**Information Technology Budget Study Group**

**Recommendations and Report**

**4-15-11**

**Information Technology Budget Study Group**

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**Information Technology Budget Study Group Charge and structure**

Charge*:*

*Assess the structure and organization of information technology resources across the campus.  Identify opportunities for improving efficiencies through various strategies including, but not limited to, restructuring, outsourcing, etc.  Consider strategies to best position institutional information technology resources for the demands and complexities of a national research university.*

Assessment opportunities:

* + Restructure student lab model from silos to institutional model?
  + Identify what is already outsourced – is it working?
  + Identify what else should be outsourced, if anything.
  + Assess virtualization opportunities.
  + Assess structure and organization of IT resources across campus processes
  + Review software licenses, opportunities?
  + Identify what IT resources we have – are they deployed to maximum benefit?
  + Given the complexity of this charge, consider hiring an outside consultant for an overall review of IT on campus?

Group Members:

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**Executive Summary**

In November of 2010, Dr. Natalicio constituted several Budget Study Groups. At a meeting in which all the members of the Budget Study Groups met on December 6, 2010, the President outlined the charge of these Budget Study Groups. The Study Groups were asked to conduct thoughtful and thorough reviews of broad support areas that cut across campus departments, to ensure that UTEP is not only working to identify opportunities for improving efficiencies, containing costs, and enhancing revenues within administrative units but also reducing duplication and redundancies, and increasing leveraging opportunities among them. The President noted that over the past several years that UTEP’s campus-wide infrastructure support operations have been “highly responsive” to UTEP’s rapid growth and development, particularly in the areas of research and doctoral education. The President noted that to ensure UTEP’s sustained progress toward Tier One, that “cross-cutting support operations” need to continue to evolve in ways that will enhance the “efficiency and effectiveness of their contributions” to UTEP’s academic, research and student support services.

The Information Technology Budget Study Group convened on December 13, 2010. Over the course of the next several months the Information Technology Budget Study Group examined a host of Information Technology related data including, but not limited to:

* IR&P budgets
* IR&P staffing structures
* Institutional Information Technology staffing structures that exist outside of the IR&P organization
* The current “status” of Information Technology on UTEP’s campus (see the IT Existing Condition document) looking at:
  + Software Licensing and management of licenses for Desktop Computing
  + Software Licensing and management of licenses for Research Computing
  + Computer Purchases
  + Virtual Desktops
  + Consolidation of Help Desks
  + Infrastructure and Management of IT relating to
    - Budgeting and Allocation Process
    - Current Budget
  + Wired Infrastructure
  + Administrative Data Center (ADC)
  + Computing Laboratories
  + Current IT Organizational Structure
    - Existing VP for IR&P Organization Structure
* Computer Lab statistical usage figures

Four main recommendations emerged from the groups study, summarized and listed in priority order on page 4..

**FINAL RECOMMENDATIONS SUMMARY LISTING IN PRIORITY ORDER**

**Recommendation 1:** The Information Technology Budget Study Group recommends that UTEP establish an Information Technology Strategy Council, with budget authority and held accountable to upper administration for resulting decisions.

**Recommendation 2:** The Information Technology Budget Study Group recommends that UTEP create a separate information technology unit, perhaps culled from current informational technology staff, dedicated solely to research computing. Tied to this separate information technology unit for research computing would be a parallel governance structure setup similar to the Information Technology Strategy Council in recommendation one.

**Recommendation 3:** The Information Technology Budget Study Group recommends that UTEP undertake a comprehensive examination of its computing labs structure for potential consolidation aiding in both cost savings and planning critical for moving UTEP towards Tier One.

**Recommendation 4:** The Information Technology Budget Study Group would recommends that UTEP establish an Information Technology Infrastructure and Sustainability Master Plan in helping to guide UTEP on towards Tier One.

**FINAL RECOMMENDATIONS**

**Recommendation 1: Information Technology Strategy Council**

The Information Technology Budget Study Group recommends that UTEP establish an Information Technology Strategy Council, with budget authority and held accountable to upper administration for resulting decisions.

***Primary Role***

1. The role of the Information Technology Strategy Council is to evaluate the investment, policy, and structure of decisions on technology, impact of operations and infrastructure and ensure that the investment lines up with strategic research and business objectives set by the university.
2. The role also includes making the investment recommendation to the VP/Provost and is accountable to track and guide the progress of funded investment projects.

***Rationale***

1. Many of the problems and opportunities with information technology involve numerous campus constituents (i.e. researchers, business services, purchasing, facilities, etc.,), who, due to the lack of a formalized communication structure and roll-out planning, communicate information technology initiatives poorly to the campus community.
2. There is a tendency for big issues to be dealt with by sloganeering, followed by give and take solutions worked out by staff.  While these are often good solutions, the Information Technology Budget Study Group believes that discussing the issues more openly, laying out the arguments and their implications more clearly, and presenting them to a group empowered to make tough decisions, could result in better policy-setting and better specific decisions that are then communicated campus-wide.
3. The Information Technology Budget Study Group noted that some key activities tend to fall through the “campus cracks” when dealing with multiple units; an Information Technology Strategy Council would help direct attention and resources to such activities.

***Benefits and Cost Savings***

Anticipated Short-Term Benefits and Cost Savings:

Short term benefits and cost savings are unknown at this moment, but this group would ensure that the current implementations are delivering on their promise and steer and/or alert of projects that are off track.

Anticipated Long-Term Benefits and Cost Savings:

1. The Technology Strategy Council could lead to a reduction in the number of redundant facilities, including instructional labs and high-performance research computers, and (although this is less likely) redundant staff across units.  An impartial and well-informed group, the Council's recommendations could have a strong impact on Deans', Chairs', Department Heads, Directors, PIs', etc., decisions, especially if they come backed by policies that are clear and clearly helpful, and backed with budget or approval authority.
2. The Technology Strategy Council could lead to better decision making in complicated cases, where an informed council could go beyond the slogans (centralize, outsource, virtualized) and look at the pros and cons of each specific case, leading to real cost savings over the long-term.
3. The Technology Strategy Council could lead to the provision of new services which would help various players make more cost-effective decisions.  In particular, the Council could oversee the development of an "internal consulting" staff available to help Deans, Chairs, and PIs make cost-effective IT purchasing and development decisions; it could oversee the quality of the communications from central IT to the distributed IT people (policy statements, technical bulletins) and to the users and back (data mining helpdesk calls to identify systematic failings); it could support the activities of the Research Computing Coordinator.
4. The Technology Strategy Council could help identify and combat false economies, such as paying IT staff too low to retain them (so that effectively UTEP is training its competitor's staff), some forms of virtualization, the introduction of new software packages which shift clerical work from clerks to faculty, and reductions in IT support staff leading to delayed responses to problems (from network outages to broken PCs) that stop workers from doing their jobs.

***Anticipated Costs***

The Technology Strategy Council members’ time; committee chair's staff time to support committee work; time for stakeholders to prepare their proposals to the committee.

***Challenges and/or Risks***

1. The Technology Strategy Council will not be able to make good decisions unless the IT-related staff can prepare clear written proposals laying out pros and cons, something to which they are currently not accustomed.
2. The Technology Strategy Council may not be able to get control enough of IT budget to make people pay attention to it.
3. The Technology Strategy Council may be unable to keep on top of things due to the desire of the System to interface with a single point of contact, leading to that person becoming the de facto decision maker.
4. The Technology Strategy Council may not have enough” tech savvy” individuals to understand the issues.
5. The Technology Strategy Council may spend too much time on trivial issues and/or on issues which could be better decided at the local level.
6. The Technology Strategy Council members may not find its activities sufficiently interesting or relevant for them to devote the time needed.
7. The Technology Strategy Council may not get the admin/staff support to make it effective.
8. The Technology Strategy Council could add another level of bureaucracy and confusion.

***Action Plan***

Since there is a large academic side to this recommendation, assigning an Associate Provost-like individual with the task of drawing up a charge for the Technology Strategy Council might be helpful, along with providing him/her with the authority and resources to make it work.

***Suggested items to include in a the******Technology Strategy Council******Charter***

1. Purview: All information-technology aspects of administrative applications, student-used IT services, teaching-relating IT services, research-related IT services, and associated infrastructure.  Approval authority for all projects, investments, and issues involving more than 12 person-months or $100K, or involving multiple units, or having high impact or high visibility.
2. Aims: Better decision making.  More effective use of resources.  More effective alignment of the organization structure and of policies with objectives.
3. Membership: 7 people: A Chair (perhaps an Associate Provost).  Two faculty members responsible for representing student interests, for providing the teaching perspective, and for highlighting research support needs.  The VPBA or delegate.  The VPORSP or delegate (e.g., the Research Computing Coordinator).  The VPIRP.  By rotation, a Dean or delegate (possibly a technical person).
4. Meeting Schedule: Once a month.
5. Organizational Position: Interfacing with and facilitating liaison with all players, including the central IT group, the TIMs and tech staff in the colleges and departments, the Deans and Chairs, the power PIs, and other campus and external stakeholders.

***Alternatives***

1. Have the VP for IR&P take on more of a liaison role, rather than being fully loaded in managing his own organization.  This could be accomplished perhaps by giving him an assistant VP to manage the day-to-day stuff so he has the time to get out and talk to more people, or perhaps by giving him a staff person to do the liaison groundwork.
2. Designate an Associate Provost for IT and have him/her do the work outlined in number one for an assistant VP, convening ad hoc committees as necessary to discuss specific issues.
3. Status Quo

**Recommendation 2**: **Research Computing**

The Information Technology Budget Study Group recommends that UTEP create a separate information technology unit, perhaps culled from current informational technology staff, dedicated solely to research computing. This separate informational technology unit would aid in leveraging research dollars expended on information technology and coordinating research computing efforts to help in both realized cost savings and planning critical to moving UTEP towards Tier One. Tied to this separate information technology unit for research computing would be a parallel governance structure, a “Strategy Council on Research Computing,” setup similar to the Information Technology Strategy Council in recommendation one.

***Rationale***

The Information Technology Budget Study Group recognized that in the area of research computing, minimal governance exists and more is needed. And, with research computing so often tied directly to grants, gifts, or startup cost of faculty hires, research computing is a high cost/value resource that governance and dedicated information technology staff (current staff redirected to support research computing) would aid in both cost savings and forward progression to Tier One.

***Benefits and Cost Savings***

The Information Technology Budget Study Group sees the benefit of the creation an approval/governance structure at UTEP for research computing: a governance structure, supported by an informational technology staff, that would allow for the vetting of

1. an approval structure be centralized and transparent, and housed in a database for optimal vetting to the campus community,
2. potential sharing of high-performance computing resources
3. gifts,
4. proposals,
5. computing related start-up packages,
6. analysis of the costs and benefits of the resource(s) that can be calculated (including power costs, cooling costs, space, administration, and maintenance costs), and
7. the ability to explore the develop of a long-term plan encompassing the
   * 1. Identification of resources for maintenance (heating/cooling, staffing, etc.), and
     2. a coordinated retirement plan of older informational technology systems, etc.

***Anticipated Costs***

1. The identified staff members’ time to support this governance endeavor; time for stakeholders to prepare needed data to present to the governance group established to coordinate this effort.
2. The creation of a group of informational technology professionals dedicated to Research Computing.

***Action Plan***

The governance structures created for Research Computing would need to be tied back into the governance structures create to facilitate general computing needs on campus. This would aid in overall campus coordination and a realized “macro” cost-savings and planning environment moving UTEP towards Tier One.

To aid in this coordination of research computing, the Information Technology Budget Study Group would recommend that a portion of the realized savings be used to create (or reassign) a position, a “Research Computing Information Officer,” to aid campus stake holders (Deans, Chairs, Directors, etc.,) in coordinating research computing at UTEP. This position might be assigned by rotation among the project managers; however, for continuity sake it might be best to have this with one individual. This person should have the knowledge and experience to be able to

1. evaluate utility and cost-benefit(s), and
2. make recommendations to the appropriate Vice President(s) as to whether a new system/software/licensing should or should not be acquired; and if not,
3. facilitate alternate approaches and recommendations.

This position would aid the VP for IR&P who is the Information Resource Manager (IRM). The IRM, by Texas statute, has veto power over any hardware or software purchases. The VP for IR&P does review all software purchases centrally. The Information Technology Budget Study Group recognized that the new automated purchasing system Miner Mall will allow for the ability to easily identify hardware purchases. However, The Information Technology Budget Study Group recognized that a better approach would be to aggressively make people aware of existing capabilities of research computing on campus, before requests reach the purchase order stage, hence the potential help of a coordinator for campus research computing.

This “Research Computing Information Officer” could also aid in the coordination of research labs. Currently many research labs maintain local resources to support their needs. Given the importance of the work conducted in these labs, exploring a consolation of, for example, data storage with backups might be both a cost savings and a security savings.  The Information Technology Budget Study Group noted that exploring the need for each research lab to have dedicated system administrators might yield potential savings and aid in UTEP’s movement toward Tier One, especially since the role of system administrators often falls on Ph.D. students. The Information Technology Budget Study Group recommends:

* 1. Exploring the interviewing of a dozen active faculty researchers to explore what IT-inefficiencies they have and what unmet needs they have, with a view to determining what services could better be provided centrally, or how otherwise to better support their work. This would provide some recognition of research computing support needs at UTEP.
  2. And**,** moving towards core computing facilities to ensure a facility has proper infrastructure (cooling, backup power, high-speed internet connections, etc) as opposed to adapting to a lab-by-lab infrastructure changes to meet temporary needs.

**Recommendation 3**: **Computer labs for students**

The Information Technology Budget Study Group recommends that UTEP undertake a comprehensive examination of it computing labs structure for potential consolidation aiding in both cost savings and planning critical for moving UTEP towards Tier One.

***Rationale***

The Information Technology Budget Study Group recognizes that student teaching, advising, and research are central components to the UTEP mission and in moving UTEP towards Tier One status. To that end, the Information Technology Budget Study Group believes that convening a group of led campus lab stakeholders is needed to explore

1. The consolidation of computer lab administration to plan for future use and to coordinate the computing labs on campus while maintaining disparate needs across colleges.
2. The development of computer centers that develop a cohesive student body through shared work endeavors and comfortable working environments (for example, the library) that promote student intellectual development.
3. The consideration of expectations for student use of personal computer laptops to reduce overhead, to model appropriate college level expectations, and to prepare UTEP students for a digital future.
4. The further development of technology in the classroom, “sticky spots”, e-advising for students, and other technology uses that coordinate 21st century demographics and expectations with UTEP teaching and advising needs.

***Benefits or Cost Savings***

The Information Technology Budget Study Group would recommend exploring the following items for cost savings and planning:

1. The consolidation of computing labs (driven by student traffic data, etc.) as a cost savings endeavor for UTEP. The Information Technology Budget Study Group recognized the need for computing lab resources for students at several locations on campus. The Information Technology Budget Study Group recognized the traffic pattern data for campus labs demonstrated that the University Library spoke to the popularity of students desiring work, socialize/collaborate, and eat while using needed computing resources on campus.
2. The Information Technology Budget Study Group would recommend exploring the creation of like computing centers around campus as both a potential popular move among students and a cost savings to UTEP in computing overheard (hardware, software, and staffing).
3. On the flip side, there is a direct cost in cooling such large labs as computers generate additional heat that puts strains on cooling systems. The Information Technology Budget Study Group would recommend conducting a well thought out planning process to move forward with a governance structure that brings the important players (Facilities, Colleges/Deans, IR&P, etc.) to the planning table. One recommendation suggested by the Information Technology Budget Study Group for UTEP would be maintaining fixed labs for now and plan for future centrally placed labs on campus. To aid in this change, the Information Technology Budget Study Group would recommend continuing to
   1. Provide good wireless coverage;
   2. Provide software to support mobile use (virtual desktops and printing) and provide the licenses and other resources to support this effort;
   3. And, monitor student usage trends over the next several years.

The above would allow UTEP to move strategically towards a core computing facilities model to ensure that Facilities have the needed and proper infrastructure (cooling, back-up power, high-speed internet connections, etc) as opposed to adapting to lab-by-lab infrastructure changes to meet temporary needs.

***Anticipated Costs***

Cost would included the identified staff members’ time to support this endeavor; time for stakeholders to prepare needed data to present to the group established to coordinate this effort.

***Challenges and/or Risks***

The Information Technology Budget Study Group recognized that students would implicitly “vote” as to what their technology needs are by the demand on UTEP’s wireless network.  Currently the usage of laptops and small mobile devices is increasing. Data shared by the Dr. Riter shows a continued increase in the number of students using UTEP’s wireless network. At some point, The Information Technology Budget Study Group recognized that students may vote to reduce the usage of fixed computing resources with their lack of computing lab usage. To that end, the Information Technology Budget Study Group recognized that UTEP needs to be prepared to adjust accordingly to this shift.  Until then, the Information Technology Budget Study Group would recommend that UTEP

1. Should not be overeager to retire fixed labs or institutionally require students to purchase laptops, or smart phones, although individual instructors who choose to-do so may be allowed to, as at present.
2. The Information Technology Budget Study Group would recommend that UTEP continue to explore and promote the growth of “sticky space” (energized areas where students can access power, internet, and printing) as part of a continued governance planning process.
3. Also, the Information Technology Budget Study Group recognized that the virtualization of desktops, as begun by the College of Engineering, be explored as a potential savings in terms of computing labs, licensing purchases, staff, and related hardware upkeep. This should be done as a coordinated effort as to not reduce labs for students too quickly hurting those students without lab top access.

***Action Plan***

The Information Technology Budget Study Group also recognized that labs tie directly into discussions on general information technology as it relates to the classroom setting impacting three groups: undergraduate students, graduate students, and faculty. Should a study group of stakeholders be formed for looking at how labs are constituted at UTEP, the Information Technology Budget Study Group would recommend that an exploration of the needs of these three groups in the developing a 3-5 year plan that would address classroom information technology needs. The Information Technology Budget Study Group also recommends that the study group explore how classroom related technology needs are currently being met at other Tier One institutions as a model for moving toward Tier One.

Suggested items/questions for the study group to explore are:

1. Do other Tier One schools require laptops, provide more/less printing (some schools have residence hall printing, so it might be tough to compare), but also printing in many buildings?
2. Are Tier One schools actively developing “sticky spots,” with actual chairs and power supplies for students? UTEP currently seems to not provide that many spots for students to actually sit down have a cup of coffee, and work on their laptops (Library is good example of a spot that does).
3. Are other Tier One schools setting expectations of students, both in terms of their requirements to have laptops, etc., and in simply how to operate computers?
4. Are other Tier One schools pushing advising virtually? (Currently UTEP is using an on-line advising system in its Psychology department via Blackboard. One cannot eliminate in person advising, but UTEP can reduce the person hours by requiring on line advising so that they can do some of the necessary work.)
5. Are other Tier One schools or UTEP pushing virtualization with other services?
6. Given the growing ubiquity of laptops, are other Tier One schools moving more in-class testing to on-line tests, which might save a great deal on printing, etc? And, if UTEP does have the wireless capability to have entire classes on-line, should UTEP move to on-line test taking while in the class room?
7. How do other Tier One institutions manage technology fees and general IT funding on their campuses?

**Recommendation 4: Develop an Information Technology Infrastructure and Sustainability Master Plan**

The Information Technology Budget Study Group recommends that UTEP establish an Information Technology Infrastructure and Sustainability Master Plan in helping to guide UTEP on towards Tier One.

***Rationale***

Technology users think of IT in the same way as electricity: It should be available 24-7-365 without having to worry about it. It is further recognized that the speed of technological change occurs at a higher rate than other infrastructure requirements on campus; but a sustainable infrastructure investment strategy (or master plan) is helpful in guiding:

1. Capital investment decisions
2. Staffing requirements
3. Staffing competency requirements
4. Guide to services
5. To ensure critical infrastructure is protected, redundant supported by the proper physical infrastructure (i.e. power back up, back-up storage, offsite storage, off-site server farms, HVAC requirements, and space requirements).
6. The setup of guidelines on how Business, Academic and Research computing is envisioned to evolve as an integrated system and what limits the institution will consciously adapt on technology to manage this complex and growing infrastructure. (i.e. standardize on one version of enterprise software (i.e. Operating Systems for Business/Research computing), Enterprise software(SharePoint, Communication software), How research computing will evolve (UTEP based, UT-system coop program or hybrid)
7. An integrated campus-wide technology lab (computer lab) plan to eliminate redundant system administrators, conflicting technology and leverage licensing.

***Benefits or Cost Savings***

1. The UTEP formal computing lab infrastructure consists of 48 computer labs, consisting of 1722 computers managed by a variety of different organizations. Establishing standard computing guidelines and vision will simplify infrastructure support requirements and potentially reduce the number of support staff of these facilities.
2. UTEP has about 30 programmers in Enterprise Computing, and those unit costs are about $2.7M per year in salaries and about $.9M per year in licenses, hardware acquisition and maintenance contracts. In addition, other units across campus have additional programming staff that supports IT initiatives representing about an additional million dollars in salaries.
   1. An analysis of the collective programming resources across campus should be done to identify skills and programming responsibilities among these individuals.
   2. Once assessed, the University should explore the cost benefits of the centralization or continued decentralization of these resources to aid UTEP in its cost savings and future Tier One growth. This recommendation touch on items from general PC support to programmers supporting Banner and other information systems.
   3. The Information Technology Budget Study Group would recommend conducting an analysis of like institutions to ensure that staff salaries for Information Technology support are competitive to ensure that UTEP can hire the best support staff for future successful movement toward Tier One. While this does not fall in line with cost savings, realigning of job duties when vacancies come, would allow for strategically combining salaries and related duties to enhance competitiveness of salaries to attract staff with multiple skill sets.
   4. Also, for each of the services provided by the current IT staff, the Information Technology Budget Study Group would recommend examining the costs and recommend possible economies of scale
      1. including sunsetting the related service,
      2. outsourcing the support service,
      3. or, reducing the staff devoted to the service.
   5. Standardization will allow current college and departmental IT staffs to focus on core competency requirements
   6. The coordination of these efforts is critical in fulfilling the Strategic Plan for Research directive to do an “Annual review of all other planning documents, including the Technology Plan.”
   7. The Information Technology Budget Study Group recognizes that a technology plan could/would provide the governing document to implement a governance structure that coordinates a campus-wide information technology solution.
   8. The technology plan could lead to the creation of other useful coordinating documents like a “Guide to Services” that provides a single, comprehensive source of information (services provided, how to access services, cost of services, level of commitment for services, work order process, service agreements, etc.) upon which campus community can draw.
   9. A technology plan would also afford critical issues within UTEP’s Information Technology to have a “voice:” for example, the need to invest in Informational Technologies infrastructure related to the Administrative Data Center (ADC) or Server Farm

***Challenges and/or Risks***

1. The Information Technology Budget Study Group recognized that to continue to progress toward a Tier One status, UTEP must be competitive in the hiring of talented programming and related IT staff: staff possessing multiple skill sets. A governance structure in this area would aid in aligning salaries campus-wide of IT staff and set a structure for future hires for IT staff.
2. By constraining computer support, there is a risk of muffling research. This risk is less in business and academic computing.

***Action Plan***

1. Allocate funding for a recurring 5 year IT master evolution plan.
2. Use this master plan to:
   1. Establish a “Guide to Service”
   2. Determine staffing requirements and competency (hire and train accordingly)

**DRAFT Opportunities and Related Recommendations 4-8-11**

**Opportunity 1** – **Governance:** The Information Technology Budget Study Group recognized that for UTEP to realize future cost savings and achieve progress toward Tier One, creating a well thought out and tight governance structure is critical. Information technology is a substantial monetary investment. It is important that a governance structure with transparent communications about the universities information technologies (hardware, software, licensing, etc.,) are communicated to the campus community for the conservation of resources in tight fiscal times of needed growth. The committee recognized that governance and the other IT Budget Study Groups are part of a potential future governance structure for effective planning and communication for UTEP.

**Recommendation(s)** for Opportunity1

**Recommendation 1--Cloud Computing and PeopleSoft**.

The Information Technology Budget Study Group recognized that moving to cloud computing had the potential to realize cost savings in the future. The PeopleSoft project was noted as an example of cloud computing in which UT System schools were sharing a “cloud” and the related savings system-wide. It was also noted that the PeopleSoft project had a shared governance component. It was noted that UTEP may already have an effective model for governance as found in the PeopleSoft conversion. As the University continues to explore the cost saving of cloud computing, the governance structure of the PeopleSoft conversion may provide a model for the entire campus computing efforts. For within the PeopleSoft effort governance structures have been setup and defined

* + communication plans,
  + project manager, and a
  + layered committee structure of stake holders providing campus guidance and communication back to campus stakeholders.

Adopting this structure at a macro level might provide UTEP with the needed governance structure model for future growth towards Tier One and related cost savings.

**Recommendation 2--Coordinating Campus-wide Information Technology Solutions**.

The Information Technology Budget Study Group recognized that governance would aid UTEP in realizing cost savings through a coordinated effort for the purchasing of various software solutions, hardware solutions, and licensing solutions. This is true for both research computing, general instructional computing, and business-related computing.

* A governance system of committees, perhaps, would apply both to the acquisition of new systems and the decisions of how to update (outsource, retire etc.) old systems. Currently college and departmental IT staffs, along with all the other things they do, meet this need, partially. The coordination of these efforts is critical in fulfilling the Strategic Plan for Research directive to do an “Annual review of all other planning documents, including the Technology Plan.”
* The Information Technology Budget Study Group recognizes that a technology plan could/would provide the governing document to implement a governance structure that coordinates a campus-wide information technology solution.
  + The technology plan could lead to the creation of other useful coordinating documents like a “Guide to Services” that provides a single, comprehensive source of information (services provided, how to access services, cost of services, level of commitment for services, work order process, service agreements, etc.) upon which campus community can draw.
  + A technology plan would also afford critical issues within UTEP’s Information Technology to have a “voice:” for example, the need to invest in Informational Technologies infrastructure related to the Administrative Data Center (ADC) or Server Farm.

**Recommendation 3--IT Infrastructure and Sustainability**.

The Information Technology Budget Study Group recognized that a governance structure would allow campus-wide issues to have a “voice” for future planning for Tier One. An example on how such a governance structure would help would be in coordinating needed investments in the Administrative Data Center (ADC) or Sever Farm infrastructure. Current issues the Information Technology Budget Study Group recognized were:

* + - Currently ADC does not have back up power systems. If power is interrupted, service will be interrupted within 15-30 minutes. (i.e. no email, no campus based computing systems) The committee sees an investment in the IT Server Farm as critical.
    - The Information Technology Budget Study Group recommends exploring adding back up power to the Server Farm facility; and relocating the Server Farm into an existing facility with excess backup power capability.
    - The Information Technology Budget Study Group recognizes that working with companies like Google to merge UTEP email with Gmail (University of Arizona has done this – works quite well) might be an option with related cost savings;
    - and, the relocation of the ADC to off-site/storage facility. These facilities give 24-7 access physical and remote access, have back-up power, climate controlled facilities and are located in less expensive storage facilities. (They do not use the high dollar university space). The committee recognizes this recommendation would work for research and business computing as well. Perhaps partnering with EPCC to house a mirror backup of key shared systems like Banner, would be a cost savings providing needed failsafe backup redundancies.

The Information Technology Budget Study Group recognizes that as touching IT sustainability, campus users think of IT like electricity: it should be there without having to worry about it.  While this is true for the basic infrastructure, including networking, desktop PCs and productivity software, many things typically are dismissed as "just IT." However, the Information Technology Budget Study Group recognized that sustainability of IT must have sustainable governance that starts at the “grass-roots” levels and filters up. So, having Deans/Chairs as part of a college-wide and/or campus-wide “IT Guidance Committee” would aid in coordinating back centrally with, perhaps, a central “IT Governance Committee” as a useful structure to address collective issues like the ADC needs. Reports could be taken from these committees.  Their input would be valued and committee chairs would be provided with a set of clear expectations so that time is productively used.  Having IT staff report to committee chairs every week or two would aid in communication needed for effective governance.  This would allow chairs and committees responsible for ensuring that decisions are being made in alignment with unit goals and UTEP goals, and that activities are being monitored, at least at a high level

1. **Recommendation 4--Information Technology Staffing across Campus:**

UTEP has about 30 programmers in Enterprise Computing, and those unit costs about $2.7M per year in salaries and about $.9M per year in licenses,hardware acquisition and maintenance contracts. This is by far the biggest IT activity and expense on campus.  In addition, other units across campus have additional programming staff that supports IT initiatives representing about an additional million dollars in salaries. The Information Technology Budget Study Group recommends that

* an analysis of the collective programming resources across campus should be done to identify skills and programming responsibilities among these individuals.
* Once assessed, the University should explore the cost benefits of the centralization or continued decentralization of these resources to aid UTEP in its cost savings and future Tier one growth. This recommendation touch on items from general PC support to programmers supporting Banner and other information systems.

**Recommendation 5--Information Technology Staff Salaries**

The Information Technology Budget Study Group recognized that to continue to progress toward a Tier One status, UTEP must be competitive in the hiring of talented programming and related IT staff: staff possessing multiple skill sets. A governance structure in this area would aid in aligning salaries campus-wide of IT staff and set a structure for future hires for IT staff.

* + The Information Technology Budget Study Group would recommend conducting an analysis of like institutions to ensure that staff salaries for Information Technology support are competitive to ensure that UTEP can hire the best support staff for future successful movement toward Tier One. While this does not fall in line with cost savings, realigning of job duties when vacancies come, would allow for strategically combining salaries and related duties to enhance competitiveness of salaries to attract staff with multiple skill sets.
  + Also, for each of the services provided by the current IT staff, the Information Technology Budget Study Group would recommend examining the costs and recommend possible economies of scale
    - including sun setting the related service,
    - outsourcing the support service,
    - or reducing the staff devoted to the service.

The Information Technology Budget Study Group would recommend perhaps starting with computing labs on campus for developing a model for these recommendations.

**Recommendation 6--Instructional Labs**

The Information Technology Budget Study Group recognized that governance would aid in aligning and planning for the future use of and coordination of computing labs on campus. The Information Technology Budget Study Group would recommend exploring

1. the consolidation of computing labs (driven by student traffic data, etc.) as a cost savings endeavor for UTEP. The Information Technology Budget Study Group recognized the need for computing lab resources for students at several locations on campus. The Information Technology Budget Study Group recognized the traffic pattern data for campus labs demonstrated that the University Library spoke to the popularity of students desiring work, socialize/collaborate, and eat while using needed computing resources on campus.
2. The Information Technology Budget Study Group would recommend exploring the creation of like computing centers around campus as both a potential popular move among students and a cost savings to UTEP in computing overheard (hardware, software, and staffing).
3. On the flip side, there is a direct cost in cooling such large labs as computers generate additional heat that puts strains on cooling systems. The Information Technology Budget Study Group would recommend conducting a well thought out planning process to move forward with a governance structure that brings the important players (Facilities, Colleges/Deans, IR&P, etc.) to the planning table. One recommendation suggested by the Information Technology Budget Study Group for UTEP would be maintaining fixed labs for now and plan for future centrally placed labs on campus. To aid in this change, the Information Technology Budget Study Group would recommend continuing to
   * Provide good wireless coverage;
   * Provide software to support mobile use (virtual desktops, could printing) and provide the licenses and other resources to support this effort;
   * And, monitor student usage trends over the next several years.

The above would allow UTEP to move strategically towards a core computing facilities model to ensure that Facilities have the needed and proper infrastructure (cooling, back-up power, high-speed internet connections, etc) as opposed to adapting to lab-by-lab infrastructure changes to meet temporary needs.

**Recommendation 7--Desktop Virtualization, Laptops, and Mobile Devices**

The Information Technology Budget Study Group recognized that students would implicitly “vote” as to what their technology needs are by the demand on UTEP’s wireless network.  Currently the usage of laptops and small mobile devices is increasing. Data shared by the Dr. Riter shows a continued increase in the number of student using UTEP’s wireless network. At some point, The Information Technology Budget Study Group recognized that students may vote to reduce the usage of fixed computing resources with their lack of computing lab usage. To that end, the Information Technology Budget Study Group recognized that UTEP needs to be prepared to adjust accordingly to this shift.  Until then, the Information Technology Budget Study Group would recommend that UTEP should not

1. be overeager to retire fixed labs or institutionally require students to purchase laptops, or smart phones, although individual instructors who choose to-do so may be allowed to, as at present.
2. The Information Technology Budget Study Group would recommend that UTEP continue to explore and promote the growth of “sticky space” (energized areas where students can access power, internet, and printing) as part of a continued governance planning process.
3. Also, the Information Technology Budget Study Group recognized that the virtualization of desktops, as begun by the College of Engineering, be explored as a potential savings in terms of computing labs, licensing purchases, staff, and related hardware upkeep.

**Recommendation 8--Technology in the Classroom**:

The Information Technology Budget Study Group recognized that governance would aid in the development of a technology plan that would takes into account the undergraduate students, graduate students, and professors classroom, on-line, and general campus education experience needs. The Information Technology Budget Study Group recognized and would recommend that an exploration of the needs of these three groups would aid in the development of a 3-5 year plan that could meet the similar and different needs of these three important groups. The Information Technology Budget Study Group would recommend the need to further explore how these needs are being met at other Tier 1 institutions. Such questions as the below might aid in beginning the development of said plan:

* + Do other Tier One schools require laptops, provide more/less printing (some schools have residence hall printing, so it might be tough to compare), but also printing in many buildings?
  + Are Tier One schools are actively developing “sticky spots,” with actual chairs and power supplies for students? UTEP currently seems to not provide that many spots for students to actually sit down have a cup of coffee, and work on their laptops (Library is good example of a spot that does).
  + Are other Tier One schools setting expectations of students, both in terms of their requirements to have laptops, etc., and in simply how to operate computers?
  + Are other Tier One schools pushing advising virtually? (Currently UTEP is using an on-line advising system in its Psychology department via Blackboard. One cannot eliminate in person advising, but UTEP can reduce the person hours by requiring on line advising so that they can do some of the necessary work.)
    - Are other Tier One schools or UTEP doing this with other services?
  + Given the growing ubiquity of laptops, are other Tier One schools moving more in-class testing to on-line tests, which might save a great deal on printing, etc? And, if UTEP does have the wireless capability to have entire classes on-line, should UTEP move to on-line test taking while in the class room?
  + TECH Fees and General IT Funding: The committee recognized a mismatch between responsibility and authority regarding the Tech Fee.  Part of the Tech Fee goes to the Colleges. IR&P has had little say over how this is allocated, yet they feel responsible for ensuring that this is spent wisely, and aggrieved when they can't monitor that this is the case.  The committee recognized the need for the Provost and the VP of IR&P to work closely to regularly reexamine tech fee allocations and allocate any discretionary Tech Fee funds on a timely and efficient basis.

**EXPECTED OUTCOME(S)**

The Information Technology Budget Study Group believes that the above recommendations, relating to governance, provide a basis for real cost savings and enhanced communication across campus as touching UTEP’s information technology.

**RESPONSIBILITY**

Entire Campus Community

**ACCOUNTABILITY**

Vice Presidents

**Opportunity 2** – **Research Computing:** The recommendations found under “Opportunity 1 – Governance**”** are in many ways applicable to this second opportunity, Research Computing. The Information Technology Budget Study Group recognized that in the area of Research Computing, minimal governance exists and more is needed. With Research Computing so often tied directly to grants, gifts, or startup cost of faculty hires, Research Computing is a high cost/value resource that governance would aid in both cost savings and forward progression to Tier One.

**Recommendation(s)** for Opportunity2:

1. **Recommendation 1—Governance**

The Information Technology Budget Study Group would recommend **c**reating parallel governance structures for Research Computing that would be created for general computing on campus as noted in the recommendations in Opportunity 1--Governance. The governance structures created for Research Computing would need to be tied back into the governance structures create to facilitate general computing needs on campus. This would aid in overall campus coordination and a realized “macro” cost-savings and planning environment moving UTEP towards Tier One.

1. **Recommendation 2--Governance Approval Structure**

The Information Technology Budget Study Group would recommend the creation an approval/governance structure at UTEP for Research Computing: a governance structure that allows for the vetting of

* + gifts,
  + proposals,
  + computing related packages,
  + analysis of the costs and benefits of the resource(s) that can be calculated (including power costs, cooling costs, space, administration, and maintenance costs), and
  + the ability to explore the develop of a long-term plan encompassing the
    - Identification of resources for maintenance (heating/cooling, staffing, etc.), and
    - a coordinated retirement plan.

The Information Technology Budget Study Group would recommend that the approval structure be centralized and transparent, and housed in a database for optimal vetting to the campus community.

1. **Recommendation 3--Separate IT Support for Research Computing**

Given the importance of research computing at a Tier One school, the Information Technology Budget Study Group would recommend UTEP exploring the creation of, or breaking off of, a group of IT professionals to support Research Computing solely at UTEP. These individuals would be dedicated to the support of the governance structure in the coordinating of Research Computing at UTEP.

1. **Recommendation 4--Create a “gatekeeper” for Research Computing**

Given the importance of Research Computing for UTEP moving toward Tier One and the potential cost savings from a tight governance structure, The Information Technology Budget Study Group would recommend creating a position, or reassigning an individual, to aid campus stake holders (like Directors, Deans, Provost, VPBA, etc.,) in coordinating Research Computing at UTEP. This position might be assigned by rotation among the project managers; however, for continuity sake it might be best to have this with one individual. This person should have the knowledge and experience to be able to

* + evaluate utility and cost-benefit(s), and
  + make recommendations to the appropriate Vice President(s) as to whether a new system/software/licensing should or should not be acquired; and if not,
  + this individual should be able to facilitate alternate approaches and recommendations.

This position would aid the VP for IR&P who is the Information Resource Manager (IRM). The IRM, by Texas statute, has veto power over any hardware or software purchases. The VP for IR&P does review all software purchases centrally. The Information Technology Budget Study Group recognized that the new automated purchasing system Miner Mall will allow for the ability to easily identify hardware purchases. However, The Information Technology Budget Study Group recognized that a better approach would be to aggressively make people aware of existing capabilities of Research Computing on campus, before requests reach the purchase order stage, hence the potential help of a gatekeeper for Research Computing.

1. **Recommendation 5--Research Labs**:

The Information Technology Budget Study Group would recommend the same governance approach recommended for exploring computing lab consolidation, etc., be conducted for research labs on campus. Currently many research labs maintain local resources to support their needs. Given the importance of the work conducted in these labs, exploring a consolidation of, for example, data storage with backups might be both a cost savings and a security savings.  The Information Technology Budget Study Group noted that exploring the need for each research lab to have dedicated system administrators might yield potential savings and aid in UTEP’s movement toward Tier One, especially since the role of system administrators often falls on Ph.D. students. The Information Technology Budget Study Group would recommend:

* + Exploring the interviewing of a dozen active faculty researchers to explore what IT-inefficiencies they have and what unmet needs they have, with a view to determining what services could better be provided centrally, or how otherwise to better support their work. This would provide some recognition of research computing support needs at UTEP.
  + And**,** moving towards core computing facilities to ensure a facility has proper infrastructure (cooling, backup power, high-speed internet connections, etc) as opposed to adapting to a lab-by-lab infrastructure changes to meet temporary needs.

**EXPECTED OUTCOME(S)**

The Information Technology Budget Study Group believes that the above recommendations, relating to Research Computing, provide a basis for real cost savings and enhanced communication across campus as touching UTEP’s information technology at the Researching Computing level.

**RESPONSIBILITY**

Entire Campus Community

**ACCOUNTABILITY**

Vice Presidents

**Opportunity 3** – **Consultation:** The committee recognized the benefit of procuring an outside consulting firm to aid with the two above opportunities. The Information Technology Budget Study Group realized that Informational Technology is a large organizational animal to try to “tame.”

**Recommendation(s)** for Opportunity3:

Recommendation 1--The Information Technology Budget Study Group would recommend that the University would be well served by acquiring a consulting firm to provide guidance on effective governance models, as touching

* IT salary and staffing—form following functions
* Student dependency for IT support verses fulltime staff
* IT governance models
  + Centralized verses decentralized
  + General PC support and enterprise computing verses research computing
* Virtualization of desktops verses computing labs
* Security of computing resources
* Organization of computing outreach efforts
* All IT related appropriations campus-wide
* Creation of an open, clear and transparent governance structure

**EXPECTED OUTCOME(S)**

The Information Technology Budget Study Group believes that the above recommendation would provide a foundation for creating an effective governance structure(s): structure(s) that would result in realized cost savings and coordinated movement toward providing a firm Information Technology foundation for Tier One.

**RESPONSIBILITY**

VP for IR&P

**ACCOUNTABILITY**

Vice Presidents

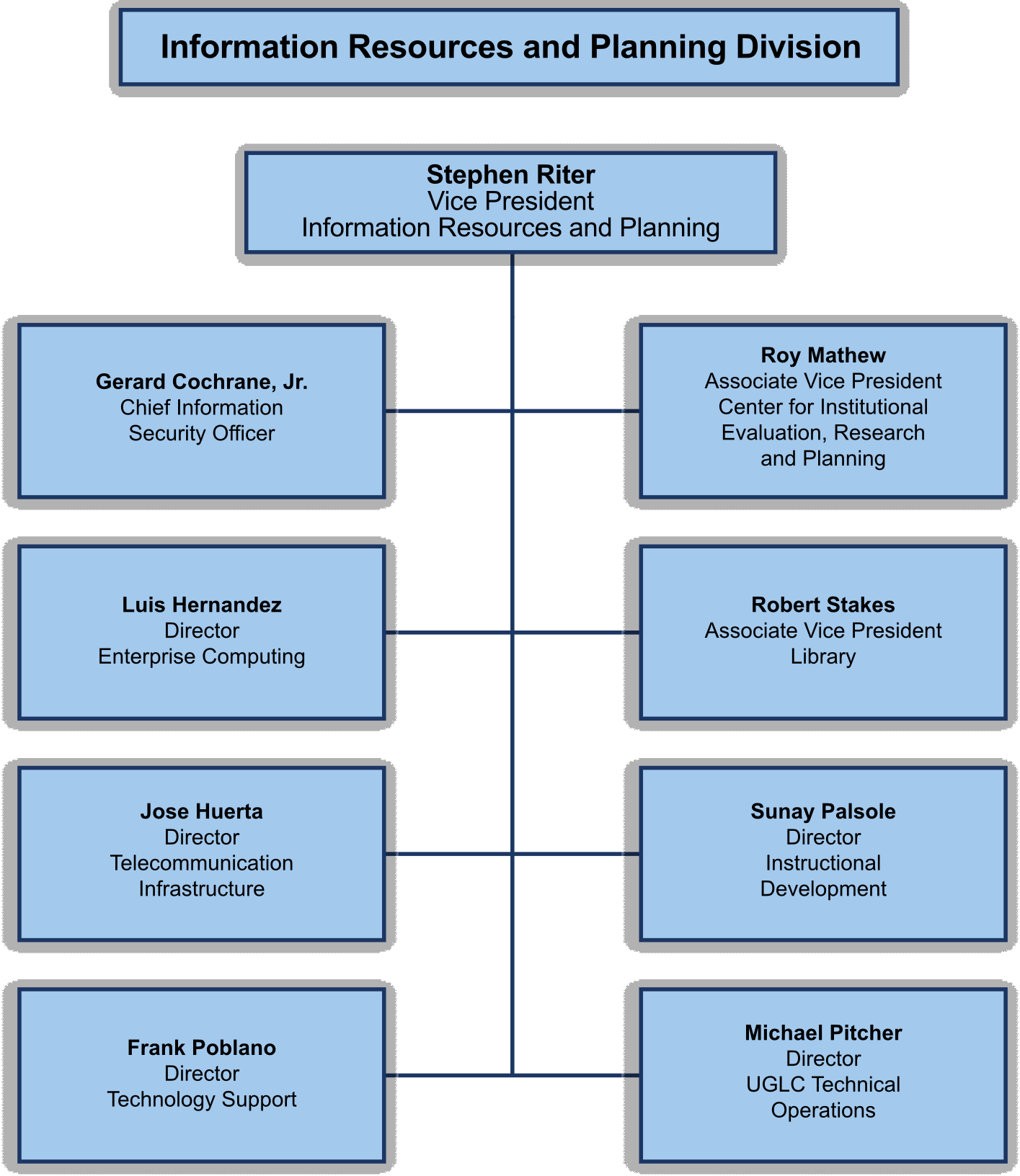
**CONCLUSION**

Ultimately the Information Technology Budget Study Group realized that cost savings and planning were interwoven with structured governance. For, if a layer of governance is applied to Information Technology, then issues like coordination, purchasing, planning, communication before moot and part of a seamless governance structure that incorporates the entire University community pulling toward a common goal and outcome—Tier One.

**DRAFT Opportunities and Related Recommendations 3-25-11**

**IT Budget Study Group Recommendations**

1. **Cloud Computing (PeopleSoft)**: Currently UTEP is facing a huge infrastructure change in the conversion from BIS to PeopleSoft.
   * **Possible Recommendation**: Recognize this as the most important and challenging implementation UTEP has undertaken. UTEP should identify those who have the knowledge/understanding to study the most efficient integration of PeopleSoft with other databases and determine optional functionality. Manage this “conversion” this not just as a software project but as a change in business workflow which will require changes in UTEP culture all levels.  Configure it properly to UTEP needs.  Train staff thoroughly.  Test thoroughly before release.
2. **Coordinating Campus-wide IT Solutions**: Sometimes people with IT needs often opt for solutions more expensive than necessary, since they don't have anyone they know and trust who has the time and the knowledge to sit down with them and work out the best solution.  This is true for both research computing and instructional computing, and perhaps also for business-related computing.  This applies both to the acquisition of new systems and the decisions of how to update (outsource, retire etc.) old systems. Currently the College and Departmental IT staffs, along with all the other things they do, meet this need, partially.
   * **Possible Recommendation**: avoid centralizing all support functions, to keep some expertise close to the users and readily available.
   * **Possible Recommendation**: The VP IR&P will create and actively promote the capability to direct and provide consultation to the campus community on coordinated acquisition of new systems.
3. **Current IT Funding**: Although there are weak spots and occasional lapses, current satisfaction with the various types and uses of information technology on campus appears to be reasonably high, as judged by student and faculty opinion, as gauged by Survey Week and other instruments. (This suggests that current levels of IT funding are generally adequate, as long as funding is not confused with service.)
   * **Possible Recommendation**: Seek efficiencies, but do not reduce service levels, or overall funding levels. This may not be doable as the two needs might cancel each other out—that is, seeking to save money, but not touching funding levels for IT.
     + Ascertain other Tier 1 institution funding levels for IT for future growth.
   * **Possible Recommendation**: Explore and employ a more sophisticated method(s) to access aspirational Tier 1 needs and benchmark current performance using accepted industry practices. A consultant could help UTEP with this.
4. **Evaluate Staff Salaries in IT:** Evaluate the salary levels of IT staff, and consider changing the salary ladder to reflect the “true value” of IT employees to the institution. (The question this begs is, “how to determine this?”)  The recruiting market for top IT staff is national, not regional. At the entry level UTEP probably pays adequately.  With raises, however, at a steady rate of 1-5% per year, it may not be competitive for people in mid-career.  Attrition of the best people at these levels is painful given that UTEP’s IT salaries are not competitive. In IT, it's probably more cost-effective to hire (and keep) one really good person (who has the skills to “learn fast”) than hire two inexperienced or mediocre people.
   * **Possible Recommendation**: Change the salary structure to make recommendation number 4 possible, so that UTEP can/will be competitive in the hiring/recruiting of competitive IT staff in open market.
5. **Gift, Grant and Opportunity Acquisitions:** Many of the least cost-effective computational resources on campus (hard to maintain, redundant) were received as gifts, obtained as line-items on grants, or promised in start-up packages.  Before UTEP approves such gifts, proposals, or packages, the costs and benefits of the resource should be calculated (including power costs, cooling costs, space, administration, and maintenance costs), and a long-term plan developed, including identification of resources for maintenance, etc., and a retirement plan. A centralized, transparent, database would be optimal to provide this to the campus community.
   * **Possible Recommendation:** designate a gatekeeper(s) for such systems.  This person(s) (there are a lot of stakeholders like Directors, Deans, Provost, VPBA, etc.,) should have the knowledge and experience to be able to evaluate utility and cost-benefit, and make recommendations to the appropriate VP as to whether such a system should or should not be acquired, and if not, be able to facilitate alternate approaches.  This position might be assigned by rotation among the project managers; however, for continuity sake it might be best to have this with one individual. For example, UTEP does have such a person. Each Texas public agency has an Information Resource Manager (IRM). The IRM by statute has veto power over any hardware or software purchase over some modest amount which the IRM feels is not a cost effective long term acquisition. Dr. Riter now does review all software purchases. When the new automated purchasing system Miner Mall is on line he will be able to also easily identify hardware purchases. However, a better approach is to aggressively make people aware of existing capabilities before requests reach the purchase order stage.
6. **Instructional Labs:** Instructional labs are difficult to manage and monitor since they are diverse and typically have many roles (examples)?   Currently such labs are sorted into 4 or 5 large categories (define), and their administration and funding is largely dependent on the category.  Instead, the functions of each individual lab should be examined and documented, and based on the functions, the funding model and governance model should be determined.  (UTEP might want to look into making all classrooms into “instructional labs” that are energized for the future needs of a Tier 1 institution.) In particular, the current model where in many labs’ replacement cost is 100% covered from the centrally administered TechFee, every 5 years, with essentially no questions asked, needs to be replaced by a model which incentivizes the owners (Deans, etc.,)  to close down obsolete labs—UTEP will need a way to determine what constitutes an obsolete lab.
   * **Possible Recommendation:** In the case of hardware replacement, the lab owner should pay part of the costs, proportional to the value of the lab to their organization (while the amount proportional to the value to the student body at large should continue to be paid by central funds). The question this begs is where is the cost savings outside of shutting down a lab and not buying new equipment?
   * **Possible Recommendation**: Explore other Tier 1 institutions to see how they deal with labs campus-wide. Do they require students to have laptops (allowing Financial Aid to cover the cost); are they virtualizing desktops and classrooms; how to they assist students who, even with financial aid helping, still cannot afford a laptop: are they moving to iPad technology, etc.
7. **IT Flexibility:** In general, retaining flexibility is important: UTEP never wants to commit to running some lab or service in the same way for the next 10 years, as things may change.  To enable flexibility and receptiveness to potential changes, it is important to foster strong horizontal links, for example between central IT and the college/departmental IT people, and among the departmental people if a decentralization model is adopted.  Currently this liaison appears to be functioning fairly well. However, Frank P., who coordinates this, seems to be overloaded, handling the managerial and the technical aspects, as well as many other job functions.
   * \***Possible Recommendation:** Allocate an additional person to this vital function via a redirection of current staff.
8. **IT Staffing:**  UTEP has "about 30 programmers" in Enterprise Computing, and those unit costs about $2.7M per year in salaries and about $.9M per year in licenses,hardware acquisition and maintenance contracts. This is by far the biggest IT activity and expense on campus.
   * **Possible Recommendation (Meta):** For each of the services currently provided by this unit, examine the costs and recommend possible economies, including sun setting the service, outsourcing it, or reducing the headcount devoted to it. Have a consultant examine this structure and make recommendations on how to position this area for future Tier 1 needs.
   * **Possible Recommendation**: Look at IT staff across campus where “shadow IT staffing” occurs and do a study to see if these additional resources could be used better in a central IT environment. Or, does the current decentralized environment make better sense for a Tier 1 university.
9. **IT Sustainability:** Users think of IT as like electricity: it should be there without having to worry about it.  While this is true for the basic infrastructure, including networking, desktop PCs and productivity software, many things typically dismissed as "just IT" are in fact customizable and flexible and work much better with a little bit of end-user attention (examples?).  Especially at the unit level, it is common to hire an IT person a technology implementation manager (TIM) and never talk to him or her, unless something goes wrong.  This makes it easy for the TIM to pursue their own goals(exceedingly tight security, restrictive rules for students and faculty, prestige projects) or shape their activities to make them sound good to people who only see them once a year at performance review time (buzzword-compliant planning, gold-plated support for the Dean’s office only).
   * **Possible Recommendation**: Encourage deans and chairs to set up IT Guidance Committees to coordinate back centrally with a central governance committee.  Take reports from these committees.  Value their input.  Train the committee chairs and set clear expectations so that these doesn't degenerate into perfunctory or time-wasting activities.  Have IT folk report to committee chairs every week or two.  Make chairs and committees responsible for ensuring that decisions are being made in alignment with unit goals and UTEP goals, and that activities are being monitored, at least at a high level.
10. **Library Computers:** The computers in Library appear to be heavily used based on the Library’s usage statistics, and it seems likely that they will not suffice for growth for potential demands in usage in the near future.
    * **Possible Recommendation**: Find space and funds for other lab of 200+ computers in a pleasant, student-friendly, centrally located space. There seems to be a correlation between food services, sticky space in the lobby area of the Library, and printing/computer availability in the Library.
    * **Possible Recommendation**: Explore using Thin Clients as a means for porting out virtual desktops for students. This would cut down on cost and lower cooling needs in buildings with numerous desktops.
11. **Laptops and mobile devices:** Students are implicitly voting every day as to what their technology needs are.  Currently usage of laptops and small mobile devices is increasing. UTEP should examine at what rate this usage is increasing. At some point students may vote to reduce the usage of fixed computing resources with their lack of usage, and on that day UTEP will be able to adjust accordingly.  Until then, UTEP should not be overeager to retire fixed labs or institutionally require students to purchase laptops, or smart phones, although individual instructors who choose to-do so may be allowed to, as at present.
    * **Possible Recommendation:** Maintain fixed labs for now and plan for future centrally placed labs as recommended in number 10.  Provide good wireless coverage.  Provide software to support mobile use (virtual desktops, cloud printing) and provide the licenses and other resources to support this.  Monitor student usage trends.
12. **Outsource/Centralize/Decentralize IT Resources:** The decision to outsource/centralize/decentralize is a never-ending one, and can be highly contentious.  These decisions need to be made on a case-by-case basis, considering in detail what service improvements or cost savings can be made.  Examine top-level service areas to see if they have much opportunity for benefit from further outsourcing, centralization or decentralization.  See if it is possible that specific activities or systems could be repositioned.
    * **Possible Recommendation:** Every time a system needs replacing or upgrading, examine whether that service is being provided in the best way.  In any case, ensure that all systems and services are reviewed from this perspective at least once every 3 to 5 years—with mobile learning increasing of the next several years, this may have to occur more frequently. Ensure that IT at UTEP has a structure that can evolve in the direction of either more or less centralization depending on campus needs or direction given to it.
    * **Possible Recommendation**: Maintain distributed expertise, to retain this flexibility.
13. **Perception and Service Quality**: There is often a disconnect between user's perceptions of service quality and the provider's view (e.g. student email, the parking permit website, etc.).
    * **Possible Recommendation:** Monitor customer satisfaction.  Monitor helpdesk calls to find problems with services. Pass that information on to the system owners.
    * **Possible Recommendation:** Designate a usability advocate able to evaluate whether new software will unnecessarily increase the burden on faculty, staff and students, and give him/her sign-off authority over all software projects at the go-ahead decision point and at the release point (i.e. Embark, Digital Measures, etc.).  This person could also serve as a student advocate, given that UTEP students seldom make their voices heard.
14. **Research Labs:**  Currently many research labs locally maintain resources that may bemire effectively provided by a central organization, for example data storage with backups.  UTEP would like to avoid the need for each research lab to have a dedicated sysadmin, especially since this role often falls on Ph.D. students who should be doing other things.
    * **Possible Recommendation:** Interview a dozen active faculty researchers to explore what IT-inefficiencies they have and what unmet needs they have, with a view to determining what services could better be provided centrally, or how otherwise to better support their work. Perhaps there needs to be some recognition of research computing support needs.
15. **Rolling out new IT Solutions to the Campus:** Software rollouts have often failed to meet user expectations because of inadequate user participation in the acquisition process, insufficient user training and promotion and the failure to involve existing expertise in IR&P.
    * **Possible Recommendation**: Examine the distribution of expertise in IT and assignment individuals to roles to match the typical distributions in good IT service units, hiring, firing training and reassigning personnel if necessary. Encourage organizations that acquire and rollout their own software packages to involve IR&P in the selection process and in the development of assessment and training activities. Determine, campus-wide, if IT services units housed in IT or in other areas are setup for optional functionality.
16. **Software:** Licenses are expensive and sometimes more restrictive than what UTEP would like.
    * **Possible recommendation:** Designate a licensing czar, a good communicator and well known across campus as the go-to person for obtaining licenses, and able to negotiate skillfully with vendors to obtain good terms. (UTEP does currently have this type of structure with Frank Poblano coordinating and Dr. Riter acting as czar.)
17. **TECH Fee:** There is something of a mismatch between responsibility and authority regarding the Tech Fee.  Part of the tech fee goes to the Colleges. IR&P has had little say over how this is allocated, yet they feel responsible for ensuring that this is spent wisely, and aggrieved when they can't monitor that this is the case.
    * **Possible Recommendation:** The Provost and VP IR&P will work closely to regularly reexamine tech fee allocations and allocate any discretionary tech fee funds on a timely and efficient basis.
18. **UTEP Strategic Plan and IT:** (from the UTEP Strategic Plan) "Enhance administrative and informational management systems to enable close monitoring of students' academic progress."
    * **Possible Recommendation:** Monitor the adoption, acceptance, and effectiveness of information management systems campus-wide as they are introduced and disseminated. And develop assessment and evaluation procedures to gage the short and long term effectiveness.
19. **UTEP Strategic Plan and IT:** (from the UTEP Strategic Plan) "Annual review of all other planning documents, including the Technology Plan"
    * **Possible Recommendation:** create such a plan and share it with stakeholders, including at least the IT community across campus, including at least TIMS and their equivalents and the Faculty Senate IT committee. UTEP should develop and update an information technology strategic plan. And, since IT is a service unit, the plan should be inclusive of its stake holders in the planning exercise.
20. **Technology in the Classroom**: Develop a plan that takes into account the undergraduate and graduate student and professor classroom, on-line, and general campus education experience.
    * **\*Possible Recommendation**: Look at current campus successes. For example, the Library is well used. What does students like about the Library experience (is it near parking, coffee, food, or just a large enough spot to be of use, etc.) and how can UTEP model that experience around campus?
      + Look at other universities. Do other Tier 1 schools require laptops, provide more/less printing (some schools have residence hall printing, so it might be tough to compare), but also printing in many buildings. Some Tier 1 schools are actively developing “sticky spots,” with actual chairs and power supplies for students. UTEP currently seems to not provide that many spots for students to actually sit down have a cup of coffee, and work on their laptops (Library is good example of a spot that does).
    * **Possible Recommendation**: Set expectations of students, both in terms of their requirements to have laptops, etc., and in simply how to operate computers.
      + UTEP should change how it provides some services to students. For example, UTEP is using an on-line advising system in psychology via Blackboard. One cannot eliminate in person advising, but UTEP can reduce the person hours by requiring on line advising so that they can do some of the necessary work. Can UTEP do this with other services?
      + Given the ubiquity of laptops, can UTEP move more in-class testing to on-line tests, which might save a great deal on printing, etc. And, if UTEP does have the wireless capability to have entire classes on-line, should UTEP move to on-line test taking while in the class room?
    * **Possible Recommendation**: UTEP should focus attention on the professor experience. For example, can professors with software issues, like running SAS, have a coordinated IT support that aids other professors having similar issues with other software packages (?)—to have a virtual “chat room” where shared experiences/help can be obtained.
      + Perhaps UTEP needs to explore how do other Tier 1 schools address this type of professor experience to aid the campus community and make these services more transparent via a communication plan.
21. **Higher Education Models**: Other Tier 1 institutions might have systems/processes/planning in place that UTEP could model future IT growth/needs against.
    * **Possible Recommendation**: Do an environmental scan of other Tier 1 institutions as models for developing a “future” model of structuring IT processes/planning/spending. (For example: Dr. Gates contacted University of Michigan who provided links to planning document: <http://nextgen.umich.edu/>, <http://research.umich.edu/ci/>. U of M noted that they have IT support divided into two support groups: one IT group is for general campus-wide IT support and coordination, and a second IT group is for research specific support and coordination.)
      + Look at other Tier 1 schools to explore a centralized verse decentralized IT structure to position UTEP for future Tier 1 status.
    * **Possible Recommendation**: Explore how other Tier 1 institutions “house” their IT hardware (i.e. physical space, mirrored systems, data backups, etc. An internal environmental scan raised questions about UTEP’s current information technology housing. Issues such as:
      + No power: UTEP has reached the electrical capacity for its Research and Academic Data Center (RADC) and is unable to house any more computing hardware.
      + No generators: the RADC relies on battery backups (UPS) providing only 30 minutes of backup power in case of a power failure.
      + HVAC: UTEP has reached the cooling capacity for both data centers.
      + Data backup: there is no collective data backup system in the RADC.



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|  |  |  |  |  |  |  |  |  |  |  |
|  |  | **E&G** |  | **Tech Fee** |  | **DL Fee** |  |  |  | **TOTAL** |
| **Admin** |  | $695,136 | ALL |  |  |  |  |  |  | $695,136 |
|  | Gen Admin |  |  |  |  |  |  |  |  |  |
|  | Accounting |  |  |  |  |  |  |  |  |  |
|  | Prog Man |  |  |  |  |  |  |  |  |  |
|  | Out Reach |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| **Security** |  | $355,443 | ALL |  |  |  |  |  |  | $355,443 |
|  |  |  |  |  |  |  |  |  |  |  |
| **Enterprise Computing** |  | $2,362,410 | A | $315,948 | E |  |  |  |  | $2,678,358 |
|  |  |  |  |  |  |  |  |  |  |  |
| **Instructional Dev** |  |  |  | $692,136 | E | $608,306 | E |  |  | $1,300,442 |
|  |  |  |  |  |  |  |  |  |  |  |
| **UGLC Ops** |  |  |  | $845,942 | E |  |  |  |  | $845,942 |
|  | Atlas |  |  |  |  |  |  |  |  |  |
|  | UGLC |  |  |  |  |  |  |  |  |  |
|  | Fit Lab |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| **Customer Service** |  | $1,084,007 | E |  |  |  |  |  |  | $1,084,007 |
|  | Help Desk |  |  |  |  |  |  |  |  |  |
|  | PC Support |  |  |  |  |  |  |  |  |  |
|  | Phone Operators |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| **Network Connectivity** |  | $244,278 | A&E |  |  |  |  |  |  | $244,278 |
|  |  |  |  |  |  |  |  |  |  |  |
| **Total Operations** |  | **$4,046,138** |  | **$1,854,026** |  | **$608,306** |  |  |  | **$6,508,470** |
|  |  |  |  |  |  |  |  |  |  |  |
| **Infrastructure Support** |  |  |  |  |  |  |  |  |  |  |
|  | M&O |  |  | $300,000 |  |  |  |  |  |  |
|  | Other Infrastructure |  |  | $200,000 |  |  |  |  |  |  |
|  | Capital Exp |  |  | $350,000 |  |  |  |  |  |  |
|  | Oracle Maint |  |  | $84,983 | A |  |  |  |  |  |
|  | Banner Upgrades |  |  | $325,761 | E |  |  |  |  |  |
|  | Hardware Maintenance |  |  | $517,247 | A |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| **Total Infrastructure Support** |  |  |  | **$1,777,991** |  |  |  |  |  | **$1,777,991** |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | **VP IR&P TOTAL =** |  | **$8,286,461** |
| Notes : | A=Admin |  |  |  |  |  |  |  |  |  |
|  | E= Education |  |  |  |  |  |  |  |  |  |
|  | Tech Fee $17.25 per sch - Max 15 | | |  |  |  |  |  |  |  |
|  | DL Fee $25 per sch | |  |  |  |  |  |  |  |  |

**ADDITIONAL IT STAFFING AT UTEP BY AREA PROVIDED BY VPBA OFFICE BASED ON JOB CODES**

|  |  |  |
| --- | --- | --- |
| **COLL - BUSINESS ADMIN.** |  |  |
| BUSN - CALC LAB | 1 | 36,050 |
| COLL - BUSINESS ADMIN. | 2 | 103,855 |
| **COLL - BUSINESS ADMIN. Total** | **3** | **139,905** |
|  |  |  |
| **COLLEGE OF EDUCATION** |  |  |
| COLLEGE OF EDUCATION | 1 | 50,407 |
| **COLLEGE OF EDUCATION Total** | **1** | **50,407** |
|  |  |  |
| **COLLEGE OF ENGINEERING** |  |  |
| CIVIL ENGINEERING | 1 | 48,488 |
| COLLEGE OF ENGINEERING | 6 | 237,586 |
| COMPUTER SCIENCE | 1 | 37,308 |
| MET & MATERIALS | 1 | 44,402 |
| **COLLEGE OF ENGINEERING Total** | **9** | **367,784** |
|  |  |  |
| **COLLEGE OF HEALTH SCI** |  |  |
| COLLEGE OF HEALTH SCI | 1 | 42,120 |
| **COLLEGE OF HEALTH SCI Total** | **1** | **42,120** |
|  |  |  |
| **COLLEGE OF LIBERAL ART** |  |  |
| ART DEPARTMENT | 2 | 61,851 |
| LACIT LAB | 2 | 99,183 |
| **COLLEGE OF LIBERAL ART Total** | **4** | **161,034** |
|  |  |  |
| **COLLEGE OF SCIENCES** |  |  |
| COLLEGE OF SCIENCES | 1 | 54,500 |
| GEOLOGICAL SCIENCES | 1 | 54,165 |
| MATHEMATICAL SCIENCES | 1 | 46,919 |
| PHYSICS | 1 | 42,631 |
| **COLLEGE OF SCIENCES Total** | **4** | **198,215** |
|  |  |  |
| **OFFICE OF THE PROVOST** |  |  |
| ADMISSION/RECRUITMENT | 1 | 58,008 |
| ENROLLMENT MANAGEMENT | 1 | 53,199 |
| FINANCIAL AID | 1 | 43,320 |
| STUD ASSESS & TESTING | 1 | 42,068 |
| **OFFICE OF THE PROVOST Total** | **4** | **196,595** |
|  |  |  |
| **SCHOOL OF NURSING** |  |  |
| SCHOOL OF NURSING | 1 | 25,670 |
| **SCHOOL OF NURSING Total** | **1** | **25,670** |
|  |  |  |
| **SPECIAL FAC MGMT** |  |  |
| SPECIAL FAC MGMT | 1 | 44,313 |
| **SPECIAL FAC MGMT Total** | **1** | **44,313** |
|  |  |  |
| **UNDERGRADUATE STUDIES** |  |  |
| DEVELOPMENTAL ENGLISH | 1 | 18,282 |
| DEVELOPMENTAL MATH | 1 | 18,282 |
| **UNDERGRADUATE STUDIES Total** | **2** | **36,564** |
|  |  |  |
| **VP BUSINESS AFFAIRS** |  |  |
| FACILITIES SERVICES | 2 | 81,498 |
| COMPTROLLER | 1 | 52,394 |
| **VP BUSINESS AFFAIRS Total** | **3** | **133,892** |
|  |  |  |
| **VP FOR RESEARCH** |  |  |
| VP FOR RESEARCH | 3 | 60,764 |
| **VP FOR RESEARCH Total** | **3** | **60,764** |
|  |  |  |
| **VP INFO RESOURCES\_PLAN** |  |  |
| INST EVAL, RES & PLANN | 1 | 20,500 |
| INSTRUCTIONAL SUPPORT | 8 | 300,530 |
| LIBRARY | 3 | 86,904 |
| INFORMATION TECHNOLOGY | 78 | 3,624,204 |
| **VP INFO RESOURCES\_PLAN Total** | **90** | **4,032,138** |
|  |  |  |
| **Grand Total** | **126** | **5,489,401** |

***Computer labs improvement opportunites***

Improvement opportunities:

1. Computer labs

a. Identify major computer labs (10+ computers) that are available to any student and where computer usage doesn’t justify the need. Merge the computers and some of the lab budget with the Cybercafé to increase computer access at this central location.

b. Control the creation of new or the expansion of existing computer labs

c. Centralized management and administration for all open access and hybrid computer labs

d. Stream the desktop to the computers or thin clients

2. Software

a. Create an entity that regulates new software purchases, keeps software inventory and manages software agreements at the university level.

b. Use application virtualization for software delivery to users

c. Evaluate software licensing options and purchase network licenses for software that is needed by 10+ users (less # of licenses, yet more access)

3. Support for student owned laptops

a. Create more “sticky” places. A sticky place is an area that supports mobile computing. These areas are equipped with mobile furniture, charging stations, and Wi-Fi access. Students can then go to the UTEP cloud to access their files, print and use UTEP software. The Computer Clinic at the Library helps students fix software related issues with their computers at no cost. Hardware repairs for student owned computers are available at the Tech Store for a cost.

4. Virtualization

a. Stream to desktop to shared UTEP computers (labs, classrooms, internet kiosk, etc…)

b. Stream desktop and applications to UTEP users on non-UTEP owned computers

c. Stream applications that require high maintenance to UTEP computers

***computer lab statistics example from january 18-31***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| lab | computers | logins | users |  |
| Academic Services Rotunda | 20 | 1911 | 2 |  |
| ACES MATH | 24 | 1139 | 287 |  |
| ACES PSCI 216 | 14 | 622 | 290 |  |
| ACES PSCI 228 | 26 | 1814 | 633 |  |
| ATLAS | 32 | 1208 | 727 |  |
| Biomechanics Lab | 5 | 6 | 5 |  |
| CALC 1-3 | 119 | 5878 | 1706 |  |
| CALC 320 | 31 | 746 | 156 |  |
| Career Services | 6 | 169 | 98 |  |
| Collaborative Learning Center | 291 | 25646 | 7314 |  |
| College Assistance Migrant Program | 8 | 137 | 48 |  |
| Communications Lab | 24 | 796 | 282 |  |
| CS 119 | 20 | 154 | 28 |  |
| CS 300 | 31 | 673 | 220 |  |
| CS 300b | 25 | 135 | 32 |  |
| CS 301 | 23 | 357 | 139 |  |
| Cybercafe | 25 | 2672 | 1228 |  |
| Developmental EDU 211 | 24 | 901 | 205 |  |
| Developmental EDU 215 | 16 | 390 | 116 |  |
| Developmental EDU 315 | 26 | 242 | 115 |  |
| Developmental EDU 316 | 25 | 925 | 205 |  |
| EDU 401 | 36 | 1641 | 850 |  |
| EDU 402 | 30 | 41 | 38 |  |
| EDU 403 | 30 | 351 | 142 |  |
| EDU 405 | 16 | 7 | 5 |  |
| EDU 411 | 19 | 8 | 7 |  |
| EPNG HR LAB | 16 | 36 | 20 |  |
| ETC 113 / PACE | 48 | 2293 | 686 |  |
| ETC 225 | 25 | 418 | 225 |  |
| ETC 226 | 25 | 366 | 179 |  |
| ETC 228 | 49 | 1730 | 457 |  |
| GEOLOGY | 27 | 461 | 83 |  |
| GRAPHIC DESIGN A | 20 | 349 | 106 |  |
| GRAPHIC DESIGN B | 22 | 128 | 56 |  |
| ILC | 37 | 3447 | 871 |  |
| LACIT 405 / 411 | 177 | 10671 | 3459 |  |
| Library Classroom 204a | 37 | 248 | 120 |  |
| Library Classroom 204b | 41 | 483 | 282 |  |
| Library Classroom 336 | 31 | 225 | 56 |  |
| Library Special Needs Lab | 5 | 114 | 7 |  |
| Miner Athlete Academic Center | 51 | 1059 | 216 |  |
| Miner Village | 5 | 888 | 297 |  |
| Psychology 202 | 29 | 243 | 145 |  |
| Technology Support Center | 19 | 748 | 330 |  |
| Technology Support Center Hubs | 8 | 31 | 12 |  |
| TEKCOM | 43 | 547 | 154 |  |
| V-LAB | 57 | 462 | 53 |  |
| Women Resource Center | 4 | 205 | 89 |  |

***IT Existing Condition* Document**

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# Current State

## Summary of Existing Infrastructure

### Software Licensing and management of licenses for Desktop Computing

Software purchasing is a problem caused by the decentralization of computer labs that offer similar services. For example, some labs converted to Windows 7 in the summer or 2010 and some are still in Windows XP. One of the major issues this has caused is in the centralized student printing system. UTEP is forced to keep 2 printer servers to be able to support both operating systems.

There are some labs that are paying for software which offers similar if not the same features as software for which we already own system-wide. An example is iWork for Apple. iWork has Pages, Keynote and Numbers which are similar products to Word, PowerPoint and Excel. Other than money being spent on purchasing redundant software, students are forced to use only certain labs with more restricted hours because the software is only available there. With budget cuts it is important to use and promote the software we own. We also couldn’t get lab stats software (tracks computer usage) installed in all the labs in the fall 2010 because of different management and administrator of labs.

Bullet Point Highlights of existing issues and process:

* Purchasing is asking for approval on all software purchases (started Oct 2010)
* Define is used in the routing of approvals
* Only one person from IT is reviewing software purchased (side job)
* Academic Software requests are routed through VPIT
* IT doesn’t know about software requests until the request starts the routing in Purchasing.
  + Ideal scenario – get with IT for solution first – prior to hitting purchasing.
  + IT can assist in identifying existing licenses or alternatives to the software.
* No centralized software purchasing process exists on campus. Everyone makes their own decision on software.
* People are buying computers with Microsoft OS and office included in the computer purchases.
  + This is an additional cost to the purchase
  + UTEP already has a site license of all this software – double dipping on cost.
* Duplication of the licenses. iWork v. Office
* Duplication of statistical software (SASS, SPSS, Minitab, Others)
* No database with all licenses exist
  + Only site license data is available in a central DB
* We know about the license via maintenance
* No one has a prime responsibility for assessing software. It is a secondary task creating bottlenecks (purchasing should have a software licensing expert)

### Software Licensing and management of licenses for Research Computing

Bullet Point highlights of existing conditions when purchasing research computing software:

* No process exists.
* Software purchases are managed by each PI
* IT gets involved in the back end if requested by purchasing.
* Hardware is managed by PI only – IT not involved
* Facilities and IT know “after the fact”
* Grants – perception that researchers do not care about “savings”, they prefer to spend more $ for equipment to meet timing requirements or spend requirements on the grant.
* There tend to perform last minute purchasing spend (more costly at times)
* Non-standard or non-enterprise solution
* Faculty without research admin may have more challenges …

### Computer Purchases

Bullet Point highlights of existing conditions when purchasing computers:

* Researchers buying equipment in vacuum – no infrastructure planning
* IT establishes a yearly standard with a vendor. IT gets volume pricing
  + i.e. optiplex 780 (PC and MAC)
  + Standard research computer established yearly
* Customize standard model does not require approval
* Approval process is required when purchasing non-standard equipment.
* This process will be automated via MinerMall
* IT attempts to manage approval for non-standard computer
* IT manages approval for all non-research server hardware
* Process is dependent on purchasing to recognize that the purchase is a server, hardware, etc.

### Virtual Desktops

The UTEP Virtual Desktop released to all students this fall 2010 will also help reduce the number of computer facilities needed across campus. For example, the college of Engineering has adopted this virtual technology and as of Spring 2011 has an Engineering Virtual Desktop. The students are encouraged to use their own laptops and the ETC provides laptops to some students to be used during class. Engineering its own its way to accomplished what they have planned, the elimination of physical computers in rooms ETC 113, 225, 226, 228 and V-LAB. Best of all, there is no need for a large number of support staff to support 210 physical computers.

This setup only requires one FTE to dedicate part of his/her time to prepare any new software for virtualization. It is expected that as more students are aware of the UTEP Virtual desktop, that computer usage in labs decline (especially those that were created due to the need of an specific software). In the future, another usage analysis can de lead into closing labs or relocating them to centralized areas where support and management is also centralized.

Virtualization is an area that offers many efficiency opportunities and even more when the computers are managed by the same unit. In the open access lab at the Library, we are planning to soon have computers with nothing install on them, in fact these computers won’t need a hard drive at all (No. 1 failing component). These computers will simply turn on and a desktop will be streamed to them. This is a great benefit that saves a lot of man-hours. Computers are known to get unstable after they have been used for some time. Most software related issues are troubleshot or computers are reimaged. Troubleshooting software related issues can take hours and imaging can take 15 minutes. Imaging is not bad, but when you multiply this times the number of computers in a lab, this can be hours. If a software related issues is suspected in a streamed desktop as it is being used, the computer is simply restarted to go back to its original state.

* Current path is to increase # of concurrent licenses
* Utilization has increase to XX % of total concurrent licenses
* Next phase is to stream it to physical machines in the computer labs
  + Extend the life of the computers (hard drive life)
  + Start to use thin-clients (10% of the power utilization that a normal desktop uses)

### Consolidation of Help Desks

* FIT Lab for faculty instructional support
* HELP desk for all the group in general
* TIM and application specialists in many departments
  + TIM started as a liaison between colleges and IT
  + TIM should know college needs to work with IT
  + IT pays % of salary
  + Breakdown - TIM’s are accountable to the deans, not IT – therefore there is little accountability to a central IT process.
  + TIMs start doing their own processes independently
* Desktop Support
  + Support the entire campus
  + Supports students personal equipment
  + 150 classrooms with technology support (5 min response time)

## Infrastructure and Management of IT

### Budgeting and Allocation Process

Current budgeting process allots costs to each college based on historical need and/or previous negotiated pricing. It is not necessarily based on other attributes such as college size or research expenditure.

### Current Budget

|  |  |  |
| --- | --- | --- |
| **Budgeted Positions by Category** |  |  |
| **FY 2010-2011** |  |  |
|  | **TECHNOLOGY** |  |
| **Row Labels** | **Count of Position ID** | **Sum of Allocation** |
| **COLL - BUSINESS ADMIN.** |  |  |
| BUSN - CALC LAB | 1 | 36,050 |
| COLL - BUSINESS ADMIN. | 2 | 103,855 |
| **COLL - BUSINESS ADMIN. Total** | **3** | **139,905** |
|  |  |  |
| **COLLEGE OF EDUCATION** |  |  |
| COLLEGE OF EDUCATION | 1 | 50,407 |
| **COLLEGE OF EDUCATION Total** | **1** | **50,407** |
|  |  |  |
| **COLLEGE OF ENGINEERING** |  |  |
| CIVIL ENGINEERING | 1 | 48,488 |
| COLLEGE OF ENGINEERING | 6 | 237,586 |
| COMPUTER SCIENCE | 1 | 37,308 |
| MET & MATERIALS | 1 | 44,402 |
| **COLLEGE OF ENGINEERING Total** | **9** | **367,784** |
|  |  |  |
| **COLLEGE OF HEALTH SCI** |  |  |
| COLLEGE OF HEALTH SCI | 1 | 42,120 |
| **COLLEGE OF HEALTH SCI Total** | **1** | **42,120** |
|  |  |  |
| **COLLEGE OF LIBERAL ART** |  |  |
| ART DEPARTMENT | 2 | 61,851 |
| LACIT LAB | 2 | 99,183 |
| **COLLEGE OF LIBERAL ART Total** | **4** | **161,034** |
|  |  |  |
| **COLLEGE OF SCIENCES** |  |  |
| COLLEGE OF SCIENCES | 1 | 54,500 |
| GEOLOGICAL SCIENCES | 1 | 54,165 |
| MATHEMATICAL SCIENCES | 1 | 46,919 |
| PHYSICS | 1 | 42,631 |
| **COLLEGE OF SCIENCES Total** | **4** | **198,215** |
|  |  |  |
| **OFFICE OF THE PROVOST** |  |  |
| ADMISSION/RECRUITMENT | 1 | 58,008 |
| ENROLLMENT MANAGEMENT | 1 | 53,199 |
| FINANCIAL AID | 1 | 43,320 |
| STUD ASSESS & TESTING | 1 | 42,068 |
| **OFFICE OF THE PROVOST Total** | **4** | **196,595** |
|  |  |  |
| **SCHOOL OF NURSING** |  |  |
| SCHOOL OF NURSING | 1 | 25,670 |
| **SCHOOL OF NURSING Total** | **1** | **25,670** |
|  |  |  |
| **SPECIAL FAC MGMT** |  |  |
| SPECIAL FAC MGMT | 1 | 44,313 |
| **SPECIAL FAC MGMT Total** | **1** | **44,313** |
|  |  |  |
| **UNDERGRADUATE STUDIES** |  |  |
| DEVELOPMENTAL ENGLISH | 1 | 18,282 |
| DEVELOPMENTAL MATH | 1 | 18,282 |
| **UNDERGRADUATE STUDIES Total** | **2** | **36,564** |
|  |  |  |
| **VP BUSINESS AFFAIRS** |  |  |
| FACILITIES SERVICES | 2 | 81,498 |
| COMPTROLLER | 1 | 52,394 |
| **VP BUSINESS AFFAIRS Total** | **3** | **133,892** |
|  |  |  |
| **VP FOR RESEARCH** |  |  |
| VP FOR RESEARCH | 3 | 60,764 |
| **VP FOR RESEARCH Total** | **3** | **60,764** |
|  |  |  |
| **VP INFO RESOURCES\_PLAN** |  |  |
| INST EVAL, RES & PLANN | 1 | 20,500 |
| INSTRUCTIONAL SUPPORT | 8 | 300,530 |
| LIBRARY | 3 | 86,904 |
| INFORMATION TECHNOLOGY | 78 | 3,624,204 |
| **VP INFO RESOURCES\_PLAN Total** | **90** | **4,032,138** |
|  |  |  |
| **Grand Total** | **126** | **5,489,401** |

### Wireless Connections

Wireless connections at UTEP have been increasing every year, which is a direct impact of students using their own mobile devices when they come to school. We need to establish more sticky places to support students with their own laptops and help reduce the number of computer labs needed on campus. A sticky place is an area where Wi-Fi, charging stations, individual seats with tables, and wireless printing is accessible. Just last semester the UTEP virtual desktop for students was released and students can now access most UTEP software from their own laptops. The computer clinic at the Technology Support Center has been fixing software related issues on students owned laptops since October 2009. With wireless coverage almost anywhere in UTEP any area can become a sticky place by adding charging stations and furniture.

## Administrative Data Center (ADC)

Dimension:

* 1408 sqft
* 198 physical servers
* ***VMWare Virtualization Infrastructure***
* 7 Production Servers
  + Hosting 133 virtual machines for campus
* 2 Payment Card Industry/Data Security Standard compliant servers
  + Hosting 5 virtual machines with PCI/DSS requirements
* 2 Test Servers
  + Hosting 29 test virtual machines for campus

***IBM Virtualization Environment***

* 1 Production Server
  + Hosting 2 instances of Banner (Production and Pre-Production)
* 1 Test Server (housed in Education Building until new Data Center is online)
  + Hosting 2 instances of Banner (Test and Development)

***Research & Academic Data Center (RADC)***

* 1088 sgft
* 28 Standalone servers
* 8 High Performance Computing Clusters (See inventory)

***Challenges***

* No power – we have reached electrical capacity for the RADC and are unable to add anymore computing hardware
* No generator – dependent on a standalone 100KVA UPS for the RADC and 2 50KVA UPS’s for the ADC which at current levels provides about 30 minutes of backup power in case of a power outage
* HVAC – we have reached the cooling capacity for both data centers
* Data backup – there is no collective data backup system in the RADC, the only system that has a backup system is Dr. AlDouri’s GIS system

## Computing Laboratories

The UTEP computing infrastructure consists of 48 computer labs across campus, consisting of 1,722 computers. Software has been installed in these computers to track computer usage and over 65% of these computers are in labs categorized as either *open access* or *hybrid*.

Computers in *open access* labs are available to any student with a valid Miner user account. Computers in *hybrid* labs are also available to any student, but they are also blocked throughout the day for computer-based instruction.

Not clear on how budget is allocated per computer lab for equipment, software, staff, and other. This may be complicated as some labs may be using various funding accounts and some staff may be partially supporting the lab but also responsible for other areas.

Computer labs exist that has fewer computers and fewer hours of operations, but their budget is twice as much as one with double the number of computers and more hours of operations. Having isolated computer labs it is inefficient, as staff is usually needed to secure the room and equipment and to help students with technical issues.

For example, three labs with 20 computers each needs are located at three different places. These labs are used for printing, scanning, Internet access, Microsoft Office applications and some other software. They all operate from 8am – 5 pm. You need three different people to oversee these labs. If had one lab with 60 computers, the computer accessibility is still the same, but you only need one person to oversee the room and equipment. The number of accessible computers and staff required for support can be better control if there is only one area.

The creation of new computer labs or expansion of the existing labs must be controlled. Most new computer labs are not well planned. New computer labs are created because of funds made available to a group or old computers that have been transferred from other departments instead of sending them to surplus. But there are so many other things to consider such as software, computer repairs and maintenance, budget for refreshing computers in the future and support staff. In most cases, Technology Support becomes aware of these labs when faculty or students are complaining to IT about the computers not being ready.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Lab Name*** | ***# of Computers*** | ***# of Logins*** | ***# of Users*** | ***login/computer*** |
| Miner Village | 5 | 888 | 297 | 177.6 |
| Cybercafe | 25 | 2672 | 1228 | 106.9 |
| Academic Services Rotunda | 20 | 1911 | 2 | 95.6 |
| ILC | 37 | 3447 | 871 | 93.2 |
| Collaborative Learning Center | 291 | 25646 | 7314 | 88.1 |
| ACES PSCI 228 | 26 | 1814 | 633 | 69.8 |
| LACIT 405 / 411 | 177 | 10671 | 3459 | 60.3 |
| Women Resource Center | 4 | 205 | 89 | 51.3 |
| CALC 1-3 | 119 | 5878 | 1706 | 49.4 |
| ETC 113 / PACE | 48 | 2293 | 686 | 47.8 |
| ACES MATH | 24 | 1139 | 287 | 47.5 |
| EDU 401 | 36 | 1641 | 850 | 45.6 |
| ACES PSCI 216 | 14 | 622 | 290 | 44.4 |
| Technology Support Center | 19 | 748 | 330 | 39.4 |
| ATLAS | 32 | 1208 | 727 | 37.8 |
| Developmental EDU 211 | 24 | 901 | 205 | 37.5 |
| Developmental EDU 316 | 25 | 925 | 205 | 37.0 |
| ETC 228 | 49 | 1730 | 457 | 35.3 |
| Communications Lab | 24 | 796 | 282 | 33.2 |
| Career Services | 6 | 169 | 98 | 28.2 |
| Developmental EDU 215 | 16 | 390 | 116 | 24.4 |
| CALC 320 | 31 | 746 | 156 | 24.1 |
| Library Special Needs Lab | 5 | 114 | 7 | 22.8 |
| CS 300 | 31 | 673 | 220 | 21.7 |
| Miner Athlete Academic Center | 51 | 1059 | 216 | 20.8 |
| GRAPHIC DESIGN A | 20 | 349 | 106 | 17.5 |
| College Assistance Migrant Program | 8 | 137 | 48 | 17.1 |
| GEOLOGY | 27 | 461 | 83 | 17.1 |
| ETC 225 | 25 | 418 | 225 | 16.7 |
| CS 301 | 23 | 357 | 139 | 15.5 |
| ETC 226 | 25 | 366 | 179 | 14.6 |
| TEKCOM | 43 | 547 | 154 | 12.7 |
| Library Classroom 204b | 41 | 483 | 282 | 11.8 |
| EDU 403 | 30 | 351 | 142 | 11.7 |
| Developmental EDU 315 | 26 | 242 | 115 | 9.3 |
| Psychology 202 | 29 | 243 | 145 | 8.4 |
| V-LAB | 57 | 462 | 53 | 8.1 |
| CS 119 | 20 | 154 | 28 | 7.7 |
| Library Classroom 336 | 31 | 225 | 56 | 7.3 |
| Library Classroom 204a | 37 | 248 | 120 | 6.7 |
| GRAPHIC DESIGN B | 22 | 128 | 56 | 5.8 |
| CS 300b | 25 | 135 | 32 | 5.4 |
| Technology Support Center Hubs | 8 | 31 | 12 | 3.9 |
| EPNG HR LAB | 16 | 36 | 20 | 2.3 |
| EDU 402 | 30 | 41 | 38 | 1.4 |
| Biomechanics Lab | 5 | 6 | 5 | 1.2 |
| EDU 405 | 16 | 7 | 5 | 0.4 |
| EDU 411 | 19 | 8 | 7 | 0.4 |

## Current IT Organizational Structure

A centralized IT organization exists under the VP for IT. Further, each department has their own IT staff to support labs and departmental computers. The full use of the central Help Desk is not exploited due to historical issues with response times (which may have already been addressed).

* The Central IT organization consists of 90 employees including the VPIT
* An additional ~36 FTE’s are scattered over different departments responsible for computer labs. This count does not include student FTE’s utilized to maintain the labs. IT is estimated that each lab has ~ 4 additional students FTE on average – therefore there is a potential for an additional ~144 student FTE’s that manage labs.
* The 36 FTE + students are managed by each department independent from the VPIT – therefore there is very little central alignment between these departments and VPIT.
* This 36 + 4 accounts for ~$1.44 M in direct salaries (@ at avg of $40k/FTE-year) + 2.16 for 144 potential student FTE at $15k/FTE-year

### Existing VPIT Org Structure



**Meeting Notes**

Notes from Strategic Financial and Operational Planning Group 12-17-10

Dr. Riter provided an overview of IT at UTEP. Dr. Riter Noted that:

* + UTEP is moving to outsourcing IT support functionality (nuts and bolts) over the next 5 years
    - PeopleSoft was given as an example of a large system migration, that supports HR and Business Services, entered into with a group of UT Schools
      * System will be supported at Arlington
      * UT System is investing 23 million dollars into this effort
  + Dr. Riter projects that about 90 percent of all UTEP’s backend systems will be outsourced over the next 5 years
    - Definite cost savings to UTEP
  + Dr. Riter noted the need for better and more system integration—systems that communicate better with each other
    - More demands on CIERP by the state other external reporting agencies for reporting out to institutional data
    - Dr. Riter noted how system security demands have increased over the last 10 years
  + Dr. Riter noted four key support areas for IT on any campus:
    - Academic Instructional Support
    - Business Services Support: centralized and exported
    - Academic Research Support
    - Teaching and Learning Support: look at TIMS support on campus and how does that work or not work for UTEP
  + Dr. Riter noted that looking at student labs should be done
    - Does UTEP need as many as it has?
    - Increased computers in the Library, but now have a strain cooling system trying to keep Library comfortable in warm months
    - Dr. Riter noted that “space” becomes an issues as UTEP grows
      * Does UTEP have space that can be repurposed for larger more centralized computer labs?
      * Can we move more students to go wireless with their IT needs?
        + If so, may run into IP issues
        + Other issues with Intellectual Property may arise—need to ask Lee Ann Koehler about these type of issues
  + Dr. Riter noted the need to look beyond marginal improvements
    - Rethink business models
    - Go beyond current state of IT to plan for the future

Dr. Morrobel-Sosa noted that there are resources out there on this

* A book Dr. Morrobel-Sosa noted was “Prioritizing Academic Programs and Services” by S. O. Ikenberry as a recourse
* Dr. Morrobel-Sosa noted we need to create IT functions that serve needs (student, faculty, staff) not being served currently
  + - Dr. Morrobel-Sosa noted what the College of Engineering is doing by virtualizing desktops for their students to access wirelessly
    - Need to also ensure via student labs, that students without laptops can access these type of services

Dr. Gates noted as a group it would be good to try to get a handle on how organizationally information is exchanged on UTEP’s campus

* Dr. Gates noted this would be important to know as UTEP plans for continued growth over the next 10 plus years
* Dr. Gates noted we need to audit this to look at all the buckets of information on UTEP’s campus

Dr. Zarate noted that this study group would need to gather information from IT now to get a handle on it to be able to make any systematic recommendations

* Dr. Zarate asked about seeing what other Tier 1 schools looked like with their IT setup
  + - Are there models out there the group should be looking at
* Dr. Zarate noted some schools have created sticky spaces for students to gather and collaborate wirelessly
* Dr. Riter noted that a requirement for students to own a laptop would be something covered by Financial Aid
  + - Craig concurred that Financial Aid would cover this student expense if it was a university requirement

Dr. Meeuwsen noted that this group needs information on what UTEP has available and that this group may need to break down in some smaller groups to analyze UTEP’s current state of IT

Craig brought up that one item on the groups charge was to bring in a consultant, if need be.

* Discussion was had on whether such would be a good use of resources
* Several noted that it would be good to bring in a consultant, perhaps, midway through the study to help assess what the group has discovered and present these findings to an out-side consultant for additional ideas on how to leverage UTEP’s IT resources
* It was also noted that a consultant may be needed as the group would not know how to advise on making systematic internal hardware/software structural changes that would allow UTEP to realize large cost savings over the next 10 to 20 years.

It was decided that several items would be needed from IT for the next meeting. These items would need to be presented to the group for it to be able to begin formulating questions/ideas/recommendations. (It was noted that some of the items IT would not have readily at hand, and may need to group to help collect).

* Some items noted that the group needs to know about from IT were
  + - Student Computer Labs inventory
      * Number of labs
      * Cost to run each lab
      * Number of open computer labs
      * Student use of computer labs
    - Software Inventory
      * Inventory of the type of software being used on campus
      * Number of licenses
      * Does UTEP have redundant systems?
        + Example: Graduate School uses Embark to manage its recruitment and

Undergraduate Admissions and Recruitment uses Hobsons to manage its recruitment

* + - * Can UTEP realize any economies of scale and save dollars?
    - Hardware Inventory
      * Number of servers on campus?
      * Number of servers not being supported centrally by IT?
      * Can servers be moved to a central server farm and virtualized?
      * How much money (support, hardware cost, etc.,) would that save UTEP?
    - IT Budgets and Technology Fees Inventory
      * What is IT’s budget and its current organizational structure?
      * How much does UTEP have in Technology Fee generation?
        + How is the Technology Fee dollars allocated and why?
    - IT support being done on campus outside of the central IT structure
      * What IT systems are being supported?
      * What resources are being allocated to support these?

**Our next meeting is scheduled for January 14, in the Provost Conference Room, from 10:30 am to 12:00 pm.**

**Notes from Strategic Financial and Operational Planning Group 1-14-11**

Dr. Riter provided an overview of IT budgets at UTEP. Dr. Riter Noted that:

* There are three categories of funding: E&G, Tech Fee, and Distance Learning Fee
* Dr. Riter noted there is not a charge back on computer support like phone support at UTEP
* Dr. Riter noted there is a Program Management group that provides program management services for large scale hardware and software projects such as the PeopleSoft migration
* Dr. Riter noted there is we provide outreach and training for faculty, staff and students.
* Dr. Riter noted that UGLC employs a large staff to operate the facility.
* Jorge Villalobos noted that there is a good possibility that other areas have staff hired to support their own internal computer support needs, and that that should be assessed.
* Dr. Riter noted that the Helpdesk was part of his operation.
  + Frank Poblano noted that the Helpdesk averages 3,500 calls per month
  + Frank noted that links have been created to help end-users “fix” computers (MAC and PC) on the spot
* Dr. Riter suggested that we look at how we use Tech Fee money.
  + Could Tech Fee dollars be used to cover E&G cost with those dollars redirected to create more “sticky spots” and computer classrooms.
  + Dr. Morrobel-Sosa asked how the Tech Fee distribution is arrived at for Colleges
  + Dr. Riter noted it is based on historical events which made sense at the time but should be reexamined.
    - Dr. Riter noted that the College of Engineering once had a course related Tech Fee but it was stopped and given dollars from the general Tech Fee to cover their old college tech fee.
    - Dr. Riter also noted that colleges could charge a tech fee by course too.
    - Dr. Riter noted that the CoLA allocation was/is used to support their computer lab.
      * The idea was to create a computer lab in CoLA to service the entire campus.
      * CoLA computer lab is also used to run credit bearing classes.
        + Dr. Riter noted that perhaps CoLA computer dollars would be better served by upgrading general purpose classrooms with needed technology in CoLA.
        + Dr. Riter noted that classrooms with advanced technology in UGLC are “maxed out” in terms of their scheduled availability.
    - Dr. Riter noted that College of Education’s Tech Fee allocation was based on the money the State use to give to all education entities in the state.
  + Dr. Morrobel-Sosa noted that Tech Fee would be one area to explore for savings
    - Dr. Morrobel-Sosa noted that UTEP needs to assess need and demand to see if Tech Fee distribution/allocations are still required at the levels shown.
    - Dr. Morrobel-Sosa asked if Tech Fee dollars used to support staff.
    - Dr. Riter noted that they were used to support areas with staff that had an historical need.
    - It was noted that perhaps Tech Fees should be used to support areas that had open labs for all students (Library, CLC, CoB, CoLA, etc)?
* Dr. Riter noted that over the next few years UTEP will be moving to a 10 Gig backbone
* Dr. Riter savings from “low-hanging” fruit included:
  + Virtualization of Servers—UTEP is doing better, but could do more.
  + Consolidation of public labs—separating closed and open labs
  + Research—virtualization of labs and related computers is an opportunity for potential savings.
    - This has happened by virtue of growing our grant research base at UTEP.
    - Dr. Riter noted that MD Anderson is very decentralized as a model—is this right for UTEP!?

Dr. Morrobel-Sosa noted that there are resources out there on this

* Dr. Morrobel-Sosa noted issues with Blackboard this past fall 2010 semester
  + Faculty were frustrated
  + Dr. Riter noted UTEP got stuck with the discontinuation of the Telecampus
    - UTEP looking to work with Arlington and other UT System schools on a future “Shared Service” approach to on-line support
    - Dr. Riter noted that in the future things like Blackboard would be run on with “Cloud” computing (i.e. like what the Dean of Engineering is proposing moving too his college too.)
  + Dr. Morrobel-Sosa noted that UTEP needs to come up with a collective strategy to position itself technology-wise for the next 10 years for Tier One status.
  + Dr. Zarate agreed with Dr. Morrobel-Sosa and noted we need to get a handle on where UETP is and where it wants to go.

Jorge Villalobos noted that we need to think strategically where we put computer labs.

* Jorge noted that the computer lab in the Library is popular, but puts a large strain on cooling systems
* Jorge noted that backup power does not exist for a data center facility such as the one in the Union West.   We currently don’t have backup power there.
* Jorge then asked if we should move to “stick spaces” and require all students to have laptops to take advantage of “Cloud” computing for the future.
  + Dr. Riter noted that that has been brought up before and that Financial Aid would cover such if it was a campus-wide requirement.
  + It was noted that the Tech Fee is $17.25 a semester or roughly $2,070 dollars over a 120 hour degree for a student.
  + Dr. Morrobel-Sosa noted that not all students can afford a laptop and need alternatives.
  + Dr. Riter noted with CoHS and SoN moving into their new building on campus, more labs/computers would be required.
  + Frank Poblano noted that moving to a laptop base structure would require more “sticky spaces” for student with power/wifi/etc.
  + Dr. Morrobel-Sosa noted that the committee and Campus needs a better accountability on how Tech Fee dollars are spent---an ROI.
  + Dr. Morrobel-Sosa noted that Research and Research labs is a “black hole” on UTEP’s campus due to simple growth in research at the institution over the last 10-20 years.
    - UTEP needs to try to get a handle on this.
* Jorge noted the committee needs to get a handle on all “labs” on campus—open and restricted.
* Jorge noted the campus needs to decide how to best manage “labs”—as a whole or by an area (i.e. college)?
* The committee agreed that a “complete picture” is needed.
* Jorge noted that IT (Dr. Riter) needs to have the authority to control UTEP’s IT future.
* Jorge noted that it was in the University’s future best interest, to plan for its computing needs centrally.
  + Dr. Morrobel-Sosa agreed and wondered about information IT had on Research Labs
  + Dr. Riter noted that not much was collected centrally on those.
  + Frank Poblano noted that there are a lot of these labs that they are not aware of centrally.
    - Frank Poblano noted and showed data on computer labs that they know about on campus.

Dr. Gates noted that in the future the FIT lab might be something that could be moved on-line to save dollars

* Dr. Gates wondered if the FIT lab might be something that could be combined with CETAL in the future.
* Frank Poblano noted that the FIT Lab provides a lot of services to Faculty:
  + Imaging, Blackboard support, etc.
* Dr. Riter noted he would get some more information on the FIT Lab for the committee.

Dr. Zarate wondered if the popularity of the Library was linked to the computers/food/parking/printing available there.

* Dr. Zarate asked about printing needs in “sticky spaces”—can we get to “cloud” printing?
  + Frank Poblano noted that there are now 57 wireless printers on campus for this type of printing
* Dr. Zarate noted some schools have created sticky spaces for students to gather and collaborate wirelessly
* Dr. Riter noted that there were 16,000 unique students’ users of the Library computers at some point in the fall 2010 term.

Craig asked what the final report should look like.

* Jorge Villalobos noted we need to determine what the “vision” we are looking for to be a Tier One institution in 10 years.
* Dr. Zarate noted we need to examine where UTEP is currently inefficient; analyze data like lab usage; and move to wireless “sticky spots” for students on laptops, iPads, etc.
* Dr. Riter noted that the UTEP of the future will be a campus where
  + Cloud Computing is utilized across campus
  + Wireless is everywhere
  + Shared licensing of all software across campus through virtualized desktops
  + Numerous charging stations
  + All students with laptops, iPads, Smart Phones, etc.,
    - All campus rooms are energized with charging stations for students
* Dr. Riter noted that budget-wise similar mid Tier One schools have an IT budget double of UTEP’s. Dollars need to be invested for future Tier One needs.
* Dr. Ward noted that we need to get all IT salaries on the table too.
* It was also noted that a consultant may be needed as the group would not know how to advise on making systematic internal hardware/software structural changes that would allow UTEP to realize large cost savings over the next 10 to 20 years.

It was decided that Craig Westman would meet with Frank Poblano to try to develop a tool to capture computer related hardware/software/lab/research/staff levels currently at UTEP to present to the committee at our next meeting.

Dr. Riter would provide some more information on:

* Some more information on the FIT lab
* Any information you could provide on software usage on campus
* And, Cloud computing

Craig Westman would also pull together recommendations from past notes and present them to the committee at the next meeting.

**Our next meeting is scheduled for January 28, in the Library Conference Room 325, from 8:30 a.m. to 10:00 a.m.**

**Notes from Strategic Financial and Operational Planning Group 1-28-11**

Dr. Riter provided an overview of the FIT Lab and CITAL labs at UTEP. Dr. Riter Noted that:

* The duties done in each area from helpdesk for faculty and staff; DNN web design; and employee staffing
  + Dr. Riter noted that perhaps the help desks could be collapsed into on one.
* Dr. Riter discussed Cloud Computing. Dr. Riter Noted that:
  + UTEP has been moving to Cloud Computing
    - PeopleSoft was given as a UT System Cloud Computing example
    - Dr. Riter noted that numerous UT System schools are moving their HR and Finance systems over to a single instance of PeopleSoft.
    - Dr. Riter noted this may be happening everywhere in a few years.
    - PeopleSoft migration is scheduled to be done September 2012.
    - System is spending 10 million over the 5 years to begin centralizing system.
    - Dr. Riter noted that UTEP has moved to more virtual servers—gone from 300 to 400 individual servers to 150 as of now.
      * Library was given an example of an area having multiple servers that have been moved to a virtual environment.
    - Dr. Riter noted that as servers go out of service coverage, and then move those servers to virtualization.
* Dr. Riter discussed consolidation of software:
  + SPSS was used as an example that we could do better with monitoring how many licenses being used at once, and buy accordingly.
  + Dr. Gates noted that it would be good to create the ability to search for software available at UTEP.
    - Research how IT equipment is funded and maintained at UTEP.
    - Create a Transparent System to manage a large Tier 1 institution.
    - ORSP could be the central clearing house for research related purchase…from computers to microscopes.
  + Frank noted that there is a tagging system in place, but noted a “one university solution” would be good.
    - Frank noted that some schools do have a “software coordinator.”
    - Frank noted that Purchasing is now asking what software UTEP has before approving purchases.
  + It was recommended that a consultant be hired to discuss what other Tier 1 universities are moving toward.
    - Frank noted that a Dell rep or Microsoft rep could come and speak with us.
  + Dr. Morrobel-Sosa noted that it would be good to get a consultant to discuss a best practice model for Tier 1. She noted we need to see what else is out there for our own planning for the next 10-20 years.
    - She noted that we need to look beyond our like institutions.
    - Craig noted he is working with Cindy V. on getting this setup.
    - Dr. Riter noted the need to look at IT structure and organization to move forward. He noted that we would find most colleges moving in the direction of UTEP’s IT’s current organizational structure.

Jorge V. noted that he would work on getting a basic white paper together on what the state of our current IT structure is for the committee

* Dr. Riter noted that Carlos/Cindy have done some budget investigation on what UTEP is spending and would send that on to Jorge.
* Dr. Riter noted that Gerry C. from security would be good to include.
* Luis said he would look at UTSA and Arlington as to where they are going being like institutions.

Some recommendations:

* Acquire a consultant that can give the group a picture of what other Tier 1 institutions look like and what the 10-20 year future view will be.
* Get broad view of our current IT structure.
* Explore virtualization of desktops.
* Partner with private sector for high-end computing and tie into Austin’s computing initiatives.

**Our next meeting is scheduled for February 11, in the Library Conference Room 325, from 8:30 a.m. to 10:00 a.m.**

**Notes from Strategic Financial and Operational Planning Group 2-11-11**

**Main focus of meeting centered on ideas/items for an RFQ.**

Jorge V. noted that getting some bench marking metrics for a Tier 1 university would be good:

* CPU’s per person, etc.
* Do an RFQ, if possible, and pick from the top 2 or 3 firms.
* Jorge noted that models exist for virtualization of technology in central server farms where departments “buy” server time in a consolidated format.
* Centralized vs. decentralized governance with technology.
  + Models on how technology finances are managed and policy suggestions occur in a centralized vs. decentralized governance.

Dr. Meeuwsen noted that organizational structures at Tier 1 schools would be helpful for our aspirational future goals.

* Acquiring a consultant/firm with a broad scope/picture of what current Tier 1 schools are doing and will be doing is important for UTEP’s aspirational goals.
* Should not have a consultant/firm with a myopic view of technology from one school, but a broad perspective.
* We need an educated consultant.

Dr. Morrobel-Sosa noted that a consultant/firm with a good strategic plan for research would be needed.

* There are several schools that the committee itself could look at too that are very complex Tier 1 schools like University of Arizona, Arizona State University, etc.
* Are there duplicate/redundant technologies on campus not getting full use?
* Dr. Morrobel-Sosa noted that two other committees are looking at how start-up cost for faculty is managed. Are there models for this that UTEP could adopt to centralize this activity?

Dr. Gates noted that organizational models would be helpful to have from a consultant.

* Models on how cost and space and sharing of technology can be done more efficiently.
* Models of how governance works is important for UTEP’s Tier 1 planning.
* Models on how inventory systems of technology can be adapted for a University-wide transparency would be helpful.
* Models on how a Tier 1 university assess how/if there is a critical mass of research need for a certain kind of technology on campus to make a single investment in technology to satisfy multiple needs.
* That is, models on managing shared resources and protecting (security-wise) the research happening on a shared virtual server setup.
* Models on how start-up cost for faculty are managed centrally to avoid redundancy of technology purchases.

It was suggested that the committee could divide-up and contact Tier 1 institutions with a series of standard questions for an environmental scan.

* Do they have policy and organizational structures they would be willing to share?
* Have they had a recent consultant visit?
* Do they have a 5 to ten year plan(s) for technology?
* Do they have financial models that they would be willing to share?
* Are they mainly centralized, decentralized, or outsourced with technology or a combination of all three?

Jorge V. suggested that perhaps we could do a round table with three of the schools contacted for a couple of hours, giving them a transcript of the discussion to the participants.

Dr. Morrobel-Sosa noted that the above questions could be vetted first to a Tier 1 CFO.

* Dr. Morrobel-Sosa noted that someone from the UT System office could help with a round-table discussion and on consulting firms to contact for our needs.

Luis H. sent on to Craig a contact at the UT System.

Craig noted he would follow-up with VPBA on acquiring a consultant for the group.

**Our next meeting is scheduled for February 25, in the Library Conference Room 325, from 8:30 a.m. to 10:00 a.m.**

**Notes from Strategic Financial and Operational Planning Group 2-25-11**

Discussion was had on beginning to review and create recommendations for the President.

Several opportunities were discussed at length for the recommendations document:

* IT Governance
* Organized budget, financial, and future committee structures
* Recommending a structured committee governance
* Consultation on Governance
* Working with a lean organization for efficiencies
* Centralized verse Decentralized IT structures

It was recommended a draft copy of recommendations be created and distributed for next meeting discussions.

**Notes from Strategic Financial and Operational Planning Group 3-11-11**

Jorge V. shared his *IT Existing Condition* document with the group. The group went over the document for the entire meeting recommending changes additions. The document was used to discuss recommendations to put forward to the President.

It was recommended that in light of the *IT Existing Condition* that some changes be made to the recommendations. The group decided to review the recommendations document on 3-25-11.

**Notes from Strategic Financial and Operational Planning Group 3-25-11**

Group discussed what goals/scope would be desired for a consultant. These were included in the 4-11-11 draft of the recommendations. The group concluded that a consultant would be helpful to provide models on overarching items as governance of IT, outsourcing verses in house, IT budgeting, etc.

**Notes from Strategic Financial and Operational Planning Group 4-8-11**

Group discussed what would be the final 3 to 4 recommendations. It was agreed that the final recommendations would be:

1. Create a Strategic Council to improve governance and communication across campus—council should have budget authority;
2. Look at Research Computing as a computing/IT need for Tier One requiring its own support and governance structure;
3. Consolidate computer labs across campus to meet the needs for students and faculty;
4. Create stronger IT coordination across campus in terms of technology solutions, licensing, staffing, etc.