

Science and Innovation in the 21st Century

Building Regional Strength: *The Akron Experience*

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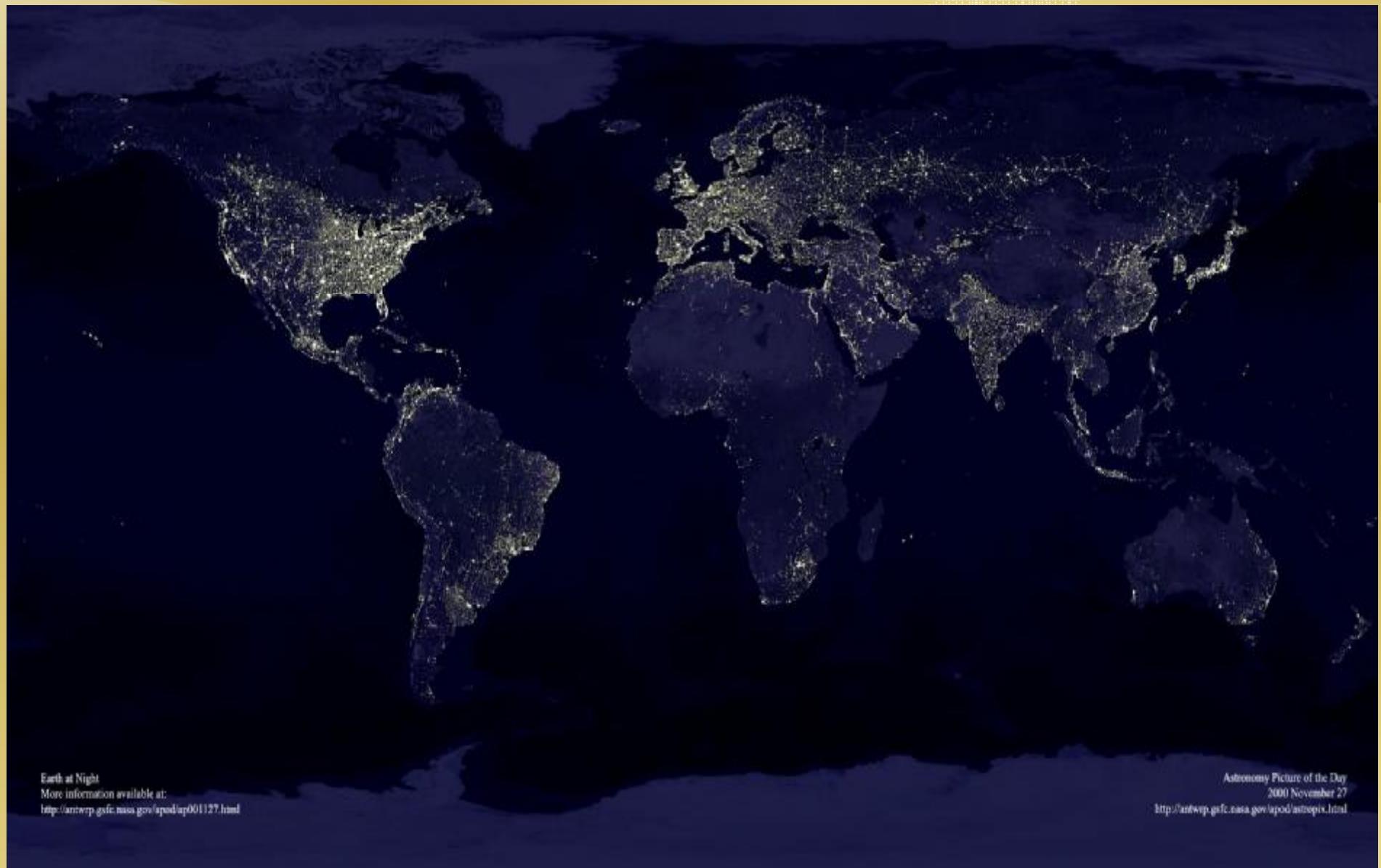
Rebuilding the Transatlantic Bridge:

U.S.-Polish Cooperation on Science, Technology, and Innovation

National Academy of Sciences

3-4 December 2009

The economic geography of the world — spiky & clustered . . . often regional . . . not flat !



Earth at Night
More information available at:
<http://antwrp.gsfc.nasa.gov/apod/ap001127.html>

Astronomy Picture of the Day
2000 November 27
<http://antwrp.gsfc.nasa.gov/apod/astropix.html>

The economic geography of a nation . . . clusters around universities, usually in urban areas.

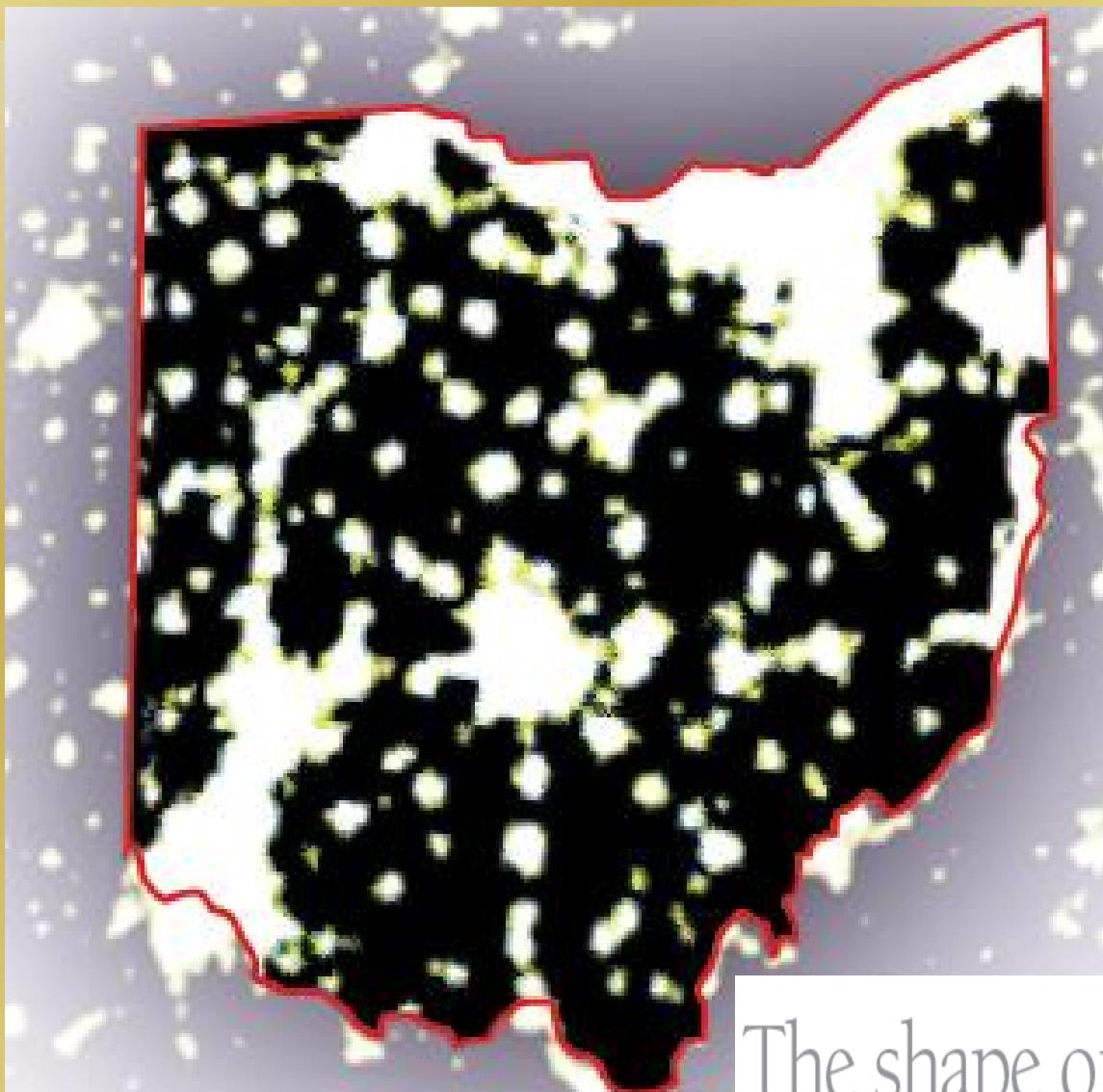


87%
of economic activity

80%
of colleges & universities

83%
of students

Assessing Opportunities & Resources – The UA Experience



The shape of our regional economy.

Regional Assets, Challenges and Opportunities

The Assets . . .

- UA: world's largest polymer program, top producer of chemistry PhDs, high productivity in IP and start-up businesses
- Strong Industrial Clusters (Advanced Materials)

The Challenges . . .

- Older industrial area
- Risk averse
- Lack of investment capital

The Opportunities . . .

- Strong (but underutilized) research assets
- Growing entrepreneurship potential
- Globalization
- Converging private and public interests
- Focus on differentiation and productivity



New Landscape
for
Learning



AUSTEN
BioInnovation
INSTITUTE IN AKRON



University
Park
Alliance

Revitalizing Neighborhoods Together

INNOVATION ALLIANCE



A transformational \$500-million campus enhancement initiative:

- 16 new buildings
 - including new 30,000-seat football stadium and two new residence halls in University Park
- 17 major additions and renovations
- 34 acres of new, green space
- 30,000+ new trees, bushes and plantings
- New walkways, plazas, terraces and gardens

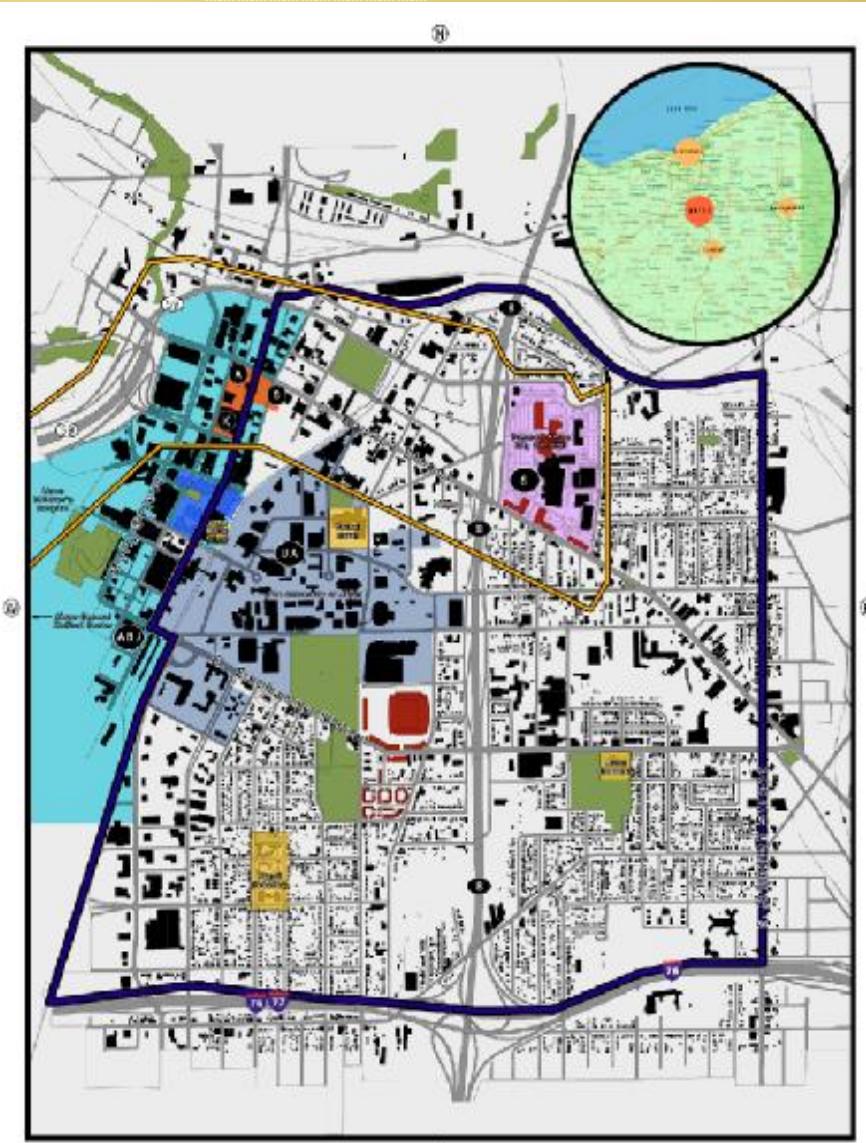
Catalyzing neighborhood redevelopment.

University Park Mission: *To revitalize the neighborhood as a vibrant and healthy place to live, learn, work, shop and play – through engaging the community and catalyzing private investment.*

- 1,000+ acres
- 15,500 residents in 5,200 households
- 300+ businesses with 24,000 employees
- 28,000 UA students (7,000 as residents)

Progress to Date

- 920 new jobs
- 80 new housing units
- \$52M in civic investments
- >\$300M in private investments



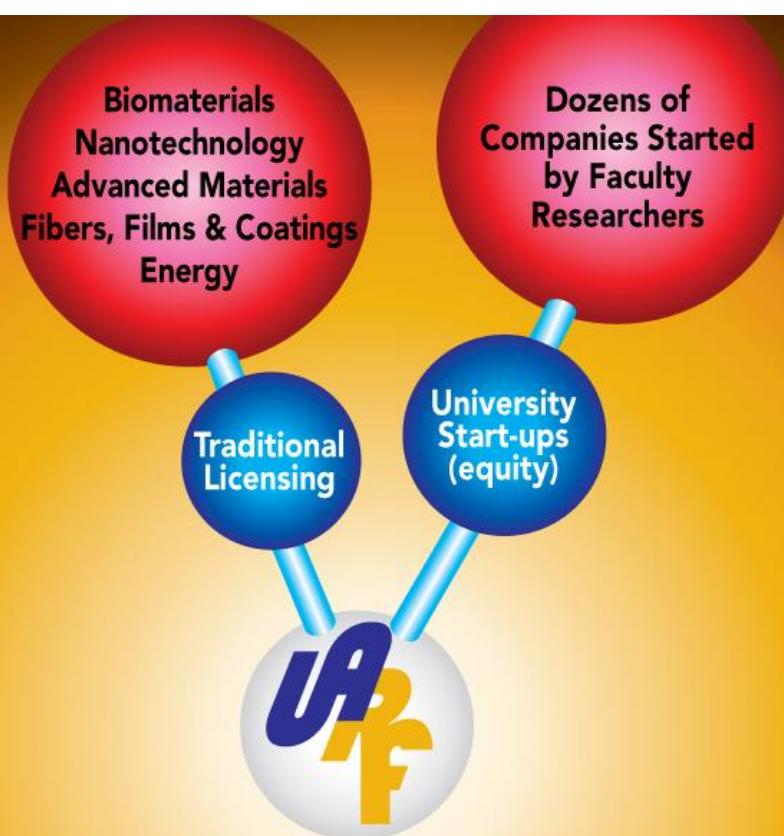


University of Akron Research Foundation

Independent entity with charter to benefit UA

- 2007 AUTM licensing revenue data – UA most productive in the nation!
 - (1) MIT, (2) Iowa State, (3) University of Georgia, (4) Cal Tech, (5) Rutgers, (6) University of Texas–Austin, (7) The University of Akron, . . .
 - The University of Akron is **No. 1** in licensing revenue normalized to total research expenditures (12.5% for 2007) for U.S. universities, without a medical school (96 reporting)

Association of University Technology Managers (AUTM) 2007 Rankings
(released in February 2009)





National Recognition

**#1 in Ohio in rate of return
per research dollar in
technology
commercialization, 2007**



**Winner of 2007 Award of
Excellence in Technology
Commercialization**



OHIO BOARD OF REGENTS

**Exemplary emerging university for
advanced innovation partnerships, 2007**



**#1 in patents issued per million
dollars in research expenditures,
2000-2004**

\$200-million, 10-year program with five partners:

- The University of Akron
- Akron General Medical System
- Akron Children's Hospital
- Summa Health System
- Northeast Ohio Universities College of Medicine

Catalyzed by Knight Foundation grant; matched by state, private & partners' investments

Supporting the city of Akron's Biomedical Corridor

Dedicated to becoming world's #1 biomaterials and orthopaedic research program

Five Major Initiatives:

- **Center for Biomaterials and Medicine**
- **Medical Device Development Center**
- **Center for Healthcare Training**
- **Center for Clinical Trials**
- **Community Outreach to the Medically Underserved**



1. Educational Efficiency: Increasing Efficiency – Enhancing Operational Excellence

- Business Processes
- Driving Down Costs

2. Job Growth: Discovery to Application

- Accelerating Growth
- The Innovation Fund

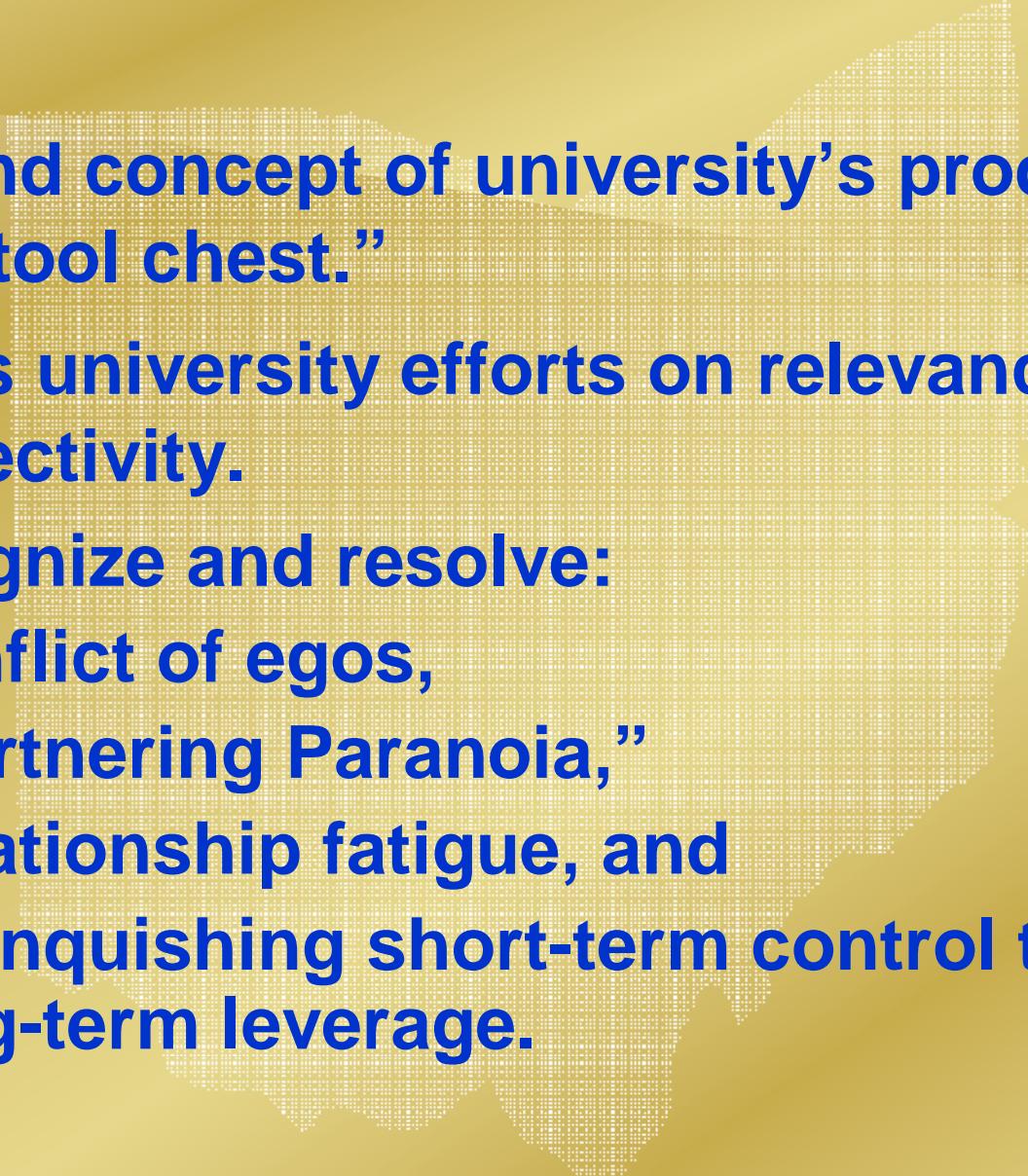
3. Talent Growth: Growing Talent - Growing Jobs

- Efficient Degrees – Lower Cost and Less Time
- STEM Education and Career Pathways

Lessons learned . . .

1. Assemble “weak” assets to create strengths.
2. Organize “guerrilla” entrepreneurial talent.
3. Identify & coalesce uncommon, synergistic partners.
4. Involve city and community as integral partners.
5. Coordinate closely with other regional assets to pursue unique opportunities.

Lessons learned . . .



6. Expand concept of university's product line and "tool chest."
7. Focus university efforts on relevance & connectivity.
8. Recognize and resolve:
 - Conflict of egos,
 - "Partnering Paranoia,"
 - Relationship fatigue, and
 - Relinquishing short-term control to gain long-term leverage.

21st Century Role of Universities . . .

- Key role in knowledge-conceptual economy
- Convener
- Developer
- As “Anchor” for Clusters of Innovation*
 - Generate creative capital
 - Generate knowledge capital
 - Train human capital
 - Build social capital
 - Attract financial capital
 - Preserve natural capital
- Common challenges & models;
unique opportunities

*(from Michael Crow, ASU)



Thank you!

✓ Questions?

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