

Summary of Conclusions and Recommendations

Research Administration Assessment

In April of 2010, Schaefer & Company was selected by The Texas A&M University System (TAMUS) to conduct an assessment of research administration to identify related opportunities for improved operational efficiency, organizational design, and management of administrative and contract risk. The primary focus of the assessment was on contract and grant administration and related delivery of pre- and post-award services at TAMUS.

The bases for the assessment included:

- Review of the Phase I Research Administration Shared Services Committee Report (Phase I RASS Report) and comprehensive cost analysis;
- An internal baseline review which evaluated costs and operational efficiencies, primarily involving the six System Members in College Station that include:
 - Texas AgriLife Research (AgriLife),
 - Texas A&M University (TAMU) Research Services,
 - Texas A&M Health Science Center (HSC),
 - Texas Engineering Experiment Station (TEES),
 - Texas Transportation Institute (TTI) and;
 - The Texas A&M Research Foundation (TAMRF).
- Select organizational, performance and/or process benchmarking of research administration at the following seven leading research universities, as a basis for comparing operational efficiencies and practices at TAMUS:
 - University of Florida
 - Purdue University
 - Michigan State University
 - Pennsylvania State University
 - University of Texas
 - University of Wisconsin
 - University of Washington

Description of Key Factors Limiting the Analysis

In conducting the analysis, the quality of information provided by System Members at TAMUS was inconsistent in a variety of ways including: accounting; methods for classifying job descriptions and related functionalities; management systems and procedures; actual number of employees directly and indirectly involved in research administration and related costs. Based on our observations of the data, there is a need for implementing a common management system.

Frequently, these data inconsistencies made meaningful and accurate performance comparisons difficult between System members and other institutions. At the present time, we have assessed that many current management systems are inadequate to support effective management, monitoring and oversight of research administration *on a System-wide basis*.

Key Conclusions

Five of six System Members at TAMUS in College Station have fully staffed contract and grant administration offices, each with its own management structure and separate pre- and post-service delivery function. Combined, these offices employ 218.4 full time job equivalents (FTE's) directly involved in research administration. 97.8 of these are involved in pre- and post-award services and 120.6 are reported in 'other' administrative and managerial support.¹ These 218.4 direct FTE's are part of a total reported 355.45 FTE's identified in the RASS Report that also include research administration support staff in the colleges and units.²

Among the seven benchmark institutions considered in the TAMUS research, all have some form of centralized contract and grant administration office. While all have centralized offices, organizational structures vary from those being more highly centralized to those involving more hybrid forms of organizational structure, including a combination of central offices and research administration support in Colleges and other research units.

Compared with centralized research administration offices at institutional benchmarks, we conclude that having five separate, fully staffed contract and grant offices in College Station (with additional at other non-College Station institutions) results in a number of operational inefficiencies in delivery of research administration services at TAMUS, which impacts effective allocation of System resources.

These challenges must be addressed as part of continuously improving research administration operations at TAMUS, and include:

- Unnecessary duplication of senior and supervisory positions;
- Staffing redundancies in select service areas and administrative support;
- Lack of standardized accounting and management systems;
- Varying productivity and related inefficiencies in managing workload and on-going capacity;
- Varying levels of customer satisfaction in pre- and post-award service delivery across the System;
- Absence of shared services in areas where resources could be combined effectively for improved service and efficiency;
- Inefficiencies in managing core internal business processes;
- Limitations in effectively sharing best practices and other information required to optimize performance and;
- Limitations in effectively managing quality and training of research administration personnel across the System.

Noted Variation in Service Quality and Productivity Levels

The baseline analysis conducted for the TAMUS engagement indicated significant levels of variation in both service quality and pre- and post-award productivity levels among System members. We have assessed that certain of this variability in performance is attributable to common causes inherent in the System at TAMUS, which must be considered as part of continuous operational improvements in future.³

Pre-and Post-Award Administrative Productivity

Key operating ratios are generally used to evaluate the efficiency of administrative productivity comparing production and required labor to produce given levels of output. In the area of pre-award productivity, a key ratio looked at the number of proposals produced per pre-award FTE. Comparing System members in College Station with four benchmarks, TAMUS averaged 124 proposals per reported pre-award FTE, just slightly below the benchmark mean of 138.⁴

While competitive with participating benchmark institutions in this study, there were significant levels of variation in pre-award productivity by this measure, reported among System members at TAMUS. Among those members with fully staffed contract and grant offices in College Station, proposals per pre-award FTE ranged from lows of 70 and 97 for HSC and TTI, respectively, to a high of 236 (Texas AgriLife).

Some variation can be caused by differences in research portfolios and related workload (e.g. number of contracts versus grants), however this was less of a consistent pattern at TAMUS. With a nearly equal portion of contracts (40.3 percent) versus grants (41.2 percent) reported in 2009, and 15.4 percent in sub-contracts in its portfolio, TEES processed 2,139 proposals. With significantly greater numbers of grants in research portfolios, TAMRF processed approximately 1,900 proposals and AgriLife processed 1,653.

Similar variation concerns were noted in post-award productivity. When measuring the number of active awards per post-award FTE, the system-wide average for TAMUS (College Station) of 123 was only slightly below levels of 152 reported by participating benchmarks, again assessed as competitive.⁵ Levels of variation across fully staffed System member offices were even more pronounced in post-award, ranging from lows of 23 and 55 awards managed per post-award FTE for HSC and TAMU RS, respectively, to a high of approximately 344 for AgriLife.

We recognize that these measures represent only a ‘picture in time’ and that analyses of potential operating variability must be evaluated over extended periods. While we did not conduct time-series or other evaluations as part this engagement, information obtained from interviews and other reports⁶ in the engagement indicated that varying workload concerns in the system have been a persistent phenomenon in recent years.⁷

Reduction of the observed variations offers a significant opportunity for improvement.

Varying Satisfaction Levels with Services Reported by Research Faculty

Similar concerns were noted in varying satisfaction levels for research administration among Principal Investigators (PI’s). As part of the engagement, a sample of 2,338 research faculty at TAMUS was surveyed to understand customer satisfaction levels among pre- and post-award service areas.⁸ Of these, 820 or an estimated 35 percent responded, and were asked to rate a number of pre and post-award sub-service areas, as well as satisfaction overall. PI’s were asked to rank these areas on a 7 point scale in which 7 represented “highly satisfied”, 4 was “neutral”, 5 was “somewhat satisfied”, and 6 was “satisfied”.

In terms of overall satisfaction with post-award customer service, scores ranged from slightly above “neutral” for AgriLife and TAMU Research Services to somewhat above “satisfied” for TTI. Variability was also assessed within a number of sub-service areas.

In the post-award category of “establishing awards and accounts”, for instance, scores ranged slightly above “neutral” for AgriLife to above “satisfied” for TTI. Similar differentials were recorded in such other post-award categories as “project monitoring and management”, “purchasing”, “travel administration” and “billings” in which TAMU Research Services experienced neutral ratings from PI’s compared with TTI, with consistent ratings in the “satisfied” category.

Similar to concerns noted in the productivity area, varying satisfaction levels among PI’s in core sub-service and process areas suggest potential operating instability, in which corresponding opportunities were assessed for improved processes, work flow and organizational structure to ensure the highest levels of service quality and consistency across the System.

Assessed Improvement Opportunities

Based on an internal baseline assessment of operations at TAMUS, we have identified a number of opportunities for improved operating efficiency, productivity and service quality in research administration at TAMUS. These opportunities include:

- Improved management systems and standardization of work processes for enhanced operational efficiency, supported by the MAESTRO electronic research administration system;
- Improved management of internal business processes for pre- and post-award service delivery;
- More effective coordination of workflow through improved organizational interdependencies and teaming;
- Improved integration of key functions and related communication;
- More effective interactions between research administrators, sharing of best practices, employee training and development;
- Use of shared services in post-award, project and general accounting; purchasing, human resource functions, risk management, and travel reimbursement, among others;
- Improved risk management, internal controls and related coordination in contract and grant administration.

Suggested Key Focus Areas

The following were assessed as key focus areas in addressing these improvement opportunities:

1. *Align Desired Operational Improvements with Strategic Priorities*

Initiatives aimed at continuously improving research administration efficiencies should be carefully considered by the Chancellor and Board of Regents in exercising their 'duty of care' in stewarding financial assets at TAMUS. This is encouraged not only in the current economic and budgetary environment, but also in the context of priorities established in the TAMUS 2009-2013 Strategic Plan.

The Strategic Plan sets forth the strategic priorities for the System in terms of strategic objectives, related actions and investments and serves as a basis for monitoring strategic execution and effective resource allocation. We have assessed that current management systems are inadequate to monitor execution of strategic priorities for research administration *on a System-wide basis* in ways best suited to support constructive engagement and effective oversight.

To these ends, we have identified significant needs for developing a set of consistent performance goals/targets, key indicators and performance measures for research administration of the System, in order to improve information flow and feedback to the Chancellor and Board of Regents in the following strategic priorities:

Improved Capacity Management to Support Strategic Growth Requirements in Research

Strategic objectives for both TAMUS and Texas A&M University underscore the need to maintain research administrative capacity required to accommodate significant growth in research expenditures. TAMUS has demonstrated success as a leading research institution, and was ranked by National Science Foundation as 20th in 2008 total academic R&S research expenditures out of 679 U.S. institutions.

Safeguarding and building on this success must be a major factor in considering organizational design alternatives for research administration, as well as providing adequate, on-going research administrative support to maintain and grow such expenditures over the long term.

The TAMUS Strategic Plan calls for increasing "the total research expenditures among member institutions by \$250 million by the end of FY 2013" (*TAMUS Strategic Imperative III, "Research for Tomorrow", page 27*). Combined with FY 2008 R&D expenditures of \$582.3 million, this would indicate a goal of \$832.3 million, or roughly a nine percent

average annual growth rate. Potential organizational restructuring decisions must consider effective ways to support achievement of these strategic growth objectives, without significant risk to services.

Improved Alignment of Research Administration to Support Increased Interdisciplinary Research

A key strategy for achieving desired System growth in research expenditures focuses on the importance of interdisciplinary research growth. Whether in areas of proposal assembly or fiscal accountability, administering multi-investigator research creates a number of special challenges which are difficult to manage in diffused operating environments.

The report concludes that the current TAMUS organizational structure, with separate and 'siloed' contracts and grants offices, is not well aligned to address many of the institution's future strategic growth requirements involving increased interdisciplinary research, research teaming and coordination necessary for preparation of more complex system-wide proposals.

Organizational Streamlining to Support Improved Resource Utilization in Research

Among strategic imperatives specifically described as "shared research facilities and leveraged expertise", the TAMUS strategic plan calls for improved utilization of existing System resources and more effective resource sharing throughout member institutions.

- "The A&M System commits to effective and efficient utilization of resources throughout the A&M System. The A&M System will improve its ability to share resources and expertise throughout member institutions." (*TAMUS Strategic Imperative III, "Research for Tomorrow", page 24*)
- "Implement procedures to improve knowledge and utilization of currently existing resources throughout the System, other universities and systems and commercial partners." (*TAMUS Strategic Imperative III, "Research for Tomorrow", page 25*)

The area of research administration is also explicitly addressed in The Texas A&M Strategic Plan, *Vision 2020* which recommends coordination of research administration in order to unify implementation of the university's research program and to effectively deploy Texas A&M University faculty and physical resources.

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- “A strategic goal in Vision 2020 calls for “coordinat(ing) research administration in order to unify the planning and implementation of the university’s research program and to effectively deploy Texas A&M University faculty and physical resources.” (*Vision 2020, “Precept: Expect and Support Research and Scholarship of the Highest Caliber”, page 21*)

The report concludes that, while organizational streamlining has remained a much studied topic at TAMUS in recent years, little progress has been made and that this must be considered an immediate priority in managing scarce capital and other resources.

2. *Balancing Operating Efficiencies with Improved Services*

Concerns persist regarding potential tradeoffs between needs for improved cost efficiencies in research administration at TAMUS and continuing needs for improved customer service to research faculty. In a satisfaction survey of 831 Principal Investigators, research faculty indicated they were predominately ‘somewhat satisfied’ with current research administration services. This result can be evaluated in a number of important contexts.

For example, even with existing levels of service coverage in the distributed network of research administration at TAMUS, “somewhat satisfied” ratings reflect a number of continuing opportunities for improved service. As importantly, however, with a majority of scores in only the “somewhat satisfied” category of customer satisfaction, risks associated with potential service disruptions to research faculty could be high, if service coverage in select areas is reduced.

For these reasons, any proposed changes in organizational structure should be considered with an awareness of on-going customer service requirements, particularly with aggressive growth plans in sponsored research expenditures at TAMUS.

3. *Systems Approach*

As separate contracts and grants offices have evolved at TAMUS over time, it has created deep structures⁹ and hierarchies in organization, communication and work flow management which have led to isolated and fragmentary decision-making. We recommend more of a systems approach be taken in research administration at TAMUS to accomplish the following:

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- Establishing an organizational boundary around research administration with:
 - Common Management;
 - Common job descriptions and policies;
 - Standardized work processes; and
 - Consistent measurement parameters.

 - Improved coordination of workload, which can be translated to improved service quality;

 - Utilize shared services in such areas as, among other,
 - ITC
 - General and financial accounting
 - Purchasing
 - Travel reimbursement
 - Human resources
 - Risk management

A systems approach recognizes the importance of increased interdependencies among research administrators across TAMUS in providing improved services to faculty. This type of holistic approach in managing at a System level also emphasizes improved integration and communications among research administrators in one community of practice, for improved organizational learning and sharing of best practices to support desired service improvements.¹⁰

The report concludes that without more of a Systems approach to managing contracts and grants, achieving desired gains in productivity, efficiency and service quality from current levels will be difficult and that risks of sup-optimizing performance will be greater.

4. Potential Resistance to Organizational Change

We have assessed both a high degree of organizational inertia and resistance to change in the current operating environment for research administration among System members and faculty at TAMUS, in favor of the status quo.

Much of this risk relates to the organizational culture and history of research at TAMUS. Research has evolved within a System that includes 11 universities and seven state agencies, each with its own mission, organizational structure, funding mechanisms, indirect cost structure and distribution.

Any change in organizational structure necessarily tends to draw resistance. Such changes must focus on the behavioral elements in play. Our assessment indicates that varying group loyalties, cohesiveness, expectations and routines have evolved at the various contracts and grants offices.

Assessed resistance to organizational change could create related risks to effectively implementing desired organizational design alternatives. These risks could include potential for declining employee morale and attitudes from restructuring and related effects on research administration service levels, and possible increased levels of employee turnover in critical service areas.

In our view, any organizational restructuring will require effective planning, leadership, effective communication with the stakeholders and implementation in the shortest amount of time possible. As part of the process training, recognition and reward systems must be established to reinforce desired behaviors.

5. Improved Business Processes as Part of Organizational Change

As part of the baseline review, we evaluated a number of core functions and business processes of research administration at TAMUS including:

- Capacity building and sponsored program development
- Coordination of interdisciplinary research
- Customer service programs
- Proposal development
- Proposal review, submission and approval
- Budget development
- Awards negotiation and acceptance
- Awards management
- Research and contract compliance
- Financial management and reporting
- Performance management

- E-research and
- Research administration support and training

Process improvement and re-design can yield a number of benefits in contract and grant administration including: more effective utilization of resources; reduced processing time and backlog; increased quality from reduced errors and rework; and increased efficiencies from standardization.

Business processes at TAMUS were evaluated using results from the internal baseline review of operations (including survey results from PI's and research administrators) and a high-level comparison with best practices and 'ideas that work' from participating benchmark institutions.

Combined Feedback from Research Faculty and Research Administrators

As part of surveying PI's at TAMUS, we asked them to evaluate their satisfaction with a number of core processes in pre-and post-award service delivery. Based on combined satisfaction levels of key pre- and post-process and service areas, the following table provides areas where the greatest variability in scores was assessed, again, where 4 = Neutral; 5 = Somewhat Satisfied; 6 = Satisfied and; 7 = Very Satisfied: Results suggest unevenness in service levels and satisfaction among a number of sub-service and process areas of research administration across the System.

PI Customer Satisfaction Survey Results; Areas of Greatest Variability in Assessed Scores (excluding HSC)

Pre-Award Sub-Service Areas	<u>Lower Bound</u>	<u>Upper Bound</u>
- Award review and approval	5.2 (AgriLife/ TAMU RS)	6.5 (TTI)
- Contract negotiations	4.4 (TAMU RS)	6.4 (TTI)
Post-Award Sub-Service Areas		
- Establishing awards and accounts	4.4 (AgriLife)	6.5 (TTI)
- Project monitoring and management	4.2 (TAMU RS)	6.2 (TTI)
- Purchasing	4.4 (TAMU RS)	6.3 (TTI)
- Billings	4.4 (TAMU RS)	6.3 (TTI)
- Account close-out	4.5 (AgriLife)	6.3 (TTI)

Research Administrator Satisfaction Survey Results: Areas of Variability in Assessed Scores (excluding HSC)

Pre-Award			
-	Contract Negotiations	4.47 (AgriLife)	6.38 (TAMRF)
Post-Award			
-	Account close-out	4.79 (AgriLife)	6.64 (TAMRF)

In a separate survey, we also asked research administrators to “please indicate how you think the majority of your ‘customers’ (e.g. PI’s and external research sponsors) would rate performance of your research administration unit” in key pre- and post-award service areas. As seen in the table above, similar to results in the PI survey, areas of significant service variability in pre-award business processes also focused in contract negotiations; and in post-award, on account close-out. Reduced variability through improving services and satisfaction levels in these areas throughout the System should be a key priority.

One area of interest was the variability of scores in these and other areas between research administrators, who as a group tended to evaluate their performance positively, and Principal Investigators, who disagreed.

Summary of Baseline Assessment of Core Processes

Among System members, business processes and systems in research administration were assessed strongest in TAMRF and TTI. Particular strengths were noted in the quality of customer service provided to faculty by these two entities. TAMRF exhibited a number of other strengths in pre-award processes and services, customer feedback and in performance measurement practices, as part of managing operations, and offers the types of services typically found in leading university offices of sponsored programs.

Combining results from the surveys, interviews with key operating executives at TAMUS and ‘ideas that work’ at participating benchmarks, the following represent key process improvement opportunities identified in two of the more important process areas, involving workload coordination and service programs. The discussion regarding remaining assessed process improvement areas can be found in the appendices.¹¹

Coordination of work flow and interdisciplinary research: With five separate contract and grant offices, supported by additional staff in Colleges and units, TAMUS was assessed as clearly unique among the benchmarks, in providing distributed services.

All institutional benchmarks evaluated in the research have some form of centralized research administration office. University of Texas, Purdue and University of Wisconsin have integrated pre- and post-award services offices, while Michigan State University is in process of organizing a new Office of Sponsored Programs, with pre- and post-award service functions. The University of Washington, Pennsylvania State University and University of Florida have sponsored program offices focusing in pre-award, supported by separate grant and contract accounting offices.

All benchmark institutions in the sample maintain a centralized research accounting function, which was assessed as a positive factor in coordinating workload, managing research compliance and contractual risk.

Emphasis on Hybrid, Distributed Service Delivery

While maintaining strong centralized research administration offices, six of the seven institutional benchmarks provide a hybrid, and/or distributed set of services in pre- and post-award.

- University of Wisconsin is among the more distributed research administration service networks in the U.S., supported by strong pre- and post-award service delivery functions throughout its Colleges.
- In March of this year, Purdue University Sponsored Program Services (SPS) completed a re-organization, distributing its direct pre-award personnel throughout Colleges as part of continuous service improvements.
- The Office of Sponsored Programs at Pennsylvania State University has placed employees in each of the 11 Colleges for enhanced coordination of pre-award services, while working with supporting staff directly employed in the Colleges and units.
- The University Of Washington Office Of Sponsored Programs provides pre-award services and reports directly to the VP for Research, while Grants and Contracts Accounting provides post-award services and reports to the Associate VP for Financial Management. Both entities coordinate with pre-and post-award research administrators employed in the university's 15 schools and colleges.
- The University Of Florida Division Of Sponsored Research is largely centralized, but in recent years has placed personnel in the College of Engineering and College of Medicine, based on continuing service needs.
- Michigan State University is organizing a new Office of Sponsored Programs with 45 people in pre- and post-award, supported by between 100 and 120 pre-award staff located and employed in the colleges and units.

'Ideas that Work': As indicated by these benchmarks, offering more distributed services has been a continuing focus by leading research universities in efforts to improve services to faculty. Based on our assessment, these efforts at benchmark institutions have provided a number of combined service benefits relating to more effective workload distribution and improved service interactions, while managing costs through effective leveraging of resources.

Recent emphasis on distributing central pre-award personnel to Colleges at both Purdue and Florida were represented as highly successful initiatives, largely due to improved working relationships between faculty and research administrators, as well as improved response time in addressing faculty needs.

In our assessment, we believe the distributive pre-award services in place at TAMUS is a strategic advantage in continued support for sponsored programs development; however, the current structure is sub-optimal in post-award and coordination of workload at a System level.

Customer service programs: The Texas A&M Research Foundation and TTI were both assessed as having active customer service programs, involving strong on-going monitoring, measurement and customer feedback. These two System members also obtained the most consistently high customer satisfaction levels for pre- and post-award service delivery among System members, as rated by PI's in the surveys.

As noted previously, however, overall customer satisfaction levels were primarily rated "somewhat satisfied" for TAMUS overall, with high degrees of variability among System members.

'Ideas that Work': Among the benchmarks, Purdue exhibited the strongest focus on customer service programming. The Director there has noted that a key to making the distributed pre-award service model successful is recruiting staff with strong customer service skills. Purdue's SPS has a formal customer satisfaction feedback mechanism, with survey results posted to the SPS web-site to ensure appropriate accountabilities for continuing improvement services. In addition, Purdue SPS has organized its contract and grant management capabilities around 'cross-functional teams' to enable more effective execution of projects and a reduction in 'siloes structures' involving research administrators in central and colleges/units, that impair coordination and collaboration.

Cost Analysis

The analysis of costs included costs reported in the Phase I RASS Committee Report, as well as by System members in management information provided to Schaefer & Company as part of the assignment.

Phase I RASS Report

In June, 2009, The Texas A&M University System (TAMUS) Board of Regents recommended the formation of a Research Administration Shared Services (RASS) Committee for purposes of reviewing contract and grant administration, including pre- and post-award services for extramural sponsored projects.

The RASS Committee was established to identify efficiencies in research administration and compliance and improve risk management, while maximizing the quality and services of research administration. In November, 2009 the RASS Committee issued its Phase I Report which reviewed contract and grant administration, focusing on such pre-award services as: preparation of proposals, submission, routing and review/approval; and contract negotiations; and post-award services, including accounting set-up, compliance with sponsor requirements and account close-out.

As part of the Report, the RASS Committee conducted a comprehensive cost analysis of sponsored projects administration among the six major System members located in College Station, Texas. The comprehensive cost analysis in the Phase I RASS Report considered total research administration costs at TAMUS that included direct employees located in contract and grants offices and also administrative as well as other personnel providing research administration support in the Colleges, Departments and units.

The Phase I RASS Report estimated total costs for research administration at TAMUS, including central pre- and post-award services, Colleges, Departments and units of \$18.5 million.¹² Additional fees paid by System members to TAMRF of \$5.9 million are not included in this cost figure.

Reported Actual Costs by System Members

In May, System members were asked to provide actual cost trends pertaining to overall research administration and discrete areas of pre- and post-award, as part of an information request for the assignment. As summarized in the table on the following page, actual costs were reported to be \$17.5 million. While we did not attempt to conduct a reconciliation with expenses indicated in the Phase I RASS Report of \$24.5 million (which includes fees paid to the Foundation), variances may have been attributable to differences in reporting periods and other factors.

Pre-Award Actual Expense Trends

	2005	2006	2007	2008	2009
AgriLife*	\$ 209,136	\$ 210,400	\$ 224,787	\$ 294,659	\$ 346,656
HSC	42,667	47,072	53,842	58,822	59,569
TAMRF	1,576,608	1,649,230	1,667,936	1,683,985	1,685,353
TAMU RS*	n/a	n/a	155,066	155,066	200,422
TEES	1,461,073	1,562,278	1,586,361	1,655,324	1,743,316
TTI	354,635	373,266	391,870	414,114	400,856
Est. Total	\$ 3,644,119	\$ 3,842,246	\$ 4,079,862	\$ 4,261,970	\$ 4,436,172

* Responded with budgeted vs. actual

Post-Award Actual Expense Trends

	2005	2006	2007	2008	2009
AgriLife*	\$ 471,318	\$ 477,905	\$ 509,009	\$ 606,027	\$ 662,019
HSC	28,500	29,000	30,000	30,000	31,000
TAMRF	4,606,504	4,644,093	5,049,567	5,033,625	5,285,106
TAMU RS*	n/a	n/a	248,940	248,940	373,309
TEES	3,802,063	3,993,713	4,221,558	4,370,599	5,176,365
TTI	2,009,601	2,115,171	2,220,596	2,346,647	2,271,516
Total	\$ 10,446,668	\$ 10,781,977	\$ 11,770,661	\$ 12,029,811	\$ 13,137,296

* Responded with budgeted vs. actual

Reported FTE's and Related Salary/Benefit Expense

As noted in both the Phase I RASS Report and reported actual costs reported by management, salaries/fringe benefits account for the largest single expense item in total operating costs at TAMUS. To reiterate, the RASS report indicates 355.45 total FTE's in research administration which includes direct contract and grant office employees as well as research administrative support staff in colleges and units.

For this engagement, management of System members reported 218.4 direct employees, of which 97.8 are involved in direct pre- and post-award services and 120.6 are directly involved in 'other' administrative and managerial support for research administration.

Assessed Opportunities for Improved Cost Efficiency

We assessed advantages in reported operational efficiencies among centralized research offices compared with TAMUS's current structure. When comparing direct FTE's at TAMUS with the benchmarks, the combined number of 97.8 direct pre-and post-award FTE's at TAMUS appears reasonable. A primary concern however, was the number of 'other' management and administrative staff required to support direct pre- and post- award among separate contract and grant offices at TAMUS. 'Other' administrative and support FTE's represent nearly 60 percent of the total 218.4 direct research administrative FTE's reported.

An evaluation of reported direct and indirect employees in research administration at TAMUS indicated a high concentration of managerial, finance, general administrative and other 'back-office' support personnel. This was clearly less of a requirement among more centralized research administrative offices. At TAMUS, TAMRF and TEES account for a total of 167 (76.5 percent) of the 218.4 total direct FTE's, of which 101.7 were in 'other' administrative and support personnel.

Reported 'other' administrative and support among direct FTE's is predominately reflected in actual costs associated with post-award. As seen in the following table, nearly 74 percent of reported actual costs in research administration at TAMUS over the past five years have been in post-award.

	2005	2006	2007	2008	2009	Total
Pre-award	\$ 3,644,119	\$ 3,842,246	\$ 4,079,862	\$ 4,261,970	\$ 4,436,172	\$ 20,264,369
Percent of Total	25.9%	26.3%	25.7%	26.2%	25.2%	25.8%
Post-Award	10,446,668	10,781,977	11,770,661	12,029,811	13,137,296	58,166,413
Percent of Total	74.1%	73.7%	74.3%	73.8%	74.8%	74.2%
Total	\$ 14,090,787	\$ 14,624,223	\$ 15,850,523	\$ 16,291,781	\$ 17,573,468	\$ 78,430,782

Of further note, TAMRF and TEES accounted for approximately 79 percent of total costs, or for \$13.9 million of the total \$17.5 million in actual costs reported in 2009, and approximately 80 percent of reported post-award expense for the five year period. We have concluded that if approximately 80 percent of reported actual total costs and approximately 80 percent of actual costs in post-award are currently centered within TAMRF and TEES, it could suggest potential focus areas for desired operational improvements.

Recommendations for Selective Restructuring

Taking into account combined service and strategic growth needs as well as required operational/cost efficiencies, we recommend consideration of selective restructuring of research administration. This approach is one which seeks to maintain the existing research competitiveness of faculty through a continued distributed network of pre-award services, while consolidating post-award and back-office functions as part of shared services.

Organizational Design Alternatives

Recommended Hybrid, Shared Services Organizational Structure

As part of our assessment we have considered three principal scenarios for structuring research administration described as follows:

- Maintaining status quo, and the existing distributed network of contract and grant administration offices among System members, with continuing autonomy;
- A hybrid strategy, which maintains a distributed network of pre-award services at System member locations, while consolidating post-award and related back-office functions as part of a new shared services function and;
- Full consolidation of pre- and post-award in a centralized contracts and grants office with no research administration.

Below is a brief description and summary of assessed advantages and disadvantages assessed for each scenario.

Scenario I: Maintaining Status Quo

- Existing distributed network of contract and grant administration offices among System members, with continuing autonomy
- Maintains existing relationships between System member PI's and research administrators
- Existing direct report relationships between System member RA's and System member CEO's

The status quo forms the baseline for comparison with other scenarios and reflects continuation of the current state of research administration. Clearly favored among both research faculty and senior research administration officials, primary concerns assessed in the research were over potential loss of services to faculty.

Potential Advantages	Potential Disadvantages
<ol style="list-style-type: none">1. Maintains existing pre- and post-award working relationships between PI's and RA's2. Customer service3. Maintains higher levels of System Member autonomy4. Maintains critical domain knowledge at SM locations related to specific contract/grant requirements5. Perceived favorably by PI's and many RA's	<ol style="list-style-type: none">1. Multiple hierarchies/management structures2. Increases potential inefficiency / related costs3. Adverse impact on required coordination, integration of work flow and sharing of best practices to support future capacity demands4. Inconsistent policies, performance measures and internal business processes5. Inconsistent financial/administrative and regulatory risk management

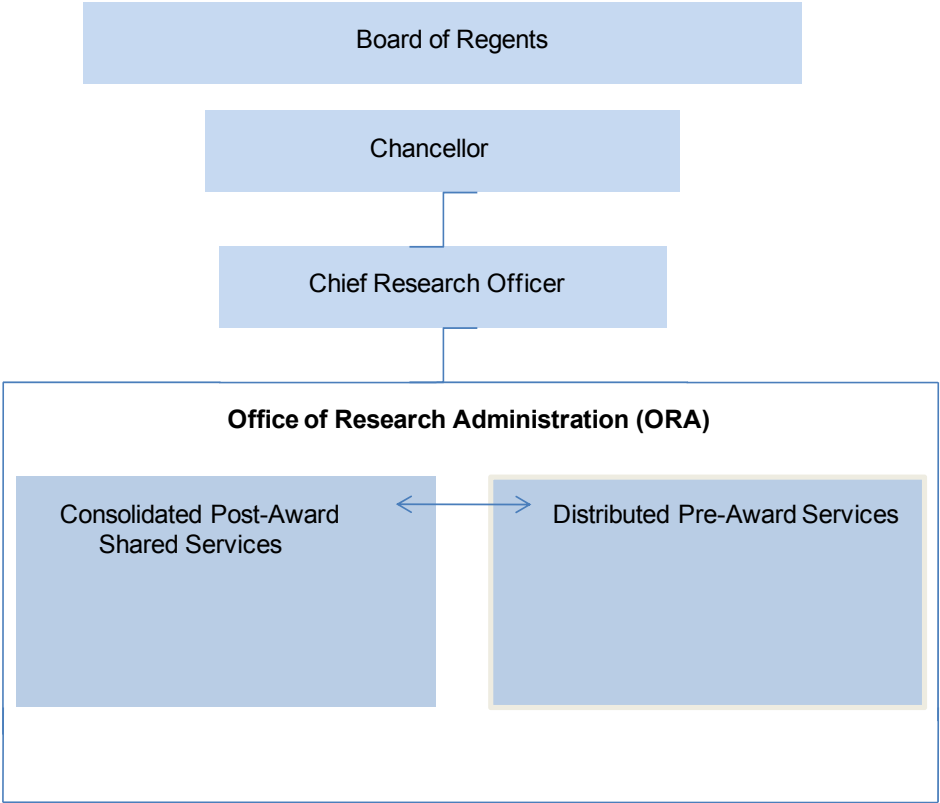
Scenario II: Moving to a Hybrid, Shared Services Structure

- Maintains distributed network of DIRECT PRE-AWARD FTE's in appropriate locations for continued service delivery, supported by MAESTRO research administration database and management capabilities
- Creation of a new Office of Research Administration (ORA), reporting to Chief Research Officer of the System
- Network includes ALL DIRECT PRE- AND POST-AWARD personnel reporting to ORA/Chief Research Officer regardless of where they are located, to optimize performance in operational efficiency, capacity and risk management; as well as sharing of best practices
- Creation of Shared Services for CENTRALIZED POST-AWARD SERVICES at System level, housed in one location, including fiscal management, financial analysis, post-award and non-project accounting/financial management and administration, purchasing, AP/AR, HR, IT, risk/compliance and other related functions.

Potential Advantages	Potential Disadvantages
<ol style="list-style-type: none"> 1. Maintains existing working relationships between PI's and direct pre-award RA's to support required customer service levels 2. Improved coordination of workflow, integration and flexibility through managing more at a Systems level vs; within individual contract and grants offices 3. At lower overall cost basis with shared services in post-award 4. Eliminates potential duplication, required specialization and management layers 5. Maintains critical domain knowledge at SM locations in specific functional/technical areas 6. Focuses on managing actual costs where greatest, in post-award / TEES and TAMRF 7. Improved control environment and alignment of contractual and other risk management 	<ol style="list-style-type: none"> 1. Potential near term risk of service disruption from required organizational changes to shared services 2. Creation of another service organization with required employees and management structure, if existing System members 'opt out' or 'game the system' in not participating, so streamlining cannot be accomplished in targeted shared service areas 3. Difficulties arising from competing hierarchies of control and reporting relationships (e.g. with pre-award having a reporting relationship to System, yet domiciled in System member locations) and related impact on service delivery, with mix of centralized and distributed services

Proposed Organizational Structure

Scenario II: Hybrid Structure



Scenario III: Full Consolidation of Pre- and Post-Award Services Research Administration

- Creation of a single shared services bureau for all pre- and post-award management, similar to a centralized, Office of Sponsored Programs for improved operational, capacity and risk management, as well as sharing of best practices

Potential Advantages	Potential Disadvantages
<ol style="list-style-type: none"> 1. Further lowers overall cost basis through consolidation of all service functions in contracts and grants 2. Improves coordination of work flow, and integration of RA's in one network 3. Eliminates potential duplication, required specialization and management layers while 4. Improved alignment of risk management 	<ol style="list-style-type: none"> 1. Perceived adverse impacts from System members and PI's through loss of autonomy/control of RA network 2. Potential risk of service disruption from required organizational changes to consolidated shared services 3. Perceived unfavorably by faculty as loss of convenience and service 4. Creation of another service organization with required employees and management structure, if existing System members 'opt out' or fail to streamline in targeted shared service areas 5. Difficulties from 'divided loyalties' and competing hierarchies of control and related impact on strategic service relationships between RA's and PI's

In sequence, we looked at organizational design and process improvements as an initial stage. Then we estimated cost savings primarily as a function of reducing headcount. The full consolidation, while appealing is less desirable.

We would anticipate additional cost savings from recommended organizational restructuring and related efficiencies, in both cost structure and fees for services currently paid by select System members to the Texas A&M Research Foundation.

Our estimates of cost savings are predicated on the average cost per FTE per information provided in the RASS Report of approximately \$60,324 across system members. We assumed that all costs other than salary and benefits would remain constant across scenarios.

For purposes of the analysis, we created a boundary around research administration which includes people directly involved in pre- and post award services, and persons in the 'other' category required for support, as reported by each research administration unit.

Our analysis of the number of FTEs under each scenario was informed by reported productivity levels per direct pre- and post FTE at four institutional benchmarks. Such information on headcount was obtained directly in interviews with benchmarks and verified by review of their organizational charts. Only benchmark data for universities in our sample which had available organizational charts was considered. The current state analysis considers no adjustment in FTEs and is consistent with data provided in the RASS report.

We estimate a minimum of 20 percent in savings from the hybrid model or between \$2.7 million and \$3.9 million, depending on varying assumptions for reductions in the 'other' administrative and support category resulting from shared services. Our estimates of the personnel reductions ranged from 20 percent to 30 percent to be conservative. We believe that the actual reductions may be greater. The estimate is offered as a minimum, based on additional savings anticipated from desired process improvements.

The third approach, which suggests the greatest absolute cost reduction in research administration, is full consolidation. Under this scenario, the total FTEs tied to the research administration would be minimized, resulting in total cost savings in the magnitude of \$4.5 to \$5 million.

Our recommendation that the hybrid alternative be chosen is based on observed trends within the benchmarks and other universities to more distributive/hybrid model for improved services to faculty and the fact that TAMUS is strategically advantaged in this area due to its existing infrastructure.

To these ends, movement to a hybrid model maintains critical relationships in pre-award services at System member locations to support continued strengths in sponsored programs development and growth in research expenditures. At the same time, such a strategy allows for consolidating research administration where costs are greatest in post-award services in order to maximize cost efficiency. We also advise the hybrid approach as we believe it will minimize real and perceived disruptions in services.

We have also concluded that such an approach would provide for an improved internal control environment from a risk management perspective relating to contract and administrative risk.

It is our opinion that full consolidation, while appealing from the standpoint of maximizing efficiency and absolute cost, is less desirable when considering cost/benefits versus both real and perceived service disruptions and assessed high levels of resistance to organizational change assessed in the engagement.

Focus on Post-Award

Based on management information, approximately 74 percent of actual research administration costs over the past five years were reported in post-award. Approximately 80 percent of post-award expense in 2009 was reported in two System members, TEES and TAMRF. For these reasons, our recommendation would seek to combine TAMRF and TEES post-award units, and other remaining post-award units where possible, thus eliminating staffing redundancies, required specialization and management layers.

Creating an Office of Research Administration

We recommend that all direct employees involved in pre- and post-award services, related management and administration will be part of a System-based Office of Research Administration (ORA) reporting to the Chief Research Officer.

The ORA would be responsible for the efficient and productive management of pre- and post-award services and related customer service excellence, involving performance oversight from an overall System perspective. Specific responsibilities would include:

- Monitoring workload distribution and research administration productivity within the network
- Monitoring efficiency and productivity of shared services
- Monitoring satisfaction levels among principal investigators and sponsors
- Provide regular reports to CEOs concerning efficiency improvements within their units
- Provide periodic reports to Chancellor and Board of Regents on implementation progress
- Authorization on hiring and employee evaluation
- Training and certification programs
- Implementation of management systems

Management Plan, Improved Business Processes and Performance Management

The restructuring would begin with development of a management plan which serves as a basis for successfully implementing, communicating and coordinating desired improvements in sponsored programs and research administration. The planning process would include development of a set of common job descriptions, performance objectives, targets and measures which can be used to monitor progress among key milestones.

Regardless of alternatives chosen, any organizational change must first focus on development of a management plan, which includes the following:

- Vision for operational improvement from customer, business process, financial and human resource perspectives
- Specific goals, targets and measures for performance management and monitoring in these four areas
- Recommended organizational changes and strategic human resource recommendations (in consultation with senior Systems and TAMU HR officials)
- Prioritized business process improvement and re-design initiatives
- Implementation plans and timing
- Communications plan

Timing

We believe desired restructuring and process improvement need to be implemented quickly and effectively to reduce uncertainty and to ensure a level of predictability to employees. Assuming commencement of the project in February 2011, and pending availability of System member officials for participation in the re-structuring initiatives, the following represent proposed milestones associated with proposed implementation:

1. Development of draft management plan for shared services for review by Board of Regents
Target Date for Completion: March 31, 2011

2. Development of process improvement initiatives to prepare for implementation
Target Date for Identifying Key Process Improvement Priorities: March 31, 2011
Target Date for Completing Design of Process Improvements: May 1, 2011

3. Development of balanced scorecard performance management program for contracts and grants administration
Target Date for Completion: June 30, 2011

4. Begin implementing new shared services network
Target Date: September 15, 2010

Services

The new consolidated, post-award shared services office would offer the following post-award services: post-award and non-project accounting/financial management and administration, purchasing, AP/AR, HR (research administration-related), IT, risk/compliance and other related functions.

Service Fee Structure

System Members would be charged a service fee by The ORA, as a 'cost of doing business.' Similar to the model established for the Institute for Innovative Therapeutics (IIT Model), System members would pay for services based on their proportionate use. If operating deficits were to occur in any given operating year, the deficit is funded by System Members based on pre-defined formulae. Again, similar to the 'IIT model', System member CEO's and COO's would serve on an oversight board which provides input into financial and operational management issues.

Notes

¹ Based on management information provided by System members in response to management information request in May, 2010 for this engagement.

² Research Administration Shared Services Committee Phase I Report to The Texas A&M University System Board of Regents”, November 2009;

³ See W. Edwards Deming, *Out of the Crisis*, MIT Center for Advanced Engineering Study, Cambridge, Mass., 1986; Andrea Gabor, *The Man Who Discovered Quality*, Random House, Inc., NY, 1990; Deming contends that many troubles with service and productivity lie in the System of which they are a part. He identifies two types of faults, relating to special causes which are created by “fleeting events”, and common causes. Common causes are those inherent in the system and if managed effectively, represent the greatest opportunity for long-term improvement.

⁴ See Appendix 2; Pre-Award productivity/efficiency comparison

⁵ See Appendix 3, Post-Award productivity/efficiency comparison

⁶ “Report on the Management Review of the Contracts and Grants Office, Texas A&M AgriLife Administrative Services, June 10, 2009”; Workload and staffing levels were key focus areas in which a comparison of staffing ratios was performed with other Tier-1 institutions (including University of Florida, University of Texas and Cornell University), as well as TEES and TAMRF. The report noted that the “aggregate direct research expenditures (for comparable institutions) was just over \$7 million for each pre-award staff member, and \$3.7 million per post-award employee.” At that time, direct research expenditures for AgriLife Contract and Grant office employees “were \$19.3 million per pre-award employee and \$6 million per post-award staff.”

⁷ “Research Administration Shared Services Committee Phase I Report to The Texas A&M University System Board of Regents”, November 2009; In a discussion of the sponsored projects cost ratio the report notes: “based on a recent internal review of their contracts and grants management office, AgriLife determined (its cost ratio) is not sustainable and that, under the present distributed system, significant additions to staff and other resources with associated costs would be necessary to bolster its central (contracts and grants) office for administration of sponsored projects.”

⁸ Customer satisfaction surveys were conducted as part of the engagement, of TAMUS Principal Investigators, research administrators and external research sponsors. Results of the PI survey are summarized in Appendix 4 of the Report.

⁹ Jeremy Seligman, “Building a Systems Thinking Culture at Ford Motor Company”, *Reflections, The Society for Organizational Learning Journal on Knowledge, Learning and Change*, Volume 6, Number 4/5; Seligman is director, IT Strategic and Organizational Development at Ford Motor Company and is a founding member of MIT’s Society for Organizational Learning Council of Trustees; The Society for Organizational Learning was formed in 1997 as an outgrowth of the MIT Center for Organizational Learning and is a learning community devoted to effective development of people and learning organizations; In his research, Seligman points to “deep structures” in organizations which produce organizational behaviors which frequently explain resistance to change. He cautions against trying to manage deep structures unless they are clearly within a manager’s span of control.

¹⁰ *Learning Organizations, Developing Cultures for Tomorrow's Workplace*, Edited by Sarita Chawla and John Renesch; Chapter 1, "Communities of Commitment: The Heart of Learning Organizations" by Fred Kofman and Peter Senge; Peter M. Senge, Director of the Center for Organizational Learning at MIT's Sloan School of Management (forerunner of the Society for Organizational Learning), is a leading authority on organizational dynamics, communities of practice and commitment and organizational learning. Learning organizations, according to Senge, are grounded in: respect for the individual; generative conversation and coordinative action and; the capacity to manage in ways utilizing systems thinking. Utilizing dynamic feedback mechanisms, learning organizations are characterized by people who constantly inquire into the systematic consequences of their actions, rather than managing parts of an organization in isolation, and who understand organizational interdependencies in the system influencing complex issues.

¹¹ See appendix 5: "Review of Business Processes"

¹² See appendix 6; "Revised Department Numbers" for total research administration costs in support of the Phase I RASS Report, November, ,2009