

# **Governor's Economic Summit: Best Practices for Advancing Economic Development and Re-Inventing Connecticut**

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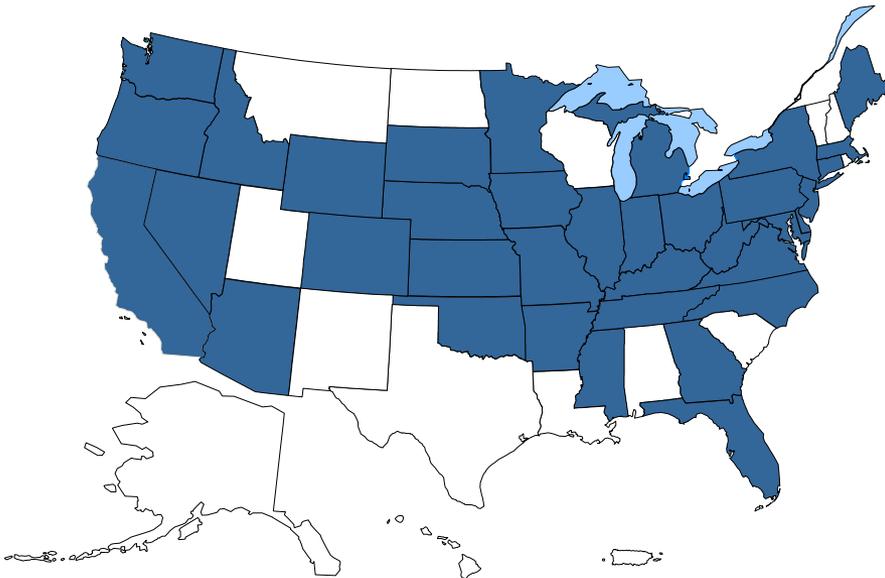
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# A Word on Battelle's Technology Partnership Practice

*Battelle TPP is the economic development consulting arm of the world's largest independent, non-profit research and development organization.*

*Demonstrated track record of translating industry strengths into development strategies and initiatives*

**Broad breadth – TPP projects across the nation over the past 10 years**



## Examples of State Level Projects

- Ohio Third Frontier
- Georgia Research Alliance's Strategies in Life Sciences & Information Technology
- Arizona's Biosciences Roadmap
- Iowa's Cluster Strategies ... Life Sciences, Adv. Mfg., Information Technology
- Nebraska's Competitive Advantage Strategy
- Massachusetts Technology Roadmap
- Connecticut IT Workforce, Connecticut Career Choices, Nanotechnology & Core Competency Assessment

# Practitioner's Lessons Learned on Growing High Quality Jobs

- ***Lesson #1: What it takes to put industry cluster development into practice***
- ***Lesson #2: Importance of identifying your development niches within leading clusters***
- ***Lesson #3: Addressing development pillars ... best practices:***
  - Innovation
  - Talent
  - Industry-University Partnerships

# Starting Point: Technology Readiness & Specialization Matters

- We are living in a high technology, high skills “knowledge” economy, where rising incomes and improved quality of life depends on the development and application of technology

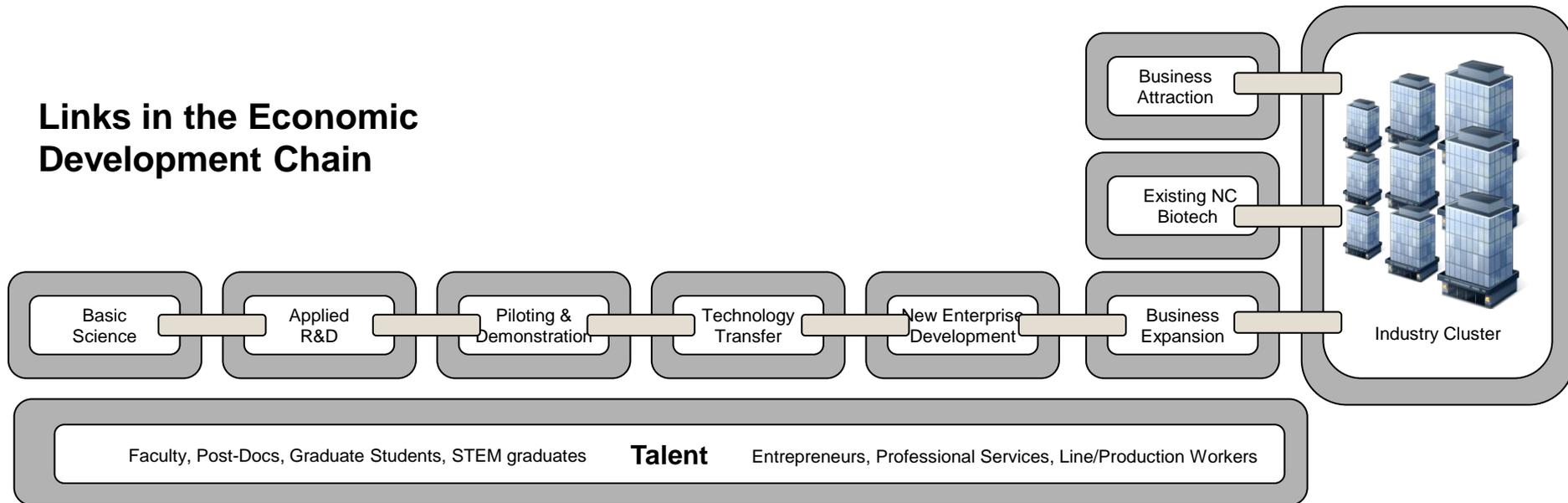
**Technology-based growth drives economic success** – 65% of difference in economic success of U.S. regions from 1975 to 1998 accounted for by the growth & presence of high tech industries

**Technology is critical for mature and established industries, not just new, emerging industries** – 6 out of every 10 information technology workers in US employed outside of computer and telecom industries

- ***“Regional economies can be thought of as developing specialized and distinctive technology capabilities, which give them unique global market opportunities.”***
  - Michael Best, a leading scholar chronicling the growth and development of industries across states and broader regions, in *The New Competitive Advantage*

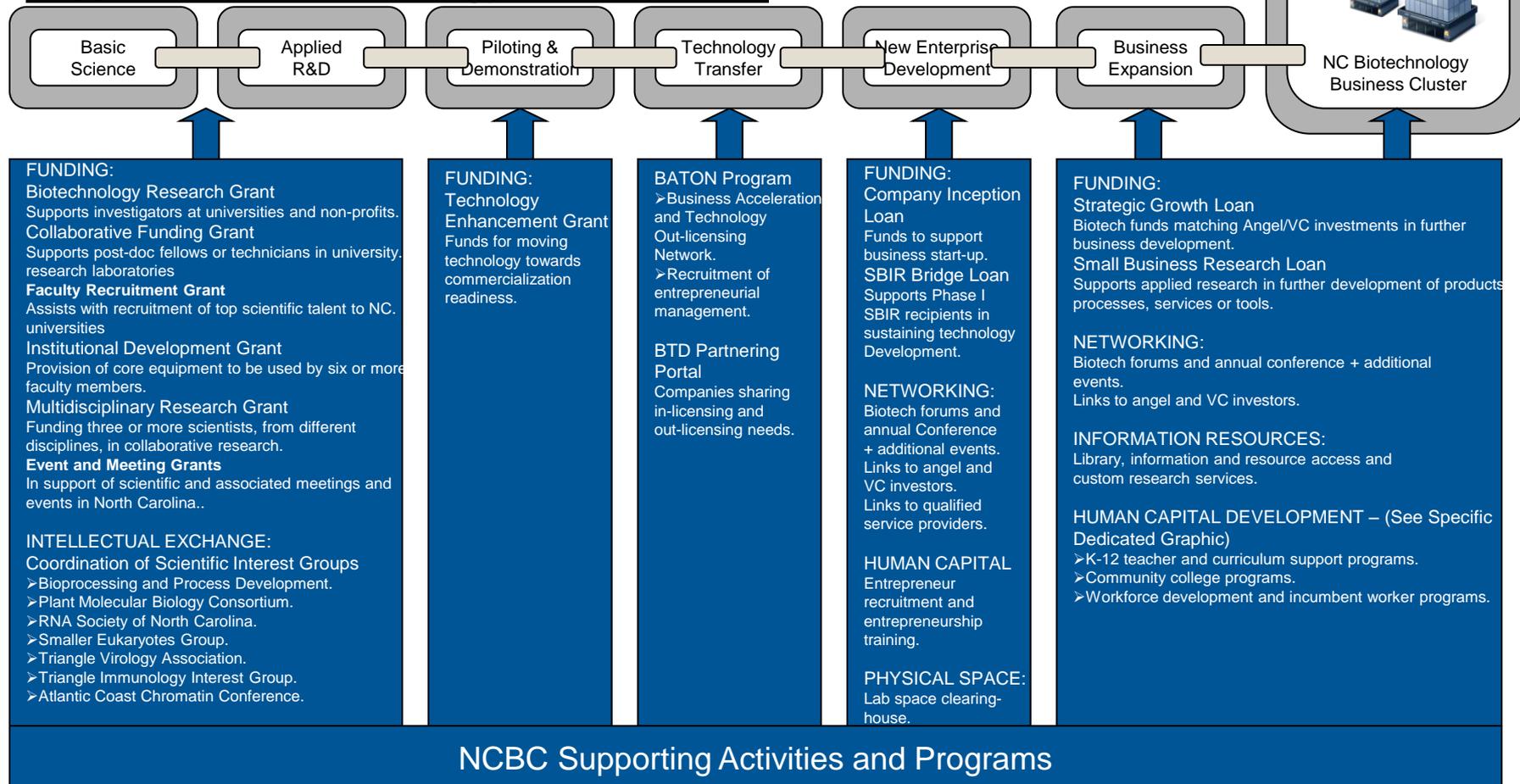
# Lesson #1: Developing Industry Clusters Requires Attention to Every Link in the Development Chain

## Links in the Economic Development Chain



# North Carolina Biotechnology Center: Connecting the Links in the Development Chain

## Supports for Biotechnology Sector Growth



# Lesson #2: New Realities Driving Global Competition Place A Greater Emphasis on Finding Your Niche

## New Realities



Recognition that not all states are built alike and it is the differences that can best guide development strategies

- Global economic competition
- Rapid technological change
- Innovation as a development engine
- Education and skills for a competitive edge
- Sustainability, a growing imperative

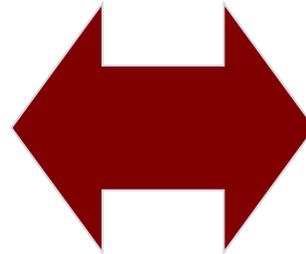


# Example of the Details for Line of Sight Analysis

## *How Have Ohio's Primary Industries Been Performing?*

### Industry Analysis

- Identify competitive position of Ohio primary industry clusters:
  - Concentration
  - Growth Trends
  - Relative Trends to Nation
- Examine both employment and output
- Consider industry niches that stand out in performance
- Timeframes
  - Recent Growth Period of 2001 to 2007
  - Recession Period of 2008-2009



**Line of Sight To  
Market  
Opportunities**

## *Where is Ohio Positioned in Core Competencies to Drive Innovation and Growth?*

### Core Competency Assessment

- Recent patent activities
- Presence of Innovative, Emerging Firms from pre-seed investments, VC funding, SBIR funding
- Changing academic strengths in publications and university R&D expenditures
- Crosswalking into industry clusters

# Ohio Approach: Preliminary Results From Line of Sight Assessments



## Step 1: Assess

## Step 2: Identify

## Step 3: Validate

### RESULTS

#### Leading Industry Sectors

- Materials
- Aerospace
- Biomedical
- Energy
- Information Technology
- Instruments and Controls

### RESULTS

#### Potential Focus Areas

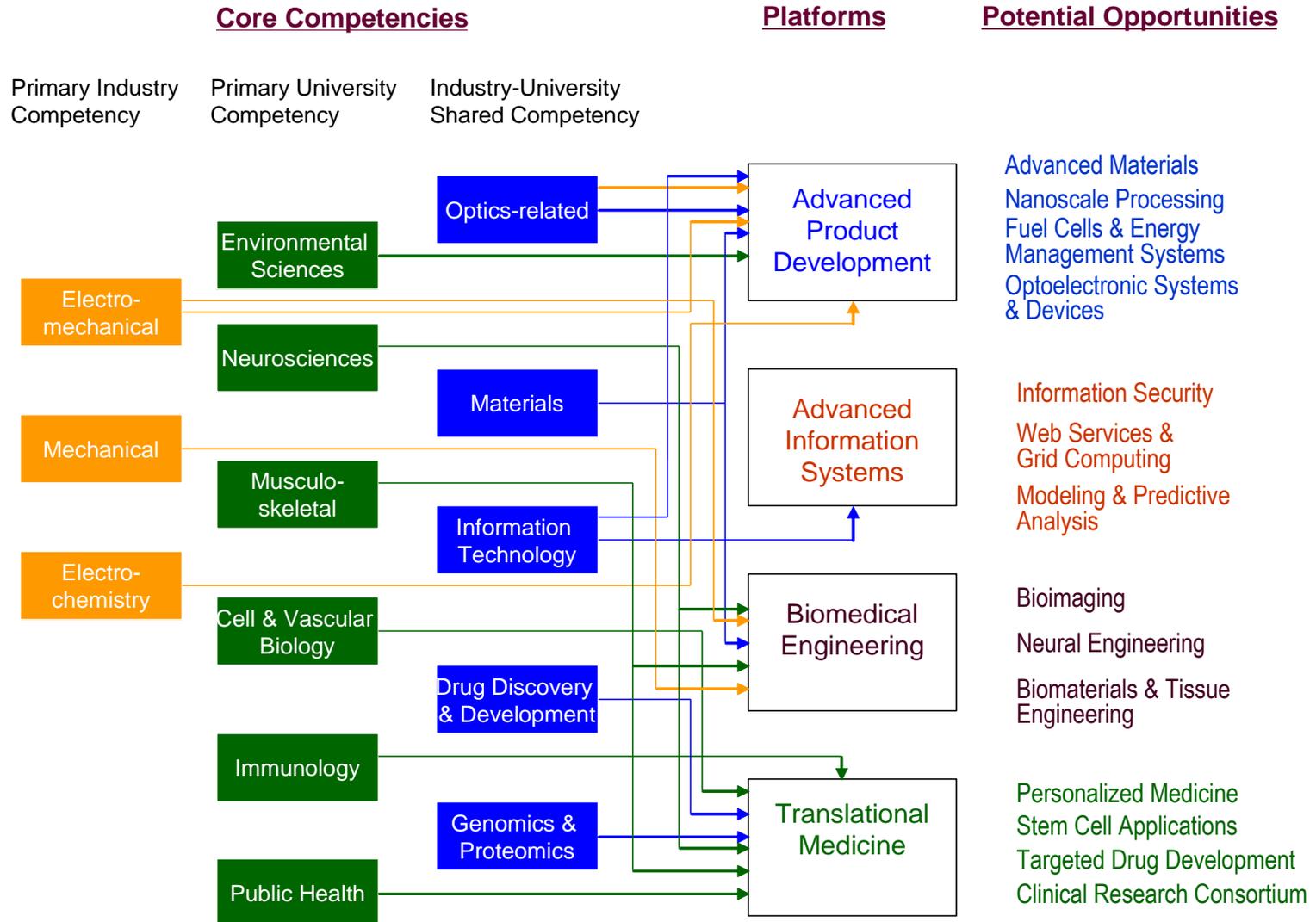
- Advanced Polymer Materials
- Composites and Ceramics
- Specialty Metals and Alloys
- Unmanned Systems
- Sensors
- Advanced Materials
- Propulsion Power Management
- Human Effectiveness
- Medical Imaging
- Molecular and Other In-Vitro Diagnostics
- Advanced Surgical Instruments and Equipment
- Implant Medical Devices
- Contract Research and Manufacturing Resource Services
- Drug Delivery and Development
- Regenerative Medicine
- Health Informatics and Logistics
- Solar Photovoltaics
- Wind Energy
- Smart Grids
- Biofuels and Biobased Energy
- Fuel Cells
- Energy Storage/Batteries
- Business Software and Enterprise Computing
- Test and Measurement
- Sensors
- Automation/Robotics
- Electronics/Embedded Systems

### RESULTS

#### Leading and Emerging Areas

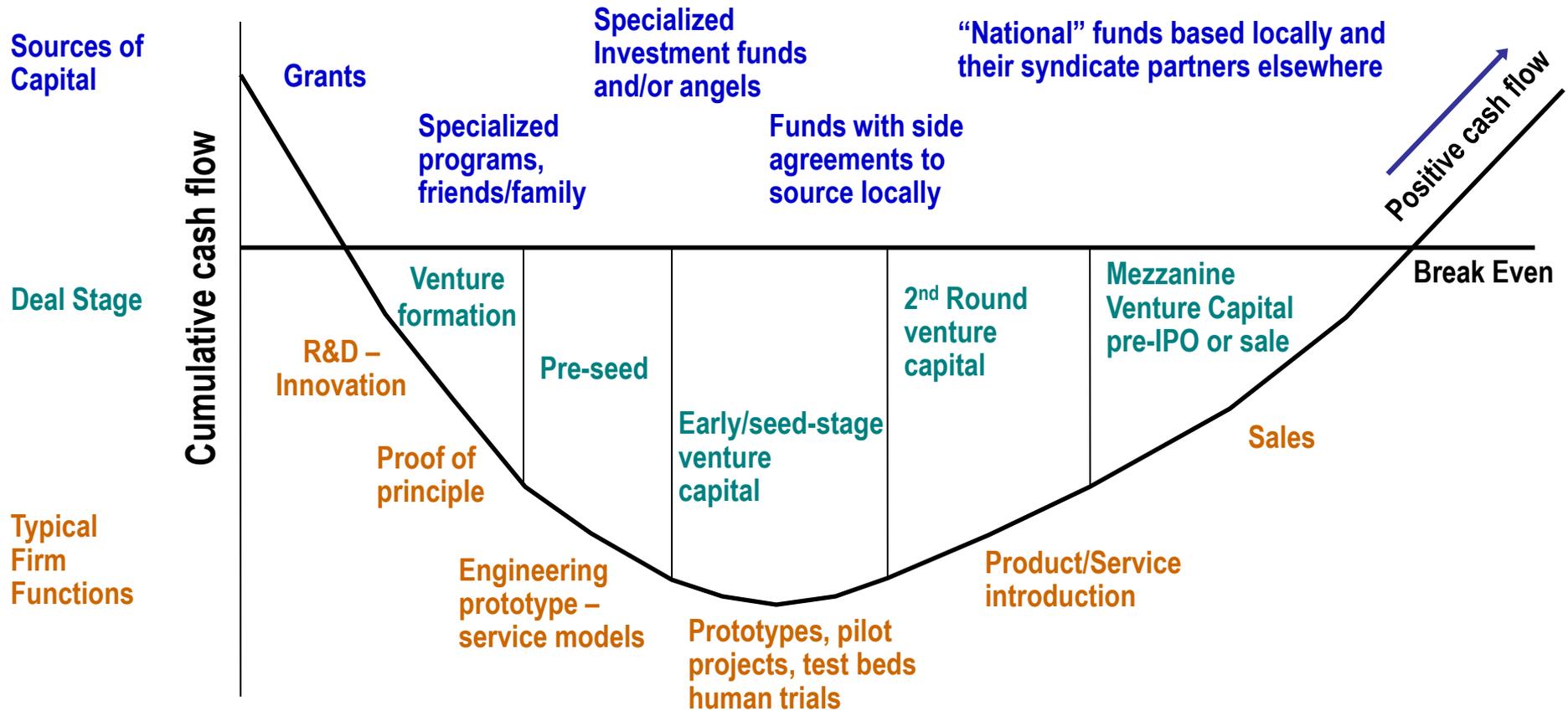
- Advanced Materials
- Business Software and Enterprise Computing
- Energy Storage
- Fuel Cells
- Health Information Technology
- Medical Technology
- Propulsion Power Management
- Sensing and Automation Technologies
- Situational Awareness and Surveillance Systems
- Solar Photovoltaics

# Baseline Connecticut Core Competency Assessment



# Lesson #3 – Best Practices in Innovation

## ... Valley of Death *Calls for Integrated Approaches to Technology Commercialization & Venture Financing*



2 yrs. for IT-comm. services... 5–7 yrs. for devices & equipment... yrs. for drugs

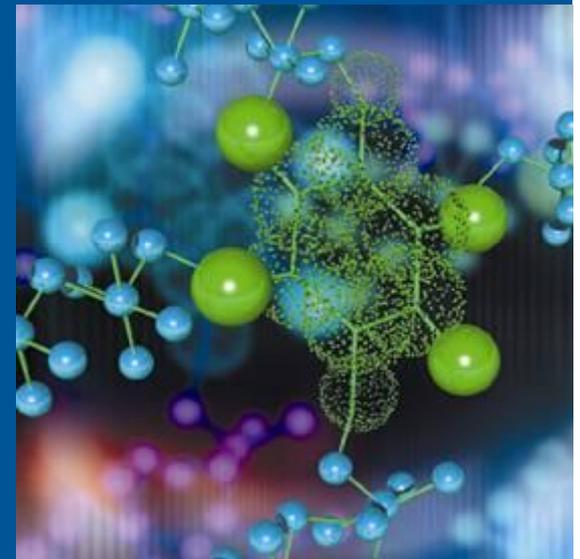
# Meeting Innovation Challenges ... Best Practice Responses

## Three Key Gaps:

Enhancing Intellectual Property  
and Valuing/Creating Business  
Opportunities

Business Mentoring and  
Support

Increasing Resources for Risk  
Capital Financing



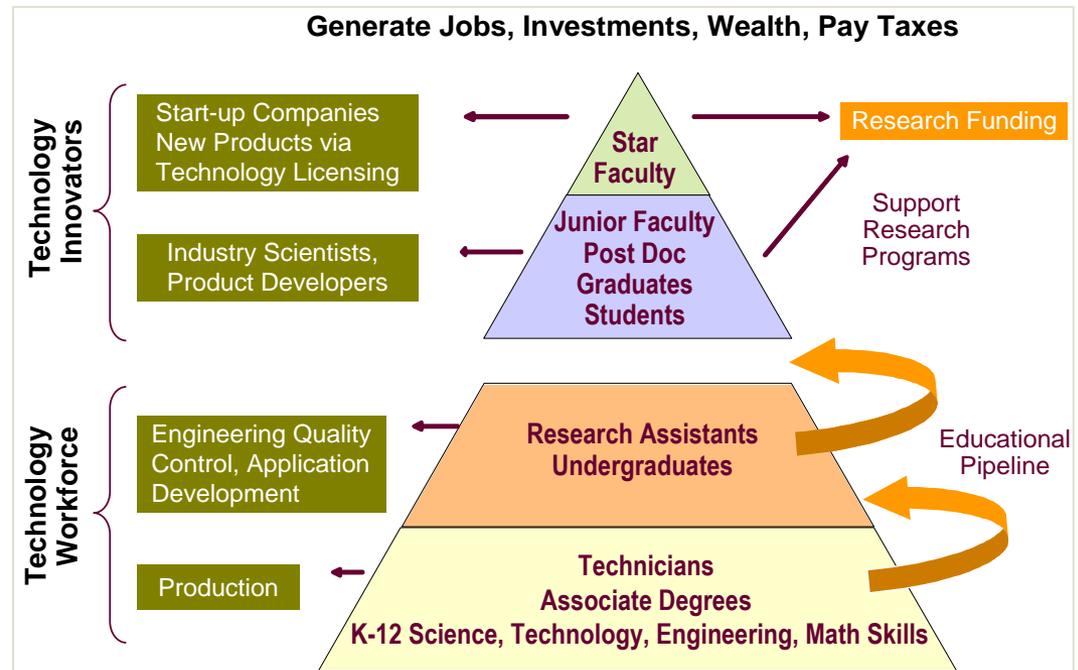
# Lesson #3 Best Practice: Growing Importance of Industry-University Partnerships & the Role of Talent

## Growing Importance of Universities

- Build research excellence in strategic areas of importance to the region/state/global economy
- Attract and retain world-class faculty
- Invest in physical infrastructure
- Link academic researchers with industry
- Capture IP developed within the university to create new companies, products and processes.

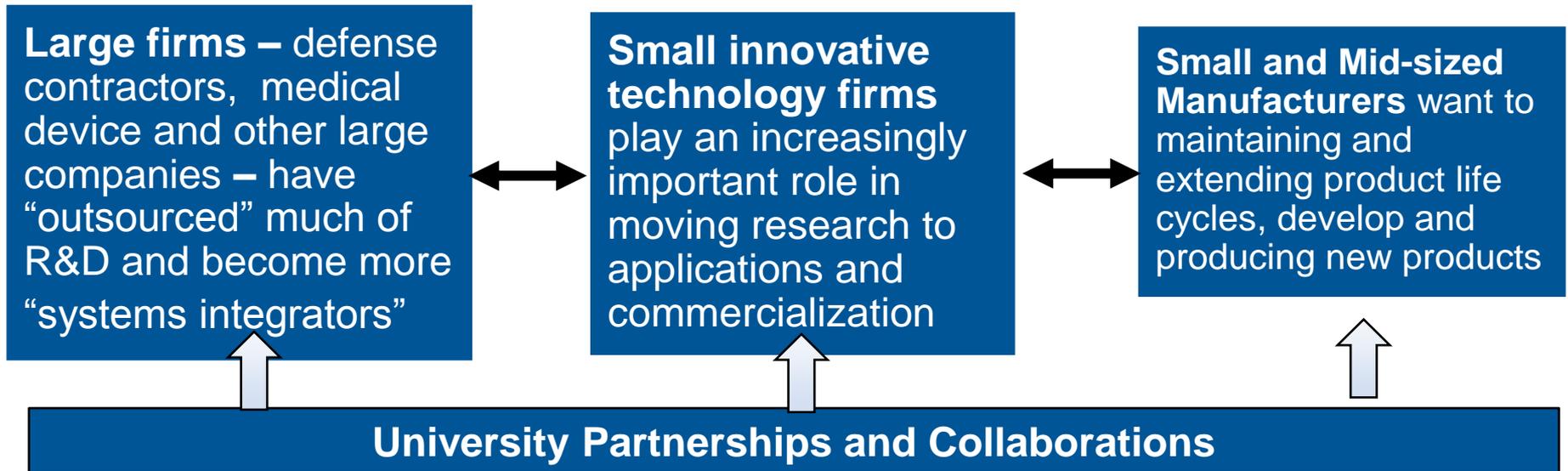
**Leading edge research universities are doing all five of these approaches.**

## How Talent Connects Higher Education and Industry



# Key Opportunity for Industry-University Partnerships: Rise of Open Innovation Models

- **Paradigm shift – firms now looking both externally and internally to develop and advance new ideas and technologies**
  - Well noted decline of internal R&D labs of major corporations
- **Rise of “supply chains for innovation” as well as production**



# Thank You!

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