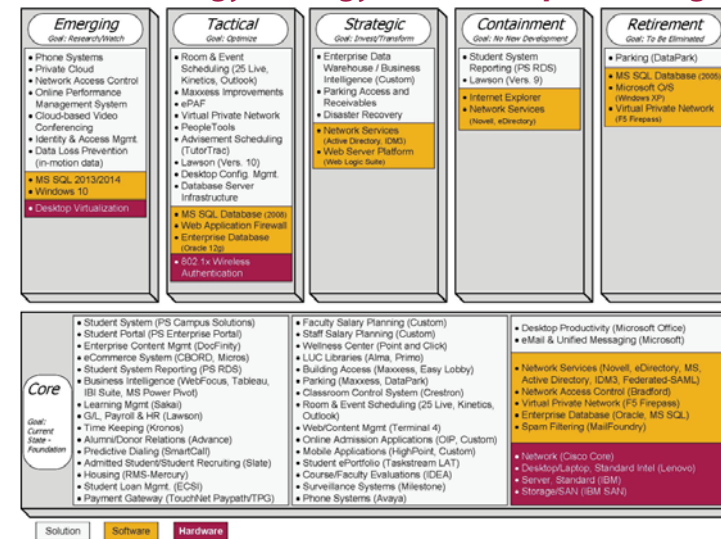
- Business Intelligence/Data Warehouse (2)
- Enterprise Content Management (4)
- Parking Access and Receivables Control System - Replacement
- LYNX Mass Notification and Panic Alarms
- Remove Clear text Email ID Information from LWD

Initiatives under development include:

- ▶ Develop an Online Performance Review process to replace paper process.
- ▶ Incorporate LMS metrics into the Data Warehouse to support new institutional initiatives around learning analytics.
- ▶ Implement a tutor tracking application for use by the Academic Support Center.
- ▶ Replace the existing VPN with Loyola Secure Access (LSA).
- ▶ Improves Security architecture and services with a web application fire wall, data loss prevention and secure file transfer.
- ▶ Conduct a needs analysis for space and asset management technology.
- ▶ Deploy a panic alarm solution to all Lakeside classrooms.
- ▶ Install solid-state drives in all Lakeside classroom computers.
- ▶ Planned upgrades with significant technology changes:

- ✓ Lawson
- ✓ Oracle
- ✓ WebFocus
- ✓ Student System, LOCUS

LUC Technology Strategy - A Roadmap for Change



Information Technology Services



FY15 Summary

LOYOLA

UNIVERSITY CHICAGO

July 2015