MISSOURI

Rising to the Challenge
2013-2020

OFFICE OF THE PROVOST
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Executive Summary from the Provost

Academic Affairs Division Strategic Plan

Every year in Africa, large herds of wildebeest (gnus) follow the seasonal changes and trek up to 1,000 miles across the plains of the Serengeti to the grasslands of Kenya and back. These curious creatures, which weigh up to 600 pounds and resemble an antelope–Longhorn bull hybrid, depend on the grazing lands and lakes of his region for their survival.

Although a herd might number in the thousands, the fear of attack by lions, hyenas, and crocodiles is ever-present during the migration. When the gnus reach a body of water, critical to their successful finish of the migration, they huddle together cautiously and slowly inch toward the edge. Taking a drink could mean life—or death.

One gnu at the front of the herd becomes the reluctant leader of the rest. For the next few hours, this animal will withstand continuous nudging from the others until it is finally close enough to the water to take a drink. This nudging phenomenon persists until, gnu by gnu, the entire herd quenches its thirst.

Occasionally, a gnu gets pushed a little farther into the water than it would like. If it panics and turns to flee, it creates a chaotic chain reaction in the herd and they stampede away from the water en masse, even those that have not yet had a turn to get that critical drink.

Nature offers us a lesson with the wildebeest; it’s easy to do the same thing time and again—especially when everybody around us is doing the same thing, too. Habits require little thought; they feel comfortable to us. Yet sometimes a habit will open the door to danger—as with the gnus that failed to drink the water they desperately needed for their journey. Sometimes survival depends on leaving your comfort zone to make your own way. (Adapted from Inside Every Woman, Vickie L. Milazzo, John Wiley & Sons)

Our campus strategic plan takes a different approach to strategic planning, its implementation, and its accomplishment, than most higher education strategic plans. The Missouri S&T campus plan presents an “outside in” approach, i.e., who are our customers and what do they expect or want from us and how can we provide that need? This approach uses “Themes,” “Levers,” “Actions,” and “jobs.” Some of these terms are not terms that we commonly use in higher education strategic planning and have made some of us unsettled. But on the other hand, this different approach offers us an opportunity to approach how we change and advance and meet the new challenges higher education faces today.

Although Missouri S&T, like most institutions of higher education, have more than six “customers,” we have identified six customers that we consider to be “key” and important to our institution’s success as an institution of higher education. Those six key customers are:

Undergraduate students  Research investors
Research-based graduate students  Employers
Distance and online students  Donors

Although many of our Missouri S&T students—perhaps a majority of our students—participate in activities that provide them with “hands on” or experiential learning, we have adopted the
application of requiring all Missouri S&T graduates to complete a significant experiential learning activity. To accomplish this—to incorporate this requirement into each baccalaureate degree program—we have adopted a campus definition of experiential learning. As we developed this definition, we contacted those few other colleges or universities that advertise that they require experiential learning for their students and learned that none of them actually had an adopted common definition of what constitutes experiential learning. Thus, Missouri S&T is the leader in establishing a common and accepted definition of experiential learning!

Missouri S&T is a unique institution of higher education. It is a technological research university. Defined as an institution which has more than 25% of its enrollment majoring in engineering and more than 50% of its enrollment majoring in engineering, science, computing, and business, as well as having robust graduate programs, a strong research culture, and exceptional liberal arts, humanities, and social science degree programs that complement the STEM and business strengths of the university, there are only 16 technological research universities in the United states—8 public TRUs and 8 private TRUs.

Because of the unique nature of our institution, our faculty members—individually and collectively—are acknowledged as among the best the country and in the world, with many of our more experienced faculty being recognized as among the best the country and in the world, with many of our more experienced faculty achieved both national and international recognition and newer faculty achieving national and international recognition of their accomplishments and skills every day. Thus, our faculty presents the opportunity for our students to have nearly daily contact with renowned faculty members and to learn from many who are acknowledged as being among the best in the world in their particular specialty area.

Our graduates are highly sought after. Although there are many polls and rankings published each year, there are three statistics that highlight the quality of our graduates as assessed by our customers. First, our fall and spring Career Fairs attract more than 200 companies— including international companies— to each event. This number of companies attending our Career Fair emphasizes the attractiveness of our graduates to these companies. Second, Missouri S&T awards approximately 1,800 degrees annually. More than 900 different companies interview on campus each year. The ratio of degree recipients to interviewing companies also emphasizes the interest employers have in our graduates. A third statistic that underscores the value that employers perceive in our graduates is that the annual median starting salary of our graduates, according PayScale, consistently ranks among the top five public universities in the country. Thus, Missouri S&T continues to provide an education like few others—one that adds tremendous value and prepares today’s students to solve the mysteries that are certain to be presented in future years.

Thus, Missouri S&T strategy statement addresses all of these important customer needs:

*Missouri S&T will provide by 2020 a top return on investment among public research universities to students, employers, research partners, and donors through extraordinary access to renowned expertise, services, and experiential learning opportunities.*
In this regard and to achieve our strategic goals, Missouri S&T will do more:

- Innovative experiential learning opportunities
- Focusing on “jobs to be done” for our key customers
- Collaboration on campus, within the University of Missouri System, and with strategic partners, both industrial and educational, both nationally and internationally.
- Addressing our overall goal of providing a top return on investment by our key customers.

Concurrently, we will do less in some areas:

- Faculty and staff hiring that does not support our strategic goals
- Silo thinking and non-collaborative, non-strategic decision making
- Non-focused, non-selective non-strategic engagements

In summary, the Academic Affairs Division has accepted the leadership responsibility of 15* of Missouri S&T’s 19 strategic plan Levers and ownership responsibility for 66 of S&T’s 120 strategic actions. Not all of the Levers and Actions will be initiated in the first year; several require other Levers or Actions to be completed before these deferred Levers and Actions can be initiated.

*As of 4/30/2014.
Mission
The Academic Affairs Division of Missouri S&T integrates education, research, and applications to create and convey knowledge that serves our state and helps solve the world’s great challenges.

Vision
Academic Affair’s vision is to be Missouri S&T’s leader in achieving discovery, creativity, and innovation.

Strategic Statement
Missouri S&T will provide by 2020 a top return on investment among public research universities to students, employers, research partners and donors through extraordinary access to renowned expertise, services and experiential learning opportunities.

Values

Lifelong Success
We add exceptional value. The rewards of the Missouri S&T experience extend far beyond a college education, valued degree or gratifying career. The S&T experience prepares you for a fulfilling life defined by the confidence to succeed, a desire to excel and a love of learning that never stops.

Creativity
We are innovators. Building a better world demands a creative spark, innovative and entrepreneurial approaches, and curiosity to discover and explore new solutions to the world’s great challenges.

Integrity
We hold ourselves accountable for our actions. We strive to uphold the highest ethical standards, to conduct ourselves with trustworthiness and respect for all of humanity, and to instill in our campus community these same principles.

Sustainability
We live by example. As stewards of the public goodwill, the financial resources entrusted to us, and the environment, we emphasize resilient and sustainable practices in all our endeavors.
Mission, Vision, Values

Partnerships
We are great partners. We focus on adding value and creating mutually beneficial partnerships. The solutions to today’s great challenges require agile collaboration, teamwork and engagement with our stakeholders, both on campus and in the greater business, civic, national and international communities.

Inclusion
We are an inclusive, welcoming community. We seek to build a creative learning environment marked by openness, understanding and valuing all people and perspectives.
The Academic Affairs Division is led by the Provost and Executive Vice Chancellor for Academic Affairs (the “Provost”).

The Provost is assisted by six vice provosts: Academic Affairs, Enrollment Management, Global Learning, Graduate Studies, Research, and Undergraduate Studies.

Nineteen academic departments, plus two Reserve Officer Training Corps units, and five non-degree granting departments report to the Provost (as shown in the organizational chart on the next page).

Additionally, the Provost is supported by two executive assistant and one executive staff assistant II and two faculty part-time special assistant’s to the provost (special projects; online learning). 12 major research centers report to the Provost through the Vice Provost for Research.
Strategic Plan Themes

The Missouri S&T strategic plan addresses its plan through four major themes:

- Theme 1: Develop and inspire creative thinkers and leaders for life-long success.
- Theme 2: Enhance reputation and raise visibility
- Theme 3: Achieve sustainable growth to ensure best return on investment.
- Theme 4: Increase and facilitate meaningful access to and interaction with renowned faculty, staff, and services.

Strategic Plan Levers

Each theme is comprised of several goals or objectives which are termed levers. The Missouri S&T campus plan is comprised of a total of 19 levers. The Academic Affairs Division is either responsible for or is cooperatively responsible for 15 of the levers. Of the 15 levers, all 15 are being actively pursued during FY2014. In Appendix D, all 19 levers are listed. The 15 levers for which Academic Affairs has principal or shared responsibility is indicated in black print and the levers currently being actively pursued are shown in bold font.

Strategic Plan Actions

Each lever has one more actions that, if achieved, accomplished, or completed, will successfully achieve all or some part of the lever. Many levers have numerous actions and some of the actions may not be actively pursued at this time. Some actions (and some levers) require other actions to be implemented or completed before they can be initiated or implemented. And some actions are not the responsibility of the Academic Affairs Division but must be initiated or completed by another department or division before Academic Affairs can pursue the action. Thus, it may appear that some actions are “missing” when looking at the order of the actions below.
Metrics

Each action has some measure by which the action can be evaluated with respect to progress being made towards completion, accomplishment, or achievement. All actions will exhibit a “start date” and either a “duration” period which projects a date by which the action is expected to be completed, achieved, or accomplished, or a stated completion date.

Lever Leaders and Action Owners

One or more persons have been identified as having the overall responsibility for seeing that the actions pertaining to a particular lever are being properly pursued. These persons are given the title “Lever Leader.”

One or more persons have been identified as having the responsibility for seeing that a particular action is initiated, progress is being made, and/or the action is completed. These persons are given the title “Action Owner.”
Missouri S&T has identified four areas where it aspires to be considered either as “best in class” or, when it is not possible to distinguish a single institution as “the best,” as being among those institutions considered to be the “best in class”. Those four areas are as follows. The national institutions that are considered to be comparator institutions for each area are also included.

- **Undergraduate student return on investment** (Comparator institutions: Purdue University; University of Illinois, Champaign-Urbana; Iowa State University; University of Arkansas, Fayetteville; St. Louis University)

- **Engineering doctoral students per tenured, tenure-track engineering faculty** (Colorado School of Mines, Iowa State University; Michigan Technological University; University of Alabama in Huntsville; New Jersey Institute of Technology)

- **National Science Foundation grant expenditures per tenured, tenure-track faculty** (Colorado School of Mines; Iowa State University; Michigan Technological University; University of Alabama in Huntsville; New Jersey Institute of Technology)

- **Number of graduate engineering and science programs offered online or by distance** (Georgia Institute of Technology; Michigan Technological University; Texas A&M University; University of Alabama in Huntsville)
## S&T Best-in-Class Metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Source</th>
<th>Strategic Plan Baseline</th>
<th>Strategic Plan Baseline Date</th>
<th>Strategic Plan Target</th>
<th>Strategic Plan Target Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering doctoral students per tenured, tenure-track engineering faculty</td>
<td>ASEE</td>
<td>1.9</td>
<td>Fall 2011 most current year data available for comparators</td>
<td>3.1</td>
<td>FY2020</td>
</tr>
<tr>
<td>National Science Foundation grant expenditures per tenured, tenure-track faculty</td>
<td>NSF</td>
<td>$18,893</td>
<td>Fall 2011 most current year data available for comparators</td>
<td>$40,000</td>
<td>FY2020</td>
</tr>
<tr>
<td>Number of graduate engineering and science programs offered online or by distance</td>
<td>Office of the Registrar</td>
<td>14</td>
<td>Fall 2012</td>
<td>18</td>
<td>FY2020</td>
</tr>
</tbody>
</table>
The Academic Affairs Division Strategic Plan

The Academic Affairs Division’s strategic plan is presented on the following pages by theme, by lever, and by action. Each action shows a start date and either a completion date or a duration period. The individual lever leaders and action owners are shown in Appendix C.
Theme 1

Develop and inspire creative thinkers and leaders for life-long success

Metric

Number of academic programs and administrative departments that expect participation in sponsored or recognized opportunities that encourage creative thinking, innovation, entrepreneurship or leadership development by its students, faculty and staff.

Baseline

Current number of academic programs that require undergraduate student participation in substantial experiential opportunities (as defined in Action 1.1.1).

Target 2020

a. Each academic program requires 100% undergraduate student participation in some significant experiential learning activity and encourages graduate student participation.

b. Each department (academic and administrative) has an established plan for faculty and staff participation either as learners or advocates in developing creative thinkers and leaders.

1 Only Theme 1 actions initiated in the first year are shown in this section. All actions are given in Appendix A.
**Lever 1.1:** Require all undergraduate students to participate in some significant experiential learning activity before graduation

<table>
<thead>
<tr>
<th>Prioritized Actions</th>
<th>Start Date</th>
<th>Duration</th>
<th>Owners</th>
<th>Key Metric to Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.1 Create a defining comprehensive list of activities that are supported by research as significant experiential activities</td>
<td>Aug. 1, 2013</td>
<td>18 months</td>
<td>Vice Provost for Undergraduate Studies and Vice Chancellor for Student Affairs</td>
<td>Approval of comprehensive list by Provost</td>
</tr>
<tr>
<td>1.1.1.a: Academic departments submit lists of proposed significant experiential learning experience activities to the VP&amp;Ds</td>
<td>Aug. 1, 2014</td>
<td>4.5 months</td>
<td>Vice Provost for Undergraduate Studies and Vice Chancellor for Student Affairs</td>
<td>Lists from academic departments to VP&amp;Ds</td>
</tr>
<tr>
<td>1.1.1.b: VP&amp;Ds submit lists of recommended significant experiential learning experiences activities to Provost</td>
<td>Dec. 16, 2014</td>
<td>2 months</td>
<td>Vice Provost for Undergraduate Studies and Vice Chancellor for Student Affairs</td>
<td>List from VP&amp;Ds to Provost</td>
</tr>
<tr>
<td>1.1.1.c: Provost approves proposed significant experiential learning experience activities and returns lists to VP&amp;Ds for submittal to Faculty Senate for approval of revised degree program requirements.</td>
<td>Feb. 16, 2015</td>
<td>1.5 months</td>
<td>Vice Provost for Undergraduate Studies and Vice Chancellor for Student Affairs</td>
<td>Approved list from Provost returned to VP&amp;Ds for submittal to Faculty Senate</td>
</tr>
<tr>
<td>1.1.1.d: Faculty Senate approves proposed revisions to degree program requirements.</td>
<td>Apr. 1, 2015</td>
<td>8.5 months</td>
<td>Vice Provost for Studies and Vice Chancellor for Student Affairs</td>
<td>Faculty Senate approval</td>
</tr>
<tr>
<td>1.1.5 The Director of Career Opportunities and Employer Relations will continue to explore internship and externship opportunities in the summer and inter-sessions as well as during semesters</td>
<td>Jan. 1, 2014</td>
<td>Ongoing</td>
<td>Vice Provost for Undergraduate Studies and Vice Chancellor for Student Affairs</td>
<td>List of opportunities</td>
</tr>
</tbody>
</table>
**Lever 1.2:** Foster innovation and creativity for faculty, staff and students.

<table>
<thead>
<tr>
<th>Prioritized Actions</th>
<th>Start Date</th>
<th>Duration</th>
<th>Owners</th>
<th>Key Metric to Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2.2 Explore creating a Learning Commons with state-of-the-art collaborative tech-</td>
<td>July 1, 2013</td>
<td>1 year</td>
<td>Library Director, Chief Information Officer</td>
<td>Decision on implementing Learning Commons Facility</td>
</tr>
<tr>
<td>nology, practice presentation rooms, experimental technology lab with video editing and 3D printing capability for teaching, learning, and research. <em>(See Lever 3.9)</em> Training on how to effectively use the commons would be included.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2.5 Identify a series of co-curricular events (e.g., intersession or alternative spring break events) for interdisciplinary groups of students, faculty and/or staff focused on providing solutions for problem-solving, innovation or leadership</td>
<td>Sept. 1, 2013</td>
<td>2 years</td>
<td>Vice Provost for Undergraduate Studies, Vice Provost for Graduate Studies, Vice Chancellor for Student Affairs, Vice Provost &amp; Deans</td>
<td>Co-curricular events</td>
</tr>
<tr>
<td>1.2.6 Develop minor and certificate programs in leadership, entrepreneurship, humanitarian engineering and science, and creativity</td>
<td>Sept. 1, 2013</td>
<td>2 years</td>
<td>Vice Provost for Undergraduate Studies, Vice Provost for Graduate Studies, Vice Chancellor for Student Affairs, Vice Provost &amp; Deans</td>
<td>Programs developed</td>
</tr>
</tbody>
</table>
Implementation Plan/Actions and Metrics

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**Theme 2**

Enhance reputation and raise visibility

**Metric 1**

Percentage of General Operating Revenue dedicated to institutional marketing and visibility efforts comparable to best-in-class universities *(Baseline: 0; Target 2020: 1%)*

**Metric 2**

Increase the number of additional faculty members through strategic hiring to leverage S&T as Missouri’s technological research university *(Baseline: 0; Target 2020: 100)*

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*Only Theme 2 actions initiated in the first year are shown in this section. All actions are given in Appendix A.*
**Lever 2.1:** Employ transformative and focused faculty hiring and retention, including cluster hires in select areas of expertise to support best in class (BIC) achievements.

<table>
<thead>
<tr>
<th>Prioritized Actions</th>
<th>Start Date</th>
<th>Duration</th>
<th>Owners</th>
<th>Key Metric to Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.2 Develop and implement a process to transparently allocate all faculty positions to impact strategic plan and progress on unit performance measures (related to Action 2.3.1 and used in Action 2.2.4)</td>
<td>July 1, 2013</td>
<td>7 years</td>
<td>Provost, Chancellor, Vice Provost &amp; Deans</td>
<td>Number of open and new faculty positions allocated to impact strategic plan and progress on unit performance measures</td>
</tr>
<tr>
<td>2.1.4 Identify and pursue companies, foundations and individual donors for charitable gifts to hire two national academy stature faculty in endowed chair positions in strategic areas #1 and #2</td>
<td>July 1, 2013</td>
<td>7 years</td>
<td>Vice Chancellor for University Advancement, Vice Provost for Research</td>
<td>Number of national academy stature faculty hired</td>
</tr>
<tr>
<td>2.1.6 Identify and pursue companies, foundations and individual donors to fund startup packages</td>
<td>July 1, 2013</td>
<td>1 year</td>
<td>Vice Chancellor for University Advancement, Department Chairs, Vice Provost &amp; Deans</td>
<td>Report on potential funding for startup packages</td>
</tr>
<tr>
<td>2.1.7 Finalize third and fourth BIC areas for investment beginning in year 2</td>
<td>See Action 2.1.1 listed in Appendix D</td>
<td>6 months</td>
<td>Provost, Vice Provost for Research, Chancellor</td>
<td></td>
</tr>
</tbody>
</table>
**Lever 2.2:** Leverage S&T as Missouri’s technological research university

<table>
<thead>
<tr>
<th>Prioritized Actions</th>
<th>Start Date</th>
<th>Duration</th>
<th>Owners</th>
<th>Key Metric to Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2.1 Increase S&amp;T’s undergrad-</td>
<td>July 1, 2013</td>
<td>7 years</td>
<td>Vice Provost and Dean of Enrollment Management</td>
<td>Undergraduate enrollments</td>
</tr>
<tr>
<td>uate enrollment by 500 by 2020</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2.2 Increase S&amp;T’s Ph.D. enrollment by 200-400 by 2020</td>
<td>July 1, 2013</td>
<td>7 years</td>
<td>Vice Provost of Graduate Studies</td>
<td>Number of PhD’s</td>
</tr>
<tr>
<td>2.2.3 Increase the number of T/TT (NTT) faculty members by 67 (33)</td>
<td>July 1, 2013</td>
<td>7 years</td>
<td>Provost, Vice Provost for Research, T/TT and NTT faculty Department Chairs, Vice Provost &amp; Deans</td>
<td>Number of T/TT and NTT faculty</td>
</tr>
<tr>
<td>(12 T/TT faculty in conjunction with Lever 2.1 focused areas in Phase 1 hiring)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2.4 Transparently allocate as defined in Action 2.1.2 all open and new faculty positions to impact strategic plan and progress on unit performance measures</td>
<td>July 1, 2013</td>
<td>7 years</td>
<td>Provost, Chancellor, Vice Provost &amp; Deans</td>
<td>Number of positions filled in line with strategic plan and progress on unit performance measures</td>
</tr>
<tr>
<td>2.2.5 Increase the number of technical/specialized staff members to support strategic program</td>
<td>July 1, 2013</td>
<td>7 years</td>
<td>Vice Provost &amp; Deans, Associate Vice Chancellor of HRSAADI</td>
<td>Number of full-time tech and specialized staff members</td>
</tr>
</tbody>
</table>
Lever 2.3: Develop a culture of excellence in research, scholarship and creative activity among faculty, staff and students

<table>
<thead>
<tr>
<th>Prioritized Actions</th>
<th>Start Date</th>
<th>Duration</th>
<th>Owners</th>
<th>Key Metric to Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3.1 Develop and implement performance-based resource allocation models commensurate with degree offerings, including productivity in research, scholarship and creative works <em>(See Actions 1.3.1 and 3.1.1)</em></td>
<td>July 1, 2013</td>
<td>2 years</td>
<td>Provost</td>
<td>Inter-department general revenue appropriations distribution models</td>
</tr>
<tr>
<td>2.3.4 Continue establishing New sustainable industry-funded research consortia</td>
<td>July 1, 2013</td>
<td>5 years</td>
<td>Vice Provost for Research</td>
<td>Number of new industry-funded research consortia</td>
</tr>
</tbody>
</table>
**Lever 2.5: Modify our conventional methods of teaching to accommodate current, new and advanced technology that will enhance student learning and increase faculty productivity**

<table>
<thead>
<tr>
<th>Prioritized Actions</th>
<th>Start Date</th>
<th>Duration</th>
<th>Owners</th>
<th>Key Metric to Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5.3 Increase instructional design support and online facilitators for teaching faculty</td>
<td>July 1, 2013</td>
<td>2 years</td>
<td>Provost, Vice Provost &amp; Deans</td>
<td>Increase number of successful students</td>
</tr>
<tr>
<td>2.5.6 Create and implement a stipend program to reward faculty who incorporate Blended Learning techniques into their courses</td>
<td>July 1, 2013</td>
<td>Ongoing</td>
<td>Provost, Vice Provost &amp; Deans</td>
<td>Increase in number of blended courses and number of faculty involved</td>
</tr>
<tr>
<td>2.5.8 Redesign high-volume courses through integration of new technology and modified teaching methods to enhance student learning</td>
<td>July 2013</td>
<td>5 years</td>
<td>Vice Provost &amp; Deans</td>
<td>Number of courses redesigned</td>
</tr>
</tbody>
</table>
Theme 3

Achieve sustainable growth to ensure best return on investment

Metric 1

Undergraduate student enrollment (Baseline: 5,843; Target 2020: 6,343)

Metric 2

Graduate student enrollment (Baseline: 1,804; Target 2020: 2,004-2,204)

1 Only Theme 3 actions initiated in the first year are shown in this section. All actions are given in Appendix A.
**Lever 3.1:** Evaluate current academic programs and create, modify, eliminate or combine in order to ensure a relevant portfolio that supports a Carnegie ranking as a national, research university

<table>
<thead>
<tr>
<th>Prioritized Actions</th>
<th>Start Date</th>
<th>Duration</th>
<th>Owners</th>
<th>Key Metric to Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1.1 Continue performing Comparisons of academic department productivity to peer institutions <em>(See Actions 2.3.1 and 1.3.1)</em></td>
<td>July 1, 2013</td>
<td>1 year</td>
<td>Provost, Department Chairs, Vice Provost &amp; Deans</td>
<td>Academic departments complete comparison of productivity measures</td>
</tr>
<tr>
<td>3.1.3 Evaluate the need for new or elimination of existing degree programs</td>
<td>Oct. 1, 2013</td>
<td>1 year</td>
<td>Provost, Vice Provost &amp; Deans</td>
<td>Recommendations initial recommendations, ongoing</td>
</tr>
</tbody>
</table>
Lever 3.3: Improve facilities to enhance research and student learning, and expand experiential learning

<table>
<thead>
<tr>
<th>Prioritized Actions</th>
<th>Start Date</th>
<th>Duration</th>
<th>Owners</th>
<th>Key Metric to Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.3.1 Leverage strategic funds for instructional laboratories with matching funding from non-appropriated sources</td>
<td>July 1, 2013</td>
<td>2-3 years</td>
<td>Provost, Vice Provost &amp; Deans</td>
<td>Instructional lab match funding acquired and allocated. Number of courses and students impacted. Number of remote collaborations supported.</td>
</tr>
<tr>
<td>3.3.2 Continue exploring plans and processes for acquiring matching funding for research equipment in areas that have return on investment to be matched with non-appropriated funds</td>
<td>July 1, 2013</td>
<td>Ongoing</td>
<td>Vice Provost for Research, Vice Chancellor for University Advancement</td>
<td>Devise a development plan. Determine feasibility.</td>
</tr>
<tr>
<td>3.3.5 Develop and disseminate a research infrastructure database to help departments share equipment</td>
<td>July 1, 2013</td>
<td>5 years</td>
<td>Vice Provost for Research, Vice Provost &amp; Deans</td>
<td>Database developed</td>
</tr>
<tr>
<td>3.3.7 Investigate building a Learning Commons (e.g., in Library) to enhance student learning and research. This facility should allow for reconfiguration as needs change, technologies evolve, and the student population changes. It should include as much hands-on technology as possible, available to all, in an interdisciplinary environment. (See Action 1.2.1)</td>
<td>July 1, 2013</td>
<td>1 year</td>
<td>VPAA Library Director</td>
<td>Needs assessment and plan</td>
</tr>
</tbody>
</table>
## Lever 3.4: Promote inclusion and increase diversity of faculty, staff and students to remain relevant and competitive in a global environment

<table>
<thead>
<tr>
<th>Prioritized Actions</th>
<th>Start Date</th>
<th>Duration</th>
<th>Owners</th>
<th>Key Metric to Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.4.3 Set up transfer articulation agreements with two-year institutions with large under-represented minority populations</td>
<td>Sept. 1, 2013</td>
<td>5 years</td>
<td>Dean and Vice Provost for Enrollment Management, HR</td>
<td>Articulation agreements</td>
</tr>
<tr>
<td>3.4.7 Bring to campus under-represented faculty as visiting scholars</td>
<td>Sept. 1, 2013</td>
<td>5 years</td>
<td>Provost, Vice Provost &amp; Deans, Associate Vice Chancellor for HRSAADI</td>
<td>One per semester</td>
</tr>
<tr>
<td>3.4.10 Evaluate and enhance faculty recruitment process and practice</td>
<td>Sept. 1, 2103</td>
<td>Ongoing</td>
<td>Department Chair Council, Human Resources, Vice Provost &amp; Deans</td>
<td>Processes reviewed, recommendations</td>
</tr>
</tbody>
</table>
### Lever 3.5: Create and implement a plan for student and alumni lifetime engagement strategy

<table>
<thead>
<tr>
<th>Prioritized Actions</th>
<th>Start Date</th>
<th>Duration</th>
<th>Owners</th>
<th>Key Metric to Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5.1 Utilize the library and archives in creating collaborative online areas where alumni can view yearbooks, the Miner, photos, and other memorabilia. As we digitize these collections, we can engage alumni in identifying people and events, and in telling stories online</td>
<td>July 1, 2013</td>
<td>Ongoing</td>
<td>Library Director, Archives Director, Alumni Assoc. Director</td>
<td>Number of alumni engaging with online collections</td>
</tr>
<tr>
<td>3.5.2 Create lifetime accounts that support contact and engagement</td>
<td>July 1, 2013</td>
<td>Ongoing</td>
<td>Chief Information Officer, Alumni Association Director</td>
<td>Lifetime accounts created. Usage data</td>
</tr>
<tr>
<td>3.5.3 Create a multifaceted engagement program that brings students through graduation and to the Academy levels</td>
<td>July 1, 2013</td>
<td>Ongoing with no specified date</td>
<td>Vice Chancellor for University Advancement, Vice Chancellor for Student Affairs, Department Chairs, Vice Provost &amp; Deans</td>
<td>Levels of volunteerism across campus by students participation, donor retention, alumni participation in alumni activities and programs, alumni giving</td>
</tr>
</tbody>
</table>
**Lever 3.8**: Exercise leadership in sustainability on campus and in the community by modeling sustainability practices in daily operations and practicing good environmental stewardship

<table>
<thead>
<tr>
<th>Prioritized Actions</th>
<th>Start Date</th>
<th>Duration</th>
<th>Owners</th>
<th>Key Metric to Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.8.1 Stabilize long-term funding for the Office of Sustainable Energy and Environmental Engagement</td>
<td>July 1, 2013</td>
<td>5 years</td>
<td>Vice Chancellor for Finance, Office of Sustainable Energy and Environmental Engagement</td>
<td>Funding for Office of Sustainable Energy and Environmental Engagement</td>
</tr>
<tr>
<td>3.8.2 Led by Office of Sustainable Energy and Environmental Engagement, initiate and create student awareness programs and associated funding vehicles to promote our sustainable research and campus initiatives</td>
<td>July 1, 2013</td>
<td>1 year</td>
<td>Vice Chancellor for Finance, Office of Sustainable Energy and Environmental Engagement</td>
<td>Student sustainability fee approved by student council</td>
</tr>
<tr>
<td>3.8.3 Create, in conjunction with Physical Facilities and Environmental Health and Safety, a sustainable waste management plan for all university waste</td>
<td>July 1, 2013</td>
<td>6 months</td>
<td>Vice Chancellor for Finance, Office of Sustainable Energy and Environmental Engagement</td>
<td>Waste manage-plan completed and approved</td>
</tr>
<tr>
<td>3.8.5 Create and promote an alternative transportation culture, focused around simple transportation methods, including pedestrian and cycling, to improve alternative transportation infrastructure over the next five years</td>
<td>July 1, 2013</td>
<td>5 years</td>
<td>Vice Chancellor for Finance, Office of Sustainable Energy and Environmental Engagement</td>
<td>Projects identified and funded</td>
</tr>
</tbody>
</table>
**Lever 3.8:** Exercise leadership in sustainability on campus and in the community by modeling sustainability practices in daily operations and practicing good environmental stewardship

<table>
<thead>
<tr>
<th>Prioritized Actions</th>
<th>Start Date</th>
<th>Duration</th>
<th>Owners</th>
<th>Key Metric to Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.8.6 Investing existing and new courses for sustainability awareness for faculty, staff and students</td>
<td>July 1, 2013</td>
<td>1 year</td>
<td>Office of Sustainable Energy and Environmental Engagement, Vice Provost &amp; Deans</td>
<td>Course development and implementation</td>
</tr>
<tr>
<td>3.8.7 Create campus sustainability project revolving fund that will allow savings to be invested back into the fund to underwrite future projects</td>
<td>July 1, 2013</td>
<td>2 years</td>
<td>Vice Chancellor for Finance and Administration, Office of Sustainable Energy and Environmental Engagement</td>
<td>Fund established and new projects funded</td>
</tr>
<tr>
<td>3.8.8 Track energy, environmental, and sustainability research on campus</td>
<td>July 1, 2013</td>
<td>5 years</td>
<td>Vice Chancellor for Finance, Office of Sustainable Energy and Environmental Engagement, Vice Provost for Research</td>
<td>Expenditure report</td>
</tr>
<tr>
<td>3.8.13 Analyze new construction with U.S. Green Building Council LEED (Leadership in Energy and Environment Design) principles, And pursue LEED certification When appropriate</td>
<td>July 1, 2013</td>
<td>Ongoing</td>
<td>Vice Chancellor for Finance, Office of Sustainable Energy and Environmental Engagement</td>
<td>Decision implemented</td>
</tr>
</tbody>
</table>
Implementation Plan/Actions and Metrics

Theme 4

Increase and facilitate meaningful access to and interaction with renowned faculty, staff and services

Metric 1

First-to-second year undergraduate student retention rate (Baseline: 85%; Target 2020: 88%)

Metric 2

Total graduate student support per funded graduate student (Baseline: $13,700; Target 2020: $17,500)

1 Only Theme 4 actions initiated in the first year are shown in this section. All actions are given in Appendix A.
### Lever 4.1: Create a comprehensive distance and online education strategy

<table>
<thead>
<tr>
<th>Prioritized Actions</th>
<th>Start Date</th>
<th>Duration</th>
<th>Owners</th>
<th>Key Metric To Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1.1 Conduct a focused market study analysis to serve as the foundation for a comprehensive distance and online education strategy</td>
<td>July 1, 2013</td>
<td>2 years</td>
<td>Vice Provost for Global Learning, Vice Chancellor for Global and Strategic Partnerships</td>
<td>Statistically valid coverage, Study completed</td>
</tr>
<tr>
<td>4.1.2 Bring together distance and online programs under one umbrella so as to leverage advantages of both, to pool resources, and to eliminate confusion</td>
<td>July 1, 2013</td>
<td>1 year</td>
<td>Vice Provost for Global Learning, Vice Chancellor for Global and Strategic Partnerships</td>
<td>New organization authorized</td>
</tr>
<tr>
<td>4.1.4 Increase our focus on the professional non-credit distance education portfolio</td>
<td>July 1, 2013</td>
<td>5 years</td>
<td>Vice Provost for Global Learning</td>
<td>Size of portfolio, Enrollment and revenue</td>
</tr>
<tr>
<td>4.1.6 Create an incentive program to encourage departments and faculty to offer more online, blended and distance courses <em>(See Lever 2.5)</em></td>
<td>July 1, 2013</td>
<td>5 years</td>
<td>Vice Provost for Global Learning, Provost</td>
<td>Number of course and program offerings</td>
</tr>
<tr>
<td>4.1.7 Leverage existing success and resources from Distance Ed program to expand into more online or asynchronous course offering</td>
<td>July 1, 2013</td>
<td>5 years</td>
<td>Vice Provost for Global Learning</td>
<td>Use of Video Communications Center facilities for online and asynchronous course production</td>
</tr>
</tbody>
</table>
Levers:

**Lever 4.2: Enhance instructional labs and methods of delivering lab experiences**

<table>
<thead>
<tr>
<th>Prioritized Actions</th>
<th>Start Date</th>
<th>Duration</th>
<th>Owners</th>
<th>Key Metrics to Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2.1 Explore how to partner with other universities, community colleges, high</td>
<td>July 1, 2013</td>
<td>3 years</td>
<td>Provost, Vice Provost &amp;</td>
<td>Develop model framework</td>
</tr>
<tr>
<td>schools or extension to deliver lab experiences</td>
<td></td>
<td></td>
<td>Deans, Department Chairs</td>
<td>and strategy</td>
</tr>
<tr>
<td>4.2.2 Develop model frameworks and strategies for evaluating and redesigning</td>
<td>July 1, 2013</td>
<td>3 years</td>
<td>Provost, Vice Provist &amp;</td>
<td></td>
</tr>
<tr>
<td>instructional lab courses for blended/online delivery</td>
<td></td>
<td></td>
<td>Deans, Department Chairs</td>
<td></td>
</tr>
</tbody>
</table>
**Lever 4.5: Engage in transformative doctoral student recruiting/retention and placement**

<table>
<thead>
<tr>
<th>Prioritized Actions</th>
<th>Start Date</th>
<th>Duration</th>
<th>Owners</th>
<th>Key Metric to Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5.1 Develop a plan to provide fully covered tuition for doctoral students on appointments and explore implementation</td>
<td>July 1, 2013</td>
<td>1 year</td>
<td>Vice Provost for Graduate Studies</td>
<td>Develop a plan/Implementation recommendations</td>
</tr>
<tr>
<td>4.5.3 (Recruit) Develop memorandum of understandings and articulation agreements with reputed national and international schools to recruit high quality doctoral students</td>
<td>July 1, 2013</td>
<td>5 years</td>
<td>Vice Provost for Graduate Studies, Director International Affairs</td>
<td>Number of active/inactive memorandum of understandings, articulation agreements</td>
</tr>
<tr>
<td>4.5.4 (Recruit) Develop a marketing plan to promote comprehensive S&amp;T graduate leadership and excellence</td>
<td>July 1, 2013</td>
<td>2 years</td>
<td>Vice Provost for Graduate Studies, Dean &amp; Vice Provost Enrollment Management, Graduate Faculty Council</td>
<td>Heightened awareness of S&amp;T’s leadership and excellence in graduate education, as measured by surveys and focus groups</td>
</tr>
<tr>
<td>4.5.6 (Retain) Study GRA “bridge funding” between faculty grant funding and graduation</td>
<td>July 1, 2013</td>
<td>1 year</td>
<td>Vice Provost for Graduate Studies, Vice Provost Research</td>
<td>Complete study and provide recommendations</td>
</tr>
</tbody>
</table>
### Lever 4.5: Engage in transformative doctoral student recruiting/retention and placement

<table>
<thead>
<tr>
<th>Prioritized Actions</th>
<th>Start Date</th>
<th>Duration</th>
<th>Owners</th>
<th>Key Metric to Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5.12 (Recruit) Investigate Creating a $10 million endowment for recruiting high quality doctoral students <em>(See Lever 3.9)</em></td>
<td>July 1, 2013</td>
<td>2 years</td>
<td>Vice Provost for Graduate Studies</td>
<td>Provide plan. <em>(See Lever 3.9)</em></td>
</tr>
<tr>
<td>4.5.16 (Retain) Perform cost analysis on providing dissertation writing fellowships to doctoral students who have completed their comprehensive exams</td>
<td>July 1, 2013</td>
<td>1 year</td>
<td>Vice Provost for Graduate Studies</td>
<td>Time to degree Completion analysis</td>
</tr>
</tbody>
</table>
Missouri S&T will provide by 2020 a top return on investment among public research universities to students, employers, research partners and donors through extraordinary access to renowned expertise, services and experiential learning opportunities.

Missouri S&T will provide by 2020 a top return on investment (ROI) for students is well-documented by national publications and media outlets. We intend to build on that national reputation to provide a top ROI for all of our key customers - not only our students, but also the employers who hire them, the research partners who team with S&T and the donors who support S&T through their gifts.

For each of these customer groups, we will measure ROI based on a number of metrics, including:

- Starting salaries for undergraduate students.
- Engineering doctoral students per faculty.
- Number of graduate engineering/science distance/online programs, number of students enrolled via distance or online.
- National Science Foundation grant expenditures per faculty, number of invention disclosures.
- Employer satisfaction with hires.
- Donor satisfaction with the S&T giving experience.
- Third-party resources (such as PayScale, U.S. News & World Report recruiter assessment score)

Missouri S&T will become the institution of choice for partners seeking a highly qualified, talented and entrepreneurial workforce; innovative research; relevant educational programs, products and services; and technology and ideas that help solve the great challenges of our time. We will accomplish this by building mutually beneficial relationships, fostering trust and confidence, breaking down barriers to success, and demonstrating our value added as a global university that integrates cross-cultural understanding in all aspects of our educational enterprise.

An anticipated outcome of this focus on ROI is an enhanced visibility and awareness of Missouri S&T’s reputation as a leading technological research university.

We will benchmark our performance for each key customer group against select comparator universities.
Appendix A - Strategy Statement

Missouri S&T has identified six key customer groups:

- Undergraduate students
- Research-based graduate students
- Employers
- Distance and online students
- Research investors
- Donors

Through extraordinary access to renowned expertise, services and experiential learning opportunities.

What sets S&T apart? First of all, our focus. Founded in 1870 as one of the first technological universities west of the Mississippi, Missouri S&T belongs to a select niche of institutions known collectively as “technological research universities.” These eight public and eight private institutions share common traits: a high percentage of STEM (science, technology, engineering and mathematics) and business majors, doctoral programs in STEM disciplines, a robust research enterprise, and thriving humanities and liberal arts programs.

Building on that focus, S&T provides:

- Direct, personal access to nationally and internationally known researchers, faculty, staff, and facilities
- A broad array of experiential learning opportunities for every student
- Innovative public and private partnerships that deliver solutions of global importance and local impact

S&T is committed to providing an inclusive environment that fosters creativity, innovation and an entrepreneurial spirit in all we do — from ground-breaking research to modes of learning to sustainable and ethical business practices.
Appendix B - Missouri S&T’s Strategy for Success 2013-2020

Themes       Levers/Categories of Actions
--------------------------------------------------------------------------------------------------------------------------------------
1  Develop and inspire creative thinkers and leaders for life-long success

   Levers
   1.1 Require all undergraduate students to participate in some significant experiential learning activity before they graduate.
   1.2 Foster innovation and creativity for faculty, staff and students.
   1.3 Establish database of measures to define student access to faculty and staff.

--------------------------------------------------------------------------------------------------------------------------------------
2  Enhance reputation and raise visibility

   Levers
   2.1 Employ transformative and focused hiring, including cluster hires, in selected areas of expertise to support best-in-class achievements.
   2.2 Leverage S&T as Missouri’s technological research university.
   2.3 Develop a culture of excellence in research, scholarship and creative activity among faculty, staff, and students.
   2.4 Create and implement a communication and marketing plan to raise the visibility of the campus and convey our return on investment.
   2.5 Modify our conventional methods of teaching and research to accommodate current and new technology that will enhance student learning and increase faculty productivity.
   2.7 Address administrative structural changes to facilitate strategy and enhance national visibility.

Notes: In-depth descriptions for themes and levers can be found in Appendix A. Italicized levers are to be initiated in year two or beyond.
Appendix B - Missouri S&T’s Strategy for Success 2013-2020

Themes | Levers/Categories of Actions
----------------------------------------------------------------------------------------------------------------------------------
3 Achieve sustainable growth to ensure best return on investment

**Lever**

3.1 Evaluate current academic programs and create, modify, eliminate or combine in order to ensure a relevant portfolio that supports S&T’s Carnegie classification as a national research university.

3.2 Centralize corporate relations to improve service to existing corporate partners and to identify and establish new partnerships for the purpose of increasing/enhancing research, economic development, credit and non-credit education, philanthropy, and the hiring of our graduates.

3.3 Improve facilities to enhance research and student learning, and expand experiential training.

3.4 Promote inclusion and increase diversity of faculty, staff and students to remain relevant and competitive in a global environment.

3.5 Create and implement a student and alumni lifetime engagement strategy.

3.6 *Devise convenient technology-based methods of accessibility, communication and engagement with external constituents.*

3.7 *Market campus strengths and create a broad awareness of student opportunities and benefits to both domestic and international audiences.*

3.8 Exercise leadership in sustainability practices in daily operations and practicing environmental stewardship.

3.9 Conduct a comprehensive fundraising campaign to secure private support for identified campus priorities.

----------------------------------------------------------------------------------------------------------------------------------

4 Increase and facilitate meaningful access to and interaction with renowned faculty, staff and services.

**Lever**

4.1 Create a comprehensive distance and online education strategy.

4.2 Enhance instructional labs and methods of developing lab experiences.

4.3 *Enhance innovative use of technologies to improve and facilitate access.*

4.4 *Ensure renowned faculty teach/interact with undergraduate students.*

4.5 Engage in transformative doctoral student recruiting/retention and placement.

4.6 *Improve student, faculty and staff mentoring and advising.*

4.7 *Identify and remove barriers to graduation and reduce time to degree for undergraduate and graduate students.*

4.8 *Expand access to renowned faculty through enhanced recruiting and retention.*

4.9 *Promote non-traditional activities outside of classroom.*

----------------------------------------------------------------------------------------------------------------------------------

Notes: In-depth descriptions for themes and levers can be found in Appendix A. Italicized levers are to be initiated in year two or beyond.
Appendix C – Lever Leaders/Action Owners

1.1. **Jeff Cawlfield, Lever Leader**
   1.1.1 VPUS and Vice Chancellor for Student Affairs
   1.1.2 VPUS and Vice Provost and Deans
   1.1.5 VPUS and Vice Chancellor for Student Affairs

1.2 **Debra Robinson and Nancy Stone, Co-Lever Leaders**
   1.2.1 Chancellor, Strategic Planning Progress Manager
   1.2.2 Library Director, Chief Information Officer
   1.2.3 VPUS, VPGS, Vice Provost & Deans, HR
   1.2.5 VPAA, VPUS, VPGS, Vice Provost & Deans, Vice Chancellor for Student Affairs
   1.2.6 VPUS, VPGS, Vice Provost & Deans, Vice Chancellor for Student Affairs
   1.2.10 Human Resource Services

1.3 **Jeff Cawlfield and Larry Gragg, Co-Lever Leaders**
   1.3.1 VPGS, VPUS, Department Chairs, Institutional Research, Vice Provost & Deans, Vice Chancellor for Student Affairs

2.1 **K. Krishnamurthy and Jim Drallmeier, Co-Lever Leaders**
   2.1.2 Provost, Vice Provost & Deans, Chancellor
   2.1.4 VPR, Vice Chancellor for University Advancement
   2.1.6 Department Chairs, Vice Provost & Deans, Vice Chancellor for University Advancement
   2.1.7 Provost, VPR, Chancellor

2.2 **Kent Wray, Lever Leader**
   2.2.1 Vice Provost and Dean of Enrollment Management, International Affairs
   2.2.2 VPGS, International Affairs
   2.2.3 Provost, Research Directors with their Department Chairs, Deans
   2.2.4 Provost, Vice Provost & Deans, Chancellor

2.3 **K. Krishnamurthy and Jim Drallmeier, Co-Lever Leaders**
   2.3.1 Provost, Vice Provost & Deans
   2.3.4 VPR

2.4 **Andy Careaga, Lever Leader**
   2.4.1 Director of Communications
   2.4.2 Assistant Director of Communications
   2.4.3 Director of Communications

2.5 **Henry Wiebe, Lever Leader**
   2.5.3 Provost, Vice Provost & Deans
   2.5.6 Provost, Vice Provost & Deans
Appendix C – Lever Leaders/Action Owners

2.7 Shenethia Manual, Lever Leader
2.7.1 Chancellor
2.7.2 Chancellor

3.1 Kelvin Erickson, Lever Leader
3.1.1 Provost, Department Chairs, Vice Provost & Deans
3.1.3 Provost, Vice Provost & Deans

3.2 Henry Wiebe and Edna Grover-Bisker, Co-Lever Leaders
3.2.1 Chancellor, Chancellor’s Cabinet
3.2.2 Chancellor
3.2.3 Vice Chancellor for Finance and Administration
3.2.4 Chancellor
3.2.5 Chancellor

3.3 Phil Whitefield and Ted Ruth, Co-Lever Leaders
3.3.1 Provost, Vice Provost & Deans
3.3.2 VPR, Vice Chancellor for University Advancement
3.3.4 Physical Facilities, Vice Chancellor for Finance and Administration
3.3.5 VPR, Vice Provost & Deans
3.3.6 Development
3.3.7 Library Director, Development
3.3.8 Development

3.4 Laura Stoll and Shenethia Manuel, Co-Lever Leaders
3.4.1 Chancellor
3.4.2 Vice Chancellor for University Advancement
3.4.3 Vice Provost and Dean of Enrollment Management
3.4.6 Associate Vice Chancellor for Human Resources
3.4.7 Provost, Vice Provost & Deans, Associate Vice Chancellor for HRSAADI
3.4.9 Chancellor, Human Resources
3.4.10 Department Chair Council, Vice Provost & Deans, Human Resources
3.4.11 Vice Chancellor for Finance and Administration
3.5 Joan Nesbitt and Jim Murphy, Co-Lever Leaders

3.5.1 Library Director, Provost, Archives Director, Alumni Association Director
3.5.2 Chief Information Officer, Alumni Association Director
3.5.3 Vice Chancellor for University Advancement, Vice Chancellor for Student Affairs, Department Chairs, Vice Provost & Deans

3.8 Phil Whitefield, Lever Leader
3.8.1 Vice Chancellor for Finance and Administration, Office of Sustainable Energy and Environmental Engagement
3.8.2 Vice Chancellor for Finance and Administration, Office of Sustainable Energy and Environmental Engagement
3.8.3a Vice Chancellor for Finance and Administration, Office of Sustainable Energy and Environmental Engagement
Appendix C – Lever Leaders/Action Owners

3.8.5 Vice Chancellor for Finance and Administration, Office of Sustainable Energy and Environmental Engagement
3.8.6 Vice Chancellor for Finance and Administration, Office of Sustainable Energy and Environmental Engagement, Vice Provost & Deans
3.8.7 Vice Chancellor for Finance and Administration, Office of Sustainable Energy and Environmental Engagement
3.8.8 Vice Chancellor for Finance and Administration, Office of Sustainable Energy and Environmental Engagement, Vice Provost for Research
3.8.13 Vice Chancellor for Finance and Administration, Office of Sustainable Energy and Environmental Engagement
3.9 Joan Nesbitt, Lever Leader
3.9.1 Advancement
3.9.2 Advancement
3.9.3 Advancement
3.9.4 Advancement
3.9.5 Advancement
3.9.6 Advancement
3.9.7 Advancement
3.9.8 Advancement

4.1 **Henry Wiebe, Lever Leader**
4.1.1 VPGL, Vice Chancellor for Global and Strategic Partnerships
4.1.2 VPGL, Provost, Vice Chancellor for Global and Strategic Partnerships
4.1.4 VPGL
4.1.6 VPGL, Provost
4.1.7 VPGL

4.2 **Kelvin Erickson, Lever Leader**
4.2.1 Provost, Vice Provost & Deans, Department Chairs
4.2.2 Provost, Vice Provost & Deans, Department Chairs

4.5 **Venkata Allada, Lever Leader**
4.5.1 VPGS
4.5.3 VPGS, Director of International Affairs
4.5.4 VPGS, Vice Provost and Dean of Enrollment Management, Graduate Faculty Council
4.5.6 VPGS, VPR
4.5.7 VPGS
4.5.12 VPGS, Vice Chancellor for University Advancement
4.5.16 VPGS
Appendix D – Detailed Description of Themes, Levers and Actions

Theme 1
Description: Develop and inspire creative thinkers and leaders and life-long success

Metric
Number of academic programs and administrative departments that expect participation in sponsored or recognized opportunities that encourage creative thinking, innovation, entrepreneurship or leadership development by its students, faculty and staff

Baseline
Current number of academic programs that require undergraduate student participation in substantial experiential opportunities (See Action 1.1.1)

Target 2020
a. Each academic program requires 100% undergraduate student participation in some significant experiential learning activity and encourages graduate student participation
b. Each department (academic and administrative) has an established plan for faculty and staff participation either as learners or advocates in developing creative thinkers and leaders

Lever/Category of Actions 1.1
Description: Require all undergraduate students to participate in some significant experiential learning activity before graduation

Metrics for success: All degree programs fully incorporating this requirement

Lever/Category of Action 1.1.1
Description: Create a defining comprehensive list of activities that are supported by research as significant experiential activities (High Impact High Feasibility)

Metrics for success: Approval of comprehensive list by Provost

Lever/Category of Actions 1.1.2
Description: Incorporate experiential/service learning into the core curriculum in all degree programs at any level beginning in the freshman year (High Impact Medium Feasibility)

Metrics for success: Faculty Senate approval for each degree program
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Action 1.1.2a

Description: Completion of Action Item 1 - Create a defining comprehensive list of activities that are supported by research as significant experiential activities by department

Metrics for success: Completion of Action Item 1 by December 2013 and list of approved significant activities by each department

Lever/Category of Actions 1.1.2b

Description: Draft a statement describing degree requirements

Metrics for success: Successful completion of the document

Lever/Category of Action 1.1.2c

Description: Department approval detailing ways students will be able to complete requirement

Metrics for success: The number of degree programs meeting this requirement

Lever/Category of Actions 1.1.2d

Description: Approval by degree-specific curriculum committees

Metrics for success: The number of degree programs with approved activities

Lever/Category of Action 1.1.2e

Description: Faculty Senate approval

Metrics for success: The number of degree programs with approved activities

Lever/Category of Actions 1.1.3 (Delayed)

Description: Assign responsibilities associated with monitoring Actions 1.1.1 and 1.1.2 and maintaining the reporting of experiential learning activities to the Vice Provost for Undergraduate Studies, who will regularly inform the Strategic Planning Progress Manager (SPPM) on progress (See Lever 2.7) (High Impact Low Feasibility)
**Appendix D – Detailed Description of Themes, Levers and Actions**

**Metrics for success**: Hire Strategic Planning Progress Manager and create monitoring and update plan

**Lever/Category of Actions 1.1.4 (Delayed)**

Description: Research and adopt fund-raising models for supporting Pell-eligible students in experiential learning opportunities (*See Lever 3.9*) (Medium Impact Medium Feasibility)

Metrics for success: Adoption of applicable models

**Lever/Category of Actions 1.1.5**

Description: Consult with the Director of COER to explore internship and externship opportunities in the summer and inter-sessions as well as during semesters (Medium Impact High Feasibility)

Metrics for success: List of opportunities
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 1.2

Description: Foster innovation and creativity for faculty, staff and students

Metrics for success: Innovation projects funded and implemented

Lever/Category of Action 1.2.1

Description: Create and promote an innovation team that solicits and considers creative suggestions from the S&T family. Empower owners for implementation. Create a small fund to implement several each year. (High Impact Medium Feasibility)

Metrics for success: Complete guidelines and plans for dissemination

Lever/Category of Actions 1.2.2

Description: Explore creating a Learning Commons with state of the art collaborative technology, practice presentation rooms, experimental technology lab with video editing and 3D printing capability for teaching, learning, and research. Training on how to effectively use the commons would be included. (High Impact Low Feasibility)

Metrics for success: Decision on implementing Learning Commons Facility

Lever/Category of Actions 1.2.3

Description: Devise a plan for TedX-like series for students, faculty and staff (e.g., experiential learning activities, professional development) (High Impact Medium Feasibility)

Metrics for success: Develop a plan for implementing TedX and evaluate

Lever/Category of Actions 1.2.4 (Delayed)

Description: Encourage entrepreneurship in the campus community through entrepreneurship courses to feed the campus business “incubator” including interdisciplinary course work that attracts creative students who want to make a difference (High Impact High Feasibility)

Metrics for success:
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 1.2.5

Description: Identify a series of co-curricular events (e.g., intersession or alternative spring break events) for interdisciplinary groups of students, faculty, and/or staff focused on providing solutions for problem-solving, innovation, or leadership (High Impact Medium Feasibility)

Metrics for success: Co-curricular events

Lever/Category of Actions 1.2.6

Description: Develop minor and certificate programs in leadership, entrepreneurship, humanitarian engineering and science, and creativity (High Impact High Feasibility)

Metrics for success: Programs developed

Lever/Category of Actions 1.2.7 (Delayed)

Description: Encourage participation in cross-disciplinary or global experiences (e.g., arts and humanities experiences for engineering, science and business students, study abroad) (High Impact Low Feasibility)

Metrics for success:

Lever/Category of Actions 1.2.8

Description: Identify ways in which graduate students research can be transformed into entrepreneurial application (High Impact Low Feasibility)

Metrics for success: Recommend opportunities

Lever/Category of Actions 1.2.9 (Delayed)

Description: Encourage an environment that promotes student-staff interaction through research and/or entrepreneurship (High Impact Low Feasibility)

Metrics for success:
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 1.2.10

Description: Identify, develop and implement professional development plans to enhance leadership, creativity, and innovation for the staff in each department or unit (High Impact Low Feasibility)

Metrics for success: Professional development plans

Lever/Category of Actions 1.2.11 (Delayed)

Description: Encourage regular use of faculty and staff of sabbatical or other off-site learning opportunities that contribute to the university’s strategic initiatives, department objectives, and individual development of expertise (High Impact Low Feasibility)

Metrics for success:

Lever/Category of Actions 1.3

Description: Establish database of measures to be used to define student access to faculty and staff

Metrics for success: Recommendation on metrics to define student-faculty interaction

Lever/Category of Action 1.3.1

Description: Define meaningful interaction with students

Metrics for success: Benchmark metrics of meaningful student interaction

Lever/Category of Actions 1.3.2

Description: Obtain data on number of faculty and other parameters

Metrics for success: Benchmark ratios to national standards. Benchmark ratios to comparator universities.

Lever/Category of Actions 1.3.3

Description: Obtain data on number of professional/exempt staff and other parameters

Metrics for success: Benchmark ratios to national standards. Benchmark ratios to comparator universities.
Lever/Category of Actions 1.3.4

Description: Create a hiring plan with Levers 2.1 and 2.2 for faculty and staff in line with established ratios and accepted definition of meaningful interaction.

Metrics for success: Completion of recommendation
Appendix D – Detailed Description of Themes, Levers and Actions

Theme 2

Description: Enhance reputation and raise visibility

Metric 1

Percentage of General Operating Revenue dedicated to institutional marketing and visibility efforts comparable to best-in-class universities (Baseline: 0; Target 2020: 1%)

Metric 2

Increase the number of additional faculty members through strategic hiring to leverage S&T as Missouri’s technological research university (Baseline: 0; Target 2020: 100)

Lever/Category of Actions 2.1

Description: Employ transformative and focused faculty hiring and retention, including cluster hires in select areas of expertise to support best in class (BIC) achievements. Identify two BIC areas for investment and initiate discussion on another two BIC areas

Metrics for success: Number of Phase 2 strategic faculty hires

Lever/Category of Action 2.1.1

Description: Identify two BIC areas for investment and initiate discussion on another two BIC areas

Metrics for success: Detailed description of BIC areas for investment

Lever/Category of Actions 2.1.2

Description: Develop and implement a process to transparently allocate all faculty positions to impact strategic plan and progress on unit performance measures (See Actions 2.3.1 and 2.2.4)

Metrics for success: Number of open and new faculty positions allocated to impact strategic plan and progress on unit performance measures
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 2.1.3

Description: Develop and implement a process to allocate faculty raises aligned with the strategic plan to address retention and reward high productivity

Metrics for success: GRA allocated faculty raises for retention/productivity

Lever/Category of Actions 2.1.4

Description: Identify and pursue companies, foundations and individual donors for charitable gifts to hire two national academy stature faculty in endowed chair positions in strategic areas #1 and #2

Metrics for success: Number of national academy stature faculty hired

Lever/Category of Actions 2.1.5

Description: Hire four faculty to complement each endowed chair hired under Action 2.1.4

Metrics for success: Number of complementary faculty associated with the endowed chair

Lever/Category of Actions 2.1.6

Description: Identify and pursue companies, foundations and individual donors to fund startup Packages

Metrics for success: Report on potential funding for startup packages

Lever/Category of Actions 2.1.7

Description: Finalize third and fourth BIC areas for investment next year

Metrics for success: See Action 2.1.1
Lever/Category of Actions 2.1.8

Description: Identify and pursue companies, foundations and individual donors for charitable gifts to hire two national academy stature faculty in endowed chair positions in strategic areas #3 and #4

Metrics for success: Number of national academy stature faculty hired

Lever/Category of Actions 2.1.9

Description: Hire four faculty to complement each endowed chair hired under Action 2.1.8

Metrics for success: Number of complementary faculty associated with the endowed chair

Lever/Category of Actions 2.2

Description: Leverage S&T as Missouri’s technological research university

Metrics for success: Student-to-faculty ratio (16:1); number of students (UG; PhD); new signed MOUs

Lever/Category of Action 2.2.1

Description: Increase S&T’s undergraduate enrollment by 500 by 2020 (High Impact, Medium Feasibility)

Metrics for success: Undergraduate enrollment increase by 500 by 2020

Lever/Category of Actions 2.2.2

Description: Increase S&T’s PhD enrollment by 200-400 by 2020 (High Impact, High Feasibility)

Metrics for success: Ph.D. enrollment increases by 200-400 by 2020

Lever/Category of Actions 2.2.3

Description: Increase the number of tenure/tenure-track (non-tenure-track) faculty members by 67 (33) to achieve an overall student-to-faculty ratio of 16:1 (12 tenure/tenure-track faculty in conjunction with Lever 2.1 focus areas in Phase 1) (High Impact, Low Feasibility)

Metrics for success: Increasing number of faculty by 14 per year on average and reducing student-to-faculty ratio to 16:1 by 2020
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 2.2.4

Description: Transparently allocate as defined in Action 2.1.2 all open and new faculty positions to impact strategic plan and progress on unit performance measures (High Impact, Low Feasibility)

Metrics for success: Number of positions filled in line with strategic plan and progress on unit performance measures

Lever/Category of Actions 2.2.5

Description: Increase the number of technical/ specialized staff members by 30 to support faculty and program activities. Year 1 funding is for an HR support staff to assist with recruitment and hiring of new faculty members (High Impact, Low Feasibility)

Metrics for success: Increasing technical staff by 4-5 per year on average by 2020

Lever/Category of Actions 2.2.6

Description: S&T will develop specific agreements with UM campuses and possibly other academic institutions to collaborate in delivering courses and degrees that enhance the current portfolios on each campus (High Impact, Low Feasibility)

Metrics for success: Number of memorandums of understanding

Lever/Category of Actions 2.3

Description: Develop a culture of excellence in research, scholarship, and creative activity among faculty, staff and students

Metrics for success: Improvement in annual department defined research, scholarship and creative activity metrics

Lever/Category of Action 2.3.1

Description: Develop and implement performance-based resource allocation models commensurate with degree offerings, including productivity in research, scholarship and creative works (High Impact, High Feasibility)
Lever/Category of Actions 2.3.2

Description: Identify and take actions to improve the metrics that contribute to increasing the national ranking of five graduate programs (High Impact, Medium Feasibility)

Metrics for success: Select five departments and measures used in graduate rankings

Lever/Category of Actions 2.3.3

Description: Be selected to lead a National Science Foundation Engineering Research Center (ERC)-type center (High Impact, Low Feasibility)

Metrics for success: Number of S&T National Science Foundation Engineering Research Centertype centers

Lever/Category of Actions 2.3.4

Description: Establish two new sustainable industry funded research consortia (High Impact, Medium Feasibility)

Metrics for success: Number of industry consortia

Lever/Category of Actions 2.3.5

Description: Establish programs and facilities to host visiting world-class faculty (High Impact, Medium Feasibility)

Metrics for success: Number of world-class faculty hosted

Lever/Category of Actions 2.3.6 (Delayed)

Description: Increase SRI to PIs

Metrics for success:
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 2.3.7 (Delayed)
Description: Identify and take actions to improve the metrics that contribute to increasing the national ranking of five graduate programs

Metrics for success:

Lever/Category of Actions 2.3.8
Description: Expand research and entrepreneurial opportunities for undergraduate students, including OURE (High Impact, Medium Feasibility)

Metrics for success: Number of UG students enrolled in course 390 and/or supported by external research funding

Lever/Category of Actions 2.3.9
Description: Balance teaching and research relative to comparator institutions by enforcing workload policy (High Impact, Medium Feasibility)

Metrics for success: Number of departments with workload policy in place

Lever/Category of Actions 2.3.10
Description: Develop and implement a new program to instill a culture of excellence in research, scholarship and creative works in early career faculty (High Impact, Medium Feasibility)

Metrics for success: Improvement in annual department defined research, scholarship and creative activity metrics

Lever/Category of Actions 2.3.11
Description: Develop and implement a new program to instill a culture of excellence in research, scholarship and creative works in doctoral students (High Impact, Medium Feasibility)

Metrics for success: Improvement in annual department defined research, scholarship and creative activity metrics
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 2.3.12 (Delayed)

Description: Develop and implement a cost share program to support faculty and students to attend national conferences to present their research results.

Metrics for success:

Lever/Category of Actions 2.4

Description: Create and implement a communication and marketing plan to raise the visibility of the campus and convey our return on investment

Metrics for success: 1.) Creation of integrated, campus wide marketing plan targeting key customer groups and focusing on national reputation in terms of return on investment; 2.) Improvement in levels of visibility and awareness among key customer groups in terms of Missouri S&T’s value and return on investment.

Lever/Category of Action 2.4.1

Description: Establish a Marketing Leadership Team to guide development of an integrated, campus wide communications and marketing plan (High Impact High Feasibility)

Metrics for success: Organizational structure established and regular participation by campus Leadership

Lever/Category of Actions 2.4.2

Description: Establish a Core Marketing Network to provide consultation to the Marketing Leadership Team to establish an integrated, campus wide communications and marketing plan (High Impact High Feasibility)

Metrics for success: Organizational structure established
Lever/Category of Action 2.4.3

Description: Develop a request for proposals for professional marketing consultation to a.) conduct a needs assessment regarding the desired outcome of an integrated, campus wide communications and marketing plan; b.) conduct a capabilities assessment to determine our ability and readiness to conduct such a campaign (the capabilities assessment will include a communications audit of all marketing materials and assessment of any marketing research) (High Impact High Feasibility)

Metrics for success: RFP created, distributed

Lever/Category of Actions 2.4.4

Description: Identify marketing staff who will be responsible for implementing the plan and shall create a professional development plan to help ensure those staff are trained to carry out their responsibilities (High Impact Low Feasibility)

Metrics for success: Staff identified; training needs identified

Lever/Category of Action 2.4.5

Description: Remove references to “formerly the University of Missouri-Rolla” in all marketing materials targeting the key customer groups (High Impact Low Feasibility)

Metrics for success: Degree of transition from “formerly…”

Lever/Category of Actions 2.4.6 (Delayed)

Description: Require researchers to include in their research proposals a request for a certain percentage of funding (to be determined by the Marketing Leadership Team in consultation with the Vice Provost for Research and Sponsored Programs) to support the research-related tactics of the integrated, campus wide marketing plan. (NSF, for example, allows funding requests for “publication/documentation/dissemination,” which can be used to support public relations and marketing activities.) (Medium Impact Medium Feasibility)

Metrics for success:
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Action 2.4.7

Description: Seek matching commitments to fund a portion of campus wide communications and marketing efforts (High Impact Low Feasibility)

Metrics for success: Proposal presented to appropriate groups & funding secured

Lever/Category of Actions 2.4.8

Description: Require all communications and marketing materials (print, web, video, etc.) to be reviewed by a central marketing team (the department of communications or the Core Marketing Network) to ensure consistency of messaging, appearance, and tone

Metrics for success: Proposal approved; funding secured

Lever/Category of Action 2.4.9

Description: Obtain commitment from campus leadership to create a recurring budget for campus wide marketing (High Impact Low Feasibility)

Metrics for success: Funding secured

Lever/Category of Actions 2.4.10

Description: Identify minimum of three higher education institutions who are considered best in class in terms of communicating return on investment. (High Impact High Feasibility)

Metrics for success: Institutions identified (minimum of 3)

Lever/Category of Action 2.4.10a

Description: Examine best-in-class institutions’ practices and incorporate into Missouri S&T marketing planning as applicable. (High Impact High Feasibility)

Metrics for success: Marketing data gathered from institutions, including site visits.
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 2.4.11

Description: Centralize all communications and marketing operations. (High Impact Low Feasibility)

Metrics for success: Progress toward centralization

Lever/Category of Actions 2.5

Description: Modify our conventional methods of teaching to accommodate current, new and advanced technology that will enhance student learning and increase faculty productivity

Metrics for success: Increase in student success in redesigned courses

Lever/Category of Action 2.5.1 (Delayed)

Description: Redefine CERTI to become a more comprehensive resource for Teaching and Learning to attract more faculty participating (High Impact Medium Feasibility)

Metrics for success: Increase number of faculty participating

Lever/Category of Actions 2.5.2 (Delayed)

Description: Enhance resources for distance and blended learning, particularly with respect to the management and distribution of multimedia objects (aid professors use in classroom instead of taking a field trip) (Medium Impact Medium Feasibility)

Metrics for success: Number of courses taught using multimedia objects

Lever/Category of Actions 2.5.3

Description: Increase instructional design support and online facilitators for teaching faculty (High Impact High Feasibility)

Metrics for success: Increase number of successful students
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 2.5.4 (Delayed)

Description: Obtain funds to establish a Chancellor’s eLearning Transformation Program (Medium Impact Medium Feasibility)

Metrics for success: Budget established. Number of course and program offerings.

Lever/Category of Actions 2.5.5 (Delayed)

Description: Create a “10 Before Tenure” program where untenured faculty participate in 10 career development programs (High Impact High Feasibility)

Metrics for success: Number of faculty participating. Creation of program.

Lever/Category of Actions 2.5.6

Description: Create and implement a stipend program to reward faculty who incorporate Blended Learning techniques into their courses (High Impact Medium Feasibility)

Metrics for success: Increase in number of blended courses. Increase in number of faculty involved.

Lever/Category of Actions 2.5.7 (Delayed)

Description: Investigate offering courses in innovative modular format (Medium Impact Medium Feasibility)


Lever/Category of Actions 2.7

Description: Address administrative structural changes to facilitate strategy and enhance national visibility

Metrics for success: New or revised organizational structure is implemented
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Action 2.7.1

Description: Implement the organizational structure appropriate to strategic plan (High Impact High Feasibility). Develop, design and implement an organizational structure that is appropriate to enhance reputation, raise visibility of the institution, and support the themes of the strategic plan.

Metrics for success: Implementation of organizational structure appropriate to strategic plan

Lever/Category of Actions 2.7.2

Description: Hire Strategic Planning Progress Manager (SPPM) (High Impact High Feasibility)

Metrics for success: Hire Strategic Planning Progress Manager
Appendix D – Detailed Description of Themes, Levers and Actions

Theme 3

Description: Achieve sustainable growth and ensure our future for best return on investment

Metric 1

Undergraduate student enrollment (Baseline: 5,843; Target 2020: 6,343)

Metric 2

Graduate student enrollment (Baseline: 1,804; Target 2020: 2,004-2,204)

Lever/Category of Actions 3.1

Description: Evaluate current academic programs and create, modify, eliminate or combine in order to ensure a relevant portfolio that supports a Carnegie ranking as a national, research university

Metrics for success: Improvement in annual department defined research, scholarship and creative activity metrics

Lever/Category of Action 3.1.1

Description: Perform a comparison of academic department productivity to peer institutions (See Actions 2.3.1 and 1.3.1) (High Impact High Feasibility)

Metrics for success: Academic departments that have a comparison of productivity measures

Lever/Category of Action 3.1.2

Description: Identify actions to improve the metrics that contribute to increasing the ranking of all graduate programs (See Action 2.3.2) (High Impact High Feasibility)

Metrics for success: Select measures used in graduate rankings and acquire values and departmental specific metrics for improvement
Appendix D – Detailed Description of Themes, Levers and Actions

**Lever/Category of Action 3.1.3**

**Description:** Evaluate the need for new or elimination of existing degree programs (High Impact High Feasibility)

**Metrics for success:** Recommendations

**Lever/Category of Action 3.1.4 (Delayed)**

**Description:** Develop a comprehensive distance and online education strategy (High Impact Medium Feasibility)

**Metrics for success:**

**Lever/Category of Action 3.1.5 (Delayed)**

**Description:** Examine how to share courses so that faculty time is preserved (High Impact Medium Feasibility)

**Metrics for success:**

**Lever/Category of Action 3.1.6 (Delayed)**

**Description:** Investigate a module approach to instruction instead of 3-credit courses (High Impact Medium Feasibility)

**Metrics for success:**

**Lever/Category of Action 3.1.7 (Delayed)**

**Description:** Eliminate programs that are sub-par (High Impact Low Feasibility)

**Metrics for success:**

**Lever/Category of Actions 3.2**

**Description:** Centralize corporate relations to improve service to existing partners and to identify and establish new partnerships for the purpose of increasing/enhancing research, economic development, credit and non-credit education, philanthropy, and the hiring of our graduates

**Metrics for success:** Number of corporate partnerships
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Action 3.2.1

Description: Create a corporate relations office and determine the role it should play in assisting the various interests within the S&T community in establishing appropriate relationships with external constituents (High Impact High Feasibility)

Metrics for success: Documentation of approval for office

Lever/Category of Actions 3.2.2

Description: Determine the reporting structure of the office within S&T (High Impact High Feasibility)

Metrics for success: Approval of reporting structure

Lever/Category of Actions 3.2.3

Description: Develop a funding mechanism to support the office and its activities (High Impact High Feasibility)

Metrics for success: Funding mechanism developed

Lever/Category of Actions 3.2.4

Description: Determine the internal organizational structure of the office (title of leadership, professional staff and support staff) (High Impact High Feasibility)

Metrics for success: Organization structure approval

Lever/Category of Actions 3.2.5

Description: Develop a plan to create campus awareness of the role to be played by the office while clearly identifying responsibilities (High Impact Medium Feasibility)

Metrics for success: Plan developed
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 3.2.6

Description: Broadly identify needs of external constituents that could be met by S&T (High Impact High Feasibility)

Metrics for success: Needs identified

Lever/Category of Actions 3.2.7

Description: Determine mechanisms to develop reciprocal partnerships (High Impact High Feasibility)

Metrics for success: Development of mechanism

Lever/Category of Actions 3.2.8

Description: Develop a method for evaluating the relative strength and breadth of the partnerships with external constituents (research, student hiring, giving, distance courses, board memberships, etc.) (High Impact High Feasibility)

Metrics for success: Acceptance of evaluation method

Lever/Category of Actions 3.2.9

Description: Develop a matrix that reflects the multiple results of Action 3.2.8 above and provides an overall indication of the strength of the relationship and helps identify paths to maintain, strengthen or expand the partnership (High Impact High Feasibility)

Metrics for success: Acceptance of results by both S&T and corporate community

Lever/Category of Actions 3.2.10

Description: Create a concierge approach to corporate relations including a web presence that supports the mission of the office (High Impact High Feasibility)

Metrics for success: Web analytics
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 3.2.11

Description: Develop marketing plan to communicate the benefits of the office to key customers (High Impact High Feasibility)

Metrics for success: Heightened awareness of understanding of benefits, as measured by surveys or focus groups. Number of corporate partnerships, corporate students, corporate research and contract revenue, gifts, and students hired.

Lever/Category of Actions 3.2.12

Description: Work with IT to create a “customer relations” management data base that provides easy access to usable and actionable information (High Impact High Feasibility)

Metrics for success: Number of corporate partnerships

Lever/Category of Actions 3.3

Description: Improve facilities to enhance research and student learning, and expand experiential learning

Metrics for success: Upgrades to instructional and research labs; master plan; determine feasibility of endowments for equipment

Lever/Category of Action 3.3.1

Description: Leverage strategic funds for instructional laboratories with matching funding from non-appropriated sources (High Impact Medium Feasibility)

Metrics for success: Instructional lab matching funding acquired and allocated. Number of courses and students impacted. Number of remote collaborations supported.

Lever/Category of Actions 3.3.2

Description: Devise a plan and process for acquiring matching funding for research equipment in areas that have high return on investment to be matched with non-appropriated funds (High Impact High Feasibility)

Metrics for success: Devise a development plan. Determine feasibility.
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Action 3.3.3 (Delayed)

Description: Implement the development plan from Action 3.3.2 (High Impact High Feasibility)

Metrics for success: Research equipment purchased. Second-year target: $1 million per year.

Lever/Category of Action 3.3.4

Description: Evaluate all campus facilities for their readiness for sustainable growth and return on investment by engaging a campus master planning consultant (High Impact High Feasibility)


Lever/Category of Action 3.3.5

Description: Develop and disseminate a research infrastructure database to help departments share equipment (High Impact High Feasibility)

Metrics for success: Database. First-year target: Database developed.

Lever/Category of Action 3.3.6

Description: Investigate feasibility of establishing a $20 million endowment for the maintenance of (teaching, research, and co-curricular) equipment (See Lever 3.9) (High Impact Low Feasibility)

Metrics for success: Analysis of donor potential. 1st Year Target: Development analysis complete

Lever/Category of Action 3.3.7

Description: Investigate building a Learning Commons (e.g., in Library) to enhance student learning and research. This facility should allow for reconfiguration as needs change, technologies evolve, and the student population changes. It should include as much hands-on technology as possible, available to all, in an interdisciplinary environment. (See Action 1.2.1) (High Impact Medium Feasibility)

Metrics for success: Need assessment and plan. 1st Year Target: Plan complete
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Action 3.3.8

Description: Investigate the feasibility of establishing a $100 million endowment for the acquisition of (teaching, research, and co-curricular) equipment (High Impact Low Feasibility)

Metrics for success: Analysis of donor potential. 1st Year Target: Development analysis complete

Lever/Category of Action 3.3.9 (Delayed)

Description: Evaluate the possibility to use GRA funding for research facilities in areas that arguably have high return on investment to be used as match to State initiatives such as HJR14 (High Impact Low Feasibility)

Metrics for success: Process to access state initiative. 1st Year Target: Process developed

Lever/Category of Action 3.3.10 (Delayed)

Description: Implement Learning Space Design Guidelines based on standard practices to guide the design of all learning spaces on campus (Medium Impact High Feasibility)

Metrics for success:

Lever/Category of Action 3.3.11 (Delayed)

Description: Assess effectiveness of collaborative learning spaces (e.g. learning commons) that can be used for experiential learning opportunities and undergraduate research (Medium Impact High Feasibility)

Metrics for success:

Lever/Category of Actions 3.4

Description: Promote inclusion and increase diversity of faculty, staff, and students to remain relevant and competitive in a global environment

Metrics for success: Number of underrepresented minority/female faculty/staff/students
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Action 3.4.1

Description: To increase diversity of faculty and staff, provide incentives to the hiring departments that select qualified underrepresented minorities (High Impact Medium Feasibility)

Metrics for success: Number of underrepresented new faculty and professional and administrative staff hired

Lever/Category of Actions 3.4.2

Description: To increase diversity of students, explore scholarship and grant funding to be more competitive with underrepresented minorities/female/student recruitment

Metrics for success: Explore feasibility of expanding scholarship and grant funding for female and underrepresented minority students (See Lever 3.9)

Lever/Category of Action 3.4.3

Description: Set up transfer articulation agreements with two-year, predominantly underrepresented minority institutions (High Impact Medium Feasibility)

Metrics for success: Articulation agreements

Lever/Category of Actions 3.4.4 (Delayed)

Description: Development of “affinity groups” to promote relationships (High Impact High Feasibility)

Metrics for success:

Lever/Category of Actions 3.4.5 (Delayed)

Description: Develop and provide professional development and training for S&T staff, faculty and students that provides awareness of diversity and inclusion issues and encourages them to develop skills that will make our campus a warm and welcoming environment (High Impact Medium Feasibility)

Metrics for success:
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 3.4.6

Description: Development a comprehensive diversity and inclusion plan that would incorporate various action items (High Impact High Feasibility)

Metrics for success: Plan is created

Lever/Category of Action 3.4.7

Description: Bring to campus underrepresented faculty as visiting scholars (High Impact High Feasibility)

Metrics for success: Underrepresented faculty visiting scholars

Lever/Category of Actions 3.4.8 (Delayed)

Description: Review the performance evaluation process and add a component that will encourage participation in programs and events that are connected to diversity and inclusion (High Impact High Feasibility)

Metrics for success: Component added

Lever/Category of Actions 3.4.9

Description: Review, revise and create policies that support work-life balance

Metrics for success: Policies created/revised

Lever/Category of Actions 3.4.10

Description: Evaluate and enhance faculty recruitment process and practice

Metrics for success: Processes reviewed, recommendations made

Lever/Category of Actions 3.4.11

Description: Explore collaborative partnerships for early childhood education, child development programs and facilities to enhance faculty recruitment and retention. Evaluate opportunities through campus master planning process (See Action 3.3.4)

Metrics for success: Opportunities identified and evaluated
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 3.5

Description: Create and implement a plan for student and alumni lifetime engagement strategy

Metrics for success: A notable growth in campus engagement by our undergraduate, graduate, alumni and donors. This growth is measured using: Levels of volunteerism across campus by students and alumni; student participation in campus organizations and activities that are relevant to their career endeavors; increases in donor retention, greater alumni participation in alumni activities and programs, growth in alumni giving that exceeds inflation, and population expansion.

Lever/Category of Action 3.5.1

Description: Utilize the library and eventually archives in creating collaborative online areas where alumni can view yearbooks, the Miner, photos, and other memorabilia. Alumni can engage in digitized collections by identifying people and events and sharing stories online. (High Impact High Feasibility)

Metrics for success: Number of alumni engaging with online collection. Usage data. Measure where user came from, time on site/location, how long they engage, specific years they engage with most, identify areas of interest.

Lever/Category of Actions 3.5.2

Description: Create lifetime accounts that support contact and engagement (High Impact High Feasibility)

Metrics for success: Lifetime accounts created. Usage and participation data based on engagement campaigns

Lever/Category of Actions 3.5.3

Description: Create a multifaceted engagement program that brings students through graduation and to the Academy levels (High Impact High Feasibility)

Metrics for success: Levels of volunteerism across campus by students and alumni, student participation, donor retention, alumni participation in alumni activities and programs, alumni giving
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 3.5.4

Description: Explore the feasibility of splitting the 1% Endowment Management Fee with departments that generate the funding; earmark the funds to be used for development-related activities (High Impact Low Feasibility)

Metrics for success: Determine impact on campus budget and identify how funds might be saved, generated or reallocated to accomplish this

Lever/Category of Actions 3.8

Description: Exercise leadership in sustainability on campus and in the community by modeling sustainability practices in daily operations and practicing good environmental stewardship

Metrics for success: Sustainability awareness projects identified and implemented

Lever/Category of Action 3.8.1

Description: Stabilize long-term funding for the Office of Sustainable Energy and Environmental Engagement (High Impact Low Feasibility)

Metrics for success: Funding for OSE3

Lever/Category of Action 3.8.2

Description: Led by OSE3, initiate and create student awareness programs and associated funding vehicles to promote our sustainable research and campus initiatives (High Impact High Feasibility)

Metrics for success: Student sustainability fee approved by student council

Lever/Category of Action 3.8.3

Description: Create, in conjunction with Physical Facilities and Environmental Health and Safety, a sustainable waste management plan for all university waste (High Impact Low Feasibility)

Metrics for success: Funding approved for implementation phase
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Lever/Category of Action 3.8.4 (Delayed)

Description: Create a minimum of two technology pilot programs per year to reduce university’s carbon footprint, e.g. electricity shedding, water protection, waste mitigation (High Impact High Feasibility)

Metrics for success: Number of new pilot programs per year

Lever/Category of Action 3.8.5

Description: Create and promote an alternative transportation culture, focused around simple transportation methods, including pedestrian and cycling, to improve alternative transportation infrastructure over the next five years (High Impact Low Feasibility)

Metrics for success: Projects identified and funded

Lever/Category of Action 3.8.6

Description: Investigate existing and new courses for sustainability awareness for faculty, staff and students (High Impact Low Feasibility)

Metrics for success: Course development and implementation

Lever/Category of Action 3.8.7

Description: Create campus sustainability project revolving fund that will allow savings to be invested back into the fund to underwrite future projects (High Impact Low Feasibility)

Metrics for success: Fund established and new projects funded

Lever/Category of Action 3.8.8

Description: Track energy, environmental, and sustainability research on campus (High Impact Medium/High Feasibility)

Metrics for success: Expenditure report
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Action 3.8.9 (Delayed)

Description: Led by OSE3 initiative in conjunction with University Advancement, create alumni awareness programs and associated funding vehicles to promote our sustainable research and campus initiatives. Funding vehicles: 1: alumni donations and endowments (High Impact Low Feasibility)

Metrics for success:

Lever/Category of Action 3.8.10 (Delayed)

Description: Make investment decisions that promote sustainability. Invest in companies and funds that provide a strong rate of return and that are socially and environmentally responsible. Create committee on investor responsibility. (High Impact Low Feasibility)

Metrics for success:

Lever/Category of Action 3.8.11 (Delayed)

Description: Partner with local schools, hospitals, non-profits and other companies to provide consolidated recycling and waste management services by contract (High Impact Low Feasibility)

Metrics for success:

Lever/Category of Action 3.8.12 (Delayed)

Description: Increase carbon offset investment to aid to S&T’s commitment to the ACUPCC climate neutrality goal of a 20% reduction in emissions by 2020 and a 40% reduction in emissions by 2035 relative to our 2010 emissions baseline (Medium Impact Low Feasibility)

Metrics for success:

Lever/Category of Action 3.8.13

Description: Analyze new construction with U.S. Green Building Council LEED (Leadership in Energy and Environmental Design) principles and pursue LEED certification when appropriate (High Impact Low Feasibility)

Metrics for success: Decision implemented.
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Lever/Category of Actions 3.9

Description: Conduct a comprehensive fundraising campaign to secure private support for identified campus priorities

Metrics for success: Improvement in fundraising metrics including total campaign dollars raised, annual dollars raised, dollars raised for featured objectives of the campaign, total number of donors participating, and number of donors at tiered giving levels

Lever/Category of Action 3.9.1

Description: Conduct wealth screening and data validation

Metrics for success: Screening and validation process completed and uploaded to Advance database

Lever/Category of Actions 3.9.2

Description: Initiate partnership with consulting/research firm

Metrics for success: Contract finalized; consultation and research activities commenced and completed

Lever/Category of Action 3.9.3

Description: Review, update and approve gift acceptance policy

Metrics for success: Policy completed and approved

Lever/Category of Actions 3.9.4

Description: Review, update and approve naming policy

Metrics for success: Policy updated and approved

Lever/Category of Action 3.9.5

Description: Develop campaign timeline with associated milestones

Metrics for success: Timeline completed
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 3.9.6
Description: Develop plan and proposal for staffing requirements


Lever/Category of Actions 3.9.7
Description: Conduct feasibility study

Metrics for success: Study completed and campaign pyramid(s) developed

Lever/Category of Action 3.9.8
Description: Participate in process to update campus master plan to advise on fundraising opportunities and targets

Metrics for success: Campus master plan updated. List of potential fundraising opportunities completed.

Lever/Category of Actions 3.9.9 (Delayed)
Description: Update gift officer portfolios based on wealth screening

Metrics for success: Portfolios updated

Lever/Category of Action 3.9.10 (Delayed)
Description: Lead review and decision making by senior campus leadership to identify and prioritize fundraising opportunities based on new strategic plan and updated campus master plan


Lever/Category of Actions 3.9.11 (Delayed)
Description: Develop campaign case statement based on prioritized list of fundraising targets

Metrics for success: Contract finalized; consultation and research activities commenced and completed
Lever/Category of Action 3.9.12 (Delayed)

Description: Recruit and hire staff

Metrics for success: Staff hired

Lever/Category of Actions 3.9.13 (Delayed)

Description: Train staff

Metrics for success: Staff assimilated and trained

Lever/Category of Action 3.9.14 (Delayed)

Description: Identify prospects for campaign cabinet

Metrics for success: Prospects identified

Lever/Category of Actions 3.9.15 (Delayed)

Description: Recruit campaign cabinet

Metrics for success: Cabinet recruited and regular cabinet meetings launched

Lever/Category of Actions 3.9.16 (Delayed)

Description: Develop and publish campaign collateral materials for leadership and major gifts

Metrics for success: Materials developed and published

Lever/Category of Action 3.9.17 (Delayed)

Description: Develop and publish campaign collateral materials for participatory gifts

Metrics for success: Materials developed and published
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Lever/Category of Action 3.9.18 (Delayed)
Description: Develop campaign proposal templates
Metrics for success: Templates completed

Lever/Category of Action 3.9.19 (Delayed)
Description: Solicit leadership gifts
Metrics for success: Gifts solicited and closed

Lever/Category of Actions 3.9.20 (Delayed)
Description: Solicit major gifts
Metrics for success: Gifts solicited and closed

Lever/Category of Actions 3.9.21 (Delayed)
Description: Solicit participatory gifts
Metrics for success: Gifts solicited and closed

Lever/Category of Action 3.9.22 (Delayed)
Description: Conduct faculty/staff campaign
Metrics for success: Gifts solicited and closed

Lever/Category of Actions 3.9.23 (Delayed)
Description: Public announcement of campaign and goal
Metrics for success: Conduct announcement
Appendix D – Detailed Description of Themes, Levers and Actions

Theme 4

**Description:** Increase and facilitate meaningful access to and interaction with renowned faculty, staff, and services

**Metric 1**

First-to-second year undergraduate student retention rate (**Baseline:** 85%; **Target 2020:** 88%)

**Metric 2**

Total graduate student support per funded graduate student (**Baseline:** $13,700; **Target 2020:** $17,500)

**Lever/Category of Actions 4.1**

**Description:** Create a comprehensive distance and online education strategy

**Metrics for success:** Increase the number of distance/online courses offered per year from a baseline of 200 to a target of 300 by 2020. Increase the number of students enrolled per year from 1,513 to 2,013 by 2020.

**Lever/Category of Action 4.1.1**

**Description:** Conduct a focused market study analysis to serve as the foundation for a comprehensive distance and online education strategy

**Metrics for success:** 1) Statistically valid coverage; 2) Study completed

**Lever/Category of Actions 4.1.2**

**Description:** Bring together distance and online programs under one umbrella so as to leverage advantages of both, to pool resources, and to eliminate confusion

**Metrics for success:** New organization authorized
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 4.1.3 (Delayed)

Description: Create a uniform marketing strategy to raise visibility of distance and online programs

Metrics for success: 1) Development of strategy; 2) Increased enrollment

Lever/Category of Actions 4.1.4

Description: Increase our focus on the professional non-credit distance education portfolio

Metrics for success: 1) Size of portfolio; 2) Enrollment and revenue

Lever/Category of Actions 4.1.5 (Delayed)

Description: Involve library to work on storage, usage and copyright issues involving online resources, including multimedia

Metrics for success: 1) Faculty use of library; 2) Policy developed; 3) Use of library services

Lever/Category of Actions 4.1.6

Description: Create an incentive program to encourage departments and faculty to offer more online, blended and distance courses (See Lever 2.5)

Metrics for success: Number of course and program offerings

Lever/Category of Actions 4.1.7

Description: Leverage existing success and resources from Distance Ed program to expand into more online or asynchronous course offering

Metrics for success: 1) Use of VCC facilities for online course production; 2) Number of asynchronous courses

Lever/Category of Actions 4.1.8 (Delayed)

Description: Hire more NTT and adjunct professors to cover the online teaching needs

Metrics for success: Number of faculty
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 4.1.9 (Delayed)
Description: Create more online delivery capability in classrooms
Metrics for success: Number of classrooms

Lever/Category of Actions 4.1.10 (Delayed)
Description: Consolidate and collaborate in delivering graduate and undergraduate engineering degree programs state-wide
Metrics for success: 1) Number of programs; 2) Enrollment; 3) Revenue

Lever/Category of Actions 4.2
Description: Enhance instructional labs and methods of delivering lab experiences
Metrics for success: Institution partners and redesigned lab courses. Two new partners and five redesigned labs by year five.

Lever/Category of Action 4.2.1
Description: Explore how to partner with other universities, community colleges, high schools or extension to deliver lab experiences (Impact High Feasibility High)
Metrics for success: Number of institution partners

Lever/Category of Actions 4.2.2
Description: Develop model frameworks and strategies for evaluating and redesigning instructional lab courses (including simulations) for blended/online delivery (Impact High Feasibility High)
Metrics for success: Developed model framework and strategy
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 4.2.3 (Delayed)
Description: Return science and engineering fees to teaching departments (Impact High Feasibility Medium)
Metrics for success: Developed model framework and strategy

Lever/Category of Action 4.2.4 (Delayed)
Description: Deploy Springfield (MSU) cooperative program model throughout the state (Impact High Feasibility Medium)
Metrics for success:

Lever/Category of Actions 4.2.5 (Delayed)
Description: Determine how international partnerships and online programs can be marketed and grown in Missouri and elsewhere (Impact High Feasibility Medium)
Metrics for success:

Lever/Category of Actions 4.5
Description: Engage in transformative doctoral student recruiting/retention and placement

Metrics for success: Publications per research-based, graduate degree awarded (Baseline: 12; Target 2020: 15). Total student support per funded graduate student (Baseline: $13,700; Target 2020: $17,500). Ph.D. enrollment (Baseline: Fall 2012; Target 2020: 200-400).

Lever/Category of Action 4.5.1
Description: Develop a plan to provide fully covered tuition for doctoral students on appointments and explore implementation (High Impact Medium Feasibility)
Metrics for success: Develop a plan and implementation recommendations
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 4.5.2 (Delayed)

Description: (Recruit) Competitive package - Provide healthcare/childcare benefits for students on appointments (Medium Impact Medium Feasibility)

Metrics for success: % increase in doctoral students; retention rate

Lever/Category of Actions 4.5.3

Description: (Recruit) Develop MOUs and articulation agreements with reputed national and international schools to recruit high quality doctoral students (High Impact Medium Feasibility)

Metrics for success: Number of active/inactive MOUs, articulation agreements

Lever/Category of Action 4.5.4

Description: (Recruit) Develop a marketing plan to promote comprehensive S&T graduate leadership and excellence (High Impact Medium Feasibility)

Metrics for success: Heightened awareness of S&T’s leadership and excellence in graduate education, as measured by surveys and focus groups

Lever/Category of Actions 4.5.5 (Delayed)

Description: (Recruit) Select top OURE students to enroll in graduate school by using senior year tuition coverage as incentive (High Impact Medium Feasibility)

Metrics for success: # of OURE students accepting scholarship offer (senior year)

Lever/Category of Action 4.5.6

Description: (Retain) Study GRA “bridge funding” between faculty grant funding and graduation (High Impact Medium Feasibility)

Metrics for success: Complete study and provide recommendations
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Action 4.5.7

Description: (Retain) Conduct a feasibility study and develop a plan for a Graduate Resource/Success Center to help students in the timely completion of their degrees, and for leadership/professional development (High Impact Medium Feasibility)

Metrics for success: Study completed

Lever/Category of Actions 4.5.8 (Delayed)

Description: (Retain) Develop a year-long Graduate Research Scholars Program for all newly admitted doctoral students (much like the new faculty program) (High Impact Medium Feasibility)

Metrics for success: Increase in retention; Increase in publications

Lever/Category of Actions 4.5.9 (Delayed)

Description: (Placement) Develop and implement a plan for a comprehensive graduate division of Career Opportunities and Employment Center (COER) (High Impact Medium Feasibility)

Metrics for success: Starting salary of graduate students, Placement rate and type (industry, academia, etc.), internship placement

Lever/Category of Actions 4.5.10 (Delayed)

Description: (Placement) Provide mentorship and networking opportunities for students by connecting them to experts in academia/industry/research labs; provide resources to present their research work at national/international conferences (Medium Impact Medium Feasibility)

Metrics for success: Number of student connections with outside experts

Lever/Category of Actions 4.5.11 (Delayed)

Description: (Recruit) Provide funds to encourage prospective domestic doctoral students to visit campus for one day and/or for a few weeks to work closely with a professor (REU model) (Medium Impact Medium Feasibility)

Metrics for success: Number of prospective students visiting campus; Number of prospective students that enroll and return to campus
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 4.5.12

Description: Investigate creating a $10 million endowment for recruiting high quality doctoral students (See Lever 3.9) (High Impact Low Feasibility)

Metrics for success: Donor feasibility analysis and study

Lever/Category of Actions 4.5.13 (Delayed)

Description: (Recruit) Enhance implementation efforts for high quality international doctoral students (High Impact Medium Feasibility)

Metrics for success: # of international doctoral students

Lever/Category of Actions 4.5.14 (Delayed)

Description: (Recruit/retain) Implement customized mechanisms to recruit and retain underrepresented and minority (URM) doctoral students at S&T (High Impact Medium Feasibility)

Metrics for success: % increase in underrepresented and URM doctoral students
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 4.5.15 (Delayed)

Description: (Retain) Examine graduate programs and reduce time to degree, where appropriate (High Impact Medium Feasibility)

Metrics for success: # of programs examined: measure time to degree per individual degree; Retention rate

Lever/Category of Actions 4.5.16

Description: (Retention) Perform study on providing dissertation writing fellowships to doctoral students who have completed their comprehensive exams (High Impact Medium Feasibility)

Metrics for success: Time to degree; retention rate/Complete study

Lever/Category of Actions 4.5.17 (Delayed)

Description: (Retain) Promote workshops/seminars/social events to encourage more camaraderie and exchange of research ideas among doctoral students from various disciplines (High Impact High Feasibility)

Metrics for success:

Lever/Category of Actions 4.5.18 (Delayed)

Description: (Recruit) Provide mechanisms for faculty/student exchange with target “feeder” schools (High Impact Medium Feasibility)

Metrics for success: Research productivity; # of students exchanges

Lever/Category of Actions 4.5.19 (Delayed)

Description: (Recruit) Focus on attracting professional students to consider doctoral studies at S&T (High Impact Medium Feasibility)

Metrics for success: Increase in distance education doctoral students; Increase in the number of programs offered via distance mode
Appendix D – Detailed Description of Themes, Levers and Actions

Lever/Category of Actions 4.5.20 (Delayed)

Description: (Placement) Provide internship/Preparing Future Faculty (PFF) program opportunities for doctoral students at places of potential future employment (High Impact Medium Feasibility)

Metrics for success: # of employers participating; # of students participating

Lever/Category of Actions 4.5.21 (Delayed)

Description: (Placement) Enhance the GTA training workshop to include training the GTA/GRAs to help future academicians fast track their career with knowledge of pedagogy and research (High Impact Medium Feasibility)

Metrics for success: Research productivity; retention rate

Lever/Category of Actions 4.5.22 (Delayed)

Description: (Recruit/retain/placement) Implement comprehensive graduate student/program data collection mechanisms, tracking mechanisms (student enquiry thru placement), graduate learning outcome rubrics, etc. to benchmark time-to-degree, doctoral retention, program improvement, timely response to student application/graduation status, and improve graduate student services (High Impact Medium Feasibility)

Metrics for success: Graduate dashboard