USC Center for Sustainability Solutions
Developing Solutions for a Sustainable and Equitable Future

Provost Mini-Retreat on Sustainability. Feb.28 2019
The wicked problem of our time

Establishing a ‘new’ economic paradigm that simultaneously promotes...
The reality: An obsolete and unequal model
A global and local call for action

The UN 2030 Sustainable Development Goals

1. No Poverty
2. Zero Hunger
3. Good Health and Well-Being
4. Quality Education
5. Gender Equality
6. Clean Water and Sanitation
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9. Industry, Innovation and Infrastructure
10. Reduced Inequalities
11. Sustainable Cities and Communities
12. Responsible Consumption and Production
13. Climate Action
14. Life Below Water
15. Life on Land
16. Peace, Justice and Strong Institutions
17. Partnerships for the Goals

The UN 2030 Sustainable Development Goals
A global and local call for action

### The grand challenges in Engineering

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Image</th>
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<tr>
<td>Make solar energy economical</td>
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<td>Provide energy from fusion</td>
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<td>Develop carbon sequestration methods</td>
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<td>Manage the nitrogen cycle</td>
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<td>Provide access to clean water</td>
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<td>Restore and improve urban infrastructure</td>
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<tr>
<td>Advance health informatics</td>
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<tr>
<td>Engineer better medicines</td>
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<td>Reverse-engineer the brain</td>
<td><img src="reverse_engineering.png" alt="Image" /></td>
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<td>Prevent nuclear terror</td>
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<td>Secure cyberspace</td>
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<tr>
<td>Enhance virtual reality</td>
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<tr>
<td>Advance personalized learning</td>
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<tr>
<td>Engineer the tools of scientific discovery</td>
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Our Vision

- Position USC as the **preeminent partner** to advance the UN’s Sustainable Development Goals and the Grand Challenges in Engineering, locally and globally.
Mission

- Advance the application of **basic science and technological solutions** to specific urban contexts, with an eye on **developing sound public policy** for a sustainable and equitable future.

- **Educate, communicate, and disseminate** sustainability challenges to fasten the adoption of solutions.
CSS – An incubator of sustainability solutions
CSS – Incubator’s unique 5 step approach

Convene

Evaluate

Advance

Transfer

Educate and Communicate
Global network of sustainability solutions hubs

Logical Partnerships within USC
- Wrigley Institute
- USC Institute on Inequalities in Public Health
CSS Contribution to the 2028 research charter

- **Faculty-led lunches** — explore initial research ideas; form interdisciplinary teams; get teams ready to respond to large RFP
- **Voices for a Sustainable and Equitable Future** — bring faculty together with highly visible visitors
- **Specialized Research Seminars**
Contribution to the 2028 research charter

- **Launch an academic venture program** – provides seed funding and prepares interdisciplinary groups for large RFPs *(requires provost commitments)*
CSS Contribution to the 2028 education charter

- Grand challenges in sustainability scholars program
- 5 mindsets:
  - Hands-on-project
  - Inter-disciplinarity
  - Innovation and Entrepreneurship
  - Cultural understanding
  - Societal consciousness
Contribution to the 2028 education charter

- **International Sustainability Labs** - integrate classroom knowledge with professional practice by providing policy-related consulting services in the network of sustainability solutions hubs
Contribution to the 2028 education charter

- Support PhD students and postdoctoral development – (e.g. Environmental and Energy Econ & Policy lunch)
Outreach

- Organize/contribute to roundtables in partnership with key stakeholders
- Organize workshops for practitioners
- Organize executive education programs
Next Steps

- Conclude soft launching, and launch webpage
- Continue to engage with stakeholders, inside and outside campus
- Finalize the recruitment of the advisory board and corporate sponsors
- Expand leadership team
- Work with the advisory groups (faculty and external board) to develop a 3 year strategic plan
Final thoughts...

Mark Zuckerberg: "If you guys were the inventors of Facebook, you'd have invented Facebook." (Social Network, 2011)