The Weill and Ross Framework

Based on extensive research on IT governance and their experience with a large number of both European and American enterprises, both corporate and non-profit, Peter Weill and Jeanne W. Ross have published several articles and a book describing their findings. They developed a model that outlines a constructive approach toward designing and implementing IT governance. The outline below is based on their published material.

Weill and Ross define IT governance as: **the decision rights and accountability framework to encourage desirable behavior in the use of IT.**

They identify three components of governance:

- IT Decisions Domains: What are the key IT decision areas?
- IT Governance Archetypes: Who governs the decision domains and how is it organized? Who decides or has input, and how?
- Implementation Mechanisms: How are the decision and input structures formed and put in place?

IT Decisions Domains

The five key decision domains Weil & Ross identified to define the scope of IT are:

- **IT principles**: High level statements on the role of IT and how IT will be used. For example: Utilize industry standards; Rapid deployment of new applications; Reuse before buy, buy before build. (High level decisions about the role of IT)
- **IT infrastructure strategies**: Strategies for the base foundation, centrally coordinated services; how should these be priced; how to keep these up to date. E. g., network, shared data, etc. (Centrally coordinated, shared IT services that provide the foundation of the organization's IT capabilities)
- **IT architecture**: Set of technical choices that guide the organization. The architecture is a set of policies, principles and rules that direct the use of IT, including technology, data, applications, etc. (An integrated set of technical choices, directions and policies for the organization)
- **Business application needs**: Coordinating, specifying the needs and requirements to meet business practices and operations. This covers both purchased and internally developed systems. (It's important to note that "business" for academia includes academic, research and business operational areas.)
- **IT investment**: Decisions about how much and where to invest in IT including project approvals, justification techniques, and post implementation continued review of value to the organization. (How much and where in the organization to invest in IT)

IT Governance Archetypes

The next component of their governance framework identifies the people or groups of

people involved in the decision domains; organization of those domains; who decides or has input, and how decision and input flow through the organization. Weill and Ross suggest six archetypes (The mapping to an academic organization is an interpretation of their concepts):

1. Leadership Monarchy: A group of or individual senior manager (Chancellor; Vice Chancellor; Dean, Chair)
2. IT Monarchy: Groups of or individual IT senior managers (CIO, IT Directors (OIT and/or Academic IT))
3. Feudal: Unit leaders, key process owners or their delegates. (Independent decisions and input by college, OIT, business unit, center/institute, etc.)
4. Federal: Shared by senior management and other College/Unit senior management. May include senior IT management. (think House, Senate and Legislative branch, so: OIT Directors and AITD recommend to CIO)
5. IT Duopoly: IT senior management and one other group (e.g. CIO (could include OIT Directors) and AITD) or CIO and Research or CIO and Deans)
6. Anarchy: Every unit or even users act and react independently.

A table can be constructed that ties Weill and Ross's Decision Domains and Governance Archetypes into a one page framework:

	IT Principles		IT Infrastructure		IT Architecture		Business Applications*		IT prioritization and Investment	
Business Monarchy	Input	Decision	Input	Decision	Input	Decision	Input	Decision	Input	Decision
IT Monarchy										
Feudal										
Federal										
Duopoly										
Anarchy										

***** For academia this includes academic, research and business operational areas; all of the areas needed to carry out the mission of the institution.

Implementation Mechanisms

The last component of the Weill and Ross model deals with how governance is implemented; what are the structures, processes, and supporting structures? This takes the framework and converts it into an operational structure. It is consistent with the university structure of committees and subcommittees – especially including existing governance (e.g. Deans, chairs, faculty senate, student government, committees, etc.).

Their model provides the following categories of mechanisms to specify how decisions will be enacted:

- Decision making structures: Who is responsible, who is accountable. (Typically Councils, Committees, and their interrelationships, budgeting and approval processes, and so on)
- Alignment Processes: Making sure decisions achieve the desired outcome. (Typically the IT organization as a whole, Service Level Agreements (SLA's), metrics, and so on)
- Communication Approaches: Disseminates information about governance processes and individual responsibilities to those who need to know. (Meetings, documented procedures, portals, and so on)

The Weill and Ross framework can be used to help create effective IT governance. They suggest the following process:

- Use the table framework from the previous page to examine and document the 'current state' (the existing situation).
- Define the desired objectives and the associated behavior.
- Determine what IT governance we want to have in place to attain desired objectives and behavior.
- Identify performance goals for governance including metrics, roles, responsibility and accountability.
- Start making the transition from the 'current' to the 'desired' state.

Application of Weill and Ross model to NC State

Below are two tables (following Weill and Ross) of NC State's IT governance structure based on committees and projects.

The first is Dr. Hoit's interpretation of the "current state" version. It shows a mix of all the archetypes and no clear, consistent and understandable approach to input and decision making. Over the past year, OIT has been attempting to use a more consistent approach in developing committees (their membership and charge), a structure that encourages transparency and effective input and a clear decision tree. While this has been helpful, it has caused a proliferation of committees with redundant memberships, similar but overlapping IT domains, and a drain on IT personnel in terms of committee meetings.

The second diagram is a first pass at developing a coherent IT governance structure for NC State. This is a "straw poll" version that consolidates the committee structures, input structures and decision domains.

Current NC State IT Governance Structure

	IT Principles		IT Infrastructure		IT Architecture		Business Applications		IT prioritization and Investment	
Business Monarchy	Input	Decision	Input	Decision	Input	Decision	Input	Decision	Input	Decision
	X	X		X						X
IT Monarchy	X		X	X						
Feudal			X			X	X	X	X	X
Federal										
Duopoly	X								X	
Anarchy			X		X		X		X	

Note: This "current structure" does NOT take into account the changes that have been implemented as a result of the VCIT position over the past year.

Proposed "Straw Poll" Governance Structure

	IT Principles		IT Infrastructure		IT Architecture		Business Applications		IT prioritization and Investment	
Business Monarchy	Input	Decision	Input	Decision	Input	Decision	Input	Decision	Input	Decision
		X						X		X
IT Monarchy				X		X				
Feudal										
Federal	X				X		X		X	
Duopoly			x							
Anarchy										

This “straw poll” version does not map directly to possible structures, rather it outlines the types of decisions to be made, who has input and where the decisions are made. For this first pass the following assumptions are made:

Business Monarchy: Consists of Executive Officers (EOs), including Chancellor

IT Monarchy: Consists of VCIT, CFO and Provost (“IT Oversight Committee” (ITOC))

Following the proposed table, Principles, Business Applications and Prioritization and Investment will be decided by the Executive Officers. This is consistent with current policy decisions

IT Infrastructure and IT Architecture will be decided by the ITOC consisting of the VCIT, CFO and Provost.

Note that this assumes these are campus-wide decisions and issues. There are many issues that fall into these categories that are more local issues (e.g. college level or within OIT) and are decided by the structures in those units. As an example: Identity Management is a campus wide issue. Management of college labs is a local issue.

Under the input column, the following is assumed:

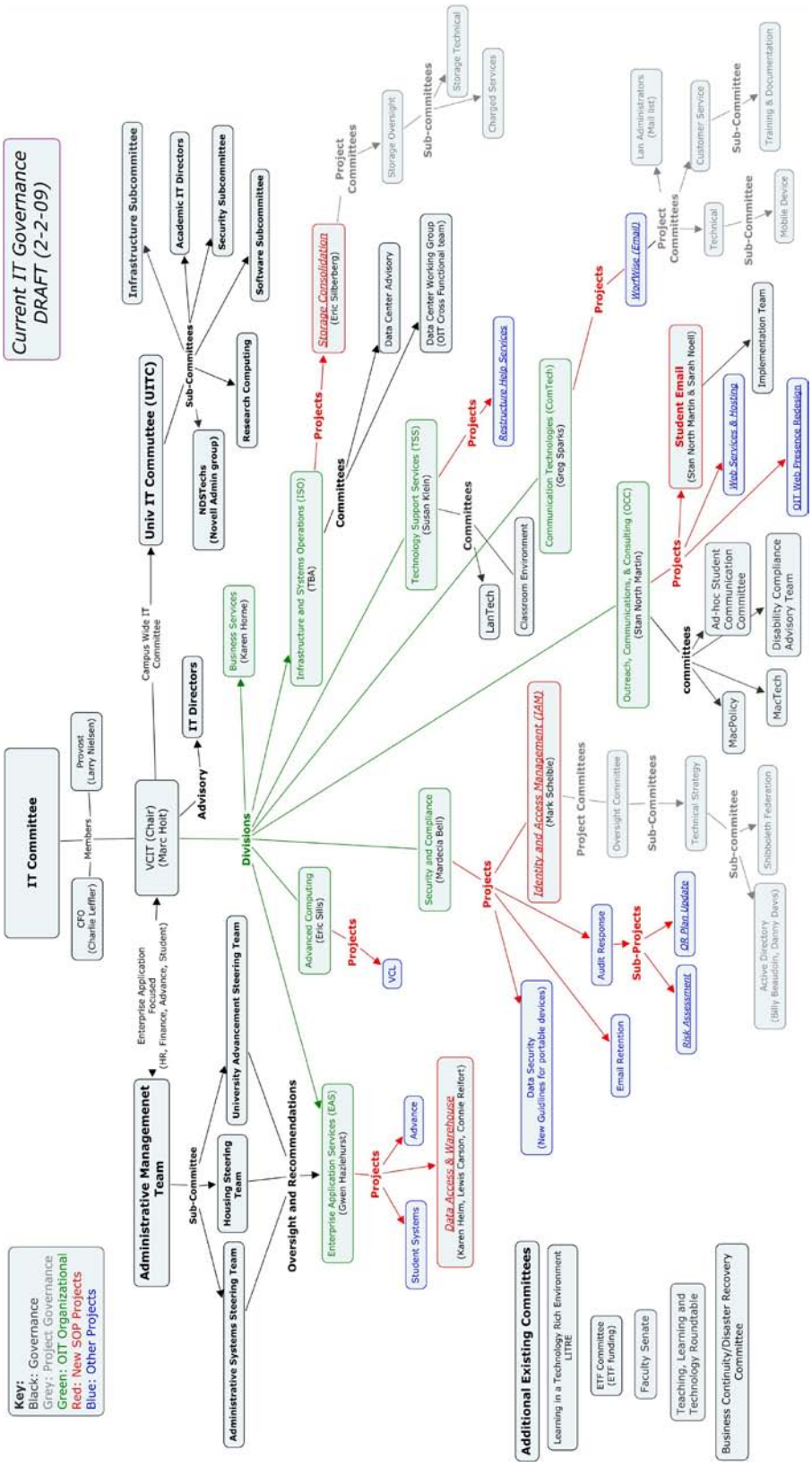
Federal: Consists of central and college and center representation. For example: A combination of college IT directors and OIT directors, or college associate deans and administrative unit directors (Enrollment Management, HR, Finance, etc.).

Duopoly: Consists of OIT and appropriate distributed group. For example: Networking could be OIT ComTech and AITD, or Storage could be OIT ISO and College storage groups, Registration could be Enrollment Management and OIT EAS.

Implementation Through Committee Structures

Finally, below are two diagrams of NC State’s IT governance structure based on committees and projects. The first is Dr. Hoit’s interpretation of the “current state” version (slightly older as some newer structures are not included). It shows no consistent framework and structure for committees, reporting etc.

The second diagram is a “straw poll” version of a proposed consolidation for discussion on how we might merge and adjust committees on campus in order to reduce the amount of redundancy and overlap, and improve the governance structure. Note that it tries to group the domains of IT into collections that discuss and cover similar topics. It merges committees and subcommittees to reduce redundant areas and provide a structure that provides consistent and diverse input and recommendations to the decision process.



Existing Governance Committee Structure (approximate by Hoit)

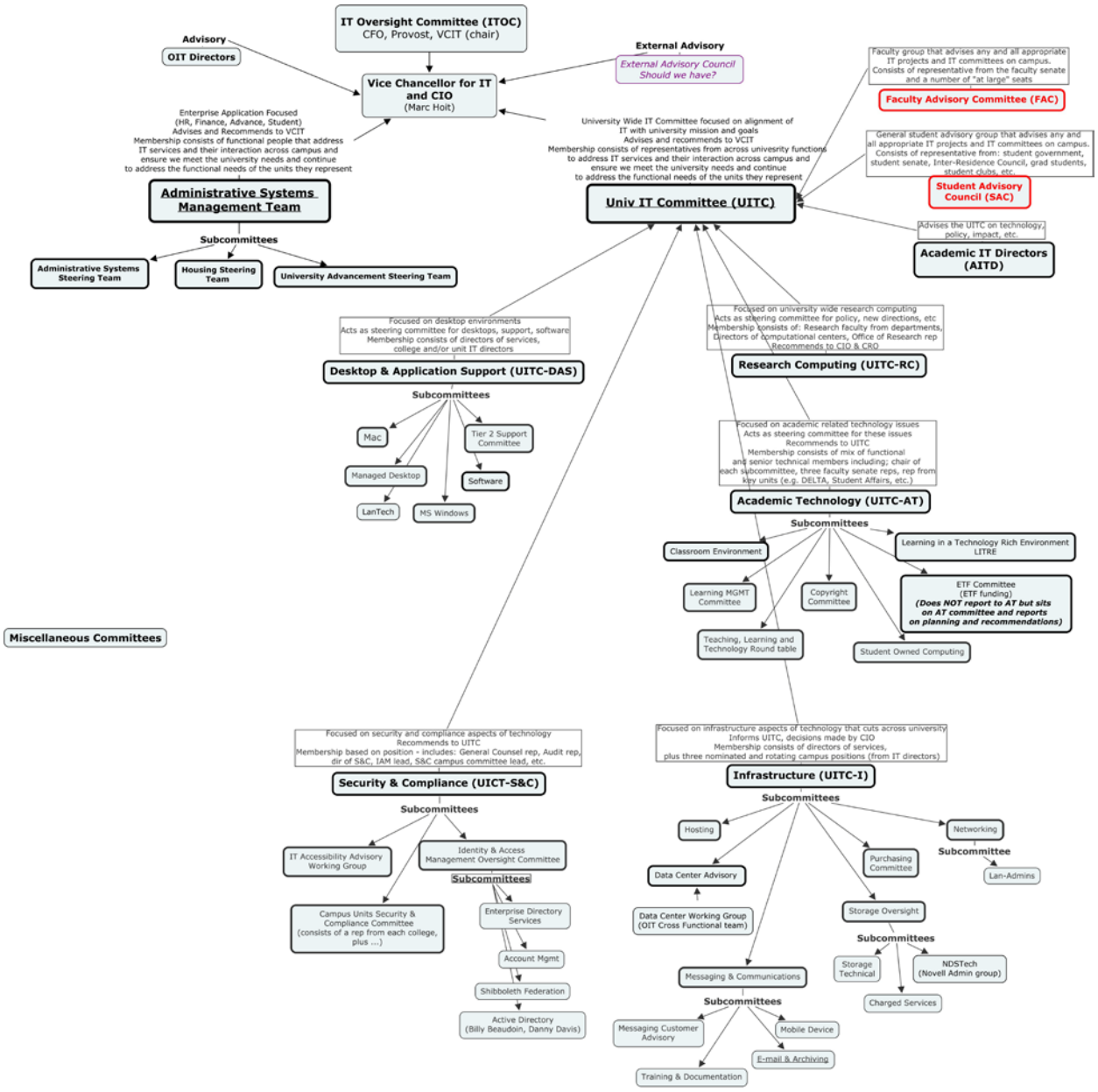
The initial “straw poll” version of the committee structure (below) assumes the following:

University IT Committee (UITC) and **Administrative Systems Management Team** are the two top level committees that make final recommendations to the VCIT. The UITC is to be restructured to have a membership of functional representation that cuts across the university and covers administrative units (HR, Finance, Enrollment Management, etc.) and the academic units (Colleges and departments). The membership is not composed of IT personnel. This mirrors the existing Administrative Systems Management team which provides a mission, service and functional representation of the campus.

Student and faculty advisory committees (**SAC & FAC**) are new structures to ensure strong and inclusive input and advice from these groups. The idea is to create a single representative body for each group to which any and all committees can present ideas and proposals and receive feedback, advice, recommendations and concerns. Historically, it has been difficult to achieve faculty or student membership in IT committees. A single member to a committee often does not represent the full diversity or needs of the respective groups. By creating a standing committee for each, a diverse and representative group can be developed that can provide the full spectrum on ideas and input.

The VCIT is responsible for following the governance structure and bringing the recommendations, policies or requests to the appropriate decision structure. Some of the decisions can be made directly by the VCIT, others need to go to the ITOC or the EO/Chancellor.

Note that the proposed governance is not a management model. This is not intended to micromanage or slow down operations or normal efforts within services. IT services are expected to handle operations and minor changes through their normal management structures. Governance is for setting policies, guidelines, receiving input and making decisions about these and larger projects.



Initial "Straw Poll" Proposed Governance Committee Structure (by Hoit)

Next Steps:

The next steps for developing a governance structure for NC State IT is to start the iterative cycle of sharing, updating and improving the proposed structure. This document (and updated versions as the process continues) will be presented, discussed, and modified with campus stakeholders to refine and finalize the structure.

After input and modifications are achieved, the implementation consisting of restructuring committees, developing charters and operating guidelines and finalizing initial memberships and membership rotations will be undertaken.

To accomplish these next steps, we will create four task forces (one for each major sub-committee under UITC). The four task forces are:

1) Academic Technology
2) Infrastructure
3) Desktop & Application Support
4) Security & Compliance

The charge for these task forces is to:

1) Develop a charter for the committee. (A skeleton charter is in Appendix A.)
2) Determine the appropriate sub-committees for the committee.
    - This may include the draft ones on the graphic, collapsing the draft ones, creating new collected ones, etc.
3) Determining the membership of the committee.

Note that a goal of the task forces is to create a clear, efficient and workable structure. The current chart has too many sub-committees under each of the major groups.

References

- Educause[1] Material
    - Improving IT Governance in Higher Education. Jack McCredie, ECAR 2006;18
    - IT Governance: Determining Who Decides. Andrew Clark, ECAR 2005;24
    - Change at the University of Kansas: Process, Experimentation, and Collaboration. Marilu Goodyear, Keith Russell, and Kathleen Ames-Oliver, ECAR 2006;2

[1] EDUCAUSE is a nonprofit association whose mission is to advance higher education by promoting the intelligent use of information technology

    - Using an IT Governance Structure to Achieve Alignment at the University of Cincinnati. Bob Albrecht and Judith A. Pirani, ECAR 2004;4
    - A Roadmap for IT Leadership and the Next Ten Years. Timothy M. Chester, Educause Quarterly 2006;2
    - IT Alignment in Higher Education. Educause Center for Applied Research; Vol 3, 2004

- Center for Information Systems Research at MIT Sloan School of Management
    - IT Governance. Peter Weill and Jeanne W. Ross; Harvard Business School Press, 2004
    - Six IT Decisions your IT people shouldn't make. Jeanne W. Ross and Peter Weill; Harvard Business Review, November 2002, 85-91

- IT Governance Institute[2]
    - COBIT 4.0
      (COBIT is an IT governance framework and supporting toolset that allows managers to bridge the gap between control requirements, technical issues and business risks.)

[2] The IT Governance Institute (ITGI) exists to assist enterprise leaders in their responsibility to ensure that IT goals align with those of the business, it delivers value, its performance is measured, its resources properly allocated and its risks mitigated.

Appendix A – Skeleton Charter

Committee: UITC-XX

Focus: The committee sets [or "develops" or "recommends"?] policy and oversees projects and directions for XXX. It makes recommendations to the UITC committee. It also creates task forces when necessary to investigate and develop a recommendation for campus wide XXX.

Scope of Topics Considered
The committee covers the following areas: XXX

Sub-Committees: The following sub-committees report to this committee:

1) XXX – sub-committee to handle XXX including YYY.

Membership: (including rotation of members)

- The following is the proposed membership for the sub-committee:

Position	Permanent or Rotating	

- Process for designation of chair and secretary

Notes:

- All meetings will be posted on the committee's website.
- Minutes from all meetings will be posted on the committee website within one week of the meeting. These notes will include decisions made, action items from the meeting and any follow up needed.