



Our Commitment to Impact

The Pennsylvania State University's Strategic Plan for 2016 to 2020
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THE UNIVERSITY'S VISION

Penn State will be a leader in research, learning, and engagement that facilitates innovation, embraces diversity and sustainability, and inspires achievements that will affect the world in positive and enduring ways.

EXECUTIVE SUMMARY

The Pennsylvania State University's strategic plan for the five calendar years comprising 2016 through 2020 is the result of a broad and inclusive two-year process that involved unit-level planning for 48 academic and administrative units across the University. In concert, this overarching institutional plan was developed.

Penn State's vision, mission, and institutional values are interwoven throughout this plan, and they ultimately drive its success. Six foundations underpin all University endeavors and are considered fundamental to implementing this plan. These foundations—**Enabling Access to Education, Engaging Our Students, Fostering and Embracing a Diverse World, Enhancing Global Engagement, Driving Economic Development, and Ensuring a Sustainable Future**—connect to, empower, and sustain our values as an institution.

This Plan's five thematic priorities are:

1. **Transforming Education.** Penn State will be a leader in the transformation of education, including enhancing access to it, as it fulfills its land-grant mission in a 21st-century context and continues to drive discovery-focused research across disciplines.
2. **Enhancing Health.** Penn State will be a leader in promoting quality of life through comprehensive approaches to enhancing personalized and population health, achieved through a commitment to and investment in relevant research, education, clinical practice, and outreach.
3. **Stewarding Our Planet's Resources.** Penn State will be a leader in creating comprehensive solutions to mitigate the dangers of climate change and address the challenges of providing safe and abundant water, clean and renewable energy sources, and plentiful and nutritious food.
4. **Advancing the Arts and Humanities.** Penn State will be a leader in the arts and humanities, utilizing them—along with the sciences and other disciplines—as agents of change in addressing complex global issues.
5. **Driving Digital Innovation.** Penn State will be a leader in preparing students for success in the digital age and use digitally optimized outreach to foster economic prosperity in communities across Pennsylvania and beyond.

This Plan's supporting elements comprise:

- **Organizational Processes.** Penn State will lead nationally in the design, development, and deployment of effective and agile organizational processes that support the University's mission and vision.
- **Infrastructure and Support.** Penn State will think creatively and act boldly to ensure that its academic infrastructure aligns with and supports the University's mission and vision.
- **Constituent Outreach and Engagement.** Penn State will partner directly and effectively with our constituencies in sharing consequential research, creative works, and scholarship for impact worldwide.

General implementation considerations cited at the end of this document provide a framework within which the plan's ambitious goals will be achieved.

During a time of rapid societal change worldwide, the University's strategic plan is a powerful beacon that will guide the institution to achieve even more meaningful accomplishments and deliver more benefits to the constituencies it serves. Penn State is excited about this plan and the hard work of delivering on its intent to make a University-wide commitment to impact.

INTRODUCTION

This document articulates The Pennsylvania State University's institution-wide strategic plan for the five calendar years comprising 2016 through 2020.

This comprehensive plan, in which we identify our direction at a macro level and set a strong foundation for where we are headed, includes input from and work by a wide range of stakeholders, including trustees, faculty members, undergraduate and graduate students, staff members, academic and administrative leaders, and alumni. University-level planning was also informed by the strategic plans of each college, campus, and major administrative unit. Especially pivotal to the planning process were the energy, expertise, and insights of Penn State's University Strategic Planning Council—an inclusive, 32-member body charged by Penn State President Eric J. Barron and chaired by Penn State Executive Vice President and Provost Nicholas P. Jones.

Imperatives outlined by President Barron upon his arrival in 2014, ideas developed in the unit planning process, and opportunities identified by numerous committees regarding institutional priorities and operations provided the plan's groundwork, and substantial, constructive feedback was solicited and received throughout the planning cycle from many constituencies through multiple mechanisms. All feedback was carefully considered as the plan evolved.

Ultimately, the notion of strategic planning—especially for a university—is no longer a static, specific-goal-driven process. We must be adaptive, and use real-time information and developments as they become available to inform and guide us in the direction that is most effective for the University. In turn, this plan for Penn State purposely does not identify specific initiatives to undertake or metrics to measure their success. These, along with detailed objectives and tactics, will emerge and evolve University-wide during the implementation of this strategic plan. Implementation ultimately will require understanding how the specific activities across departments, colleges, and other units align with the overarching strategies articulated herein.

This plan begins with a reaffirmation of Penn State’s mission as the Commonwealth’s land-grant University. Core institutional values are identified and defined, followed by the articulation of foundations that will support every step of the plan’s implementation. These foundations are aligned with the imperatives outlined by President Barron. Five thematic priorities follow—emerging strategic areas of emphasis where Penn State has identified significant opportunities to achieve strong, positive impacts, but not at the exclusion or minimization of other important endeavors. Supporting elements identify areas in which operational attention will be required to achieve the plan’s goals, while implementation approaches frame broadly how the University will move forward—from plan to relevant follow-up action to, ultimately, impact.

THE UNIVERSITY’S MISSION

The Pennsylvania State University is a multi-campus, land-grant, public research University that educates students from around the world, and supports individuals and communities through integrated programs of teaching, research, and service.

Our instructional mission includes undergraduate, graduate, professional, continuing, and extension education, offered through both resident instruction and distance learning. Our educational programs are enriched by the talent, knowledge, diversity, creativity, and teaching and research acumen of our faculty, students, and staff.

Our discovery-oriented, collaborative, and interdisciplinary research and scholarship promote human and economic development, global understanding, and advancement in professional practice through the expansion of knowledge and its applications in the natural and applied sciences, social and behavioral sciences, engineering, technology, arts and humanities, and myriad professions.

As Pennsylvania’s land-grant university, we provide unparalleled access to education and public service to support the citizens of the Commonwealth and beyond. We engage in collaborative activities with private sector, educational, and governmental partners worldwide to generate, integrate, apply, and disseminate knowledge that is valuable to society.

INSTITUTIONAL VALUES

Six core institutional values, identified in large part through Penn State’s Culture and Values survey in 2014, sustain this strategic plan and offer essential context for the successful execution of Penn State’s mission.

- **Integrity.** We act with integrity in accordance with the highest academic, professional, and ethical standards.
- **Respect.** We respect and honor the dignity of each person, embrace civil discourse, and foster a diverse, inclusive, and safe community.
- **Responsibility.** We act responsibly and hold ourselves accountable for our decisions, actions, and their consequences.
- **Discovery.** Through advanced research and scholarship, we seek and create new knowledge and understanding, and foster creativity and innovation, for society’s benefit.
- **Excellence.** We strive for excellence in all of our endeavors as individuals, an institution, and a leader in higher education and research.

- **Community.** We work together for the betterment of our University, the communities we serve, and the world.

FOUNDATIONS

Foundations are integral to everything Penn State does and will be essential to implementing this strategic plan. These foundations—**Enabling Access to Education, Engaging Our Students, Fostering and Embracing a Diverse World, Enhancing Global Engagement, Driving Economic Development,** and **Ensuring a Sustainable Future**—are not specific to or the responsibility of certain programs or units, or to individual faculty and staff. Instead, these are imperatives for all members of our University community. The foundations are woven throughout the thematic priorities and are important considerations in implementing all of them.

Enabling Access to Education

We will place pursuing and completing a Penn State education within reasonable reach for students and their families. Many factors contribute to the ability to earn a Penn State degree, and we must address them all if we are to increase access, especially for populations that have historically had barriers to entry.

Student debt and the cost of attendance are increasing at troubling rates for a variety of reasons, including the substantial decline of funding for public universities in nearly every U.S. state. Approximately two in three students receive need-based financial aid at Penn State, and generating philanthropic support for scholarships remains a core institutional priority. Understanding and addressing trends in the costs of higher education and effecting sustainable budget management processes will be critical, as will be developing responsive and adaptive programs to ease students' transition to Penn State.

We must continue to strive for efficiencies in our operations in ways that support the quality of a Penn State education. Given the large number of students who need financial aid and the socioeconomic challenges in communities throughout the Commonwealth, Penn State's ability to educate students for productive careers is crucial. Penn State's unique structure—one University, with campuses geographically distributed and a best-in-class World Campus—must be optimally configured to help enable access to potential students, both flexibly and at reasonable cost.

Engaging Our Students

Engaged students—those who establish relationships with faculty, take advantage of academic support services, and participate in student groups and co-curricular activities such as internships and study-abroad programs—are typically more successful than their non-engaged peers. Engaged students tend to develop stronger time management skills, manage distractions better, associate more often with affinity groups that reinforce success, sustain higher grade-point averages, and build stronger résumés for their post-Penn State lives.

Penn State will facilitate this co-curricular engagement for all of its students, across all physical campuses and the World Campus. The classroom (physical or virtual) is often where an education begins, but it cannot be where it ends. Penn State will promote and enable undergraduate and graduate student engagement in worthwhile, substantive, academic and non-academic activities outside of the classroom, including providing opportunities in student-run organizations and facilitating internships, community service, global experiences,

and research with faculty. Our commitment to enabling and facilitating student engagement at all Penn State campuses will bolster retention and graduation rates, and reinforce engagement as a pivotal part of learning that, in turn, well-equips our graduates to succeed in the rapidly evolving modern workplace.

Fostering and Embracing a Diverse World

Students, faculty, and staff alike rightfully demand that the University be inclusive and make meaningful efforts to be successful and accountable. Penn State is committed to diversity, equity, and inclusion across all of its campuses. Diversity-related foci included in unit strategic plans and our *Framework to Foster Diversity* describe in detail the challenges we must confront and overcome and opportunities we can leverage.

University demographics and projections highlight the importance of recruitment, retention, and success of diverse faculty, staff, and administrative leadership within the context of an inclusive educational environment. Penn State has emerged as a national leader for our diversity, equity, and inclusion work, and this is an area where we have further opportunity for broader and deeper results. Diversity has immense practical value with respect to scholarship, research, and workforce development.

Inclusion and equity are central to Penn State’s obligation and commitment as a public institution of higher education to teach effectively all of the people in our communities—in our Commonwealth, the United States, and increasingly from around the world. Diversity is critical to the education of all students. It broadens their exposure to people representing different countries and nationalities; age groups; racial, ethnic, religious, and socioeconomic backgrounds; mental and physical abilities; and sexual orientations and gender identities, among others. Education within a diverse environment, with people having opinions and perspectives different than one’s own, helps to create a rich learning context and prepares students for life in a complex, changing society. Furthermore, diversity enables enlightened research and discovery in a manner that is central to our mission.

We will continue to foster and sustain an environment of respect and inclusion for faculty, staff, students, and members of the communities we serve; creatively provide programs and environments that embrace diversity and promote broad acceptance of differences; be steadfast in our efforts to ensure equitable access to our facilities, programs, resources, and services; and advance our workforce by attracting and developing talented faculty, staff, and students from diverse backgrounds. We will assertively incorporate diversity, equity, and inclusion into our research, teaching, learning, outreach, assessment, operations, and decision making at both the unit and University levels, and equip Penn State leaders, faculty, and staff with the tools to foster diversity, measure results, be accountable, and further institutionalize a culture of inclusion.

Enhancing Global Engagement

Penn State is a global institution that requires ongoing integration of varied perspectives across the University community and in all components of its mission. An enhanced focus on global engagement is central to our mission in the 21st century, reinforcing our mission to offer students opportunities to become global citizens and providing a vehicle for Penn State’s impact to be extended around the world.

Continuing to build a “Global Penn State” will include enhancing global competencies by sending students,

faculty, and staff abroad; internationalizing the University by bringing non-U.S.-born students and scholars to our campuses; and establishing a global network of partnerships that enables the University to pursue its mission worldwide. The Global Engagement Network—with its pillars of global citizenship for students, faculty, and staff and global leadership in scholarship and international engagement—provides a strategic focal point and support infrastructure for many global activities. In addition, Penn State’s World Campus will continue to attract place-bound learners from around the globe, ensuring the University has a global footprint.

Driving Economic Development

Penn State’s educational programs, research, and outreach will make measurable and meaningful differences in economic development for our communities, from local to global. By leveraging our size and broad research strengths, Penn State can drive job creation, economic development, and student career success. We will accelerate the transfer of new ideas into useful products and processes in areas such as energy, food and nutrition, environmental protection, health care, manufacturing, educational technologies, medical devices, and pharmaceuticals.

Penn State is a substantial contributor to the Commonwealth’s economy. Its annual \$4.9 billion operating budget (as of 2015-2016) is leveraged into statewide economic activity that considerably exceeds this amount, and Penn State consistently reaches or surpasses \$800 million in research-related expenditures each year. The University is positioned to have an even larger, more positive economic impact in the coming years. True to our mission of research for the public good, we will embrace innovation and develop strategies to promote economic development and a culture that encourages and rewards entrepreneurship—not only in fields such as science, technology, engineering, and math, but also in the arts, health and human development, education, and emerging disciplines. Working with legislators, business leaders, communities, and other partners, we are prepared to make short- and long-term investments that will benefit generations of Pennsylvanians.

Ensuring a Sustainable Future

Penn State will confront directly and assertively the global challenges of climate change and sustainability in all their complexity—from feeding a growing population to preserving Earth’s resources to ensuring energy security. As an institution of higher learning and research, Penn State has a responsibility to embody and communicate an evidence-based worldview that allows all of us to prosper, both now and in the future. Penn State must lead by example and help our students—who are tomorrow’s leaders—to promote sustainability and become advocates for change. Penn State already has vast interdisciplinary talent in areas relating to climate change, sustainability, and environmental stewardship, and we have the scale and reach to effect meaningful, measurable change. Our staunch support of sustainability and environmental protections reflects how these have emerged as priorities among students, faculty, staff, alumni, private donors, research organizations, and legislators. Nevertheless, we must—even more comprehensively and cohesively—integrate sustainability into our research, teaching, outreach, and operations, as well as lead with innovative and aggressive programs institutionally to reduce our impact on the environment.

THEMATIC PRIORITIES

This plan highlights five thematic priorities: **Transforming Education, Enhancing Health, Stewarding Our Planet’s Resources, Advancing the Arts and Humanities, and Driving Digital Innovation.**

These strategic areas of focus embody existing and emerging strengths and opportunities that were identified during Penn State’s planning process. Each represents a breadth and depth of expertise and interest across multiple Penn State units where the University is well positioned (with continued commitment and strategic investment of resources) for profound and measurable contributions. The themes intersect with unit plans and pull from the human capital, infrastructure, and programs they represent, but by focusing on synergistic energy and resources they will enable a previously unimagined Penn State impact.

These areas of focus are not intended to exclude or minimize the importance of the University’s many other endeavors and enterprises, including fundamental and applied research across a variety of disciplines, which remain at the core of our enterprise. Rather, for this particular strategic plan, they are areas of opportunity that we believe merit more attention and investment in the near term. They do not replace or diminish the importance of and investment in any other institutional priorities.

In addition, these thematic priorities are not prescriptive, but visionary. A strategic plan for an academic institution must serve as a consensus-driven beacon for future directions, but without the rigidity that can stifle innovation and the emergence of new and unimagined opportunities. In this plan, that vision is impact, and these themes provide paths to achieving it in selected areas where Penn State has expertise and assets. Interwoven with them are the foundations, which provide a scaffold on which they rest and a common framework for implementation.

Transforming Education

Penn State will be a leader in the transformation of education, including enhancing access to it, as it fulfills its land-grant mission in a 21st-century context and continues to drive discovery-focused research across disciplines.

Making a comprehensive and useful education accessible to citizens of the Commonwealth of Pennsylvania and beyond was core to Penn State’s founding mission. Today, this “comprehensive and useful education” encompasses many traditional topics, such as the physical sciences and mathematics, as well as emerging issues, such as climate change; food, water, and cyber security; sustainability; political instability; terrorism; displaced populations; and global cooperation. As a world-renowned, land-grant, public research institution, Penn State has a pre-eminent global role in addressing these challenges by producing a new generation of leaders. This will require Penn State to use its size, scope, reach, intellectual capital, and resources to help transform education, making it accessible to all sectors of society. We will show by example what it means to be a land-grant university in the 21st century, and enable the education of enlightened graduates who are prepared for meaningful careers. While providing access to outstanding educational opportunities to Commonwealth residents, Penn State is and will continue to be a global university that must also consider the needs of prospective students from around the United States and the rest of the world. Our structure (one University, with physical campuses geographically distributed and an online World Campus), with a scope

unique among institutions of higher education and the commitment of the entire Penn State community to our educational mission, enables us to achieve meaningful and measurable impacts in this area.

Advance the frontiers of knowledge. Research impact in the sciences, engineering, and mathematics remains vital to Penn State’s mission and vision, and the University will continue to invest aggressively in these areas. Areas of study in which we are already world class—the aforementioned and others—will continue to grow, evolve, and thrive. Transformative knowledge creation in myriad disciplines will further elevate Penn State’s status as a top-echelon institution of higher learning that continues to emphasize discovery through meaningful, curiosity-based research and study.

Foster a curriculum that integrates multiple modes of delivery, while leveraging online capabilities and enhanced and emerging digital learning options. Penn State is well situated to provide opportunities for students to take classes in a manner and context that best meet their varied needs. Penn State provides a physical presence near most residents of Pennsylvania, and through the World Campus students can receive online instruction in key fields from almost anywhere. In the next five years, Penn State will further develop a culture and curriculum that facilitates the ability of students to seamlessly access courses across resident, online, and blended instructional modes.

Support and empower our outstanding faculty and staff. Our 21st-century land-grant University will require faculty to possess the skills and tools necessary to meet changing pedagogical needs, infused with creative approaches to teaching, research, and scholarship. University organizations, institutes, and support units will work with faculty and staff to articulate, implement, assess, and continuously improve excellence in teaching and student learning outcomes. We will be known as a leading research university whose faculty embraces teaching as integral to its charge and receives resources to support success.

Prepare our students for success in their careers and in life. In higher education, the quality and effectiveness of our work profoundly and substantively impact our students. A key role of any university is to ensure that our students receive an education that effectively prepares them not only for the modern workforce, but also for the challenges they will encounter during their lives. The foundation of a strong general education program will be combined with disciplinary training and engaged learning. Moreover, Penn State will remain committed to providing an array of co-curricular opportunities and career preparation services that will enhance students’ readiness to succeed.

Partner more effectively with pre-college educators. Pursuing a college degree can be a daunting challenge for students who are underprepared in primary and secondary education. Dismantling barriers to that pursuit will require fortification of current partnerships and creation of meaningful new ones with PreK-12 educators. Such changes will ensure a continuous flow from one academic experience to another—creating a more seamless PreK-16-and-beyond approach to student learning—and make a college education more accessible to and affordable for all individuals.

Enhancing Health

Penn State will be a leader in promoting quality of life through comprehensive approaches to enhancing personalized and population health, achieved through a commitment to and investment in relevant research, education, clinical practice, and outreach.

The centerpiece of this vision is recognition of the multiple factors that contribute to overall health—including individual biology and behaviors, the contexts in which people live and work, the quality of their health care, and public health policies and programs. By striving to understand people in all their complexity and the social determinants of health, we can leverage that knowledge to create innovative programs, policies, products, and practices for research, education, engagement, and patient care that will improve health and well-being. We use the term “personalized health” in a holistic fashion, to include all aspects of health (including physical, mental, and emotional health, among others), while “population health” refers to the health outcomes of groups of individuals (such as people at a workplace or the population of a U.S. state, a nation, or geographic region).

Penn State and its substantial medical enterprise, Penn State Health, will play critical roles in addressing important trends in understanding, managing, and promoting health. The complexity of health insurance offerings and health care options requires consumers to make educated, thoughtful decisions and prioritize their own health and wellness. Likewise, pressures will intensify for health care providers to focus on disease prevention and reduce patient readmissions due in part to the increasing costs of health care.

The aging of the worldwide population is a demographic development that puts unprecedented pressures on global health care systems. World travel and the frequent interaction of humans and animals may foster the emergence of new threats, calling for community and health system preparedness and resilience. Scientific progress in the areas of “omics” (such as genomics, nutrigenomics, metabolomics, and proteomics) and smart technology will enable health care providers and prevention scientists to pinpoint disease outbreaks geographically and tailor clinical treatment and health interventions to specific communities and individuals, leading to more effective and efficient use of resources.

The focus on personalized and population health is broadly applicable, but it may be especially relevant for three groups: children, for whom preventing disease offers great potential immediately and in terms of long-term health; older adults, whose health problems collectively put the most pressure on health care resources; and socioeconomically vulnerable groups who too often lack access to quality medical care. A focus on personalized and population health capitalizes on our highly collaborative and interdisciplinary research environment and builds on recent Penn State investments in key areas such as genomics, demography and population health, cancer, cardiovascular disease, neurosciences, health symptoms and environmental exposures, health disparities, infectious disease, and real-time collection of data on daily health-related experiences.

Advance discovery in personalized and population health. Penn State will be a leader in collaborative, interdisciplinary research on personalized and population health, with robust activities ranging from basic to applied science. It will include research on social contexts and social determinants of health, and how they intersect with biological determinants of health. Inspiring work by faculty across our colleges will provide vital direction.

Create innovative academic programs in personalized and population health. Penn State will create innovative, interdisciplinary, and joint professional-graduate and postgraduate programs that focus on personalized and population health. Research and graduate education go hand in hand. A vibrant cadre of scholars engaged in interdisciplinary research in this area will help to unite faculty from different academic units and campuses around the themes of personalized and population health and facilitate the creation of curricular options focused on both.

Build synergistic partnerships to influence population health. We will increase Penn State’s engagement as a partner across the Commonwealth in improving health care and health-related outcomes. An ongoing, collaborative relationship will help address Pennsylvania’s health-related challenges, including childhood obesity and community health disparities, and drive analysis of state health data and translation of research findings into public education programs, outreach, and best practices.

Facilitate wellness within the Penn State community. Because our University is only as strong as its people, we will invest in innovative, multi-pronged, institution-wide health initiative that inspires faculty, staff, and students to focus proactively on their physical, mental, and emotional wellness. The effort across all Penn State campuses will encourage faculty, staff, and students alike to pursue recommended preventive health care services and educate them about behaviors (such as physical activity, healthy eating and drinking, smoking prevention and cessation, and stress management) that experts agree promote health and prolong life.

Inform governmental health policy. Evidence-based health policy is essential for effective efforts to enhance the health of individuals and populations. Penn State will lead in conducting policy-relevant health research and in training public health practitioners who understand the importance of evidence for public health policy and practice.

Stewarding Our Planet’s Resources

Penn State will be a leader in creating comprehensive solutions to mitigate the dangers of climate change and address the challenges of providing safe and abundant water, clean and renewable energy sources, and plentiful and nutritious food.

“Pennsylvania’s public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the commonwealth shall conserve and maintain them for the benefit of all the people.” – The Constitution of the Commonwealth of Pennsylvania, Article I, Section 27

With service to the citizens of the Commonwealth as an institutional commitment, we embrace the challenge articulated so clearly in our Constitution.

Climate change is recognized worldwide as one of the most important issues of our time, and Penn State will be a leader in addressing and solving this challenge. In addition, with a projected global human population of 8 billion by 2040, food and water consumption is expected to increase by 50 percent, and energy requirements by even more. Urgent research, development, and implementation needs exist regarding water, energy and food, and there are even more pressing challenges in effectively, ethically, economically, and sustainably managing the interactions among them (for example, energy consumption for water desalination, or the use of

crops for biofuels). Because of Penn State's expertise and resources, including its extension program, profound opportunities exist for the University to lead by example and address these challenges in economical and sustainable ways that respect, protect, and adapt to the environment for future generations and set the stage for future national and global priority setting.

Drive fundamental science relevant to critical problems. The world faces pressing fundamental science and engineering questions, the solutions to which underpin the development of enabling technologies. Across a range of topics—water purification and desalination, energy recovery, genetic crop analysis, stress-tolerant food production, better understanding of the human microbiome, responsible energy production from unconventional gas and oil reserves, and many more—Penn State faculty will do the fundamental research necessary to help develop urgently needed new technologies.

Develop technologies for implementation. Penn State will explore and pursue enabling physical, biological, agricultural science, and engineering technologies that encompass environmental, economic, policy, and sustainability considerations. They include water filtration and irrigation; power management; green building design; energy production, distribution, efficiency, and storage; and crop precision application, storage, and refrigeration.

Improve modeling capability. Current and future indicators will be critical to identifying problems, establishing collaborative research and implementation priorities, tracking trends, and identifying leaders and best practices. Penn State will aim to provide predictive models of the water-energy-food triad that include interactions with environmental, economic, social, public policy, geological, geophysical, and climate-related systems.

Fully engage our research infrastructure. Institutes, colleges, campuses, centers, laboratories, and libraries at Penn State offer personnel and unique infrastructure to address research opportunities related to stewarding Earth's resources. All will have important roles in resolving fundamental, technological, and integrative questions associated with water, energy, and food.

Forge broad and relevant partnerships. Research partnerships, funding sources, and end users are three stakeholder communities essential to making significant inroads against challenges related to water, energy, and food. Penn State will compile a comprehensive inventory of stakeholders (including industry, government, and international organizations) and engage them to drive success.

Advancing the Arts and Humanities

Penn State will be a leader in the arts and humanities, utilizing them—along with the sciences and other disciplines—as agents of change in addressing complex global issues.

Like its strongest peers, Penn State has vibrant arts and humanities programs that are meaningful to its students, its disciplines, and the larger community, and these can be strengthened further. We will encourage and promote fundamental inquiry, discovery, and understanding in these areas and selectively invest to bring more programs into the top tier, increasing the impact of already prominent programs.

The arts and humanities, and design disciplines related to them, offer timely answers to timeless questions. They can embody and make public our highest aspirations. They foster imagination and innovation, which form the essential foundation of all human thought and the scientific and social progress (and sometimes regression) that follow from it. In times of conflict and fear, the arts and humanities are critical to our understanding of and balance among values, including choices we must inevitably make as individuals and as part of society. And, in an increasingly diverse world, engagement with the arts and humanities plays an essential role in creating an educated and humane citizenry, which in turn drives community and economic development.

Penn State will take a leadership role in using the arts, design, and humanities—as it does with its many other strong disciplines—to help address social and political challenges. While technology can open exciting new vistas, individual values and aspirations determine how technologies are put to use and for whom, how new resources generated from technologies are allocated, how we think about problems that new technologies raise, and how much we invest in technological and human solutions to address a range of issues. The arts and humanities help us consider values of equality and freedom, privilege and diversity, individual versus communal good, ethical and other value choices intrinsic to any group decisions. This evaluation is critical to other priority areas of this plan, including health, education, resources, and technology. Likewise, complex problems, domestic or global, require creative solutions involving multiple perspectives, and the arts and humanities facilitate the development of important skills in problem solving, communication, collaboration, creativity, and empathy, all of which are essential in 21st-century higher education and the world beyond.

Strategically strengthen the arts and humanities through investments in selected areas. Penn State has substantial resources for and faculty strength to support the arts and humanities. We will continue to strengthen those areas and explore and support others that will encourage research, intellectual discourse, student engagement, and action that leads to understanding of societal and global issues. Support for the arts and humanities also requires faculty expertise and recognition of the roles that arts-oriented institutes, centers, and venues play in our lives—including, for example, performance and visual arts spaces for academic programs that function as labs for arts students.

Invest in Penn State as a cultural destination and enhance personal engagement in the arts. Penn State's campuses serve as prominent cultural venues in Pennsylvania, and we will continue to elevate the institution's cultural profile. Penn State will continue to invest and reinvest in such facilities, as needed, to ensure they are modern, functional, and integrated into the educational and research fabric of the University. This investment will raise awareness of Penn State's role as a cultural hub, serve as a magnet for faculty and students, and benefit the entire Commonwealth. We will expand service to Pennsylvanians in the performing and visual arts, and ensure that every Penn State student will have meaningful experiences through personal engagement in these areas.

Prepare students with the skills to work together to develop ethically and historically informed solutions to our most pressing problems. As a public research institution, Penn State has a responsibility to deliver educational experiences that prepare students to be leaders in their communities and to be global citizens. Although culturally beneficial learning occurs across a wide range of disciplines via the curriculum, the co-curriculum, and outreach, the arts and humanities are fundamental for building cross-cultural understandings. We will encourage arts and humanities faculty and institutes to build connections for greater impact across the University. We must enhance students' skills through more opportunities to create and practice the arts

and design disciplines, and to participate in informed discussions and decision-making processes through many of our humanities-based centers and programs. We will encourage individual departments and colleges to more seamlessly integrate arts practice, cultural perspectives, and humanities into their programs and co-curricular experiences.

Driving Digital Innovation

Penn State will prepare students for success in the digital age and use digitally optimized outreach to foster economic prosperity in communities across Pennsylvania and beyond.

We will use the digital environment to open new ways to explore, experiment, create, and advance knowledge that has an impact in addressing global challenges. Penn State must become a leader among institutions of higher education, digitally extending our impact and responding to the potential of technology to help us enable learning, facilitate research, and serve communities just outside our gates and across the globe. To do this, Penn State must increase its capacity to provide faculty, students, and staff with access to high-quality, physical and virtual educational environments; transform education to reflect new realities and to lead in translating those to life skills and workforce development; and push the capacity of digital tools and technologies to empower our research on the world's most pressing challenges.

The ability to use data and computational processes to solve many of the world's most significant problems has never been greater, and Penn State is positioned to play a leadership role in mapping a revolutionary global digital future. Penn State will develop interdisciplinary approaches and partnerships to resolve pressing global issues, using technology and teams with the expertise to confront persistent and emerging problems of regional and global significance, and to expand creative frontiers in the arts and humanities. Penn State will meet the needs of small businesses and entrepreneurs by providing innovative solutions in ways that engage students in the problem-solving process. A digitally powerful Penn State will connect students, teachers, and researchers with unprecedented capabilities to extract insights from diverse digital data sets to address critical challenges. Penn State will use technology and its physical presence throughout the Commonwealth to fully realize its unique standing as one University, geographically distributed, along with a World Campus, and to broaden the impact of its significant research, teaching, and engagement resources.

Develop a more robust digital infrastructure and culture. Penn State will construct a state-of-the-art digital infrastructure and culture that seamlessly facilitates and enhances collaboration across units on research and outreach initiatives aligned with our mission. The infrastructure and culture also must meet the needs of students and other stakeholders with strong digital competencies and expectations about how Penn State should support them—and how the University should support those who need to better develop such competencies and gain better access to such resources. With openness to the use of technology, innovation, and an unwavering focus on learning outcomes, quality and rigor will, and must, remain hallmarks of a Penn State education.

Make online education and personalized learning central to our 21st-century land-grant mission. Penn State has been at the forefront of education and access since the emergence of the land-grant movement in the 19th century. While the strategic and operational means of realizing the land-grant mission will continue to evolve throughout the 21st century, the University remains committed to that historically powerful ideal.

We will leverage components of in-person and online instruction to facilitate personalized learning that optimizes individuals' educational experiences and enables deeper engagement. Learning analytics will be deployed to inform teaching and learning strategies and processes, ensuring that over time we enhance the effectiveness of instruction—for educators and learners—as new methods and approaches emerge. Adaptive learning software also will help teachers to assess student mastery of subject matter in real time and adjust course content and strategy as needed.

Create digital solutions that cross academic borders. We will establish Penn State's status as a global leader in digital discovery, innovation, and creativity to address society's most pressing challenges as they emerge. Penn State will create interdisciplinary environments embracing powerful forms of learning that integrate efforts across our colleges and campuses.

Drive economic development. Penn State will drive economic development in the Commonwealth, as well as in regional, national, and international industry, through facilitated access to and use of the University's digital assets. A digitally agile and effective Penn State will use its powerful resources to enhance global well-being, while simultaneously building capacity for transformative discovery, creativity, student learning, and engagement.

SUPPORTING ELEMENTS

This plan identifies important pieces that must be in place for Penn State to pursue its aforementioned thematic priorities, and to support its mission and vision. The supporting elements are **Organizational Processes, Infrastructure and Support, and Constituent Outreach and Engagement.**

Organizational Processes

Penn State will lead nationally in the design, development, and deployment of effective and agile organizational processes that support the University's mission.

Organizational processes should be driven by strategy, not vice versa. The following steps address the planning and development of new processes, the alignment and integration of current processes through system-level approaches, and continuing improvement and innovation—all geared to promote quality education, scholarly and creative endeavors, and service.

Improve the design, oversight, integration, and effectiveness of organizational processes. Penn State will continue to systematically and strategically identify key processes that drive value creation and employ leading-edge principles of process design and control to optimize effectiveness and efficiency. The University will increase service quality by continuing to improve the enterprise systems that make up the backbone of business processes. Penn State will manage budgets and resource allocation to provide necessary stability while aligning the allocation of resources and incentives with institutional priorities, extending the ambitious and meaningful work of the Academic and Administrative Services Review Core Council and the Budget Planning Task Force.

Establish processes for continual institutional assessment, improvement, and innovation, including more systematic review of administrative and academic organizational performance and financial stewardship. Penn State also will identify and implement best practices through benchmarking with peer institutions,

affiliates, and industry networks, and create productive mechanisms for regular stakeholder feedback on services and process improvements. The University will continue to develop and implement business intelligence tools and techniques to promote intelligent, data- and evidence-driven analysis and decision making. Penn State also will promote innovation to strengthen institutional capability, while effectively managing risk and ensuring legal and regulatory compliance.

Develop a culture of academic business modeling to support innovation. The University will encourage faculty, staff, and students to pursue new and innovative ideas that will advance academic and operational excellence. When new innovations or opportunities emerge and initial investments are warranted, multi-year business plans that provide realistic, well-defined metrics, and targets that contribute to operational excellence will be developed and presented to pertinent constituents.

Infrastructure and Support

Penn State will think creatively and act boldly to ensure that its academic infrastructure aligns with and supports the University's mission and vision.

Infrastructure is often thought of as a university's land, buildings, and equipment, all of which are important, yet it includes much more. Penn State's infrastructure—hard and soft, academic and administrative—plays a critical role in the functioning of the University and in the creation of knowledge. People, money, space, information technology (IT), physical plant, enterprise systems, business processes and services, curricular workflow, pedagogy, and human resource services all constitute our core academic infrastructure. When it functions well, it may be overlooked. Yet enlightened academic infrastructure is critical to advancing our mission, and seamless harmonization across this complex landscape is critical to our effectiveness and efficiency. Penn State will act boldly to make necessary strategic investments in infrastructure to enhance quality and achieve further excellence in support of the University's strategic priorities.

Prioritize investment in our people. Our faculty and staff are indispensable to our effectiveness as an institution, and Penn State's human resources are considerable. With thousands of faculty and tens of thousands of staff distributed across 24 campuses, nothing is accomplished at Penn State without their commitment and hard work. Our ability to recruit and retain the best and most diverse talent demands that we pursue enlightened, state-of-the-art practices in human resource management and remain committed to supporting and enhancing this most vital resource.

Invest in resources creatively and systematically. We will identify areas in which investment may be required to provide new physical infrastructure or to complement and enhance existing investments, as facilities' inevitable obsolescence hinders Penn State's ability to educate students and conduct research. We also will undertake a structured and coordinated approach to research and academic infrastructure, with the commitment of proportionally more resources to mechanisms (such as institutes) that cross traditional academic units in high-priority areas.

Drive innovation and discovery. We will encourage and facilitate robust collaboration to drive innovative thinking across all domains. Investment in programs and infrastructure where Penn State can have meaningful impact will support discovery, research, curricular and pedagogical innovation, and engagement.

Build and manage state-of-the-art information technology. Given the nature of information technology in ensuring Penn State’s operational and strategic future, enlightened investment in and support of technological infrastructure is essential. The IT roadmap, the most recent IT assessment, as well as various other reviews and committee assessments, provide excellent frameworks that will guide investments necessary to have Penn State re-emerge as a leader among peers.

Align fundraising to address specific needs. Penn State will adopt models that encourage development for strategic, cross-unit, collaborative big ideas, fully integrating with and leveraging the next University fundraising campaign. Key stakeholders will help to identify what needs should get priority attention, and decision makers will be empowered to proceed accordingly.

Constituent Outreach and Engagement

Penn State will partner directly and effectively with our constituencies in sharing consequential research, creative works, and scholarship worldwide.

Penn State already excels in constituent outreach and engagement, and many Penn State academic programs are ranked among the United States’ best. As of the end of 2015, the World Campus provides virtual access to students in all 50 U.S. states and more than 80 countries. Penn State’s Global Engagement Network of regional partnerships enables the University to pursue globally its tripartite mission of teaching, research, and service. Penn State’s large and engaged alumni base provides opportunities for outreach and engagement in every corner of the world. The Penn State campuses, Penn State Extension, and technology transfer programs also provide access and influence across Pennsylvania, serving as a significant economic force advancing the Commonwealth’s long-term vitality by educating students and providing training programs to support business, agriculture, and communities. With this as a backdrop, we must explore further opportunities to more effectively translate Penn State’s accomplishments to the constituencies we have committed to serve.

Focus on impact through partnerships. More than ever before, Penn State will partner with industry, government, and relevant communities to promote the simultaneous pursuit of human health and well-being, environmental quality, and economic security for current and future generations. All of our foundations and thematic priorities require effective internal and external partnerships if we are to succeed.

Provide expanded access to Penn State resources. Penn State does an extraordinary job through outreach and Extension of providing access to our intellectual capital and practical resources. Nevertheless, we can do more. Penn State is rightly seen as a resource to the community, Commonwealth, and nation, and we will continue to expand and enhance access.

Promote contributions through strategic communication. In an era of “information overload,” news about Penn State’s accomplishments may fail to reach many of our constituents. As people are increasingly distracted and overwhelmed by new, highly utilized forms of communication, we must develop methods to more effectively convey the positive impacts of University programs. We will be more systematic in our strategy development and use of contemporary communication and marketing vehicles.

Streamline translation of Penn State discoveries. We will leverage the unique Penn State educational model to strengthen the communities we serve and be a leader in technology transfer and commercialization across the Commonwealth and beyond. Ensuring that our discoveries and creative works find their way to communities (consistent with our mission of research for the public good) demands that we do what is necessary to maximize the likelihood of meaningful translation to the marketplace, policy environment, or community at large.

Support economic development and community renewal. Penn State must put critical resources, knowledge, and experience to work on the problems of local (and global) communities. With 24 campuses around the Commonwealth, we have a unique presence in, and commitment to, these campuses' communities. Our health as an institution is drawn from the well-being of these communities, and we have a crucial responsibility to them.

IMPLEMENTATION APPROACHES

Strategic planning strengthens Penn State's ability to make informed and often difficult choices and to allocate resources according to evidence, judgment, and priorities. The process involves not only reducing unnecessary expenditures, but also finding new sources of revenue. And while this plan purposely articulates strategic goals and not specific initiatives, programs, or topics to accomplish them, we have identified several broad approaches to implementation that support this plan.

Invest thoughtfully based on the University's mission, foundational principles, strategic priorities, and institutional and unit plans. First and foremost, resource allocation must be aligned with priorities identified in this institutional plan, as well as those in University unit plans. Chief among these is the pursuit of Penn State's mission as stated in this plan, as well as integration across multiple dimensions of our mission. To the extent that new initiatives or proposed programs support our strategic directions, they can expect to be prioritized for support, both in principle and in resource allocation. Priority also will be given to maintaining robust and critical operational activities, but this plan will drive new investments.

Use planning as the basis for academic and administrative business ventures. Developing a culture of business planning over multiple years for all ventures is crucial for management of resource allocations. Plans should reflect expectations for both sources (as appropriate) and uses of funds, with clear understanding reached on long-term sustainability. As important as it is to launch new programs, it is equally important to have strong governance, management oversight, and a clear appreciation for conditions under which programs will be eliminated and the investment reallocated.

Seek positions of meaningful impact and leadership. Penn State must be active in identifying areas where it can have a maximum positive impact, and emerge as a visible leader. This has very practical implications for not only the magnitude of our work, but also for our ability to attract external resources and investment. Emergence as a leader engenders further opportunities for broader and deeper results.

Understand changing dynamics and their potential implications. Penn State is subject to both internal and external realities that constantly challenge the ways in which we do business. We cannot simply respond to developments that have a potential to impact the University; we must anticipate challenges and constantly position ourselves to respond to them as opportunities.

Leverage existing resources and strengths. There are areas where Penn State still needs to grow its presence and available resources. However, the University is strong in many areas that can now be leveraged to maximum effect. We must ensure that our existing resources are wholly and synergistically utilized. New initiatives will be expected to engage those resources to the extent feasible and reasonable, with additional investment anticipated to complement and leverage them.

Seek innovative partnerships. Despite the massive enterprise that we represent, Penn State simply cannot do it all alone. Partnerships with other universities—as well as with individuals, companies, and other not-for-profit and for-profit organizations—will accelerate innovation and bolster funding for ongoing research and creative activity. Our institution is a magnet, and we must take full advantage of it in order to maximize our potential for impact.

CONCLUSION: FROM PLAN TO ACTION TO IMPACT

Penn State’s extensive, ongoing, institution-wide planning experience rivals that of any other major U.S. university. For decades, Penn State has continued a commitment to strategic management both for the University as a whole, and for all academic and administrative units. This strategic plan extends that action- and impact-oriented approach.

Penn State is at an exciting crossroads. It is well situated to advance its position among the world’s top research universities. This plan lays out in broad strokes the basis for action toward that end from 2016 through 2020. Pursuant to this plan’s publication, Penn State will work with all of its stakeholders to develop specific plans, programs, and initiatives that support the University’s aforementioned mission, vision, foundations, and thematic priorities. These efforts will include identification of clear goals and metrics to assess if and when they have been accomplished.

As an extraordinary, 21st-century, global institution, Penn State has an impressive depth, breadth, and variety of collaborative talent across disciplines, along with tremendous resolve and energy. With all key stakeholders working together, the elements are in place for Penn State to extend its reach and impact through teaching and learning, research, and service.

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