To: Dr. Pamela Whitten  
Senior Vice President for Academic Affairs and Provost  

From: Sustainable Environments Break-Out Group Participants  
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Provost Whitten, thank you for the support provided for the 2017 UGA Academic Affairs Faculty Symposium focused on “Solving the Grand Challenges of Our Time: Enabling Faculty and Preparing Students.” We are happy to propose the following recommendations for your consideration.  

The vision of our group is to move UGA forward as a model for sustainable practices encapsulated in the concept of UGA as a Living Lab. Our discussions centered around two major goals:

1. Establish UGA as a recognized leader in sustainable practices.
2. Build a sustainable and resilient Georgia, nation, and world, integrating social, economic, and environmental dimensions of sustainability.

The first goal is addressed by emphasizing sustainability in campus operations and infrastructure, especially capital improvements, and aligning some teaching, research and service efforts in the development and maintenance of the UGA Living Lab. The second goal can be met by “taking the university” to the communities of Georgia, the nation, and the world. Goals, action items, and suggestions about possible tools and strategies to use to reach these goals are listed below and summarized in the attached diagram (Appendix 1).

UGA Living Lab Goal 1: Establish UGA as a recognized leader in sustainable practices

Two primary strategies are recommended to engage students, faculty, and staff in data collection, evaluation, and informed action to increase sustainability and resilience at UGA. First, create a structure to promote and engage transdisciplinary grand challenge and sustainability education to ensure continued momentum. This could include a graduate research assistant, with support from a faculty-staff advisory committee, to coordinate networking workshops, promote experiential learning opportunities, assist grant proposal development, and facilitate ongoing collaboration to address grand challenges. A budget of approximately $23,000 per year is recommended to hire a graduate research assistant, host semi-annual networking workshops, and provide faculty mini-grants. Second, establish a revolving ‘green’ fund to support grand challenge experiential learning through partnerships on and off campus to implement projects with a financial return on investment. The initial fund could vary in size and grow over time through reinvestment of savings. An endowment of $100,000 or more could provide
competitive annual funding to implement meaningful student and faculty-driven projects. All Living Lab projects and programs would engage staff practitioners with operational responsibilities, as well as faculty and students, to ensure goal alignment and useful outcomes. Potential funding sources include Southern Company, Kendeda Foundation, or other external partners.

Additionally, creation of a virtual and self-guided tour, beginning in the proposed new STEM building, could allow visitors to see, in real time, the implementation of sustainable practices and the monitoring of their efficacy. The tour could enhance instruction, communicate research, and engage the broader community. It could facilitate the dissemination of information and knowledge, empowering those who visit with a vision for a sustainable future. We imagine that the tour could also be an effective recruiting tool for prospective students and faculty. Ultimately, the Living Lab would demonstrate how a large institution can move toward resilience and sustainability.

An expanded list of Living Lab strategies that would enhance UGA’s capacity to address grand challenges and increase sustainability, including no-cost options, is attached as Appendix 2.

UGA Living Lab Goal 2: Build a sustainable and resilient Georgia, nation, and world, integrating social, economic, and environmental dimensions of sustainability

To achieve a sustainable and resilient Georgia, we would leverage UGA Extension, Archway Partnership, industry partners and others to share details and extrapolate lessons learned through the Living Lab. Conversely, the Living Lab can also produce data or information to meet specific needs identified by our strategic partners. Specific strategies toward an increasingly sustainable and resilient state and world include addition of a requirement for instruction and outreach in the President’s grand challenges seed grant funding and establishment of mini-grants to promote grand challenge service and outreach in Georgia and around the globe. There would be no cost to require an instruction and outreach component for all teams that receive funding through the President’s grand challenges seed grant program. Grand challenge engagement mini-grants totaling as little as $10,000 per year could enhance local faculty-student-community partnerships to address grand challenges in ACC and surrounding counties. A similar grand challenges outreach fund could be established to promote innovative solutions throughout the state of Georgia. As little as $15,000 in annual mini-grants could provide added support to UGA Extension, Archway Partnership, or other PSO units to address grand challenges throughout the state. Funding for these mini-grant programs could come from corporate partners, foundations, or other external sources.

As a model for sustainable practices, UGA will be poised for leadership, locally and globally, in a rapidly changing world. To meet these goals, the group believes that sustainability should be incorporated into every decision, as well as in reporting and public accountability. The group highlighted the importance of integrating efforts of teaching, research, and service occurring at the Athens campus with existing UGA resources, experience, and community engagement flourishing throughout the state. By embracing the Living Lab concept, UGA has an opportunity to become a leader in sustainability practices, education, research, and service for the benefit of our students and the residents of Georgia.

Thank you for your interest in this very important topic. Please do not hesitate to contact us if you have any questions.
Appendix 1: Summary Diagram

The UGA ‘Living Lab’: A model for sustainable practices

Goal: Establish UGA as a recognized leader in sustainability teaching, research, service and campus operations

Campus operations and infrastructure
- New & renovated buildings and landscapes meet UGA facilities performance standards
- Convert to 100% renewable energy purchase &/or generation by 2035
- Reduce potable water use by 50% or more by 2035
- Expand efforts in energy, water, waste, food and transportation

Teaching (curricular and co-curricular)
- Provide transdisciplinary sustainability teaching, research and service opportunities for graduate and undergraduate students through a coordinated structure
- Establish Green Revolving Fund to support experiential learning in the ‘Living Lab’
- Organize activities to help students learn about micro-behaviors that make an environmental difference, such as expansion of the Green Cup Challenge

Research
- Improve tools to build capacity for addressing grand challenges and implementing sustainable practices and green infrastructure
- Use ‘Living Lab’ buildings, systems, roadways and landscapes as a generator of data streams for research
- Develop measurement technology and sensors to support the ‘Living Lab’

Service/Outreach
- Communicate “UGA Living Lab” best practices through multiple channels such as:
  - Augmented reality and social media
  - ‘Living Lab Walking Tour’ integrating sustainability examples such as the UGA Arboretum, Founder’s Garden, Watershed UGA project, green infrastructure, historic/sustainable buildings, etc.
  - Sustainability Science Center in the proposed STEM building, which could embody sustainable design and technologies and serve as a starting point for a ‘Living Lab Walking Tour’

Goal: Promote a sustainable and resilient Georgia, nation and world, integrating social, economic and environmental dimensions of sustainability.

Service/Outreach/Extension
- Expand capacity for UGA to be a nexus for citizens, communities, industry, and government across GA (Nation/World) to enhance learning, action, and changing conditions toward sustainable environments.
- Highlight the work and role of UGA Extension, Archway Partnership and other outreach units present across Georgia.
- Establish outreach seed grants to support building sustainable environments across GA, the nation, and the world.

Leverage existing resources across the State of Georgia

Sustainability should be incorporated into all decisions, reporting, and public accountability at UGA.
Appendix 2: Expanded List of Strategies for UGA Living Lab

Teaching

- Include teaching and outreach requirements in the President’s Grand Challenges research seed grant program (no cost)
- Encourage FYOS courses to address grand challenges and denote this in the course description (no cost)
- Investigate 75-minute block scheduling to enhance instruction and reduce resource use and “down time” in classroom utilization (no cost)
- Encourage experiential learning credit and non-credit activities to address grand challenges (no cost, or up to $10,000 for mini grants/stipends to enhance the learning environment in grand challenge experiential / service learning courses)
- Expand UGA Green Cup Challenge to include additional residence halls and other departments across campus (requires additional metering)
- Create a structure to support transdisciplinary grand challenge and sustainability education, research and service ($23,000/year; Grad RA, two networking workshops, faculty mini-grants)
- Green Revolving Fund for experiential learning and research in grand challenges and sustainable environments ($100,000 endowment yielding $10,000+ /year investment potential to increase as funds are reinvested in the program)
- Participate in multi-institutional proposal to establish a UN Regional Center of Expertise in Education for Sustainable Development (no cost or minimal reimbursement for travel to meetings and workshops in Atlanta)

Research

- Engage a Green Revolving Fund for pilot-scale grand challenge and sustainable environments applied research through CURO and other undergraduate and graduate resources ($100,000 endowment as mentioned above; potential funding sources include Kendeda Foundation and Southern Company)
- Enhance the support network for transdisciplinary research team development including an interactive database of faculty expertise related to grand challenges and other available resources (such as proposal writing support) to facilitate active collaboration on external grants

Service

- Engage with community partners via Office of Service Learning to address grand challenges locally in ACC and surrounding counties ($10,000 / year mini-grants for grand challenge community engagement)
- Grand challenges outreach fund to promote solutions to grand challenges through leveraging relationships and community partnerships through UGA Extension, Archway Partnership, and other PSO units ($15,000 mini-grants for community partnerships to address grand challenges through experiential learning)
Campus Operations

- **Energy**
  - Install smart metering for each building on campus by 2025, starting with high use facilities
  - Reduce energy use intensity by 40% by 2035 (versus 2007 baseline)
  - Convert to 100% renewable (electrical) energy by 2035 (~$2M per year via GA Power Simple Solar Program)

- **Water**
  - Reduce potable water use by 50% or more by 2035 (versus 2007 baseline)
  - Treat and reclaim waste water for reuse in cooling towers and other non-consumptive purposes in collaboration with ACC (no direct cost; obligation of minimal land area for 20+ years)

- **Food**
  - Collaborate with UGArdens, UGA sustainable agriculture program and others to source local and sustainable foods for UGA dining operations
  - Incorporate 45% local and sustainable foods in UGA food services by 2035

- **Waste**
  - Expand departmental composting program to all campus buildings by 2020
  - Reduce landfilled waste by 75% by 2035 (versus 2010 baseline)

- **Transportation**
  - Continue to value and support expansion of Greenway Network on UGA properties
  - Expand Bulldog Bikes bike share program to include 75 or more bikes in 15 or more locations and coordinate town-gown program with ACC by 2020 ($100,000 per year or less)
  - Achieve Bike Friendly University Gold-level by 2020
  - Convert 95% of UGA transit fleet to electric / alternative fueled vehicles by 2035
  - Pursue use of Norfolk Southern rail corridor for commuter rail and/or trail
Appendix 3: Sample Illustrative Graphic