ARIZONA STATE UNIVERSITY

MEMORANDUM

July 21, 2016

TO: Greg Patterson
Chairman, Arizona Board of Regents

FROM: Michael M. Crow
President, Arizona State University

CC: Arizona Board of Regents
Eileen Klein
Nancy Tribbensee

RE: FY2016 Performance Assessment

Enclosed is my FY2016 Performance Assessment as it relates to the Arizona Board of Regents Performance Incentive program. This performance and incentive-based compensation model has been in place for several years following the chairmanship of Regent Rick Myers. This represents a report on the metrics established for both FY2016 and for the period between FY2015 and FY2018, with multiple year objectives. Separate reporting is occurring relative to Enterprise Executive Committee metrics.

ASU continues its evolution as the prototype "New American University," an institution committed to high levels of academic excellence, broad accessibility and deep community impact, and we continue to make progress on all of these fronts. The performance incentives set forth are not reflective of the totality of the progress that ASU continues to make, but rather highlights specific areas of complexity and importance in which ABOR has requested particular focus and achievement across these complex areas. My objective here is to lead the staff, faculty and leadership team to perform in ways that will help us attain the very complicated goals articulated for this year and we use these goals established by ABOR as a way to highlight significant challenges the Board would like to address. As you can imagine, this performance assessment is very useful in that regard.

From the outset of my appointment in July 2002, we have outlined a range of very significant goals and objectives that are aspirational. The attainment of these goals and objectives is not

OFFICE OF THE PRESIDENT
FULTON CENTER 410, 300 E. UNIVERSITY DRIVE
PO BOX 877705 TEMPE, AZ 85287-7705
(480) 965-5253 FAX: (480) 965-0865
HTTP://PRESIDENT.ASU.EDU

something that is anywhere near certain as many of the goals we have outlined and designed for ASU have never been achieved before by anyone else. For example, we know that high levels of retention and graduation rates have been achieved by other schools because they only admit "A" students to their freshman class, but ASU admits both "A" and "B" students to our freshman class as well as transfer students from community colleges enrolling as undergraduates, and this makes our setting very complicated compared to others.

The enclosed report summarizes goal progress and attainment for: 1) 2015-2016 Annual Incentives; 2) Enterprise Performance Incentives; and 3) University Initiatives Performance Incentives. I am pleased to report that all goals have been attained for FY2016 and all multi-year (2015-2018) goals have seen substantial progress and are on-track for successful outcomes.

All of these goals are in the context of ultimately attaining the newly established 2025 metrics that have emanated from ABOR. These goals are extremely challenging and will only be attained through the highest rates of innovation, the highest level of performance by faculty and staff, and through outstanding leadership by our executive team.

I am looking forward to reviewing this progress with you and establishing our new goals for the upcoming year and the years to come.

2015-2016 Individual Annual Incentives

FY2015-2016 Goal 1

Oversee the design and launch of the entire freshman year in an online interactive curriculum as well as a brand-new tool completely online for Arizona high school completion enhancement. The president's report should document the steps taken to launch and the expected strategic benefits. The report should also describe the process for continued evaluation of the success of this initiative and how it will be sustained in the future.

FY 2016 Goal 1

Individual Annual Incentives:

Design and launch online academic initiatives as identified in Goal 1

Goal Accomplished

Report Follows

Global Freshman Academy

Overview

In April 2015, President Crow announced a partnership between ASU and edX to develop the Global Freshman Academy (GFA), creating large-scale access to quality higher education and a low-risk opportunity for students to earn university credit.

GFA is unlike anything ASU has ever undertaken. It provides learners anywhere in the world the opportunity to take high quality digital immersion classes hosted on edX, designed and taught by leading scholars from ASU -- all for free. Not only do students around the globe have access to these exceptional courses, they can also earn freshman-level university credit. Unlike traditional online course models that require students to prepay, GFA allows students to take classes, and only when they successfully complete the courses, choose to pay tuition and earn credit. By allowing students to learn, explore and complete courses before paying tuition, GFA reimagines the freshman year and reduces academic and monetary barriers to students while opening a new path to a college degree for a diverse set of learners.

GFA breaks new ground in education in a number of ways:

- **Innovative Admissions Option:** GFA's approach is different than traditional admissions processes of other credit-bearing courses by eliminating barriers to entry, such as standardized tests and transcripts.
- **Learning Before Payment:** Students may decide to take a course for credit at the beginning or after coursework has been completed – reducing financial risk while opening a pathway for exploration and preparation for qualified students who may not otherwise seek a degree.
- **Unlimited Reach:** Because of the open course format, learning takes place while scaling completely – there are no limits to how many learners can take the online courses. It is free to learners anywhere in the world with internet access, through the edX platform.
- **Cost Effective:** Students who complete all eight courses in the series, including several required courses and some electives, will complete a full freshman year at ASU at about half the cost of the national average for a year of in-state tuition at public universities (currently $200 per credit). Because the series is hosted and administered completely online, learning can occur anywhere, at any time, any day of the week. The program is perfect for ambitious students who need a more flexible, economically viable model of higher education that enables them to hold jobs, work remotely and save money.

The strategic importance of the incentive to the university or enterprise strategic plan

ASU is committed to academic inclusion and student success, regardless of a student's family circumstances. In line with ASU's commitment to providing access to higher education, GFA becomes a strategically important fulcrum for scaling educational opportunity. ASU, via the Global Freshman

Academy, is the first university to design and deliver a transformative program that will impact the college access rate inside the United States and globally.

In a world where there is incredible demand for tertiary education, but where cost is a significant barrier to entry, GFA enables unlimited access to quality higher education while decreasing the potential cost of attaining a bachelor's degree. Providing quality ASU courses online in an open course environment also brings ASU to the world, with the ability to deliver higher education at internet scale.

One transformative aspect of this program is that it evaluates students by what they can achieve now, not by their past academic circumstances. In this way, GFA becomes a low-risk learning environment where learners with varying levels of college experience can prove to themselves and to an academic institution that they can complete rigorous university classes. This approach opens opportunity to an underserved segment of the population -- those who have tried college but did not succeed on the first try, as well as those who may feel underprepared for university-level courses.

As ASU continues to develop partnerships with educational institutions and businesses, such as Starbucks, that wish to provide education benefits to employees, GFA will enable ASU to reach a broad range of employee's educational needs and enhance corporate education programs to broaden access to more employees, no matter their educational background. Some employees need a program to develop and demonstrate their ability to succeed at the university-level -- GFA is this pathway.

Achievement of the incentive as assigned, progress toward achievement, or challenges that prevented achievement and a strategy for overcoming those challenges

With a cross-functional team and the edX platform, GFA successfully launched its first course in August 2015. Seven courses have been built over the past year, with plans to expand to 20 courses within the next two years. GFA courses cover the same learning objectives as equivalent online or campus-immersion ASU courses; the primary difference is in how the learning is delivered.

When ASU partnered with edX, the leading open online class platform, it was the first time that a top university had offered undergraduate classes with the ability to earn credit. This created two major challenges to overcome: First, we must ensure the equivalent level of rigor as other ASU courses delivered through online and in person mediums. Second, we needed to learn and adapt the edX platform to enable important components to allow for credit eligible courses. ASU assembled a cross-functional team of faculty, content experts, instructional designers, software engineers, data scientists, product managers and administrators to successfully launch the program. In addition, edX shared considerable resources to launch this program. This partnership between teams was essential in successfully launching GFA.

Also, we have developed the courses using open educational resources, which eliminates the need for expensive textbooks and increases learner access. We have achieved lower student costs through the design and creation of materials and by covering some of the ongoing instructional costs ourselves. For

students interested in earning credit from ASU, they must decide to follow an ID verification track with proctoring ($49 per class). This is the only upfront cost that students pay in order to decide later whether or not they want to purchase credit. This modest fee allows ASU to verify student identity for academic integrity purposes and FERPA compliance. While the ID-verified fee creates some upfront cost for the student, it should be noted that this cost is often less than application fees for traditional online programs. In this way, GFA not only becomes a secure avenue for earning college credit, but it also remains a low-risk and affordable model for students.

The most important challenge facing GFA is creating awareness with potential learners and their supporters. The opportunity to complete a freshman year of college from a top university, receive credit without an application or transcript, and decide to pay after knowing how successful you have been has simply not existed. In the first year, we have established that the current learner population on edX provides access to a large population of lifelong learners. Although it has given thousands of learners access to ASU faculty, those who actually transfer for credit have been much smaller. For GFA to achieve its potential impact, we must increase awareness with potential learners who can benefit from earning credit through GFA.

Data or other evidence demonstrating achievement

With seven courses and three semesters in place this fiscal year and real-time data to inform our decisions, the goal is to scale GFA to support more students. The GFA team has learned how to design and deliver courses in a new medium, gained expertise in the edX platform and pushed the boundaries of standard edX courses.

The first seven courses that launched this fiscal year were:

1. AST 111 /113 - Introduction to Solar Systems Astronomy
2. ASM 246 - Human Origins
3. HST 102 - Western Civilization: Ancient and Medieval Europe
4. EXW 100 - Introduction to Health and Wellness
5. CEE 181 - Technological, Social and Sustainable Systems
6. MAT 117 - College Algebra
7. ENG 101 - English Composition

Because we know that math courses are often stumbling blocks for new or returning students, our team has created innovative approaches to teaching math at scale. For example, the MAT 117 College Algebra course is a highly innovative and potentially disruptive approach to helping students learn college algebra. This course allows learners the flexibility to start whenever they want and complete the course as soon as they can demonstrate mastery. Through a partnership with McGraw-Hill, the course utilizes the ALEKS adaptive math platform to provide a personalized path for every learner. GFA also has a team of coaches, under the guidance of faculty members, available to answer student questions, and assessment provided through edX. This unique combination is helping us teach thousands of students

algebra, develop ways to increase learning efficacy and build a product by which other particularly difficult subjects can be taught.

There is huge untapped market for this algebra course. In addition to students in college, many high school students wish to progress through college algebra prior to attending college. The personalization of this course allows it to be used effectively by high achieving students and those needing remediation in core math concepts. The flexible delivery allows the course to be used independently by high school learners with non-traditional school schedules and could be adapted to be used in a traditional online or in-person high school programs. In addition, developing this course creates a pathway for future math subjects with a similar model.

At the end of Spring semester, GFA numbers are as follows. Please note, there is separate row for college algebra, because this course has ongoing enrollments and is not a part of a quarter system.

Courses	Enrollments	ID-verified Enrollments	Week One Active	Converted for Credit	Eligible for Credit Conversion
6 Courses	149,256	2,295	33,089	192	895
College Algebra	25,324	323	6,472	1	9
Totals	**174,580**	**2,618**	**39,561**	**193**	**904**

Any administrative, personnel, resource allocation or policy changes associated with achievement of the incentive

EdPlus hired a project manager in May 2015 and a director for GFA in April 2016. A cross-functional team (instructional designers, project management, strategy, product, data science, marketing, student service, administration) has been assembled at EdPlus with strategic focus on GFA.

EdPlus has partnered with ASU academic units and schools to launch GFA. Each class that was created and taught required dedication and flexibility from the faculty members to reimagine the course for a new group of learners on the edX platform while keeping in mind open education requirements to keep access free to students. Several ASU units including the University Technical Office, Admissions, Educational Outreach and Student Services and the Marketing Hub also worked to create, launch and implement GFA.

The plan or proposed strategy for maintaining the achieved goal or the momentum put in place in support of the strategic initiative(s) described in the incentive

GFA is building a pathway to specific majors to better replicate a freshman year academic experience. The first pathway will be general studies; a collection of six courses across disciplines, similar to a common freshman course selection. Next, the development of pre-business and pre-engineering specializations -- four additional classes for each, has begun to be added to the general studies pathway.

Now that we have demonstrated the ability to teach ASU classes with this model by successfully teaching thousands of learners in several classes, the GFA team has begun working on other strategies to grow awareness and learners for the program. GFA is currently pursuing paid marketing efforts, corporate partnerships, new ASU Pathways and international partnerships.

Any additional issues the president believes may be relevant to the evaluation of the incentive or to the continued success of the initiative described in the incentive

Currently, learners who have earned ASU credit through the Global Freshman Academy and wish to convert it to transcripted credit must pay the tuition themselves. The program is not eligible for federal financial aid. While there is a tremendous benefit to the student and other financial providers in students' only paying for credits they have earned and a lower cost per credit, it limits access to those who are able to pay directly for the credit within one year of having completed a course. We have and will continue to explore options for financial aid and other partners that can sponsor students' education. For instance, ASU submitted a proposal to the Department of Education (DOE) for the Educational Quality through Innovative Partnerships (EQUIP) experiment to provide low-income students with access to new models of education and training. ASU made it through the first round of consideration and is currently awaiting a decision on ASU's proposal status from the DOE. We will continue to look for these types of opportunities.

Also, GFA is a new educational model and requires focused marketing efforts. We face a significant challenge in generating awareness among potential students we wish to help and will need to scale marketing and partnerships to reach our goals.

While we have removed the barriers of application and transcript for GFA, the ultimate goal is to help more students earn their bachelor's degrees. GFA needs further development to help students who have demonstrated their ability to master the rigor of university education make the transition to a full bachelor's degree program. We are focused on how success in GFA impacts the admissions process and how a series of classes in GFA can efficiently lead to earning the right credits leading to graduation. In short, we are focused on making sure GFA acts as a pathway to college degree attainment.

me3

Overview

me3 is a unique, interactive image-based tool launched by ASU that helps students better understand their career interests. Via a mobile responsive website, me3 provides students three career suggestions based on correlations between RIASEC codes and careers established by the Occupational Information Network (ONET). The results section allows for hundreds of possible outcomes that are customized for each user. Students connect those potential careers to matched college majors and are provided specific high school course plans that best prepare them for a.) high school graduation, b.) admission to any of the three Arizona state universities and c.) successful completion of the first year of university coursework in their chosen college major. Since me3 officially launched on September 8, 2015 over 27,000 students have used the tool. Initial user feedback indicates higher satisfaction with me3 compared to other tools students have used for career assessment.

The me3 project was piloted with six Arizona high school districts to ensure a broad sample of the Arizona student population achieved a general consensus on high school course suggestions for majors and to gain feedback from this core audience on how to enhance the application. The tool was developed in consultation with high school stakeholders, including administrators, counselors and students. The team has taken feedback from these various constituencies into account in order to maximize the utility of me3 for high school students.

Continued Evaluation

Users are invited to complete a survey within the me3 tool to rate the efficacy of the tool. Data gathered from this survey is periodically reviewed by the me3 team. Users, parents and educators are invited to contact the me3 team at me3@asu.edu, and feedback is monitored and addressed by the me3 team on a regular basis. Information received from the survey and via email is used to continue to add new components and functionality based on user demand.

Future Sustainability

To date, the development of me3 has been funded by a gift from a private donor. Additional resources will need to be identified to continue developing me3, as well as to execute an effective marketing strategy to increase the number of students who can benefit from the tool.

The strategic importance of the incentive to the university or enterprise strategic plan

K-12 students in Arizona face many challenges -- only 46 percent of Arizona high school graduates are eligible for admissions to an Arizona university, and half of the graduates continuing to postsecondary education graduate from only 10.6 percent of Arizona high schools (Arizona Board of Regents, 2015). These statistics indicate that high school students need better preparation to conceptualize and realize

their post-secondary aspirations. Recognizing that the road to postsecondary success and future employment begins well before college entrance, and given a desire to build upon the success of ASU's eAdvisor, the university created me3 to be an engaging career and university major exploration tool for high school students. This online tool provides high school students with the same type of transparency as the successful tools within the ASU eAdvisor suite, including educational requirements, career and major exploration and personalized feedback central to student interests and academic goals. me3 demonstrates ASU's commitment to contribute further to the educational attainment and economic advancement of our state.

me3 is helping to provide critical career exploration and college-going information to Arizona high school students. Though me3 is only in its first year of implementation, students and high school staff already see its benefits. For students, me3 is shaping their attitudes about college and the future.

Frankie, a junior in high school, credits me3 with changing how he approaches college and career preparation. "It made me think of different ways to get to college." After playing the game, Frankie's results directed him to a career in engineering. Similarly, Angela noted that me3 has helped her consider new career choices. "It definitely opened my eyes...to literally a new field of possibility... I had never considered teaching before and now it's...on my radar."

me3 is also gaining traction with teachers and administrators. Jennifer Anderson, the department chair of student advising at Westwood High School in Mesa, noted that, "me3 provides students with insight about themselves that links them to career choices they might not consider otherwise...me3 is an immense tool for post-secondary readiness." me3 is not just another academic planning tool. It is a perspective shaping tool that enables students to explore their potential.

Achievement of the incentive as assigned, progress toward achievement, or challenges that prevented achievement and a strategy for overcoming those challenges; data or other evidence demonstrating achievement

Since implementing the program, me3 has seen steady growth, and currently has 27,081 users (24,873 users and 2,208 demonstration users) from 315 districts and 559 schools. Building on this success, the enterprise goal for FY17 is to reach a total of 100,000 users; the largest share being Arizona high school students (45,000), followed by high school students nationally (25,000), current ASU students via me3@ASU (25,000) and transfer students (5,000).

ASU has pursued a variety of avenues to market me3 and has received a number of media impressions, including the *New York Times*, *PBS NewsHour* and *The Huffington Post*. We will continue to work with our marketing team to increase awareness about me3 to students, families and educators. Moving forward, we will advance specific marketing strategies to influence students and other key target markets via direct mail, email and social media to increase the me3 user base.

We have highlighted me3 at the following key national convenings to maximize exposure to youth, as well as influencers within higher education and technology sectors:

- Starbucks Opportunity Youth Forums
    - 2015-2016: Chicago, Phoenix, Los Angeles and Seattle
- The Economist Higher Education Forum (New York)
- ASU GSV (Global Silicon Valley) Summit 2016 (San Diego)

Recently, me3 was updated to meet Arizona's Education and Career Action Plan (ECAP) requirements. In 2008, the Arizona State Board of Education began requiring ECAPs for all Arizona students in grades 9-12.

> *"The ECAP reflects a student's current plan of coursework, career aspirations, and extended learning opportunities in order to develop the student's individual academic and career goals."* (ECAP 2016)

While there are a few paid tools in current use that provide much of this functionality, many schools in rural districts are still completing ECAPs with pen and paper. me3 is a free, online tool schools can access to meet the ECAP requirements, provide transparency and visibility to high school counselors and administration and engage student while building the academic mindset necessary for success in postsecondary education. And according to our search, there are no free tools that connect the ECAP requirements and planning process to college-level majors or provide feedback on the appropriate high school coursework needed to prepare for college success. It is this connection that we believe will be most effective in affecting change in the college attrition, not only in Arizona but nationally.

As we move forward to maximize a tool that will ultimately increase the pipeline of students prepared for higher education, we continue to make improvements that will increase the utility of the tool. Critical advancements include:

- Images within the me3 game have been updated to be more culturally relevant and representative of the diverse workforce. The tool is now accessible for the visually impaired.
- A new algorithm was developed that will further customize the list of careers shown to a student upon completion of the game. The results a student receives are now more scientifically sound and are increasing the match quality between student results and their careers.
- me3 has been updated to be more relevant to out-of-state students. Utilizing data from ASU Admissions, a list of more than 30,000 out-of-state high schools have been added to me3 for users to select from. This allows the me3 team to more accurately determine where students are using the tool outside of Arizona. Additionally, out-of-state students now see the appropriate criteria for admission.
- "me3 @ASU" has been developed to allow me3 to go beyond the current high school audience. On June 1, 2016, me3 was integrated into ASU's Degree Search site, ASU Online's degree site and major and career exploration program. As part of this integration, current and prospective

ASU students will be able to use me3 to find careers, pair them with degrees and compare both programs and major maps for three programs. me3@ASU will be valuable to many students, including transfer students and off-track students who will be encouraged to utilize the tool in order to increase their understanding about potential careers and degree options. me3@ASU will be marketed to ASU students in Fall 2016.

Any administrative, personnel, resource allocation or policy changes associated with achievement of the incentive

me3 has been developed in collaboration with EdPlus, Educational Outreach and Student Services, Enrollment Services, the Office of the Provost and the University Technology Office.

Within Educational Outreach and Student Services, Access ASU has played a lead role in connecting partner schools and community organizations to share information about me3, as well as to demonstrate the tool with student users and educators via classroom presentations -- hosting demonstration tables at events and conferences and presenting me3 to school and district leadership. Additionally, Access ASU programs and initiatives have incorporated me3 into their offerings to students and families.

Access ASU partner high school districts include:

- Glendale Union High School District
- Mesa Public Schools
- Phoenix Union High School District
- Tempe Union High School District
- Tolleson Union High School District

Access ASU Programs include:

- AVID Conference
- American Dream Academy
- Barrett Summer Scholars
- Cesar Chavez Leadership Institute
- Collegiate Scholars
- Future Sun Devil Experiences
- Future Sun Devil Families
- Hispanic Mother-Daughter Program
- RECHARGE Conference

Access ASU also has several community-based organization partners that share the mission of providing access to higher education. In partnership with these organizations, the me3 tool has been utilized with program participants in the following organizations:

- AGUILA Youth Leadership Institute
- Be a Leader Foundation
- Jobs for Arizona's Graduates

The plan or proposed strategy for maintaining the achieved goal or the momentum put in place in support of the strategic initiative(s) described in the incentive

While tremendous progress has been made to date, there are additional features that will be incorporated in 2017 to continue to evolve me3 for the benefit of student users:

- ECAP Educator Dashboard: to maximize the utility of the ECAP functionality embedded within me3, a dashboard will be developed to allow educators the ability to quickly and easily download their students' information.
- Gamification: additional gamification elements will be added to me3 to encourage users to return to the tool during each year of high school.
- Spanish Translation: college readiness information for parents within me3 will be translated into Spanish.
- me3 App: based on feedback from users, educators, and experts in educational technology including Jaime Casap, Chief Education Evangelist at Google, me3 will be converted to an app instead of a purely web-based tool.
- me3 Website: The me3 website that will offer an online train-the-trainer video, lesson plans and classroom activities for educators. This will help make me3 more accessible to rural communities.
- Student Transfers: Integration of me3 and MAPPs and TAGs to help transfer students find the right academic home.

Any additional issues the president believes may be relevant to the evaluation of the incentive or to the continued success of the initiative described in the incentive

me3 began as a tool created for Arizona high school students to increase the pipeline of students entering into postsecondary education and has evolved into a tool utilized by high school students, counselors and parents across the U.S. Beginning in Fall 2016, me3 will also be marketed as me3@ASU to provide current ASU students guidance on college majors and career pathways. It will continue to be an effective tool regarding career opportunities that await students once they are admitted to the university and to assist students to be most successful once they are enrolled at ASU.

2015-2016 Individual Annual Incentives

FY2015-2016 Goal 2

Complete the multi-year project successfully to design a new ASU partnership with the Mayo clinic and two new ASU schools for the launch of the new Mayo medical school in Arizona. The president's report should describe the status of the partnership as of July 1, 2015 and progress made as of June 30, 2016. The report should describe any actions taken by ASU during this period and articulate the benefit to Arizona in addition to the benefits to the students and programs of ASU.

FY 2016 Goal 2

Individual Annual Incentives:

Complete multi-year projects with Mayo as identified in Goal 2

Goal Accomplished

Report Follows

2015-2016 ANNUAL PERFORMANCE

ASU Strategic Partnership with the Mayo Clinic

FY2016 Goal

Complete the multi-year project successfully to design a full scale transformative partnership with the Mayo Clinic and two new ASU schools for the launch of the multi-site, multi-campus Mayo Medical School, the country's first national medical school.

Goal Accomplished

A more detailed report follows.

MAYO CLINIC

ASU ARIZONA STATE UNIVERSITY

FY2016 Outcomes

- ✓ Secured the expansion of the Mayo Medical School to Arizona, emerging as the country's first national medical school
- ✓ Redesigned new Mayo-ASU partnership to be formally launched as the "Mayo Clinic and Arizona State University Alliance for Health Care" this Fall
- ✓ School for the Science of Health Care delivery fully operational and underway with undergraduate, graduate and medical school degree programs
- ✓ Department of Biomedical Informatics fully operational and underway with undergraduate and graduate degree programs

MAYO CLINIC

ASU ARIZONA STATE UNIVERSITY

Strategic Objectives

Establish innovative health solutions pathways capable of educating 200 million people about health care; engaging 20 million people in online health care delivery; and enhancing treatment for 2 million patients

Redefine medical, health science and professional education for the health workforce of the future and life-long learners

Enhance joint innovations and research competitiveness to more than $24 million in annual research expenditures through funding and investments

Augment regional economic competitiveness through research and discovery and value-added programs through the Arizona Health Solutions Corridor vision

MAYO CLINIC

ASU ARIZONA STATE UNIVERSITY

Mayo Medical School

in collaboration with ASU

- With the Mayo Clinic, raised **more than $45 million** for the start-up capital for the medical school
- Designing and launching new **"flipped" curriculum** through Mayo and EdPlus partnership to enable new methods of teaching medicine
- Continuing to evolve and build the medical school through grants/scholarships to drop costs to below the average tuition for publically supported medical schools
- 1st class currently being solicited and **starting June 2017**
- ASU's Science of Health Care Delivery curriculum integrated with **co-branded 18 credit certificate** for all medical students
- Received support from the Kern Family Foundation, Flinn Foundation and American Association of Medical Colleges for innovative curricular design

New Schools

College of Health Solutions

- Advanced the School for the Science of Health Care delivery
  - Fully operational and underway with 986 students to date, 19 faculty, 4 degree programs
  - Co-branded graduate certificate created for all 2nd year medical students with an option to complete a Masters of Science
  - Led by former Mayo Clinic Arizona CEO, Victor Trastek, MD
- Advanced the Department of Biomedical Informatics
  - Fully operational and underway with 500 students to date, 14 faculty, 4 degree programs
  - Co-located at the Mayo Clinic Scottsdale Campus with Mayo Biostatistics department and Mayo Medical School
  - Co-led by Mayo Clinic's Chair of the Division of Biomedical Statistics and informatics, Jean-Pierre Kocher, PhD

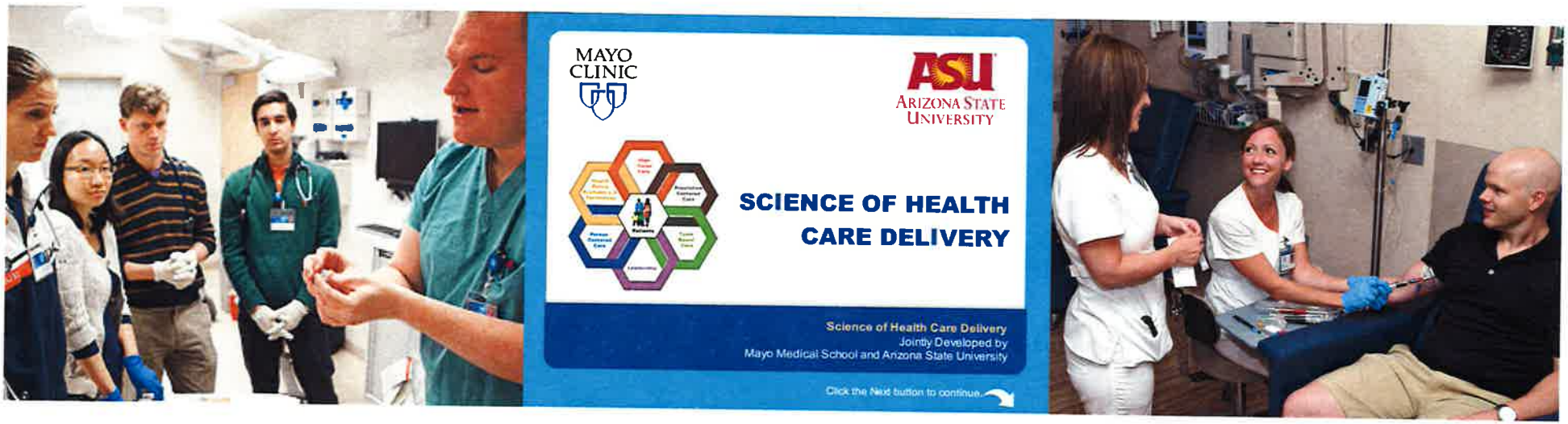
ASU/Mayo Collaborative

Pre-Licensure Nursing Program

- **Achieved national recognition** by American Association of Colleges of Nursing (AACN)
    - 2015 Recipient of Exemplary Academic-Practice Partnership Award for Nursing Education
- **160 graduates** to date
- Hiring rate at Mayo Clinic: **55%** per cohort
- **9th Cohort** starting this Fall

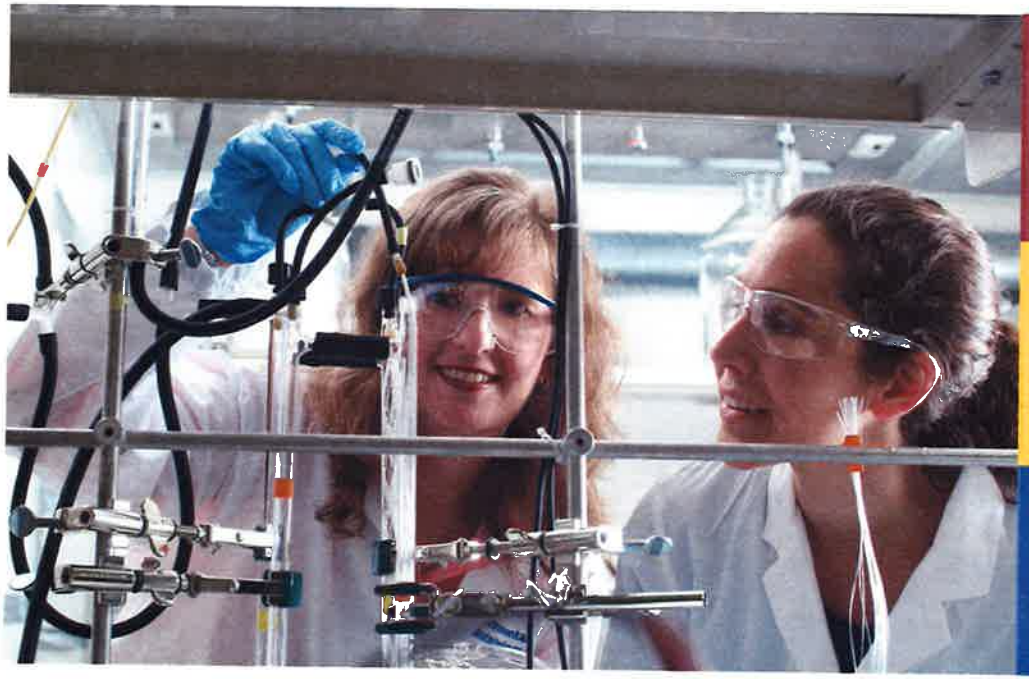
Education

- ASU's EdPlus designed "flipped" & blended curriculum for Medical School and continuing education physicians/students
- Developing Barrett Honors Medical Scholars Program with pre-admissions to Mayo Medical School
- Renewing the joint MD/MBA program for full-time medical students
- Developing new programs in Health Sciences and Technology
- Appointing ASU faculty members to teach in the Mayo Medical School
- Advancing executive and continuing education programs to be delivered to Mayo Clinic physicians and staff



Research

- Achieved over **$90M in externally funded research** projects over the partnership
- Launched the 13th cycle of the Mayo-ASU **Seed Grant Program** collaborative research projects between researchers at both institutions
- Launched the 2nd cycle of **Acceleration Grants** in the Science of Health Care Delivery to help existing teams prepare for external funding
- Developed the high-risk and high-reward **Team Science Grant Program** - in the areas of biomedical sensing, functional restoration, and biomedical imaging



Team Science Grants

3 awards $900K each 3 years

Acceleration Grants

2 awards $100K each 1 year

Seed Grants

8 awards $50K each 1 year

MAYO CLINIC Care Network Member

Practice & Delivery

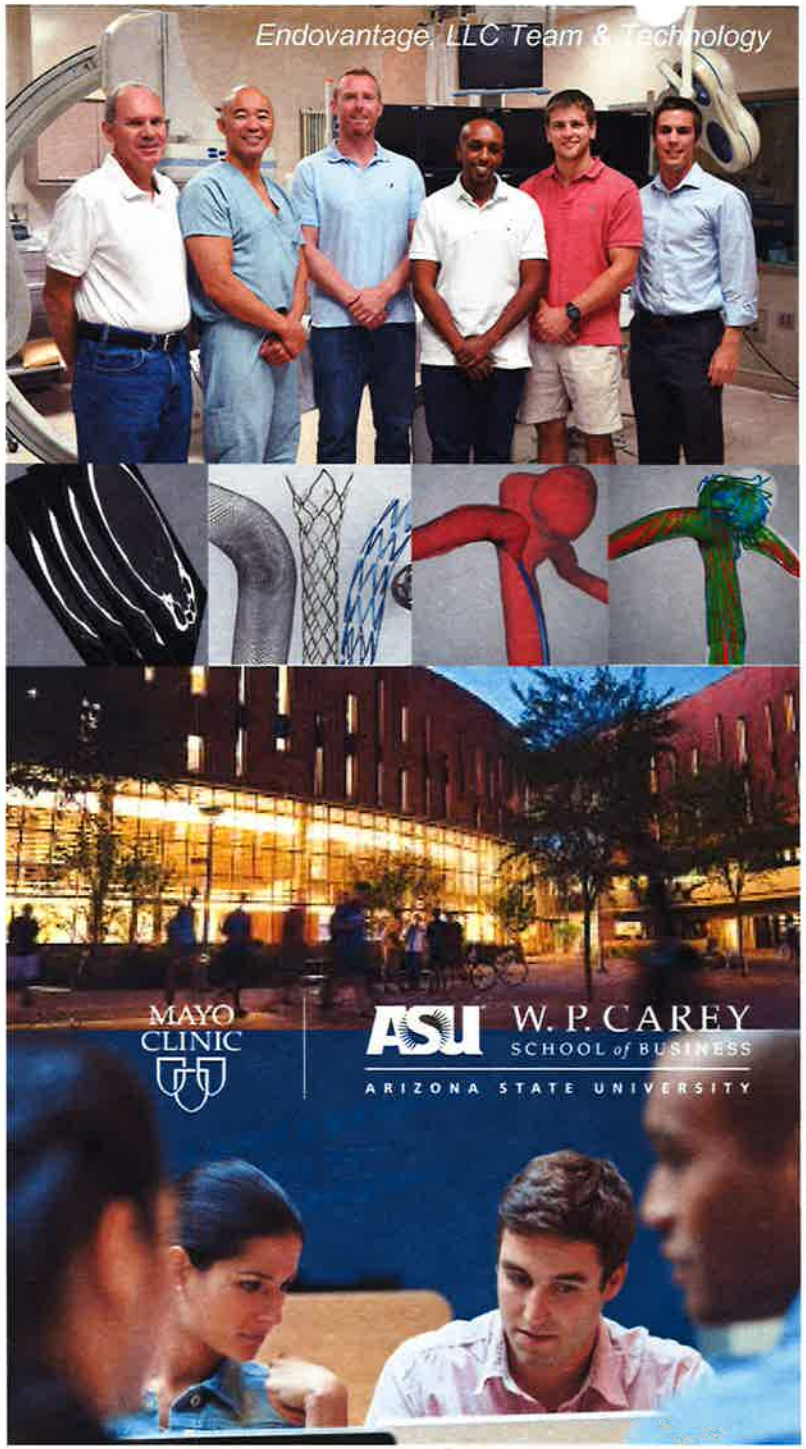
- Continued engagement in the Mayo Clinic Care Network / Affiliated Practice Network
- Growth of programs between arts and humanities – launched **Imagining Health** lecture series
- Linking ASU Global Sports Institute and Sun Devil Athletics with Mayo Clinic Arizona's burgeoning sports medicine practice
- Growing connections between **ASU's School of Biological and Health Systems Engineering** to help advance and innovate clinical care settings

MAYO CLINIC

ASU ARIZONA STATE UNIVERSITY

Entrepreneurship & Innovation

- Over **30 jointly developed Intellectual Property disclosures**
- Partnering with Mayo Clinic Ventures to develop a joint **MedTech Accelerator** program
- Creation of **Trailblazer program** with W.P. Carey's Student Solutions course to create business plans for Mayo Clinic projects
- Commercializing jointly developed products (e.g. online continuing education courses, a freshman mobile app, etc.)



Integration

Building a one-of-a-kind collaborative environment by blending the cultures and administrative operations of the two institutions

- Creating a common environment for fruitful collaborations
- Planning and development of **ASU Health Solutions Innovation Campus** adjacent to Mayo Clinic Hospital
- Monthly meetings with Mayo AZ CEO, Wyatt Decker, MD
- Annual Leadership Summit w/Mayo Enterprise CEO, John Noseworthy, MD
- Established the Mayo-ASU Executive Steering Committee and Mayo Clinic and Arizona State University **Alliance for Health Care**
- Over **85 jointly appointed faculty** members
- Appointed full-time liaison to ensure multi-year project is on track to meet goals and to build/enhance relationships
- Streamlining administrative processes (joint appointments, IP, IRB, etc.)
- ASU graduates comprise **10% of Mayo Clinic Arizona's workforce**

MAYO CLINIC

ASU ARIZONA STATE UNIVERSITY

Continued Success

This strategic partnership is transformative relative to both the history and the outcome of Arizona State University and the history and outcome of Arizona. The continued success and growth of the initiative depends on the following factors:

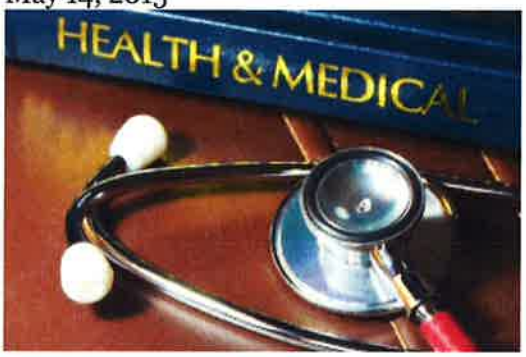
- Leadership
- Continued Integration and Common Culture
- Community Support and Recognition for the Initiative
  - ✓ Arizona Board of Regents
  - ✓ City of Phoenix
  - ✓ State of Arizona
  - ✓ Philanthropy

MAYO CLINIC

ASU ARIZONA STATE UNIVERSITY

Mayo Medical School Receives State Licensure For Arizona Branch Campus

May 14, 2015



SCOTTSDALE, Ariz. —Mayo Medical School announced that its planned expansion in Scottsdale, has received licensure by the Arizona State Board for Private Postsecondary Education, the group responsible for regulating private postsecondary degree-granting institutions within the state of Arizona.

"This is a major milestone in our journey to open a full four-year branch campus of Mayo Medical School in Scottsdale," says Wyatt Decker, M.D., CEO of Mayo Clinic in Arizona. Earlier this month, Mayo Medical School leaders announced they had also received endorsement for the expansion from the Liaison Committee for Medical Education (LCME), the accrediting body for medical education.

While many experts wonder if medical schools across the country are doing enough to prepare graduates for the challenges of an evolving health care system, Dr. Decker notes that the medical school — planned to open in 2017 — won't rest on conventional physician training.

"The reality is that most medical schools are teaching the same way they did 100 years ago," Dr. Decker said in a recent Wall Street Journal article. "It's time to blow up that model and ask, 'What must we do to train *tomorrow's* doctors?'"

One tool that will be woven into the school's transformative education is a four-year Science of Health Care Delivery curriculum jointly developed with Arizona State University (ASU),along with innovative online learning modules. As Mayo medical students master subjects such as systems engineering, health care policy and biomedical informatics, they will become the first in the nation to receive a certificate in the Science of Health Care Delivery, jointly conferred by Mayo Medical School and ASU, along with their medical degree. Students will also have the personal option of completing a master's degree in the Science of Health Care Delivery through ASU.

"The goal of the Science of Healthcare Delivery curriculum is to provide a patient-based, science-centered and value-driven system designed to help patients heal and keep them healthy," said ASU President Michael Crow. "We are proud of our collaboration with Mayo on this important update to medical education."

Originally established in Rochester, Minnesota, in 1972, Mayo Medical School is considered one of the most highly competitive medical schools in the country for admittance. Averaging over 4,700 applications per year, Mayo Medical School traditionally accepts only 50 students per enrolling class. With the opening of the Arizona campus in 2017, this will increase to 50 additional students per year. Careful planning will maintain a coveted feature of the school — its high faculty-to-single student ratio.

"Mayo Medical School's expansion into Arizona is an important boost to our local economy," said Phoenix Mayor Greg Stanton. "Phoenix and Mayo Clinic share a common vision to grow bioscience in our region — and the Mayo Medical School will strengthen our position as an international destination for health care related research and education."

Along with the current four-year Mayo Medical School campus in Minnesota and creating a four-year campus at Mayo Clinic in Arizona in 2017, the school will also open a complete third- and fourth-year campus at Mayo Clinic in Florida in 2016. This national expansion will become a reality thanks to visionary benefactors who have expanded the school's endowment and support from Mayo Clinic.

"Mayo Medical School will truly be a national medical school," notes Michele Halyard, M.D., Suzanne Hanson Poole Vice Dean and incoming interim dean of the school. "We are training our students to be excellent physicians and scientists and we are equipping them with the leadership and tools to transform America's ailing health care system."

The expansion of the medical school is a natural next step in its track record of training highly skilled physicians. Notably, Mayo Medical School students routinely match to top residency programs across the country with 98 percent of fourth year students reporting a match to one of their top residency choices, and 80 percent — more than twice the national average — publishing research manuscripts in peer-reviewed journals.

Mayo Medical School's goal to transform medical education also reaches far beyond its own doors. In 2013, the school was one of only 11 medical schools across the nation selected for the American Medical Association's *Accelerating Change in Medical Education* initiative. This consortium of educational innovators is working with the AMA to pioneer and collectively accelerate cutting-edge changes in medical education.

###

About Mayo Clinic
Mayo Clinic is a nonprofit organization committed to medical research and education, and providing expert, whole-person care to everyone who needs healing. For more information, visit http://mayocl.in/1ohJTMS or http://newsnetwork.mayoclinic.org/.

Table 1 Enrollment for the School for the Science of Health Care Delivery as of 7/21/16

	Year			
Level & Program	2013-14	2014-15	2015-16	2016 (YTD)
Undergraduate	---	99	263	351
- Science of Health Care Delivery	---	7	27	57
- Medical Studies	---	73	203	250
- Public Health	---	12	30	43
- Health Systems Management (Disestablished)	---	7	3	1
Graduate	36	58	87	92
- Science of Health Care Delivery (MS)	36	58	87	92
Total	36	157	350	443

Table 2 Degrees Awarded for the School for the Science of Health Care Delivery as of 7/21/16

	Year		
Level and Program	2013-14	2014-15	2015-16
Undergraduate	---	---	3
- Science of Health Care Delivery	---	---	---
- Medical Studies	---	---	---
- Public Health	---	---	1
- Health Systems Management (Disestablished)	---	---	2
Graduate	35	35	48
- Science of Health Care Delivery (MS)	35	35	48
Total	35	35	51

Table 3 Number of Barrett Scholars within the School for the Science of Health Care Delivery as of 6/2/2016

Major	**# of Barrett Scholars**
Medical Studies	29
Science of Health Care Delivery	3
Public Health	1
Total	33

Table 4 Enrollment for the Department of Biomedical Informatics as of 7/21/16

Level and Program	Year									
	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016 (YTD)
Undergraduate	---	---	---	---	---	---	---	20	32	49
- Biomedical Informatics	---	---	---	---	---	---	---	20	32	49
Graduate	13	7	30	35	41	41	51	63	59	54
- Biomedical Informatics (MS)	13	7	17	17	18	18	21	36	33	24
- Health Informatics (MAS)	---	---	---	---	---	---	---	---	---	9
- Biomedical Informatics (PhD)	---	5	13	18	23	23	30	27	26	21
Total	13	12	30	35	41	41	51	83	91	103

Table 5 Degrees Awarded for the Department of Biomedical Informatics as of 7/21/16

Level and Program	Year							
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Undergraduate	---	---	---	---	---	---	---	---
- Biomedical Informatics	---	---	---	---	---	---	---	---
Graduate	1	9	6	7	9	9	13	22
- Biomedical Informatics (MS)	1	9	5	5	7	6	11	20
- Biomedical Informatics (PhD)	---	0	1	2	2	3	2	2
Total	1	9	6	7	9	9	13	22

Table 6 Number of Barrett Scholars within the Department of Biomedical Informatics as of 6/2/2016

Major	# of Barrett Scholars
Biomedical Informatics	7
Total	7

Table 7 Enrollment for the International School of Biomedical Diagnostics as of 7/21/16

	Year		
Level and Program	2014-15	2015-16	2016 (YTD)
Graduate	24	56	48
- Biomedical Diagnostics (MS)	24	56	48
Total	24	56	48

Table 8 Degrees Awarded for the International School of Biomedical Diagnostics as of 7/21/16

	Year	
Level and Program	2014-15	2015-16
Graduate	13	6
- Biomedical Diagnostics (MS)	13	6
Total	13	6

Faculty and Programs

Department of Biomedical Informatics:
TOTAL: 14 faculty
5 Assistant Professors
3 Associate Professors
4 Professors (full)
2 Clinical Professors

4 Degree Programs
BS Biomedical Informatics
MAS Health Informatics

MS Biomedical Informatics
PhD Biomedical Informatics

Science of Health Care Delivery:
19 Faculty
1 Assistant Clinical Professor
6 Associate Clinical Professor
3 Assistant Professor
2 Instructors
1 Lecturer
2 Professors (Full)
1 Professor of Practice
3 Faculty Associates

4 Degree Programs:
BS Science of Health Care Delivery
BS Medical Studies
MS Science of Health Care Delivery
Graduate Certificate – Science of Health Care Delivery
*SHCD is also currently teaching Mayo Medical School students in SHCD (18 credit certificate program). This provides an additional 50 Rochester, MN students for '15-16 and another 100 students to the '16-17 rosters.

Goal 2: Detailed Summary

Strategic Area	Actions Taken	Benefit to Arizona	Benefit to ASU Students & Programs
Integration	• Creating the environment for fruitful collaborations • Planning of ASU Health Solutions Innovation Campus adjacent to Mayo Clinic Hospital • Monthly meetings with Mayo AZ CEO, Wyatt Decker, MD • Annual Summits with Mayo Enterprise CEO, John Noseworthy, MD • Established the Mayo-ASU Executive Steering Committee and Mayo Clinic and Arizona State University Alliance for Health Care • Over 85 jointly appointed faculty members • Appointed full-time liaison to ensure multi-year project project is on track to meet goals and to build/enhance relationships • Streamlining administrative processes (joint appointments, IP, IRB, etc.)	• Advancing the AZ Biomedical Corridor Vision / stimulating economic development • Strong example of a long-term innovative public-private partnership	• New campus with world class, multi-modal learning and research facilities • Access to jointly appointed/shared faculty with clinical expertise • Exposure to medical school students as mentors, students, etc. • Opportunities for ASU faculty to teach medical school courses • Opportunities for ASU faculty/students to complete sabbaticals and post doctoral fellowships at Mayo Clinic • Enhance ASU brand by partnering with Mayo
Education	• With the Mayo Clinic, raised more than $45 million for the start-up capital for the medical school • Growth of 2 new schools developed in partnership with Mayo Clinic: ASU's School for the Science of Health Care Delivery (SHCD) and Department of Biomedical Informatics • Earned national acclaim by the American Association of Colleges of Nursing (AACN) for nursing partnership • Partnership with EdPlus to design online & blended curriculum • Created certificate for the Science of Health Care Delivery for Mayo Medical School students • Developing concept paper for Mayo-ASU Health Sciences Prep School	• Nurtures and retains educated workforce (10% of Mayo Clinic in AZ's workforce are ASU graduates) • Serving as a national exemplar for the redesign of health sciences medical education	• Graduate students in SHCD perform capstone projects at Mayo Clinic • Award winning ASU-Mayo Nursing Program • Enhancing Barrett Honors College opportunies for medical school • Potential access for K-12 students to receive formal health sciences training
Research	• Launched the 13th cycle of the Mayo-ASU Seed Grant Program collaborative research projects between researchers at both institutions • Launched the 2nd cycle of Acceleration Grants in the Science of Health Care Delivery • Developed the Mayo-ASU Team Science Grant program - jointly invested $900,000 of research seed funding for three teams in biomedical sensing, functional restoration, and biomedical imaging	• Positions AZ as a leading force in biotechnology and biomedical research to improve health and save lives while offering economic advantages • Attracted over $90M in externally funded projects	• Deepening clinical experiences for undergraduate and graduate students • Enhancing translational research by adding clinical component • Access to patients, equipment and clinical grade samples
Practice	• Continued membership in the Mayo Clinic Care Network / Affiliated Practice Network • Linking ASU Global Sports Institute and Sun Devil Athletics with Mayo Arizona's burgeoning sports medicine practice • Growing connections between ASU's School of Biological and Health Systems Engineering	• Increase access/quality of care for Arizona Mayo Clinic patients • Develop world-class sports/training district	• ASU students shadow Mayo physicians • ASU students perform for patients through art, creative writing and music • Physician/scientist experts from Mayo serve on ASU councils and panels • ASU students have access to Mayo physicians for specialty clinics • ASU faculty/staff have access to Mayo for health care
Entrepreneurship & Innovation	• Over 30 jointly developed Intellectual Property disclosures • Partnering with Mayo Clinic Ventures to develop a joint MedTech Accelerator program • Creation of Trailblazer program with WP Carey • Commercializing jointly developed products (e.g. online continuing education courses, a freshman mobile app, etc.)	• Launched 2 joint startup companies • Attract and support new and existing companies to relocate to the region • Support the development of medical and biotechnology • Create a pipeline for new industry – dynamic new businesses and quality jobs	• Access to capital, internships, experiences in the medical/biotechnology industry • Access to clinician experts • Business students working on real world problems

Mayo Clinic & ASU Collaborative Activities

EDUCATION

Medical School
- Flinn Grant
- Kern Grant
- SHCD Network Expansion
- Science of Healthcare Delivery (SHCD) →
- Blended Curriculum
- Dual Degree Programs
- PreMed Enrichment Program for UMR Students
- Shared Student Services
- Barrett Honors Medical Scholars Program
- Health Sciences and Technology Program

Graduate Programs
- SHCD Capstone/Internship Program
- ASU Walter Cronkite School of Journalism/Mayo Clinic Program →
- Bioscience Ethics, Policy and Law Internship Program →

Undergraduate Programs
- Pre-medical Scholars
- Special Research
- Summer Internships at Mayo Clinic
- Barrett Honors Programs →
- Bachelor of Science in Nursing →
- Medical Brigades @ Mayo Medical School
- Interprofessionalism

Executive Education
- ECG Refresher Course
- Applied Quality Essentials →
- Transfusion Medicine
- Patient Trends in Critical Incident Recognition
- Clinical Hemodialysis Technician
- Mayo Online Learning →
- Whitney MacMillan Physician Leadership Business Academy →
- Innovation Catalyst Program →

RESEARCH

Joint Internal Funding Programs
- Team Science (Level/Tier 3) Grants →
- Acceleration Grants
- Seed Grants →

Joint Externally Funded Projects - $90M
- Microbiome →
- Joint Centers
- Structural Biology Alliance
- Biodesign
- Project HoneyBee →

Clinical
- Strategic Themes
- Joint Elsevier Instance
- Proton Beam Outcomes Database →
- AZ Cancer Survivorship →
- Sangre por Salud Biobank →
- Radiology Dept. Data Depot (2013 EI-10 Award)
- Music Therapy Program →
- Supply Chain Bar Code study →
- Infoscitex

PRACTICE

Humanities
- HIM/ASU Herberger Institute for Design and the Arts →
- Poesia del Sol Creative Writing at the Bedside Program →
- Sonata del Sol Music at the Bedside Program →
- ASU String Ensemble Outreach Program →
- Symposium →
- Imagining Health Series →
- Medical Journalism →

Health & Wellness
- Specialty Clinics
- MC Care Network →
- MCCFI Projects →
- Care expansion for ASU fac/staff
- Executive/Elite Wellness
- New Pathways of Care
- Sports Medicine

MAYO CLINIC & ASU PARTNERSHIP

INTEGRATION

Joint Faculty Appointments
- MC w/ASU (59): CHS (30), CONHI (20), FSE (8), CLAS (1)
- ASU w/MC (25): CHS (9), CONHI (4), FSE (6), CLAS (6)

Capital Projects
- Health Solutions Corridor @ 56th St
- Health Solutions Innovation Center
- Mirabella @ ASU →
- Medallion Program →

Collaborative Centers
- Medical Informatics and Clinical Decision Support/ Bioinformatics →
- Center for Metabolic and Vascular Biology (CMVB) →
- Science of Health Care Delivery →
- ASU-Mayo Clinic Imaging Informatics Laboratory (AMIIL) →

Partnerships
- Phoenix Children's Hospital →
- Intel →

Fundraising
- Events
- Zocolo Public Square →
- Mayo Medical School
- Health Solutions Innovation Center

Advisory
- Center for Services Leadership Board (Caselli) →
- Health Futures Council (Krahn) →

Events
- Payment Reform Summit 2017
- Transform Conference CFI →
- Science of Team Science →

Branding →
- Website →
- Collateral
- Campaigns
- Shared Content

Legal
- Master Agreements: Education, Research, Clinical Education, Medical Services, Professional Services, Innovation
- Strategic Collaboration Naming
- Leases: CMVB, BMI

Resources
- 1.25 FTE Liaisons

ENTREPRENEURSHIP & INNOVATION

- MedTech Accelerator
- Trailblazer
- WP Carey Student Solutions →
- Joint Ventures
- Innovation Fund
- Endovantage, LLC →
- Imanin, LLC
- Center for Innovation (MCCFI) →
- Events
- First Look LA →
- Other Santa Monica

MAROON= Emerging BLACK= Exisiting

Interactive map: tinyurl.com/mayoasumap

Enterprise Performance Incentives

FY2015-2018 Goal 1

Achievement of the 2018 fiscal year strategic plan metric goal in the Freshman Retention Rate of 85.2%; additional incentive to exceed goal by attaining at Freshman Retention Rate of 86%.

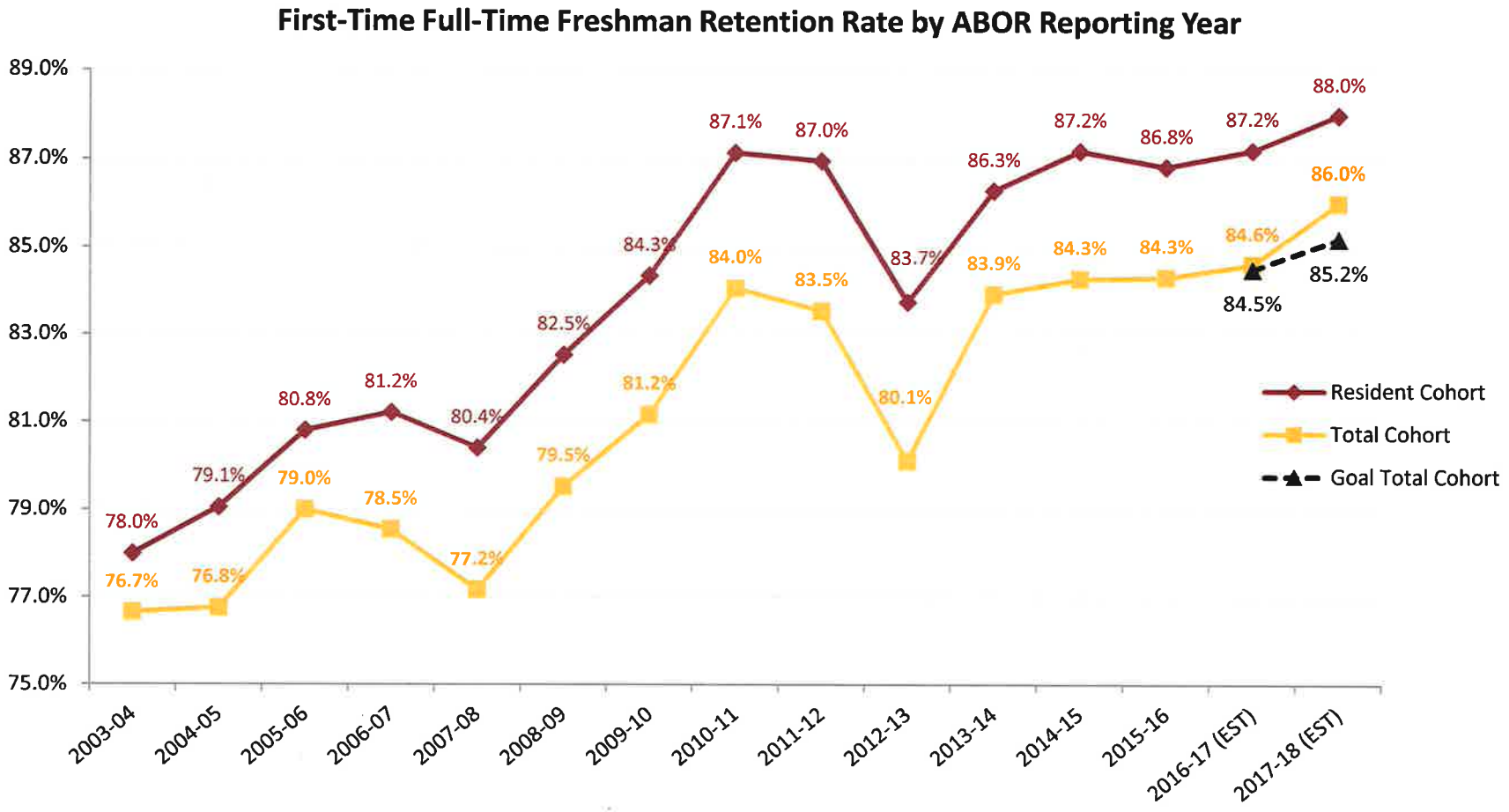
FY 2016 Goal 1

Enterprise Metrics Performance Incentives:

Freshman retention rate: 84.3%

Progress Report Follows

Achieving Freshman Retention Goal:



Achieving 2018 Metric: 85.2% Freshman Retention

Context:

- ASU underperformed historically, but has worked to improve the freshman retention rate to the level of other universities that admit only "A" students coming out of high school, while still admitting "B" students as well.
- The ultimate goal is above 90% retention, the current retention rate for UT Austin, which admits only "A" students.
- "A" students coming to ASU from Arizona high schools already retain at 95%.
- Several colleges within ASU are approaching 90% retention, including Journalism (88.6%) and Engineering (87.7%).
- New and continuing efforts to boost overall retention focus particularly on improving outcomes for "B" students and those from lower income families.
- Retaining higher numbers of out-of-state students remains a challenge for ASU, as even those who perform well often return to universities in their home states after the first, successful year at ASU.

Achieving 2018 Metric: 85.2% Freshman Retention

Strategies to Realize Goals

- Continue existing broad-reaching programs and actions to reach as many students as possible (e.g., tutoring, financial aid).
- New initiatives that provide students access to applications that personalize their experiences and give them meaningful control.
- New instruments that give service providers access to information for focused intervention as soon as a predicted failure has developed instead of reacting to failure once it occurs.

Highlighted initiatives

Student Success Tools

2016-17

- Continued development of and broader implementation of eAdvisor, Degree Search, and me3@ASU
- Predictive analytics-based platform to provide real-time risk assessment and to improve intervention actions by faculty, academic advisors, and other student support staff (Civitas: Illume, Inspire for Advisors, Inspire for Faculty)
- Financial literacy platform to give students and their families access to personalized student financial learning and planning, emphasizing college and life/career financial planning (iGrad)
- Growth mindset online platform that matches students to peer mentors in similar circumstances who have successfully navigated the same challenges and obstacles to improve motivation, resiliency, and determination in a highly personalized way (GetSet). Exercises will be required in ASU 101 so all new freshmen will be engaged.
- Shift communication of advisors, faculty, and other student support staff with students from transactional to proactive and student centric, enabling systematic case management and personalized assistance (Salesforce)
- ePortfolio platform enabling students to store, share, and showcase their in and out-of-class work and achievements, building the ingredients for a top-notch resume and portfolio (Digication)

Highlighted initiatives (cont.)

Student Success Tools (Cont.)

2016-18

- Co-develop an interactive and personalized student-facing application so students can map-out an integrated plan to achieve their academic and career aspirations
  - using Degree Search, Major Maps, iGrad, Schedule Planner, career planner, graduation planner, etc.
  - students control their course planning (within the degree map), visualize progress towards their goals, understand the implications of changing plans (e.g., cost), layout their own milestones to achieve (e.g., internship), and integrate achievements in ePortfolio
  - students own their plans and define their aspirations at the beginning, rather than at the end, of their college experiences.

Highlighted initiatives (cont.)

Curricular Innovations

- A major expansion of new approaches will continue to drive improved learning, and by so-doing, improve student success, leading to improved retention and graduation. These innovations require active/engaged learning and a level of personalization not normally found in traditional pedagogies.
  - Adaptive learning-based pedagogy blended with interactive learning that cause students to apply their knowledge; extend it to unfamiliar situations; and formulate solutions to complex problems.
  - LEAD: curriculum focused on building superior cognitive skills with applicability to career success for at-risk students
  - PROMOD: projects-based curriculum mapping to a specific set of competencies and anticipated learning outcomes in the major

University Innovation Alliance

- Through work with the UIA, including participation in a First-in-the-World grant, collaborating to understand best practices that support real change in student success and retention at member institutions and implement at ASU as appropriate.

JumpStart

- Underprepared students will complete an orientation to college course, financial literacy course, and other activities that prepares them for the demands of college prior to the beginning of their first fall semester

Enterprise Performance Incentives

FY2015-2018 Goal 2

University attaining the projected 2018 fiscal year strategic plan metric goal for the total research expenditures of $562.5 million; with an additional incentive for exceeding the goal by attaining total research expenditures of $607.4 million for the 2018 fiscal year.

FY 2016 Goal 2

Enterprise Metrics Performance Incentives:

Research Expenditures: $481 million

Estimate as of July 2016

Progress Report Follows

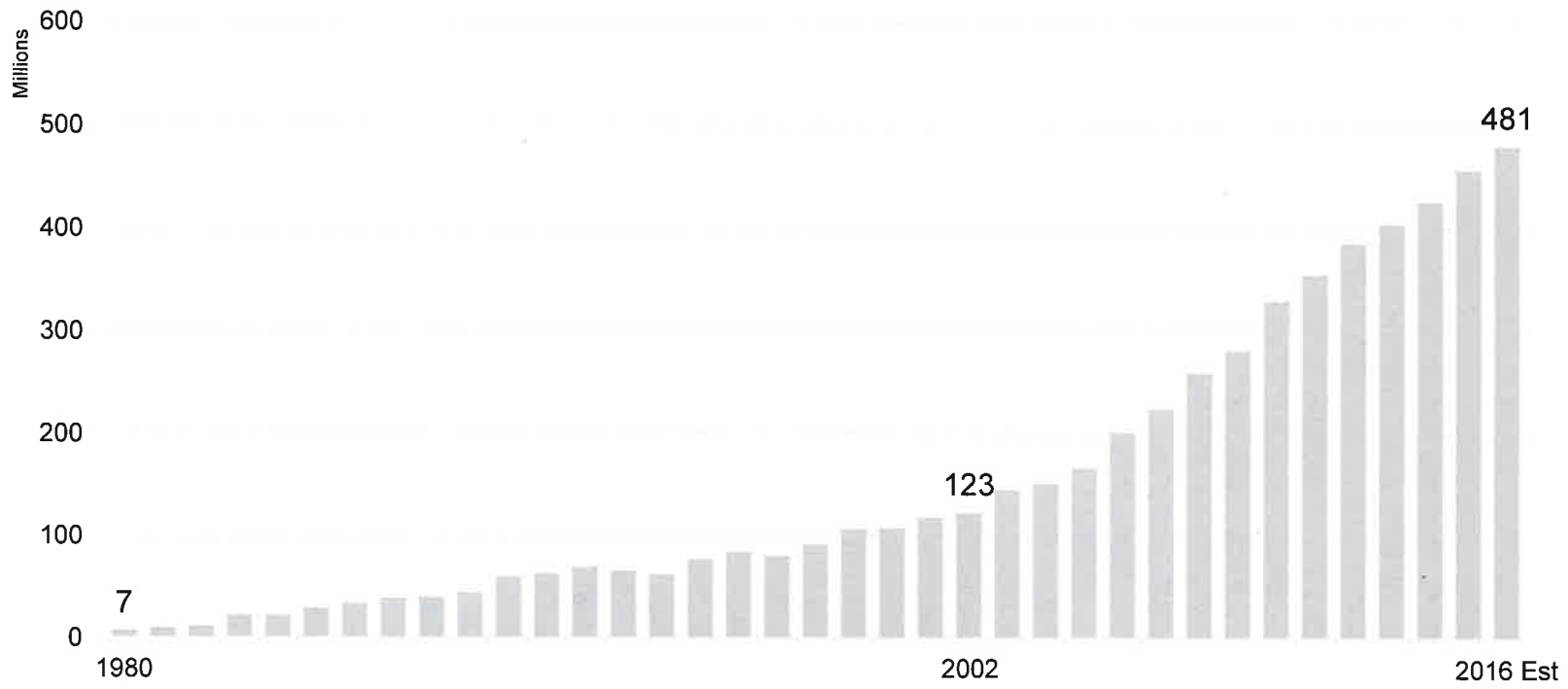
Total Research Expenditures

The growth of ASU's research expenditures demonstrates that our ideas are successful in the competition for research funding.

ASU's goal is to grow as a world class research university that is highly accessible.

Total Research Expenditures

ASU's Research Transformation



ASU's research enterprise emerged in 1980, approximately 100 years after most of our competitors. Since 2002, ASU has rapidly grown to become a national leader in research.

Total Research Expenditures

ASU's National Research Rankings

Total Research Expenditures: 49 of 895 (+4) ahead of

THE UNIVERSITY OF CHICAGO

BROWN

PRINCETON UNIVERSITY

Non-Medical School Expenditures: 31 of 895 (+1) ahead of

Duke UNIVERSITY

Yale

Total Research Expenditures among Institutions without a Medical School: 12 of 745 (unch) ahead of

Caltech

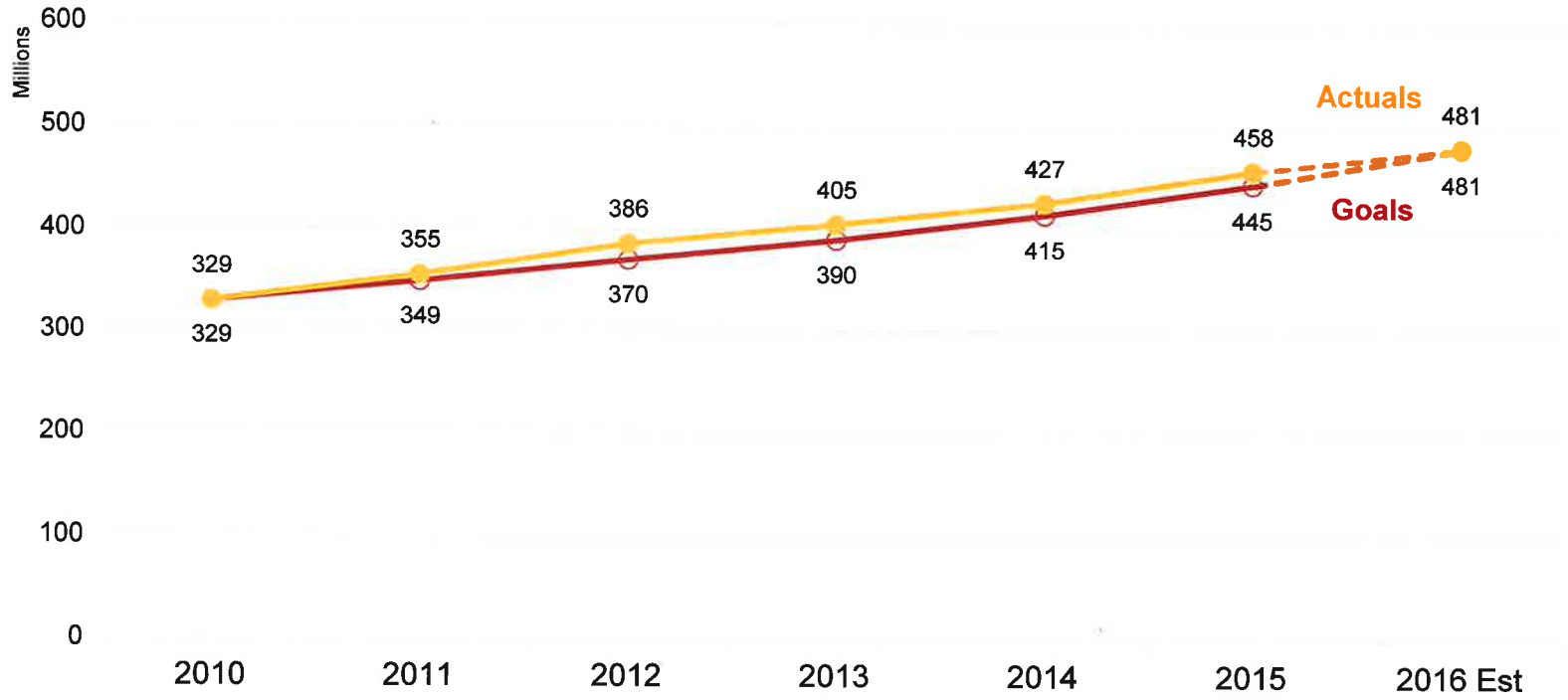
PRINCETON UNIVERSITY

Carnegie Mellon University

ASU's research expenditures exceed many of the nation's most high recognized universities.

Total Research Expenditures

Research Expenditures vs. Goals

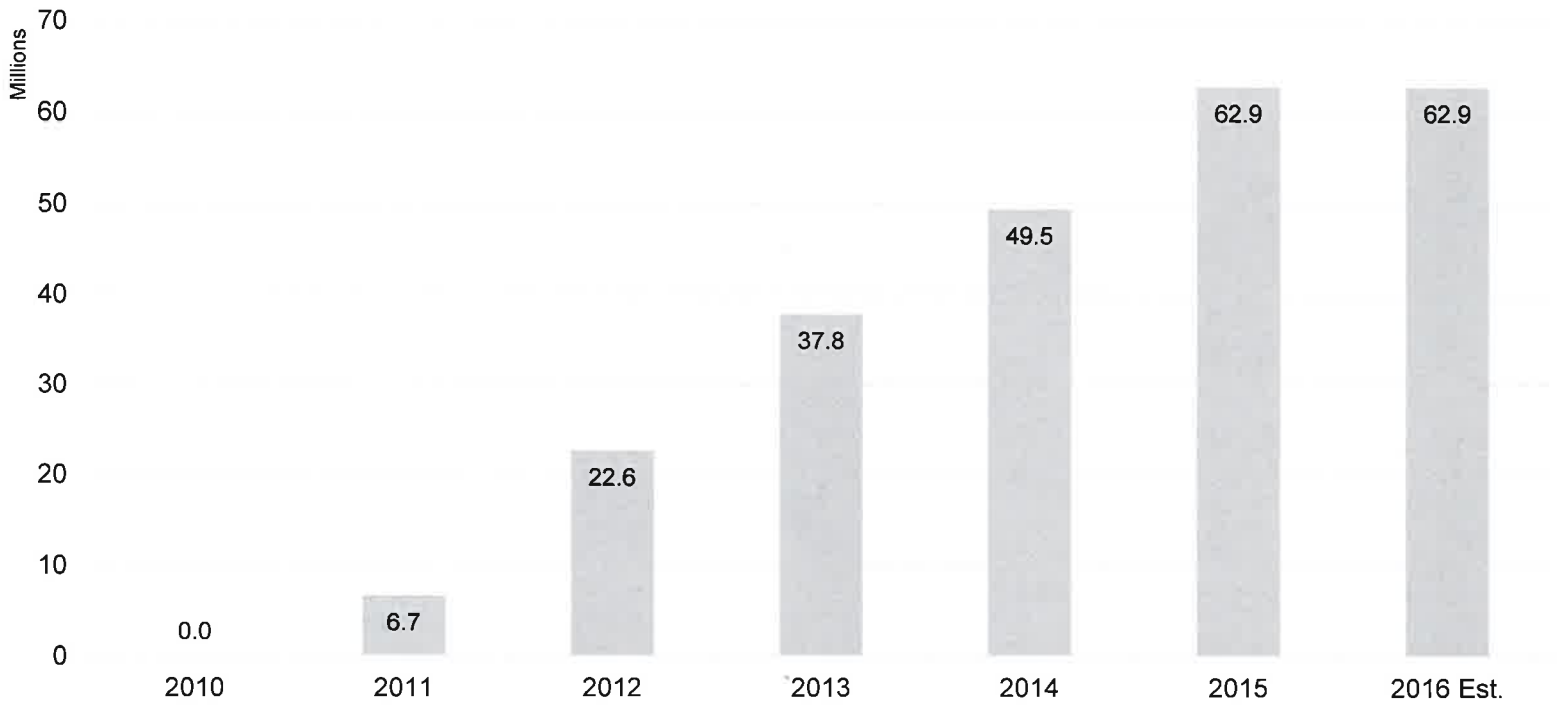


ASU has met or exceeded its goal in each year of the Enterprise Plan.

ASU's Research Expenditures have increased by 45% in the first 6 years of the Enterprise Plan.

Total Research Expenditures

Cumulative Outperformance vs. Goals



ASU has outperformed its research expenditure goals by more than $60M.

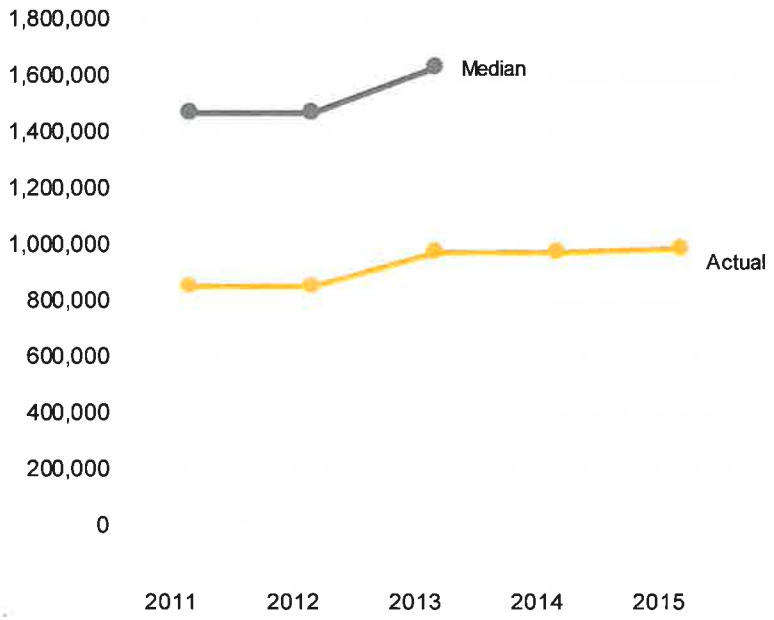
Related Research Metrics

ASU's research enterprise is highly efficient both in its use of resources and in its delivery of use-inspired outcomes.

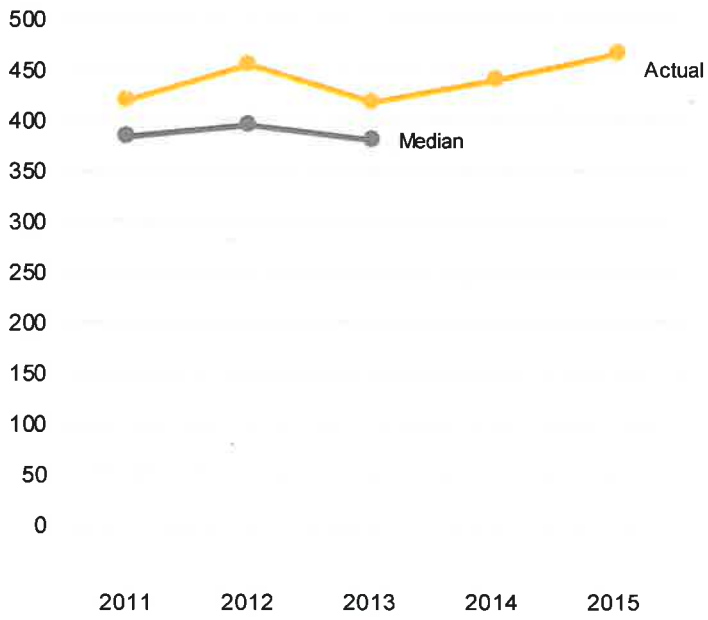
Related Research Metrics

Net Assignable Research Square Feet

Net Assignable Square Feet (NASF)



Total Research Expenditures per NASF

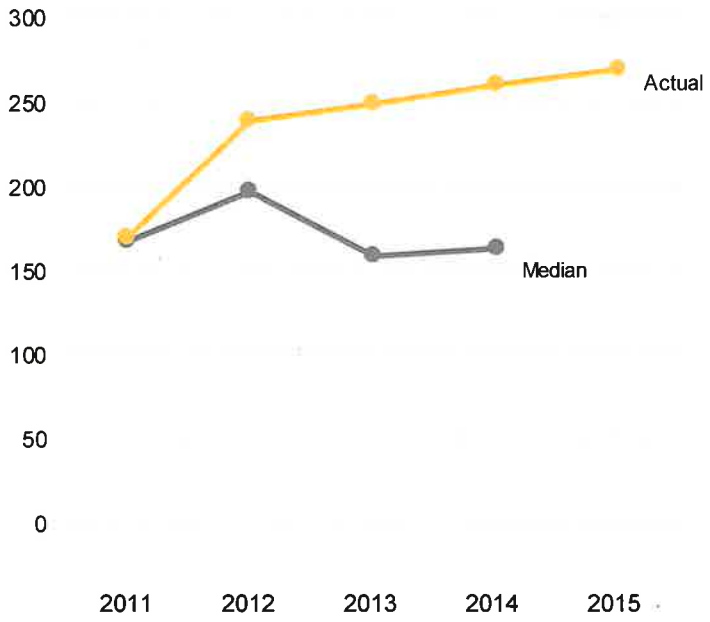


ASU outperforms the median of its peer institutions in research expenditures per square foot of research space.

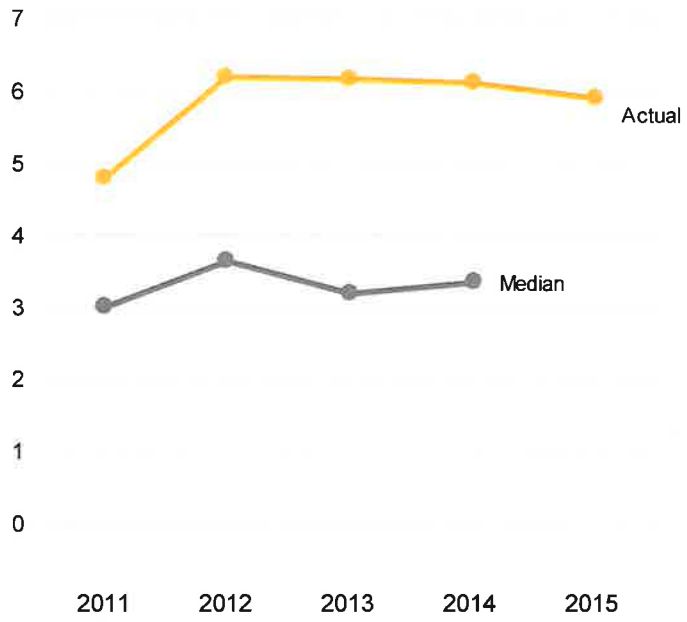
Related Research Metrics

Invention Disclosures

Invention Disclosures Transacted



per $10M in Total Research Expenditures

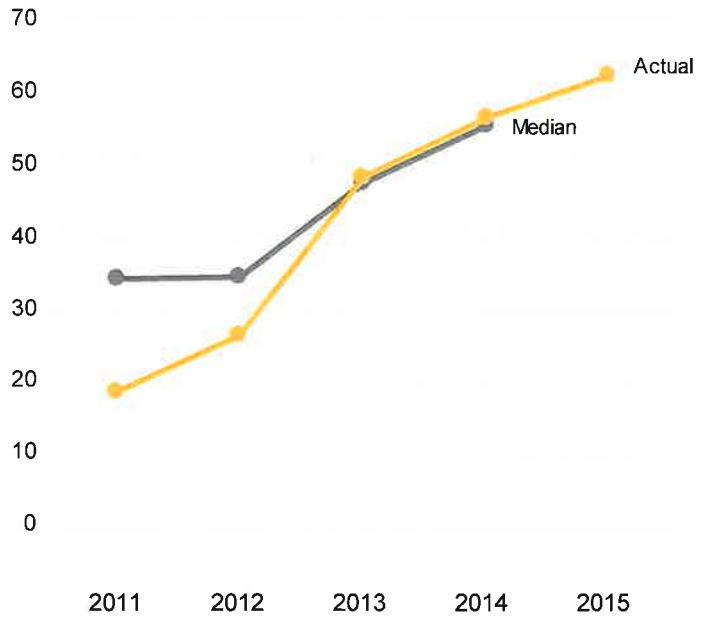


ASU significantly outperforms the median of its peer institutions in invention disclosures transacted.

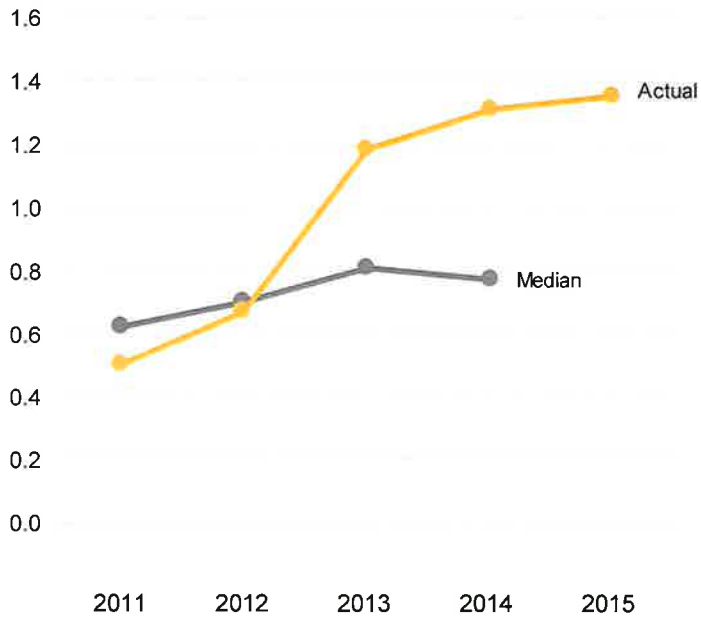
Related Research Metrics

U.S. Patents

U.S. Patents Issued



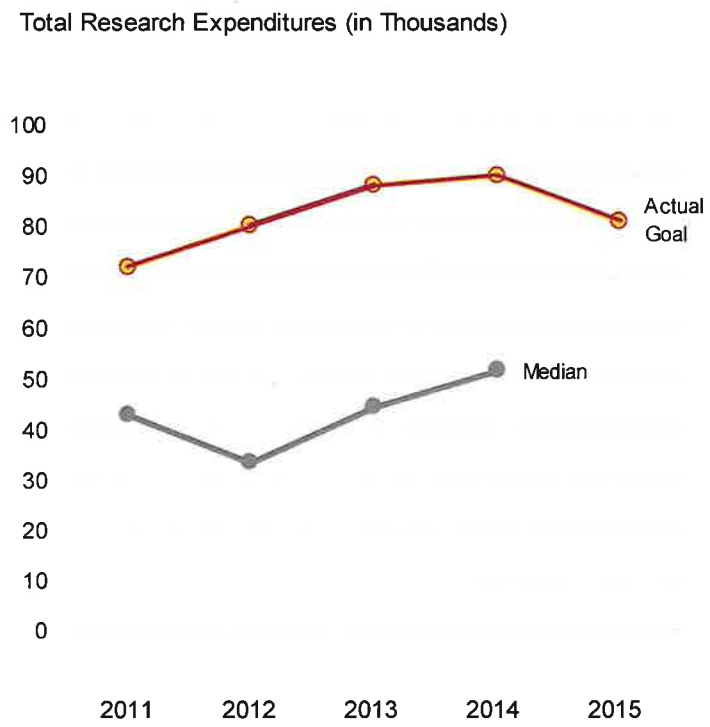
per $10M in Total Research Expenditures

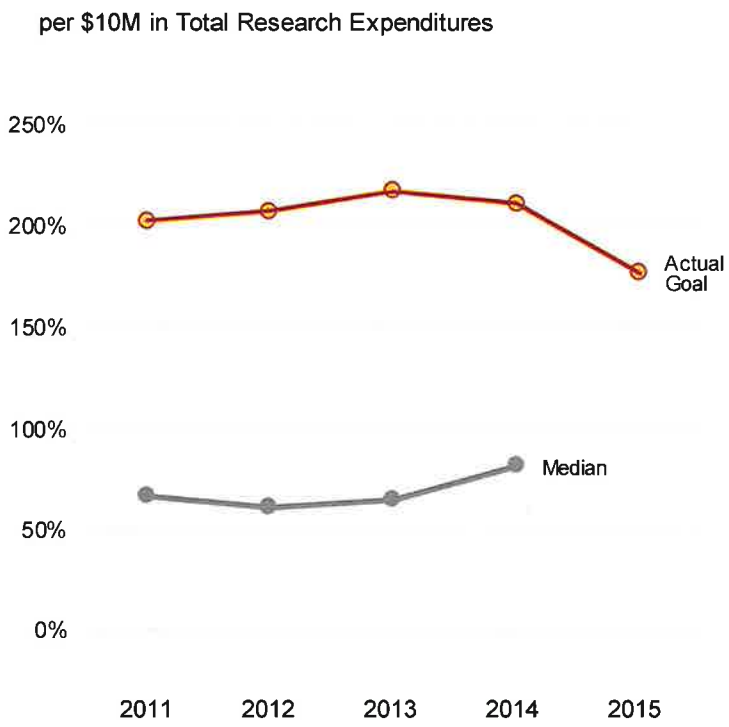


ASU significantly outperforms the median of its peer institutions in U.S. patents issued per $10M in research expenditures.

Related Research Metrics

License and Options Executed



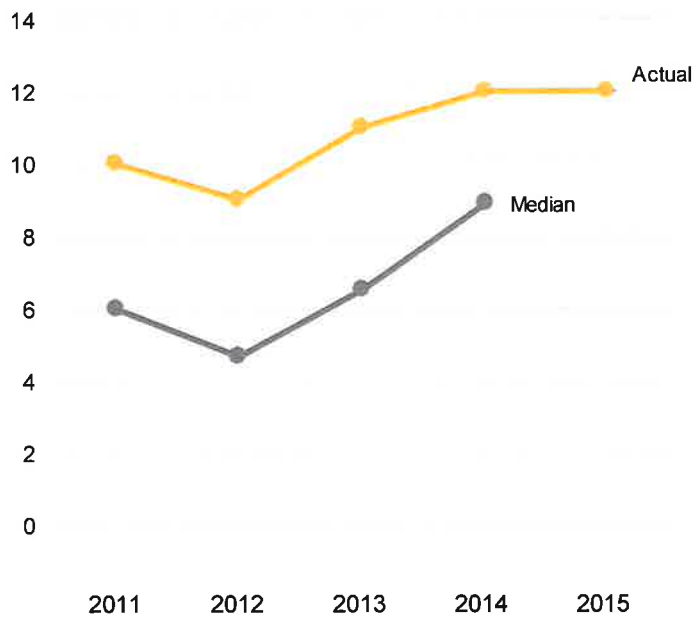


ASU significantly outperforms the median of its peer institutions in the number of Licenses and Options Executed both in absolute terms as well as per $10M in research expenditures.

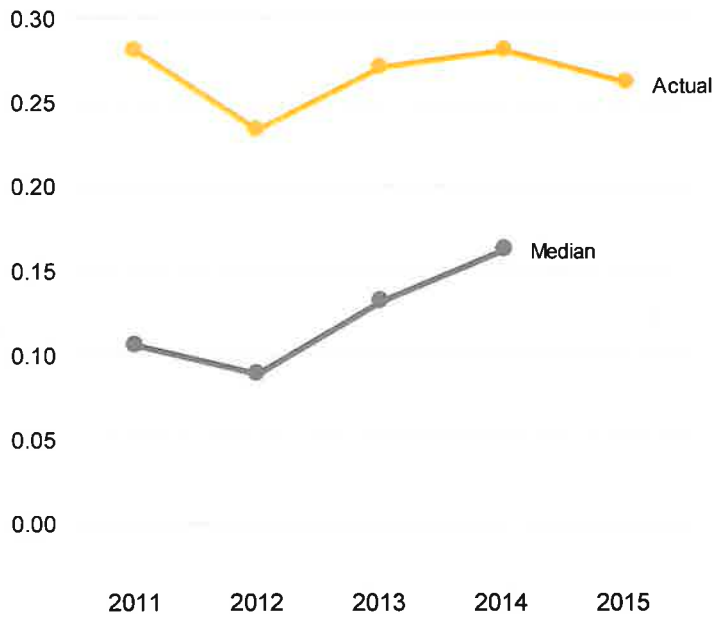
Related Research Metrics

Startup Companies

Startup Companies



per $10 Million in Total Research Expenditures



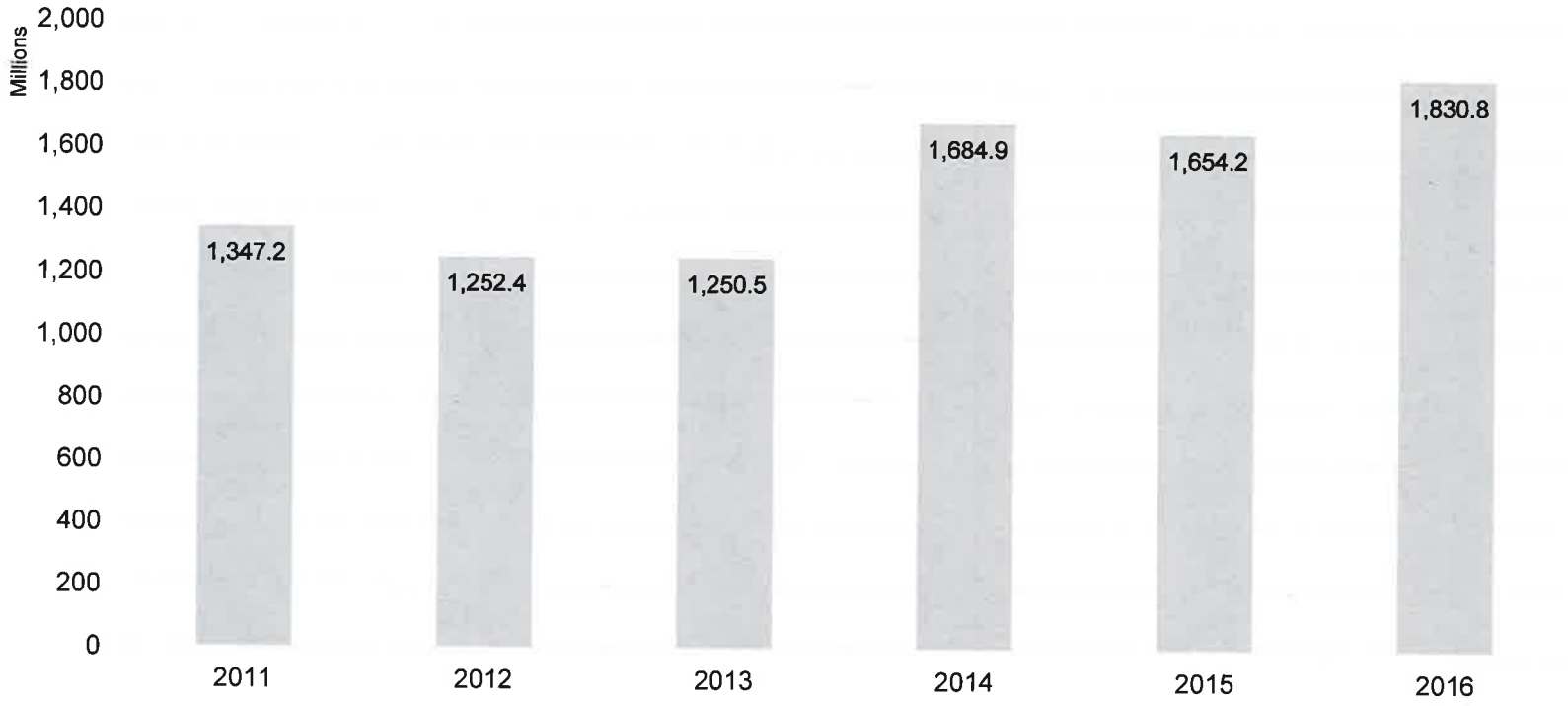
ASU significantly outperforms the median of its peer institutions in startup companies launched.

Research Outlook

ASU's research pipeline is robust. Current levels of proposals submitted and award obligations received demonstrate that ASU's research expenditures will continue to grow.

Research Outlook

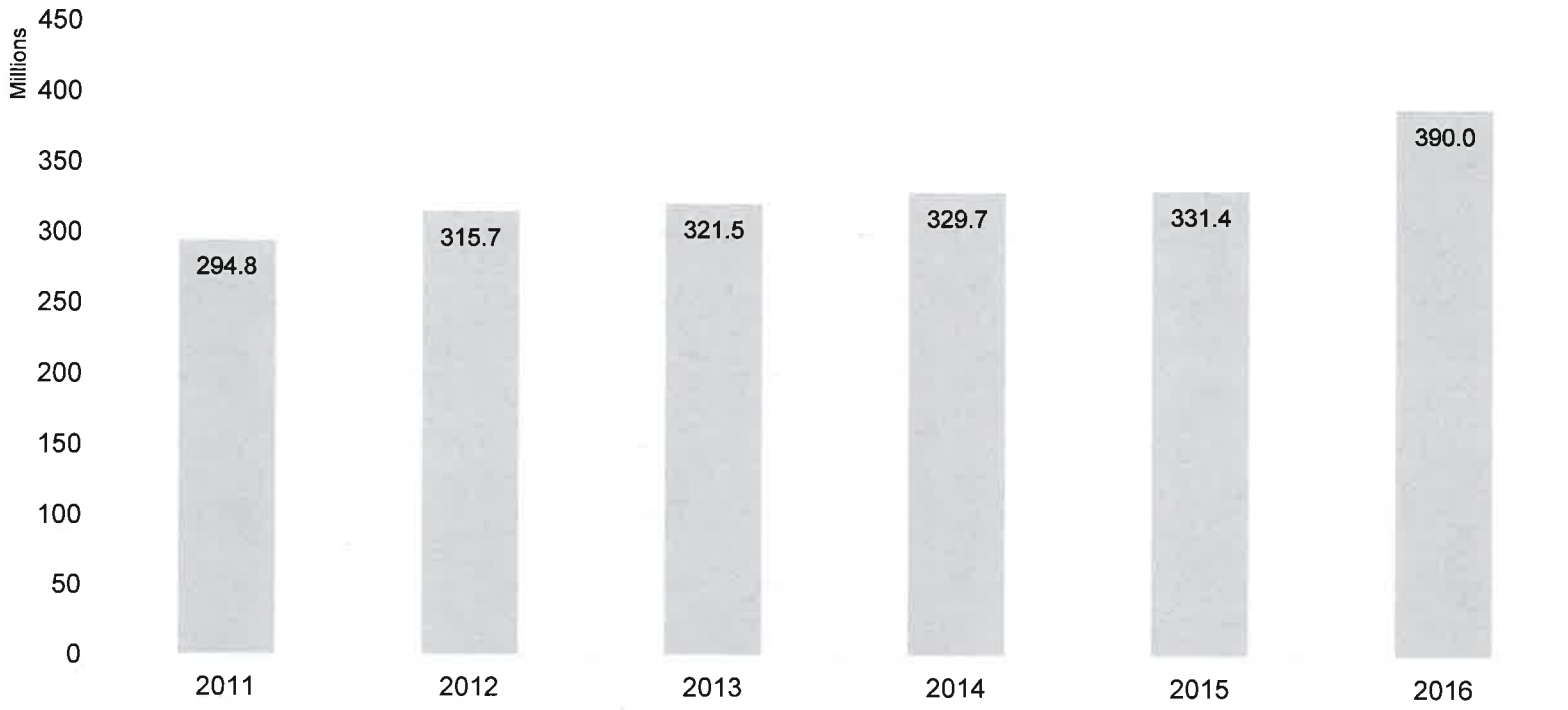
Proposals Submitted



ASU's proposal volume nearing institutional records set during ARRA period.
ASU's proposal volume has increased more than 45% since 2012-2013 levels.

Research Outlook

Award Obligations Received



ASU's award obligations are at an all time high.
ASU's award obligations increased by more than 30% since 2011.

Enterprise Performance Incentives

FY2015-2018 Goal 3

Achievement of the projected 2018 fiscal year strategic plan metric goal in Bachelor's Degrees awarded of 16,246.

FY 2016 Goal 3

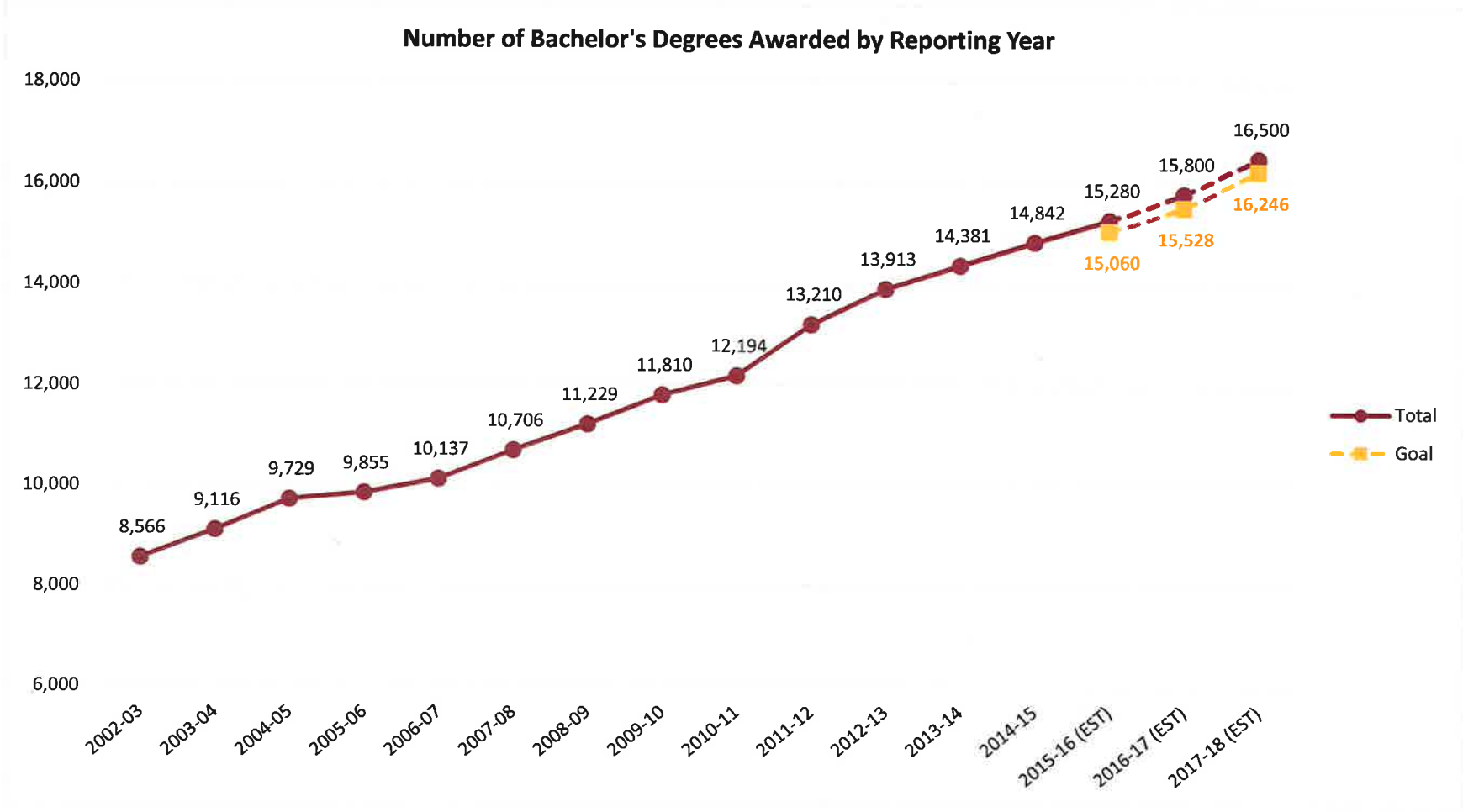
Enterprise Metrics Performance Incentives:

Bachelor's Degrees Awarded: 15,280

Estimate as of July 2016

Progress Report Follows

Achieving Degree Goal:



Achieving 2018 Metric: 16,246 Bachelor's Degrees

Importance of Increasing Bachelor's Recipients in Arizona

- Obtaining a college degree remains the single greatest determining factor in social mobility – ability to improve one's socio-economic position.
- University graduates produce cutting edge ideas, products, and processes that move creativity and discovery into the marketplace, boosting personal as well as societal success.
- Increasing the number of college graduates will improve outcomes for children, for our health and social systems, and for civic participation in Arizona.

Achieving 2018 Metric: 16,246 Bachelor's Degrees

Strategies to Realize Goals

- Continued growth in the freshman class (76% increase since 2002)
- Continued improvements in retention and graduation rates. Next year, the 4 year graduation rate is forecast to be 50.0% and the 6 year rate to be 66.9%.
- Continued growth in transfer pathway programs with community college partners. Fall new transfers increased by 91% since 2002.
- Continue to add about 10 new degree program offerings each year
- Increased Online program offerings. More than 100 degree programs are offered online.

Enterprise Performance Incentives

FY2015-2018 Goal 4

Achievement of the projected 2018 fiscal year strategic plan metric goal of 100,184 total students enrolling in the University.

FY 2016 Goal 4

Enterprise Metrics Performance Incentives:

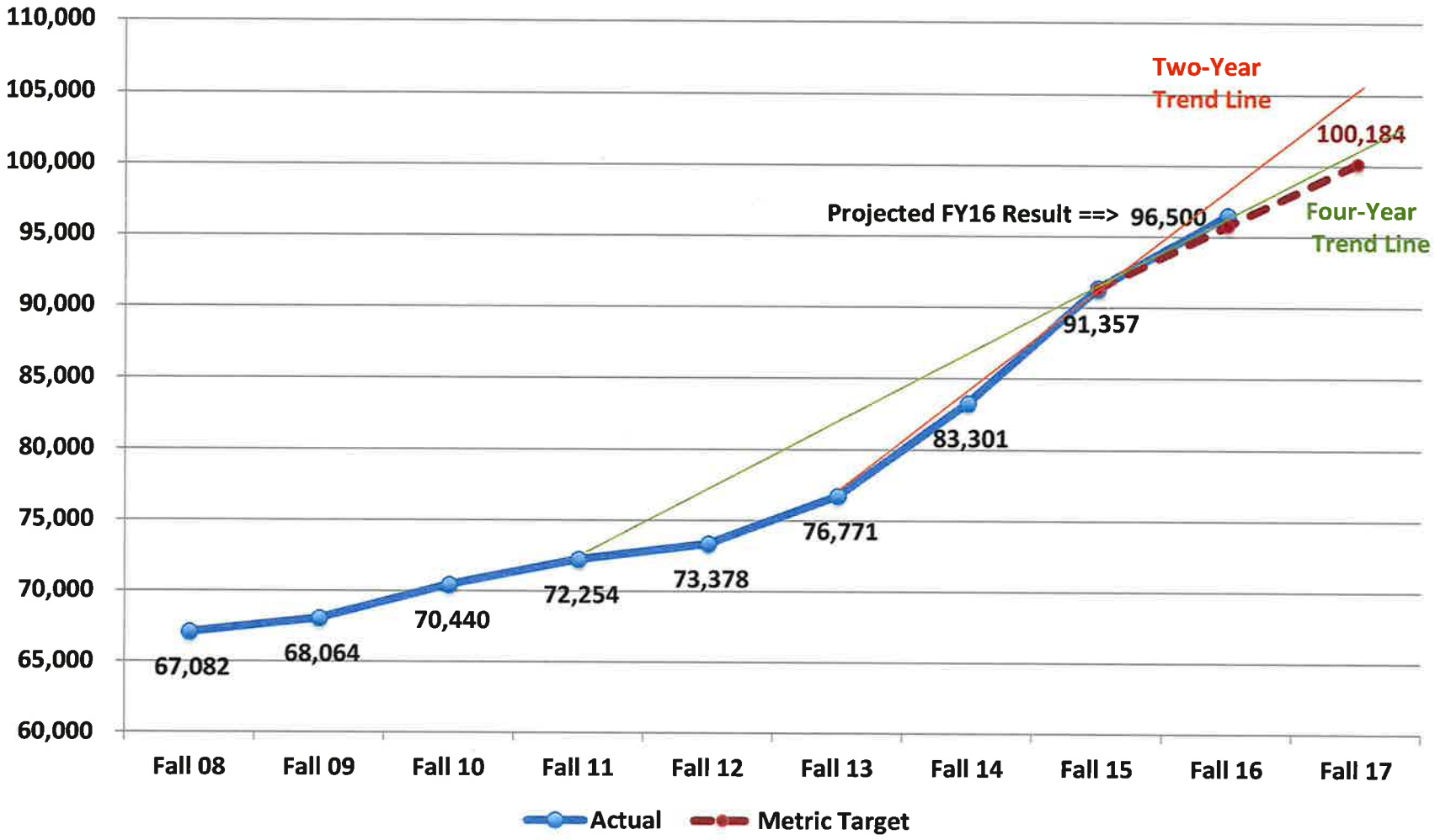
Total Enrollment: 96,500

Fall 2016 estimate as of July 2016

Progress Report Follows

Total Enrollment

Actual Fall 2008 to Fall 2015, Projected Fall 2016 & Metric Targets to Fall 2017



Enrollment Growth Philosophy

ASU seeks enrollment growth as a function of being a greater service to:

- Rising high school seniors to have access to a world class research university, more than a teaching and learning experience
- Transfer students who are coming in from community colleges
- College completers who are in online programs
- The state through ASU programs in Lake Havasu and Eastern Arizona
- Industry through programs like the partnership with Starbucks and others

Enrollment Growth Strategies

ASU will seek to expand the pipelines from AZ high schools and community colleges through efforts with:

- ASU Prep
- Expanded reach of programs in high schools to more schools
- Further development of the Me3 app
- Better penetration of eAdvisor access for community college students

ASU will ramp up on-ground activity in domestic and overseas recruiting in conjunction with the improving ASU brand reputation that is driven by:

- #1 school for innovation designation
- National visibility for the New American University model
- Current and new international educational and research partnerships that extend the awareness of ASU globally

Enrollment Growth Strategies

Maintaining responsive financial aid policies to offer affordable access is critical to recruitment and retention success

The growth trajectory of ASU Online can be maintained by:

- Continuing to expand the number of undergraduate and graduate degree programs available online, with particular emphasis on engineering and business
- Refining digital marketing strategies in conjunction with marketing partner
- Continuing to innovate with state-of-the-art instructional technologies and tools to assure highest quality courses in the market.

Enterprise Performance Incentives

FY2015-2018 Goal 5

Achievement of the projected 2018 fiscal year strategic plan metric goal number of degrees in high demand fields of 9,450.

FY 2016 Goal 5

Enterprise Metrics Performance Incentives:

Degrees Awarded in High Demand Fields: 8,240

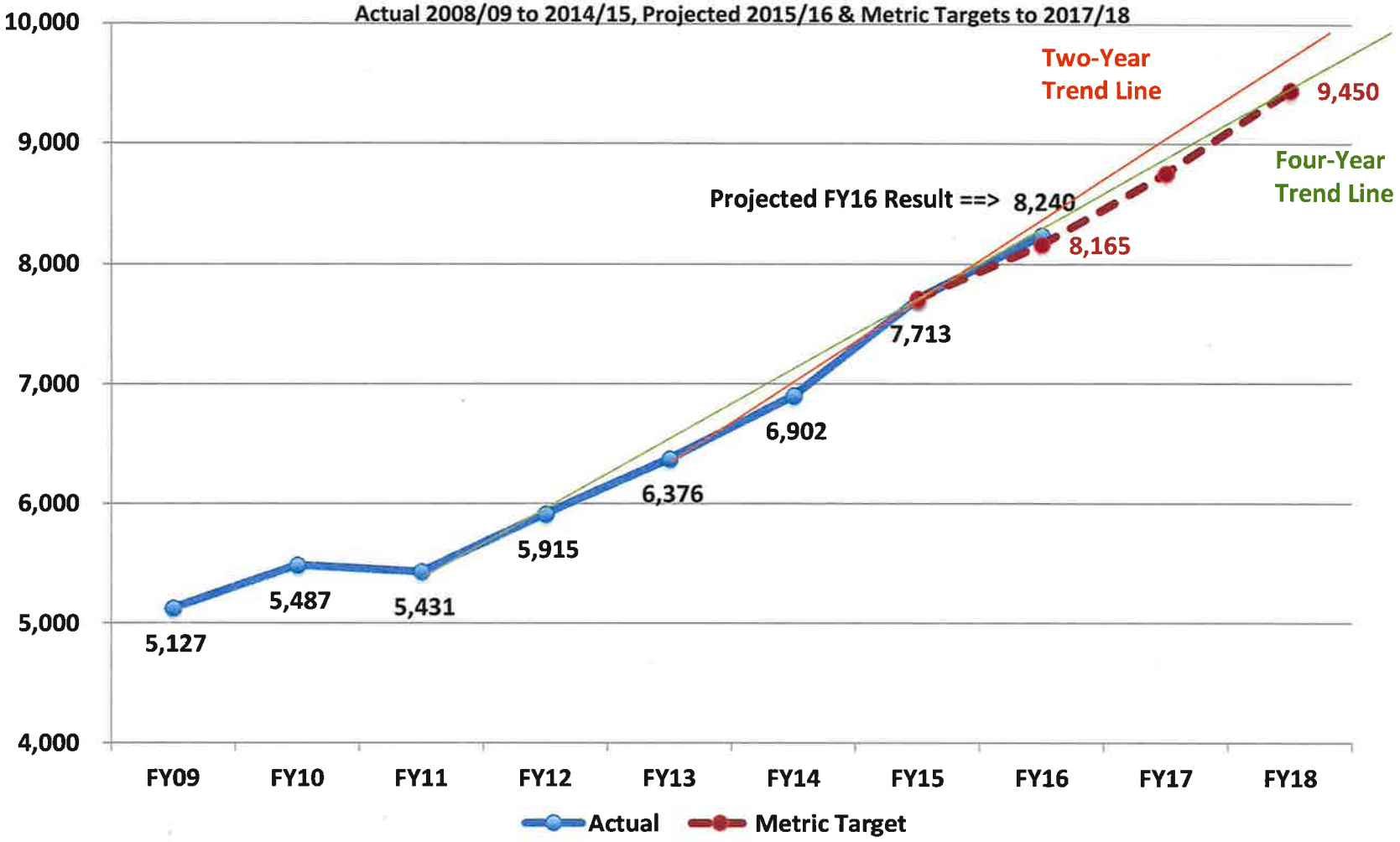
Estimate as of July 2016

Progress Report Follows

Degrees Awarded in High Demand Fields

STEM fields (natural sciences, engineering & technology, & mathematics), health professions & education

Actual 2008/09 to 2014/15, Projected 2015/16 & Metric Targets to 2017/18



High-Demand Degree Importance

- Focus and emphasis on the high demand fields are essential goals for the economic future of Arizona

High-Demand Degree Strategies

- High demand degrees have been defined as those from the STEM fields (natural sciences, engineering and technology, and mathematics), the health professions, and education.

- Student demand has shifted towards all of these fields (except education) as concerns about career prospects have become more of a focus in the choice of majors.

- ASU believes that this shift will continue, and current enrollment patterns confirm that. Achieving the targets require the ability and willingness to provide sufficient capacity to meet demand.

High-Demand Degree Strategies

- On-campus investments in the sciences and engineering in faculty and in student housing are underway.

- New online programs, particularly in engineering and in bio-medical sciences, will further enlarge capacity for enrollment.

- New varieties of healthcare programs have been introduced to provide more opportunities beyond nursing. Examples include: Science of Healthcare Delivery, Health Policy, Health Management, Healthy Lifestyle Coaching, and Biomedical Informatics.

- Education degree demand growth will require better market signals but ASU has efforts to provide teaching credentials to students in a wide range of non-education majors

University Initiatives Performance Incentives

FY2015-2018 Goal 1

Attain top three ranking in the PAC 12 for academic performance of ASU student athletes.

FY 2016 Goal 1

University Initiatives Performance Incentives:

PAC 12 Academic Performance for Student Athletes

Progress Report Follows

Attain top three ranking in the Pac-12 for academic performance of ASU student athletes

The strategic importance of the incentive to the university or enterprise strategic plan;
Nationally, athletics has generally been recognized as the "front porch" of the university. The visibility of intercollegiate athletics and local and national interest in student-athlete achievement is under constant scrutiny. While team records (wins and losses) bring the most notoriety, Sun Devil Athletics overarching goal is to ensure the academic success, graduation, overall wellbeing and career transition of ASU student-athletes.

Achievement of the incentive as assigned, progress toward achievement, or challenges that prevented achievement and a strategy for overcoming those challenges;

The primary metrics of academic performance for Sun Devil Athletics are 1) graduation success – measured by the NCAA Graduation Success Rate; 2) contemporary academic progress – measured by the Academic Progress Rate; and 3) overall and team grade point averages.

Several additional academic distinctions with meaning on a conference and national scale are:

- Pac-12 Conference Scholar-Athletes of the Year (annual since 2007)
- Academic All-Americans
- Post-Graduate Scholarships awarded

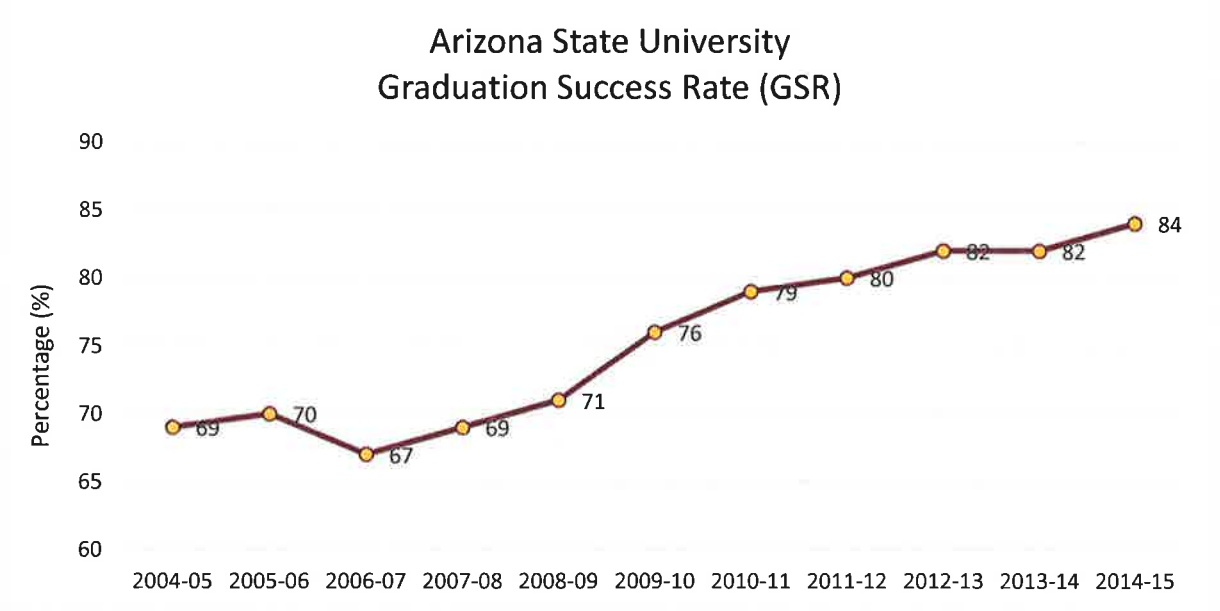
Graduation Success Rate	84%	5th Place in Pac-12
African American Student Athlete	82%	2nd Place in Pac-12
Academic Progress Rate	985*	5th Place in Pac-12
*Indicates 985 is average of APR scores for all sports		
4 Teams gained NCAA National recognition for being ranked in top 10 percentile		2nd Place in Pac-12
Grade Point Average	3.11*	Highest all-time/no comparison data for Pac-12
*Indicates 3.11 grade point average for all student-athletes for 2015-16 academic year		
Pac-12 Scholar Athletes of Year	30*	2nd in Pac-12 Conference
*This designation began in 2007		
Academic All Americans	73	2nd in Pac-12 Conference*
*Since 2000		
NCAA Postgraduate Scholarships	18	2nd in Pac-12 Conference
*Since 2000		

Data or other evidence demonstrating achievement;

Graduation Success Rate:

84% = ASU All-time high; have tied or surpassed all-time high in each of past nine years.

- Women's GSR is 90%.
- Men's GSR is 79%. The men's GSR has improved from 56% in 2005.
- We have confirmed this number will increase to 87% at the next report in October 2016.

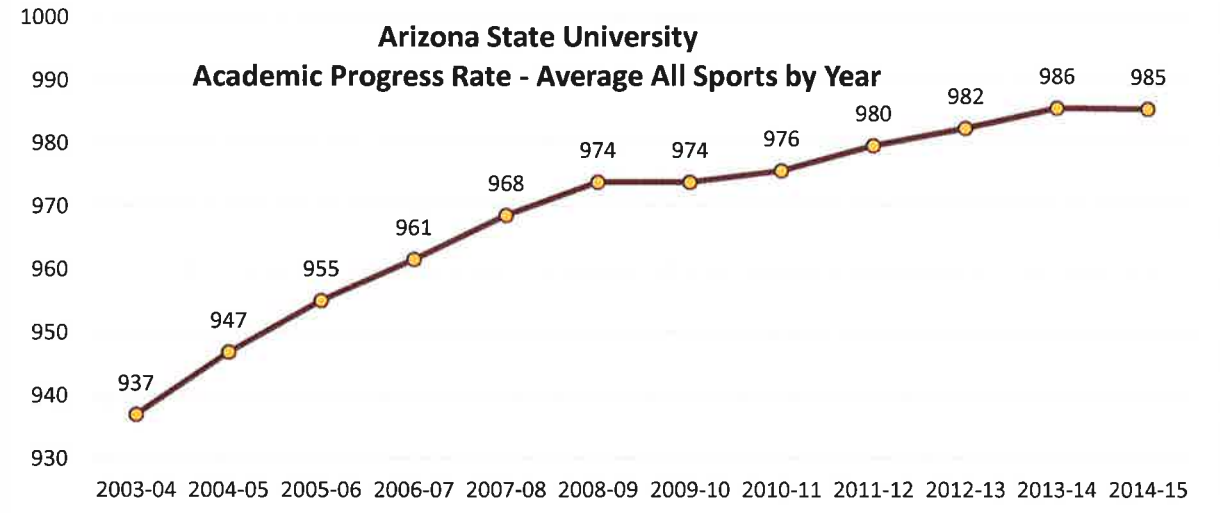


Academic Progress Rate

985 – continuous improvement since beginning of metric.

Teams ranked 1st in the Pac-12: Baseball, Men's Golf, Women's Swimming, Women's Tennis and Women's Volleyball.

Ranked 2nd in Pac-12 for most teams recognized by the NCAA in the Top-10 percent.



Any administrative, personnel, resource allocation or policy changes associated with achievement of the incentive;

- Created and enhanced systems to evaluate risk factors for all entering and continuing student-athletes
- Continued research on best practices for supporting academic performance
- Hired full-time learning specialist within past five years
- Incremental increases of staff size toward optimal ratio of academic support staff to student-athletes
- Evolved culture regarding academic excellence / achievement

The plan or proposed strategy for maintaining the achieved goal or the momentum put in place in support of the strategic initiative(s) described in the incentive; and

- Hire additional full-time learning specialist and Academic Coordinator – approved for FY17
- Continue to evolve comprehensive assessment tool for evaluating incoming and returning student-athletes
- Better customize educational tools and motivational methods to meet the needs of current student-athletes
- Use technology to provide tools to enhance student-athlete academic performance and continue to collaborate with the University Technology Office to enhance performance-tracking software

University Initiatives Performance Incentives

FY2015-2018 Goal 2

Increase fundraising to more than $165 million per year over the 3-year average of FY16, FY17 and FY18.

FY 2016 Goal 2

University Initiatives Performance Incentives:

Fundraising to more than $165 million per year over 3 year average

Progress Report Follows

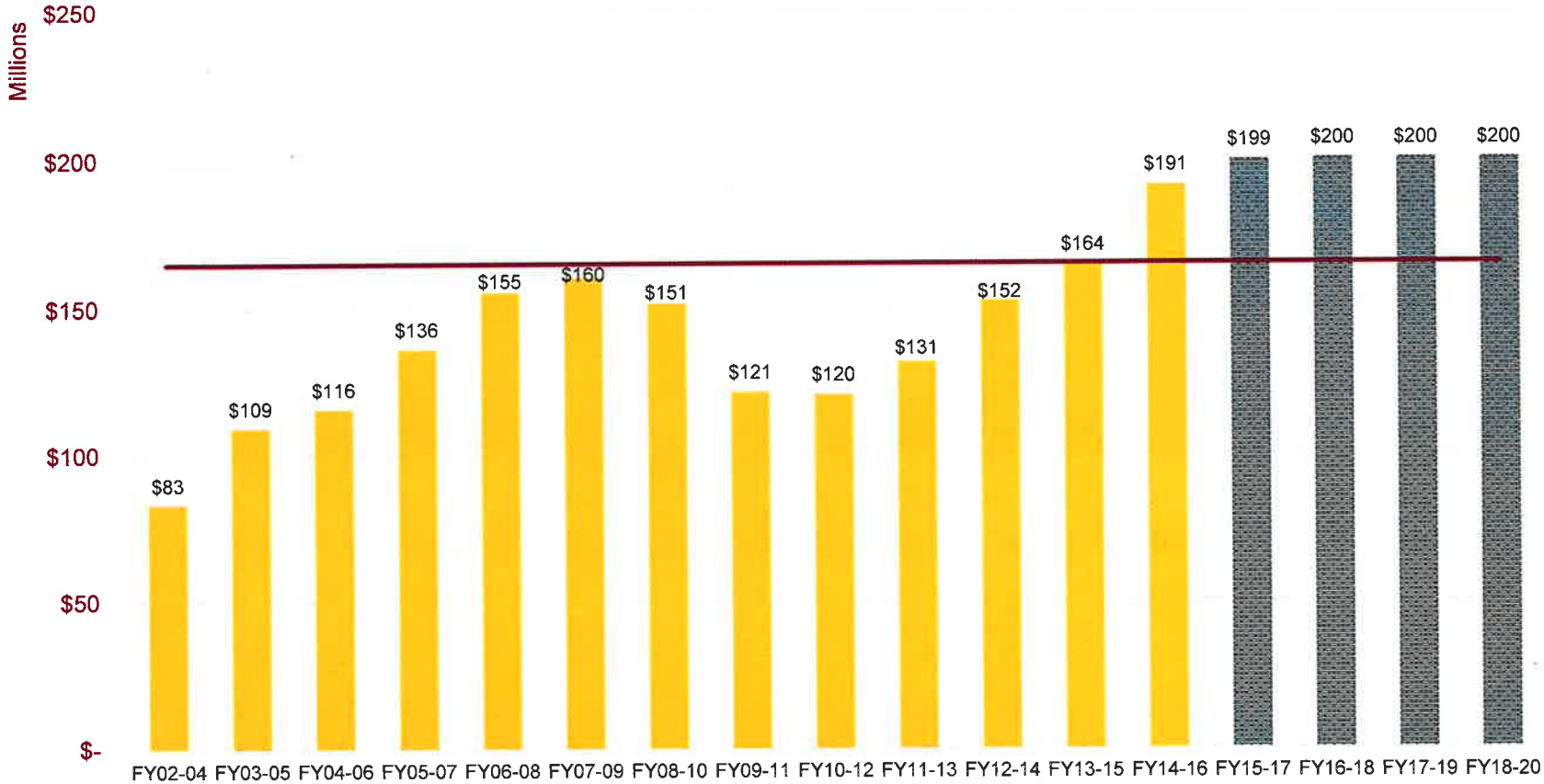
- The strategic importance of the incentive to the university or enterprise strategic plan:
  - Declining state investment in higher education has necessitated finding new and diverse revenue sources to advance Arizona State University as The New American University. Resource raising is a significant element in achieving President Crow's vision outlined in the ASU enterprise strategic plan.

- Achievement of the incentive as assigned, progress toward achievement, or challenges that prevented achievement and a strategy for overcoming those challenges:
  - The incentive is being achieved, in large measure, due to the spirit of innovation and entrepreneurism President Crow infused in the university and Foundation.
  - The Foundation is evolving from a purely fundraising focus to a resource raising model. For example, Foundation real estate ventures are creating assets to advance the university and higher education.

- Data or other evidence demonstrating achievement:
  - FY16 brought more than $215M+ in new gifts & commitments from ASU investors, with the year prior bringing $207M+, the two best ever fundraising years in the history of ASU.
  - Since FY11, the ASU Foundation has seen steadily increasing new gifts and commitments which has improved our three year average from $120M to $191M, which exceeds the ABOR fundraising target.
  - See next slide on 3 year average for New Gifts & Commitments.

ASU Foundation
ARIZONA STATE UNIVERSITY

New Gifts and Commitments
Three-Year Average



FY17-FY20 totals are projected estimates

- Any administrative, personnel, resource allocation or policy changes associated with achievement of the incentive:
  - Campaign ASU 2020 has required a reallocation and slight increase in fundraising staff.

- The plan or proposed strategy for maintaining the achieved goal or the momentum put in place in support of the strategic initiative(s) described in the incentive:
  - An annual, comprehensive Foundation operations plan outlines key objectives and metrics ensuring a well defined pathway to goal achievement.
  - A greater emphasis on principal-level giving ($5M+) philanthropy will allow the Foundation to move towards achieving $200M+ three year average in new gifts and commitments by 2020.

- Any additional issues the president believes may be relevant to the evaluation of the incentive or to the continued success of the initiative described in the incentive:
  - Continued implementation of the ASU Enterprise Model.

FY 2016 Goal 3

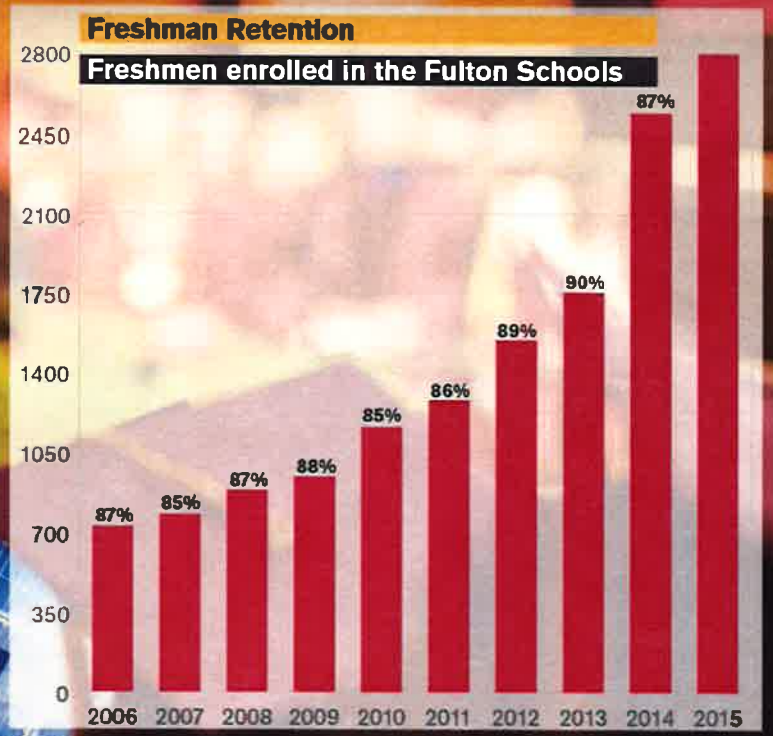
University Initiatives Performance Incentives:

Fulton Schools of Engineering Goal

Progress Report Follows


Building Engineers:
Becoming America's largest
engineering school with
90% student retention
ASU
IRA A. FULTON SCHOOLS OF
engineering
ARIZONA STATE UNIVERSITY

Increasing access *and* increasing student success



Critical to the university's mission is increasing participation and success of Engineering majors

Highlights:

- 4-year graduation rates in engineering nearly tripled between 2003 and 2010 (entering classes).
- Degrees awarded increased more than 260% between 2005-2006 and 2014-2015.

The Fulton Schools of Engineering Restructured

The design of the school was altered by eliminating traditional departments and building grand challenge departments.

Numerous operational changes were executed
eg: the leadership, the organizational structure, and the financing.

The Fulton Schools are the Largest Engineering School in the Country

2015 rankings from the American Society of Engineering Education:

- ***1*** in **engineering undergraduate enrollment** (11,572) ahead of Texas A&M and Georgia Tech
- ***3*** in **graduate enrollment** and in number of engineering **master's degrees awarded** including computer science
- ***6*** in number of **women tenured/tenure-track faculty** members
- ***7*** in **electrical engineering bachelor's degrees** awarded
- ***9*** in **biomedical engineering bachelor's degrees** awarded
- ***10*** in number of **tenured/tenure-track faculty members**
- ***11*** in **bachelor's degrees awarded to Hispanics**, in number of **Hispanic tenured/tenure-track faculty** members and in **computer science bachelor's** degrees awarded

The Fulton Schools are the Largest Engineering School in the Country

2015 rankings from the American Society of Engineering Education:

- ***16*** in **engineering bachelor's degrees** awarded and in **aerospace bachelor's degrees** awarded
- ***20*** in **chemical engineering bachelor's** degrees awarded
- ***24*** in bachelor's **degrees awarded to women**
- ***26*** in **engineering doctoral degrees** awarded by school
- ***32*** in **industrial engineering bachelor's** degrees awarded
- ***34*** in **mechanical engineering bachelor's** degrees awarded

Student Quality Better than Ever in 2015-2016

30%	of **Barrett Honors students** are in the Fulton Schools
167	**National Merit Scholars**/54 first-time freshman National Merit Scholars
109	**National Hispanic Scholars**
3	**Goldwater Scholar recipients** in 2016
1,184	Average SAT/26 Average ACT for incoming freshmen
20	**Flinn** Scholars
13	**Gates** Millennium Scholars
6	**National Achievement** Scholars
53	**Moeur Award** recipients in May 2016 (graduates with a 4.0 GPA within 4 years and all coursework at ASU)

Focused on Student Success: Working Toward 90% Retention

Strategies

- Created E2 Camp, an immersive, community-building experience for all freshmen
- Made advising central to student success and with recent innovations including creation of retention specialists
- Re-created the first-year experience by reconceptualizing introductory courses
- Created and actively promote customized experiences that connect students to their engineering future
- "Engineers from day one" philosophy – starts at E2 Camp
- Promoted our "Fulton Difference" mission that puts student success at the center of everything that we do

Sustained Focused Investment in Student Experience

Undergraduate Teaching Assistants

Dedicated freshman instructors

Peer Mentors

Dedicated Career Services

Research Experiences

Online BSE

Dedicated Spaces

E2 Camp

Retention and Enrollment Trends

Tripled freshman enrollment from 2002 to 2014 while increasing retention 10%+

FULTON SCHOOLS OF ENGINEERING – ALL PROGRAMS		
Year	FTFT Number	Retention
2002	801	77.0%
2003	801	81.3%
2004	773	82.3%
2005	838	82.1%
2006	726	86.5%
2007	819	84.4%
2008	993	85.4%
2009	1031	87.1%
2010	1290	85.0%
2011	1491	85.0%
2012	1759	88.2%
2013	2025	87.2%
2014	2430 **(3x)**	87.7% **(+10.7%)**

Retention and Enrollment Trends

We have achieved our 90% retention goal among female freshmen while tripling enrollment from 2002-2014

FULTON SCHOOLS OF ENGINEERING FEMALE FRESHMEN – ALL PROGRAMS		
Year	FTFT Number	Retention
2002	147	81.0%
2003	150	82.0%
2004	149	89.9%
2005	147	83.7%
2006	132	83.3%
2007	158	91.8%
2008	199	92.0%
2009	201	90.5%
2010	218	89.9%
2011	269	90.7%
2012	353	92.4%
2013	388	90.7%
2014	**468 (3x)**	**92.3% (+11.3%)**

Retention and Enrollment Trends

Increased Hispanic freshmen enrollment 5x+ since 2002 while increasing retention 10%+

FULTON SCHOOLS OF ENGINEERING HISPANIC FRESHMEN – ALL PROGRAMS		
Year	FTFT Number	Retention
2002	88	75.0%
2003	122	75.4%
2004	103	79.6%
2005	132	79.5%
2006	111	84.7%
2007	115	77.4%
2008	196	86.2%
2009	183	83.1%
2010	262	84.4%
2011	291	77.7%
2012	366	83.6%
2013	417	85.4%
2014	**495**	**85.1%**

IRA A. FULTON SCHOOLS OF engineering
ARIZONA STATE UNIVERSITY

New Strategies to Foster Success in our STEM Degree Programs

Highlighting two new programs

- Engineering Futures
- Young Engineers Shape the World

Engineering Futures and *Young Engineers Shape the World*: new initiatives aimed at increasing student success

Students who enroll in an engineering program are entering an exciting profession that turns ideas into realities. From research to real-world applications, engineers constantly discover how to improve lives.

Future engineers need ingenuity, creativity, communication skills, entrepreneurship, leadership, high ethical standards, collaboration skills, optimism, resilience, agility, and flexibility.

Goal of these programs is to increase participation and retention via the creation of cohorts who will have shared experiences

Engineering Futures: putting freshmen on the path to success

Strategies

Build an affinity group of individuals to build friendships and create a feeling of belonging and support for their interests and motivation

Offer opportunities to take part in panel discussions, mentoring, advising assistance, industry field trips, and design-based learning experiences

Develop awareness of science and engineering career opportunities

Develop good advisor relationships with faculty, industry professionals, and “near peer” mentors

Young Engineers Shape the World — ensuring the STEM pipeline

Strategies

Recruit and yield enrollment in the Fulton Schools

Goal is to use qualitative and quantitative research methods to generate evidence that will be useful in establishing knowledge of engineering identity development of cohorts comprised of grade 11 and first-year engineering students.

Pilot program launching in Fall 2016 with at least 100 students from four area schools

Engineering Futures: putting freshmen on the path to success

Approach

New Cohort of 200 students starting in Fall 2016

This cohort will learn through related experiences and receive mentoring from successful engineering students and professionals.

The program offers research-based strategies to help students become successful as future engineers.

Engineering Futures: putting freshmen on the path to success

Approach

This program is a two-year commitment in which students take the following classes as a cohort:

First semester – Special section of FSE 100: Introduction to Engineering

Second semester – Build your Engineering Future

Third semester – Design Solutions: Engineer the World Part I

Fourth semester – Design Solutions: Engineer the World Part 2