Request

for

IT Management Flexibility

Submitted by

The University of North Carolina at Chapel Hill

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Section 1: Introduction

Campus Information Technology Plan

The Chapel Hill campus IT strategy is a combination of a creative plan for the availability of high quality technology to all faculty, staff, and students called the Carolina Computing Initiative and an alignment of services to meet the University's priorities. The strategic plan for technology delivery, the Carolina Computing Initiative (CCI), was initiated four years ago. It is arguably the most progressive and successful program for technology delivery on any university campus in the nation. Indeed, the CCI embodies one of the major thrusts of the Board of Governors' plan for Transformation and Change in that it employs a sound business plan that combines negotiated pricing, financing, service, and support. Phase I of the CCI, which includes financial aid support for the undergraduate laptop requirement (the first year of which commenced with this year's entering class), also provides a desktop life cycling plan for faculty, staff, and teaching graduate students in the College of Arts and Sciences. The CCI is the first plan of its kind on any research campus to equip the undergraduate student body and to provide a continuous technology plan for faculty and staff. It is also uniquely suited to a public university setting. The implementation of Phase I was accomplished through a process of aggressive priority setting and campus reallocation in 1998. Today, the success of the initiative (delivered on budget and on time) is clear – all undergraduates in the freshman and sophomore classes have appropriate technology and all College faculty, staff, and teaching graduate students are being supported by a technology life cycling plan. In two years, the entire undergraduate student body will be carrying laptops. The most notable aspect of the plan is the University's commitment to the need-based student. Chapel Hill is the *first* public university in the country to offer a pre-approved loan to all entering students to purchase laptops and need-based grants to fund the purchase of laptops for up to 40% of the student body. This past year, over 1,000 need-based students were granted ownership of a laptop.

Aligning Technology with the University's Priorities

In the spring of 1998, then Chancellor Michael Hooker approved the University Priorities and Budget Committee's "Priorities for The University of North Carolina at Chapel Hill". This document was based on the recommendations in the University's Intellectual Climate Task Force Report, submitted to the Chancellor the previous year. Information Technology Services adopted section E (*Enhance the use of innovative information technologies to strengthen core University activities.*) of the priorities document as its mandate to:

1. Improve access and availability of up-to-date information technologies to meet the needs of all campus constituencies – faculty, staff, and students. These technologies include both the local and wide area network, personal and central computers, and educational and applications software. Provide the resources to renew and support these.

2. Provide campus-wide support (e.g., training, consultation, evaluation, etc.) to both faculty and students for an online distributed learning environment.

3. Provide integrated access to knowledge resources in support of teaching, research, and service (e.g., digital library resources available from the desktop).

4. Standardize, automate, and redesign core processes (administrative, student service, and other) to take advantage of the efficiencies of automation.

5. Develop and implement policies and procedures that permit central support of critical University-wide networks and large-scale computing systems with decentralized and distributed support for the desktop environment.

The following table describes the alignment of the services of the University's Information Technology Services (the central IT organization at Chapel Hill) with the University priorities.

Activities In Support of UPBC Priorities

University Priority	Supporting Activity
A. Intensify the intellectual climate	
1. Mechanisms to engage students in teaching and learning	CCI: provides computers to faculty and students to support instructional technology; CIT: support faculty use of instructional technology; Web: create web-based tools for teaching and learning.
2. Improve financial support for grad students	CCI: computers provided for graduate student use offsets need for personal purchases.
3. Foster undergraduate research	CCI: provides technology to all undergraduates, enhancing research effectiveness; DCI: makes research data more freely available to students.
4. Improve physical settings for teaching, research, learning	CCI: classroom networking and wireless networking in non-traditional locations (Lenoir Dining Hall, Starbucks) encourages learning.
5. Improve academic advising & mentoring	Web: Online Advising System is now a powerful tool for both students and advisors.
6. Sustain quality of libraries	CCI: with technology provided to faculty and students, use of digital libraries and computers in libraries is enhanced. Web: Single Sign-on will improve access to digital libraries.
7. Improve communication of University's intellectual life	CCI: provides electronic communication to entire University community; Web: www.unc.edu becomes a more effective communicator to external community and through web-based student applications and web-based administrative applications, a more effective tool to internal community.

* CIT – Center for Instructional Technology; DCI – Distributed Computing Initiative

B. Improve the University's capacity to recruit, develop, and retain a high quality and diverse faculty, student body, and staff.

1. Provide salary and benefits and administrative flexibility to attract an outstanding and diverse faculty and staff	CCI: Provides a technology benefit to faculty and staff.
2. Provide career development opportunities for faculty, staff, and graduate students	CCI: Provides technology and training for faculty, staff, and graduate students; CBTs: offer career development as self-paced training; CIT: provides instructional technology training and course design assistance to faculty and graduate students.
3. Improve merit and need-based scholarships, together with TA & RA tuition relief	CCI: Provides financial assistance for laptop purchase for need-based students.
4. Provide appropriate spaces	CIT: *Should* provide appropriate spaces for faculty and graduate students to use and create instructional technology tools.
5. Provide an effective administrative infrastructure	Web: Provides flexible and easy to use web-based and client/server administrative applications (e.g., Departmental Accounting System, HRIS, Grant Management System, etc.); the data warehouse initiative consolidates and enhances administrative data base applications.
6. Increase the number & diversity of outstanding students who choose to enroll at Carolina	CCI: Excellent students will recognize the University's commitment to providing technology.
7. Enhance/promote pluralism	CCI: The financial assistance for laptop purchases makes technology available to all students.

C. Identify and build on selected areas of concurrent and potential excellence.

1. Strengthen commitment to excellence in undergraduate liberal-arts education, service to NC citizens, and comprehensive health-care education and research in this, the "University of the people"	CCI: Recognizes the need to provide the best technology for teaching and learning. DW: The Public Service Data Base is an effective resource for the State.
2. Build on research strengths in a region rich in inter-institutional opportunities for collaboration	NCNI: Continued collaborations with the triangle's research campuses lead the nation in next generation technologies. TR: Technology research efforts in DWDM, video over IP, and local wireless offer research opportunities as well as new models for technology delivery.
3. Develop criteria for and identify areas of current and emerging excellence that should be chosen for excellence, develop strategies for implementation, and identify programs to de-emphasize	CCI: Through IBM grants, faculty will be identified to lead assessment and instructional technology development.

D. Foster excellent interdisciplinary programs.

1. Encourage entrepreneurial faculty efforts to identify and develop interdisciplinary research and teaching	CIT: Works with faculty to develop new forms of instruction. NCNI: Networking grants offer support for graduate students to work with faculty in creating the next generation Internet.
2. Develop systematic review process to assure quality of existing and future interdisciplinary programs	
3. Enhance access to and majors in interdisciplinary programs	CCI: Pervasive availability of information assets offers opportunities for enhanced interdisciplinary communication.

E. Enhance the use of innovative information technologies to strengthen core University activities.

1. Improve access and availability of up-to-date information technologies to meet the needs of all campus constituencies	CCI; software acquisition; ITRC; network software delivery; web-based, integrated administrative applications.
2. Provide campus-wide support to both faculty and students for an online distributed learning environment	CCI; CIT; CBT's.
3. Provide integrated access to knowledge resources	DCI; Single Sign-on; TR; Digital Library; pervasive high-speed internet access.
4. Standardize, automate, and redesign core processes to take advantage of the efficiencies of automation	Administrative web and client/server applications; web-based student services; DW.
5. Develop and implement policies and procedures that permit central support of University-wide networks and computing systems with decentralized support for the desktop environment	All of the above.

* CBTs – Computer Based Training; DW – Data Warehousing

Alignment with the UNC System IT Strategy

UNC Chapel Hill is a national leader in the delivery of information technology in a research university setting. We are also committed to the system information technology strategy adopted by the Board of Governors in 1999.

Services for Students:
We were one of the first universities to move to an online course registration system and our students have been using this system in record numbers since the initial rollout. Today, students at Chapel Hill can: get their grades online, register for classes, plan their time, apply for financial aid, check progress toward their degree, get their bills, and much more. All of these services are available through a single web interface.

Campus Teaching and Learning with Technology:
Chapel Hill is a leader in the development of campus learning technology. Through our Center for Instructional Technology we deliver faculty: training, consulting, and course development tools. The tools developed at Chapel Hill have been freely given to all campuses in the system. We also actively participate in the TLT Collaborative.

Distance Education:
A number of professional schools at Chapel Hill have a long history of serving their constituents using distance education tools for delivery. Nursing, Public Health, Business, and Government, for example, recognized early that to serve the people of North Carolina they would need to provide education to those who could not come to Chapel Hill. Our campus is coordinating these programs through the Distance Education Steering Committee to best offer course content.

Administrative Systems:
UNC Chapel Hill is an associate member of the Information Technology Alliance and participates fully in all related activities. Every effort is made to meet and exceed standards established by the Alliance for campus information technology.

Logistical Needs:
UNC Chapel Hill baseline networking standards are higher than those adopted by the system to meet the demands of a research campus. To accomplish this in a cost effective manner has necessitated many creative approaches to networking and the delivery of campus IT services. For example, the CCI allows us to employ wireless networking and close computer classrooms and labs – both highly cost effective. Software site licensing (such as Microsoft Campus Agreement) helps control software costs. Using wise, multi-year, single-vendor contracting controls hardware costs. Computer Based Training (CBTs) has allowed us to supplement our Training Center course offerings at a greatly reduced price. State funding has helped us in accomplishing these objectives.

Alignment with the Board of Governors Strategic Plan

On 11 January 2002, the Board of Governors adopted a long-range plan that included the goals of the University of North Carolina IT Strategy Project. The following best sums up this IT strategy:

V. Strategic Directions

    6. Transformation and Change

    "Use the power of information technology guided by IT strategy and more effective educational, administrative, and business practices to enable the University to respond to the competitive global environment of the 21st century."[1]

The following addresses how UNC Chapel Hill meets and exceeds the Board of Governors expectations for Information Technology as described in the subsections of V.6.

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[1] The University of North Carolina Board of Governors (2002). *Long Range Plan 2002-2007.*

V.6.a. Expand campus teaching and learning with technology (TLT) audiences beyond faculty to include librarians, instructional technologists, academic administrators, staff, and students; expand the portal to a professional development portal, align TLT grants and workshops with e-learning strategies.

The Center for Instructional Technology and the ATN Training Center work closely with the Center for Teaching and Learning to provide a host of Information Technology training alternatives for all segments of our campus population. For example, last year the ATN Training Center trained over 9,000 students, faculty, and staff in a wide range of Information Technology subjects. TLT grants are offered both through faculty refereed RFPs managed by the Faculty Information Technology Advisory Committee (FITAC) and through the Distance Education Committee charged by the Provost with coordinating distance education initiatives on our campus.

V.6.b. Implement coordinated technology platforms and services for e-learning both off-campus and in traditional classrooms. Develop and market existing UNC e-learning programs and courses. Develop policies and standards for coordinated offerings.

On our own campus, the Distance Education Committee is charged by the Provost with the coordination of our off-campus e-learning programs and courses. Representatives from this committee are actively engaged with system committees to coordinate our offerings with sister campuses. We are also active participants in the system TLT Consortium to develop standards and policies. On campus e-learning activities are coordinated through the Center for Instructional Technology and FITAC.

V.6.c. Create a UNC-wide data warehouse to simplify UNC-wide data collection, improve data retention, and provide more efficient and effective reporting capabilities. Plan the next generation of integrated administrative information systems. Align support services with e-learning strategies.

UNC Chapel Hill is an active participant in the UNC Shared Services Alliance dedicated to the goal of building state of the art administrative systems for all of the UNC campuses. On our own campus we are planning and building next generation administrative systems with standard interfaces allowing interoperability among enterprise applications – both administrative and academic – as well as with our sister campuses. At every stage, we are ensuring that we satisfy all baseline requirements for services, as identified and refined by the Alliance membership.

We are heavily invested in developing a comprehensive campus data warehouse that will meet the reporting and data mining needs of our campus and external constituencies. This effort is coordinated by a cross-functional Institutional Data Group, co-chaired by the Director of Institutional Research, to ensure the broadest possible participation and to develop solutions that will meet the needs of the UNC System. Our approach is standards-based and designed to integrate with future System-wide solutions. It has recently been suggested, by the UNC System CIO, that the Chapel Hill project might serve as a best practices model for all campuses in the System and for central data warehousing solutions.

All of our support services (Response Center, Center for Instructional Technology, ATN Training Center, etc.) are aligned to support our e-learning strategies. Our unique approach

is the envy of universities across the country that regularly send representatives to visit Chapel Hill for a firsthand look at our support services.

V.6.d. Complete remaining web-enabled student services and implement the Prospective Student Portal.

UNC Chapel Hill was one of the first universities in the country to offer live, online course registration to its students. Today, students on our campus can conduct their university business online. We have been a national leader in offering comprehensive web-base student services and have worked diligently to exceed the baseline services identified by the UNC Shared Services Alliance.

V.6.e. Implement second phase of campus network build out. Expand campus network maintenance: enhance user support and training.

On our research campus, networking improvements are a continuous process necessary to meet the ever-increasing demand for on and off campus bandwidth. The establishment of a 24x7 control center to monitor the campus network and server resources was a direct acknowledgement of the importance of these services. Our commitment to user support and training is comprehensive. Both general and highly specialized support services are available, with the IT Response Center serving as an around-the-clock hub for that support. A combination of on-line and classroom training are broadly available to students, faculty and staff. These efforts are coordinated through the ATN Training Center and the Center for Instructional Technology.

V.6.f. Develop an IT policy framework for acquiring, managing and implementing IT on UNC campuses. Expand and enhance inter-campus and inter-education sector networking.

UNC Chapel Hill actively participates in the creation of this framework through committee work in: the CIOs Council, the TAG, and the Shared Services Alliance. This campus has also been a leader in building and maintaining the inter-campus and inter-education sector networks.

V.6.g. Increase the capacity of the President's office to sponsor strategic initiatives in areas such as research computing, alumni and public relations, fundraising and development, and innovative web applications.

UNC Chapel Hill strongly supports an increase in capacity of the President's Office to sponsor these strategic initiatives.

V.6.h. Streamline administrative processes through applications such as on-line purchasing and increase managerial flexibility in conducting the affairs of the University and its constituent institutions in areas of classification, acquisition of property, and technology.

UNC Chapel Hill has been a leader in establishing e-procurement relationships with key University vendors. We have instituted a web based IT hardware and software ordering system that allows for purchase, order tracking and history, and management reporting. This system will be progressively expanded to include other areas of purchasing. We are also

engaged in the completion of a comprehensive Human Resources Information System that has been evolved, at every stage, to offer streamlined, automated processing of human resource activities.

V.6.i. Improve the ability of the Office of the President to collect, process, and analyze university-wide data for accountability and assessment using new tools such as the balanced scorecard to improve administrative efficiencies.

As stated in section V.6.c. our goal of interoperability includes comprehensive data collection and analysis at all levels of the administrative process.

Section 2: Organization

Central IT Organization

Information Technology Services (ITS) is the University's primary information technology support organization. ITS is headed by Marian Moore, Vice Chancellor for Information Technology, and is comprised of three operating divisions and two centers employing over 300 professionals and 250 to 300 students engaged in all manner of service delivery. Academic Technology and Networks (ATN) is the central support organization for academic computing, the campus network, and University telecommunications. Administrative Information Services (AIS) is responsible for development and management of the University's core business and operational information systems. Systems and Procedures provides management consulting services to University departments. The Vice Chancellor for Information Technology reports directly to the Chancellor and is a member of the Chancellor's Executive Cabinet. This position is responsible for developing campus IT priorities; setting IT directions; and working with the Chancellor, other Vice Chancellors, the Provost, and the Board of Trustees to ensure that the University has the appropriate IT resources to fulfill its mission in outreach, instruction, and research.

Academic Technology and Networks (ATN):
The mission of ATN is to support and strengthen the University's instructional and research programs by providing central services and infrastructure for University-wide access to information resources and technologies. Faculty, students and academic units are the primary clients for ATN services, which are designed to augment unit and individual investments and to enable personalized access to information resources and technologies. ATN is led by John Oberlin, Executive Director, and has approximately 190 professional support positions organized into six primary operating units - Academic Systems, Computer Policy, Distributed Support, Response Services (operating a 24x7 help desk for systems and network monitoring and customer support), Networking and Telecommunications.

Administrative Information Services (AIS):
AIS develops and manages the core business and operational computer systems for the University. Its primary mission is to help ensure, through the appropriate exploitation of information technologies, that the University's business functions are as effective and efficient as they can be. To that end, AIS partners with numerous constituencies throughout the campus to design and develop the scores of information systems required to manage such a complex enterprise. AIS, led by Steve Jarrell, Executive Director, is composed of approximately 200 professional staff and is organized into four divisions - Administrative Applications, Systems and Communications, Data Management, and Operations.

Systems and Procedures:
Systems and Procedures, directed by Candy Davies, provides analysis and review of existing operational processes and systems, with particular emphasis on process improvement and automation. The objective is to provide management consulting services that facilitate, streamline, and unify the tasks of operating and managing the University.

Metalab:
The Metalab is a joint entrepreneurial effort of ITS, the School of Information and Library Science, and the School of Journalism and Mass Communication. The Director of the Metalab is Paul Jones

who holds joint appointments in SILS and SJMC. Metalab is a collaborative project in electronic publishing and digital library research with an applied focus.

knowledgeWorks@Carolina:
knowledgeWorks is an experimental initiative created to investigate the development of technology enhancements in support of the educational and research missions of the University. knowledgeWorks is currently involved in the pilot development of a set of mediabooks. The Director of knowledgeWorks is Prof. Skip Bollenbacher, a faculty member in Biology.

IT Policy Committees

Information Technology Strategic Planning Council:
This council, made up of chairs of the various IT committees on campus as well as the senior administration of the University and substantial faculty representation, is responsible for strategic planning for information and communication technology covering policy, infrastructure, application, adoption, and fund-raising priorities associated with information technology. The membership of this committee includes: the Provost, the Vice Chancellor for Finance and Administration, the Vice Chancellor for Research, the Chair of the Faculty Council, the Dean of the College of Arts and Sciences, the Student Body President, The Chair of the Employee Forum, the Head of the University Libraries, and distinguished faculty. This committee is chaired by the Vice Chancellor for Information Technology and reports to the Chancellor.

Faculty Information Technology Advisory Committee:
The Faculty Information Technology Advisory Committee (FITAC) is a standing committee of the Faculty Council. Its charge is to consider issues pertaining to the use of technology in teaching and other professional activities at the University. The chair of this committee sits on the strategic planning council and works closely with the Vice Chancellor for Information Technology on resource allocation for faculty needs.

Information Technology Directors Committee:
The ITD is made up of the heads of information technology support in the College and the professional schools. The group is responsible for offering direction to the co-chairs: the Executive Director of Administrative Information Services and the Executive Director of Academic Technology and Networks.

Computational Resources Coordinating Committee for Genomics and Bioinformatics:
This committee is charged with the task of identifying the computational needs of our researchers in genomics and bioinformatics and offering creative solutions to those needs. The committee is co-chaired by the Vice Chancellor for Information Technology and the Vice Chancellor for Research. Both are members of the strategic planning council.

IT Decision Making Process

The IT decision-making process is based on sound management practices and the policies of the State of North Carolina and The University of North Carolina System. Major initiatives, such as the

CCI, are initiated by the Strategic Planning Council, received by the Chancellor, approved by the Chancellor's Cabinet, and, where appropriate, taken for a vote to the Board of Trustees.

Section 3: Standards and Policies

Campus IT Infrastructure

Chapel Hill has an extensive campus information technology infrastructure. The central IT organization (ITS) is responsible for the delivery of the campus network "to the wall plate". And, in fact, the campus networking standard exceeds the system wiring standard (as it must to support the scholarship and research needs of our customers). ITS offers free electronic mail and web space to all faculty, staff, and students. Online network disk storage is available for backups and auxiliary space. Scientific computer systems are available for faculty and student use. ITS also runs a 24x7 help desk for all. Free technology training is available through the Training Center. Campus computer labs are available across the campus for student use. Many coordinating activities are offered through ITS including: a site licensing office that aggregates software purchases for low pricing, Carolina Technology Consultants offering a forum for departmental and school IT professionals, a shareware web site is supported for easy access on the campus network for software downloads and upgrades, etc. These are only a small number of the infrastructure activities offered to all faculty, staff, and students at Carolina.

Policies

The University has established a set of comprehensive guidelines relating to the use of electronic resources by faculty, staff, and students. They are:

- Acceptable use
- Electronic mail privacy policy and record retention policy
- Data network policies
- Data storage policy
- List server policy
- Product support policy
- Security policy
- Copyright policy
- Web page policy

These policies can be found at www.unc.edu/policy. They are reviewed on a regular basis for technology changes as well as any state or federal legislative changes. The Office of Computer Policy in the Academic Technology and Networks Division is responsible for their creation and revision.

Networking Standards

ITS publishes and supports a number of technology standards. Most notable are our campus networking technical standards, our support software, and our laptop and desktop standards. All campus networking standards (which meet all of the specifications of the Board of Governors' guidelines) can be found at www.unc.edu/atn/network.

Software Support Standards

ITS runs a 24x7 help desk called the Response Center. The Response Center operates in a tiered manner to efficiently process any campus technology question. Software standards supported by the Response Center can be found at www.unc.edu/atn/techsupp/supapps.html.

Computer Standards and Recommendations

In academic year 2000-2001 the University began requiring all entering Freshmen to purchase a laptop meeting the specifications set forth by ITS. Each subsequent entering class will be required to purchase (or have access to) a laptop meeting that year's specifications. Brochures are sent to all perspective first year students in March of each year providing information on the specifications, the pre-approved loan program, the laptop grant program, and ordering instructions for the University preferred models. This information is also available online at www.unc.edu/cci.

Besides all undergraduates, laptop requirements are also set for students entering the following professional schools: Medicine, Dentistry, Business, Public Health, and Information and Library Science. Decisions regarding laptop requirements rest with the administration and faculty of the individual professional school.

Standards also exist for University owned laptops and desktops. Though these standards are not mandated, the University has been able to creatively standardize. Four years ago the University initiated a life cycling desktop program in the College of Arts and Sciences for all faculty, staff, and teaching graduate students. The program has been extremely popular and cost effective for the University. A follow on life cycling plan for the professional schools is also planned. Information about the University laptop and desktop standards can be found at www.unc.edu/cci.

Application Development and Production Operations Standards

ITS adheres to carefully developed standards in the development of administrative applications and associated production operations. These standards are regularly reviewed and revised to maintain currency with evolving technology platforms. Responsibility for standards development rests with a cross functional committee whose membership may be seen at: www.ais.unc.edu/stds2/committee.html. These standards are subject to periodic review by State EDP auditors. The complete standards may be seen at www.ais.unc.edu/stds2.

Section 4: Management Processes

IT Audit Performance

In addition to annual State financial audits, UNC Chapel Hill, like other State agencies, is subject to periodic intensive EDP audits. The most recent of these was completed in November 1998. All findings from that audit have been remedied. In addition, we continue our intensive efforts to ensure a secure, reliable, high performance IT environment. The results of these audits are available from the Office of the State Auditor.

Acquisitions for IT Goods and Services

All major acquisitions for IT goods and services are done in accordance with State mandated procedures (http://www.northcarolina.edu/ir/). A good example of such a process was the selection of the preferred campus vendor for laptop and desktop computers. This was done under State RFP guidelines and resulted in a multi-year contract for campus purchases.

Major IT Implementation Project Processes

All major implementations of new software and services are done using sound academic business practices. A committee is formed consisting of the major project stakeholders and members of the appropriate IT support group. This committee is charged with evaluating, selecting, and planning the implementation of the particular package (in the case of software). Depending upon the project, interoperability with existing applications is given a high priority. The committee reports to a committee of senior administrators who act as sponsors and provide project oversight. Examples of this process in action are implementation of: the new grant management system – Coeus; the new Human Resources system – InPower; the new space management system – InSite; and the new departmental accounting system – InDEPTh.

IT Life Cycling

IT life cycling is accomplished through the Carolina Computing Initiative which, in Phase 1, provides a desktop to all faculty, staff, and teaching graduate students in the College of Arts and Sciences. This plan has been in operation for four years. The desktop life cycle is three years. Future phases of the CCI will include the professional schools and a laptop option for faculty.

ITS Professional Development Program

ITS recognizes the importance of professional development and is committed to hiring, developing, and retaining professional IT staff. As a result of this commitment, ITS has developed a professional development program as a means of further enhancing the professional competencies of professionals on our staff through a comprehensive learning experience. The program's goals include: (1) increasing awareness of individual professional strengths and developmental needs through assessment and coaching; (2) expanding the knowledge, skills, and abilities critical to those in the rapidly changing field of information technology through a range of experiential and classroom sessions; and (3) networking with others in ITS to strengthen the organization's capabilities and sense of collegiality. The program spans ten days and is typically run once each fiscal year with fifteen participants. The curriculum includes modules on team building,

communication and presentation skills, facilitation and conflict resolution, change management, customer service, and project management. The program has been very well received by ITS participants and has clearly contributed to the overall effectiveness and efficiency of the campus IT support organizations.

Campus-Wide Technology Training Programs

ITS recognizes the importance of developing and maintaining a high level of technical competence among the IT support professionals campus-wide. To promote technical competency ITS provides training opportunities in three ways. First, ITS runs a campus IT training center that provides technical courses to the campus community. ATN's Computer Training Center (http://www.unc.edu/atn/training) offers a variety of hands-on computer workshops for University faculty, staff and students. These classes are offered throughout the year and subject matter runs a wide gamut including productivity applications (MS Office suite), multimedia/web tools, and statistical and research computing applications (e.g., SAS and ArcGIS). During the past academic year the Training Center offered 944 classes that were attended by 8,947 participants. In addition to hands-on classes the Training Center offers "just in time training" through a large selection of computer-based training courses. The courses, created by SmartForce, cover topics ranging from Java programming to Microsoft End-User applications.

ITS also funds matching grants for IT professionals in campus departments to facilitate their training in more advanced and specialized areas. This advanced training typically requires the participant to travel to external vendor locations. The IT training grants also provide for bringing special training opportunities to campus that would otherwise be prohibitively expensive.

Finally, ITS operating budgets provide for ongoing technical training opportunities for IT professionals on staff. These training opportunities are highly tailored to individual needs and organizational priorities. All managers work with their respective staff to develop, maintain, and update twice annually a technical training schedule as part of the "development plan worksheet" (HR-46) which is part of the annual work planning and performance review (WPPR) process.

Section 5: Assessment and Accountability

Campus Measures of ITS Performance

On a large complex campus, there can be no single metric that determines the success or failure of any project or activity, and this is true of information technology efforts. There are a number of ways we evaluate and monitor our progress. We then use those data to drive change back into our processes. For example, our lifecycling program in the College of Arts and Sciences is coupled with a set of faculty seminars on the use of technology in research and teaching. As each department in the College is lifecycled, we run focus groups and conduct surveys of customer satisfaction and ways we can improve our services. We also run focus groups and conduct surveys after each freshman class receives their laptops to gauge the effectiveness of our laptop orientation program. We even survey parents on the effectiveness of our communications about our laptop program.

Of course, we also keep many sets of statistics on other services provided. For example, we closely monitor customer use and satisfaction of our Response Center. In December 2001, 85% of the telephone calls to the Response Center were answered in 60 seconds and 54% were resolved on initial contact. From July 1 to Dec 31, 2001 the Response Center received 44,762 calls - 85% of which were resolved by Tier 1 personnel. In FY2000-01 the total count was 76,711. So we are well ahead of last year's numbers. This close monitoring has alerted us to the need for alternative forms of service such as self-help on the web. This service has grown three fold over last year – helping us to continue providing excellent service during a time when we have had to reduce staffing.

We also keep very detailed metrics on our campus network. This allows us to, among other things, predict future bandwidth needs before our customers are adversely affected. This information can be found at www.unc.edu/cricket.

Campus Measures of Use of IT

The use of technology by our customers is also measured in many ways. For example, we know from the yearly faculty survey in the College of Arts and Sciences that 47 faculty had students bring laptops into their classroom at least once during Spring Semester 2001. (At the time, only first year students were carrying laptops.) We expect that number to grow substantially as laptops become pervasive in the undergraduate population.

Faculty use of technology in teaching is also measured by the use of our course delivery package – Blackboard. The following shows the growth of technology assisted instruction at Chapel Hill:

Semester	Fall 1999	Spring 2000	Fall 2000	Spring 2001	Fall 2001	Spring 2002
Courses	24	62	369	474	740	820

Of course, we also track use of technology by our students. In our student residence halls we monitor use of network connections. This year 100% of our entire residence hall ports were activated which translates to 100% of all students in our residence halls had computers and were connected to our campus network.

Accountability

The Vice Chancellor for Information Technology is responsible for all central IT services at UNC Chapel Hill. The Vice Chancellor reports to the Chancellor and is accountable to: the IT Strategic Planning Council, the Chancellor, and the Board of Trustees. Recommendations on major strategic IT projects are crafted by the Council, sent to the Chancellor for recommendation to the Board of Trustees. Information Technology Services is then accountable to the Council for the successful implementation of these projects. Accountability for ongoing services is handled through the standing IT committees (i.e. FITAC, etc.), reporting back to the Council, as well as periodic service evaluations done internally in Information Technology Services (as described above). An example of this accountability is demonstrated by ITS participation in the campus Student Fee Committee. Each year ITS must present to this committee a detailed analysis of how the past year's student technology fees were spent and a detailed description of the next year's proposal. The committee must be satisfied before it will approve the technology fee for the coming year. A review committee made up of faculty, staff, and students also systematically evaluates the performance of the Vice Chancellor and ITS on a regular basis.

Section 6: Funding

Funding Elements and Uses

The budget for Information Technology Services is constructed each year during the normal budget process of the University. A description of funding uses and new initiatives is presented to the University Budget Committee. The Budget Committee, consisting of the Provost and the Vice Chancellor for Finance and Administration, then makes funding recommendations to the Chancellor. Traditionally, the ITS budget consists of State funding and is supplemented with overhead. ITS also administers a portion of the Technology Fees collected from students. A close accounting is made of all these resources and reports are presented annually on how these funds are spent to the associated groups. For example, the Chancellor's Committee on Student Fees gets a detailed accounting of uses of Technology Fees. All earmarked funding, whether central or otherwise, is strictly accounted for.

Section 7: Conclusion

The University of North Carolina at Chapel Hill has made a major commitment in the area of information technology as it applies to the teaching, research and public service missions. This is reflected in its organization, with the presence of a Vice Chancellor level CIO, reporting directly to the Chancellor and responsible for all campus central information technology services. It is further reflected in the financial and functional commitment to the Carolina Computing Initiative, a groundbreaking program to ensure that our students are prepared for the 21st century workplace. It is demonstrated in the quality of the campus network infrastructure; classroom technology support; technology training programs for faculty; the dedication of resources to quality response center management; the commitment to security, reliability and accountability; and the provision of state-of-the-art administrative applications. As this report details, UNC Chapel Hill is a leader in the comprehensive management of information technology resources and has demonstrated a very high level of professionalism and success in implementation. Within the constraints of resource availability, UNC Chapel Hill has clearly demonstrated its qualification for IT Management Flexibility by every reasonable measure.