

ICT Governance at the University of Saskatchewan

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Information and communications technology (ICT) affects every facet of the contemporary university: teaching and learning, research and scholarly pursuits, and administrative/business processes. The costs are high, the issues cut across every sector of the campus and the risks need to be managed carefully. Major strategic investments such as the development of a new student information system or a campus-wide portal are *business* decisions that impact everyone. Such decisions cannot and should not be made solely by those responsible for deploying the technology or those who will be its primary users. This is why ICT governance structures need to be accorded high institutional priority: to ensure that we develop our plans and set our priorities collectively; to ensure that the actions we take are consistent with our shared values, strategies and objectives; to ensure that our risks are properly mitigated; and to ensure that the investments we make return the value we expect.

ICT governance is about policies, plans, projects and priorities. It's about who makes what decisions, who advises those who make the decisions, and how and where that advice is provided. It's also about roles, responsibilities and authority. Leaders need to lead but stakeholders need the opportunity to contribute meaningfully to decision-making at a point appropriate to their institutional roles. There must be institution-wide oversight, coordination and facilitation.

At the U of S our *federated* approach to ICT seeks to balance the tension between the opposing poles of centralization and decentralization. While centralization brings the advantages of scale economies, enterprise-level planning and institution-wide control of standards (best practices), highly centralized decision-making can seem unresponsive to individual unit needs. Decentralization offers local control of priorities and expenditures and the ability to respond nimbly to opportunities that arise, but it can create costly redundancies, fragmented competencies, and uneven or inconsistent service delivery. A true institution-wide ICT strategy would be difficult to achieve in a fully decentralized model, where the focus on local needs can be at the expense of institutional needs. A federated model fits well with the culture of a university. It can both accommodate the autonomous nature of individual units and achieve the scale economies of the centralized model—not centralization *or* decentralization but centralization *and* decentralization, appropriately balanced. Strong central leadership, with significant local input and respect for boundaries, is a hallmark of a successful federated model. Boundaries need to be flexible since they may and will change over time.

We have put in place a governance structure that respects institutional responsibilities and boundaries, provides opportunities for stakeholders to be meaningfully engaged in the planning and development of initiatives according to their roles and provides for both technical and non-technical input (since both are critical to success). Our structure ensures that those developing and supporting our technology are fully accountable to the community that the technology serves and that our plans for both academic and non-academic initiatives are developed in accordance with our collective sense of institutional priorities and institutional values.

Our model is described in more detail in the following sections, including areas in which decisions need to be made, examples of questions that arise in each area, bodies that provide advice of various kinds and with whom the authority for decisions rests in each area.

Areas in Which ICT Decisions Are Required

Weill and Ross¹ identify five areas in which ICT decisions are required. In the context of the University of Saskatchewan these are strategy, architecture, infrastructure, business applications and major investments. These can be described as follows:

ICT strategy: high-level statements about how ICT is used at the university. These may be articulated as a set of principles or strategic directions.

ICT architecture: the organizing framework for data, applications and technical infrastructure, captured in a set of policies, organizational structures and technology choices to achieve the effective integration of systems, processes and data to meet the university's goals. Architectural integrity is itself a goal.

ICT infrastructure: the foundation of ICT capability (both technical and human) available across the university as shared, reliable services used by multiple applications. This includes the network and the servers, and the software that runs them.

Business applications: software applications that leverage and extend the enterprise architecture to meet business needs, where "business" encompasses all aspects of our business (both academic and non-academic). Identifying new and more effective ways to support business objectives using ICT is important both locally and globally but cannot undermine architectural principles.

Major investments: how much we spend on ICT, and what we spend it on. Board approval is required for any investment over \$500,000.

Key Questions in Each Decision Area

ICT strategy:

- What role does ICT play at the university? What are the goals?
- What are the core business processes of the university? What information drives these core processes? How must the data be integrated?
- How will ICT be managed and how will it be funded?

ICT architecture:

- What technical capabilities should be standardized (and/or centralized) to support ICT efficiencies and facilitate integration of both processes and data?
- What technology choices will support an enterprise-wide approach to ICT initiatives and maintain architectural integrity?

¹ Peter Weill and Jeanne W. Ross, *IT Governance*, Harvard Business School Press, 2004

ICT infrastructure:

- What infrastructure services are most critical to achieving the university's strategic goals?
- What is the plan for keeping underlying technologies up to date?

Unit-specific applications:

- What are the technology and business process opportunities for new applications (including all facets of university "business" in both academic and administrative units)?
- How can local needs be addressed within architectural standards?
- Who will own the outcomes of each project and institute organizational change to ensure the value?

Major investments:

- What process changes or technology enhancements are strategically most important to the university and what priority should be attached to them?
- How do the investments required align with the university's strategic goals?

Making Decisions

Executive authority for university ICT rests with the Chief Information Officer and Associate Vice-President for Information and Communications Technology, who reports to the Provost and Vice-President Academic. The CIO has overall responsibility for strategy, for policy, for technology and for applications. Stakeholders participate in decision-making at several levels, as shown in the accompanying diagrams. Four bodies are especially important.

The Campus Advisory Board for Institutional Systems (CABIS):

CABIS is the senior advisory body for campus ICT. With a membership comprising senior policy makers, business process owners and data stewards, CABIS brings the perspective of the broad university community and advises the CIO on a wide range of matters pertaining to the development and use of our institutional information systems and our institutional data. With a focus on strategy and policy rather than tactics CABIS makes recommendations about priorities and plans in accordance with the values and goals of the university. CABIS meets four times a year and is chaired by the CIO.

The Enterprise Systems Planning Committee (ESPC):

The ESPC provides a place for program managers, project managers and operational managers to do "horizontal" operational planning relating to issues that cut across our key institutional systems. The primary focus of the ESPC is operational or tactical matters, including technical issues. The ESPC meets monthly and is chaired by ITS's manager of administrative information systems.

The IT Managers Forum (ITMF):

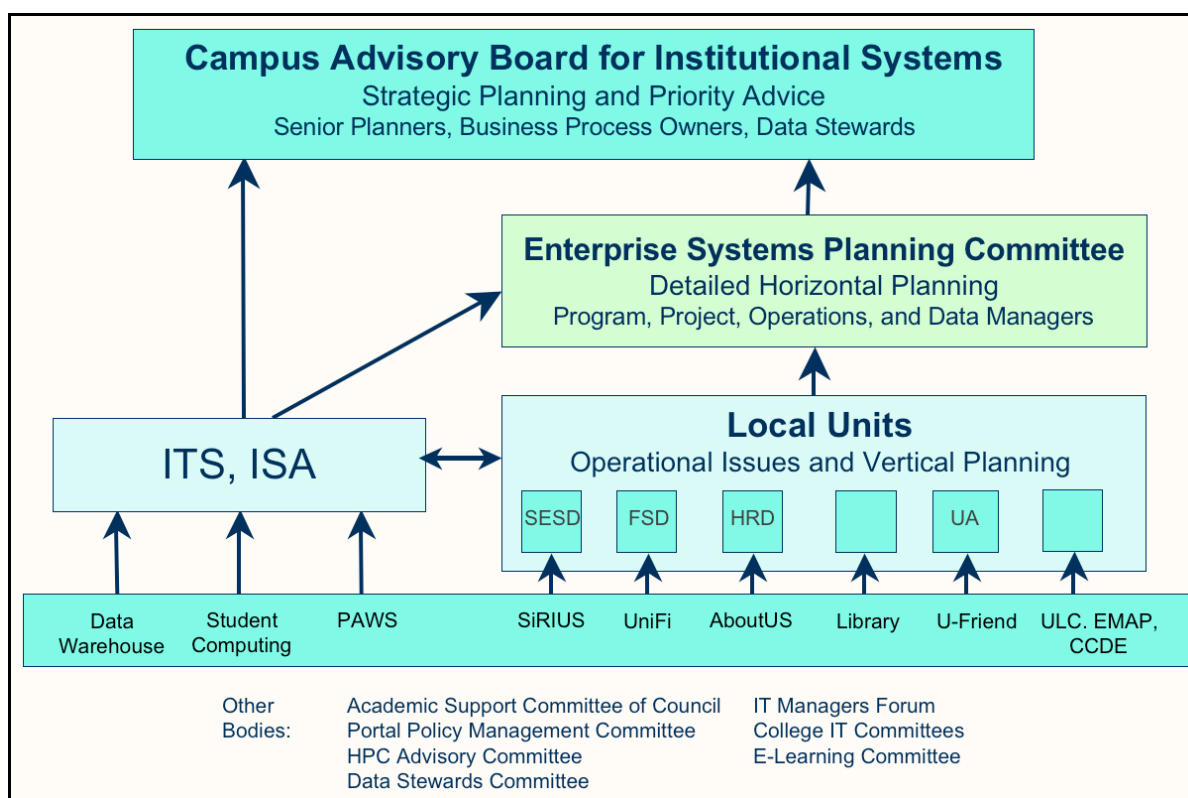
The IT Managers Forum is a monthly meeting of IT support staff from the colleges. ITMF provides a place for tactical planning on issues affecting academic units. The forum meets monthly and is chaired by ITS's manager of student computing.

The Academic Support Committee (ASC):

The ASC provides oversight and advice on behalf of University Council. The ASC's focus is primarily, but not restricted to, matters that directly affect academic activities (teaching, learning and research).

As primary steward of campus ICT assets, both hardware and software, **Information Technology Services (ITS)** has a special role—providing support and advice to individual units on matters pertaining to local systems and processes and to various committees on campus-wide ICT issues and implications. The Director of ITS is a member of CABIS and ITS staff members chair both the ESPC and the IT Managers Forum.

Our Advisory Structure



Finally, while many participate in the ICT governance process, the authority to make decisions that have broad impact rests in only a few hands. Institutional authority in the areas of strategy and architecture lies with the CIO; authority in the area of campus-wide infrastructure lies with ITS; individual unit leaders have authority over local applications; and authority for major investment decisions lies with the Provost's Committee on Integrated Planning (PCIP) and the Board of Governors. The following decision matrix shows both who makes decisions in each area and who provides input to these decisions.

Our ICT Decision Matrix

		Strategy		Architecture		Infrastructure		Unit-specific Applications		Major Investments	
		Input	Decision	Input	Decision	Input	Decision	Input	Decision	Input	Decision
University Executive	PEC	√		√		√		√			
	PCIP	√									√
	Board	√									√
ICT Leaders	CIO		√		√	√		√		√	
	ITS	√		√			√	√			
Advisory Groups	CABIS	√		√		√		√		√	
	ESPC			√		√		√			
	ASC	√		√		√				√	
	IT Mgrs			√		√					
Colleges/Admin Units		√		√		√		Appropriate Unit Leader		√	

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