Tulane University

APPENDIX C

Technology Evaluation: June 28, 2006

(a) Instructions for Completing the Technology Evaluation

This evaluation document offers discussion questions for the management of the central IT department to stimulate a dialog on the current state of IT at the institution. The goal is to focus on qualitative vs. quantitative discussions. The assessment should be completed as a team activity including all IT managers and should be completed over a series of sessions. Answers should be scribed by a third party then approved after each session by all participants. Questions can be answered in an informal manner that addresses not only the current state but also the reasons and logic behind the answers.

Participants should skip questions that may need further review or information, returning to them when the information is available. Additional questions may be added along the way if discussing them will add value to the evaluation. During the process, the participants should maintain a "Parking Lot" of ideas that are out of the scope of the discussion but that should be addressed in a different forum. The group should also keep a running list of potential projects that would improve IT performance and services.

The outcome of this process should be an evaluation reflecting IT management's beliefs about department functionality and ideas on how the department can improve performance and services.

Participants should keep in mind that IT management sometimes believes that the institution:

- Does not value or support the high level of services and support the IT department wants to deliver;
- Does not act on IT department recommendations;
- Does not enforce IT policies; and/or
- Does not provide sufficient funding to achieve its objectives and goals.

This evaluation should be completed regardless of the perceived institutional support; instead, managers should assume that institutional support would be in place when discussing the questions.

Note that the majority of this document is based on the Self Assessment for Campus Technology Services *document created by Linda H. Fleit in conjunction with CAUSE (now part of EDUCAUSE) in 1994. The original document has been updated for today's information technology environment.*

Section 1.02 Section 1: Planning and Project Management

(a) Strategic and Long-Range Planning

- Is there a multi-year strategic technology plan in place for the entire institution?
- If yes, was it drawn from institutional goals and objectives, even if those objectives are not fully articulated?
- Was the planning process a participative and collaborative one?
- Is the plan updated on a regular basis, such as once a year?
- Is the plan written in non-technical language with goals and objectives that are meaningful to a broad base of campus people?
- Is there a multi-year telecommunications plan in place for the entire institution?

(b) Operational Planning

- Is there a one-year tactical (operational) plan in place?
- If yes, is it tied to a budget?
- Is tactical planning done annually?
- Is tactical planning tied to the institutional budgeting and planning processes?
- Are quarterly and/or annual reports done showing actual accomplishments and expenditures compared with what was planned?

(c) Disaster Recovery Planning

- Is there a written disaster recovery plan in place?
- Has it been actually tested?
- Does it include decentralized and desktop systems as well as the operations center?
- Does it include the telecommunications network?

(d) Project Chartering

- Are there formal project charters for all major projects?
- Have representatives from all affected functional and technology areas participated in creating these charters?
- Do the charters specify executive and project sponsors; a project leader; end results; milestones; deliverables, estimated budgets; staffing required; risks; etc.?
- Do sponsors and leaders use the charter throughout a project's life to ensure project success?

(e) Project Planning and Reporting

- Are there formal project plans for all major projects?
- Have representatives from all affected functional and technical areas participated in creating these project plans?
- Do the project plans specify tasks; responsible parties; and due dates?
- Are project plans actually used by project leaders to manage throughout the life of the project?
- Are project plans updated on a regular basis based on changes throughout the project?
- Are project statuses, based on the project plan, communicated to the sponsors, project team and users on a regular basis throughout the project?

Section 1.03 Section 2: Policies and Procedures

(a) Customer Service

- Does the department have a consistent, well-communicated customer service philosophy?
- Is the customer service philosophy promoted and well understood throughout the department and by the institution?
- If users had to pay for the department's services with real money, would they?

(b) Service Level Agreements (SLAs)

- Are there written SLAs between the department and users?
- Do they cover all major services provided by the department?
- Have these SLAs resulted from a negotiating process involving the users?
- Do these SLAs take into account current resource levels?
- Are these agreements updated annually and whenever a major change in resources occurs that may affect service levels?
- Are the agreements measured and reported to users and IT management?

(c) Priority Setting

- Is the priority-setting process for department objectives well-understood?
- Is there a different priority setting process for major and minor projects?
- Is it controlled by the users and accountable to senior management and administration?
- How is the process bypassed for mandatory and/or emergency work without creating a crisis?
- Is everyone clear on how new technology initiatives are justified?

(d) Standards

- Are there hardware, software and procedural standards that both the IT staff and users follow?
- Are there quality control and formal turnover procedures for moving programs / changes into production?
- Are programs always written the same way, using reusable code and libraries whenever possible?
- Are there choices within the standards for users so that they can retain some local control?
- Is ethical computing widely promoted to the institution by department staff?

(e) Security

- Are the IT facilities secure?
- Is data security taken seriously?
- Are there (consistent) data security and data ownership policies in place and used?
- Does the security function include procedures for department staff as well as guidelines for users to use for decentralized data and equipment?
- Are there (consistent) watchdog procedures to make sure unauthorized access (data, network, etc.) is recorded and followed up on?
- Are there acceptable use policies in place for all types of users?
- Are there policies in place for access to institutional systems and data from off campus and/or when data is taken off campus on portable computing devices?

- Are there policies in place for working with law enforcement?
- Are there solutions in place to minimize spam and viruses?

(f) Problem Tracking

- Is there a problem recording, tracking, and resolution system in place? For what service does this tracking exist?
- Is it clear to the users whom to call for help for any service? Is this clear for 24x7 help support?
- Is there an emergency user notification process in place for things like machine and network outages?
- How are after hour service or support requests tracked and followed up on?

(g) Inventories

- Are inventories kept of all computing resources, including desktop and laptop computers, printers, and peripherals?
- Is there an ongoing plan to replace obsolete or inadequate (centralized and decentralized) technologies with current technologies (including hardware and software)?

Section 1.04 Section 3: User Support and Services

(a) User Access

- Are all services and facilities provided by the department easy to access, and easy to obtain assistance for?
- Are facilities in convenient and safe locations?
- Would a new user know where to go to get involved with computing?
- Is there user documentation for all service areas in the department? Is it well written and kept accurate through periodic updates? Is it easily available to users?
- Do users understand the impact of the technology work they do (e.g., running large jobs)?
- Do users in functional areas understand their business processes so they can partner with IT in development of and changes to technology solutions that support their processes?

(b) Monitoring and Planning

- Are there formal ways of measuring of major services such as mainframe and server usage and performance, network usage and performance, telecommunication systems usage and performance, programming hours, help desk requests and resolution, etc.?
- Are these measurements used as a basis to adjust current capabilities, capacities and/or performance?
- Are these measurements used as a basis to improve future capabilities, capacities and/or performance?
- Are these measurements made known to users on a regular basis?
- Is there an ongoing approach for identifying and acquiring hardware and software to support the institution's long-range needs and overall changes in technology directions from driven outside the institution?

(c) Research and Development

- Is there a "research and development" function within the department to assure that technical innovations and recent developments are identified and evaluated?

- How are emerging technologies evaluated? How are IT staff and the institution made aware of these technologies?

(d) Staff Background and Experience

- Do all staff members have required technical expertise in current and emerging technologies?
- Do all staff members who work directly with users understand the users' functional environments, including goals and objectives?
- Do staff members who interact with users have appropriate interpersonal communications skills, both oral and written?

(e) Staff Training

- Are there formal staff training / education / professional development programs?
- Are there budgets for these programs?
- Are programs reviewed on a regular basis to ensure they are up-to-date and serving genuine staff needs?
- Are they geared toward the higher education environment?
- Are program goals and accomplishments integrated into annual staff evaluations?
- Are the skills and talents of the staff well matched with user service needs, as opposed to the department's perception of service needs being shaped by the staff's current strengths and capabilities?
- Are staff members cross-trained so that service areas are not vulnerable to someone's absence?

(f) Staff Attitude

- Do staff members see themselves as productive work partners with their users?
- Do they have high self-esteem without being arrogant or unapproachable?
- Is morale in the department good?
- Does the staff feel well-rewarded for its efforts?
- Is everyone in the department clear on what is expected from them and are measurements clearly defined and communicated?

(g) Staff Turnover

- Is the turnover rate among the IT staff at a high enough level to regularly bring in fresh ideas but low enough so that it is not disruptive?
- Are open positions filled relatively quickly?
- Are compensation strategies (taking into account benefits and intangibles) competitive, or at least reasonable?

(h) Student Employees

- Does the department make use of student workers in every case where feasible?
- Are the students encouraged to see themselves as staff members, with corresponding rights and responsibilities, especially concerning data security, reliability of performance, and attitude?
- Do students tend to stay with the department throughout their academic careers? After graduation?

Section 1.05 Section 4: Products and Services

(a) Direction

- Is the department's philosophy supportive of self-sufficiency for users?
- Are there tools, such as a report writer, software, and a query capability available to promote user access?

(b) Architecture

- Is the IT architecture sufficiently flexible to promote user computing and control?
- Are data definitions consistent and understood by all those creating and having access to data?
- Are centralized and decentralized systems coordinated and/or integrated to avoid duplication of data and ensure efficient processes for users and to leverage capabilities of technology?

(c) Applications Development

- Are there formal ways of / philosophies for / policies for determining which applications should be supported by purchased, which should be developed in-house, and which should be a combination of the two?
- Do the users participate in these decisions?

(d) Delivery

- Are projects always completed on time?
- Are deadlines always met?
- Are budgets always adhered to?
- Do the recipients always perceive the deliverables as valuable?
- Does the department always fulfill its service level commitments?

(e) User Training

- Is there a training strategy for users?
- Does it make the best use of a variety of resources, including self-paced instruction, classroom training, one-on-one assistance, online training and videos?

(f) Backlog

- Is the backlog of service requests, especially for applications programming changes and enhancements, at a reasonable level?
- Is it short enough so as not to build up a "hidden" demand or guilt on the part of users in asking for something?

(g) Outreach

- Does the department have a customer outreach function?
- Are users regularly canvassed to determine how the department can be helpful to them?

Section 1.06 Section 5: Organization and External Relationships

(a) Organization

- Are the institution's information technology services organized in such a way as to promote both economies of scale and to effectively respond to user needs?
- Has the institution achieved the right balance of centralization and decentralization so that the entire community is being well served in the most effective and cost-efficient ways?
- Is there sufficient coordination among related service areas (e.g., decentralized technology departments, central IT, etc.) so that the institution can be assured that everyone is moving in the same direction?
- Do staff from central IT and decentralized IT departments work together, look to each other for support, share ideas and approaches, etc.? Are there regular meetings among these groups?

(b) Advisory Committees

- Is there a technology advisory committee comprising high-level faculty and administrators that advises on broad policy and prioritization matters?
- Do members regularly attend meetings?
- Are appropriate people part of the committee?
- Does this group meet several times a year?
- Does it understand its charge and work accordingly?
- Is the group effective?

(c) Users Groups

- Are there user groups that discuss operational matters and help prioritize work and assist with resource allocations?
- Do members regularly attend meetings?
- Are appropriate people part of the committee?
- Does this group meet several times a year?
- Is the group effective? Does it understand its charge and work accordingly?

(d) External Support

- Are there resources on campus, in addition to the central IT, which also support user needs?
- Are there library staff members, decentralized IT groups, department-based "power users", or application-specific (such as research computing) users groups from which users can get help or advice?

(e) User Expectations

- Are the expectations of the users realistic, given the institution's information technology funding, and their own perceptions of what their investment (e.g., education and training, participation in planning and setting priorities, providing specifications, review and evaluation of deliverables) needs to be?

(f) User Satisfaction

- Are user perceptions about the quality and quantity of IT services favorable?
- If the IT department were in a competitive situation, would it retain its customer base?

- Are users generally willing to abide by the guidelines and standards set by the IT department?
- Are user satisfaction surveys conducted on a regular basis?
- Do users hold the department's staff members with whom they work in great esteem?

(g) Communications

- Are there both formal (e.g., regular meetings, newsletters, email, intranet, open door hours) and informal ways of communicating with users on campus?
- Does everyone in the department use them?
- Are they effective?
- Are issues and updates communicated effectively among management in the central IT department? With all staff in the central IT department?
- Are quarterly and/or annual status reports done showing operational and project costs, usage levels, the status of requests, and accomplishments in comparison to the annual tactical plan and/or other benchmarks?

(h) Credibility

- Does the department have credibility on campus?
- Are staff members' opinions sought and valued?
- Is the department a regular participant in other planning activities, such as building construction or renovation, capital campaign planning, enrollment management, etc.?

Section 1.07 Section 6: Funding

(a) User Awareness

- Are all users aware of the cost of IT and telecommunications?
- Is there a mechanism (e.g., a charge-out system) that encourages users to make use of technology services in an efficient manner?
- If there is no charge-out, do users have to justify their requests for services in some way to the people to whom they report?
- Do users make educated requests by appreciating and understanding fully the costs (e.g., dollars, time, etc.) and consequences (e.g., adjustment of their and other's deadlines) of their requests?

(b) Staff Awareness

- Are information technology staff members aware of technology costs?
- Is the staff encouraged to find alternative, creative and less costly ways of providing and supporting the same (or better) service levels?

(c) Capital Budgeting

- Is there a capital budgeting process for information technology to minimize unexpected costs and to provide for orderly growth?
- Is there a replacement, or depreciation, factor built in?