

**Efficiencies and Effectiveness Accountability  
Report of the University of Missouri System**

**Fiscal Year 2015**

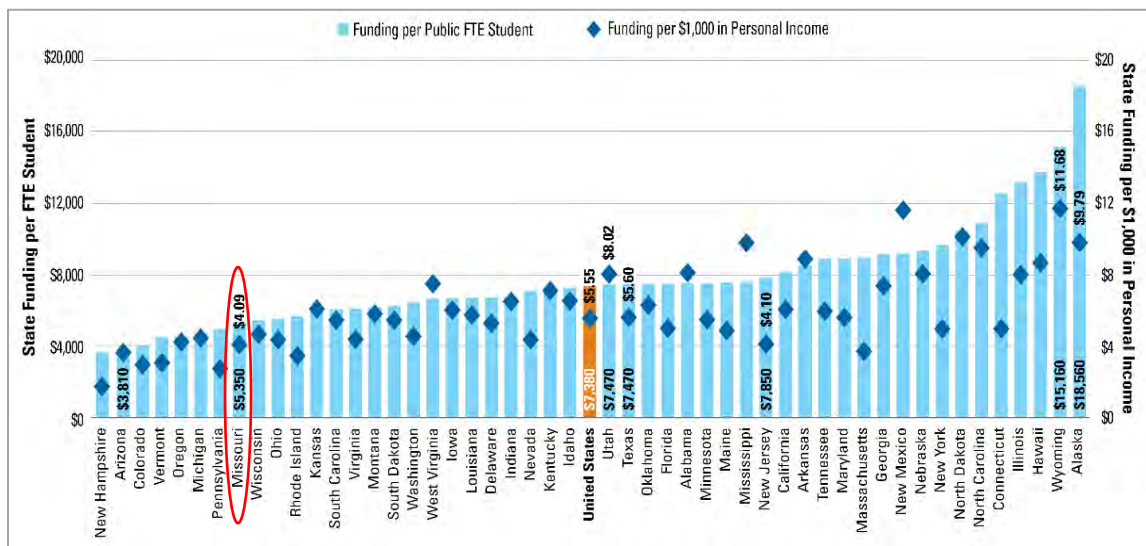
**December 2015**

# FY2015 Efficiencies and Effectiveness Report UM

## Public Higher Education Funding Landscape

One of the major sources of operating revenue for Public Higher Education is state appropriations. In recent years, this support has been on the decline across the country. However, the University of Missouri System saw a modest increase in state appropriations in FY2015. The increase in funding of 5.5% over FY2014 was a result of the University's performance as measured by the state. The University will receive a small increase in FY2016 as well based on performance. The State of Missouri now ranks 43<sup>rd</sup> in funding per student, which is a slight improvement from the previous year in which Missouri ranked 44<sup>th</sup>.

2014-15

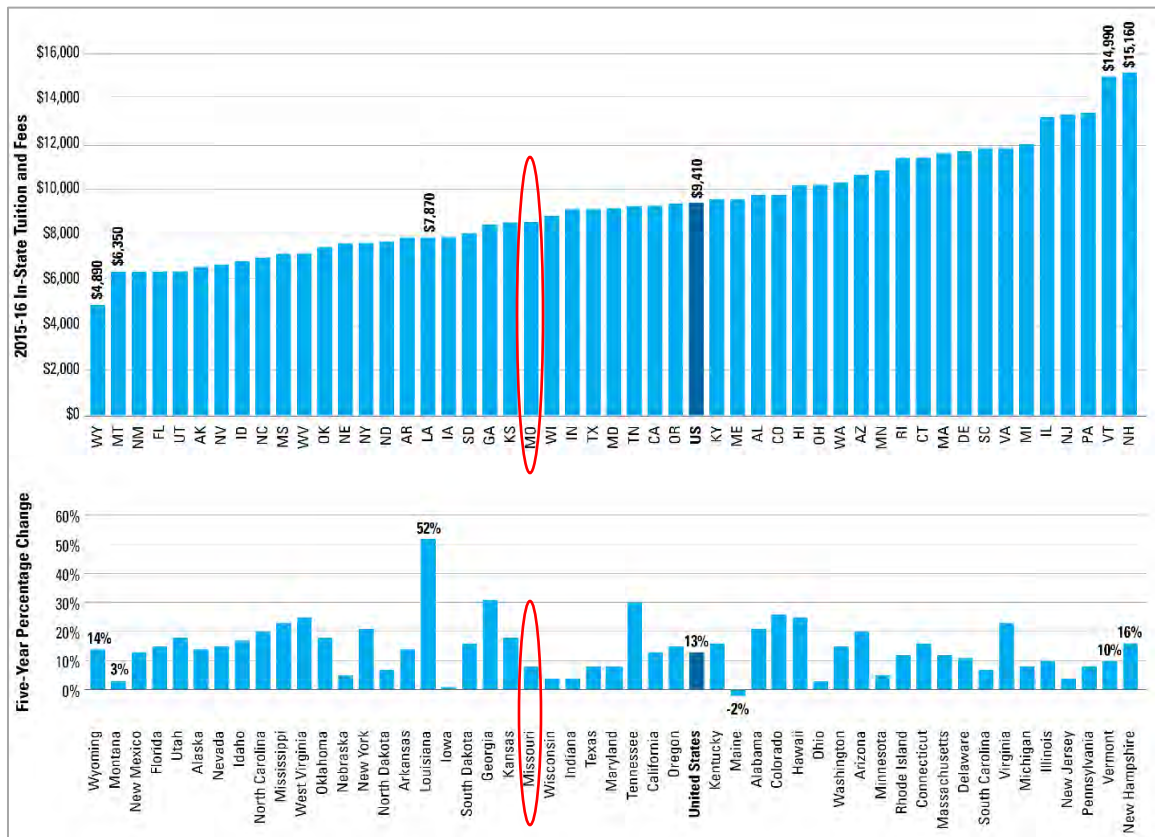


SOURCE: The College Board, Trends in College Pricing 2015, Figure 17B

## Tuition Changes

As a result of lower state funding, many universities have increased tuition to fill the gap in funding. The national trend over the last five years equates to increased tuition of 13% with the highest state's increase at 52%.

2015-16

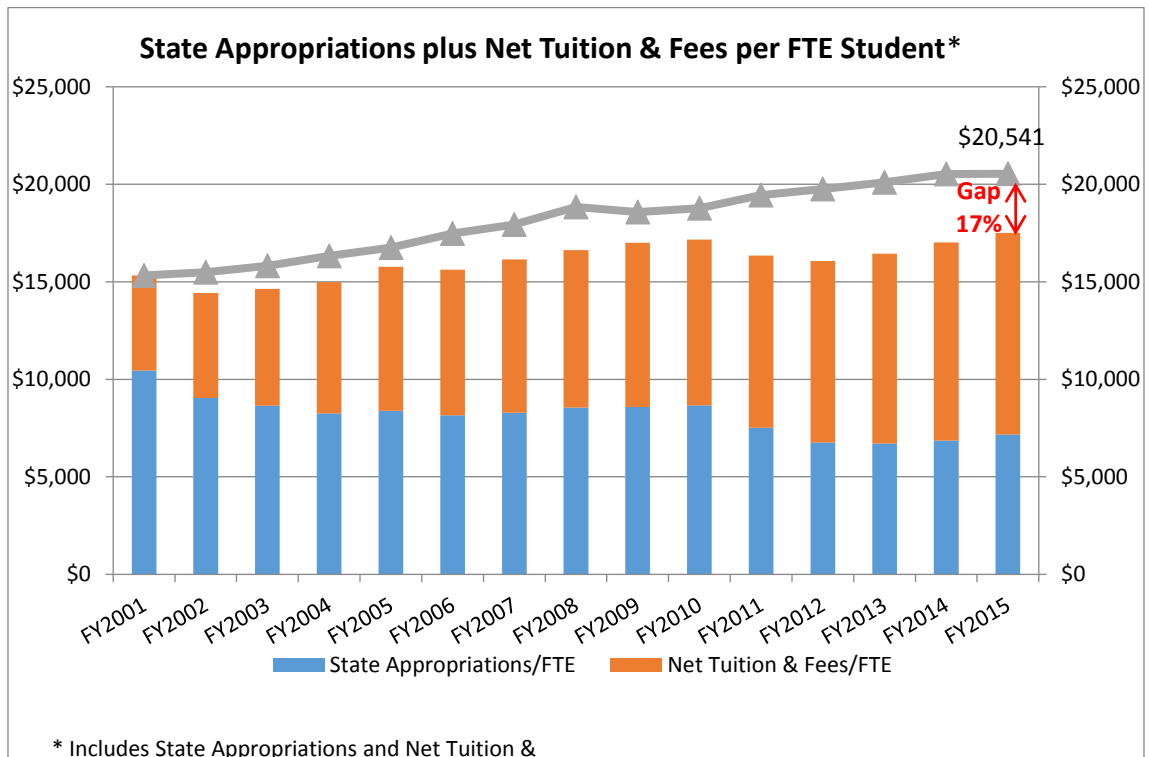


SOURCE: The College Board, Trends in College Pricing 2015, Figure 8

### Per Student Revenues Remain Lower Over Past Decade

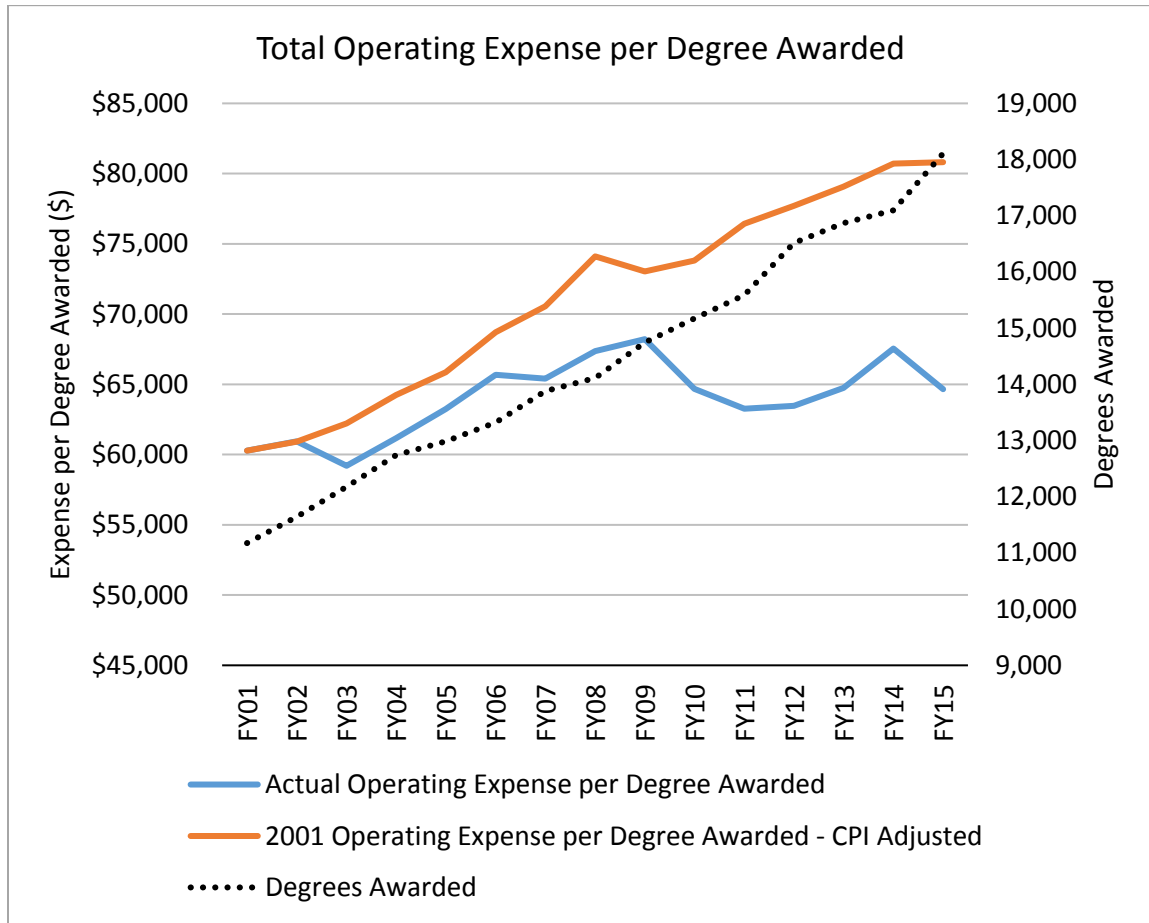
The two major sources of revenue for the general operations of the University of Missouri are net tuition and fees and state appropriations. Historically, these sources have contributed 85% or more of the total resources for general operations.

State operating appropriations increased over prior year by 5.5%, the largest increase in several years. Combined funding per full-time equivalent increased slightly as a result. The following chart shows total state appropriations and net tuition and fees per full-time equivalent (FTE) student since FY2001. State appropriations per FTE student have declined while net tuition and fees per FTE student have increased. In nominal terms, the University is receiving slightly more revenue on a per student basis than it did in 2001. There was a slight uptick in state appropriations per FTE in FY2015 combined with an increase in net tuition in fees resulting in a narrowing of the gap between revenues per student from 2001 to 2015 to 17%. The University's cost management and efficiency efforts as well as modest increases in revenues have helped to bridge this gap.



### Reduction in Operating Expenditures Per Degree

The University continues to make strides in reducing operating expenditures. The chart below demonstrates the increase in number of degrees award since FY2001, which has increased from under 11,000 to over 18,000. At the same time, the cost per degree has remained flat since 2008 in nominal terms. The actual operating expense per degree declined again in FY2015, representing close to a \$17,000 drop in real dollars since FY2001.



### Specific Activities to Achieve Efficiency and Effectiveness

The University has remained focused on reducing costs and increasing efficiency. Efforts have concentrated on implementing process redesign and shared services. This has been achieved with declining revenues on a per student basis while still maintaining good performance measures. The following are actions taken that increase efficiencies and effectiveness while saving money.

## **Intercampus Course Sharing**

The University of Missouri System provided funding to encourage faculty members to share their expertise with other system campuses. This initiative was designed to encourage the sharing of courses among the four campuses to increase options for students and provide opportunities for faculty development and collaboration across the system. Other benefits include:

- Allowing the University to utilize specialized faculty across different programs on multiple campuses
- Increasing the collaboration among faculty across campuses, leading to new linkages and ideas that potentially could foster new research collaborations
- Leveraging open seats across campuses to provide new course options for students
- Increasing the occupancy of classes, creating more time for faculty to focus on research activities or offer additional courses
- Building an infrastructure to create multivariate course paths for students in similar programs across campuses. For instance, three UM nursing schools are collaborating to provide statistics courses for graduate nursing students with classes taught on two campuses that allow graduates students to choose the specific courses that pertain to them.

There have been barriers in the past that have prevented course sharing including the loss of tuition fees at the home campus. In order to promote sharing of courses, the Office of Academic Affairs provided an incentive of \$300 per student that enrolls to the primary campus offering the course.

The goal is not to reduce the number of faculty but rather to make better use of the expertise of the faculty at the various campuses that may not be available at the other campuses. Each semester, the University intends to make approximately 20 courses available through this program. It is estimated that the program also provides for some cost savings although the main purposes is to increase course options for students and maximizing knowledge of faculty. To date, there have been 67 courses offered and 127 students enrolled in the courses that were not hosted by their home campus.

## **Custom Network Health Plan**

Like most employers across the country, the University of Missouri has struggled with increasing medical costs. Although the University has been rated in the top quartile for financial plan management in a Towers Watson study, the university has experienced a 21% growth in medical costs over the past 5 years, with revenue increases of only 15%. A number of initiatives are underway to ensure the sustainability and value of the University's Total Rewards, including the development of the Custom Network Plan.

The Custom Network Plan is comprised of a low cost, high quality provider network centered on the University's healthcare system with additional providers to ensure network adequacy. In an innovative change, provider reimbursement departs from the traditional fee for service model by adding a shared savings model based on improvement of quality and utilization metrics. This partnership between the University of Missouri System and University of Missouri Health aligns improvement efforts to better manage the health needs of the University employee population. The design is meant to link reimbursement to improvement of care quality and efficiency rather than solely the quantity of healthcare services provided.

Due to the changes in the plan design, the University is able to provide a benefit plan that has lower premiums and out of pocket to employees as well as lower costs to the University as compared to the traditional PPO option. To date, actual costs in the plan have trended in line with the calculated plan premiums. Benefit costs should be viewed on a longer time horizon due to volatility, but the initial returns are positive. If costs do increase, this plan gives the University a new means to collaborate with its internal health system to help attack the issue of healthcare costs within, rather than working solely through a third party insurance provider. The University is working to expand this model to the other UM campuses.

### **Insourcing Internal Audit**

The University began insourcing the Internal Audit function in 2015. This function was previously outsourced. The Office of Internal Audit and Consulting Services (IACS) was created to serve as the University's internal auditor. The mission of the office is to provide independent, objective assurance and consulting services designed to add value and improve the University's operations. It aids the University in accomplishing its objectives by bringing a systematic, disciplined approach to evaluate and improve the efficiency and effectiveness of risk management, control and governance processes.

The team has three distinct areas of expertise: Higher Education, Healthcare and Information Technology. This approach has the following benefits while being cost neutral to the University's budget:

- Increase audit coverage by two to three times
- Add over 6,200 hours of in house consulting to the University
- Move the University of Missouri to a model that is consistent with peer systems.

### **Finance Process Improvements**

UM System Finance Office, in collaboration with each campus finance office, engaged in several projects resulting in processing efficiencies for the University. These efficiencies were driven by process improvement initiatives and aided by the upgrade of PeopleSoft Finance System to the most current version. Implemented process improvements include:

- Reduction of Application Modifications – A goal for the Finance upgrade was to decrease costs and support of technology through modification reductions. As a result of this review, 58% of the existing modifications were removed from the system.
- Electronic Workflow –Electronic workflow eliminated the need to print and manually route over 100,000 vouchers and related support per year. Electronic workflow is also being used to request new, or make changes to, suppliers and has replaced an Outlook form used to request new accounts.
- Attachment Storage – Attachments for Accounts Payable and Travel & Expenses documents were previously stored in another system that required a separate login. The upgrade to 9.2 allowed the user to attach files directly in the financial system and avoid logging into separate systems to review documentation and approve transactions. Over 155,893 items have been stored electronically since the upgrade in May of 2015.
- Electronic Effort Verification Reports (eEVR) –A new application converted paper EVRs to an electronic form. The development of the eEVR has resulted in reduced paper usage, an electronic work flow routing system, transparency for tracking EVR's, and storage of electronic signatures for validation purposes for over 90 monthly and more than 6,600 semi-annual certifications.

### **UM System Supply Chain Value Analysis Program Continues to Realize Savings**

UM System Supply Chain continues to deliver savings across the University and University Health Care system. The Value Analysis program continued to sustain strong expense reductions again in FY2015 within the University Health System resulting in savings of \$7.3 million. This effort has tremendous impact on the health system during a time of continually increasing costs of providing health care.

In addition to the hard cost savings from supply pricing, the Supply Chain team began to engage LEAN principles that delivered process improvements at the health system in FY2015. By utilizing the LEAN methodology, the Supply Chain team is able to evaluate the flows of specific supplies and reduce inventories and waste throughout the process. Benefits of this process include:

- Reductions in inventory
- Improved compliance with expiration dates and reduction of waste
- Segregation of high cost, highly specialized inventory for better management
- Reduction in staffing necessary to deliver supplies

In addition, and as a result continuing their focus on identifying opportunities for improvements in contracting, the supply chain team worked diligently to negotiate expense

reductions on contracts across the four campuses. Those efforts resulted in savings of \$12 million in FY2015. Combined the UM System Supply Chain team saved more than \$20 million across the educational enterprise in FY2015.

### **Improved Supplier Diversity in Design and Construction**

For the past 20 years, the University maintained a supplier diversity program to increase utilization of minority and women owned business entities. Over the past 24 months, the University has revamped the program. To broaden the effort to improve its utilization of diverse suppliers, the University began tracking and recognizing veteran and service disabled veteran-owned businesses as diverse suppliers. As a percentage of total spend, supplier diversity spending within design and construction increased by 57% over the prior year, with improvements on every campus across the system.

### **Scholarship Process Changes**

Missouri University of Science and Technology (Missouri S&T) developed an Innovation Team to foster innovation and harvest good ideas. One area the team looked at was streamlining the scholarship awarding process. The team reviewed the internal and external processes and analyzed outcomes from the student and donor perspective (four of Missouri S&T's six key customer groups). Based on the review, changes to the awarding process have included: identifying scholarship award candidates by the Financial Aid Office and providing that information to academic departments, initiating a University goal of a five percent carry-forward limit, creating a fully online scholarship application process, placing all departmental scholarships into one database, sending notifications to all students informing them of the scholarship availability, simplifying the decisions for academic departments, developing a standardized thank you card process, establishing earlier scholarship notifications and disbursements timeline, and developing a Scholarship Advisory Board. This new process has shown positive results with some donors increasing scholarship amounts based on these changes and with \$900,000 savings to the general operating revenue for FY15.

### **MU - Contract Web Portal**

A review of the contracting process at the University of Missouri Columbia resulted in the creation of a new web portal. The portal allows for departments to submit their contracts electronically, resulting in a significant reduction in paper usage. Contracts that are submitted via the portal eliminate campus mail wait times, improve customer service, eliminate scanning of documents, improve records retention, and decrease the processing time of contracts from 1-30 days to 1-10 days, approximately a 42% reduction in processing time over the previous paper method. This new process impacts over 2,000 contracts per year on the MU campus.

## **MU - College Efficiency Initiative**

After facing challenges with financial sustainability, higher administrative work load and limited budgets, the Columbia campus began a project to increase administrative efficiencies and effectiveness. The areas of focus include the decentralized components of finance and HR across the campus. Overall the objective is to provide a collaborative, transparent and data-driven approach to assess current processes and identify recommendations for eliminating inefficiencies and increasing value-added deliverables while strengthening a culture of continuous improvement.

For each unit, the project starts by forming the team to address the issues and brainstorming. Teams include members from the unit under review, central campus functions, and other units from across the campus to bring an outside perspective. The project team utilizes data from electronic transactions to identify bottlenecks and areas of inefficiency and uses that data to discuss processes with cross functional teams within each college or division. From there, the team then identifies areas of process improvement and engages leadership to gain their support and buy in of desired changes. Lastly, the team creates an implementation plan of desired changes with areas of responsibility assigned.

The project just started in FY2015, however, the project generated many positive outcomes. The efficiency initiative improved staff morale by allowing them to work as a part of a team to redesign work that may have been done the same way for years. By using process improvement methodology, the project seeks to empower the team to design work that is more efficient and effective while having the ability to view processes from start to finish. At this stage in the initiative there is no quantitative cost savings, however the financial goal is to reduce costs by at least \$450,000 by June 30, 2017. Additionally, the startup of this project has been funded by a gift that seeks to improve the operating efficiency of the University as a whole.

## **Missouri Renewable Energy/Geothermal Project**

As part of Missouri S&T's strategic plan of ensuring environmental, fiscal and social sustainability, the campus completed a geothermal project. Funding for the project was provided by various sources including tax credits and grant funding. Total financial impact of the tax credits and grant funding is anticipated to be around \$7 million.

The project created three new geothermal plants to serve the heating and cooling needs of 16 buildings by using the Earth as a battery to store rejected heat during warmer months and extract it during cooler months as a ground source heat pump. Results from the project include elimination of deferred maintenance of a 40-year-old coal and wood chip fired steam boiler and power plant; expansion to a two-pipe chilled water system; as well as decreasing the campus' carbon footprint by up to 57%. There was a financial impact from the project as well including \$1.2 million in savings of operation costs due to a reduction in BTU usage of 60% as plus a reduction in deferred maintenance of \$60 million.

## Financial Pressure

While the University received an increase in state appropriations in FY2015 and a small increase in FY2016. As has been the trend over the past decade, the University expects modest support from the state and a continued increased reliance on tuition. This creates an increasing burden on students and parents as they bear more of the cost of a public education. The State Higher Education Finance Report sums up the current environment, “The substantial shift of responsibility for financing public higher education toward net tuition (from around 30 percent to nearly 50 percent) in a dozen years is a significant change for American higher education. Twenty-five states now receive more per-student revenue from net tuition than from educational appropriations.”

The only way for universities to cope with slow per student revenue growth is to continue to pursue more efficient and effective ways of delivering on their missions. This requires universities to challenge long-held assumptions regarding space utilization, business processes, and other areas requiring resources to improve performance. Additionally, any uses of any incremental funding must be carefully considered to ensure it aligns with the long-term best interests of the University. The State Higher Education Finance Report reflects this concept well:

“Efficiency is a thorny issue in education finance; educators can always find good uses for additional resources, and resources are always limited. If educators and policymakers can agree that it is highly desirable to achieve widespread educational attainment more cost-effectively, they can work together to increase educational productivity. Making authentic productivity gains requires sustained effort and a combination of investing in priorities and finding efficiencies through incentives, reallocation, and innovation.”

## The Way Forward: Continue to Increase Effectiveness and Efficiency

The University continues to maintain its proactive approach towards improving the efficiency and effectiveness of its operations, while maintaining a focus on cost containment. Over the next year, the University plans to stay focused on initiatives in Human Resources, Information Technology and Finance that deliver services that are more effective at lower costs. This includes shared services, policy reviews, and process redesigns.