



University Information Technology Systems Operational Plan

Part 2 Information Systems Development Plan 2006 – 2009

March 2006

March 2, 2006

Executive Summary

The Systems Development plan builds on the first phase of the *ITS Operational Plan Part I – Governance and Operational Framework* which identified the structures for governing and managing Information Technology Systems (ITS) development. Keeping the same framework, the Plan outlines the major initiatives to be undertaken.

The objective of the plan is to upgrade the ITS infrastructure to facilitate new services and to move Administrative Systems to a greater degree of systems integration while providing significantly enhanced capabilities in Learning and Research Systems.

Governance Systems comprises two initiatives: the deployment of a **Project Portfolio Management** system and the implementation of a **Control Framework**. These will add significantly to effective governance of ITS activities.

Learning and Research Systems are the main focus of the development contained in the plan with the deployment of **Moodle**, the selection and implementation of a **Content Management System**, the web enabling of **TRIX**, expansion of **myAU** portal and **Library** services, the upgrading of the **Tutor Information System** and the continuance of the **Research subnet**.

Administrative Systems developments will be targeted at reducing the resource cost of administrative processes while improving information accessibility. The main developments here are: the selection and implementation of a **groupware** application; the continued deployment of **HEAT** contact tracking software; upgrading the **Banner Student Information System**; and the development of an automated **Transfer Credit Articulation System**. The **Finance Systems** will be improved with several smaller projects while the **Human Resource System** and processes will be reviewed with the goal of introducing increased automation into the department.

The **Computing infrastructure** will be significantly upgraded with the addition of key enabling technologies. Communications will be improved through the adoption of **video conferencing**, the upgrading of the **telecommunications** hardware to enable **wireless** access. Data access and security will gain substantially from the introduction of a **Storage Array Network** architecture and improved **security** systems. User support is also addressed by the continued resourcing of the **Help Desk** and improvement in **workstation** support and the ongoing provision of **ITS training**.

| ITS Systems Development Planned Expenditure 2006-2011 | | | | | | |
|---|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Area | Total | 2006/7 | 2007/8 | 2008/9 | 2009/10 | 2010/11 |
| Total Governance Systems | \$ 552,350 | \$ 55,000 | \$ 139,000 | \$ 114,060 | \$ 119,364 | \$ 124,926 |
| Total Learning and Research Systems | \$ 2,882,598 | \$ 669,000 | \$ 734,210 | \$ 466,581 | \$ 492,622 | \$ 520,185 |
| Total Administrative Systems | \$ 3,045,394 | \$ 965,000 | \$ 606,700 | \$ 568,142 | \$ 440,770 | \$ 464,783 |
| Total Computing Systems | \$ 7,811,180 | \$ 2,526,000 | \$ 1,584,200 | \$ 1,274,388 | \$ 933,876 | \$ 989,516 |
| ITS TOTAL | \$ 14,291,523 | \$ 4,215,000 | \$ 3,182,110 | \$ 2,546,771 | \$ 2,115,032 | \$ 2,232,610 |

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Process of Plan Development

This *University Information Technology Systems Operational Plan Part 2: Information Systems Development Plan (Part2)* was created with input from across the University in many different forums some purposely to elicit opinions and perspectives for the plan and others, while not specifically established to develop the plan, provided essential information to enable the plan's creation.

Those forums created to inform the plan:

- ITS Computing Committee Visioning session (November 4 2005); and
- ITS Administrative Committee visioning session (December 9 2005).

Forums which guided the plan:

- Strategic University Plan (SUP);
- myAU Steering Committee;
- ITS committee meetings;
- Annual business Planning process;
- LMS adoption process;
- Facilities Planning Process;
- Capital Planning Process; and
- Newton/TRIX steering committee.

Several review engagements were undertaken to help construct Part 2:

- IBM – HR and Finance systems (Complete March 2006);
- Online Systems Inc. – Groupware (Complete March 2006);
- BCS Global – Videoconferencing (Complete February 2006);
- Telus – Network security (Complete March 2006); and
- AAHEIT – Systems Recovery Plan (Complete June 2006).

Additional opinion was sought from external sources

- The Auditor General's recommendations;
- Alberta Association of Higher Education for Information Technology (AAHEIT);
- The CIO's advisory committee to Alberta Universities Association (AUA);
- Educause;
- Project Management Institute (PMI);
- IT plans from other Alberta Universities; and
- Government of Alberta.

Introduction

This second part of the plan builds on the first phase of the *ITS Operational Plan Part 1 – Governance and Operational Framework (Part 1)*¹ which identified the structures for governing and managing ITS development.

Part 1 identified key objectives to direct ITS activities under four headings

- Governance
- Computing Systems
- Administrative Systems
- Learning and Research Systems

The objectives from Part 1 have been revised as several objectives outlined within it have been completed while others have been redefined and expanded by the ITS committees. Part 2 of the plan deals with the implementation of systems. Its purpose is to act as both a guide to the development of ITS services and as a monitor of performance over the coming period.

Over the next three years we will develop the ITS along five perspectives:

- Accessibility;
- Decision support;
- Efficiency;
- Sustainability; and
- Improved functionality.

The planned developments address these perspectives through either application development or through the provision of infrastructure to facilitate their attainment.

Part 2 is sensitive to the other institutional strategic priorities and the role ITS must play in shaping the future. The projects goals and approaches reflect the University's critical systems needs and its ability to implement them.

Although the time period of Part 2 is for 2006-2009, an additional two years have been added to show the steady state requirements of sustaining the investments. The reasoning here is the high ratio of operating to investment costs due to the dynamics of the IT environment.

The plan reflects the current state of the ITS planning process with projects at different stages of their lifecycle. To address this timing issue the plan will be amended over its life as technological, organisational and regulatory changes offer fresh challenges and opportunities to the University's operational environment. The plan is therefore a living document, similar to other AU operational plans, which will be refreshed annually to incorporate new information while also updating the progress of the initiatives articulated within it.

¹ The plans two parts will be referred to as Part 1 and Part 2 respectively throughout this document.

Principles

The following principles will be applied in the consideration and approval of all ITS developments.

- ITS activities will comply with AU policies and Standard Operating Procedures.
- ITS developments will be coordinated and directed by the steering committees and application for development will follow the procedure articulated in Part 1².
- ITS activities will comply with AU standard operating environment, as per the guideline contained in part 1, and will conform to the system compliance requirements.
- ITS activities will comply with all regulatory requirements and laws of Canada, Alberta and other jurisdictions which the University operates in. AU will practise good IT citizenship in the use of technology.
- An asset life-cycle approach will be taken to the management of ITS assets. This approach considers acquisition, commissioning, maintenance, user support, and disposal costs in the determination of complete asset costs. In the consideration of acquiring and deploying assets, the life cycle approach will guide the decision making process.
- ITS systems activities will employ a full or absorbed costing method to determine the economic value of activities; this will extend to the comparison of internal development with externally acquiring applications, services and systems.
- ITS activities will be guided by the strategic and operational needs of the University; evaluation of developments will be guided by the impact the proposed activity will have on the University's strategic and operational plan and will pursue those opportunities that best support advancing the University.

² University Information Technology Systems Operational Plan 2005 – 2007 Part 1 Governance and Operational Framework pp.26, 27

Definitions

Applications are defined as computer programs and software that are designed to provide functionality to complete operational tasks. Such tasks range from teaching to invoicing to payroll.

Benchmarking measuring performance against a standard of quality (industry sector or technical standard).

Best Practices are state-of-the-art methodologies and technologies for infrastructure planning, design, construction, management, assessment, maintenance and rehabilitation that consider economic, organizational and technological factors

Capital is the up-front costs associated with building new infrastructure and investment that extends the life of current infrastructure.

Computers used for the completion of daily activities are referred to as **workstations**, for non-mobile devices, and **laptops** for mobile devices.

Communications is used to describe the range of technologies that comprise the University's infrastructure to exchange information. These consist of telephony, Internet, Intranet, SuperNet, Videoconferencing, messaging, mobile devices, etc.

High Availability is defined as the constant provision of computing services to end users. While 100 percent is desirable the costs of obtaining such are inordinately high and not sustainable. The practical application of high availability is to provide the service level just above that which is normally sufficient for the user. Additional service is seen as unnecessary and therefore of no value.

Infrastructure, for the purpose of this plan, is defined as all hardware, software and networking equipment and activities that create and provide a base for the provision of services for other ITS related activities that address specific functions. In this sense infrastructure can be considered as providing a horizontal function which vertical applications can use.

Levels of Service reflect social, technical and economic goals of the community and may include any of the following parameters: safety, student/stakeholder satisfaction, quality, quantity, capacity, reliability, responsiveness, environmental acceptability, cost and availability. The defined levels of service comprise any combination of the above parameters deemed important by the University

Life Cycle Asset Management/Total Asset Management is a tool consisting of an inventory of assets, and the ability to track the performance and projected needs of those assets based on life cycle maintenance and care activities and their associated costs during the expected life of an asset, typically computerized.

The **project management** practised at AU is based on the PMI *Body of Knowledge*³. Implementation of this methodology began in 2005 with the approval of the IT Project Approval Policy⁴. The practice and procedures outlined in the first part of the plan have been operational since March of 2005 and 20 projects have been initiated using these.

³ <http://www.pmi.org>

⁴ Information Technology Project Approval Policy
<http://www.athabascau.ca/policy/computingservices/projectapprovalpolicy.htm>

Quality of Service (QoS) refers to the capability of a network to provide better service to selected network traffic over various technologies. It achieves this by prioritising and dedicating bandwidth to reflect organisational needs ensuring that identified core functions attain a baseline service level.

Security is defined as the ability, of the appropriate individual, to have protected access to their ITS assets. This includes data quality assurance, identity protection and data access protection. Security thus covers firewall architecture, authentication policies and procedures and data redundancy.

Risks

Each initiative contains a risk analysis concerning the particular risks for each respective project. Considered here are the broader risks to the whole plan and the risks that may impact the overall accomplishment of the project goals.

Organisational ability to undergo change

The scale of the change the plan represents is very large. Although not all new applications are used by all staff there is nonetheless a significant requirement for change that each staff member will have to undergo. This may cause “technological shock” to staff members and their ability to adopt and adapt to a continually changing environment may be severely reduced. The communication of intended changes throughout the development cycle and the preparation of staff through training and access to support will help mitigate the risk here. Nonetheless it remains a very real concern and will be reviewed on a constant basis to ensure application roll-outs are effective.

Conflicts between ITS project and other institutional or unit priorities

The plan does not take into account other events that may impede other units of the University to meet with the schedule contained within this plan. The mitigation here has been to coordinate the major enterprise wide projects to have, at least at the starting point, no discernable conflicts of agendas. However this may change over the plan’s life as events force changes. The strategy is to work through or around these when they happen and to minimise the impact to the schedule. In addition the project management process assists in identifying potential resource conflicts and will provide early warnings, which will allow a planned approach to rescheduling.

Fiscal health of the University

The growth targets of the University may not be achieved which would cause a decline in forecast revenues that may enforce a reduction of the funding to the plan. Reprioritisation may result from this as scarcer resources would force a choice to focus on those projects with the highest economic return. Such will be dealt with over the plan’s life if and when necessary.

Technological shift

The planning period is not insignificant in technological time and a major new technology shift may happen over the period. Our research to date suggests that the proposed ITS developments are consistent with industry directions and best practices. To mitigate the risk we will consistently stay aware of technological developments through published material, conferences and the input from faculty on our steering committees.

Loss of significant resource

Although the planning period is relatively short there is still a risk that the staff will undergo turnover during the period. The loss of a key resource at a critical project phase presents a real risk to successful completion of a project. In particular projects which require significant internal tacit knowledge are susceptible. The mitigation strategy will be to share knowledge by working in teams and to continually document the development process. The use of external resources will also reduce this risk.

Change in external environment - political, regulatory, and economic

The external environment is subject to fluctuations that are not foreseeable over a three to five year horizon. Such may include an economic downturn, change of regulatory requirements such as privacy, security or identity, or more broadly the ability of the University to operate outside Alberta. Such changes cannot be foreseen and the mitigation will be to react to them as effectively as possible. Having a plan will afford us the ability to assess the impacts of different strategies and to select the most appropriate response to minimise the impacts on the University.

Supplier lock-in

Lock-in represents the dependency an organisation has on a supplier. When referenced to IT lock-in presents a significant risk as it encompasses the compatibility of the systems architecture. Thus the creation of systems that are dependent on key proprietary system components leaves the institution vulnerable to either business failure or to predatory behaviour by the supplier. In addition the IT industrial sector is subject to severe fluctuations of fortune with regard to both hardware and software products which add a temporal aspect to risk management. Thus even market leading products are subject to rapid shifts in strategic direction.

The mitigation to this risk will include, ensuring vendors are financially stable; that system components are substitutable; that data structures are non proprietary; that open standards compliant applications are used; that technological deployments are not dependent on single proprietary solutions; and that we consistently monitor market behaviour to determine product directions.

Methodology

Framework

The plan consists of a portfolio of systems development projects that will be completed within the planning period. The portfolio includes projects already underway. The initiatives are grouped into five sections:

1. **Governance;**
2. **Learning and Research;**
3. **Administrative;**
4. **Computing; and**
5. **Other Projects**

Each section begins with an overview of the current situation which includes an update of status of the initiatives stated in Part 1. Section 5 represents initiatives that have been identified but not yet formulated.

Format

The methodology used in this part of the plan is based on the PMI Body of Knowledge and has been adapted to better fit the planning requirements of the University. Each development initiative is treated using the following framework:

- The organisational need or business case is discussed, identifying the problem and the proposed solution.
- The Goal is stated to clearly identify the key benefit to AU
- Objectives are stated to show more detailed deliverables of the initiative
- Approach outlines the strategy for the achievement of the objectives
- Key Milestones are listed to identify the key steps to project completion
- A Risk Assessment is summarised to identify the chief risks to the project and the mitigation strategies being employed
- The Project Gantt and Budget is a summary chart and table which shows the timelines for the project in conjunction with the projected expenditures and the nature of these expenditures. Also contained in this are the ongoing operational costs required to sustain the initiative.

Project Phases

A slight difference from the PMI methodology is that Project activities will be broken into four phases. As per the table below the project phases are represented in the Gantt charts using the following colour scheme.

| PMI | AU Plan | Legend |
|--------------------------------|----------------|--------|
| Initiation | Planning | |
| Planning, | Design | |
| Execution, Control and Closing | Implementation | |
| | Operation | |

Planning includes the initiation of a project the development of a business case and initial analysis to determine the potential benefits of an ITS solution. The deliverable of this phase is a project plan.

Design contains the elements to move the initiative to an implementable format. Activities here include, process mapping, systems analysis, prototyping, Request for Information (RFI) or Request for Purchase (RFP). The deliverable of the design phase is a systems design and/or a product specification

Implementation is the execution and operationalising of the project to bring it to production status. Activities included here are programming, testing, training, commissioning of equipment, piloting, systems integration, and documentation.

Operation represents the daily production status of completed project and is included her to signify he planned date on which continued service will begin. Activities included here include version updates, maintenance, evergreening, bug fixes, and report generation.

Section 1. Governance Systems Development Plan

Overview

ITS governance is essential to ensuring systems investments and activities are coordinated across the University and consistent with the strategic and operational plans. This second part of the plan will continue the work outlined in Part 1 by underpinning the governance structure with a managing and reporting system and the operationalising of a control framework.

Update

The goal, outlined in Part 1 of the ITS plan, of establishing a **workable governance structure** has been achieved. AU now has an effective and workable governance structure to ensure the effective utilisation of ITS within the institution. The ITS Administrative and Computing committees have been in operation since May of 2005 and the ITS Learning and Research committee will begin operation in March of 2006. These committees have reviewed the objectives in the plan and held visioning sessions to articulate the future of ITS in AU. The amendments to the ITS systems development objectives are as a result of these revised priorities.

The introduction of a **control framework** will assist in ensuring that our activities are guided with regard to compliance to best practices. In particular the ongoing development of **standard operating procedures** for ITS management will benefit from such a framework. It will also assist the ITS committees in their approval of projects facilitating an operationalising of the controls. A new project has been established to move ITS activities into a control framework.

| Planned Governance Systems Expenditures 2006-2011 | | | | | | |
|---|-------------------|------------------|-------------------|-------------------|-------------------|-------------------|
| Expense | Total | 2006/7 | 2007/8 | 2008/9 | 2009/10 | 2010/11 |
| Base Increase | \$ 502,350 | \$ 35,000 | \$ 109,000 | \$ 114,060 | \$ 119,364 | \$ 124,926 |
| One Time Increase | \$ 50,000 | \$ 20,000 | \$ 30,000 | \$ - | \$ - | \$ - |
| Capital Increases | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Total Governance Systems | \$ 552,350 | \$ 55,000 | \$ 139,000 | \$ 114,060 | \$ 119,364 | \$ 124,926 |

1.1 ITS Project Portfolio Management System

Discussion

Part 1 contained three separate goals relating to ITS activity management, **Project Portfolio management**, **ITS information system**, and a **planning and budgeting system**. The research into the portfolio system revealed that these systems have developed to the point where they can provide a full range of both operational and strategic capabilities. As a result the portfolio system will act as the ITS information system, project management system, including planning and budgeting, and project portfolio management system. It will work in conjunction with Microsoft Project for large and complex projects where more detail is required.

The portfolio system will provide the University with an accessible and transparent process for informing stakeholders about the current state of projects.

The following list identifies the primary benefits of the Portfolio system at both the individual project and portfolio level:

- activity tracking;
- project tracking;
- resource tracking;
- project status reporting;
- project costing; and
- project variance analysis.

Goal

Acquire and deploy a Project Portfolio Management System (PPM) to provide a set of tools to manage ITS activities in an efficient, effective and transparent framework.

Objectives

- acquire a hosted service to provide the required functionality;
- train staff to effectively use the software;
- transition project information into the PPM; and
- use the system on a daily basis to manage projects.

Budget

| Project Portfolio Management System Project Gantt and Budget | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------------|-------|----|----|-----------|----|----|----|-----------|----|----|----|-----------|----|----|----|-----------|----|----|----|-----------|----|----|----|--|
| Project Milestone | COST | 05/06 | | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | | |
| | | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | |
| Project Timeline and Cost | \$19,000 | | | | | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$ 369,950 | | | | \$40,000 | | | | \$77,700 | | | | \$80,808 | | | | \$84,040 | | | | \$87,402 | | | | |
| Base Increase | \$ 349,238 | \$ - | | | \$ 35,000 | | | | \$ 74,000 | | | | \$ 76,960 | | | | \$ 80,038 | | | | \$ 83,240 | | | | |
| Licensing and Hosting | | | | | \$ 35,000 | | | | \$ 74,000 | | | | \$ 76,960 | | | | \$ 80,038 | | | | \$ 83,240 | | | | |
| One Time Increase | \$ - | | | | \$ - | | | | \$ - | | | | \$ - | | | | \$ - | | | | \$ - | | | | |
| Capital Increase | \$ - | \$ - | | | \$ - | | | | \$ - | | | | \$ - | | | | \$ - | | | | \$ - | | | | |
| Incremental Cost | \$ 349,238 | \$ - | | | \$ 35,000 | | | | \$ 74,000 | | | | \$ 76,960 | | | | \$ 80,038 | | | | \$ 83,240 | | | | |

1.2 Implement Control Framework

Discussion

The Project Portfolio Management system is a key component in the introduction of this structure as it provides the informational backbone to ensure that compliance is actively practiced and managed. The project management methodology has given structure to the management of ITS activities. In particular the abilities to justify an initiative, to track and control its development and to audit its success have proved to be of significant benefit to the University. The project management methodology lays the foundation for the introduction of a control framework. A control framework such as COBIT or the General Computer Controls Review (GCCR), will provide a methodology to ensure ITS activities are consistent with the strategic and operational plans of the university while also ensuring that best practices are adhered to.

Goal

To implement an ITS control Framework in AU that will provide for effective governance and management of ITS activities

Objectives

- review control frameworks;
- select appropriate framework for AU;
- develop implementation strategy;
- align control framework with operating procedures;
- align control framework with AU policies;
- implement on a phased basis; and
- create operational structure to sustain implementation.

Budget

| Control Framework Project Gantt and Budget | | | | | | | | | | | | | | | | | | | | | |
|--|-------------------|-----------|-----------|-----------|-----------|-----------|----|----|----|--------|----|----|----|---------|----|----|----|---------|----|----|----|
| Project | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | |
| | COST | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Project Timeline and cost | \$198,000 | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$303,315 | \$ 38,000 | \$ 99,000 | \$ 61,000 | \$ 51,124 | \$ 54,191 | | | | | | | | | | | | | | | |
| Base Increase | \$ 153,112 | \$ - | \$ 35,000 | \$ 37,100 | \$ 39,326 | \$ 41,686 | | | | | | | | | | | | | | | |
| Employee Administrator 0.5 FTE | | \$ - | \$ 35,000 | \$ 37,100 | \$ 39,326 | \$ 41,686 | | | | | | | | | | | | | | | |
| One Time Increase | \$ 50,000 | \$ 20,000 | \$ 30,000 | \$ - | \$ - | \$ - | | | | | | | | | | | | | | | |
| Consultant to research systems | | \$ 20,000 | \$ - | \$ - | \$ - | \$ - | | | | | | | | | | | | | | | |
| Acquire framework | | \$ - | \$ 30,000 | \$ - | \$ - | \$ - | | | | | | | | | | | | | | | |
| Capital Increase | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | | | | | | | | | | | | | | | |
| Incremental Cost | \$ 203,112 | \$ 20,000 | \$ 65,000 | \$ 37,100 | \$ 39,326 | \$ 41,686 | | | | | | | | | | | | | | | |

Section 2. Learning and Research Systems Development Plan

Overview

The movement to elearning and the expansion of services, content and experimentation will require improved infrastructures, applications and user support. The plan has been formulated to provide a richer tool set and a more supportive environment for the development of elearning content and research.

Update

Part 1 identified several objectives in the learning and research area which have been acted upon. The establishment of a **research subNet** with system administration support has provided academics an experimental environment to test and research technologies which engenders innovation and the development of new teaching and learning methods. The capability has led to improved research, more timely evaluation of technologies and a faster development cycle from test to production. The adoption of **Moodle** as the University's learning platform is underway and lays the foundation for a common platform for experimentation, research and the development and sharing of knowledge regarding elearning technologies. It further provides a common application for all support services, enabling improved processes and service to students.

The **adLib** database has been completed and awaits placement into a production environment. The implementation of the elearning plan to develop a SCORM compliant learning object repository will require adLib to be operationalised. Such will also require the deployment of a **Content Management System (CMS)**. This was identified as an objective in Part 1 and the objective has been merged with the administrative web content objective to allow the development of a single application to facilitate improved digital content management.

Library services have also improved with the ongoing developments of the **Digital Reading Room (DRR)**. The intention is to make the DRR Moodle compliant so that it will form a seamless part of the LMS. The INNOPAC Library system has been upgraded throughout the year.

| Planned Learning and Research Systems Expenditures 2006-2011 | | | | | | |
|--|---------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Expense | Total | 2006/7 | 2007/8 | 2008/9 | 2009/10 | 2010/11 |
| Base Increase | \$ 2,002,840 | \$ 294,000 | \$ 379,690 | \$ 419,390 | \$ 442,599 | \$ 467,161 |
| One Time Increase | \$ 463,000 | \$ 303,000 | \$ 160,000 | \$ - | \$ - | \$ - |
| Capital Increases | \$ 416,758 | \$ 72,000 | \$ 194,520 | \$ 47,191 | \$ 50,023 | \$ 53,024 |
| Total Learning and Research Systems | \$ 2,882,598 | \$ 669,000 | \$ 734,210 | \$ 466,581 | \$ 492,622 | \$ 520,185 |

2.1 Learning Management System Moodle

After a lengthy review and selection process, Moodle was selected by Academic Council in September 2005 and approved in principal by AUGC in December 2005. Moodle is an Open Source⁵ application allowing for common development among the user community. The project is currently proceeding and is in pilot.

Discussion

The movement from three course delivery platforms to the adoption of a single LMS will bring significant benefits to the University most notably:

- Each of the three platforms required a separate infrastructure and staff to operate, maintain, develop and service users. The movement to one infrastructure will reduce the resource requirement here.
- The provision of these platforms has resulted in systems duplication, process complexity and a failure to develop content standards. The adoption of a single platform will reduce complexity, unify processes and help the development of content standards.
- The costs of fissured development and support costs are both uneconomic and ineffective for the provision of world class elearning.
- We can offer a common environment for all stakeholders to use and develop.
- The introduction of a single platform will allow the creativity and energy of AU to be channelled into the development and provision of learning technologies that will continually enhance the AU learning experience.
- A single LMS is sustainable in the longer term as the University continues on its strategy of moving to on-line course delivery.

Goal

To implement a University wide Learning Management System which will provide a seamless virtual environment of innovative on-line learning tools for our students, faculty and staff. This centrally provided application will also enable the University to move courses to a common on-line format and to facilitate the research and development of world class learning technologies.

Objectives

- commission Moodle as a highly available and centrally supported LMS;
- convert/integrate existing courseware to Moodle;
- provide support and training to users and developers;
- integrate Moodle into existing Course Administration systems; and
- develop work process to best advantage the ongoing operation of Moodle.

⁵ The **Open Source Initiative (OSI)** is a non-profit corporation dedicated to managing and promoting the [Open Source Definition](http://www.opensource.org/) for the good of the community: <http://www.opensource.org/>

Moodle Budget⁶

| Moodle Project Gantt and Budget | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------|------------|------------|------------|----|----|--------|------------|----|----|--------|------------|----|----|---------|------------|----|----|---------|----|----|----|--|
| | | 2005/6 | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | | |
| | Cost | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | |
| Project Timeline and Cost | \$933,000 | | | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$ 2,040,206 | \$ 221,000 | \$ 437,000 | 443,620 | | | | 364,237 | | | | 386,091 | | | | 409,257 | | | | | | | |
| Base Increase | \$ 1,163,851 | | \$ 180,000 | \$ 224,900 | | | | \$ 238,394 | | | | \$ 252,698 | | | | \$ 267,859 | | | | | | | |
| Employees - HelpDesk Assistant (1 FTE) | | | \$ 15,000 | \$ 50,000 | | | | \$ 53,000 | | | | \$ 56,180 | | | | \$ 59,551 | | | | | | | |
| Employees - System Administration (1FTE) | | | \$ 75,000 | \$ 79,500 | | | | \$ 84,270 | | | | \$ 89,326 | | | | \$ 94,686 | | | | | | | |
| Employees - System Administration (1FTE) | | | \$ 75,000 | \$ 79,500 | | | | \$ 84,270 | | | | \$ 89,326 | | | | \$ 94,686 | | | | | | | |
| Training | | | \$ 15,000 | \$ 15,900 | | | | \$ 16,854 | | | | \$ 17,865 | | | | \$ 18,937 | | | | | | | |
| One Time Increase | \$ 245,000 | \$ 35,000 | \$ 145,000 | \$ 100,000 | | | | \$ - | | | | \$ - | | | | \$ - | | | | | | | |
| Training | | \$ 5,000 | \$ 15,000 | \$ - | | | | | | | | | | | | | | | | | | | |
| PM Costs | | \$ 15,000 | \$ 55,000 | \$ 40,000 | | | | | | | | | | | | | | | | | | | |
| Conversion | | \$ 15,000 | \$ 75,000 | \$ 60,000 | | | | | | | | | | | | | | | | | | | |
| Capital Increase | \$ 236,758 | \$ 186,000 | \$ 42,000 | \$ 44,520 | | | | \$ 47,191 | | | | \$ 50,023 | | | | \$ 53,024 | | | | | | | |
| Servers | | \$ 186,000 | \$ - | \$ - | | | | \$ - | | | | \$ - | | | | \$ - | | | | | | | |
| Hardware Evergreening | | | \$ 42,000 | \$ 44,520 | | | | \$ 47,191 | | | | \$ 50,023 | | | | \$ 53,024 | | | | | | | |
| Incremental Cost | \$ 1,645,609 | \$ 221,000 | \$ 367,000 | \$ 369,420 | | | | \$ 285,585 | | | | \$ 302,720 | | | | \$ 320,884 | | | | | | | |

⁶ The 2005/6 expenses are not used in the final cost calculations for the Moodle project, they are included here for reference purposes, to show the full cost of the project and the expenses incurred to date.

2.2 Content Management System (CMS)

Discussion

The continued movement to online content both for academic and administrative purposes will increase the requirement for a digital content management system (CMS). The administrative content accessed through the Intranet has reached the point of critical need for such a system. The development of robust and effective content management is constituent on the adoption and implementation of a CMS that will allow for:

- automation of many routine functions;
- consistency in technical and organizational (not pedagogical) aspects of course design;
- application of quality and compliance standards;
- elimination of redundant activities;
- assurance of course version consistency;
- auditing of workflow; and
- improved information accessibility.

The success of any technical solution will depend on the development and implementation of workflow policies and procedures. The management of content and the accountability for its maintenance will have to be distributed along with the technical capability to create, store, edit and manipulate content. This development is a key requirement to moving to the creation and deployment of learning objects. Having codified methodologies will enable an efficient and effective production methodology to be adopted.

Goal

To deploy a University-wide content management system that facilitates the efficient handling of web content that will operate seamlessly with essential University applications including Moodle and myAU.

Objectives

- select and implement a CMS;
- convert/integrate existing content to CMS;
- provide support and training to users and developers;
- integrate CMS Administration systems; and
- develop work process to best advantage the ongoing operation of CMS.

CMS Budget

| CMS Support Project Gantt and Budget | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|-------------------|--------|---------|----|----|--------|---------|----|----|--------|--------|----|----|---------|--------|----|----|---------|--------|----|----|
| Project | COST | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | |
| Project Timeline and Cost | \$305,000 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Absorbed Cost | \$542,045 | \$ | 157,000 | | | \$ | 192,500 | | | \$ | 61,230 | | | \$ | 64,124 | | | \$ | 67,191 | | |
| Base Increase | \$ 183,112 | \$ | - | | | \$ | 35,000 | | | \$ | 47,100 | | | \$ | 49,326 | | | \$ | 51,686 | | |
| Maintenance contract | | \$ | - | | | \$ | - | | | \$ | 10,000 | | | \$ | 10,000 | | | \$ | 10,000 | | |
| Employee System Administrator 0.5 FTE | | \$ | - | | | \$ | 35,000 | | | \$ | 37,100 | | | \$ | 39,326 | | | \$ | 41,686 | | |
| One Time Increase | \$ 80,000 | \$ | 60,000 | | | \$ | 20,000 | | | \$ | - | | | \$ | - | | | \$ | - | | |
| Consultant to research systems | | \$ | 25,000 | | | \$ | - | | | \$ | - | | | \$ | - | | | \$ | - | | |
| Consultant to develop data dictionary | | \$ | 35,000 | | | \$ | - | | | \$ | - | | | \$ | - | | | \$ | - | | |
| Training related costs | | \$ | - | | | \$ | 20,000 | | | \$ | - | | | \$ | - | | | \$ | - | | |
| Capital Increase | \$ 110,000 | \$ | - | | | \$ | 110,000 | | | \$ | - | | | \$ | - | | | \$ | - | | |
| Application License | | \$ | - | | | \$ | 50,000 | | | \$ | - | | | \$ | - | | | \$ | - | | |
| Servers | | \$ | - | | | \$ | 60,000 | | | \$ | - | | | \$ | - | | | \$ | - | | |
| Incremental Cost | \$ 373,112 | \$ | 60,000 | | | \$ | 165,000 | | | \$ | 47,100 | | | \$ | 49,326 | | | \$ | 51,686 | | |

2.3 MyAU Portal

The myAU portal has been very successful with the overwhelming majority of students using the portal to access AU online services. The developments of the portal are being guided by the myAU steering committee which consists of a broad cross section of the University community. The objectives outlined below have been at the direction of the steering committee.

Discussion

Athabasca University is currently deploying a web-enabled student portal to provide targeted communication and online services to students. A recent survey of students was overwhelmingly positive with strong favourable comments on the portal’s usability. The portal also serves as a vehicle for new functionality as it is a focal point for student entry. An example of this is the eLetters application which was made available through the portal.

myAU will provide the access point to Moodle courses and the portal has been integrated into Moodle creating a seamless conduit to courses for students. This service, however, is currently only provided to Undergraduate students. It will be a priority of the next phase of the portal development to extend myAU integration to Graduate students, as it is a key dependency before Moodle can be put into production mode.

Goal

To continue to be responsive to the community’s needs and to develop the portal’s functionality with particular regard to its enabling capabilities to introduce and support other technologies.

Objectives

Proposed second phase objectives include:

- Graduate Student Portal⁷:
- Staff and Tutor portal:
- Single sign-on to all AU services:
- Targeted messaging:
- Course scheduling capability; and
- ePortfolios.

Budget

| myAU Portal Project Gantt and Budget | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|------------|-----------|-----------|----------|------|--------|------|------|------|--------|------|------|------|---------|------|------|------|---------|------|------|------|
| Project | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | |
| | COST | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Project Timeline and Cost | \$ 245,000 | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$245,000 | \$124,000 | \$72,000 | \$49,000 | \$0 | \$0 | | | | | | | | | | | | | | | |
| Base Increase | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| One Time Increase | \$ 73,000 | \$ 53,000 | \$ 20,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Library System Upgrade | | \$ 33,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Programming | | \$ 20,000 | \$ 20,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Capital Increase | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Incremental Cost | \$ 73,000 | \$ 53,000 | \$ 20,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |

⁷ CIM students are not currently in the AU Banner student information system. Their ability to access the portal will depend on this development.

2.4 Library Systems

Overview

The Library systems will be enhanced throughout the planning period through upgrades of the INNOPAC system and the development of a digital repository AUSpace.

The Library will continue to upgrade its core INNOPAC system throughout the planning period. An initial development is to allow single sign-on (SSO)⁸ access through the myAU portal. This will require a module to be programmed to integrate with our authentication system, the additional cost has been added to the myAU budget. The INNOPAC upgrades are part of the existing licensing agreement or have already been purchased.

2.4.1 AUSpace

Discussion

In the fall of 2005, AU Library piloted with research and academic centres to establish AUSpace, an institutional repository. Members of the AU community can deposit their work and learning objects online and store them at AUSpace. The system currently holds presentation materials, faculty's E-portfolios, audio lectures, learning objects, and conference papers. It will go into production in 2006. AUSpace is administrated by library services with technical support from the research centre system administrator.

Goal

To deploy into production a scalable digital repository to preserve AU scholarly materials

Objectives

- provide efficient, effective, and reliable worldwide access to collective scholarly works at AU;
- achieve interoperability with other Institutional repositories;
- increase the use of locally available AU research and scholarly work; and
- effectively store and deliver all AU materials in digital format.

Budget

| AUSpace Digital Repository Project Gantt and Budget | | | | | | | | | | | | | | | | | | | | | |
|--|------------|------------|-----------|-----------|-----------|-----------|----|----|----|--------|----|----|----|---------|----|----|----|---------|----|----|----|
| Project | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | |
| | COST | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Project Timeline and Budget | \$ 119,000 | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$304,066 | \$ 108,000 | \$ 46,865 | \$ 48,271 | \$ 49,719 | \$ 51,211 | | | | | | | | | | | | | | | |
| Base Increase | \$ 185,820 | \$ 35,000 | \$ 36,050 | \$ 37,132 | \$ 38,245 | \$ 39,393 | | | | | | | | | | | | | | | |
| Employee System support 0.2 FTE Covered in Research Subnet | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | | | | | | | | | | | | | | | |
| Employee Digital Repository Specialist 0.5 FTE | \$ - | \$ 35,000 | \$ 36,050 | \$ 37,132 | \$ 38,245 | \$ 39,393 | | | | | | | | | | | | | | | |
| One Time Increase | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | | | | | | | | | | | | | | | |
| Capital Increase | \$ 15,000 | \$ 15,000 | \$ - | \$ - | \$ - | \$ - | | | | | | | | | | | | | | | |
| Hardware and Software | \$ - | \$ 15,000 | \$ - | \$ - | \$ - | \$ - | | | | | | | | | | | | | | | |
| Incremental Cost | \$ 200,820 | \$ 50,000 | \$ 36,050 | \$ 37,132 | \$ 38,245 | \$ 39,393 | | | | | | | | | | | | | | | |

⁸ Single Sign-on allows users to authenticate only once to access AU hosted services

2.5 TRIX/Newton

Discussion Phase 1

Newton – TRIX, the Tutor Marking System is to be redeveloped on a web based platform. The existing TRIX is currently running on a non supported SUN platform presenting a risk to the institution. While measures have been taken to keep the existing system operable it must be replaced to ensure continued operation and to enable development of a more functional and user friendly system.

The essential functionality of TRIX is that it provides a repository for tutor marked assignments and exams. It also supplies contact information for the tutor to contact students in their courses. Finally, it provides a security framework to protect the information stored in the application.

Goal

The goal is to replace the aging TRIX system with a new web based application that provides the functionality of the TRIX system and provides a base for the development of enhanced functionality and tutor support. In addition the system will not be resource intensive to support and will be compatible with our existing learning systems infrastructure.

Objectives

- move the existing content database to Oracle;
- provide a Web based front end using SSL communications;
- use a programming language that is compatible with PHP for code re-use;
- move to a 3-tier architecture for better security; and
- integrate with Banner and Moodle Applications.

Budget

| Newton Project Gantt and Budget | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|------------------|--------|----|----|----|-----------|----|----|----|-----------|----|----|----|----------|----|----|----|----------|----|----|----|----------|
| Project Milestone | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | | |
| | COST | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Project Timeline and Cost | \$255,900 | | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$304,036 | | | | | \$137,450 | | | | \$118,450 | | | | \$15,120 | | | | \$16,027 | | | | \$16,989 |
| Base Increase | \$78,919 | | | | | \$14,000 | | | | \$14,840 | | | | \$15,730 | | | | \$16,674 | | | | \$17,675 |
| Employees 0.2 FTE | | | | | | \$14,000 | | | | \$14,840 | | | | \$15,730 | | | | \$16,674 | | | | \$17,675 |
| One Time Increase | \$40,000 | | | | | \$20,000 | | | | \$20,000 | | | | \$0 | | | | \$0 | | | | \$0 |
| Travel and Training costs for Tutors | | | | | | \$20,000 | | | | \$20,000 | | | | | | | | | | | | |
| One Time Capital Increases | | | | | | | | | | | | | | | | | | | | | | |
| Incremental Cost | \$118,919 | | | | | \$34,000 | | | | \$34,840 | | | | \$15,730 | | | | \$16,674 | | | | \$17,675 |

2.6 Research subNet

Discussion

The Athabasca University research subNet is critical for the future development of AU’s research program and for the future mission critical development of applications for online learning. A primary goal of the subNet is to provide researchers with adequate technical support with enhanced capabilities for secure, mobile, networked communications, assured information delivery, presentation of information and decision-making. This can be achieved by improving the subNet with support for human-computer interfaces, mobile computing and new applications as they become available. Both open source and commercial applications must be continuously investigated and leveraged where possible to improve the learning quality, efficiency and cost-effectiveness of our programme delivery.

Research includes the investigation of applications and appropriate infrastructures that allow for the timely distribution, display, and use of learning objects either as simple text or as interactive multimedia applications. In particular, support is needed on the use of learning technologies that will allow learners on the move from virtually any location to access learning opportunities in a seamless, secure, robust network. In addition, discipline focused researchers need support in a robust network to help them take maximum advantage of the potential for eresearch in their respective subject areas.

Goal

To create a digital environment for research and experimentation that is responsive, accessible and supported and is compliant with the standardised operating environment within the university.

Objectives

- deploy a networked server;
- provide user support through a systems administrator;
- ensure system is compliant with AU standards; and
- allow and encourage researchers to utilise the capability.

Budget

| Research SubNet Gantt and Budget | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|-------------------|-------|----|----|-----------|----|----|----|-----------|----|----|----|-----------|----|----|----|-----------|----|----|----|-----------|----|----|----|
| Project | | 05/06 | | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | |
| | COST | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Project Timeline and cost | \$ 52,000 | | | | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$ 495,834 | | | | \$104,000 | | | | \$89,570 | | | | \$94,944 | | | | \$100,641 | | | | \$106,679 | | | |
| Base Increase | \$ 366,411 | \$ - | | | \$ 65,000 | | | | \$ 68,900 | | | | \$ 73,034 | | | | \$ 77,416 | | | | \$ 82,061 | | | |
| Employees | | | | | \$ 65,000 | | | | \$ 68,900 | | | | \$ 73,034 | | | | \$ 77,416 | | | | \$ 82,061 | | | |
| One Time Increase | \$ - | | | | \$ - | | | | \$ - | | | | \$ - | | | | \$ - | | | | \$ - | | | |
| Capital Increase | \$ 15,000 | \$ - | | | \$ 15,000 | | | | \$ - | | | | \$ - | | | | \$ - | | | | \$ - | | | |
| Server Commissioning | | \$ - | | | \$ 15,000 | | | | \$ - | | | | \$ - | | | | \$ - | | | | \$ - | | | |
| Incremental Cost | \$ 381,411 | \$ - | | | \$ 80,000 | | | | \$ 68,900 | | | | \$ 73,034 | | | | \$ 77,416 | | | | \$ 82,061 | | | |

2.7 Tutor Information System

Discussion

The growth in the University has led to an expanding workload for Learning Services Tutorial (LST). Given our teaching model, registration growth impacts this group in direct proportion to the overall registration increase of the University. As growth is being actively pursued in the strategic plan, the requirement for tutorial services will increase over the coming period. To sustain this growth and to effectively administer tutors a more sophisticated web-enabled tool set is required. Failure to address this will result in increasing human resources being employed in the area involving increased coordination resulting in a decreasing responsiveness to students and tutors needs.

Goal

To deploy a Tutor information system that will facilitate effective and efficient management of tutors and provide demand forecasting and schedule management capabilities.

Objectives

- review workflow;
- determine optimum system response to address core needs; and
- develop a project plan to effectively implement the selected solution.

Budget

| Tutor Information System Gantt and Budget | | | | | | | | | | | | | | | | | | | | | |
|---|-------------------|-----------|-----------|----|----|-----------|----|----|----|-----------|----|----|----|-----------|----|----|----|---------|----|----|----|
| Project Milestone | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | |
| | COST | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Project Timeline and Cost | \$ 95,000 | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$ 179,145 | \$ 85,000 | \$ 62,000 | | | \$ 10,400 | | | | \$ 10,712 | | | | \$ 11,033 | | | | | | | |
| Base Increase | \$ 24,727 | \$ - | \$ - | | | \$ 8,000 | | | | \$ 8,240 | | | | \$ 8,487 | | | | | | | |
| Maintenance fee | | \$ - | \$ - | | | \$ 8,000 | | | | \$ 8,240 | | | | \$ 8,487 | | | | | | | |
| One Time Increase | \$ 25,000 | \$ 25,000 | \$ - | | | \$ - | | | | \$ - | | | | \$ - | | | | | | | |
| Consultant fees | | \$ 25,000 | | | | | | | | | | | | | | | | | | | |
| Capital Increase | \$ 40,000 | \$ - | \$ 40,000 | | | \$ - | | | | \$ - | | | | \$ - | | | | | | | |
| Application License | | \$ - | \$ 40,000 | | | \$ - | | | | | | | | | | | | | | | |
| Incremental Operating Cost | \$ 89,727 | \$ 25,000 | \$ 40,000 | | | \$ 8,000 | | | | \$ 8,240 | | | | \$ 8,487 | | | | | | | |

Section 3. Administrative Systems Development Plan

Overview

The University’s administrative systems require upgrading to handle the continued growth of both students and staff. Existing work practices will require realignment with ITS enabled systems to allow the effective adoption of automated systems. This will also require a shift from a unit transaction focus to an organisational information focus and a systemic approach to data management. Data flows must allow the ability to analyse data and create and deliver high-level report functions as real-time reporting is a key deliverable of integrated systems and is essential for effective organisational decision making.

Update

Part 1 outlined 4 major objectives in this area: systems integration, administrative content management system, Banner upgrade and the deployment of a collaborative suite to the distributed work environment. These projects have all moved forward.

The **HR and Finance Systems integration** has been reviewed by IBM with a recommendation to review the existing workflows and emPath system to determine a transition path to automating the work processes. Once the systems decision is made processes can transition on a prioritised basis.

The **Administrative Content Management System** has been piloted in the Human Resource department. The results have been inconclusive as to its abilities to act as the institutional content Management system (CMS). In addition, the desirability and feasibility of having one content system for both academic and non-academic content outweighs the development of this system in isolation. The initiative has therefore been merged with the CMS, dealt with under Learning and Research Systems, and will be directed by the needs of both groups’ requirements.

The **Banner upgrade** presents a significant challenge to the University. The requirement to customise the application due to the nature of our individualised continuous enrolment model and the further necessity to web enable its operation have made upgrading a very complex task. The plan below outlines the approach we have adopted to address this project.

A **groupware** review has been completed with a recommendation to adopt centrally supported collaborative software. The adoption and deployment of this software will extend to all the University’s staff and faculty the abilities of an enhanced productivity suite of communication and collaborative technologies that will improve their work experience and access to information. The plan outline is included below.

| Planned Administrative Systems Expenditures 2006-2011 | | | | | | |
|---|---------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Expense | Total | 2006/7 | 2007/8 | 2008/9 | 2009/10 | 2010/11 |
| Base Increase | \$ 1,857,394 | \$ 200,000 | \$ 356,700 | \$ 395,142 | \$ 440,770 | \$ 464,783 |
| One Time Increase | \$ 510,000 | \$ 285,000 | \$ 150,000 | \$ 75,000 | \$ - | \$ - |
| Capital Increases | \$ 678,000 | \$ 480,000 | \$ 100,000 | \$ 98,000 | \$ - | \$ - |
| Total Administrative Systems | \$ 3,045,394 | \$ 965,000 | \$ 606,700 | \$ 568,142 | \$ 440,770 | \$ 464,783 |

3.1 Student Information Systems Banner 7 Upgrade

Overview

The student information system is the application that provides the University with the ability to handle student administration. The Banner system is supported by an Oracle database and is web enabled by the Office of the Registrar Online Services (OROS) system - a custom built application.

Discussion

Banner, similar to other Student Information Systems (SIS), was designed for traditional universities and therefore modifications have been made to accommodate the unique business practices at AU. Banner upgrades have become quite cumbersome due to the amount of modifications that have been made to the baseline tables. It is necessary for AU to move closer to baseline (vanilla) Banner to ease future upgrades to newer versions of Banner. This will position AU to benefit from the enhancements made to newer versions. Our current version of Banner (5.3) will be de-supported with the current Oracle database (8i) in use. Therefore, AU must upgrade to a newer version of Oracle (10g). Upgrading to Banner 7 will improve performance and accountability, enhance access and service for students and staff, ease the distribution of client software, and improve web services. This will result in reduced costs, better reporting, ease of data conversions, and avoid process and data duplications. This project also supports initiatives set forth in the AU's Strategic University Plan (SUP) such as the distribution of the networked environment and the systems recovery plan (SRP).

Goal

Upgrade the current version of Banner 5.3 to Banner 7.x to keep version currency, attain improved functionality, web enable staff, and reduce resource cost to support and operate and to simplify the configuration to make the application upgrade friendly.

Objectives

- upgrade the current version of AU's student information system (SIS), Banner 5.3 to Banner 7.x version;
- prepare with SunGard SCT a readiness assessment;
- select either Banner Web product or the Office of the Registrar Online Services (OROS) to integrate Banner web services;
- integrate Centre for Innovative Management (CIM) and AU central to use the same instance of Banner;
- examine opportunities for AU to move closer to baseline. This will involve a thorough examination of the modifications that have been made to Banner baseline tables; and
- interfaces to Banner such as CODA Financials, Purchasing, TRIX and Course Materials Information System (CMIS) will also be considered as part of this project.

Budget

| Banner 7 Upgrade Gantt and Budget | | | | | | | | | | | | | | | | | | | | | |
|---|--------------------|------------|------------|------------|------------|------------|----|----|----|--------|----|----|----|---------|----|----|----|---------|----|----|----|
| Project | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | |
| | COST | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Project Timeline and Cost | \$ 655,000 | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$1,242,812 | \$ 297,000 | \$ 358,000 | \$ 307,648 | \$ 136,410 | \$ 143,754 | | | | | | | | | | | | | | | |
| Base Increase | \$ 438,363 | \$ 70,000 | \$ 74,200 | \$ 78,652 | \$ 104,931 | \$ 110,580 | | | | | | | | | | | | | | | |
| Dbase Administrator 0.5 FTE | | \$ 40,000 | \$ 42,400 | \$ 44,944 | \$ 47,641 | \$ 50,499 | | | | | | | | | | | | | | | |
| Business Analyst in Registry 0.5 FTE | | \$ 30,000 | \$ 31,800 | \$ 33,708 | \$ 35,730 | \$ 37,874 | | | | | | | | | | | | | | | |
| Maintenance on Server | | \$ - | \$ - | \$ - | \$ 21,560 | \$ 22,207 | | | | | | | | | | | | | | | |
| One Time Increase | \$ 380,000 | \$ 200,000 | \$ 120,000 | \$ 60,000 | \$ - | \$ - | | | | | | | | | | | | | | | |
| Readiness Assessment Engagement | | \$ 30,000 | \$ - | \$ - | \$ - | \$ - | | | | | | | | | | | | | | | |
| Business Process Review | | \$ 40,000 | \$ - | \$ - | \$ - | \$ - | | | | | | | | | | | | | | | |
| Project Management | | \$ 80,000 | \$ 80,000 | \$ 40,000 | \$ - | \$ - | | | | | | | | | | | | | | | |
| Systems analyst and programming resources | | \$ 50,000 | \$ 40,000 | \$ 20,000 | \$ - | \$ - | | | | | | | | | | | | | | | |
| Capital Increase | \$ 98,000 | \$ - | \$ - | \$ 98,000 | \$ - | \$ - | | | | | | | | | | | | | | | |
| Oracle Application Production server | | \$ - | \$ - | \$ 98,000 | \$ - | \$ - | | | | | | | | | | | | | | | |
| Incremental Cost | \$ 916,363 | \$ 270,000 | \$ 194,200 | \$ 236,652 | \$ 104,931 | \$ 110,580 | | | | | | | | | | | | | | | |

3.2 Transfer Credit Articulation Project

Discussion

This project will enable the conversion of all transfer credit information in the existing Access database and the Alberta Transfer Guide to Banner’s transfer credit module. A functional transfer credit module in Banner will offer the following benefits:

- evaluators need enter only the incoming course codes into Banner to determine if and what transfer credit has previously been awarded for the course presented;
- all students presenting the same course for transfer credit will receive the same credit;
- an overall improvement data accessibility since all information would be centrally located; and
- there would be flexibility to accommodate situations where more than one course may be required to earn transfer credit at Athabasca University.

The Office of the Registrar is also investigating using the electronic delivery of transcripts (EDI) as a means of eliminating the need for data entry of the external course work.

Another efficiency expected from the implementation of the transfer credit module is the automation of the “Transfer Credit Proposal” form sent to faculty requesting a review of courses from other institutions. In addition, the automated form will allow for the electronic storage and access of this information.

Objectives

The Transfer Credit Articulation System consists of three phases.

- Phase 1 includes the storage of the articulated data within the Banner Transfer Credit Module.
- Phase 2 involves the tracking and approval of new proposals for transfer credit including applications that allow staff and students to view articulation decision.
- Phase 3 is the reporting part of the project where the reporting requirements of the various users of the system are handled.

Budget

| Transfer Credit Articulation System Project Gantt and Budget | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-----------|--------|------------|----|----|--------|----|--------|----|--------|----|----|--------|---------|----|----|----|---------|----|----|----|----|--------|--|--|--|
| Project | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | | | | | | |
| | COST | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | | | | | |
| Project Timeline and Cost | \$198,000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$268,192 | \$ | \$ 131,000 | | | | \$ | 67,000 | | | | \$ | 22,048 | | | | \$ | 23,371 | | | | \$ | 24,773 | | | |
| Base Increase | \$ 69,994 | \$ | - | | | | \$ | 16,000 | | | | \$ | 16,960 | | | | \$ | 17,978 | | | | \$ | 19,056 | | | |
| Employee System support 0.2 FTE | | \$ | - | | | | \$ | 16,000 | | | | \$ | 16,960 | | | | \$ | 17,978 | | | | \$ | 19,056 | | | |
| One Time Increase | \$ - | \$ | - | | | | \$ | - | | | | \$ | - | | | | \$ | - | | | | \$ | - | | | |
| Capital Increase | \$ - | \$ | - | | | | \$ | - | | | | \$ | - | | | | \$ | - | | | | \$ | - | | | |
| Incremental Cost | \$ 69,994 | \$ | - | | | | \$ | 16,000 | | | | \$ | 16,960 | | | | \$ | 17,978 | | | | \$ | 19,056 | | | |

3.3 HEAT – Contact Tracking System

Discussion

The HEAT initiative was not identified in Part 1. The need became apparent as the student facing call centre activities did not have a common application to track contacts and resolve problems. The implementation of HEAT will enable an enterprise wide approach to dealing with student/stakeholder contacts providing both an efficient data gathering methodology while also facilitating the analysis of the contact information to improve responsiveness and call centre performance.

The University conducts call centre activities in a number of departments and centres within the University. These centres vary in size and scope. A list includes: Library Services, Facilities, Computer Services Help Desk, Information Services Call Centre, Counselling Call Centre, School of Computing and Information Science Help Desk, School of Business Call Centre, Assisted Student with Disabilities (ASD), Prior Learning Assessment and Recognition (PLAR), and the Office of the Ombudsman.

In addition, HEAT may be used by other departments to track tasks that are not student-related. Many of these currently have no tracking system at all.

Goal

To implement a University-wide student/stakeholder contact-tracking system which will facilitate excellent student/stakeholder service, provide information to improve University performance and enable the development of a student life-cycle relationship methodology.

Objectives

- deploy a University-wide student/stakeholder contact-tracking system;
- provide information to improve University performance;
- enable the development of a student life-cycle relationship methodology;
- interact with student/stakeholders more cost-efficiently;
- improve student attraction/retention;
- optimize marketing efforts and increase enrolment; and
- provide centres with an integrated and centrally supported system.

Budget

| HEAT Project Gantt and Budget | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|-------------------|------------|-----------|----|----|-----------|----|----|----|-----------|----|----|----|-----------|----|----|----|---------|----|----|----|
| Project Milestone | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | |
| | COST | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Project Timeline and Cost | \$263,000 | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$419,822 | \$ 150,000 | \$67,000 | | | \$76,680 | | | | \$61,706 | | | | \$64,436 | | | | | | | |
| Base Increase | \$ 171,238 | \$ - | \$ 36,000 | | | \$ 41,800 | | | | \$ 45,708 | | | | \$ 47,730 | | | | | | | |
| Employees 0.5 FTE | | | \$ 30,000 | | | \$ 31,800 | | | | \$ 33,708 | | | | \$ 35,730 | | | | | | | |
| Maintenance Contract | | | \$ 6,000 | | | \$ 10,000 | | | | \$ 12,000 | | | | \$ 12,000 | | | | | | | |
| One Time Increase | \$ 30,000 | \$ 15,000 | \$ - | | | \$ 15,000 | | | | \$ - | | | | \$ - | | | | | | | |
| Consulting/Purchased Services | | \$ 15,000 | \$ - | | | \$ 15,000 | | | | \$ - | | | | \$ - | | | | | | | |
| Capital Increase | \$ 80,000 | \$ 80,000 | \$ - | | | \$ - | | | | \$ - | | | | \$ - | | | | | | | |
| Additional Licenses | | \$ 30,000 | \$ - | | | \$ - | | | | \$ - | | | | \$ - | | | | | | | |
| Self Serve Module | | \$ 50,000 | \$ - | | | \$ - | | | | \$ - | | | | \$ - | | | | | | | |
| Incremental Operating Cost | \$ 281,238 | \$ 95,000 | \$ 36,000 | | | \$ 56,800 | | | | \$ 45,708 | | | | \$ 47,730 | | | | | | | |

3.4 Human Resource Information System (HRIS)

The University’s human resources represent over 65 percent of its annual budgeted expenditures. The management and development of this body of human capital requires an ever increasing sophistication of the tool set for human resource management.

Discussion

A review conducted by IBM indicates that the University must move a predominantly transaction focused and paper based technology to a knowledge based web enabled one. The existing workflows are labour intensive requiring excessive handling to ensure ongoing operations are handled effectively. Procedures and work practices require re-planning with the view to automation and system integration.

There has been little development of the system, outside of the payroll module since its initial deployment. A review by the IBM consultants in conjunction with the HR and Finance departments will determine if emPath is sufficiently capable to handle the current and planned requirements for HR capital management. Once the decision is made the projects will be established to transition the existing HR workflows to the computerised system.

Goal

To develop a Human Capital Management system that efficiently manages the activity flow, empowers stakeholders, and fosters the development of the human resources employed by Athabasca University.

Objectives

- review and implement improved business practices;
- reduce the resource cost of administrating Human Resource Policies;
- improve the information flow to stakeholders to facilitate timely decision making through the provision of workflow management tools; and
- facilitate the development of a human resources capital management capability.

Budget

| Human Resources Systems Project Gantt and Budget | | | | | | | | | | | | | | | | | | | | | |
|--|------------|--------|---------|----|---------|--------|---------|----|---------|--------|---------|----|----|---------|----|----|----|---------|----|----|----|
| Project | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | |
| | COST | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Project Timeline and Cost | 364000 | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$814,022 | \$ | 190,000 | \$ | 159,000 | \$ | 146,068 | \$ | 154,832 | \$ | 164,122 | | | | | | | | | | |
| Base Increase | \$ 563,709 | \$ | 100,000 | \$ | 106,000 | \$ | 112,360 | \$ | 119,102 | \$ | 126,248 | | | | | | | | | | |
| Employee 1 FTE HRIS Specialist | | \$ | 100,000 | \$ | 106,000 | \$ | 112,360 | \$ | 119,102 | \$ | 126,248 | | | | | | | | | | |
| One Time Increase | \$ 100,000 | \$ | 70,000 | \$ | 30,000 | \$ | - | \$ | - | \$ | - | | | | | | | | | | |
| Part time employees for backfill | | \$ | 40,000 | \$ | 30,000 | \$ | - | \$ | - | \$ | - | | | | | | | | | | |
| Process Review | | \$ | 30,000 | \$ | - | \$ | - | \$ | - | \$ | - | | | | | | | | | | |
| Capital Increase | \$ 150,000 | \$ | 150,000 | \$ | - | \$ | - | \$ | - | \$ | - | | | | | | | | | | |
| New System Contingency | | \$ | 150,000 | \$ | - | \$ | - | \$ | - | \$ | - | | | | | | | | | | |
| Incremental Cost | \$ 813,709 | \$ | 320,000 | \$ | 136,000 | \$ | 112,360 | \$ | 119,102 | \$ | 126,248 | | | | | | | | | | |

3.5.1 Contract Management System

Discussion

Managing contract information needs to be centralised into a core database. Currently electronic and paper files are maintained in various departments. Accessing up-to-date, accurate and critical contract information for management decision-making and reporting is difficult and time-consuming. The inability to readily access such information subjects the University to unnecessary risk. Five main contract related processes are currently under review:

- contracts for Service including general service contracts, Subject Matter Expert (SME) contracts, and instructional support contracts;
- collaboration agreements and Memorandum of Understanding (MOU)s;
- student practicum agreements;
- maintenance, software, licensing agreements, leases, and other miscellaneous agreements; and
- copyright, trademark, and ISBN agreements.

Goal

To implement a contract registry to effectively handle the contract needs of the University that is efficient and has low support requirements

Objectives

- identify institutional needs for the contract management process;
- determine an appropriate application;
- implement the application across the business units at Athabasca University; and
- provide accurate and timely reporting of contract status.

Budget

| Contract Registry Project Gantt and Budget | | | | | | | | | | | | | | | | | | | | | |
|--|-------------------|-----------|----|----|----|------------|----|----|----|-----------|----|----|----|-----------|----|----|----|-----------|----|----|----|
| Project | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | |
| | COST | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Project Timeline and Cost | \$10,000 | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$222,600 | \$133,000 | | | | \$42,000 | | | | \$15,400 | | | | \$15,862 | | | | \$16,338 | | | |
| Base Increase | \$ 43,273 | \$ - | | | | \$ - | | | | \$ 14,000 | | | | \$ 14,420 | | | | \$ 14,853 | | | |
| Maintenance Agreement | | \$ - | | | | \$ - | | | | \$ 14,000 | | | | \$ 14,420 | | | | \$ 14,853 | | | |
| One Time Increase | \$ - | \$ - | | | | \$ - | | | | \$ - | | | | \$ - | | | | \$ - | | | |
| Capital Increase | \$ 100,000 | \$ - | | | | \$ 100,000 | | | | \$ - | | | | \$ - | | | | \$ - | | | |
| Server | | \$ - | | | | \$ 30,000 | | | | \$ - | | | | \$ - | | | | \$ - | | | |
| Application Purchase | | \$ - | | | | \$ 70,000 | | | | \$ - | | | | \$ - | | | | \$ - | | | |
| Incremental Cost | \$ 143,273 | \$ - | | | | \$ 100,000 | | | | \$ 14,000 | | | | \$ 14,420 | | | | \$ 14,853 | | | |

3.5.2 Finance Systems Projects

The Finance Department will be undertaking three smaller projects with regard to the development of existing systems. Two of the projects relate to expanding the capabilities of the Cognos system with the third aimed at improving payment options for students and reducing merchant fees to the University.

3.5.2.1 ReportNet

Discussion

Cognos Enterprise Planning was implemented in 2004 and Phase II, Cognos ReportNet was initialized in 2005. Due to internal and external resource issues, ReportNet's evaluation was delayed and then put on hold until 2006. ReportNet is now slated for evaluation in 2006. Preparation is underway to define the scope and deliverable of this initiative.

Goal

To provide improved access to and quality of financial information to the University community.

Objectives

The major objectives for implementation of ReportNet are;

- evaluate ReportNet software functionality and technical fit;
- eliminate "paper flow" distribution for standard reports;
- provide flexible query capabilities to several identified users;
- allow data to be combined from multiple data sources for reporting purposes; and
- reduce efforts to produce external reports.

3.5.2.2 Online Payment Option

Discussion

Athabasca University's students currently register for courses and can pay admission fees online. This service is only available for credit card transactions. Expanding on-line payment options to direct debit transactions will provide both increased options to students and a reduction of merchant fees. Approximately \$50,000 in savings are obtainable annually if 12% of students switch from credit card to on-line direct pay option.

Objectives

- establish an on-line direct debit option for students;
- integrate option into AU systems; and
- reduce credit card merchant fees.

3.5.2.3 Variance and Forecasting Model

Discussion

The existing availability of financial information does not allow real time or near time access by budget holders in the University. The ability to make decisions is hampered by this constraint. The short-term solution has been for budget holders to create "shadow systems", which are generally spreadsheets of budget submissions that the user updates on an ongoing basis. While somewhat effective they require additional resources to maintain and create additional silos of information.

A variance and forecasting model will be deployed using Cognos Enterprise Planner which will provide financial information to facilitate short-term planning and decision making for budget holders.

Goal

The variance and forecasting model will allow cost reviews on a more timely basis, enabling a re-prioritization and re-allocation of resources thereby enhancing the accuracy of financial plans and the timeliness and quality of decision making

Objectives

- develop easy to use intuitive, responsive, and timely model;
- deploy to budget holders; and
- reduction in the use of shadow systems.

Budget

| Finance Systems Projects Gantt and Budget | | | | | | | | | | | | | | | | | | | | | |
|--|-------------------|--------|----|----|----|--------|----|----|----|--------|----|----|----|---------|----|----|----|---------|----|----|----|
| Project | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | |
| | COST | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Project Timeline and Cost | \$155,000 | | | | | | | | | | | | | | | | | | | | |
| ReportNet | \$40,000 | | | | | | | | | | | | | | | | | | | | |
| Variance & Forecasting Model | \$50,000 | | | | | | | | | | | | | | | | | | | | |
| Bank Pay Option | \$65,000 | | | | | | | | | | | | | | | | | | | | |
| Total Project Cost | \$155,000 | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$264,675 | | | | | | | | | | | | | | | | | | | | |
| Base Increase | \$ 109,365 | | | | | | | | | | | | | | | | | | | | |
| Bank Charges for online payment | | | | | | | | | | | | | | | | | | | | | |
| One Time Increase | \$ - | | | | | | | | | | | | | | | | | | | | |
| Capital Increase | \$ - | | | | | | | | | | | | | | | | | | | | |
| Incremental Cost | \$ 109,365 | | | | | | | | | | | | | | | | | | | | |

3.6 Groupware system

Overview

Our distributed workforce requires access to AU services from many locations with differing network bandwidths. The existing tool set provided by AU will not be sufficient for this workforce to access their knowledge assets or to work collaboratively with their peer groups. A richer environment is required. One that also supports the growth of mobile devices which will grow significantly over the planning period.

Discussion

The University has no centrally provided source of groupware or collaborative software. Lotus Notes is used by approximately 20 percent of the organisation’s staff, mainly in the business faculties. There are centrally supported email and calendaring systems however an integrated application which includes discussion forum and document sharing capabilities has not been deployed. The increasing requirement to provide external access to AU assets and services is driving the need to establish a central groupware capability.

A review engagement was undertaken by Online Business Solutions to determine the best approach. Groupware contains the following functionality: e-mail, individual and group; calendar, individual and group; work flow management; document processing and management; and synchronous and asynchronous conferencing.

Goal

To provide a rich virtual environment for effective online communications, collaboration, and knowledge sharing.

Objectives

- select Groupware compatible with AU systems;
- implement on a rolling basis;
- transfer existing systems to groupware;
- determine groupware abilities to manage documents; and
- provide mobile device support.

Budget

| Groupware System Project Gantt and Budget | | | | | | | | | | | | | | | | | | | | | |
|---|------------|------------|------------|------------|------------|------------|----|----|----|--------|----|----|----|---------|----|----|----|---------|----|----|----|
| Project | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | |
| | COST | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Project Timeline and Cost | \$397,000 | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$ 861,891 | \$ 301,000 | \$ 129,350 | \$ 136,331 | \$ 143,707 | \$ 151,502 | | | | | | | | | | | | | | | |
| Base Increase | \$ 461,455 | \$ 30,000 | \$ 99,500 | \$ 104,870 | \$ 110,544 | \$ 116,540 | | | | | | | | | | | | | | | |
| Employee 1 FTE System Administrator | | \$ 30,000 | \$ 79,500 | \$ 84,270 | \$ 89,326 | \$ 94,686 | | | | | | | | | | | | | | | |
| Maintenance Contract | | \$ - | \$ 20,000 | \$ 20,600 | \$ 21,218 | \$ 21,855 | | | | | | | | | | | | | | | |
| One Time Increase | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | | | | | | | | | | | | | | | |
| Capital Increase | \$ 250,000 | \$ 250,000 | \$ - | \$ - | \$ - | \$ - | | | | | | | | | | | | | | | |
| Application Purchase | | \$ 100,000 | \$ - | \$ - | \$ - | \$ - | | | | | | | | | | | | | | | |
| System Hardware | | \$ 130,000 | \$ - | \$ - | \$ - | \$ - | | | | | | | | | | | | | | | |
| Application Commissioning Costs | | \$ 20,000 | \$ - | \$ - | \$ - | \$ - | | | | | | | | | | | | | | | |
| Incremental Cost | \$ 711,455 | \$ 280,000 | \$ 99,500 | \$ 104,870 | \$ 110,544 | \$ 116,540 | | | | | | | | | | | | | | | |

Section 4. Computing Systems Development Plan

Overview

The thrust of the plan will be to sustain the existing ITS services and to create additional opportunities by developing key infrastructural components. An overarching theme will be to reduce the complexity of the computing systems to simplify the infrastructure. System complexity grows multiplicatively with the addition and integration of more sub-systems; the complexity factor increases with customisation of systems. The desire to tailor applications to match users' requirements must be seen in the larger picture of the potential long-term impacts such customisation will have on the ability for applications to stay current. The projected outcome is that we will be able to deploy technology at a rate that is consistent with users' requirements.

Update

The Systems Recovery Plan (SRP) has undergone significant redrafting due to a reorientation of the purpose of the plan. Originally it was intended to provide an emergency recovery capability in the event of a catastrophic event. Upon review it was determined that the sustainability of this approach was not viable and that it would excessively burden ongoing operations with restrictive requirements for conformance. The approach outlined below is to incorporate SRP into a broader strategy of system availability and to view the provision of emergency backup services as an integral part of operationalising systems as opposed to having a separate redundant structure.

The introduction of a PMI based **project management** methodology is significantly improving performance of ITS projects. Training has been given to key members of the ITS group and continued training will be given over the coming period. In addition, the hiring of project coordinators in Registry, Finance/HR and Computing Services has also created a dynamic for more formal and structured project shandling. The project phase of this initiative has been successfully completed and we are now in the operational phase. This is not to imply that the systems are complete, rather that the improvements are as a result of operational improvements rather than as part of the implementation project.

The ITS Computing committee oversaw the development of an RFP consisting of a three year contract for computer equipment and services. The goal of the RFP is to establish a **strategic vendor relationship** to facilitate a significant improvement in the value the University receives in relation to computing infrastructure. The plans for implementing and operationalising these initiatives are outlined below.

| Planned Computing Systems Expenditures 2006-2011 | | | | | | |
|--|---------------------|---------------------|---------------------|---------------------|-------------------|-------------------|
| Expense | Total | 2006/7 | 2007/8 | 2008/9 | 2009/10 | 2010/11 |
| Base Increase | \$ 2,870,706 | \$ 258,000 | \$ 478,300 | \$ 615,061 | \$ 733,094 | \$ 786,251 |
| One Time Increase | \$ 593,274 | \$ 224,000 | \$ 155,900 | \$ 89,327 | \$ 60,782 | \$ 63,265 |
| Capital Increases | \$ 4,347,200 | \$ 2,044,000 | \$ 1,068,000 | \$ 693,600 | \$ 268,400 | \$ 273,200 |
| Total Computing Systems | \$ 7,811,180 | \$ 2,526,000 | \$ 1,584,200 | \$ 1,274,388 | \$ 933,876 | \$ 989,516 |

4.1 Hardware Evergreening

Discussion

The computer evergreening practice is to replace workstations, servers, data storage devices and network switches on an ongoing basis. The length of the replacement cycle is dependent on several factors: the nature of the use of the equipment, the manufacturer’s warranty, internal and external system dependencies and technological developments are chief among the drivers to update technological assets.

The practice at AU is to replace assets as per the following table

| | |
|--------------------------------------|---------|
| PC workstations and laptops | 4 years |
| PC high end workstations | 3 years |
| Printers | 5 years |
| Servers , networks, and data storage | 5 years |

The replacement of assets is staggered to ensure an even flow of work for the Computing Services unit and to avoid having a singular transfer once every 4 to 5 years with the disruption that would entail.

The cost of replacement is driven by the number of users, the functionality of the systems provided and the volume of data transacted throughout the system. The estimates below reflect the current position and the projected growth of the University over the planning period; these are consistent with the University’s strategic and operating plans.

The server evergreening costs are not directly driven by operational scale and do not respond quickly to changes in operating position. This equipment is capital and will require funding on an ongoing basis to ensure continued service, it is therefore included in the composite budget totals.

The tables below show the annual evergreening costs of the and capital infrastructure. There is an allowance of 10 percent growth included in the estimates. The cost of equipment is held constant as the same dollar amount will purchase improved equipment and no inflation is necessary. Also the evergreening factor is held constant. The annual estimates for these assets are:

| Computer Server and Network Equipment Evergreening Costs | | | | | | | | | | | |
|---|-----------|------------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|
| 2006/7 | | | | 2007/8 | | 2008/9 | | 2009/10 | | 2010/11 | |
| No. of devices | Age. Cost | Evergreen Factor | Yearly Cost | No. of devices | Yearly Cost | No. of devices | Yearly Cost | No. of devices | Yearly Cost | No. of devices | Yearly Cost |
| 80 | 6000 | 0.2 | 114000 | 88 | 118000 | 92.4 | 123600 | 97 | 128400 | 102 | 133200 |
| Total | | | \$ 114,000 | | \$ 118,000 | | \$ 123,600 | | \$ 128,400 | | \$ 133,200 |

Additional evergreening costs will accrue due to the systems developments outlined in this plan. Each of these has an evergreening component in the cost estimates. Thus as each development is implemented the evergreening cost will be added to the master evergreening schedule.

4.1.1 Consolidation of Computer Purchases

Discussion

Purchasing of ITS resources will be approached from a strategic standpoint. The goal here is to obtain increased value for AU through the attainment of improved services and/or cost reductions. The grouping of large purchase volumes will enable the creation of purchasing power. This strategy will provide a stronger negotiation position with interested vendors. By determining what services are of significant value to AU, the University can then effectively use its strengthened negotiating position in order to obtain higher value. The value of particular vendors can only be determined by a thorough determination of AU's needs, a partnering approach, and open and frank negotiations with selected vendors.

It is estimated that the value of foregone activities will more than cover the additional monitoring costs. Costs savings identified include acquisition, asset management and commissioning, an initial estimate of the direct cost savings are approximately \$150,000 over the three year contract. In addition there are many intangible benefits such as:

- improved service levels to users;
- consolidation of inventory;
- local repair/service options to distributed workforce; and
- simplification of acquisition process.

Budget

The cost of developing and maintaining the initial contract is calculated to be \$45,000 absorbed cost or \$27,000 incremental cost over 3 years. Should the contract require re-tendering there will be additional costs incurred to renegotiate and to integrate with a new vendor. These costs are estimated to be \$25,500 absorbed and \$17,000 incremental. These costs will be offset by the savings generated by the value and/or cost savings from consolidated purchasing.

4.2 Enhanced Infrastructure

A new initiative has been established with the intention of upgrading the University's network and communications infrastructure, including upgrading the telecommunications network, extending the wireless network across the University's facilities, replacing end of life equipment, and implementing virtualised server architecture. The plan below outlines the specific projects to complete the installation of these capabilities.

The infrastructural upgrades are dealt with into the following categories:

- Hardware deals with server and storage infrastructure
- Network is dealt with in two sections
 - Local Area Network (LAN) covers the internal networking within the University
 - Wide Area Network (WAN) includes the networking required to enable our access to external networks such as the Internet.
- Telecommunications deals with the provision of telephone services

Goal

Continue to provide a highly available data and communications network that supports Athabasca University's growth and provide the infrastructure to enable new technologies such as wireless access, VoIP, and videoconferencing.

Projects

4.2.1 Enhanced Local Area Network Infrastructure

The growth in online content will require improved network services and capacities. This work has already begun with the deployment of wireless services within AU. The planned developments will provide additional capacities and capabilities to provide increased opportunities for operational, learning, teaching and research purposes. In addition the network upgrade will build in redundancy to ensure continuous service.

Discussion

The current local area network consists of:

- A switched 1 Gigabit per second⁹ (Gbps) backbone at AU Central and ELC, with switched 100 Megabit per second (Mbps) service to end user devices.
- Servers have a mix of 1 Gbps and 100 Mbps connections.
- CLC has a shared 10 Mbps network.
- There is redundancy in the core network switches at AU Central, but a number of single points of failure exist in the LAN.
- Limited (pilot) wireless network access is available at AU Central and ELC.
- Quality of Service (QoS) functionality has not been implemented in the LAN. Most of our network hardware has this capability, but some of the older equipment does not.
- Tools to monitor the health and performance of our network have not been implemented.

Objectives

- maintain and enhance network infrastructure;
- maintain and enhance network service levels;
- deploy wireless LAN;

⁹ Gigabit and Megabit are measures of bandwidth on a digital network Gbps is equal to a billion bits per second or 1,000 Mbps per second.

- implement network monitoring tools;
- ensure network supports the SRP; and
- implement QoS to support VoIP and videoconferencing.

Projects

Each of the elements listed in the strategy will be addressed as separate projects.

Current plans are:

- Deploy wireless LAN at all AU locations.
- Implement QoS in 2006 to support VoIP pilot.
- Implement network monitoring system.
- Upgrade to a 10 Gbps backbone at AU Central.

4.2.2 Enhanced Wide Area Network Infrastructure

Discussion

Currently, we have interoffice connectivity among AU Central, ELC, and CIM at 60 Mbps and CLC at 40 Mbps over the Alberta SuperNet. Internet access is provided by a direct fibre connection to Telus at 10 Mbps. There is not enough bandwidth to perform videoconferencing with locations outside of AU. Athabasca University is not connected to NeteraNet at this time.

The network routers/firewalls have redundancy, but there are a number of single points of failure in our wide area network infrastructure.

The VPN access into our network must be enhanced and expanded to handle increased external use from remote staff and/or drop-in wired/wireless connections to secure internal information.

Objectives

- upgrade the existing network infrastructure to provide reliable Internet and interoffice (Intranet) connections;
- establish NeteraNet connectivity over SuperNet,;
- provide secure access into the AU network for the networked workforce through an enhanced Virtual Private Network (VPN); and
- increase bandwidth capacity to support the systems recovery plan (SRP) and videoconferencing.

Key Projects

Each of the elements listed in the strategy will be addressed as separate projects:

- Establish Internet connection via SuperNet with increased bandwidth.
- Establish NeteraNet connection via SuperNet.
- Scale back Telus connections and configure to act as failover.
- Replace VPN equipment.
- Add additional interoffice bandwidth to support SRP project.

4.2.3 Telecommunications

Discussion

Currently the University operates Nortel Meridian Private Branch Exchange (PBX) systems at AU Central, ELC, and CLC. At the CIM, telephone service is provided by Centrex service from Telus. Each PBX has its own voicemail system and the systems have proved to be very reliable. The software on the PBX systems is not current, and the voicemail system is no longer supported by the manufacturer. The PBX systems can currently provide only limited call centre functionality, like local automatic call distribution (ACD) and reporting.

The growing requirement for a more integrated telephone service combined with the requirement to replace the existing infrastructure affords an opportunity to implement a substantial upgrade in functionality to the telephone services.

Objectives

- continue to provide highly reliable telephone service at AU locations with the capability to handle growth and co-location of ELC and CIM;
- deliver additional features and functions, especially for call centre areas and the networked workforce;
- reduce the administration workload of the telephony systems; and
- implement strategies to provide high availability and system recovery.

Projects

Each of the elements listed in the strategy will be addressed as separate projects.

Current project plans are being developed to implement the following:

Implement PBX and voicemail upgrades.

Evaluate and pilot hosted call centre.

Evaluate and pilot VoIP technology for staff at AU locations.

Evaluate and pilot unified messaging.

Evaluate and pilot VoIP technology for networked workforce.

Implement telephony and computing network convergence.

4.2.4 Hardware

Discussion

The hardware upgrades listed below are additional to the requirements outlined in the server evergreening projections above. The upgrades will provide for the continued uninterrupted service of core services.

A new initiative which will address “server sprawl”: the requirement to locate applications on individualised servers. The use of virtual server technology will facilitate the consolidation of services by enabling the serving of multiple applications from a single server and thereby reducing the server hardware requirement

Objectives

- replacement of Oracle database server;
- replacement for Uninterrupted Power Supply (UPS);
- research high availability servers; and
- implement virtual server architecture.

Budget

| Infrastructure Upgrades Gantt and Budget | | | | | | | | | | | | | | | | | | | | | |
|--|---------------------|--------|----|----|----|--------|----|----|----|--------|----|----|----|---------|----|----|----|---------|----|----|----|
| Project | COST | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | |
| | | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| LAN Projects | \$125,000 | | | | | | | | | | | | | | | | | | | | |
| Full Secure Wireless Deployment | \$210,000 | | | | | | | | | | | | | | | | | | | | |
| Core Network Upgrade | \$190,000 | | | | | | | | | | | | | | | | | | | | |
| Quality of Service | \$30,000 | | | | | | | | | | | | | | | | | | | | |
| Wan Projects | \$125,000 | | | | | | | | | | | | | | | | | | | | |
| VLAN VPN deployment | \$60,000 | | | | | | | | | | | | | | | | | | | | |
| NeterraNet over SuperNet | \$50,000 | | | | | | | | | | | | | | | | | | | | |
| Internet over SuperNet | \$15,000 | | | | | | | | | | | | | | | | | | | | |
| Telecommunications | \$670,000 | | | | | | | | | | | | | | | | | | | | |
| implement PBX and voicemail upgrades | \$240,000 | | | | | | | | | | | | | | | | | | | | |
| Integrate Telephony and computing networks PBX upgrade | \$350,000 | | | | | | | | | | | | | | | | | | | | |
| evaluate and pilot hosted call centre | \$20,000 | | | | | | | | | | | | | | | | | | | | |
| evaluate and pilot VoIP technology for staff at AU locations | \$15,000 | | | | | | | | | | | | | | | | | | | | |
| evaluate and pilot unified messaging | \$25,000 | | | | | | | | | | | | | | | | | | | | |
| evaluate and pilot VoIP technology for networked workforce | \$20,000 | | | | | | | | | | | | | | | | | | | | |
| Hardware | \$680,000 | | | | | | | | | | | | | | | | | | | | |
| Database server replacement | \$400,000 | | | | | | | | | | | | | | | | | | | | |
| Oracle enterprise wide license | \$210,000 | | | | | | | | | | | | | | | | | | | | |
| UPS replacement | \$50,000 | | | | | | | | | | | | | | | | | | | | |
| Research High Availability Servers | \$20,000 | | | | | | | | | | | | | | | | | | | | |
| Total Project Cost | \$1,600,000 | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$ 2,445,500 | | | | | | | | | | | | | | | | | | | | |
| Base Increase | \$ 320,000 | | | | | | | | | | | | | | | | | | | | |
| PBX Maintenance | | | | | | | | | | | | | | | | | | | | | |
| One Time Increase | \$ 215,000 | | | | | | | | | | | | | | | | | | | | |
| Implementation Services Wireless | | | | | | | | | | | | | | | | | | | | | |
| Implement Network Quality of Service | | | | | | | | | | | | | | | | | | | | | |
| NeterraNet over SuperNet | | | | | | | | | | | | | | | | | | | | | |
| Internet over SuperNet | | | | | | | | | | | | | | | | | | | | | |
| evaluate and pilot hosted call centre | | | | | | | | | | | | | | | | | | | | | |
| evaluate and pilot VoIP technology for staff at AU locations | | | | | | | | | | | | | | | | | | | | | |
| evaluate and pilot unified messaging | | | | | | | | | | | | | | | | | | | | | |
| evaluate and pilot VoIP technology for networked workforce | | | | | | | | | | | | | | | | | | | | | |
| Capital Increase | \$ 1,630,000 | | | | | | | | | | | | | | | | | | | | |
| Core Network Upgrade 10Gigabit | \$ - | | | | | | | | | | | | | | | | | | | | |
| Wireless Network Implementation | \$ - | | | | | | | | | | | | | | | | | | | | |
| PBX Upgrade | \$ - | | | | | | | | | | | | | | | | | | | | |
| PBX network integration | \$ - | | | | | | | | | | | | | | | | | | | | |
| Vlan Equipment | \$ - | | | | | | | | | | | | | | | | | | | | |
| NeteraNet over SuperNet | \$ - | | | | | | | | | | | | | | | | | | | | |
| Database server replacement | \$ - | | | | | | | | | | | | | | | | | | | | |
| Oracle enterprise wide license | \$ - | | | | | | | | | | | | | | | | | | | | |
| UPS replacement | \$ - | | | | | | | | | | | | | | | | | | | | |
| Research High Availability Servers | \$ - | | | | | | | | | | | | | | | | | | | | |
| Incremental Cost | \$ 2,165,000 | | | | | | | | | | | | | | | | | | | | |

4.3 Enhanced Data accessibility - Storage Array Network

An initiative coming out of the computing visioning forum is the implementation of a storage array network. This technology will provide the University with a greatly enhanced data architecture which will add significantly to the user experience while providing data redundancy in the event of a compromising event.

Discussion

Currently, data storage and data backup are decentralized and inefficient. Each server is purchased with locally attached storage plus a hot spare drive in case of failure.

Another issue is duplication and inefficiencies in our tape backup processes. Restores from tapes are a manual, CS-operator process, and are very labour intensive. Users have no ability to write directly to tape for archival purposes, or to recover data from tape..

The provision of centralised data architecture will enable a more effective and efficient SRP to be developed which will ensure data integrity and high availability.

A fourth issue is the lack of existing disk space and its flexibility for remote access. As we move to a more networked organization, and as we implement a collaborative groupware solution, safe, secure, and accessible PC data become critical.

Goal

Implement a highly available data architecture to facilitate a seamless experience for users to gain access to their data that is congruent with the requirements of the SRP.

Objectives

- devise and implement a data storage architecture which is be highly available, flexible, efficient, sustainable, scalable, and disaster-resilient;
- migrate existing servers in a reasonable timeframe, and to utilize the new data architecture for all new server acquisitions;
- implement a tape backup and recovery architecture which reduces manual labour, and which allows direct end-user storage and recovery; and
- provide central, scalable, secure, accessible storage for PC storage.

Budget

| Storage Array Network Gantt and Budget | | | | | | | | | | | | | | | | | | | | | |
|--|---------------------|------------|------------|----|----|------------|----|----|----|------------|----|----|----|------------|----|----|----|---------|----|----|----|
| Project Milestone | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | |
| | COST | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Project Timeline and Cost | \$ 1,441,400 | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$ 2,056,698 | \$ 954,400 | \$ 247,000 | | | \$ 279,950 | | | | \$ 285,049 | | | | \$ 290,300 | | | | | | | |
| Base Increase | \$ 727,544 | \$ 100,000 | \$ 150,000 | | | \$ 154,500 | | | | \$ 159,135 | | | | \$ 163,909 | | | | | | | |
| Maintainance Contract (3% inflation) | | \$ 100,000 | \$ 150,000 | | | \$ 154,500 | | | | \$ 159,135 | | | | \$ 163,909 | | | | | | | |
| One Time Increase | \$ 10,000 | \$ 10,000 | \$ - | | | \$ - | | | | \$ - | | | | \$ - | | | | | | | |
| Systems Integration | | \$ 10,000 | | | | | | | | | | | | | | | | | | | |
| Capital Increase | \$ 1,150,000 | \$ 800,000 | \$ 50,000 | | | \$ 100,000 | | | | \$ 100,000 | | | | \$ 100,000 | | | | | | | |
| SAN Hardware | | \$ 650,000 | \$ - | | | | | | | | | | | | | | | | | | |
| Annual evergreening of disk space | | | \$ - | | | \$ 100,000 | | | | \$ 100,000 | | | | \$ 100,000 | | | | | | | |
| SAN Commissioning and peripherals | | \$ 150,000 | \$ 50,000 | | | | | | | | | | | | | | | | | | |
| Incremental Cost | \$ 1,887,544 | \$ 910,000 | \$ 200,000 | | | \$ 254,500 | | | | \$ 259,135 | | | | \$ 263,909 | | | | | | | |

4.4 Video Conferencing

Discussion

The enabling capabilities of Video Conferencing (VC) to improve the communications among the distributed community are an essential tool set. In addition the requirement to interact with external stakeholders using a VC platform has grown and we are now in a position to have to play catch-up to provide the same service.

The Alberta Government will be rolling out shared IP video conferencing services to 2000 educational institutes in Alberta over the next 3 years. Because these services will be heavily subsidized by the government, Alberta learning institutes will have a unique opportunity to “try and buy” video conferencing in their own environments.

To assist the process a review engagement was undertaken by BCS Global Networks Inc. This engagement combined a broad consultation to identify needs with a review of the potential solutions available to the University. The report summarised the needs to AU.

The key anticipated benefits are:

- faculty Training cost reduction and convenience;
- synchronous Learning Course Delivery cost;
- admin & Governance to increase collegiality;
- course Development cost reduction;
- AU advancement potential with external stakeholders;
- improved inter and intra institute collegiality;
- improved course value and differentiation;
- reduced delivery cost base through exploration of new business models; and
- alignment of research focus with core AU strategy.

The precise specifications for the infrastructure required by the AU community will need further definition to ensure a sustainable infrastructure will provide the required level of service to attain the anticipated benefits.

Goal

To trial and implement a university wide collaborative video communications service which will facilitate governance and decision-making; university outreach, professional and staff development.

Objectives

- pilot videoconferencing;
- develop full implementation plan;
- implement capability University wide; and
- maintain and expand service.

Budget

The project Gantt and budget is based on the assumptions that the pilot will prove successful and will help further define the needs of the technology specifications for a full deployment. The growth shown in the budget represents continued expansion of services and usage by the community.

| Video Conferencing Project Gantt and Budget | | | | | | | | | | | | | | | | | | | | | |
|--|---------------------|--------|----|----|----|--------|----|----|----|--------|----|----|----|---------|----|----|----|---------|----|----|----|
| Project | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | |
| | COST | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Phase 1: Benefit Potential Assessment | \$942,000 | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$1,482,720 | | | | | | | | | | | | | | | | | | | | |
| Base Increase | \$ 772,477 | | | | | | | | | | | | | | | | | | | | |
| Employee 1 FTE Room support | | | | | | | | | | | | | | | | | | | | | |
| Bridging Fees | | | | | | | | | | | | | | | | | | | | | |
| WAN Connections to Rooms | | | | | | | | | | | | | | | | | | | | | |
| WAN Connections Bridged Locations | | | | | | | | | | | | | | | | | | | | | |
| One Time Increase | \$ 45,000 | | | | | | | | | | | | | | | | | | | | |
| Engage Facilitator | | | | | | | | | | | | | | | | | | | | | |
| Capital Increase | \$ 420,000 | | | | | | | | | | | | | | | | | | | | |
| Cameras Monitors and Network Equipment | | | | | | | | | | | | | | | | | | | | | |
| Retrofit Rooms - Lighting | | | | | | | | | | | | | | | | | | | | | |
| Retrofit Rooms - Sound | | | | | | | | | | | | | | | | | | | | | |
| WAN Connection Upgrades | | | | | | | | | | | | | | | | | | | | | |
| Incremental Cost | \$ 1,237,477 | | | | | | | | | | | | | | | | | | | | |

4.5 User support

Overview

The advancement of systems capabilities is critically dependent on the user's abilities to understand and operate the system. User support is therefore a critical enabler to systems adoption and utilisation. Support will be provided in three forms:

- Help Desk
- Workstation
- Training

The University has a Computing Services Help Desk and PC unit in operation which has been very successful with very high satisfaction ratings from users. Our intention in this plan is to build upon this success by undertaking a twofold approach. Firstly to improve the operation of the Help Desk by providing additional systems support and secondly to lower the requirement for Help Desk services by providing improved support through the introducing of a training resource to help employees to be more productive in their use of the technology.

4.5.1 User support - Help Desk

Discussion

The CS Help Desk plays the predominant role in supporting ITS services to AU stakeholders. The regular satisfaction survey index in the high 90's is testament to their success in this regard. The growth in the University has been reflected in the Help Desk with a current compliment of 6 FTE staff supporting the user community. The current model of homogenous capability is no longer operable for two primary reasons. Firstly the growth of systems complexity has made knowledge of all systems an extremely lengthy process of training and secondly the number of operators allows for a better division of activities.

The Help Desk will be restructured with a view to dividing tasks along Help Desk Analyst (HDA) capabilities and experience. Thus the newer staff members will handle the easier and more routine functions leaving complex queries to the more experienced analysts. HDA training will be provided on an ongoing basis with specific application support training being given to each HDA on an institutional requirement basis. By organising Help Desk in this manner we achieve several key objectives:

- more efficient use of resources;
- improved morale among Help Desk personnel;
- improved training;
- knowledge sharing and backup of resources for vacations;
- easier path for new hires to effectively service users; and
- the new structure will not have incremental costs.

Over the period, registrations are projected to increase by a cumulative 35% or 17,000; this will require three additional Help Desk resources at the current service rates. There is no plan, at this time, to extend the service hours as the very high satisfaction ratings for Help Desk services indicate an acceptance of the hours of service. Further to this, the call volumes indicate that the Help Desk hours are meeting the call volume patterns.

4.5.2 User support - Workstation

Workstation support is provided by the PC unit it includes hardware and software asset management and system deployment. The following initiatives will be implemented to improve user experience and service level.

- Client Backup (Central File Storage)
- Video (Web) conferencing PC hardware and software
- Print Services
- AntiSpyware/AntiVirus

4.5.2.1 Client Backup (Central File Storage)

Discussion

Currently there is a great deal of University data stored on workstations, and in most cases this data is backed up by the user or not backed up at all. There is some use of the institutional file server for important documents, but there are space limitations that prevent all University data from being stored in this manner, and it is not always a good option for remote/mobile users.

Goal

Implement a seamless method of storing all University data such that it is regularly backed up in a reliable and consistent manner, and is readily accessible to remote and mobile users.

Objectives

- deploy automated backup;
- develop central data archiving structures; and
- enable client retrieval of archived data.

4.5.2.2 Video (Web) conferencing PC hardware and software

Discussion

Currently we have no standard for audio/video hardware or software to allow AU staff to participate in videoconferencing or web conferencing. Desktop web cameras and microphone headsets will be required as we move to adopt video conferencing enhanced services.

Objectives

Select and implement suitable products for desktop web and video conferencing, compatible with the AU videoconferencing infrastructure.

4.5.2.3 Print Services

Discussion

All printing from clients is currently sent directly to printers, and driver installs and updates are performed in a manual way. This does not allow for regular or timely updates to print drivers and can have a significant time impact on staff (CS and clients) when new printers are deployed.

Goal

Provide a server based solution to allow for automated installation/setup of standard printers based on department or location.

Objectives

- easy client initiated printer installs for other network printers;
- automatic updates of drivers on client PCs; and
- automatic replacement of printer drivers when printers are replaced/evergreened.

4.5.2.4 AntiSpyware/AntiVirus

Discussion

We currently deploy McAfee as our standard workstation antivirus solution. It has performed well since its initial implementation, nonetheless it is time to review our existing solution with other developments to determine the relative effectiveness of the McAfee product. We can take this opportunity to review the antispysware requirement with the intention of deploying a common solution to increase the protection to workstations without creating increased administrative overhead.

Goal

Implement an antipyware capability combined with an antivirus capability to reduce the potential for system intrusion by third parties.

4.5.3 User Support - Training and Development

Overview

Training is an essential activity to the effective development and implementation of IT enabled systems. The changes outlined in the ITS plans will require a coordinated approach to institutional training of ITS skills.

Discussion

Unfortunately, training has been an activity that has proven very difficult to make benefits tangible in hard numbers, particularly in a predominantly professional environment. Nonetheless it is taken as given that the failure to train users effectively will result in excessive deployment times, poor application performance, deterioration in student/stakeholder service, increased Help Desk call volume and increased requests for system upgrades. The value of organised and targeted training is of a very significant order and it is an underpinning of the ITS systems development strategy to provide such training for the AU user community.

Upon the approval of the ITS plan an ITS trainer was hired in the Fall of 2005 to help improve user performance. This has provided a pivotal resource to help both formulate and administer training of fundamental ITS skills to the AU community. The ITS trainer has carried out a needs analysis by interviewing staff, faculty and managers across the University. The analysis yielded the areas of skill shortages, poor performance and lack of knowledge. These interviews combined with a review of the operational systems at AU culminated in the objectives and strategies and activities outlined below, which will address the needs of the AU community over the coming period.

Objectives

The objectives of this IT Training Plan are:

- Identify the technologies staff use and require training in;
- Identify target staff groups, and describe their training profiles and needs;
- Identify training resources required to implement the Plan;
- Set priorities for training within actual resource limitations;
- Outline a strategy and schedule for IT training at AU; and
- Leverage technology in the IT training of staff.

Budget

| User Support Gantt and Budget | | | | | | | | | | | | | | | | | | | | | |
|---|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Project | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | |
| | COST | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Help Desk Support | \$16,000 | | | | | | | | | | | | | | | | | | | | |
| Reorganise Help Desk Structure | \$10,000 | | | | | | | | | | | | | | | | | | | | |
| Hire Additional Help Desk Analyst | \$2,000 | | | | | | | | | | | | | | | | | | | | |
| Hire Additional Help Desk Analyst | \$2,000 | | | | | | | | | | | | | | | | | | | | |
| Hire Additional Help Desk Analyst | \$2,000 | | | | | | | | | | | | | | | | | | | | |
| Workstation Support | \$175,000 | | | | | | | | | | | | | | | | | | | | |
| Client Backup (Central File Storage) | \$30,000 | | | | | | | | | | | | | | | | | | | | |
| Video(Web)conferencing PC hardware and software | \$50,000 | | | | | | | | | | | | | | | | | | | | |
| Print Services | \$30,000 | | | | | | | | | | | | | | | | | | | | |
| AntiSpyware/AntiVirus | \$65,000 | | | | | | | | | | | | | | | | | | | | |
| ITS Training Support | \$48,000 | | | | | | | | | | | | | | | | | | | | |
| Research and Acquire Training materials | \$20,000 | | | | | | | | | | | | | | | | | | | | |
| Design and Launch Courses | \$12,000 | | | | | | | | | | | | | | | | | | | | |
| Design and Implement Communities of practice | \$16,000 | | | | | | | | | | | | | | | | | | | | |
| Total Project Cost | \$239,000 | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$1,141,952 | | | | | | | | | | | | | | | | | | | | |
| Base Increase | \$ 632,117 | | | | | | | | | | | | | | | | | | | | |
| AntiSpyware/AntiVirus maintenance contract | | \$ - | \$ - | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 |
| Employee HDA 1FTE (covered in Moodle plan) | | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Employee HDA 1FTE | | \$ - | \$ - | \$ 46,000 | \$ 48,760 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 |
| Employee HDA 1FTE | | \$ - | \$ - | \$ - | \$ 48,760.00 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 | \$ 51,686 |
| Employee ITS Trainer | | \$ 60,000 | \$ 63,600 | \$ 67,416 | \$ 71,461 | \$ 75,749 | \$ 75,749 | \$ 75,749 | \$ 75,749 | \$ 75,749 | \$ 75,749 | \$ 75,749 | \$ 75,749 | \$ 75,749 | \$ 75,749 | \$ 75,749 | \$ 75,749 | \$ 75,749 | \$ 75,749 | \$ 75,749 | \$ 75,749 |
| Training related materials | | \$ 3,000 | \$ 3,200 | \$ 3,400 | \$ 3,600 | \$ 3,800 | \$ 3,800 | \$ 3,800 | \$ 3,800 | \$ 3,800 | \$ 3,800 | \$ 3,800 | \$ 3,800 | \$ 3,800 | \$ 3,800 | \$ 3,800 | \$ 3,800 | \$ 3,800 | \$ 3,800 | \$ 3,800 | \$ 3,800 |
| One Time Increase | \$ 154,000 | \$ 14,000 | \$ 45,000 | \$ 37,500 | \$ 28,000 | \$ 29,500 | \$ 29,500 | \$ 29,500 | \$ 29,500 | \$ 29,500 | \$ 29,500 | \$ 29,500 | \$ 29,500 | \$ 29,500 | \$ 29,500 | \$ 29,500 | \$ 29,500 | \$ 29,500 | \$ 29,500 | \$ 29,500 | \$ 29,500 |
| Video(Web)conferencing PC hardware and software | | \$ - | \$ 30,000 | \$ 20,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 | \$ 10,000 |
| Training courses and materials - Purchased | | \$ 10,000 | \$ 10,000 | \$ 11,000 | \$ 11,000 | \$ 12,000 | \$ 12,000 | \$ 12,000 | \$ 12,000 | \$ 12,000 | \$ 12,000 | \$ 12,000 | \$ 12,000 | \$ 12,000 | \$ 12,000 | \$ 12,000 | \$ 12,000 | \$ 12,000 | \$ 12,000 | \$ 12,000 | \$ 12,000 |
| Trainig related travel | | \$ 4,000 | \$ 5,000 | \$ 6,500 | \$ 7,000 | \$ 7,500 | \$ 7,500 | \$ 7,500 | \$ 7,500 | \$ 7,500 | \$ 7,500 | \$ 7,500 | \$ 7,500 | \$ 7,500 | \$ 7,500 | \$ 7,500 | \$ 7,500 | \$ 7,500 | \$ 7,500 | \$ 7,500 | \$ 7,500 |
| Capital Increase | \$ 120,000 | \$ 40,000 | \$ 80,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| ITS Plan – Client Backup (Central File Storage) Servers | | \$ - | \$ 30,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Print Services servers | | \$ 30,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| AntiSpyware/AntiVirus Licensing Agreement | | \$ 10,000 | \$ 50,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Incremental Cost | \$ 906,117 | \$ 117,000 | \$ 191,800 | \$ 164,316 | \$ 210,581 | \$ 222,420 | \$ 222,420 | \$ 222,420 | \$ 222,420 | \$ 222,420 | \$ 222,420 | \$ 222,420 | \$ 222,420 | \$ 222,420 | \$ 222,420 | \$ 222,420 | \$ 222,420 | \$ 222,420 | \$ 222,420 | \$ 222,420 | \$ 222,420 |

4.6 Systems Recovery Plan

Discussion

The implementation of the ITS Systems Recovery Plan is an essential element of the University’s Business Continuity Plan. It is also a critical component to ensuring a high availability environment. The CIM location at St. Albert has been selected and developed as the back-up site. It is intended that it will act as a “hot” site providing infrastructure to enable system maintenance and upgrades without the concomitant absence of service. By moving in this direction we achieve the desired end of providing for disaster recovery without creating a redundant infrastructure. Further to this, by actively using the site we ensure its viable operation in the event of a major event at the AU central site.

Goal

To create the framework for developing, implementing, and maintaining an effective and sustainable recovery strategy for Athabasca University’s IT systems which is a component of Athabasca University’s Business Continuity Plan.

Objectives

- ascertain critical business process needs;
- complete Risk Assessment;
- develop mitigation strategies consistent with the risk assessment;
- pilot systems; and
- deploy mitigation strategy.

Budget

| Systems Recovery Project Gantt and Budget | | | | | | | | | | | | | | | | | | | | | |
|---|-------------------|--------|----|----|----|--------|----|----|----|--------|----|----|----|---------|----|----|----|---------|----|----|----|
| Project | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | |
| | COST | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Phase 1 Risk Assessment | \$420,000 | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$976,139 | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Base Increase | \$ 418,568 | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Employee System support 0.5 FTE | | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Network bandwidth | | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| One Time Increase | \$ 10,000 | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| AAHEIT Consultant | | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Capital Increase | \$ 360,000 | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Hardware | | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Hardware Evergreening | | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Incremental Cost | \$ 788,568 | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |

4.7 Security

Discussion

Our current environment has firewalls at the Internet/SuperNet interfaces of each of the Athabasca University offices. However, additional firewalls need to be deployed behind the firewall located in Athabasca due to its server diversity. Additionally, we need to maintain operating system and service patches to maintain optimal security. Monitoring and reporting processes will also be instituted to ensure that the AU environment is secure and highly available. The security planning will be an ongoing activity as new software and hardware are added to the AU network combined with continued technological developments that require security evaluation and risk mitigation. Security also includes the process of accessing AU networks and services through authentication and passwords procedures.

Goal

The major objective of the “security” project is to develop a highly available, secure network infrastructure which allows access to AU services in a secure and seamlessly accessible environment.

Objectives

- design and deploy firewall architecture;
- review and amend security procedures; and
- institute external security monitoring.

Budget

| Security Gantt and Budget | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|------------|--------|---------|----|--------|--------|--------|----|--------|--------|--------|----|----|---------|----|----|----|---------|----|----|----|
| Project | | 2006/7 | | | | 2007/8 | | | | 2008/9 | | | | 2009/10 | | | | 2010/11 | | | |
| | COST | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Plan | \$7,000 | | | | | | | | | | | | | | | | | | | | |
| Absorbed Cost | \$300,056 | \$ | 132,000 | \$ | 40,170 | \$ | 41,375 | \$ | 42,616 | \$ | 43,895 | | | | | | | | | | |
| Base Increase | \$ - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | | | | | | | | | | |
| One Time Increase | \$ 159,274 | \$ | 30,000 | \$ | 30,900 | \$ | 31,827 | \$ | 32,782 | \$ | 33,765 | | | | | | | | | | |
| Annual External Security Review | | \$ | 30,000 | \$ | 30,900 | \$ | 31,827 | \$ | 32,782 | \$ | 33,765 | | | | | | | | | | |
| Capital Increase | \$ 50,000 | \$ | 50,000 | \$ | - | \$ | - | \$ | - | \$ | - | | | | | | | | | | |
| Security Monitoring System | | \$ | 50,000 | \$ | - | \$ | - | \$ | - | \$ | - | | | | | | | | | | |
| Incremental Cost | \$ 209,274 | \$ | 80,000 | \$ | 30,900 | \$ | 31,827 | \$ | 32,782 | \$ | 33,765 | | | | | | | | | | |

Section 5. Other Projects

The projects below are in the early investigative phase and are too early in their cycle to estimate their scope, time or resource requirements. In addition these projects have significant dependencies on external factors not directly controlled by the University. They are discussed here to identify that they may be coming forward in the near term and are likely to be added to the Systems Development plan in the annual revision.

Learning and Research Systems

Exams system

A review of the processes and procedures for exam administration is underway; the Office of the AVPA is leading this initiative. Its intentions are to reduce the complexity of exam management and to create an integrated centralised system for exams to both improve student service and reduce the resource requirement for processing each exam.

Course 4 digit numbering

The move to a 4 digit codes for courses to facilitate the categorisation of courses between junior and senior in 4 year degree requirements will require extensive involvement by the Registrar's office, faculties and the EMD unit as reclassification will require significant analysis and recoding of course materials. The impacts on this plan will be more indirect as other units experience schedule conflicts.

Library Systems

The Library has two key initiatives that will be coming forward; the Lois Hole digital Library project and the AU press initiative. Both projects are at a very early stage of investigation, requiring further research to determine their scope and scale. The Lois Hole digital Library initiative is an Government of Alberta initiative.

Lois Hole Campus Alberta Digital Library (LHCADL)

Athabasca University will develop technology capacity to digitize resources unique to AU, the northern region of Alberta, and outside of Alberta. The migration of analogue resources to digital format will result in the preservation of cultural memory, increase the discoverability, access, and use of resources by searchers and researchers.

Commencing in year one (2006/07), it is anticipated that funding to each of the four Alberta universities will increase so that by year four of the LHCADL, Athabasca University will receive more than \$1million annually toward digitization capacity and activities. It will be important to leverage the funding to realize maximum benefit and potential to AU. Expenditures will be in the areas of staffing, hardware/software and system acquisition and development, and the access and actual digitization process.

AUPress

Athabasca University will build on the successes of e-journal and electronic publishing (production and hosting). The online journal *IRRODL*, and the online monograph *Theory and Practice of Online Learning* are premier examples of AU's capability and expertise in online publishing and production. The evolution at AU toward increased experience and capacity is significant. Expenditures for the AUPress initiative will surround staffing and coordination of AUPress, acquiring the hardware and software infrastructure, and actualizing the publishing processes. At the present time PKP-OJS software is in production for online journals. Requirements for monograph production and publishing are yet to be determined.

AUPress could commence at the outset of the 2006/07 budget year, at which time a project plan including AUPress specifications will be determined

Administrative Systems

APAS

The Alberta Single Application System (APAS) is an initiative of the Alberta Government for the post secondary sector. The intention here is to have a single point of application for students to all post secondary institutions in the province. It is modelled on a similar initiative in British Columbia.

Document Management

Document Management has been identified as a need within the University due to the volume of communications and records requirements. The implementation of a document management system will be dependent on the other initiatives identified in this plan. The content management system, the contract registry and the groupware initiatives may resolve this need. Should a substantial unmet need remain a new project will be initiated to address the document management needs.

Accounts Payable

Improving services to students, employees, department administrators, external suppliers and other external stakeholders is a key priority for Financial Services. One area that has been identified is in Accounts Payable. Keeping up with the demand of increased academic coaches, contracts, construction projects and procurement have increased accounts payable processing. To better support this demand an electronic process to eliminate the manual handling of payments to vendors has been proposed.

Computing Systems

Identity Management

We are looking to significantly enhance our authentication mechanisms to simplify access to AU services without compromising security and privacy. Currently, we use single passwords for single applications. An enhanced Network Authentication system would offer a two-pass authentication along with Access Control List features. This would allow users to only have one password for all applications, which is not advisable under the current structure as hacking of one password would allow penetration of all the user's accounts.

ⁱ The ITS training plan is excerpted from the AU Training Plan developed by Dan West Training Coordinator HR department