

3. Situation Assessment: 2004-2007

There were a number of significant accomplishments during the last planning cycle. Here is a summary of a few of the highlights with comments on their connection to the themes of the second planning cycle. A more comprehensive report on the progress on the various projects that were proposed in the last plan and outcomes that were achieved follows in the next section.

Our development of the student computing environment is a continuing priority and a critical element in Theme A (enhancing the student experience). Among the many highlights in this area were continued development of PAWS and associated services, expansion of wireless services, installation of network connections in the residences (Resnet) and our ongoing experimentation with new e-learning technology (webstreaming lectures, podcasting, clickers, etc.). The response from students continues to be extremely positive. For the fourth year in a row we received A grades from our students in the annual Globe and Mail survey of student satisfaction. The quality of their technology environment is extremely important to the current generation of technology-savvy students (often dubbed “the net generation”). They challenge us constantly with their demands and we work hard to meet their expectations. Work continues on many fronts.

PAWS has been an enormous success in many ways, but among them is its significant contribution to standardizing service delivery on campus. The PAWS team works in close collaboration with “co-developers” across the campus to deliver a wide range of services in an integrated way—a great convenience for users who now number in excess of 15,000 every day. PAWS supports several of the themes through the services it delivers, including Theme A (enhance the student experience, specifically e-learning and technology), Theme F (champion faculty recruitment and retention) and Theme G (build a high-performance organization, specifically in the area of service quality).

On the enterprise system front, we completed the implementation of our new student and finance systems (SiRIUS and UniFi), our human resources system (About-US) went through a major upgrade, replacement of our Library system began and a new e-payment system was introduced to support demand for online payments across the campus. We continue to struggle, though, to address the full cost of initiatives such as these. We now know, for example, that the cost of ongoing operations and system evolution for SiRIUS was underestimated when the project was proposed and steps are being taken to address the gap. We also significantly underestimated the cost of helping the user community accept the process changes and we need to address that as well. These are but examples of a systemic problem that needs to be solved. Despite these challenges these projects have introduced business process enhancements and improved service in many areas and so they connect to Theme G (build a high performance organization).

The USR-net project was completed, resulting in significant improvements to our campus computer network—core infrastructure that is the foundation for the services we provide to both internal and external users. This critical project was made possible by \$12 million of external funding (from CFI, the Province and our vendor partners) and it has paved the way for other important projects, including the development of our wireless capabilities and the migration of our telephone service to VoIP technology. This work connects directly to several of the themes,

but most directly to Theme C (accelerate research momentum), to Theme F (champion faculty recruitment and retention) and to Theme A (enhance the student experience).

We also devoted considerable attention to governance and policy issues. New policies were developed and approved for data use, e-mail and network security, and our long-standing computer use policy was rewritten to accommodate contemporary technologies and expectations. On the governance front effort was directed to both the governance of individual projects and to overall engagement of the community in setting institutional priorities and plans for technology. This work connects directly to Theme D (foster an engaged university).

3.1 Progress Report Card

A consolidated list of the “top ten” ICT priorities was provided in our last plan. This list reflected our most critical institutional requirements in information and communications technology over the 2004-2007 planning horizon.

1. PAWS: Operations and Evolution
2. Identity Management: Identification/Authentication of Users and Authorization for Services
3. ICT Security Upgrades
4. Multimedia Support for Learning Spaces
5. U-Who Evolution
6. Extended Hours of ICT Support
7. Support for E-learning
8. Student Mobile Computing
9. Desktop Renewal
10. Technology Readiness Program

Some progress was made on the most critical of these through internal reallocation of resources, but in other areas little was possible because the necessary funding was not made available.

Measuring Progress: The Rubric

A	Initiative was completed or is on track with respect to scope and schedule; required resources were provided.
B	Significant progress was made on pressing/urgent elements of the initiative; resources were reallocated from other service areas and/or some new resources were provided.
C	Progress was achieved only as a result of ongoing operations—some/no marginal improvement between needs and service level depending on whether operational funding level was maintained or reduced.
D	Very little or no progress made since resources were not made available.

Progress on Commitments Made Prior to 2004 (Maintenance Initiatives)

Initiative	A	B	C	D
Renewal/Expansion of Campus Research and Education Network (USR-Net)	*			
Initiatives in Student Computing	*			
Implementation of New Student Information System (SiRIUS)	*			
Implementation of New Financial Information System (UniFi)	*			
Classroom Renewal (1997 Project)			*	

Progress on Initiatives Proposed for Investment in the 2004 Plan

Initiative	A	B	C	D
Campus Portal Development (PAWS)		*		
Identity Management, Authorization and Authentication			*	
ICT Security (now includes requirements for physical security of some ICT assets)			*	
Multimedia Support for Learning Spaces			*	
Contacts Database Evolution (U-Who)		*		
Extended Hours of ICT Support			*	
Support for E-learning		*		
Student Mobile Computing (including wireless access)		*		
Desktop Renewal (including desktop support strategy)			*	
Technological Readiness Program				*

Initiatives That Were Not in the Top 10 Priorities in the 2004 Plan

Initiative	A	B	C	D
Media Archive				*
E-Payment Gateway		*		
Institutional Reporting			*	

Disinvestments (freeing up some resources for reallocation, either in ITS or in other units)

- Interactive Voice Response System (IVR) and U-Star were eliminated.
- Faculty/Staff Dial-up service was terminated.
- Support for legacy IT protocols/technologies (e.g OpenVMS) was withdrawn.
- The Photography unit in DMT was closed down.
- The Media Resources Library in DMT was moved to the Library.
- The functionality provided by the My.usask portal in Arts and Science was migrated to PAWS. This made possible more campus-wide consolidation of ICT services and freed up resources in Arts and Science.
- Decommissioning of legacy ERP systems: in progress. HRS soon to be decommissioned, but no schedule yet to decommission SIS V1 and FRS.
- Some shadow administrative systems have been eliminated.

Details: Progress on Initiatives Proposed for Investment in the 2004 Plan

Initiative	Grade	Overview of Progress
Campus Portal: Operations and Evolution (PAWS)	B	<ul style="list-style-type: none"> • PAWS has become the one-stop, role-based, personalized, anywhere-anytime service and information mall for the University community—both service recipients (students, faculty, staff and alumni) and service providers (colleges and administrative units). • 15,000 unique users every day. • 70+ services; new services being added continually (e.g. community building tools, course management tools, assignment drop boxes, web tests, student registration, transcripts, T2202A, library tools, self-service address change, classified ads, professional development, alumni services, college tabs, pay information, electronic voting, surveys, wireless access for U of S guests). • Challenge: evolving the portal so that it continues to meet the University community's needs (new services, improved e-mail client, maintain high level of service availability, etc). • 2 FTE were added on a permanent basis (Services Manager, Technical Lead) but a funding gap remains.
Identity Management: Identification, Authentication and Authorization (SSAM)	C	<ul style="list-style-type: none"> • Manages authorizations for 88,000 users and 800+ services • Synchronizes passwords for many services. • Integrated with SiRIUS as data source for roles/authorization. • In progress: support for CAS single sign-on, SSAM V3 development. • Need to support Shibboleth and federated (inter-university) user identity management and authorization.
ICT Security	C	<ul style="list-style-type: none"> • The good news is that we have not suffered any major service disruptions in the past four years as a result of central ICT security problems, but the bad news is that Internet-based attacks and ICT security failures are a growing problem and continue to be a significant risk for the University. Incidents may severely disrupt critical operations, damage our reputation, and reduce productivity of instructors, students, researchers and staff. • The following were introduced during the past four years: port blocking (we block six million probe attempts daily), VPN service, new firewall technology, a packet shaper, Clean Access on the wireless network, Sophos anti-virus site license (for both University and home use), improved e-mail spam filtering and e-mail virus checking, Microsoft and Linux automated software update service, increased end-user support for laptop users. • We've seen increasing occurrence of theft of physical ICT assets and continuing risk to data assets. • Significant ongoing effort required to "keep up." Progress to date has been achieved only by "robbing" effort from other service operations/development tasks. • A new network security policy was introduced.

		<ul style="list-style-type: none"> Continued education efforts underway.
Multimedia Support for Learning Spaces	D	<ul style="list-style-type: none"> The capital budget historically assigned to develop technology-enabled multimedia classrooms was reduced during the previous planning cycle. We are no longer keeping pace with demands. Wired and wireless network access requested for all new construction along with new classroom layouts (e.g. Academic Health Sciences, Law). Wired network connections now available in all “shared” classrooms; wireless access available in some classrooms. Successful introduction of technology for lecture capture and streaming video playback on a limited basis, as well as technology and processes to support student response systems (“clickers”) in many classrooms. Cost to “modernize” teaching and learning spaces to meet today’s needs estimated at \$10 million or more, most of which is renovation cost.
Contacts Database Evolution (U-Who)	B	<ul style="list-style-type: none"> One place for maintaining contact information (home, work) for students, employees, alumni and others Key information source for identity management. Integration with SiRIUS (registration, admissions). U-Who now contains emergency contact information. Work underway to include e-mail addresses and functional roles (e.g. departmental heads). Self-service address change (including emergency contact information) improved service and reduced manual effort.
Extended Hours of ICT Support	D	<ul style="list-style-type: none"> Help Desk hours increased to 69 hours/week during fall/winter terms to better support students (Learning Commons location). Many system and network upgrades and patches are now performed outside of regular office hours to better accommodate needs of students, instructors, researchers and employees. IT staff who perform this work at night still have to come to work the next day. Staff occasionally check service availabilities on evenings and weekends on their own “good will” but some service failures will not get resolved until the “next day” or “Monday.” Credit card companies require 24x7 handling of alarms relating to systems that collect payments online using credit cards. The U of S must do this or we will not be able to collect payments online using credit cards. Availability of some services has been improved through the introduction of new hardware (network, server) but there are ever more expectations/needs for 24x7 availability for an increasing number of services, for a variety of reasons: <ul style="list-style-type: none"> more students taking courses through alternate delivery formats to accommodate work schedules; students taking online courses and/or using online services

		<p>(such as applying for admission, registering for courses, paying fees) may be doing so remotely while physically situated in other provinces or other countries and thus in different time zones;</p> <ul style="list-style-type: none"> • researchers do not work “9 to 5” schedules and their remote collaborators may be in different time zones; • employees require access to some services (such as e-mail and calendar) when travelling; and • CLS is expected to operate 24x7 and so 24x7 network availability is required to meet their needs. <ul style="list-style-type: none"> • 24x7 on-call and problem resolution costs will be significant. This requires network, server, application, database and end-user support.
Support for E-learning	C	<ul style="list-style-type: none"> • A number of new services were introduced: <ul style="list-style-type: none"> • blogs; • wikis; • Elluminate web conferencing; • Teach-US IT (online IT learning materials); • survey tool; • electronic assignment drop boxes (service migrated from my.usask); • online exams (service migrated from my.usask); • student response system technology (clickers); • lecture capture/streaming video technology (Apresso); and • Blackboard (formerly WebCT) V6 upgrade. • About 40 online courses/course modules developed for TEL. • Blackboard (formerly WebCT) usage is doubling yearly: now used in 450 course sections; almost 13,000 student-class registrations; 8,500+ unique students. • PAWS My Courses usage is also high.
Student Mobile Computing (including Wireless Access)	C	<ul style="list-style-type: none"> • Introduced highly successful Laptops4U program in the Campus Computer Store. Supports how students want to work and reduces need for student computer lab space on campus. • Close to 400 wireless access points will be in place by January 2008. This provides coverage to about 60% of the campus. • The introduction of Clean Access and associated processes stopped “infections” on the wireless network. • Allocated 1 FTE towards helping students configure laptops and resolve problems relating to anti-virus, wireless access and software updates • Laptop and tablet computers available for loan at libraries.

<p>Desktop Renewal (including desktop support strategy)</p>	<p>C</p>	<ul style="list-style-type: none"> • Automated software update service introduced for Windows and Linux machines. • Campus Computer Store successful in providing competitive pricing on hardware and software, along with a high service level • Introduced a faculty desktop/laptop renewal and support plan (all new faculty, some help for current faculty). • Usage of ITS desktop support services is increasing (fee for service).
<p>Technology Readiness Program</p>	<p>D</p>	<ul style="list-style-type: none"> • Very limited progress possible because of lack of funding. • Developed or acquired online training resources for some standard software packages, including Word, Excel, PowerPoint and Access. Success had been mixed and uptake has been slow. • Now developing our own online resources for U of S-specific services.