GEODESIGN AS A MULTISCALE GLOBAL ENTERPRISE

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Geodesign Summit Europe
1-2 November, 2016
Outline

- Spatial as an enabling discipline
- Geodesign Summit 2012
- B.S. in Geodesign
  - SSCI 350: International Geodesign
  - SSCI 412: Geodesign Practicum
- Student response
- Millennials
- Global challenges | Opportunities
  - California
  - The Netherlands
  - China
- Geodesign as a global enterprise
- Close | Questions
Spatial ... as an enabling science

Agronomy
Archaeology
Architecture
Civil Engineering
Data Science
Economics
Environmental Science
Epidemiology
Geodesign
Geography
Geology
Hydrology
... ...
... ...
Landscape Architecture
Oceanography
Political Science
Soil Science
Zoology

Spatial Sciences

Use Cases

Poverty
Food & Water Security
Obesity
Social Justice Issues
Cancer
Sustainability & Climate Change
Terrorism
Cyber Security
Aging
Dementia

Wicked Problems
Geodesign Summit – 2012

- 2010 – USC Spatial Sciences Institute established
- 2010 – M.S. & GC in Geographic Information Science & Technology
- 2013 – Minor in Spatial Studies

- **2013 – B.S. in Geodesign**
  - 2014 – GC in Geospatial Intelligence
  - 2015 – GC in Geospatial Leadership
  - 2016 – M.S. in Spatial Informatics
  - 2016 – Ph.D. in Population, Health & Place
  - 2016 – Minor in Human Security & Geospatial Intelligence
B.S. in Geodesign – Curriculum

Microeconomics | Mathematics | Social Statistics

Design
- Built Environment
  - Architecture
  - History
  - Political Science
  - Policy, Planning & Development
  - Sociology
  - Spatial Sciences

Spatial Sciences
- Design, Analysis & Computation
  - Anthropology
  - Architecture
  - Fine Arts & Design
  - History
  - Policy, Planning & Development
  - Sociology

Planning

Geodesign Practicum

(12)
(36)
(28)
(4)
SSCI 350: International Geodesign

USC Problems Without Passports (PWP) Program
Developing a plan and project ideas for recovery of endangered Palos Verdes blue butterfly for an external client, the Disney Conservation Fund
Student Response

- 14 first majors
- 27 students changed majors
- 4 double majors
- 1 Trustee, 5 Presidential, & 2 Dean’s Scholars
- 21 students made Dean’s List in Spring 2016
Self Assessment

- Geodesign principles
- Practice of Geodesign
- Urban applications in U.S.
Self Assessment

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Self Assessment

- Geodesign principles
- Practice of Geodesign
- Urban applications in U.S.

- China (3)
- Myanmar (2)
- Spain
- Taiwan
- California (23)
- Illinois (3)
- Missouri (2)
- Washington (2)
- +8 other states
Millennials …
Central Valley, California
Silicon Valley, California
Los Angeles County

12.8 million
4,850 mi²
Los Angeles County …

61 stations
8 lines
Bend, Oregon
The Netherlands …
The Netherlands | Trains

16.8 million
16,040 mi²
404 stations
The Netherlands | Bicycles
<table>
<thead>
<tr>
<th>City</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shanghai</td>
<td>24.1 million</td>
</tr>
<tr>
<td>Beijing</td>
<td>21.5 million</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>20.8 million</td>
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<tr>
<td>Chongqing</td>
<td>18.3 million</td>
</tr>
<tr>
<td>Chengdu</td>
<td>17.7 million</td>
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<tr>
<td>Tianjin</td>
<td>15.5 million</td>
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<tr>
<td>Shenzhen</td>
<td>12.4 million</td>
</tr>
<tr>
<td>Harbin</td>
<td>12.0 million</td>
</tr>
<tr>
<td>Wuhan</td>
<td>10.7 million</td>
</tr>
<tr>
<td>Suzhou</td>
<td>10.3 million</td>
</tr>
</tbody>
</table>

145 cities > 1 million
690 million urban dwellers
China | Beijing
China | Rice paddies
Geodesign as a Global Enterprise

- New opportunities to tackle serious & enduring global challenges
  - Biological conservation
  - Climate change
  - Sustainability

- New opportunities for learning
  - To learn from one another
  - To learn how to connect individual & collective action across multiple cultures & settings
  - To learn how to inspire global citizens, thinkers, & actors