The Office of the Executive Vice President and Provost is making funds available through seed grants to fund strategic initiatives in support of Penn State’s strategic plan, “Our Commitment to Impact.” Proposals initiated through the RFP process are evaluated by the relevant strategic plan committees, and the Strategic Plan Oversight Committee submits recommendations for funding.

This list, which summarizes the initiatives funded thus far (in Cycle 4, Spring 2019; Cycle 3, Fall 2018; Cycle 2, Spring 2018; and Cycle 1, Fall 2017), will be updated as more proposals are approved for funding.

For more information about these initiatives and the funding process, please contact the Office of Planning and Assessment at strategicplan@psu.edu.

**Initiatives Funded: Spring 2019**

**RFP Cycle 4**

**Title:** Redesigning Modernities: Why Does the Modern World Look So Different In Various Places around the Globe?

**Supports:** Advancing the Arts and Humanities

**Project Lead:** Thomas Beebee, Edwin Erle Sparks Professor of Comparative Literature and German, Germanic and Slavic Languages and Literatures, College of the Liberal Arts

- **External Workshop Facilitators:**
  - Aparna Dharwadker, Professor--English and Interdisciplinary Theatre Studies, University/Wisconsin
  - Vinay Dharwadker, Professor--Comparative Literature and Folklore, University/Wisconsin
  - Wail Hassan, Professor--Comparative Literature and English, University/Illinois

- **Penn State Faculty:**
  - Magalí Armillas-Tiseyra, Assistant Professor--Comparative Literature
  - Heather McCune Bruhn, Assistant Teaching Professor--Art History, UP
  - Krista Brune, Assistant Professor--Portuguese and Spanish
  - Sabine Doran, Associate Professor--German
  - Jonathan Eburne, Associate Professor--Comparative Literature, English, French and Francophone Studies
  - Amanda Larson, Open Education Librarian--University Libraries
  - Sarah Townsend, Assistant Professor--Spanish and Portuguese
  - Maria Truglio, Associate Professor--Italian and Women's, Gender, and Sexuality Studies
  - Robin Bower, Associate Professor--Spanish, Beaver
Overview: Spanning curriculum and research collaborations, this project will connect current arts and humanities scholarship on globalization and modern cultures with courses offered across the University. Faculty and students will collaborate in two summer workshops and follow-on activities including journal publication, open-resource instructional materials, and curriculum development.

Title: A Systems Approach for Meeting Local and Global Food-Energy-Water Nexus Challenges

Supports: Stewarding our Planet's Resources

Project Lead: Rachel Brennan, Associate Professor, Civil and Environmental Engineering, College of Engineering

- Michael Jacobson (Co-Lead), Professor of Forest Resources, Department of Ecosystem Sci. and Management, College of Agricultural Sciences
- Brian Thiede, Assistant Professor of Rural Sociology, Sociology and Demography, Department of Agricultural Economics, Sociology and Education, College of Agricultural Sciences
- Robert Crane, Associate Vice Provost, Penn State Global Programs, College of Earth and Mineral Sciences
- R. Keith Hillkirk, Chancellor, Penn State Berks

Overview: This initiative will unite the Penn State community in developing and testing systematic conceptual models of varied food-energy-water nexus challenges in select communities in Pennsylvania and Africa. The resulting frameworks and principles will be used to guide interventions that promote sustainable development and foster capacity building with local and global partners.

Title: The SoVA Studio for Sustainability and Social Action (SoVAS3A)

Supports: Advancing the Arts and Humanities

Project Lead: B. Stephen Carpenter, Interim Director, Penn State School of Visual Arts (SoVA) and Professor of Art Education and African American Studies, College of Arts and Architecture

- Simone Osthoff, Professor of Art and Critical Studies, School of Visual Arts: Project co-lead
- Rebecca Strzelec, Professor of Art, Penn State Altoona
- Yvonne Love, Assistant Professor of Art, Penn State Abington
- Damian J. Fernandez, Chancellor, Penn State Abington College
- Paul Shrivastava, Chief Sustainability Officer, Sustainability Institute
- Thomas Richard, Director, Institutes of Energy and the Environment
- Clive Randall, Director, Materials Research Institute
- Mallika Bose, Interim Associate Dean for Research, College of Arts & Architecture
Overview: The School of Visual Arts Studio for Sustainability and Social Action promotes the development of arts courses and minors through curriculum coordination; public art collaborations with communities throughout the commonwealth; a nationally visible biennial symposium and art exhibition; and a lecture series and workshops by high profile artists.

Title: Establishing Penn State’s Leadership in Secure and Ethical Use of Health Behavior and Social Science Data
Supports: Driving Digital Innovation
Project Lead: Max Crowley, Director of Evidence-to-Impact Collaboration, Social Science Research Institute, College of Health and Human Development
Research Leadership:
- Susan McHale, Director, Social Science Research Institute (SSRI)
- Jenni Evans, Director, Institute for CyberScience (ICS)
- Lawrence Sinoway, Director/ Clinical Translational Science Institute (CTSI)
- Prasenjit Mitra, Associate Dean for Research, College of Information Sciences & Technology (IST)
- Kathy Draeger, Associate Dean for Research, College of Health & Human Development (CHHD)
- Scott Bennett, Associate Dean for Research, College of the Liberal Arts (CoLA)
- Gregory Kelly, Senior Associate Dean for Research, Outreach, and Technology (DoE)

Administrative Leadership
- Donald Welch, Chief Information Security Officer, Office of Information Security (OIS)
- John Hanold, Vice President, Office of Sponsored Programs (OSP)
- Zach Moore, Vice President for Government and Community Relations, Office of Government & Community Relations (OGCR)
- Sarah Horn, Director, Internal Review Board, Office of Research Protections (IRB)
- Neil Sharkey, Vice President for Research, Office of the Vice President for Research (OVPR)

Overview: In recognition of the rapid technological developments producing substantial amounts of sensitive data instrumental to Penn State’s research mission, this initiative will grow the University’s campus-wide digital infrastructure and international leadership in the secure and ethical use of high-value health/behavioral and social science data.

Title: The Penn State Network for STEM Inclusion and Innovation
Supports: Transforming Education
Project Lead: Alma Derojas, Proposal Specialist, Office of the Chancellor, Penn State Abington

- Jacqueline Edmondson, Chancellor, Penn State Greater Allegheny
- Damian Fernandez, Chancellor, Penn State Abington
- Tina Richardson, Chancellor, Penn State Lehigh Valley
- Kristin Woolever, Chancellor, Penn State Brandywine
- Michael Bernstein, director of ALITE (Abington Laboratory for Innovation in Teaching and Education) and chair of Psychological and Social Sciences at Abington
Overview: Penn State Abington, Brandywine, Greater Allegheny, and Lehigh Valley will implement the Network’s pilot STEM recruitment initiative, in which cohorts of prospective community college transfers will participate in a summer program designed to prepare students for success in four-year STEM degrees - the first program of its kind at Penn State.

Title: Embracing Diversity by Institutionalizing Equity Pedagogy and Culturally Sustaining Curricula
Supports: Transforming Education
Project Lead: Alicia Dowd, Professor and Director, Education Policy Studies, College of Education
- Co-leader- Leticia Oseguera, Associate Professor of Education (Higher Education) and Senior Research Associate, College of Education
- Co-leader- Paula Smith, Associate Librarian, Penn State Abington
- Sonia DeLuca Fernandez, Associate Vice Provost, Office of Educational Equity
- Lori Hancock, Associate Vice Provost for Institutional Research, Office of Planning and Assessment

Overview: This initiative will create a “networked improvement community” of faculty affiliated with geographically dispersed research, teaching, and learning centers to maximize their effectiveness in institutionalizing equity pedagogy and culturally sustaining curricula.

Title: Holocaust, Genocide, and Human Rights Education Initiative
Supports: Constituent Outreach and Engagement
Project Lead: Boaz Dvir, Assistant Professor, Journalism department, Donald P. Bellisario College of Communications
- Scott Metzger, Associate Professor of Social Studies Education, College of Education
- Eliyana Adler, Associate Professor in History and Jewish Studies, College of the Liberal Arts
- Tiya Maluwa, H. Laddie Montague Chair in Law, Professor in Law and School of International Affairs, Penn State Law
- Tobias Brinkmann, Malvin E. and Lea P. Bank Associate Professor of Jewish Studies and History, College of the Liberal Arts
- Alexander Klippel, Professor of Geography, College of Earth and Mineral Sciences

Overview: This Initiative is a partnership with the Pennsylvania Department of Education and organizations such as the U.S. Holocaust Memorial Museum and the University of Southern California Shoah Foundation. It aims to develop and provide effective professional development and instructional tools for educators to teach difficult historical and social subjects.

Title: Growing Penn State Forests
Supports: Stewarding our Planet’s Resources
Project Lead: Margot Kaye, Associate Professor of Forest Ecology, Department of Ecosystem Science and Management, College of Agricultural Sciences
- Joseph Harding, co-lead, Director of Forestlands, Department of Ecosystem Science and Management, College of Agricultural Sciences
Doug Miller, Research Professor of Geography, Departments of Geography and Ecosystem Science Management, College of Earth and Mineral Sciences
Susan L. Brantley, Distinguished Professor of Geosciences, College of Earth and Mineral Sciences
Lisa A. Emili, Associate Professor of Physical Geography and Environmental Studies, Co-Coordinator Environmental Studies Program, Sustainability Coordinator, Penn State Altoona.

Overview: Penn State owns over 9,000 acres of forestlands that are largely unknown to faculty, staff, and students. These forestlands are an expansive resource for training, research, and sustainability. This project will use them as a living laboratory to showcase the University's leadership in sustainable forest management.

Title: Penn State Cohort Study: to Promote High-Impact Research, Student Engagement, and Health
Supports: Enhancing Health
Project Lead: Stephanie Lanza, Professor; Director, Edna Bennett Pierce Prevention Research Center, Biobehavioral Health, College of Health and Human Development
- Gregory Fosco, Associate Professor, Human Development and Family Studies; Associate Director, Prevention Research Center, College of Health and Human Development
- Hobart Cleveland, Professor, Human Development and Family Studies, College of Health and Human Development
- Sue Grigson, Professor, Neural and Behavioral Sciences; Director, Penn State Addiction Center for Translation
- Molly Hall, Assistant Professor of Veterinary and Biomedical Sciences, College of Agricultural Sciences
- Max Crowley, Director, Administrative Data Accelerator; Co-Chair, SSRI Integrated Data Systems task force
- Tracey Huston, Vice President for Outreach
- Rick Brazier, Vice President for Commonwealth Campuses
- Carey McDougall, Chief Academic Officer, Academic Affairs, Penn State Beaver
- Glenn Sterner, Assistant Professor, Criminal Justice, Penn State Abington
- Jason Whitney, Director, Collegiate Recovery Group

Overview: Substance abuse is a leading national problem, with young adults at high risk. We aim to develop a University resource that investigates biobehavioral underpinnings of student substance abuse across the Commonwealth. It will inform needed services, provide engaged learning opportunities, connect with Commonwealth faculty, and catalyze high-impact, interdisciplinary research.

Title: Restorative Justice Initiative (RJI): Prison Education Project
Supports: Transforming Education
Project Lead: Efrain Marimon, Assistant Teaching Professor; Director of Restorative Justice Initiative at Penn State, Curriculum and Instruction, College of Education
- David Monk, Dean, College of Education
• Ted Toadvine, Director of the Rock Ethics Institute
• Ellen Stroud, Associate Professor of History, College of the Liberal Arts
• Stephanie Russell, M.S., Associate Director of Academic Affairs, World Campus & Continuing Education
• Michael Pipe, Center County Commissioner, Chair Reentry Coalition
• Brandon Kooperhaver, Director of Reentry, State Correctional Institution – Benner
• Thomas Brewster, CEO, CentrePeace
• Ms. Heather Winfield, Associate Director, Foundations Relations
• Simon Corby, Development Officer, College of Education

Overview: The Restorative Justice Initiative will enhance equitable access to higher education and transform undergraduate education at Penn State by providing access to college courses leading to degrees for the Commonwealth’s incarcerated residents; further integrating the study of justice into the curriculum; and providing transformative teaching and learning opportunities for faculty and students.

Title: The Midcareer Diverse Faculty Advancement Program and Humanities Collaborative
Supports: Infrastructure and Support
Project Lead: Crystal Sanders, Director, Africana Research Center and Associate Professor of History and African American Studies, College of Education
• Andrew Belser, Director of the Penn State Arts and Design Research Incubator
• John Christman, Director of the Penn State Humanities Institute,
• Kristen Woolever, Chancellor, Penn State Brandywine
• Jacqueline Edmondson, Chancellor, Penn State Greater Allegheny
• Richard Brazier, Associate Professor, Geoscience, Penn State DuBois

Overview: This project will assist tenured associate professors, from underrepresented groups, or whose research contributes to advancing diversity, to achieve the rank of full professor. Using strategic mentoring, the program will foster maximum productivity and increase the pool of diverse scholars at all levels.

Title: Greening our stormwater: using campuses as living labs for green stormwater infrastructure
Supports: Stewarding our Planet’s Resources
Project Lead: Hong Wu, Assistant Professor, Department of Landscape Architecture, College of Arts and Architecture
• Lauren McPhillips, Assistant Professor, Civil & Environmental Engineering, Agricultural & Biological Engineering; University Park Co-lead
• Odette Mina, Managing Director, Energy and Environmental Sustainability Laboratories (EESL), Assistant Research Professor; University Park Co-lead
• Daniel Brent, Assistant Professor, Agricultural Economics, Sociology & Education; University Park Co-lead
• Shirley Clark, Professor, Environmental Engineering, Penn State Harrisburg
• Charles A. Cole, Associate Professor, Landscape Architecture; Director, E+D: Ecology Plus Design
Overview: Stormwater pollution and flooding are issues of growing global concern. Using Penn State’s multi-campus network, this project will create a living laboratory for green stormwater infrastructure (GSI) research, education, and innovation. This will transform Penn State into a national GSI leader, building community capacity in the long term to implement cost-effective solutions.

Initiatives Funded: Fall 2018
RFP Cycle 3

Title: Pennsylvania Population Network
Supports: Enhancing Health
Project Lead: Jennifer Elyse Glick, Hoffman Professor of Sociology and Director of Population Research Institute, Department of Sociology and Criminology

- Sue Copella, Director, Pennsylvania State Data Center, Penn State Harrisburg
- Jennifer Shultz, Research Project Manager, Pennsylvania State Data Center, Penn State Harrisburg

Overview: The Pennsylvania Population Network (PPN) is designed as a visible program of demographic and health research, application and outreach. The goal is to leverage existing resources to provide analyses and training focused on the role of population dynamics for health and well-being across diverse groups and geographies.

Title: Ethical Application of Analytic Tools: A Pilot Study in Academic Advising
Supports: Transforming Education
Project Lead: Janet Schulenberg, Associate Director, Division of Undergraduate Studies

- David R. Smith, Associate Dean for Advising and Executive Director, Division of Undergraduate Studies – Co-Lead
- Bart Pursel, Assistant Director of Innovation, Teaching and Learning with Technology – Co-Lead
- Drew Wham, Research and Development, Teaching and Learning with Technology – Co-Lead
- Daniel Susser, Research Associate, Rock Ethics Institute
- Sarah Rajtmajer, Research Associate, Rock Ethics Institute
- Mary Beth Williams, Senior Associate Dean, Eberly College of Science
- Jackie Edmondson, Chancellor and Chief Academic Officer, Penn State Greater Allegheny
- Karen Pollock, Assistant Vice Provost for Online and Blended Programs, World Campus
Overview: This project aims to create resources necessary to support the evaluation and adoption of advanced analytic tools. The initiative will define processes for developing training materials and evaluating ethical use of predictive analytics by studying these tools in an academic advising context.

Title: Transforming Online and On-Campus Education through Simulated Real-World Inspired Industry Projects
Supports: Transforming Education
Project Lead: Ashkan Negahban, Assistant Professor of Engineering Management, Penn State Great Valley
  - Oladipo Onipede, Associate Director of Academics, School of Engineering, Penn State Erie, The Behrend College
  - Sabahattin Gokhan Ozden, Assistant Professor of Information Sciences and Technology, Penn State Abington
  - Omar Ashour, Assistant Professor of Industrial Engineering, Penn State Erie, The Behrend College
  - Chris Millet, Director of Learning Design, World Campus

Overview: This initiative aims at: (1) development and assessment of applied learning environments enabled by "virtual projects" - complex, three-dimensional computerized simulation models of a system - when physical access to the actual system is not possible; (2) enabling synergies by bringing together investigators of funded transforming education strategic initiatives.

Title: Re-imagnining the use of Textbooks in a Traditional Classroom through Interactive Open Educational Resource Notebooks
Supports: Transforming Education
Project Lead: Josephine Wee, Assistant Professor of Food Science
  - Patrick Dudas, Data Visualization Software Engineer for the Huck Institutes of the Life Sciences, Institute for CyberScience, Eberly College of Science
  - Jenay Robert, Research Project Manager, Teaching and Learning with Technology

Overview: This project is re-imagnining the traditional use of textbooks within classrooms. This initiative will develop, test, and implement an interactive open educational resources notebook (iOERn) that provides (1) replacement of traditional static imaging and text utilized in a classroom and (2) digital fluency training to Penn State students.

Title: Penn State Initiative for Resilient Communities (PSIRC): A Pilot to Develop Community-Based Solutions to Riverine Flooding
Supports: Stewarding Our Planet's Resources
Project Lead: Lisa Domenica Iulo, Associate Professor; Director, Hamer Center for Community Design, College of Arts and Architecture
Overview: Recent flooding in Pennsylvania, already one of the most flood-prone states, highlights the need for communities to address flooding impacts. This project pilots approaches for addressing such impacts through a coordinated project with Selinsgrove, PA and other river communities along the Susquehanna River and broader region.

Title: The Pennsylvania Adult-Fiduciary Project: Developing Statewide Online Education in Support of Aging and Vulnerable Adults
Supports: Constituent Outreach and Engagement
Project Lead: Katherine C. Pearson, Professor of Law, College of Law, Dickinson Law
- Barbara Birriel, Assistant Research Professor, College of Nursing
- Claire Flaherty, Associate Professor, Department of Neurology, College of Medicine
- Dr. Eugene Lengerich, Professor, Department of Public Health Sciences, College of Medicine
- Karin Sprow Forté, Assistant Teaching Professor, School of Behavioral Sciences and Education, Penn State Harrisburg
- Denise Shivery, Communications and Training Specialist, Office of Ethics & Compliance

Overview: Pennsylvania needs accessible, effective methods of education on standards of conduct and responsibilities for agents and court-appointed guardians of incapacitated adults. A multiple-campus collaboration with the Pennsylvania Courts will create these interactive educational tools and exemplify the University's commitment to outreach and its expertise in web-based learning.

Title: Stimulating Partnerships Among Researchers and Clinicians (SPARC): Proposal for a Clinical-Research Exchange Fellowship
Supports: Enhancing Health
Project Lead: Sarah Bronson, Associate Dean for Interdisciplinary Research, Cellular & Molecular Physiology, College of Medicine
- Leslie Parent, Professor – Medicine, Microbiology and Immunology, Vice Dean for Research and Graduate Studies, College of Medicine
- Andrew Read, Evan Pugh Professor – Biology, Entomology, Eberly Professor – Biotechnology, Eberly College of Science
- Susannah Gal, Professor – Biology, Associate Dean of Research and Outreach, Penn State Harrisburg
Overview: This Initiative will establish a fellowship program to stimulate partnerships among clinicians and researchers, bridging interests, resources and expertise at different ends of the bedside-to-bench continuum. The interdisciplinary collaborations resulting from this program will be a powerful way to address unmet medical needs, simultaneously expanding biomedical research at Penn State.

Title: Engaging the Palmer’s Public: An Online Publishing Platform for Outreach and Education  
Supports: Advancing the Arts and Humanities  
Project Lead: Patrick McGrady, Charles V. Hallman Curator, Palmer Museum of Art  
  • John Russell, Associate Director, Center for Humanities and Information, and Digital Humanities Librarian, Department of Digital Scholarship and Data Services, University Libraries  
  • Carolyn Lucarelli, Curator of Visual Resources, Visual Resources Centre, Department of Art History  

Overview: The Palmer Museum of Art will develop an online publishing platform for the presentation of exhibition catalogues and other scholarship on the museum’s website. The platform will form a template that can be adapted to meet the online publishing needs of collection- and exhibition-oriented units throughout the University.

Title: Employee Community Networks at Penn State: Pilot Program Proposal  
Supports: Organizational Processes  
Project Lead: Barbara Lynn Welshofer, Senior Equity Consultant, Office of Educational Equity  
  • Sara Oliver-Carter, Senior Director of Talent, Diversity, and Inclusion  

Overview: This limited-scale pilot program will create three “Employee Community Network” (ECN) groups supported by a new position within the Office of Educational Equity. The ECNs constitute process improvements for increased satisfaction and sense of belonging, and ultimately increased recruitment and retention, of diverse talent at Penn State.

Initiatives Funded: Spring 2018  
RFP Cycle 2
**Title:** Experiential Digital Global Engagement (EDGE) at the Commonwealth Campuses  
**Supports:** Driving Digital Innovation and Transforming Education  
**Project Leads:** Jenifer S. Cushman, Chancellor, Penn State Beaver, and Beaver Campus EDGE committee members:  
- John Chapin, Communications Professor  
- Talha Harcar, Business and Economics Professor  
- Ashu Kumar, Information Sciences and Technology Instructor  
- Richard Lomotey, Information Sciences and Technology Assistant Professor  
- Tiffany MacQuarrie, English Instructor  
- Carey McDougall, Director of Academic Affairs  
- Hilary O’Toole, Communications Lecturer  
- Andrea Patrucco, Project and Supply Chain Management Assistant Professor  
- Dan Smith, Business and Economics Assistant Teaching Professor  
- Claudia Tanaskovic, Chemistry Instructor  

**Overview:** Distance education and access are the core of Commonwealth Campuses. Experiential Digital Global Engagement (EDGE) augments that mission by building on the SUNY Collaborative Online International Learning (COIL - [http://coil.suny.edu/](http://coil.suny.edu/)) model to connect Penn State classrooms with classes around the world through technology and project-based learning. Identified as a Beaver campus strategic priority, EDGE can be scaled up to the Penn State campuses in the Pittsburgh region, then the Philadelphia region, and finally across the Commonwealth. Through EDGE, students can learn to interact with those who are different from themselves and to work on projects across distances through technology, developing skills that will give them an advantage in the global industry landscape.

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**Title:** Lion Pulse: Networking Employee and Student Wellness Initiatives  
**Supports:** Enhancing Health  
**Project Leads:** Jennifer Kraschnewski, Associate Professor of Medicine, Pediatrics and Public Health Sciences, Penn State College of Medicine, and Stakeholder Advisory Board members:  
- Deborah Tregea, Campus Wellness Coordinator, Penn State Health  
- Daniel George, PhD, Associate Professor, Department of Humanities, Penn State College of Medicine  
- Kathryn Schmitz, PhD MPH MEd, Professor of Public Health Sciences, Penn State College of Medicine  
- Wenke Hwang, PhD, Director, Master of Public Health Program, Associate Professor, Public Health Sciences, Penn State College of Medicine  
- Leslie Walker-Harding, MD, Professor and Chair, Department of Pediatrics, Penn State College of Medicine  
- Susanne Marder, Fitness and Wellness Director, Mini Tab  
- Lidija Petrovic-Dovat, MD, Chair, Penn State Hershey Commission for Women, Assistant Professor of Child & Adolescent Psychiatry  
- Erin Velazquez, American Heart Association
Dr. Joan Humphrey, College of Nursing
Adrienne Bruner, Human Resources, Penn State Health
Jennifer Sarff, Penn State Health Human Resources Department, Director of Total Rewards Benefits Program
Representatives from Student Organizations (including Exercise is Medicine and Food as Medicine Student-led Groups at Hershey and University Park)

**Overview:** Healthier work and learning environments and promotion of wellness programming are critical to population health efforts. Therefore, this institution-wide initiative aims to revive employee and student health programming across Penn State and create a national exemplar and positive influence on University faculty, staff, students and communities Penn State serves. It proposes creating a network of Health Champions across Penn State University and providing technical assistance to implement evidence-based wellness policies and practices within departments. Programs that are well-received within one campus should be disseminated to all 24 campuses. The creation of Lion Pulse, a wellness network with facilitated oversight will help attract and retain top employees and students. Further, resources developed can be disseminated beyond Penn State to community members and organizations to truly impact population health across the Commonwealth.

**Title:** Energy 2100: Ensuring a Carbon-neutral, Global Energy Economy

**Supports:** Stewarding Our Planet’s Resources

**Project Leads:** Bruce Logan, Evan Pugh University Professor in Engineering, Stan & Flora Kappe Professor of Environmental Engineering and initiative Steering Committee members:

- Charles Anderson, Department of Biology
- Rachel Brennan, Department of Environmental Engineering
- Chris Giebink, Department of Electrical Engineering
- Caitlin Grady, Rock Ethics Institute, Department of Civil Engineering
- Chris Rahn, Department of Mechanical Engineering
- Susan Stewart, Department of Aerospace Engineering

**Overview:** The health of the planet depends on reversing climate change while providing the energy needed for industrialized and developing societies. This initiative will focus on the development of carbon-neutral technologies and their integration into energy infrastructure, while engaging local and global communities through education and outreach. Penn State President Eric Barron has emphasized that Penn State is an “Energy University,” as Penn State is among the top universities in the areas of energy publications, research, and education. The goal of “Energy 2100” is to drive research, innovation, and education in technologies that can be used for providing energy, in the form of transportation fuels and electricity, in an environmentally sound and responsible manner, minimizing the reliance on fossil fuels that release carbon dioxide and other greenhouse gases into the air.
**Title:** Using Research-based Pedagogies to Enhance Cognitive and Affective Outcomes of General Education  
**Supports:** Stewarding Our Planet’s Resources  
**Project Leads:** Thomas Litzinger, Assistant Dean for Educational Innovation and Accreditation and Director of Leonhard Center, Engineering Dean's Office, College of Engineering, and Project Leadership Team members:  
- Maggie Slatter, Assistant Dean and Director of Office of General Education  
- David Christiansen, Associate Vice President and Senior Associate Dean for Academic Programs  
- Jeff Adams, Vice President and Associate Dean for Undergraduate Education  

**Overview:** This research, built upon Elrod and Kezar’s Model for Institutional Change, will demonstrate methods for achieving the consistency in courses required by One Penn State 2025 and for increasing use of research-based pedagogies in high-enrollment General Education courses offered in online and resident formats. The research is designed to achieve three interrelated goals: (1) to develop and implement processes through which disciplinary working groups can establish common learning objectives and course content for high-enrollment General Education courses, (2) to conduct pilot projects to increase use of research-based pedagogies that enhance student engagement and learning in high-enrollment General Education courses, and (3) to enhance Penn State’s reputation as a leader in the transformation of higher education.

**Title:** Pennsylvania in Balance: Harnessing Stewardship for Clean Water through Innovative Communication, Engagement, Marketing and Sense of Place  
**Supports:** Stewarding Our Planet’s Resources  
**Project Leads:** Matthew Royer, Director, Agriculture and Environment Center, Environment and Natural Resources Institute, College of Agricultural Sciences, and Proposal Co-collaborators:  
**College of Agricultural Sciences**  
- Jim Shortle, Distinguished Professor of Agricultural and Environmental Economics, Director, Environment and Natural Resources Institute  
- Alyssa Collins, Assistant Professor of Plant Pathology, Director, Southeast Agriculture Research and Education Center  
- Jennifer Fetter, Extension Educator, Water Resources  
- Kristen Kyler, Project Coordinator, Agriculture and Environment Center  
- Sarah Xenophon, Watershed Technician, Agriculture and Environment Center  
- Charles White, Assistant Professor of Soil Science  
- Leon Ressler, Extension Educator, Agronomy  
- Jerry Martin, Extension Educator, Livestock and Nutrient Management  
- Rob Shannon, Associate Professor of Biological Engineering, Director, Environmental Resource Management Program  
- Jonathan Duncan, Assistant Professor of Hydrology  
- Mary Wirth, Director of College Relations and Communications  
- Mary Seaton, Assistant Director of College Relations
Overview: This proposal addresses one of the most critical environmental problems on the globe today: nonpoint source pollution of water (agriculture and urban stormwater runoff). Pennsylvania is at the epicenter of this problem, causing pollution to streams, rivers and the Chesapeake Bay. Building upon a transformative conference convened by Penn State, the proposal advances integrated research, student learning, and community engagement to solve this complex problem with study focus areas at the Harrisburg campus and Lancaster County experimental station.

Title: Exhibition and Catalogue: Back and Forth
Supports: Advancing the Arts and Humanities
Project Leads: Julia Spicher Kasdorf, Professor of English, and Christopher Reed, Distinguished Professor of English and Visual Culture, College of the Liberal Arts
Overview: Rich in history and culture rooted in agricultural communities, yet bordered by sprawling suburbs and threatened by industrial development, rural Pennsylvania faces conflicts concerning the value and sustainability of local ways of life. This collaborative initiative involving faculty from the College of the Liberal Arts with the Palmer Museum of Art approaches these questions through a major exhibition – 50 to 60 works – of the art of Warren Rohrer (1927-1995) as it evolved in conversation with poet Jane Turner Rohrer (b. 1928), his partner of 48 years, both modernists from traditional Mennonite farm communities. The
exhibition, associated educational programming, and a published catalog together engage vital issues of cultural and environmental sustainability.

**Title:** FaceAge @ Penn State  
**Supports:** Advancing the Arts and Humanities  
**Project Leads:** Andrew Belser, Director, Arts & Design Research Incubator; 2017-18 Penn State Laureate, and Professor of Voice, Movement, Acting, School of Theatre, and Proposal Co-
Collaborators:
- Amy Lorek, Center for Healthy Aging Director of Outreach – FaceAge Director of Education and Engagement
- Marty Sliwinski, Director, Center for Healthy Aging – FaceAge Principal Strategic Collaborator
- Robert Roeser, Bennett Pierce Professor of Caring and Compassion and Professor of Human Development and Family Studies – FaceAge Strategic Collaborator
- Donna Fick, Eberly Professor of Nursing and Professor of Medicine; Director, Center of Geriatric Nursing Excellence at Penn State – Course Lead Professor
- Maura Shea, Associate Head of the Department of Film-Video and Media Studies, Donald P. Bellisario College of Communications – Course Lead Professor
- Cynthia White, Embedded Researcher, Filmmaker, Arts & Design Research Incubator – Course Collaborator, FaceAge Film Production Lead

**Overview:** FaceAge - a film-based installation - is attracting global public/private markets as a platform for community engagement, workforce/diversity training, and healthcare education. This initiative embeds FaceAge into Penn State’s undergraduate and graduate curricula, with FaceAge serving as a “learning laboratory” offering new courses, distributed course modules, and engaged learning.

**Title:** Transforming Education through Immersive Technologies  
**Supports:** Transforming Education  
**Project Leads:** Peter LaFemina, Associate Professor of Geosciences, College of Earth and Mineral Sciences, and Proposal Co-
Collaborators:
- Alex Klippel: CO-PI; Professor of Geography
- Chris Stubs: IT Manager 1, Penn State Education Technology Services/Teaching and Learning with Technology (Learning Designer)
- Kathy Lou Jackson: Research Project Manager, Penn State Education Technology Services/Teaching and Learning with Technology (Learning Designer)
- Ann Taylor: Assistant Dean for Distance Learning and Director of the John A. Dutton e-Education Institute
- Stevie Rocco: Assistant Teaching Professor and Director of Learning Design, John A. Dutton e-Education Institute (Learning Designer)
- Timothy Bralower: Professor of Geosciences and Interim Head of Geosciences
- Maureen Feineman: Assistant Professor and Associate Head for Undergraduate Education
Overview: This initiative will transform education through empirically validated immersive experiences that will allow for integrating place-based learning experiences (virtual field trips) into STEM classes (e.g., geosciences and biology). Utilizing the emerging immersive technology infrastructure, Penn State will be in a position to provide access to critical learning experiences across the Commonwealth. The initiative will advance the integration of different learning environments and simultaneously make cutting-edge educational practices available to everyone at Penn State.

Title: Individualized Pathways and Resources to Adaptive Control Theory-Inspired Scientific Education (iPRACTISE)

Supports: Transforming Education

Project Leads: Sy-Miin Chow (Principal Investigator), Professor of Human Development and Family Studies College of Health and Human Development, and Co-Investigators:

- Nilam Ram (PI), Professor, Department of Human Development and Family Studies
- Peter C.M. Molenaar, Distinguished Professor, Department of Human Development and Family
- Zita Oravecz (PI), Assistant Professor, Department and Human Development and Family
- Timothy R. Brick, Assistant Professor, Department and Human Development and Family
- Michael Hallquist, Assistant Professor of Psychology
- Guangqing Chi, Associate Professor of Rural Sociology and Demography and Public Health Sciences, Director of the Computational and Spatial Analysis Core of SSRI/PRI
- Michael Rutter, Associate Director, School of Science and Associate Professor of Statistics, Mathematics, Penn State Behrend
- Matthew Beckman, Assistant Research Professor of Statistics
Overview: Heterogeneity in students' backgrounds is a major hurdle to effective, broad, and inclusive education in areas such as data science. This initiative proposes developing, testing, and implementing a system, iPRACTISE, that provides personalized digital training in data science guided by user input and automated control theory algorithms. The system, Individualized Pathways and Resources to Adaptive Control Theory-Inspired Scientific Education (iPRACTISE), will revolutionize the current educational system by using modern technology to personalize educational content.

Title: Campus Arts Initiative
Supports: Advancing the Arts and Humanities
Project Leads: Lindsey Landfried, Instructor of Arts, School of Visual Arts, College of Arts and Architecture, and Ann Tarantino, Assistant Professor of Art and Director, Woskob Family Gallery

Overview: The Campus Arts Initiative will commission site-specific visual arts works for units, buildings, and campuses throughout the Commonwealth, bringing transformative visual art to high-impact indoor and outdoor locations across Pennsylvania. Eight installations will utilize the creation of visual artwork as a cross-disciplinary replicable model for collaborative engagement and environmental sustainability.

Initiatives Funded: Fall 2017
RFP Cycle 1

Title: A University-wide, Structured Approach to Organizational Excellence
Supports: Organizational Processes
Project Leads: Renata Engel, Vice Provost for Online Education, and Peter Moran, Assistant Dean for Policy and Planning, Penn State Altoona
Overview: This proposed initiative includes three phases: 1: Develop a University-wide, structured approach to assist our efforts to manage improvement or change, whether expansive, such as the adoption of a new enterprise system, or smaller-scale or incremental enhancements; 2: Pilot implementation of the approach and refine it for broader adoption; 3:
Advance recommendations to institutionalize change strategy. The implementation of process improvements, whether modifications to existing or the adoption of new processes, often present a host of challenges, including technological, financial, and cultural, that need to be carefully managed if an improvement is to be successful. To that end, the proposal to develop, implement, and institutionalize a University-wide organizational excellence strategy taps into the techniques associated with change management and process improvement.

**Title:** Enhancing Interdisciplinary and Collaborative Cancer Research Activity Across Penn State Campuses  
**Supports:** Enhancing Health  
**Project Lead:** Andrew D. Patterson, Associate Professor of Molecular Toxicology, Associate Professor of Biochemistry and Molecular Biology, Scientific Director of Metabolomics  
**Overview:** This initiative aims to develop and implement a postdoctoral scholars program for the Penn State Cancer Institute (PSCI) members at University Park, Hershey, and other University campuses. The program is designed to be truly interdisciplinary and cross-cutting by bringing together laboratories from different disciplines and that share the common goal toward better understanding and treating cancer. The program is designed to foster greater, more productive, and long-term interactions between diversely focused laboratories (e.g., basic and clinical research, demographic and metabolism research, social science and basic scientists) that might not be achieved through short-term, focused projects funded by traditional seed grant mechanisms. The postdoctoral scholars will serve as the bridge between the two laboratories and simultaneously receive cross-training in the laboratory’s major research areas.

**Title:** The Public Humanities Initiative  
**Supports:** Advancing the Arts and Humanities  
**Project Lead:** John Christman, Director of the Penn State Humanities Institute  
**Overview:** Spurred by the public outreach mission of the new Penn State Humanities Institute, this is a multi-platform public media initiative organized in partnership with the Donald P. Bellisario College of Communications to spur an ongoing conversation about the fundamental ideas and questions that shape our time. Interest in the kinds of reflection on the human condition that the study of the humanities provides—in fields such as history, philosophy, literature, cultural studies, and communications—has never been higher, and the affordances of media technologies to reach audiences driven by those interests have never been more numerous. Therefore, this initiative aims to produce media that include interviews, conversations, and discussions about topics related to today’s most pressing issues.

**Title:** Digital Collaboratory for Precision Health Research  
**Supports:** Driving Digital Innovation  
**Project Lead:** Vasant Honavar, Professor and Edward Frymoyer Chair, Information Sciences & Technology; Professor of Computer Science & Engineering, Bioinformatics & Genomics, Neuroscience; Director, Center for Big Data Analytics and Discovery Informatics; and Associate Director, Institute for CyberScience  
**Overview:** Despite recent advances in electronic capture, storage, querying and analyses of data, the ability of researchers and clinicians to harness the power of big data is limited by the
lack of means to seamlessly access, analyze, and act upon such data through integrative analysis of heterogeneous, fine-grained, richly structured, longitudinal patient data. Realizing the promise and potential of such data to significantly mitigate health risks and improve health outcomes presents major challenges. The Digital Collaboratory for Precision Health Research (DCPHR) aims to address these challenges by establishing: 1) a secure, data access and use policy (DAUP) compliant, modular, customizable, reproducible, sharable, and auditable data integration and computational data analytics software workflows for integrative analyses of disparate types of health data; and 2) a data governance group to oversee and approve access to DCHPR data and workflow components that realize specific kinds of analyses for IRB-approved projects.

**Title:** Digital Innovation through Immersive Technologies: Establishing New Paradigms for Environmental Decision Support  
**Supports:** Driving Digital Innovation  
**Project Lead:** Alexander Klippel, Professor of Geography and Gosnell Senior Faculty Scholar  
**Overview:** Immersive technologies are positively transforming human life, from social interaction to education and research. Digital innovations ranging from augmented reality (AR) to mixed and virtual reality (VR), short xR, find applications in environmental communication and decision making, emergency management, or digital heritage. Penn State is tasked to develop a response to the global investment of billions by major technology companies—most recently Apple for AR—to promote xR, creating a central place in humanity’s digital future. Penn State is set up to globally lead developments in xR, and this initiative will ensure Penn State’s governance in this area in research, education, and outreach. This initiative will provide a platform to efficiently organize efforts across the university that are already under way in almost every college. It will facilitate securing extramural funding through basic research, philanthropy, as well as expanding world campus and residential education efforts by creating a central place for researchers to obtain, share, and advance knowledge about critical developments, workflows, and technology.

**Title:** Integrated Data Systems Solutions for Health Equity  
**Supports:** Enhancing Health  
**Project Lead:** Susan McHale, Director of the Social Science Research Institute and Co-Director of the Penn State Clinical and Translational Science Institute  
**Overview:** Pennsylvania collects an array of administrative data from its residents that bear on health and health care. Most of these data reside at the state-level in public agencies. Although collected at a substantial cost to taxpayers, these data are not often used to guide public policy and investments. They also tend to be siloed within collecting agencies whose capacity is limited to basic data management and descriptive analyses. The goal of this initiative is to develop the capacity to access and link administrative data for inferential and predictive analysis to advance understanding of health disparities and provide direction for public policy in the Commonwealth.

**Title:** On Campus Ambulatory Intensive Care (AIC) to Improve the Health and Wellness of Penn State Employees and Adult Beneficiaries with Chronic Illnesses
Supports: Enhancing Health

Project Lead: Dennis P. Scanlon, Distinguished Professor, Health Policy & Administration, and Director of the Center for Health Care and Policy Research

Overview: This initiative involves a unique partnership between five University Park (UP) area Penn State Health ambulatory health care clinics (PSH clinics) and the UP Employee Health and Wellness Center (EHWC) to identify overweight or obese patients with or at high risk for chronic disease and provide integrative intensive care management as part of an ambulatory intensive care (AIC) unit modeled after similar programs. Providers and their patients will have ongoing access to planned EHWC care management resources, such as education, coaching, and counseling diet, exercise, and patient well-being. In addition, the AIC intervention will incorporate intensive care management program components previously shown to be critical, including personal invitations from providers; an ongoing, close collaboration between physicians, care management specialists and lifestyle interventionists; coordinated medical care to address patients’ personal needs; and tailored care for unique patient populations.

Title: Energy University Partnership to Support the Commonwealth’s Oil and Gas Strategy

Supports: Stewarding Our Planet’s Resources

Project Leads: Amy Bridger, Senior Director for Corporate Strategy and External Engagement, and Ivor Knight, Associate Dean for Research and Graduate Studies

Overview: The Commonwealth of Pennsylvania was selected as the location for the new Shell Pennsylvania Chemical’s ethane-to-ethylene cracker plant, which will open in 2020 near the Penn State Beaver campus. The IHS Market study from March 2017 estimates a $6B investment from Shell, which will be leveraged into an additional $2.7-$3.7B from supporting efforts. The study estimated that for each job created at the Shell plant, a multiplier of 5-7 is estimated for additional indirect jobs, including utilization of the byproducts in the plastics industry. A major challenge identified is attracting an educated workforce with the right skill sets to meet the growth demand. The purpose of this initiative is two-fold: It will fund research to determine how to best meet the workforce pipeline and research and development needs of the plant, and it will establish Penn State and The Behrend College as the central point for the efforts related to the Erie region and statewide for byproduct utilization outreach efforts.

Title: Ecology and Design

Supports: Stewarding Our Planet’s Resources

Project Leads: Charles Andrew Cole, Associate Professor of Landscape Architecture & Ecology
– Eliza Pennypacker, Professor, Head, and Stuckeman Chair in Integrative Design, Department of Landscape Architecture
– Mehrdad Hadighi, Professor, Head, and Stuckeman Chair in Integrative Design, Department of Architecture
– Kelleann Foster, Professor, Associate Dean, and Director of the Stuckeman School of Architecture and Landscape Architecture

Overview: This initiative supports the creation of a Penn State Center for Ecology and Design (E+D) that will house three core activities to address the need to fuse ecology and design. Research: Facilitation of funded interdisciplinary projects that demonstrate the impact of this strategy and create new collaborative norms, promote sponsorship of faculty and
students for analyses of built works, and test the performance of designed projects based on ecological goals. **Outreach:** Annual high-profile events that rotate between lecture series and symposia, bringing innovators to Penn State and establishing the University as the locus of forward thinking in this realm, resulting annually in a digital publication of presentations. **Education:** Development of a graduate education option as well as a certificate in E+D available to a range of majors.

**Title:** United Nations Economic Commission for Europe (UNECE): Global Consortium for High Performance Buildings  
**Supports:** Stewarding Our Planet’s Resources  
**Project Leads:**  
– James Freihaut, Professor of Architectural Engineering, Director DOE Mid-Atlantic Combined Heat and Power Technical Assistance Partnership, Technical Director of Penn State at the Navy Yard, and Director of the Indoor Aerosol Laboratory  
– David Riley, Professor of Architectural Engineering and Director of the GridSTAR Center  
**Overview:** In June 2017 in Kazakhstan, the Energy Ministerial Conference convened by the United Nations Regional Commissions adopted the “Framework Guidelines for Energy Efficiency Standards in Buildings.” The United Nations Economic Commission for Europe (UNECE) is leading efforts to implement this Framework for the global transformation of energy efficiency in the built environment. Based on Penn State’s initial contributions, collective expertise, and unique positioning, the UNECE has designated the University as the lead institution for developing and managing an integrated and globally scaled research, education, and outreach program supporting the Framework. This initiative seeks the resources to respond immediately to this unique opportunity by providing leadership and expertise in the creation of a global research consortium and developing an integrated and globally scaled education and outreach program. Responding to this unique opportunity will require Penn State to assemble an interdisciplinary team and to draw expertise from across its colleges and campuses, as well as industry partners.

**Title:** Growing Food, Leaders and Community: Expanding Sustainable Food Systems Learning Across Commonwealth Campuses  
**Supports:** Transforming Education  
**Project Lead:** Leslie Pillen, Associate Director of Farm and Food Systems, The Sustainability Institute  
**Overview:** In response to strong student demand for interdisciplinary learning opportunities in sustainable food and agriculture systems, the Sustainable Food Systems Program (SFSP) has been in development for the past three years, and a Student Farm was established at University Park (UP) in 2016. Student farm production and maintenance, marketing and sales, and educational and outreach events are managed by student interns, Student Farm club members, and course partners. Produce supplies the dining commons, contributing to campus operations goals. In addition, an accompanying curriculum comprised of three resident education courses (with a fourth on the way) were newly developed that explore not only the sustainable production of food but the social dimensions of food distribution, access, and justice and how food access and choice influence human wellness. The purpose of this initiative is to extend
what we have learned through the development of our thriving UP program to other Commonwealth Campuses (CWCs) with a demonstrated interest and capacity to add an engaged scholarship thrust addressing sustainable food systems. Additional Student Farms at CWCs can be achieved through this initiative with assistance from the SFSP at UP.

**Title:** Penn State Lehigh Valley LaunchBox and Retail Services and Sales Industry Collaborative to Support Employment Pathways  
**Supports:** Transforming Education  
**Project Lead:** David Yanoshik, Director of Business Development, Penn State Lehigh Valley  
**Overview:** Penn State Lehigh Valley has developed an innovative teaching and learning model to work with various facets of business and industry through the Lehigh Valley LaunchBox that would address fundamental needs specific to certain industries (manufacturing, healthcare, engineering, human resources, retail services and sales, etc.). Through our model, we will develop a core competencies domain curriculum that integrates classroom content with industry-informed content to enhance faculty instruction, student learning, industry collaboration, and pathways to employment opportunities. Students will be exposed to an innovative program that provides applied-learning opportunities based on real-time industry problems, the building of teamwork and problem-solving skills, professional development, and integrated internships. In this specific proposal, we offer an initiative focused on the retail and sales industry, which would allow Lehigh Valley LaunchBox to work directly with partners to support The Center for Retail and Sales, which is dedicated to being a leading authority on issues and solutions that face the retailing industry.