Attendees: Anthony Atchley, Kultegin Aydin, Priya Baboo, Sven Bilen, Peter Butler, Jerry Ciołkosz, Clark Colborn, Chitaranjan Das, Cheng Dong, Eric Donnell, Pat Fox, Amy Freeman, Paul Heinemann, George Lesieutre, Tom Litzinger, Tom LaPorta, Rebecca Mason, Christine Masters, Arthur Motta, Jim Myers, Kate Myers (representing Dana Marsh), Chris Rahn, Terry Reed, Phil Savage, David Spencer (representing Phil Morris), Karen Thole, Judy Todd, Bob Voight (representing Janis Terpenny), Jennifer Wu, Cedric Woolfork

Absent: Amr Elnashai, Dana Marsh, Kevin Parfitt, Phil Morris, Vic Sparrow, Janis Terpenny, Bobbi Schaffer

Guests: Rachel Brennan, Steve Maruszewski, David Riley

<table>
<thead>
<tr>
<th>Convene/Introductions/Updates</th>
<th>Lead: Anthony Atchley</th>
</tr>
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<tbody>
<tr>
<td>Summary of Discussions</td>
<td></td>
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<tr>
<td>Anthony stated many deadlines for nominations are approaching and referred attendees to the list provided with the agenda. He also mentioned that webcams are set up for the construction sites of Fenske and AgBio.</td>
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<tr>
<td>Fenske:</td>
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<tr>
<td><a href="https://www.senserasystems.com/public/PennsylvaniaState">https://www.senserasystems.com/public/PennsylvaniaState</a> University/M68617714401</td>
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<tr>
<td>AgBio:</td>
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<tr>
<td>Recommendations: N/A</td>
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<tr>
<th>The Sustainability Experience Center (CfS)</th>
<th>Lead: David Riley, Steve Maruszewski, Rachel Brennan</th>
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<tbody>
<tr>
<td>Summary of Discussions</td>
<td></td>
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<tr>
<td>David Riley presented background, current activities, and the future potential of the Sustainability Experience Center. The nine-acre site is located on Porter Road near Beaver Stadium. This site is being developed by Penn State’s Sustainability Institute as an education destination featuring numerous facilities designed to support sustainability education and engagement. The Center currently features the MorningStar Solar Home, Eco-Machine Greenhouse, Community Gardens, “Wind for Schools” Wind Turbine, Sustainability Leadership Center and Chevrolet Solar Carport. David would like to see the College taking a lead role in moving the Center forward. Anthony mentioned that the faculty members currently involved in these projects have an enthusiasm and passion for the subject that has made the Center what it is today. To advance further, we need to involve more faculty members with similar interests. Anthony recognized Steve Maruszewski from OPP for his continued support for the College of Engineering and the Center. He acknowledged that the sustainability efforts going on around campus are largely due to the Steve’s leadership at the University. Anthony mentioned that this project is well aligned with the College’s Strategic Plan. The question is how we move from words in a plan to actionable steps leading to projects. Discussion</td>
<td></td>
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</table>
ensued about the College making sustainability efforts a more central focus, the monetary side and how to pursue. Presentation attached.

For more information please contact:

**David Riley**  
Tel: (814) 863-2079  
driley@engr.psu.edu  
Website: [http://greentour.psu.edu/sites/sec.html](http://greentour.psu.edu/sites/sec.html)

<table>
<thead>
<tr>
<th>Status Updates: Learning Outcomes Assessment &amp; ANGEL to Canvas Transition</th>
<th>Lead: Tom Litzinger</th>
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</thead>
</table>
| **Summary of Discussions** | **Learning Outcomes Assessment**  
Tom announced that development of learning assessment plans are underway for all undergraduate, graduate, and certificate programs with a submission deadline at the end of fall semester. Assessment plans must be put into action in spring semester for one learning objective per program with a submission deadline of June 2017. Tom has been coordinating the assessment efforts with the departments. |

**ANGEL to Canvas**  
Tom gave an update on the transition from ANGEL to Canvas which has made substantial progress, but still has a long way to go. The College developed customized training sessions in which 38 faculty members participated in this summer. Our training lab is offering “walk-in” hours and additional training sessions (Vikki Gearhart or Dawn Roussey at 863-4666). The College secured University-level support for the migration of 700 courses from ANGEL to Canvas and all courses should be migrated to Canvas by June 30, 2017. Presentation attached.

| Recommendations: N/A |

<table>
<thead>
<tr>
<th>Summary of Discussions</th>
<th><strong>Associate Dean for Research (ADR) Department Visits</strong></th>
<th>Lead: George Lesieutre</th>
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<tbody>
<tr>
<td>The ADR has been visiting department faculty meetings to discuss and invite feedback and suggestions regarding the CoE proposal processes, OSP contracting, resources for funding opportunities and project management, and industry relations and outreach. The ADR has agreed with the Vice President’s office to pilot a program, in the near future, that will give faculty members the ability to draft SIMS budgets. The College has approved funding for one additional pre-award research coordinator immediately. George is working on a more in depth analysis of staffing in the pre- and post-award offices. Presentation attached.</td>
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</table>

| Recommendations: N/A |
Agenda

- Background
- Current Activities
- Future Potential
- Discussion
Sustainability Education Center

- Eco - Machine Greenhouse
- Community Gardens
- Wind Turbine
- Morningstar Home & Solar Carport
The Vision

A Penn State education goes far beyond mastering classroom material, and solutions to the global challenges of sustainability require systems-level thinking that can only develop in an experiential learning system that dissolves the boundaries of classroom and campus.

Penn State’s Sustainability Experience Center (SEC) will provide a physical space for hands-on, immersive education about sustainable food, energy, water, and building systems. This on-campus, living laboratory will educate our students on applied solutions to sustainability challenges and inform and inspire participants and visitors about the possibilities and realities of a sustainable future. The center will be part of a national model for experiential learning around sustainability challenges for students from K-12 to Graduate and Beyond.
Existing COE Engagement with SEC

I. Research Activities
   I. Renewable Energy Systems / Controls (Riley)
   II. Energy Efficiency (Asadi)
   III. Indoor Air quality (Freihaut/Rim)
   IV. Wind Turbine Performance (Stewart)
   V. Ecological / Environmental Systems (Brennan)

II. Teaching
   I. Energy Leadership Course
   II. Freshman Seminar
   III. REU program
   IV. Supports 25-30 faculty/year with tours

III. Student Organizations
   I. Engineers without Borders
   II. Community Garden
   III. Construction Engineering (NECA)
Eco-Machine Research, Education, and Outreach
Potential for Growth

- Systems Research: *Energy-Water-Food Nexus*
- Serve local and global communities
- Support Learning Factory, HESE, Engineers without Borders
Penn State ...preparing students, faculty, and staff to be sustainability leaders in their professional, personal, and civic lives

SUSTAINABILITY LEADERSHIP CENTER

LEADERSHIP CENTER GOALS

• Approximately 10,000 square feet
• Conference / retreat meeting space
• Visitor and orientation desk
• Indoor/Outdoor classroom
• Smart Grid Control Center
• Living Building Laboratory Systems
Penn State ... preparing students, faculty, and staff to be sustainability leaders in their professional, personal, and civic lives

LEADERSHIP CENTER GOALS

• Be home for Outreach programming in topics of energy and sustainability
• Be designed to meet or beat the performance specification of the Living Building Challenge
• Demonstrate the viability of commercial scale building strategies with an income producing commercial building
Proposal: Evaluate potential role of Sustainability Experience Center in COE strategic plan
Status Updates: Learning Outcomes Assessment & ANGEL to Canvas Transition

Tom Litzinger
Assistant Dean, Educational Innovation and Accreditation

3 November meeting of Engineering Management Committee
Development of learning outcomes assessment plans is underway for all undergrad, grad and certificate programs.

**Undergraduate Programs**: accredited programs are permitted to submit sections of ABET self-studies in place of University forms.

**Graduate Programs**: draft learning objectives and assessment plans developed; discussed with grad programs in early October.

**Certificates**: University forms were provided along with offer of assistance in developing the assessment plans.

*Submission deadline: End of Fall Semester*
Assessment plans must be put into action in Spring Semester for one learning objective

**Undergraduate Programs:** ABET group will jointly address any issues that arise.

**Graduate Programs:** College will organize meetings of grad coordinators to allow programs to jointly address any issues.

**Certificates:** Assistance in addressing issues will be offered as needed.

*Submission deadline: June 2017*
Transition from ANGEL to Canvas is fully underway …

**Workshops/Training**
- CoE developed customized training: 38 faculty participated this summer
- CoE ITS is offering “walk-in” hours and additional training sessions

**University-level Conversion Support**
- The College secured University-level support for migration of 700 courses from ANGEL to Canvas
- The College is communicating directly with the faculty to make them aware of this conversion support (on department by department basis).

**Official Timeline for Transition**
- “All” courses should be migrated to Canvas by June 30 2017!
We have made substantial progress in the transition to Canvas, but we have a long way to go.

**Scope of the transition for CoE**
- ~1700 courses/sections in one academic year
  - 800 Fall
  - 800 Spring
  - 100 Summer
- ~400 faculty

**Current usage of Canvas**
- ~300 courses/sections have been “published” in Canvas
  - 18% of total courses
- ~170 faculty using Canvas
  - 43% of total faculty
Associate Dean for Research

George A. Lesieutre

Fall 2016
There’s a lot we could discuss

Associate Deans: Research & Innovation
• Who’s doing what?

Information, feedback, suggestions re:
• COE proposal processes
• OSP contracting
  – Graduate Assistant and Post-doc minimum rates
  – F&A rates
  – Industry contracting
• Resources for funding opportunities and project management
  – www.research.psu.edu/for-researchers
  – MyResearchPortal: www.myresearch.psu.edu
• Industry relations and outreach
Associate Deans will collaboratively advance CoE research and innovation priorities

- **Associate Dean for Innovation (ADI)**
  - Chris Rahn (50% appt.)
  - Helps CoE faculty members do things “bigger”
  - Has a somewhat *external facing* perspective

- **Associate Dean for Research**
  - George Lesieutre (50% appt.)
  - Helps CoE faculty members do things “better”
  - Has a somewhat *internal facing* perspective
ADR will lead research administration, PSU advocacy, and corporate research relations

• Research administration processes
  – Make as easy as possible for faculty to navigate
  – Ensure effort is commensurate with risk
  – Lead OERA staff in
    • Proposal management and pre-award
      – Cost-sharing negotiations
    • Contract negotiations (w/OSP)
    • Post-award and reviews
      – Compliance and certification

• Intellectual property management (w/ADI)
• Corporate relations and research promotion (w/ADI)
• College-wide research seminar series
ADI will lead major initiatives, faculty/team development, and resource planning

• Faculty and proposal development
  – Increase extramural research funding (CAREER to ERC)
  – Federal agency relationships (w/ADR)
  – PSU colleges and institutes relationships
  – Research conduct management

• Strategic research planning and implementation
  – Research metrics and benchmarking (w/ADR)
  – Research communications (w/ADR)
  – Research incentive funding (RIF)
  – Limited submission selection
  – Entrepreneurship
COE faculty are submitting many proposals

• As of 10 OCT, **150 proposals** in OERA queue
  – Big NIH and NSF deadlines
  – Staff members are working long hours; turnover

• **Need to:**
  – Make as easy as possible for faculty members
  – Build in some resilience
  – Satisfy complex compliance requirements
  – Respect constraints on OERA staff members
COE proposal process was recently revamped

- **The “Atchley doctrine”** (1 APR 2016; to evolve)
  - Send completed *Proposal Information Form* to **OERAProposals@engr.psu.edu**
    - Anything that requires university signature
    - Assigned a Coordinator; communicates re: required files and info
  - Allow **two weeks** to process proposals; **three weeks** with *subcontracts or cost-share*
    - Need budget in final form 4 business days in advance;
    - Everything else, 3 business days (compliance checking)
  - OERA hours: 8 am – 5 pm, Monday – Friday
  - We want you to be successful – if considering proposal, get in the queue
    - Late requests can sometimes be accommodated – don’t expect it

- **Coming**
  - Faculty prepare draft SIMS budgets [www.sims.psu.edu](http://www.sims.psu.edu)
    - Maybe departmental staff with appropriate roles
  - Web-based version of Proposal Information Form
  - Right-sized OERA staff and resilience strategy
We work with OSP on many fronts

• The usual: pubs, IP, export, data, proprietary
• Other
  – Graduate Assistant rates (Grad School)
  – F&A rates
  – Cost-sharing
  – VPR review of industry contracting
  – Evolution of SIMS budgets (e.g., multi-task rollup)
• Industry relations and outreach
  – Innovation Gateway: www.innovation.psu.edu
Grad Asst & Post-doc rates have floors

- **Grad Assistant rates**
  - International students need funding of $22,200/year for I-20 visa (2016-17)
    - With full support, including summer, Grade 11 will meet; without summer (TA, say), need higher grade level or additional student funds
  - Grad School requires (FA17) Grade 12 minimum half-time standard across the university (assuming additional summer support) to meet “living stipend” $21,944/year (Centre County, 2016)
    - Units have some discretion

- **Post-doc minimum salary** increase to $47,484 on December 1, 2016
  - Due to change in overtime regs from U.S. Dept of Labor
  - If below minimum, must pay overtime; cannot charge to federal grant

- Departments have flexibility to set higher minima (consistency / competition)
## F&A Rates have been increasing

<table>
<thead>
<tr>
<th></th>
<th>16-17</th>
<th>15-16</th>
<th>14-15</th>
<th>13-14</th>
<th>12-13</th>
<th>02-03</th>
</tr>
</thead>
<tbody>
<tr>
<td>DoD contracts</td>
<td>70.0%</td>
<td>64.0%</td>
<td>54.5%</td>
<td>49.5%</td>
<td>49.0%</td>
<td>41.0%</td>
</tr>
<tr>
<td>Industry (5% up)</td>
<td>62.2%</td>
<td>62.2%</td>
<td>56.9%</td>
<td>54.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>57.2%</td>
<td>57.2%</td>
<td>51.9%</td>
<td>49.5%</td>
<td>49.0%</td>
<td>41.0%</td>
</tr>
</tbody>
</table>

- A significant concern to many researchers
  - Less competitive
  - Very difficult for small “capped” efforts
- Trying to understand reasons
  ... and what we can influence
F&A calculations are complex

- **Facilities**: interest/depreciation, ops/maintenance
- **Administrative**: General/Dept/OSP; capped at 26%

Rate = F&A / MTDC

- Can increase if Facilities ↑ or MDTC ↓
- Until 2011, ONR established in 3-year blocks
- In 2012 changed to “fixed, with carry-forward”
  - ONR reacted slowly to decrease in MDTC in 2014-15
- PSU invests ~ $150M annually in research

- **Benchmarks** (Big10 2014): 49% - 59%
2016-17 F&A details are illuminating

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Plant</td>
<td>14.30%</td>
</tr>
<tr>
<td>Interest</td>
<td>0.90%</td>
</tr>
<tr>
<td>Library</td>
<td>0.90%</td>
</tr>
<tr>
<td>Building Depreciation</td>
<td>6.80%</td>
</tr>
<tr>
<td>Equipment Depreciation</td>
<td>3.90%</td>
</tr>
<tr>
<td><strong>FACILITIES Total</strong></td>
<td><strong>26.80%</strong></td>
</tr>
<tr>
<td>General Administration</td>
<td>8.60%</td>
</tr>
<tr>
<td>Sponsored Program Administration</td>
<td>9.40%</td>
</tr>
<tr>
<td>Departmental Administration</td>
<td>11.00%</td>
</tr>
<tr>
<td>Departmental Administration Allowance</td>
<td>3.60%</td>
</tr>
<tr>
<td><strong>ADMINISTRATIVE Total (uncapped)</strong></td>
<td><strong>32.60%</strong></td>
</tr>
<tr>
<td>Less: Reduction to 26% Cap (capped)</td>
<td>6.60%</td>
</tr>
<tr>
<td><strong>Administrative Total (capped)</strong></td>
<td><strong>26.00%</strong></td>
</tr>
</tbody>
</table>

Subtotal *(capped)*: 52.8%
Carryforward *(capped; 2015)*: 4.4%
TOTAL *(capped)*: 57.2%

Subtotal *(uncapped)*: 59.4%
Carryforward *(uncapped; 2015)*: 10.6%
TOTAL *(uncapped)*: 70.0%

Industry surcharge: 5.0%
TOTAL: 62.2%
F&A return supports PSU researchers

• 27M annually to 6 major research institutes, to enhance collaborative research
• $17M in 2014 + 2015 for advanced instrumentation
• $5M in 2015 and another $3M in 2016 to reengineer campus wide research computing
• $2.7M per year over the last six years in matching
• Continuous seed and bridge funding for various centers and initiatives

86.5% Central; 12% units; 1.5% OVPR
Industry relations are important

- VPR launched review of industry contracting process
  - Risk / benefit assessment
- Office of Industrial Partnerships
  - Innovation Gateway: www.innovation.psu.edu
- IP stance: researchers can assign IP rights to companies
  - https://www.research.psu.edu/otm/approach-to-IP
- PSU Guideline RAG05: Establishing Research Institutes, Consortia, and Centers
  http://guru.psu.edu/policies/rag05.html
  - Includes industry membership programs
- PSU @ Navy Yard
  - A priority of Provost and VPR
Funding and Admin Resources are available

• Resources for funding opps, processes
  [link]
  [link]
  SciVal Funding: [link]

• Tools for management of research projects
  MyResearchPortal: [link]
  – Improvements re: compliance tracking (NDA, TCP)
Please provide feedback and suggestions

• COE proposal submission process
• OSP contracting
• Industrial research
• Major research initiatives
• Other?