INSTITUTIONAL ENGAGEMENT: Connections and Metrics

Universities as Economic Drivers

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The Engaged University

We are on a promising path of transformation that will change our focus from teaching to learning, out of a concern for outcomes. Research will be part of a broader emphasis on scholarship that recognizes not just discovery but also the application and dissemination of knowledge. And the notion of service to society will be a guiding force for virtually every area of institutional endeavor.

~ Dr. Graham B. Spanier
Engaging educational, private, public and non-profit organizations in transformative regional development

University Roles: An Evolving Perspective

September 26, 2010
University Roles in Local Economies

Richard K. Lester
Engaging educational, private, public and non-profit organizations in transformative regional development

The Context for Economic Engagement
Economic Characteristics of 21st Century Regional Prosperity

• On the cusp of economic eras: Industrial Innovation

• Shift away from competing on low costs toward maximizing regional competitive advantages

• Built upon a new premium for in-region critical mass$_1$ of:
  - Workforce Skills
  - Knowledge and Talent Base
  - Sector-Oriented Supply Chain
  - Innovation Capacity
  - Quality of Life Amenities

1 - Mark Drabenstott – University of Missouri
Cultural Characteristics of 21st Century Regional Prosperity

• Generated by self-organizing\textsuperscript{1}, self reinforcing regional systems\textsuperscript{2} in which:
  – Knowledge flows across professional boundaries
  – Capacity to manage risk and uncertainty are rewarded
  – Mobilization capacity to move quickly on unplanned opportunities and challenges is rewarded

• Therefore, regions need new kinds of social organizing platforms that support boundary-spanning networks that are dense, diverse and varied\textsuperscript{2}

• Designing the appropriate economic development strategy may be the ultimate local innovation\textsuperscript{1}

\textsuperscript{1} – Maryanne Feldman, University of North Carolina, Chapel Hill
\textsuperscript{2} – Mary Walshok – University of California, San Diego
Connecting: Institutional Engagement Strategies
What can/will a university do to engage a cluster or a region?
...start with the end in mind. What is the successful region doing?

1. Builds civic collaboration

2. Develops regional identity

3. Anchors and strengthens its export economy
How do we make this happen?

Institutional engagement
What can we do that has an impact?

- Partner/Engage
- Clarify university role in moving region’s metrics
- Align university assets with region
- Develop shared agenda
This is what WE can offer (university assets)

Regional Development
- Convening of business, public, education and non-profit sectors
- Access to networks of key regional partners
- Regional analysis
- Strategic alignment of regional assets
- Coordination of talent development pipelines
- Coordination of technology development programs
- Coordination of firm development programs
- Coordination of cluster development activities

Institutional leadership to catalyze university potential

Technology Development
- Technology transfer
- Commercialization
- Interdisciplinary research
- Commercial testing and user facilities
- Product development support
- Entrepreneurship
- Applied research
- Industrial research
- Equity

Industrial Cluster Development
- Forums for interaction
- Networks
- Institutes of collaboration
- Incubators and accelerators
- Science and innovation parks
- Talent and technology hubs
- Place-based competitive research
- Distributed research
- Cluster-focused technical assistance
- Cluster-focused branding
- Business and management services
- EDA University Centers

Firm Development
- EWD Technical assistance
- Business and management education
- Capital access
- Mentoring
- Networking
- Management support
- Entrepreneurial support
- Workforce development
- Corporate training
- Custom or continuing education
- Incubators and accelerators
- NIST MEP programs

Talent Development
- Access to degrees
- Innovations in format
- Innovations in delivery
- Professional continuing education
- Educational enrichment and training programs
- STEM enrichment
- Entrepreneur development
- Lifelong learning
- Graduate education

Quality, Connected Place Development
- Economic development support
- Architecture, planning and redevelopment support
- Faculty and staff know-how
- Service learning
- K-20 pipelines and reform
- Facilities for community activities
- Entrepreneur facilities
- International students and programs
- Locus of cultural activities
- Outreach activities and events
- Employment for community members
- Civic skills
- Expertise
- Diversity growth and support (global, racial, ethnic)
- Community capacity building (i.e., not for profits)
- Telecommunications infrastructure support

Timothy Franklin, James Woodell and Meredith Aronson ©
Connecting: Three Examples of Institutional Engagement
Virginia Tech and Danville, VA
RITH Program Model:
REGIONAL INNOVATION AND TALENT HUBS (RITH)
To attract and develop technology and talent critical to a region’s prosperity

- Distributed Research
- Commercial Testing and Engineering Services
- Entrepreneurial Support Services

Fostering the Development of a New Economic Base

- Attracting graduate students
- Creating academic pathways
- STEM enrichment programs

Attracting and Developing an Innovation Economy Workforce

- Quality of Life
- Business Traffic
- Attracting and retaining the region’s best and brightest

Creating a Destination Location

- Technology networks
- Financial networks
- Social networks
- Innovation networks

Enabling Access to Networks
PA Prosperity Partnerships

• Three regional pilot engagement efforts designed to:
  • Convene and Listen
  • Connect the University’s capacity in regions
  • Develop investment propositions
  • Confirm the University’s role as steward

• Social change campaign (of sorts) to connect campus assets to regional economic development efforts
The Office of Economic and Workforce Development

- Convening
- Aligning
- Agenda Building

- Competitive Advantage
- Prioritizing
- Connecting

Integration

Economic Base

21st Century Workforce

Place-Based

Leadership & Networks
Mission: TRE Networks advances the role of universities in regional development by:

- Convening regional leaders from the public, private, education and non-profit sectors
- Educating regional leaders on the evolving roles of higher education in regional engagement
- Advocating for new public policies to support these evolving roles; and
- Advising regional leaders on the leading edge practices of regional development
Measuring University Engagement Strategies

Universities Create Conditions for Economic Success: We Produce the Raw Material for Innovation Economy!
<table>
<thead>
<tr>
<th>Objectives for Southside Virginia</th>
<th>Performance Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1: Develop robust research centers which build high tech economic capacity</td>
<td>#1: Dollar amount of competitive sponsored research awards</td>
</tr>
<tr>
<td>#2: Translate IALR research activities into the private sector innovation</td>
<td>#2: # of IP, R&amp;D contracts, and commercial testing contracts</td>
</tr>
<tr>
<td>#3: Strengthen the competencies in STEM-E thru targeted programs</td>
<td>#3: # of participants attending IALR STEM-E programs</td>
</tr>
<tr>
<td>#4: Introduce private sector businesses to opportunities thru IALR programs and services</td>
<td>#4: Number of visits by private businesses to the IALR</td>
</tr>
</tbody>
</table>
Business Growth

Technology Transfer
  # Commercialization Support Services
    # Patents
    # Licenses
    # Publications
  $ Contract Research & Development
  $ Research Expenditures
  $ Competitive Research & Development Awards
  # Faculty  # Technicians  # Post-docs  # Grad Students

High Wage Jobs
Business Starts
Business Expansion
Business Recruitments
Venture Capital Investments

Regional Economic
Inputs

Outputs
Knowledge Workers

- Doctoral Degree Programs
- Thesis Masters Degree Programs
- Non-thesis Masters Degree Programs

- Per Capita Income
- Population Ages 25-40
- Baccalaureate Degrees
- Post-secondary Participation

- Baccalaureate Degree (comp.) Programs
- Associate Degree Transfer Programs
- Community College Cert./Terminal Programs Courses
- High School Certificate Programs
- STEM Outreach Programs

- Summer College Internships
- High School Internships
- Intro & Prerequisite College
- AP, IB, Dual Enrollment Courses
- STEM Teacher Prep Programs
Wide Area Network Connectivity
First Mile Broadband Access
High-Speed Backbone

Global Connectivity

Showcase & Demonstrate Technologies & Applications
Technology Topics & Issues Programs
Vendor-led IT Programs
Cutting Edge Information Applications
Leading Edge Voice, Data, and Video Technologies

Residential BB* Connections (*Broadband)
Business/Org BB* Connections
Technology-related Business Starts
Technology-dependent Business Relocations

Outputs
Regional Economic Inputs

& Private Sector
& STPC
& The Institute for Advanced Learning and Research
We Create Conditions for Economic Success:

- Sort, educate, & pool talent and brainpower
- Host facilities and faculty attracting billions of $$$ in federal research funding
- Partner with private industry to convert knowledge into profits
- Grow IT infrastructure – distribution system for knowledge-based products
- Provide a destination for business traffic and hub for professional networks
An “institutional engagement” perspective emphasizes creating measurable impacts on a region/cluster scale by coordinating university programs and assets that take its core technologies/missions and productively and sympathetically aligns them with regional needs to create “place-based advantage.”
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