



TRIF PROGRAM



Arizona's First University.

September 1, 2009



THE UNIVERSITY OF ARIZONA TRIF PROGRAM



The Technology and Research Initiative Fund (TRIF) is a special investment in higher education made possible by the passage of Proposition 301 by Arizona voters in 2000. The TRIF portion of the proceeds from a six-tenths of a cent increase in state sales tax are administered by the Arizona Board of Regents and given to the state's public universities. At the University of Arizona, TRIF

funds support creative research efforts in critical high-technology areas, translation of research results to clinical or commercial application, and education of a workforce prepared for the knowledge-based economy of the 21st Century. Funds also support specialized research facilities, enhancement of technology transfer, and distance-learning activities.

Research-intensive TRIF activities fall under Programs that capitalize on broad research and teaching strengths that meet important community needs:

- **Bioresearch**, which includes the BIO5 Institute for bioscience and biotechnology, the McKnight Brain Institute, and the Arizona Clinical and Translational Research and Educational Consortium;
- **Optical Sciences and Technology**, which has especially strong ties with industry; and
- **Water and Environmental Sustainability**, which includes Water Sustainability and Translational Environmental Research initiatives.

Two additional programs are funded by ABOR's TRIF Strategic Investments fund. The **UA-ASU Solar Energy Initiative**, collaborative with Arizona State University, provides funds for new research, develops existing knowledge for industrial enterprise, and develops educational and outreach programs related to solar energy. **Higher Education in Rural Southern Arizona** delivers training and border commerce programs in Arizona's border countries in a hybrid of on-site and distance education. Our final Program, in **Education and Infrastructure**, includes the Educator Development Plan, distance education through Anyplace Access for Arizonans, and on-line degree and certificate programs of the College of Nursing. Cross-cutting, foundational support for many activities is provided through Critical Core Infrastructure and Technology Transfer Infrastructure.

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Executive Vice President  
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# PERFORMANCE MEASURES

	FY02 Actual	FY03 Actual	FY04 Actual	FY05 Actual	FY06 Actual	FY07 Proj	FY07 Actual	FY08 Proj	FY08 Actual	FY09 Proj	FY09 Actual	FY10 Proj	FY11 Proj
<b>RETURN ON INVESTMENT (IN MILLIONS)</b>													
Sponsored Awards	\$ 14.78	\$ 22.92	\$ 50.19	\$ 39.92	\$ 46.79	\$ 60.01	\$ 72.59	\$ 64.84	\$ 96.35	\$ 71.16	\$ 129.96	\$ 77.31	\$ 83.21
Gifts & Other Sources	\$ 1.17	\$ 5.11	\$ 2.58	\$ 0.55	\$ 1.15	\$ 2.00	\$ 2.28	\$ 2.26	\$ 7.29	\$ 2.96	\$ 7.55	\$ 3.45	\$ 4.05
Patent Royalty Income	\$ 0.71	\$ 1.08	\$ 1.01	\$ 1.18	\$ 1.69	\$ 1.58	\$ 1.27	\$ 1.73	\$ 0.79	\$ 1.89	\$ 0.77	\$ 2.04	\$ 2.19
<b>TECHNOLOGY TRANSFER &amp; COLLABORATIONS</b>													
Invention Disclosures	109	168	141	167	118	182	161	165	152	174	190	202	218
Licenses & Options	18	99	42	57	33	42	35	44	45	46	55	49	55
Patent Applications	78	129	164	177	173	115	145	125	189	134	177	155	164
New Start-up Companies	12	2	7	9	8	15	4	6	6	8	14	8	13
Economic Impact Studies	0	0	0	1	0	1	2	1	0	1	0	1	1
<b>WORKFORCE CONTRIBUTIONS</b>													
Number of Graduate Students Enrolled		1183	1318	1378	1429	326	219	400	276	344	442	369	406
Number of Undergraduates Enrolled													
Growth in Graduate Enrollment	35	20	26	4	29	3	15	4	(4)	3	22	4	4
Number of Graduate Degrees Awarded		266	280	285	420	58	29	40	56	45	56	53	61
New Graduates from ACIST related programs	0	69	256	224	100								
Growth in Optics-Related Undergraduate Enrollment	12	25	44	25	(12)	4	(40)	6	(5)	4	(3)	4	4
Number of Undergraduate Degrees Awarded	0	658	705	733	1014	0	0	0	0	0	0	20	30
Growth in Optics-Related Distance Learning Enrollment	3	48	32	32	23	5	(8)	8	(34)	8	(11)	2	2
Undergraduate Trainees	0	9	22	40	313	284	390	290	412	296	429	314	317
Graduate Trainees	1	16	54	75	379	339	368	361	478	375	424	352	377
Postdoctoral Trainees	2	2	3	3	140	158	156	154	167	159	163	160	169
ACIST graduates benefitting from minors in related areas	25	50	100	77	75								
Undergraduates taking non-technical minor	50	100	150	111	75								
Teachers Certified in Undergraduate Level Math & Science	7	12	22	20	24	40	24	40	25	30	27	30	30
Teachers Certified in Master's Level Math & Science	28	25	26	40	24	30	24	30	14	25	14	25	25
Teachers Certified in Agriculture	8	13	16	16	12	15	11	17	13	19	17	20	20
Total Student Credit Hours Produced													
Number of Certificates Granted					9	50	0	58	85	99	107	300	300
Number of New Certificates Offered						40	44	50	52	80	90	120	150
Clinical Scholars Circle Members						9	3	14	32	21	25	34	47
Number of Affiliate Clinical Partners in ACTREC						16	22	9	12	12	15	9	10
New Faculty Hires	11	16	9	13	13	16	22	9	12	12	15	9	10
<b>CURRICULUM INNOVATIONS &amp; STUDENTS SERVED</b>													
Number of Newly Revised Courses Offered				8	10	15	49	9	15	33	42	116	323
Number of Online Courses Offered	0	10	19	28	28	37	16	10	20	25	79	23	28
Curriculum Innovations program implemented	P1	39	40	6	2								
<b>OUTREACH &amp; EDUCATION</b>													
Teachers/Educators Trained	0	524	880	1,032	1,217	1,063	1,419	1,179	1,470	1,220	2,519	1,253	1,294
K-12 Students Benefitting & Participating	2,150	29,390	32,730	36,545	77,352	42,925	84,474	69,200	74,727	75,000	79,090	80,850	85,900
Workshops, Seminars, & Conferences Supported	11	9	11	11	29	22	38	24	73	34	71	30	40
Users of Extension & Workplace Resources	0	493	58,000	103,000	156,055	200,000	314,115	250,000	225,503	300,000	5,470,117	350,000	400,000
Communities Assisted						5	7	10	9	10	12	10	10
Enrollments in Web & Hybrid Courses	0	20,450	24,528	35,353	77,557	39,373	104,715	41,085	2,154	2,434	4,793	2,734	3,024
<b>DATA AND RESEARCH ACCESS &amp; NETWORK</b>													
Building Networks Brought to Standards						1	1	1	1	1	1	1	1
Supercomputer Usage						85-90%	90%	85-90%	78%	85-90%	94%	85-90%	85-90%
Percentile-ranked access to advanced networks						75th or better	75th	75th or better	50th	75th or better	50th	75th or better	75th or better

FINANCIAL INFORMATION

UA CONSOLIDATED TRIF FINANCIAL SCHEDULE											
	FY02 Actual	FY03 Actual	FY04 Actual	FY05 Actual	FY06 Actual	FY07 Actual	FY08 Actual	FY09 Revised Budget	FY09 Actual	FY10 Revised Budget	FY11 Revised Budget
<b>BioResearch Program</b>											
Revenue	4,837,623	7,565,242	5,617,329	8,741,603	8,332,381	9,231,367	10,606,580	9,600,725	7,966,808	6,371,524	5,925,637
Expenditures	2,075,899	7,199,779	3,852,669	6,220,377	7,645,577	5,878,772	9,000,889	9,600,725	7,610,195	6,371,524	5,925,637
<b>Return on Investment</b>	0.7:1	2.2:1	6.6:1	4.3:1	3.5:1	6.4:1	5.2:1	4.1:1	9.0:1	5.6:1	6.2:1
<b>Optical Sciences and Technology Program</b>											
Revenue	4,395,646	6,339,470	4,846,348	4,858,145	5,277,994	3,782,078	4,193,386	4,328,463	3,570,688	2,584,031	2,656,045
Expenditures	2,859,694	6,014,645	4,480,050	3,627,920	5,142,408	3,187,607	3,340,957	4,328,463	3,642,702	2,584,031	2,656,045
<b>Return on Investment</b>	4.0:1	0.6:1	4.5:1	0.7:1	1.9:1	6.8:1	9.4:1	3.9:1	10.1:1	9.8:1	9.7:1
<b>Water and Environmental Sustainability Program</b>											
Revenue	474,283	922,432	2,104,866	2,898,746	4,503,450	5,335,450	5,854,659	5,150,109	4,213,403	3,229,577	3,283,205
Expenditures	32,203	827,112	1,667,088	2,302,796	3,813,467	3,473,905	5,001,366	5,150,109	4,267,031	3,229,577	3,283,205
<b>Return on Investment</b>	-	2.2:1	1.2:1	1.5:1	0.9:1	3.0:1	3.8:1	2.3:1	5.6:1	4.0:1	4.2:1
<b>Education and Infrastructure Program</b>											
Revenue	2,233,439	3,468,894	3,076,975	3,170,342	3,549,332	8,718,378	9,721,719	10,429,549	9,066,371	7,388,638	7,062,094
Expenditures	1,070,234	2,903,876	2,523,545	2,706,933	3,151,044	8,160,936	9,100,061	10,429,549	8,776,787	7,388,638	7,062,094
<b>Venture Fund</b>											
Revenue	-	-	-	68,123	68,123	1,201,622	603,234	270,117	173,556	60,000	36,444
Expenditures	-	-	-	-	68,123	1,028,843	459,631	270,117	119,136	60,000	36,444
<b>ASU-UA Joint Biomedical Research Fund</b>											
Revenue	-	-	-	-	-	1,000,000	1,052,528	271,636	248,763	-	-
Expenditures	-	-	-	-	-	187,472	1,040,892	271,636	248,763	-	-
<b>Planning for Phoenix Biomedical Campus</b>											
Revenue	-	-	-	-	-	750,000	538,854	91,522	91,522	-	-
Expenditures	-	-	-	-	-	211,146	447,332	91,522	91,522	-	-
<b>Expansion of Phoenix Biomedical Campus</b>											
Revenue	-	-	-	-	-	2,145,000	1,269,679	1,589,051	683,360	586,529	500,000
Expenditures	-	-	-	-	-	2,009,192	920,628	1,589,051	596,831	586,529	500,000
<b>ASU-UA Solar Energy Initiative</b>											
Revenue	-	-	-	-	-	-	1,050,000	1,525,124	1,372,524	595,624	611,272
Expenditures	-	-	-	-	-	-	224,876	1,525,124	1,388,172	595,624	611,272
<b>Return on Investment</b>	-	-	-	-	-	-	9.9:1	1.3:1	2.3:1	4.7:1	11.1:1
<b>Higher Education in Rural Southern Arizona</b>											
Revenue	-	-	-	-	-	-	500,000	810,594	742,885	618,111	-
Expenditures	-	-	-	-	-	-	-	810,594	315,800	618,111	-
<b>ACIST</b>											
Revenue	3,864,703	5,813,439	5,747,018	5,271,272	4,307,688	-	-	-	-	-	-
Expenditures	2,182,290	4,286,510	4,859,477	4,350,084	3,876,167	-	-	-	-	-	-
<b>Return on Investment</b>	0.5:1	1.2:1	0.7:1	0.9:1	0.5:1	-	-	-	-	-	-

## MANAGEMENT AND ADVISORY BOARDS

**Management:** All University of Arizona TRIF activities report to **Dr. Meredith Hay**, Executive Vice President and Provost and **Dr. Leslie P. Tolbert**, Vice President for Research, Graduate Studies, and Economic Development. The Directors of the University's TRIF Programs and the individual Initiatives that fall under them are listed below:

**BIORESEARCH PROGRAM LEADER:** **Dr. Vicki Chandler**, Director, The BIO5 Institute and Regents' Professor and Carl E. and Patricia Weiler Endowed Chair

**ACTREC:** **Dr. Peter Lance**, Professor, Medicine

**BIO5:** **Dr. Fernando Martinez**, Director, BIO5 institute

**Evelyn F. McKnight Brain Institute:** **Dr. Carol A. Barnes**, Regents' Professor and Evelyn F. McKnight Endowed Professor, Psychology

**EDUCATION AND INFRASTRUCTURE PROGRAM LEADER:** **Dr. Ronald Marx**, Dean, College of Education

**Anyplace Access for Arizonans:** **Mr. Mike Proctor**, Senior Associate Vice President for University Outreach and International Programs

**Critical Core Infrastructure:** **Ms. Michele Norin**, CIO and Executive Director, University Information Technology Services

**Nursing Online Programs:** **Dr. Carolyn Murdaugh**, Interim Dean and Professor, College of Nursing

**Technology Transfer Infrastructure:** **Mr. Bruce Wright**, Associate Vice President for Economic Development, and **Dr. Patrick Jones**, Director, Office of Technology Transfer.

**Workforce Initiative: The Educator Development Plan:** **Dr. Ronald Marx**, Dean, College of Education

**HIGHER EDUCATION IN RURAL SOUTHERN ARIZONA:** **Mr. Michael Proctor**, Vice President for Outreach and International Programs

**OPTICAL SCIENCES AND TECHNOLOGY PROGRAM:** **Dr. James C. Wyant**, Dean and Professor, College of Optical Sciences

**WATER AND ENVIRONMENTAL SUSTAINABILITY PROGRAM:**

**Translational Environmental Research:** **Dr. Jonathan Overpeck**, Director, Institute for the Study of Planet Earth

**Water Sustainability:** **Dr. Sharon Megdal**, Director, Water Resources Research Center, College of Agriculture and Life Sciences

**ASU-UA JOINT BIOMEDICAL RESEARCH FUND:** **Dr. Leslie P. Tolbert**, Vice President for Research, Graduate Studies, and Economic Development

**UA-ASU SOLAR ENERGY INITIATIVE:** **Dr. Joseph Simmons**, Department Head and Professor, Materials Science and Engineering

**EXPANSION OF PHOENIX BIOMEDICAL CAMPUS:** **Mr. Joel Valdez**, Senior Vice President, Business Affairs

**PLANNING FOR PHOENIX BIOMEDICAL CAMPUS:** **Mr. Joel Valdez**, Senior Vice President, Business Affairs

**VENTURE FUND:** **Dr. Meredith Hay**, Executive Vice President and Provost, and **Dr. Leslie P. Tolbert**, Vice President for Research, Graduate Studies, and Economic Development

**Advisory Boards:** Each University of Arizona TRIF Initiative has its own Advisory Board, composed of experts in the community who can help to steer activities toward maximum societal impact. The four TRIF Programs have Advisory Boards that comprise select members from the Boards of the individual initiatives within the Programs. For additional information, please refer to page 4 of the brochures for the individual TRIF Programs.

## LEARN MORE

- Contact Dr. Leslie P. Tolbert, Vice President for Research, Graduate Studies, and Economic Development, at [tolbert@email.arizona.edu](mailto:tolbert@email.arizona.edu) or 520-621-3513.

