

Clarion University Technology Plan 2006

Center for Computing Services

April, 2006

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I) Introduction and Executive Summary

An objective for a new Information Technology (IT) plan was set as part of the comprehensive university planning process announced by the President in the Fall of 2005. Computing Services partnered with the University Technology Advisory Committee (UTAC) to develop the technology plan. To develop the IT plan, we considered two primary avenues. First, we examined general technology needs for IT products and services that are common and shared across the university community. Second, we examined IT areas that need to align to the specific strategic goals and directions of individual units.

University-wide IT directions and needs were assessed based on a series of focus groups coordinated by UTAC and held with groups from the College of Arts & Sciences, College of Business Administration, College of Education & Human Services, Division of Academic Affairs, Division of Finance & Administration, Division of Student & University Affairs (including student groups), and Venango Campus. Unit-specific IT directions and needs were examined initially as part of several unit-specific meetings that were included in the development process for the college strategic plans and subsequently as part of a comprehensive review of the Provost's on-line Strategic Planning Forum where draft documents were posted for strategic plan narrative reports and the associated matrices of key plan components.

Information collected from these reviews was combined with a situational analysis of our internal and external IT environment and used to develop a core set of strategic directions. The strategic areas of focus are as follows:

- Area 1 - IT Infrastructure: Enable the ubiquitous use of IT services by enhancing the university's technical infrastructure
- Area 2 - IT Support for Instruction and Research: Support and enable the creation and life-cycle maintenance of effective IT-related learning environments. Provide Faculty with the IT resources and tools needed to support their instructional and research initiatives.
- Area 3 – General IT Support Services: Enable the effective utilization of the IT infrastructure by providing baseline access, training, and support services.
- Area 4 – Administrative IT Services: Enable improvements in operational efficiencies and effectiveness by leveraging IT tools and services.
- Area 5 – Partnership: Collaborate with a full range of Higher Education and Commonwealth partners to advance the IT capabilities of the university, the region, and PASSHE.

Specific initiatives are identified for each area to address over the life of the strategic plan. These initiatives will be executed by defining specific annual action plans that are prioritized based on alignment with the yearly plans defined by the President, Provost, and Deans.

While the analysis and strategic direction defined in this report reveal challenges with a rapidly changing technological environment, this plan also presents great opportunities to strengthen IT's support of university operations. We have a strong IT team and a strong partnership with the university community. Through this planning process, we are defining a strategic direction that positions our IT services to support and enable the advancement of the academic, administrative, service, and research goals of the university.

II) IT Missions, Vision, and Values

- **MISSION:** The mission of Computing Services is to provide information technology services to support and enable the advancement of the academic, administrative, service, and research goals of the university.
- **VISION:** Computing Services will provide effective technology services that are aligned with the priorities and resources of the university and the PASSHE.
- **COMPUTING SERVICES VALUES:** We value and strive to provide excellence in the
 - Service Orientation that we will bring to all interactions with the university community
 - Technical Quality of our products and services
 - Teamwork and Collaboration with our partners across the university community, PASSHE, and within our internal organization

III) Situational Analysis

The last Strategic Information Technology Plan was developed in the period 2001 – 2003. Through that process and plan, solid advancements were made with IT services at the university including the deployment of the iClarion portal, the implementation of wireless network services at the library and selected other areas, significant expansion of Blackboard availability, and the implementation of SAP Finance, SAP Human Resource and event and scheduling systems. With the advent of the Technology Fee, major projects were also completed to implement and expand smart classrooms, ITV services, laptops for students, specialized computer labs, digital radio, audio, and video tools, and specialized software. The plan also led to the creation of the University Technology Advisory Committee (UTAC) to support IT planning across the university.

For the current planning effort, the UTAC-related focus groups were used to examine the existing state and future needs/directions of IT services. Various challenges and opportunities for improvement were identified. For IT to support and enable the advancement of the university's goals, an enhanced technical product and service infrastructure is needed. Limited wireless network coverage and an aging e-mail service are not meeting users' expectations for pervasive network access and robust and reliable communication tools. Better tools and processes are needed to improve the university's web presence. Information security is a growing concern across the enterprise. Greater training, support, and communications are needed to more effectively utilize the technologies that are in place. Expanded efforts are also needed to support, research, learn, and use emerging technologies (particularly for faculty use of instructional technologies) and to support specialized IT needs within specific disciplines. We must also actively participate in the design and implementation of central PASSHE/SyTEC SAP Campus Management system while still continuing to support and improve local university systems that are beyond the PASSHE projects – particularly those related to fund raising, assessment, decision support, and student operations. Moreover, while service expansions are needed, fiscal constraints challenge our ability to provide the technical support resources and the life-cycle system maintenance and operation of the desired services. Budgetary reductions within both central and college/division areas threaten the on-going viability of various classrooms and labs.

The University's internal feedback on IT reflected much of what is observed in the broader external IT environment. According to the November 2005 Educause Current Issues report, the top ten Higher Education IT issues are as follows: Funding IT, Security and Identity management, Administrative ERP/Information Systems Infrastructure Strategic Planning for IT, Infrastructure Management, Faculty Development, Support, and Training, E-learning/Distributed Teaching and Learning, Governance/Organization/Leadership for IT, Enterprise-level Portals, and Web Systems and services. Technology tools are pervasive. Laptops, advanced phones, and other personal devices push an IT environment for anytime, anywhere access. Our visitors, students, faculty, and staff increasingly expect IT services that are widely available, easy to use, and reliable.

IV) IT Strategic Areas of Focus

In presenting the charge for the five-year strategic planning initiative, the President outlined five strategic directions:

- Academics (Expand high quality academic program offerings)
- Community (Contribute to regional and community advancement)
- Diversity (Enhance diversity as a major contributor to overall high quality)
- Enrollment (Achieve moderately growing enrollment)
- Resources (Manage resources for sustainable growth and quality)

These guiding principles were the baseline for a comprehensive planning process with the colleges and all academic units within Academic Affairs. The resultant Academic Affairs Strategic Plan 2006-2011 identified the following strategies:

- Enrich Educational Experiences for Students
- Strengthen General Education
- Add or Expand Selected High Demand Programs
- Enhance Graduate Education and Research
- Enhance Academic Affairs Efficiencies
- Support and Mentor Departmental Chairs and Directors

There are many facets of IT that cut across these strategies. To support and enable the achievement of these strategies, the following IT Strategic Areas have been identified:

Area 1 - IT Infrastructure: Enable the ubiquitous use of IT services by enhancing the university's technical infrastructure

The university's technical infrastructure provides baseline access to campus IT resources and services including data networks, telecommunications, and core information services such as computer accounts, e-mail, and personal electronic file space. IT services are needed to provide and operate a reliable infrastructure that is easily accessible both on and off campus via a variety of devices and access methods.

Initiative 1.1: Network Access: Provide comprehensive wireless network access for the Clarion and Venango Campuses. Preserve and enhance the university network infrastructure.

Tactics:

1.1.1) Assess current coverage levels, identify wireless coverage goals for campus buildings and common gathering spaces, and define a prioritized plan to fund and deploy wireless services starting Fall 2006 and completing by Fall 2008.

1.1.2) Provide reliable data, video, and voice network services. Monitor network utilization and adjust available bandwidth to meet demands, maintain industry-current and supported network hardware and software.

1.1.3) Analyze service models for the Residence Hall (aka ResNet) network. Establish and implement a model to provide effective and efficient ResNet services with the 2007—2009 expiration of the contract for the current ResNet service provider.

Initiative 1.2: E-mail and Computer Account Services: Provide an enhanced e-communication solution with a robust and responsive user interface and adequate capacity to accommodate communications with broad electronic content including document, image, and media files. Enhance the computer account provisioning model to be responsive to dynamic enrollment needs.

Tactics:

1.2.1) Research and identify upgrade options for e-mail and related services such as personal calendars. Define and implement an upgrade plan for the 2007-08 academic year. (Computing Services, UTAC, PEC/Deans)

1.2.2) Review account provisioning services and define accelerated methods to promptly provide e-mail and other central account services (network, blackboard, etc.) for students, particularly for courses that rely on web-based resources.

Initiative 1.3: Security: Provide a foundation to promote a secure computing environment.

Tactics:

1.3.1) Develop and implement Information Protection policies and procedures to ensure compliance with regulatory requirements and best practices for the information security by DEC-2006.

1.3.2) Design and implement a project to eliminate the use of Social Security Number as a primary student identifier for Spring 2007.

1.3.3) Identify and implement enhancements to the technical infrastructure to automate (where practical) compliance with the security policies developed in 1.3.1.

Initiative 1.4: File Storage: Leverage existing file storage options more fully and develop an enhanced electronic file storage model to support current and emerging demands for individual and group store space for text, image, video, audio, and specialized project files.

Tactics:

1.4.1) Develop and market improved documentation and related support resources for the WebDrive service for Fall 2006.

1.4.2) Identify and implement new network-based storage offerings to provide expanded electronic file services for individual and group use and stay ahead of the demand curve for storage needs to support instruction and information management needs.

Area 2 - IT Support for Instruction and Research: Support and enable the creation and life-cycle maintenance of effective IT-related learning environments. Provide Faculty with the IT resources and tools needed to support their instructional and research initiatives.

IT-related learning environments include technology-enhanced classrooms, general and specialized computer labs, and web or network based systems that support teaching and learning. IT services support the baseline access, hardware, software, and peripherals needed to deploy, operate, and maintain these environments. IT resources are needed to support faculty in the effective use of these environments and to support individual and collaborative research.

Initiative 2.1: Technology-enhanced Classrooms: Provide and maintain smart classrooms to support the academic program needs.

Tactics:

2.1.1) Assess the current smart classroom environment, identify a target state (number and types of rooms) for smart classroom at the university level, and define a prioritized plan to fund, deploy, support, and maintain the target level of facilities over the span of the current five year strategic plan.

Initiative 2.2: General and Specialized Computer Labs: Provide and maintain general and special use computer lab options to support academic program needs.

Tactics:

2.2.1) Evaluate the options and fit for student-owned laptops for the Clarion University environment, identify a specific model to provision, use, and support student laptops at the identified level, and execute a plan to fund and deploy the laptop model.

2.2.2) Assess the current computer lab environment, identify a target state ((number and types labs) at the university level, and define a prioritized plan to fund, deploy, support, operate, and maintain the target level of lab services over the span of the current five year strategic plan.

2.2.3) For the software components for items 2.2.1 and 2.2.2, design and implement a methodology for comprehensive software tracking and identify procurement and technical solutions where feasible to provide flexible software availability to student or lab environments regardless of physical locale.

Initiative 2.3: Systems to Support Teaching & Research: Provide and maintain course and learning management systems, tools, and utilities.

Tactics:

2.3.1) Leverage the University and PASSHE investment in Blackboard by providing comprehensive support and documentation for the Blackboard system and the related building blocks. Partner with the Distance Education Committee and related PASSHE bodies to research, identify, fund, and deploy additional Blackboard building blocks and enhancements to support web-based instruction.

2.3.2) Develop and implement a resource and organizational model to provide streaming video/audio and podcasting services.

2.3.3) Develop and implement a resource and organizational model to provide improved research for and faculty access to emerging instructional technologies and tools.

2.3.4) Develop and implement a resource and organizational model to provide IT resources to support specialized servers, software, and network access for discipline-specific research.

Initiative 2.4: Faculty Training and Support: Expand and improve instructional technology training resources available to faculty.

Tactics:

2.4.1) Develop and implement expanded training programs and documentation to provide faculty with comprehensive information about the features and operation of smart classroom technologies.

2.3.3) Develop and implement a training program to provide faculty with self-paced/on-demand training for teaching and learning systems including Blackboard, Blackboard building blocks, and related instructional software and tools.

Area 3 – General IT Support Services: Enable the effective utilization of the IT infrastructure by providing baseline access, training, and support services.

To effectively leverage the technology available at the university, general IT services are needed to support the access, installation, configuration, maintenance, training, and related help desk services required to operate within the IT infrastructure. This area includes support for microcomputers and other devices that access the network along with the baseline software model that can be available to every campus user.

Initiative 3.1: Enhanced Personal Computing Services: Expand and improve baseline personal computer services for employees

Tactics:

3.1.1) Define processes with UTAC to formalize a core software set as the base image for personal computers including the operating system, office suite, and key utilities and file viewers. Identify and implement enhanced tools to manage the tracking and maintenance of personal computer hardware and software.

3.1.2) Define an effective support model to provide for the timely installation of additional software beyond the baseline model in a way that balances responsiveness, resources, and security.

3.1.3) Develop a tracking, acquisition, and life cycle maintenance model to provide faculty with current personal computers.

Initiative 3.2: Enhanced Help Desk Services: Provide campus-based and network-based access to a full range of help desk services for employees and students.

Tactics:

3.2.1) Develop a new Help Desk web site to provide a comprehensive set of documentation, service details, and self-help resources for students, faculty, and staff.

3.2.2) Define and implement a model to better leverage and monitor the extended hours help desk services available under the Blackboard contract.

3.2.3) Develop and implement a communication program to promote help desk services and resources.

Initiative 3.3: General Training Program: Provide expanded training and documentation for fundamental IT services.

Tactics:

3.3.1) Develop and implement a training programs for faculty and staff for the core software suite.

3.3.2) Develop and maintain web-based resources for training-on-demand for the core software suite.

Area 4 – Administrative IT Services: Enable improvements in operational efficiencies and effectiveness by leveraging IT tools and services.

Administrative IT Services are systems and services that utilize technology to improve the operation and management of information and processes. As demands on resources grow, Administrative IT Services are needed to leverage the campus technical infrastructure by fully utilizing the available tools and by developing systems to streamline and improve processes.

Initiative 4.1: University Web Sites: Provide tools and technical services to improve and advance the university's web presence

Tactics:

4.1.1) Identify and implement web content management and related web tools to support the re-design and maintenance of the university web site to provide consistent content and streamlined access to web services to student, faculty, staff, and visitors.

4.1.2) Define a campus intranet and related group file services to support information sharing, electronic work flow, and collaboration across the university.

Initiative 4.2: Information System: Advance the use of information systems to support university business processes.

Tactics:

4.2.1) Partner with PASSHE to complete the implementation of the Campus Management student information system (which will replace the current SIS system).

4.2.2) As SIS is replaced, define a new university application development architecture to provide integrated information systems for all systems (housing, alumni development, etc.) to enable greater use of web-based solutions for campus operations and provide all systems that will be unavailable from the PASSHE Campus Management solution.

4.2.3) Design and implement a decision support system to provide access to a full set of university information to support data drive decisions.

Area 5 – Partnership: Collaborate with a full range of Higher Education and Commonwealth partners to advance the IT capabilities of the university, the region, and PASSHE.

Technology is increasingly integrated into every fabric of society and a regional IT communications infrastructure can enable our students, faculty, and staff to fully leverage campus IT services regardless of location. By partnering with the greater community, the investment and expertise needed by the university can be leveraged to expand opportunities for IT infrastructure in the rural areas that we serve.

Initiative 5.1: IT Access: Pursue partnerships to expand access to IT services in the rural areas served by the university.

Tactics:

5.1.1) Collaborate with regional educational and government entities to promote infrastructure investment for broadband and related network services in rural areas.

5.1.2) Collaborate with local Intermediate Unit and related school districts to research IT solutions and opportunities. Partner with these units to leverage university buying power and expertise with the procurement of IT services.

Initiative 5.2: Trinity Point and the Science and Technology Building: Support the development of the Trinity Point and Science and Technology Building projects in support of the regional biotechnology agenda.

Tactics:

5.2.1) Collaborate with other areas of the university to plan and support the IT infrastructure for Trinity Point.

5.2.2) Partner with colleagues from Arts & Sciences to support grant initiatives and technology projects to advance the alignment with regional biotechnology agenda.

Initiative 5.3: SyTEC and PASSHE

Tactics:

5.3.1) Collaborate with SyTEC and PASSHE on the procurement and operation of core IT services.

5.3.2) Collaborate with SyTEC and PASSHE on the development and implementation of shared information systems including SAP FI/HR/CM, Wolffpack and related systems, and Blackboard.

V) Implementation

Numerous specific initiatives are identified for each area to address over the life of the strategic plan. These initiatives will be executed by defining specific annual action plans that are prioritized based on alignment with the yearly plans and associated resources defined by the President, Provost, and Deans. UTAC will monitor the progress of the plans and coordinate on-going planning assessments and updates.