RESEARCH ENHANCEMENT AT UTSA

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Research Enhancement at UTSA

Research is a critical part of any modern university. This report addresses several aspects of UTSA's research mission in an attempt to

- clarify the proper role of research activities within the greater university mission,
- identify the basic infrastructure needs of researchers,
- outline the operational challenges cited most often by researchers, and
- develop an action plan for enhancing our research support infrastructure.

This document has been prepared by Provost John Frederick following extensive consultation over the past two months with members of the research administration staff, deans, associate deans, center and institute directors, and faculty researchers. The intent is both to frame the role of research administration and to ensure that it is properly structured and staffed to meet the needs of an emerging research university.

I. The Role of Research in Universities

All universities have, as their primary mission, the education of students. However, that mission is most effectively accomplished when universities create a dedicated community of learners at all levels. The premise here is that, when students are taught by active learners, they are exposed to a richer tapestry of knowledge, to the latest developments and discoveries in each academic discipline, to the methods employed in active scholarship, and to the enrichment that a habit of lifelong learning endows.

Ideally, a university is a continuum of learners. Undergraduate students learn the current state of knowledge from faculty and from graduate students and peers through the courses they take. Graduate students learn the "cutting-edge" of knowledge from faculty-led courses and from research monographs and journals. Eventually, graduate students learn new knowledge through their own scholarly activities and intellectual discovery, and doctoral students ultimately learn to become independent investigators and publish the results of their investigations in a dissertation. Faculty members themselves remain active learners through their preparation of courses, through their interactions with peers both at UTSA and at other institutions, and through their own independent scholarly activities. The common thread is that all remain dedicated to continual learning and intellectual growth.

It is the obligation of universities to sustain an environment that supports learners at all levels, whether they are undergraduate students, graduate students, postdoctoral associates, or faculty. Cast in this light, research is one key aspect of learning, namely discovery, and for this reason cannot be separated from the fabric of the university's mission. Instruction is how we teach what is known; research is how we learn what is not known; and public service and outreach is how we disseminate what we know and what we learn for the benefit of our community and of society. With this latter provision, the extension of the university contributes to learning throughout the community.

II. The Infrastructure Needs of Researchers

Throughout this report, the term "researchers" is used to represent all members of the university community engaged in scholarly and creative activity: undergraduates, graduate students, and faculty in all disciplines. Several common elements are required by researchers: time to carry out independent investigations, readily-available access to information sources, physical space in which to work, necessary materials and equipment for performing the work, and administrative infrastructure to support externally funded projects. Depending upon the academic discipline, the manifestation of these needs can vary significantly, and with a wide range of disciplines, it can be challenging to provide appropriate and adequate support for research activities.

A. Time

Faculty researchers often feel the greatest constraints are associated with the time afforded for research activities. In part, this is due to the internal drive to learn and the intellectual satisfaction that discovery and creative activities provides. However, noting that the primary mission of the university is to cultivate and develop student learners, this creates a dynamic tension that requires finding a balance between assisting the learning of students (*i.e.* instruction) and facilitating the learning of faculty (*i.e.* research). Both are essential for a healthy university, but they must be balanced— just as one must have a balanced nutritious diet to ensure one's physical health. Without instruction, the university would be equivalent to a research institute; without research, it would be no more than an extension of secondary school.

The finite availability of time is the main factor that fuels this dynamic tension— with abundant time for all activities, no prioritization of purpose would be needed. To promote an appropriate balance of faculty activity, most universities, including this one, have adopted mechanisms for setting expectations. These include faculty instructional workload guidelines and expected effort distributions (also known as "role statements" in some institutions), as well as policies governing course buy-outs that facilitate the ability of faculty to shift the balance toward self-learning activities (research) and away from student-learning activities (instruction).

UTSA has worked hard in recent years to develop appropriate policies and guidelines for faculty workload expectations. In most colleges and departments, these policies are well-understood and are functioning as designed. However, there remain some areas in which these expectations are not universally understood, and it is important to communicate not only the policy, but also the underlying philosophy, especially as it relates to the university's primary mission.

Student researchers face a different challenge concerning the availability of time. For undergraduates engaged in research, the research activity may or may not count as credit toward graduation requirements; if not, then it is an unacknowledged (or at least uncertified) part of the learning that they do as students. In effect, they must balance the time spent learning through formal courses and learning through discovery-based or through service-based activities. This is somewhat addressed through independent studies courses, and is available to graduate students in that they are able to register for thesis or dissertation credits. However, these options are sometimes inadequate to truly capture the effort involved in student-based research.

Recommendation— Faculty effort distributions (role statements) detailing the percent effort devoted to instructional, scholarly and creative, and service-related activities should be established on an annual basis as an agreement between faculty members and department chairs, with the dean's oversight and approval. These agreements should form the basis of annual faculty evaluation.

Recommendation — College course buy-out policies should be clearly communicated via the college web site, and should clarify the minimum expectations for instructional effort and the impact of buy-outs on the effort distribution.

Recommendation — The university should examine the range of research activities undertaken by undergraduates and establish a system for crediting them for this and other types of signature-experience learning activities. Undergraduate research activities should be promoted through the creation of an Office of Undergraduate Research.

B. Access to Information

All scholarly and creative activities are fundamentally based upon the discoveries and creations of prior workers. To support a community of researcher-learners, the university must be prepared to provide adequate access to information and information resources.

The most common route to information resources in the 21st century is the internet, and an essential tool for any learner is access to the internet. While the university has taken seriously the need to provide faculty, students, and staff with appropriate access to the internet, many challenges remain including, but not limited to, the capacity of the on-campus network (its data bandwidth), the availability of proprietary software platforms and data resources, the availability of data visualization and manipulation facilities, and the security of the campus network from external cyber attacks. Our goal is seamless access to information resources through the campus network and sufficient computing facilities to process and analyze the information retrieved.

It is important to note that many of these uses of the internet are merely modern manifestations of the traditional mission of the university library. Library collections remain a critical element in support of researchers, and library staffing is evolving to meet the new demands of mining the internet for useful and reliable information. Despite the growing use of the internet, archival access to special collections remains, for the present, entirely in the domain of the university library, and it is important to ensure that UTSA's library continues to acquire special collections in support of its researchers.

For archives not held locally and not digitized for inspection on the internet, researchers must have the opportunity to travel to access special collections in remote locations. Insofar as scholarly conferences are another means of accessing critical information needed by researchers, resources for travel to meetings, workshops, symposia, and other gatherings of scholars. When practical and appropriate, videoconferencing is another means for accomplishing information exchange among our researchers.

Recommendation — The university should identify, strategize, and prioritize the information needs of researchers and integrate IT support between the Office of Information Technology (OIT) and the university's research administration and infrastructure support.

Recommendation — The special collections at University Library should be enhanced, with input concerning content from faculty, departments, and colleges. Similarly, the university should develop a philosophy and policy for supporting faculty travel to perform archival work at remote locations.

Recommendation — The university should clarify the responsibilities of researchers and engage them in maintaining the security of information resources, mindful of the obligations imposed by UT System on IT security.

C. Research Space

All researchers need suitable space to carry out their scholarly activities, whether it be office space, library space, laboratory space, or off-campus locations for field studies. A university priority has been to add space and allocate existing space in ways that have the broadest positive impact on academic units. Nevertheless, the Texas Higher Education Coordinating Board data indicates that UTSA has an overall space deficit of about one million gross square feet (GSF), and this deficit will only increase as our student enrollment and research activities continue to grow.

While it is tempting to consider all academic space as "learning space", and therefore potentially contributing to the university's research activities, there is a more practical consideration that must be taken into account. The university's support of sponsored research activities through the infrastructure it provides, including space, is measured (somewhat imperfectly) through the negotiated Facilities and Administrative (F&A) rate. This rate depends in part on the amount of space dedicated to research activities by the university. As a result, we must continue to differentiate space allocated for research purposes from that allocated for formal instruction.

Given our general space limitations and our ambitions concerning research productivity, the university will need to adopt thoughtful and creative ways of utilizing the space available for research in ways that optimize its usage. This may include, for example, expanding the use of core facilities utilized by several faculty (*e.g.* the Research Data Center), developing common dedicated areas for research activities in central facilities like the library, and adopting flexible assignments of research areas for the use of faculty through an effective space allocation policy.

Recommendation — The provost office should develop a tiered research space allocation policy with university allocating to colleges, colleges allocating to departments, and departments allocating internally.

Recommendation — Each college should design policies and processes for flexible ongoing use of available research space. This will necessitate improved communication of appropriate safety and security practices for research facilities.

D. Materials and Equipment

Each academic discipline has its own specific needs for materials and equipment, ranging from desktop computers to building materials to sophisticated scientific instruments. Depending upon the discipline, it may or may not be possible to acquire materials and equipment through external grants. As a general strategy, the university should encourage colleges, departments, and faculty to identify outside sources as much as possible to defray the cost of high-priced equipment and expensive materials.

As an example, major shared research instrumentation should generally be acquired as part of an institutional grant proposal. When required by the sponsoring agency, the university will always endeavor to provide cost-sharing in support of a proposal, subject to the availability of resources. A prioritizing mechanism is needed, however, when the number of proposals requiring cost-sharing exceeds the university's capacity to meet those matching fund obligations. There continues to be some uncertainty and confusion concerning the university's capacity and policy for providing cost-sharing in general for sponsored projects, and this needs to be addressed through transparency and continual communication within the university.

In the case of minor equipment acquisition, institutional funds are often used to purchase and maintain the equipment, whether it be a Steinway piano for the Music department, or a Laser Cutter for Architecture. In recent years, Academic Affairs has been able to allocate end-of-year funds to address some of these needs, although changes in the way the budget is managed will reduce the source of those funds. Regardless of the original source of funding, all equipment purchased through the university is owned by the institution for the benefit of its faculty and students (including personal computers). This point forms the basis for the university's policies concerning the care, distribution, usage, and maintenance of all equipment.

> *<u>Recommendation</u> — The Office of Research should, with faculty consultation, develop a process for prioritizing commitments for cost-sharing major instrumentation acquisition through grants and enhance the transparency of the process for cost-sharing in general.*
>
> *<u>Recommendation</u> — Minor equipment funding priorities, including life-cycle replacement of personal computers, need to be established by the university. Operating budgets should be examined for adequacy to meet appropriate research expenditure needs for expendable materials and supplies in disciplines whose research is normally unfunded.*

E. Externally Funded Research

Up to this point, this report has focused generally on research infrastructure needs applicable to all disciplines in one form or another. In a growing number of disciplines, though not all, it is becoming necessary to solicit external funding support for research activities. A critical aspect to the success of the research enterprise at UTSA is the administrative infrastructure in support of sponsored programs. This is also the area cited most commonly by faculty researchers as an area of continuing concern, as well as of paramount importance.

Although faculty principal investigators (PIs) take the lead in preparing grant proposal submissions, it is important to note that grants are not awarded to PIs, but to the university. The university then relies on PIs to manage the projects— this arrangement is not unique to UTSA, but common to all research universities. Grants are a contractual agreement between a sponsor (typically a funding agency) and the university to carry out specific work to address a particular research question or set of questions. As a result, the sponsor holds the university, not the PI, responsible for expending grant funds in accordance with the sponsor's rules and constraints.

External support is essential to carrying out research projects in certain disciplines. However, it is important to keep in mind that the university supports funded research ***not*** for the additional revenue that it provides, but because it enables faculty and student learning in those disciplines that cannot otherwise carry out research without grants. Indeed, the infrastructure costs associated with sponsored projects far exceed the F&A cost recovery that accrues from such projects at virtually every university.

The ability to write successful grant proposals is often a proxy for other metrics useful in assessing the quality of a faculty member's research program. Tenure-track faculty in funded-research disciplines (*e.g*. the sciences and engineering) usually need to demonstrate that they are capable of winning grants as a means of sustaining their research programs. Success in obtaining funding is a sign that the faculty member has good ideas, asks the right research questions, and is well regarded by his/her peers in the discipline.

Grants can provide support for equipment, supplies, travel, student support, and faculty support. Since faculty are not on contract over the summer, grants are a preferred way for them to supplement their nine-month contracts during this time. For all tenured and tenure-track faculty, the university allocates a portion of their time toward research activities during the nine-month contract period, typically 40% for the average faculty member. It is permissible, when agencies allow, to buy-out a portion of the nine-month contract in support of research activities. However, using buy-outs only to replace instructional effort with research effort is problematic from the standpoint of the university's mission and from the standpoint of how research activities enhance our students' learning.

Since much of the feedback from faculty concerning the administration of research focuses on the oversight and support of funded programs, suggestions and recommendations in this area are deferred to section IV in which research administration is treated directly.

III. Operational Areas of Concern to Researchers

As background for this report, feedback was solicited from a wide range of constituents, including both members of the Vice-President for Research (VPR) staff, and researchers and administrators from across the university. From February 13 to March 9, 2012, a total of 27 meetings lasting over 35 hours were conducted to learn more about the various functions of the VPR division and to receive feedback about the performance of the division, and suggestions from all participants of ways that we could enhance the research activities at UTSA. Since then, a number of follow-up meetings with VPR staff have been devoted to exploring optimal solutions and responses to the issues raised in those 27 meetings. Finally, a few participants, as well as other researchers from around the university, have supplemented these sessions with email messages containing further suggestions.

Several common themes emerged from these meetings. First and foremost, it is abundantly evident that all concerned are dedicated to the expansion and enhancement of research activities at UTSA and to the eventual goal of attaining premier research university status. Likewise, both VPR staff and university researchers want to promote research activities that are successful, productive, and compliant with applicable rules and regulations. However, both of these groups cite structural, procedural, and cultural challenges that impede the effectiveness of our research programs.

The comments at the 27 meetings were all offered, and accepted, in a spirit of constructive feedback with the intent to improve how the university functions. Most of what is reported here arose from the meetings with various researcher or administrator groups— many of the solutions cited in the next section originated in the sessions with VPR staff or in follow-up communications. The feedback is organized by area in the following subsections.

A. Sponsored Projects

The effort expended by both researchers and staff to prepare and submit proposals, and then process, manage, and complete awarded grants is in all cases a testament to the hard work and perseverance of all involved. This has resulted in tremendous growth in external funding and research expenditures that have roughly doubled in the past five years.

However, one cannot help but emerge from these sessions with the definite sense that we (UTSA) make it far too difficult for both researchers and support staff to engage in and manage sponsored projects. While some of the information relayed by participants conveyed a misunderstanding of actual practices, the general perceptions shared by most researchers are consistent and are illustrated by multiple experiences. These perceptions must be addressed decisively if we are to make progress in this area.

Researchers' perceptions of proposal submission, processing, and post-award handling include:

- the creation of departmental research administrators (DRA's) has been very helpful, in general, as it allows researchers to work with someone directly; however, the quality of DRA's is somewhat variable;

- proposals often get held up due to communication gaps between DRA's and VPR pre-award staff— the extra layer of review often appears redundant to researchers;
- proposals frequently get held up over compliance considerations that are seemingly premature given that the grants have not yet been awarded;
- the purpose of the 5-day/2-day proposal submission policy is not well understood and researchers believe that proposals are not submitted until the last minute anyway and would prefer to have the extra time to work on them;
- the process followed for internal review of limited submission proposals (*i.e*. programs that allow a limited number of proposals from each institution) should be more transparent;
- there appears to be a disconnect between pre- and post-award functions, especially in the establishment of project budgets;
- the creation of grant account numbers (handled by Business Affairs) takes much longer than researchers feel it should, including continuing grants in the second or third year;
- compliance checking of grant expenditures is perceived both to be excessive and, on occasion, to invoke local restrictions on funds that exceed agency guidelines— this makes executing grants much more work than should be necessary;
- the difference between post-award staff (VPR) and grants accounting staff (Business Affairs) is generally misunderstood; and
- researchers' communications with post-award staff and grants accounting staff are often unanswered, even after multiple attempts to get a response.

In addition to these more operational observations, researchers were consistent in their feeling that the culture of the university conveyed indifference to the success of proposals, and that an inordinate effort was required simply to carry out a sponsored research program. In many of the meetings, they expressed the feeling that the university is more interested in adhering to rules and regulations than it is in facilitating the preparation of successful grant proposals.

B. Compliance

Researchers generally expressed a desire to comply with applicable federal, state, and System rules concerning the ethical conduct of research. However, they also expressed some frustration with the enthusiasm displayed by the university to demonstrate and enforce compliance in sponsored projects and other areas of review. Interestingly, some of their comments were repeated by multiple researchers in different sessions, including: the university is "smothering our research effort," researchers are treated as "guilty before proven innocent," and UTSA's approach to compliance goes "above and beyond the regulations— compliance plus 20%."

Specific operational perceptions about compliance mostly focus upon the compliance exercised in the control of funded projects, and in the review of protocols for projects involving human subjects by the Institutional Review Board (IRB). The former category has been noted above; the latter was characterized by the following perceptions:

- review of simple protocols appears to take longer than it should;
- the IRB does not exempt protocols that are exempted by many other universities— for example, secondary data analysis;
- the IRB uses a subject consent form that is much longer than that used by other institutions (UTSA's consent form is two pages long);
- feedback from the IRB often includes commentary and required changes in the research design, appearing to overstep the bounds of the IRB's fundamental mission to protect human subjects; and
- it is becoming extremely difficult to promote student researcher projects involving human subjects because of the slowness and intrusiveness of the review.

It should be noted that some of these perceptions were shared by faculty members who have recently come to UTSA from Tier-One public universities where they have had markedly different past experiences with an IRB.

C. Communication

The effectiveness of communication and availability of information from the VPR office was mentioned in several contexts. Researchers were appreciative of the relatively recent database that catalogs various research interests across campus, and would like to see this feature updated more frequently, if possible. Likewise, the VPR web site was lauded for the thoroughness of the information available; however, many found it difficult to navigate, and wanted "quick links" to particularly useful pages, including the CAYUSE page for proposal submission.

In several of the meetings, researchers discussed the effectiveness of email communications emanating from the VPR office for new grant and/or partnership opportunities, making the observation that such messages are often not targeted properly to a focused audience and, therefore, go largely unread. Several suggestions for improving this system were offered, but none that appeared to gain widespread consensus among a majority of researchers.

There were also concerns raised about more operational communications from the VPR office. These concerns ranged from the desire of department chairs to be notified of submitted proposals, even when they are not in the approval chain, to the format of grant budget reports (considered by many faculty to be informative only for accountants!), to the tone of some business-related communications that are perceived to be overly harsh and unfriendly.

Perhaps more seriously, researchers often felt uninformed about the purpose for various new research-related policies, the use of F&A funds by the VPR office, and a clear notion of the organizational structure of the VPR office and the job responsibilities of various staff, including high-level staff. These perceptions suggest that the forms of communication employed by the VPR office for these purposes have not been as effective as they might be.

D. Research Committees

The VPR office currently convenes several research-related committees, including the Associate Deans of Research from each college, the University Research Center and Institute (URCI) directors, and the Research Advisory Council (RAC), appointed by the president. Each of these committees meets at least twice per semester, and sometimes more often, and each committee was solicited for feedback as part of this review. A common observation by all groups is that the meetings involve mostly the delivery of information from the VPR office, who generally sets the agenda, though members are also asked to submit prospective agenda items.

There is also a Research Advisory Committee appointed by the Faculty Senate which does not meet regularly with the VPR, but whose feedback was solicited as part of this review. Both advisory committees suggested that only one RAC is necessary, and proposed that its charge and purpose be clarified and that the committee be self-governing. The presidentially-appointed RAC also noted that the committee's function(s) should be dictated by the nature of the advice sought by UTSA administration and should be tailored to the recipient of that advice (generally, the VPR, the provost, or the president). Members of the two RAC's felt that the advisory role of the committee should be paramount and that it not be utilized as a conduit for information flow to researchers.

The presidentially-appointed RAC noted that one of the successes of their committee was the subcommittees that have been set up to address particular issues of concern to researchers. They indicated that the VPR has played a pivotal role in helping to facilitate necessary discussions and change for those task forces, and they would like to see the subcommittees continue, even if the role and/or composition of the RAC should ultimately be changed. In addition, they advocated for the assignment of facilitating staff that would help implement recommendations coming from the committee and its task forces.

E. Research Development

Researchers expressed mixed reactions to the research development efforts of the VPR office. Some noted appreciation for some of the collaborations and partnerships initiated by VPR staff, while others felt that research development could be improved by including faculty and academic administrators more centrally in the identification and facilitation of fruitful new research areas. A common theme among several groups was the desire to have more contact between faculty researchers and funding agency program officers as a means of learning the priorities of those agencies.

Academic administrators, particularly deans, expressed a strong preference to play a more determinative role in seeking interdisciplinary funding opportunities and external partnerships. They have concerns that new programmatic opportunities are often pursued in the absence of individuals who have the relevant research and/or technical expertise to judge whether a given opportunity will be desirable for UTSA.

F. Seed Grant Program

A portion of the research development area under the VPR of especial interest to researchers is the use of internal seed grants to promote research areas. In general, researchers regard the internal grant program favorably and feel that it is important element for supporting faculty research efforts. However, they also have numerous suggestions for its improvement, including:

- internal grants should be divided between larger grants for STEM (science-technology-engineering-mathematics) areas, and smaller grants for other disciplines [*Note: this has actually been implemented, though apparently participants in these sessions were unaware of this fact*];
- proposals should have different sets of internal reviewers with expertise correlated with the discipline of the proposals (*i.e*. STEM *vs*. non-STEM, for example);
- more total funding should be allocated toward these programs; and
- young faculty grants should be the highest priority to help tenure-track faculty get their research programs started.

G. Contracts and Industrial Agreements

There is a growing volume of activity at UTSA in developing research-related contracts and industrial agreements. Researchers and VPR staff alike raised a number of concerns about the university's process and timeliness for negotiating these agreements, including:

- the process for developing contracts appears to be very convoluted and is not well understood— there is insufficient transparency in the process, and the roles of different staff need to be more clearly delineated;
- contracts generally take far too long to negotiate and there is concern that our external partners will grow impatient with UTSA;
- legal concerns and risk management issues often trump the purpose of collaboration and no one appears to factor in the lost opportunity costs when making decisions about contract stipulations; and
- there sometimes appears to be a communication gap or a "disconnect" between different offices at UTSA which leads to additional delays in negotiations.

The general sentiment among both researchers and VPR staff is that the process for developing contracts and external agreements may undermine UTSA's ability to collaborate effectively with higher education institutions, private industry, and other external partners on matters of strategic importance.

H. Technology Transfer

A related area of concern for some researchers is the development of intellectual property (IP) originating at UTSA, and particularly our relationship with South Texas Technology Management (STTM). Although this is a nascent area of activity for the university, we have had impressive growth in the number of invention disclosures the last few years and it is becoming

increasingly important for researchers to see their ideas translate into appropriate commercialization outcomes.

The primary concern voiced by both researchers and VPR staff is whether STTM is approaching the process of provisional patents, marketing ideas to relevant industries, developing license agreements, and commercializing IP in a way that is most conducive to success. Some researchers suggest that the strategy taken by STTM disadvantages university inventors in that it does not protect IP early enough, and its approach is not consistent with the way many early venture companies develop licensing agreements. The management of STTM counters that it is a more a matter of defining the degree of risk with new inventions and the extent to which the university is willing to invest in those that may not provide any return on investment.

As a final note on this topic, the VPR office has been utilizing the Director of the Center for Innovation and Technology Entrepreneurship (CITE) to assist with the university's development of commercialization and innovation efforts and manage UTSA's new-venture incubator program. CITE itself promotes student entrepreneurship programs through the Colleges of Engineering and Business. Given the success of the director's expanded activities, researchers and staff suggest that it may be desirable for the university to focus on developing more of its IP "in-house," and use STTM only for the more complicated invention commercialization processes.

I. Support for Self-funded Research Disciplines

The VPR office ideally supports all research activities, whether the research involves externally sponsored projects or not. Researchers from all disciplines were included in the feedback sessions, and there were a number of helpful suggestions concerning ways that the university can support those research activities in "self-funded" disciplines. These suggestions include providing:

- adequate support for travel, not only for conferences, but also for archival research, or other place-based research activities undertaken during the summer;
- assistance for faculty preparing fellowship applications and other types of externally funded research activities;
- additional graduate assistantships, especially for students in terminal degree programs;
- expanded support for library acquisitions, subscriptions, online data sets, and special collections, as well as support staff;
- travel support for graduate students;
- department- or college-based seminar series;
- mentoring programs for young faculty; and
- small seed grant programs specifically for research in humanities, arts, business, education, and social sciences.

In addition, there is support from both academic administrators and VPR staff for establishing an Undergraduate Research Office that would promote research activities among undergraduate students and facilitate institutional programs for this purpose.

J. Culture

A significant issue raised by almost every group is the need for UTSA to establish a service-oriented culture within the university's bureaucracy, one that facilitates success. It is important to note that this observation is not limited to the VPR division, but is a more general characteristic of all service offices at the university. In many instances, researchers associated the perceived lack of service-orientation to an institutional preoccupation with risk avoidance. This has led to the general perception that the university is so concerned about reducing risk to zero, that it fails to seize the many opportunities it has available. The danger is that this could result in lost partnerships through slow contract processes, lost grants through excessive compliance controls, and lost researchers through inability to facilitate scholarly activities as well as our competitor universities.

IV. Action Plan for Enhancing Research at UTSA

The university's goal to become a premier research university rests upon its ability to promote scholarly and creative activities in all disciplines, facilitate the execution of externally-sponsored research projects, and integrate research activities into the broad spectrum of learning that forms the basis for the university's mission. Much of the basic infrastructure to accomplish these aims is in place, and the task now is to ensure that the infrastructure works properly to support the efforts of our faculty and students.

Using the feedback received from researchers and from VPR staff, this action plan suggests several adjustments to improve the operational effectiveness of the VPR division. These recommendations are grouped into three primary areas: *(i)* structural changes to better align existing services, *(ii)* procedural changes to improve and streamline critical processes, and *(iii)* environmental changes to enhance service and promote a helpful, problem-solving culture.

A. Structural Recommendations

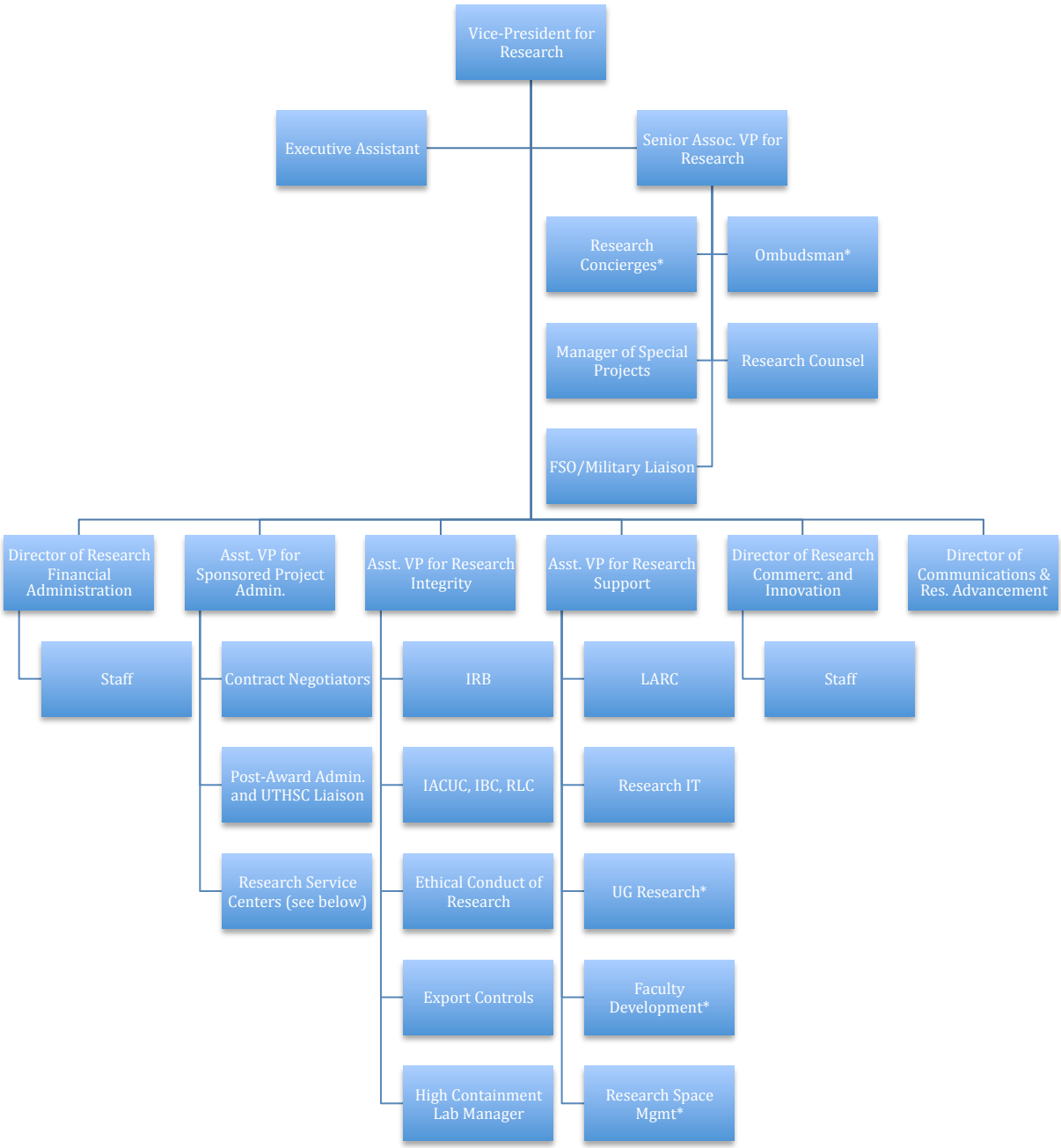
1. Overall structure of VPR division

As it is currently organized the VPR division has a highly vertical structure comprised of several layers. This has the potential to dilute the VP for Research's ability to establish a proper tone for the division, isolate the middle levels of the VPR bureaucracy so that they have neither authority nor responsibility, promote deep "silos" of operation that inhibit collaboration within the division, and complicate approval processes so that they require numerous reviews that slow processing. To address these issues, I recommend the division adopt a flatter overall structure.

Presently, the VPR has only three direct reports, two Associate VPs (AVP's) and an executive assistant, and one partial report (STTM director). In addition, the chief budget officer of the division reports to one of the AVP's rather than to the VPR. I recommend that the division be reorganized into four major subdivisions: *(i)* Sponsored Projects Administration, including the current Offices of Grants, Contracts, and Industrial Agreements (OGCIA) and Post-Awards Administration (OPAA), *(ii)* Research Integrity, including the units currently comprising the Office of Research Integrity and Compliance (ORIC) plus the High Containment Lab Manager, *(iii)* Research Support, including the Laboratory Animals Resource Center (LARC), the Research IT support, and new functions to be described below, and *(iv)* Research Commercialization and Innovation. These recommendations are summarized in the diagram below.

In addition, I recommend that the budget officer for the division report directly to the VPR, as well as Director of Communications and Research Advancement. Including a Senior Associate VP for Research, this would increase the number of direct reports to the VPR to eight and reduce the number of layers between the VPR and the directors of various research support functions in the division. The Senior Associate VP would function as the chief deputy officer of the division, oversee day-to-day operations, monitor and enhance the efficiency of administrative processes, craft research-related policies, and fill-in for the VPR in her/his absence. The Director of Communications and Research Advancement would produce the *Discovery* magazine and manage the communications for the division including updates on policies and processes.

Proposed Structure of VPR Division



**New offices proposed— see below*

Implicit in this proposed structure are fundamental changes in how the university administers sponsored projects (see next section) and how it undertakes research development activities. The VPR staff within the Research Support area would facilitate new research initiatives as they are identified by the academic deans and associate deans, the URCI directors, and the research advisory board. As much as possible, however, the pursuit and development of external partnerships would be the responsibility of researchers and college administrators.

In this chart, there are a couple of new positions, including Research Concierges and an Ombudsman, supervised by the Senior Associate VP for Research. The chart also indicates some new functions under the Research Support area, including an Undergraduate Research Office, a Faculty Research Development office, and a Research Space Management office which would coordinate research space usage with the university's Office of Space Management under Executive Vice Provost Julius Gribou. All of these functions will be explained in more detail below.

- Expected timeline for implementation: 6-12 months

2. Structure of Sponsored Project Administration

The areas of greatest concern to researchers in disciplines dependent upon externally funded projects involves those functions presently served by OGCIA, OPAA, and contract negotiations. As noted above, researchers appreciate the establishment of departmental research administrators because DRA's enable them to develop a closer working relationship with staff responsible for assisting with proposal submissions and grant management. This system works well for those DRA's who are well-trained and able to provide comprehensive services, but breaks down in the case of DRA's with insufficient expertise and training, and when communication gaps arise between the DRA's and the pre- and post-award staff in the VPR division. In addition, there are perceived processing disconnections that inhibit the facile creation of grant accounts.

To address these issues and to further facilitate proposal submissions and grant administration, I propose three fundamental adjustments to the current structure: *(i)* compress the pre-award processing structure, *(ii)* expand the accessibility and familiarity of pre- and post-award VPR staff by bringing them closer to the researchers, and *(iii)* remove any artificial barriers between pre- and post-award processing. The VPR staff has proposed that this can be accomplished by the creation of distributed Research Service Centers (RSC's) that provide full services spanning the range from grant opportunity identification, to proposal preparation and submission, to grant award processing and management, and finally to grant close-out procedures.

Under this model, each RSC would consist of a director who would oversee the operations and be well-versed in pre- and post-award procedures and policies. The center would include staff specializing in pre-award and post-award functions, and could include staff familiar with funding opportunities, agency priorities, and new grant announcements. Finally, each RSC would be staffed with several research award administrators (RAA's) who, similar to the present DRA's, would directly assist researchers with the preparation, submission, and post-award processing of grant proposals, but who would also facilitate communication of grants opportunities, researcher compliance awareness and protocol preparation, cost-sharing documentation, and completion of progress and final reports. By having several RAA's in each center, researchers would always have access to assistance from familiar staff; whereas, this may not always be the case in the current arrangement when a lone DRA might take vacation leave or be out on sick leave.

The mission of each RSC would be to serve researcher clients with seamless cradle-to-grave grant processing, eliminating the "disconnections" that are currently perceived by researchers. Most RSC's would be created to serve a narrow range of disciplines so that customized services

would be available to researchers. It is also envisioned that each RSC could eventually include staffing particular to the needs of the researchers that it serves, for example, grant writers or specialized accountants.

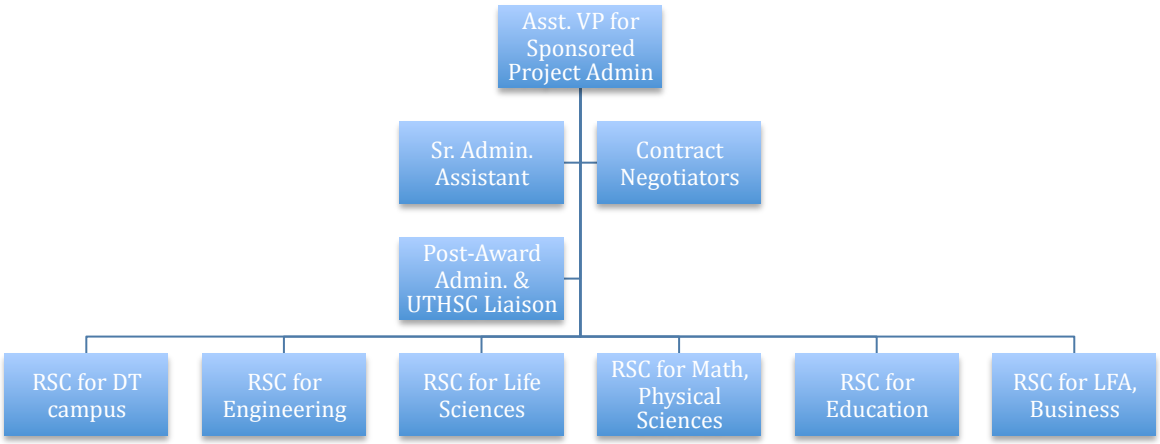
The staffing of the RSC's would be filled through a collaboration between VPR management and researchers in the service areas. The VPR management would ensure that grant coordinators, pre-award, and post-award staff all have the appropriate expertise and training to provide excellent service, while researchers would provide input about their greatest needs and participate in the selection process. Staff evaluations would be carried out by the RSC director who would have a direct reporting line to the AVP for Sponsored Project Administration using input from researchers who have worked with the staff. This model is similar to the successful model used for college development directors who are evaluated by the VP for University Advancement using input from the deans.

Based on the volume of proposals processed last year, the university should consider creating six RSC's with the following areas of emphasis: *(i)* Downtown campus, serving the needs of Architecture, Public Policy, and Community Services (Institute for Economic Development, P-20 Initiatives, *etc.*), *(ii)* Engineering, *(iii)* Life Sciences, *(iv)* Mathematical and Physical Sciences, *(v)* Education, and *(vi)* Liberal and Fine Arts and Business. Based on proposal volume, the last two areas could theoretically be combined, but the nature of Education grants is sufficiently different from those in the social sciences to warrant having two different centers. I note that the size of these centers could vary depending upon the needs of the colleges served, and their size could grow over time as the volume of proposal submissions increases.

An important point about these centers is that they would represent the VPR office in their distributed locations, and would have full responsibility for proposal submissions and grant management for the colleges they serve. It is expected that the staff in each RSC will develop a strong working relationship with the researchers in their service area and will be given the responsibility and authority to facilitate the work of researchers. For this reason, it is critical that the university fill the RSC director positions with highly competent staff capable of exercising appropriate independent judgment in the oversight of the sponsored projects in their service area. They should be capable of managing their staff to form a cohesive team that supports the needs of researchers and collaborates with one another to solve problems and streamline paperwork and approval processes.

It is possible that other centralized staff would be needed to provide special functions that are less commonly used by researchers. For example, in the chart below, the contract negotiators are shown in a more centralized position reporting directly to the AVP. Over time, as contract needs expand, the number of negotiators might increase and their functions later moved to the RSC's. There is not sufficient volume at this point, however, to de-centralize our contract negotiation functions.

Proposed Structure of Sponsored Projects Administration



Hypothetical Structure of a Research Service Center (RSC)

🕒 Expected timeline for implementation: 6 months

3. Structure of Research Support Subdivision

In place of the current subdivision for Research Development, I propose a new subdivision of Research Support that would provide oversight of those functions in the VPR division that directly or indirectly provide support infrastructure for ongoing research activities, including the Laboratory Animal Resource Center and the Research IT office. It would also include oversight of seed grant programs and some new functions that assist with the promotion of research activities among undergraduate students, faculty research development, and research space management.

Undergraduate Research Office— It is important to engage students at an early stage in research-related learning activities. These represent an important component of the signature learning experiences cited in the university's strategic implementation plan. The creation of an Undergraduate Research Office (URO) has been in the planning stages for several years, proposed by the Honors College, and more recently planned by VPR staff. With the general restructuring of the division, this is a good time to finalize this

implementation. The URO would be charged with providing a clearinghouse for undergraduate research opportunities on campus and with external partners (for example, the UTHSC-SA and Southwest Research Institute). In addition, it could provide organizational infrastructure for preparing institutional grant proposals in support of undergraduate research (for example, the Research Experiences for Undergraduates program at NSF). Ideally, the director of this office would be a faculty member with an active research program.

Faculty Research Development— The university currently invests in the development of instructional methods and skills among faculty through the Teaching and Learning Center. This office is envisioned to be a research version of the TLC. Its purpose would be to organize workshops, engage in new faculty orientation, and generate other activities to assist faculty in developing new research agendas or in establishing new research collaborations. This office would also provide the essential facilitation of research development initiatives identified by the colleges, URCI's, and the research advisory board. In practice, the VPR office would organize annual retreats for deans, URCI directors, and advisory board members to identify new strategic directions in research and then this office would facilitate contacts between researchers and appropriate funding agencies or external partners. During the course of the year, this office would also assist with the dissemination of new research funding opportunities to appropriate groups of researchers, thereby better targeting the communications from the VPR office.

Research Space Management— The Office of Space Management (OSM) has oversight of general space allocation on campus, but would be enhanced by the addition of staff who could help manage the university's allocation of research space. Although this office is shown in the proposed organizational chart for the VPR division, this office (likely a single staff member) would actually report to the OSM, with a dotted reporting line to the AVP for Research Support. In this way, anticipated research space needs can be better facilitated while adding needed expertise in the use of research space to the OSM.

🕒 Expected timeline for implementation: 3-6 months

4. Technology Transfer structure

The concerns over the commercial development of intellectual property at UTSA by the STTM warrant a deeper look at our current relationship and the value that UTSA receives in return for its share of the partnership in STTM. There are compelling arguments to suggest that our commercialization efforts should be handled "in-house" by CITE, but our longstanding and deep partnership with the UTHSC-SA should also be considered before we opt for a different arrangement. I propose that this question be studied in greater depth over the next three months, with the intention that a recommendation would be provided to the president concerning UTSA's future course for technology transfer management during the summer.

🕒 Expected timeline for implementation: 3 months

5. Restructuring the Research Advisory Council

As noted in the previous major section, the university currently has both a Research Advisory Council, appointed by the president, and a Research Advisory Committee, created by the Faculty Senate. Both committees suggest that only one committee is necessary. To address the suggestions made by the members of these committees, I propose the following features for a single Research Advisory Board (RAB):

- Board to be composed of membership appointed by the president—
    - each college nominates two members and the president selects one from each college,
    - the Faculty Senate nominates five members, of which the president selects two,
    - the president selects one dean, one associate dean for research, and one URCI director,
    - the VPR is an ex-officio member of the board, but does not chair the board;
- each college-nominated member serves for three years, with terms staggered so that roughly one-third rotate off each year;
- each Senate-nominated member serves for a term to be determined by the Senate, but not to exceed three years— these members are charged with communicating the business of the RAB with relevant Senate committees, and *vice-versa*;
- each dean, associate dean, and URCI director serves for a term of two years— these members are charged with communicating the business of the RAB with their colleagues in other colleges or URCI's, respectively;
- the RAB chair is elected by the RAB members and serves a one-year (renewable) term;
- the RAB meets no fewer than two times per year, but may meet more often if it chooses;
- meeting agendas are set by the board chair and board members;
- the RAB provides advice to the president on general strategic matters concerning research;
- the RAB provides advice to the VPR on operational matters related to research support on campus;
- the RAB provides advice to the provost on operational matters related to faculty support, recruitment, retention, and academics;
- the RAB may form task forces to investigate matters of specific concern and may enlist faculty, staff, and students outside the RAB to participate on such task forces;
- the RAB may request meeting reports from the VPR, VP Business Affairs, provost, or president, and each of these administrators may request a place on the agenda of an RAB meeting; and
- a charge for each coming year's special tasks for the RAB would be determined each spring by RAB members with input from the VPR, provost, and president.

🕒 Expected timeline for implementation: 3 months

B. Procedural Recommendations

Researcher and VPR staff comments provided ample feedback on several procedural weaknesses that, if addressed, could greatly improve UTSA's effectiveness and enhance the overall research enterprise. Recommendations in this area are ordered by ease of implementation, with the quickest implementation items listed first.

1. Developing research policies

I recommend that the development of research-related policies (Chapter 10 in the Handbook of Operating Procedures) be undertaken as a collaboration between the Senior Associate VP for Research and a faculty group in advance of submission to the University HOP Review Committee. The group of faculty used for this purpose could be derived from a subcommittee of the RAB, or could be drawn from the Faculty Senate's HOP Committee. The idea would be that faculty input would be present in the development of the policy and this would also serve to inform faculty about the reasons for different policies recommended by the university's administration and improve transparency. This approach is already being adopted in the development of the new System-motivated Conflict of Interest policy.

🕒 Expected timeline for implementation: immediately

2. Travel reimbursement process

The process for getting reimbursement for travel is one of the more arcane and complicated processes at the university. The number of reviews and approvals required is unwieldy, and reimbursement for international trips is made unnecessarily complicated by the ways in which UTSA interprets travel guidelines. A task force of the current RAC is presently hard at work addressing these concerns and should yield some solutions soon; however, I feel compelled to offer the following recommendations as part of any solution that they devise:

- travel reimbursements should require no more than three signatures, optimally the traveler, the department chair, and a representative of the university administration;
- where permissible by state and federal law, the university should simplify its reimbursement policy to allow use of federal subsistence per diem rates while traveling, especially for extended trips of a week or more;
- international travel reimbursements should use a single exchange rate to calculate the total amount of the reimbursement in dollars, and not require a daily calculation of the instantaneous exchange rate;
- the department chair's signature should represent certification on behalf of the institution that the traveler's expenses were a legitimate use of grant funds; and
- all forms should be simplified to the greatest extent possible and placed online for electronic processing (if not there already).

🕒 Expected timeline for implementation: already in process— 6 months for completion

3. University Research Centers and Institutes (URCI) oversight

The university research centers and institutes have been placed under the supervision of the deans for the past two years. However, the deans have only recently been convened specifically for the purpose of exercising this oversight. Moving forward, I recommend the following structure be implemented:

- the eight college deans form a group referred to as the "Deans Research Council" (DRC) which would function as a board of trustees in overseeing the URCI's;
- the DRC would elect its own chair;
- the provost and VPR would attend meetings of the DRC as *ex-officio* members, but are not eligible to serve as chair; and
- the DRC would include, but not be limited to, the following functions—
    - strategic oversight of the URCI's,
    - planning for future strategic directions in research,
    - approving new and ending old URCI's when appropriate,
    - reviewing reports from periodic external reviews of URCI's,
    - appointing "lead" deans to provide day-to-day oversight of URCI's,
    - convening the URCI directors at appropriate intervals, and
    - recommending research policies as needs are identified.

🕒 Expected timeline for implementation: immediately

4. VPR budget priorities

The VPR division needs to examine its use of resources and ensure that it is making the best possible investment of those resources in promoting research activities. I recommend that an internal review be undertaken to examine the VPR budget and adjust it, as necessary, to focus resources on programs that provide the greatest return in the form of enhanced research activity.

🕒 Expected timeline for implementation: 3 months

5. Proposal submission deadlines

Researchers, administrators, and staff have varying reactions to the relatively new policy requiring submission of the administrative portions of all proposals five days in advance of the funding agency deadline, and submission of the narrative part two days in advance. I believe that the arguments in favor of the policy are compelling, and are consistent with best practice at other universities; however, I recommend auditing the outcomes of this policy after the end of the current academic year to ascertain whether the policy has resulted in unintended consequences or unnecessary hardship for researchers. The results of that audit should then be discussed with the RAB to develop appropriate recommendations concerning whether to continue the policy, to continue the policy with some adjustments, or to discontinue the policy.

🕒 Expected timeline for implementation: 3-4 months

6. IRB review process

An area of great concern to researchers, especially in the social sciences, is the process for reviewing human-subjects protocols by the university's Institutional Review Board (IRB). Researchers' concerns have been amply documented above; however, there has not been sufficient time to adequately follow-up on the issues they raise in order to present a thoughtful recommendation that addresses those issues directly.

In the next few months, the university will be undergoing an external review from the Association for the Accreditation of Human Research Protection Programs (AAHRPP). This represents an opportunity to engage experts from outside the university as to the appropriateness of our IRB review processes. In particular, it will be important to solicit their appraisal of:

- the process we use to triage protocols as a means of streamlining our review;
- the timeline for IRB reviews of research protocols and the stage in the project at which those reviews occur;
- the process used to determine exemptions from IRB review, including projects that involve secondary data analysis;
- the process used to review student project protocols (if different) needed for advanced work in the social sciences; and
- the appropriateness of directives in our IRB reviews that touch upon research design, methods, and sample sizes.

Such a review would enable the university to ascertain whether its practices are in line with established research universities and, where different, to adjust our practices. The review might also guide us in how we communicate with researchers to set appropriate expectations.

Following the evaluation of the AAHRPP external review team, I recommend that the university align its practices for IRB review with the best practices of high research activity universities.

🕒 Expected timeline for implementation: 3-6 months

7. Compliance in research

The university takes a responsible approach to ensuring compliance with federal, state, and System rules for conducting research, both sponsored and non-sponsored. However, it is the view of most researchers that UTSA is over-zealous in its implementation of research compliance enforcement. Given that we compete for faculty, students, and grants with other research universities that strive to reduce administrative burdens on faculty and staff, I believe it is imperative that we begin taking a smarter, more efficient approach to compliance. In particular, our approach needs to recognize and respond appropriately to the level of risk associated with a given compliance area, ensuring that our investment of time, effort, and resources in compliance does not exceed the magnitude of the risk.

First and foremost, I recommend that we vest more responsibility in our faculty and other principal investigators, and trust them to be compliant. At present, we take an approach designed to minimize risk and ensure absolute compliance, transaction by transaction. The result is that we spend thousands of dollars in an effort to guarantee that every dollar spent is appropriate. A more efficient and effective approach would be to shift the philosophical emphasis away from blanket enforcement and toward facilitating and encouraging researcher responsibility for research compliance.

Some suggestions for how we might streamline our compliance apparatus include:

- develop forms with "just-in-time" compliance training for faculty rather than relying on training modules every other year— the idea is taken from TurboTax which includes pop-up boxes to explain every small, arcane tax code provision for those who need them, but does not force all taxpayers to read them;
- develop compliance training that is more entertaining so that learning the rules is made a bit more enjoyable;
- set appropriate ceilings on expenditures that can be quickly approved without extensive compliance checking— this way, purchases below a certain amount are more automated, while only those above that amount are checked for compliance;
- eliminate itemized checking of low-risk transactions— the staff in OPAA have already provided a list of possible candidate transactions for this;
- incorporate random audits to ensure that all researchers are incentivized to follow the rules;
- streamline conflict of interest reporting so that it is easy to re-certify ongoing conflicts and to identify which new ones need to be added; and
- automate to a greater extent the approval of some research protocols that do not represent high-risk activities.

These are just a few of the ideas that came up in the feedback sessions. Given that the VPR staff has already begun implementing several of these measures, I am confident that they can and will generate additional ideas that would allow them to further reduce the administrative burden on themselves and allow a greater focus on providing excellent service to researchers.

🕒 Expected timeline for implementation: 3-6 months

8. Contract development process

Researchers whose work involves the development of contracts or industrial agreements have indicated some frustration with the length of time required to negotiate contracts, and lack of transparency in the review process that accompanies that negotiation. As noted earlier, there is concern that little attention is paid during contract negotiation to the potential opportunity costs, while most emphasis is placed on risk reduction. This suggests that it is important for the university to examine its contract negotiation processes and streamline them where appropriate so that we are able to nimbly respond to opportunities and close contracts in a timely manner.

As an initial step, I recommend that the senior VPR staff develop streamlined research contract review processes. Ideally, these processes would take into account the risk level of a potential contract and tailor the degree of oversight and review of the contract to the risk level. Contracts for amounts below a prescribed amount should be developed through a more automated process; those involving a higher degree of financial or compliance risk should receive an appropriate degree of review and approval before adoption.

More generally, I recommend that the university appoint a broad task force to recommend changes to our general contracting process (including both research- and business-related activities), focusing on the following issues:

- create a process map of the contract review and negotiation process for each of the different types of contracts in which the university engages (*e.g.* research program collaborations, off-campus facilities usage, equipment leasing or purchase, international agreements, and others);
- devise a negotiation process for each that incorporates university officers with appropriate expertise for review and risk assessment;
- vest decision-making in contract negotiations with individual(s) at the university who have appropriate perspective on the value of the opportunity and can weigh that against the risks— when appropriate, this responsibility might be vested more in academic administrators (*i.e.* deans, vice provosts) than is currently the case;
- for complicated contracts, outline a "team review process" whereby a group with complementary areas of expertise can swiftly respond to proposed contract stipulations;
- examine performance metrics for contract reviewers, including turnaround time as one indicator, and set appropriate goals for those metrics; and
- develop automated templates, and utilize them, for common contract types that can be used to reduce significantly the time for review.

Such a task force should include VPR staff, Business Affairs staff, Student Affairs staff, and provost staff, faculty, and administrators so that a revised process benefits from multiple perspectives and is responsive to multiple needs. These recommendations would serve to reduce the burden on our contract negotiators in all divisions, and allow them to focus more attention on the contracts that are of greatest consequence to the university.

◷ Expected timeline for implementation: 3-6 months

9. Seed grant programs

Researchers made numerous suggestions for improvements to the existing seed grant programs administered by the VPR division. Some of these suggestions will need to be examined in light of what is financially feasible, so these recommendations come with the caveat that it may not be possible to implement all of them within the next year. However, it is clear from various groups that these programs are valued by researchers and should be continued.

Recommended improvements to the seed grant program include:

- create separate programs for STEM and non-STEM sets of proposals and use different review boards tailored to the disciplines represented by the proposals— this is also suggested for SALSI-funded projects;
- establish a seed grant program specifically for the humanities and social sciences with a smaller maximum award amount that would facilitate research in those disciplines (in place already);
- provide a seed grant program exclusively for pre-tenure faculty with the purpose of helping them prepare for success with external sponsoring agencies;
- provide a seed grant program for mature investigators who engage in novel cross-disciplinary projects with researchers in different departments or institutions (in place already); and
- increase the number of grants that can be awarded (*i.e.* increase the funding for these programs).

Once the VPR division is restructured according to the recommendations of this report, an analysis will be performed to determine which of these recommendations is feasible within the VPR budget.

◷ Expected timeline for implementation: 6-12 months

10. Grant proposal process improvements

The creation of Research Service Centers will address some of the needs for enhancing the grant proposal preparation and submission processes, and subsequent award management process. However, these must be supplemented by corresponding changes in some of our administrative processes if we are to optimize our success in winning externally sponsored projects.

Among the process improvements that I recommend are the following:

- assign every proposal, as it is in preparation, to a team consisting of a research award administrator, a pre-award specialist, and a post-award specialist (the latter two could be combined into a single specialist if cross-trained) who will assist the principal investigator (PI) in all phases of the funded project, from "cradle-to-grave";
- implement a project management software system that will enable a proposal project team to easily share information among themselves and with PI's related to a particular proposal— this will enable all members of a project team to be able to access its current status, even when one team member is absent;
- provide post-award specialists or the relevant RSC director with the authority to assign grant account numbers, so that PI's can begin projects without unnecessary delay;
- improve the communication channels and protocols between post-award staff in the VPR division and grants accounting staff in the VPBA division— this might be facilitated by

providing access to the project management system database suggested in the second bullet above and by holding regular meetings among the two offices to coordinate account handling;

- develop a useful and acceptable process for purchase cards, or equivalent purchasing instruments, that researchers can use for appropriate materials and supplies needed by research projects;
- vest responsibility for grant account close-out, sponsor billing, and grant financial statements for progress and final reports to Grants Accounting staff; and
- automate financial reporting of grant status for monthly statements in a user-friendly format.

The last of these points addresses the observation that the monthly grant budget reports derived from DEFINE and provided to faculty are unclear and confusing according to researchers. One department, Chemistry, has developed a simplified reporting format that researchers claim is much better and could be adopted for more general use. This should enhance researchers' understanding of their budgets and potentially address problems with under- or over-spending.

The net impact of the formation of Research Service Centers, and the overhaul of proposal and grant award processing should ideally be to facilitate researcher participation in externally funded projects. The bottom-line question we should always be answering is: "What can we do to make it easy for our researchers to apply for and manage successful grants so that they can focus their energy and attention on the purpose of the grant project?"

🕒 Expected timeline for implementation: 6-12 months

11. Recharge center creation process

The university is only now beginning to establish recharge centers, that is, core facilities that charge for services and access to shared equipment according to an established business plan as a means of earning the revenues needed to operate. There is some confusion and misapprehension among faculty about how a recharge center should work, although this model has been in place at research universities for many years.

I recommend that a small task force be charged to examine the process by which recharge centers are created at other, more mature research universities, and propose a process for UTSA to adopt. Such a task force should include relevant VPR staff, academic administrators, and faculty with experience using a recharge center here or at another university. The process should be transparent to researchers so that the reasons for incorporating different features in the creation process and in the ultimate operating procedures and charge structures of the recharge center are evident.

🕒 Expected timeline for implementation: 6-12 months

12. Large grant development process

The university has been moderately successful competing for institutional grants involving multiple co-PI's, but there is a feeling among VPR staff and researchers that our process for developing these proposals could be improved. To ensure that UTSA is cognizant of available opportunities, nimble enough to assemble appropriate proposals, and competitive enough to win large grants, especially those targeting minority-serving institutions, I recommend the following support be provided through the VPR division:

- utilize staffing within the Research Service Centers and the Research Support subdivision to track upcoming institutional grant opportunities, and notify relevant colleges and researchers of those opportunities;
- expedite the identification of a primary PI and the assembly of the team of co-PI's who will contribute to the proposal;
- centrally facilitate proposal preparation through the Office of Sponsored Programs Administration (or delegate assistance with the preparation to one or more Research Service Centers), ensuring that proposals address all the priorities listed in the program announcement;
- clarify at an early stage of proposal development what obligations may exist for institutional cost sharing and whether the university has the resources to make the commitment;
- ensure that the process for documenting cost-share obligations, with appropriate authorizations, is carried out in advance of submitting a proposal; and
- assist with funded award administration through the RSC's and the VPR central budget office.

I suggest that the Research Advisory Board provide advice concerning the details of large grant submission processes, and guidance as to how we can adopt best practices to optimize the quality and success of our large grant proposals.

🕒 Expected timeline for implementation: 12 months

C. Environmental Recommendations

Promoting a service-oriented approach to administrative processes will go a long way toward facilitating research success at UTSA. Feedback from researchers indicates that the bureaucracy of the university often impedes success and makes even small transactions difficult and time-consuming. At the same time, VPR staff indicate a willingness and desire to help researchers achieve their objectives. A few simple measures may go a long way towards providing a high level of service to researchers' needs.

After consulting with several individuals over the past six weeks, I believe that part of the answer lies in having overly complicated processes, which some of the recommendations provided in section IV.B should help address. Another part lies in segregating authority for approval, or in not recognizing the authority of academic administrators (*i.e*. deans) to grant approvals— again this is a process issue, but one that speaks more to inadequate training and campus culture. A third part of service orientation shortcomings is manifest in communication practices, which are in turn fueled by the work environment. In this section, I present some recommendations aimed at addressing both the culture and work environment issues that appear to be adversely affecting our ability to facilitate research at UTSA.

1. Commitment to service orientation

One cannot promote a service-oriented culture at the university unless there is a clearly stated and reinforced commitment to service articulated by everyone. My recommendation along these lines must extend beyond the VPR division to all service offices at the university if it is to become more effective and efficient. In particular, rendering outstanding service must be stated as an expectation, used as a criterion for performance evaluation, and rewarded when it is exemplary.

Among the specific recommendations that I would make for the VPR division are:

- A statement outlining expectations should be constructed, ideally in collaboration with the VPR staff, and disseminated to all staff. The statement should outline our core values and how they translate into the way we interact with one another and with researcher-clients. This statement of expectations should become a point of pride among VPR staff and, as a consequence, self-policing.
- Guidelines should be articulated for the tone to be used in all communications whether they be in person, by telephone, or by email. Where possible, communications with researcher-clients should be prioritized as follows: *(i)* in person, *(ii)* telephone call, *(iii)* email. Finally, appropriate guidelines should be put in place for the maximum allowable time interval before a response should be made to a researcher inquiry. As a corollary, researchers will also be held accountable for the tone of their messages to reinforce the notion that respect is an essential element in all forms of communication.
- Staff should be exposed to the general operations of the division and related administrative offices that impact research activities. Through this exposure, they should be encouraged to act as "problem solvers," able to assist researcher-clients with any issue or refer them to the appropriate office. This is part of helping VPR staff avoid giving "no" as an answer, but instead offer advice as to "how" a problem may be resolved.

- The division should implement team-building sessions to encourage a spirit of cooperation and shared success. A retreat for staff is planned for May 17 to begin that process and could become an annual event if successful.
- One or more mechanisms for soliciting researcher-client feedback immediately following the performance of a service should be implemented. This feedback should then be integrated into the performance evaluations of all staff. Staff who are found to be particularly effective at rendering high quality service should be rewarded; those found to be less effective should be offered an opportunity to further develop their skills, or invited to seek another position.
- A mechanism that facilitates VPR staff's input into process improvement should be implemented. Since the staff are most familiar with our processes and are, therefore, most familiar with the inefficiencies of our procedures, they represent a valuable resource for process improvement that should be utilized more widely.

The primary objective is to make the VPR division regarded throughout the university for its high level of service and ability to facilitate researcher success.

🕒 Expected timeline for implementation: immediately and ongoing

2. Transparency in VPR division structure

There is no reason that the structure of the VPR division should be confusing to researchers, and indeed, one can find information identifying the relevant staff in all areas with some perseverance. However, this task should not be made more difficult than necessary, and pending the implementation of the restructuring proposals presented in section IV.A, organizational charts for all parts of the division will be made available on the VPR web site. In addition, a guide identifying the general duties and responsibilities of each of the offices will be placed in a more accessible part of the VPR web site.

In addition, the division will create an ombudsman position reporting to the Senior AVP for Research. The ombudsman will have responsibility for directing researchers to the appropriate staff or process for handling problems or other issues, and also receiving comments and suggestions from researchers for ways to improve the services provided through the division. In this way, we would be able to provide multiple pathways to connect researcher-clients with staff who can best help them address issues and problems.

🕒 Expected timeline for implementation: 1-3 months

3. Tenure-track faculty mentoring program

The university makes a substantial investment when it recruits new faculty, and it is important to protect that investment by enhancing the prospects for success among our tenure-track faculty. I recommend that UTSA adopt a model pioneered by Kansas State in which tenure-track faculty are allowed to apply for funding to engage an external research mentor. These mentors are proposed by the faculty member and should represent someone who is nationally or internation-

ally prominent in the same discipline. Funding would be provided by the university to support a visit to UTSA by the external mentor, who would not only work with the tenure-track faculty member, but also visit with her/his colleagues and, ideally, give a research seminar to the department. Kansas State administrators report that their program has been highly successful and has helped their faculty establish important connections with leaders in their disciplines.

🕒 Expected timeline for implementation: 3-6 months

4. Researcher-VPR staff relations development

To promote stronger working relationships among researchers and the VPR staff who provide essential services, I recommend establishing opportunities for researchers to make informal research presentations to staff to illustrate their research projects. These opportunities could be in the form of brown-bag lunch presentations for the staff of a given Research Service Center, or could include laboratory tours, or other demonstrations. Such events would help build a "team" relationship between VPR staff and researchers.

🕒 Expected timeline for implementation: 3-6 months

5. Research concierges

The university should strive to provide excellent service for all researcher-clients, but it is particularly important to serve well those researchers whose long-term track record with sponsored projects is strong. For this purpose, I recommend the establishment of a research concierge system that would provide enhanced services to those researchers who have attained a certain level of accomplishment at UTSA.

Research concierges would report to the Senior AVP for Research and would be analogous to personal bankers in that they would assist their clients with all transactions, ensuring that those transactions are carried out without delay. Concierges would need to have extended training to familiarize themselves with essential university functions and the staff who provide those functions. Their purpose would be to streamline transactions for their clients utilizing the staff that normally provide those functions. They would also have responsibility for reporting inefficient and ineffective process to the Senior AVP so that those processes could be improved.

The criteria that a researcher might need to meet in order to qualify for the services of a research concierge could include consideration of the number of successful proposals, the total amount of awarded funds, holding an endowed position, or other factors that indicate a proven record of high-level success in research. Depending upon the volume of transactions that need to be handled, some processes might be referred to the client's RSC. This program would help the university provide top-level service for our best researchers and give other researchers an added incentive to meet the success criteria to qualify for concierge services.

🕒 Expected timeline for implementation: 3-9 months

6. Communications and VPR web site

As has been detailed in several parts of this report, I believe that improving communications is an important step in addressing the perceptions of researchers. Effective communication must be *(i)* clear and succinct, *(ii)* timely, *(iii)* relevant, and *(iv)* accessible. In addition, it must be backed up by more thorough and comprehensive information sources. In the current age, communication must be multi-modal and it must be targeted for each audience that it addresses. For this reason, this is one of the more complex recommendations offered here.

One of the most critical assets for communicating broadly is the VPR web site. Over the past few years, the VPR division has done an excellent job of making information and online resources available through the web site. However, the web site is not easy to navigate and the sheer amount of information on it is formidable to a first-time visitor. There are 54 explicit links to other pages, not counting the links that are provided on all university web pages at the top and the bottom of the page. This compares with 33 links to other pages on the UTSA main web page, and 37 links on the Provost web site (not counting the header and footer links).

My first, and most important recommendation in this area is to organize the web site along lines that lead researchers efficiently into the information that they need. The UTSA front page does this using pop-up menus, which is an efficient way to embed more links on a page without cluttering it unnecessarily. The VPR web site could, for example, make more extensive use of pop-up menus to guide users directly to the information they need. In particular, links critical for researchers preparing a proposal could be clustered under a pop-up menu for easy access. The simplification of the VPR web site should be guided by those who most often make use of it, and this should be a high priority now that the web site conforms to the university standard template.

Another important format for communication is meetings, and a common observation from those groups who meet regularly with the VPR and VPR staff is that the meetings are primarily forums for one-way information flow. I recommend that responsibility for forming the agendas for these meetings be delegated to the meeting groups (RAB, URCI directors, Associate Deans for Research, *etc*.), with the VPR invited to submit agenda items for consideration. The material presented should ideally concern processes under development, new federal/state regulations that require our response, and new research opportunities so that the purpose of the agenda item is to receive feedback to guide the VPR office.

Researchers also commented on the effectiveness of mass emails sent out by the VPR office and several alternatives were suggested. These include:

- asking researchers to indicate what types of announcements they would like to receive through email and tailoring email lists to target email more precisely;
- posting all notices on a centrally maintained bulletin board and sending weekly or bi-weekly email summaries with links to the web site;
- as RSC's are established, they could be used to target appropriate researchers with email opportunities that are relevant; and
- all of the above— there was no clear consensus for these solutions.

While there was no consensus of opinion voiced in the sessions I attended, I recommend that we engage the RAB in identifying the most effective communication chain to be used for the various kinds of messages sent out by the VPR and VPR staff. Finally, as one specific means of enhancing communication, I will be holding three open forums in early May to discuss changes in the VPR division with interested researchers. These forums provide an occasion for communicating important changes to the division's primary clientele, while also allowing feedback and suggestions.

◷ Expected timeline for implementation: 1-12 months

7. Support for researcher development

Given the university's stage of institutional evolution, I believe it is now important to provide some professional development assistance to faculty, research faculty, postdoctoral associates, and other researchers that will help them achieve their personal goals and objectives for research-related activities. I recommend charging the RAB to advise the VPR, provost, and president concerning the services a Faculty Research Development (FRD) office should ideally provide, and help define the structure of such an office.

In addition, researchers commended the VPR office's development of the researcher database. Its use as a faculty development tool has not been explored, but that might represent another charge for the RAB to consider. For example, the College of Business has pioneered the concept of helping faculty researchers form collaborations within the college as a means of increasing research participation. This concept could be expanded with the use of the researcher database and used to promote inter-college collaborations through the FRD.

The university is committed to promoting research activities in all disciplines, whether they are traditionally funded by external grants or not. To learn about the needs of "self-funded" disciplines, I solicited feedback from a number of researchers in the arts, humanities, social sciences, business, public policy, and education. Among the suggestions for ways that the VPR office could facilitate research activities specifically in those disciplines, I recommend the following be explored for implementation through the FRD office:

- provide assistance for special fellowship applications (*e.g.* Fulbright, *etc*.);
- expand the availability of seed grants to assist faculty with specialized research needs in the traditionally self-funded disciplines;
- provide more resources to support travel related to research activities (*e.g*. archival research, installation of art exhibits, *etc*.); and
- expand available library services and funding to acquire special collections and data sets.

Small investments in these kinds of programs have an enormous impact on these research areas and would underline our commitment to support all disciplines.

◷ Expected timeline for implementation: 6-12 months

8. Graduate student research support

Researchers, especially those in the self-funded research disciplines, also cited the need to provide more support for graduate student research. Graduate students are central to our stated goal to achieve premier research university status, and supporting their research efforts is strongly aligned with the university's strategic plan. Although the feedback from researchers was compelling, more needs to be done to determine the greatest needs of graduate students. Among the recommendations I would make in this area are

- raise philanthropic support for graduate fellowships, especially in the self-funded disciplines where there are few alternative sources for graduate student support;
- support a central fund to assist with graduate student travel to conferences, especially if the student is presenting a contributed paper, or can document how the conference will provide needed access to critical information or data; and
- engage the Graduate School and the RAB in providing further advice concerning the critical needs of graduate student researchers.

🕒 Expected timeline for implementation: 6-12 months

9. Academy for Distinguished Researchers

The university rewards achievement in research through the President's awards each year, but more is needed to recognize our outstanding researchers. I propose the creation of an Academy for Distinguished Researchers that would acknowledge notable research accomplishments over an extended period of time at UTSA. A similar Academy for Distinguished Teachers will be established this spring and could provide a useful model for the research academy. Once again, I would ask the RAB to advise the university as to how such an academy could be established, the criteria for membership in the academy, and the responsibilities and privileges accorded to those inducted.

🕒 Expected timeline for implementation: 6-12 months

10. Research strategic planning

One key to improving the environment for promoting research at UTSA is to engage a broader group in the strategic planning for research goals over the next five to ten years. I recommend that a process be initiated to formulate a plan for research development over that time, with periodic opportunities for the university community to revisit those strategic priorities so that the university can respond flexibly to new opportunities. This process should ideally begin in the Fall 2012 and take place during the 2012-13 academic year.

The groups that should be included in this planning processes are the deans (through the DRC), the associate deans for research, the URCI directors, and the members of the RAB, with others added, as needed, to fill any gaps in disciplinary representation. VPR staff should assist with

facilitating the planning process and with producing any data or information needed by the planners. The process should be led by the VPR or someone appointed by the VPR.

In addition, one idea that has emerged from the current RAC (precursor to the RAB) is to ask departments to each formulate a research strategic plan. I encourage this development, but suggest that departments need to be provided guidelines as to the appropriate elements that should be included in their plans. I recommend that the RAC/RAB devise such a set of guidelines, perhaps even providing an outline of what a departmental research strategic plan should contain. The departmental strategic plans should only be solicited once the university has developed its own research strategic plan so that departments can align themselves with the university's strategic research priorities.

🕒 Expected timeline for implementation: 6-18 months