4.1 Redefining Governance and Fiscal Responsibility: From Services Offered to Services Shared

Governance: How can the Office of the Associate Vice Chancellor for IT develop appropriate advisory structures that include faculty, students and staff that effectively shape IT direction through engaged participation to better support the core activities of teaching, learning and research?

Additionally, how can the AVC for IT define in theoretical and actionable terms the idea of fiscal responsibility and budget transparency through engaged participation of the advisory committees? How can the IT committees draw in other recommendations that derive from other committees to create a campus-wide dialogue regarding IT fiscal responsibility?

A. Background/Rationale

This subchapter provides a roadmap to engage all areas at CU-Boulder to select, prioritize, coordinate, budget, measure, and judge IT services, at the level of one specific area, and for all of CU-Boulder.

IT is a strategic service and resource necessary to the support of research, teaching, outreach, and administration. IT services have developed across the campus in a distributed manner, typical and appropriate to an R1 institution. To maximize the quality, quantity, and cost-effectiveness of IT services, governance – advisory and decision-making processes – is needed to coordinate and optimize IT assets across distributed service providers. An IT governance model that engages the campus can form a campus-wide virtual IT organization composed of ITS and distributed IT providers that is guided by, and is responsive to, all campus constituencies. A virtual IT organization can provide a continuum of services, from core infrastructure provided primarily by ITS, to domain-specific IT providers who will then be better able to serve IT needs unique to their areas. No one area at CU-Boulder independently provides all of its IT service and resources. It follows that each area, to maximize its IT services and resources and minimize its costs, must coordinate how it fulfills its IT needs with other areas and with ITS. Further, the more an area can depend on ITS for core services and resources, the fewer core services and resources an area has to provide for itself, freeing resources for IT needs specific to an area, or for non-IT needs; therefore, the campus has an inherent interest in IT governance and finance.

Effective IT governance requires systematic campus-wide advisory input from faculty, students and staff within a decision-making model. The model must be able to distill and prioritize IT projects and directions that support the strategic directions set forth by campus leadership. Governance and fiscal responsibility are sides of the same coin. The governance model, informed by fiscal realities, must identify and, endorse or decline funding for initiatives, projects, and services. Committees within the governance model must be aware of the many-faceted aspects of distributed and centralized IT on campus and how those aspects interdependently form one large-scale IT environment. This new structure needs support from all campus constituencies, including the chancellor and senior leadership.
B. History and Accomplishments to Date

IT at CU Boulder evolved from four groups. Three formed ITS: Telecom (telephony and physical networking); Computing and Network Services (core and administrative development and services); and Academic Media Services (instructional IT and media services). One developed alongside ITS: distributed IT service providers within the research, administrative and academic areas. A rift and lack of coordination between ITS (the first three groups) and distributed IT service providers (the fourth group) is apparent. ITS offers campus-wide IT services and resources, but generally has not engaged or interactively communicated with other campus IT providers.

For the past few years ITS has operated under the Four Tier support model in which Tier 1 provides broad, self-help communications (the ITS web, end-user support documents, technical information, etc.), Tier 2 provides an outreach component composed of non-ITS staff known as Computer Support Representatives (or CSR’s) who provide local IT support functions partly coordinated by ITS, Tier 3 provides ITS support employees, some positioned in academic and administrative departments, and Tier 4 – ITS staff who provide escalated IT support. In addition to about 150 ITS employees, by rough count, there are about 250-300 “IT” staff, who comprise mainly IT professionals, but range from doctoral level scientists to departmental assistants also assigned an IT support role. The primary communication conduit from ITS to campus-wide IT professionals (primarily a one-way channel) is the CSR/Tier 2 community.

The campus recognized the need to develop a senior position overseeing IT functions and created the position of “associate vice provost for academic and campus technology.” This position is now reconstituted as “associate vice chancellor for IT and CIO.” The former AVP formed IT Council, comprised of senior-level administrative staff, faculty, and students. IT Council met monthly during the academic calendar from 1999 to 2005, having eventually degenerated to little faculty participation and interaction. The 2002 campus-wide strategic plan recommended that three additional advisory boards be developed: the IT Infrastructure Advisory Group (ITIAG), the Faculty Advisory Committee for Educational and Information Technology (FACE-IT) and a student advisory committee. ITIAG is still in operation. FACE-IT met for a year and no longer exists. The student advisory committee never developed. ITIAG comprises IT professionals from the schools and colleges as well as the research institutes, academic departments and ITS. ITIAG has met monthly since 2002 to influence technical direction, shape policy, and provide a campus-wide technical perspective.

C. A New Model

Building on past success, lessons learned, and best practices from public and private sectors, the office of the AVC for IT and CIO recently developed a new, integrated model of campus-wide IT focus (academic computing, research computing, and administrative computing), support and process (service strategy, design, transition, and operation, and, continuous improvement) and governance principles (policy and governance, communication, enterprise architecture, and information security).

The diagram below, “Conceptual IT Environment,” shows that the faculty, students, and staff are at the core, or the heart of the IT environment. Close to the constituencies are the three areas of focus in which all IT services and support fall: academic technology, research computing, and administrative computing. The next concentric circle—the campus IT providers—represents all IT providers who support these three focus areas utilizing a collection of campus resources in a
variety of ways. The following circle represents how these IT services and support are created, adopted, managed, and assessed using the most widely accepted approach to IT service management, ITIL, which provides a cohesive set of best practices for IT—strategy, design, transition, operations, and continuous improvement provide the structure to effectively plan and execute IT projects and programs. The outermost circle represents the boundaries, or criteria in which to create structure and order in developing and maintaining campus IT. IT security, enterprise architecture and policy are all critical elements that must be considered to ensure a healthy, functioning IT environment.

| Conceptual IT Environment |

D. Action Plan

Specific Recommendations

The Governance committee considered the question: how can campus-wide IT directions and projects identified in the rest of the strategic planning process be endorsed and supported over the coming years? We considered existing and past IT advisory councils and groups, the BFA, the soon-to-be advent of a research computing faculty advisory group, existing IT governance structures across the campus in various schools, colleges, and administrative areas, and the overall governance structure of CU-Boulder. The chair and co-chair also reviewed the ideas in an EDUCAUSE publication with the committee.¹
Three principles emerged. 1) IT services and resources are necessary to all functions at CU Boulder. 2) How IT is to be conducted requires advisory committee input from all areas of the campus – faculty, students, and staff. Such committees will allow for campus-wide consideration of IT strategies and priorities. 3) An executive committee is necessary to communicate and help shape major projects and directions into recommended decisions and funding needs that can be supported and authorized by the Chancellor, his executive team, and the faculty leadership. (Area specific IT service providers would remain responsible to their existing management, and would participate alongside ITS to help shape and participate in campus-wide IT directions, specific projects, and policies.)

The next diagram, “Shaping IT direction through engaged participation and shared services” depicts a structure to implement these three principles, basically, a campus-wide advisory layer and an executive group tied to the Chancellor’s Cabinet. The structure will also maintain ties with the BFA through joint members, and with various academic groups such as the Council of Deans, the Chair’s Breakfast, and various meetings of Associate Deans and Associate Vice Chancellors.

Specifically:

- **Recommendation 1**: Create the suggested governance structure.
- **Recommendation 2**: Use the suggested structure as an integrative approach to develop IT strategies and associated funding requests, and as an intake mechanism for requests from individuals, other committees, and group entities for IT strategies and projects, and their associated funding requests.
- **Recommendation 2a**: Develop campus-wide communication methods for individuals, other committees, and group entities to provide input into the new governance structure (see section 4.2: Developing Strategic Communications).
- **Recommendation 3**: Develop a review process to measure the effectiveness of the advisory boards (process to be determined).
Shaping IT direction through engaged participation

Chancellor
Chancellor's Cabinet

Senior Vice Chancellor and CFO

IT Policy Committee
Chaired by the AVC for IT

Faculty IT Advisory Committee
Chaired by AVC for IT with support from the Director of Academic Technology

Student IT Advisory Committee
Chaired by the AVC for IT with support from the Director of Strategic Communications Outreach and Documentation

Office of the AVC for IT and CIO

Research Computing Advisory Committee
Chaired by the VC for Research and AVC for IT

Vice Chancellor for Research

Administrative IT Advisory Committee
Chaired by the AVC for IT with support from the Director of Enterprise Architecture

CCITP (Formally ITIA) campus-wide collaboration of IT professionals: a co-equal, rotating representative group of IT professionals from the academic, administrative, and research areas. Co-chaired by an ITS director and a campus-wide IT professional.
Description of the Committees:

Executive IT Policy Committee – This committee (name subject to change) will comprise of five members, at the associate dean level or higher. Each of the following offices will nominate one member; final decision will be determined by the Chancellor: Provost, VC for Budget & Finance, VC for Administration, VC for Student Affairs, and University Counsel. Each member initially will serve either 2-3 years to create a mixed rotation schedule. This committee will be chaired by AVC for IT/CIO, supported by Director of Strategic Communications, Outreach and Technology. This small group of senior leadership will review and “own” strategy, policies, and directions developed by the four advisory committees. Initially, this group will meet quarterly with the potential of twice per year with select members with the Chancellor’s Cabinet (see schedule chart at end of the report). Additionally, this committee will apprise CEC regarding campus-wide IT issues as requested by the CEC.

Faculty IT Advisory Committee – This committee will have approximately 15 members: three nominated from A&S, one member from each of the other Schools and Colleges in addition to the chair of the BFA Administrative Services and Technology committee and possibly two at-large BFA members, nominations determined by Deans for Schools colleges, BFA for BFA members. Each member initially will serve either 2-3 years to create a mixed rotation schedule. This committee will be chaired by AVCIT/CIO, supported by the Director of Academic Technology. This influential and representative group of faculty may develop additional subgroups (e.g. Faculty Evaluating Educational Technology, or FEET) as necessary. This committee will meet every other month (September through May). This group ensures that IT services and support enhance learning, teaching, and research; meet instructional and research needs of faculty and instructors; and are coordinated across academic and service units. Members will provide advice and help evaluate issues associated with: the deployment of new technology services and spaces; the evaluation of the effectiveness of technology in teaching and learning; the support of academic technologies. Additionally, this committee will apprise CEC regarding academic technology issues as requested by the CEC.

Administrative IT Advisory Committee – This committee will also have approximately 15 members from administrative areas and administrative support from at least A&S and Engineering, Continuing Education, and UIS. The various administrative areas: Enrollment Services, Human Resources, A&S Administration, Engineering Administration, Faculty Affairs, Housing & Dining Services, UIS, Continuing Education, Institutional Research, Public Health and Safety. Nominations determined by the head of each administrative area. Members should be appointed by the department head/chair, participation should be part of the job duties of the role, and should be on-going according to role (not served terms). In many cases, the member should be the department head (HR, Registrar, Faculty Affairs, Housing & Dining Services) – not the senior IT person. This committee will be chaired by AVC for IT/CIO, supported by the Director of IT Service Engineering. The three main functions of the committee:

- Provide “business owner” direction to central IT services where active concerns have impacts across multiple business areas (such as identity management practices)
- Provide campus input to be brought to UIS governance
- Develop and recommend policy related to how campus IT assets (systems and data) are to be deployed and managed to meet campus administrative needs.

Student IT Advisory Committee – This committee will seek to have seven consistent members, four from undergraduates, including one representative from University of Colorado
Student Government (UCSG) as well as three graduate students, includes one representative from UGGS. Nominations determined by UCSU and UGGS. Given the difficulty in getting student representation, the term limit is five years for this committee, which makes it possible to have a student member sit on this committee for that length of time. This committee will be chaired by AVC for IT/CIO, supported by the Director of Strategic Communications, Outreach and Documentation and will meet three times a year. This committee advises the AVCIT/CIO on student IT strategic, priority, and policy matters. Additionally, this committee could apprise the CEC on IT issues as they relate to the student experience as requested by the CEC.

**Faculty Research Computing Advisory Committee** – This committee is yet to be formed, name is subject to change. This committee will be chaired by the Director of Research Computing who will report to VCR in collaboration with AVCIT/CIO and instantiated and charged by the Provost. This committee will provide oversight for the development and management of a campus-wide collaborative research-computing environment. This committee is a singularly focused group reporting to the VCR. Frequency of meetings has not yet been determined.

**Campus-wide Collaboration of IT Professional/Partners** (formerly ITIAG, new name subject to change) – This group will be composed of approximately 20 members from the schools and colleges, research institutes, and administrative departments, including auxiliaries (each area has approximately five representatives with four additional ITS employees serving). This cross-representative group will have members rotate on a 3-4 year cycle depending on the schedule (see appendix A for the schools and colleges, research institutes and administrative departments).

This group of IT professionals would replace both ITIAG and the Tier 2/CSR Advisory Board. This group is co-chaired by an ITS representative and campus IT professional and meets monthly. (Note – various subsets of members of the CCITP group would advise and consult with the four advisory committees on both an ad-hoc and regular basis, e.g., Security and/or Enterprise Architecture.

### Proposed Meeting Schedule

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E. Fiscal Responsibility:

Linking the advisory committees to a flexible, yet systematic process of funding enhances the transparency surrounding IT initiatives, programs and services. The budget committee, as part of this IT strategic planning process, led by Steve McNally and David Chittenden, recommends integrating systematic conversations regarding funding priorities into the advisory committees’ agendas.

Integrating the consideration of IT strategies and directions with funding: These examples would not necessarily occur in a prescribed order, and would iterate across five major aspects of the proposed governance model:

1. Campus members at large, individuals, other committees, other entities, who forward requests, questions, complaints, and criticism to the advisory committees and to individual members of the advisory committees;
2. The advisory committees (including the CCITP);
3. The IT Executive Committee;
4. Other campus committees; and
5. Chancellor’s Cabinet/senior leadership.

The consideration of IT strategies, directions, and funding must also recognize the budget cycle of:

- May/June final approval of budget for next FY by Regents;
- Close of the previous FY;
- Early fall budget census, which helps determine the overall budget for the FY that will follow the current FY;
- Circa late-fall considerations for the upcoming FY, whether it will be a growth or a retraction year; and the late spring end-process in which the budget for the following FY is finalized May/June, ultimately, with the Regents.

Proposed Budget Cycle Conversation:

1. Summer/ongoing. Beginning in summer, as much as is possible for committees to meet, and continuing into the new academic year, the advisory committees, likely picking up themes and matters from the previous year, consider whether elements of the IT environment need to be maintained as-is, discontinued, decreased, increased, and whether new elements need to be developed.

2. Post fall budget census. The AVC for IT provides an early distillation and reviews this ongoing development of possible initiatives with various senior officers, including the
SVC/CFO, the Provost, and various associate (vice) provosts and chancellors for their input and as a “heads-up.”

3. Ongoing process. The CCITP and other technical venues around campus, in collaboration with ITS program managers, through their work, will posit changes to existing or new IT initiatives. Ultimately the AVC for IT will hear about these new initiatives in a variety of ways, will bring them to the advisory committees, and will bring advisory committee considerations to the CCITP. (There will also be cross-memberships among the advisory committees, the CCITP, and the BFA.)

4. Late winter/early spring. Based on their considerations to date, the advisory committees and the Executive Committee discuss a distillation of possible strategic IT initiatives for the upcoming budget cycle. These initiatives will derive from the ongoing momentum of the governance committees, ongoing assessments of the performance of the IT environment, and the ongoing evolution of technology. Again, as feasible, the AVC for IT provides further distillation and reviews this ongoing development of initiatives with various senior officers, including the SVC/CFO, the Provost, and various associate (vice) provosts and chancellors for their input and as a “heads-up.”

5. Spring and/or ongoing. The SVC/CFO in conjunction with the Provost and Chancellor’s Cabinet, reacting to proposed IT directions, begin the effort of determining possible new projects and funding levels as well as identifying from a senior leadership perspective areas that should be discontinued and/or areas where efficiencies can be realized.

6. Spring. The AVC for IT and the Executive Committee, based on input from senior leadership, provide some high-level parameters for the advisory committees, the CCITP, and ITS regarding funding parameters to be applied in support of IT directions identified by the ongoing governance process.

7a. Ongoing. Culminating for spring use by the advisory committees and executive committee discussions will continue. Projects and formal funding requests may then be initiated in a variety of ways, most commonly: a) through program direction statements from ITS program directors; b) with endorsement from the CCITP; c) presented as recommended program directions to be vetted, depending on the domain of the statement, by one or more of the advisory committees. Standard formats will be developed which includes high-level project description and funding requests.

7b. The direction statement and standardized funding requests will be discussed and reviewed by the various committees, with the final product being a prioritized list of funding requests that is given to the Executive Committee. It will be the responsibility of the AVC for IT/CIO to prepare the prioritized list and support the presentations to the advisory committees.

8. The Executive Committee will finalize the funding priorities and present the information to the Provost and the Chancellors’ Cabinet.

The funding process is meant to be iterative, dynamic—with requests being generated from the bottom up and expectations and funding levels being communicated down from the highest levels of the university. The focal point is the Office of the AVC for IT who, through engaged IT participation from the faculty, students, and staff, create requests that provide the broadest IT perspective. Additionally, it is the responsibility of the Office of the AVC for IT to critically
examine the entire campus-wide IT budget, providing recommendations that will gain efficiencies and savings.

Conclusion:

Implementation of this governance process will result in visible, campus-wide, participatory, and ongoing process for faculty, students, staff, and senior leadership to engage together in shaping the nature and directions of the CU-Boulder IT environment, both in terms of services and spending.
Appendix A:

Schools & Colleges:
Arts & Sciences
Architecture & Planning
Business
Education
Engineering
Graduate School
Journalism
Law
Libraries
Continuing Education

Research Institutes:
ATLAS—Alliance for Technology, Learning & Society
Center for Humanities and the Arts
CIRES—Cooperative Institute for Research in Environmental Sciences
Energy Initiative
IBG—Institute for Behavioral Genetics
ICS—Institute of Cognitive Science
INSTAAR—Institute of Arctic and Alpine Research
JILA
LASP—Laboratory for Atmospheric and Space Physics
University of Colorado Museum of Natural History
Institute of Behavioral Sciences

Administrative Units:
Bookstore & Imaging Services
Budget & Finance
Enrollment Management
Environmental Health and Safety
Facilities Management
Housing and Dining Services
Human Resources
ITS
Public Safety, Parking & Transportation
Recreation Center
UMC
Appendix B

Sample of Meeting Agendas

Each committee will need to establish a baseline of common knowledge/understanding of the IT issues the committee will encounter. Largely, this will be accomplished at the discretion of the AVC for IT by bringing in IT experts to speak on a particular topic. To launch the structure, all committees will review the campus-wide IT strategic plan.

Draft Agenda for Executive Policy Committee

- **August 2010**: skip because this committee will build from the work of the other committees
- **November 2010**: kick-off orientation with utilizing the campus-wide IT strategic plan as foundation
- **February 2011**: policy review—Computing & Network Resources, Security Policies
- **May 2011**: review of proposed budget considerations

Draft Agenda for Faculty Advisory Committee

- **September 2010**: Introduction to the academic technology committee; technologies available; spaces available; support available; organization of IT organization and services on campus
- **November 2010**: Rolling out the new Learning Management System: timeline, needs, migration of courses, review of draft C&NR policy
- **January 2011**: Prioritizing LMS functions and Security policies
- **March 2011**: review of proposed budget considerations
- **May 2011**: classrooms (centrally- and departmentally-scheduled); labs; instructional computer spaces, review of evaluation and assessment metrics specific to teachers and learners

Draft Agenda for Administrative Advisory Committee

- **August 2010**: kick-off orientation with utilizing the campus-wide IT strategic plan as foundation and definition of POI/university roles
- **October 2010**: review of cloud computing, mobile computing and possibly ISIS implantation also, review of draft C&NR policy
- **February 2011**: review of support for teachers and learners and Security policies
- **April 2011**: review of proposed budget considerations
- **June 2011**: review of evaluation and assessment metrics specific to teachers and learners

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