Information Technology Strategic Plan
May 2004
# Table of Contents

Table of Contents ................................................................. 2

Information Technology Strategic Plan Overview ......................... 3

Information Technology Strategic Project Background .................. 6

  Comprehensive University-wide Information Technology Plan ....... 6
  Project Objective .................................................................. 6
  Project Primary Deliverables ............................................... 6
  Information Technology Strategic Planning Core Team Members ... 6
  Four-Phase Continuous Approach to Planning ......................... 7
  Information Technology Strategic Planning Project Timeline Summary ... 7

Introduction ........................................................................... 8

  Plan Development .................................................................. 8
  Foundation for Objectives, Prioritization, and Measurable Tactics ... 8
  Information Technology Strategic Plan Components .................. 8

Information Technology Strategic Plan Scope ................................. 9

Information Technology Strategic Planning Assumptions .................. 9

Information Technology Guiding Principles ................................ 10

Information Technology Vision ............................................... 11

Information Technology Strategic Goals and Imperatives ................. 11

  Goal #1: Empower and Enhance Learning and Research .................. 11
  Goal #2: Build and Expand Reliable, Robust, and Secure Access to Information and Technology .......... 13
  Goal #3: Promote Customer-centered Information Technology Services and Support .................. 15
  Goal #4: Ensure Continuous Innovation .................................. 16
  Goal #5: Support University Administration and Management ........ 17
  Goal #6: Plan and Manage Information Technology .................... 18

Appendix A: Internal Environmental Analysis Participants ................ 20

Appendix B: For Additional Information ..................................... 22
Information Technology Strategic Plan Overview

Information technology is now well understood as a strategic resource in higher education, a driving force in enabling change. Information technology continues to transform teaching, learning, scholarship, research, business and administrative practices and our relationships with students, alumni, and many other constituents. – EDUCAUSE 2002

During the past decade, information technology has reshaped the form and substance of higher education through transformations in learning and instruction, infrastructure, administrative systems, research, information access, and service. Miami University has been greatly affected by these ongoing changes and developments in technology. Given these circumstances, Miami has recognized the critical need to develop a university-wide information technology strategic plan and an ongoing planning process to ensure Miami maintains its competitive edge and continues to prosper in the future.

The objective of this document is to describe the planning process and its results.

A Strategic Cornerstone

Information technology has become a strategic cornerstone for building excellence at Miami and is a critical component in helping to improve the university’s already excellent reputation. Information technology helps Miami University...
- Recruit high quality faculty.
- Attract quality students.
- Produce quality graduates.
- Encourage alumni involvement.
- Increase fund raising opportunities and corporate partnerships.

Defining Information Technology

Multiple resources and units provide information technology support and services across the campuses of Miami University. The collective efforts of each of these areas will be required to reach the strategic vision and goals outlined in this plan. Therefore, when the term information technology is used in this plan, it represents the collective group of information technology resources and units.

Miami University Information Technology Vision

The following vision represents the desired state for information technology at Miami University and is critical in supporting the university’s mission and the First in 2009 initiatives.

Information technology at Miami University is a nationally recognized model for:
- Enabling student learning, faculty productivity, and administrative support and efficiency.
- Creating and supporting a transparent, seamless, and secure environment for learning, creative endeavors, and research.
- Fostering collaboration among its diverse community of students, faculty, and staff.
- Promoting and supporting continuous innovation.
- Measuring the success of information technology in supporting the university’s mission.
Strategic Planning Process
The Information Technology Strategic Planning project began in August 2003 with an analysis of the information technology environment at all of Miami University’s campuses, and it included representation from administrative units, academic units, regional campuses, students, faculty, and staff. This internal analysis included “think tank” sessions, individual interviews, focus groups, and feedback sessions with more than 650 people. In addition, 790 students, faculty and staff responded to a detailed on-line survey.

In addition, the information technology strategic and tactical plans of approximately 25 peer institutions were reviewed as well as technology-related higher education resources, such as EDUCAUSE and Gartner, to identify trends in information technology in higher education.

Information Technology Strategic Goals and Expected Outcomes
The strategic planning process resulted in the development of six strategic goals with associated imperatives. The strategic goals include what Miami University wants information technology to accomplish during the next three to five years. Following is an overview of the strategic goals and their expected outcomes.

Strategic Goal #1: Empower and Enhance Learning and Research
- Learning, research, and creative scholarly environments are empowered by technology.
- Faculty, students, and staff are effectively supported in their use of technology to enhance the learning experience through…
  - Training and development.
  - Assessment of technology in learning.
  - On-line course management support.
  - Necessary hardware and software.
- Classrooms and open-access computing labs help inspire learning and are consistent.
- Faculty, students and staff have an increased ability to collaborate and share best practices.
- Defined levels of information technology literacy ensure baseline skills for faculty, students, and staff.
- A solid research infrastructure is in place to support the increasing focus on research including:
  - Network infrastructure.
  - Data input, storage, analysis and management services.
  - Technology support and services.

Strategic Goal #2: Build and Expand Reliable, Robust, and Secure Access to Information and Technology
- Students, faculty, and staff have access to the information they need.
  - When they need it – any time.
  - Where they need it – any place.
  - How they need it – in a format they can easily use, with provisions for special needs.
  - Without hassles – convenient.
- University and personal information is secure and private.
- Technology is available, reliable, and consistent in:
  - Classrooms
  - Libraries
  - Residences
  - Where students congregate
  - Open-access Computing Labs
- Technology is current and continually refreshed.
- University communications methods are consistent and easy to use.
IT Strategic Goals and Expected Outcomes Continued...

**Strategic Goal #3: Promote Customer-centered Information Technology Services and Support**
- IT clients receive the customer-centered technology services and support they need to be more effective in their daily activities.
- Students, faculty, and staff can access the service and support they need – when and where they need it.
- Productivity is maximized, and hassles are minimized.

**Strategic Goal #4: Ensure Continuous Innovation**
- Innovative uses of technology enhance teaching, learning, research, and scholarly endeavors.
- Innovative uses of new technology are encouraged and supported through…
  - Collaborative opportunities to generate ideas.
  - Ongoing evaluation.
  - Test bed opportunities facilities.
  - Deployment strategies.
- Miami graduates are highly innovative and technologically savvy.
- Potential faculty are attracted to our open and innovative technological environment.

**Strategic Goal #5: Support University Administration and Management**
- Interactions of students, faculty, and staff with administration are simplified.
- Systems are more intuitive and integrated.
- Systems are more responsive to needs.
- The university operational environment is continuously improved.
- Information is readily available and easily accessible for making informed decisions.
- Information technology is effectively used to collect, manage, maintain, and archive a variety of digital content.

**Strategic Goal #6: Plan and Manage Information Technology**
- Information technology is effectively planned and managed as an institutional strategic asset.
- Information technology is appropriately funded.
- Technology is a transformational force for:
  - Enhancing academics and research.
  - Ensuring continuous innovation.
  - Streamlining operations.
  - Improving the university experience.
Information Technology Strategic Project Background

Comprehensive University-wide Information Technology Plan

In August 2003, Miami University began implementing a strategic planning project for information technology at the university. This project is taking a comprehensive look at information technology across the entire university and its campuses.

Project Objective

Develop a university-wide strategic plan and ongoing strategic planning process for information technology at Miami University. This strategic plan and process will integrate with and support the overall university vision and mission as well as the First in 2009 goals.

Project Primary Deliverables

1. A Miami University Information Technology Strategic Plan developed with input and consensus from the entire university by February 2004.

Information Technology Strategic Planning Core Team Members

The Information Technology Strategic Planning project is being managed using project management processes; therefore, a Core Project Team was created to lead the project and represent the entire university with a broad institutional perspective. Following are the Core Team members who were selected because of their institutional perspective and their ability to participate in a visionary process:

<table>
<thead>
<tr>
<th>Name</th>
<th>Position and Affiliations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reid Christenberry</td>
<td>Vice President for Information Technology, Project Leader</td>
</tr>
<tr>
<td>Luis Actis</td>
<td>Associate Professor, Microbiology</td>
</tr>
<tr>
<td>Debi Allison</td>
<td>Interim Exec. Asst. to the VP for Information Technology</td>
</tr>
<tr>
<td>Stan Brown</td>
<td>Library Systems Officer</td>
</tr>
<tr>
<td>Tecumseh Bryson</td>
<td>Student</td>
</tr>
<tr>
<td>Daniel Hall</td>
<td>Executive Director, Hamilton Campus and Professor</td>
</tr>
<tr>
<td>Carolyn Haynes</td>
<td>Director, University Honors Program; Professor; Chair, First in 2009 Coordinating Council</td>
</tr>
<tr>
<td>Ethan Karp</td>
<td>Student</td>
</tr>
<tr>
<td>William Knisely</td>
<td>Associate Vice President Finance and Business Services</td>
</tr>
<tr>
<td>Mark McBride</td>
<td>Professor, Economics</td>
</tr>
<tr>
<td>Michael Mills</td>
<td>Director, Admissions</td>
</tr>
<tr>
<td>Kay Roman</td>
<td>Consultant, Cornelius &amp; Associates, Project Manager</td>
</tr>
<tr>
<td>Judith Sessions</td>
<td>Dean, University Libraries and Professor</td>
</tr>
<tr>
<td>David Stonehill</td>
<td>Senior Associate for Executive Initiatives</td>
</tr>
<tr>
<td>Jeff Toaddy</td>
<td>Student</td>
</tr>
<tr>
<td>Stephen Wright</td>
<td>Associate Professor, Mathematics and Statistics; Chair, Senate Computing and Information Systems Committee; Director, Center for the Advancement of Computational Research</td>
</tr>
</tbody>
</table>
Four-Phase Continuous Approach to Planning

The strategic planning process being used to develop the Information Technology Strategic Plan involves four distinct phases and is designed to integrate ongoing planning efforts. The planning process for information technology will be a continuous process.

1. Conduct an environmental analysis – internal and external.
2. Develop, revise and align the strategic plan.
3. Develop tactics and measures.
4. Implement, evaluate, adjust and monitor the plan.

Following is a status of the project and the steps to continue the planning process.

<table>
<thead>
<tr>
<th>Conduct external environmental analysis</th>
<th>Conduct internal environmental analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Higher-education resources</td>
<td>• Individual interviews</td>
</tr>
<tr>
<td>• Benchmarking schools</td>
<td>• Think Tank Sessions</td>
</tr>
<tr>
<td>• Information technology strategic</td>
<td>• Existing assessments and reports</td>
</tr>
<tr>
<td>planning outside higher education</td>
<td>• Focus Groups</td>
</tr>
<tr>
<td>Industry resources (EDUCAUSE, Gartner,</td>
<td>Web Survey</td>
</tr>
<tr>
<td>Casey Greene Study)</td>
<td></td>
</tr>
</tbody>
</table>

| Identify key issues                    | Distribute plan for stakeholder group review |
| Hold focus groups to discuss identified key issues | Receive input |
| Document environmental analysis findings | Develop next draft |
| Hold Core Team planning retreat        | Gain additional input and final approval |
| Develop first draft of plan            | Align with budgeting process              |

| Develop initial scope documents using input from the planning process and environmental analysis |
| Prioritize initial scope documents for FY05 project implementation based on budget and resource allocations |
| Operationalize specific annual priorities, tactics and measures |
| Initiate and implement projects |

| Implement the tactical plans |
| Implement quarterly review of progress |
| Evaluate and adjust tactics as needed |
| Review plan for next year's planning and budgeting |
| Ensure ongoing feedback and university-wide involvement |

Information Technology Strategic Planning Project Timeline Summary

Following is a summary of the project plan timeline used to implement the project.
Introduction

Plan Development
Following the internal and external environmental analysis, the Information Technology Strategic Planning Project Core Team met for two days in December 2003 to develop the concepts for the first draft of the plan. The Vice President for Information Technology, Reid Christenberry, then met with each major unit of the university to review comments provided on the draft and gain additional input. The final draft includes this feedback.

Foundation for Objectives, Prioritization, and Measurable Tactics
This plan is designed to lay the foundation for the subsequent development of more detailed objectives, time-driven tactical plans, and measures to ensure ongoing effectiveness. In addition, prioritization will occur during the development of the objectives and will be determined using multiple criteria including urgency of need, criticality to the university’s mission, breadth of impact, resource requirements, sequencing, and dependencies.

Information Technology Strategic Plan Components
Within this plan and the continued planning process, the following components are being used.

<table>
<thead>
<tr>
<th>Planning Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scope</strong></td>
<td>Defines the boundaries for the strategic plan and clarifies what will be included in the plan.</td>
</tr>
<tr>
<td><strong>Planning Assumption</strong></td>
<td>Is a theme identified during the environmental analysis phase and used during the plan development phase as a foundation for the planning process.</td>
</tr>
<tr>
<td><strong>Guiding Principle</strong></td>
<td>Outlines what we believe relative to information technology at Miami University. A guiding principle describes a “good practice” for information technology, and will facilitate the planning process and, ultimately, guide ongoing information technology decision-making.</td>
</tr>
<tr>
<td><strong>Vision</strong></td>
<td>Represents the desired state for information technology at Miami University that is critical to support the university’s mission and the First in 2009 initiatives.</td>
</tr>
<tr>
<td><strong>Strategic Goal</strong></td>
<td>Outlines a major strategic issue identified during the environmental analysis. A strategic goal includes what we want to accomplish in a 3 – 5 year time frame. Strategic goals are broadly stated, few in number, and will stay fairly stable from year to year.</td>
</tr>
<tr>
<td><strong>Imperative</strong></td>
<td>Is a recommended strategy critical to reaching the strategic goal.</td>
</tr>
<tr>
<td><strong>Objective</strong></td>
<td>Identifies the means to achieve a strategic goal. Objectives associated with a goal are achievable typically in one to two years.</td>
</tr>
<tr>
<td><strong>Tactic</strong></td>
<td>Is a specific and measurable activity designed to achieve the strategic goals and objectives. Tactics identify who will do what, when, and how, and they will include the specific tools, activities, steps or projects. Tactics are achieved generally within 12 months, and tactics may address multiple goals and objectives.</td>
</tr>
</tbody>
</table>
Information Technology Strategic Plan Scope

The following scope was developed to define what is to be included in the Information Technology Strategic Plan for Miami University.

The scope of the Information Technology Strategic Plan includes all aspects of information technology resource management and client support at Miami University dealing with:

- **Technical resources** including, but not limited to, computers, networks (wired and wireless), digital storage devices, digital media devices, telecommunications devices, related devices and infrastructure, and software.

- **People** who provide support for the technical resources, including support staff for the end users and resource experts who advise and consult with end users and support staff.

- **Services** related to the effective use of the technical resources, including end-user support, instructional technology support, classroom technology support, course management services, library services, research computing support, administrative process support, application programming support, technical design, and other activities related to the total experience at Miami.

- **Expectations** regarding the technical resources, including service level agreements, contractual services, policies, procedures, best practices, information technology performance measures, and external liaisons.

- **Fiscal resources** required assuring effective uses of technical resources, including the people and services at the negotiated level of service expectations.

The Information Technology Strategic Plan includes students, faculty, and staff on every campus of the institution with no specific domain restrictions based on organizational unit or functional uses of information technology. Policies and procedures resulting from this plan apply to both the users and providers of information technology services and support.

Information Technology Strategic Planning Assumptions

The planning assumptions contain themes identified during the environmental analysis phase, and they were used during the plan development phase as a foundation for the planning process.

1. Students, faculty, and staff increasingly come to Miami University with higher competence in, and expectations for, information technology, placing greater demands on the university’s capabilities and resources.

2. Information technology will continue to provide opportunities to enhance efficiency and effectiveness across all university functions.

3. Technological advancement will likely require substantial training programs for students, faculty, and staff.

4. University leaders must create, organize, and manage an effective technology community on the campus. Sharing of technical expertise and reductions in duplication of effort require collaboration across the institution and among Miami University units.

5. Individuals expect access to high-quality, just-in-time information from expert sources. Information technology increasingly provides access from anywhere to the Internet, creating a virtual conduit for the individual to connect to a wide range of information as well as to different communities.

6. Information technology provides increasing freedom through mobile devices, helping to realize unprecedented mobility in information and network access.

7. Individuals anticipate service and support assistance 24 hours a day, seven days a week.

8. Consumers expect the convenience of products and services available online, with secure purchase and transaction systems.
Information Technology Guiding Principles

The Guiding Principles outline what we believe relative to information technology at Miami University. These principles describe “good practice” for information technology. They will facilitate the planning process and, ultimately, guide ongoing information technology decision making.

1. Information technology exists to **support the Miami University mission** of providing an environment conducive to effective and inspired teaching and learning, professional development of faculty, students, and staff, and scholarly research and creativity of faculty, students, and staff.

2. Information technology helps build excellence by strategically developing a **competitive edge** for Miami University.

3. Information technology is a basic need of students, faculty, and staff.

4. Information technology supports the missions of the regional campuses and recognizes the distinct needs of each campus.

5. Information technology recognizes and enhances the **individual missions of each university division**.

6. Information technology is **customer-centric** with focused attention on the needs and support of Miami’s diverse population of students, faculty, and staff, and its external customers including library patrons, parents, alumni, and Miami University’s campus communities.

7. Information technology recognizes the distinctive characteristics within each of the various client/constituency groups at Miami. For example, students include undergraduate, graduate, on-campus, off-campus, international, commuting, non-traditional, special-needs, etc.

8. Information technology appropriately **balances**:
   a. Academic support with administrative support.
   b. Attention to individual needs with a concern for the university as a whole.
   c. Innovation with risk-taking and reliability of ongoing services and support.
   d. Centralized services and support with appropriate decentralized services and support.
   e. Access to information with security and privacy.
   f. Specialized, targeted solutions vs. generic “one-size-fits-all” solutions.

9. Information technology provides **access** beyond the typical campus boundaries extending to all segments of the university.

10. Information technology **fosters innovation** and concentrates on those opportunities and innovations that are transformational.

11. Information technology provides an infrastructure that is **reliable, scalable, flexible, secure, transparent, and robust**.

12. Information technology facilitates the development and implementation of solutions for **complex administrative processes** with openness to improvement of business practices and rules.

13. Information technology provides appropriate **access to university data** while safeguarding the data and other assets, ensuring university business effectiveness while maintaining the privacy of university citizens.

14. Information technology empowers people to achieve the learning and self-development that result from effective communication, information access, and discovery and sharing of knowledge.

15. Information technology, in acknowledging the diversity of the Miami University environment, strives to **support a variety of information technology solutions and accessibility needs**.

16. Information technology is **professionally managed** through effective policies, ongoing planning, and resource allocation advocacy.
Information Technology Vision

The vision represents the desired state for information technology at Miami University and the state that is critical to support the university’s overall vision and mission as well as the First in 2009 initiatives.

Information technology at Miami University is nationally recognized for:
- Enabling student learning, faculty productivity, and administrative support and efficiency.
- Creating and supporting a transparent, seamless, and secure environment for learning, creative endeavors, and research.
- Fostering collaboration among its diverse community of students, faculty, and staff.
- Promoting and supporting continuous innovation.
- Measuring the success of information technology in supporting the university’s mission.

Information Technology Strategic Goals and Imperatives

Following are the strategic goals and their imperatives (specific strategies critical to reaching the strategic goals).

Goal #1: Empower and Enhance Learning and Research

Learning, research, and creative scholarly environments are empowered and enhanced by the transparent and seamless uses of technology. These uses of technology provide an environment conducive to effective and inspired teaching and learning, to scholarly research and creativity, and to continued professional development of faculty, students, and staff. Following are the imperatives for reaching this goal:

1.1 Develop an Information Technology Support Plan for Learning and Teaching

The university will establish a well-communicated and collaborative model that provides high-level support for instructional design and advanced technological and pedagogical innovation, as well as basic-level support for the use of academic technology in course content and/or course management and organization. This support will be grounded in sound principles of learning and in a thorough knowledge of integrating technology for effectiveness and efficiency.

Create an information technology support model for learning and teaching. The model should build on the existing strengths and available resources of the college, schools, libraries, regional campuses, and other existing groups, as well as external resources and collaborative opportunities. In developing the model, the following should be addressed:

1.1.1 Assessment of the Use of Technology in Teaching and Learning: Create multiple means of evaluating technology-assisted teaching and learning within all departments, across the university, and throughout students’ engagements with the university. Ensure communication of results and methods for improving the quality of the use of technology in teaching and learning.

1.1.2 Online Course Management: Collaborate with students, faculty, and researchers to develop online learning materials and media to enhance the learning experience for all students. Ensure continuous improvement in the mission critical online course management system and a robust web-based learning infrastructure to support courses at the university.

1.1.3 Distributed and Distance Learning Model: Recognizing the general trend in higher education to deliver courses in innovative ways, facilitate collaboration in the development of a model for distributed and distance learning opportunities to meet the diverse needs and expectations of the students and faculty.
1.1.4 **Instructional Data Storage and Management Services**: Provide data storage and management services for instructional resources including digital, audio, and visual libraries.

1.1.5 **Classroom/Open-access Computing Lab Technology and Support**: Provide technology-rich physical and virtual classrooms and open-access computing labs for teaching and learning that are consistent across the university while reflecting the programmatic needs of the individual disciplines. Review and improve the current standards and levels of support provided for all open-access computing labs within the university. Identify emerging opportunities/technologies to experiment with and prototype. Establish a program to ensure that technology in all open-access computing labs and classrooms is current and refreshed.

1.1.6 **Teaching and Learning Support, Development, and Training**: Provide comprehensive support, development programs, training activities, and software access in the appropriate use of teaching and learning technologies.

1.1.7 **Incentives and Support**: Establish appropriate incentives and support so that faculty and staff are encouraged in the creative use and application of information technology for teaching, research, and service.

1.1.8 **Information Technology Literacy**: Facilitate collaboration to establish specific goals for information technology literacy across the university recognizing the diversity of information technology fluency among students, faculty, and staff and the need for discipline-specific goals. Facilitate the development of a training and support program to meet those goals so they can be full participants in the information technology community.

1.2 **Develop Information Technology Infrastructure and Support Plan for Research**

The university will establish a well-communicated and collaborative model that provides broad support for computation used in research that facilitates distributed high-performance computing while still providing a broad spectrum of services and support for the broader ranges of research activities that occur at Miami University.

Create a plan to develop and implement a research information technology infrastructure and support model. The model should build on the existing strengths and available resources of the college, schools, libraries, regional campuses, administrative units, and other existing groups. In developing the model, the following should be addressed:

1.2.1 **Research Information Technology and Network Infrastructure**: Determine and implement appropriate tools and infrastructure to support research collaboration within the university and across worldwide communities.

1.2.2 **Research Data Storage and Management Services**: Facilitate and provide advanced data storage and management services for research.

1.2.3 **Research Support Services**: Determine the appropriate information technology resources necessary, including people, services, and equipment, for a research support infrastructure at Miami University. Develop a continuous process to prioritize needs for services and implementation of solutions. Services under consideration should include a broad spectrum of institutional services, including centralized services, grant writing and submission support, distributed platform support, and research application development and support.

1.2.4 **Commercialization Center**: Consistent with the university’s plans to initiate a new center for innovative commercialization, provide the necessary information technology support to assist in establishing this center and undertaking its initiatives consistent with revenue generated by the center.
Goal #2: Build and Expand Reliable, Robust, and Secure Access to Information and Technology

Information technology provides seamless and integrated access to information, education, and research resources for all students, faculty, and staff recognizing the diverse and special needs within each of these groups. The state-of-the-art network and systems infrastructure is comprehensive, robust, scalable, and secure, and is recognized for providing a premier information technology environment in higher education. Following are the imperatives for reaching this goal:

2.1 Network Infrastructure Support and Enhancement: Preserve and enhance the network infrastructure through an ongoing commitment to upgrade, extend, and diversify its capabilities and support. Regularly refresh the network services, introducing newer versions of supported operating systems and key applications (e.g., file, print, backup, electronic mail, and scheduling/calendaring) as they become available and in accordance with the university academic and administrative calendars.

2.2 Management and Distribution of Servers: Develop a model for effective management of network file servers including a replacement cycle and the consolidation of distributed servers with more capable and reliable centrally managed server clusters.

2.3 Information Technology Services Deployment Model: Recognizing the varying needs across the university, develop, communicate, and implement a model for the effective deployment of information technology services (e.g., email systems, network support, help desks, credit card payment processing, scheduling/calendaring) to achieve efficiencies and reduce unnecessary redundancies.

2.4 Enterprise Communications Applications: Explore and implement effective means of communications for all university constituent groups and between the university and the global community. Establish and promote a common technical foundation and shared architecture to leverage these communication tools, including:

2.4.1 Communications Applications: Provide enhanced and new communications services (e.g., email, video conferencing, instant messaging, and web sites) to students, faculty, and staff and designated affiliates so that communications is conveniently accessed from on- and off-campus, easy-to-use, reliable, highly available, and secure. Systems must be enhanced to further combat unsolicited communications and viruses.

2.4.2 Use of Technology in University-wide Communications: Explore opportunities to improve the use of technology to enhance community and university-wide communications (e.g., broadcasting, LISTSERV mailing lists, etc.).

2.4.3 Scheduling/Calendaring: Explore possibilities for the use of technology to enhance university-wide scheduling or calendaring to support students, faculty, staff, and resources.

2.5 Software Licensing and Management: Evaluate opportunities for providing universally available software licenses to support multiple platforms, developing processes to support volume purchasing of software, creating access to the software regardless of geographic location, and offering central maintenance and clearinghouse capabilities.

2.6 Security: Develop a model to ensure a strong foundation for information technology security coordinated with university continuous operations planning. Develop and implement policies and procedures to protect the security of university information technology and institutional data, safeguard personal privacy, and respect intellectual property rights, while at the same time promoting academic freedom with access to information.

2.7 Wireless: Aggressively pursue the creation of a community-wide wireless infrastructure by expanding and coordinating wireless access consistent with the university’s mission and scope.
2.8 **Information Technology Availability:** Develop service level agreements for the availability of the information technology infrastructure and application services and detail the availability for normal periods as well as post-disaster periods. Use service level agreements to determine required acceptance testing, stress testing, production outage windows, appropriate deployment of 24x7 infrastructure, and continuous operations activities.

2.9 **Disaster Recovery:** Develop, document, and test adequate disaster recovery scenarios and procedures to deal with major disasters affecting technology service availability.

2.10 **Lifecycle Funding for Technology:** Develop and fund a model for the availability of consistent, up-to-date technology and an “acquire, retire, and upgrade” cycle for computers, software, and other information technology. Implement processes and measures to ensure consistent currency across the university.

2.11 **Connectivity Enhancement:** Provide students, faculty, and staff with uniform and reliable access to computing, research servers, and network services and resources, on- and off-campus.

2.12 **Access to Computers and Networks:** Explore the needs and opportunities for location-independent access to services including technology support, the Internet, university networks, Internet2, and other emerging research networks.

2.13 **Student Computer Ownership Policy:** Investigate models in existence at other universities that range from required student computer ownership to university-provided computers for all students in the student body. Develop appropriate policies and plans for Miami University.

2.14 **Seamless Access to Information, Research, and Digital Resources:** Develop a model for efficient integration of and seamless and consistent access to the university’s information resources including libraries, media, computing, telecommunications, and services such as the Internet and Internet2.

2.15 **Telecommunications:** Prepare the university for the next generation of telephony services by evaluating current and future needs.
Goal #3: Promote Customer-centered Information Technology Services and Support

Information technology encourages and supports an operational environment that is customer-centered and provides quality assurance for information technology services and support. Following are the imperatives for reaching this goal:

3.1 Customer Service Support Model: Identify Miami University information technology clients, clients with special needs, client characteristics, and client expectations and needs. Explore options for and implement a customer service support model to meet the client needs and that provides reliable, ubiquitous access to and support for the use of information technologies. The model will provide suitable and appropriate technology support across the university and should explore the following service components:

- Distribution of support staff to provide an optimal support structure and ensure continued levels of appropriate support.
- Support for multiple hardware and software platforms and applications.
- User training.
- Help desk service level optimization.
- University-wide problem reporting and tracking processes.
- Service level agreements.
- Client satisfaction metrics.
- Continuous improvement processes.

3.2 Web-based Services through a Portal Environment: Explore development of a robust portal environment for unified web-based client services that are tailored to individuals based on their affiliation with the university.

3.3 Communication Channels: Increase coordination and communication among the many providers, supporters, and users of information technology at Miami University.

3.3.1 Coordination and Management of Projects: Improve internal coordination and management of projects, including more formal coordination across division groups and increased communication and engagement with the university community.

3.3.2 Availability of Information Technology Services and Support: Improve communication with clients about available information technology services and support.

3.3.3 Formal Communication Processes: Define and manage the user environment and experience through formal processes that guide service rollout, technology evaluation, release management (deploy and decommission), system management documentation, user requirements, and feedback.
Goal #4: Ensure Continuous Innovation

Early adopters and innovative uses of technology in academics, research, administration, and general university and community life are supported through university-wide internal networks, systems, and support staff. An innovation support model fosters collaboration, encourages innovation and generation of ideas, facilitates evaluation and testing, and offers a process to help determine whether and when new technologies should be deployed more generally across the university. Following is the imperative for reaching this goal:

4.1 **Support Model for Innovation:** Develop and promote a support model for innovation and early adopters that supports this philosophy.

4.1.1 **Process for Generation of Innovative Ideas:** Define a process for ongoing collaboration and formal interactions with peers, vendors, university colleagues, and higher education contacts to track technologies and trends and to generate innovative ideas.

4.1.2 **Evaluation and Testing Processes:** Develop processes to continually and critically evaluate these ideas in “test-bed” environments, based on the perceived value to the university, the university’s core competencies, and the expectation of interest from potential collaborators.

4.1.3 **Approval and Funding Process:** Implement a process to cultivate the most promising ideas, to formalize proposals, and to gain financial commitments and deliverables from interested parties and sponsors.

4.1.4 **Deployment Strategies:** Develop and implement deployment strategies for mainstreaming applicable innovative technologies.
Goal #5: Support University Administration and Management

Administrative information technology systems are developed and managed collaboratively with end-users to support the administration and management of the university and are responsive to the diverse needs of students, faculty, staff, departments, divisions, and campuses. Following are the imperatives for reaching this goal:

5.1 Administrative Systems Support Model: Develop and implement a formalized support model for administrative computing (e.g. Banner, Kronos, etc.) to include the following:

5.1.1 Stewardship: Promote university-wide prioritization, coordination, oversight, and planning required in the implementation of administrative information technology systems.

5.1.2 Support and Training: Provide information systems support and training to assist the community in performance of business-related or administrative processes.

5.1.3 Compliance: Ensure compliance with all appropriate federal, state, and local laws, regulations, and auditable practices.

5.1.4 Communications: Ensure continuous communication and feedback between services and support providers and the areas using the services and support.

5.1.5 Continuous Improvement and Enhancements: Provide support in procurement, implementation, and ongoing enhancement and maintenance of enterprise level business/administrative information systems purchased by the university.

5.2 Banner System Enhancement and Support: Consistent with imperative 5.1, implement a university-wide project to develop a plan for the effective and efficient use of Banner to include:

- Centralized support and stewardship of Banner.
- Full exploitation of the capabilities of Banner.
- Reporting services.
- Review of business processes to include optimization of services to students, faculty and staff.
- Upgrades to Banner and removal of Miami-implemented modifications to Banner that are no longer needed.
- Assessment of functionality required to reduce unnecessary shadow systems across the institution.
- Ongoing user training.
- Ongoing responsive service and support.

5.3 Decision Support System and Reporting: Develop responsive and secure systems to access administrative information that facilitates informed university decisions. Implement an effective organizational structure to assure quality support services and provide direction for decision support systems across the university. Develop and implement a university decision support system that focuses on data integrity and effective reporting support.

5.4 Content and Document Management and Archival System: Develop and implement a model to ensure accurate collection, maintenance, presentation, and archival of information in a digital format. This system would support management of websites, documents, and other media and will facilitate routing of electronic documents through the business and academic processes of the university.

5.5 Systems Integration and Accommodating “Web Services”: Explore and develop a plan for the implementation of common interfaces and a common information delivery environment to facilitate integrated administrative systems. Major software providers are moving toward more highly integrated applications through the use of communication protocols labeled “web services.” As example, the next release of Banner will be highly dependent on “web services” interfaces with partner products like Blackboard, library applications, Resource 25, decision support tools, credit card processing software, etc. These developments will require significant resources to stay current with available products and releases.

5.6 Printing and Imaging Services: Consistent with imperative 5.4, develop a model for printing and imaging services to support the needs of the students, faculty, and staff.
Goal #6: Plan and Manage Information Technology

Information technology is effectively and efficiently planned, managed, and reflects the complexity of the university’s information technology environment and the need for increased participation by and communication with a wide array of university constituents. Following are the imperatives for reaching this goal:

6.1 Information Technology Policy and Governance
   6.1.1 Information Technology Governance Model: Develop a comprehensive information technology governance model that encompasses information technology resources and units across the university.
   6.1.1.1 Assess the roles, responsibilities, overlap, and effectiveness of the wide range of committees and functional organizations addressing information technology issues.
   6.1.1.2 Develop recommendations for and implement a university governance structure for information technology.
   6.1.1.3 Formally implement new information technology advisory committees to ensure university-wide input and involvement.

6.1.2 Information Technology Policy Development Model: Develop a model for developing information technology policies within the governance structure.
   6.1.2.1 Assess the current means of developing and managing information technology policies and procedures.
   6.1.2.2 Explore ways of involving students, faculty, and staff in the identification and handling of information technology issues and concerns.
   6.1.2.3 Institute oversight and feedback mechanisms for students, faculty, and staff to review policy.

6.2 Information Technology Planning
   6.2.1 Strategic Planning: Develop, gain approval for, and fully implement a university-wide information technology strategic plan with means for continuous improvement. Establish and implement an ongoing information technology planning process that continually assesses and evaluates information technology at Miami.
   6.2.2 Financial Planning: Prepare a long-range university information technology financial plan spanning operating, capital and development budgets, and incorporating long-term information technology needs.
   6.2.3 Quantitative Measurements: Develop quantitative measures that will assess the accomplishment of the strategic goals.
   6.2.4 Regional Campus Information Technology Plans: Partner with and support the regional campuses in the development of their information technology plans within the context of the overall university information technology plan to: 1) facilitate the individual mission of each campus, and 2) recognize points of integration and coordination with the university information technology plan.
   6.2.5 Unit Information Technology Plans: Ensure the college, schools, libraries, and administrative units develop information technology plans within the context of the overall university information technology plan to: 1) facilitate the individual mission of each unit, and 2) recognize points of integration and coordination with the university information technology plan.
   6.2.6 Communications: Develop and implement ongoing coordinated information technology communications and feedback mechanisms for students, faculty, and staff.
   6.2.7 Integration with University Planning: Ensure that information technology is integral to all major strategic planning efforts across the university.
6.3 Information Technology Operations and Management: Establish an information technology operational environment that aligns operations and management of information technology across the university and is adequately supported so that:

- Costs are effectively managed.
- Services have the resources required.
- Resource alternatives are explored.
- Resources are shared and used to their maximum potential.
- Collaboration is a priority.
- Services are continually assessed and improved.

6.4 Information Technology Staffing, Development, and Management: Develop and implement an information technology staffing and development plan including common job descriptions, professional development, career path development, and ongoing training.

6.5 External Liaisons and Collaboration: Ensure institutional participation in appropriate national, regional, and statewide collaborative efforts to maintain competitiveness, maximize economies of scale, and capitalize on best practices and innovation in the use of information technology in higher education. Current examples include, but are not limited to: Internet2, Ohio Academic Research Network (OARnet), The Ohio Library and Information Network (OhioLINK), Third Frontier Network, Ohio Learning Network, Inter-University Council of Ohio (IUC), Midwest Higher Education Compact (MHEC), Ohio Supercomputer Center (OSC), and SCT/Banner.
## Appendix A: Internal Environmental Analysis Participants

### Individual Interviews

<table>
<thead>
<tr>
<th>Name</th>
<th>Position and Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debi Allison</td>
<td>Interim Executive Assistant to VP for Information Technology</td>
</tr>
<tr>
<td>Reid Christenberry</td>
<td>VP for Information Technology</td>
</tr>
<tr>
<td>Ronald Crutcher</td>
<td>Provost and Executive VP for Academic Affairs</td>
</tr>
<tr>
<td>Joe Cox</td>
<td>Associate Provost/Professor</td>
</tr>
<tr>
<td>Bill Custer</td>
<td>Acting Assistant Director, University. Applications.</td>
</tr>
<tr>
<td>Carolyn Haynes</td>
<td>Chair of Steering Committee for First in 2009; Director, Honors Program; Professor</td>
</tr>
<tr>
<td>John Hughes</td>
<td>Associate Provost/Graduate School Dean/Professor</td>
</tr>
<tr>
<td>John Kinne</td>
<td>Associate Director, Technical Services</td>
</tr>
<tr>
<td>Ralph Gutowski</td>
<td>Assistant VP Budget, Planning &amp; Analysis</td>
</tr>
<tr>
<td>Bill Knisely</td>
<td>Associate VP Finance &amp; Business Services</td>
</tr>
<tr>
<td>Richard Little</td>
<td>Sr. Director University Communications</td>
</tr>
<tr>
<td>Richard L. Nault</td>
<td>VP for Student Affairs</td>
</tr>
<tr>
<td>Richard Norman</td>
<td>VP for Finance and Business Services and Treasurer</td>
</tr>
<tr>
<td>Denny Roberts</td>
<td>Associate VP Student Affairs</td>
</tr>
<tr>
<td>Judith Sessions</td>
<td>Dean of University Libraries/Professor</td>
</tr>
<tr>
<td>David Stonehill</td>
<td>Sr. Associate for Executive Initiatives</td>
</tr>
<tr>
<td>Joe Urell</td>
<td>Vice Provost/Associate VP Academic Affairs</td>
</tr>
<tr>
<td>John Vaughn</td>
<td>Assistant Director, Media Services</td>
</tr>
<tr>
<td>Tom Walsh</td>
<td>Manager of Telecom</td>
</tr>
<tr>
<td>Jayne Whitehead</td>
<td>VP for University Advancement</td>
</tr>
</tbody>
</table>

### Targeted Group Environmental Analysis Meetings

<table>
<thead>
<tr>
<th>Group/Committee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Client Group (ACAL)</td>
</tr>
<tr>
<td>Area 351</td>
</tr>
<tr>
<td>Banner As It Should Be Group</td>
</tr>
<tr>
<td>Center for the Advancement of Computational Research (CACR)</td>
</tr>
<tr>
<td>Council of Academic Deans (COAD)</td>
</tr>
<tr>
<td>Computer and Information Services Committee (CISC)</td>
</tr>
<tr>
<td>Decision Support/Data Warehouse Group</td>
</tr>
<tr>
<td>Electronic Portfolio Group -- Sumit Sircar</td>
</tr>
<tr>
<td>Faculty Research Committee (FRC) (Advisory to the Associate Dean for Research, OARS)</td>
</tr>
<tr>
<td>First in 2009 Coordinating Council</td>
</tr>
<tr>
<td>Interactive Media Systems -- Glenn Platt</td>
</tr>
<tr>
<td>Student Technology Advisory Group</td>
</tr>
<tr>
<td>Technical Service Representatives</td>
</tr>
</tbody>
</table>
### Think Tank Sessions

<table>
<thead>
<tr>
<th>Category</th>
<th>Sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty</td>
<td>4</td>
</tr>
<tr>
<td>Faculty (Research)</td>
<td>4</td>
</tr>
<tr>
<td>Library</td>
<td></td>
</tr>
<tr>
<td>Staff</td>
<td>4</td>
</tr>
<tr>
<td>Student General</td>
<td></td>
</tr>
<tr>
<td>Student Lab Attendants and Help Desk Support</td>
<td>4</td>
</tr>
<tr>
<td>Technology Advisory Group</td>
<td></td>
</tr>
<tr>
<td>Technology Residence Hall</td>
<td></td>
</tr>
</tbody>
</table>

### Open Focus Group Sessions

<table>
<thead>
<tr>
<th>Category</th>
<th>Sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>8</td>
</tr>
<tr>
<td>Faculty</td>
<td>7</td>
</tr>
<tr>
<td>Staff</td>
<td></td>
</tr>
</tbody>
</table>

### First Draft Feedback Sessions

<table>
<thead>
<tr>
<th>Academic Affairs</th>
<th>School of Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advancement Services</td>
<td>School of Education &amp; Allied Profession</td>
</tr>
<tr>
<td>Associated Student Government</td>
<td>School of Engineering &amp; Applied Science</td>
</tr>
<tr>
<td>College of Arts &amp; Science</td>
<td>School of Fine Arts</td>
</tr>
<tr>
<td>Computer and Information Services Committee (CISC)</td>
<td>School of Interdisciplinary Studies</td>
</tr>
<tr>
<td>Finance &amp; Business Services</td>
<td></td>
</tr>
<tr>
<td>First in 2009 Coordinating Council</td>
<td>Technical Service Representatives</td>
</tr>
<tr>
<td>Graduate School</td>
<td>University Communications</td>
</tr>
<tr>
<td>Hamilton Campus</td>
<td>University Libraries</td>
</tr>
<tr>
<td>Middletown Campus</td>
<td>Student Technology Advisory Group</td>
</tr>
<tr>
<td>Open Forum for Students, Faculty &amp; Staff</td>
<td></td>
</tr>
</tbody>
</table>

### Electronic Survey

<table>
<thead>
<tr>
<th>Category</th>
<th>Undergraduate Students</th>
<th>Graduate Students</th>
<th>Faculty Members</th>
<th>Staff</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamilton</td>
<td>298</td>
<td>33</td>
<td>230</td>
<td>229</td>
<td>790</td>
</tr>
<tr>
<td>Undergraduate Students</td>
<td>18</td>
<td>1</td>
<td>34</td>
<td>28</td>
<td>81</td>
</tr>
<tr>
<td>Graduate Students</td>
<td>33</td>
<td>1</td>
<td>34</td>
<td>28</td>
<td>81</td>
</tr>
<tr>
<td>Faculty Members</td>
<td>230</td>
<td>1</td>
<td>28</td>
<td>34</td>
<td>81</td>
</tr>
<tr>
<td>Staff</td>
<td>229</td>
<td>1</td>
<td>28</td>
<td>18</td>
<td>81</td>
</tr>
<tr>
<td>Total</td>
<td>790</td>
<td>81</td>
<td>790</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Undergraduate Students</th>
<th>Graduate Students</th>
<th>Faculty Members</th>
<th>Staff</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxford</td>
<td>265</td>
<td>32</td>
<td>174</td>
<td>22</td>
<td>652</td>
</tr>
<tr>
<td>Undergraduate Students</td>
<td>249</td>
<td>107</td>
<td>57</td>
<td>65</td>
<td>790</td>
</tr>
<tr>
<td>Graduate Students</td>
<td>32</td>
<td>1</td>
<td>22</td>
<td>22</td>
<td>65</td>
</tr>
<tr>
<td>Faculty Members</td>
<td>174</td>
<td>1</td>
<td>22</td>
<td>22</td>
<td>65</td>
</tr>
<tr>
<td>Staff</td>
<td>181</td>
<td>1</td>
<td>18</td>
<td>18</td>
<td>65</td>
</tr>
<tr>
<td>Total</td>
<td>652</td>
<td>107</td>
<td>57</td>
<td>65</td>
<td>790</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Undergraduate Students</th>
<th>Graduate Students</th>
<th>Faculty Members</th>
<th>Staff</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middletown</td>
<td>11</td>
<td>0</td>
<td>22</td>
<td>20</td>
<td>53</td>
</tr>
<tr>
<td>Undergraduate Students</td>
<td>72</td>
<td>1</td>
<td>18</td>
<td>20</td>
<td>72</td>
</tr>
<tr>
<td>Graduate Students</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Faculty Members</td>
<td>22</td>
<td>1</td>
<td>18</td>
<td>20</td>
<td>53</td>
</tr>
<tr>
<td>Staff</td>
<td>20</td>
<td>1</td>
<td>18</td>
<td>20</td>
<td>72</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>72</td>
<td>53</td>
<td></td>
<td>790</td>
</tr>
</tbody>
</table>
Appendix B: For Additional Information

For more information on the IT Strategic Plan and the IT Strategic Planning Process, please visit the website at: http://www.muohio.edu/itplan

External Environmental Analysis References

- Fourth Annual EDUCAUSE Survey Identifies Current IT Issues, 2003 Survey Highlights
- "One Size Does Not Fit All: Two Models for Support and Training," EDUCAUSE QUARTERLY, Volume 3, 2001. The University of Virginia and the College of William and Mary successfully employ two very different models in confronting IT challenges.
- The Campus Computing Project National Survey of Information Technology in U.S. Higher Education
- Gartner Higher Education Scenario Symposium

Internal Environmental Analysis Results

Documenting Effective Educational Practice (DEEP) Reports

- Deep Interim Report for Miami University, July 31, 2003

Focus Session Results

- Banner as it Should Be Focus Group Results
- Decision Support Focus Group Results
- Hamilton Students Focus Group Results
- Faculty Focus Group Results
- Research Faculty Focus Group Results
- Staff Focus Group Results
- Think Tank Sessions Results

Survey Results

- Web Survey Summary Results #1
- Web Survey Summary Results #2