

**Academic Senate Sustainability Committee
Monthly Meeting Notes from October 4, 2017**

Note taker: Lessa Grunenfelder

Present: Ann Close, Jessica Dutton, Kyle Konis, Paul Adler, Jeremy Kagan, Darren Ruddell, Lessa Grunenfelder, Josh Goldstein, James Steele

Visitors:

Brooke- co director of student ECore
Halli Bovia & Mark Ewalt

Phone conference: Jeremy Kagan, Catherine Coleman, Erin Moore, Antonio Bento

Prior business

September minutes approved

New business

Update from Antonio

Antonio is working on a proposal to advance sustainability in academics (research/education thrusts).

Antonio: Darren and Paul met with engineering dean – Antonio supplied a PowerPoint presentation to describe how we think about sustainability science – a science defined by the problems it addresses (this file has been shared with the group). The slides highlight that nature of the field is interdisciplinary (natural, physical, social sciences, engineering, and medicine) and requires outreach to general public. Slides review how the field has evolved at other major institutions to shed light on why USC may have lagged behind. Environmental and sustainability programs came as a natural evolution through land grant universities through colleges of agriculture. Michigan, Duke and Yale have also evolved schools of the environment as a rethinking of forestry programs or fishery and marine research. What can we do? Arizona State established a new school of sustainability, Columbia established a campus-wide institute. These frameworks may serve as a mechanism for bringing interdisciplinary faculty together at USC. Two options

1. School of sustainability (unlikely to be feasible at USC)
2. Campus-wide institute aimed at facilitating bringing interdisciplinary scholars together and promote cluster hires of teams to address sustainability research

What space is left for USC given what other players are doing? We need to identify a broad focus area as well as core thematic teams to make rapid progress and raise our

profile. Starting point for our strategic position may lie with the city of Los Angeles. Establish a solutions lab (research center) partnered with the city to position ourselves as the go-to place for issues of urban sustainability within the living laboratory of Los Angeles.

Overarching theme: Urban sustainability

Potential thematic areas: Local air pollution and health impact, energy efficiency of buildings (architecture and engineering), sustainable transportation, big data in cities and how it influences environmental issues in cities – to be decided and refined by project teams.

Our investments should not be in the traditional core sciences – the costs to get up to speed in relation to the competition is prohibitive for us. We would be better served by establishing collaboration in the professional schools and focusing on applied research (school of education, cinema, etc.) to maximize outreach. Become the leader in local sustainability and public policy solutions, which will require key partnerships with city agencies for access to big data.

Vision is clear but key challenges remain.

1. Initial cost to form interdisciplinary groups: manage provost or donor sponsored academic research seed funds to allow concept development before groups apply for outside grants (has worked in the active center for sustainable future at Cornell). Recommendation – start with applied sciences, minimize cost to bring groups together
2. Education: Phase 1 - Establish a masters of sustainability science in public policy. Academic program would generate revenue for the university. Phase 2 – look at undergraduate program in environmental studies. Recommend additional allocation of funding for that program (currently relies heavily on teaching faculty with a minimal research profile). Have the institute manage cluster hires around research teams where those hires could contribute additional depth to the undergrad program. Phase 3 - PhD program on sustainable development with access to institutional and city data sources for PhD students who would spend time inside government agencies to see first-hand the practical issues the agencies are facing.

Discussion

Paul: Update – in the meeting with Dean Yortsos (task force lead) it was clear he has done nothing up to this point and is awaiting instructions from the provost's office. He was very supportive of the 2030 document and would be receptive if we moved forward with Antonio's ideas as a platform for discussion with the deans.

One potential impediment to the plan – the academic senate may not support urban sustainability as a focus as opposed to a different focus such as oceans (Wrigley

institute). However, applied and policy positions make sense for USC and urban sustainability will bring together more diverse interdisciplinary groups. Mark needs proposals for education and research on 2020 horizon. What targets should we propose for the immediate time horizon?

Antonio: Had lunch with Mark last week. Price school raised funds through development office for “voices in environmental policy” initiative to bring students and faculty together. Good target for 2020 may be venture funds for bringing interdisciplinary groups together. Antonio has the numbers from Cornell to show initial investments and return on those investments. This will help to launch a series of thematic areas. We will likely not have control over what those thematic issues are. Groups will establish the topics organically with institutional support (venture funds and relationships with regulatory agencies).

Josh: Can Wrigley be involved in the larger institute?

Antonio: we will need a compromise to elevate both urban sustainability and related efforts on ocean and marine sustainability policy. We have to avoid diluting the message too much if we want to find a major donor to endow a research center. We need our own niche

Ann: What if we look at the issues from the solutions side to avoid differentiating marine vs urban?

Antonio: that is the commonality – providing practical solutions to sustainability challenges. We can claim some credibility in both areas with existing faculty and that could provide a launching point

Paul: clarification – goal is to provide seed money for groups to come together and then go for NSF money. What about education?

Antonio: voices seminar can be a platform which will get key faculty together with speakers and help create core groups of faculty that may take ownership over a professional master’s degree. Education is more difficult to gauge in terms of transaction costs than research efforts. We need to identify what the program would look like then find someone to spearhead administrative efforts.

General Updates from Darren

Senate newsletter – academic senate asked us for an article for first issue – Paul and Darren supplied that and it will be distributed by the Senate soon.

Sustainability steering committee (faculty, staff and students) met two weeks ago to discuss the 7 subcommittees and their activities. Some are on pace to achieve 2020

goals, others are not at that level. There have been investments from the university to help achieve the 17 goals identified in the 2020 plan.

Environmental policy seminar series – new initiative from Price looking for high profile seminar speakers. Input requested – think about potential speakers.

Meeting with Yannis Yortsos – good discussion. Also thinking about formation of an institute, currently waiting and preparing for Oct 18 meeting with provost. Interested in focusing on the NAE Grand Challenges framed in the context of sustainability – hands on research, interdisciplinary training, entrepreneurship, cultural awareness and service. All grand challenge goals align nicely with the narrative on sustainability.

Capital construction: Darren reached out to a contact (John) who he is trying to schedule to meet with us in November.

Paul, Josh, Kyle met with student leaders from ECore to work on ways to open lines of communication and develop complementary efforts.

Field trip to LMU: Sierra club “cool schools” report ranked LMU 7th. What are they doing that we can learn from? Erin has reached out to them but is waiting on a response.

Wrigley Update from Ann

Sustainability cross-campus prize for entrepreneurial ideas will be announced in January. Prize money awarded to teams with ideas on promoting sustainability – each team must include a current student. Students learn how to give a pitch, first place winners from last year have a company to increase the efficiency of air conditioning and they are currently testing at Wrigley.

Skywater system set up to take humidity out of the air and provide drinking water. Solar still in place to distill seawater to water plants. Solar panels installed on dining hall. Grants in progress to attempt to generate enough power to be taken off the grid. Solar is currently 20-30% of the kitchen (which is biggest energy draw). All numbers are on the website – solar portal.

Food digester to compact food scrap into a powder and reclaim water. Power can be used as fertilizer – very simple thing we could do on the main campus. Idea of Wrigley is to demonstrate how well these technologies work on campus to try to transition to the main campus. Test bed for larger urban issues – working on an urban coastline, which ties in to Antonio’s ideas.

Food service – meatless Mondays. Use food grown in aquaponics system. Waste from kitchen used to feed local chickens – eggs harvested for staff.

Transportation – almost fully electric fleet. Some vans still operating. Most staff live close and carpool.

Sustainability spring break as alternative spring break.

We need better PR for Wrigley – they are an official USC campus doing important things.

Update from Kyle on Buildings

Kyle: schools were ranked in a semi-arbitrary way on the basis on sustainability, but a key was carbon impact of buildings. On our campus we had a thorough report in 2009 which was a very valuable teaching tool – using the city of Los Angeles as a lab (Kyle will provide to Darren who will distribute). Students tend to think commuting is biggest impact – people don't realize the impact the buildings make and how people use energy through buildings. The UCs are aligning themselves with carbon neutrality and track and benchmark building performance. Can USC do the same and actually compete with those schools? The challenge is that if we wait too long we will have more eyes on us as other California schools disclose this information and we don't – particularly when we have more funds. We can use the campus we have and our current reality as a way to teach students how to effectively practice in a built environment and pinpoint where low hanging fruit exists for improvement. Our buildings are metered for electricity data. We should follow benchmarking and reporting policies and set goals for USC and involve students in target setting.

Earth month initiative – campaign centered on student engagement in observations of campus. Platform for students to hack or create entrepreneurial and socially driven enterprises.

New construction – can we get a donor for our next building who wants a net zero building? Can we build something resilient in a disaster or extreme weather event? Kyle is providing list of topics to discuss and flush out. Knows facilities and Halli's office are working on these things but wants to involve students and teaching opportunities.

Discussion

Halli: greenhouse gas inventory – first was the 2009 report. Commute was not included, nor was university air travel. Another inventory was done in 2012 and was not made public because data collection was not rigorous. Halli will send to Kyle. University is onboarding a consultant for a 2014 inventory as a baseline for 2020 document, should be completed by the end of the month. UC system reports do not include commute or travel.

Kyle: buildings are benchmarking – why can't use do that?

Halli: we do that every year to APA, facilities assists with that effort. That is our benchmarking standard. We have a more robust energy metering system than the UCs. Reporting availability – we used to have a system with 40 buildings on the lucid dashboard. Some dorms and housing will remain on that system. Carol is looking into a replacement. She can send building data individually.
Engagement – priority of 2020 subcommittee to affect behavior change.

Kyle: app is built, but no longer funded. ECore and ESA are supportive to help with a relaunch. App needs updating. QR code piece being added to tag specific locations when reporting feedback.

Paul: This sounds like a great contribution for education and research for the 2020 short term goals. Could provide potential for real progress. Living lab, education and behavior change.

Update from Halli and Mark and discussion on Sustainability 2020

Darren: What is happening with 2020 and how can we help? What goals are on track and which are not?

Halli: on track – water. Robust pre-work had been done. City has delayed timeline for purple pipe which was a major factor. May push us back by a couple of years. Considerable infrastructure already invested toward laying and maintaining the purple pipe when it is available.

Mark: Waste – will be complete once receptacles are phased in to pick up separate waste streams. Engagement and information is the final piece so people know how to use the new systems. Program will be ready by end of academic year.

Transportation – package of alternative transportation options being assembled to avoid having to search independently for options.

Purchasing – groundwork is set, but significant challenges remain. We will have a program in place by 2020 to provide information and options but no departmental mandates are set. Some might come through in key areas – fleet, paper, IT. Third party audit is underway, output will be a proposal for the program. Report should be drafted by the end of fall semester.

Darren: do these strategies require investment or just a change in behavior?

Halli: there is additional cost (for, say, recycled vs virgin paper). Lower prices are being negotiated to at minimum make the cost equivalent.

Energy – hold up is greenhouse gas inventory – to be completed by the end of October.

Mark: progress will be slower on energy because we lack a “silver bullet.” It is an incremental process, building by building. Biggest element is the building retro commissioning.

Halli: New initiative from the city (did not consult campuses, established thinking of single building owners). Buildings of a certain size go through the retro-commissioning this year. Analysis of the building to see if it performs to the stats to which it was constructed – how does it compare to current standards?

Kyle: how do we consider unregulated loads? In the dorms 90% of load can be behavioral. That piece is left out of these types of analysis. State mandate to reduce carbon emissions 50% by 2030 (30% by 2020) – are we just riding the coattails of the state (DWP) and not making additional contributions? As utilities get more efficient we need to go beyond that to truly intervene. We need energy reduction not just carbon reduction. Unregulated loads need to be addressed. Flour tower was over 80% controlled by students.

Darren: buildings are metered for water – are they metered for energy?

Halli + Mark: all are metered for energy, some for water

Paul: big hole is still education and research. Do mark and Halli have ideas for initiatives under that heading that make sense with a 2020 timeline?

Mark: Antonio’s plan could be the springboard. His meeting with the dean may be the tipping point.

Paul: academic venture fund to kick start interdisciplinary research and voices seminar series. Are there other things we should add, apart from Kyle’s initiative?

Mark: metrics on education are vague

Darren: Metrics include

1. Encourage development of environmentally literate students and faculty
2. Develop degree programs
3. Develop excellence in research that includes interdisciplinary research and transformative findings.

Halli: goal 1 was intended to lay the groundwork for a GE requirement

Darren: should we focus on a GE? We can commit to developing a proposal for the next GE cycle.

Halli: talk to former GE committee members to determine how to approach this. There are a lot of moving pieces.

Paul: Antonio has ideas on a 2030 timeline for PhD level education – applies to goal 3. For degree programs, we can work on proposals by 2020 including a professional master's degree

Mark: that could have traction

Paul: What we are really looking at is proposals – for GE requirement and degree programs?

Mark: that would be the most useful tool. The proposals could go to the provost to force a dialog. Would provide formality we did not have before.

Darren: That would come from Antonio and the subcommittee of the sustainability steering committee and we could contribute.

Paul: Halli is leaving USC - some 2020 goals need someone in the sustainability office to advance them. Long term we need a more substantial staff. What is the plan with regard to staffing?

Mark: the methods to submit for staffing have changed to more carefully examine hires to make sure the university is not overburdened with administration. There is increased oversight. Filling Halli's position will be the first with the new system. It would be ideal to have 3 people.

Paul: can we help make arguments toward hires in this area?

Mark: yes

Josh: what will these 3 people do?

Mark: 3 functions: (1) Program development, (2) operations, (3) communication. Development is needed for growing and advising, vision and leadership. Ongoing programs need to be sustained. PR – sustainability related information needs to be disseminated, website regularly updated etc.

Action Items:

1. Distribute 2009 Carbon Footprint Report for USC (**Kyle**)
2. Develop recommendations and briefing report for Yannis (**Darren and Paul**)
3. Follow up meeting/conversation with Mark and Halli on developing academic and research initiative on carbon neutral buildings (**Darren, Paul, Kyle**)

4. Follow up with Mark and Halli on making a recommendation to the administration for an expanded staff in the Office of Sustainability (**Paul**)
5. Develop proposals to advance sustainability in academics, such as proposing a sustainability GE requirement and proposing new academic degree programs in sustainability (**Darren**)