

Enhance Inspired, Impactful Research and Scholarship



**Guiding Aspiration #4:
Enhance Inspired, Impactful Research
and Scholarship**

University of Texas at Arlington, Strategic Planning Meeting

July 30th 2014

Enhanced Impactful Research and Scholarship

Operational Priority: Undergraduate Education

Objective 1: Increase Undergraduate Research Participation Across Campus

Rationale: Top tier institutions have demonstrated that integration of research experience at the undergraduate stage is critical to improve the overall research infrastructure and to graduate the next generation of graduates.

Near-term steps:

- Develop and enhance research based courses at the UG level.
- Incorporate research and creative activity into the UG curriculum.
- Identify success stories within UT Arlington and externally to learn from best practices in both STEM and non-STEM fields.
- Identify funding sources for UG research and creative activities, from federal, state agencies and local agencies as well as foundations and companies.
- Encourage UG students to participate in ACES and Council on Undergraduate Research.
- Encourage and facilitate student participation in the Honors college.

Resource requirements:

- Ensure continued Membership in the Council on Undergraduate Research.
- Develop mechanism to support students with seed grants and travel support to present their work at national and international competitions and conferences.
- Provide release time for faculty to develop an undergraduate research courses.
- Support to integrate research component into existing and new courses.
- Resources for research educators (i.e. Ph.D.'s) engaged in training and research.
- Provide support for faculty and students research at the Honors college.

Implementation:

- Develop Freshman Research Experience courses to engage students early in their academic career in research and creative activities.
- Encourage faculty with active federal grants to request REU supplements to support UG research.
- Increase the number and diversity of grant applications to bring in resources for UG education and research.
- Send students to conferences and competitions to present their work and compete nationally and internationally.
- Increase the number of requests from philanthropic organizations, foundations and individuals for support of research and creative activities.

Accountability:

- Provost, Deans, Vice President of Research, Office of Development, Faculty.

Success metrics:

- Number of grants awarded to support UG research and creative activities. **Target:** 15% increase in grant value as measured by \$ awarded annually through 2020.

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- Number of undergraduates participating in research and creative activities with faculty. **Target:** 10% increase annually in the number of Undergraduates participating in research projects annually through 2020.
- Number of UG Students winning competitions and presenting papers in conferences. **Target:** 10% annual increase in number of competitions entered and won by undergraduate students annually to 2020.
- Number of UG students competing and winning fellowships for graduate study. **Target:** 10% increase in number of UG students winning fellowships and scholarships from federal and state agencies annually through 2020.
- Number of UG students publishing papers in conferences and journals. **Target:** 10% increase in number of UG students publishing papers annually through 2020.
- Increase in the number of internships at national labs and companies for UG students. **Target:** 15% increase in number of internships and Co-op's UG participated in annually through 2020.
- Number of UG courses that have research component. **Target:** 5% annual increase in courses that have a research component at the undergraduate level through 2020.
- Number of students and faculty participating in honors college. **Target:** 5% annual increase in number of students participating in the honor's college.

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Operational Priority: Graduate Student Education

Objective 1: Increase funding for graduate student research and creative activity

Rationale: Increase in funding is necessary for enhancing research, scholarship, and creative activity

Near-term steps:

- Increase the number of research proposals submitted to large funding agencies.
- Increase philanthropic giving restricted to graduate student research, scholarship, and creative activity.
- Recruit competitive graduate students who would support impactful research, creative activity and scholarship

Resource requirements:

- Increase in funds allocated to the office of Research Grants to accommodate increases in the volume of graduate student submissions.
- Increase in funds allocated to merit based graduate student scholarships

Implementation:

- Develop strategies to attract resources specifically for graduate students research, scholarship, and creative activity through extensive public relations effort.
- Involve the graduate student body and student organizations in the public relations

Accountability:

- Vice President for Research, Associate Dean for Research, Dean for Graduate Studies, Assistant Vice President for Research Administration, Provost, Academic Deans, Department Chairs, Faculty

Success metrics:

- Increase in the number of student proposals funded by local, state and federal agencies.
 - **Target:** Increase the number by about 10 percent each year
- Increase in the amount of funds received from local, state, and international agencies for student research in kind and finance.
 - **Target :** Increase amount of restricted funds received annually by about \$8 million.
- Increase in funded graduate student retention and graduation (Ph.D.)
 - **Target:** 80 percent to be retained after 2 years with the goal of retaining 90 in about 5 years.
 - **Target:** 10 year graduation rate of Ph.D.'s reach 75% by 2020 .

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Objective 2: Increase Graduate Student Research participation in research, scholarship, and creative activity

Rationale: Increasing student participation in terms of numbers and quality is necessary to enhance impactful **research, scholarship, and creative activity as well as to train next generation of scholars...**

Near-term steps:

- Increase/improve faculty participation as research advisors and/or mentors
- Increase the number of research and scholarly activities, recognitions and awards across the campus to encourage student research participation.
- Encourage minority participation in **research, scholarship, and creative activity** .
- Encourage both disciplinary and cross-disciplinary participation from diverse set of disciplines across the campus
- Identify and publicize student accomplishments in research, scholarship and/or creative activities.
- Train/mentor new faculty on graduate student education, research advising and productivity.
- Improve peer group (class mates) feed back and consultation opportunities.
- Improve the volume of faculty feed back on graduate students research projects and activities.
- Promote mutli-disciplinary and inter-disciplinary collaborations in graduate education, research and creative activities
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Resource requirements:

- Allocation of funds in terms of seed money to supportive innovative graduate student proposals.
- Funds to support and facilitate student research and scholarship presentations across all departments
- Funds to support graduate student research and scholarship award ceremonies
- Funds to support part time faculty involved in coordinating graduate student research and scholarship in terms of identifying promising research proposals, facilitating brown bags, and informing students of research and scholarship opportunities
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Implementation:

- Re-allocation of monetary and time resources to facilitate and support faculty mentors.
- Coordinate and facilitate student research, scholarship and creative activity within and across disciplines.
- Encourage faculty to add graduate students as research assistants within grant proposals.

Accountability:

- Vice President for Research, Provost, Associate Deans for Research, Dean for Graduate Studies Academic Deans, Department Chairs, Faculty

Success metrics:

- Increase in the number of students working on research and scholarship papers and creative activity presentations .
 - **Target:** Increase the number of students by about 10 % annually
- Increase in the proportion of minority students engaged in research scholarship, creativity activity projects and publication..

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- **Target:** Increase number of minority students by 10 percent annually
- Increase in the number of students submitting proposals for competitive awards, scholarships, and competitions entries.
 - **Target:** Increase the number of students by about 10% annually
- Increase in the number of student (single and co-authored) publications in high impact journals.
 - **Target:** Increase the number of student publications by about 10 % annually
- Increase in the number of competitive awards and recognitions as a result of both scholarly and creative activities
 - **Target:** Increase the number of awards by about 10% annually
- Increase in the number of graduate student papers and presentations at national and international conferences.
 - **Target:** Increase the number of student presentations by about 10% annually

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Objective 3: Increase research, scholarship and creativity collaboration with profit and non-profit organizations in the Dallas-Fort Worth area

Rationale: Collaboration with the metropolitan community is essential for enhancing the impact of research, scholarship, and creative activity.

Near-term steps:

- Effectively communicate and advertise student research, scholarship, and creative activity to the DFW community and beyond to promote collaboration
- Identify opportunities for students to present research, scholarship and creative activity in various institutions such as schools to promote community partnership, collaboration, and outreach.
- Extend invitations to selected profit and non-profit organizations to attend graduate student research ,scholarship and creative presentations, exhibits, and/or events.
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Resource requirements:

- Funds specifically geared towards local, regional and state travel, development of material for communication and advertisement.
- Funds for demonstration projects, exhibits, installations, and/or concerts to engage community
- Funds for improving active web presence to engage community

Implementation:

- The University communication office should receive information on graduate student research, scholarship and creative activities. (Focus on student publication, grants, conferences).
- Facilitate student travel and aid in developing material for presentations (posters etc.), exhibits, competitions.

Accountability:

- Vice President for Research, Associate Dean for Research, Provost, Vice Provost for Faculty Affairs, , Dean for Graduate Studies, Academic Deans

Success metrics:

- Increase in the number of collaboration profit and non-profit organizations (for local, region, state, national, or international).
- Increase in the number of community partnership and outreach projects.
- Increase in the number of student presentations, exhibits, and outreach activities.
 - **Target:** Increase the number by about 10 % annually
- Increase in the information material compiled and disseminated to the community about graduate student research.
 - **Target:** Full co-ordination and compilation of information from all departments to be achieved within 2 years
- Increase in the volume of information disseminated to the community per media type.
 - **Target:** All types public media material such as pamphlets, magazines etc to be designed and sustained within the next two years

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Operational Priority: Continuing and Professional Education

Objective 1: Provide continuing and professional education programs across the diverse set of units of the campus

Rationale: In order to significantly expand the University's local, regional, national, and global outreach and impact, it is imperative to provide continuing and professional education to others informed by robust research, scholarship, and creative activities across the diverse set of units ("Strategic Plan," n.d.).

Near-term steps:

- Assess knowledge clusters across different academic units to develop continuing and professional education strategies.
- Identify strengths and weaknesses in existing continuing and professional educational programs.
- Identify areas of specializations and core competencies of faculty to offer robust continuing and professional education in North Texas and beyond.
- Improve and diversify continuing and professional education offerings about research and creative activities.
- Invest on robust infrastructure and technologies in content/knowledge delivery that would withstand the test of time.
- Develop a large variety of professional education course that sustain and update professional growth.
- Encourage and facilitate active participation of students and faculty in continuing and professional education through the university.
- Develop open educational resources available to the professional community.
- Disseminate professional research findings at UTA to the professional community locally and beyond.

Resource requirements:

- Support faculty membership, travel, and formal participation in prestigious professional organizations and professional activities.
- Provide designated resources (such as staff or research personnel) for active faculty, centers, and units who offer continuing and professional education within the university.
- Provide resources for community partnerships, service learning, and professional outreach activities to actively engage to human capital in the region, as well as, most current local and regional issues.
- Improve facilities, technologies, and computational power within the university to support distance and on-line learning activities.
- Increase the amount of monetary and material resources needed to produce diverse professionals.
- Course suitable for continuing education programs.
- Increase funding available to students and faculty to provide continuing professional education.
- Invest in providing open educational resources to professional community locally and beyond.
- Increase monetary and human resources necessary to improve communication and advertising with the professional community locally and beyond.

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Implementation:

- Invest in strengthening the successful centers, institutions, and units.
- Build and invest in relationships with professional organizations and agencies to initiate continuing and professional education programs.
- Explore funding opportunities to expand centers.
- Encourage adding support staff funding in active grants.

Accountability:

- Continuing Education Division, Office of Information Technologies, Facilities Management, Center for Distance Education, Centers, Institutes, Deans, Associate/Assistant Dean's in each School/College/Unit, faculty

Success metrics:

- Increase the number of continuing and professional education offerings about research and creative activities, both on-line and otherwise.
 - Target: Obtain a baseline by the end of academic year 2014-2015; then increase the number by 10% annually through 2020.
- Attendance and participation (presentations, etc.) numbers in professional and scholarly meetings and conferences by continuing and professional education participants.
 - Target: Obtain a baseline by the end of academic year 2014-2015; then increase the number by 10% annually through 2020.
- Increase in the number of professional awards and recognitions for faculty, centers, institutions and/or units who are involved with continuing and professional education activities.
 - Target: Obtain a baseline by the end of academic year 2014-2015; then increase the number by 10% annually through 2020.
- Increase in the number of students and faculty participating in continuing and professional courses.
 - Target: Obtain a baseline by the end of academic year 2014-2015; then increase the number by 10% annually through 2020.
- Increase in the number of participants in continuing and professional education programs.
 - Target: Obtain a baseline by the end of academic year 2014-2015; then increase the number by 10% annually through 2020.

Objective 2: Increase resources for continuing and professional education

Rationale: Resources are needed for continuing and professional education for individuals within the university in order to have knowledgeable, informed, and engaged professionals who are leaders in research and creative activities within their disciplines ("Strategic Plan," n. d.).

Near-term steps:

- Identify and improve existing resources at UTA that support continuing and professional education activities.
- Increase opportunities for continuing and professional development about grant writing and management of research and creative activities.
- Seek partnerships with profit and non-profit organizations locally, regionally, statewide, or nationally to develop targeted continuing and professional education strategies and courses.
- Offer executive professional and continuing education programs.

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Resource requirements:

- Increase funding for centers, institutions, schools/colleges/units, and individuals for continuing and professional education, including access to local, state, national, and international opportunities and conferences.
- Provide resources and incentives for academic units and faculty who offer continuing and professional development within the university.
- Increase and maintain professional and state-of-the-art facilities at main campus, as well as, regionals hubs to accommodate executive professional programs for an urban university model.

Implementation:

- Review existing guidelines and policies and enhance them to support continuing and professional education, including increased funding for travel.
- Target professional development around grant writing and management activities, as well as, research processes.
- Collaborate with profit and non-profit organizations, as well as, corporate partners and firms with continuing and professional needs in the region and initiate educational programs.
- Improve university infrastructure and facilities.

Accountability:

- Vice Provost for Faculty Affairs, Vice President for Research, Facilities Management, Deans, Associate/Assistant Deans in each School/College/Unit, faculty

Success metrics:

- Increase in the amount of funds for continuing and professional development for individuals and schools/colleges/units, particularly those with a research or creative activity focus.
 - Target: Obtain a baseline by the end of academic year 2014-2015; then increase the amount of funds for individuals and schools/colleges/units by 10% annually through 2020.
- Increase the number of continuing and professional development offerings for grant writing and management activities, as well as, research productivity.
 - Target: Obtain a baseline by the end of academic year 2014-2015; then increase the number by 10% annually through 2020.
- Increase in the number of applied research, service, and community partnership activities as a result of collaboration with profit and non-profit organizations, as well as, corporate partners and firms.
 - Target: Obtain a baseline by the end of academic year 2014-2015; then increase the number by 10% annually through 2020.

Objective 3: Increase administrative, staff, and educational support for continuing and professional education faculty and programs

Rationale: Successful continuing and professional education programs require reliable, resourceful, and well informed administrative and staff support for the faculty and programs to promote education, as well as, research, scholarship, and creative activities.

Near-term steps:

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- Identify human capital in campus that can support continuing and professional education activities.
- Identify resources to fund continuing and professional education from local, federal, and state agencies, as well as, foundations and private sources.
- Appoint informed and resourceful administration to emerging continuing and professional education programs to increase viability.

Resource requirements:

- Increase support staff for assistance in grant writing and to assist with submission of grants.
- Improve access to funding sources and/or information about funding sources.
- Support administration and faculty membership, travel, and formal participation in prestigious professional organizations and professional activities for administration.
- Train academic staff to support continuing and professional education activities.

Implementation:

- Recruit new faculty with significant and continuing exposure to profession in his/her area of expertise, especially for supporting continuing and professional education programs.
- Encourage increased value on grants submitted for continuing and professional education.
- Explore hiring additional support staff for assistance in grant writing and to assist with submission of grants, especially geared towards continuing and professional education.

Accountability:

- Vice President for Research, Office of Grants and Contracts, Office of Development, Associate/Assistant Dean's in each School/College/Unit, faculty

Success metrics:

- Increase in scholarly presentations and publication, especially in education.
 - Target: Obtain a baseline by the end of academic year 2014-2015; then increase the number by 10% annually through 2020.
- Increase in the number of grants submitted and/or awarded to support continuing and professional education.
 - Target: Obtain a baseline by the end of academic year 2014-2015; then increase the number by 10% annually through 2020.
- Increase in the number of additional support staff for assistance in grant writing and to assist with submission of grants.
 - Target: Obtain a baseline by the end of academic year 2014-2015; then increase the number by 10% annually through 2020.
- Increase in the number of professional awards and recognitions, for administration, staff, and faculty and/or units who are involved with continuing and profession education activities.
 - Target: Obtain a baseline by the end of academic year 2014-2015; then increase the number by 10% annually through 2020.

Objective 4: Improve and enhance facilities, technologies, and computational power within the university to support continuing and professional education.

Rationale: Impactful research, scholarship, and creative activities require top-notch facilities, state-of-the-art technology and computational power to support continuing and professional education.

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Near Term Steps:

- Improve facilities to accommodate a professional environment for content delivery.
- Update periodically technologies and computational equipment and software within the university to support distance and on-line learning activities.
- Activate UTA libraries to house and support cross-disciplinary technology, on-line resources, and computing and software, such as GIS, to support on-line and distance continuing and professional education.
- Actively seek funding, donations, and grants to built and study continuing and professional education pedagogy and facilities.

Resource requirements:

- Increase in funds to support technologies and computational infrastructure within the university to support distance and on-line learning activities.
- Provide high speed and computational power that meet faculty needs working with a large number of students and data, especially in on-line and distance education courses.
- Increase and maintain professional and state-of-the-art facilities at the main campus, as well as, regionals hubs to accommodate executive professional programs for an urban university model.
- Increase in funds to subscribe to on-line resources and databases to support on-line education and research activity for continuing and professional education programs.

Implementation:

- Identify and invest in appropriate/user-friendly educational and research technologies and computing that offers fast, efficient, and reliable methods to deliver knowledge/content on multiple on-line and on-site platforms.
- Built state-of-the-art facilities equipped with latest technology to accommodate high profile executive continuing and professional education programs.

Accountability:

- Dean of Facilities (Facilities Management), Office of Information Technologies, Center for Distance Education, Academic Deans, Associate/Assistant Deans, Department Chairs (as applicable), Program Directors, faculty

Success metrics:

- Availability, accessibility, and reliability of network and facilities on a 24/7 basis.
 - Target: Obtain a baseline by the end of academic year 2014-2015 by surveying faculty/staff about the availability, accessibility, and reliability of network and facilities on a 24/7 basis; then increase the satisfaction of faculty/staff by 10% annually through 2020.
 - Target: Obtain a baseline by the end of academic year 2014-2015 by surveying students about the availability, accessibility, and reliability of network and facilities on a 24/7 basis; the increase the satisfaction of students by 10% annually thought 2020.
- Increased number of on-line and on-site course offerings in continuing and professional education programs.
 - Target: Obtain a baseline by the end of academic year 2014-2015; then increase the number by 10% annually through 2020.
- Increased number of students enrolled in continuing and professional education programs.

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- Target: Obtain a baseline by the end of academic year 2014-2015; then increase the number by 10% annually through 2020.
- Increased number of satellite facilities and classrooms offering education and research opportunities for continuing and professional education students in high-density urban centers throughout North Texas.
 - Target: Obtain a baseline by the end of academic year 2014-2015; then increase the number by 10% annually through 2020.

Enhanced Impactful Research and Scholarship

Operational Priority: Research and economic development

Objective 1: Grow and diversify extramural research funding

Rationale: Obtaining adequate and sustained resources is necessary for research and scholarship.

Near-term steps:

- Invest in strengthening the most successful centers and institutes
- Enhance administrative infrastructure to support grants and contracts procurement and management
- Foster greater collaboration across departments, colleges, and disciplines through use of incentives and eliminating barriers to the pursuit of large opportunities
- Increase philanthropic giving restricted to research purposes

Resource requirements:

- Indirect cost returns allocated to successful centers and institutes
- Incentives for collaborative work, from indirect cost returns and other sources
- Adequate staffing of research administration functions
- Development officer time allocated to pursuing research-oriented gifts

Implementation:

- Assess ongoing center and institute activity while evaluating opportunities for new ventures
- Assess research administration needs and invest or reallocate into priorities
- Identify and remove institutional barriers to faculty and academic unit collaboration

Accountability:

- Vice President for Research, Assistant Vice President for Research Administration, Provost, Academic Deans, Department Chairs, Faculty

Success metrics:

- Research expenditures: total, federal, restricted, NRUF, etc. **Targets:** Increase total research expenditures by \$20M per year through 2020; Increase expenditure per NRUF formula by \$8M per year through 2020; Increase federal and restricted research expenditures by 25% per year through 2020.
- Number and amounts of cross-disciplinary, interdisciplinary, and multi-institution grant awards. **Target:** Obtain at least three such awards per year through 2020.
- Number and amounts of philanthropic gifts restricted to research. **Targets:** Increase number and total amounts of research gifts by 25% per year through 2020.
- Academic Analytics™ “Grants Market Share” analysis for academic units. This analysis can highlight unexploited funding opportunities on a discipline-specific basis. **Target:** Complete an analysis for each academic department by fall 2015; Articulate a strategy to target unexploited opportunities by spring 2016; Repeat this cycle every other academic year.

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Objective 2: Enhance excellence and achievement in diverse areas of research and scholarship

Rationale: Increasing the accomplishments and productivity of the faculty will enhance the university's prestige and its value to students and the community.

Near-term steps:

- Define and enforce high scholarship expectations across all academic units
- Expand research and creative outputs typically associated with the arts, humanities, and design disciplines
- Identify outstanding scholars and nominate them for external awards

Resource requirements:

- Faculty and administrative time allocated to evaluating scholarly productivity and seeking recognition for accomplishments
- Funds to support incentives and rewards for scholarly productivity

Implementation:

- Regular and systematic assessment of scholarly productivity in all academic units
- Develop strategies for external recognition of outstanding scholars, e.g. nomination to society fellowships, and to progressively more prestigious awards

Accountability:

- Vice President for Research, Provost, Academic Deans, Department Chairs, Faculty

Success metrics:

- Academic Analytics™ metrics on numbers of publications and citations per faculty member. These metrics enable percentile comparisons to other research institutions. **Target:** Increase each academic department's percentile rankings for publications and citations by one decile by 2020.
- Number of publications, juried or adjudicated shows, and performances by arts and humanities faculty. Comparative data for this metric are not widely available, so it is premature to set a target, but the data can be monitored.
- Number of faculty receiving awards on the NRUF list. **Target:** Two additional awardees per year through 2020.
- Number of faculty receiving awards on the Academic Analytics™ list. **Target:** four additional awardees per year through 2020.

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Objective 3: Build upon current and emerging areas of research excellence to enhance the university's reputation

Rationale: Increasing the visibility and impact of research activities will enhance the university's prestige and its value to students and the community.

Near-term steps:

- Identify and invest faculty hires in areas of current research excellence
- Assess and respond to emerging opportunities through strategic investment of faculty hires in new areas

Resource requirements:

- Allocation of funds to competitive salary and startup packages for faculty hires in priority areas

Implementation:

- Develop a strategic faculty hiring plan that identifies current areas of research excellence and emerging opportunities for new research areas

Accountability:

- Vice President for Research, Provost, Academic Deans, Department Chairs

Success metrics:

- Sponsored research expenditures in identified areas of current research excellence. **Targets:** Identify current areas of research excellence by spring 2015; Grow research expenditures in targeted areas by 50% per year through 2020.
- Sponsored research expenditures in emerging areas of research excellence. **Targets:** Identify current areas of research excellence by spring 2015; Grow research expenditures in targeted areas by 50% per year through 2020.
- Tracking of media coverage for university activities in areas of research emphasis. **Targets:** Identify areas of emphasis by spring 2015; Comparative data for this metric are not widely available, so it is premature to set a quantitative target, but the data can be monitored.

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Objective 4: Strengthen the sustainability of research and scholarly productivity on the part of faculty

Rationale: The University's research mission is best served when its faculty achieve long-term sustained productivity over their careers.

Near-term steps:

- Increase funds available to support seed grants, REP grants, and bridge funding for mid-career faculty
- Increase the number of Faculty Development Leaves available
- Increase the funds available to support travel by faculty to important conferences, research sponsor agencies, and current or potential collaborator institutions
- Encourage and incentivize faculty participation in grant review panels, sponsor agency advisory panels, rotating program officer positions, and other research leadership positions

Resource requirements:

- Allocation of funds for research, travel, and leaves
- Release time for faculty participating in major research service activities and leadership positions

Implementation:

- Expand existing programs such as REP and FDL as resources allow
- Initiate program to support research-oriented travel
- Initiate targeted support program for research of mid-career faculty
- Develop strategies for moving accomplished faculty into major service and research leadership positions

Accountability:

- Vice President for Research, Provost, Vice Provost for Faculty Affairs, Academic Deans

Success metrics:

- Number and amount of institutional grants to support research and travel. **Targets:** Establish baseline data by spring 2015; Grow the number and total amount of such grants by 10% per year through 2020.
- Number of faculty development leaves, and percent of faculty receiving leaves. **Targets:** Establish baseline data by spring 2015; Grow the number of leaves by 10% per year through 2020.
- Number of faculty serving on review or advisory panels, and other major research service and leadership positions. **Targets:** Establish baseline data by spring 2015; Grow the number of faculty serving in such positions by 10% per year through 2020.

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Objective 5: Increase research partnerships with for-profit and non-profit organizations

Rationale: Engagement with external stakeholders will increase the likelihood of innovations that have impact and wide adoption.

Near-term steps:

- Provide appropriate administrative infrastructure for supporting research partnerships and remove institutional barriers
- Provide incentives for faculty participation in research and innovation partnerships

Resource requirements:

- Adequate staffing of research administration, tech transfer, and intellectual property functions
- Release time or other incentives for faculty participating in major research partnerships

Implementation:

- Develop and nurture relationships with potential research partners in for-profit and non-profit sectors
- Provide information and training for faculty and administrators to become involved in research partnerships
- Identify and remove institutional barriers to research partnerships
- Maintain and publicize facilities and infrastructure available at UTARI and SIRT

Accountability:

- Vice President for Research, Assistant Vice President for Research Administration, Executive Director UTARI, SIRT Director

Success metrics:

- Number of research partnerships with for-profit and non-profit organizations. **Targets:** Establish baseline data by spring 2015; Grow the number of partnerships by 10% per year through 2020.
- Number and award amounts of SBIR and similar grants. **Targets:** Establish baseline data by spring 2015; Grow the number of such grants by 10% per year through 2020.
- Number of patents filed by or with involvement of UT Arlington faculty. **Targets:** Establish baseline data by spring 2015; Grow the number of patents by 10% per year through 2020.
- Revenue from patent and intellectual property licenses. **Targets:** Establish baseline data by spring 2015; Grow revenue by 10% per year through 2020.

Enhanced Impactful Research and Scholarship

Operational Priority: Faculty & Staff

Objective 1: Retain and attract prestigious faculty

Rationale: Prestigious and productive faculty make the highest impact in research, scholarship and creative activities.

Near-term steps:

- Assess current leading edge faculty presently creating impact for UT Arlington.
- Identify ascendant faculty, here and elsewhere, who are rising stars.
- Build a collaborative, engaged culture of research, scholarship, and creative activity.
- Promote an academic environment that supports faculty diversity (gender, racial, ethnic, and religious).
- Evaluate mentor program for tenure-track faculty.

Resource requirements:

- Increase the number of endowed chairs and professorships.
- Increase staff and graduate assistantship support.
- Increase infrastructure support for resource acquisition.
- Increase university funding, support, and awards to activate innovative ideas in research, scholarship, and creative activities.
- Allocate funds for competitive start-up packages and salaries to attract promising new faculty.
- Increase support for course releases and research development leaves to reactivate and recharge senior/permanent faculty research.
- Increase mentors for tenure-track faculty.

Implementation:

- Develop strategies for showing industry, academia, and alumni what prestigious faculty can be recruited to UT Arlington.
- Create an institute for advanced studies that attracts leading scholars.
- Explore joint appointment opportunities for faculty at top tier institutions.

Accountability:

- President, Provost, Vice President for Research, Deans, Associate/Assistant Deans, Prestigious & Endowed Faculty

Success metrics:

- Hire or develop 7 Members of National Academies within 5 years; increase number of Fellows in scientific and academic societies by 20% in 5 years.
- Increase federally funded research expenditures by \$ 8 million annually through 2020.
- Receive 35 national and international awards and prizes won by prestigious faculty over 5 years.
- Have 100% of faculty on peer-reviewed journal editorial boards and/or leadership roles in professional and/or scholarly societies and organizations within 3 years.

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Objective 2: Retain and attract strong staff, both administrative and operational

Rationale: Research and scholarship is a collaborative, team effort requiring support.

Near-term steps:

- Benchmark adequacy of skilled support staff ratios in research intense areas.
- Identify areas where skilled staff shortages constrain the faculty and research.
- Build a collaborative, engaged culture of research, scholarship, and creative activity,
- Promote a working environment that supports staff diversity (gender, racial, ethnic, and religious).

Resource requirements:

- Increase the number of skilled staff, both administratively and operationally.
- Recognize the instrumental and essential role of staff in research.
- Invest appropriately for long-term growth and advancement.
- Increase university funding, support, and awards to energize and promote staff.
- Increase the number of staff supporting grants, research, and project management.

Implementation:

- Develop training, professional, and continuing education opportunities for staff.
- Develop strategies for showing industry and alumni what high quality staff can be recruited to UT Arlington..
- Create opportunities for staff to support an institute for advanced studies.
- Increase internal mobility for staff for development and growth.

Accountability:

- Provost, Vice President for Human Resources, Vice President for Research, Deans, Associate/Assistant Deans, Department Chairs, Program Directors

Success metrics:

- Achieve a 2-to-1 staff-to-faculty ratio in research support within 4 years.
- Write technical staff into 100% of federally funded research proposals in 1 year.
- 1-to-1 staff-to-student ratios (graduate and undergraduate) that support the overall educational mission of the university.

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Objective 3: Build faculty research and scholarship teams to include junior faculty

Rationale: Prestigious faculty often seek to mentor and nurture the next generation.

Near-term steps:

- Support prestigious and productive faculty in their recruitment and development of juniors.
- Increase incentives for collaboration, especially cross-disciplinary.
- Build a collaborative, engaged culture of research, scholarship, and creative activity.

Resource requirements:

- Increase the support for junior faculty, especially in collaborations with seniors.
- Increase staff and graduate assistantship support.
- Increase infrastructure support for resource acquisition.
- Increase the support for senior faculty mentors.

Implementation:

- Develop an internal culture of collaboration, versus internal competition.
- Manage internal resource competition to reduce unintended consequences.
- Consider formal dual track, differential system for research and for teaching.
- Provide incentives for senior faculty to mentor junior faculty.
- Provide training for senior faculty in mentoring.

Accountability:

- Provost, Vice President for Research, Deans, Associate/Assistant Deans, Department Chairs, Prestigious & Endowed Faculty

Success metrics:

- Increase by 35% faculty applications to UT Arlington.
- Write junior faculty into 100% of federal research proposals within 1 year.
- Win 35 junior faculty national and international awards/prizes within 5 years.
- Have 70% of senior faculty as mentors to junior faculty.

Enhanced Impactful Research and Scholarship

Objective 4: Create and support opportunities for faculty company spin-offs

Rationale: Increase the incentives for faculty to create new products, services, and value.

Near-term steps:

- Benchmark US and European universities in this entrepreneurial domain.
- Build relationships with venture capitalists and others in this domain.
- Insure fair treatment for all in the intellectual property arena.
- Facilitate teaching and research partnership opportunities for industry leaders.

Resource requirements:

- Increase staff and faculty review process for a 200 proposal capacity.
- Increase staff support for managing 35-65 spin-off companies over time.
- Strengthen UTARI as the leading edge of this spin-off process.
- Increase infrastructure support for proposals and for new ventures.
- Increase funds to support collaboration with industry leaders.

Implementation:

- Develop strategies for building networks with industry, even alumni in domain.
- Build links between UTARI and an institute for advanced studies.
- Explore joint appointment opportunities for gaining specialized expertise.

Accountability:

- Provost, Vice President for Research, Deans, Center Directors, Prestigious & Endowed Faculty

Success metrics:

- Spin-off 90 faculty conceived companies over a 10-year period.
- Attract \$100 million in capital investment for these companies in 10 years.
- Increase by 33% the UT Arlington ownership share in 5 years.
- Increase by 30% active industry leaders with faculty appointments (adjunct, visiting, lecturer, and etc.).

Enhanced Impactful Research and Scholarship

Operational Priority: Infrastructure and Resources

Strategy 1: Expand and Enhance Existing Research, Scholarship, and Creative Activity Capabilities on Campus

Rationale: Top quality research, scholarship, and creative activity require top-notch facilities.

Near-term steps:

- Identify areas of core competencies of national importance that are fundable on campus.
- Provide additional support to bring facilities up to national standards.
- Provide incentives for people to share facilities to enhance productive use of existing facilities.
- Invest on up to date and advanced technology and computing power to facilitate academic productivity.
- Request UTA libraries to house and support cross-disciplinary technology, online resources and computing such as GIS software, technology, and support.
- Invest in new facilities that have greatest shared use to enhance productivity.

Resource requirements:

- Provide resources, in the form of enhanced indirect return, to help facilities operate.
- Provide resources to pay for service contracts on critical infrastructure.
- Provide increased research support personnel to help provide staffing help to ensure smooth operation of equipment and facilities.
- Provide funds and support to acquire advanced technology and computing.

Implementation:

- Determine top performing research facilities based on use and support of funded projects and provide additional resources to them.
- Reduce barriers for use of facilities and incentivize faculty to use existing research facilities on campus.
- Provide physical and/or web spaces as well as knowledgeable staff support for growing research centers and productive research faculty.

Accountability:

- Vice President for Research, Assistant Vice President for Research Administration, Provost, Academic Deans, Department Chairs, Program Directors, Faculty

Success metrics:

- Increase use of research facilities on campus. **Target:** A 15% increase in utilization of shared facilities on campus annually through 2020.
- Increase funding that is based on the use of research facilities on campus as measured by restricted research expenditures. **Target:** \$8 million increase in research expenditures annually through 2020
- Increase in the number of publications in high impact journals and conferences. **Target** 10% increase in publications in high impact journals annually through 2020.
- Reduce down time of facilities on campus for improved productivity. **Target:** 10% reduction of downtime of instruments in shared facilities annually.

Enhanced Impactful Research and Scholarship

Objective 2: Build New and State-of-the-Art Research and Scholarship Facilities on Campus.

Rationale: Impactful research, scholarship and creative activities requires state-of-the-art research facilities.

Near-term steps:

- Ensure that the UT System is aware of the needs on our campus, as it has grown in enrollment and research expenditures, as well as, the impact of the research and scholarship on the economy of Texas.
- Provide resources for faculty to build interdisciplinary teams to initiate collaborative research, with the ultimate goal of submitting large grant proposals to acquire new state-of-the-art research facilities.
- Develop a business plan to ensure that existing facilities become more self-sufficient and generate resources to support maintenance staff and facilities.
- Ensure that shared facilities across campus have proper protocols in place to be appropriate charge centers and comply with federal standards.

Resource requirements:

- Additional resources to existing facilities on our campus to increase research activity, scholarship, and creative activity, and build on existing strengths.
- Provide matching money for large proposals to improve chances of success.
- Infrastructure support to install and renovate or build new facilities for the new equipment.
- Manpower resources to staff and run these new facilities.
- Acquire land/real estate to accommodate future needs of growing urban university

Implementation:

- Determine need and develop white papers based on proposed new infrastructure needs. This has to be done based on existing strengths of faculty, as well as, proposed future growth in new emerging areas of priorities on campus.
- Increase the number of proposals submitted to federal agencies and foundations to help build research and scholarship infrastructure on campus.
- Increase use of shared facilities on campus and development of uniform policies on shared facilities.

Accountability: Vice President for Research, Provost, Facilities, Academic Deans, Associate/Assistant Deans, Department Chairs, Program Directors, Faculty

Success metrics:

- Increase in the number of shared facilities on campus. **Target:** Increase shared equipment available to use across campus by 10% annually.
- Increase use of shared facilities by faculty on campus, as well as, external users. **Target:** Increase hours of use of shared facilities by 15% annually through 2020.
- Large interdisciplinary grants awarded based on access to large research facilities. **Target:** Increase number of grants awarded by 10% annually that list shared (ORCE)

Enhanced Impactful Research and Scholarship

- Increase energy efficiency in new and renovated facilities across the campus. **Target:** 5% in energy savings annually through 2020.

Enhanced Impactful Research and Scholarship

Objective 3: Enhance quality of computational facilities on Campus

Rationale: Having a top-notch, reliable, and user-friendly computational infrastructure is critical for efficient running of a 21st century university.

Near-term steps:

- Determine the critical computing needs for a growing campus.
- Ensure a reliable high-speed network is available for the increased demands of research, scholarship, and creative activity, as well as teaching.
- Ensure that OIT is aware of the needs of research and teaching faculty, students, and administrators for effective running of a 21st century university.

Resource requirements:

- Resources provided to OIT based on an “As-is” analysis and need to implement reliable efficient network.
- High throughput computing capability to be able to handle projects with “big data” in a variety of fields/disciplines across campus and beyond.
- Resources provided for effective delivery of multiple types of access to the network across campus.

Implementation:

- Assess and ensure high quality of service is provided to faculty and students across campus.
- Install top of the line infrastructure.
- Either house or have access to high speed computing capacity for large data intensive research projects.

Accountability:

- Vice President for Research, Provost, OIT, Academic Deans, Associate/Assistant Deans, Department Chairs, Faculty

Success metrics:

- Reliability of network on a 24/7 basis. **Target:** Reduce downtime of networks by 10% annually through 2020.
- High speed and computational needs met for faculty working with large data needs. **Target:** Increase bandwidth of network by 10% annually through 2020.
- Reliable multiple types of access to network across campus. **Target:** Reduce downtime of networks annually by 10% through 2020.
- Increased use of online resources on UTA websites (such as analysis of number of visits and use time for specific websites). **Target:** 10-20% increase in traffic to the online resources annually through 2020.

Enhanced Impactful Research and Scholarship

Objective 4: Enhance infrastructure and facilities for increased delivery of content using new technologies.

Rationale: The new paradigm in education and outreach is the ability to deliver on demand in a multitude of ways to customers who may be anywhere in the world. The need to increase enrollment will require new ways to deliver content and infrastructure to support it.

Near-term steps:

- Identify all the different approaches to deliver content and determine best approaches to invest in.
- Identify emerging media and content delivery platforms and assess viability.
- Invest on robust infrastructure and technologies in content/knowledge delivery that would withstand the test of time.

Resource requirements:

- Resources to incentivize faculty to adopt new technologies and content delivery methods.
- Build out facilities to record, deliver and manage large amount of content in a reliable and user-friendly way.

Implementation:

- Identify and invest in technologies that offer the best methods to deliver knowledge/content, i.e., competency-based education, content delivery on multiple platforms, and new methods of content delivery using multimedia and social media.
- Invest in human capital, i.e., people who understand these new technologies and are able to translate the technologies to practice.
- Coordinate with the Institute for Transformational Learning in Austin to bring in best practices into this realm.

Accountability:

- Provost, OIT, Center for Distance Education, Academic Deans, Associate/Assistant Deans, Department Chairs, Program Directors, faculty, students

Success metrics:

- Increase enrollment of students in distance education sections. **Target:** 15% increase in number of online students annually through 2020.
- Expand UT Arlington's footprint globally. **Target:** Increase number of students from overseas enrolled in our On-line programs by 20% annually.
- Identify and deliver content in new programs (degree, certificates, short courses, etc.) in order to reach a large and diverse audience. **Target:** Increase number of programs that offer online content as measured by the number of courses that are available online by 10% annually through 2020.