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Global Institute of Sustainability*

ASU's Global Institute of Sustainability and AIRE

*AIRE Workshop
April 29, 2008*



ASU's Global Institute of Sustainability

- University-wide Sustainable Research Federation
- First degree-granting School of Sustainability
- Decision Theater links research to community's policy needs
- University practices that reflect sustainable principles



Global Institute of Sustainability Headquarters



Urban Water
Decision-making

Sustainable Urban
Design Services

Mediterranean
Landscape Dynamics

Decision
Theater

ASU Sustainability
Research Federation

Bacteria-based
Biofuels

GIOS
SOS

Fluid Dynamics
and Air Pollution

Conservation in
a Social Context

Urban
Remote
Sensing

Urban Materials
and Heat Island

Environmental
Economics

Biogeochemical
Dynamics

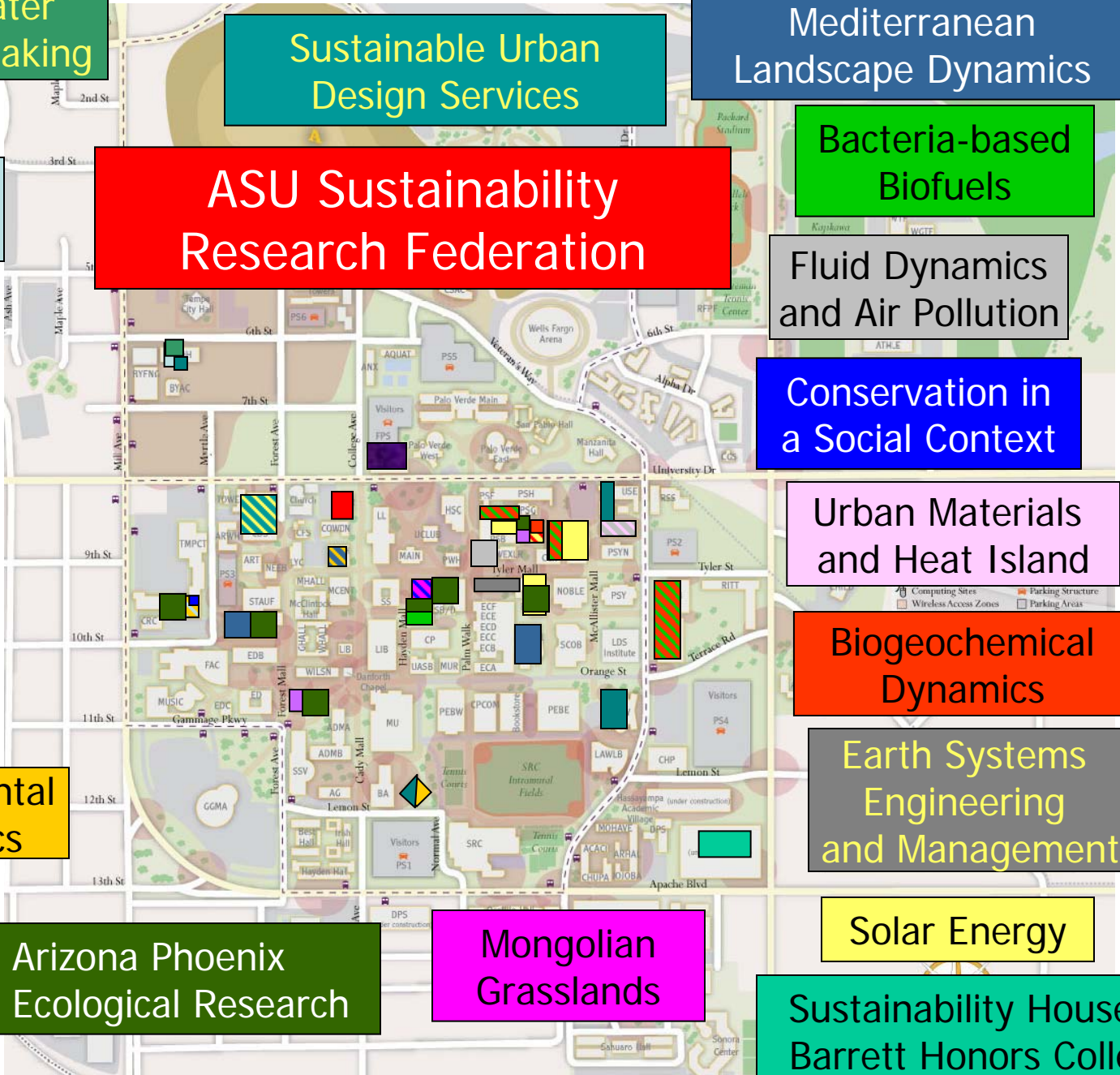
Earth Systems
Engineering
and Management

Central Arizona Phoenix
Long Term Ecological Research

Mongolian
Grasslands

Solar Energy

Sustainability at
Barrett Honors College





Properties of the Research Federation

- Focus on programs, not academic units
- Integration (Brings together entire university)
- Flexibility (Programs can be combined quickly)
- Rapid evolution (Programs enter and leave)
- Incubation (Many new ideas supported)
- ***Oriented around Challenges to Sustainability***



Sustainability challenge:

How to speed the adoption of renewable energy by linking expertise throughout the innovation supply chain?



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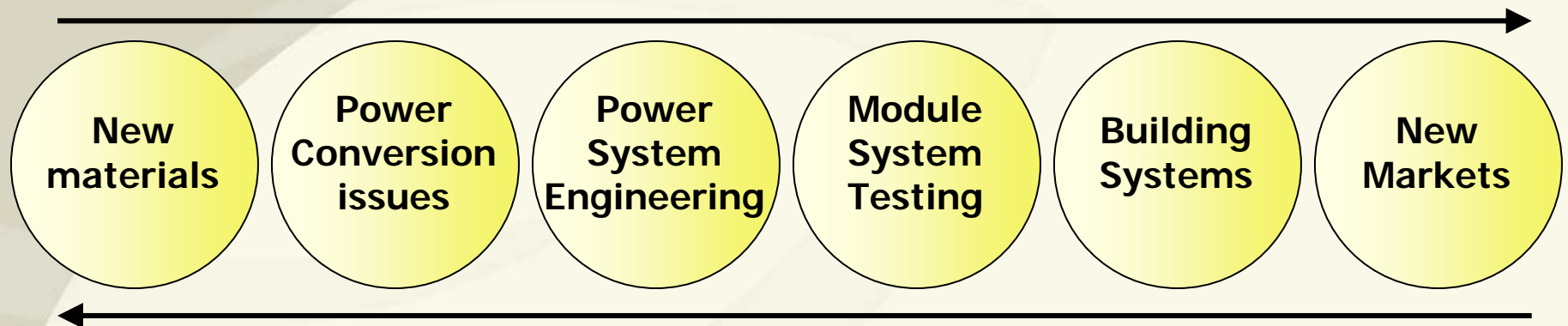
Solution:

ASU's comprehensive solar energy initiative





Focus on full solar innovation supply chain

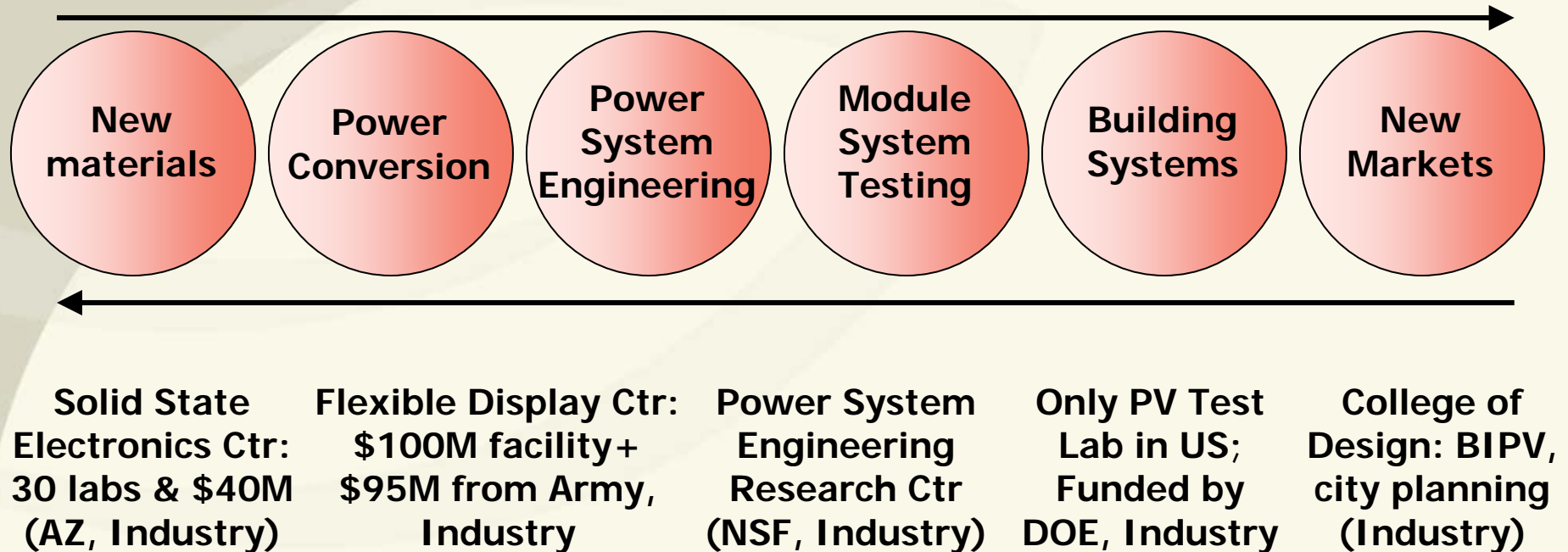


Technology ↔ Infrastructure ↔ Policy



ASU Solar Energy Initiative

- ASU has longstanding solar research strengths
- Unique assets along entire solar innovation supply chain
- Working with government and industry to expand markets





Why is solar under-developed in Phoenix today?

- Electricity has been too cheap, supply too reliable, incentives too low, public too uneducated about benefits

However, chances are good for a "Solar Phoenix"





Solar developments on the horizon

- Joint venture to greatly expand ASU's Photovoltaic Test Lab
- Recruitment of several leading solar experts to ASU
- APS-Abengoa Solana 280MW Solar Thermal Plant
- Bid for management of National Renewable Energy Lab
- GPEC, cities, ASU actively recruiting solar manufacturers
- Bid for Fifth Solar Cities Congress to be held in Phoenix
- Real estate developers interested in incorporating renewables