



ARIZONA STATE UNIVERSITY

MEMORANDUM

June 28, 2013

TO: Rick Myers
President, Arizona Board of Regents

FROM: Michael M. Crow
President, Arizona State University

COPY: Eileen Klein
Nancy Tribbensee

RE: 2012-13 Performance Incentive Report: Developing and Implementing a
Tactical Framework and Comprehensive Strategy for ASU's Global/
International Engagement

I am pleased to submit to the Executive Committee this updated report regarding my performance incentive program area on developing a strategy for ASU's Global/International Engagement.

For the last eleven years, Arizona State University has pursued a design aspiration to evolve as a globally-engaged institution of higher learning. This aspiration, which was outlined in my inaugural speech in November 2002, is driven by the belief that no modern American research university can succeed in isolation from the opportunities or challenges that the rest of the world presents. Research universities around the world are globally-engaged institutions by the very nature of the tasks that they are pursuing. America's research universities are the most globally-engaged and increasingly so as time moves forward. ASU is committed to welcoming an international student body, working on problems that are instructive and enhance our educational outcomes in the global arena, examine problems of mutual interest with global partners and work to develop solutions for broad application, and advance the interests of Arizona through our global network.

The history of ASU has however been that of a largely regionally-based, if not locally-based, institution. More than half of our existence was focused on the task of finding, training and educating top teachers for Arizona and Arizona's development. With its emergence as a university in the 1960s and as a research university in the 1990s, ASU transitioned to the national and then, ultimately, the world stage as an institution with substantial research and knowledge development impact. Today, ASU is among the top 20 U.S. universities in terms of

Office of the President

Fulton Center 410, 300 E. University Drive
P.O. Box 877705 Tempe, AZ 85287-7705
(480) 965-8972 Fax: (480) 965-0865
<http://president.asu.edu>

international student enrollment, among the top schools in terms of new projects and activities related to global engagement and global funding, and has been recognized globally as one of the 100 leading research universities, among thousands attempting this undertaking, on the planet. One example of our 2012-2013 focused global engagement was our selection by the MasterCard Foundation for a \$30 million-plus project that makes us one of six U.S. institutions (Michigan State, UC Berkeley, Stanford, Duke, Wesleyan University, and ASU) taking the lead to develop new leaders for the future of Africa. Buoyed by this and many other successes, ASU's global reach is accelerating meaningfully and rapidly.

This report is organized according to the following sections:

- 1) Situation Report: What is the current environment in which ASU is advancing on its global engagement objectives?
- 2) The Challenge: Why is global engagement so important to ASU's development and what are the specific challenges associated with achieving our articulated goals?
- 3) Specific Goals: What are we specifically attempting to achieve in 2012-2013?
- 4) Personal Role and Leadership: How am I involved in the advancement of global engagement and what function do I serve?
- 5) Specific Achievements: What progress has been made toward our past and current goals?
- 6) The Road Ahead: What path are we taking to achieve our specific goal?

In addition, a summary of our specific plans for resource acquisition for our international and global engagement activities and our student-related activities is attached. I will return to this document at the end of this memo.

1) Situation Report

It is worth noting from the outset that the problems faced locally, nationally and globally related to ASU's international engagement activities are numerous and far outstrip the numbers of teams working on them or the actual solutions being derived. As a result, I believe that ASU's global engagement opportunities are massive and that ultimately ASU, through leadership, careful project selection, successful project execution and long term commitment, will be a major player in deriving solutions for global challenges. The number of potential projects, available research funding, and interested research partners all far exceed our present capacity to engage. This is good news as it demonstrates our immense potential to move forward in terms of global impact and overall institutional development.

The point being here that our ability to engage globally and meaningfully in ways that benefit Arizona, the United States and our global partners is essentially unlimited.

2) The Challenge

Our challenge in the area of international and global engagement exists primarily in the area of expertise. While we have immensely knowledgeable and creative faculty members in a very broad range of disciplines, we lack the expertise necessary to build the interfaces needed to leverage partnerships and resources to make our talents meaningfully available. The hard lesson we have learned in the past year is how to compete and win against institutions that have significant amounts of expertise to augment their faculty members. In other words, imagine that “faculty expertise” is similar to the medical expertise of a physician in a hospital. ASU must find a way to provide “the hospital” to our faculty members as a way of making their expertise meaningful in international problem-solving settings. This requires us to locate, attract and retain a highly specialized set of project and program managers who are able to help leverage our faculty for maximum impact. While we have acquired some of this staff and some of this capability, it has been very challenging.

Our second challenge is the crowded field of institutions attempting to implement simplistic programs. By “simplistic program” I mean an effort that is purely educational outreach or purely problem-solving linked to the institution’s own narrow interests versus those of the international third party. These projects make our work more difficult because they create skepticism about new arrivals in this arena and we have to work hard to demonstrate that ASU is different.

Our third challenge involves the sheer logistics of building institutional and global relationships that institutions like Michigan State University and Purdue University have spent decades developing. As an example, I have participated in many international trips in the last 11 years (and many in the year 2012-2013) as part of efforts to initiate global ventures for ASU. From those experiences, we repeatedly see that, once contact is initiated and partnerships begin to evolve, the CEO or President of the institution (me) is the most desired point of engagement. As a result, we are severely rate limited in attempting to build alliances simultaneously in multiple locations at multiple levels.

3) Specific Goals

Our specific goals involve improving our international student enrollment from roughly 6,000 students to 10,000 students; moving our annual funded research from a few million dollars per year from international sources on international projects to \$50 million a year; developing global philanthropic support beyond where we presently are from globally-based foundations and wealthy individuals; and lastly, advancing ASU as a globally recognizable brand for problem solving and educational excellence. All of these goals are very challenging given that our institutional efforts in this area are only a few years old.

4) Personal Role and Leadership

I was directly involved in developing ASU's design aspirations, including our goal of advancing a globally engaged institution. I put forth this goal with the full knowledge that I would have to play a critical role in positioning the university in the global arena. I worked to acquire related people and resources, including the 2012-2013 appointments of Dr. Gary Dirks (former president of BP Asia) as director of our Global Institute of Sustainability and Dr. Rafael Rangel (former president of the Tecnológico de Monterrey) as senior advisor on Latin American Affairs, as well as the redesign and restructuring of our global engagement unit. Most recently, we organized a team in Washington, DC to advance our relationships with the World Bank, the Inter-American Development Bank, and other countries of prominence. I have been personally involved in all of these endeavors.

In addition, I also recently led a restructuring exercise to establish University Affairs under James O'Brien, our senior vice president for University Affairs. In this capacity, he and I will continue working together to advance all of our global development efforts, in addition to the many other areas of responsibility that pertain to University Affairs.

In 2012-2013, I have dedicated significant time, thought and energy to the following efforts:

- 1) Growing our relationship with the Republic of China (Taiwan) and, in particular, its Industrial Technology Research Institute. I visited the senior leadership of the Institute in Taiwan twice this year and they visited ASU twice during this year as well. We made progress toward a greatly enhanced relationship, which I hope will involve the siting of research activities at ASU and the building of a joint development effort associated with technology development. As a part of that, I had a special opportunity to visit with the President of Taiwan (President Ma), the Minister of Education, the Minister of Science, the leader of their National Academy of Sciences, and all of their leading university presidents in a demonstration of how ASU might work as their ally both in education reform and educational technology development, as well as areas of research particularly related to new biomarker science and sustainability.
- 2) Intensifying the establishment and enhancement of our relationships throughout greater China by appointing Dr. Denis Simon as our ASU China coordinator, as well as the director of the ASU Institute for University Design. In this role, Denis and I are working together to create a higher level of visibility for ASU in China through a number of trips, programs and activities that capitalize on pre-existing efforts. For instance, ASU now has an operational team in Shanghai for our business school MBA program and our Center for American Culture at Sichuan University in Chengdu, China. In 2012-2013, I personally led the evolution of that effort and worked to secure additional funding for that activity from foundations in New York City and elsewhere. It is up and running and more than 10 replicas have been designed and launched by other universities throughout China built on the ASU model and with our coordinated assistance.
- 3) Expansion of our focus on Mexico. Through our appointment of President Rangel we have gained additional access in Mexico and have now been invited to submit a bi-

Lastly, I have outlined in the appendices of the attached documents our project development activities underway in Mexico and Latin America, Greater China and Southeast Asia, and Europe. I have also outlined USAID and World Bank projects as well as our Inter-American Development Bank projects.

I hope that this information is helpful and clearly illustrates my direct participation in the strategic development and implementation of ASU's diverse global engagement activities.



ASU Knowledge Enterprise Development
ARIZONA STATE UNIVERSITY

Advancing Research, Entrepreneurship
& Economic Development

Senior Leadership Biographies



research.asu.edu





Dr. Sethuraman "Panch" Panchanathan

Senior Vice President

Office of Knowledge Enterprise Development

Director, Center for Cognitive Ubiquitous Computing (CUbiC)

Foundation Chair in Computing and Informatics

Focus | Advancing research, entrepreneurship and economic development.

Sethuraman "Panch" Panchanathan is the Senior Vice President of the Office of Knowledge Enterprise Development where he is responsible for advancing research, entrepreneurship, and economic development. He is a foundation chair in Computing and Informatics and Director of the Center for Cognitive Ubiquitous Computing (CUbiC).

He was the founding director of the School of Computing and Informatics and was instrumental in founding the Biomedical Informatics Department at ASU. He was also the chair of the Computer Science and Engineering Department. Panch's research interests are in the areas of Human-centered Multimedia Computing; Face/Gait Analysis and Recognition; Haptic User Interfaces; Medical Image Processing; Media Processor Designs and Ubiquitous Computing Environments for enhancing quality of life for individuals with disabilities. CUbiC's flagship project iCARE for individuals who are blind and visually impaired won the Governor's Innovator of the Year-Academia Award in November 2004.

Panchanathan has published over 400 papers in refereed journals and conferences and has mentored over 100 graduate students, post-docs, research engineers and research scientists who occupy leading positions in academia and industry. He has been a chair of many conferences, program committee member of numerous conferences, organizer of special sessions in several conferences and an invited speaker, panel member in conferences, universities and industry. Panch is a Fellow of the Institute of Electrical and Electronics Engineers (IEEE), Society of Optical Engineering (SPIE) and a member of the Canadian Academy of Engineering.

<https://research.asu.edu/>

<http://cubic.asu.edu>



Dr. William Petuskey

*Associate Vice President, Science, Engineering, and Technology
Office of Knowledge Enterprise Development*

Professor, Department of Chemistry and Biochemistry

Focus | Empowering existing faculty to increase research productivity in Science, Engineering, and Technology. Managing pursuit of large federal opportunities.

William Petuskey is Associate Vice President of the Office Knowledge Enterprise and Development whose responsibilities are in the development and nurturing of research in the natural and physical sciences, engineering and technology at Arizona State University. He is also professor of chemistry and biochemistry, whose research interests and expertise are in the physical and synthetic chemistry of technical ceramic materials for electrical, magnetic, chemical and high temperature mechanical applications.

As past chair of the Department of Chemistry and Biochemistry between 2006 and 2012, he oversaw the department during a time of extraordinary growth in ^{ASU} undergraduate and graduate majors, course enrollments, research funding and productivity. It is now one of the largest and most active chemistry and biochemistry departments in the nation.

He received his B.S. in Materials Science and Engineering (1973) at the University of Utah and his Sc.D. in Ceramic Science (1977) at the Massachusetts Institute of Technology. He carried out postdoctoral research in high temperature electrochemistry at the Technischen Universität Hannover (now Universität Hannover) and an appointment as assistant professor in the Department of Ceramic Engineering at the University of Illinois at Urbana-Champaign. In 1983, he was recruited by ASU where he has been active in both the Department of Chemistry and Biochemistry and interdisciplinary graduate programs on the science and engineering of materials.

http://chemistry.asu.edu/faculty/w_petuskey.asp



Dr. Patrick Kenney

*Associate Vice President, Social Sciences, Humanities & Arts
Office of Knowledge Enterprise Development*

Dean of Social Sciences, College of Liberal Arts and Sciences

Director, Institute for Social Science Research

Professor, School of Politics and Global Studies

Focus | Empowering existing faculty to increase research productivity in Social Sciences, Humanities, and Arts. Managing pursuit of large federal opportunities.

Patrick Kenney is Associate Vice President for advancing social sciences, humanities and arts research in the Office of Knowledge Enterprise Development. He is also the dean of social sciences in the College of Liberal Arts and Sciences, and the director of The Institute for Social Science Research.

Patrick Kenney came to ASU in 1986. He received his BA, MAPA, and PhD from the University of Iowa. Professor Kenney has authored and co-authored articles in the *American Political Science Review*, *American Journal of Political Science*, *Political Behavior*, and the *Journal of Politics*. He has co-authored two books with Kim Fridkin, *The Spectacle of U.S. Senate Campaigns* (Princeton Press, 1999) and *No-Holds Barred: Negativity in U.S. Senate Campaigns* (Prentice Hall, 2004). He has received funding from the National Science Foundation. His research areas are in campaigns, elections, and voting behavior.

<http://pgs.clas.asu.edu/>

<https://issrweb.asu.edu>



Mr. Keith Walton

Vice President of Strategic Corporate Initiatives

*Special Advisor to the President
ASU Foundation*

Focus | Linking with strategic global corporate partners and foundations.

Keith Walton is the Vice President of Strategic Corporate Initiatives and Special Advisor to the President. He joined the foundation in January 2013 and is responsible for the structure, organization and operations necessary to identify strategic corporate opportunities that will expand support for ASU's vision of a New American University.

Walton served most recently as vice president of global government affairs at Alcoa. He previously served as a principal and chief administrative officer at Global Infrastructure Partners.

Walton was executive vice president and secretary of the university at Columbia University in New York City for 10 years. From 1993 to 1996, he served the U.S. Department of the Treasury as deputy chief of staff and chief of staff to the undersecretary for enforcement, the Treasury's chief law enforcement official.

He is an honors graduate of Yale College and the Harvard Law School. He is a 2005 Henry Crown Fellow of the Aspen Institute and is a member of the American Law Institute, the Council on Foreign Relations and the Trilateral Commission.

<http://www.asufoundation.org>



Mr. Todd Hardy

*Associate Vice President, Economic Development & Corporate Engagement
Office of Knowledge Enterprise Development*

Focus | Linking ASU with industry and overseeing economic development.

Todd Hardy is the Associate Vice President for Economic Development & Corporate Engagement. He leads the university's efforts to create alliances with private industry in local, state, and national markets that advance statewide economic development and promote innovative applications of sponsored research. His work also involves active representation of the university in economic policy matters and multi-party economic development projects throughout the state.

Throughout his career of more than twenty-five years as corporate counsel to Fortune 500 and NASDAQ firms and co-founder of a number of startup and early stage enterprises, Hardy has been a leader in the formation and operation of innovative enterprises built on advances in a variety of new technologies.

In addition, Hardy serves on boards and committees that are focused on community services and the economic development of the Phoenix market-place, including the Scottsdale Training and Rehabilitation Services Board of Directors and the Greater Phoenix Economic Council Board of Directors.

Hardy received a Bachelor of Science in industrial engineering from Purdue University, a Juris Doctorate from the Washington College of Law at American University and a Master of Science in real estate development from Columbia University.

<http://skysong.asu.edu/>



Dr. Kenneth Polasko

Executive Director, Arizona Technology Enterprises (AzTE)

Vice President of Business Development, Physical Sciences

Professor, Department of Physics

Focus | Accelerating patenting and licensing of technologies.

Ken Polasko is the Executive Director of Arizona Technology Enterprises (AzTE). He has 20 years of experience in technology commercialization, research and development, and manufacturing. He comes to AzTE from the University of California Los Angeles (UCLA), where he was the Director of Business Development and Industry-Sponsored Research.

Before joining ASU, Ken held various positions within n Motorola including: Director, Technology and Quality; Director, Research and Development; Manufacturing Manager; Manager, Technology Transfer and Protection, and established a successful internal venturing fund: Eureka. He began his industrial career as a researcher for GE's Corporate Research & Development Center in Schenectady, New York where he was part of the original team that developed GE's digital, medical, x-ray imaging technology now in many hospitals. During his graduate work at Stanford he served as the CTO for a startup company based in Palo Alto, CA utilizing sensory deprivation to improve athletic performance.

Ken has a B.S. in electrical engineering from University of Pittsburgh and an M.S. in electrical engineering from the University of California at Santa Barbara. In addition, he holds an M.S. in materials science, a Ph.D. in electrical engineering, and an M.B.A. from Stanford University. While at Stanford, Ken also conceived and led an effort resulting in the awarding on one of the original Feynman Prizes proposed in Richard Feynman's classic talk, "There is Plenty of Room at the Bottom." He has four issued patents and 17 technical publications.

<http://www.azte.com/>



Mr. Gordon McConnell

*Assistant Vice President, Entrepreneurship and Innovation Group
Office of Knowledge Enterprise Development*

Focus | **Accelerating the entrepreneurial ecosystem.**

Gordon McConnell is the Assistant Vice President for Innovation, Entrepreneurship and Venture Acceleration for the Office of Knowledge Enterprise Development at ASU. He joined ASU in June 2011 in the role of Executive Director for Venture Acceleration, managing the Venture Catalyst unit based in ASU SkySong which includes the Edson Student Accelerator program. Prior to relocating to the US, Gordon was Deputy CEO of the Dublin City University (DCU) Ryan Academy for Entrepreneurship in Ireland.

As part of his role at DCU Ryan Academy for Entrepreneurship, he co-founded, and was the first director of the Propeller Venture Accelerator in Dublin and a charter member of the Techstars Network. Gordon worked for DCU over eight years, including the previous position of Head of Strategy and Administration in the DCU President's Office from 2005 until 2009.

Prior to working at DCU, Gordon worked in industry, venture capital and was a senior consultant in the Andersen Consulting (Accenture) strategy practice in Europe. Gordon has also been part of the founding group of two funded start-up companies in the late 1990's. He now serves as an advisor to a number of startup ventures in Ireland including GreenEgg Technologies and Associate Mobile. Gordon has produced published research in a number of areas including the development of high technology clusters, innovation in social entrepreneurship and the digital media sector.

<http://skysong.asu.edu/>



Mr. Stephen Feinson

*Assistant Vice President, ASU Global
Office of Knowledge Enterprise Development*

Focus | **Expanding global projects.**

Stephen Feinson is the Assistant Vice President for ASU Global, the unit within the Office of Knowledge Enterprise Development charged with identifying and pursuing large scale global research and training opportunities for Arizona State University. In this capacity Stephen oversees a team that is building relationships and exploring opportunities with critical agencies, particularly in the area of international development, and matching those opportunities with core ASU capabilities and strategic goals.

ASU Global coordinates a pipeline of such opportunities, moving from opportunity identification to partnering and consortium development to proposal preparation and submission. Prior to arriving at ASU Stephen served as deputy director of Columbia University's Center for Science, Policy, and Outcomes in Washington, DC, and before that as project director for the Jeffersonian Science Project at Harvard University's Belfer Center for Science and International Affairs. Stephen holds a master's degree in law and diplomacy from the Fletcher School at Tufts University.

<https://research.asu.edu/global>



Ms. Tamara Deuser

*Assistant Vice President, Operations
Office of Knowledge Enterprise Development*

Focus | **Strengthening and streamlining operations of the research enterprise.**

Tamara Deuser is the Assistant Vice President for Operations. She is responsible for overseeing the operations functions of the Office of Knowledge Enterprise Development. This includes management of the Office of Research and Sponsored Projects Administration as well as leadership for the Research Advancement staff that support faculty across campus. In addition to research administration, Deuser oversees the Office of Industry Research Collaboration, the Research Technology Development and Services teams, and the Office of Research Integrity and Assurance. The teams under this umbrella organization manage all aspects of research operations and information technology services for OKED.

Deuser previously managed OKED's Information Management and PRIDE groups. Before joining ASU, she held leadership positions in project management and process improvement at several firms, including GE and Motorola. Most recently, she was responsible for the complete redesign of a medical software implementation process. She is a certified Project Management Professional (PMP) and holds a Master of Business Administration from the W.P. Carey School of Business at Arizona State University. She earned a Bachelor of Arts in biology from Scripps College, where she graduated Phi Beta Kappa.

<http://researchadmin.asu.edu/>



Dr. Raymond DuBois

*Executive Director and Professor, The Biodesign Institute,
Center for Inflammation and Cancer*

Dalton Chair, College of Health Solutions

Professor, Department of Chemistry and Biochemistry

Focus | Leading large research institute, recruiting world class centers and leaders.

Raymond DuBois is the Executive Director of the Biodesign Institute at ASU. In addition to his ASU responsibilities, his appointment includes co-leadership of the Cancer Prevention Program at the Mayo Clinic, which has a hospital and clinic, and is developing a medical school campus in the Phoenix area. He maintains his own laboratory at Biodesign to examine the molecular mechanisms by which inflammatory mediators affect epithelial biology, the tumor microenvironment, carcinogenesis and development.

Prior to coming to ASU, DuBois was provost and executive vice president and professor of cancer medicine and cancer biology at the University of Texas MD Anderson Cancer Center in Houston. At MD Anderson, he was responsible for developing and overseeing research strategy, faculty, the School of Health Professions, graduate education programs and initiatives, and Global Academic Programs.

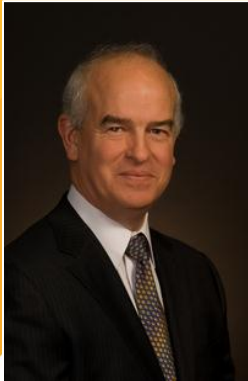
DuBois is a Fellow of the American Association for the Advancement of Science, is past president of the American Association for Cancer Research, and serves on the executive committee of the Aspen Cancer Conference. In addition, he is a founding scientific advisor for both the National Colon Cancer Research Alliance and Stand Up to Cancer.

DuBois' first two degrees were in biochemistry. He earned a bachelor's degree from Texas A&M University and a doctoral degree from the University of Texas Southwestern Medical Center at Dallas. DuBois obtained a medical degree from the University of Texas Health Science Center at San Antonio, followed by an Osler Medicine internship and residency, and a gastroenterology fellowship at the Johns Hopkins Hospital in Baltimore.

<http://biodesign.asu.edu/>

<https://healthsolutions.asu.edu/>

<http://www.mayoclinic.org/arizona/>



Dr. Gary Dirks

Director, Global Institute of Sustainability

Director, LightWorks

*Julie A. Wrigley Chair, Practice of Sustainable Energy Systems,
School of Sustainability*

Distinguished Sustainability Scientist, Global Institute of Sustainability

Focus | Leading large research institute, recruiting world class centers and leaders.

Gary Dirks is director of the Global Institute of Sustainability and ASU LightWorks. Prior to joining ASU, Dirks was the president of BP Asia-Pacific and the president of BP China. In China, he grew BP from an operation with fewer than 30 employees and no revenue to more than 1,300 employees and revenues of about \$4 billion in 2008.

BP has been recognized for its innovative approach to business, particularly through projects that support sustainable development and energy security. Dirks has served on the boards of the India Council for Sustainable Development, the U.S. China Center for Sustainable Development, and the China Business Council for Sustainable Development.

Dirks received China's "Friendship Award" in 2003 and received an honorary CMG (Companion of the Order of St. Michael and St. George) from the United Kingdom in 2005. In December 2008 he was recognized by the People's Daily as one of the 10 most influential multinational company leaders of the last 30 years of China's economic development.

Dirks received a Ph.D. in chemistry from ASU in 1980. He was the first doctoral student to work in the Center for the Study of Early Events in Photosynthesis (now the Center for Bioenergy and Photosynthesis).

<http://sustainability.asu.edu/>

<http://asulightworks.com/>



Dr. Werner J.A. Dahm

Director, Security & Defense Systems Institute

ASU Foundation Professor of Aerospace & Mechanical Engineering

Focus | Leading large research initiative, recruiting world class centers and leaders.

Werner J.A. Dahm is director of Security & Defense Systems Institute (SDSI) at Arizona State University, where he is also ASU Foundation Professor of Aerospace & Mechanical Engineering in the Ira A. Fulton Schools of Engineering. He previously was the Chief Scientist of the U.S. Air Force, serving in the Pentagon as the direct science and technology advisor to the Secretary of the Air Force and the Air Force Chief of Staff. Dr. Dahm is also an Emeritus Professor of Aerospace Engineering at The University of Michigan, where he served on the faculty for 25 years and was Head of the Laboratory for Turbulence & Combustion (LTC).

He has also been a Member of the Air Force Scientific Advisory Board (AFSAB), has served on numerous task forces of the Defense Science Board (DSB) for the Office of the Under Secretary of Defense (OUSD AT&L), and is a past member of the Defense Science Study Group (DSSG) at the Institute for Defense Analyses (IDA) in Washington, D.C. He is a Fellow of the American Physical Society (APS) in the Division of Fluid Dynamics (DFD), a Fellow of the American Institute of Aeronautics and Astronautics (AIAA), a recipient of the William F. Ballhaus Aeronautics Prize from Caltech, the 1938E Distinguished Achievement Award from the University of Michigan, and the George J. Huebner Research Excellence Award from The University of Michigan.

He received his Ph.D. degree in Aeronautics from Caltech in 1985, and previously worked as a Research Engineer in Propulsion Wind Tunnel Facility at the USAF Arnold Engineering Development Center (AEDC) in Tullahoma, TN.

<http://sdsi.asu.edu/>



Dr. Gregory Raupp

Director, MacroTechnology Works

*Founding Director, Flexible Display Center
Office of Knowledge Enterprise Development*

Focus | Leading large research initiative, recruiting world class centers and leaders.

Gregory Raupp, the founder and former director of ASU's Flexible Display Center, is the director of MacroTechnology Works at Arizona State University. Raupp returned to ASU from the City University of Hong Kong (CityU), where he served as their vice president for research and technology and as dean of Graduate Studies. During his time at CityU, Raupp helped to establish a strategic institutional partnership between the two universities, including a focus on advancing flexible electronics. Raupp is focused on enhancing the flexible systems and manufacturing portfolio for the university.

Raupp began as an assistant professor within ASU's Department of Chemical and Bio Engineering in 1985 and has since advanced in his role, research and contributions at the university through a number of different academic appointments. Past roles include associate dean for Research, College of Engineering and Applied Sciences, associate vice president for research, and professor. Raupp received his Ph.D. from University of Wisconsin, Madison.

<http://flexdisplay.asu.edu/>



Dr. George Poste

Chief Scientist & Co-Director, Complex Adaptive Systems

Regents' Professor and Del E. Webb Chair, Health Innovation

Focus | Leading large research initiative, recruiting world class centers and leaders.

George Poste is Chief Scientist, Complex Adaptive Systems (CAS), Regents' Professor and Del E. Webb Chair in Health Innovation at Arizona State University. He assumed this post in February 2009. This program links expertise across the university in research on synthetic biology, ubiquitous sensing and healthcare informatics for personalized medicine.

He founded the Biodesign Institute at ASU and served as Director for 2003 to 2009. In creating this Institute, Poste designed and built 400,000 sq. ft. of new facilities, achieved cumulative research funding of \$300 million and recruited over 60 faculty, including three members of the National Academies of Science and Engineering.

He has published over 350 research papers and edited 14 books on pharmaceutical technologies and oncology. He is a Fellow of the Royal Society, the Royal College of Pathologists and the UK Academy of Medicine, a Distinguished Fellow at the Hoover Institution, Stanford University and a member of the Council for Foreign Relations. He served as a member of the Defense Science Board from 2003 to 2009 and Health Board of the US Department of Defense (DoD) and is currently a member of the US Institute of Medicine Board on Global Health. He has served as a member of Advisory Committees for multiple U.S. Government Agencies in areas of defense, national security and healthcare.

<http://casi.asu.edu>



Dr. Anna Barker

Director, Transformative Healthcare Networks

Co-Director, Complex Adaptive Systems

Professor, School of Life Sciences

Focus | Leading large research initiative, recruiting world class centers and leaders.

Ann Barker directs the transformative knowledge networks – specifically directed toward addressing major problems in healthcare. The Transformative Healthcare Networks initiative (THN) will serve as a foundation for the development of new research models that leverage convergent knowledge, innovative teams and novel funding approaches to better prevent and treat acute and chronic diseases. She also serves as Co-Director of a major ASU initiative in complex adaptive systems research. The Complex Adaptive System (CAS) serves as an organizing construct to approach understanding and solving multi-dimensional problems in the biological and social sciences.

Prior to joining ASU, Barker served as the Deputy Director of the National Cancer Institute (NCI) and as Deputy Director for Strategic Scientific Initiatives for eight years – retiring in 2010. While Deputy, she developed and implemented multi/trans-disciplinary programs in strategic areas of cancer research and advanced technologies including: the Nanotechnology Alliance for Cancer; The Cancer Genome Atlas (TCGA) – in collaboration with the National Human Genome Research Institute; and the Clinical Proteomics Technologies Initiative for Cancer.

She has received a number of awards for her work in support of cancer research. Most recently she received the 2009 AACR Margaret Foti Award for Leadership and Extraordinary Achievements in Cancer Research, AACR 100th Anniversary Meeting; and in 2009 Dr. Barker was named to the list of "The 100 People Changing America" by Rolling Stone Magazine.

<http://casi.asu.edu>

Arizona State University

Global Engagement

Update to the Arizona Board of Regents

New American University Design Aspirations

01. Leverage Our Place

ASU embraces its cultural, socioeconomic and physical setting.

02. Transform Society

ASU catalyzes social change by being connected to social needs.

03. Value Entrepreneurship

ASU uses its knowledge and encourages innovation.

04. Conduct Use-Inspired Research

ASU research has purpose and impact.

05. Enable Student Success

ASU is committed to the success of each unique student.

06. Fuse Intellectual Disciplines

ASU creates knowledge by transcending academic disciplines.

07. Be Socially Embedded

ASU connects with communities through mutually beneficial partnerships.

08. Engage Globally

ASU engages with people and issues locally, nationally and internationally.

Global Engagement

Vision

- Leverage our local knowledge, expertise and intellectual capital
- Access and harness global knowledge, expertise and intellectual capital
- Address critical global, national and local problems and issues

Global Engagement

Strategy

ASU's strategy for global engagement is built upon four main pillars:

International student
recruitment, enrollment
and retention

Growth in funded
research that
addresses key global
problems

Increased development
and philanthropic
support

Enhanced global image and visibility as well as thought leadership

Global Engagement

Strategic Tools

- Forge active, high-value strategic **alliances and partnerships** in 6-8 key target countries: universities plus government, business, and think tanks
- Develop and harness a more engaged **international alumni** in key target countries
- Tracking and analysis of U.S. and foreign government **funding mechanisms** and decision-making processes
- High level **“connectivity”** with and knowledge of prominent international organizations and agencies
- Ongoing support for expanded academic activities among the ASU faculty; continuous development and execution of innovative **academic programs** that meet global needs
- Targeted, well-defined global/regional **recruiting initiatives**
- Leveraging on a global level, ASU’s thought leadership regarding “the New American University” via a revitalized **University Design Institute**

Strategic Tactics

- ASU website—multiple languages
- Effective use of social media
- Faculty travel
- McCain Institute for International Leadership
- DC and LA offices
- American English and Culture Program (AECP)—leverage English language offerings to drive market entry and expansion in key target countries

Global Engagement

International Student Recruitment and Resource Acquisition Targets



Global Engagement

International Student Recruitment and Resource Acquisition Targets



International Students

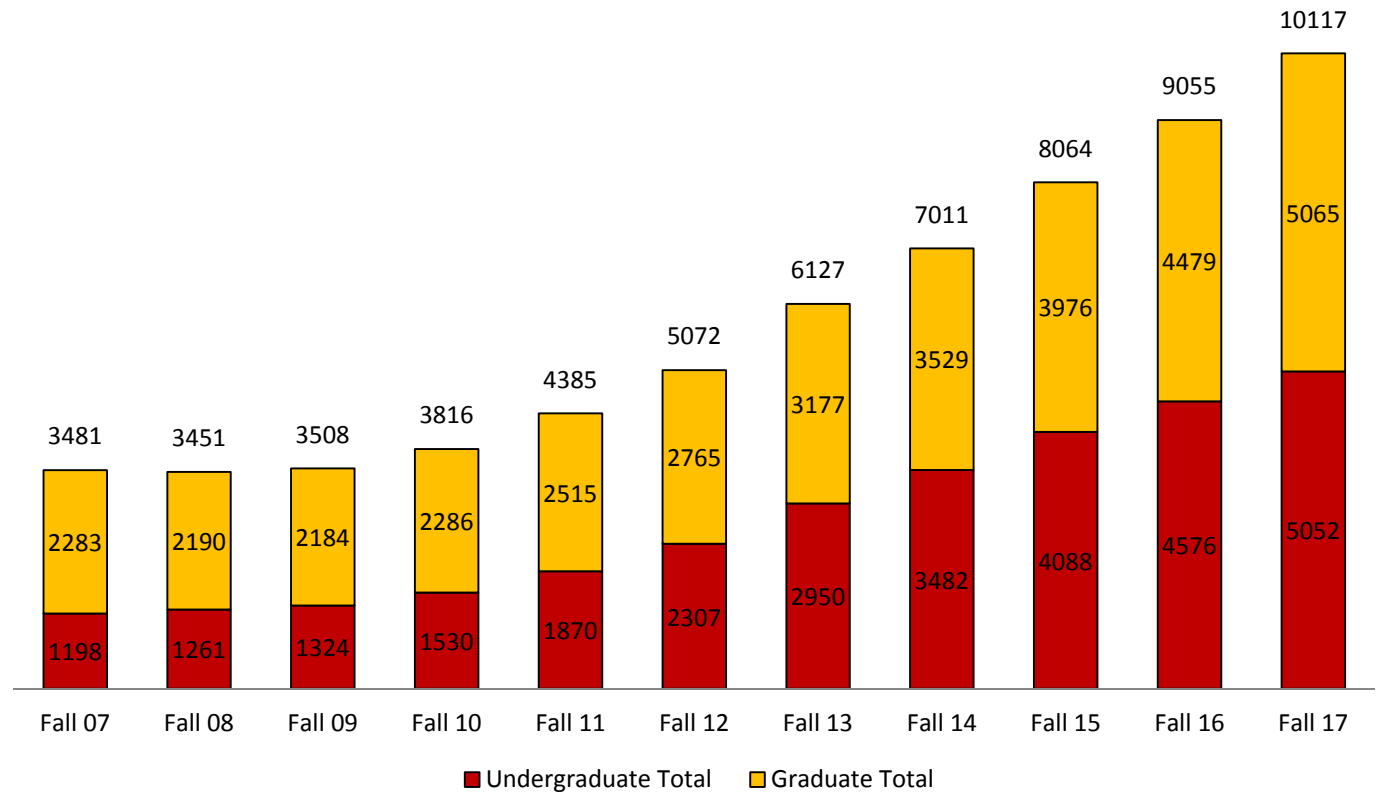
International Students

Objectives

- 10,000 international students at ASU by 2017
- Diversify the country composition of the pool of incoming students by at least 10% over the same period

International Students

Four Campus International Enrollment Fall 2013-Fall 2017 Targets



International Students

American English and Culture Program (AECPP)

- Transplant and locate the AECPP abroad, including its most advanced level
- Deliver online English training, test prep, and other online products that prepare students for college success
- Design and implement large scale training projects in partnership with other ASU units and foreign partners
- Expand custom and integrated programs with foreign universities
- Serve in-bound custom groups, such as Engineering faculty from Vietnam or ESL professors from Iraq
- Dramatically expand partnerships with government agencies and multinational corporations (e.g., English training partnerships with Intel and other MNCs working closely with Engineering's HEEAP partners)

**Global
Resource
Acquisition**

**Global
Resource
Acquisition**

Objective

Increase ASU global project support to **\$50 million** per year

Global Resource Acquisition

OKED Targeted Assignments

- Outline options beyond \$550 million (new organizational models, U.S. labs, international labs, etc.)
- Initiate **3-5 Global Science programs** with partners (City University of Hong Kong is an example)
- Complete and implement **Singapore linking strategy**
- Develop **funding pathways** for increased international support (Europe, Gulf States, Mexico, China)

OKED Assigned Tasks

- Create global strategy in four areas:
 1. Sustainability/energy
 2. Civil society
 3. Education
 4. Health
- Increase pipeline of global funding opportunities
- Increase number of qualified funding opportunities
- Increase number of submitted proposals
- Strengthen ASU's connection and branding with select funding agencies
- Enhance ASU's relationship with select global opportunities partners
- Create robust capture team and process for ASU Global

ASU Foundation Top Targets/Strategies

Mexico

Targets

- Corporations (FEMSA, CEMEX)
- Foundations (Arronte, US-Mexico, Azteca)
- Individuals associated with ASU priorities (water/sustainability, IHO)

Strategy

- Work through existing networks and partners (Tec de Monterrey, IHO Board relationships) to engage prospective partners and investors
- Develop relationships with Mexican federal government to engage partners and investors

China

Targets

- Corporations/NGO networks (Fung Global Institute)
- Individuals associated with ASU priorities (sustainability, Shanghai MBA)
- Engagement (Alumni chapters – especially in Shanghai and Hong Kong, other identified individuals)

Strategy

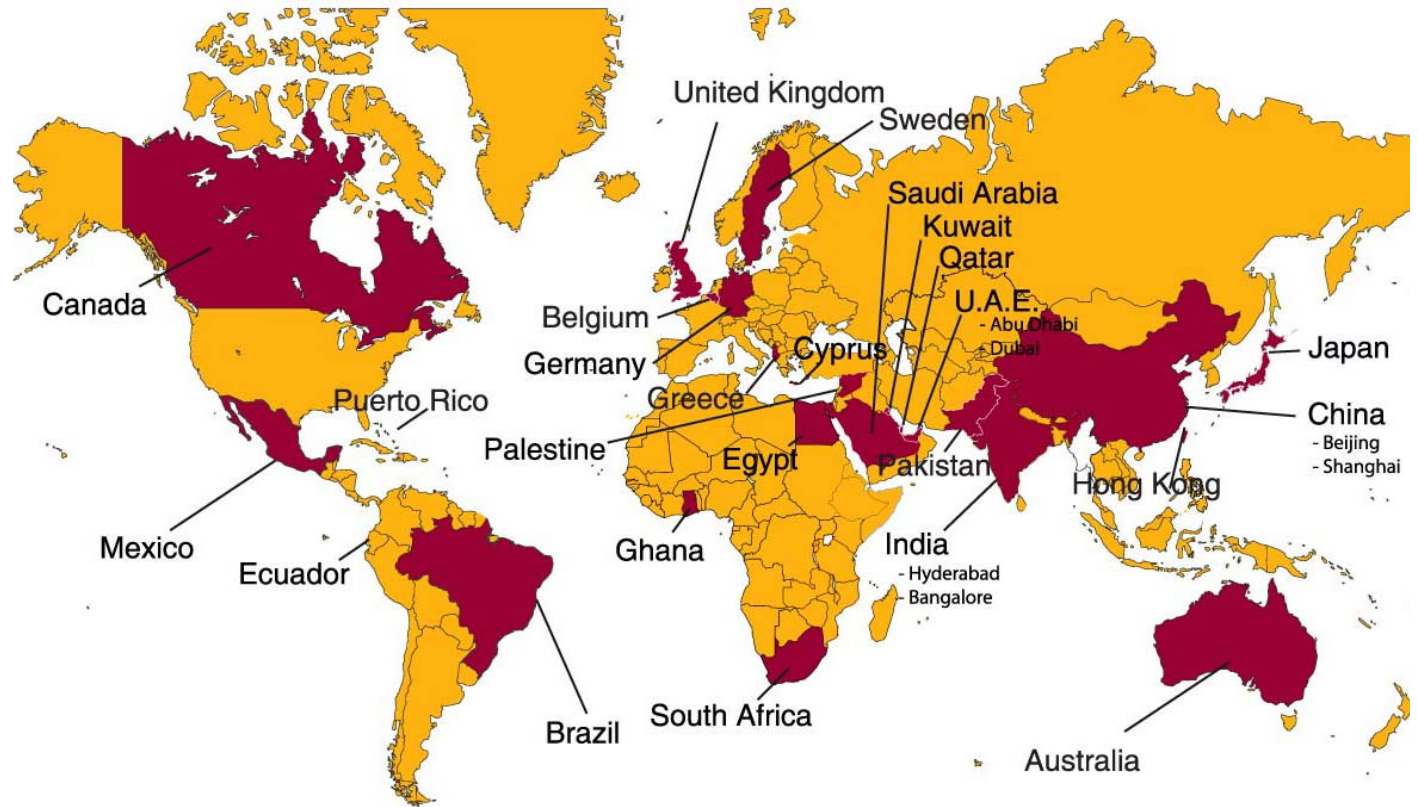
- Assess the philanthropic culture in China; focus efforts in Hong Kong and Shanghai

**Global
Alumni
Engagement**

Global Alumni Engagement



Official International Alumni Network*



**Each of the identified countries has an official Alumni Association contact*

Appendix of Projects and Initiatives

Appendix A

Mexico and Latin America Projects and Initiatives

1. Renewable energy binational research hub (Gary Dirks)
2. Regional clean energy projects (Gary Dirks)
3. Sustainable water and decision support (Dave White) (was “border region water project)
4. Food security/agribusiness (Mitzi Montoya)
5. English as a second language program for Mexico students (Julia Rosen)
6. ASU Tec de Monterrey legal/justice studies Ph.D. and certificate program (Doug Sylvester)
7. ASU Certified Public Manager program at Tec de Monterrey (Jonathan Koppell)
8. Criminal justice leadership institute (Jonathan Koppell, Doug Sylvester)
9. U.S.-Mexico policy analysis tool (Dennis Hoffman, Kurt Volker)
10. U.S.-Mexico industry sector analysis (Sue Clark Johnson, Rafael Rangel)
11. Relocation of TechBA business accelerator to SkySong (Todd Hardy)
12. USAID GDA Mexico - International Leadership Justice Institute (Stephen Feinson)
13. PROJUST, Mexico Justice Reform (Stephen Feinson)
14. Mexico City alumni chapter, increase alumni giving (Christine Wilkinson, Rick Shangraw)
15. Pursue investments from Mexican foundations and corporations (Rick Shangraw)
16. SolucionES – Crime and Violence Prevention, El Salvador (Stephen Feinson)
17. El Salvador Higher Education Reform Project (Stephen Feinson)
18. Partnership with El Salvador’s Universidad Don Bosco to improve their engineering programs (Rafael Rangel Sostmann)
19. Inter-American Development Bank water management certificate program for Peru (Rafael Rangel Sostmann)

Appendix B

Greater China and Southeast Asia Projects and Initiatives

1. Executive MBA in Shanghai (Buck Pei)
2. ASU-Sichuan University Center for American Culture (Kathryn Mohrman, Denis Simon)
3. Higher Education Engineering Alliance Program (ASU, Intel, Vietnamese government) (Elizabeth Phillips, Jeff Goss)
4. Research collaboration agreement with Industrial Technology Research Institute (Taiwan) (Sethuraman “Panch” Panchanathan)
5. ASU Global Sustainability Solutions Center, City University of Hong Kong (Gary Dirks)
6. Flexible electronics alliance, City University of Hong Kong (Greg Raupp)
7. Mekong Partnership for the Environment project (Stephen Feinson)
8. Institute of International Education Myanmar initiative (Denis Simon)
9. Governance Program Southern Philippines (CHANGE) (Stephen Feinson)
10. Philippines Science, Technology, Research and Innovation for Development (Stephen Feinson)

Appendix C

Europe Projects and Initiatives

1. Dublin City University partnership
 - 1.1 Joint Biodesign center (Ray DuBois)
 - 1.2 Journalism and the digital age symposium (Dan Gillmor)
 - 1.3 Intel global science technology center (Sethuraman “Panch” Panchanathan)
 - 1.4 NSF proposal with DCU's Clarity Center (Sethuraman “Panch” Panchanathan)
 - 1.5 USAID proposal (Stephen Feinson)
2. Fraunhofer Institute partnership
 - 2.1 Fraunhofer Institute for Electronic Nano Systems (Bill Petuskey, Greg Raupp)
 - 2.2 Fraunhofer Research Institution for Modular Solid State Technology (Greg Raupp)
 - 1.3 Intel global science technology center (Sethuraman “Panch” Panchanathan)
 - 1.4 NSF proposal with DCU's Clarity Center (Sethuraman “Panch” Panchanathan)
 - 1.5 USAID proposal on the topic of diaspora (Stephen Feinson)

Appendix D

USAID Projects and Initiatives

1. Water and Development IDIQ (WADI), teamed with consortium to pursue \$1 billion IDIQ
2. Energy II IQC, teamed with consortium, \$350 million ceiling
3. HABITATE IQC (Sustainable Urban Management), teamed with consortium, \$650 million ceiling
4. Mekong Partnership for the Environment Project, pursuing teaming agreement, \$13 million
5. Jordan Rule of Law/Anti-Corruption, \$45 million
6. SolucionES – Crime and Violence Prevention, El Salvador, pursuing direct subcontract, \$42 million
7. USAID GDA Mexico - International Leadership Justice Institute, developing concept and proposal, \$2-5 million
8. PROJUST, Mexico Justice Reform, partnered with consortium, \$80 million
9. Governance Program Southern Philippines (CHANGE), identifying prime, \$25 million
10. India In-STEP, \$4.5 million
11. El Salvador Higher Education Reform Project, partnered with consortium, \$22 million
12. Philippines Science, Technology, Research and Innovation for Development, partnered with IIE, \$32 million

Appendix F

World Bank Projects and Initiatives

1. World Bank higher education initiative (President Michael Crow and World Bank President Jim Yong Kim)
2. International Finance Corporation short course focused on cities, energy and water
3. Higher Education Engineering Alliance Program model regional expansion; co-hosting a forum on Solutions Networks in Vietnam
4. World Bank Institute and ASU Center for Games and Impact collaboration to co-develop engagement tools and games to enhance WBI learning products
5. Massive Open Online Course built around the World Bank Report, *Turn Down the Heat: Why a 4 Degree C World Must be Avoided*
6. Co-development of e-courses with World Bank Institute
7. Partner to host the 2014 Participatory Governance Conference
8. Africa Centers of Excellence Project within Science Technology Engineering and Mathematics (STEM), Health Sciences, and Agricultural Studies

Appendix E

Inter-American Development Bank Projects and Initiatives

1. Water Innovation Collaboratory: *Pilot project with Tec de Monterrey on water resource management and decision making in Monterrey, Mexico*
2. Recife water project: *Sustainable water and decision support project*
3. Water management certificate program for Peru
4. Sustainable water and decision support: *Create a regional pipeline of sustainable water projects for IADB and other funders in Mexico/Latin America*

MEMORANDUM

June 28, 2013

TO: Rick Myers
President, Arizona Board of Regents

FROM: Michael M. Crow
President, Arizona State University

COPY: Eileen Klein
Nancy Tribbensee

RE: 2012-13 Performance Incentive Report: Developing and Implementing a Comprehensive Strategy for ASU Activities that Enrich Arizona's Economy

I am pleased to submit to the Executive Committee of the Arizona Board of Regents my 2012-2013 performance incentive report summarizing Arizona State University's research objectives and my personal leadership and involvement in their advancement as they relate to the enrichment of Arizona's economy. It is through our three principal products -- educated people, new ideas and new technologies and solutions -- that ASU enriches Arizona's economy. I will focus these discussions on the research and innovation related elements of these outputs for ASU.

As context for this update, I offer a brief review of my experience and introduction to ASU, as the design and development of research initiatives has long been an area of intense personal interest for me. I have been involved in the design, building and deployment of university research enterprises and their connection to the greater economic development ecosystem since the mid-1970s. In those roles, I conceptualized, constructed and launched as leader more than 35 disciplinary and transdisciplinary research initiatives. In addition, during my 11 years at Columbia University, I served, in addition to being a faculty member, as the Chief Research Officer (among other assignments) and oversaw an increase in that institution's funded research activity by a factor of 2 (\$300-\$600 million+) and its technology development and transfer activities by a factor of 40 in terms of revenue from \$4 million to approximately \$160 million a year. I also served as a consultant in the design of research enterprises and economic development initiatives at the University of Chicago, Harvard University, the Swedish Ministry for Science and Education, the Korean Advanced Institute for Science and Technology, Lawrence Livermore National Laboratory, the U.S. Department of Commerce, the U.S. Department of Energy, the various agencies of the intelligence community of the U.S.

government, and a range of other universities and governments. Most notably, between 1991 and 2002, I served as an advisor to ASU on the design of the emerging ASU research enterprise. During that time, I visited ASU more than 100 times interacting with faculty, staff and all levels of the institution. Since my arrival as president of ASU in July 2002, I have continued my active involvement in these activities personally.

As context for our specific progress and objectives, a brief overview of the evolution of American research universities during the past century is helpful, so as to understand the design conditions for ASU's evolution as a research university. There were about 15 institutions that developed and were operational from various precursor platforms by 1915. Another 30 or 40 were added before WWII, and another two dozen evolved afterwards. During the same timeframe, ASU was not a research university, but a territorial and state Teachers College until roughly 1933. Between 1933 and 1960, it was a state college focused only on education and teacher preparation. In 1960, ASU became a university by vote of the people of Arizona and began its emergence as a comprehensive institution.

New universities that were established since 1960 in the United States, regardless of their previous platform, type of university or university of origin, are small in number and are best represented by schools like UC Santa Barbara, UC Irvine, UC San Diego, Central Florida University, University of South Florida, among others. These universities, including ASU, were latecomers to an already well-established group of institutions and, as a result, had the freedom to determine if they wanted to follow orthodox development models (like the UC campuses) or forge more aggressive new trajectories. In ASU's case, the process of forming a unique research identity was initiated by former ASU President Russ Nelson (who had been the Chancellor of University of Colorado at Boulder prior to coming to ASU) beginning in 1980. Former ASU President Lattie Coor (who had previously been the President of the University of Vermont and the Vice Chancellor of Washington University in St. Louis) expanded these efforts during his subsequent tenure, beginning in 1990. I assumed these responsibilities in 2002 and was able to draw from a significant transdisciplinary and interdisciplinary research community at its early stages of development.

ASU's thirty-plus year development as a research university is one of the two shortest evolutions among America's present leading research universities, the other being Boston University. This "late start" makes for an exceedingly complex undertaking in terms of developing ASU as a research university given the levels of maturity and experience in resource acquisition in older and more established institutions. The largest research universities, with a couple of exceptions, represent the original fifteen founded long ago and they generally house the largest endowments also. ASU's choice to adopt a highly differentiated model for the rapid and comprehensive development of its research enterprise means that its metrics cannot be easily compared to other older or more traditionally patterned research universities or land-grant research universities. ASU is fundamentally different as a function of its history, location and purpose.

With that in mind, ASU has set four goals as a part of our overall institutional design. These goals speak directly to our progress to date and guide our planning for the future. Related specifically to research, we aim to **"establish ASU as a global center for interdisciplinary research, discovery and development by 2020."** This goal effectively replaces our 2002-2012

goal to establish ASU as a national research university, which we contend has been meaningfully accomplished. Our new goal and its specific measurable objectives were identified and presented both internally and to the Board and is fully consistent with each of our ABOR specific Vision 2020 Goals.

To attain our goal, our four categories of metrics include:

- 1) Become a leading global center for interdisciplinary scholarship, discovery and development.
- 2) Become a leading American center for discovery and scholarship in the Social Sciences, Arts and Humanities.
- 3) Enhance research competitiveness to more than \$700 million in annual research expenditures.
- 4) Augment regional economic competitiveness through research and discovery and value-added programs.

One of my key functions as president of ASU is the identification, articulation, presentation and honing of this overall goal statement and each of its specific metrics and I devoted significant time to these activities during 2012-2013. More specifically, I led the process of identifying a unique pathway for ASU to gain a level of recognition and achievement different from and complementary to that of the University of Arizona in particular, and other already established research universities in general. Thus, the goal of becoming a global center for interdisciplinary research, discovery and development by 2020 suggests that we will have a specialized focus on pursuing problems that exist at the intersection between particular disciplines in which we excel. To be clear, the attainment of the goal on becoming a global center for interdisciplinary research, discovery and development by 2020 is no small task. What I mean by the articulation of that goal is that when people talk around the planet about where the great centers are for transdisciplinary research, ASU will be top of mind on that list by that point.

Cementing ASU as a world class home for interdisciplinary research, discovery and development in less than seven years is an extremely challenging endeavor that will require an immense amount of focus, creativity and leadership on my part. Pursuit of this objective in simultaneous coordination with the other goals ASU is working toward and in an environment of limited resources adds additional complexity to this assignment. Nonetheless, I am wholly dedicated and inspired to see this goal through to fruition by the excellence of our faculty and staff and our potential for meaningful impact on the future trajectory of Arizona and the United States. By pointing out these resource limits is to illustrate that we have a goal which greatly outstrips our present resource configuration, meaning that not only do we have to have the goal but we have to acquire the resources to achieve the goal. One of the challenges in hiring people to ASU who can work towards this goal is because many researchers that we hire come from already well-funded universities or government agencies and neither of these models are applicable to the process that lies in front of us. We have no steady source of money, we are not making political negotiations for our resources per se and we are advancing in an area that is new. All of these things are thus very complicated and challenging.

As you will see, this report is organized according to the following sections:

- 1) Situation Report: What is the current environment in which ASU is advancing on its research objectives?
- 2) The Challenge: Why is research so important to ASU's development and what are the specific challenges associated with achieving our articulated goals?
- 3) The Goals: What are we specifically attempting to achieve in 2012-2013?
- 4) Personal Role and Leadership: How am I involved in the advancement of our research enterprise and what function do I serve?
- 5) Specific Achievements: What progress has been made toward our past and current goals?
- 6) The Road Ahead: What path are we taking to achieve our specific goals?

1) Situation Report

Overall, ASU is advancing its research agenda in a positive manner. This is in spite of significant uncertainties due to state funding divestment, indeterminate federal funding, economic instability in general, investment variability by the private sector, and general constraints associated with risk mitigation as it relates to the development of our overall research enterprise. ASU nonetheless is making swift and meaningful progress. In a remarkably short period of time, we have emerged as a high speed and rapidly evolving interdisciplinary research enterprise of national note. We have become a top 25 recipient of National Science Foundation funding, and a top 30 recipient of funding from all other major federal funding agencies. We are also ranked in the top 10 in NIH funding comparisons among research institutions without medical schools.

2) The Challenge

The challenge in advancing ASU's research enterprise in all aspects in 2012-2013 has been to find ways to distinguish ASU from other American research universities so as to secure additional resources more quickly and to direct those resources to the areas of research and development where they are most likely to yield a beneficial result for Arizona and the United States in terms of global competitiveness and quality of life. This effort is a secondary objective to our primary mission to provide one of the largest undergraduate student bodies in the country with a high quality education that yields long-term value over a lifetime. Therefore, we have a great responsibility to align our teaching and discovery components so as to enrich, not diminish, the success of our undergraduate students. Thus, the challenges for ASU and my leadership are:

- With my personal leadership, can we seek and achieve greater productivity and greater commitment to our complex mission from the entire ASU faculty and staff?

- Can we design an institution that is flexible and adaptive to the stresses and strains of being research agile and educationally innovative?
- Can we enhance the teaching and research productivity of our faculty in select units while maintaining extreme teaching intensity in other units and simultaneously maintaining a unified academic culture overall?

These challenges are sizable and daunting in that they have seldom, if ever, been successfully navigated by other emerging research universities. Either a university, like the University of California at San Diego, was designed from “day one” to be a research university or, as it emerged as a research university, it reduced its teaching assignments for its faculty and changed its work order and culture. In the case of ASU, we are attempting to recreate a historically successful academic culture wherein the faculty members are heavily involved in both teaching and research. In 2012-2013, through my focused leadership and direct engagement with faculty, faculty leaders, senior researchers, junior researchers, research staff and others on repeated occasions allowed us to continue our specific goals to evolve our culture in a way where we are on a path of forging a new cultural outcome.

3) Specific Goals for 2012-2013

My hope for 2012-2013 was that we could reach \$400 million in research expenditures and I placed an immense amount of institutional energy, institutional investment by my office, personal time, commitment and focus to the task. Only a handful of universities without medical schools have ever broken such a threshold, and I am proud to share that ASU successfully met this goal for 2012-2013 having achieved \$405-\$410 million in research expenditures for the fiscal year ending June 30, 2013. While our goal is not only quantitative in nature, this numeric achievement indicates that we are able to compete with the historically recognized major research universities of the United States and that we have since 2002 demonstrated our abilities to grow our research enterprise by three-and-a half fold.

In addition to our specific research expenditure goal, we also wanted to intensify our technology transfer activity, which I know from experience at Columbia leads to meaningful research success and subsequent economic returns for the broader economy. By activity, I mean invention reports, licenses, spin-outs, etc. We had more than 10 spin-outs from university-based faculty driven technologies and more than 80 ideas and companies from students this year alone. Our goal has been to be in the Top 10 of all universities when calculated per \$10 million of funded research. (Scaling the research enterprise that we have to its size and, thus, its potential for impact.)

These aspirations form the foundation for our economic development-related objectives where we aim to make ASU a driving force for opportunity in Greater Phoenix and Arizona through our direct engagement with any and all companies and enterprises associated with technology driven economic development.

In addition, it is important that as ASU builds its research enterprise to the highest levels of performance it also simultaneously continues its efforts to build our technology transfer and knowledge expression outreach activities. These activities are not limited to our SkySong Innovation center in Scottsdale and its associated programs or to our enterprise known as Arizona Technology Enterprises, which is responsible for our technology transfer activities. We recognize that we have a research and entrepreneurship enterprise which is directly tied to Arizona's economic future. The best way for us to do that is to build from the outset, programs, activities and initiatives intended to break down the barriers to the university and moving out from the university.

4) Personal Role and Leadership

My role in the development of the research enterprise has been very personal. The Senior Vice President for Knowledge Enterprise Development (Sethuraman Panchanathan) reports directly to me and each and every goal that he is advancing was devised collaboratively with me. I work with him on nearly a daily basis on matters related to the Strategic Initiative Fund we established to invest internal resources in priority initiatives that are advanced. I also work with him personally on the acquisition of key faculty members, including recruitment on a national and international basis. I believe that the attraction of faculty capable of performing the high level of teaching and discovery needed to make ASU successful is a critical responsibility of mine. To that end, I have been involved in more than 15 senior hires this year alone at ASU, not including administrative leadership positions at the institution.

I have been involved in meetings with the top 30 research team leaders, as well as personal meetings with deans, school directors and department heads on the advancement of transdisciplinary and interdisciplinary research initiatives. I have also been personally involved in the design of a new major institute related to Children and Family Outcomes, as well as a range of other centers and institutes which are considered hallmarks in the development in ASU's research enterprise.

I have also played a personal role in the evolution and design of the ASU Catalyst program to its next level, secured an additional \$2 million commitment from private philanthropy during 2012-2013 for expansion of our Edson Center for Student Entrepreneurship, our Furnace programs and our general ASU Catalyst programs.

My personal engagement related to research also includes multiple personalized communications (in-person, e-mail and video messages) to faculty and staff in specific units and university-wide regarding our research achievements and the advancement of the university's identity by strongly stressing the visibility of our collective achievements.

5) Specific Achievements

The attainment of \$405-\$410 million in research expenditures is a very significant achievement for our university. In light of the major time and effort I contributed to designing Arizona

Technology Enterprises and its operations, I am very proud of its Top 5 status in terms of technology transfer activity. In addition, ASU has greatly expanded its role as a regional technology development and regional economic development enterprise through the efforts of our Office of Economic Affairs and the addition of senior personnel recruited specifically by me to move our corporate research funding from the top 20 to the top 5 among American research universities. We have made excellent progress in the acquisition of Mr. Keith Walton, director of Strategic Corporate Affairs, who augments the work of Mr. Todd Hardy, associate vice president for Economic Affairs. Both of these senior officers possess substantial private sector, academic and governmental experience, and provide a team capable of engaging successfully at any level with any local or global corporation. Specifically, Mr. Walton's new activities are focused on six multi-national corporations which we have targeted for a comprehensive relationship with ASU. These companies include Boeing, Disney, Kraft, Intel, etc., and he is off to an excellent start during this fiscal year to build those relationships.

Our efforts to link with industry have achieved the following:

- 1) We have launched a new innovation ecosystem mapping project design to link ASU with every possible industry of every possible size that can consume the kind of people and idea products that we produce. In this particular case, I was personally involved in acquiring our Silicon Valley based consultant to design and develop this system on a LinkedIn platform that she helped developed as one of the initial officers of LinkedIn.
- 2) We have expanded all of our activities with ASU Catalyst by greatly increasing the numbers of companies involved, our furnace and innovation accelerator programs are also at maximum levels. Perhaps most important here is the university's overall efforts to greatly expanded our entrepreneurship initiatives.

6) The Road Ahead

In spite of our achievements in 2012-2013, the road ahead is going to be challenging. Resource uncertainties are prevalent, ASU's financial constraints are significant, and faculty recruitment is very expensive when compared against our other necessary goals related to undergraduate teaching and more general scholarship. To move forward, we are intensifying our planning and identifying strategic pathways for moving from \$400 million in annual research expenditures to \$700 million a year. The attached document outlines our specific plans and outlines the challenges and methodological approach involved. Perhaps our most important task will be expanding our funding base beyond the United States to international funding partners. We are making active and significant progress, including inroads during the last year with industrial funding partners and non-governmental organization funding partners.

It is absolutely essential that Greater Phoenix see the emergence of ASU as one of the leading research universities in the world. Right now, along with the University of Arizona, we are considered one of the 100 leading research universities in the U.S. and in the world. That ranking does not satisfy us. We believe that we need to be in the Top 50 in the world and we are

on a path to achieve that recognition. We also believe that our unique focus on transdisciplinary research could carry us even beyond our aspiration.

An Arizona that is home to multiple world class research universities, and a metropolitan Phoenix that is home to its own transdisciplinary, highly intensive and adaptive research university, are components of a region with a better chance of economic adaptability and higher levels of broad economic competitiveness. ASU wants to help that happen.

Again, research is an area of intense personal interest for me and I believe that my personal commitment, guidance and leadership continue to be an important factor in our success.

June 2013

Research Enterprise Plan



Advancing Research, Entrepreneurship and Economic Development

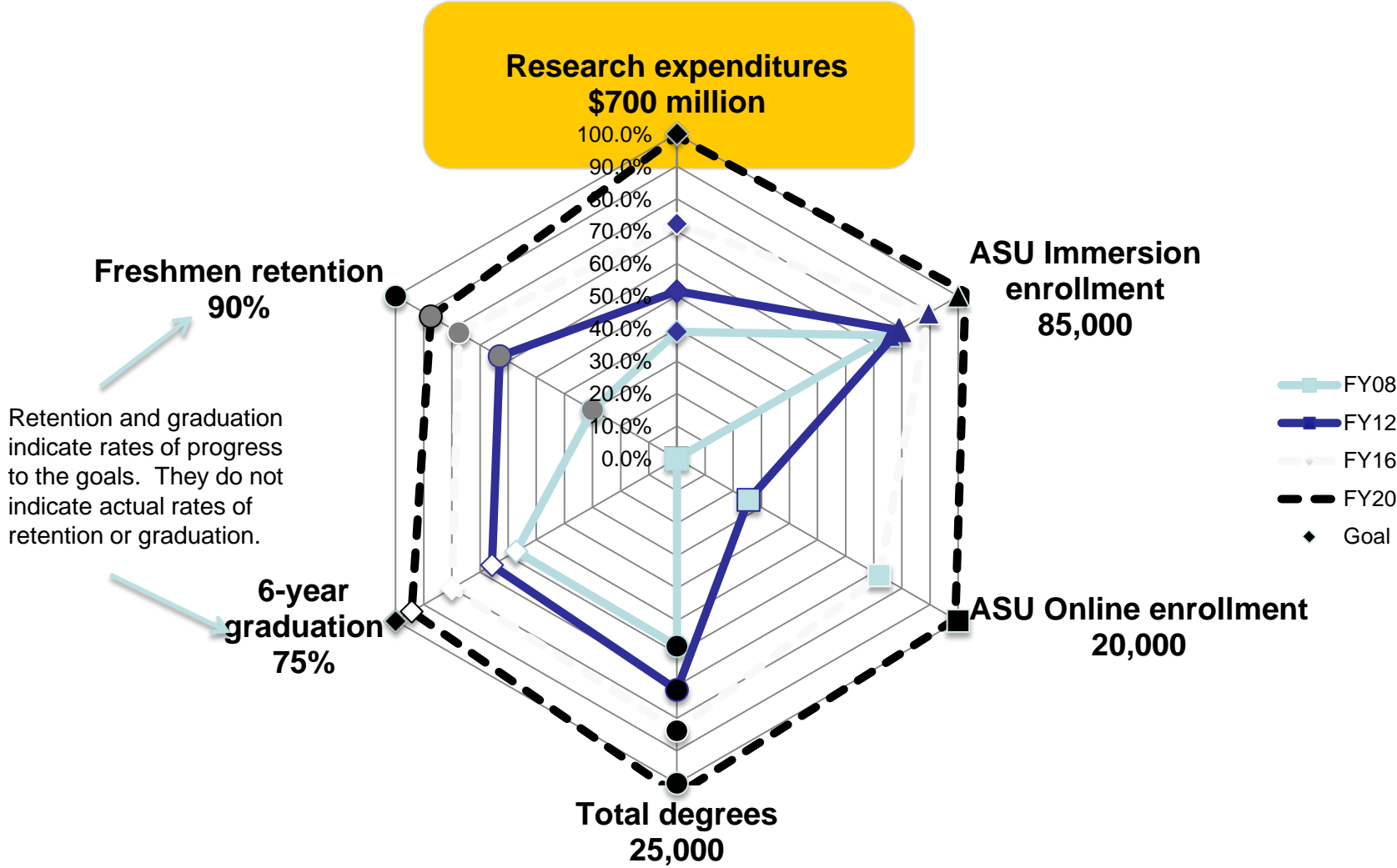
research.asu.edu

Achieving the ABOR Metrics

Expanding Research Activity

- Growth in tenure and tenure track faculty and externally-funded research faculty and staff
- Ongoing laboratory facility expansion
- Large scale inter-disciplinary research programs
- Social & Behavioral Science and Arts/Humanities expansion
- Acquisition of targeted “soft money” centers

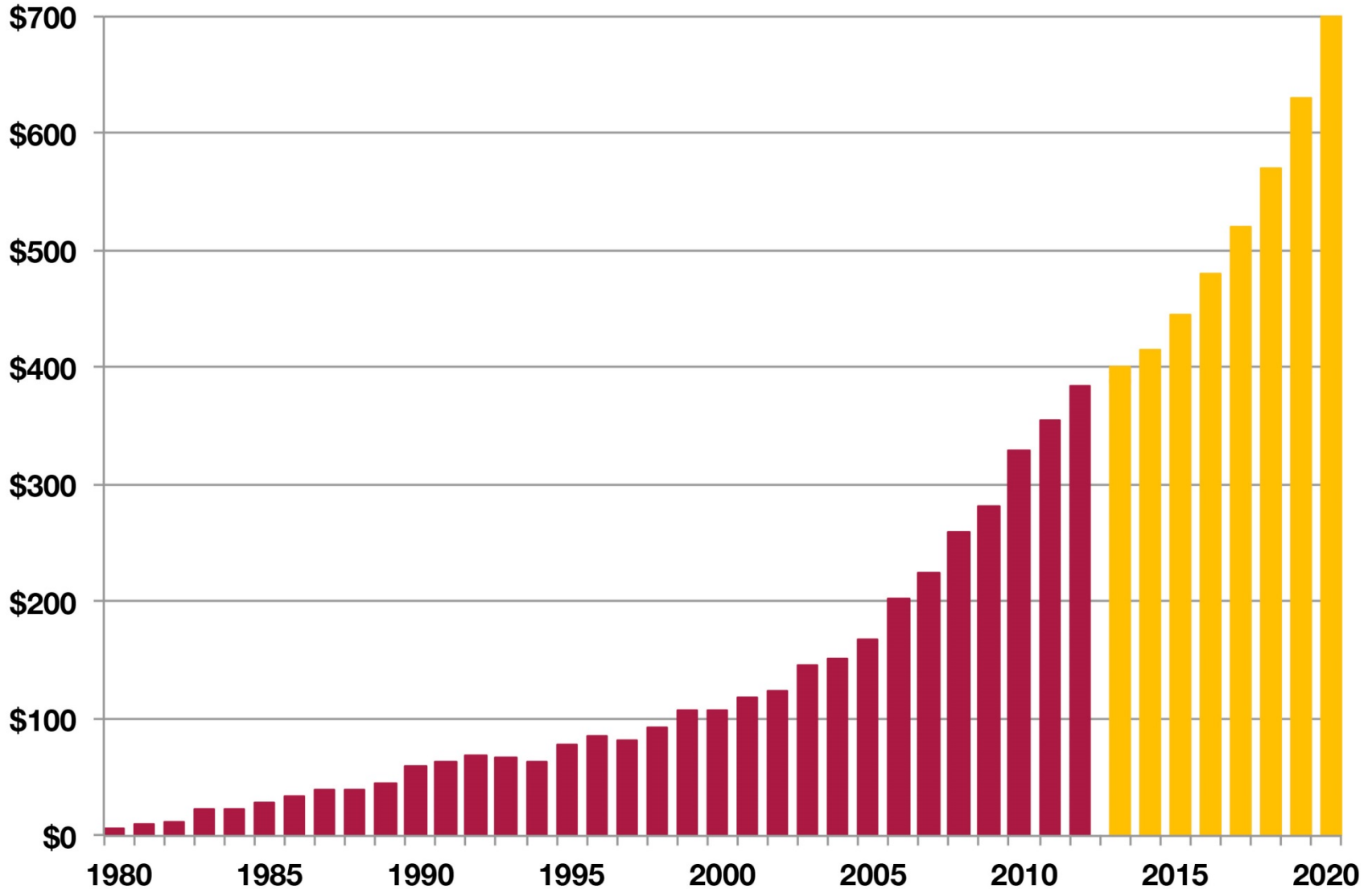
Progress Towards Achieving 2020 Metrics



Source: President Crow's Strategic Enterprise Framework August 2012

History of the Enterprise and Projected Growth

ASU Research Expenditures: 1980-2020



Top 20 National Rankings

Non-medical school expenditures

Rank (of 765)	Academic Institution	2011 Expenditures
1	Massachusetts Institute of Technology	723,610
2	University of California, Berkeley	707,945
3	Texas A&M University, College Station	705,720
4	University of Texas M.D. Anderson	663,279
5	Georgia Institute of Technology	655,375
6	University of Texas at Austin, The	632,171
7	Purdue University, West Lafayette	578,231
8	University of Illinois at Urbana-Champaign	545,669
9	University of Maryland, College Park	495,382
10	Virginia Polytechnic Institute & State Univ	450,058
11	Rutgers, The State University of New Jersey	432,306
12	Scripps Research Institute, The	400,768
13	University of Colorado Boulder	390,677
14	Washington State University	388,974
15	North Carolina State University	378,154
16	California Institute of Technology	377,514
17	Arizona State University	355,215
18	Colorado State University, Fort Collins	330,784
19	Louisiana State University, Baton Rouge	287,841
20	Rockefeller University	272,491

Non-science & Engineering expenditures

Rank (of 912)	Academic Institution	2011 Expenditures
1	Brown University	120,635
2	University of Missouri, Columbia	100,688
3	University of Wisconsin-Madison	88,919
4	University of Texas at Austin, The	73,794
5	University of Michigan, Ann Arbor	66,133
6	Purdue University, West Lafayette	58,230
7	University of Florida	53,883
8	University of South Florida	51,597
9	University of Alaska Fairbanks	42,638
10	University of California, Los Angeles	39,907
11	Stanford University	39,578
12	Georgia State University	38,504
13	Ohio State University	38,103
14	Columbia University in New York	37,727
15	University of California, Berkeley	37,019
16	University of Washington, Seattle	36,007
17	Texas Tech University	34,751
18	University of Pennsylvania	34,514
19	Arizona State University	31,648
20	Vanderbilt University	31,225

SOURCE: National Science Foundation

Top 20 National Rankings

Social Science expenditures

Rank (of 912)	Academic Institution	2011 Expenditures
1	University of Michigan, Ann Arbor	141,559
2	University of Maryland, College Park	92,005
3	University of North Carolina at Chapel Hill	59,544
4	Rutgers, The State University of New Jersey	48,706
5	University of Wisconsin-Madison	48,203
6	University of California, Berkeley	47,310
7	Washington State University	47,172
8	Arizona State University	36,198
9	Michigan State University	33,975
10	University of California, Los Angeles	32,680
11	Cornell University	30,114
12	Purdue University, West Lafayette	29,972
13	Indiana University, Bloomington	29,909
14	George Washington University	29,373
15	Harvard University	28,472
16	University of Minnesota, Minneapolis	28,457
17	Pennsylvania State University - University Park	28,099
18	George Mason University	24,837
19	University of California, Davis	23,258
20	Stanford University	22,741

Humanities expenditures

Rank (of 912)	Academic Institution	2011 Expenditures
1	Brown University	15,865
2	University of Michigan, Ann Arbor	15,516
3	University of Wisconsin-Madison	12,665
4	University of California, Irvine	9,378
5	University of Notre Dame	6,468
6	Princeton University	5,828
7	University of California, Los Angeles	5,486
8	Johns Hopkins University	5,308
9	University of Nebraska-Lincoln	5,179
10	George Mason University	4,914
11	University of Southern California	4,742
12	Columbia University in the City of New York	4,553
13	Brigham Young University, Provo	4,196
14	Arizona State University	4,135
15	SUNY University at Binghamton	3,901
16	University of California, Berkeley	3,726
17	San Diego State University	3,632
18	Purdue University, West Lafayette	3,623
19	University of Cincinnati	3,419
20	Ohio State University	3,319

SOURCE: National Science Foundation

Ranking Summary

Total Federal Research Expenditures	62 of 912
Non-medical Research Expenditures	34 of 912
Total Research Expenditures without a Medical School*	17
Non-Science & Engineering Total Research Expenditures	19 of 912
Social Sciences Total Research Expenditures	8 of 912
Humanities Total Research Expenditures	14 of 912
Recipient of NSF Funding by Total Value of Awards	21
Recipient of NSF Funding by Number of Awards	17
Non-Medical School Recipient of NIH Funding by Total Value of Awards	7
Non-Medical School Recipient of NIH Funding by Number of Awards	8

**calculated by OKED Research Analytics*

Plan for Reaching \$450M Core Goal



1. Empowering existing faculty to increase research productivity

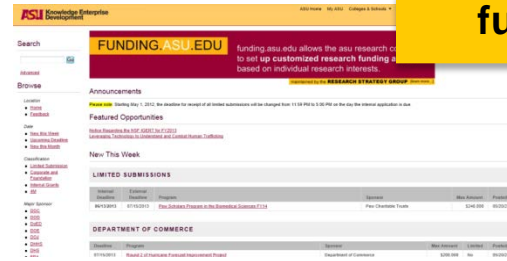
Intense efforts to acquire and execute **>\$1M projects**

Highlighting efforts to acquire >\$1M projects:

Between October 2012-March 2013, 69 proposals over \$1M were submitted, with a total value of \$154M from faculty in Fulton Schools of Engineering. In March 2013 alone, 52 proposals totaling over \$24.4M in proposals were submitted.



Increasing awareness of **funding opportunities**



Funding.asu.edu: Resource available to all faculty to identify funding opportunities

Identifying faculty leaders for **multi-PI/multi-disciplinary grants**



FUNDING SUCCESS SKILLS SERIES



Forums for bringing together faculty around thematic areas and panels for **increasing funding success** with agencies

ASU Knowledge Enterprise Development

SciVal

SciVal implementation for expertise and collaboration matching

Deployment of new **electronic research administration tool**

University Research Scholars program

2. Recruiting world class faculty and leaders



Dr. Douglas A. Granger, a widely known psychoneuroendocrinology researcher, will join ASU faculty from Johns Hopkins University in August 2013 to establish the Institute for Interdisciplinary Salivary Bioscience research.

Strategic engagement with deans and unit leaders to identify and recruit national leaders to advance large initiatives

Metaplans to identify gaps and growth areas

Tasking leaders of Institutes and Initiatives to recruit centers



**Biodesign Institute,
Executive Director**

Dr. Raymond DuBois

The past provost and executive vice president, and professor of cancer biology and cancer medicine at The University of Texas MD Anderson Cancer Center in Houston



3. Investments in Institutes and Initiatives

Hiring **world class** Institute & Initiative leaders



Global Institute of Sustainability, Director & Lightworks Initiative, Director



Dr. Gary Dirks

Former president of BP China and BP Pacific-Asia

Transformative Healthcare Networks, Director & Complex Adaptive Systems Initiative, Co-Director



Dr. Anna Barker

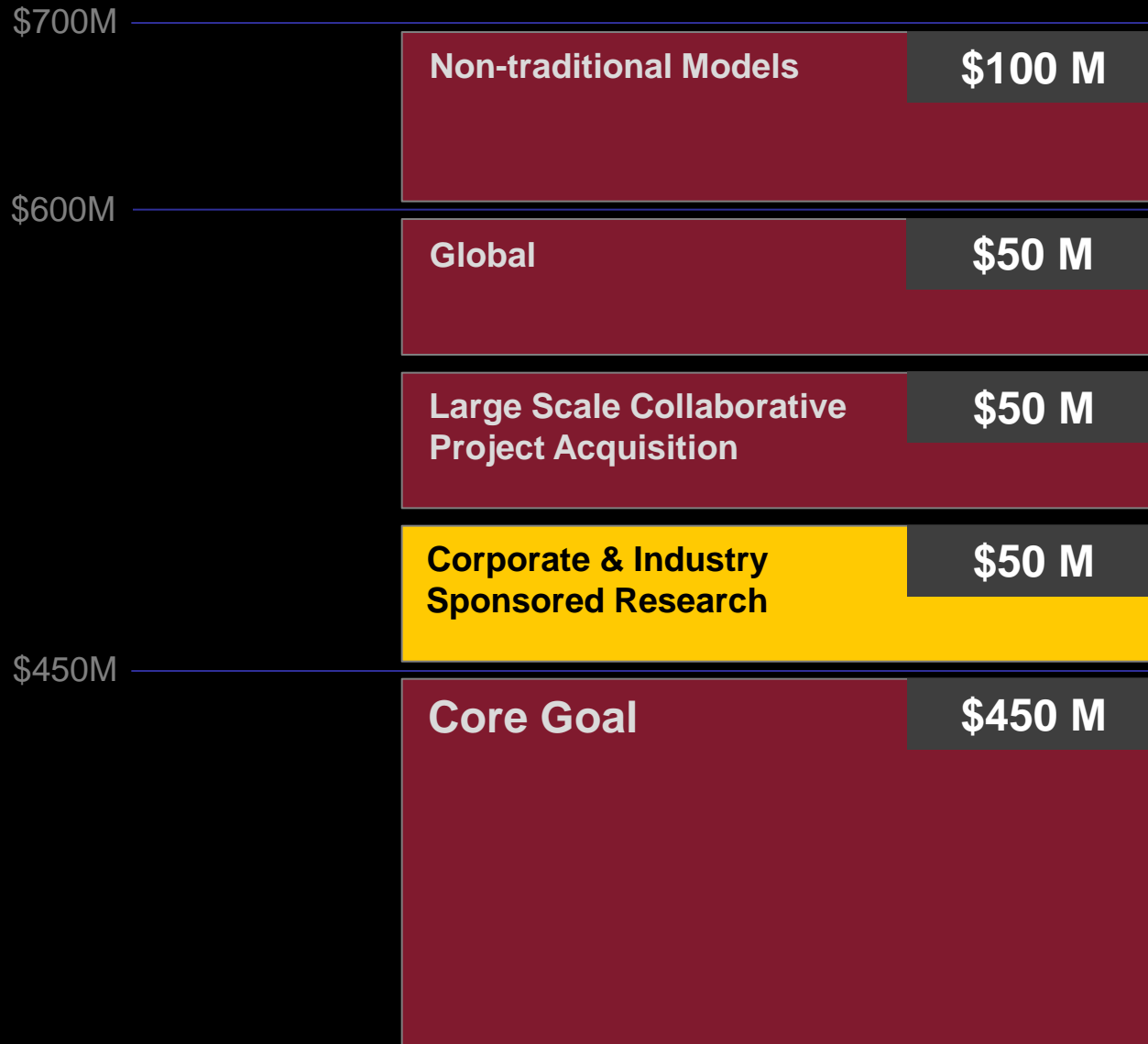
Former deputy director and deputy director for strategic scientific initiatives at the National Cancer Institute, National Institutes of Health

Strategic Investments with **significant ROI (TRIF)**

Identification and pursuit of large proposal opportunities through **integration with Policy Affairs**

Advance the research opportunity pipeline 2.0 implementation

Plan for Reaching \$50M Corporate and Industry Sponsored Research Goal



1. Strategic engagement with large corporations

- Intel
- Boeing
- Dell
- Disney
- General Dynamics
- Kraft



2. Working with Industry on large research project acquisition

- Flexible Display Center
- QESST Engineering Research Center
- SenSIP
- Connection One
- Center for Embedded Systems



3. Corporate Engagement Council

- Stakeholders from all Colleges, Schools, and Institutes working collaboratively
- Deploying a collaborative tool for coordination (SalesForce)

4. Working with economic development organizations

- Arizona Commerce Authority
- Greater Phoenix Economic Council
- Tucson Regional Economic Opportunities
- Maricopa Association of Governments

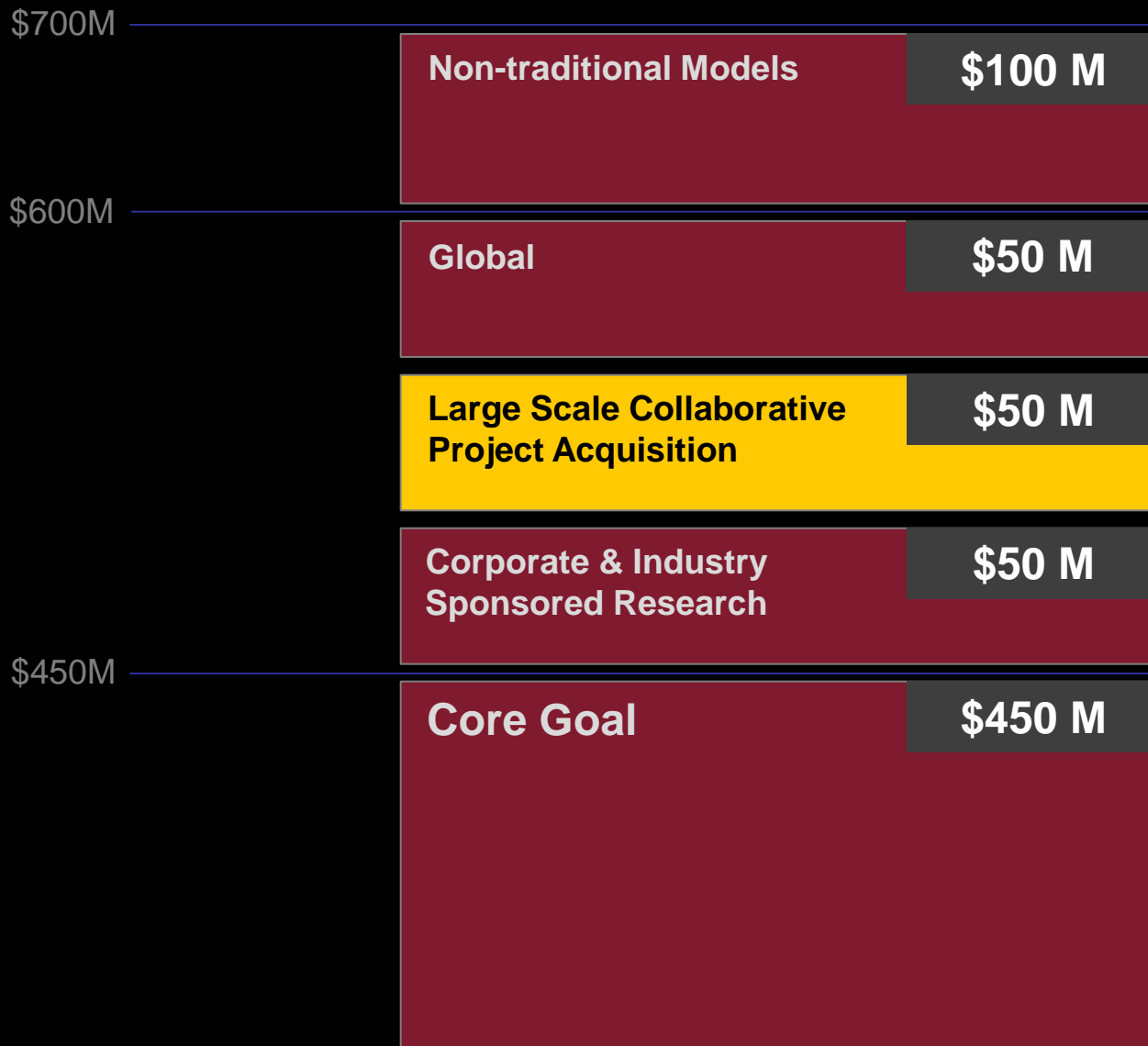


5. Attracting new companies

- General Motors
- ZocDoc
- WebFilings



Plan for Reaching \$50M in Large Scale Project Acquisition



1. Pursuit of large federal opportunities

- NSF Science & Technology Centers (STC)
- NSF Engineering Research Centers (ERC)
- NSF Integrative Graduate Education & Research Traineeship (IGERT)
- DOE Energy Frontier Research Centers (EFRC)
- DOD University Affiliated Research Center (UARC)
- DOT Research Center
- Bi-National Research Labs



U.S. DEPARTMENT OF
ENERGY



2. Private foundations and individual investors

- Virginia G. Piper Charitable Trust
- Walton Family Foundation
- MasterCard Foundation



The
WALTON FAMILY
FOUNDATION



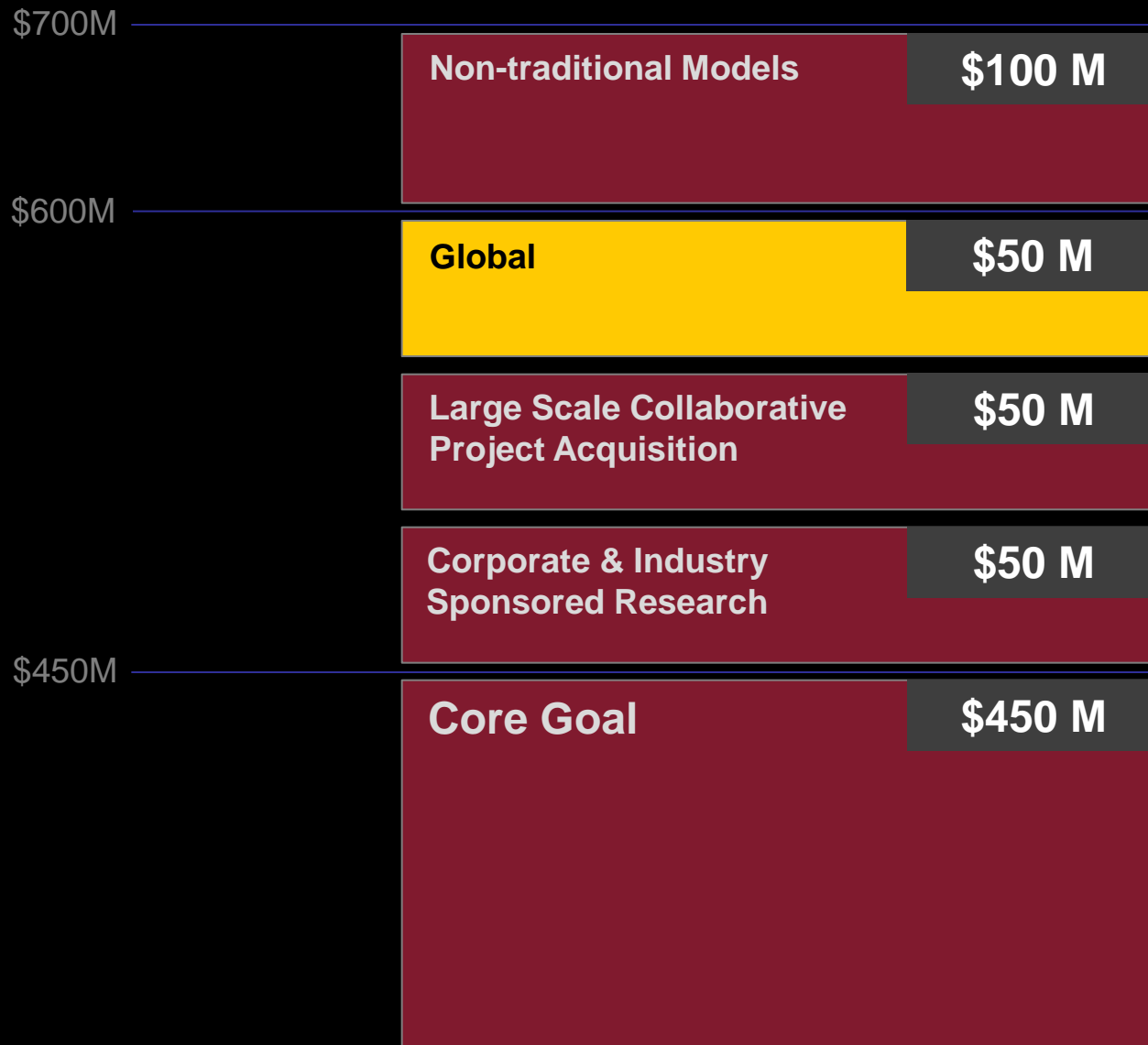
3. Strategic regional partnerships around larger themes

- National Institutes of Health Centers in collaboration with Mayo Clinic and other clinical partners
- President's BRAIN Initiative



**BRAIN
INITIATIVE**

Plan for Reaching \$50M in Global Projects



1. Engagement with global development agencies on multi-institutional projects

- USAID
 - Higher Engineering Education Alliance Program (HEEAP) - Vietnam
 - Higher Education Reform – Philippines
- World Bank
- Inter-American Development Bank
- Millennium Challenge Corporation



USAID
FROM THE AMERICAN PEOPLE

Higher Education Engineering Alliance Program:

USAID awarded Intel, ASU and Vietnamese Government to improve the quality of higher education

2. International partnerships for engaging global projects

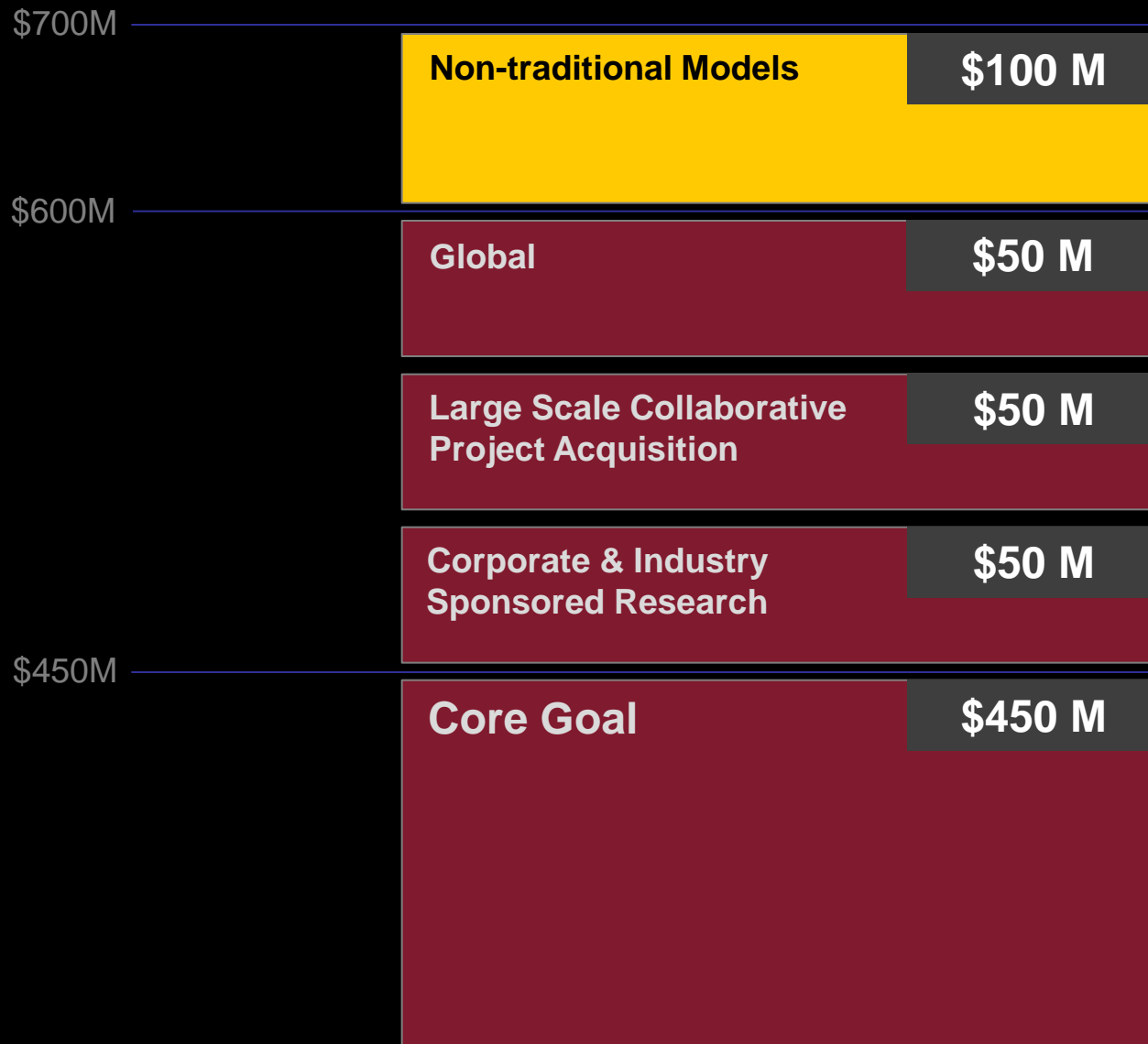
- Tec de Monterrey, Mexico
- Dublin City University (DCU), Ireland
- City University of Hong Kong (City U), Hong Kong



**TECNOLÓGICO
DE MONTERREY®**



Plan for Reaching \$100M through Non-Traditional Models



1. ASU Research Enterprise (ASURE)

- National Biomarker Development Alliance (NBDA)
- 501(c)(3) operating under FAR and A-21
- Classified research capability
- Regional partnerships (e.g. Mesa 7 UAS – FAA)

2. Joint ASU-Fraunhofer Institute

- Flexible systems



3. FFRDC collaborations and pursuits



Innovation and Entrepreneurship

Success in patenting and licensing

ASU Spinouts and Technology Transfer

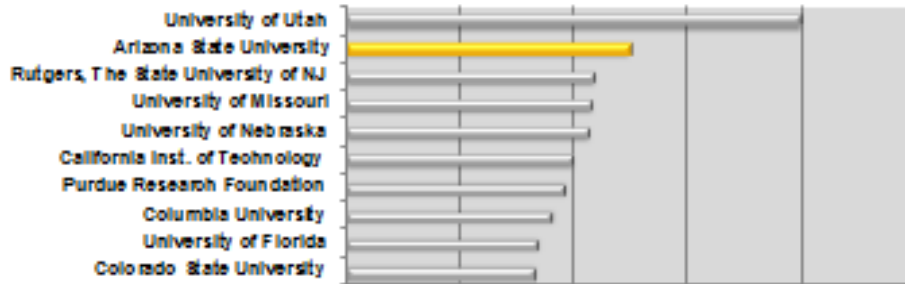
55 spinouts, 230 U.S. and foreign patents
9 ASU companies acquired or merged

Invention Disclosures per \$10M Expenditures



A record number of invention disclosures submitted to AzTE in FY12 (239; 41% increase)

Startups per \$10M Expenditures



9 startup companies formed in FY12

Accelerating Innovation & Entrepreneurship

Success in patenting and licensing

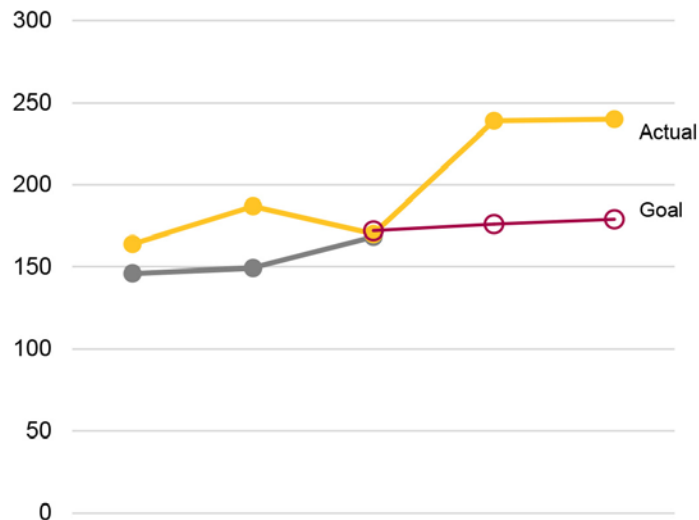
Rankings per \$10M in research expenditures among all institutions with more than \$300M in expenditures (n=~65)

	FY2013 Results to Date	FY2013 Projection	AUTM Rank*
Invention Disclosures	207	240	#2
Startups	10	11	#2
Licenses & Options	63	75	#7

* FY13 rankings are projections based on past AUTM surveys

Rate of invention disclosure exceeds goals and peers

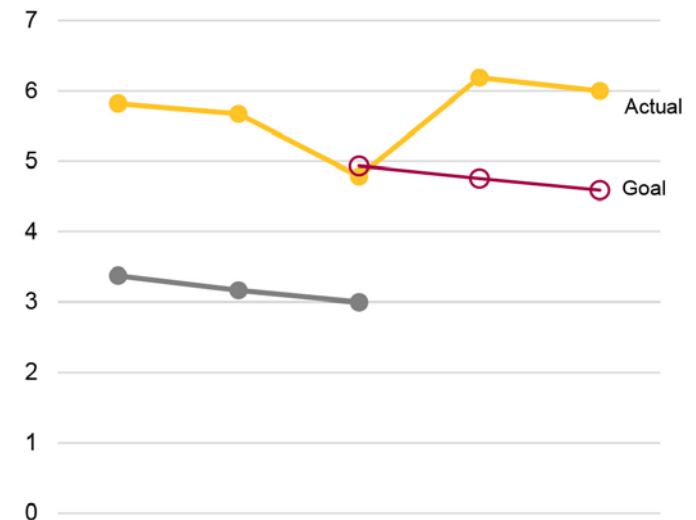
Invention Disclosures Transacted



ABOR Enterprise Plan	2009	2010	2011	2012	2013
Actual	164	187	170	239	240
Goal	164	187	172	176	179
Difference	0	0	-2	63	61

ABOR Peer Group	2009	2010	2011	2012	2013
Median	146	149	168		

per \$10M in Total Research Expenditures



Year	2009	2010	2011	2012	2013
Actual	5.8	5.7	4.8	6.2	6.0
Goal	5.8	5.7	4.9	4.8	4.6
Difference	0.0	0.0	-0.1	1.4	1.4

Year	2009	2010	2011	2012	2013
ABOR Peer Group Median	3.4	3.2	3.0		

Innovation and Entrepreneurship

Startups: Entrepreneurial students and faculty

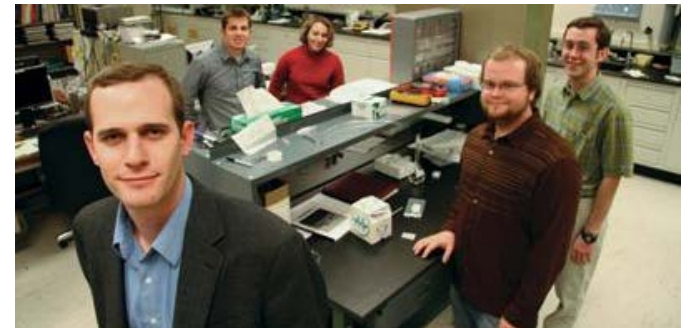


- **3 of 5** finalists in *Entrepreneur Magazine's* "College Entrepreneur of the Year Award" were ASU teams, including the winner, G3Box (pictured)
- **1st place** winners of the Microsoft Imagine Cup competition were ASU teams in 2011 and 2012
- **2** student companies named finalists in *Inc Magazine's* "Coolest College Startups" competition

Inc.

FLUIDICENERGY™

Fluidic Energy, founded by **Prof. Cody Friesen** in 2007 to create sustainable energy storage solutions, received two significant rounds of venture capital funding and several millions from Dept. of Energy



Breezing, founded by Prof. Nongjian Tao and Dr. Erica Forzani in 2013, offers a portable device to track metabolism, and is currently raising external capital including through crowdfunding sites like Indiegogo

Building Capacity for Innovation and Entrepreneurship

Entrepreneurial programs contribute to an entrepreneurial ecosystem

- Edson Student Entrepreneur Initiative
 - \$5.4 million endowment provides \$200,000 annually in seed funding
- Applied Regional Economic Action (AREA) 48
- Furnace
- Alexandria Network
- Rapid Startup School



FAST
COMPANY FastCompany ranks
Arizona #1 in
entrepreneurial activity

Since June 2011, Edson companies have won more than \$850,000 in external grants, funding and competition prizes.



ASU Knowledge Enterprise
Development

ARIZONA STATE UNIVERSITY

research.asu.edu

MEMORANDUM

June 28, 2013

TO: Rick Myers
President, Arizona Board of Regents

FROM: Michael M. Crow
President, Arizona State University

RE: 2012-13 Performance Incentive Report: Comprehensive Strategy for ASU's
Health Education/Solutions Model

Arizona State University is at a point of significant organizational and intellectual transition related to its health education programs and its particular emphasis on the development of health solutions. This memo summarizes ASU's progress in developing a comprehensive health education strategy, with the hope that our progress in bringing it to fruition may be reviewed between July 1, 2015 and September 1, 2015.

One of the most confounding facts about America is that we spend approximately \$8,000 per person annually on healthcare, yet we as a nation do not rank in the top half among industrialized nations in terms of health outcomes. In fact, from any perspective, America has one of the most inefficient healthcare systems in terms of dollars spent per unit gained of longevity. Furthermore, those health outcomes are distributed inequitably among our populace despite incredible need. I will not belabor the importance of these facts, but instead wish to stress that ASU, with my direct participation, has re-engineered its logic related to the advancement of health education and committed itself to the aggressive development of "health solutions" – innovative and tangible answers to society's health challenges. ASU has decided to forge this path based on the premise that, while there are many health-related technologies, mechanisms and institutions, they have not aligned with our educational processes to derive pragmatic and affordable health solutions that empower us to improve the overall quality of life for all segments of our society.

I contend that this is largely the result of a knowledge and education enterprise that is too heavily focused on finding silver bullet solutions to extend the human lifespan and treating end of life prevention as its top priority, while largely ignoring the role of education in producing enhanced behaviors and the subsequent enhanced health outcomes.

Accordingly, in the last year ASU has completely restructured its intellectual purpose in this area and its health education programs. As part of this effort, ASU appointed Dr. Keith Lindor,

outgoing dean of the Mayo Medical School, as the dean of the ASU's new College of Health Solutions. Dr. Lindor's appointment supports our goal of having ASU evolve a new type of health education enterprise focused on the simultaneous innovation of systems-level solutions and human behavior-level solutions. It is our belief that these two areas have the greatest potential for impact in adjusting our overall health outcomes.

In addition, ASU has undertaken an effort to re-conceptualize and recreate all of its health education program and initiatives, from the "traditional" (such as nursing) to all related disciplines (such as engineering), plus the development, design and deployment of entirely new initiatives. Our rationale and plans for advancing the Health Solutions Initiative and its metrics center on the following five assumptions:

1) Programs designed exclusively to identify specific solutions

We want health education programs that do not solely produce nurses, nutritionists, biomedical informaticians or any other specialization. Our interest lies in preparing health care experts capable of conceptualizing the grossly underperforming healthcare enterprise and applying their skills, in whatever healthcare arena they work, to identify and implement specific solutions designed to improve human longevity. This endeavor requires that we reshape the logic of every health education student we graduate, both in terms of what they need to learn and how they use that knowledge to solve problems.

2) Programmatic growth that enhances the flow of new era health solutions experts into the Arizona and U.S. workforce

ASU programs are designed to grow to help meet the shortage of both "traditional" healthcare workers and new health solutions professionals. We are woefully under-producing individuals capable of generating better outcomes for our existing healthcare system. Rather than continue down a path that we know will not yield what we need in terms of health care, ASU is creating alternative healthcare curricula designed to prepare the new breed of health care professionals we need now. This is a critically important element of our strategy.

3) Linkages with our comprehensive clinical partner – the Mayo Clinic.

Mayo Clinic is ASU's sole comprehensive clinical partner. We work closely with them to integrate our health solutions logic with their clinical activities and scientific plans. We are fortunate to have other clinical partners that represent the major clinical organizations in Maricopa County, but they are not comprehensive in nature. At present, our relationship with Mayo Clinic involves more than three dozen individual research initiatives, four joint educational degree attainment initiatives, a nursing education program in Mayo Clinic Arizona, two joint research laboratories, and the joint development of a next generation medical school that is scheduled to launch in the summer of 2016. These collaborations do not preclude our activities with anyone else, but they do provide us with a seasoned, local partner with the experience and infrastructure to offset our institutional lack of clinical staff and clinical facilities. This

arrangement allows ASU to work at any scale or dimension without incurring additional expense to the state. With specific reference to the Mayo Medical School – Arizona Campus, our 2015 evaluation should include an examination of our progress in its advancement and our recently funded LCME project to derive a next generation medical school curriculum.

Lastly, in 2013 ASU launched the new School for the Science of Healthcare Delivery, which will be the partner school for the Mayo Medical School – Arizona Campus and the Mayo Medical School in Minnesota in delivering an educational experience for all medical school students linked to improved treatment, outcomes and lowering the cost of affordable healthcare.

4) Intense focus on transdisciplinary teaching, learning and discovery

Traditionally, health education is a very hierarchical and highly rigid discipline. ASU will work to change the concept that medicine is the top discipline and all other fields possess lower status, which we believe contributes to some negative health outcomes. Our aim is to break down disciplinary barriers at every point possible to forge new areas of collaborative focus and thinking.

5) Cooperation with all health-related teaching, learning and clinical organization

We plan to be cooperative at the state level with any and all partners, but especially the University of Arizona and Northern Arizona University, to aid in the design and transformation of the healthcare and health-related systems in Arizona. Our particular focus will be the areas of our schools and programs described in the attached document, but we believe that all components of the ASU Center for Health Transformation under Dr. Denis Cortese will be necessary as a part of statewide initiatives associated with the design and enhancement of health solutions. All of these efforts will require significant leadership on the part of the university presidents, and I am committed in my role to ensuring Arizona's enhanced design of improved and low-cost health outcomes. This will be another important area for evaluation in 2015.

In moving forward, the health education and health solutions program for ASU 2013 and beyond should be measured against the program areas summarized in the attached document, which outlines the drivers for healthcare issues in the United States, the status of our healthcare delivery mechanisms, the relationship between health and healthcare, and our specific plans for ASU.

ASU is excited by the prospect of educating students that are not meant solely to be traditional health practitioners but to be designers of future health systems that meet the needs of our increasingly rapid and data-driven, world. In addition, as previously indicated, we intend to integrate all relevant disciplines from finance, to economics, to psychology/sociology and engineering. Our plans are built around growth and comprehensive partnerships.

I would be pleased to elaborate on the attached information related to the individual units within the College of Health Solutions (which is our core unit, and the home for the School of Nutrition and Health Promotion), the School for the Science of Healthcare Delivery, the Department of Biomedical Informatics (which is co-located at Mayo Clinic Scottsdale), the Department of Speech and Hearing Sciences and our Doctor of Behavioral Health program. As presented therein, it can be anticipated that what we are looking for going forward is substantial growth in research funding by 2015 of at least 25% and students by at least 15%. For each of the schools' future directions, they are detailed in terms of how to measure our progress by 2015 with a specific set of goals and objectives for each program and each school connected to our overall Health Solutions and Health Education Initiative.

It is worth noting that our College of Nursing and Health Innovation, which has risen to a very high level of national prominence in the last few years, flies in the same orbit as our College of Health Solutions and while the Dean of Nursing and the Dean of Health Solutions both report to the Provost, they work collaboratively as a part of an ASU design federation in the space of Health Solutions.

We are greatly expanding our ASU Online programs, including a new online Masters of Science degree in Nutrition in the Spring of 2014 and a range of new programs that we are also moving forward with the Mayo Clinic for 2014 and 2015.

I look forward to updating you on our ongoing progress in these endeavors and anticipation of future evaluation in FY15.

**Health Education
and Health Solutions
(2013 – Forward)**

Arizona State University

Status of Health in US Today

Health care in US is in crisis

- Costs are high (18-20% of GDP); outcomes are low
- Our population is aging
- The Affordable Health Care Act is pushing boundaries
- Health professional shortages (see Institute of Medicine “The Future of Nursing” report)

Status of Health in US Today

Changing demand & expectations

- More people entering system (health care reform)
- Aging population; more in-home care

New models and tech emerging

- Rise of ACOs & other financing models
- Real-time data sharing opportunities; old systems

Health vs. Health Care

- Models are changing
- Care is moving from hospital to in-home care and community settings
- We educate students to work in this ever-changing field of HEALTH

ASU Future Plans

- Develop new academic programs to train health professionals of future who are not only health practitioners, but also leaders in designing health systems of the future
- Connect all academic disciplines relevant to this, including finance, economics, psychology, sociology, engineering

ASU Future Plans

- Expand enrollment in health programs
- Increase partnerships with other health related entities, private and public

College of Health Solutions

Arizona State University

College of Health Solutions (CHS)

- School of Nutrition and Health Promotion
- School for the Science of Health Care Delivery*
- Department of Biomedical Informatics
- Department of Speech and Hearing Sciences
- Doctor of Behavioral Health Program

*Launched Spring 2013

College of Health Solutions (CHS)

The College at a Glance:	Student Headcount Fall 2012	Bachelor Degrees Awarded 2012	Master Degrees Awarded 2012	Doctoral Degrees Awarded 2012
School of Nutrition and Health Promotion	3556	650	28	3
Department of Biomedical Informatics	41		5	2
Department of Speech and Hearing Sciences	463	89	36	14
Doctor of Behavioral Health Program	160			23

*The School for the Science of Health Care Delivery launched in Spring 2013 and will be reflected in future projections on subsequent slides.

College of Health Solutions (CHS)

Faculty Makeup Within College:	
Professor	23
Associate Professor	17
Assistant Professor	21
Clinical Professor	5
Associate Clinical Professor	16
Assistant Clinical Professor	6
Instructors	3
Lecturers	20

College of Health Solutions (CHS)

Research Funding	12 Month Total
Awards	\$8,547,165
Expenditures	\$5,158,350

College of Health Solutions Projections

Anticipated Enrollment Growth	Fall 2013	Fall 2014	Fall 2015	Fall 2016
School of Nutrition and Health Promotion	3800	4100	4350	4650
School for the Science of Health Care Delivery	35	45	55	65
Department of Biomedical Informatics	45	49	54	58
Department of Speech and Hearing Sciences	467	470	470	470
Doctor of Behavioral Health Program	200	235	255	275

College of Health Solutions Highlights

School of Nutrition and Health Promotion

- First of its kind to combine the two fields
- Dietetics Program is second largest program in the US
- Dietetics has a 95% pass rate on the National Examination for Registered Dietitians
- Over \$2 million in research expenditures
- More than 5000 alumni

College of Health Solutions Highlights

School of Nutrition and Health Promotion

Major research themes:

- Health Benefits of Functional Foods
- Chronic Disease Risk Reduction Through Physical Activity
- Impact of Built Environment on Health
- Effectiveness of Targeted Behavioral Change for Health Promotion
- Use of Technology to Promote Behavior Change
- Food Policy/Food Security/Food Sustainability

College of Health Solutions Highlights

School for the Science of Health Care Delivery

- First of its kind

Multiple partners including Mayo Clinic/Mayo Medical School Master's in the Science of Health Care Delivery embedded in MD curriculum for AZ branch of Mayo medical school and content to be taught before that in Rochester Mayo medical school

- Academic Expansion:

Executive Master's and online programs, and undergraduate studies in the Science of Health Care Delivery

College of Health Solutions Highlights

Department of Biomedical Informatics

- Located at Mayo Clinic in Scottsdale which promotes collaboration
- Currently, over 90% of BMI students are fully-funded
- Faculty are world renowned
- Over \$13.1 million in research expenditures (2007-2012)
- Poised to grow to include an undergraduate degree program and an applied masters in Clinical Informatics

College of Health Solutions Highlights

Department of Speech and Hearing Science

- Speech Language Pathology ranked 18th and Audiology ranked 17th by US News and World Report
- Nearly 100 clinical training locations
- Launched 'Hearing for Humanity'
- 1000 clients/patients per year
- Highly competitive programs
- Over \$5 million in research expenditures

College of Health Solutions Highlights

Doctor of Behavioral Health Program

- Nicholas Cummings partners with ASU to launch the DBH program focused on integrated behavioral health in 2009
- Endowed with a legacy gift of \$3 million from The Nicholas & Dorothy Cummings Foundation
- Program has initiated expansion with select Chinese universities and hospitals to recruit students, provide training on integrated care for Chinese physicians, nurses and behavioral clinics
- Continued rapid growth

College of Health Solutions Faculty Highlights

- One Fellow and one President-elect in the National Academy of Kinesiology
- One Past-President of the American College of Sports Medicine
- Three are members of the Institute of Medicine
- Three Fellows elected to the American Speech, Language, Hearing Association

College of Health Solutions

Future Directions

College of Health Solutions

- Develop and launch strategic academic programs to meet the needs of the job market in Health
- Establish and maintain relationships with clinical and community partners like Mayo Clinic
- Leading edge of identifying emerging trends in the job market to leverage opportunities for students
- Ensuring research programs are complementary and strengthen existing programs so that they are strategically placed within the College and the University
- Expand Center for Health Care Transformation
- Advance Community and Governmental Engagement
- Facilitate interprofessional relationships, particularly with the College of Nursing and Health Innovation
- Pivotal role connecting health related activities at ASU (Biodesign Institute, Biomedical Engineering, Center for Sustainable Health, and more)
- Academic home to co-leader of Obesity Solutions
- Emerging initiatives in Biomedical Informatics to greatly enhance the relationship with Mayo Clinic

Fulton Schools of Engineering

Health Education-Related Efforts

Arizona State University

Fulton Schools of Engineering Health Education-Related Efforts

Most closely related academic programs

biomedical engineering (BSE, MS, PhD) – prepares students for careers in health care-related industries and further study in medical, graduate, and other health professional schools; topics include medical instrumentation, biomechanics and prosthetics, biomaterials, therapeutics, neurorehabilitation, regenerative medicine, and principles regarding the functioning and structure of living systems.

computer science (BSE, MS, PhD), informatics (BSE), and industrial engineering (BSE, MS, PhD) – select emphasis areas in these degrees prepare students for careers in health care service industries and further study in graduate schools in topics like medical record storage and mining; bioinformatics data storage, processing, and mining (imaging, brain sensors, etc.); signal processing, data visualization; and human-machine interfaces.

mechanical engineering (BSE, MS, PhD) – select emphasis on prosthetics and robotics in collaboration with biomedical engineering above.

chemical engineering (BSE, MS, PhD) – select emphasis on systems biology, tissue and biomaterials, drug delivery, and therapeutics in collaboration with biomedical engineering above.

Fulton Schools of Engineering Health Education-Related Efforts

Sample Graduate Education Specialty Areas

Neural engineering and neurorehabilitation:

help patients with injury and degenerative disease live more normal, active, and independent lives
increase memory and learning capacity

Medical diagnostics (biosensors, biomarkers, imaging):

enable transition to personalized medicine paradigm;
enable home-based diagnoses
increase utility and decrease time and costs of tests utilizing high-cost centralized infrastructure

Synthetic biology

develop new biologically-based therapies and diagnostic tools

Molecular, Cellular, and Tissue Bioengineering

design of molecules and systems to create and control whole organ systems (regenerative medicine)

Man-Machine Interfaces

assistive devices (sight, sound, haptic interfaces), surgical simulators, surgical devices

Data Analytics and Information Management

Patient record security, data storage, data mining, data visualization

Fulton Schools of Engineering Future Directions in Health Education

- We will have a biomedical engineering program that is one of the largest and highest-ranked in the country, and that is especially known for its translational impact
- We are already one of the largest in terms of undergraduate students.
- To increase our ranking and translational impact we are:
- Increasing our engagement and deepening our relationships with clinical partners (Mayo, St. Joseph/BNI, Barrow, Phoenix Children's Hospital)
- Growing our faculty (addition across biomedical engineering and related majors of about 15-20 faculty in health-related expertise, with many cross-appointments with clinical partners)
- Focusing on neural rehabilitation and neuroengineering, regenerative medicine, synthetic biology, medical diagnostics, health systems operations, informatics and data analytics, and man-machine interfaces
- Striving for growth of research enterprise and doctoral student production

Fulton Schools of Engineering Health Education-Related Efforts Targets

Student Headcount Targets:

- 800 BSE students (biomedical engineering)
- 250 MSE students (biomedical and other related majors)
- 150 PhD students (biomedical and other related majors)

Faculty Targets:

- 35 faculty in biomedical engineering
- 15 faculty in related areas across computer science, informatics, and industrial engineering
- 10 faculty in related areas across chemical, electrical, and mechanical engineering
- Joint appointments with all major health-care providers in the Valley

Research Enterprise Targets:

- \$25M per year in research expenditures
- Joint research projects with all major health care providers in the Valley

College of Nursing and Health Innovation

Arizona State University

College of Nursing and Health Innovation Expanded Academic Programs

Degree/Certificate/Concentration	Program
Bachelor of Science	Patient Advocacy and Education
Bachelor of Science	Clinical Research Operations
(MS Nursing) Concentration	Care Coordination
(MS Nursing) Certificate	Care Coordination
(MS Clinical Research Management) Concentration	Regulatory Science and Health Safety
(MS Nursing Education) Concentration	Patient Safety and Health Care Quality
(MS Nursing Education) Certificate	Patient Safety and Health Care Quality
Certificate	Innovation leadership in Healthcare
Master of Science	Interprofessional Education and Interprofessional Collaborative Practice
Certificate	Interprofessional Education and Interprofessional Collaborative Practice
Master of Science	Forensic Nursing
Certificate	Forensic Nursing
RN to MMS	Nursing Education Pathway
Bachelor of Science	Healthcare Innovation, Concentration in Product Development and Technology Transfer
4+1 Bachelor to MS	Healthcare Innovation

College of Nursing and Health Innovation Enrollment Projections

Fall 2013	Fall 2014	Fall 2015	Fall 2016
1260	1350	1440	1525

College of Nursing and Health Innovation Faculty

Faculty Makeup Within College:	
Professor	14
Associate Professor	39
Assistant Professor	26
Instructors	25
Lecturers	0
No Rank	2

College of Nursing and Health Innovation Faculty Highlights

- 18 Fellows of American Academy of Nursing
- 4 Fellows of National Academies of Practice
- 3 Fellows of American Academy of Nurse Practitioners

College of Nursing and Health Innovation Faculty Research

Research Funding	12 Month Total
Awards	5,603,677
Expenditures	5,763,191

College of Nursing and Health Innovation Community Partnerships

- RN to BSN with Banner
- Grant with Scottsdale Healthcare to increase number of DNP graduates
- Continuing BSN program cohort at Mayo hospital
- New MACY funding for interprofessional education
- Partnership with VA hospital to expand BSN

College of Nursing and Health Innovation Highlights

- Ranked top 15 in National Institutes of Health funded nursing research (2009, 2010)
- Ranked top 4% in nation for best graduate nursing programs by U.S. News & World Report (current)
- Ranked 17th in nation for best online graduate nursing program by U.S. News & World Report (current)
- Top 5 in nation for Doctor of Nursing Practice enrollment
- Hartford Center of Gerontological Nursing Excellence
1 of only 8 centers in nation designed to increase geriatric nursing faculty capacity

College of Nursing and Health Innovation Future Directions

- Provide excellent education for a new era of health professionals
- Emphasize Interprofessionalism
- Create innovative pathways to expand the BSN-prepared workforce
- Innovate educational approaches to reach learners across settings
- Build on strong clinical partnerships
- Expand the science of nursing and health innovation
- Create and evaluate new models of health promotion, disease prevention & chronic illness management

College of Nursing and Health Innovation Future Directions

Increased access to nursing education at all levels

- Expanding existing programs
 - RN to BSN and bachelor's pathways
 - Increased DNP students
 - Careful expansion of PhD students
- Investing in new programs
 - Bachelor's degrees for current master's degrees programs – Clinical Research Management, Healthcare Innovation; concentration in Nurse Educator w/focus on IPE (tbd)
 - Degrees in healthcare navigation, care coordination, transitions in care management
 - Exploring Interprofessional healthcare leadership

Community partner engagement to assess needs

College of Nursing and Health Innovation Future Directions

Focus on Interprofessional Education (IPE)

- Educating students from various health-related disciplines to tackle issues together
 - No one discipline has the answer to complex issues
 - Together the approaches we design will be more successful than those created in isolation
 - Alternatives will be directly related to the richness and diversity of thoughtful engagement and multiple perspectives
- Grant funding to build efforts
 - Macy Foundation & CMS for Continuing Nursing Education
- Reimagine how we deliver IPE that goes beyond hospital and clinic setting
 - Simulation
 - Standardized patients
 - Clinical experiences in the community

ASU Online in Health Education

Arizona State University

ASU Online in Health Education

Online education needs to be infused into health education. ASU is partnering with the Mayo clinic on infusing modern educational technology based teaching into the Mayo Medical School in Rochester, producing the MD degree with better learning outcomes at lower cost

ASU Online Degree Programs in Health

Bachelor of Applied Science in Health Sciences

Bachelor of Science in Health Sciences

Bachelor of Science in Nursing (RN-BSN)

Bachelor of Science in Nutrition Communication

ASU Online Degree Programs in Health

Master of Healthcare Innovation

Master of Science in Clinical Research Management

Master of Science in Nutrition (Spring 2014)

Doctor of Behavioral Health

ASU Online with Mayo Clinic Online

Project 1: ECG Interpretation

Critical care nurses must pass competency for ECG interpretation every two years. Those who do not pass the exam must take a refresher course and retest. This project will convert the refresher course from didactic classroom to online adaptive learning.

Project 2: Respiratory Therapy

Respiratory Therapy has identified critical knowledge for people delivering care at the bedside. Lack of knowledge can result in patient death. A team will develop online modules that deliver the content for just in time learning for care at the bedside.

Project 3: Pharmacy Education

Hospitalized patients who receive discharge prescriptions must fill them at an outpatient pharmacy. Many utilize Mayo's outpatient pharmacies. Pharmacists must provide counseling for the medications, but they are often picked up by family members, thus the information must be transferred to the patient. Patients frequently have questions about their medications once they get home and currently do not have a resource other than the package inserts and printed material provided by the pharmacy. The process is inefficient and a dissatisfier for staff and patients.

This project will develop modules for the pharmacy counseling that will be delivered bedside via an iPad. Patients can sign up to access the videos later from home. They will have the option to speak to a pharmacist live via face time.

MEMORANDUM

June 28, 2013

TO: Rick Myers
President, Arizona State University

FROM: Michael M. Crow
President, Arizona State University

RE: 2012-13 Performance Incentive Report: Distance Learning at ASU

I am pleased to summarize the strategic plans of Arizona State University as they relate to distance learning and a set of objectives for future review by the Arizona Board of Regents between July 1, 2015 through September 1, 2015. At ASU, “distance learning” refers to those programs and activities offered to students who are not physically present at ASU. This is in contrast to “immersion learning,” which refers to programs and activities for students who physically attend ASU campuses for instruction. While the “immersion” students do use significant amounts of technology in a range of pedagogical teaching and learning methods (including some Internet-based courses) and as part of our new “adaptive learning” efforts, “distance learning” students receive their ASU instruction exclusively through ASU Online.

Distance learning is a critical strategic pathway for ASU to meet its long-term objectives of enhancing baccalaureate degree rate attainment in Arizona, increasing the number of college graduates in general, including graduate school degrees, and providing educational access without time or place constraints and at various price points.

This report is organized according to the following sections:

- 1) Situation Report: What is the present environment in which ASU is advancing its distance learning efforts.
- 2) The Challenge: Why is distance learning important to ASU and what are the specific challenges associated with achieving success.
- 3) Specific Goals and Objectives: What is ASU attempting to achieve in the area of distance learning?
- 4) Personal Role and Leadership: How am I engaged and what is the role I am playing?

- 5) Specific Achievements: What have we actually achieved against our goals and how are we doing?
- 6) The Road Ahead: How are we planning to advance in this area? Given the forward-looking nature of this report, a significant portion of this memo will focus on our current and future plans.

1) Situation Report

Distance education, particularly type provided through Internet-based delivery systems, is a hugely opportunistic field of play for any institution of higher learning. Most recently, a number of for-profit institutions have entered this space and have dominated with a marginal to non-credible product. While there are some exceptions to this generalized statement, there are very few. This has permitted institutions like ASU to advance with a faculty-driven, high quality online learning experience, which has in its first couple of years already demonstrated its utility and superiority to the market.

We are working with a range of technology and service support allies in advancing ASU Online and we have grown rapidly from virtually no students 36 months ago to approaching 10,000 students in the next academic year. These 10,000 degree seeking students have a high level attainment and a high level degree progress and are doing quite well in terms of measured learning outcomes against other learning environments. It is worth noting that the online market for learning is slightly older than the immersion market and thus is a different socio-cultural setting with a range of differentiated parameters all of which have to be designed into the overall program.

ASU is moving well in this space and I believe could now be considered to be one of the 5 leading not-for-profit online educational enterprises in North America. Others would include Penn State University and the University of Maryland, most notably. We believe that we will continue to be one of the handful of leaders in this space for the foreseeable future.

2) The Challenge

The challenge in advancing ASU Online is the complicated process of designing and deploying product of sufficient quality to attract and graduate students with learning outcomes equal to or greater than learning outcomes achieved by any other methodology. This challenge has been unmet by the for-profits and has been only met by a handful of the not-for-profits.

In addition, the more recent challenge of hyperbolic uninformed rhetoric on the part of the press and others regarding the possibility of online learning to become a global solution to all of the various economic constraints associated with public higher education has led a number of institutions to leap first and suffer the consequences. This has created some confusion in the market both for suppliers and consumers. This challenge will eventually work itself out but it

does indicate that there will be high degrees of uncertainty and a range of challenging environmental shifts in the near future.

3) Specific Goals and Objectives

Our goal for ASU Online is that by 2020 we will have 20,000 students enrolled in our programs and be graduating 4,000 students per year. This is a significant goal in that it basically means that ASU will be building a medium size university in terms of numbers of students and graduates attached to its immersion institution drawing from the same faculty with expanded support staff to achieve 4,000 additional university graduates per year. This goal is very challenging.

4) Personal Role and Leadership

I am intimately involved with the leadership team advancing the ASU Online agenda. My time is spent principally on strategy and relationship building. I have initiated the relationships that we presently have in place with a number of our technology supporters and I am involved in helping to further develop and maintain the relationship with various partners that we have and including an upcoming meeting with the CEO of Pearson (our global partner) in London in September.

Furthermore, the advancement of any online activity at an American research university is one that creates or can create significant disruption in the academic culture. Working with the Provost, we have derived a series of incentive mechanisms to be able to maintain academic quality and enhance academic output and academic workload as a function of expanding and drawing an additional outcome from our faculty, that being 20,000 new students and 4,000 graduates by 2020.

5) Specific Achievements

To date, we have gotten off to a fantastic start and are on track to meet our goals going forward. We are approaching the halfway point toward our goal and believe that with a cold start in 2010 that we can achieve our objectives in the specified time. Achievements to date have been largely derivative of the efforts of Provost Betty Phillips and Vice Provost Phil Regier, our two executives leading these initiatives, but also notably has been the significant engagement of scores of ASU faculty members and dozens of departments and schools that have advanced degrees and programs.

6) The Road Ahead

The road ahead will be one largely influenced by externalities in that we will be competing against rising competitors from other not-for-profit universities as well as some changed and likely to be new behaviors from for-profit competitors. Thus, the road ahead will be one where winners and losers will be separated quickly. Obviously, we plan on being a winner and our plan to success is outlined in the ASU Online attachment. In this attachment, I specify the goal,

20,000 students online and 4,000 online graduates per year by 2020. This goal allows us to help fulfill our stated online goals as outlined in the Arizona Board of Regents 2020 Vision Statement.

In particular, we are looking to a scale with quality, something that has not been done by others to date. We will be using advanced technologies to achieve high retention and graduation rates and will also be looking to measure our learning outcomes such that employers, as they are beginning to, will be attracted to our graduates of this particular program.

In the attached report, you will see where we are relative to the goal and where our goal is taking us. You can see the scale of activity involved in advancing these enterprises and the process that we go through to expand from 7 degrees in the fall 2010 to 80 academic degrees in 2016. It is important to note that our level of effort and our level of intensity has been growing rapidly as we have expanded the number of degrees, the number of programs and our outreach programs that we have. Most notably, are our 38 technology partners that we have integrated into our online programs and our focus on continuous improvement of all of our systems.

It is important to note in the analysis of online programs that these programs are a function of our faculty. They are not a function of a mechanistic business orientation but of an academic orientation. Thus, these programs are unique to ASU, are reflective of our particular faculty strengths and our particular academic orientations. These programs that we offer will not be similar to those that are offered by others and are not replicable by others, they stand alone. Thus, our focus on measuring learning outcomes is what we believe to be to ultimately our ace in the hole. We believe that we can deliver to the market a measured learner capable of expressing their learning capacity and their learning ability as a result of their participation in these online programs in a way that no other program will be able to offer. Our design of our programs, our pedagogy of our programs, the way in which our faculty are engaged, the way in which our course materials are organized, the ways in which we use lecture materials, learning materials, massively online course materials or whatever it is that we use are all unique to the particular programs that we are advancing.

We are off to a very good start here and I look forward to our review in the summer 2015.

the 2020 plan

June 27, 2013

the goal.

ASU Online
expands rapidly
to over

20,000

students in 2020, and

graduates

4,000

students per year.

2020

VISION

The Arizona University System
Long-term Strategic Plan
2008-2020

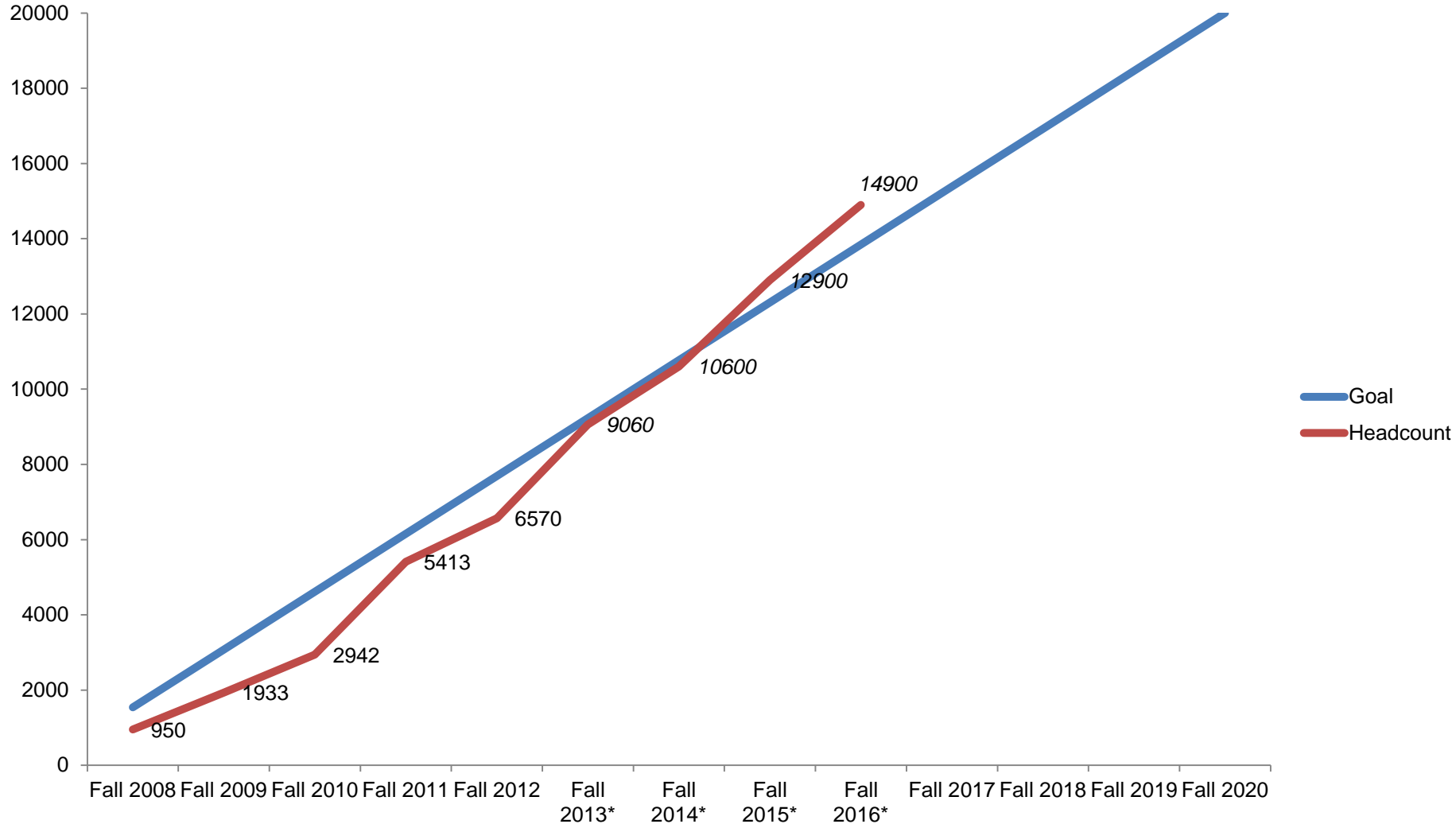
Arizona Board of Regents

www.azregents.edu/2020.pdf

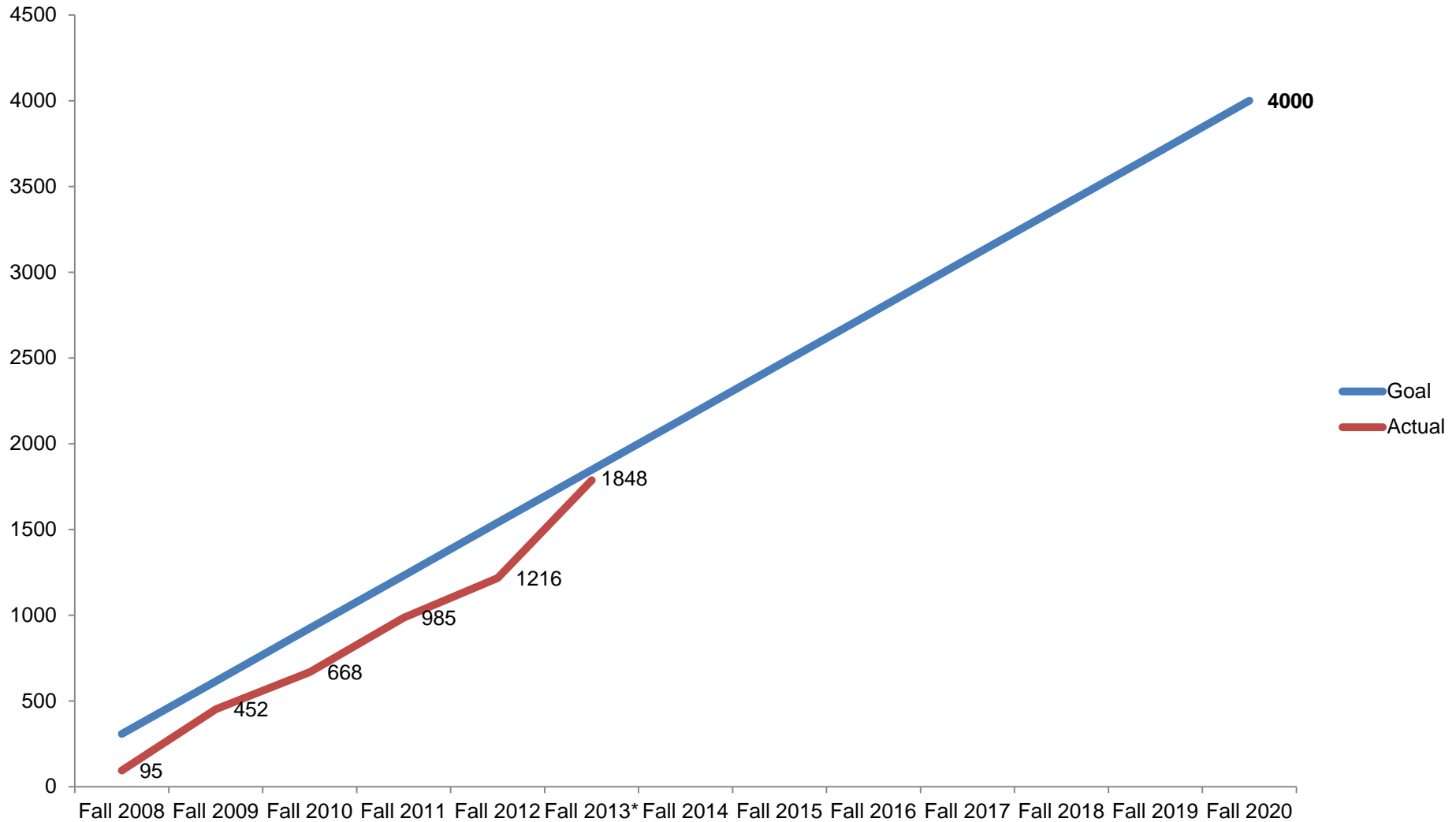
2020 strategies: scaling with quality.

1. Achieve high retention and graduation rates with existing students.
2. Efficiently deliver challenging, rigorous coursework to an increasing number of students through an expanding number of online degree programs.
3. Implement effective marketing and high-quality, on-demand student service for potential students.
4. Maintain a leading edge educational technology position.

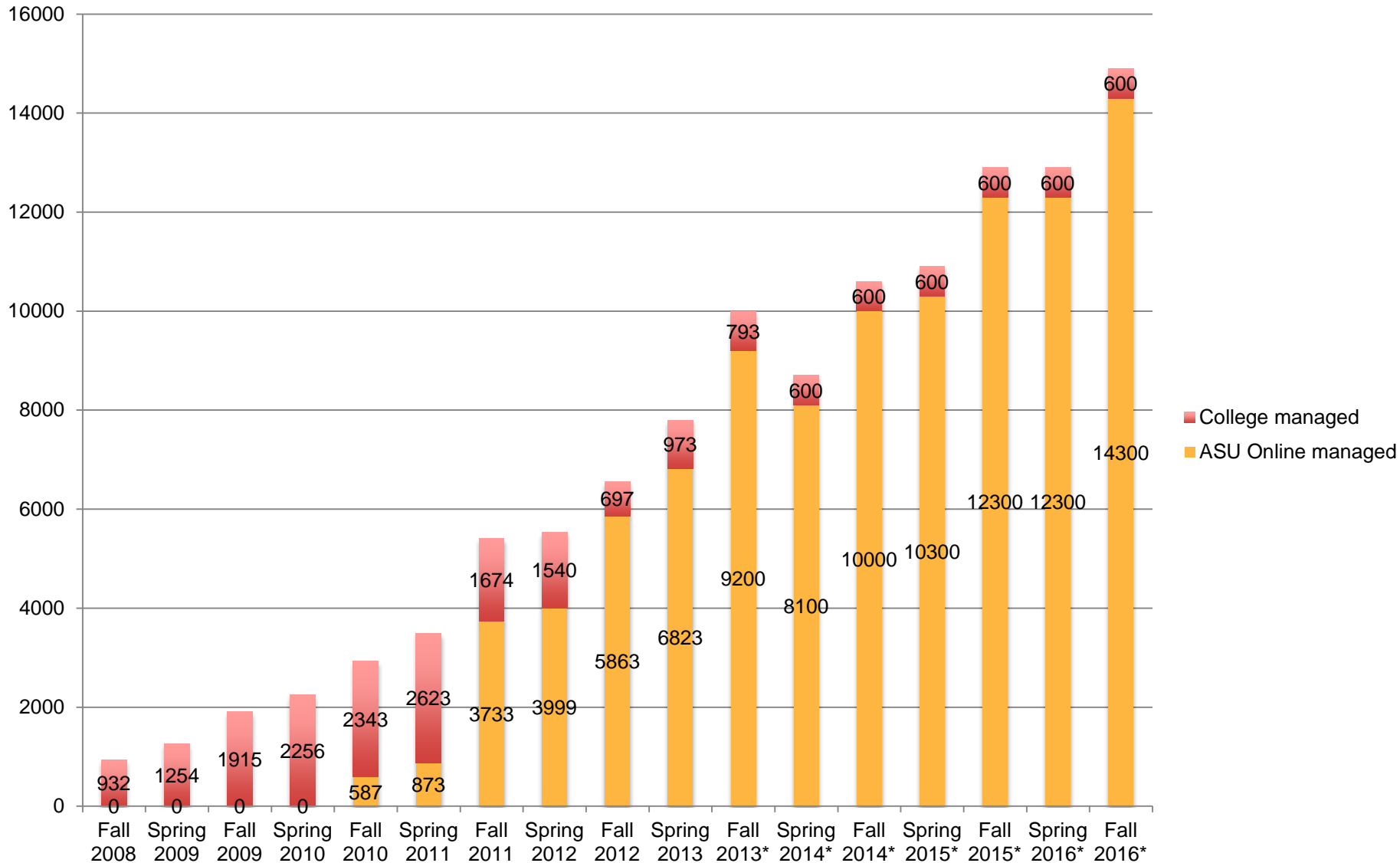
headcount toward goal.



graduation toward goal.



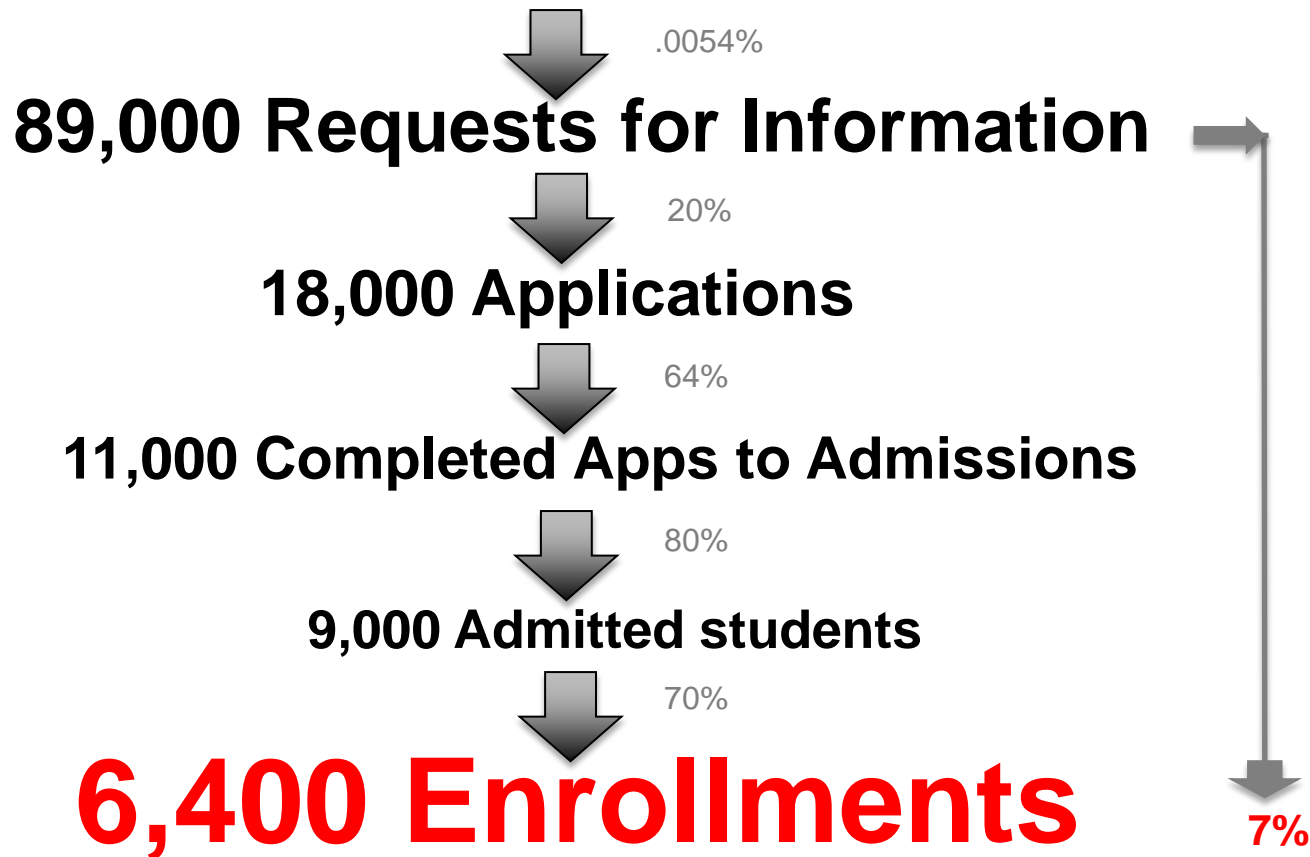
headcount: ASU Online managed vs. College managed programs.



how we achieve goals: the recruitment funnel, AY 13-14.

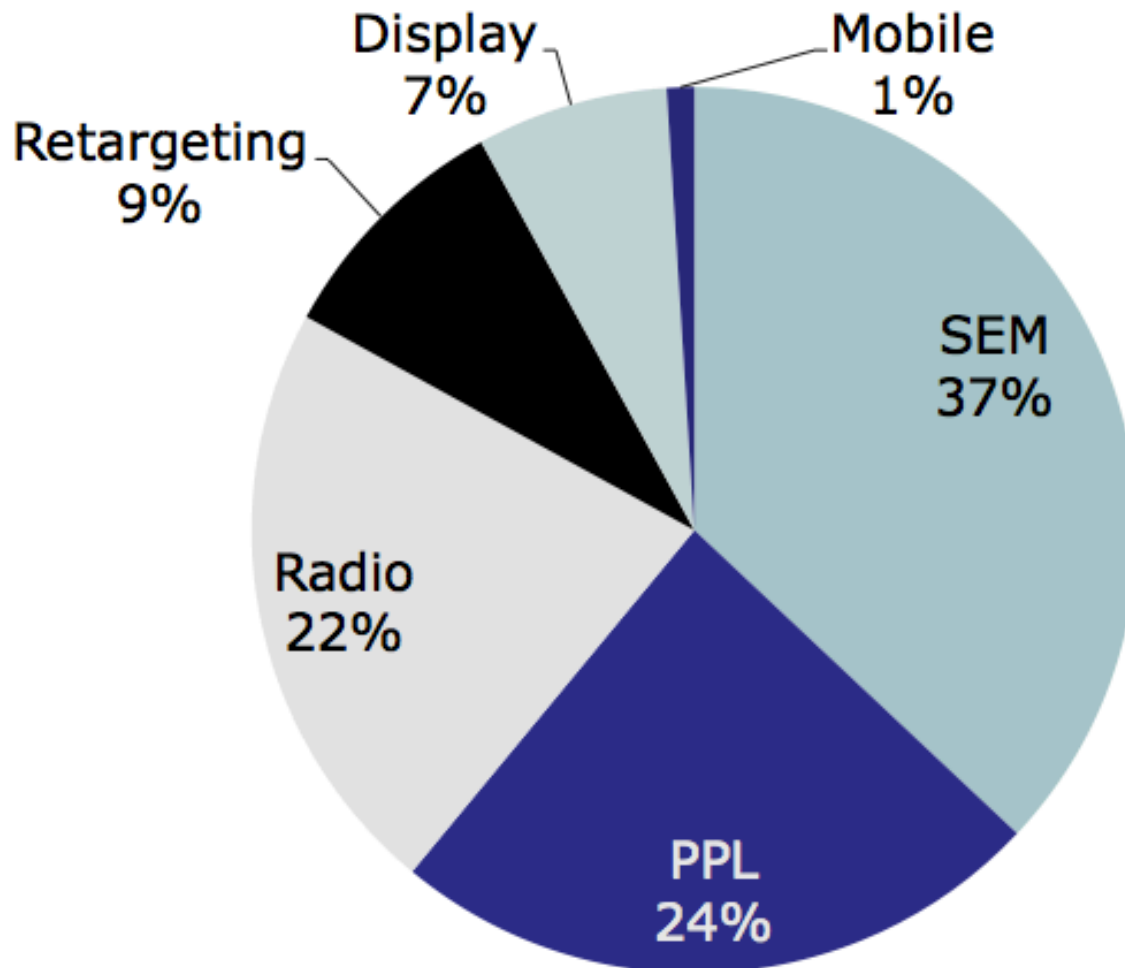
What will it take to reach our goal for new online students during the upcoming academic year?

1.98 billion Impressions



how we achieve goals: media mix, AY 13-14.

How do we get 1.98b impressions that will lead to 6,400 enrollments?

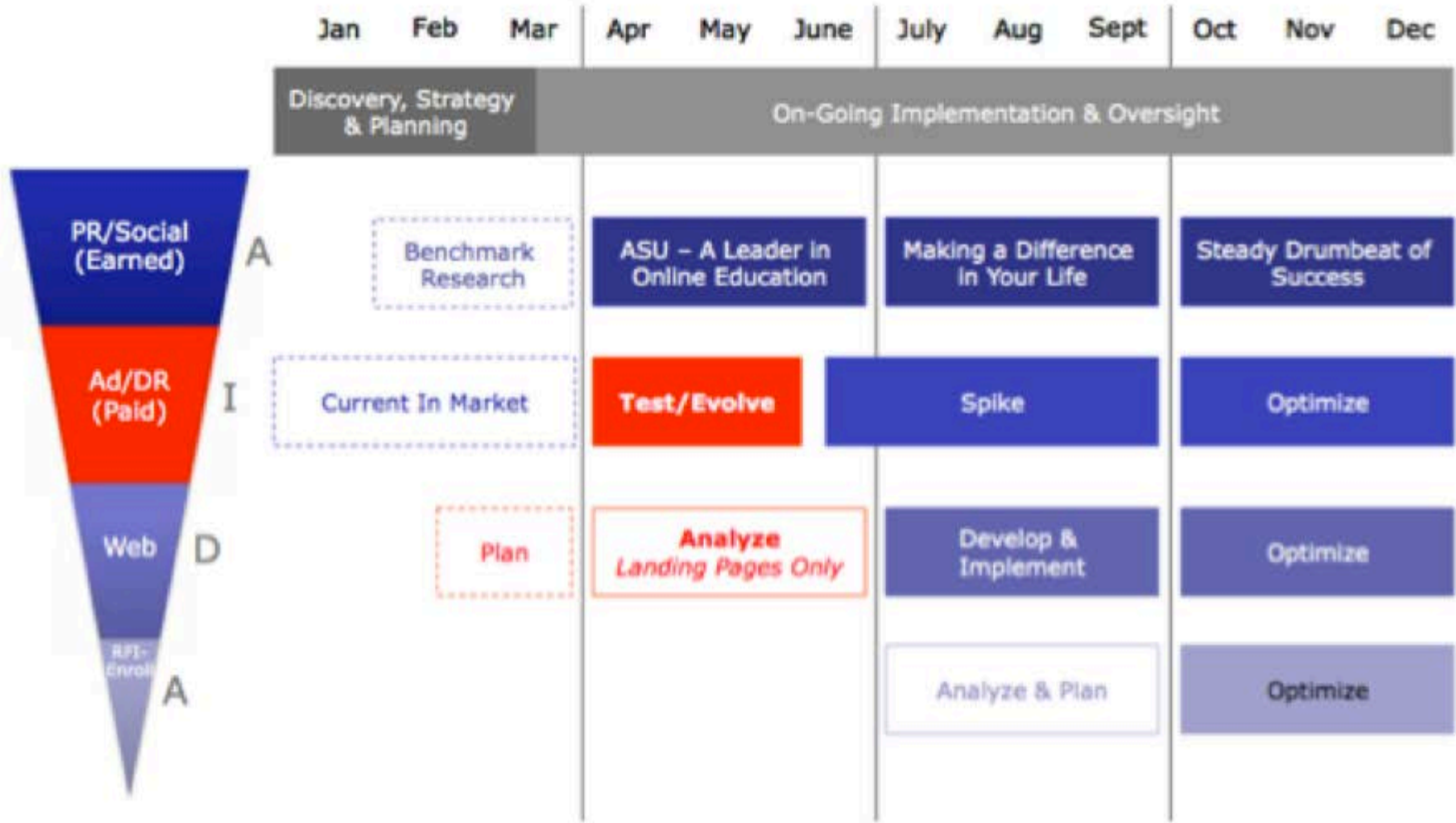


“SEM” refers to Search Engine Marketing; PPL to Pay Per Lead.

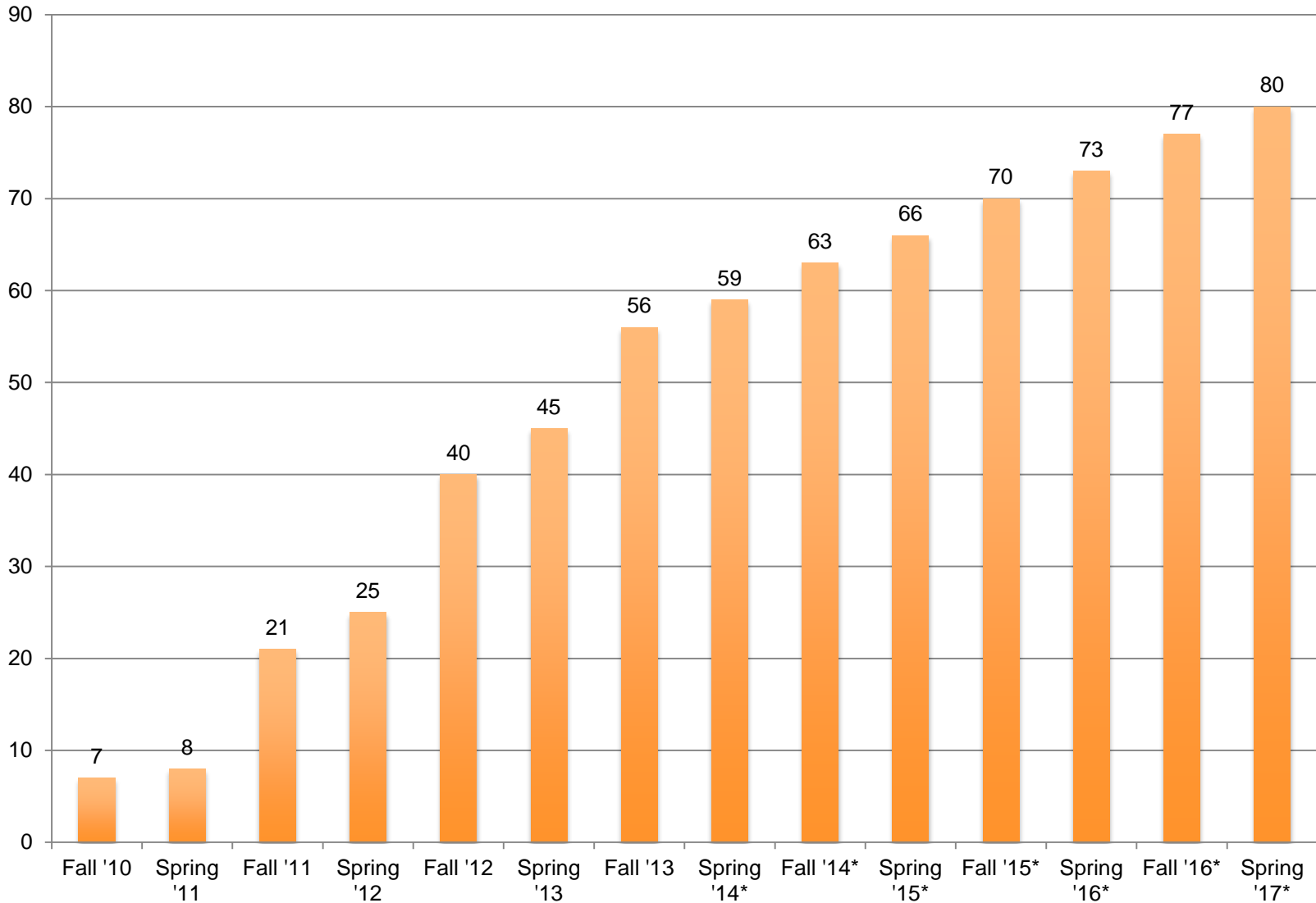
*Does not include impressions generated through less-attributable channels:

- Out-of-Home advertisements, such as radio, billboards and airports.
- Public Relations, such as earned media and social media.
- Corporate Partnerships

How we achieve goals: marketing improvements (AY 13-14) and expanded media schedule.



how we achieve goals: steady increase in online program offerings.



how we achieve goals: continued
creation of online course versions.



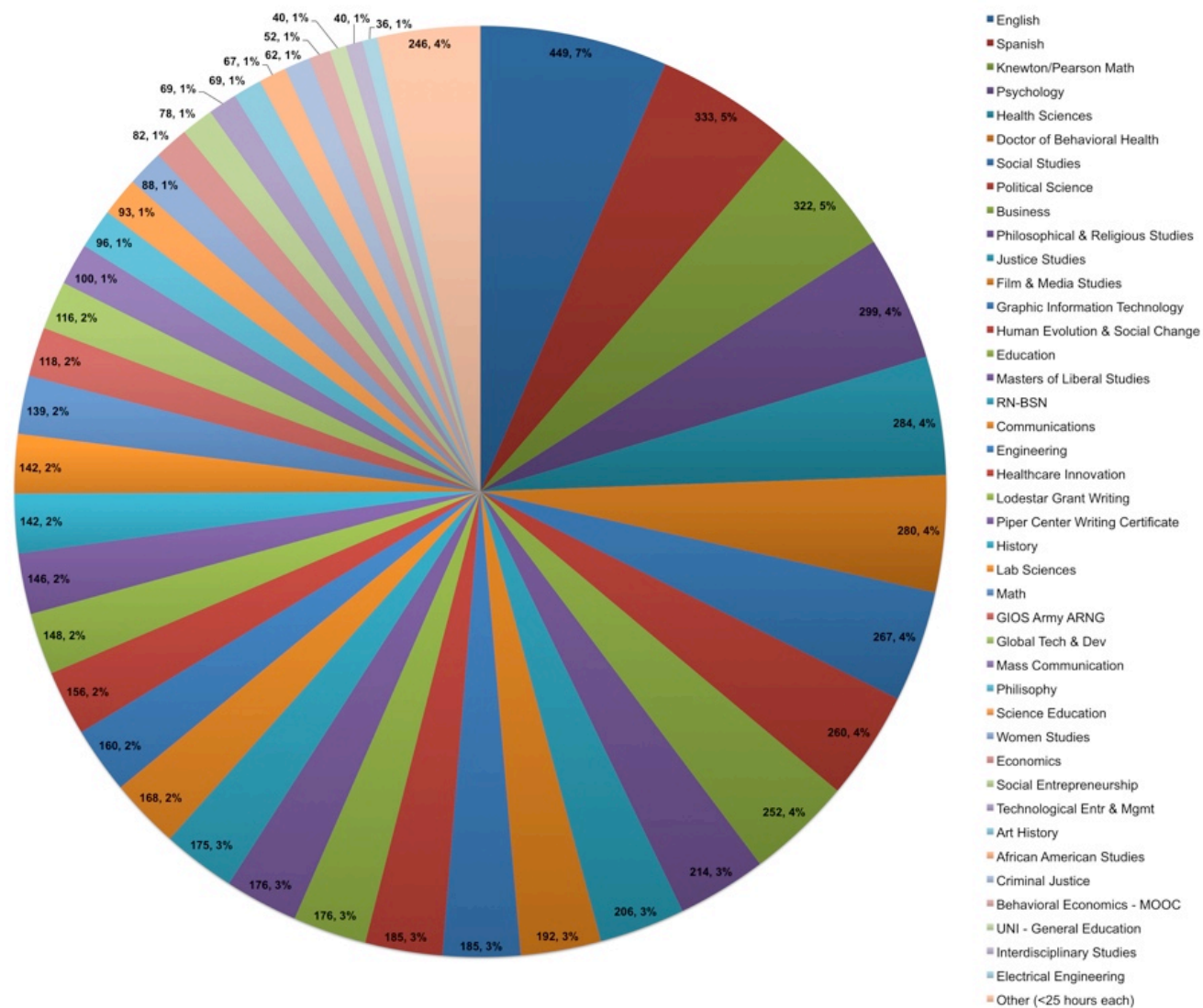
544

Projects in AY 12-13

58

Program Areas

how we achieve goals: online course versions spanning every academic field.



how we achieve goals: increasing amount and intensity of faculty training for digital.



Featured

ASU online Boot Camp for Teaching Online - February
2/11/13 9AM - 2/24/13 11:55PM

Attend

ASU Online

Check out events and organizer information for ASU Online.

Events

Current Events

Past Events



Boot Camp for Teaching Online - February 2/11/13 9AM - 2/24/13 11:55PM

Attend

This two week, fully online workshop is designed to facilitate peer sharing of strategies for designing and teaching online courses. Taught...



Creating Instructor Videos from Your Computer
2/26/13 9AM - 11AM
Scottsdale | View map

Attend

In this two hour workshop you will learn to create instructor videos (also known as "talking head" videos) right from your...



Just-In-Time Webinar: Course Check-Up 2/27/13 1PM - 1:30PM

Attend

In this 30 minute session we will review a checklist of items critical to a successful course start and term. Don't miss this opportunity...



Just-In-Time Webinar: Setting Up Your Gradebook
2/27/13 1:45PM - 2:15PM

Attend

This 30 minute session focuses on Gradebook setup. We will quickly walk-through setting up the Gradebook and how to check for potential...



Just-In-Time Webinar: Setting Dates Using the Course Scheduler 2/27/13 2:30PM - 3PM

Attend

The Course Scheduler allows you to set all course dates in one location. This 30 minute session will take a quick look at the scheduler...



Just-In-Time Webinar: Checking Your Exam Settings

Attend

ASU Online and UTO delivered **280** workshops, webinars & boot camps last year.

how we achieve goals: continuous evaluation of educational technologies (shows recent adoptions).

1. VoiceThread
2. Google Technologies
3. Video servers- Wistia & Vimeo
 - 3Play Interactive Video
 - Camtasia Relay v4
 - Acxiom
 - LearningStudio
 - Turnitin GradeMark with ETS e-Rater
 - Turnitin PeerMark
 - Knewton
 - ProctorU
 - MyLab integrations
 - WikiSpaces
 - Crocodoc
 - TweetChat
 - Box.com
 - AudioPal
 - Prezi
 - Skitch
20. Screenr
21. LearningStudio Mobile Apps
22. Scoop.It!
23. Jux
24. Paper.li
25. LiveScribe
26. Adobe Connect 8.1
27. Spark
28. Screencast-O-Matic
29. Snag-it
30. Piazza
31. Watchitoo
32. MentorMob
33. VProctor
34. LearningStudio Social Course Home
35. Camtasia Fuse
36. SoundCloud
37. SurveyMonkey
38. Quizlet

how we achieve goals: continuous improvement in systems and services

System processes priorities FY14:

1. Receive more electronic transcripts
2. Faster processing of paper transcripts
3. Automation of transfer credit articulation
4. Modernize Admission Applications

Student services priorities FY14:

1. Expand career services
2. Refine retention model to refine retention coaching

MEMORANDUM

June 28, 2013

TO: Rick Myers
President, Arizona Board of Regents

FROM: Michael M. Crow
President, Arizona State University

COPY: Eileen Klein
Nancy Tribbensee

RE: Update on additional long term performance incentive objectives

As outlined in my contract adjustment going forward there are six areas of additional performance that will be evaluated in FY2014-2015. These include:

- 1) Freshmen Retention
- 2) Research Expenditures
- 3) Bachelors' Degrees Awarded
- 4) Community College Enrollment
- 5) ASU Graduating Senior Satisfaction Survey
- 6) Resource development from non-tuition/non-research grant resource and acquisition

Progress towards each of these goals is steady with significant challenges also for each. Details are follows:

1) Freshmen Retention

In 2012-2013 we saw freshmen retention increase from a temporary decrease to about 80% back up to about 83%. This higher level had been achieved two academic years ago but through enrollment adjustments and admission standards complications that number went down in the 2011-2012 fiscal year. We are estimating that 2012-2013 freshmen retention will be in the range of 83% working toward our 2014-2015 goal of 86%.

2) Research Expenditures

Research expenditures have been steadily increasing the last few years at ASU. In 2012-2013, we estimate that our final audited number will be around \$405-\$409 million. With our goal of

\$419 million for FY2014-2015, we believe this goal is attainable. This goal however will be affected by the dramatic changes in research funding availability from the U.S. government. We believe that we will work around this and that the \$419 million is attainable but it will be challenging.

3) Bachelors' Degrees Awarded

ASU has been experiencing a steady increase in its bachelors' degrees awarded with many hundreds of additional degrees awarded per year over the last several years. In academic year 2012-2013 13,735 bachelors' degrees were awarded. We believe that the goal of 14,900 bachelors' degrees by academic year 2014-2015 is attainable.

4) Community College Enrollment

We have seen a steady increase in community college enrollment through transfer and our 2012-2013 of 7,900 is reflective of numerous programs and services that we put in place the last few years. The FY2014-2015 goal of 6,191 is attainable on the present trajectory and, in fact, should be exceeded.

5) ASU Graduating Senior Satisfaction Survey

We will compare our graduating senior survey of 2013 with 2015 looking for increases at that time. This, of course, is a highly subjective indicator by an individual who has not yet in a sense tested the product. We believe that downstream evaluations in addition to graduating senior evaluations would give us a better idea of what graduates think of their experience at ASU. In general, these indicators have been improving at ASU in the last few years.

6) Resource development from non-tuition/non-research grant resource and acquisition

We have been working in several categories to expand our resource acquisition efforts for dollars outside of our usual revenue sources. These include current-use gifts, endowment payout (which is a function of endowment size and management), real estate related revenue, auxiliary enterprises related revenue, and partnerships. It has been the experience the last few years that each of these revenue sources have been increased by several fold with particularly large increases in current-use gifts and real estate revenue. To put this into perspective, our current-use gift revenue a few years ago was just a few million dollars per year and now it is in the several tens of millions of dollars per year. One way that we look at this is what is the total amount of cash made available to the university for expenditure on university programs from the ASU Foundation. This number has in the last few years increased by a factor of 4 and is continuing to increase at a steady pace. Real estate revenue has increased from roughly \$1 or \$2 million a year to what will be by 2014-2015 on the order of \$10-\$12 million per year. It is anticipated that these revenue sources will continue to expand for the university and will be detailed at the time of review.

Our progress for each of these objectives has been significant. I would be happy to discuss any of these items further with the Regents Executive Committee at your convenience.



ARIZONA STATE UNIVERSITY

MEMORANDUM

June 28, 2013

TO: Rick Myers
President, Arizona Board of Regents

FROM: Michael M. Crow
President, Arizona State University

COPY: Eileen Klein
Nancy Tribbensee

RE: 2013-2014 Individual Performance Indicators

As outlined in my contract revision, I am submitting two ideas for your consideration for my 2013-2014 individual performance indicators.

They are:

- 1) I would like to make progress on lowering the cost to produce a degree. ASU already ranks in the lowest 5% of research universities in terms of costs to produce a degree from tuition/fees and public investment resources. I would like to be able to outline our progress made and plans towards lowering the costs to produce a degree to among the 2 or 3 lowest in the United States.
- 2) I would like to design, develop and implement a plan and program for ASU to advance an academic output / quality evaluation and metric system. We all know that the ranking systems used for universities are biased towards private institutions and biased towards institutions desiring to spend more money per student or institutions maintaining historical models of pedagogy. In our thinking at ASU, we are much more focused on what we produce, who we produce and what they achieve. Accordingly, I would like recommend that my second individual performance indicator be the development of such an output/quality assessment system.

I would be happy to discuss these items with you further at your convenience. Both of them would be comprehensive in nature, valuable and useful for not only ASU but for other universities around the country and it is something that I feel excited about if I had the chance to focus on.