Building the Arkansas Innovation Economy

Innovation Infrastructure

At The
State & Regional Level:
Some Success Stories

Richard A. Bendis
President & CEO
Innovation America
March 8, 2010
Clinton Presidential Center
Little Rock, Arkansas
Arkansas’s Future is Determined By the Present
Realities, Opportunities & Innovations for the Next Decade

- Continued fiscal difficulties
- Sorting out of the capital markets
- More opportunities for entrepreneurship
- China as a potential market if consumers spend
- Reshaping of manufacturing
- New tech frontiers (e.g., alt energy, climate change)
- Continued growth of open innovation
- Workforce issues among the U.S. and global populations
- **INNOVATION** is essential to remain competitive
Why Is Innovation Essential?

“INNOVATION IS THE SPECIFIC INSTRUMENT OF ENTREPRENEURSHIP. THE ACT THAT ENDOWS RESOURCES WITH A NEW CAPACITY TO CREATE WEALTH.”

-PETER F. DRUCKER

“INNOVATION DISTINGUISHES BETWEEN A LEADER AND A FOLLOWER.”

-STEVE JOBS

“JUST AS ENERGY IS THE BASIS OF LIFE ITSELF, AND IDEAS THE SOURCE OF INNOVATION, SO IS INNOVATION THE VITAL SPARK OF ALL HUMAN CHANGE, IMPROVEMENT AND PROGRESS!”

-TED LEVITT
"If a man empties his purse into his head, no man can take it away from him. An investment in knowledge always pays the best interest."

--Ben Franklin
Knowledge Economy: Definitions & Terminology

- Knowledge is the confident understanding of a subject, potentially with the ability to use it for a specific purpose.

- Knowledge economy is based on creating, evaluating, and trading knowledge.

- Innovation is the creation and transformation of knowledge into new products, processes, and services that meet market need.
Goals of Innovation-Based Economic Development

*Intervene at the margins of private sector investment flows of capital (financial and intellectual) to:*

- Address economic transition
- Capture the benefit of investments in research and development, higher education
- Build entrepreneurial cultures
- Help existing industries modernize
- Diversify both rural and urban economies
- Develop global innovation network
Implementing a New Innovation Paradigm

- Willingness to deviate from traditional and parochial perspectives
- Encourage public investment and risk taking
- Developing trust through collaboration
- Ensuring the paradigm is responsive to partners’ missions
- Building consensus of all constituents through education, participation, and positive outcomes
- Move from technology-based economic development to Innovation-Based Economic Development
Government’s Role in S&T

- Long term vision and planning
- Identify gaps and trends in science, technology and innovation
- Be a catalyst through strategic investments and partnering
- Develop a balanced and flexible innovation capital investment portfolio
- Encourage private sector innovation
- Establish performance-oriented innovation-based economic development strategy and implementation plan
The Role of Academia

Knowledge Integration

Resource Investment → Education Research → Continuous Learning and Innovation

Knowledge Creation → Knowledge Transfer
The Role of Industry: Wealth Creation

Capitalism is a Process of Creative Transformation

“The interaction of technological innovation with the competitive marketplace is the fundamental driving force in capitalist industrial progress.”

Joseph A. Schumpeter, 1942
Economic Development

- Economic Development is like a three-legged stool:
  - Attraction
  - Retention
  - Grow Your Own

- IBED requires patience and persistence, continuity and consistency.
- Working with early-stage companies takes time.
- Balanced portfolio economic development strategy is best!
Public/Private Partnership

• Progress is promoted by strong industry, government and university leadership

• Sustained by dynamic public/private partnerships

• These leaders create new, responsive models of governance
Global Cluster Initiatives & Studies

1995 – German Study of 15 European Regions
1998 – Nordic Region Cluster Study
1999 – Kansas Strategic Technology Assessment
2000 – India Cluster Study
2001 – Council On Competitiveness/Michael Porter
2001 – European Cluster Study
2002 – Korea
2003 – Innovation Philadelphia Cluster Road Map
(Many states & regions published cluster reports)
2010 – U.S. Obama Administration RIC Cluster Initiative
2010 – Russia, Canada, European Commission, & other
countries Introduce RIC Cluster initiatives
## Traditional ED vs. Innovation-Based ED

<table>
<thead>
<tr>
<th>Traditional ED</th>
<th>Innovation-based ED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Competitive Basis</strong></td>
<td></td>
</tr>
<tr>
<td>Natural resources</td>
<td>Specialized talent</td>
</tr>
<tr>
<td>Highways / Rail</td>
<td>Networks, information</td>
</tr>
<tr>
<td>Proximity</td>
<td>University research / professors</td>
</tr>
<tr>
<td>Costs</td>
<td>Market understanding</td>
</tr>
<tr>
<td>i.e. PHYSICAL</td>
<td>i.e. KNOWLEDGE</td>
</tr>
<tr>
<td><strong>Key values / offerings</strong></td>
<td></td>
</tr>
<tr>
<td>Business parks</td>
<td>Access to research</td>
</tr>
<tr>
<td>Incentives</td>
<td>Workforce competencies</td>
</tr>
<tr>
<td></td>
<td>Lifestyle</td>
</tr>
<tr>
<td><strong>Lead Organization</strong></td>
<td></td>
</tr>
<tr>
<td>Chambers / EDCs</td>
<td><strong>Innovation intermediaries,</strong></td>
</tr>
<tr>
<td></td>
<td>Economic developers</td>
</tr>
</tbody>
</table>

- Competitive Basis
- Key values / offerings
- Lead Organization
What is an Innovation Intermediary?

• An Organization at the Center of the region’s, state’s or country’s efforts to align local technologies, assets and resources to work together on advancing Innovation.

Make the leap to a whole world of new opportunities
<table>
<thead>
<tr>
<th>Innovation Intermediary Commercialization Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Investigation</strong></td>
</tr>
<tr>
<td>Proof of Concept</td>
</tr>
<tr>
<td><strong>Development Phase</strong></td>
</tr>
<tr>
<td>Feasibility</td>
</tr>
<tr>
<td>Planning</td>
</tr>
<tr>
<td>Introduction</td>
</tr>
<tr>
<td><strong>Commercial Phase</strong></td>
</tr>
<tr>
<td>Full Scale Production</td>
</tr>
<tr>
<td>Maturity</td>
</tr>
</tbody>
</table>
Innovative Small Business Facts

- Innovative small business have generated 60 to 80 percent of net new jobs annually over the last decade
  - Employ 30 percent of high-tech workers, such as scientists, engineers, and computer workers
- SME’s (Small & Medium-size Enterprises) produce 13 times more patents per employee than large patenting firms
- Small Companies are a key source of innovation by themselves and for Large Companies

Source: Small Business Administration

Innovation Capital Facts

- Proof of Concept, Start-up, and Seed stage companies lack investment support
- Most Seed stage firms need investments of $500K - $2M
- The average venture capital investment today is $8.3M

Source: PriceWaterhouseCoopers – MoneyTree©
Innovation Paradigm Shift

PROOF OF CONCEPT
(Technological Feasibility)
“It Works!”

PROOF OF RELEVANCE
(Market Pull)
“I’ll Buy It!”

economic value creation

\[
\begin{align*}
\text{margin} & \quad \text{return on invested capital} \\
\text{cost of capital} & \\
\text{organic} & \quad \text{growth} \\
\text{m&a} &
\end{align*}
\]
21st Century Innovation Intermediary

Connectivity of Key Human & Institutional Players

Leverage & Alignment of Funding & Resources

Arkansas

Research & Marketing of the Strengths of the Innovation Economy

Programs

Commercialization
Direct Investment
Angel Capital
SBIR Programs
Technology Mining / Intellectual Property Programs
Innovation Commercialization Model

1. Proof of Concept
2. Prototype Product
3. Product Development Research
4. Make Technology Investment Grade
5. Transfer Technology to Industry
6. Spinoff Companies
7. Generate Equity, Royalties, and License Fees
8. Next Generation Products

Universities, Federal Grants, Private R&D, Basic Research, Inventions

- Publications
- Ph.Ds
- Tenure
- Patents

Funding/Entrepreneur Resources
R&D: Companies, Jobs, Products & Profits

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George W. Donaghey
College of Engineering & Information Technology
10 Reasons (Some) SME’S Underperform

1. Passion
2. Physical and mental strength
3. Self-doubt
4. Belief
5. Foresight
6. Guts
7. Failure
8. Self-discipline
9. Fairness
10. Integrity
Reduced Angel Activity

• Angel Investors reduced their investments by over 26% in 2008
• Availability of investment capital among angels decreased dramatically by 40% in 2008

Venture Funding Moving Downstream

• The average investment by venture firms last year was $8.3 million per investment and only about 4% of the capital went to early-stage companies.
• First Quarter of 2009 was the worst quarter in 12 ½ in terms of total capital invested by venture firms

State TBED Budgets Decreasing

• 44 states have budget deficits
The Business Plan Funnel

100 business plans come in

10 are a good fit and promising — they get a close look

Extensive due diligence

1 gets funded

1 gets funded
## Innovation Capital Valley of Death

### “VALLEY OF DEATH”

<table>
<thead>
<tr>
<th>Stage</th>
<th>POC / Pre-Seed</th>
<th>Seed/Start-Up</th>
<th>Early</th>
<th>Later</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>FFF</td>
<td>Angel Groups, TBED, SBIR, Seed Funds</td>
<td>Venture Funds</td>
<td></td>
</tr>
<tr>
<td>Demand</td>
<td>$25K</td>
<td>$100K</td>
<td>$500K</td>
<td>$2,000K</td>
</tr>
</tbody>
</table>

**Supply**

"VALLEY OF DEATH"

Funding Gap  
Secondary Funding Gap
The Case for Focus: U.S. Venture Capital

Source: Gompers, Kovner, Lerner and Scharfstein [2009].
Arkansas VC Investment in $
US Angel Capital Programs

Note: 29 states with Angel Capital Tax Credit Investment Programs
Does Seed Investing REALLY Create Jobs?
In the three years after the 1991 recession, Companies of less than 20 employees created 89% of net new jobs while companies over 500 employees created a net of 4%.

Source: Small Business Administration

1991 Recession: Small Business Drives Job Creation

Total USA Cumulative Net New Job Creation 1991 to 1994
(In The Three Years After The 1990-1991 Recession)

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<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Total</td>
<td>100%</td>
<td>89%</td>
<td>96%</td>
</tr>
<tr>
<td>1-19</td>
<td>7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-500</td>
<td></td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>&lt;500</td>
<td></td>
<td></td>
<td>4%</td>
</tr>
<tr>
<td>500+</td>
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</tbody>
</table>

Size of Company (Based on the Number of Employees of Each Year (March))

Source: Small Business Administration
In the three years after the 2001 recession, Companies of less than 20 employees created 107% of net new jobs while companies over 500 employees eliminated a net of -24%

Source: Small Business Administration

Total USA Cumulative Net New Job Creation 2002 to 2005
(In The Three Years After The 2001-2002 Recession)

Size of Company (Employees) at Beginning of Each Year (March)

Source: Small Business Administration

George W. Donaghey
College of Engineering & Information Technology
Innovative Entrepreneurial Support Initiatives

• Seed Funding
• A Collaborative work space
• Mentors and Advisors who have "been there and done it" before
• Donated legal, accounting and administrative help to form companies properly
• Introductions to funding sources (including Angel Investors, Venture Capitalists, private investors and public sources of funding)
Best Practices in Innovation Entrepreneurial Support

The PIPELINE is the nation’s premier state-sponsored technology entrepreneur fellowship program. PIPELINE is designed to systematically identify high potential technology entrepreneurs and match them with best-in-class training, resources and mentors to facilitate their dynamic growth in Kansas.
## Public Investment Job Creation

<table>
<thead>
<tr>
<th>Category</th>
<th>State of PA</th>
<th>CDVCA*</th>
<th>State of UTAH</th>
<th>Stimulus Bill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funds Invested</td>
<td>$90M</td>
<td>$26M</td>
<td>$60M</td>
<td>$800B</td>
</tr>
<tr>
<td>Jobs Created</td>
<td>8,150</td>
<td>3,700</td>
<td>2,047</td>
<td>4,000,000</td>
</tr>
<tr>
<td>$ Per Job Invested</td>
<td>$11,000</td>
<td>$7,100</td>
<td>$29,300</td>
<td>$200,000</td>
</tr>
</tbody>
</table>

* Community Development Venture Capital Assoc.
“It is not the strongest of species that survive, nor the most intelligent, but the ones most responsive to change.”

–Charles Darwin
IBED Best Practices, Common Attributes

- Longevity
- Bipartisan Support & Champions
- Independent Organizations
- Continuous Reinvention
- Private Sector Involvement
- Understand Return On Investment
- Sustainability In Funding
- Accountable
- Innovative
- Effective Leadership
Our Goal

- The goal of the Technology Investment Office is to ensure that the variety of TBED organizations and initiatives located throughout the Commonwealth are working collaboratively to fully leverage the wealth of research, capital sources, and support services available to build a comprehensive infrastructure that supports company growth.

Our Customers

- Pre-revenue, emerging and mature technology companies
- Universities engaged in R&D that can be commercialized
- Community organizations focusing on technology infrastructure, training and facilities
- Investment partners

Mission

The mission of the Technology Investment Office is to serve as a catalyst for growth and competitiveness for Pennsylvania companies and universities through technology-based economic development (TBED) initiatives including funding, partnerships and support services.
The Four Pillars of Innovation-based Economic Development

- Innovation
- Capital
- Collaboration
- Workforce
- Support Services
Technology Investment

Technology-based Economic Development Tools Along the Continuum

- Concept
  - Ben Franklin Technology Partners
  - BFTDA Technology Grants
  - BFTDA University Program
  - Center for eBusiness and Advanced IT
  - CURE Program
  - Idea Foundry

- Formation
  - Keystone Innovation Zones / Innovation Grants
  - Life Sciences Greenhouse Initiative

- Growth
  - New PA Venture Guarantee Program
  - New PA Venture Investment Program
  - PA Initiative for Nanotechnology
  - PA Technical Assistance Program
  - Pennsylvania Angel Network
  - R&D and KIZ Tax Credits

- Maturity
  - BFTDA/TSIB Venture Programs
  - Industrial Resource Centers
  - Innovation Partnership

- Reinvention
  - > ready > set > succeed

- Pre-seed
  - Seed
  - Series A
  - Series B/C
  - Mezzanine
The Ohio Third Frontier represents an unprecedented and bipartisan commitment to expand Ohio's technological strengths and promote commercialization that leads to economic prosperity throughout Ohio. Designed to build world-class research programs, nurture early-stage companies, and foster technology development that makes existing industries more productive, Ohio Third Frontier creates opportunity through innovation.

"Ohio's $1.6 billion Third Frontier initiative is a comprehensive, professionally run effort to build world-class research capacity, promote interaction between research and industry, and commercialize R&D." – National Governor's Association and Pew Center for the States
Kansas Technology Enterprise Corporation

“To create, grow and expand Kansas enterprises through technological innovation.”
Kansas Strategic Technology Cluster Assessment and a Plan for the 21st Century

Published by The Kansas Technology Enterprise Corporation

Purpose of the Study:

• Technology revolution affecting the economy.
• We must map our course in this new innovation economy.
• Focus our resources on strategic technology clusters in order to compete.
Linking Opportunity With Capacity

• Standardized rating system
• Determine level of capacity and opportunity for critical technologies
KTEC Program Structure

Board of Directors

KTEC Staff

Federal Initiatives and Partnerships

Research
For Inventors, Entrepreneurs and University & Industry Scientists
- Advanced Manufacturing Institute (AMI)
- Kansas Polymer Research Center (KPRC)
- Information Technology & Telecommunications Center (ITTC)
- Higuchi Biosciences Center (HBC)
- National Institute for Aviation Research (NIAR)
- EPSCoR

Investments
For Inventors, Entrepreneurs and New & Existing Companies
- Small Business Innovation Research (SBIR) Awards
- SBIR Bridge Funding
- State-Sponsored SBIR
- Applied Research Matching Fund (ARMF)
- ACE-Net
- Ad Astra Funds I & II
- Kaw Holdings (KIC)
- Wichita Ventures (WTC)
- Manhattan Holdings (MACC)
- Prairie Investments
- Quest Ventures
- KU Medical Center Research Institute Pre-Seed Fund
- Alliance for Technology Commercialization

Business Assistance
For Inventors, Entrepreneurs, Scientists and New & Existing Companies
- Kansas Innovation Corporation (KIC)
- Mid-America Commercialization Corporation (MACC)
- Wichita Technology Corporation (WTC)
- Mid-America Manufacturing Technology Center (MAMTC)
- Capital for Manufacturers (CFM)
- Information Research Corp. (IRC)
- Kansas Integrated Commercialization Information Network (KICIN)
- Intern Program
- Business Residency Program
- Inventor Development Assistance Program (IDAP)
ICC’s Expand the Life Cycle

**Investment Grade Technologies**

*Development Risk*

**Applied Research Project**

**Innovation**

- Development Risk
- Market Risk
- Management Risk
- Growth Risk

**Innovation and Commercialization Corporations**

- Independent 501(c)(3) not-for-profit
- Independent Board of Directors
- President with commercialization experience
- For Profit Seed Capital Funds

**General Incubator Services**

- Business Plan Consulting
- Financial Expertise
- Management & Operations Consulting
- Marketing & Sales Strategies
- Guidance in Accessing Financing
- Training
- Market Research
- Due Diligence
- Technical Review

**Quality Investments**

**Start-up Company**

- Market Risk

**Seed Capital**

- Market Risk
- Management Risk
- Growth Risk

**Laboratory & Office Space**

**THE NATIONAL ACADEMIES**

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**College of Engineering & Information Technology**
Attracting Investors

- Kansas Angel Tax Credit Program
- Kansas Angel Networks
  - Three statewide organizations

<table>
<thead>
<tr>
<th>KANSAS ANGEL TAX CREDITS  2005 – 2008</th>
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<tbody>
<tr>
<td>Total (from inception)</td>
</tr>
<tr>
<td># of Companies Receiving Investments</td>
</tr>
<tr>
<td>Total Capital Raised</td>
</tr>
<tr>
<td>Total Revenue</td>
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</table>

Note: Wisconsin has a model Angel Investment Tax Credit Program
There is concrete evidence that KTEC’s efforts are improving the entrepreneurial climate in Kansas, which was ranked 8th in Nation for “Gazelle Jobs” - according to the 2008 State New Economy Index. Rapid growth “Gazelle” companies account for 80% of new jobs created.

The New Economy Index also ranked Kansas a “Top Mover” in “Fastest Growing Firms.” Through our direct equity investments and business assistance, KTEC has helped Kansas experience a large increase in the number of “fast growing firms” (i.e. those with growth exceeding 200% over 4 years). These firms provide a strong base for the state’s current and future growth.
<table>
<thead>
<tr>
<th>CLUSTER</th>
<th>ORGANIZATION</th>
<th>OUTCOMES</th>
</tr>
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</table>
| Human BioSciences               | Kansas BioScience Authority (KBA)                                           | • $581m Fund  
• Build world-class research capacity, growth of bioscience startups, expansion of the state’s bioscience clusters and facilitate industrial expansion and attraction. |
| Value-added Agriculture and Ag Bio | National Agricultural Biosecurity Center (NABC)                           | • $500m Research Center  
• Focused on protecting America's agricultural infrastructure and economy from endemic and emerging biological threats.                                                                                       |
| Aviation                        | National Institute for Aviation Research (NIAR)                             | 24 year-old research and tech-transfer center established to advance the nation’s aviation industries that may benefit from aviation-related technologies.                                                        |
| Information and Telecommunications & Computing | Software and Technology Association of Kansas (SITAKS)                  | Advocate for Kansas’ software and information technology sector to help Kansas’ software and IT companies grow and succeed.                                                                          |
$581 million state-funded independent bioscience TBED organization
- $75.5 million program budget; $3.5 million operating budget
- 18 employees (8 “deal” people)

Investment priorities
- Expand the quantity and quality of bioscience research
- Focus on the commercialization of bioscience discoveries
- Foster formation and growth of bioscience companies
- Position Kansas for international leadership in key clusters
How the Fund Works

Set Baseline Tax Revenue for Bioscience Companies (NAICS) and Research Institutions

Measure Actual Incremental Growth in State Bioscience Taxes

Baseline to State General Fund

Increment of Growth to Bioscience Fund

Kansas Bioscience Authority
Fund Programs & Repay Bonds

Repeat annually for 15 years
OCAST helps these hard-working people create technologies that will advance our society, invent new products and discover medical treatments that will save millions of lives.

I2E – A 501(c) (3) private not-for-profit Oklahoma corporation that operates under contract with OCAST to administer the Oklahoma Seed Capital Fund, Oklahoma Technology Commercialization Center and the Technology Business Finance Program.
Tennessee Technology Development Corp

• Provides no less than $84,000,000 of financial capital to be invested in small businesses in Tennessee
• Funded by deferred insurance premium tax credits
• Focused on early stage, equity investments
• Targeting high-growth companies for “transformational” outcomes
• 6 new professionally managed private sector funds
• Creates the opportunity for financial return to state government
• Access to Capital:
  • A New Program…… A New Approach…
USTAR has created a number of research teams at the University of Utah and Utah State University. Spearheading these teams are world-class innovators hungry to collaborate with industry to develop and commercialize new technologies.

Research Teams engage with innovators and entrepreneurs around the state of Utah. Learn to maximize your innovative business potential by collaborating with USTAR in your region, particularly if your product or service matches a USTAR focus area.
U.S. State Innovation Councils

HAWAI'I
INNOVATION INITIATIVE

big
Business Innovation Growth

The Governor's Innovation Council

IP
innovation
PHILADELPHIA™
Regional Innovation...Global Realization

Iowa Innovation Gateway
Connecting Commerce and Communities

THE NATIONAL ACADEMIES
Advances in the Nation’s Science, Engineering, and Medicine
Innovation Philadelphia’s Mission

A Public/Private Partnership created to:

Grow the Wealth and Workforce of the Greater Philadelphia Global Innovation Economy
Innovation Philadelphia: Leveraging the Resources of the Greater Philadelphia Region

3 states
11 counties

- **Pennsylvania:** Bucks, Montgomery, Philadelphia, Chester, Delaware
- **New Jersey:** Mercer, Burlington, Camden, Gloucester, Salem
- **Delaware:** New Castle
How Innovation Philadelphia Started

- Blank sheet of paper
- Need for an Innovation Intermediary
- Gap analysis of all Regional-based economic development and investment programs
- SWOT analysis of all organizational programs, boards, and funding
Innovation & Entrepreneurial Index

Is our glass half empty or half full?
Churning the Greater Philadelphia Innovation Economy

A Roadmap for Regional Growth

“...You can always amend a big plan, but you can never expand a little one. I don’t believe in little plans. I believe in plans big enough to meet a situation which we can’t possibly foresee now.”

— Harry S. Truman

Innovation Philadelphia

Greater Philadelphia Chamber of Commerce
Get involved. Get results.
<table>
<thead>
<tr>
<th>Investment</th>
<th>Commercialization</th>
<th>Global &amp; Regional Workforce / Economic Development</th>
<th>Branding, Research &amp; Marketing</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESF</td>
<td>MCC</td>
<td>KIP</td>
<td>IP Map</td>
</tr>
<tr>
<td>RESEARCHDOLLARS FUND</td>
<td>Mid-Atlantic Commercialization Corporation</td>
<td>Knowledge Industry Partnership</td>
<td>IP Portfolio Management</td>
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<tr>
<td>INNOVATION PARTNERSHIP</td>
<td>Phoenix IP Ventures</td>
<td>careerPHILLY</td>
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<td>World’s Best Technology Network</td>
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<td>IP Entrepreneurship Guide</td>
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<td>innovation AMERICA</td>
<td>innovation PHILADELPHIA</td>
<td>Science Center</td>
<td>IP Innovation Report</td>
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<td>DVIN</td>
<td>Delaware Valley Innovation Network</td>
<td>THE NATIONAL ACADEMY</td>
<td>George W. Donaghey EIT</td>
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</table>
Knowledge Industry Partnership/CareerPhilly

• The first Web site dedicated to the career development of students in the Greater Philadelphia Region.

• Provides Regional students with a search engine designed to help them find Regional job and internship opportunities.

• A calendar of events provides students with a listing of career development and networking activities.

• An advice section contains helpful information for students on the many aspects of their career development.
What Worked For KTEC and Innovation Philadelphia

- **FOCUSED & INTEGRATED** Science & Technology Collaboration
- **PRIVATE** Sector Leadership and COMMITMENT
- Organization’s function as a BUSINESS
- Successfully manage a technology investment portfolio for **ROI**
- Operational **FLEXIBILITY**
- **ACCOUNTABILITY** with measurable outcomes
- Experienced **PROFESSIONAL** team
- Focus on the **ENTREPRENEUR’S** needs
- **SUSTAINABLE** Funding
Economic Gardening

• The term Economic Gardening means ‘growing our economy from within.’

• This is accomplished by providing access to technology and business expertise for helping both new and existing small businesses, generally between 10-25 employees, located within a city/region to thrive and grow.

• Economic Gardening works by finding new sales opportunities and expanding upon old ones through the provision of free or low-cost tools and information to small businesses.

• Assistance is also provided in other areas such as market intelligence and general industry information.

• The goal is to assist businesses early on in their development so they remain viable and are prepared to overcome common obstacles.
Examples of Economic Gardening

Longmont Economic Gardening Initiative (LEGI) The City of Longmont will launch the Longmont Economic Gardening Initiative (LEGI) on July 1, 2006, to assist local businesses grow, and create and retain local jobs. The program is designed to meet the needs of Longmont’s small business community by leveraging public and community resources. Any business in Longmont is eligible to participate through a combination of peer counseling, access to research data, data analysis, market analysis, plus competitive and industry intelligence. The initial interview, counseling, research data, and data analysis are free.

We kicked off the project in 1989 with the idea that "economic gardening" was a better approach for Littleton (and perhaps many other communities) than "economic hunting." By this, we meant that we intended to grow our own jobs through entrepreneurial activity instead of recruiting them. The idea was based on research by David Birch at MIT that indicated the great majority of all new jobs in any local economy were produced by the small, local businesses of the community.

Florida Economic Gardening Institute and Partners Unveil GrowFL to Cultivate Growth Companies Statewide. Program Targets Second-Stage Businesses Offering Sophisticated Tools and Elite Staff.
Mission: To promote the competitiveness of companies established in Portugal, through the development and the diffusion of a culture and practice of innovation as well as of “resident” knowledge.

Vision: To become a key agent of business innovation in Portugal, by challenging both public and private organizations of the national innovation system (NIS) and by coordinating its intervention with them.
Arkansas Innovation Leadership/Collaboration?
Arkansas Innovation Road Map Elements

1. Asset Mapping
2. Cluster analysis
3. Innovation Benchmarking (Peer 2 Peer)
4. Innovation and Entrepreneurship resource identification
5. Innovation Economic Development organizational analysis and matrix
6. Gap Analysis (programs & services)
7. Public policy recommendations
8. Recommended organizational structure, governance, budget, and funding sources (Private Public Partnership)
9. Organizational leadership and staffing
10. Program portfolio/implementation
11. Economic Impact Analysis
Willingness to deviate from traditional and parochial perspectives

Encourage public investment and risk taking

Developing trust through collaboration

Ensuring the paradigm is responsive to partners' missions

Building consensus of all constituents through education, participation, and positive outcomes

Move from technology-based economic development to **Innovation-Based Economic Development**

Arkansas Innovation Paradigm

**Arkansas**

[diagram of the Arkansas Innovation Paradigm]

**Arkansas Innovation Paradigm**

- **Cultivation**
- **Collaboration**
- **Capital**
- **Careers**
- **Commercialization**
“Somebody has to do something, and it's just incredibly pathetic that it has to be US.”

--Jerry Garcia of the Grateful Dead

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