

UNC Asheville Request for IT Management Flexibility

Introduction

The University of North Carolina at Asheville (UNCA) is pleased to submit to the UNC Board of Governors this request for Information Technology Management Flexibility. The intent of this document is to summarize our IT management structure, policies, and practices, and to demonstrate how our IT efforts support UNCA's strategic goals, the UNC IT strategy, and the Board of Governors Strategic Directions for UNC. By documenting UNCA's effective management of IT, we will demonstrate our readiness for a formal grant of IT management flexibility by the Board of Governors.

Section 1: Planning

UNCA has been operating for three years under a comprehensive information technology plan developed by a diverse constituency of campus IT users and modeled on the IT strategy formulated for the entire UNC. The plan has proved to be a useful guide for our IT efforts, offering both a clear statement of strategy, and concrete, measurable action steps to implement that strategy.

The plan, entitled "Information Technology Strategy for the University of North Carolina at Asheville," is a working document, and has been updated twice since its creation in the 1999-2000 academic year. The spring 2003 update of the strategy is available in its entirety at www.unca.edu/compcenter/itflex/itstrat03.htm.

Our IT strategy is not an isolated effort. Its key features are supportive of the UNCA strategic plan, the UNC IT strategy, and the Board of Governors strategic directions for UNC. This supportive relationship becomes particularly clear when the goals of the UNC IT strategy are cross-referenced to the goals of the other planning efforts.

Following is that cross-reference in table format, preceded, for ease of comparison, by an enumeration of the planning areas of the UNCA IT strategy and their related goals.

Planning area 1: Campus Teaching and Learning with Technology

Goals:

- Create/enhance an appropriate infrastructure – space, equipment, software, staff – for technology-enhanced teaching and learning. **(1.1)**
- Support faculty development efforts that empower faculty to incorporate technology tools in their teaching and research. **(1.2)**
- Provide for students a living and learning environment that ensures their attainment of "technology literacy" upon graduation from UNCA. **(1.3)**

Planning area 2: Administrative Systems, Services for Students

- Goals:**
- For the university in general, provide stable, quality central information systems which support institutional decision-making, provide academic information services for students and faculty, and provide financial information services for faculty and staff. **(2.1)**
 - For students specifically, provide greater access to web-enabled information and services through self-service mechanisms, allowing students to interact with personalized, intuitive tools that support and enrich their academic and co-curricular experiences. **(2.2)**

Planning area 3: Distance Learning

- Goals:**
- Continue active and effective support provided by Distance Learning Services for the Asheville Graduate Center and NC State Engineering and, increasingly, for UNCA pilot distance learning projects, including the German studies consortium, involving six UNC campuses. **(3.1)**
 - Assess the need for distance learning at UNCA, establishing a clear definition of what distance learning looks like, and determining a baseline for the technology needed to support it. **(3.2)**

The table below cross-references our IT goals, presented in the columns, to, respectively, the Board of Governors strategic directions for UNC, the UNC IT strategy, and the strategic goals of the University of North Carolina at Asheville, all of which are presented in the rows. An **X** in a box indicates close alignment between the associated “row” and “column” goals.

The table necessarily uses a condensed form of expression for goal and direction statements. See the following URL’s for a more detailed exposition:

Board of Governors Strategic Directions:

www.northcarolina.edu/content.php/aa/departments/planning/reports/longplan/stratdir.htm

UNC IT Strategy:

www.northcarolina.edu/content.php/ir/strategy/strategy.htm

UNC Asheville Strategic Goals:

http://www.unca.edu/ir/plan/Goals_Indicators.pdf

APPENDIX S

	UNC Asheville IT Goals						
Goals/Strategies	TLT			Systems, Services		Distance Learning	
BOG UNC	TLT instr 1.1	Fac dev 1.2	Tech literacy 1.3	Admin systems 2.1	Student services 2.2	Cont. support 3.1	Assess need 3.2
1. Ensuring access	X	X	X	X	X	X	X
2. Intellectual capital formation		X	X	X		X	
3. K-16 education	X	X	X	X	X	X	
4. Creation and transfer of knowledge	X	X	X	X	X	X	
5. Internationalization		X	X		X	X	
6. Transformation and change	X	X	X	X	X	X	X
UNC IT							
1. Admin systems, services to students			X	X	X		
2.TLT	X	X	X	X	X	X	X
3. Distance learning	X	X	X			X	X
4. Logistical needs	<i>Note: Logistical needs was not a planning area in UNCA' s initial development of its IT strategy. However, the 2003 update of the strategy identified logistical needs as an area requiring consideration, and presented several issues pertinent to logistical needs.</i>						
UNC Asheville							
1. Excellent liberal arts education		X	X		X	X	
2. Diverse, collab. community	X	X	X	X	X	X	
3. Personal growth		X	X		X		
4. Rich and varied co-curriculum			X		X		
5. Student-centered scholarly emphasis	X	X	X		X	X	
6. Environmental awareness			X		X		
7. Lifelong relationships			X	X	X	X	

Section 2: Organization

IT Organization Chart and Functional Responsibilities

University Computing (UC) is the central IT management organization at UNCA. UC reports directly to the Vice Chancellor for Academic Affairs and consists of four divisions, each headed by its own manager: Academic Computing Services, Administrative Computing Services, Systems and Networks, and Distance Learning Services.

Each division has a unique mission.

Academic Computing Services provides the primary support for members of the faculty who use computing in their curricular applications and their research. Pursuant to that role, it manages all the student computer classrooms and labs, and all of the campus' technology-enhanced classrooms. Additionally, Academic Computing is the main source of support for all individuals on campus, in both academic and administrative departments, who use personal computers for personal productivity applications and network access. Other division responsibilities include support of student users of the residence hall network RESNET, user training (in both classroom and one-on-one settings), and the maintenance and repair of UNCA-owned personal computers and peripherals.

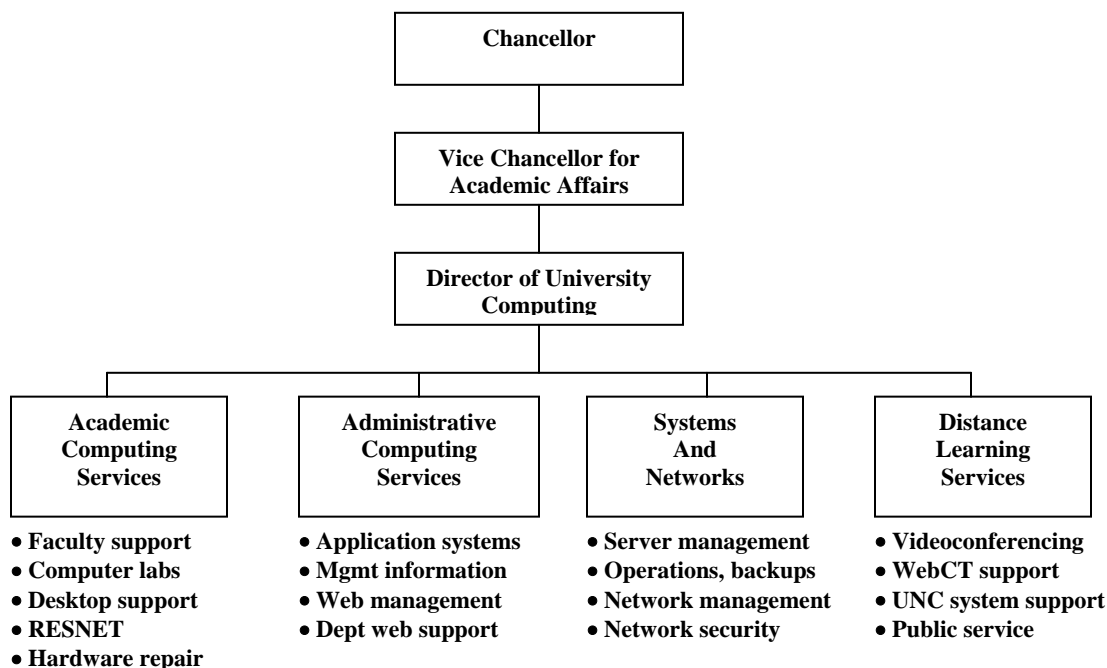
Administrative Computing Services develops and maintains central application systems which store and process UNCA's institutional data. These central application systems manage information related to students, university finances, human resources, and alumni and development, and provide users with friendly web "front-ends" and other software tools for management information access and retrieval. (Administrative Computing is currently leading the campus in an implementation of a comprehensive client-server, database-driven application suite, SCT Corporation's *Banner*, which will replace our legacy application systems over a five-year period.) In addition to its application systems efforts, Administrative Computing is responsible for UNCA's official web presence, maintaining the official UNCA home page and providing support to web page development efforts in other campus departments.

Systems and Networks provides systems programming and systems management for UNCA's central servers, and manages the campus network. In its systems management role, Systems and Networks installs new systems software releases on the central servers, implements security procedures for system files and application programs, monitors and enhances system performance, and carries out daily operations and backups. The division's network management duties include network maintenance and enhancement, performance analysis, bandwidth management, and design and implementation of network security systems. (Systems and Networks, using higher education bond issue funding, recently implemented a significant upgrade of UNCA's network. The upgrade provided gigabit Ethernet backbone connectivity, 100mb desktop connectivity, and significantly enhanced network management and security tools.).

APPENDIX S

Distance Learning Services manages UNCA's two-way interactive videoconferencing facilities, working with Academic Affairs to import and export UNCA-specific curricular programming, and supporting non-curricular, UNCA-related conferences, seminars, and meetings. Additionally, Distance Learning Services provides extensive support to the curricular efforts of the Asheville Graduate Center and the North Carolina State Engineering program, both resident on the UNCA campus. In another important role, Distance Learning Services, in collaboration with Academic Computing Services and the Center for Teaching and Learning, provides support for UNCA's web-based course management system, WebCT. Finally, this division contributes significantly to UNCA's public service mission, offering its facilities for videoconferencing on a time-available basis to local and regional non-profit organizations and governmental entities, and on a cost-recovery basis to the private sector.

The following chart gives an overview of UNCA's IT organization and functional responsibilities.



Standing IT Committees

UNCA's IT efforts are informed and guided by two campus committees, the Administrative Computing Advisory Committee (ADAC) and the Academic Computing Advisory Committee (ACAC). Both groups meet regularly throughout the academic year and are tasked with providing advice to the Director of University Computing. Both have been very active in the development of UNCA's IT strategy

ADAC has general purview of UNCA's information systems issues, while ACAC concentrates on faculty and student technology issues, but areas of concern for the two groups necessarily and frequently overlap, a recent case-in-point being the issue of campus technology refresh.

ADAC is made up of managers and other key personnel in all UNCA administrative departments. Over the years the committee has been very instrumental in policy development efforts, in the allocation of resources to administrative departments for technology initiatives, and in the formulation of UNCA's information systems strategies. It recently has performed significant services in this latter area by providing valuable input to our planning process for our migration to Banner.

ACAC is a committee of the faculty, with four full-time faculty members serving two-year, rotating terms. The Student Government Association appoints a student representative to the group. ACAC has been particularly active in recent months in policy formulation efforts (faculty/staff IT usage policy, faculty desktop computing refresh policy), and in the allocation of student technology fees to improve the student computing environment. The committee generally deals with any technology issue that has impact on UNCA's academic process.

IT Decision-Making Process

IT decisions at UNCA are of two general types ... operational and strategic.

Operational IT decisions are typically made within the University Computing organization. They deal with "normal" operations, usually involving expenditure of University Computing's base operating budget allocation, and routine assignment of University Computing personnel. The Director of University Computing consults on a weekly basis with division managers, and on a bi-weekly with the entire staff, to discuss operational issues and decisions. Division managers have the flexibility to make many operational decisions themselves, but the Director retains ultimate responsibility.

Strategic decisions are made in a broader context. Relevant issues are brought before one or both advisory committees, as appropriate, for consideration. The committees make recommendations to the Director, who carries those recommendations forward to university management ... first to the Director's supervisor, the Vice Chancellor for Academic Affairs; and second, if appropriate, to the Chancellor's cabinet or to the Chancellor directly. Examples of recent strategic decisions are the university's decision to migrate to Banner, which started in ADAC and was ultimately approved by the Chancellor; and the decision to solve student

technology refresh issues with dedicated funding from the student technology fee, which started in ACAC and was approved by the Vice Chancellor for Academic Affairs.

Section 3: IT Infrastructure, Standards, and Policies

Campus IT Infrastructure

UNCA's IT infrastructure consists of computer hardware and software; network hardware, software and cabling plant; and, most importantly, people. A general description of our IT infrastructure follows. More details may be obtained from our list of standards, referred to below.

The campus network is the integrating factor in our IT infrastructure. All campus users are connected to it with high-speed connections, which they use to access our local computing resources, and other resources external to UNCA. We have installed a pervasive fiber optic backbone, connecting all places on campus where people live, learn and work. We use Cisco networking hardware to implement the gigabit Ethernet protocol on the fiber optic backbone, and use Cisco switches to provide all campus users ... faculty, staff, and residence hall students ... with 100 megabit dedicated connections to their desktop computers. Our campus network has a 45 megabit/sec connection to NCREN, the university system network which provides Internet gateway services and access to other UNC-system and statewide resources. Additionally, NCREN provides us with connectivity and support for our extensive campus videoconferencing and distance learning effort. In the near term, our NCREN connection will be upgraded to OC12 capacity (622 megabit/sec).

Important university computing applications are provided over the network by an array of servers supporting both administrative and academic efforts. Our key administrative server is a Compaq AlphaServer that supports the SCT Plus suite of administrative software, under the VMS operating system. Our campus web servers, closely integrated with the administrative server and providing friendly web interfaces and campus portal services, run Microsoft server operating systems. Academic servers run varieties of Unix, including Linux, and provide course management software (WebCT), file and application services for computer labs, and campus-wide email services. Additional academic servers run Apple operating systems and provide services for our campus Macintosh community.

Campus personal computers ... on faculty, staff, and student desktops ... consist of Windows/Intel PC's (Gateway and Dell) and Apple Macintoshes, and of a small number of Sun Solaris workstations. PC's and Macintoshes exist in an approximate 7:3 ratio. We fully support the Microsoft suite of personal productivity software on our PC's and Macintoshes, and supply email clients for those platforms for communication with our POP and IMAP email servers.

Support, enhancement, and maintenance of this complex hardware/software/network environment are the responsibilities of our most important IT infrastructure component ... our IT

professional staff. Twenty IT professionals make up the staff of the University Computing organization, providing services in each of the four divisions: Administrative Computing Services, Academic Computing Services, Systems and Networks, and Distance Learning Services. (Go to www.unca.edu/compcenter/itflex/ucorg.pdf to see the University Computing departmental organization chart). UNCA, historically supportive of IT efforts despite its relatively small size, makes every effort to keep its IT staff at appropriate position classification levels (with concomitant compensation), and to provide staff development opportunities that maximize a staff member's potential to contribute positively to campus IT initiatives.

UNCA IT Policies

UNCA has developed a comprehensive set of IT policies to govern its IT efforts. Covering such areas as appropriate use of IT resources by staff and students, enterprise systems and software management, web resource management, and intellectual property and copyright, the policies provide a framework for the management of IT at UNCA. All policies will be regularly reviewed, and new policies will be developed, as changes in technology, resource availability, and strategic directions warrant. To see UNCA's complete set of IT policies (some still in the draft/campus approval process), visit www.unca.edu/compcenter/policy.htm.

UNCA IT Standards

In the description of *Campus IT Infrastructure*, earlier in this section, some of the key standards of our IT environment were referenced. Adherence to standards is critical for effective management of higher education IT, particularly on a smaller campus where staff size is inadequate to maintain a broad spectrum of supported technologies. For a comprehensive list of UNCA standards, see www.unca.edu/compcenter/standards.html.

Section 4: Management Processes

Implementation of Major IT Projects

Major IT projects at UNCA are typically initiatives recommended by one or both of the two campus IT advisory committees, ACAC and ADAC (see *IT Decision Making Process* in Section 3 above). These initiatives are supportive of the goals of our IT strategy, and receive detailed discussion and shaping in the committee process. Committee recommendations for implementation of a particular project are forwarded to higher university management for consideration and approval.

Three elements of such major IT projects ... funding, resource procurement, and staffing ... deserve particular mention.

Funding. Major IT projects are typically beyond the reach of University Computing's operating budget allocation, so the decision to fund them must be made by higher management. Funding is typically drawn from the campus pool of funds for strategic initiatives, from special-purpose

allocations by the Office of the President, or from one-time, “year end” money (other university funds that were not expended as planned).

Resource Procurement. Procurement of resources to support major IT projects is done in accordance with state purchasing regulations, state laws, and UNC purchasing guidelines. Our resource procurement efforts benefit substantially from our collaborative relationship with the North Carolina Office of Technology Services (ITS). Although under state law we are exempt from the authority of ITS to manage IT procurement for state government, we nonetheless take advantage of ITS’ expertise and purchasing power, working under the terms of 2000 Memorandum of Understanding between UNC and ITS.

Staffing. UNCA has always regarded as critical end-user involvement in the implementation of major IT projects, and consequently UNCA staffs projects with end-users in both advisory and management roles. Technical support staff from University Computing therefore interact extensively with end-users in project implementation efforts, and together the two groups create a productive “project team” mindset. Our philosophy has always been that users own their systems, and user involvement in system implementation projects has brought great benefit to our IT environment.

IT Life Cycle Management Efforts

Effective IT life cycle management is a key goal of the UNCA IT strategy.

Progress in this area for student technology initiatives has been very encouraging. In the fall of 2001, the Office of Academic Affairs agreed to devote 70% of the student Education and Technology Fee (approximately \$200,000 annually) directly to the maintenance and enhancement of student computing facilities. The Academic Computing Advisory Committee (ACAC) solicits proposals for student computing projects, prioritizes them, and recommends allocation of available funding. In academic year 2002-03, funds were allocated to overhaul five important computer labs, and other funds were directed to smart classroom construction. In addition, important student support units, such as the University Writing Center, received improved technology as a result of this effort.

Progress for central IT infrastructure and faculty/staff desktop life cycle management efforts has been slower, but still significant, with funding being the key obstacle. ACAC, in the spring and fall of 2002, developed detailed guidelines for refreshing faculty computers. Additionally, a subcommittee of ADAC developed in the fall of 2002 a preliminary funding model, and presented it to university management for consideration. Further progress in this area awaits formal adoption of a funding plan in the 2003-04 budget year.

IT Professional Development and Training

Professional development and skill enhancement are critical for the staff of an effective IT organization. Additionally, campus users of technology need regular training in order to employ their growing array of IT tools to maximum effect.

UNCA has a strong record of support for professional development of its IT organization. Staff members participate actively in a broad range of professional organizations, serving variously as conference attendees, presenters, and organizers. These professional organizations include EDUCAUSE, SIGUCCS-ACM, and UNC-CAUSE, as well as regional user groups of our administrative applications suite. Additionally, we are well represented at UNC system-sponsored professional development activities, such as the Teaching and Learning with Technology Conference sponsored by the UNC TLT Collaborative.

UNCA has always prioritized end-user training as well. University Computing presents a comprehensive set of IT workshops each semester, and provides a specialist who works directly with faculty on instructional technology applications. Additionally, we procure vendor training (for both technical staff and end users) as part of major IT project implementation efforts, like the Banner migration project.

Needs in the professional development and training area continue to grow, and IT management has prioritized the creation of two new positions in the next budget cycle -- an additional instructional technology consultant to support faculty in their efforts to enhance their courses with technology; and a trainer skilled with personal productivity software and information systems access tools, the latter area being particularly important in light of our migration to Banner.

Business Continuity Planning

UNCA, in conjunction with its user departments, has developed a comprehensive business continuity plan, a key component of effective IT management practice. As part of the overall Business Continuity Plan, University Computing has developed a central disaster recovery plan, focusing on the availability of key technical and user personnel, provision of an off-site processing facility, and expeditious restoration of key IT services. In addition, user departments have individual business continuity plans which are coordinated with the central disaster recovery plan, and detail methods for continuing to conduct departmental business in the event of an unplanned IT service outage or actual disaster affecting central IT services.

IS/IT Audit Performance

In late 2002, University Computing underwent an Information System audit conducted by the Office of the State Auditor. The audit produced six findings, most dealing with the need to

APPENDIX S

document University Computing's existing sound IT practices. All findings were resolved well within the 90-day finding resolution window.

Section 5: Assessment and Accountability

Assessment and accountability are the cornerstones of UNCA's institutional effectiveness effort, in which University Computing actively participates. Institutional effectiveness at UNCA involves aligning the mission and goals of individual departments with the university's mission and goals; and with detailed assessment of progress towards the attainment of departmental and university goals.

On a three-year cycle, departments are required to prepare a comprehensive Departmental Effectiveness Plan with Assessment. For each departmental goal, the plan lists strategies for goal attainment, assessment procedures and criteria for success, and assessment results. University Computing's last departmental plan, prepared for the 1999-2002 time period, is contained in its entirety at www.unca.edu/compcenter/itflex/insteff.pdf. An updated report for 2003-2006 is scheduled for completion in late 2003.

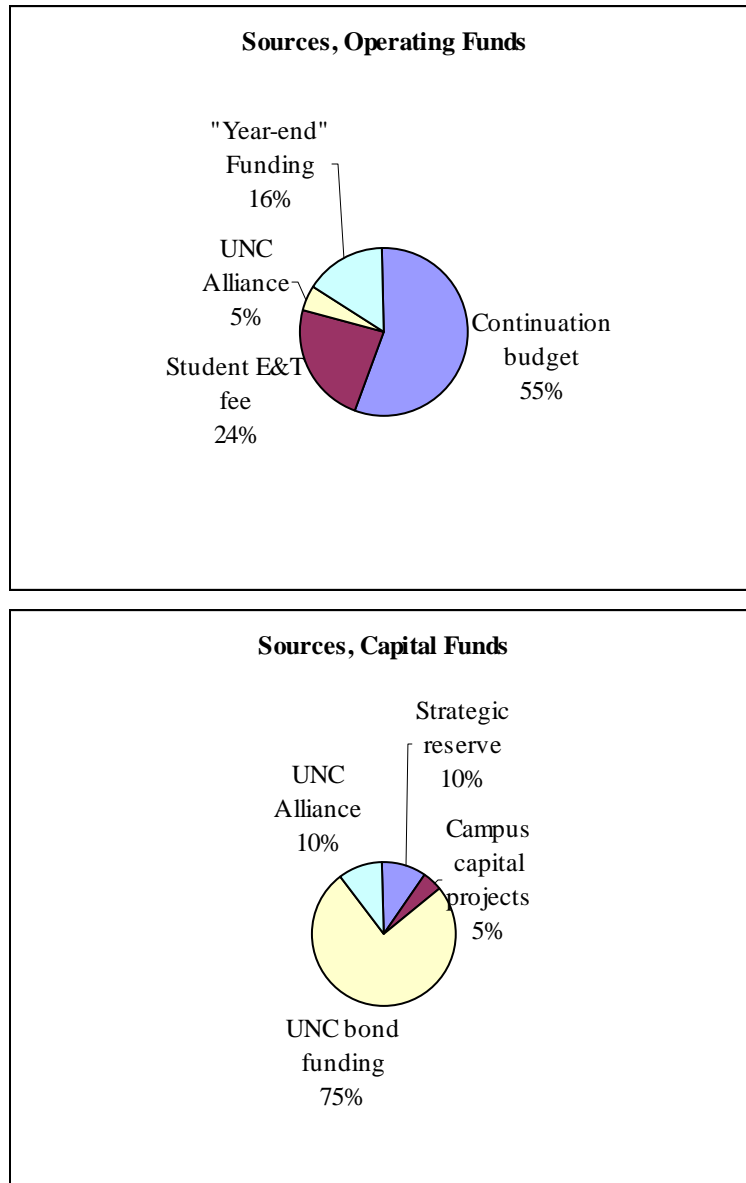
Section 6: Funding

UNCA's IT efforts are supported from a number of funding sources:

- The university's continuation budget for University Computing (supports day-to-day operations ... personnel, equipment, maintenance costs, service fees)
- The university's strategic project reserve (supports IT projects with campus-wide impact)
- The student Education and Technology fee (used specifically for technology refresh in student computing facilities)
- Capital funds (support IT capital projects, such as the fiber optic backbone installation in 1998)
- Allocation for collaborative IT efforts within the UNC system (provides for collaborative efforts such as the Banner migration effort, and system-wide enhancement of TLT infrastructure)
- UNC bond funding for IT infrastructure (supports campus network enhancement and smart classroom development)
- "Year-end" money (supports a variety of important, near-term projects; consists of funds from other university budgets that were not expended as planned)

APPENDIX S

The charts below show a typical recent year distribution of funds, both operating and capital, from the different funding sources:



Despite its creative success in finding resources to support IT initiatives in the past, UNCA faces significant resource challenges in the years ahead, as IT becomes even more pervasive and more essential to meeting the university mission.

Section 7: Conclusion

In the sections above, we have demonstrated that UNCA's IT management efforts:

- are guided by a planning process that supports campus and UNC strategic initiatives;
- are well-organized and supported by sound decision-making structures;
- are governed by policies and standards;
- are supported by an adequate resource base; and
- are assessed and held accountable as part of a campus-wide initiative for institutional effectiveness.

This document provides substantive evidence of UNCA's ability to manage IT effectively, and we therefore submit it to the UNC Board of Governors as a formal request for a grant of IT Management Flexibility.