Introduction

Information Technology Services (ITS) aims to provide the IT services necessary to support the University in being a world-class private higher education institution in the 21st century. Accomplishing this can only occur through the synergies of high-caliber and talented members that have directly affected strategic goals for increasing enrollment, incorporating web enhanced student learning, development of student services with emphasis on technology and continuing development of technology and applications. Below are progress updates towards meeting Technology Service’s operational goals.

Dashboards

Yearly Service Performance

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Work Orders Completed</td>
<td>5544</td>
<td>5707</td>
<td>5132</td>
</tr>
<tr>
<td>WO Closed &lt; 1 hr. (%)</td>
<td>54%</td>
<td>46%</td>
<td>41%</td>
</tr>
<tr>
<td>Response Time (%)</td>
<td>92%</td>
<td>87%</td>
<td>84%</td>
</tr>
<tr>
<td>Turnaround Time (%)</td>
<td>92%</td>
<td>83%</td>
<td>83%</td>
</tr>
<tr>
<td>Communication (%)</td>
<td>92%</td>
<td>86%</td>
<td>84%</td>
</tr>
<tr>
<td>Technical Abilities (%)</td>
<td>89%</td>
<td>84%</td>
<td>82%</td>
</tr>
<tr>
<td>Keep systems running (%)</td>
<td>89%</td>
<td>89%</td>
<td>83%</td>
</tr>
<tr>
<td>Delivers new service (%)</td>
<td>91%</td>
<td>83%</td>
<td>81%</td>
</tr>
<tr>
<td>Usability and effectiveness (%)</td>
<td>88%</td>
<td>83%</td>
<td>81%</td>
</tr>
<tr>
<td>Service value (%)</td>
<td>97%</td>
<td>83%</td>
<td>85%</td>
</tr>
<tr>
<td>Overall satisfaction (%)</td>
<td>79%</td>
<td>92%</td>
<td>89%</td>
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Yearly Infrastructure Utilization

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Reliability (%)</td>
<td>99.891%</td>
<td>99.946%</td>
<td>99.93%</td>
</tr>
<tr>
<td>Cloud CPU / Mem (%)</td>
<td>13.1 / 51.2</td>
<td>12.7 / 50.7</td>
<td>10.9 / 36.3</td>
</tr>
<tr>
<td>Internet (%)</td>
<td>34%</td>
<td>40%</td>
<td>36%</td>
</tr>
<tr>
<td>Storage (TB)</td>
<td>11.1</td>
<td>15.7</td>
<td>17.6</td>
</tr>
<tr>
<td>Wireless Hotspots (#)</td>
<td>76</td>
<td>92</td>
<td>101</td>
</tr>
<tr>
<td>Average Wireless Clients (#)</td>
<td>236</td>
<td>315</td>
<td>384</td>
</tr>
</tbody>
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Sustainability Metrics

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Double-Sided Printing(^1) (%)</td>
<td>30%</td>
<td>59%</td>
<td>57%</td>
</tr>
<tr>
<td>Paper Saved(^2) (Sheets)</td>
<td>202,252</td>
<td>433,383</td>
<td>375,819</td>
</tr>
<tr>
<td>e-Waste Recycled (Tons)</td>
<td>3.6</td>
<td>deferred</td>
<td>deferred</td>
</tr>
</tbody>
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Goals & Progress

Goal 1: Excellence in Customer Service

Technology Service’s primary function is to support the University and its members. It is the department’s priority to exceed the expectations of users of technology. From support services, planning, implementation and management of all institutional information systems, Technology Services implements best practices and processes with the goal of increasing its customer satisfaction.

Progress towards this goal is in accordance with Middle States Standard 7: Institutional Assessment and Standard 9: Student Support Services.

- **Customer Service Excellence - ongoing**

  Total work orders decreased from 5,707 the year prior to 4,948 in 2015. Customer service satisfaction experienced marginal decreases of 2-3%, while Service Value was up 2% year-over-year (Y.O.Y) and Keeps Systems Running was down 6% Y.O.Y. Work order surveys indicate 97% satisfaction overall, the same as the year prior.

Assessment Tools: Annual Customer Satisfaction Survey, Work Order Surveys

Goal 2: Provide enhanced systems and services to better serve faculty, staff, and students

Innovation is in Technology Service’s DNA. It will enhance, improve, and implement administrative systems with capabilities and functionality to better serve faculty, staff, and students.

Progress towards this goal is in accordance with Middle States Standard 3: Institutional Resources.

- **Large File Transfer – complete**

  Technology Services developed and launched its own secure, cloud-powered, file locker service (i.e. Dropbox) to overcome file size limitations within the Moodle LMS.

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\(^1\) Excludes print shop
Whereas Moodle limits files to 64 Megabytes, Large File Transfer permits files up to 2 Gigabytes. During the year, the service had approximately 286 unique users, 628 hosted files totaling 119 Gigabytes stored in the cloud and 567 Gigabytes of transferred.

- **PowerCampus Upgrade – complete**

Significant upgrades were completed in Summer ’14 to the PowerCampus ERP. A total of 139 defects were corrected and support added for the National Student Clearinghouse’s enrollment reporting changes.

- **Loaner Equipment Program – complete**

Launched in Fall ‘14, the Loaner Equipment Program is a new service for faculty and staff to borrow laptops, projectors, adapters and other peripherals. To date, there have been 48 requests within this program to borrow equipment.

**Assessment Tools: Annual Customer Satisfaction Survey, Service Metrics**

**Goal 3: Develop a modern cyber infrastructure to support evolving needs**

The IT infrastructure is the underpinning of all technology services and solutions, including wired, wireless network, telephony, servers and data storage. Continual development of the University’s cyber infrastructure is necessary to support the evolving needs for enrollment growth, program development, intellectual and informational resource growth, and services to the students and the community. It is Technology Service’s responsibility to create a secure landscape that provides a consistent user experience for all students, faculty and staff.

Progress towards fulfillment of this goal is in accordance with Middle States Standard 3: Institutional Resources.

- **Academic Center – ongoing**

Working with colleagues, architects and engineers, significant progress towards the Academic Center was completed. From pervasive wifi, state-of-the-art audio/visual technologies in classrooms, to a new IT suite with modern computing facilities, the Academic Center is being designed to meet the institution’s needs today and tomorrow.

- **Telephone PBX Upgrade - ongoing**

Technology Services embarked on and completed the first of three phases towards modernizing campus communications with Voice-over-IP (VOIP). In the first phase, 300 administrative and faculty telephones transitioned to Microsoft Lync, bringing unified communications, telephony, instant messaging, conferencing and collaboration to all.
• **Intrusion Detection System – ongoing**

Technology Services outsourced intrusion detection functions to AlertLogic. AlertLogic conducts real-time network analysis to detect and notify department staff in the event of data breach.

• **Wifi Expansion - ongoing**

Ten additional wireless access points were installed in Main Hall to support continuing growth of student, faculty and staff wifi-enabled devices on campus.

• **Internet Upgrade – complete**

Internet service provider Lightower Networks replaced Cogent Communications for primary internet access. In addition, a private circuit connects the campus network with the designated IT systems disaster recovery site in Ashburn, VA. As a result, internet capacity has tripled, cost savings exceed $11k annually and disaster recoverability has been improved.

Assessment Tools: SLA, Service Metrics

**Goal 4: Align with the University’s sustainability pledge**

Aligning with the University’s commitment to going green, Technology Services will focus strategic investments and services into reducing waste, improving energy efficiency and promoting a greener environment through smarter use of technology.

Progress towards fulfillment of this goal is in accordance with Middle States Standard 3: Institutional Resources.

• **Print Conservation - ongoing**

Launched in 2012, the Go Green, Print Lean! Initiative emphasizes the reduction of paper consumption through double-sided printing. By halving the cost of print jobs for students, over 376k sheets of paper have been saved, equivalent to 45 trees²!

• **e-Recycling – deferred**

Due to time constraints, Technology Services was unable to coordinate disposal of e-waste prior to the close of FY’15. An estimated 2 tons of e-waste is slated for recycling in Summer ’16.

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² One tree produces an estimated 8,333 sheets of paper.
Assessment Tool: Paper Consumption, e-recycler inventory

Goal 5: Promote Student Success

Teaching and learning represent the core of Trinity’s mission. Technology has increasingly played an important role in achieving educational goals. To realize these goals, Technology Services will leverage existing, emerging, and innovative technologies to promote student success.

Progress towards fulfillment of this goal is in accordance with Middle States Standard 3: Institutional Resources and Standard 9: Student Support Services.

- Classroom Projector Refresh – ongoing

Fifteen classroom projectors were replaced during the year. The new projectors are sharper, 35% brighter and have a 33% lower total cost of ownership. Additionally, they are future-proofed to support HDMI connectivity seen on newer student laptops. Five additional projectors are slated for replacement in FY’16.

- Microsoft Office 365 – ongoing

Microsoft Office 365 was released to Trinity students, faculty and staff for free in Spring ’15. Working with Creative Services, Office 365 promotional fliers can be seen around campus and on the Trinity homepage. Efforts to further promote the productivity suite are planned for Fall ’16 with tie-in to the laptop purchase portal.

Additionally, Technology Services is evaluating OneDrive cloud integration to enhance services available for teleworkers.

Assessment Tools: Annual Customer Satisfaction Survey
Data from the most recent Annual Technology Services Customer Satisfaction survey reveals slight decreases across all key performance indicators. Overall satisfaction with response time, or the time it takes IT to respond when a work order is opened, decreased by 3%. Customers perceive slower response times when there is an actual improvement of 26 minutes compared to the year prior. In other words, customers are receiving responses more quickly.

Turnaround performance, or the total time needed to resolve a work order, remained the same YOY with 83% satisfaction rating.

Communication is the essence of providing good customer service. It can defuse the most troublesome issues if it is provided in a professional and courteous manner. The performance metric in communication decreased 2% YOY to an overall 84% satisfaction.

Technical ability is a measure of how confident customers are in IT. The performance metric decreased 2% YOY to an overall 82% satisfaction.

As a carry-over from the year prior, decreases in communication and technical abilities are seen as opportunities for improvement. Technology Services will seek to introduce operational initiatives for the upcoming year with a greater focus on communication, wider use of cross-functional training and customer service training.
Overall performance measures key performance indicators that assess the reliability of major services, the frequency at which new and innovative servers are delivered, the usability and effectiveness of new services provided, how valuable these services are to customers, and the overall satisfaction of Technology Services as a whole.

Reliability of IT services decreased 5% YOY, to 83% overall satisfaction. The decrease is supported by internal measures against reliability. By the end of the year, the reliability of all critical IT systems measured 99.93%, down from 99.946% the year prior. The 0.016% decrease equates to 6 hours and 8 minutes of actual downtime, a 1 hour and 24 minutes increase YOY.

Timely delivery of services, usability & effectiveness and value of services all received slight decreases or slight increases in overall satisfaction. Open feedback in the annual survey suggest recurring issues around lack of knowledge on available services and lack of training. Additional feedback indicate a lack of classroom technology uniformity (i.e. tech carts in Main Hall 244-248 vs. standard fixed layout classroom in Main 236) and weak wifi in dense areas on campus. These areas will be addressed in the following year and are referenced in goals for 2016.

Overall satisfaction, which measures all things considered how satisfied customers are with Technology Services, decreased 3% YOY to an 89% satisfaction.

Supplementing the annual survey, feedback from work order surveys reaffirm overall high levels of customer satisfaction despite the slight decreases noted previously. On a scale of 0 through 5, work order feedback averaged 4.87 for overall satisfaction, down 0.01 of a point YOY. Comments from the surveys are listed below.

“Terrific, immediate service.”
“Excellent, fast service!”
“The technician detected the error fast and repaired immediately.”
"I think the Trinity IT team is outstanding in knowledge, customer service and speed of response.

Services Satisfaction

Of services offered, the newly launched Large File Transfer received a 65% satisfaction. While the purpose of the service was to address file size upload limitations within Moodle, the service has already been used for easier sharing of files among faculty and staff. Minor complaints have included desire for sharing files larger than 2 Gigabytes to slow transfers over wifi.

Among student services, IPTV and the Laptop Purchase Portal received the lowest rating, at 30% and 45% overall satisfaction. Common issues cited with IPTV are similar from prior years. Channel/programming lineup is limited, lack of streaming ability over wireless and lack of set top boxes. Technology Services continues to evaluate IPTV over wifi in addition to digital media players (Apple TV, Roku, etc.).
For the Laptop Purchase Portal, customer feedback was not provided. The low satisfaction could be attributed from minimal marketing, limited selection and increased competition from retailers (Trinity Bookstore, BestBuy, Apple Store, etc.). In late Spring ’15, Technology Services partnered with Dell to revamp offerings with better savings. Links to Apple Education and the Trinity Bookstore have been and continue to be listed.

Among staff and faculty services, PowerCampus and Reporting Services (Report Manager) received the lowest satisfaction ratings. PowerCampus was down 7% YOY, while Reporting Services was down 28% YOY in overall satisfaction. Given the two services are interrelated, emphasis on understanding their issues and developing a long-term roadmap will occur in the upcoming year.

**Completed Work Orders**

![Completed Work Orders Over Time](image)

Approximately 5,132 work orders were closed in FY’15, an overall 11% decrease YOY. Peak resolved work orders occurred in the month of August, although it was 27% less than in the prior year. The majority of work orders in August consisted of password resets, which were 40% fewer than in the same month YOY. It is possible multiple factors contributed to fewer requests, including depressed enrollment, increased use of single login systems and streamlined Cont. Ed. password reset procedures.
Similar to last year, password resets (31%), account administration (11.4%), desktop repairs (6.5%) and printer/copier (5.9%) held top spots for completed work orders. New to this year, virus/malware category was added order to track the number of computer-borne threats found by antivirus, intrusion detection systems and technicians. This new category consisted 6.5% of total help desk work orders.
New to this assessment period, work orders for Applications Support are being reported separately from the help desk. Academic Records (34.6%) required the most support, followed by Admissions (16.6%), Advancement (14.6%) and Self-Service (14.4%). These levels indicate a shift in workload to support departments primarily responsible for these PowerCampus workflows.
Technology Services tracks utilization to determine if sufficient resources are readily available to support the needs of the institution. Furthermore, it aids with informed data-driven decision making. The following are notable events that had a marked impact in the past 2 years.

- March 2014: Server computing cluster upgraded; sufficient processing capacity available for the next several years.
- May 2014: High-speed network storage added.
- August 2014: Internet capacity increased threefold.
- November, 2014: Launched Microsoft Lync to replace legacy campus PBX telephone system.

Goals for 2013-2014

Technology Services continues to maintain five operational goals that contribute towards Envision Trinity 2020 and its strategic goals on 1) Enrollment Development, 2) Financial Performance, 3) Program Development, 4) Technology, 8) Services to Students and the Community and 9) Quality, Outcomes and Key Performance Indicators.

1. Provide customer service excellence to students, faculty and staff. Technology Services will continue to seek ways to improve customer satisfaction and enhance the value of services by soliciting feedback through annual surveys, work order surveys and leveraging its service response system. Emphasis on improving communication and
wider use of cross-training are initiatives for the upcoming year with a goal of improving these areas by 4%.

Fulfillment of this goal applies to Middle States Standard 7: Institutional Assessment and Standard 9: Student Support Services through documented, organized and sustained assessment processes; use of qualitative and quantitative measures; periodic evaluation of effectiveness; assessment of student support services and the utilization of assessment results for improvement; help strengthen learning outcomes.

2. Seek ways to enhance, improve, and implement administrative systems with capabilities and functionality to better serve faculty, staff, and students. For the upcoming year, Technology Services will coordinate, plan, and install upgrades to PowerCampus, Dynamics, and PowerFAIDS to address defects and meet regulatory changes. Reporting, analytics and business efficiency (i.e. e-Transcripts, electronic forms) will be major drivers in the upcoming year.

Fulfillment of this goal applies to Middle States Standard 3: Institutional Resources through evidence of a systemic approach used to improve efficiency, contain costs, redirect resources to support the institution's mission and goals.

3. Provide a reliable and robust cyber infrastructure to meet the evolving needs of the University through collaborative and data-driven decision making. Through ongoing assessments, Technology Services has budgeted for wireless upgrades in FY’16 to support this goal.

Additionally, the VOIP rollout will continue with phase 2 to decommission the legacy PBX. This will free significant financial resources for reinvestment back into IT systems.

Furthermore, construction of the new data center in the Academic Center is slated for completion in Spring ‘16. The new data center will provide the necessary capacity to support “always-on, always-ready” access to information systems.

Fulfillment of this goal applies to Middle States Standard 3: Institutional Resources through evidence of a systemic approach used to improve efficiency, contain costs, redirect resources to support the institution's mission and goals; an infrastructure lifecycle management plan; an equipment acquisition and replacement process.

4. Renew commitment to institutional green initiatives by aligning IT practices and acquisitions with those that promote environmental stewardship. Technology Services will further its Go Green, Print Lean! campaign with a goal of decreasing overall paper consumption by 3%. Additionally, an estimated 2 tons of e-waste will be scheduled to recycling at the end of Summer ’15.
Fulfillment of this goal applies to Middle States Standard 3: Institutional Resources through an infrastructure life-cycle management plan; an equipment acquisition and replacement process.

5. Focus on advancing student success through services that enhance the learning and teaching process. Technology Services will continue to collaborate with Instructional Technologies and align initiatives that deliver technological value towards the success of Trinity students. Initiatives planned for the upcoming year include:

- Awareness building of services available to students and faculty.
- Marketing push for free Office 365 with tie-in to laptop purchase portal.
- Study on classroom technology usage and standardization.
- Completion of classroom projector refresh

Fulfillment of this goal applies to Middle States Standard 3: Institutional Resources and Standard 9: Student Support Services, through evidence of a systemic approach used to improve efficiency, contain costs, redirect resources to support the institution’s mission and goals; promote development of the student and help strengthen learning outcomes.