

“Commercialization and Entrepreneurship: The State of the Art”

**Fairmont Château
Ottawa, Ontario Canada
March 30, 2011**

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

The Global Innovation Imperative

- Innovation is Key to Growing and Maintaining a Country's Competitive Position in the Global Economy and to address Global Challenges
- Collaboration among Small and Large Businesses, Universities, and Research Institutes is Essential for Innovation & Commercialization
- New Institutions and New Incentives, are increasingly important to support collaboration and foster innovation
- Competitive advantages are increasingly tied to human capital and innovation
- Economic growth is closely related to education/workforce, energy, climate change, environmental, natural resource, geopolitical issues & entrepreneurship

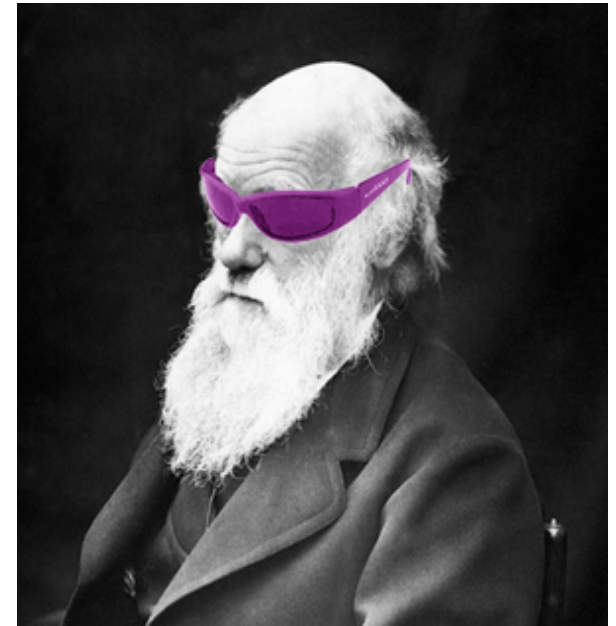
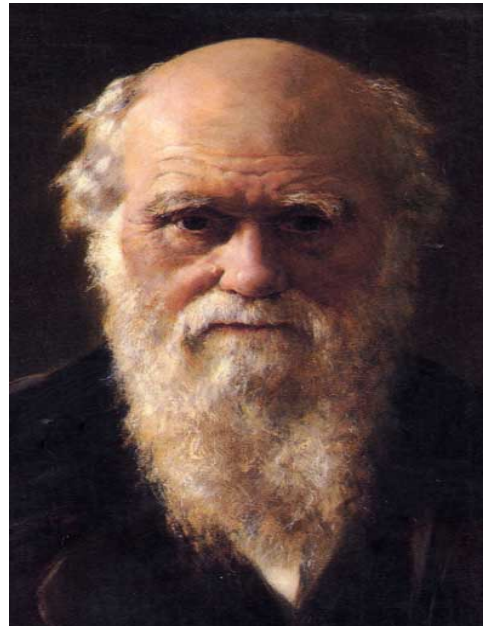


**INNOVATION
MATTERS**

Darwin on Collaboration

“ It is the long history of humankind (and animal kind, too) those who learned to collaborate and improvise most effectively have prevailed.”

-Charles Darwin



How Leading Nations Responding to the Innovation Imperative?

They are providing four things:

- High-level Focus
- Sustained Support for R&D:
Leveraging Public and Private Funds
- Support for Innovative SMEs
- New Innovation Partnerships to bring new products and services to market

Note: Many countries are investing very substantial resources to create, attract and retain industries in leading sectors



Innovation 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.....and interactions, entertainment forms, and ways of communicating and collaborating



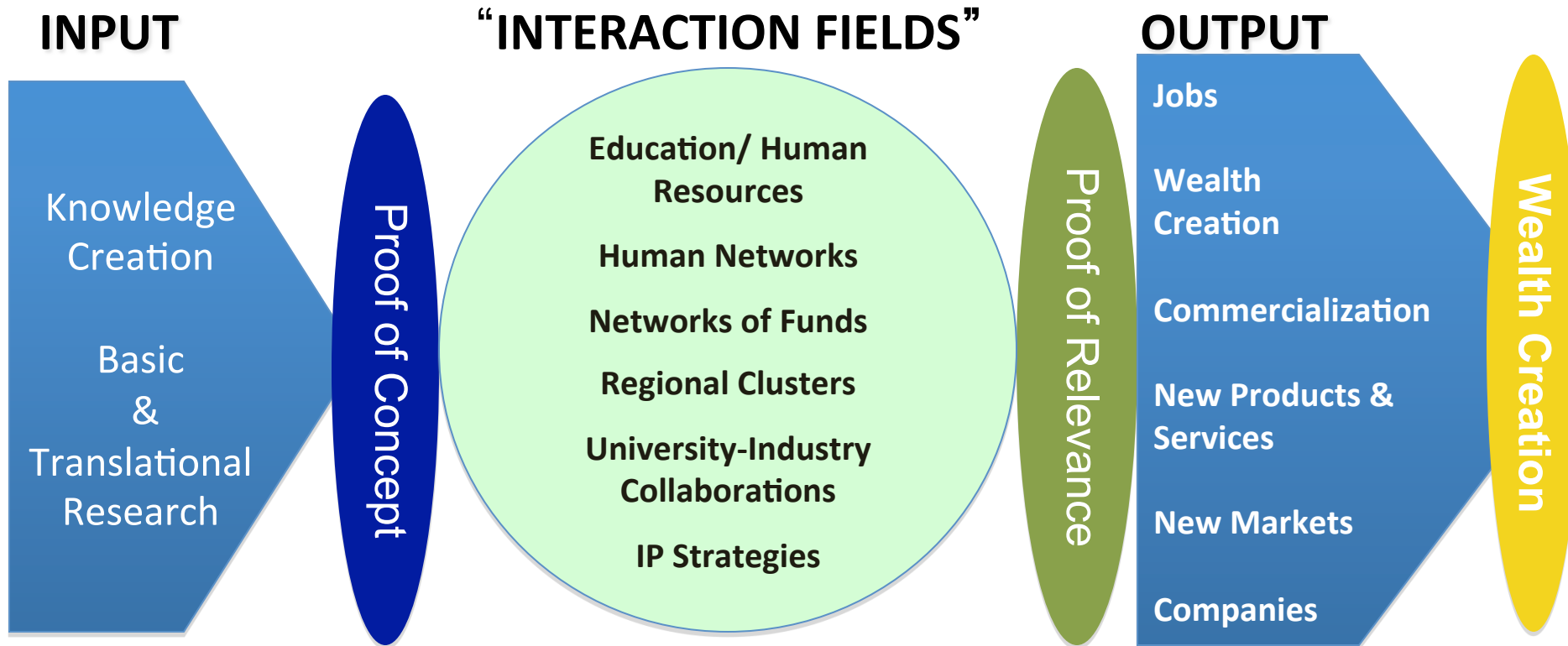
Why Is Innovation Essential?

***“INNOVATION
DISTINGUISHES
BETWEEN A LEADER
AND A FOLLOWER.”***

-STEVE JOBS



Innovation Ecosystem



The concept of the innovation ecosystem stresses that the flow of technology and information among people, enterprises and institutions is key to a vibrant innovation process.

The New Locational Competition

Definition: The competition for economic activity

Intense and growing competition among nations and regions for well paid jobs and improving living standards.....

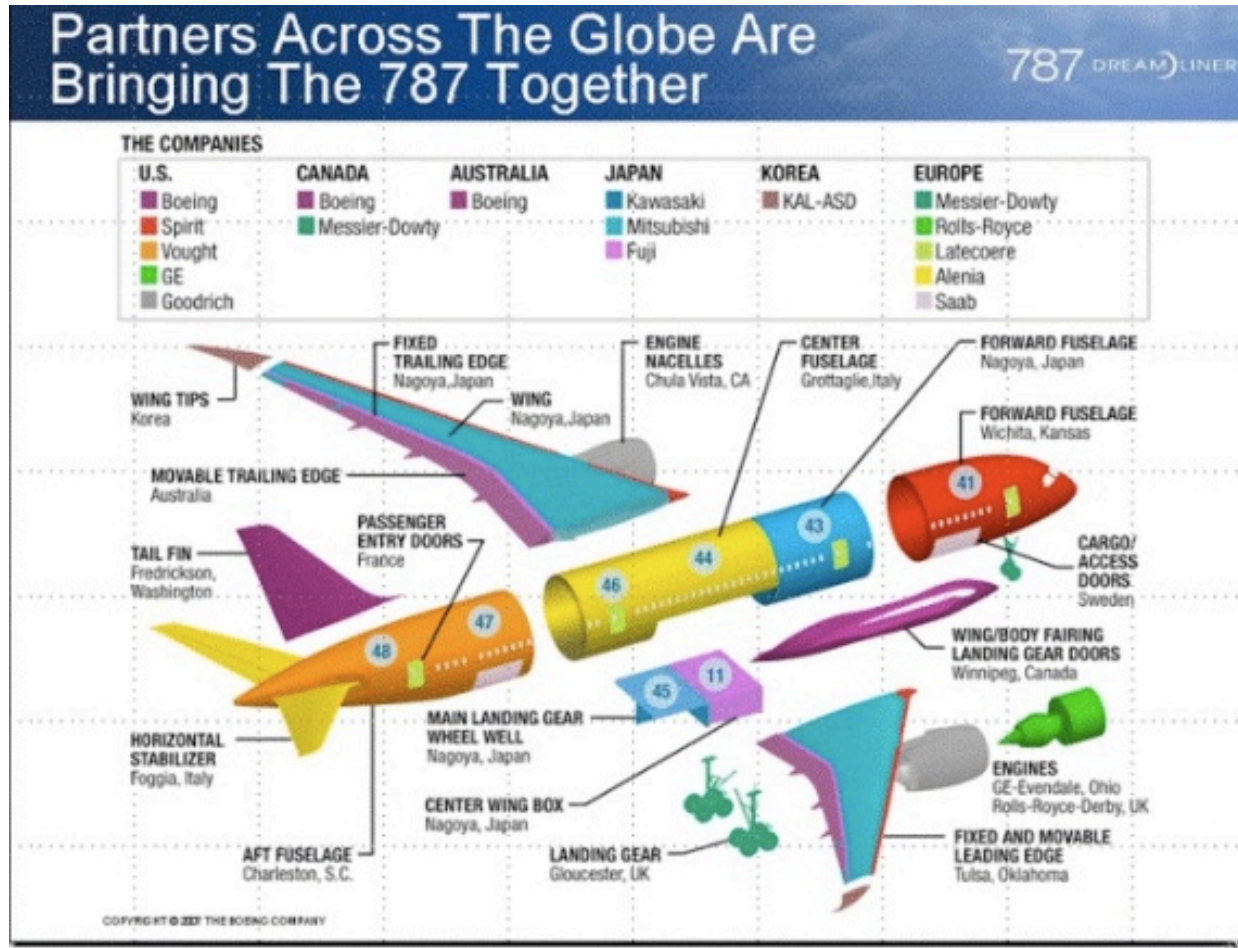


Global Innovation Network

Global Innovation Network



Global Open Innovation



Transatlantic Cooperation FP7

Program for Research of the European Community (FP7).

- European Community's main instrument for funding R&D activities in Europe, reflecting all aspects of EU research policy
- Timing 2007-2013
- Budget: \$53.2 billion Euros
- Four Specific Programs:
 - Cooperation
 - People
 - Capacities
 - Ideas.



Leverage the Inherent Strengths of the Transatlantic Innovation Economy

- 1.Reaffirm open investment policies and eliminate restrictions on foreign direct investment
- 2.Drive collaboration between and among American and European universities, research institutions, and the private sector.
- 3.Facilitate R&D investment through public-private partnerships and long-term incentives.
- 4.Fund pre-competitive scientific research and make it more readily available for commercialization.
- 5.Prevent the erosion of intellectual property rights (IPR) and ensure their consistent and effective enforcement.
- 6.Ensure that competition laws enhance efficiency and consumer welfare without restricting the commercial exploitation of IPR.
- 7.Promote the use of international standards and, where necessary, performance- based technology regulations.
- 8.Secure reliable and undistorted access to raw materials and encourage their efficient use.
- 9.Promote national deployment and maintenance of robust information technology (IT) infrastructure and allow access to innovative technologies.
- 10.Assess the implications of government policies on the process of innovation and share lessons learned with third countries.



Canada and US Cross Border Facts

- 300,000 travelers cross the Canada US Border Everyday
- 35,000 trucks cross the border everyday
- \$1.6 Billion of trade everyday



The Big Table

Film and Video Incentives in Canada (2010)

Digital Media and Animation Incentives in Canada (2010)

Canadian Based Digital Media Cross Border Collaborations



SAATCHI & SAATCHI
THE LOVEMARKS COMPANY



Conference Focus

THE INTERNATIONAL COMMERCIALIZATION FORUM

- Emerging Practices & Frontiers of Commercialization
- Regional & Community Delivery Models
- Exemplary Practices for Financing of Commercialization & Building Sustainable Seed Funds
- Measuring Impact of Innovation & Communicating Success
- Roles of Government & Innovation Intermediaries
- Potential of Global Adaptation of Regional Practices

Innovation Paradigm Shift

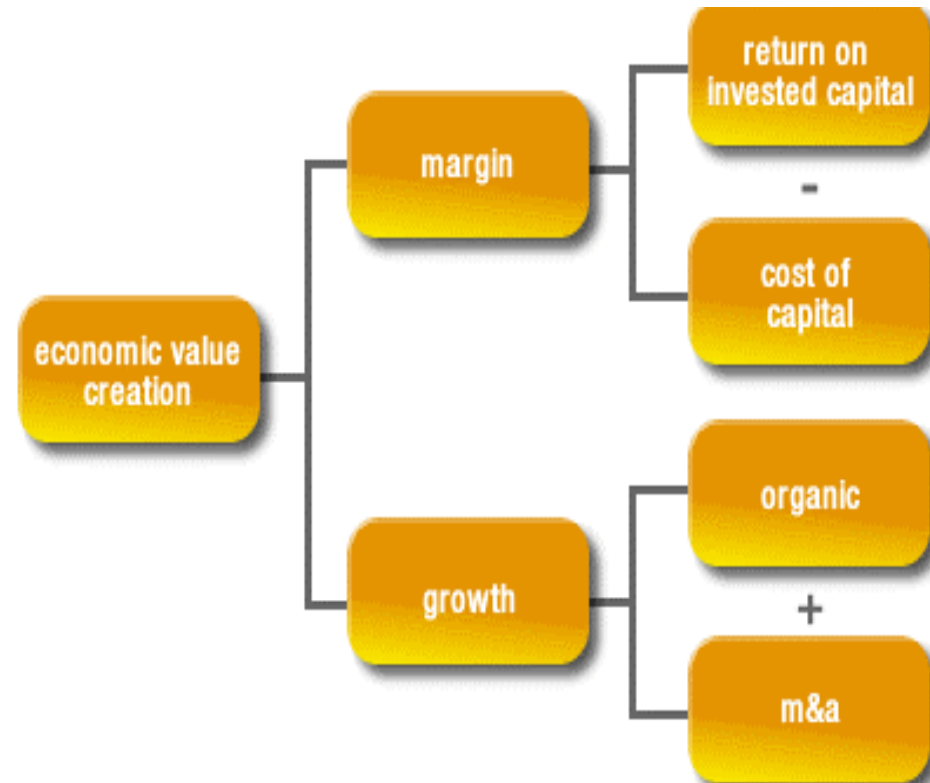
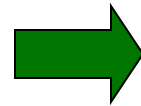
**PROOF OF CONCEPT
(Technological Feasibility)**

“It Works!”



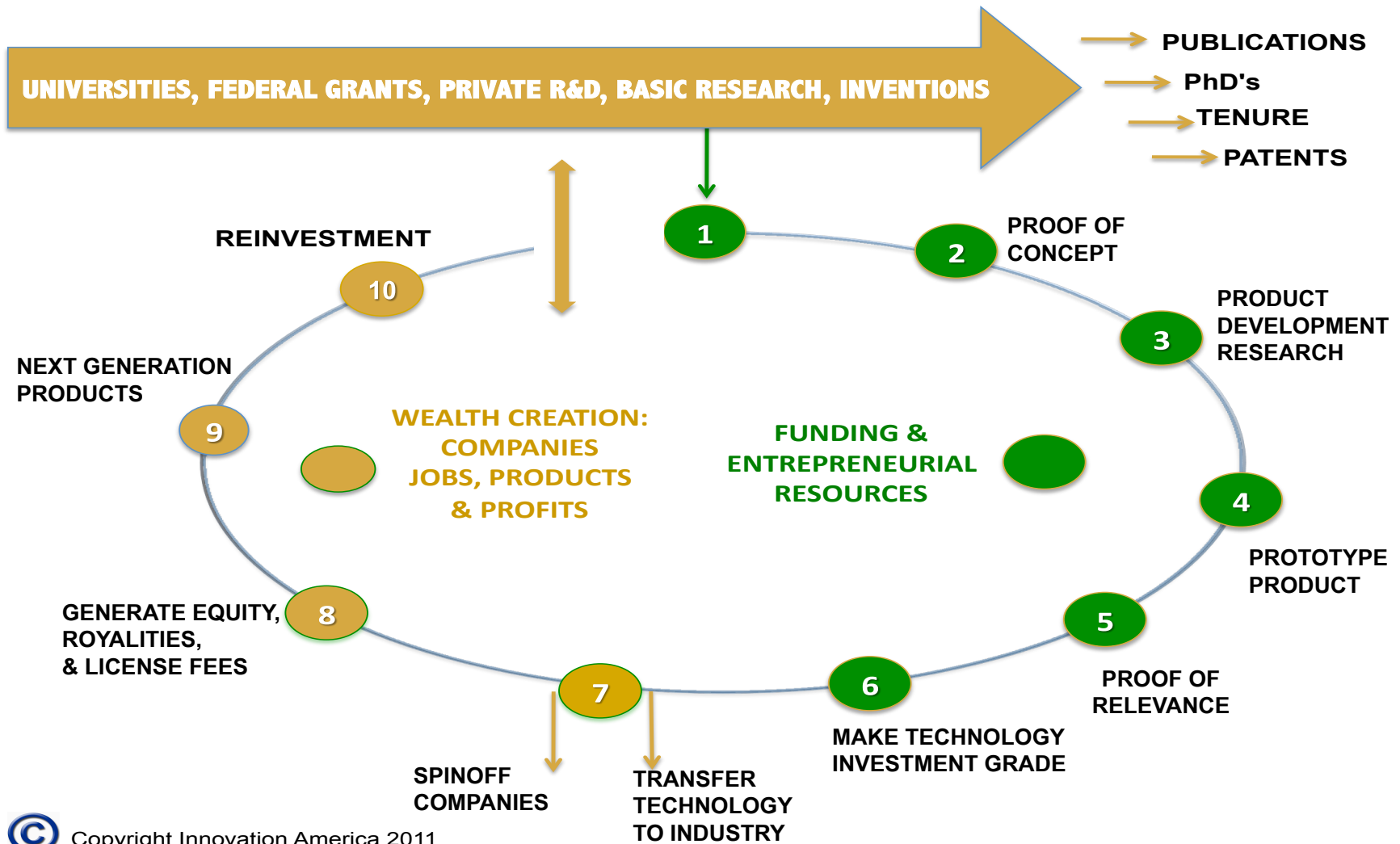
**PROOF OF RELEVANCE
(Market Pull)**

“I’ll Buy It!”



Cana

Innovation America Commercialization Model



Kansas ICC's

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

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



General Incubator Services

Quality Investments

Start-up Company

- *Market Risk*
- Seed Capital
- Market Risk
- Management Risk
- Growth Risk

Kansas Innovation and Commercialization Centers

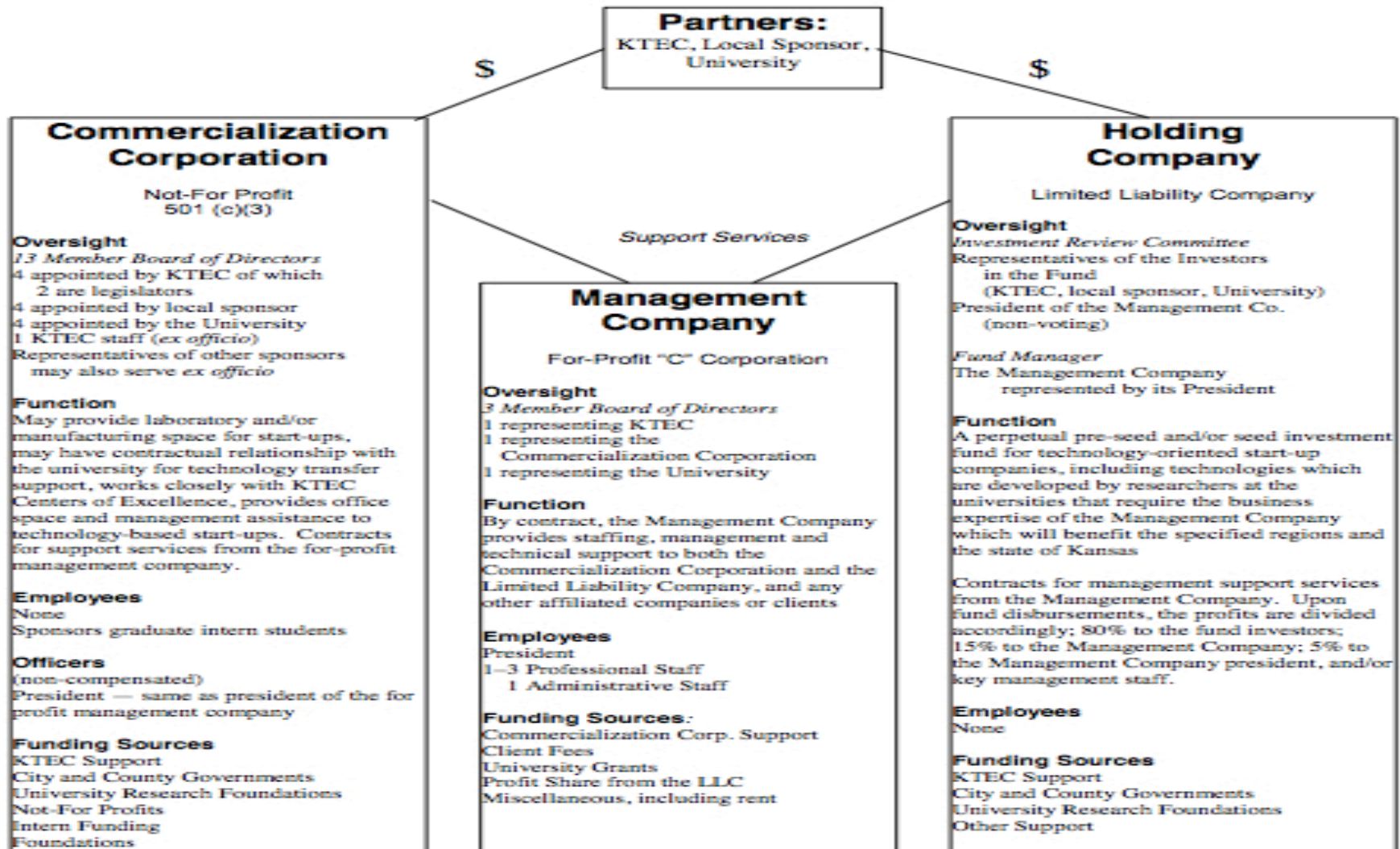
The Bioscience and Technology Business Center at University of Kansas serves:

- Spin-out companies commercializing research developed at KU researchers
- Emerging private-sector companies
- Large companies collaborating with KU researchers
- Small-scale pharma manufacturers seeking GMP—ready space

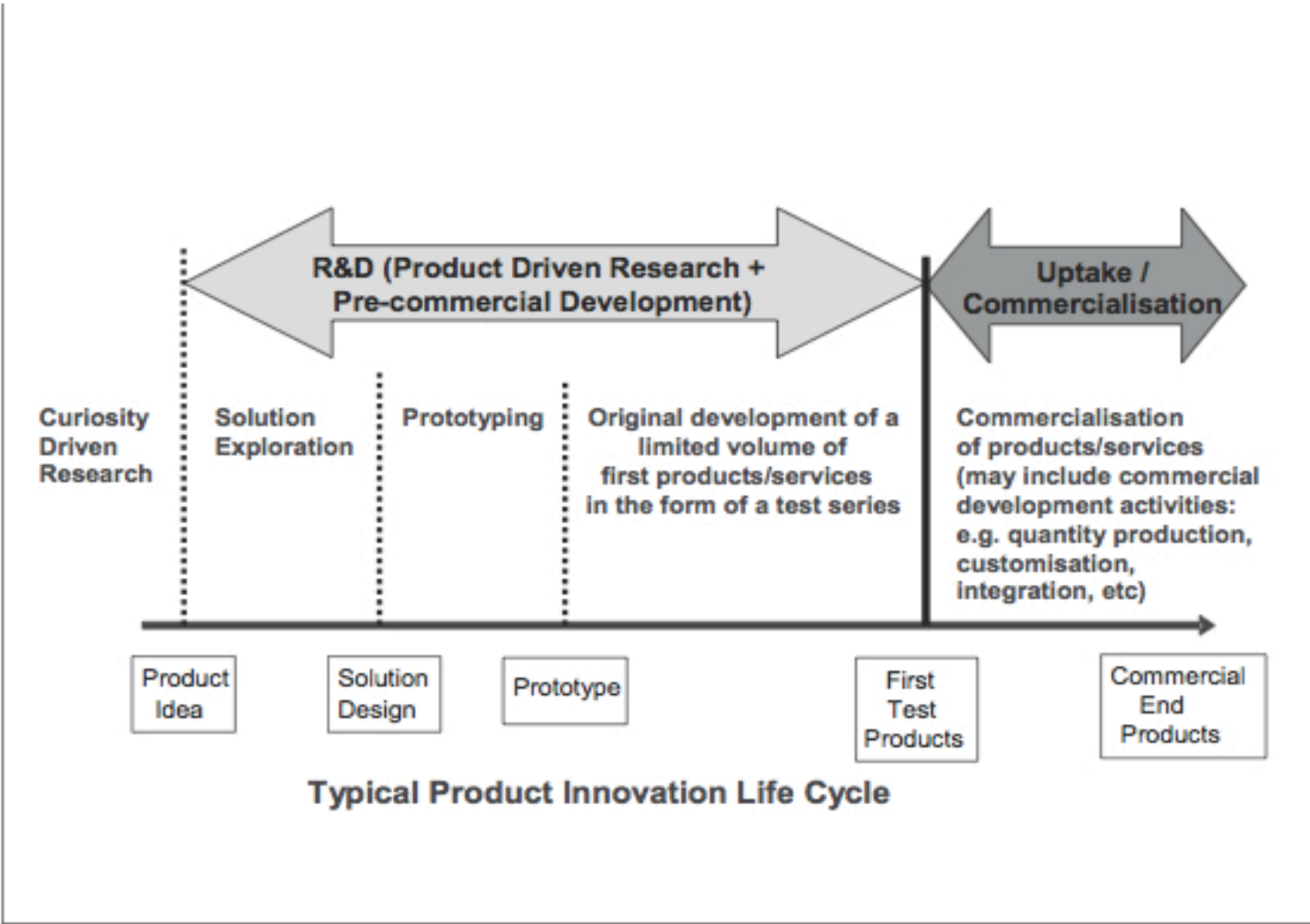


Innovation Intermediary Structure

ORGANIZATIONAL STRUCTURE Kansas Commercialization Corporations





R&D versus Commercialization Phase



Exemplary Practices for Financing of Commercialization & Building Sustainable Seed Funds



Funding & Resources for Innovation Capital

<u>Seed</u>	<u>IBED</u>	<u>Federal</u>	<u>Angel</u>	<u>Entrepreneur</u>
 Biotechnology Greenhouse of Southeastern Pennsylvania				
	 NEW JERSEY ECONOMIC DEVELOPMENT AUTHORITY	 Cooperative Partnerships Solve Complex Problems	 	
	 Accelerating Delaware's Entrepreneurial Economy			
	 Technology-Development-Corporation			
	 Associação Empresarial para a Inovação	 NRC Industrial Research Assistance Program		
				
			 "A Member Managed Angel Fund"	
				

Bootstrapping

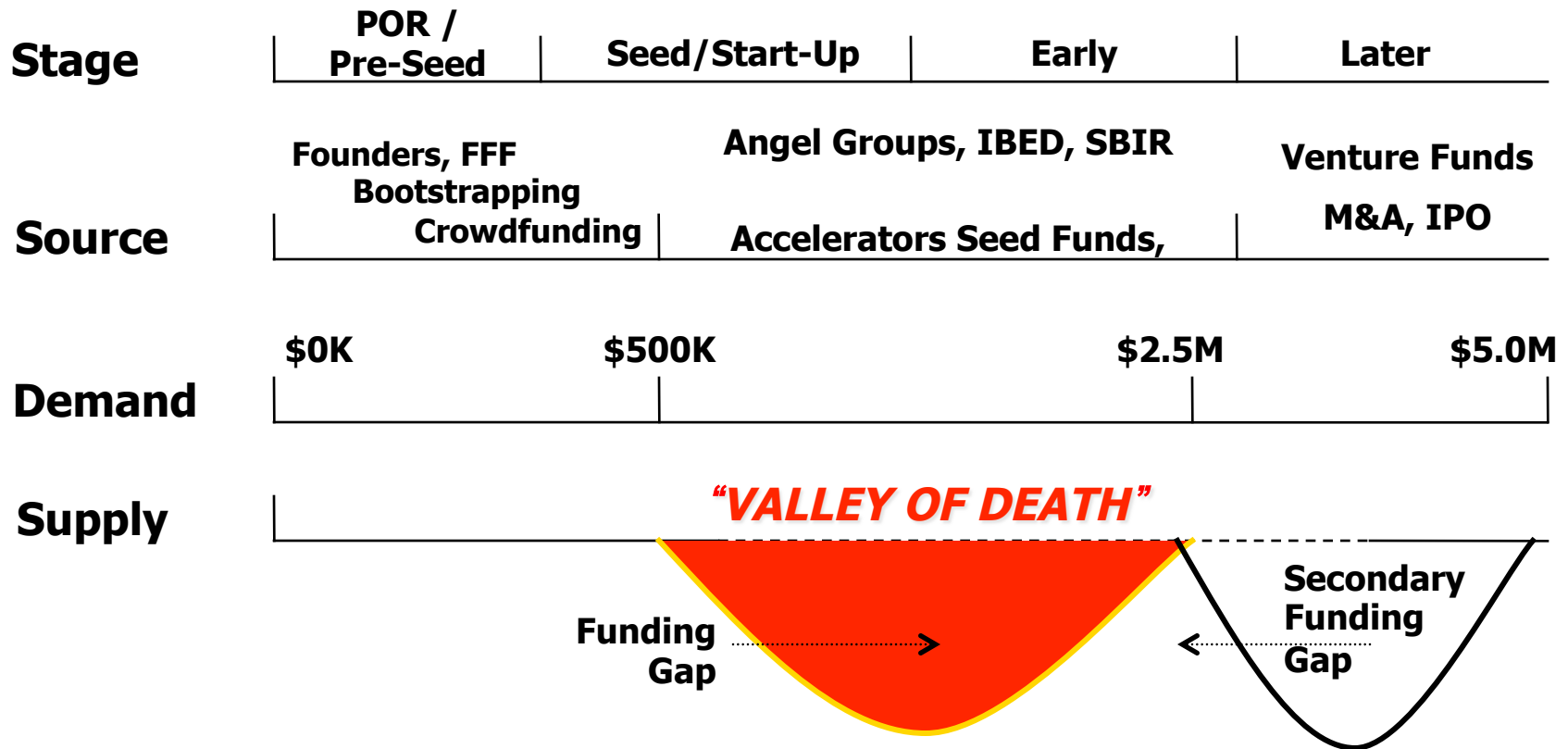
The term comes from the German legend of Baron Münchhausen pulling himself out of the sea by pulling on his own bootstraps.



Definition: “*The act of starting a business with little or no external funding*”

Innovation Capital Valley of Death

“VALLEY OF DEATH”



Successful Funding Models



Third Frontier
Innovation Creating Opportunity

\$700M 5-year Bond Issue
62% Taxpayer vote approving



**KANSAS BIOSCIENCE
AUTHORITY**

\$581M 15 year Wage-tax TIF



\$160M VC Premium insurance
Tax Incentives



\$60 Million
Angel Tax Credits



A U.S. DOE Energy Innovation HUB

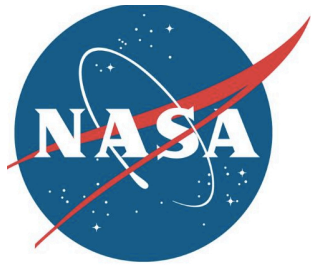
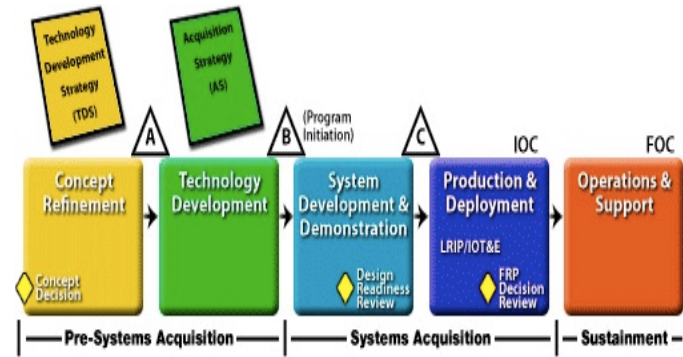
\$129M E-RIC Grant



The U.S. SBIR & TIP Program



SBIR/STTR = \$2.5B
VC = \$1.7B



The Small Business Innovation Research (SBIR) Program

- The SBIR Program converts Knowledge into Products to meet Government and Societal Needs

- SBIR is a highly-competitive, gated innovation system, providing merit-based awards to small companies to– Provide Proof of Principle

Develop Prototypes

- Successful Companies Attract Private Capital and/or win Public Contracts

- Largest U.S. Innovation Partnership Program: \$2.5 billion per year



Pre-Commercial Procurement

Pre-commercial
procurement:

DRIVING INNOVATION TO ENSURE HIGH QUALITY PUBLIC
SERVICES IN EUROPE

- **The scope is R&D services only**
- **The application of risk-benefit sharing**
- **A competitive procurement designed to exclude State aid**

Technology Innovation Program

The Technology Innovation Program (TIP)

- TIP accelerates innovation through high-risk, high-reward research in areas of “critical national need”
- Aim is to speed the development of high-risk, transformative research
- Targeted to address key societal challenges
- TIP provides funding to universities, small and medium-sized businesses, and consortia for research on promising technologies
- Awards are Merit Based
- Funding provided through cost-shared research grants, cooperative agreements, or contracts





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About IPart

What is the Innovation Partnership?

The Innovation Partnership is a consortium of economic development and business assistance organizations located throughout the Commonwealth of Pennsylvania. Our goal is to help early-stage technology companies in Pennsylvania secure federal funding opportunities. [Find Help Now!](#)



[Proposal Writing Assistance](#)

[IPart assists technology-driven companies in Pennsylvania to prepare high-quality SBIR/STTR grant proposals for submission to federal.](#)



[Travel & Training Assistance](#)

[Candidates are eligible for reimbursement of one-half of the cost of travel and training expenses directly related to their SBIR/STTR.](#)



[Federal Funding Resources & Links](#)

[Your essential starting point to locate solicitations and federal funding opportunities that may be a perfect match for your company.](#)

Our Partners:

Use the arrows to view more partners. Click each logo for additional info.



Crowdfunding

Crowdfunding—as its name implies—aims to reach a funding goal by getting many investors to put in small amounts.



Key Difference Between Incubators and Accelerators

Incubators - incubators allow for slower growth, although they typically have some requirements as to how long companies can remain in the incubators before they graduate.



Accelerators - as their name implies, focus on an intense, boot-camp-like experience to get new businesses up and running in a matter of months.



Accelerators



European Seed Camp

- Jumpstarts the entrepreneurial community in Europe by connecting next generation developers/entrepreneurs with a top-tier network of over 400 mentors
- Seedcamp Week - Intensive week-long event held in London every September and is targeted at young entrepreneurs
- Micro seed fund to invest in startup companies €50.000 for 8-10% equity
- Funded companies are hosted in London for 3 months to grow and develop their company



Startupbootcamp - Denmark

- startupbootcamp is a European startup accelerator affiliated with Techstars

- Startup cash €4,000 per team member in micro capital.

- Access to our 75+ mentors – serial entrepreneurs and experts

- 10 teams joining for 3 months of acceleration until Investor Day.



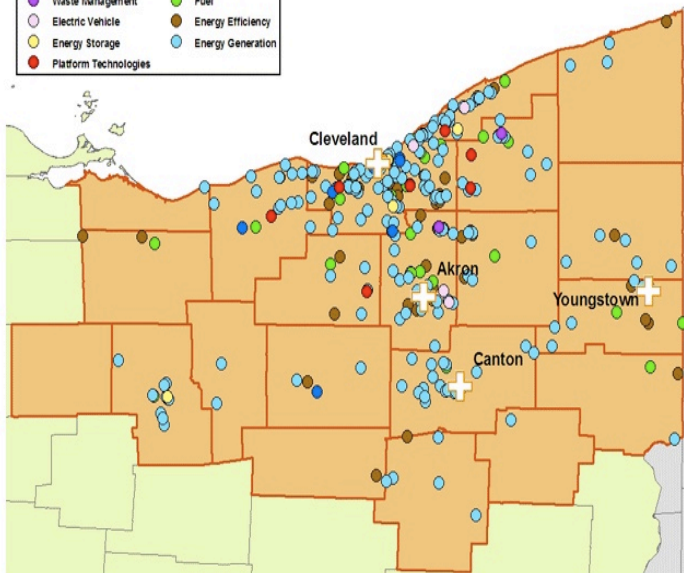
Regional & Community Delivery Models

Northeast Ohio U.S. Regional Ecosystem

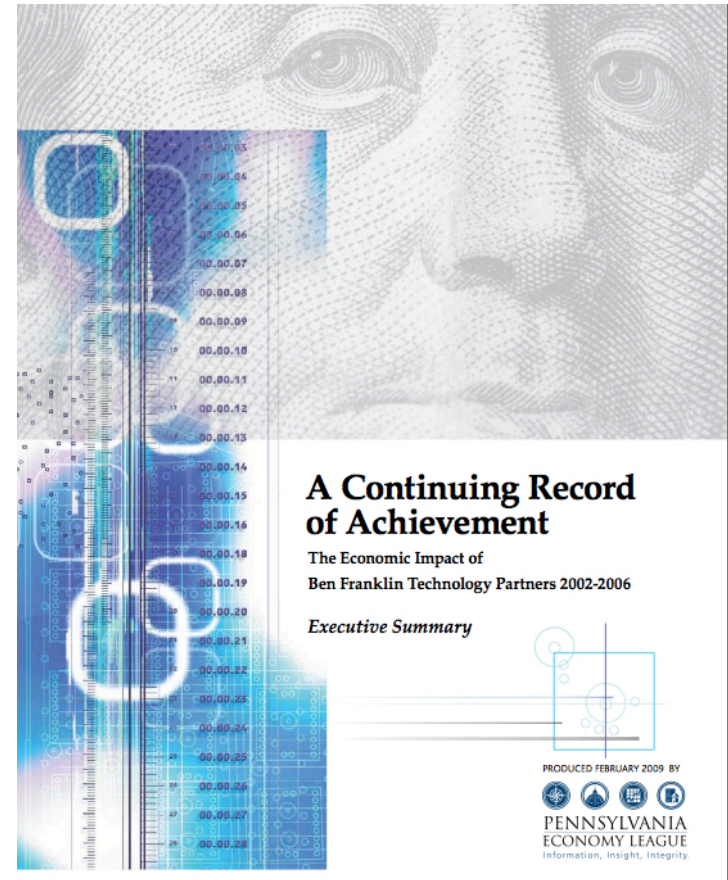
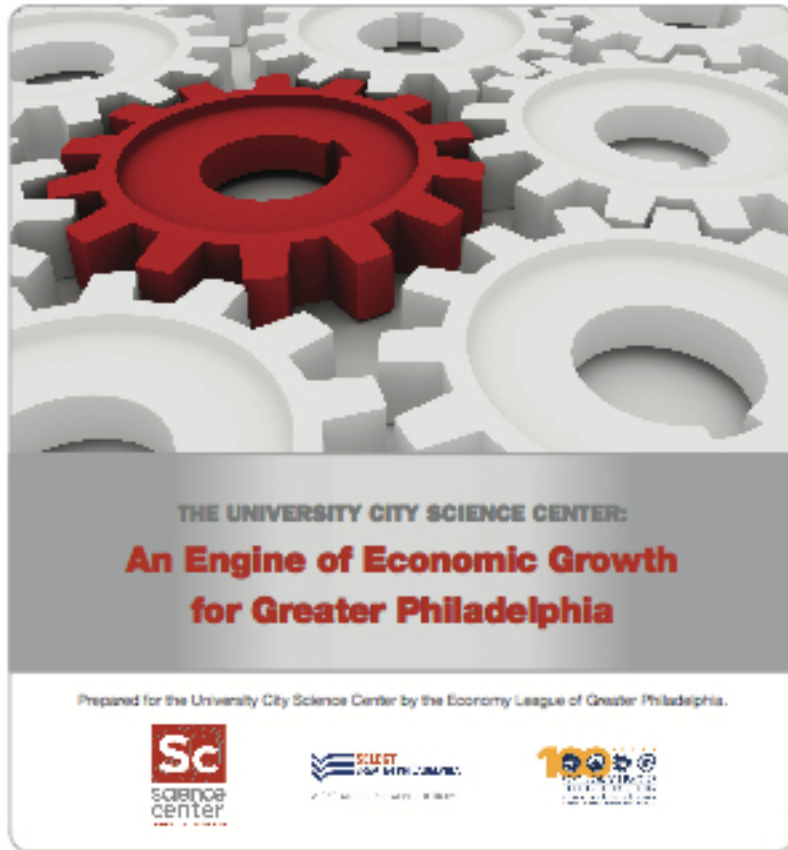
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Advanced Energy Sectors

Workforce Development	Multi-sectors
Waste Management	Fuel
Electric Vehicle	Energy Efficiency
Energy Storage	Energy Generation
Platform Technologies	



Measuring Impact of Innovation & Communicating Success



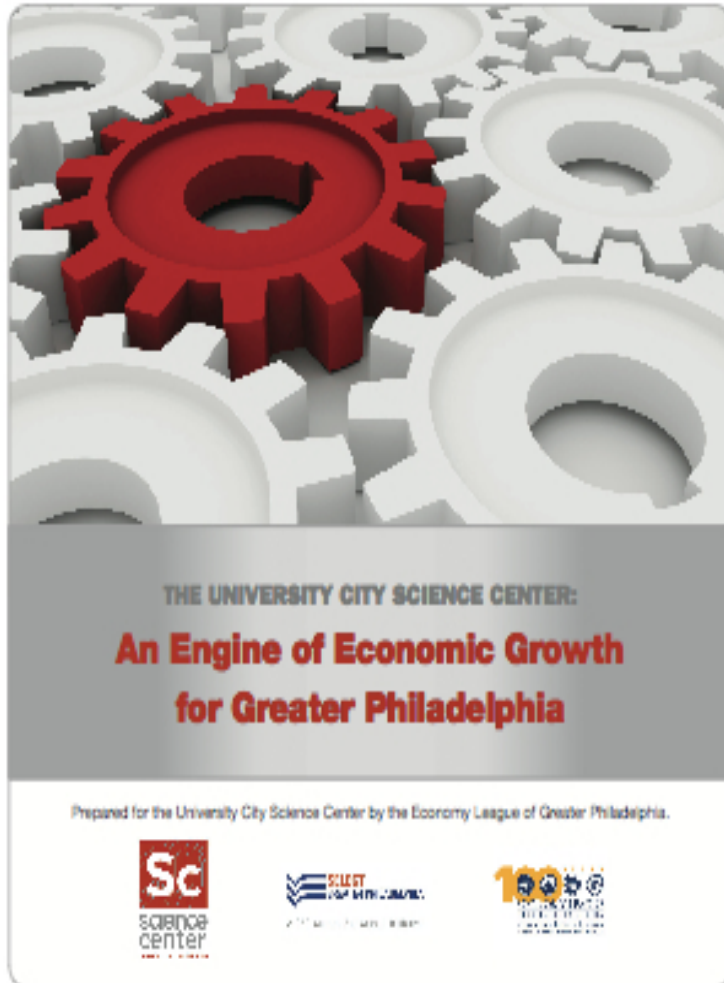
Kansas Bioscience Authority – Economic Impact

Through June 2010, KBA investments have helped generate:

- **1,195** new jobs
- **\$212.6** million in capital expenditures
- **\$86.6** million in new research funding
- **\$48.3** million in equity investments
- *Including estimated wages of jobs, that represents a **\$9.41 return** to the state's economy **for each \$1 invested** by the KBA*



Science Center Economic Impact



Summary of the Impact of Science Center Business Incubation in Greater Philadelphia (2009)

Category	Graduate Organizations	Resident Incubator Organizations	Total of Science Center-Incubated Organizations
Employment			
Direct	15,512	174	15,686
Indirect	12,334	256	12,590
Induced	13,491	254	13,745
Total	41,337	684	42,021
Multiplier	2.66	3.93	2.68
% of Region	1.09%	0.02%	1.11%
Output (\$ millions)			
Direct	\$4,978.3	\$108.2	\$5,086.5
Total	\$9,188.1	\$196.5	\$9,384.6
% of Region	1.49%	0.03%	1.52%
Value Added (\$ millions)			
Direct	\$2,539.3	\$51.2	\$2,590.6
Total	\$4,877.0	\$99.4	\$4,976.4
% of Region	1.42%	0.03%	1.45%
Labor Income (\$ millions)			
Direct	\$1,642.8	\$26.7	\$1,669.6
Total	\$3,159.7	\$58.3	\$3,218.0
% of Region	1.07%	0.02%	1.09%

Notes: Please see Appendix B for more information on economic impact methodology.
 Sources: Minnesota IMPLAN Group. Numbers may not add up due to rounding.

Government's Role in Innovation

- Long term vision and planning
- Identify gaps and trends in science, technology, innovation and SME development
- **Be a catalyst through long-term strategic investments and partnering**
- Develop a balanced and flexible research and development investment portfolio
- Encourage private sector innovation
- Establish performance-based research and development
- Accelerate the commercial exploitation of creativity and knowledge, through innovation and research, to create wealth, grow the economy, build successful businesses and improve quality of life

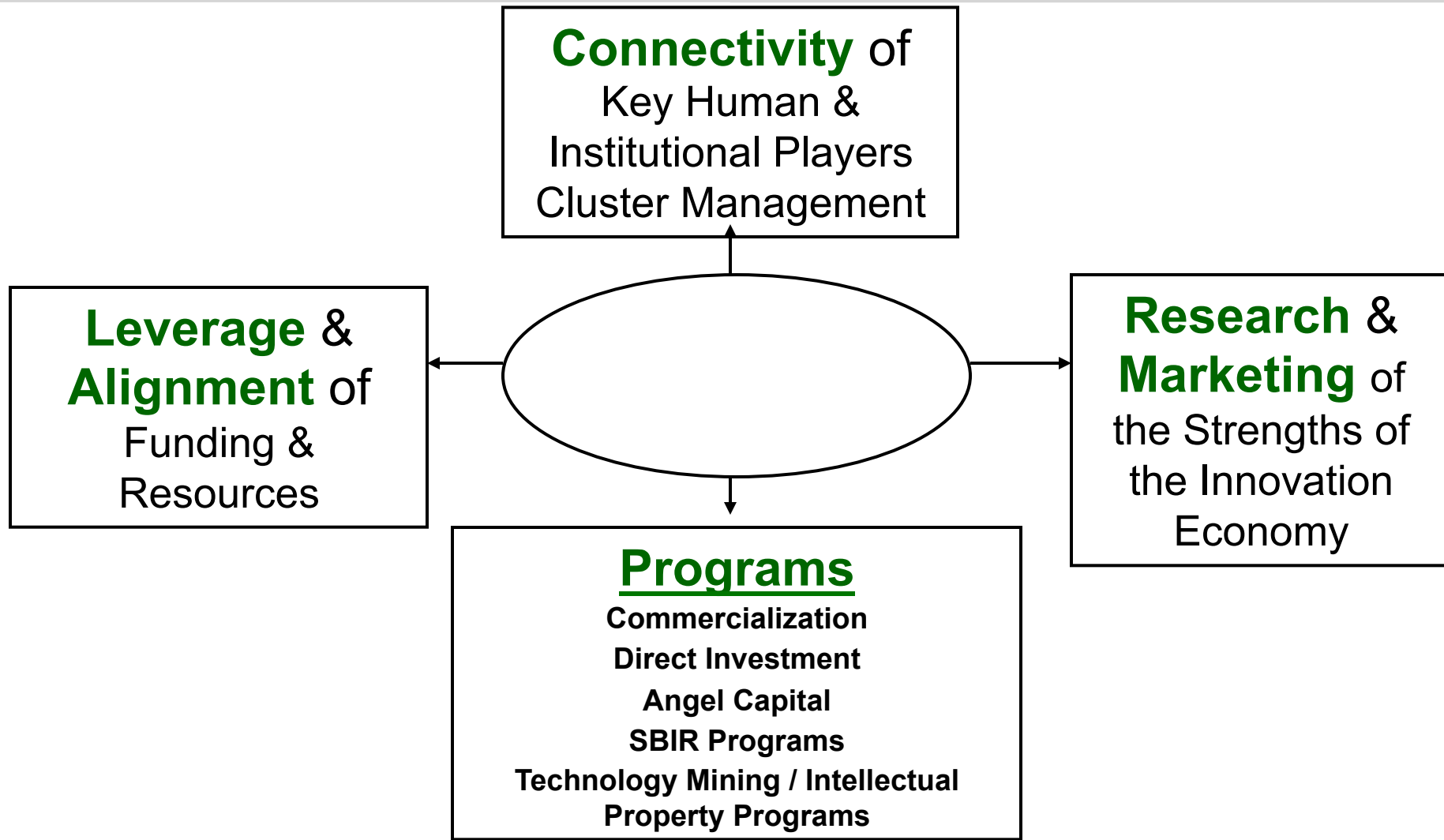


What is an Innovation Intermediary?

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.



21st Century Innovation Intermediary



Innovation Intermediary Commercialization Structure

Investigation	Technical	Market	Business
Proof of Concept	Technology Concept Analysis	Market Needs Assessment	Venture Assessment
Development Phase			
Feasibility	Technology Feasibility	Market Study	Economic Feasibility
Planning	Engineering Prototype	Strategic Marketing	Strategic Business Plan
Introduction	Pre-Production Prototype	Market Validation	Business Start-Up
Commercial Phase			
Full Scale Production	Production	Sales and Distribution	Business Growth
Maturity	Production Support	Market Diversification	Business Maturity

Intermediary Best Practices

- Longevity
- Bipartisan Support & Champions
- Independent Organizations
- Continuous Reinvention
- PRIVATE SECTOR LEADERSHIP
- Understand Return On Investment
- Sustainability In Funding
- Accountable
- Innovative
- Effective Leadership



Global Innovation Intermediaries



<http://www.nrc-cnrc.gc.ca/index.html>



www.startupamericapartnership.org/



<http://www.fumec.org.mx/v5/>



http://europa.eu/index_en.htm



www.innovationamerica.us



<http://202.99.33.5/channel.php?cid=27>



European Innovation Intermediaries



<http://www.innovasjon Norge.no>



<http://www.vinnova.se>



NL Agency
Ministry of Economic Affairs, Agriculture and
Innovation

<http://www.senternovem.nl>

Canadian Innovation Intermediaries



MaRs Canadian Intermediary

MaRs Goal: To build great companies. And a vibrant and diverse Canadian economy.

- MaRS helps entrepreneurs bring new and innovative ideas to the marketplace.
- MaRS offers a comprehensive range of business services. And experienced advisors guide our clients every step of the way.
- MaRS works with entrepreneurs in a range of sectors, including:
 - Advanced materials and engineering
 - Cleantech
 - Information technology,
 - Communications
 - Entertainment
 - Life sciences and health care
 - Social innovation



U.S. State Innovation Programs



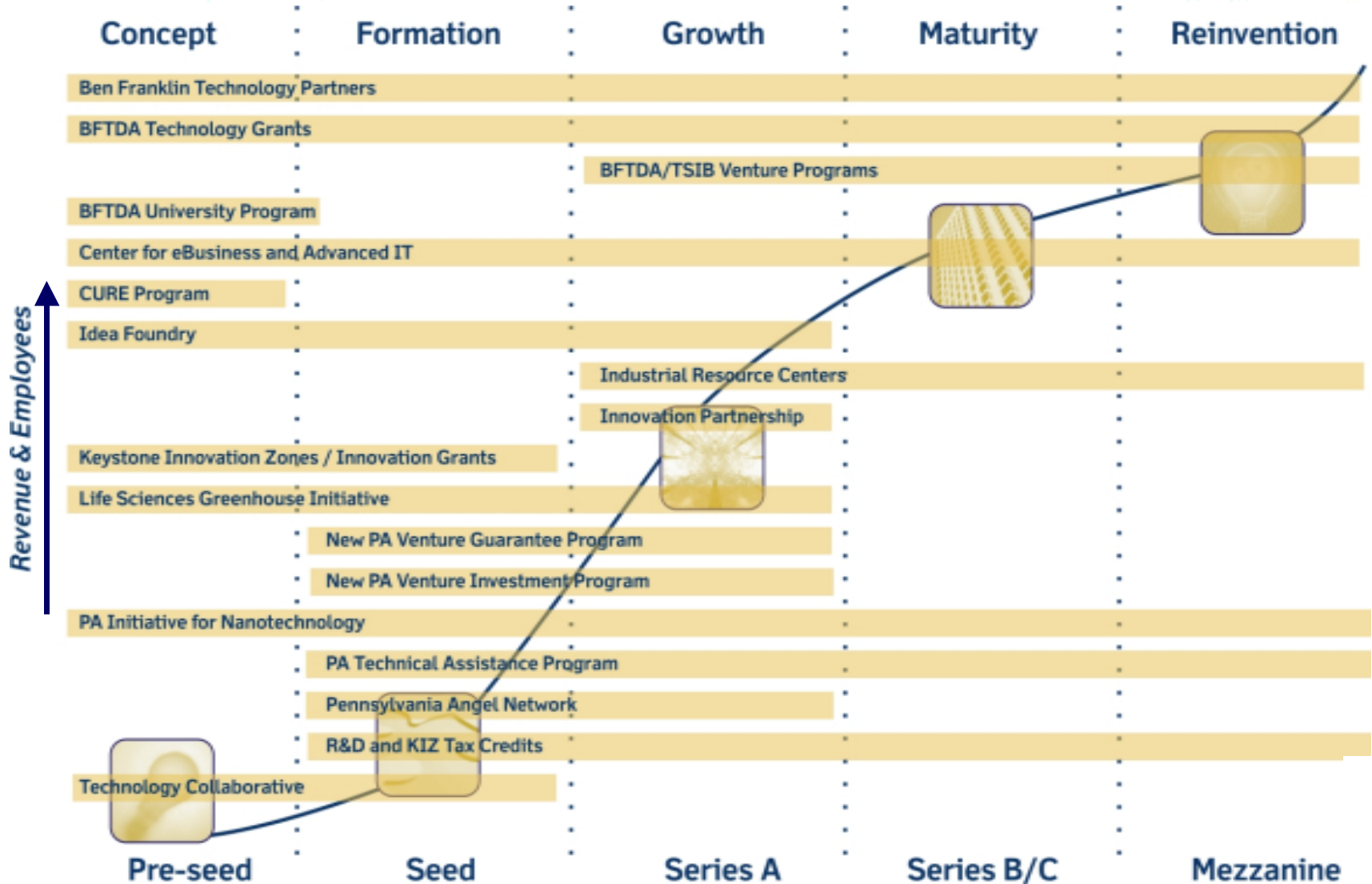
Pennsylvania's Industry Clusters



Technology Investment

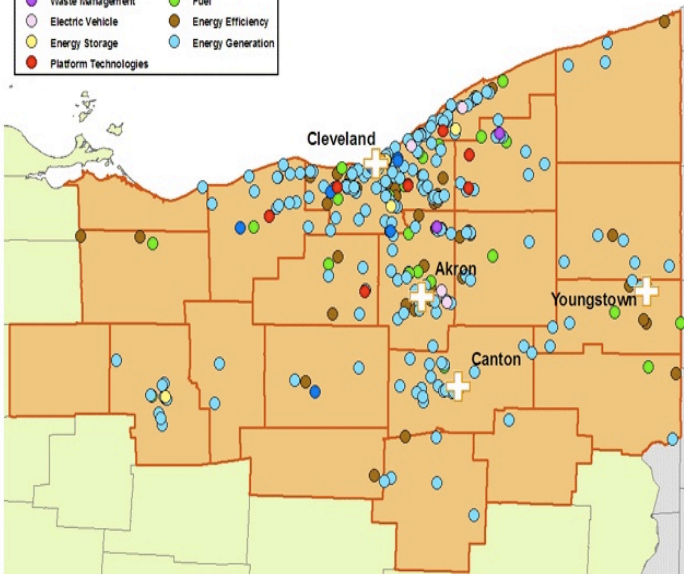
Technology-based Economic Development Tools Along the Continuum

> ready > set > succeed



Northeast Ohio U.S. Regional Ecosystem

- Advanced Energy Sectors**
- Workforce Development
 - Waste Management
 - Electric Vehicle
 - Energy Storage
 - Platform Technologies
 - Multi-sectors
 - Fuel
 - Energy Efficiency
 - Energy Generation



JumpStart Ohio

- JumpStart Entrepreneurial Network:
 - Intensive entrepreneurial development assistance to Northeast Ohio entrepreneurs leading high potential, early-stage companies by delivering:
- Venture Partners and Entrepreneurs-in-Residence programs through incubators.
- JumpStart Ventures:
 - Seed Capital Fund
- Jumpstart Inclusion Advisors
 - High impact minority and women-owned businesses



jumpstart
VENTURES
jumpstart
INCLUSION
ADVISORS

jumpstart
ENTREPRENEURIAL
NETWORK

Ohio | **Third Frontier**
Innovation Creating Opportunity

The Technopolicy Network

- Network for exchange of best practices on International Science Based Regional Development, focusing on:
 - Regional innovation policies and strategies
 - Attracting and developing new science based business in the region
 - Instruments such as incubators, science parks, R&D subsidies, early stage investments
 - Creating international alliances among Science Based Regions and Institutions.

Activities:

- International Conferences
- Working Groups
- Structuring International Cooperation
 - NSF Pilot with the United States, Canada, The Netherlands and Finland.

Key member regions:

i.a. Amsterdam, Delft, Helsinki, Heidelberg, Greater Washington Region, Liverpool, Massachusetts, Øresund, Toronto, Shanghai Pudong;

2009:

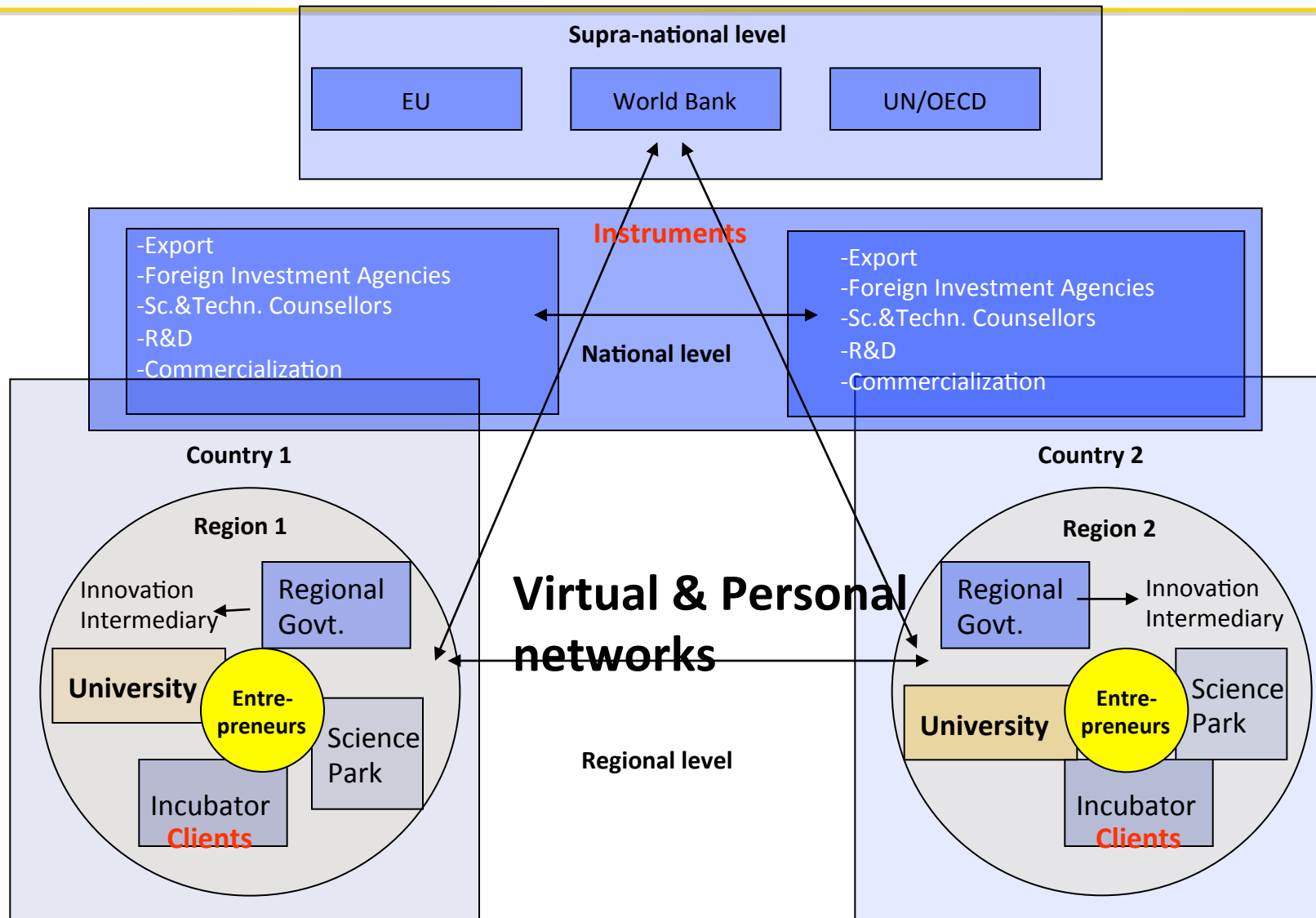
- Transatlantic Innovation Collaboration, 25-26 June, Helsinki, Finland

2011:

- Structuring and Organizing Global Support Systems, 25th February, Toronto, Canada
- Open Innovation for Regional Development, 26-28 September, Tampere, Finland,
- Science Based Incubators as Connectors in High-Tech Clusters, 28-30 November, Auckland, New Zealand,

The Technopolicy Network Collaborates Globally

Connecting entrepreneurs to International Innovation Intermediaries: How does it work?



- Established in 2005
- 2 million Sq. Ft.
- Wet Labs
- Proof of Concept Funding
- Focus on Asia and Europe
- Relationships with JETRO (Japan), Rhone/Alps Region (France) & Belgium Trade Office (Wallonia Foreign Trade & Investment), Spain, UK and Germany
- Networks for Biosciences



Potential of Global Adaptation of Regional Practices

FORMATION OF THE INTERNATIONAL COMMERCIALIZATION ALLIANCE

Goals:

- Promote international networking and partnerships with a potential outcome of creating new multilateral or bilateral partnerships
- Share exemplary practices in the commercialization of outcomes from research in each of our regions
- Provide feedback to support these assessments and the metrics
- Host annual conference to present and discuss the successful practices, emerging models & determine relevance universally
- Share outcomes of commercialization in our regions and the impact of publicly funded research on our customers and stakeholders.

Steps in forming the Alliance

- 1.Step 1 Gain agreement from the participants in the inaugural event.
- 2.Step 2- Determine the format of the alliance
- 3.Step 3 - Establish when & where the next event will be held and identify the host organization(s)

Potential Formats for the Alliance

Network

Resource Alliance

Organization:

What Is A Road Map.....Why Is It Needed?

- A roadmap answers the *question* “**Where do we want to be and how to we get there?**”
- A cluster roadmap *provides strategies and action* plans to best *achieve a vision of the future shared by a critical mass* of industry-related organizations.
- The strategies and action plans are developed according to the unique strengths of the cluster and region as compared to a global market opportunity.



Innovation America : Innovation Road Map Process

1. Literature Review of Comparables
2. Key Stakeholder Interviews/Recommendations
3. Asset Mapping/Cluster Analysis
4. GIS Innovation Mapping
5. Innovation Benchmarking/Index (Peer 2 Peer)
6. Innovation and Entrepreneurship Resource Identification (Entrepreneur Resource Guide and Database)
7. Innovation Economic Development organizational analysis and matrix
8. Innovation & Commercialization Gap Analysis (programs & services)
9. Innovation Ecosystem Public Policy Recommendations
10. Develop Strategic Plan
11. Organizational leadership and staffing
12. Operations/Implementation Plan and Program Portfolio
13. Branding/Marketing Strategy and Market Research
14. Economic Impact Analysis
15. Celebrate Success

THE
BEST WAY TO
PREDICT
THE FUTURE
IS TO **CREATE**
IT



Bill Gates - Microsoft

“Never before in history has innovation offered promise of so much to so many in so short a time.”



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innovation AMERICA
Accelerating the growth of the GLOBAL entrepreneurial innovation economy

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Innovation Across Borders | February 24-25, 2011 – MaRS Centre, Toronto, Canada (Bendis to Speak)

Sunday, 13 February 2011 00:00 |  

Innovation and trade are keys to growth and competitiveness for small and medium enterprises around the world. Yet many entrepreneurs are unfamiliar with the opportunities for innovation across borders and the good practices that mitigate the challenges of successful international business development.

Note: Bendis to Speak at Event - Ed.

To read the full, original article click on this link: [Innovation Across Borders | February 24-25, 2011 – MaRS Centre, Toronto, Canada](#)

Top Innovation Bloggers



[Rich Bendis](#) voted as the **4th best Innovation Blogger in the World in 2010** by [BloggingInnovation Voters](#)

Thanks to all those who voted for Rich!



INNOVATION ACROSS BORDERS
A Global Conference for Small & Medium Enterprises

Home Speakers Agenda

A Global Conference for Small & Medium Enterprises

Innovation and trade are keys to growth and competitiveness for small and medium enterprises around the world. Yet many entrepreneurs are unfamiliar with the opportunities for innovation across borders and the good practices that mitigate the challenges of successful international business development.

The discussion will feature global insights, practical experiences, success stories and lessons learned from SMEs operating on over a dozen of the world's mature and

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