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IT Governance: Determining Who Decides

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Overview

Decision making about information technology (IT) can be confusing, especially in institutions as complex as colleges and universities. On the one hand, new technology is emerging and evolving at an ever-increasing rate. On the other, budget reductions, tuition discounting, and escalating IT costs make funding IT one of the most pressing issues facing higher education today.¹ Adding higher education's typical shared governance approach to the decision-making process will raise the level of complexity even further.

In higher education, how decisions are made about institutional priorities, strategies, goals, and major resource allocations, and who is held accountable for these decisions, are functions of institutional governance. Governance structures and processes can range from straightforward and transparent to complex and opaque, and ensuring effective processes is as important or more so than the specific allocations themselves. This is the environment in which strategic and resource allocation decisions must be made. When you can't do it all and you can't involve everyone, how do you decide?

One way is to clearly define and come to institutional-level agreement on just who has a say in, and who will be held accountable for, decisions related to investments in IT and how those decisions are made. A Center for Information Systems Research (CISR) briefing from the Massachusetts Institute of Technology (MIT) Sloan School of Management highlighted six key questions the institution's senior leaders should not relinquish to their IT leaders.² Each of the questions relates to aspects of IT governance. The first three deal with strategy: How much should we spend on IT? Which business processes should receive our IT dollars? Which IT capabilities need to be organization-wide? The second three deal with execution: How good do our IT services really need to be? Which security and privacy risks will we accept? Whom do we blame if an IT initiative fails? The institution's senior leaders, including but not limited to the chief information officer (CIO), need to be involved in this determination of how to best use IT to generate value for their institution. Just as an institution's senior leaders must be involved in and understand the governance of the organization's financial, physical, and human assets, they need to be involved in and understand the governance of the institution's information and IT assets.

Designing a simple and clear approach to IT governance will lead to increased effectiveness. This research bulletin will provide an overview of IT governance and explain why such governance is important. It will also describe the IT governance work performed at Syracuse University and how other institutions can similarly model their governance structures.

Highlights of IT Governance

Governance has a number of meanings. They all relate to control, authority, and domination and may not be particularly useful when trying to reduce the confusion an

institution faces when making IT decisions. However, two research scientists, Peter Weill and Jeanne Ross at CISR, define IT governance as

specifying the decision rights and accountability framework to encourage desirable behavior in using IT. IT governance is not about making specific decisions—management does that—but rather determines who systematically makes and contributes to those decisions.³

Governance, as described here, is about encouraging desirable behavior in the use of IT. To do that, decision making is broken into two components: who contributes to the decision making process (specifically, who has input), and who makes the decision (specifically, who has decision rights). Governance is the framework that identifies all of the complexities of decision-making: which decisions need to be made; who will have input and/or decision rights for each decision; who will be held accountable for each decision; and how each decision will be structured, aligned, and communicated. This approach defines the IT accountability framework for decision making.

Weill and Ross conclude that “effective IT governance is the single most important predictor of the value an organization generates from IT.”⁴ They further found empirically that the best predictor of IT governance performance is the percentage of managers in leadership positions who can accurately describe IT governance.

A Framework for Governance

Perusing any number of higher education’s IT Web sites reveals that each institution has a unique combination of councils, committees, and working groups, all with diverse membership that make, influence, guide, or assist with IT decision making. These structures reveal different levels of complexity and centralization or decentralization, and they provide diverse ideas about how an institution structures IT decision making. Such inspection also raises questions about the effectiveness of each approach, as well as how to compare approaches. What is needed is a tool to represent and analyze decision making critical to IT governance—a framework for governance. This framework needs to be able to address the decision-making environment, including the people involved, the decisions to be made, and the specific situation encompassed.

Overview of the Weill and Ross Framework

Weill and Ross are convinced of the importance of IT governance as a result of their research with more than 300 enterprises in 20 countries. They developed a structure for IT governance—an IT Governance Framework—that can be applied by any institution. The framework provides a schema for institutional self-assessment as well as the scaffolding to construct a more effective approach to institutional IT governance.

The framework includes three major components: domains, styles, and mechanisms. Each component poses a question about IT, the answer to which provides a key part of the governance puzzle. By answering all three questions, institutions can evaluate the

current institutional approach to governance and design a more effective decision-making methodology. The three questions are:

- *Domains*—what decisions need to be made?
- *Styles*—who has input and/or decision rights?
- *Mechanisms*—how are the decisions formed and enacted?

Domains: What Decisions Need to Be Made?

Identifying the decisions that must be made enables the institution to translate its institutional business principles into IT principles and provides the alignment to drive IT to effectively support the enterprise. For instance, distinguishing IT principles as a key decision to be made will drive the institution to answer questions such as, How will we use IT in our institution to create value for our enterprise?

Five Key Governance Decisions. The IT Governance Framework proposes that an institution make five key governance decisions, captured by the following questions:

- *IT principles*—how will IT create business value?
- *IT infrastructure strategies*—how will we build shared services?
- *IT architecture*—what technical guidelines and standards will we use?
- *Business applications*—what applications do we need?
- *IT investment and prioritization*—how much and where will we invest?

While these five decisions are interconnected, decisions about principles clearly steer the direction and decision making for the other four. Infrastructure and architecture will translate IT principles into requirements for services and then describe a plan for providing needed capabilities. IT prioritization and investment decisions translate the institution's principles into usable services and systems.

Styles: Who Has Input and/or Decision Rights?

Once the scope has been defined, the next step is to identify just who is involved in decision making and how they are involved. Both the “who” and the “how” of involvement are critical to the success of IT governance, especially in the shared governance approach in higher education. Different people, or different groups of people, will need to be involved in the various IT decisions that must be made. And, for each person or group, just how each will be involved must be decided, agreed upon, and communicated throughout the enterprise. Each person or group may simply provide input into a decision or they may be involved in considering all the input and making the decision (specifically, they may make the decision and be accountable for it).

The Weill and Ross model proposes that an institution consider the involvement of six groups of people (the “who”) and specify whether each has input and/or decision rights (the “how”) for each of the five “domain” IT questions listed above. The model uses six

political archetypes to describe input and/or decision rights for each decision. (*Note:* Group 1 below must be “translated” to fit into the higher education arena. In academia, this group would be composed of the chancellor or president and his or her direct reports such as the provost.)

- *Business monarchy*—typically, CxOs (CEO, CIO, COO, et al.) groups of business executives
- *IT monarchy*—CIO and/or IT directors acting as individuals or a group
- *Federal*—CxOs and at least one business unit leader
- *Feudal*—business unit leader(s), key process owners or their delegates
- *Duopoly*—CIO/IT directors and at least one other group (CxO or business unit or process leader)
- *Anarchy*—a business unit that owns a business process or an end user

Constructing a table from the questions that must be answered, combined with who has input to and/or decision rights for each of these questions, determines an institution’s IT governance (see Table 1). Decision rights determine who will decide and be held accountable.

Table 1. Sample IT Governance Framework (Decisions and Groups)

	IT Principles		IT Infrastructure Strategies		IT Architecture		Business Applications		IT Investment and Prioritization	
	<i>Input Rights</i>	<i>Decision Rights</i>	<i>Input Rights</i>	<i>Decision Rights</i>	<i>Input Rights</i>	<i>Decision Rights</i>	<i>Input Rights</i>	<i>Decision Rights</i>	<i>Input Rights</i>	<i>Decision Rights</i>
Business monarchy										
IT monarchy				X		X				
Federal	X						X	X		
Feudal										
Duopoly		X	X		X				X	X
Anarchy										

Mechanisms: How Are the Decisions Formed and Enacted?

The last component of the framework is how the institution implements the governance arrangement: what decision-making structures, processes, and approaches are used. Following the identification of decisions and the specification of input and/or decision rights, an institution must decide detailed decision responsibility and accountability, how alignment will occur, and how information will be communicated throughout the institution. These three mechanisms, properly selected, ensure the institution’s approach to IT governance will perform as desired.

The Weill and Ross model provides three categories of mechanisms to specify how the decisions made by the identified individuals (or groups) will be enacted.

- *Decision-making structures*—these mechanisms clarify who is responsible and accountable for decisions. Examples of these structures are committees, executive teams, and business/IT relationship managers.
- *Alignment processes*—these mechanisms ensure effective input to decision makers and implementation of their decisions. Examples of these processes are IT investment and evaluation processes, architecture exception processes, service-level agreements, chargeback, and metrics.
- *Communication approaches*—these mechanisms disseminate governance processes and individual responsibilities to everyone who needs to know. Examples of these approaches are announcements, advocates, channels, and education efforts.

For each question to be answered, an institution considers which decision-making structure is involved, how the institution will ensure the decisions made will be effectively implemented, and how the decision outcome will be communicated to the institution's constituents.

Syracuse University Study

Syracuse University (SU) is a private doctoral university in upstate New York with a student enrollment of about 18,200. The VP/CIO reports jointly to the chancellor/president and vice chancellor/provost, and decision making about IT services on the campus is performed through shared governance. The Information Technology and Services (ITIS) unit, led by the VP/CIO, is an umbrella organization that includes Computing and Media Services and Enterprise Process Support. ITIS is a strategic partner with the Office of Energy and Computing Management and the information technology departments located within the University's schools and colleges. Multidisciplinary collaboration among SU's IT community is nurtured and coordinated by the Technology Leadership Committee (TLC), which reports to the VP/CIO.

A growing interest in and subsequent research about the topic of IT governance, combined with increasingly good working relationships among certain functional areas and IT directors and growing enterprise-wide thinking, produced a strong desire to examine the university's current approach to IT governance. A small, focused, cross-institutional group of individuals was convened to do this work.

As-Is Evaluation

Successful improvement projects begin with an understanding of, and agreement about, the existing situation. The group identified models that might be used to determine how IT was presently governed on the campus, agreed on the model to use, used the model, and then interpreted and modified the assessment until the group agreed it accurately described our current approach to IT governance.

The selection of individuals involved in the study was critical to its success. Director-level individuals were chosen from various functional and IT areas across the campus that, over the past several years, had been working increasingly collaboratively and were viewed as thought leaders for their areas. Each individual also understood multiple aspects of how IT was governed on the campus and expressed interest in meeting with a group to pursue institutional IT governance assessment and improvement.

A review of approaches to IT governance by various institutions of higher education revealed that they use a broad array of methodologies—centralized and decentralized, simple and complex, transparent and opaque. Conversations with individuals performing research in the area also revealed that higher education struggles with IT governance as much as—or more so—than the commercial sector. With all the variance by organization and no obvious way, other than using the IT Governance Framework to compare the different approaches to IT governance, SU agreed to the framework to assess its current governance approach. Table 2 displays the results of using the IT Governance Framework and the team members' knowledge of how IT was governed at the university. The large number of Xs in each column indicates the individual team members had widely varying assessments of the current IT governance at the institution.

Table 2. SU's As-Is IT Governance Framework (Decisions and Groups)

	IT Principles		IT Infrastructure Strategies		IT Architecture		Business Applications		IT Investment and Prioritization	
	Input Rights	Decision Rights	Input Rights	Decision Rights	Input Rights	Decision Rights	Input Rights	Decision Rights	Input Rights	Decision Rights
Chancellor's cabinet	X	X	X				X	X	X	X
CIO and/or IT directors (acting as individuals or a group)	X	X	X	X	X	X	X	X	X	X
Functional leader(s) or their delegates	X	X	X		X		X	X	X	
Chancellor's cabinet and at least one functional area VP	X	X	X				X	X	X	
CIO/IT director(s) and at least one functional area	X	X	X		X	X	X	X	X	X
Functional area that owns a business process or end user	X	X	X	X			X	X		

The model provided a clear framework in which to display each individual's understanding of SU's current approach to governing IT. Results of the individual assessments were combined. Using the IT Governance Framework, supplemented by an effectiveness and business orientation indicator, the group members' consensus was that we had a largely autonomous business orientation (that emphasized business unit decision making), our IT governance effectiveness was lower than we desired, and our understanding of the institution's IT input and decision rights varied widely. This consensus made us eager to further use the framework, along with associated research, as a basis for proposing changes to IT governance at SU.

To-Be Design

After agreeing where we were (our as-is approach), the next steps were to identify our target, to create and come to agreement on how we wanted to perform IT governance, and to build a framework that would be more effective at SU (our to-be approach). The group discussed critical success factors for IT governance; how top-performing organizations manage IT governance; and additional detail about domains, styles, and mechanisms. Then the group created a proposal for an improved approach to SU's IT governance that would work in our environment, with our community members and our specific situation. We modified Weill's IT framework to fit our institution.

Specifically, we discussed, refined, and agreed to answers to the three questions of the model:

- what decisions need to be made about IT;
- who has input and/or decision rights (specifically, accountability) for each of the decisions; and
- how the decisions should be formed and enacted.

The "what," and especially the "who," were critical (and lengthy) discussions, occupying many meetings as the group's understanding grew and as terminology was reworked until it was acceptable to all. Informed by research on how firms that effectively manage their assets govern IT, combined with patterns of IT governance in nonprofit organizations, we came to agreement on who should have input rights and decision rights for each of the IT decisions identified as key for the institution. The Xs in Table 3 display the individuals or groups that our IT governance team believed should have input and/or decision rights for the various domains in order for our governance process to be more effective.

Table 3. SU’s Proposed IT Governance Framework (Decisions and Groups)

	IT Principles		Enterprise Needs		IT Infrastructure Strategies		IT Architecture		Business Applications		IT Investment and Prioritization	
	Input Rights	Decision Rights	Input Rights	Decision Rights	Input Rights	Decision Rights	Input Rights	Decision Rights	Input Rights	Decision Rights	Input Rights	Decision Rights
Chancellor's cabinet		X										X
CIO and/or IT directors (acting as individuals or a group)		X				X		X				
Functional leader(s) or their delegates			X	X								
Chancellor's cabinet and at least one functional area VP	X								X		X	
CIO/IT director(s) and at least one functional area					X		X		X	X		X
Functional area that owns a business process or end user												

The final piece to complete our to-be design was the identification and description of a mechanism for each decision, an explanation of how each pronouncement would be formed and enacted. For each required decision (the Xs in the decision column for each domain), we identified and described what person or group made the decision (specifically, the decision-making structure), how the decision would be implemented (specifically, the alignment approach), and how information about each decision would be shared with the SU community (specifically, the communication approach). All this information—our to-be design for institutional IT governance—was captured in two tables that were the substance of a memorandum to our new CIO. Table 3 was a modification, based on our research and subsequent work, of Table 1, displaying what the group believed to be a more effective approach to governance at SU.

The second table provided thinking on the mechanisms the group thought most effective for each X from Table 3. For example, considering the IT principles domain, our to-be table suggests the chancellor’s cabinet and the CIO and/or IT directors should make

decisions about how IT will be used in the institution (specifically, the IT principles). So, for this domain, the group felt the following mechanisms were appropriate:

- *Decision-making structures*—both of the suggested decision-making structures already existed, but high-level discussions and decisions about how IT should be used in the institutions would need to be a new agenda item for the chancellor’s cabinet.
- *Alignment processes*—no new alignment processes were considered necessary for this domain.
- *Communication approaches*—an “Office of the CIO” approach, potentially including information on SU’s intranet, was considered for how the decision outcome should be communicated to the SU community.

We continued to examine each domain and to recommend a decision making, alignment, and communication mechanism for each of the six domains. We put this information into a table of domain (the rows) and mechanisms (the columns) for easy reference. The framework for this second table is displayed in Table 4.

Table 4. Appropriate Mechanisms for Each Domain

<i>Domains</i>	<i>Mechanisms</i>		
	Decision-Making Structures	Alignment Process(es)	Communication Approach(es)
IT principles			
Enterprise needs			
IT infrastructure strategies			
IT architecture			
Business applications			
IT investment and prioritization			

How to Do Your Own Study

Any organization that wants to get more value from IT should examine how it governs IT. A summary of the approach presented in this document should serve as a guide.

- *Education about IT governance.* Learn about IT governance to better understand the topic in terms of input and decision rights. Find someone who is interested in the subject and give that person the charge to investigate it.
- *Assessment of current IT governance.* Use the IT Governance Framework and self-assessment tools to better identify how IT is presently governed in the institution. This will involve selecting the appropriate individuals to generate the critical mass of support needed, educating them about IT governance, asking them to perform the assessments, and then compiling and assessing the information.

- *Design of desired IT governance.* Once you know how IT is governed at present, determine what you want to change by using the findings and comparing them to research information about how top performers manage IT input and decision rights. Determine if the framework needs modification to be accepted or to work best in your institution, and then come to agreement on the specifics of domains, styles, and mechanisms.
- *Implement the new design.* Determine the new steps necessary to move forward by identifying an appropriate sponsor (probably the CIO) and turning it into a project. Assign and support a strong project manager.
- *Promote ongoing review.* Put in place a way to continuously review the effectiveness of your IT governance and make the appropriate changes as you find opportunities for improvement.

What It Means to Higher Education

Higher education's institutional leaders play many roles in the institution. One of the most crucial roles relates to governance for the organization. As the academy increasingly comes to rely on IT to achieve not only its administrative but also its academic and research agendas, the approach to governance for IT needs to be as carefully considered as other components of institutional governance. Adding the complexity of separately considering both input and decision rights is even more important in higher education where decision-making routinely involves some sort of shared governance including faculty, administrators, (sometimes) students and (often) board members.

Our research indicates that institutional leaders, as governance designers, have four key objectives:

- to understand how IT is presently governed and champion improvements in governance when IT doesn't provide the desired value to the institution;
- to define the key IT decisions that must be made and ensure the appropriate participation by various members of the campus community;
- to guarantee the institution's approach to governance is reasonably simple, continuously assessed/improved, and clearly communicated to the community; and
- to ensure the governance approach drives the alignment of institutional strategies, goals, and objectives with the institution's IT investment and other decisions.

Key Questions to Ask

- How understandable and transparent is IT governance at our institution? What percentage of our senior executives can accurately explain how IT is governed in the institution?
- What decisions need to be made about IT at our institution (for example, how will IT create business value? What technical guidelines and standards will we use? What applications do we need? How much and where will we invest?)
- Who should we gather input from and who should make the decisions to ensure that academic, administrative, research, and enterprise concerns are appropriately represented? What should the scope of each person or group be for each decision?
- How should the decision-making, alignment, and communication approaches of the people and groups involved be related so that IT governance is simple, clear, and effective?
- How can we effectively monitor our IT decisions and modify our approach to governance when appropriate?

Where to Learn More

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Endnotes

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