



**Nomination Proposal**  
**SACUBO 2008 “Best Practices” Award**

**Texas A&M University’s Budget Model**  
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# DIVISION OF FINANCE

***Vision: Be The Benchmark***

## **Abstract**

*In 2004, Texas A&M University's Division of Finance was up against several budgeting and financial analysis-related challenges. Turnover had decimated the knowledge base at senior levels; loss of institutional knowledge was compounded by outdated legacy systems; and budgeting and financial analysis of strategic initiatives was largely a manual driven process involving a number of resources across the university. In response to these challenges, division staff embarked on a project to develop a Budget Model which would reduce "people dependencies" related to the budget; automate budget modeling; provide for one central store of budget inputs and drivers; and allow for scenario and sensitivity analysis related to proposed strategic initiatives. In the end, Texas A&M now has a centralized tool that takes into account both financial and operational statistics and their relationships with each other in order to predict a resulting outcome. Modeling of the budget and financial analysis of strategic initiatives is no longer people dependent. Retirement of long-term employees is not quite as daunting as it was before. While the university contemplates replacing old legacy Systems, the budget model has provided a low-cost solution to data and analysis needs.*



**DIVISION OF FINANCE**  
*Vision: Be The Benchmark*

### **Texas A&M University Overview**

Texas A&M University (Texas A&M) is the seventh largest institution of higher learning in the nation, with an enrollment of more than 45,000, including approximately 8,400 studying at the graduate level, pursuing degrees in more than 100 fields. Its 2,500-member faculty is nationally and internationally renowned, with winners of the Nobel Prize, Pulitzer Prize, World Food Prize and other top awards among its ranks. The university is nationally ranked for enrollment of National Merit Scholars (136 in its current freshman class), its research (totaling more than \$550 million annually) and size of endowment (more than \$4.4 billion). It is one of a select few institutions to hold triple federal designation as a land-, sea- and space-grant university. It is the oldest public institution of higher learning established in Texas, opening for classes on Oct. 4, 1876.

A 5,200-acre campus valued at over \$1 billion houses more than 100 buildings and a 434-acre research park. Texas A&M's Colleges of Agriculture, Business Administration, Engineering, Geosciences and Veterinary Medicine are among the largest in the United States, and its Corps of Cadets is the nation's largest uniformed student organization outside service academies. From the university's early focus on agricultural and mechanical studies, it has expanded to encompass ten colleges offering 151 fields of undergraduate study, 147 at the master's level, 105 at the doctoral level and two professional degrees: Doctor of Medicine and Doctor of Veterinary Medicine.

# DIVISION OF FINANCE

## *Vision: Be The Benchmark*

Texas A&M's Division of Finance, led by Senior Vice President and Chief Financial Officer, K. Sue Redman, is comprised of five components, over 2,000 employees and an annual operating budget of \$82 million. The five components are: Business Affairs, Chief of Staff, Controller, Employee Services and Finance and Strategic Sourcing. The division is the most demographically diverse in the university with 43.5% non-Anglo employees and 63.3% women employees.

### **Texas A&M University's Budget Model**

In 2004, the new Division of Finance leadership team at Texas A&M faced a number of concerning challenges related to budgeting and financial analysis: 1) turnover, largely driven by retirements, had decimated the knowledge base at senior levels; 2) loss of institutional knowledge was compounded by outdated legacy systems; and 3) budgeting and financial analysis of strategic initiatives was largely a manual driven process involving a number of resources across the university.

As a result, division staff embarked on a project to develop a Budget Model which would reduce specific "people dependencies" (i.e. serve as a knowledge database related to the budget as opposed to relying on a specific individual with institutional knowledge); automate budget modeling, replacing one-off excel spreadsheets or other modeling tools; provide for one central store of budget inputs and drivers, as opposed to modeling tuition in one department, legislative appropriations in another, faculty

# DIVISION OF FINANCE

*Vision: Be The Benchmark*

salaries in another, etc.; and allow for scenario and sensitivity analysis related to proposed strategic initiatives.

Development of the model was separated into four phases, approximating the university's four fund groups (Educational and General, Designated, Auxiliary, and Restricted). The first phase, the Educational and General (E&G) budget, has been completed. The next phases in progress include Auxiliary and Designated budgets, which will then be followed by our Restricted Fund budget.

To begin the development of the E&G budget, all of the individual components and associated inputs that make up the E&G budget were identified. Included in these components are, on the revenue side, enrollment data (both headcount and semester credit hours), tuition and fee rates, state funding, and indirect cost recovery funds, among others. On the expenditure side, the components include faculty and non-faculty salaries, graduate assistantships, fringe benefits, infrastructure costs, scholarships and fellowships, and other operating expenditures.

The next step in the process was to identify the most important drivers of each of the revenue and expenditure components. These drivers, coupled with a core set of budget assumptions based upon historical data, make up the backbone of the budget model. Over 100 inputs to the E&G phase of the model alone were identified and modeled.

These inputs include, among others: change in student headcount, change in average

# DIVISION OF FINANCE

## *Vision: Be The Benchmark*

semester credit hour load taken by students, student/faculty ratio, merit percentages, natural gas and electricity prices, and changes in campus space.

In addition, detailed modules related to state formula funding (presently consisting of an instruction and operations formula and an infrastructure formula in the state of Texas) were developed and built into the model. These modules not only factor in impacts to formula funding for Texas A&M, but also for all public higher education institutions in the state of Texas. Prior to development of these formula-funding modules, modeling impacts to state appropriations was a time consuming process, often dependent on analysis provided by The Texas A&M University System staff.

While actual development of the model was handled by Division of Finance staff, individuals across the university were tapped for their knowledge and assistance in identifying drivers and pulling in key inputs into the model. University System staff members were also integral in developing the formula funding modules. Because the model is built primarily using Microsoft Excel and Access, no other computing resources were required.

# DIVISION OF FINANCE

## *Vision: Be The Benchmark*

By creating this base model, the division transformed institutional knowledge into a workable model with proven, historical relationships. The university has used this model to analyze strategic decisions including those related to enrollment growth and flat rate tuition. While the model alone is not the only decision factor considered relative to a strategic initiative, it does provide a reasonableness check on assumptions and financial impacts. It has been useful in identifying cost impacts that were not considered originally in an analysis. Thus, the model helps in building meaningful, realistic, attainable budgets.

Texas A&M now has a centralized tool that takes into account both financial and operational statistics and their relationships with each other in order to predict a resulting outcome. Modeling of the budget and financial analysis of strategic initiatives is no longer people dependent. Retirement of long-term employees is not quite as daunting as it was before. While the university contemplates replacing old legacy Systems, the budget model has provided a low cost solution to data and analysis needs. The Division of Finance looks forward to adding additional phases to the budget model in the near future, building on the benefits and successes already realized.