SAINT PAUL COLLEGE

Technology Master Plan

2016-2019

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Executive Summary

The Technology Master Plan 2016 – 19 provides a vision of the future, an analysis of the barriers to that vision, and a series of strategic directions, goals, and action objectives to support Information Technology Services (ITS) as it works to expand and enhance the use of technology in support of the teaching, learning and associated Mission of Saint Paul College (SPC).

Plan Development

The Technology Master Plan was developed by the Technology Committee during the period January through March 2016 under the leadership of Najam Saeed, CIO of ITS. The Committee was comprised of volunteers recruited from among SPC faculty, administration, staff and students. The CIO co-designed and oversaw the Plan development process in collaboration with the College community. Focused meetings were held and e-mails were sent to the solicit ideas, suggestions, and technology needs for the next 3 years.

The Technology Committee created a 3-Year Practical Vision of the Future for ITS by agreeing on the specific, recognizable conditions that needed to be in place in relation to technology at the College. Based on this 3-Year Vision, the Committee then reached consensus on the existing Barriers that could prevent ITS from achieving the Vision of the Future. Then, focusing on the three-year process, the Committee agreed upon the five major vectors of action—or Strategic Directions—that needed to be pursued for the Vision of the Future. The five Strategic Directions of the Plan are as follows:

1. **Advocating Effectively for College Technology Needs**
2. **Developing Human Capital to Meet Technology Needs in All Areas of the College**
3. **Procuring & Managing IT Assets & Funds to Support Teaching & Learning**
4. **Facilitating Change Through Communication & Training for Faculty, Staff & Students**
5. **Planning, Measuring & Implementing ITS-Related Projects Strategically & Collaboratively**

The five Strategic Directions are supported by several Arenas of Action formulated by the Committee. The Committee then crafted high level SMART Goals within these Arenas of Action in order to fulfill the five Strategic Directions. Next, the Committee members worked to craft SMART Objective Action Plans in order to accomplish the SMART Goals. Each SMART Objective Action Plan includes the steps, milestones, completion dates, position(s) responsible for the action plan, estimated funding requirements, and suggestions for additional team members, should they be required.

Executive Summary—*Continued*

Progress Reviews & Updates to the Plan

This Technology Master Plan is intended to be a living and evolutionary document. Arena of Action J includes SMART Goals and SMART Objective Action Plans to ensure that the College Technology Committee and the CIO keep the Plan alive by monitoring, measuring and reporting implementation progress on the Plan.

In terms of the Plan's evolution, the intention is to reconvene the Technology Planning Committee near the beginning of 2019 to consider the circumstances at that time and create next 3 Year Strategic Directions, SMART Goals and SMART Objective Action Plans. One additional cycle of planning could occur prior to the last year of the Plan. In this way the Plan will continue to evolve, respond to unforeseen changes, and address to current circumstances.

Technology Planning Committee Members

Saint Paul College wishes to thank the following members of the Technology Committee for generously giving of their time, knowledge, creativity and efforts.

Name	Title
Greg French	Faculty
Clinton Heino	Student Representative
Kelly Jacobson	Director, Technical Services (ITS)
Tam Knapton	Academic Success Coordinator
Travis Mills	Faculty
Fredrick Onyango	Safety & Health Officer
Edward Schones	Faculty
Ben Tri	Faculty (Library)
Najam Saeed	Chief Information Officer (CIO)

Scan of the Current Situation

To create a clear context at the beginning of the mission development and strategic planning process, the Committee completed a Scan of the Current Situation to clarify the environment in which the technology organization exists as of 2016.

Present Situation Assessment

ITS's Chief Products, Services & Programs
- Tech support to faculty, staff and students
- Maintain network, classroom computers, software
- IT & Network Security
- Help desk support
- Recommend IT purchases
- Vendor contract support
- Provide support for AV and Web
- Voice mail, printing support, email, wireless, Intranet, D2L Brightspace, remote access, Cisco VOIP

ITS Track Record
- Good leadership
- Forward Thinking
- "Up" time of the network and technology services
- Timey application of patched and updates
- Continually improving
- Overall, excellent track record
- Ahead of the curve
- Fast response time, professional

What are the Distinctive Competencies of ITS?
- Provide feedback mechanism
- Smart technology in classrooms is superior
- Could provide better night and weekend IT support
- Could benefit from customer service training for techs
- Excellent inventory control; cyclivcal replacement of computers, laptops and data center infrastructure
- Attractive and friendly Technology Center
- IT support and help desk is superior
- Superior at procuring quality hardware and software

Current State of the ITS Organization
- Some challenges remain: communication between IT staff and customers; hardware/software problems; limited assistance with software applications
- IT Helpdesk Services are prompt, efficient, and professional. Examples: wireless, data center, help desk, inventory control

Scan of the Current Situation—*Continued*

ITS's Plans for the Future
- Continue to provide excellent support to customers (faculty, staff, students)
- Wireless technology support (e.g. Tablets, Smart Phones, etc.)
- Secure the College networking environment
- Rotation plan for purchasing and maintaining hardware/software
- Work with Marketing Department to completely revamp the College web site and make it responsive and mobile friendly
- Wireless classroom support
- Migration to Cloud Computing
- Stay ahead of the curve in technology
- Solid infrastructure
- Virtual desktop support

Scan of the Current Situation—*Continued*

Environmental Scan

Demographic Shifts
- Declining Student enrollment
- Minority majority College with large diverse population
- Influx of smart phones & tablets
- Many students not computer literate
- Dislocated workers increasing, impacts student population/program offerings
- Change from technical college to comprehensive mission
- Aging Baby Boomers
- New populations/immigration

Social and Cultural Trends
- Growing societal reliance on mobile technology
- Ability of students to purchase technology
- Digital divide
- Changing definition of privacy/social networking
- Movement toward open source and electronic resources
- Expectation of 24-hour support and infrastructure
- Cultural implications of photo IDs
- Language support
- Need to maintain support for older technology
- Changing status and perception of 2-year colleges

Changes or Trends in Institutional Leadership That Could Affect ITS
- Stable and supportive leadership
- Expand programmatic offerings such as weekend and online college, etc.
- Filling and replacement of administrative positions
- Legislative changes
- Pending retirement of the Chancellor in 2017 and hiring of a new Chancellor
- Restructuring of Academic Affairs & Student Development
- Revitalized mission statements & strategic planning
- Student Senate's impact at local, system, and state levels

Legislation That Could Affect ITS
- Cybersecurity and data privacy Issues
- Financial Aid regulation and processes
- State funding
- Strict rules regarding collaboration
- Federal regulations for students from other states
- Payment card industry rules
- Perkins and Title IV funding

- Immigration policy and legislation

Scan of the Current Situation—*Continued*

Global Patterns/Shifts
- Impact on program offerings
- Emerging economies impacts on local economy & IT funding, resources, pricing
- Global shift to cloud computing
- International standards (www.Incits.org)
- Environmental awareness impacting cost of facilities and student tastes

Technological Innovations That Could Affect ITS
- SMART devices and mobility decrease the need for desktop computing
- Antiquation of hardware and software
- Keeping up with what standards can be supported
- Cloud computing
- Security
- Wireless-- changes in standards
- Open source and electronic resources
- Media changes in format

Economic/Financial Pressures That Could Affect ITS
- Increase in student debt
- Continued reduction in state funding
- Ability of students to pay for tech. upgrades
- Grant writing and implementation
- Pell grant funding changes

Scan of the Current Situation—*Continued*

Strengths and Weaknesses

ITS's Strengths (Internal)
- Excellent leadership
- Excellent support at IT Help Desk
- Excellent network infrastructure
- New ITS office space
- Quick response to change (e.g. update to Office 365)
- Smart rooms
- Online student services
- Easy access to support
- Consolidated Tech. Center/state of the art
- Student e-mail (Office 365)
- Intranet Document Center/ Portals, Share Point, VDI
- Network security
- Document imaging (no paper)
- Co-location of services
- Laptop carts
- Administrative support
- Quality of current equipment

ITS's Weaknesses (Internal)
- MnSCU
- ISRS
- Hardwiring of SMART room/design inconsistencies
- No centralized, easy lecture capture technology
- Lack of computers during peak times (student use)
- Cost of updates and maintenance of software/hardware/mobile technology
- Inefficient feedback mechanisms (D2L effectiveness)
- Increased security spam malware risks
- Inventory for outdated under-utilized technology
- Tech. Ed. for faculty and staff
- Wireless coverage
- Staff shorthanded/ financial issues
- SharePoint isn't shared
- Union weakness specific to IT
- Participation in Tuesday with Technology
- Lack of secretarial support

Scan of the Current Situation—*Continued*

Opportunities and Threats

ITS's Opportunities (External)
- Investigate Open Education Resources (OER) and e-Textbook options
- Laptop program for students with a fee (Laptop Campus)
- Online orientation and tutorials/tutoring
- System-wide software purchase
- New College website
- Work flow and document management to improve efficiencies using Share Point
- Departmental web pages
- Kiosk for students
- Open Source learning expansion
- Improve multimedia classrooms
- More money from online learning fee
- More support from government for e-learning
- Improve D2L or online learning system
- Growth in online resources
- Expand use of student laptop carts
- More clicker technology in classrooms
- 2+2 offerings (degrees)

ITS's Threats (External)
- Lack of technology specific state funding to support technology
- Rate/speed of change
- Cost of technology upgrades
- IT Security threats (spam, malware, DDoS, risk of security breach)
- Rising technology fee and other fees
- Control from outside the College (MnSCU, State, etc.)
- Lack of student knowledge and skills in technology
- Lack of creativity
- Lack of student access to technology resources
- Competition from other institutions
- MnSCU IT support services
- Lack of personnel support in ITS

Scan of the Current Situation—*Continued*

Critical Issues of the Future

- How can we best embrace emerging technology to better serve our students, faculty and staff? (e.g. Cloud, VDI, mobile, etc.)
- How do we provide security for our technology assets?
- How do we overhaul the public website to attract new populations of students?
- How can we help reduce the gap between our stakeholders who understand and embrace technology and those who do not?
- How do we ensure student & institutional preparedness for online learning?
- How do we manage new LMSs and other technology changes?
- How do we excel on a limited budget?
- How do we ensure quality online delivery (classes, programs, points in between)?
- How do we meet the diverse needs of customer segments?
- How do we provide access to technology to students outside of normal hours?
- What is ITS's role in maintaining the College's and system's mission and vision?
- Expansion of personnel in event of 2+2, etc.: hire more staff?
- How do we better design smart classrooms?
- How do we recruit the appropriate online students and make transfer work?

The ITS Updated Internal Mission Statement

The Mission Statement needs to answer the question, "*Who are we and why are we here?*" In the aftermath of the Scan process, the Technology Committee reviewed the current Information Technology Services Mission Statement and then analyzed the core desired outcomes of the key customers of Information Technology Services. As a result, the Committee decided to keep the current Mission Statement as it fully reflect the mission of Information Technology Services that foster unity of purpose and guide decision-making by ITS Staff.

Information Technology Services (ITS) Internal Mission Statement

We provide IT support services to enhance teaching and learning in support of the Mission and Vision of the College.

We leverage our strengths in responsiveness and adaptability to deliver:

- Collaborative & Respectful Interactions Within the College Community
- Fast, Effective & Accessible Issue Resolution
- A Robust, Reliable & Secure IT Infrastructure
- A Friendly & Supportive Technology Environment
- A Technology Environment That Facilitates Learning, Teaching & Student Success
- A Campus Community That Is Informed & Confident in Effective Use of Technology
- A Technology Environment That Supports Continuous Quality & Productivity Improvement
- A Campus Community That Explores, Uses, & Adapts to The Best Technology Solutions

Through our commitment to supporting a diverse campus and community, we contribute to the development of a skilled, educated and technologically literate work force.

The 5-Year Practical Vision of the Future

A vision of the future is a longer-term, future-oriented answer to the question, *"Where are we going?"* The Vision of the Future represents the preferred future that the Technology Committee chooses to create for ITS. In creating the **Practical Vision of the Future**, the Technology Committee reached consensus on the specific, recognizable conditions it envisioned being in place by the end of five years.

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Consensus 5-Year Practical Vision of the Future

(<u>Note</u>: Bulleted items represent consensus agreement by the Technology Committee regarding the recognizable conditions to be in place for ITS)

- Saint Paul College Is Recognized as a Premier Provider of IT Services & Educational Technologies

- We Provide Access & Support to e-Books, Electronic Publications & Online Resources for Teaching, Learning, Research & Management

- An Established Cyclical Process Is in Place to Maintain & Improve IT Infrastructure Throughout the College

- We Provide Prompt & Effective Support for Mobile & All Other Electronic Devices

- ITS Provides Efficient, Cost-Effective & Centrally Managed Printing & Duplicating Services

- A Simplified & Effective User Authentication Process Is in Place

- Adaptations of all Technologies Are Made Thoughtfully, Swiftly & Seamlessly to Maintain Persistent & Reliable Technology Access from Anywhere

- ITS Is Involved Collaboratively in the Design of Classrooms & Common Areas to Facilitate Quality Learning & Teaching

- The College Website Is a Robust, Accessible Tool for Information & Interaction Between the College & Its Stakeholders

- College Web Services Are Designed to Promote Personalized Interaction & Collaboration Between Program Faculty & Their Students

- ITS Has the Resources & Trained Staff to Effectively Support the College's Technology Environment

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- ITS Collaborates with the Campus Community to Provide Cost-Effective IT Equipment, Software & Services

The Barrier Analysis

In the Barrier Analysis, the Technology Committee reached consensus on the present Barriers that could prevent ITS from achieving the 5-Year Practical Vision of the Future. Barriers are to be found in our images and attitudes, in historical and societal trends, and in the structures and patterns we create and out of which we operate. A barrier is not something that is missing; it is something that is present.

Consensus Barrier Analysis
In Relation to the 5-Year Practical Vision of the Future
(Note: Bulleted items represent consensus Barriers
agreed upon by the Technology Committee.)

- Undefined Vision & Uncoordinated Plans Across College Departments

- Shrinking & Unbalanced Funding

- Restricted Availability of Staff & Resources

- Some Forces External to IT Adversely Impact IT Operations

- Campus Users & Groups Are Resistant To Change

- Speed & Unpredictability of Technological Changes

- Incomplete Measurement of IT Utilization On Campus

- Uncoordinated & Ill-Defined Communication Processes Across
  College Departments

The Strategic Directions & Arenas of Action

Keeping one eye on the consensus 5-Year Practical Vision of the Future and one eye on the consensus Barriers blocking the path to the Vision, the Committee next reached consensus on the six major vectors of action (Strategic Directions), the supporting Arenas of Action that ITS needed to focus on in the 5-Year Plan, and then crafted one or more SMART Goals for each Arena of Action under each of the Strategic Directions. The Committee agreed on the following:

Strategic Direction #1: Provide Excellent IT Support and Services to all areas of the College

Arena of Action A: IT Services

SMART GOAL 1.   Ensure all students have access to technology
SMART GOAL 2.   Perform annual IT capacity assessment and keep IT infrastructure updated to meet the needs of the College
SMART GOAL 3.   Establish and document a process to research, test, evaluate, and implement new technologies

Arena of Action B: Staff Development

SMART GOAL 1.   Provide frequent training opportunities to IT staff to stay up-to-date on technologies implemented at the College

Strategic Direction #2: Improve and Enhance Technology Support to the Faculty in and out of the Classroom

Arena of Action C: Academic Technology

SMART GOAL 1.   Upgrade all multimedia classrooms to digital technology
SMART GOAL 2.   Work with faculty and deans to implement a lecture capture solution
SMART GOAL 3.   Work with faculty and deans to implement a telepresence/video conferencing solution

The Strategic Directions & Arenas of Action—*Continued*

Strategic Direction #3: **Migrate the College's Services and Infrastructure into Cloud Computing Environment.**

Arena of Action D: *Cloud Computing / Web Services*

SMART GOAL 1. Office 365 migration for students, staff and faculty
SMART GOAL 2. Migrate DR/BC (Disaster Recovery/Business Continuity) to the cloud
SMART GOAL 3. Migrate SharePoint and College websites to the cloud
SMART GOAL 4. Revamp/redesign the College website (www.saintpaul.edu) into a responsive website

Strategic Direction #4: **Implement Processes, Procedures and Solutions that will Improve IT Services and Security**

Arena of Action E: *IT Security*

SMART GOAL 1. Develop an IT Security and Incident Management plan
SMART GOAL 2. Maximize security of IT infrastructure and mobile devices
SMART GOAL 3. Ensure safety and security of data on College systems

Arena of Action F: *IT Infrastructure and Services*

SMART GOAL 1. Upgrade wireless technology from 802.11n to 802.11ac
SMART GOAL 2. Provide an "always connected" IT environment to students, faculty and staff
SMART GOAL 3. Develop and implement a system to support BYOD/BYOT (Bring Your Own Device/Bring Your Own Technology) at the College
SMART GOAL 4. Assist with the implementation of a student services CRM system to help improve student retention and completion

The Strategic Directions & Arenas of Action—*Continued*

Strategic Direction #5:   Facilitate Change through Communication and Training for Students, Faculty, and Staff.

> <u>*Arena of Action G*</u>*:*   *Communication*
>
> SMART GOAL 1.   Hold regular feedback forums to enhance communication between the College community and IT Services
> SMART GOAL 2.   Design and implement a program and process to facilitate change and the acceptance of change in the College community for all significant IT initiatives
> SMART GOAL 3.   Develop a comprehensive strategy to increase awareness and development of e-textbooks and open educational resources (OERs)
>
> <u>*Arena of Action H*</u>*:*   *Training*
>
> SMART GOAL 1.   Increase faculty awareness regarding the availability and use of the Kaltura Media Space tool
> SMART GOAL 2.   Provide training to College staff on the use of the online learning system so they may assist students
> SMART GOAL 3.   Increase opportunities for exploration of emerging technologies and professional development for students, faculty and staff

Strategic Direction #6:   Work with Technology Committee and the Campus Community to Assess, Support, Enhance, and Improve Technology at the College.

> <u>*Arena of Action I*</u>*:*   *Collaboration*
>
> SMART GOAL 1.   Establish and implement a strategy to get IT service collaboratively involved early on all campus planning initiatives and projects
>
> <u>*Arena of Action J*</u>*:*   *Assessment*
>
> SMART GOAL 1.   Define metrics and use relevant tools to measure, analyze and improve IT services and utilization
> SMART GOAL 2.   Annually assess the placement of technology resources and equipment in classrooms and other student-use spaces, and strategically relocate/reallocate, if necessary
> SMART GOAL 3.   Review and assess IT staffing to ensure optimal service is provided and risk management is considered
> SMART GOAL 4.   Meet with academic deans bi-annually to review and assess academic technology needs

Funding the Technology Master Plan

Technology initiatives are funded by three primary budget sources: general college funds; equipment funds; and a technology fee charged to students. The general college funds are distributed to departments and programs and are used for a variety of instructional needs: faculty, teaching supplies, materials, and technology. Specific program technology needs are met using the general program and equipment budget allocations. Student Technology Fee funds are dedicated to support direct and indirect technology needs of the students.

General College Budget

This funding source's monies are allocated by the Cabinet, and address overall College needs. The general college equipment funds are also distributed to programs and departments based on defined needs. The various technology-related needs that fall under this funding source include:

- Software & Hardware needs
- Required support staff including student workers
- Space allocation and remodeling
- Staff and faculty training
- Servers, phone system, unified messaging system, etc.
- Network infrastructure, cloud computing, IT security, etc.
- Academic technology/multimedia equipment
- Disaster recovery planning and implementation

Equipment Budget

This funding source allocates monies related to technology for end-user equipment and hardware directly related to instructional needs. Each program and department prioritizes the instructional needs and requests for funds. Funds allocated under the equipment budget have an impact on technology support services.

Student Technology Fee

All registered students at Saint Paul College pay an $8.84 per semester credit hour technology fee in the 2016/2017 academic year. It is expected that the technology fee will increase over the next two years, and will cap out at $10.00 per semester credit hour by the 2018/2019 academic year. Technology fee funds are used for campus wide technology projects. The Chief Information Officer develops a technology fee spending plan every year in collaboration with the College Leadership. As a matter of MnSCU policy, funds generated by the technology fee are spent on projects or items which benefit the general student body directly or indirectly and have campus-wide technology impact. The draft technology fee spending plan is presented to the Technology Fee Committee, Student Senate General Assembly, and finally, the President of the College for approval.