State Tech-based Economic Development Programs Experience (or Lack Thereof) in Collaboration & Global Partnerships

Dan Berglund
State Science & Technology Institute
About SSTI

Mission

– Leads, supports, and strengthens state efforts to improve state and regional economies through science, technology and innovation
Perspectives on Collaboration

• What kind of collaboration?
  – University-industry-government
  – Project-specific or ongoing centers
  – Not university researcher working alone w’ one company, not interdisciplinary

• Defining collaboration
  – “To work together, especially in a joint intellectual effort.”—American Heritage Dictionary
  – “The process people with different ways of seeing the world have to achieve similar goals.”—wikipedia
  – “The act of willingly cooperating with an enemy.”—Answers.com
Why Collaboration?

• Economic development perspective:
  – Regions w’ active connections between universities and industry have seen great economic benefits

• Industrial perspective:
  – Reducing internal R&D, open to working with other R&D generators

• University perspective:
  – Intellectually stimulating while opening new revenue sources and satisfying policymakers
Elements of Tech-Based Economy

- Intellectual infrastructure
- Spillovers of knowledge
  - from universities
  - from informal networks
- Technically skilled workforce
- Physical infrastructure
- Capital
- Entrepreneurial culture
- Quality of life
Examples

• Centers
  – Ohio’s Edison Centers
    • EWI– success story
    • EPIC– not a success story
  – New York’s Centers for Advanced Technology
  – Florida’s Centers of Excellence
  – New York’s Centers of Excellence
  – Ohio’s Wright Centers for Innovation
Examples

• University-industry projects
  – Ohio’s Edison Seed Development Fund
  – Maryland Industrial Partnerships (MIPS)
  – Connecticut Innovations’ Yankee Ingenuity
  – UC Discovery Grants
  – Science Foundation Arizona’s Strategic Research Groups

• Building university R&D capacity
  – Georgia Research Alliance
  – Texas Enterprise Fund dollars for Texas Instruments
Trends

- Mini-NSFs in the 1960s
- Ctrs of excellence w’ strong company collaboration
  - Consideration for small and medium-sized companies
- University-industry research projects
- Mega centers
- Building R&D capacity
  - Including through econ dev recruitment
- Some states shifting from R&D capacity to funding for companies and commercialization
Lessons Learned

• All partners are joining because they see value
  – EWI (self-interest) vs. EPIC (corporate citizenship)

• Meaningful involvement of all parties in governing the collaboration
  – EWI (industry setting direction) vs. EPIC (universities setting direction)

• Realistic goals and metrics are established from the outset
  – Florida’s Centers of Excellence unrealistic expectations
Expected Outcomes for FL

- World class research
- Compete against Silicon Valley and Research Triangle Park
- Collaboration between university and Florida business community
- Improved curriculum
- Recruitment of world class faculty
- Establishment of leading edge research facilities
- Acquisition of public and private funding for collaborative research
- Move technology to commercial sector
- Self-sustaining after 2 years
Lessons Learned

- All parties understand the others’ goals, accept the legitimacy of those goals, and make necessary accommodations
  - State: Not all benefits will accrue in-state
  - Industry: Publishing needs and timeline
  - University: Timing

- Sufficient resources are provided to make the collaboration of interest to all
Lessons Learned

• Committed high-level leadership is required that understands:
  – Economic impact further down the road than other approaches
  – Research does not always succeed
  – Significant cultural differences between actors

• Action should be based on:
  – Understanding of needs, capabilities, and gaps
  – Filling gaps to encourage change in private sector behavior
**Introduction to Survey**

Inquiries sent to 174 TBED organizations
58% response rate

38% organizations have int’l relationships
62% do not, or have ended them
most mentioned countries:
• Canada (10)
• U.K. (9)
• China (6)
• Japan (5)
• Germany (5)
• Israel (5)
• Russia and fmr. Soviet republics (4)
• Mexico (3)
• Ireland (3)
• Australia (3)
Examples of Relationships

- Establish incubators
- Act as gateways for customer access and direct investment in foreign markets
- Share technical information through research partnerships
- Sponsor business plan competitions
- Advise best practices for commercialization
Genesis of Relationships

- Regional trade initiatives
- Google searches from other countries
- Sister city/county/region relationships
- Stop for international delegations
- Outgrowth of university cooperation
- Enlightened/aggressive foreign leaders
- Personal friendships
**Respondents’ Answers**

Why International Collaborations Do Not Exist

<table>
<thead>
<tr>
<th>Reason</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>We are too busy with other matters</td>
<td>29</td>
</tr>
<tr>
<td>Do not see reason to establish relationships</td>
<td>17</td>
</tr>
<tr>
<td>Do not know where to start</td>
<td>8</td>
</tr>
<tr>
<td>Unable to find partners in U.S. to assist</td>
<td>6</td>
</tr>
<tr>
<td>Unable to find appropriate partners in other countries</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>37</td>
</tr>
</tbody>
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Other Reasons

- Time and money
- Regional trade organizations or consulates handle this
- Export control difficulties
- Don’t get beyond talking stage
- Seen as competition from other orgs
- Client companies don’t have money
• Can’t just meet 1 or 2 times and expect quality relationship.
  – Anchors to be visited repeatedly
• Insufficient funds were committed compared to what was needed
• Markets for some technologies just don’t exist in some markets
• Different countries, different cultures
• TBED orgs in other countries may not have the same clout as in U.S.
Recommendations

• True champions are needed on both sides
  – More critical than financial backing, lack of commitment by individuals leads to failure

• Creativity is needed to find mutually beneficial opportunities
  – “what are the gains to my state?”

• Strong relationships take time to build
  – Both orgs and individuals need to plan time investment

• Receive assistance from 3rd parties
  – Grants and advice exist to build these relationships
  – Government officials, business leaders and patent lawyers can be connectors
Recommendations

- Make sure you have 3 years (minimum) of funding
  - Don’t expect results in less than 36 months
- Need to identify both buyers and sellers in international markets
  - Having only one type will not work
- Having the blessing of govt’s may help
  - Can also create red tape
- Push follow-up from businesses
  - Without input from key associates, relationship fizzles
Contact Information

Dan Berglund
State Science & Technology Institute
614/901-1690
berglund@ssti.org

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