NC State IT Governance Redesign

February 2018
Version 2.1 (Final - Public Release)

Changes from v1.0

1. Pagination changed due to content additions
2. Changes to Figures:
   a. Updated Figure 1 on page 8. Separated governance structure from disposition of existing governance groups. That information was moved to Figure 5 on page 17.
   b. Changed "Client and Application Support" to "Technology Support" in Figure 1. Change made to indicate the function of the group as with the other group names. Note that actual subcommittee names may be finalized in the Mechanics phase.
   c. Added comment on Figure 1 to indicate our recommendation that the CISO should be a member of the Strategic IT Committee. While membership is outside the scope of this phase, we wanted to note this in order help NC State address UNC System Office concerns around information security governance.
   d. Added Figure 3 on page 13.
   e. From v1.0, Figure 3 became Figure 4 and its caption changed from "Non-governance structure (existing groups)" to "Mapping of existing subgroups to non-governance structure". The content is the same.
   f. Added Figure 5 on page 17
3. For the RACI matrix in Table 1 on page 11, added "--" to fill in blank cell for Service Configuration x IT Governance, indicating that IT governance does not have a role in service configuration.
4. Added sections:
   a. Non-Governance Relationships with IT Governance, pages 12-13
   b. Applicability to Campus Units, page 14
   c. Mapping Subgroups to New IT Governance Structure, page 17
5. Clarified role of service owners in the Mapping Subgroups to Non-Governance Structure section, bullet at bottom of page 15.
6. Removed timeline in Appendix 2, Project Plan. The timeline for Mechanics phase will be determined when that phase is planned.
7. Added deliverable for Mechanics phase for refinement of the scorecard, page 22.
8. In Appendix 4, New roles for existing governance groups,
   a. Added comment "There may be changes to committee charge or representation" to ITSAC-Academic Technologies, ITSAC-Client & Application Support, and ITSAC-Enterprise Applications.
   b. Under ITSAC-Client and Application Support, noted that this group maps to the Technology Support function in the governance structure
   c. For ITSAC-CAS/Software, changed "Steering team under Client & Application Support" to "Steering team under Technology Support"
   d. For ITSAC-Security & Compliance, removed "Disbanded or" leaving "Changed to advisory role."

Changes from v2.0

1. Changed "governance" to "IT governance" on page 7
2. Removed reference to disbanding ITSAC-Security on page 14
3. Removed references to disbanding ITSAC-Security and role of subgroups on page 15
4. Added link to external "Information Security Governance and IT Governance" document on page 15
5. Added link to external "Information Security Governance and IT Governance" document in comments for ITSAC-Security in Appendix 4, New roles for existing governance groups, page 29
6. Updated pagination in Changes from v1.0 section
7. Updated Table of Contents

Executive Summary

One goal of the NC State IT Strategic Plan is to "Optimize IT Governance." A steering team for this initiative has developed a plan for redesigning IT governance with a goal to create an improved IT governance process for the university. The first phase of this plan, Design, seeks to develop an overall structure and process that supports effective recommendation/decision-making while supporting innovation and collaboration.

The process the steering team used included interviews and research on other universities' IT governance processes, interviews with the chairs of the current NC State IT governance committees and subcommittees to assess strengths and weaknesses of the current process, and discussions from the perspectives of the steering teams with respect to their own expertise and experiences as governance participants.

Key areas of strength in the current process are:
● Provides a forum for communication and collaboration
● Facilitates stakeholder buy-in for decisions
● Participants find value in IT governance and want to see it improved

Key weaknesses include:
● Conflates governance, advisory and operational roles
● Lack of strategic alignment
● Scope and authority of groups are unclear
● Processes are complex and ineffective
● Stakeholder representation is not inclusive
● Governance is poorly utilized

To address these issues, the steering team has developed a revised structure and process with an intention to preserve the voices of stakeholders while improving effectiveness and reducing complexity. Key elements of the new design include:
● A distinction between non-governance and governance roles
● An IT governance design aligned with the university's mission and business, consisting of a top-level strategic committee and subcommittees for four functional domains
● A proposed model for non-governance organization that incorporates advisory groups and service teams
● Assignment of current IT governance bodies to the appropriate non-governance and governance roles

The next phase of the project, Mechanics, will involve developing charters, identifying membership, completing the scorecard defining what goes to governance, and developing the administrative processes that will underpin IT governance.

Project Overview

The redesign of NC State's IT governance process supports the "[Optimize IT Resources through Governance](#)" strategic initiative that is part of the implementation of [NC State's IT Strategic Plan](#).

The steering team for this phase of the project included stakeholders from OIT/College of Sciences, DELTA, the Libraries, Internal Audit, Finance & Administration, Engineering and Natural Resources, and faculty from the Poole College of Management (see **Appendix 1, Steering team members)**. These representatives were charged to consider IT governance in the context of the needs of the entire university, not just their functional areas.

We are currently finishing the first phase of the project, Design. The complete project roadmap including phases, timeline, goals and deliverables for each phase can be found in **Appendix 2, Project plan**.

Design Process

To explore IT governance processes at other universities, the steering team interviewed IT governance leaders at UCLA, the University of Wisconsin-Madison and Purdue University. In :addition, we reviewed a summary of a master's thesis that included descriptions of the IT governance processes at University of Texas at Austin, a private research university, Virginia Tech, NC State and University of Nebraska-Lincoln.

The steering team interviewed the chairs of the committees and subcommittees in the current NC State IT governance structure, as well as a subgroup. We also discussed the nascent data governance process with the Office of Institutional Research and Planning. See **Appendix 3, Sources** for a complete list of interviewees and sources.

From this data and the group's knowledge and experience, we analyzed the strengths and weaknesses of the current IT governance process and structure, identified potential improvements, and developed a proposed structure and scorecard to help determine what governance should address. We held two working sessions with Dr. Hoit to finalize the new structure.

Guiding Principles

We developed a set of guiding principles that shape the overall approach to this revision of IT governance. These principles are foundational for the current and future phases of this project.

- **Simplicity.** Governance should be straightforward and easy to navigate. Unnecessary bureaucracy must be avoided.

- **Strategic alignment.** The overarching role of IT governance is to provide strategic oversight and guidance around IT matters, and non-IT participation essential for alignment.
- **Engagement and access**. Stakeholders should have access to governance, and governance should address issues of stakeholder concern
- **Integration.** Governance should address issues spanning multiple domains holistically.
- **Clarity.** Governance scope, goals and processes should be clear and comprehensible.
- **Transparency.** Governance processes should be transparent and open.

Strengths and Weaknesses of Current IT Governance

While the existing process has some strong points, there are also many areas that need improvement. As we designed the new process, we considered these strengths and weaknesses.

The strengths include:

- **Provides forum for communication and collaboration.** The current structure provides many opportunities for campus stakeholders to meet and discuss issues of common interest. This has strengthened ties among groups and led to collaboration on common projects.
- **Facilitates stakeholder inclusion.** The opportunity for stakeholders to review proposals and provide recommendations generates buy-in into IT policy and decisions. In some cases, stakeholders are able to help prioritize projects or provide input into technical/operational decisions.
- **Participants value governance.** Participants in the current IT governance process would like to see it improve because they see value in having an effective IT governance process.

However, several weaknesses were observed:

- **Conflation of governance, advisory and operational roles.** Some groups are focused on operational tasks and problems or serve primarily to provide a forum for IT to seek advice about particular services. Few groups function in governance roles, such as making resource prioritization decisions or recommendations about broad IT strategy and policy decisions.
- **Lack of strategic alignment.** The relationship between the university strategic plan, the NC State IT strategic plan and IT governance is not well-understood, and the IT governance process is not aligned with or connected to university budget processes.
- **Scope and authority are unclear.** Many committees and subcommittees are confused about their charges and scopes of authority. Decision-making process are undefined, and many subgroups lack clear purpose or official charge in relation to governance.
- **Processes are complex and ineffective.** The structure is too complex, and consequently how governance works in practice differs from what's documented. There is often poor communication between committees, subcommittees and subgroups. The lack of standard

processes for basic committee functions makes it difficult for stakeholders to navigate governance and for governance participants to effectively communicate decisions and recommendations.
- **Stakeholder representation is inadequate.** There is a lack of non-IT stakeholder participation. Current membership does not always consist of those empowered to make decisions or recommendations affecting the university, or in many cases, even their own units.
- **Governance is poorly utilized.** There is a lack of clarity regarding when governance should be consulted, and it is unclear how to move an issue forward through governance. There is resistance to the use of IT governance by OIT and campus units, who often find the process bureaucratic or who do not see the value that governance brings.

Recommendations

Complexity and Alignment: A New Structure

The current "spaghetti diagram" of 41 governance bodies was originally developed in 2012 to bring together the many existing IT-related committees and ad hoc groups into an integrated IT governance process. This was an improvement over the disjointed initial level of IT governance maturity at that time.

We reviewed a variety of IT governance structures at other universities, and analyzed what works and doesn't work with our existing IT governance process. Three key findings around structure emerged:
- Other universities studied have significantly fewer IT governance bodies than our current structure.
- Our current structure is confusing and difficult to use effectively, even for the chairs of the committees and subcommittees
- Governance, operational and advisory functions are all labelled as "governance," leading to confusion and misunderstandings about the scope, authority and decision-making roles of these bodies

As a first step, we have made a basic distinction between governance and non-governance functions.
- **Governance** groups address issues of IT strategy, IT policy and resource prioritization. They consult on strategic service decisions and direction of technology services.
- **Non-governance** groups address configuration, operation and selection of technology solutions, provide functional requirements, and weigh in on the direction of technology services.

In this new model, governance groups may be one of four types: committee, subcommittee, steering team, or governance working group.

- The **committee** is the top-level governance body, directly advising the VCIT/CIO
- **Subcommittees** represent functional domains. These domains are focused on user communities (academic, research, business and IT)
- **Steering teams** may be created by committees or subcommittees and have a delegated role in resource prioritization within the functional domain.
- **Governance working groups** are <u>temporary</u> groups that may be formed by any governance body to address issues. They have a defined charge and lifespan. They may make recommendations or provide information to their parent group.

Governance groups report to the Vice Chancellor for Information Technology & Chief Information Officer (VCIT/CIO). See **Figure 1** for a diagram of the new IT governance structure.

- **The VCIT/CIO** leads IT governance, and is ultimately accountable for IT strategy.

Strategic IT Committee
In the new structure, the top-level IT governance committee is the **Strategic IT Committee (SITC)**. This group is expected to place greater emphasis on providing recommendations regarding IT strategy, opportunities, and priorities. As envisioned, the CIO may choose to delegate specific decisions to this committee which, at the discretion of the CIO, could be further delegated to appropriate subcommittees or working groups.

In order to achieve the style of inclusive governance envisioned, the existing membership of the CITD should be evaluated and other stakeholders added as needed to ensure that as many stakeholder groups as practical are represented.

Subcommittees
The four subcommittees were selected to represent major functional domains. They represent the academic and research mission of the university (Academic Technologies and Research Computing subcommittees), the major business functions (Enterprise Applications), and include a functional IT focus (Technology Support). We have eliminated Infrastructure and Security as IT governance bodies, as these are services that span multiple functional domains (see **Today's Voices** for further explanation.)
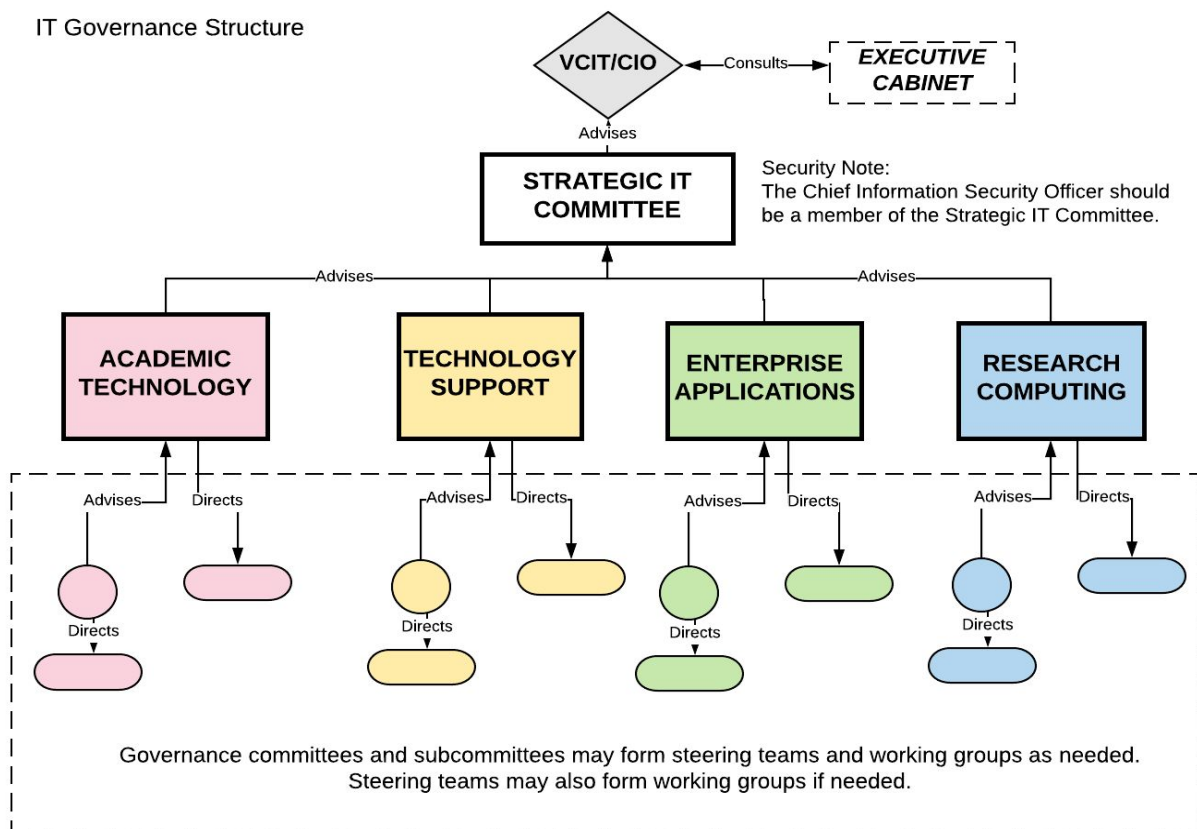
Steering Teams
A large contributor to the "spaghetti structure" nature of current governance is the proliferation of subgroups. In the new governance model, we are retaining only groups that are charged with

resource prioritization or allocation within a broad area of a functional domain as steering teams. The other subgroups are moved into the non-governance structure, discussed later.

Governance Working Groups
A proliferation of standing groups would undermine the goal of reducing governance complexity. The need for a standing group and its proposed role should be carefully considered, and we expect that in most cases a temporary working group will be sufficient. Working groups are time-bound and have a clear charge and deliverables.

Figure 1. New IT governance structure

IT Governance Structure

Security Note:
The Chief Information Security Officer should be a member of the Strategic IT Committee.

Governance committees and subcommittees may form steering teams and working groups as needed. Steering teams may also form working groups if needed.

Types of Governance Bodies
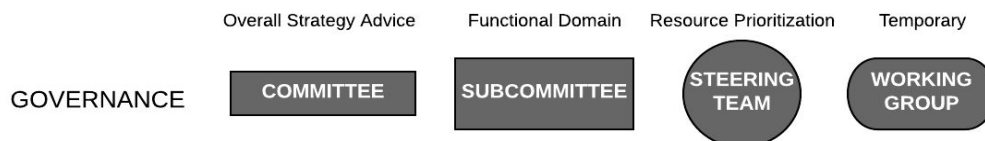
As we address the current state of IT governance, we have to address non-governance functions because many groups in the current structure will have non-governance roles.

Non-governance groups from the current structure will fall into two categories: advisory teams and service teams. They serve to assist the service owner and to allow stakeholders to have direct input on decisions affecting the service. For major services, we recommend that service owners consider a model that includes both types of groups.

- **Advisory teams** are composed of <u>functional stakeholders</u> of a particular service. They advise the service owner on functional requirements for the service, raise performance issues, identify service-related needs, and advise on the future direction of the service.
- **Service teams** are composed of <u>subject matter experts and technical staff</u> who are responsible for the operation of a service. They operate under the direction of the service owner, who is accountable for service delivery.
- **Service owners** are units in the university's management hierarchy that are accountable for delivery of the service. Service owners designate a <u>service manager</u> for each service, who is the individual that is accountable and responsible for ensuring the service is delivered according to established standards.

In addition, service owners, service teams, or advisory teams may find that they need a working group to address a particular topic or project.

- **Non-governance working groups** are <u>temporary</u> groups that are charged with particular tasks and have a defined lifespan. They may gather information, work on a project, and make recommendations. Working groups can be created as needed.

Like governance groups, non-governance groups influence IT decisions and ultimately report to the VCIT/CIO or another accountable university leader.

- **The VCIT/CIO** is at the top of the non-governance structure, and is ultimately accountable for IT service delivery.
- **Other university leaders** may be part of the non-governance structure if they are accountable for the delivery of an IT service.

See **Figure 2** for the proposed non-governance model.

Figure 2. Non-governance model
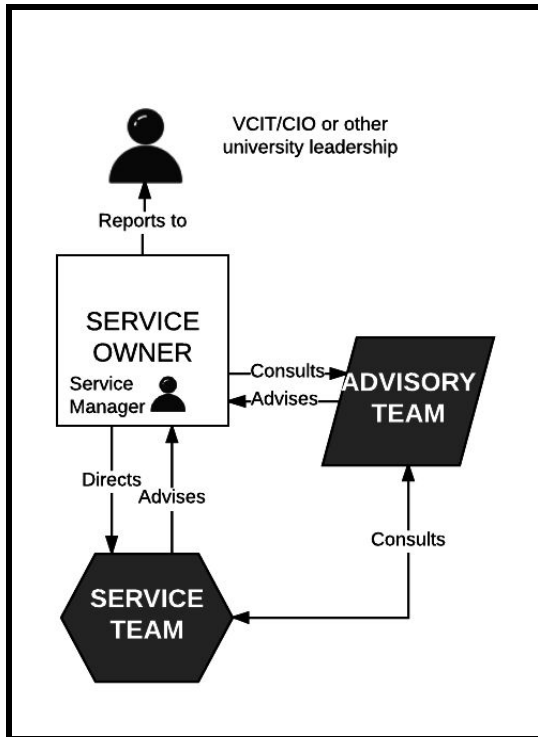
Roles in Service Decisions

The relationship between the service owner and IT governance is key to the success of both. In general, governance does not "delve into the weeds." Technical configuration and day-to-day operation of the service are non-governance responsibilities. This is a change from current practice, where governance has often weighed in on operational decisions in some detail.

Governance plays a strategic role rather than an operational role, and should be consulted regarding new service development, the selection of technology solutions, and the direction of the service as well as service changes that meet the criteria that would bring them before governance (see **Appendix 5**, **Draft scorecard: Does this go to governance?**).

A summary of the roles of non-governance and governance can be seen in **Table 1**. For some services, steering teams which are part of IT governance may also fulfill the functions of an advisory team. The RACI model identifies who is Responsible, Accountable, Consulted and Informed on decisions.

- Responsible: entity responsible for doing the work to implement a decision
- Accountable: entity that is held accountable for a decision
- Consulted: entity that has input into a decision
- Informed: entity that is informed about a decision that has been made

Table 1. RACI matrix for service decisions

Decision	Service Owner	Advisory or Steering Team	Service Team	IT Governance
Service configuration	A	C	R	--
Service operations	A	C	R	I
Functional requirements	A	R	C	I
Service changes	A	C	R	C
Technology solution selection	A, R	C	C	C
Service Direction	A, R	C	C	C

- **Service configuration.** The technical configuration of a service does not require governance input. If the configuration impacts functionality, the advisory team should be consulted.
- **Service operations.** The day-to-day operations of the service do not require governance input. However, if there are problems with operations that impact the availability or functionality of the service, governance should be informed.
- **Functional requirements.** The establishment of functional requirements for a service is ordinarily the responsibility of the advisory team. However, some services will have steering teams in the IT governance structure instead of advisory teams. Governance should be informed about the functional requirements developed by the advisory or steering team for a new service or upgrades to existing services.
- **Service changes.** When service changes are planned whose impact to business processes, users, cost, risk, or strategic impact rises to the level specified in the scorecard (see **Appendix 5, Draft scorecard**), governance must be consulted. This includes the development of new services.
- **Service direction.** The service owner should consult with governance regarding future plans for the service, including expansion, replacement, or discontinuation of the service.

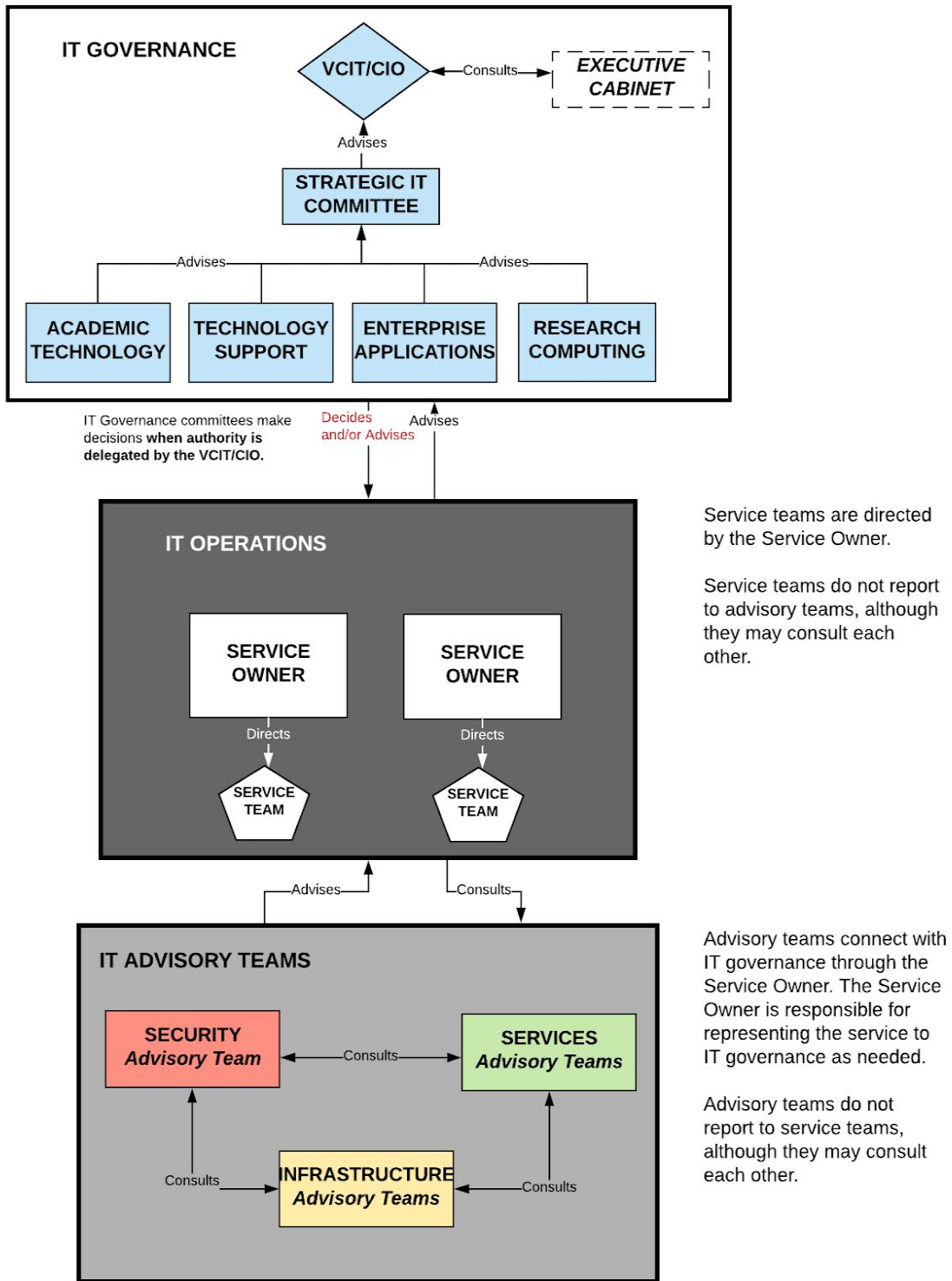## Non-Governance Relationships with IT Governance

The relationships between non-governance groups and governance bodies are shown in **Figure 3**. The essential principles are:

- The service owner represents the service to IT governance when needed.
- Advisory teams associated with areas such as security, infrastructure, and other services provide advice to the service owner.
- Advisory teams do not directly advise IT governance bodies and they are not a part of IT governance. Their role is to advise the service owner. Their connection with governance is through the service owner.
- Service teams are directed by the service owner. Their role is to perform the work necessary to deliver the service, and they are not part of IT governance.
- Advisory teams and service teams are independent and do not report to each other but rather consult with each other. They do so in order to either complete the work as directed by the service owner or to gather information in order to advise the service owner.

Figure 3. Relationships between IT governance and non-governance bodies

Relationships between IT governance, service owners and advisory teams

NC State IT exists as a federated model, with central IT (OIT) and independent IT units in the Libraries, DELTA and the Colleges, as well as in many other divisions, departments, centers and institutes. As we move toward a unified IT governance process, there are questions about how and when units outside of OIT will use IT governance for review of their own projects and decisions.

We recognize that the development of a unified IT governance process at an institution with such a complex IT structure is aspirational. However, in order to achieve the benefits that effective IT governance can provide, broad participation and utilization of the process is needed. What we are suggesting for now is:
- The IT governance scorecard, which will be developed further in the next phase of this project, should be used to determine what should be brought forward to IT governance
- At this point, the idea is for campus units to **inform** governance rather than for their decisions to be determined by IT governance
- This will allow campus to have more awareness of what is happening in other units. This offers the chance to avoid unnecessary redundancy or duplication of services or purchases. It will also facilitate collaboration among units that might not have otherwise known that such opportunities existed.

With respect to the proposed non-governance model, units outside of OIT may also offer enterprise services or other services that are utilized by multiple stakeholders. It is up to the service owner to determine how to manage service teams or when to have advisory teams. In many cases for enterprise services, these exist although may be named differently. Our recommendations are that:
- Service owners outside of OIT ensure that they have appropriate advisory functions in place, whether or not they formally utilize the non-governance model.
- Service owners clearly document how stakeholders provide input regarding the service, how decisions are made, and who the service manager and service team are.

Transition of Existing Governance Groups to New Model

Today's Voices

The most frequently cited benefit to existing governance was that it provides a forum for communication across many groups of stakeholders. In this new model, we have worked to preserve the voices of those participating in the current governance process, while recognizing more accurately the roles that they play.

Notable changes include the disbanding of ITLC, ITSAC, and ITSAC-Infrastructure. These groups currently function in advisory roles and are forums for information sharing. The members of these committees will have other options for providing input and receiving information about the services they are interested in. They may participate in advisory or steering teams that directly interact with

the service owner and service team, and may receive information through existing channels as users of a service. The shift to advisory teams is intended to amplify the voices of the stakeholders for the service by connecting them more closely to the service owner and service team.

ITLC consisted of the Vice Chancellor for Information Technology and Chief Information Officer (VCIT), the Chief Financial Officer, the Vice Chancellor for Research, Innovation and Economic Development and the Provost. In practice, this group does not meet regularly as a committee. Instead, the VCIT addresses issues as needed with the relevant members of the executive cabinet, and those executives consult with him on matters related to information technology. This arrangement better suits the culture of the institution.

ITSAC members participate in management structures and advisory bodies where they can provide input and where information sharing occurs about services that interest them. They also have the ability to escalate issues to IT leadership through their respective Vice Chancellors or to bring issues forward directly to IT governance as needed.

ITSAC-I also serves a role in facilitating discussion among technical staff with interests and roles in multiple technology areas, and has value in providing a forum for coordinating services across technology domains. We would like the current membership of ITSAC-I to weigh in on whether a formal non-governance forum should exist to support this function.

ITSAC-Security will be transformed into an advisory team. See external document, "Information Security Governance and IT Governance" at https://go.ncsu.edu/info-sec-gov-redesign for details on how information security governance integrates into IT governance.

This proposed model maintains space for the types of communication and advising that we have today. Crosswalk tables showing the new roles for existing groups can be seen in **Appendix 4**, **New roles for existing governance groups**.

Mapping Subgroups to Non-Governance Structure

We are recommending including the majority of current subgroups in a non-governance structure based on this model. See **Figure 4** for the proposed mapping of existing groups to a non-governance structure.
.
- The majority of the current subgroups largely advise or work with OIT service owners.
- In order for this model to function well, OIT will need to identify its major services, service owners and service managers, and develop appropriate advisory team and service teams.
- Service owners are responsible for constructing service teams and advisory teams. The mappings indicated for existing groups are suggestions and we recognized that the service owners may want to make changes to these groups, including their charge and membership.

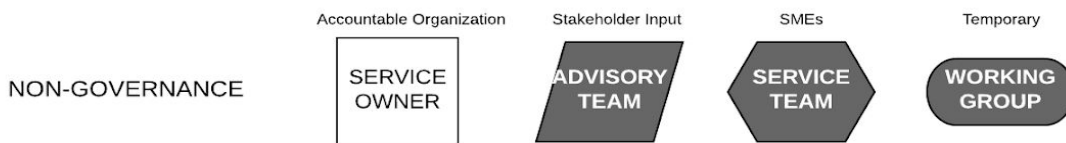**Figure 4. Mapping of existing subgroups to non-governance structure**
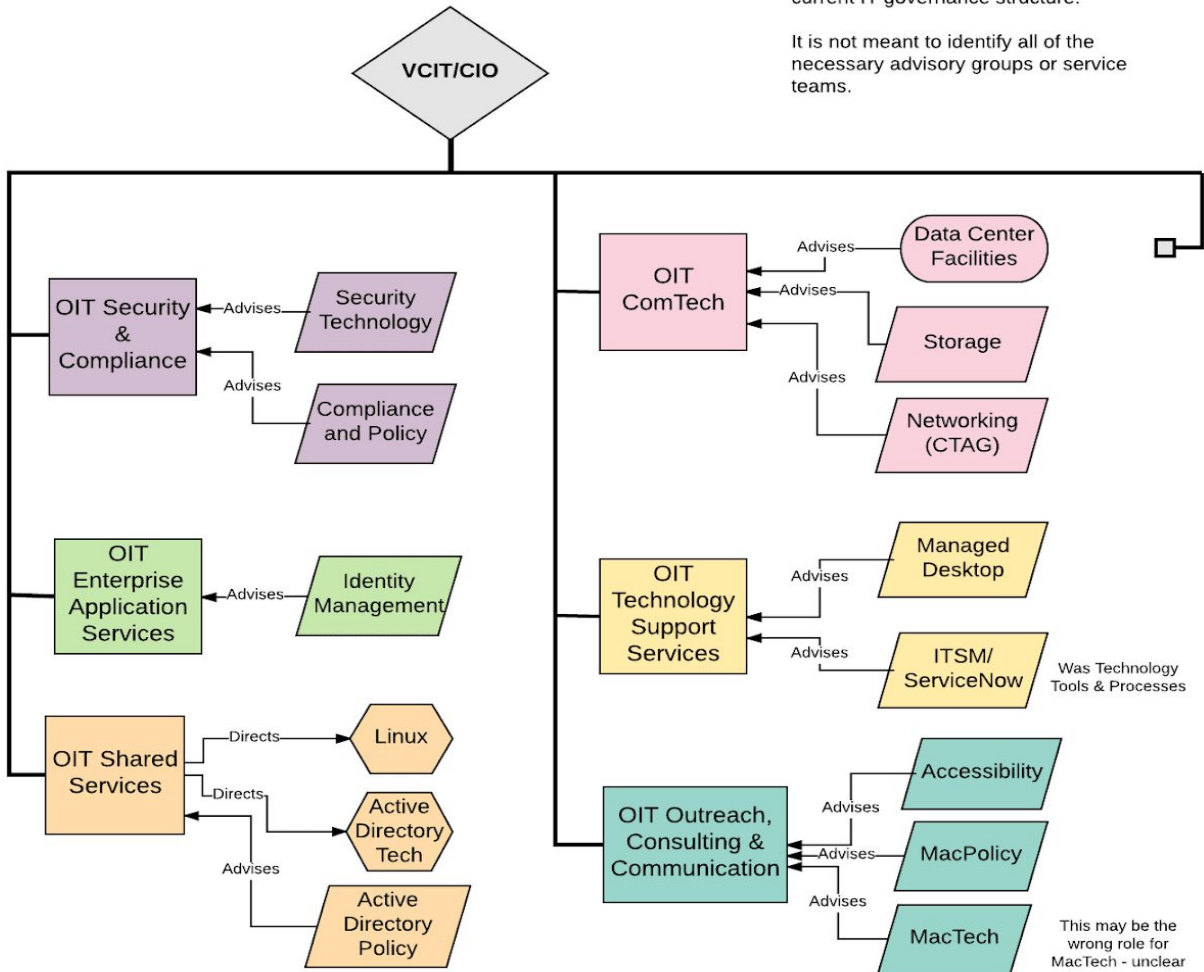
Mapping Subgroups to New IT Governance Structure

Some current subgroups may continue to be a part of the new IT governance structure. These are steering teams that are currently responsible for resource prioritization. See **Figure 5** which shows the mapping of current steering teams with their parent subcommittees.

- Committees and subcommittees will determine which steering teams and working groups are needed going forward. It is possible that there could be changes to these subgroups.
- Committees and subcommittees will be responsible for charging such groups, and it is possible that the charge and/or membership may change if it is determined this is desirable.

Figure 5. Mapping of existing steering teams to new IT governance structure
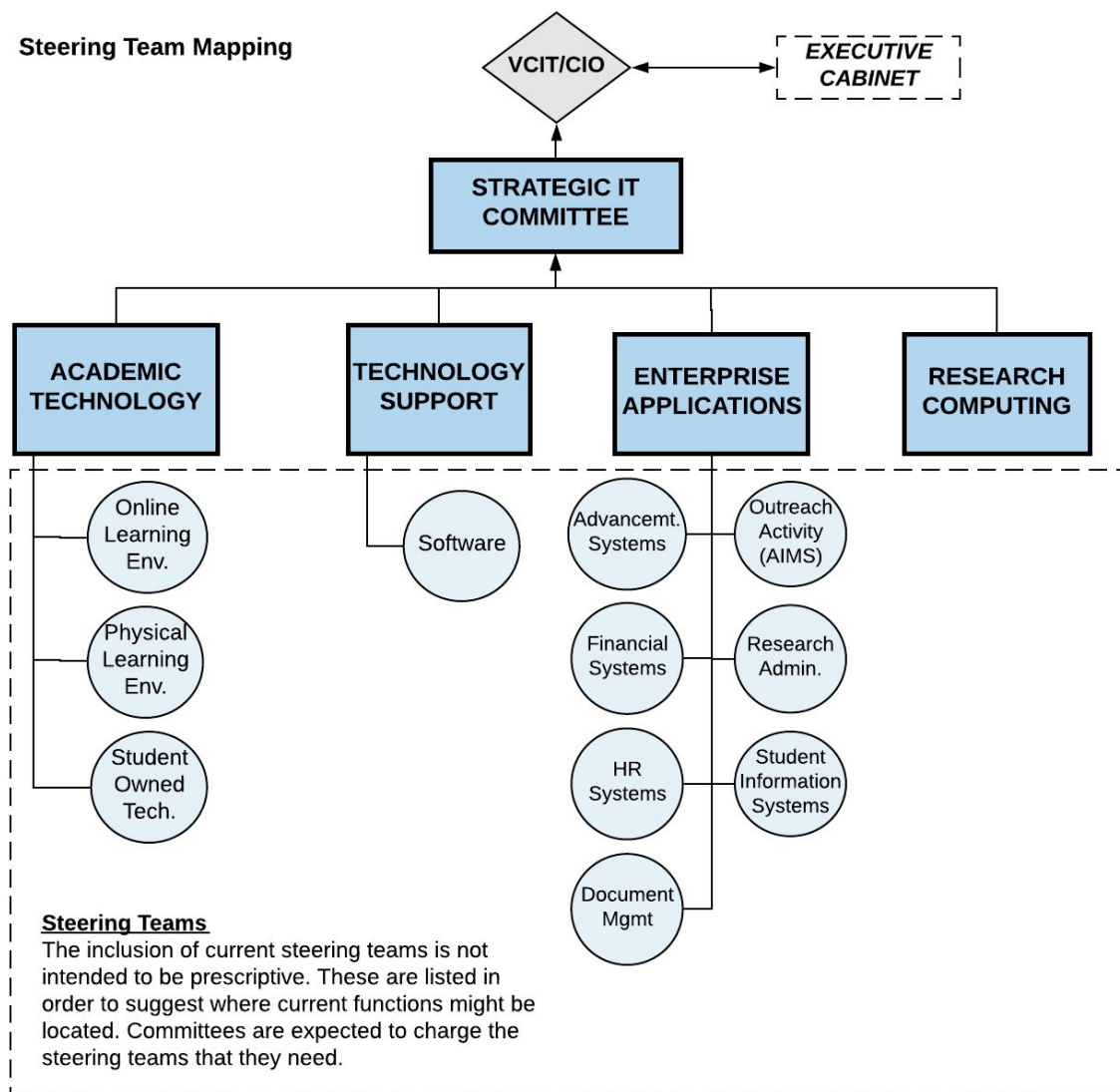
Charges and Processes: The Mechanics of Effective Governance

In the current process, many of the groups have charged themselves and attempted to identify their scope. Their authority is unclear, and they do not know what decisions they are supposed to address. Moving forward, our recommendations are:

- **Provide clear charges** to the SITC and subcommittees that define their purpose, scope and authority.
    - The current CITD membership should be involved with charging the subcommittees in cooperation with the steering team and VCIT/CIO.
- **Define delegated decision-making authority** and roles. The VCIT/CIO will identify the kinds of decisions that SITC and/or the subcommittees are authorized to make on an ongoing basis. Certain decisions may be delegated on an ad hoc basis.
- **Ensure the separation** of governance functions from non-governance operational decision-making
- **Refine and finalize the scorecard** that determines when governance should be consulted and when governance is responsible for making final recommendations on a decision or issue
- **Establish consistent processes** for committee/subcommittee management, including communications and documentation, meeting schedules, voting processes, officer selection and terms, and chair responsibilities
- **Schedule a continuous improvement process** for IT governance, including regular reviews that assess accomplishments, process effectiveness, and opportunities for improvement. This should include a review of committee/subcommittee membership.
- **Actively manage** the governance process. Some staff effort must be devoted to ensuring that governance bodies are adhering to established processes, that chairs understand their responsibilities, and identifying any problem areas.

Stakeholder Representation: Empowered People

For governance to be effective, the right people must be involved in the process. One problem we've observed in the current process is that participants are not always empowered to speak on behalf of their organizations. Some of this resulted from the conflation of governance and non-governance roles in the current structure. We recommend:

- **Assess the membership** of the governance groups against their charges, and ensure that people at the right organizational level to meet the charge are included
- **Expand non-IT stakeholder inclusion**, inviting representatives from major constituent areas to participate at the appropriate level. We recognize the challenges that large groups present, and the sometimes more narrow interests of non-IT stakeholders, so consideration must be given to the best way to include them.
- **Monitor member participation**. If members do not regularly participate, it may be appropriate to investigate the reason and/or request another representative or to find other ways for their organizations' voices to be heard.

Using Governance: Socializing the Process

Utilization of the current governance process is spotty, and at times staff actively avoid taking decisions to governance because it is perceived as an unhelpful bureaucracy. In order for governance to be effective, it must be well-understood, it must be responsive, it must demonstrate value, and managers and stakeholders must be committed to using the process. To this end, we should clarify, simplify and communicate governance processes:

- Provide clear guidance on what goes to governance. The steering team developed a draft scorecard to help with this which can be seen in **Appendix 5**, **Draft scorecard: Does this go to governance?**
- **Create responsive processes** for considering issues that minimize delays and the need for repetitive reporting
- **Provide simple processes** for requesting an issue receive consideration and for communicating decisions and questions
- **Communicate agendas and decisions effectively.** Last-minute or missing agendas and a lack of accessible documentation of decisions have been problems with some governance bodies.
- **Regularly communicate the IT governance process** to the campus community, both IT and non-IT
- **Obtain management and stakeholder commitmen**t to utilize governance and ensure that they understand how to use the process.

Next Steps

As we continue with this project, CITD will play a key role in the development of the redesigned IT governance process. The next steps are:

Review new structure

The new structure should be reviewed by CITD, ITSAC and the ITSAC-* subcommittees with an opportunity to provide feedback. This feedback will be reviewed by Dr. Hoit and the steering team, and any necessary changes to the structure will be made.

Prepare for Mechanics Phase

We would like CITD to help identify a team that will work on the next phase of the project. This team will be responsible for overseeing the development of the charges for the governance bodies, refine the scorecard, and develop standard processes for IT governance bodies. It will also develop an implementation and communication plan, and identify the resources needed for implementation. At the end of this phase, we will be ready to implement the new structure.

Appendices

Appendix 1. Steering team members

Membership included:
- Debbie Carraway, coordinator. Director of Information Technology, College of Sciences (originally Asst. Director, Infrastructure, Systems & Operations, OIT)
- Dr. Mark Beasley, Deloitte Professor of Enterprise Risk Management, Poole College of Management
- Keith Boswell, Director of Technology (ITECS), College of Engineering
- Dr. Martin Dulberg, Senior Coordinator for Learning Management Systems, DELTA
- Cecile Hinson, Director, Internal Audit Division
- Sharon Loosman, Director of Materials Management, Office of Finance and Administration
- Jill Sexton, Department Head, Information Technology, NCSU Libraries
- Greg Robinson, Director of Information and Instructional Technology, College of Natural Resources

Other participants:

Dr. Marc Hoit, Vice Chancellor for Information Technology and Chief Information Officer, and Greg Sparks, Assistant Vice Chancellor for Communication Technologies participated in the drafting of the final proposed structure.

Mary Peloquin-Dodd, Associate Vice Chancellor for Finance and Administration and University Treasurer participated in the initial meetings and assisted with the development of the guiding principles and assessment of ITSAC.

Appendix 2. Project Plan

Phases
1. **Design**
   Development of IT governance process (structure, composition, roles, criteria, high-level implementation plan)
2. **Mechanics**
   Development of detailed implementation procedure (charges for governance bodies, standard processes, communication plan)
3. **Implementation**
   Implementation of new IT governance process (communication/socialization, recruitment of participants, support)
4. **Improvements**
   Review and refinement of IT governance process (feedback, observation, design changes, mechanics improvements, communication/socialization of changes)
5. **Operationalization**
   Management of IT governance process (mechanics, communication/socialization, regular review)
6. **Closeout**
   Lessons learned and wrap-up

Goals for design phase:
- Development of a mature IT governance process that will be responsible for strategic recommendations and decision-making about IT policies and resource allocation for all NC State IT projects meeting defined criteria.
- Incorporation of best practices to facilitate effectiveness
- Design of a governance process that formalizes policy development and project review processes while supporting innovation and facilitating collaboration

Deliverables:
- Recommended governance structure
- Recommended governance composition
- Definition of governance roles in decision-making
- Recommendation of criteria for governance review of IT projects
- High-level implementation plan
- Identification of team responsible for detailed implementation planning and execution

Goals for mechanics phase:
- Development of detailed implementation plan/timeline
- Identify resources needed to execute implementation phase
- Plan for communication/socialization to build buy-in and help campus constituents develop understanding and adoption of new IT governance process
- Development of charges for all governance bodies identifying scope, responsibilities and authority
- Development of a plan for transitioning existing groups into or out of new IT governance structure
- Development of standard processes for IT governance bodies (e.g., agenda templates, minutes/notes, leadership roles/elections, reporting process, documentation location)

Deliverables:
- Detailed implementation plan/timeline
- Request for resources needed for implementation phase
- Communication/socialization plan
- Charges for each governance body
- Transition plan for existing groups
- Documentation of standard processes
- Documentation repository for each governance body created
- Location for publication of meeting agendas/meeting notes for each governance body created
- **NEW:** Refinement and completion of scorecard (see Appendix 5 for draft)

Goals for implementation phase:
- Recruitment of participants for IT governance bodies
- Initiation of regular meetings, including a review of the charge and standard processes for each governance body
- Election/selection of officers for each governance body
- Provide support for IT governance participants on the new standard processes
- Communication and socialization of new IT governance process to academic, business and IT units
- Communication of transition plan to existing governance groups

Deliverables:
- Initial meetings for all governance bodies held, future meetings scheduled
- Agendas/meeting notes published for each governance body
- Complete roster for each governance body including officers
- Execution of communication/socialization plan

Goals for improvements phase:
- Assess the IT governance process for problems or areas to improve (feedback on attendance/participation, projects/policy issues brought forward, communication/socialization concerns, mechanics, etc.)
- Develop plans and timelines for improvements
- Report on status of IT governance to stakeholders
- Identify resources needed for operationalization phase

Deliverables:
- Documentation of areas of concern/problems
- Plan/timeline for improvements
- Report on status of IT governance
- Request for resources for operationalization phase

Goals for operationalization phase:
- Identify measures/metrics to ensure IT governance is meeting its goals
- Monitor process to ensure that governance groups are meeting and successfully utilizing standard processes
- Monitor process to ensure that IT projects and policies are making their way through governance appropriately,
- Identify "rogue" projects that incorrectly avoided the IT governance process and address through improved communication/socialization
- Design and implement processes for regular review and improvements to IT governance

Deliverables:
- Measures/metrics identified
- Plan for any needed remediation
- Reports on status of success of IT governance

Goals for closeout phase:
- Identify lessons learned from project
- Identify resources/process needed for management of IT governance, including regular reviews and improvements
- Ensure documentation of IT governance process is complete and published

Deliverables:
- Published documentation of lessons learned
- Request for needed resources
- Complete and published documentation of IT governance process

Appendix 3. Sources

Interviews were conducted with other universities as well as chairs of IT governance committees and subcommittees at NC State.

Other Universities

- **Boston University:** Tracey Schroeder, Vice President, Information Services & Technology, 4/22/16
- **Purdue University:** Gerry McCartney, Vice President for Information Technology and System Chief Information Officer, 4/14/16
- **UCLA:** Kelly Arruda, Project Manager, Privacy & IT Governance, Office of Information Technology, 4/12/16
- **University of Wisconsin-Madison**: Beth Schaefer, Director of IT Services, University Information Technology Services, 4/29/16
- Information about IT governance structure and factors in maturity and effectiveness at additional research universities was drawn from:
  Carraway, Deborah. Supporting Innovation through IT Governance. Research bulletin. Louisville, CO: ECAR, April 20, 2016.

NC State

- **ITSAC-Academic Technologies:** Stacy Gant and Bethany Smith (co-chairs), 4/12/16
- **ITSAC-Enterprise Applications:** Todd Driver, 4/26/16
- **ITSAC-Client & Application Support:** Mark Williams and Danny Davis (co-chairs), 4/8/16
- **ITSAC-Infrastructure:** Dan Deter, 4/12/16
- **ITSAC-Research Computing:** Eric Sills, member and de facto lead (Doug Irving, chair, not available), 4/27/16
- **ITSAC-Security:** Leo Howell, 4/13/16
- **Campus IT Directors:** Stan North Martin, 4/8/16
- **IT Strategic Advisory Committee (ITSAC):** Information about ITSAC was gained from conversations with ITSAC representatives on the steering team (Cecile Hinson, Mary Peloquin-Dodd), part of CITD interview with Stan North Martin (CITD representative to ITSAC and agenda coordinator) and conversations with Marc Hoit, chair
- **IT Leadership Committee (ITLC):** Information about ITLC was gained from conversations with Marc Hoit, chair
- **MacPolicy:** Everette Allen, chair, 5/9/16 (one of the longest-running subgroups, if not the longest, since ~1998)
- **Data Governance:** Mary Lelik, Senior Vice Provost, Office of Institutional Research & Planning and her staff about the nascent data governance process, 5/6/16

Appendix 4. New roles for existing governance groups

Crosswalk tables showing new roles for existing governance groups.

ITLC

Group	New Role	Comments
ITLC	**Disbanded. Executive cabinet members are consulted as needed, and they consult the VCIT/CIO on IT matters.**	This group has not met regularly as a separate committee. Culturally and practically, a less formal arrangement works better.

ITSAC

Group	New Role	Comments
ITSAC	**Disbanded. Current members will serve in advisory roles to relevant services, and can bring issues forward directly to governance as needed or through their respective Vice Chancellors.**	ITSAC participants expressed confusion about what they are supposed to do, and generally did not find much value in the current model. OIT noted that it has been difficult to utilize this group effectively. Other avenues exist for members to receive information and express concerns.

CITD

Group	New Role	Comments
CITD	**Basis for top-level governance (SITC), but with non-IT stakeholders and updated charge**	**Non-IT stakeholder participation needs improvement.**

ITSAC-Academic Technologies

Group	New Role	Comments
ITSAC-Academic Technologies	**Academic Technologies remains a governance group**	There may be changes to committee charge or representation
ITSAC-AT/Online Learning Environment	Steering team under Academic Technologies	
ITSAC-AT/Physical Learning Environment	Steering team under Academic Technologies	
ITSAC-AT/Student Owned Technologies	Steering team under Academic Technologies	

ITSAC-Client & Application Support

Group	New Role	Comments
ITSAC-Client & Application Support	**Client & Application Support remains a governance group (Maps to "Technology Support" in this document)**	There may be changes to committee charge or representation
ITSAC-CAS/Accessibility	Steering Team under Client & Application Support	
ITSAC-CAS/Active Directory Policy Working Group	Advisory team advising OIT service owner	OIT should identify the appropriate service owner for Active Directory service.
ITSAC-CAS/Mac Policy	Advisory team advising OIT OCC service owner	
ITSAC-CAS/Mac Tech	Advisory team advising OIT OCC service owner	We were not sure whether MacTech operates as a service team or if it is more of an advisory group
ITSAC-CAS/Software	Steering Team under Technology Support	
ITSAC-CAS/Managed Desktop	Advisory team advising OIT TSS	This group has not met as a subgroup of ITSAC-CAS. The

		current OITMD LANTechs may play this role?
ITSAC-CAS/Messaging Customer	Remove	This group has not met. If needed, this would be advisory to the appropriate service owner.
ITSAC-CAS/Technology Support Tools & Processes	Advisory team to OIT TSS	ITSM

ITSAC-Enterprise Applications

Group	New Role	Comments
ITSAC-Enterprise Applications	**Enterprise Applications remains a governance group**	There may be changes to committee charge or representation
ITSAC-EA/Advancement	Steering Team under Enterprise Applications	
ITSAC-EA/HR	Steering Team under Enterprise Applications	
ITSAC-EA/Financial Systems	Steering Team under Enterprise Applications	
ITSAC-EA/Document Management	Steering Team under Enterprise Applications	
ITSAC-EA/AIMS	Steering Team under Enterprise Applications	
ITSAC-EA/Research Administration	Steering Team under Enterprise Applications	
ITSAC-EA/Student Information Systems	Steering Team under Enterprise Applications	

ITSAC-Infrastructure

Group	New Role	Comments
ITSAC-Infrastructure	**Disbanded. Members will now participate in relevant advisory teams/service teams for various infrastructure services.**	**Another forum to support information-sharing among those with interests in multiple technology areas may be needed.**
ITSAC-I/Active Directory Technical Service Team	Service team directed by OIT Shared Services service owner	
ITSAC-I/Realm Linux Service Team	Service team directed by OIT Shared Services service owner	
ITSAC-I/Data Center Facilities Working Group	Disbanded as a standing group. Working group instantiated as needed by ComTech	Has not regularly met for some time.
ITSAC-I/Identity Management	Advisory to OIT EAS	
ITSAC-I/ComTech Advisory Group (CTAG)	Advisory to OIT ComTech	This group is generally focused on networking.
ITSAC-I/Storage	Advisory to OIT ComTech	This group has not met in several years. However, there may be a need for a storage services advisory group.
ITSAC-I/Web Services	Advisory to OIT	This group has not yet been constituted but is in the charter for ITSAC-I. Web services are provided by multiple OIT units. OIT needs to identify a service owner.

ITSAC-Research

Group	New Role	Comments
ITSAC-Research Computing	**Research Computing remains a governance group**	**This group has not been meeting and needs substantial redesign**

ITSAC-Security & Compliance

Group	New Role	Comments
ITSAC-Security & Compliance	**Changed to advisory role.**	**See http://go.ncsu.edu/info-sec-gov-design**
ITSAC-S&C/Security Technology Working Group	Advisory team advising OIT Security & Compliance	
ITSAC-S&C/Compliance and Policy Working Group	Advisory team advising OIT Security & Compliance	

Appendix 5. Draft scorecard: Does this go to governance?

This scorecard helps users determine whether a project, policy or strategy should be reviewed by governance. It should be easy to use, and no more than a page. Specifics need discussion.

FINANCIAL/RESOURCE IMPACT	BUSINESS PROCESS IMPACT
High (any of the following are true): ● Project cost exceeds $(*threshold to be determined*) ● Project requires an incremental FTE Low (all of the following are true): ● Project costs less than $(*threshold to be determined*) ● Project will be done with existing staff	High (any of the following are true): ● Business processes in multiple academic or business units will change ● Project/policy requires integration with other enterprise or shared systems ● Faculty will have to change their processes for teaching, grading or advising students ● Researchers will have to change processes for managing research programs or data Low: (all of the following are true): ● Business processes are minimally impacted ● Impacts only one academic or business unit ● Integration with other enterprise or shared systems is not required ● No impact to teaching or research
USER IMPACT	RISK
High (any of the following are true): ● Users in multiple units will have to learn significant new skills, training is required ● The number of users impacted exceeds 300 or they are in multiple academic or business units ● Users impacted include university leadership at the 3D level Low (all of the following are true): ● Users will be able to easily understand any changes ● Fewer than 300 users are impacted or only one academic or business unit ● Users impacted do not include 3D level university leadership	High (any of the following are true): *Failure of project OR failure to act results in:* ● Loss of reputation or adverse publicity for the university ● Costs to the university exceeding $50K ● Loss of grant funding ● Significant security risk ● Adverse impact to compliance with laws, rules, regulations or contracts Low (all of the following are true): *Failure of project OR failure to act results in:* ● No significant impact university reputation and does not generate adverse publicity ● Costs less than $50K ● No adverse impact to grant funding ● No adverse impact to compliance ● None or low security risk
STRATEGIC IMPACT High ● Impacts progress toward a university or NC State IT strategic initiative ● Impacts progress toward multiple units' strategic initiative Low ● Impacts progress only toward one unit's strategic initiative	