Title

Support The Information Requirements for University Planning, Performance Management and Institutional Reporting

University Themes Supported

- Practice Effective Enrolment Management
- Champion Faculty Recruitment and Retention
- Build a High-performance and Environmentally Sustainable Organization
- Accelerate Research Momentum

Description of Initiative

Context

Today, the University of Saskatchewan (like many others) is facing the challenges of shrinking student enrolments, lower than desirable student retention rates, rising costs, increased competition and space shortages. For example – based on Saskatchewan Learning's Provincial School Statistics for 2006-2007 and current participation rates, the pool of graduating high school students (prospective University students) may decrease by 30% over the next 10 years (in 2006-07, there were 15,761 students in grade 12 but only 11,184 students in grade 3). In the near future, we may also face challenges relating to faculty recruitment and retention. Senior executives, deans and department heads, often have to make strategic decisions relating to the above and other issues with insufficient information.

External agencies, governments and the public are requiring more information from universities to measure their value and performance. The University must also measure its performance against that of other universities (benchmarks) and against its own aspirations (key performance indicators). Again, we face many challenges in providing accurate and timely information. The lack of adequate information challenges the very basis of integrated planning itself, i.e., evidence-based decision making.

There are a number of reasons why we may not have the information required for decisions and for reporting. Some of those reasons include the following:

- New system installations, such as SiRIUS, UniFi and About-US, increased services to students and others, and increased the amount of data available at the University. However, these systems have been implemented primarily for operational purposes not informational purposes. As such, they contain an abundance of operational data elements but not many information elements. For example, while SiRIUS contains much data about students (such as the number of registrations in each class), this data must be transformed with appropriate business rules to create informational elements (e.g. "FTE" enrollments). Additionally, our systems may not contain all the data required by the University and has varying levels of data quality and accuracy.
- Our present processes for converting data into information are often ad hoc and use a cumbersome collection of tools, many of which are not well suited to the task. As a result, the effort required to create the information is high. Furthermore, the risk of error in the

conversion of data to information is also high. Information errors can affect the institution's reputation (e.g., Maclean's) and our funding (e.g., Saskatchewan Universities Funding Mechanism).

- The absence of a defined authority for the management of data/information results in required data not collected and the use of different business rules to calculate information elements (e.g., student FTE).
- Our operational systems contain current-value data, not historical data. We do not have a central depository that contains (all) the historical data (or information) required to perform longitudinal analyses such as modeling or forecasting.
- The University has not clearly defined its key performance indicators (KPIs) or benchmarks. This is required to determine the information elements that must be created and stored.

The Initiative

This initiative has three components:

- Develop an information strategy for the U of S. This strategy will address issues and deficiencies identified in our current information management practices, identify risks associated with those deficiencies, examine practices in place at or planned for peer institutions and present a strategy for managing campus information assets as the University progresses into its second century.
- Establish the Director of Information Management position on a permanent basis within the Office of the AVP ICT to assume a lead role in managing our data/information vision, goals, priorities, design principles, and operating policies in support of the strategic directions and overall business goals of the University. The Director of Information Management will also facilitate the implementation of the information strategy.
- Implement the recommended information management strategy in order to provide the information that the University requires for evidence-based decision making, planning, performance measurement and reporting, in a timely and cost-effective manner.

It should be noted that there are two other initiatives currently underway on campus to enhance our longitudinal and operational reporting capabilities. Since the flow of data from transactional systems to information systems is a key component of an information strategy, these initiatives will factor into the development of the University's information strategy.

1. Institutional Analysis has been, and continues to develop iDat as an institutional reporting system that will enhance longitudinal reporting capabilities.
2. SESD and FSD are currently pursuing the implementation of the Sungard Operational Data Store (ODS) product to replace the current student data store (Ganymede) and to create a data store for financial data to support student and financial operational reporting needs.

Objectives/Outcomes by 2012

This initiative will provide the information that University needs for evidence-based decision-making, for planning, for performance measurement and for reporting, in a timely and cost-effective manner. In this way, this initiative will support initiatives outlined in the 4 year plans of SESD (relating to enrollment management), University Advancement (relating to the identification of

potential major donors to the University through data mining) and the Office of the VP Research (relating to measuring research success).

With better information, the University will be better able to (among other things) to:

- determine how to strategically target our efforts to increase enrolment, improve student retention, and increase the effectiveness of our alumni development and giving programs, thereby increasing the funding available to the University;
- assess which classes are in demand by students but are currently not available because of limited numbers of sections or class sizes;
- identify alternative patterns of classroom space that can free up some classroom space for graduate student or faculty offices or for research space without affecting teaching; and,
- measure our progress on key performance metrics pertaining to attracting and retaining students, faculty and research activity.

Some other benefits relating to accurate and complete information include:

- Clearly defined performance measurements for integrated planning and institutional use.
- Reports for government and external agencies can be created quickly and easily, with a substantially reduced effort.
- Longitudinal data will be available for modeling and forecasting (e.g. student enrolment and retention).
- Easier ad hoc reporting for administrative units and colleges.

Revenues and Costs

Costs

The development of the information management strategy will be led by the Director of Information Management. Funding for this position was provided by PCIP in May 2007 to the AVP ICT. The funding supports a one-year term (salary and benefits) for the position that expires at the end of April 2008, in line with the delivery of the recommendations.

The cost to make this position permanent (salary and benefits, plus training and equipment) is estimated to be about $100,000 per year (per University current pay grades and benefits rates).

We believe that some aspects of the information strategy may be fairly easy to implement. Other elements will require extensive collaboration and additional staff resources and software tools. Initial estimates of the staff and technology cost to implement the information strategy range from $500,000 to $1,000,000 annually. Costs associated with the implementation of the Sungard Operational Data Store are not included in the stated estimates.

Revenues

Accurate and timely information can inform our strategies relating to recruitment, retention, research activity, alumni development and giving, and can increase the funding available to the University. For example, if the appropriate information was available to enable us to increase the retention of students after their first year, the University would receive more than $1,000,000 in

additional tuition annually and would also receive a budget increase from the SUFM (assuming no other changes in the model).

Accurate information can also help maintain or increase the University's share of funding from the SUFM as well as inform us about the strategies we could take to increase our share of the SUFM funding or increase our *Macleans* rankings. The following two recent examples illustrate the importance of information that relates to SUFM:

- In 2006, the University nearly missed the deadline for submitting information relating to the Saskatchewan Universities Funding Mechanism. Missing the deadline would have prevented the government from using the SUFM. The use of the SUFM with accurate UofS data resulted in an estimated $3,000,000 increase to the University's operating budget. The deadline was nearly missed because of the effort required to create the required information from new data sources (SiRIUS and UniFi) using inadequate tools
- Also last year, it was discovered that data relevant to the SUFM process was missing in the new student reporting system. Had Institutional Analysis not identified the issue surrounding the missing data, the University would have forfeited approximately $400,000 of operating budget.

Performance Measures/Metrics

- The effort to produce information required for the University Stats Book, SUFM, *Macleans* and other annual reports.
- The number of clearly defined benchmarks and the University's key performance indictors.
- Timely measures of the University's progress against the defined benchmarks and key performance indictors based on accurate information as opposed to approximations or "gut feel."

Responsibility

- Associate Vice-President, Information and Communications Technology

Timeline

The work to develop the information strategy will be completed by April 2008 and a set of recommendations will be presented to PCIP.

A schedule for implementing the information strategy will be developed based on PCIP's direction and level of support for the recommendations.

Comments

With the development of the Second Integrated Plan, it is essential that we strive to introduce the processes, people, organizational model, and technology we need to support our information needs and measure our planning efforts. No matter how elaborate or focused the institution's planning efforts, the planning exercise will be adversely affected if we cannot measure our progress towards attaining the goals that we set out to achieve.