Innovation Choke Points
What thwarts U.S. R&D Investments, Commercialization, Job Growth and Competitiveness

Missing In Action
The Role Small Businesses and Entrepreneurs Should Be Playing in Reviving the U.S. Economy

Presented by:
Richard A. Bendis
President and CEO
Innovation America
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Entrepreneurship

“Entrepreneurship is living a few years of your life like most people won’t, so that you can spend the rest of your life like most people can’t”
Job Growth in U.S. Driven Entirely by Startups, According to Kauffman Foundation Study
Small Business

- "On average and for all but seven years between 1977 and 2005, existing firms are net job destroyers, losing 1 million jobs net combined per year. By contrast, in their first year, new firms add an average of 3 million jobs," the study reports.

– Kauffman Foundation

Source: Research Series: Firm Formation and Economic Growth
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
Innovative Small Business Facts

SME’s (Small & Medium-size Enterprises):

• **Generate 60%-80%** of net new jobs annually over the last decade

• **Employ 30%** of high-tech workers, such as scientists, engineers, and computer workers

• **Produce 13X** more patents per employee than large patenting firms

• **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 in Q1 2010 today is **$8.9M**

Source: PriceWaterhouseCoopers – MoneyTree©
Source: Small Business Administration
“The Perfect Storm”

Reduced Angel Activity

• Angel Investors reduced their investments in 2009 by over 27%

• Availability of investment capital among angels decreased dramatically by 50% in 2009

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.

• 2009 was the worst year in terms of total capital invested by venture firms since 1999

State TBED Budgets Decreasing

• 40 states have budget deficits

• SBIR NOT REAUTHORIZED YET & TIP UNDERFUNDED

innovation
AMERICA
### 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><strong>Source</strong></td>
<td>Founders</td>
<td>Angel Groups, TBED, SBIR, Seed Funds</td>
<td>Venture Funds</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FFF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Demand</strong></td>
<td>$25K</td>
<td>$100K</td>
<td>$500K</td>
<td>$2,000K</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$5,000K</td>
</tr>
</tbody>
</table>

**Supply**

"VALLEY OF DEATH"

- Funding Gap
- Secondary Funding Gap
Jobs! Jobs! Jobs!

Does Seed Investing REALLY Create Jobs?
# Public Investment Job Creation

<table>
<thead>
<tr>
<th>Category</th>
<th>State of PA</th>
<th>CDVCA*</th>
<th>State of UTAH</th>
<th>State of MI</th>
<th>Stimulus Bill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funds Invested</td>
<td>$90M</td>
<td>$26M</td>
<td>$60M</td>
<td>$291M</td>
<td>$800B</td>
</tr>
<tr>
<td>Jobs Created</td>
<td>8,150</td>
<td>3.700</td>
<td>2,047</td>
<td>28,854</td>
<td>4,000,000</td>
</tr>
<tr>
<td>$ Per Job Invested</td>
<td>$11,000</td>
<td>$7,100</td>
<td>$29,300</td>
<td>$11,728</td>
<td>$200,000</td>
</tr>
</tbody>
</table>

*Community Development Venture Capital Association
US Angel Capital Programs

Note: 29 states with Angel Capital Tax Credit Investment Programs
Challenges
Innovation Paradigm Shift

PROOF OF CONCEPT
(Technological Feasibility)

PROOF OF RELEVANCE
(Market Pull)

- return on invested capital
- cost of capital
- organic
- m&a

economic value creation

margin

growth
### Innovation Intermediary Commercialization Structure

<table>
<thead>
<tr>
<th>Investigation</th>
<th>Technical</th>
<th>Market</th>
<th>Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proof of Concept</td>
<td>Technology Concept Analysis</td>
<td>Market Needs Assessment</td>
<td>Venture Assessment</td>
</tr>
</tbody>
</table>

#### Development Phase

<table>
<thead>
<tr>
<th>Feasibility</th>
<th>Technology Feasibility</th>
<th>Market Study</th>
<th>Economic Feasibility</th>
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</thead>
<tbody>
<tr>
<td>Planning</td>
<td>Engineering Prototype</td>
<td>Strategic Marketing</td>
<td>Strategic Business Plan</td>
</tr>
<tr>
<td>Introduction</td>
<td>Pre-Production Prototype</td>
<td>Market Validation</td>
<td>Business Start-Up</td>
</tr>
</tbody>
</table>

#### Commercial Phase

<table>
<thead>
<tr>
<th>Full Scale Production</th>
<th>Production</th>
<th>Sales and Distribution</th>
<th>Business Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maturity</td>
<td>Production Support</td>
<td>Market Diversification</td>
<td>Business Maturity</td>
</tr>
</tbody>
</table>
U.S. State IBED Programs
Emerging Innovator Programs With Seed Funding

• They assist startups through what is for many the hardest step, from idea to company which includes:
  • Seed funding
  • 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)
Change Is Inevitable

“ It is not the strongest of species that survive, nor the most intelligent, but the ones most responsive to change.”

–Charles Darwin
What’s Missing?
Regional Innovation Clusters Initiative (RICs)

RICs are a geographically-bounded, active network of similar, synergistic or complementary organizations which leverage their region’s unique competitive strengths to create jobs and broader prosperity.
U.S. Regional IBED Intermediaries
Partners in National Innovation Development

Community Development
Venture Capital Alliance
National Innovation Jobs Seed Fund

U.S. Federal Agency (TBD)

National Innovation Jobs Seed Fund
$2 billion fund

National Innovation Jobs Seed Fund of Funds
50 Seed Funds = $1.8 Billion

- 50 State/Regional Innovation Seed Funds
- Receive approximately $10-15 M direct investment from NISF
- Has to match with $1 from other third parties
- Awarded on early-stage innovation focus and experienced managers
- Leverages successful federal SBIR recipients and like or similar state and regional investment programs
- Federal Government is a Financial Partner

Innovation Capital Technical Assistance Grant Fund
$200 Million

- Available to both NISF funds
- Grants are used to provide support and technical assistance to fund managers, portfolio, companies & entrepreneurs
- The National Public-Private Partnership would administer the Innovation Capital Technical Assistance Grant Fund
- Approximately $200 M
Other Countries Response – Small Business Growth

Cowen launches €500m fund to fund plan for Ireland to become Europe’s “Innovation Hub”

Israel.... now know as the Start Up Nation with the most friendly entrepreneurial culture replacing the US

UK Government Unveils Plans for £1BN Venture Capital Fund of Funds

Government of Canada Announces $450 Million in New Funding to Assist Small Canadian Businesses
Federal Recommendations

1. EARLY STAGE INNOVATIVE JOBS STIMULUS FUND OF FUNDS (FOF)
2. REAUTHORITIZATION OF THE SBIR PROGRAM
3. TECHNOLOGY INNOVATION PROGRAM (TIP)
4. SMALL BUSINESS INVESTMENT COMPANY PROGRAM (SBIC)
5. NEW NATIONAL ANGEL CAPITAL TAX CREDIT PROGRAM
6. CREATION OF A FEDERAL R&D TAX CREDIT PROGRAM WITH TRANSFERRABILITY OF THE EARNED TAX CREDITS
7. CREATE THE FIRST ELECTRONIC (WIKI) INNOVATION AND ENTREPRENEURSHIP CLEARINGHOUSE
A Call to Action

“Somebody has to do something, and it's just incredibly pathetic that it has to be **US**.”

--Jerry Garcia of the Grateful Dead

The **US** is **YOU**!
Richard A. Bendis
President and CEO
Innovation America
2600 Centre Square West
1500 Market Street
Philadelphia, PA 19102
(215) 496-8102
rbendis@bendisig.com
www.innovationamerica.us
www.innovationamerica.us/daily