



## **IT Strategic Plan Renewal Report**

March 2007

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## Executive Summary

The original IT Strategic Plan (ITSP), adopted in May 2004, identifies major goals and imperatives and seeks to guide change within Miami University. A renewal process is carried out annually to assess whether the original goals and imperatives identified in the ITSP remain relevant. Our conclusion is the original goals still apply and we are nearing completion of the original set of projects.

In the wake of Miami University welcoming a new president in July 2006, the decision was made to not do a vigorous renewal of the ITSP without first allowing time for the President to develop and communicate his roadmap for the future of the university. In the fall of 2006, an abbreviated ITSP renewal process was undertaken. As part of this renewal process, we conducted information sessions to receive input and inform the Miami University community about the new E-mail and Calendaring System that will be implemented in the Spring/Summer 2007. These information sessions were held on the Oxford, Hamilton and Middletown campuses and input was solicited from students, faculty and staff. An external environmental analysis was also completed. This analysis employed research from important opinion and policy leaders in the field of technology and higher education, including Gartner and EDUCAUSE.

Some of the themes of the internal environmental analysis:

- There is a high level of interest and concern regarding the E-mail and Calendaring project and that frequent communications should occur.
- Training sessions should be hands-on.
- A strong majority of opinions are in favor of a summer migration for most offices.
- We need to identify what new IT policies are required or desirable as a result of this new system.

The results of the external environmental analysis revealed several recurring themes including:

- Security is the top IT issue identified by IT officials in institutions of higher education.
- Though disaster planning remains an important issue, a significant number of schools have not completed a plan for IT disaster recovery.
- The demand for wireless technology across university campuses continues to grow.

In Appendix A, we highlight an IT success story that resulted from the original tactical projects of the ITSP, the work of the newly formed Research Computing Support group (RCS). Begun in 2005, this unit has already offered tremendous technology tools and support to faculty and students engaged in research throughout Miami. In March of 2006, the RSC launched the Redhawk High Performance Computing Cluster (HPC). In less than a year, this project has run more than 38,000 jobs and has significantly increased the research capacity here at Miami. By offering both computational tools for research as well as support, training and collaborations, the RSC has already become a vital link in the teaching, learning and research chain at Miami.

Should you have comments on this document or the IT Strategic Plan and associated materials on the web site at [www.muohio.edu/itplan](http://www.muohio.edu/itplan), please contact J. Reid Christenberry ([Reid.Christenberry@muohio.edu](mailto:Reid.Christenberry@muohio.edu), 529-8338) or Debra Allison ([Debra.Allison@muohio.edu](mailto:Debra.Allison@muohio.edu), 529-5327).

## **Project Summary**

Appendix B contains the list of original projects undertaken as a result of the initial IT strategic planning effort and their status as of February 2007. There were thirty-five of these projects planned to begin in FY05. Twenty-nine are complete (83%) and the remaining six are in progress.

The summary in Appendix C details 116 managed projects since FY05, all of which are aligned with the IT strategic goals. As of February 2007, 68 projects have been completed. An additional 20 are scheduled to start prior to the end of the fiscal year. Each quarter, the Project Review Board evaluates those projects that are on hold or not yet started and the project portfolio is rebalanced.

## Internal Environmental Analysis - Introduction

This year's internal environmental analysis consisted of information sessions pertaining to the new e-mail and calendaring system that will be put into operation later this year. Future information sessions will be held to inform the university community about upcoming information technology projects and to gather valuable input from students, faculty and staff.

### E-mail & Calendaring System Information Sessions (Held on Oxford, Middletown and Hamilton campuses)

Information sessions, open to all faculty, staff and students, were held on the Oxford, Hamilton and Middletown campuses in November 2006. The goals of these sessions were to share information about the new e-mail/calendaring system and to give a brief demonstration of the system and receive input. Input was sought from faculty, staff and students for use in planning the migration to the new system.

The information sessions were announced through the *Miami Report*, an ad in *Miami Student*, table tents in dining halls, online listings on the Miami new event calendar and myMiami, flyers to all faculty and staff, and announcements on regional campuses via the dean's offices. A total of 4 forums were held – two on the Oxford campus and one each on the Hamilton and Middletown campuses. The sessions were open to all students, faculty and staff. (Note: Effort is underway to receive input from the Luxembourg campus also.)

The information sessions were well attended. Below is the attendance breakdown:

	Oxford campus (session 1) 11/28/06	Oxford campus (session 2) 11/28/06	Middletown campus 11/29/06	Hamilton campus 11/30/06
Students	3	0	1	2
Faculty	4	5	2	7
Staff	68	3	31	26
Session Totals	75	8	34	35
<b>Total Attendance:</b>	<b>152</b>			

The information sessions held on the Oxford, Hamilton and Middletown campuses yielded many suggestions for the E-mail/Calendaring implementation team. A sampling of these suggestions is below:

- Very frequent communications (but not burdensome) should be available on this project. There is a high level of interest and concern.
- Migration schedule should be solidified by the end of March.
- Training sessions should be hands-on.
- Training sessions should be given for various types of users. While the number of each type might vary between the main campus and the regionals, desire was expressed on all campuses for appropriate training.
- Training sessions will be needed for students.
- The migration schedule will likely need to be done on a department by department basis.

### *E-mail & Calendaring System Information Sessions Continued...*

- There was a strong majority of opinions expressed in favor of a summer migration. However, there was some mention for migration at other times, and the need to be sensitive to the department's needs. The migration schedule should be developed with sensitivity to the need for some units to move earlier or later.
- We need to work with the Office of Disability Resources on accessibility.
- We will need special documentation to address the period of time when we are in transition. What behaviors are necessary for the period of time when everyone is not yet on the new e-mail and the new calendar system?
- We need input from the Luxembourg campus, and we need to include them in the migration timetable.
- We need to identify what new IT policies are required or desirable as a result of the new system.
- Our plan to create a test Microsoft Exchange environment in the January/February timeframe, allowing interested clients to "kick the tires," was highly supported by attendees of the information sessions. We need to ensure that this happens in January/February.

Additional information from the information sessions can be found by visiting the E-mail & Calendaring Project website at [www.muohio.edu/emailinfo](http://www.muohio.edu/emailinfo).

## External Environmental Analysis - Introduction

As part of our effort to refresh Miami University's IT Strategic Plan each year, we conducted an external environmental analysis during the fall of 2006.

The following resources were used during the external environmental analysis to gauge where there have been significant changes since the IT Strategic Plan was published in May 2004:

1. The annual EDUCAUSE conference, attended by members of the IT Services Leadership Team
2. Gartner Group's research on IT issues in higher education and overall
3. EDUCAUSE and ECAR surveys and research
4. The Campus Computing Survey 2006 – prepared by the Campus Computing Project
5. The New Media Consortium's (NMC) Horizon Project – a collaboration between the NMC and the EDUCAUSE Learning Initiative

Some noteworthy items are mentioned below.

- After consistently climbing up the EDUCAUSE list of the Top 10 IT issues over the past few years, Security & Identity Management has taken over the top spot on the list.
- According to the EDUCAUSE Core Data Study, despite a recognized need for around the clock support, very few (7.1%) institutions offer 24 hour support.
- We also learned from the EDUCAUSE Study of Undergraduate Students and IT that today's undergraduates are well-connected with some form of technology. Nearly all students (97.8%) own a PC. Three-fourths own a laptop and almost 40% own BOTH a laptop and a PC.

## EDUCAUSE Top Ten IT Issues, 2006 (628 institutions responding)

*For the last seven years, EDUCAUSE has conducted its Current Issues Survey to identify what campus information technology leaders see as their most critical IT challenges.*

Three overall findings for all respondents to this year's survey are especially notable.

1. Security & Identity Management topped the list for the first time, steadily moving up from #2 in 2005 and #3 in 2004.
2. Disaster Recovery/Business Continuity jumped all the way to #4, after falling off the list in 2005.
3. Enterprise-Level portals dropped off this year's list after falling to #9 in 2005 from #8 in 2004.

### The following are the top 10 issues identified by 628 IT leaders that need to be resolved for strategic success.

2006	2005	2004	Issue	Our projects
1	2	3	<b>Security &amp; Identify Management</b>	Strategic & Tactical Security; Network Security Enhancements; Critical Incident Response
2	1	1	Funding IT	IT Strategic Planning; Technology Funding Model; CIO Management System
3	3	2	Administrative/ERP/Information Systems	Banner System Enhancement & Support; Decision Support
4	-	10	<b>Disaster Recovery/Business Continuity</b>	Primary Disaster Recovery, Disaster Recovery Exercise
5	6	5	<b>Faculty Development, Support, and Training</b>	Classroom/Open Access Computing Labs; Research Support Model; Online Course Management System Enhancement; Innovation Support Model; IT Literacy
6	5	6	Infrastructure Management for IT	Continuous Infrastructure Improvement; Network & Workstation Protection Strategy; Life Cycle Management
7	4	4	Strategic Planning for IT	Continuous IT Planning
8	8	9 (tie)	Governance, Organization, and Leadership for IT	IT Policy, Planning & Governance; IT Services Leadership Team Implementation; IT Services Performance Management Enhancement; Project Office
9	7	7	E-Learning/Distributed Teaching and Learning	Online Course Augmentation/E-Learning
10	10	8 (tie)	Web Systems and Services	(facilitated by Enterprise level Portal projects)

**Note:** bolded issues are ones with significant change since 2005: they either advanced one place over the previous year, or appeared in the Top Ten for the first time.

## EDUCAUSE 2005 Core Data Survey

*Data from 933 surveys was used to compile the results in this report.*

1. The percentage of institutions with stand-alone IT strategic plans did not change from last year, with 73% of all institutions reporting the existence of a plan. However, an increasing number of schools involve a broad array of groups in the creation of their IT strategies. A majority of institutions report involving members of the president's cabinet/council (63.9%), administrative (58.5%), academic/faculty (67%) and technology advisory (80.7%) committees to provide advice on technology strategies and plans. In addition, the percentage of schools that use student advisory committees to offer advice grew from 25% in 2004 to 30.2% in 2005. Furthermore, about 17% of schools use trustee committees for guidance on IT policy.
2. The percentage of schools that charge a technology fee did not significantly change from last year, 51.2% in 2005 vs. 53.2% in 2004.
3. Most schools report charging a flat fee per semester (43.2%) or per credit hour (29.8%). Total funds generated per institution remained relatively stable, with an average of \$1,397,000 raised in 2005 vs. \$1,440,417 in 2004.
4. The group deciding how the tech fee is spent continues to be Senior Administration (+4% from 2003 to 2004.) This group showed the largest percentage of growth; next largest growth: IT Administration, +3.3%. Of those institutions reporting they have a flat fee per semester the median fee collected is \$75 per semester. The median fee for those collecting a flat fee per year is \$148.
5. Help desk services continue to be essential in assisting faculty and students to utilize the technology that is available. Despite a recognized need for around the clock support, very few (7.1%) institutions offer 24 hour support. This is a slight increase from last year (5.8% offered 24 hour support).
6. Staffing ratios were found to be fairly equal for professional full-time employees across all IT areas (there were 14 areas described ranging from administration and planning to help desk, academic computing, web support, etc.) However, it was widely acknowledged that most campuses could not meet the IT demands without the students who serve in a variety of IT support capacities. Unlike their professional counterparts, students tended to work in three areas: Instructional Technology, Multimedia Services, Student Computing; Help Desk; and Desktop Computing Support.
7. The percentage of institutions reporting wireless technologies in their classrooms continued to increase in 2005, with 45.8% of all schools reporting wireless Internet connectivity. This is a rate of increase of more than 11% over the previous year. Wired Internet connectivity increased only slightly, but remains high at 88.6% of all schools. What's more, nearly 50% of classrooms are equipped with computers. This is almost a 5% increase for all schools.
8. Remote access to campus networks and the Internet continues to grow. While providing the use of an internal modem pool continued to decrease in 2005 (45% in 2005 vs. 49% in 2004), wireless network access continued to rise. Schools reported that wireless access was most available in libraries (70% report that 76% to 100% of their libraries offered wireless access) and least available in residence halls, open spaces and research buildings.

***EDUCAUSE 2005 Core Data Survey Continued...***

9. There continues to be a variety of ways in which faculty are supported in their use of technology with 94.6% of schools offering faculty training on request and 89.2% training faculty through scheduled seminars. Nearly 70% of schools offer designated instructional technology centers for faculty. However, this number appears to be shrinking.
10. The number of students who own their own computer continues to rise, from 67% to 72% on average in 2005. Almost 85% of students at private institutions owned their own computers, compared to 64.3% of those enrolled at public schools. However, because it is not 100% of all students, there is still a need to continue to offer public access to computers at both public and private schools.
11. There was a slight 1.5% increase in the number of schools requiring students in some departments or majors to purchase a computer (104 institutions, 14.5% of all respondents), while 30.3% of all institutions recommend the purchase/lease of a computer, but do not require it.
12. Many institutions are continuing to offer new technologies throughout their campuses. Voice-over-IP (VoIP) is fully implemented at nearly 30% of schools, and Video-over-IP is deployed at nearly 43%.
13. Despite the interest in and need for public key infrastructure (encryption), for the third year in a row, very little development has occurred.
14. The data on anti-spyware software shows that nearly 62% of campuses have implemented this technology, with an additional 34% piloting, in progress or considering the use of such programs. In addition, the use of personal firewall technology is being used by more than 41% of schools, with 52.2% of doctoral schools having deployed it. More than 58% of all schools have conducted IT security risk assessments. Again the percent is even higher among doctoral institutions (80%), an increase of 10% for this group.
15. There was an 8.8% increase in the number of institutions reporting that “We offer special grants or awards to faculty to support innovative use of technology in teaching and learning.” (296 institutions, 41.3% of all respondents.)

## Gartner Group Hype Cycle for Higher Education

The Gartner Hype Cycle for Higher Education predicts when new information technologies will be adopted by higher education institutions. These emerging technologies will be adopted at varying rates based on many variables including budgets (both the IT and in some instances, the institution's budget), as well as an institutions past history of adopting new information technology.

On the Rise	Definition
CobiT	Control Objectives for Information and Related Technology (CobiT) is an IT governance framework that helps organizations understand primary control objectives.
Technology-Enabled Classrooms	Rather than viewing the physical classroom, the technology and the pedagogy separately, a technology-enabled classroom must integrate all three.
Global Library Digitalization Projects	Global library digitalization projects are massive organizational initiatives that make research library collections accessible globally.

At the Peak	Definition
ITIL	The Information Technology Infrastructure Library (ITIL) is a standard process framework for integrated IT service support and delivery processes used to manage an IT operations environment.
Personally Owned Devices With Campus Network Access	Personally owned mobile devices with campus network access are capable of voice and data calls. They can run data applications without a network connection, including digital audio/video download.
Podcasting Learning Content	Podcasting learning content involves the prerecorded, radio like format delivery of content via Really Simple Syndication (RSS) across an extremely varied set of content themes.
ID and Access Management	ID and access management technologies allow institutions to manage and control user accounts and privileges.

Sliding Into the Trough	Definition
e-learning Repositories	These are global digital repositories for extrainstitutional sharing of e-learning content.
Peer-to-Peer Entertainment for Students	Students are using peer-to-peer technologies for entertainment.
CRM for Enrollment Management	CRM for enrollment management involves systems that are verticalized for higher education student and prospect recruiting, as well as for enrollment management functionality.
Learning Content Management	Learning content management involves the storage of institutional e-learning content so that it can be indexed, searched, managed and shared.
Open-Source E-Learning Applications	Open-source e-learning applications are higher-education e-learning systems developed via open-source or community source models.
E-Portfolios	E-portfolios are web-accessible repositories for student work, both graded and ungraded, which may be shared with authorized parties.

***Gartner Hype Cycle for Higher Education Continued...***

Web Services for Administrative Applications	Web services for administrative applications have capabilities that facilitate the internal integration and extrainstitutional collaborative commerce needed to carry out higher education-specific administrative functions.
Radio-Frequency Identification (RFID) Library Materials Management	This is the use of RFID tags on individual library books, media and objects for library management and self-service check-out/check-in.

<b>Climbing the Slope</b>	<b>Definition</b>
IP Video for E-Learning	IP video for e-learning involves H.323 and similar technologies that enable point-to-point video for online academic instruction.
Next-Generation Library Management Systems	Next-generation library management systems feature advanced Internet capabilities, including link servers, federated search portals and e-learning content management.
Internet2/NextGeneration Internet	These are consortium and government efforts to define a next-generation high-speed Internet with strong educational tools.
802.11x on Campus	802.11x refers to campus wireless local area networks enabled by the 802.11 family of standards.
Higher Education Enterprise Portals	Higher education enterprise portals are integrated with administrative, academic and other applications of interest to students, faculty and staff.
Course Management Systems	Course management systems are e-learning systems that enable institutions to put course material online, facilitate learner interaction and provide faculty with course administration tools.

## **EDUCAUSE ECAR Study of Undergraduate Students & IT, 2006**

*This 2006 study is a longitudinal extension of the 2004 and 2005 ECAR studies of students and information technology. This study is based on quantitative data from almost 29,000 freshman and senior students at 96 higher education institutions.*

1. Today's undergraduates are well-connected with some form of technology. Nearly all students (97.8%) own a PC. Three-fourths own a laptop and almost 40% own BOTH a laptop and a PC.
2. Students spend a great deal of time using various technologies. The average is 23 hours per week, with more than 25% of men reporting that they use technology more than 30 hours per week.
3. Almost all students report using e-mail and 80% use instant messaging. They report being equally comfortable using either form of communication, with 84.9% reporting they prefer e-mail for official communication. However, nearly 12% only have one e-mail account and about half report using an e-mail provider that is not their university.
4. Nearly three-quarter of the respondents use various forms of technology for recreation such as downloading music, using social networks (70.6%) and playing video games (73.4%). A much smaller percent report using technology to create media such as video (27.7%) or websites (28.6%).
5. Despite their daily use of various forms of technology, students are relatively conservative in their desire to use technology in their courses, with a majority (56.2%) reporting only a "moderate" preference for use of technology in coursework. Older students and male students prefer slightly more technology in their coursework than their younger or female counterparts.
6. Despite their reticence to use technology in their courses, 64.4% of students report that technology has improved their learning. A mere 7.6% did not think that it helped their learning.
7. While most students prefer using laptop computers, nearly 71% report never bringing their computer to class. Even some (16.2%) who are required to bring their computers to class report not doing so. Many cited the weight of the computer and concerns about theft as the reason for leaving the computers home.
8. Students report that convenience is the biggest advantage of IT in their learning experience.
9. Students continue to stress the need for additional IT training for faculty. Students believe that instructors who are better equipped to use a broad range of technology in the classroom enhance their learning experience.
10. Despite its widespread use, technology remains beyond the interest and out of reach for many students. Most often it is female students who report feeling ill at ease with technology. In addition, low-income students, many of whom attend two-year universities, report lower levels of satisfaction with IT resources.
11. There needs to be balance between investment in cutting edge technology for students with a high degree of comfort and resources for those who have little desire for or comfort in using technology in their coursework.

## The Campus Computer Survey 2006

*This annual survey is the longest continuing study of the role of computing and information technology in American higher education. The survey was conducted from September - October 2006 and a total of 540 institutions responded.*

1. Classroom access to wireless networks continues to grow within all higher educational institutions. It leaped from 31.1% in 2004 to 51.2% in 2006. In addition, even more, nearly 70% of the schools surveyed, report having a strategic plan regarding the use of wireless networks.
2. Network and data security continues to be singled out as the top IT issue by IT officials, with 34.3% of those in public universities and colleges and 31.4% of CIOs within private universities citing security concerns as their top concern.
3. Despite concerns, the percent of institutions experiencing security events or threats declined over the past year, and the percent reporting identity management problems increased only slightly. What's more, the reports of attacks on campus networks went down this past year. Problems with viruses and spy-ware decreased dramatically, with just under 25% of public universities reporting a major virus problem this past year compared to 46.1% the previous year.
4. The report points out that despite the good news, there are still major security issues that could crop up in the future. Departmental servers pose a significant risk of exposure of sensitive data, with 11.3% of institutions currently reporting this as a problem. In addition, social networking sites, such as MySpace and Facebook, pose additional security risks.
5. Though disaster planning remains an important issue, only 55.5% of the schools report having completed a strategic plan for IT disaster recovery.
6. Much like last year, just over 40% of public institutions reported an increase in their academic computing budget, with only 15.7% reporting a budget cut. Despite the gains in IT funding, campus technology efforts are still being affected by cuts made earlier in the decade.
7. Not surprisingly, as in years past the IT security budgets have continued to grow with 63% of institutions reporting an increase in 2006. Increases were also noted in budgets for wireless networks, Enterprise Resource Planning (ERP) software and services, network servers and identity management.
8. Major increases have been reported in the percent of schools that provide online access to student transcripts (81.5% of schools) and degree audit software (66.8% of schools). While the percent of institutions offering subscription services like online music remains very small (10.5%).
9. The use of ePortfolios continues to grow, with nearly a third of institutions offering this service.
10. While IT officials continue to stress the need for IT assessment on academic programs, less than a third report institutional efforts to evaluate the impact of IT this past year.

## The Horizon Report, 2007 Edition

*This annual report by the New Media Consortium's Horizon Project seeks to identify and describe emerging technologies likely to have a large impact on teaching, learning or creative expression within higher education.*

### KEY TRENDS:

1. Higher education is quickly changing. As students increasingly seek alternative options and administrators seek to cut costs, distance learning options become more attractive. There is also pressure from students looking for more technology-centered educational experiences as well as competition with the for-profit educational sector.
2. Globalization is impacting the educational sector by rapidly exposing students to an ever-widening array of information and resources.
3. Contrary to popular opinion, today's students are not equally competent in all aspects of technology. They may be adept in some areas such as the use of technology to communicate, but may be ill-informed about other aspects. Also, while technology now provides access to a dizzying array of information sources, students are in need of solid critical thinking and evaluation skills to sort through it all.
4. Academic practices are increasingly out of step with the rapidly changing technology. Publication-centered evaluations of faculty and the rewards system do not reflect the more technology-centered nature of the education.
5. Scholarship outside the walls of academia is rapidly increasing as access to information of varying quality becomes commonplace.
6. What students think of as technology differs greatly from the view of their professors and with each in-coming class this gap widens.

### CRITICAL CHALLENGES:

1. Evaluating student and professional work in this rapidly technology-influenced arena poses a significant challenge.
2. Finding ways to protect intellectual property is increasingly important in this environment.
3. While students may be savvy with regard to using some forms of technology, they may not grasp how to create meaningful work. There is an increased need to stress critical skills such as storytelling and design.
4. Increasingly collaborative approaches to education and teaching mean there is a need for new forms of evaluation and assessment.
5. The pressure for educational institutions to utilize new and changing forms of communication, such as mobile devices, is increasing.

*The Horizon Report Continued...*

**TECHNOLOGIES TO WATCH:**

1. User-Created Content
2. Social Networking
3. Mobile Phones
4. Virtual Worlds
5. The New Scholarship and Emerging Forms of Publication
6. Massively Multiplayer Educational Gaming

## Gartner Group Top Ten Strategic Technologies for 2006

*Following is a list of technologies Gartner feels will overcome important barriers and limitations in the next three years and will move from narrow niches to more widespread adoption by 2008. These technologies have the potential for competitive and internal value.*

Mainstream	Comments	Recommend Actions
<b>Open Source</b>	End-user adoption of open-source technology extends beyond Linux. Open-source alternatives to commercial software products are available across a wide range of markets. In general, open-source software (OSS) across infrastructure subsegments is more mature than OSS available across the enterprise application software subsegments.	Today, OSS is maturing in many levels of the software "stack." Increasing numbers of IT organizations are finding open source to be a valid, cost-effective choice in many aspects of software infrastructure markets.
<b>Virtualization</b>	Virtualization technologies can improve IT resource utilization and increase the flexibility needed to adapt to changing requirements and workloads.	At Miami, the Support Services & Campus Partnerships initiative requires the ability to rapidly deploy new servers. Using virtual servers will allow IT Services to manage and control the environment from which services are deployed while reducing the management burden on our customers of provisioning these services.
<b>Service Registries</b>	Service-oriented architecture (SOA) enables software to be defined as independent services that can be "composed" into operational systems. Services will be managed and stored in a repository together with rules for maintaining their integrity (the repository may also point to external services, acting in that case as a registry).	Users should seek an integrated platform of a business services repository and composition technologies to enable the BPP.
<b>Business Process Management Suites</b>	The business process platform (BPP) enables companies to develop business-oriented architectures to enable process development. The composition process is driven largely by mapping the use of services within a business process — known as process orchestration.	Users should seek an integrated platform of a business services repository and composition technologies to enable the BPP.
<b>Enterprise Information Management</b>	As the march toward service-oriented architecture (SOA) continues, a focus on information architecture is required. The success of SOA depends on knowing where information is, how to connect to it and the authoritative sources of information. An agile company needs enterprise information management (EIM).	Develop an enterprise information management system to complement your SOA initiatives.

**Gartner Top 10 Technologies Continued...**

<b>Web 2.0 — AJAX</b>	Many choices exist for application developers selecting rich Internet application (RIA) technologies and platforms. These choices are made, in large part, on the package's technical merits and on closeness of fit to application requirements.	Some organizations will move forward with either Adobe Flex or Tibco General Interface. Others will adopt a wait-and-see stance, preferring to delay selection until offerings from IBM and Microsoft are mature.
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<b>Important Long-Range Trends</b>	<b>Comments</b>	<b>Recommend Actions</b>
<b>Information Access</b>	Information access is moving from discrete individual searches, often done in the context of an individual application, to a rich, integrated world where users navigate through a sea of linked information. Ultimately, interpretable information of all kinds will find its way into searchable environments	Currently underway at Miami, the Decision Support System Preparation and Pilot Project will select business intelligence software and establish a data store to facilitate business decision-making across the university. It will provide better access to the university's business information. SAS has been selected as the vendor and implementation will begin in March 2006.
<b>Web 2.0 Mashup Composite Model</b>	A mashup is a web site or web application that combines content from multiple sources into a single integrated presentation. A mashup uses a variety of public interfaces, including APIs, web service calls, JavaScripts and web feeds (for example, RSS and Atom) to source the content.	A rich community is growing on the web, experimenting with mashups based on APIs from eBay, Amazon, Google and host of other companies.
<b>Communities</b>	Technology has enabled many new types of communities, as well as new ways for communities to collaborate, which, in turn, has created new sources of information and new styles of creation.	Take advantage of new types of community interaction that can extend your enterprise and its creative processes.
<b>Ubiquitous Computing</b>	As computers proliferate and as everyday objects are given the ability to communicate with RFID tags and their successors, networks will approach and surpass the number of nodes that can be managed in traditional centralized ways.	Location awareness, and the ability to use computers where they lie instead of transporting your own, enables powerful new services and accessibility. Even in the world of carried computers, many are moving among multiple portable computing devices — PDAs, cell phones and laptops.

## Research Support Matures: Provides New Opportunities for Faculty and Students

Today at Miami faculty and students face a revolution in changing teaching and learning. A significant part of that revolution involves research as a critical component in the experience of both faculty and students at Miami. To support faculty engaged in research, IT Services' Academic Technology Services unit has leveraged significant resources to create the new research computing support group (RCS). During FY06 the RCS grew to four full-time PhD level staff and celebrated its first anniversary.

Members of the RCS actively work and collaborate with individuals and groups from departments including botany, psychology, English, geology, mathematics and statistics and many others. Key to the work of the RCS this year was the deployment of the Redhawk High Performance Computing Cluster (HPCC) that came on line in mid-March. Between June of 2006 and January of 2007, over 140 accounts have been requested, 38,371 jobs have been run and over 11 years of processing have been clocked.

Use of the HPCC provides the ability to perform the high-speed computational analysis required for many research projects. User Mr. Edray H. Goins (mathematics and statistics) captured the response of many faculty users when he wrote, "Thanks so much for providing such a wonderful resource!"

Mr. Goins and the students in the Summer Undergraduate Mathematical Science Research Institute used the HPCC to complete a research paper that was presented at the joint mathematical meetings of the American Mathematical Society and the Mathematical Associate of America in New Orleans in January 2007.

Dr. Amit Shukla (mechanical and manufacturing engineering) and Dr. Olga Brezhneva (mathematics and statistics) are using the Redhawk HPCC for several cutting edge research projects in the areas of nonlinear dynamics and optimization, involving undergraduate and graduate research assistants in the work. Two undergraduate students will present the results of one of these projects as a research publication in the proceedings of the International Modal Analysis Conference to be held in Orlando during February 2007.

Other active users of the HPCC include Dr. Steven Wright (mathematics and statistics), Quinn Li (botany), and Mike Helmick (computer science). Wright is pursuing projects in pure mathematics, as well as applications of mathematics in other disciplines, working with collaborators in a variety of science and engineering departments. Li is working with RCS staff member Greg Reece to examine patterns of repetition in DNA nucleotides. Helmick says of the HPCC, "I'm running thousands more simulations than I would ever be able to run on a single machine...I am planning on publishing my findings within the next couple of months."

The RCS supports teaching and learning by providing computational tools for research as well as support, training and collaborations to make those tools as effective as possible. The results are a win-win research environment, where faculty support is growing and students interested in research can have hands-on experience with state-of-the-art technology. As faculty and students' work is published and presented, the university gains in reputation as a good place for teaching, learning and research.

## Status of Original (2005) Tactical Projects

<b>IT Strategic Plan Major Goal and Tactical Projects</b>	30 projects completed; 5 projects in progress; 1 project cancelled
	<i>Status as of February 2007</i>
<b>Strategic Goal #1: Empower and Enhance Learning &amp; Research</b>	4 of 5 projects completed; 1 project cancelled
Classroom Support Strategy (support unit, funding for upgrades, Classroom Enhancement Council)	Completed
Information Technology Literacy Project	Cancelled
Limited scope web-based course projects to demonstrate team model (Instructional designers, Nursing program, Fine Arts, COOL)	Completed
Establish the Research Support Model (Support staff, research cluster)	Completed
Online Course Management System Enhancements (New Blackboard Infrastructure)	Completed
<b>Strategic Goal #2: Build and Expand Reliable, Robust, Secure Access to Information</b>	11 of 11 projects completed
E-mail & calendaring study replacement	Completed study and RFP Inadequate funding to acquire
Campus wide storage/server study implementation	Completed external assessment study In progress
Wireless deployment	Completed
Off-campus wireless cable modem pilot and resulting strategy	Completed evaluation test Decided not to deploy at this time
Proactive workstation management (pushing virus protection, quarantining infected machines from the rest of the network)	Completed
Network architecture and strategy for future growth	Completed
Third Frontier Network migration	Completed
Implement critical incident response process for IT Services	Completed
University Network Security Support Staff	Completed
Commence a security awareness training program	Completed
Implement managed security services	Completed
<b>Strategic Goal #3: Promote Customer-Centered IT Support and Services</b>	3 of 4 projects completed; 1 projects in progress
Customer Service Support Model Study Project	Completed assessment Implemented Partnership program Began Altiris remote support models Began Altiris Patch Management implementation
Alternative TSR Pilot Project for End-user Workstation Support	Completed
Establish IT customer advocacy role	Completed
Extend support desk hours to 24x5	Completed

Status of Original (2005) Tactical Projects Continued...

<b>Strategic Goal #4: Ensure Continuous Innovation</b>	2 of 2 projects completed;
Collaborative Innovations Projects (for example, Miami Notebook, Altiris, iTunes U, etc.)	Completed
Design a virtual collaboration center for managed IT innovation	Now incorporated into IT Services processes.

<b>Strategic Goal #5: Support University Administration and Management</b>	2 of 4 projects completed; 2 of 4 in progress
Decision Support strategy, plan and organization	Completed study Implementation Phase In Progress FY07
Banner 6 Implementation	Completed. Also completed upgrades to Banner 7 in FY06, and Banner 7.3 in FY07
Portal and Content Management Study and Strategy Development Project	Completed assessment Completed Phase I: myMiami moved Completed Phase II: definition of functions needed
Banner As It Should Be - Prune Unneeded Mods, Implement Remaining Unimplemented Features & Make More User-Friendly	Completed mod assessment Online rendering and imaging projects continue. HR workflow planned to begin in Q3 FY07

<b>Strategic Goal #6: Plan and Manage Information Technology</b>	8 of 10 projects completed; 2 projects in progress
IT Project Management Office	Completed
IT planning process - ensure continuous planning and assist college, schools, libraries and regional campuses in developing their IT plans	Completed
Review and Manage IT Purchases Institutionally	Completed
Software license management	In progress
IT Funding Model - Implement Technology Fee	Completed
CIO Management System (Pinnacle)	In progress FY07
IT governance and policy structure - staffing to support	Completed
IT Services performance management enhancement	Completed
IT staff compensation analysis, definition of standards-based IT job descriptions	Completed Phase I
Address Pent Up Demand - Understaffing at FY04 levels in programming staff, operations center, support center	Completed

## FY07 Operational Plan

### Summary:

Status	FY 05 OP	FY 06 OP	FY 07 OP as of 2/1/07
Completed	23	40	5
In Progress	2	15	11
Pending	0	2	9
Hold	2	5	2
<b>Total</b>	<b>27</b>	<b>62</b>	<b>27</b>

### Strategic Goal #1: Empower and Enhance Learning and Research

10 projects completed;  
1 project in progress;  
3 projects on hold/pending

PROJECT #	PROJECT TITLE	DIVISION	ORIGIN	STATUS
176	Continuing Education Enhancements	Academic Affairs(Deans)	FY05 Operational Plan	Completed
187	e-Learning	University Wide	FY05 Operational Plan	Completed
193	On-Line Evaluations	Academic Affairs(Deans)	FY05 Operational Plan	Completed
172	Harco Changes for Heritage Commons	Finance and Business Services	FY05 Operational Plan	Hold
98	Alcohol Education	Student Affairs	FY06 Operational Plan	Completed
105	Darwin Software Upgrade (job)	Academic Affairs(Admin)	FY06 Operational Plan	Completed
106	Ad Astra web Client	Academic Affairs(Admin)	FY06 Operational Plan	Completed
116	Digital Postage Metering	Finance and Business Services	FY06 Operational Plan	Completed
138	Grid Computing	University Wide	FY06 Operational Plan	Completed
148	On-line Jobs System Training (job)	Finance and Business Services	FY06 Operational Plan	Completed
152	Murphy Software Upgrade	Student Affairs	FY06 Operational Plan	Completed
129	Decision Support Implementation	IT Services	FY06 Operational Plan	In Progress
103	Ad Astra Platinum	Academic Affairs(Admin)	FY06 Operational Plan	Hold
351	Text Conversion Project	Office of the President	FY07 Operational Plan	Hold

**Strategic Goal #2: Build and Expand Reliable, Robust, and Secure Access to Information & Technology**

 17 projects completed;  
 8 projects in progress;  
 6 projects on hold/pending

PROJECT #	PROJECT TITLE	DIVISION	ORIGIN	STATUS
168	Core Network Upgrade	University Wide	FY05 Operational Plan	Completed
175	Campus Conveyance Initiative	University Wide	FY05 Operational Plan	Completed
177	PDA and Laptop Information Protection	University Wide	FY05 Operational Plan	Completed
181	DNS/DHCP Move	University Wide	FY05 Operational Plan	Completed
184	Secondary ISP	University Wide	FY05 Operational Plan	Completed
185	University-Wide Security Awareness	University Wide	FY05 Operational Plan	Completed
190	Network Security Enhancements	University Wide	FY05 Operational Plan	Completed
76	Visual Resources Center Digitization	Academic Affairs(Admin)	FY06 Operational Plan	Completed
81	E-mail Upgrades	University Wide	FY06 Operational Plan	Completed
92	Course Offerings in General Bulletin	Academic Affairs(Admin)	FY06 Operational Plan	Completed
96	QS1 and Pyramed Security Enhancements	Student Affairs	FY06 Operational Plan	Completed
100	Student Application Review Website	Academic Affairs(Admin)	FY06 Operational Plan	Completed
110	Authenticated Web Access to Database System	Academic Affairs(Deans)	FY06 Operational Plan	Completed
140	VPN Capability Upgrade	University Wide	FY06 Operational Plan	Completed
141	Change Management Processes	IT Services	FY06 Operational Plan	Completed
156	On-line Survey Capability (University-wide) - Product Selection	Student Affairs	FY06 Operational Plan	Completed
86	Off-site Recovery	University Wide	FY06 Operational Plan	In Progress
136	Document Imaging Pilot	University Wide	FY06 Operational Plan	In Progress
143	Knowledge Base Upgrade	University Wide	FY06 Operational Plan	In Progress
317	Blackboard Upgrade to 7.2	University Wide	FY06 Operational Plan	In Progress
75	Ohio Instructional Grant (OIG) Form Processing	Academic Affairs(Admin)	FY06 Operational Plan	Hold
142	Network Uniformity Compliance	University Wide	FY06 Operational Plan	Hold
331	Esponse Fixes	Academic Affairs(Admin)	FY07 Operational Plan	Completed
334	Online Payments for First-year Confirmation Deposits	Academic Affairs(Admin)	FY07 Operational Plan	In Progress
367	Disaster Recovery exercise	University Wide	FY07 Operational Plan	In Progress
370	Universal Edition for Door Access (Harco/One-Card)	Finance and Business Services	FY07 Operational Plan	In Progress
378	myMiami for Incoming Oxford Undergraduates	University Wide	FY07 Operational Plan	In Progress
360	Move PHP Applications to Linux	University Wide	FY07 Operational Plan	Pending
368	Box Office/Athletic Ticket Office Server Upgrade	Finance and Business Services	FY07 Operational Plan	Pending

### Strategic Goal #2: Build and Expand Reliable, Robust, and Secure Access to Information & Technology (Continued...)

PROJECT #	PROJECT TITLE	DIVISION	ORIGIN	STATUS
383	Implement "responsible use policy" challenge for new employees and students	Office of the President	FY07 Operational Plan	Pending
428	Online Directory Search	Office of the President	FY07 Operational Plan	Pending

### Strategic Goal #3: Promote Customer-Centered Information Technology Services & Support

4 projects completed;  
2 projects in progress;  
1 project on hold/pending

PROJECT #	PROJECT TITLE	DIVISION	ORIGIN	STATUS
170	Transfer Hub for Electronic Transfers	Academic Affairs(Admin)	FY05 Operational Plan	Hold
102	On-line Student Applications (in-house)	Academic Affairs(Admin)	FY06 Operational Plan	Completed
115	Electronic Access to Student Bills	Finance and Business Services	FY06 Operational Plan	Completed
154	Application System for Student Opportunities	Student Affairs	FY06 Operational Plan	Completed
157	Greek MInE reports	Student Affairs	FY06 Operational Plan	Completed
90	Web Accessibility Policy and Roadmap	University Wide	FY06 Operational Plan	In Progress
131	Call Tracking and Workflow	IT Services	FY06 Operational Plan	In Progress

### Strategic Goal #4: Ensure Continuous Innovation

3 projects completed;  
1 projects in progress

PROJECT #	PROJECT TITLE	DIVISION	ORIGIN	STATUS
167	Oxford Area Wireless Pilot	University Wide	FY05 Operational Plan	Completed
169	IP Telephony Study & Pilot	University Wide	FY05 Operational Plan	Completed
171	Virtual Servers and Storage	University Advancement	FY05 Operational Plan	Completed
457	Identity Management	University Wide	FY07 Operational Plan	In Progress

### Strategic Goal #5: Support University Administration and Management

27 projects completed;  
15 projects in progress;  
11 projects on hold/pending

PROJECT #	PROJECT TITLE	DIVISION	ORIGIN	STATUS
179	University Web Presence Coordination	University Wide	FY05 Operational Plan	Completed
180	Space Planning	IT Services	FY05 Operational Plan	Completed
183	MyMiami Portal - Phase 2	University Wide	FY05 Operational Plan	Completed

<b>Strategic Goal #5: Support University Administration and Management (Continued...)</b>				
<b>PROJECT #</b>	<b>PROJECT TITLE</b>	<b>DIVISION</b>	<b>ORIGIN</b>	<b>STATUS</b>
191	RTR/Thematic Sequencing	Academic Affairs(Admin)	FY05 Operational Plan	Completed
192	Resource Planning and Project Portfolio Management	IT Services	FY05 Operational Plan	Completed
166	NCATE Phase 2	Academic Affairs(Deans)	FY05 Operational Plan	In Progress
173	Advisor Assignments to Students	Academic Affairs(Admin)	FY05 Operational Plan	In Progress
79	Kronos v5 Upgrade with Time Modification	Finance and Business Services	FY06 Operational Plan	Completed
84	Banner v7 Upgrade	University Wide	FY06 Operational Plan	Completed
85	Banner Mod Reduction	University Wide	FY06 Operational Plan	Completed
88	Evisions Forms Printing Software	University Wide	FY06 Operational Plan	Completed
95	Judicial Affairs Software	Student Affairs	FY06 Operational Plan	Completed
97	Learning Assistance Evaluation Process Upgrade	Student Affairs	FY06 Operational Plan	Completed
107	Modify Data Table (AZVCONF) View for Scholarship Recipients	Academic Affairs(Admin)	FY06 Operational Plan	Completed
117	Open Enrollment for Benefits	Finance and Business Services	FY06 Operational Plan	Completed
118	Report Center ( Consolidate Reports in MInE)	Finance and Business Services	FY06 Operational Plan	Completed
120	SCT Workflow Implementation	University Wide	FY06 Operational Plan	Completed
125	Grant Staff Benefit Adjustments	Finance and Business Services	FY06 Operational Plan	Completed
128	Decision Support System Preparation and Pilot	University Wide	FY06 Operational Plan	Completed
134	Realtime Registration Study	University Wide	FY06 Operational Plan	Completed
135	MyMiami Portal - Phase 3	University Wide	FY06 Operational Plan	Completed
150	WMUB Alternate Signal Delivery	Office of the President	FY06 Operational Plan	Completed
153	Banner Activity Codes for Student Orgs	Student Affairs	FY06 Operational Plan	Completed
155	ASG Budget/Information Management System	Student Affairs	FY06 Operational Plan	Completed
160	GoalQuest / Student Demographic Information System	Student Affairs	FY06 Operational Plan	Completed
261	Report - Student Parameters for Revenue Projections	Finance and Business Services	FY06 Operational Plan	Completed
80	Integrate On-line Job Applications with Classified Database and Capture Diversity Data	Finance and Business Services	FY06 Operational Plan	In Progress
89	Address Maintenance Software	University Wide	FY06 Operational Plan	In Progress
101	Student Electronic Signatures for Forms	Academic Affairs(Admin)	FY06 Operational Plan	In Progress
109	DARS Interactive Course Audit	Academic Affairs(Admin)	FY06 Operational Plan	In Progress

**Strategic Goal #5: Support University Administration and Management (Continued...)**

PROJECT #	PROJECT TITLE	DIVISION	ORIGIN	STATUS
113	Summer Session Reporting	Academic Affairs(Deans)	FY06 Operational Plan	In Progress
151	WMUB Service Enhancements	Office of the President	FY06 Operational Plan	In Progress
164	On-line Requisitions	Finance and Business Services	FY06 Operational Plan	In Progress
122	HR Workflow	Finance and Business Services	FY06 Operational Plan	Pending
126	Job Enrichment Tracking System	Finance and Business Services	FY06 Operational Plan	Pending
104	Course Demand Analysis	Academic Affairs(Admin)	FY06 Operational Plan	Hold
163	Phonathon Software Upgrade	University Advancement	FY06 Operational Plan	Hold
343	2009 Initiatives	University Advancement	FY07 Operational Plan	Completed
344	Third party billing - SHS	Student Affairs	FY07 Operational Plan	Completed
346	Health Center electronic billing to new student insurance provider	Student Affairs	FY07 Operational Plan	Completed
352	Year End System Reporting/Extract	Office of the President	FY07 Operational Plan	Completed
625	Universal Edition for Door Access (ISS)	Finance and Business Services	FY07 Operational Plan	In Progress
340	Gift Acknowledgement Stewardship	University Advancement	FY07 Operational Plan	In Progress
345	Phase two of the PAVE Judicial Action installation	Student Affairs	FY07 Operational Plan	In Progress
348	Rewrite Tutor Management System	Student Affairs	FY07 Operational Plan	In Progress
365	Banner 7.3 upgrades	University Wide	FY07 Operational Plan	In Progress
376	SAS implementation - convert existing MInE portal	University Wide	FY07 Operational Plan	In Progress
341	Generate University Advancement Banner ID	University Advancement	FY07 Operational Plan	Pending
347	Automating completion of online Medical History form for SHS	Student Affairs	FY07 Operational Plan	Pending
356	Admission Webforms Redesign and Consolidation	Academic Affairs(Admin)	FY07 Operational Plan	Pending
433	Student Organization Registration (Application) System	Student Affairs	FY07 Operational Plan	Pending
443	Annual orientation registration updates	Student Affairs	FY07 Operational Plan	Pending
333	Recruitment Plus Upgrade	Academic Affairs(Admin)	FY07 Operational Plan	Hold

<b>Strategic Goal #6: Plan and Manage Information Technology</b>				5 projects completed; 1 project in progress
<b>PROJECT #</b>	<b>PROJECT TITLE</b>	<b>DIVISION</b>	<b>ORIGIN</b>	<b>STATUS</b>
165	Establish ISS Standards	IT Services	FY05 Operational Plan	Completed
178	IT Planning Governance & Policy	IT Services	FY05 Operational Plan	Completed
182	SSL Encryption	University Wide	FY05 Operational Plan	Completed
186	Critical Incident Response	IT Services	FY05 Operational Plan	Completed
188	Primary Disaster Recovery	University Wide	FY05 Operational Plan	Completed
83	Life Cycle Management	University Wide	FY06 Operational Plan	Completed
82	CIO Management System	IT Services	FY06 Operational Plan	In Progress

## IT Project Portfolio FY05 - FY07 (as of 2/1/07)

### Projects by Status

Status	FY05 Projects		FY06 Projects		FY07 Projects		Total	Total
Completed	23	85%	40	65%	5	19%	68	59%
In Progress	2	7%	15	24%	11	41%	28	24%
Pending/Hold	2	7%	7	11%	11	41%	20	17%
<b>Total</b>	<b>27</b>	<b>100%</b>	<b>62</b>	<b>100%</b>	<b>27</b>	<b>100%</b>	<b>116</b>	<b>100%</b>

### Projects Aligned by IT Strategic Goals

Projects Aligned with IT Strategic Goals	FY05		FY06		FY07		Total	
SG #1: Empower and Enhance Learning and Research	4	15%	9	15%	1	4%	14	12%
SG #2: Build and Expand Reliable, Robust, and Secure Access to Information & Technology	7	26%	15	24%	9	33%	31	27%
SG #3: Promote Customer-Centered Information Technology Services & Support	1	4%	6	10%	0	0%	7	6%
SG #4: Ensure Continuous Innovation	3	11%	0	0%	1	4%	4	3%
SG #5: Support University Administration and Management	7	26%	30	48%	16	59%	53	46%
SG #6: Plan and Manage Information Technology	5	19%	2	3%	0	0%	7	6%
<b>Total</b>	<b>27</b>	<b>100%</b>	<b>62</b>	<b>100%</b>	<b>27</b>	<b>100%</b>	<b>116</b>	<b>100%</b>

### Projects by Division

Projects By Division	FY05	FY06	FY07 (as of 2/1/07)		
	Completed	Completed	Completed	In Progress	Pending/Hold
Academic Affairs(Admin)	1	7	1	1	2
Academic Affairs(Deans)	2	1			
Finance and Business Services		8		2	1
IT Services	5	1			
Office of the President		1	1		3
Student Affairs		11	2	2	3
University Advancement	1		1	1	1
University Wide	14	11		5	1
<b>Total</b>	<b>23</b>	<b>40</b>	<b>5</b>	<b>11</b>	<b>11</b>