

Presentation to:
New England Board of Higher Education
October 4, 2010

Concurrent Session:
Locally and Regionally—21st Century Models for Colleges and Universities
as Drivers of Local and Regional Development

“Economic Development, Engagement, and Stewardship:
Lessons from The University of Toledo Model”



- ➡ The Global Knowledge Economy Context
- ➡ Higher Education in the Global Knowledge Economy
- ➡ The University of Toledo Engagement Strategy
- ➡ Lessons and Ideas: What Parts of this Apply to All Institution Types?



The Global Knowledge Economy Context



In 8,000 Years of Human Economies and Societies: Only 3 HUGE Transformations



Pre-Agrarian

– Pre-history to 8,000 BC

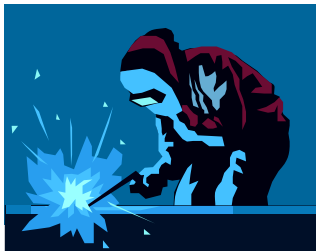
- Hunting/Gathering
- Nomadic Cultures
- Emergence of Tools



Agrarian

– Since 8,000 BC

- Agricultural Cultivation
- Formation of Communities
- Laws for Land Ownership



Industrial

– Since @ 1800

- Machines/Production Process
- Literacy/Public Schools
- Business Organizations & Law



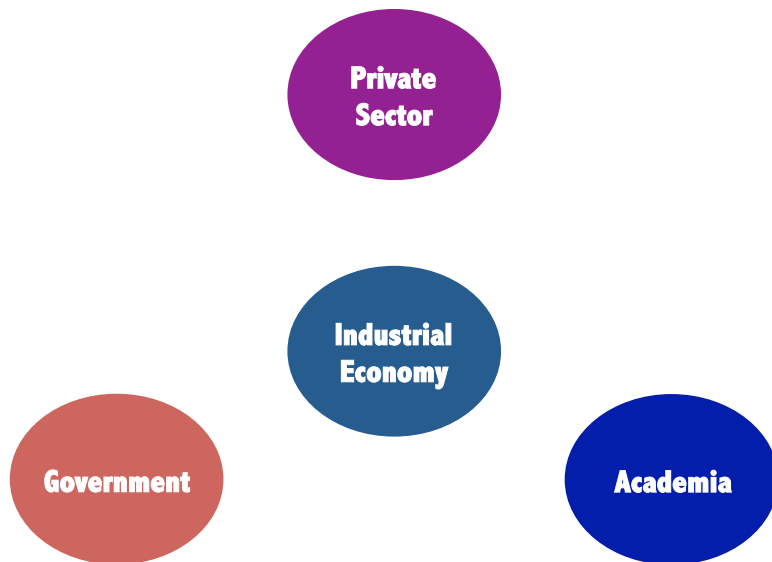
Knowledge

– Since last few decades

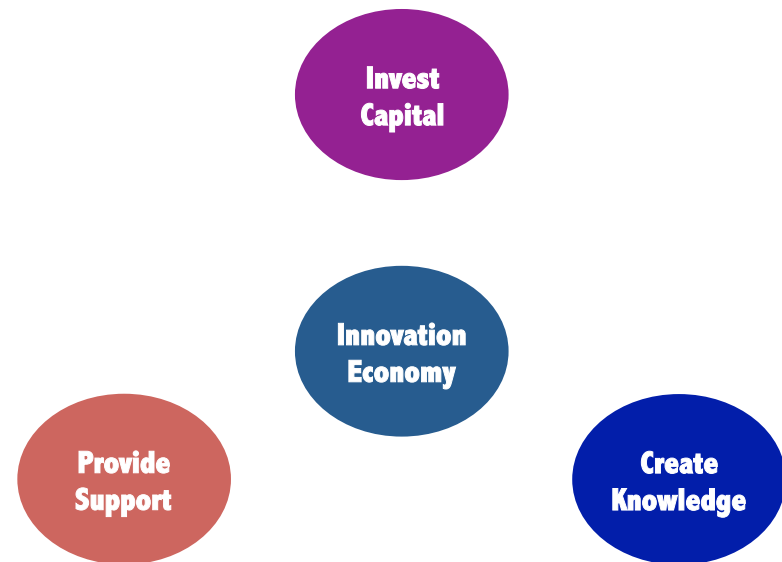
- Innovation & Technology
- Knowledge Work Force
- Globalization, Alliances, Regionalism, Networks

How We Do Things: From Sectoral to Functional Organization

In the Industrial Economy
Functions were organized
within sectors



In the Knowledge Economy
Functions are organized
across sectors



The Global Knowledge Economy: 4 Mega-Industry Clusters

➔ Information and Telecommunications

- Hardware
- Software
- Telecommunications and Internet services

➔ Life Sciences

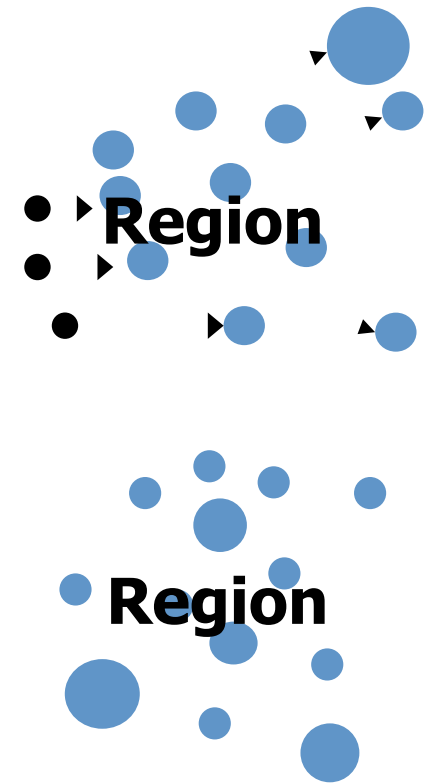
- Genomics-human, plant, animal
- Diagnostics, treatments, biomaterials, bioengineering
- Food supply

➔ Advanced & Sustainable Manufacturing

- New Materials, e.g. nano-materials
- New Processes, e.g., nano-manufacturing
- Customization; identification; compatibility

➔ Energy and Environment

- Alternative/clean energy
- Protection and remediation of water, air, earth
- Sustainability



Source of Cluster Graphics:
Jerry Paytas,
Carnegie Mellon University

The Global Knowledge Economy: A Definition

- ➔ Captures and commercializes innovation
- ➔ Advances competitiveness of traditional industries
- ➔ Grows visible, globally-competitive clusters in new knowledge enterprises
- ➔ Creates and sustains a highly-skilled work force.

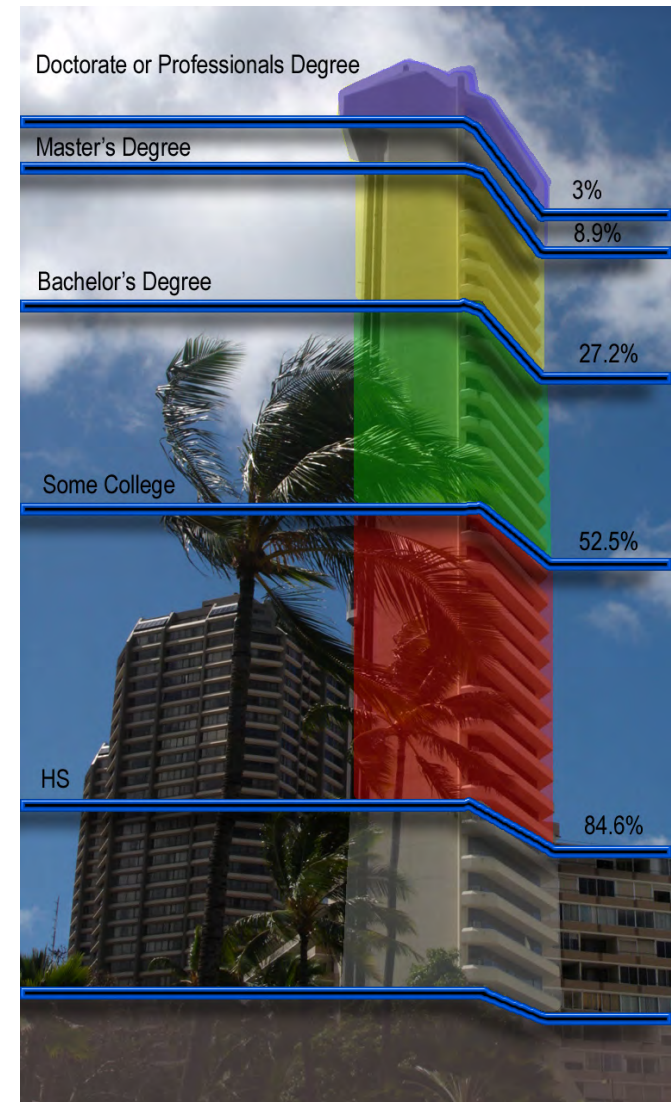


Educational Attainment: Access + Quality + Success = Competitiveness

Tertiary Educational Attainment(most recent) by Country

Rank	Countries	Amount
# 1	Canada:	42%
# 2	United States	37%
# 3	Ireland:	36%
# 4	Japan:	34%
# 5	Finland:	32%
# 5	Sweden:	32%
# 7	Australia:	29%
# 7	New Zealand:	29%
# 9	Norway:	28%
# 10	Belgium:	27%
# 10	Denmark:	27%
# 12	United Kingdom:	26%
# 13	Switzerland:	25%
# 14	Germany:	23%
# 14	France:	23%
# 16	Netherlands:	22%
# 17	Austria:	14%
# 18	Italy:	10%
	Weighted average:	27.6%

Source: Latest available data. OECD Education at a Glance: OECD Indicators 2003 via NationMaster; <http://www.nationmaster.com>



Source: US Census Bureau, in Wikipedia



Higher Education in the Global Knowledge Economy



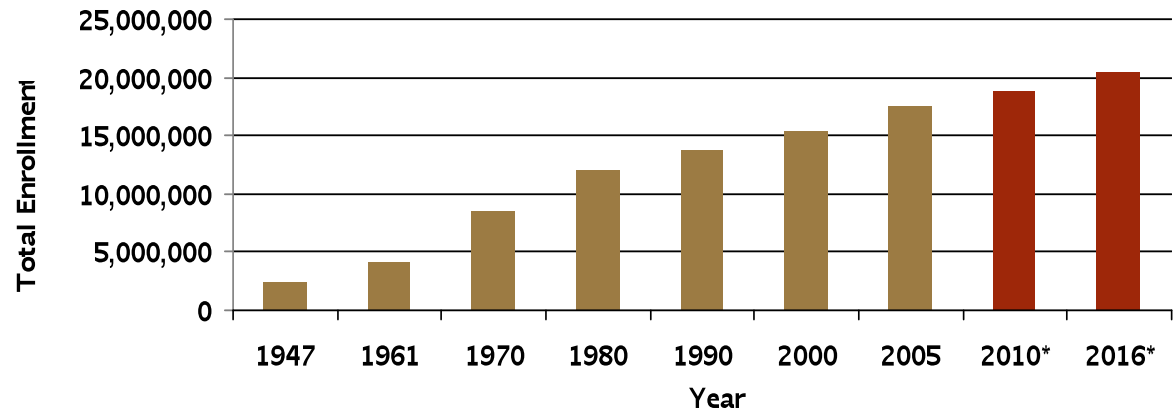
US Enrollment Projections: Under-Estimating Both Need and Actual Demand?

University of Phoenix
claims that 38 million
US adults are seeking
college degrees.

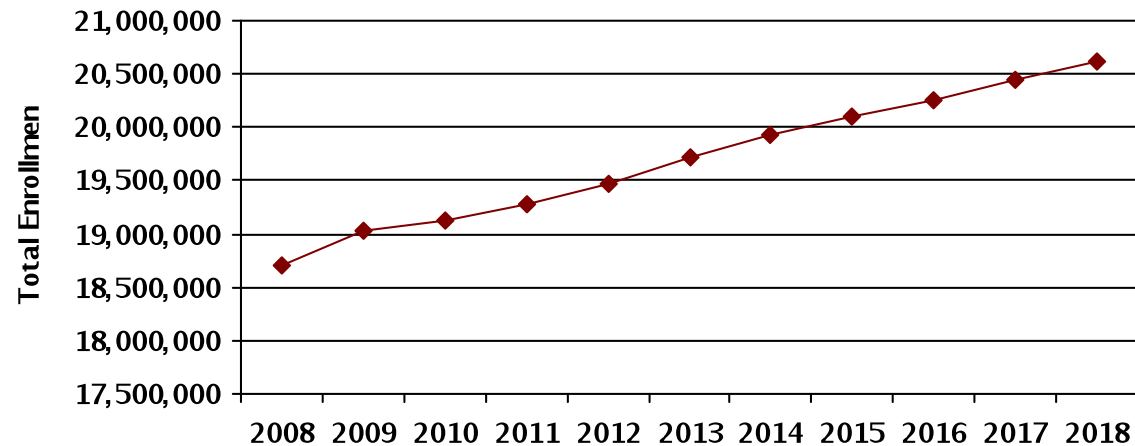


The US needs a
much larger portion
of its population
achieving higher
levels of education.

Total Fall Enrollment in Degree-Granting Institutions, 1947 to 2016
(*2010 and 2016 Projected)



Total Fall Enrollment in Degree-Granting Institutions: 2008 to 2018
(Updated in 2009)



Source: http://nces.ed.gov/pubs2009/2009062_1.pdf

Technology and Pedagogy: Now Rapidly Evolving Changes



2,000 Years Ago



1,000 Years Ago



600 Years Ago

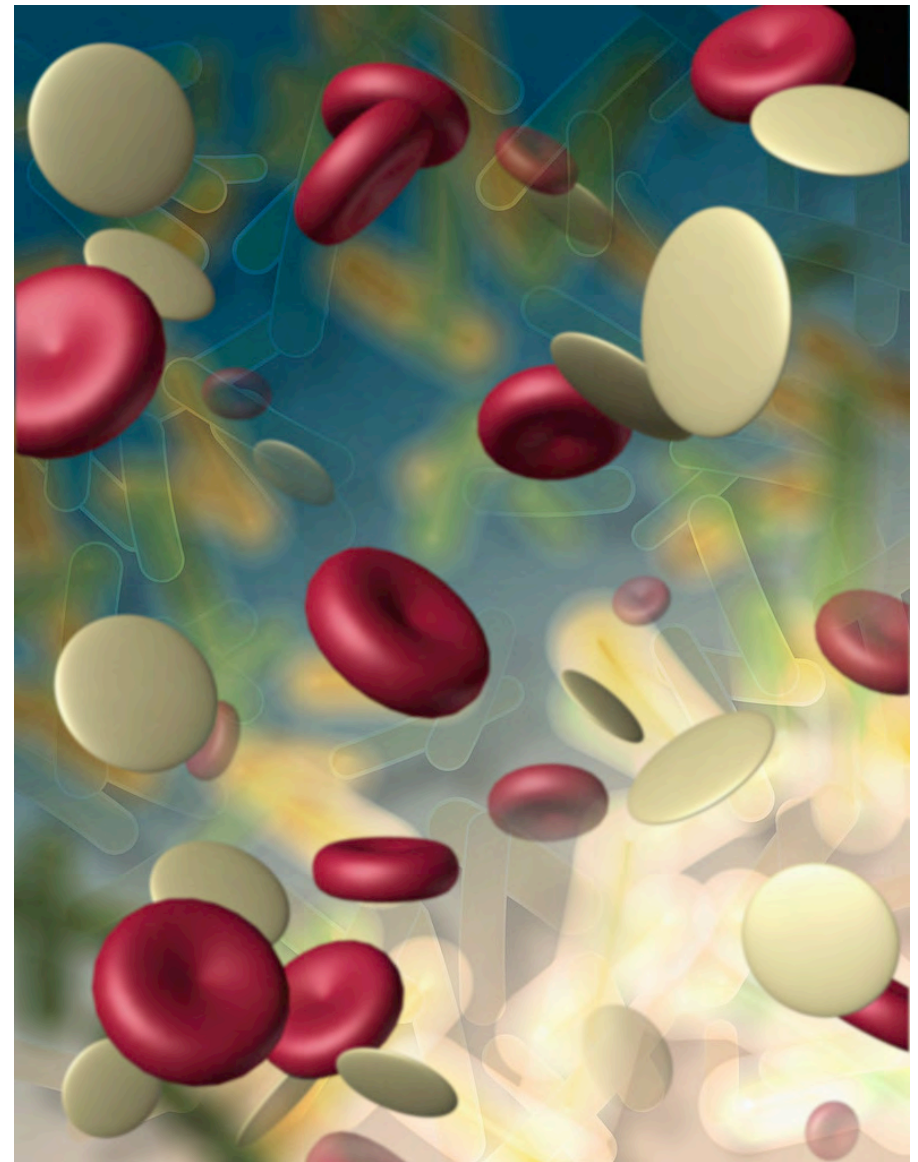


150 Years Ago

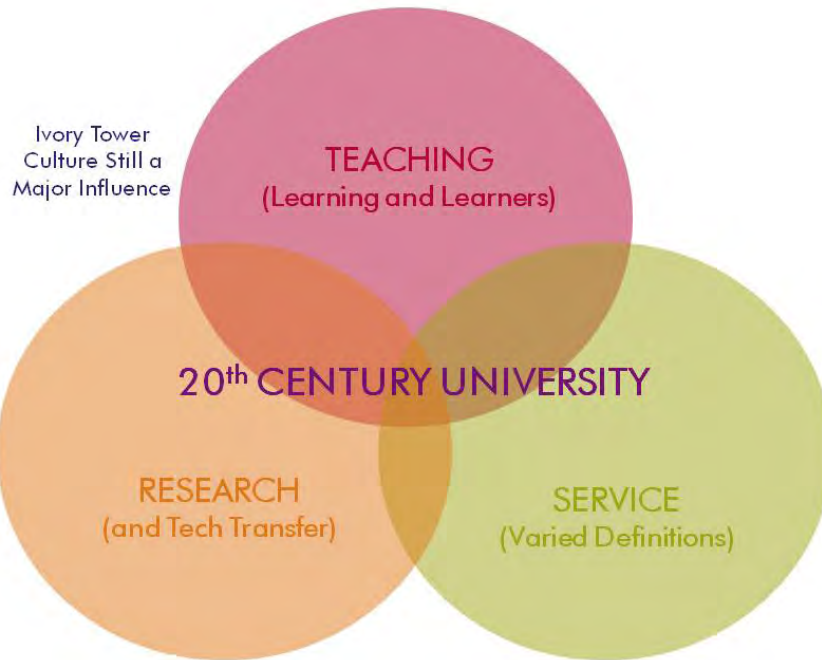


Yesterday

Ever Greater Importance of *Effective* Research: Especially in STEM²

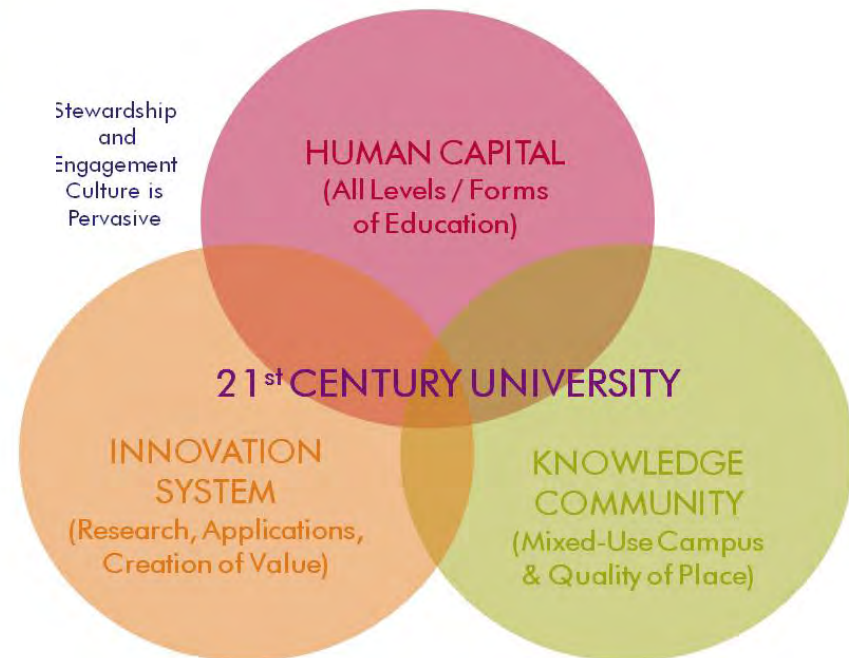


The 21st Century College / University in the Knowledge Economy



From Teaching, Research,
and Service...

...to Human Capital,
Innovation System, and
Knowledge Community (or
Quality of Place)





The Relevant University:

MAKING COMMUNITY AND ECONOMIC ENGAGEMENT MATTER

The Relevant University: The University of Toledo Engagement Strategy



The University of Toledo

- ➔ One of Ohio's 13 public universities
 - 2006 merger— former UT + MUO
 - Students: 23,000
 - Operating budget: \$793 MM
 - Clinical revenues: \$270 MM
 - Six campuses; CRV @ \$1.7BB
- ➔ UT Medical Center = only academic health sciences center in NW Ohio region
- ➔ Unusual array of colleges (non-land grant)
 - Arts & Sciences
 - Education
 - Business
 - Engineering
 - Law
 - Medicine
 - Nursing
 - Pharmacy
 - Health & Human Services
 - University College
- ➔ Funded research expenditures: \$75 MM
- ➔ High ranking in licensing of IP (AUTM)



How *The Relevant University* Came About

- ➔ Began as consulting engagement:
Strategic Business Plan for Economic Engagement Strategy
- ➔ Became broader effort to rethink the University in context of its own founding/history and contemporary challenges
- ➔ Discovered that UT's motto is particularly apt:

***Engaging the Present;
Creating the Future***



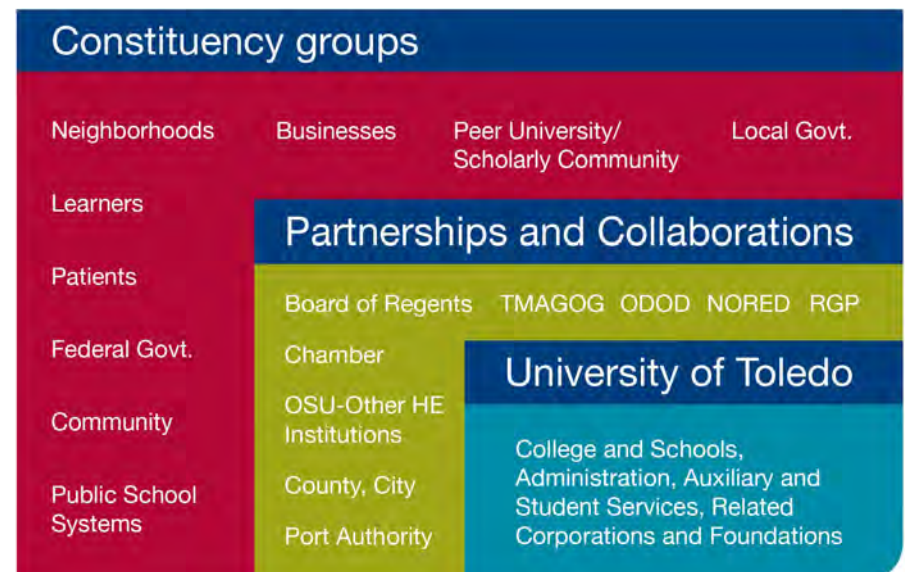
The Relevant University:

MAKING COMMUNITY AND ECONOMIC ENGAGEMENT MATTER

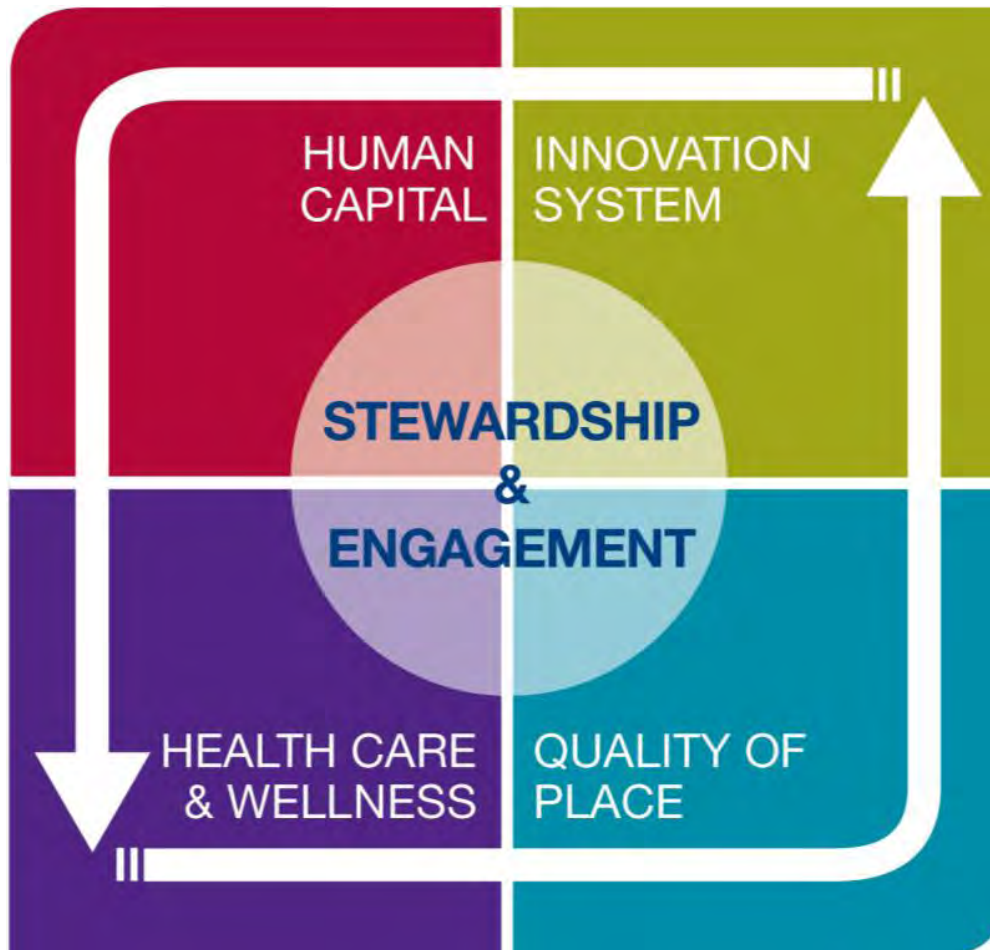
The Relevant University: Requires Shift in Perspective, Priorities, Culture, and Metrics

The Relevant University

- ➔ Takes “real world” into direct account in design of programs
- ➔ Becomes more “permeable” to constituents (beyond “outreach”)
- ➔ Responds to changing needs in something less than eons
- ➔ Becomes more “big problem-focused”
- ➔ Shifts planning perspective from “inside-in” to “outside-in”
- ➔ Evaluates the outcomes it generates **for others**



The Relevant University: Four Domains



Stewardship & Engagement Permeate All

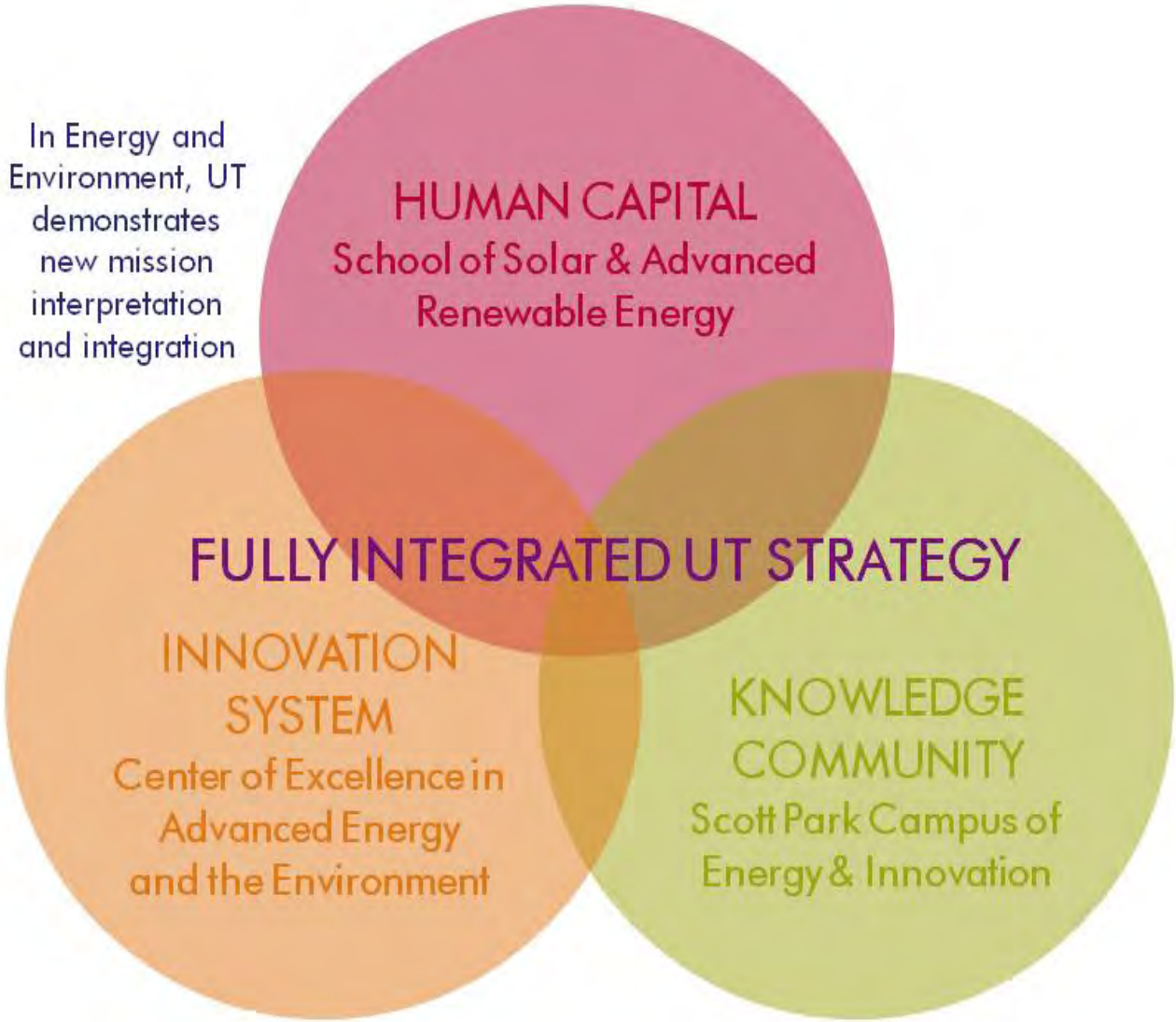
- **Human Capital**
 - Formation of the knowledge workforce (babies to post-docs)
- **Innovation System**
 - Innovation created by a complex set of resources (talent, programs, services, and funding)
- **Health Care & Wellness**
 - Quality, access, cost-efficiency; emphasis on wellness
- **Quality of Place**
 - Desirable, vibrant livable community and region

175 Strategies And Four Major Initiatives (Focus)

- ➔ 175 strategies in sub-domains
 - All interrelated
 - Structure based on:
*Engaging the Present;
Creating the Future*
- ➔ 4 major initiatives for distinction and impact—selected based on university strengths AND regional priorities:
 - Solar & Renewable Energy & Environment
 - Biomarkers
 - Transportation & Logistics
 - Advanced Manufacturing



Energy and Sustainability: Application of the New Model at UT



Lessons and Ideas:
What Parts of this Apply to All Institution Types?



Public Education is Everyone's Job: Not Just Schools of Education

➔ Dismal statistics

- 68% of eighth-graders can't read at grade level.
- About 1/3 of our students drop out of high school (50% in some areas)
- Another 1/3 are not college-ready when they graduate.



➔ Of 30 developed nations, US is:

- 24th in Math
- 17th in Science
- 10th in Literacy

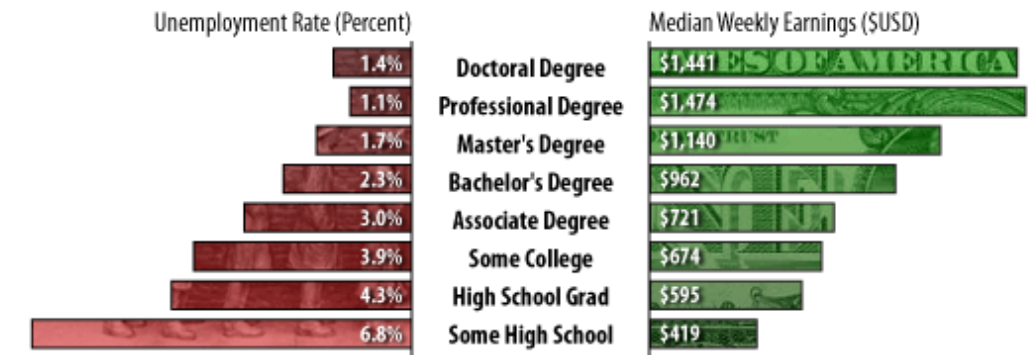
➔ Social cost

- Achievement gap costs the US \$525 billion each year.

NBC News "Education Nation,"
<http://www.educationnation.com>

Education & Training Pays, 2006

Unemployment & earnings for workers 25 & older by educational attainment; earnings for full-time wage and salary workers

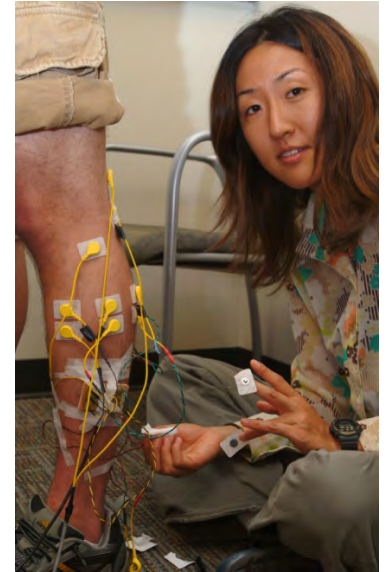


Source: U.S. Bureau of Labor Statistics

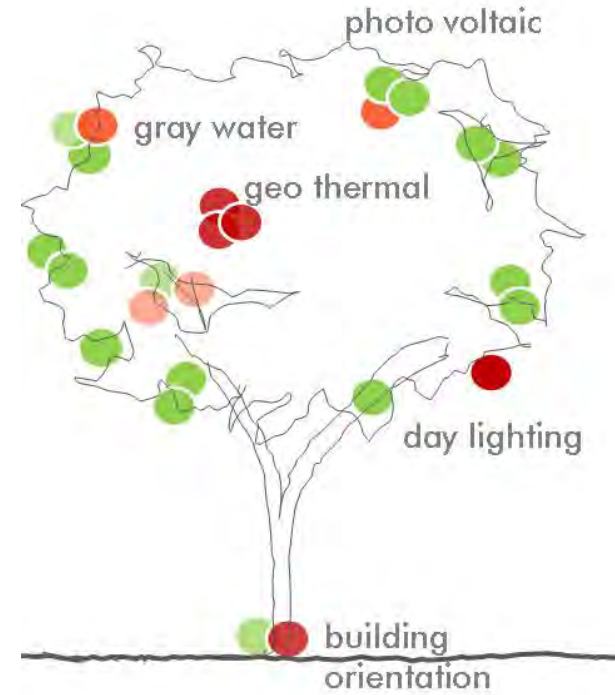
www.bls.gov

Health and Wellness Is Everyone's Job: Not Just Academic Health Sciences

- ➔ Many institutions have nursing, allied health, and human/social services programs
- ➔ Many institutions can address business, economic, and policy aspects of health care—and promote improvements in their regions
- ➔ All institutions can promote health/wellness education in their communities



Sustainability is Everyone's Job: Not Just Engineering Graduate Schools



Water



Energy



Waste



Transportation



LAND USE

Community Development is Everyone's Job: Not Just Large Universities

- ➔ Residential communities
- ➔ Local business formation and support
- ➔ Urban/community planning and redevelopment
- ➔ Active help to economic development agencies
- ➔ Public Pre-K to 12 education and youth services
- ➔ Range and quality of amenities
- ➔ Local governance
- ➔ Promoting investment

University Circle, Inc. in Cleveland is among the oldest university organizations devoted to urban planning and community development.



Today, there are many others, and more emerging.

Some are multi-institutional partnerships.

Institutional Culture is Everyone's Responsibility: Every Institution Must Be *Relevant* in the 21st Century

➔ Traditional Ivory Tower

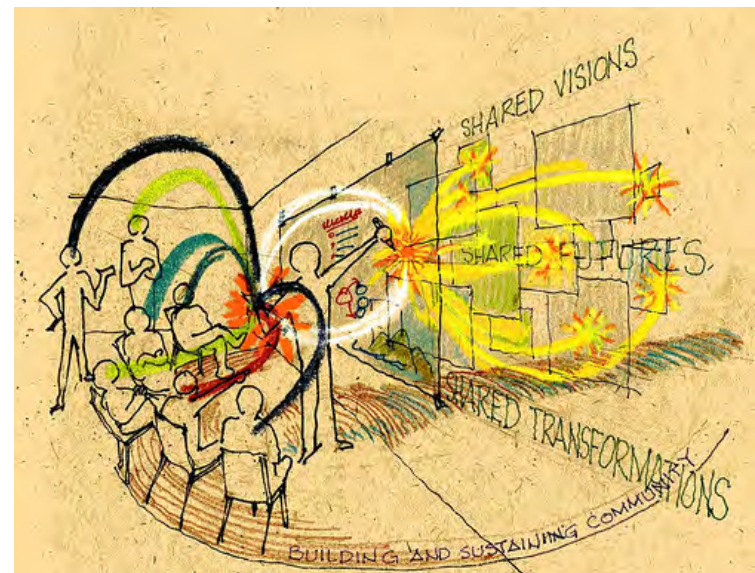
- Prerogatives of “disciplines”
- Exaggerated importance of consensus in decision-making
- Weaknesses in planning
- Reward, incentives, recognition = rooted in old traditions
- Inverted organization model
- Deliberate isolation/separation from “outside world”
- People come to us
- **We** decide what is “of value”

“Laws are sand, customs are rock. Laws can be evaded and punishment escaped, but an openly transgressed custom brings sure punishment.”

Mark Twain

➔ 21st Century Culture

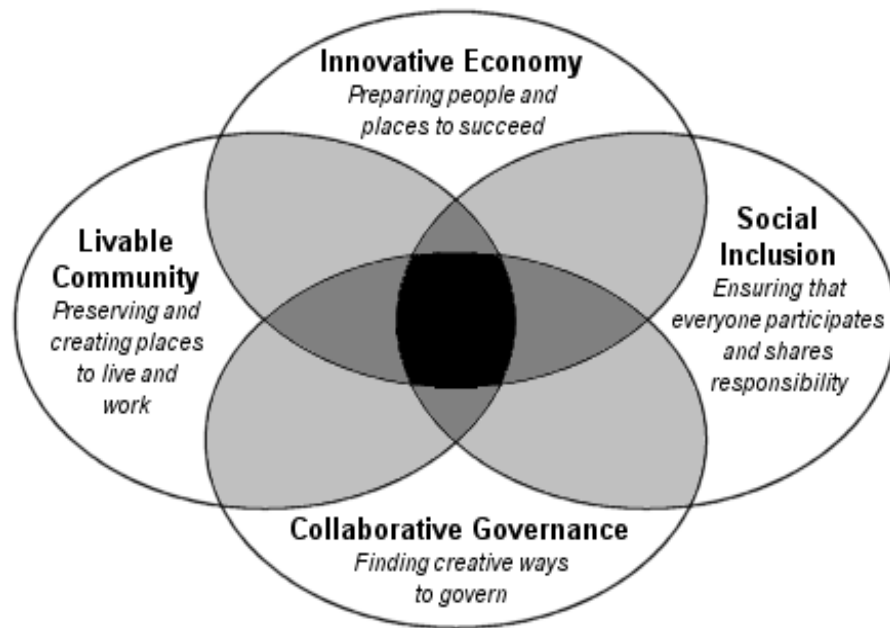
- Preserve best elements of academic traditions, BUT
- New elements:
 - Outside-in perspective
 - More problem-focused, interdisciplinary programming
 - Metrics of outcomes **for others**



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Summary: Local/Regional Development, Engagement, and Stewardship

Framework for Regional Stewardship



Nothing about Regional Stewardship is limited to certain types of higher education institutions.

Source: Alliance for Regional Stewardship, in *Tools and Insights for Universities Called to Regional Stewardship*, 2006, Alliance for Regional Stewardship, AASCU and NCHEMS

Summary: Local/Regional Development, Engagement, and Stewardship

➔ Human Capital

- Serious, competent, learning outcomes—UG / Grad
- Major impact on pre-K to 12
- Making adults welcome and a priority as learners

➔ Innovation System

- Entrepreneurship education/experience
- Impart skills that include problem identification, problem-solving, creativity
- Business services, brokering resources of others

➔ Health Care and Wellness

- Health care and human services professionals
- Health and wellness education and promotion

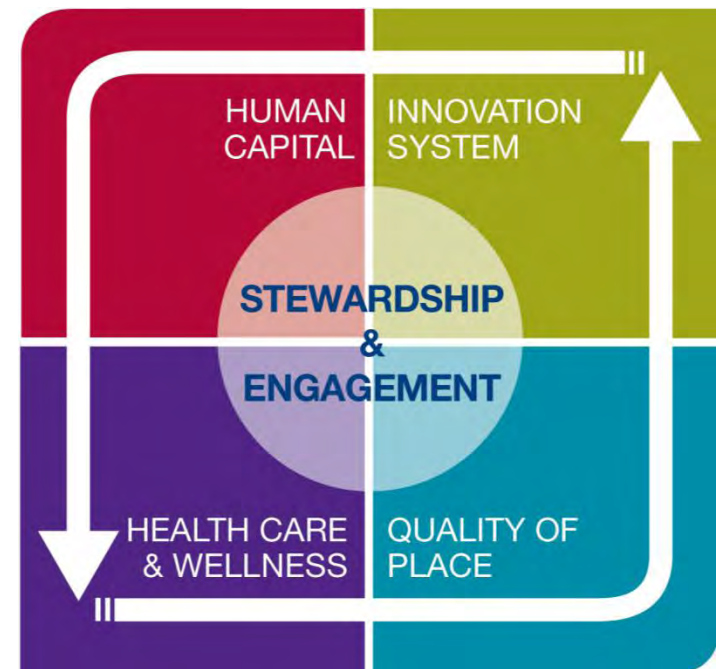
➔ Quality of Place

- Community development
- Fine and performing arts, recreation amenities
- Instill values re: “service,” civic responsibility, and good governance



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