DRAFT

Strategic Plan for Information Technology at Virginia Commonwealth University

University Information Technology Advisory Committee
July 22, 2004

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Information Technology Vision for
Virginia Commonwealth University

Information technology is integral to the lives of constituents of Virginia Commonwealth University. It serves as a vital and essential tool to support the highest caliber of instruction, research, public service, health care and administrative activities. To best support the mission of the University, our vision is that:

- *Technology resources* at VCU will be available anywhere and anytime.
- *Technology solutions* at VCU will be creative, innovative and add value to University activities.
- *Technology support* at VCU will maximize the use and worth of technology tools for constituents.
- *Technology management* at VCU will ensure that resources are used effectively and efficiently.

Guiding Principles

1. The needs of VCU constituents are foremost in the development and delivery of technology services.

2. VCU will provide an IT environment that promotes innovation and experimentation in academic and administrative activities.

3. In general, VCU will adopt proven technologies. In selected areas, we may encourage the development and use of new technologies as visionary or leading edge applications.

4. Technology services will be provided through an optimal balance of central and decentralized IT operations.

5. University IT management will make the optimal use of resources available for technology services within the context of the existing fiscal environment. Resources will be deployed to have the greatest impact on the greatest number of users.

6. Vendor-supported, off-the-shelf products are preferred to custom-develop, in-house solutions for new technology initiatives.

7. Open standards are preferred to proprietary standards for new technology initiatives.

8. Academic and administrative processes should be optimized prior to the application of new technology.

9. Collaborative opportunities among multiple units and other institutions should be evaluated for every technology development effort.

10. The highest level of security and privacy will be maintained on VCU's network and computing resources within the framework of federal and state laws and regulations, prudent IT management, the academic culture and responsible personal use.

11. Technology will be accessible in different formats and media to accommodate people with disabilities, including those with vision, hearing, and mobility impairments.

12. Technology initiatives will be coordinated with the VCU Health System to ensure that authorized users have easy, appropriate and secure access to both Health System and University systems and applications from academic as well as clinical facilities.

Information Technology Goals and Strategies

Instruction

Goal 1: ***Continue and enhance classroom and computer laboratory support.***

1.1 Upgrade and enhance classroom equipment and infrastructure to implement changing technology and learning strategies.

1.2 Assure appropriate network connectivity to support current and projected instructional needs.

1.3 Provide training and tools to empower faculty to convert content to digital formats.

1.5 Provide instant response communication system to classroom support staff.

Goal 2 Provide support for distributed and blended learning[1] opportunities to ensure success for both students and faculty using these modalities.

2.1 Provide the technical resources and network infrastructure necessary to reliably support and deliver distributed and blended learning.

2.2 Assist faculty to develop course delivery methods that reduce time and location constraints to teaching and learning.

2.3 Ensure that the faculty and students understand and observe the VCU's policies regarding intellectual property and copyright while utilizing distributed and blended learning techniques.

2.4 Conduct ongoing research and development of communications technologies to ensure the continued improvement and expansion of distributed and blended learning programs.

2.5 Explore collaboration with other institutions providing these services.

Goal 3 Collaborate with and support faculty in investigating and implementing technology to enhance and transform from a teacher-centered to a learner-centered university.

3.1 Provide easily operable technology and reliable service and in lecture halls and classrooms.

3.2 Provide tools and services to empower faculty to effectively engage today's tech-savvy students in learning.

3.3 Collaborate with Academic Affairs and other units to support student engagement, learning and assessment.

3.4 Promote the use of collaborative technologies (e.g., video, audio, instant messaging) where appropriate.

3.5 Offer instruction at the departmental level where instruction is tailored to a department's specific needs.

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[1] **Distributed learning** means using a wide range of computing and communications technology to provide learning opportunities beyond the time and place constraints of the traditional classroom.

3.6 Examine the need for evening and weekend class offerings and alternative delivery methods.

3.7 Sponsor events (seminars, webinars, etc.) to showcase new technology.

3.8 Encourage faculty participation in Educause, the National Learning Infrastructure Initiative (NLII) and other higher education information technology (IT) professional associations.

Goal 4 Continue faculty incentive programs that effect transformative instruction using technology.

4.1 Continue the Faculty Mentoring Program and utilize mentors more effectively.

4.2 Provide released-time buy-out for selected faculty to allow them to further already significant activity with technology and teaching (and/or research).

Research

Goal 1 Provide support for research collaboration within VCU, nationally, and internationally.

1.1 Provide secure high speed connection to the Internet and to developmental and experimental regional, national, and international networks.

1.2 Provide high speed connections to researchers' desktops and labs.

1.3 Investigate and provide real-time collaboration tools.

1.4 Actively participate with regional and national organizations such as the Southeastern Universities Research Association (SURA), Internet2, the Mid-Atlantic Terascale Partnership, and the National Lambda Rail.

1.5 Pursue strategic alliances with federal agencies, industry, foundations and other interested groups to provide access to essential research resources.

Goal 2 Collaborate with VCU Centers, Departments, and researchers to provide computing resources for high performance computing, data storage and analysis, specialized software, and visualization.

2.1 Seek opportunities to partner with Centers, Departments, and researchers to provide IT planning, consultation, and specialized technical management in order to maximize the acquisition and use of computing resources for research.

2.2 Provide research tools and networking to facilitate efficient recruitment of researchers and actively seek to meet with researchers during the recruitment cycle.

2.3 Provide increasing central research computing resources to enable continued research growth, avoid redundancies, and provide superior managed resources to researchers.

Goal 3 Support research needs by investigating and offering new technologies and computing resources.

3.1   Provide training and time for and encourage staff to investigate new technologies, such as new statistical software, grid computing, and visualization hardware and software, to support research needs.

3.3   Provide consulting support in the use of the most commonly used research software and hardware.

3.4   Regularly assess researcher satisfaction with research computing resources and support.

Goal 4 Promote the development of and access to cutting-edge informatics and computational resource, including network infrastructure, computer hardware, software, and database technologies.

4.1   Create an atmosphere of openness and collaboration with and among researchers.

4.2   Regularly meet formally and informally with various faculty and research groups to understand and support current and future computing needs and advertise successes and lessons learned internally and externally.

4.3   Fund faculty research fellow to explore and advance research computing resources.

Student Life

Goal 1 Support a "Student Centered University" through the use of technology.

1.1   Strengthen the technological literacy of students, faculty and staff.

1.2   Provide forums to engage students and faculty in technology planning and delivery of services.

1.3   Showcase the work of students engaged in using information technology in pursuit of their educational goals.

1.4   Provide students with access to and instruction in state-of-the art technology tools.

1.5   Provide a student-centered one-stop Web portal that personalizes tools and information to the specific needs and characteristics of the student visiting the site using information from university databases.

1.6   Ensure adequate bandwidth and user-support exists for students to engage in both educational and appropriate recreational activities in the residence halls.

1.7   Promote accessibility and diversity through the use of technology.

Constituent Support

Goal 1: Simplify end user support for all technology needs.

Strategies:

1.1 Develop a unified support model that encompasses departmental IT support staff, central help desk functions and central IT specialists.
1.2 Evaluate the feasibility of a central point of contact for all technology questions.
1.3 Implement a VCU portal as the primary point of entry into University applications and services.

Goal 2: Expand and improve technology training for all students, faculty and staff.

Strategies:
2.1   Establish a single point of responsibility for IT user training.
2.2   Leverage e-learning technologies for faculty and staff development.
2.3   Require some basic level of IT training [competency] for all faculty and staff [similar to student requirement].

Web Services

Goal 1 Increase integration of Web-based services into the University's instructional, research, public service, health care and administrative activities.

1.1   Develop and implement an infrastructure to support VCU's general and specialized Web servers and to provide training, consulting and online documentation support to departmental webmasters.

1.2   Develop and implement new Web-based services as well as enhance existing Web-based services.

1.3   Provide intuitive and responsive access to University information and services via the VCU Web site that are both visually attractive and highly functional.

1.4   Develop and implement a "student-centered" VCU Portal that will provide personalized and user-customized access to University information and services.

Goal 2 Enhance support for web-based services by developing an ongoing process of service promotion, implementation, and evaluation.

2.1   Develop, promote and enforce VCU Web Publishing Guidelines and accessibility requirements.

2.2   Promote and actively participate in the VCU Web Users' Group which provides advice to the Director of Web Services, shares ideas, displays best practices, and collaborates on all aspects of web publishing and the provision of web-based services.

2.3   Develop and implement a model for ongoing user evaluation and participation in decisions affecting web publishing and the provision of web-based services.

2.4   On an annual basis, assess and upgrade existing centralized Web-servers and software as appropriate.

Administrative Operations

Goal 1: Provide improved support for University administrative and business operations by replacing legacy administrative systems with a modern, integrated suite of applications.

Strategies:
1.1 Implement SCT Banner with associated Web-based interfaces and services.
1.2 Integrate administrative and other business applications with VCU portal.
1.3 Explore opportunities for collaboration on implementation with other Virginia institutions to leverage expertise and skills and reduce costs.
1.4 Leverage the administrative systems implementation to promote business process redesign and improvement [before the application of technology].

Goal 2: Expand existing data warehouse capabilities to provide better tools and information for operational and management decision-making.

Strategies:
2.1   Reassess current VCU Reporting Center structure and tools concurrent with SCT Banner implementation.
2.2   Develop an executive decision system with performance metrics, Web-based self-service access and "push" technology.

Goal 3: Improve access to and utilization of administrative and business systems through Web-based interfaces and self-service applications.

Strategies
3.1   Select and implement only Web-native for applications that cross users in multiple departments.
3.2   Develop Web-based self-service applications for all routine University business functions that impact students, faculty and/or staff.
3.3   Integrate all Web-based applications with the VCU portal.

Goal 4: Provide centralized administrative and business applications that serve multiple units.

Strategies:
4.1   Expand current imaging technology to support all departments that require this functionality.
4.2   Promote collaborative efforts among different units to develop and implement centralized applications rather than departmental-specific solution.
4.3   Integrate specialized applications with primary administrative systems through real-time APIs rather than batch interfaces.

Infrastructure

Goal 1: Provide a robust communications infrastructure that will support the instruction, research and administrative needs of the University community.

Strategies:

1.1 Converge telecommunications, data and video networks into a single network with modern, expanded services. Implement a next generation telephony solution.
1.2 Participate as an active partner in the MidAtlantic Terascale Partnership and the Virginia Optical Research Exchange to provide high bandwidth, experimental networking capabilities to VCU researchers.
1.3 Expand the secure wireless network to meet academic and administrative needs.
1.4 Redesign the VCU network and security infrastructure to better protect University systems and resources.
1.5 Implement a 24x7 network operations center.
1.6 Implement a single e-mail infrastructure for the entire University.
1.7 Enhance and expand video production capabilities, facilities and equipment.
1.8 Provide technical support and expertise to provide web casting and archiving of instructional programs.
1.9 Include videoconferencing capabilities in all new and renovated classrooms and meeting rooms.

Goal 2: Provide modern, reliable computing platforms and services.

Strategies:
2.1 Establish a dynamic technology architecture that will consolidate and simplify the number and types of computing platforms.
2.2 Expand the development of shared computing platforms to support departmental computing needs (e.g., central servers for database support, research, file sharing and applications).
2.3 Offer centralized computer management services (e.g., hardware and OS support, backup and recovery, security, authentication, etc.) for departmental applications [note: on a charge for service basis].
2.4 Develop a University-wide desktop computer lifecycle replacement program that provides cost-effective, up-to-date technology for all users.
2.5 Develop a central user authentication mechanism. Migrate all general user applications to this system and develop single sign-on capabilities.

Goal 3: Provide secure computing and network resources to protect privacy, confidentiality and University assets.

Strategies:
3.1 Redesign the University network to provide varying levels of security depending on nature of use.
3.2 Develop security policies that balance adequate protection of University technology assets while permitting users optimum use of the resources.
3.3 Implement centralized security management practices and tools. Develop and enforce server level and workstation level security standards. Develop technologies to detect and remediate devices on the network that are security risks.
3.4 Develop security awareness and training for all constituents.

Goal 4: Explore and evaluate new technology.

Strategies:

4.1 Examine emerging technologies in communications, computing and applications for potential application in academic and administrative uses.
4.2 Promote cooperative ventures among central IT units and departments to provide opportunities to explore new and innovative technologies.
4.3 Aggressively seek external funding sources for emerging technologies.

IT Governance, Management and Funding

Goal 1: Clarify the governance structure for information technology oversight.

Strategies:
1.1 Redefine the roles and responsibilities of the various governance groups in IT policy-making and management (e.g., UITAC, ATFAC, Faculty Senate, Staff Senate, University Council, etc.)

Goal 2: Develop a unified central IT organization.

Strategies:

Goal 3: Develop roles and responsibilities for central and departmental IT units and staff.

Strategies:
3.1 Identify and assign IT duties and responsibilities to either the central or departmental IT staff. Minimize overlap and duplication of responsibilities.
3.2 Periodically review the activities of the various IT units to ensure that responsibilities are located in appropriate units.

Goal 4: Develop a management model for IT investments.

Strategies:
4.1 Develop a review and approval process for major IT investments.
4.2 Develop and monitor a project management methodology for IT projects.

Goal 5: Develop a coherent funding strategy for IT investments and operations.

Strategies:
5.1 Fund IT operational impacts/needs concurrent with IT capital investments.
5.2 Develop alternative funding models (including user charges) to help balance resources with demand and to provide an on-going funding source for maintenance and replacement.
5.3 Re-evaluate central IT funding sources (e.g., HEETF, Student Technology Fees) to ensure that they are meeting strategic University needs.

Goal 6: Attract, support and retain high quality information technology.

Strategies:
6.1 Provide state-of-the-art facilities, equipment and training.

6.2 Provide leadership opportunities to develop future IT leaders.

6.3 Encourage staff participation and leadership in state and national user groups and professional organizations.

6.4 Continuously evaluate and advocate for competitive compensation and benefits packages for IT professionals at the University.

6.5 Collaborate with VCU academic departments to provide staff development events and internship opportunities for students.

6.6 Develop training programs to ensure that staff stay abreast of current and emerging technologies.