



***“Growing Regional Economies through
Innovation Collaboration”***

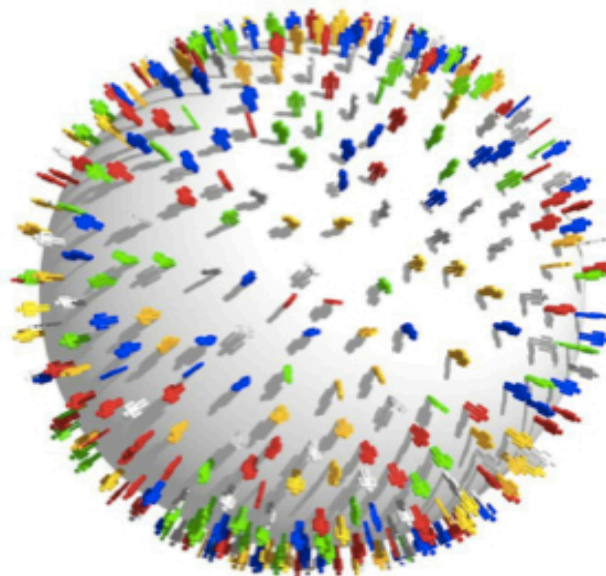
**Presented by:
Rich Bendis, President & CEO
Innovation America
Publisher, innovationDaily
August 30, 2012
RiverCenter Davenport**

Bill Gates - Microsoft

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



The World According to Friedman: Hot, Flat, and Crowded



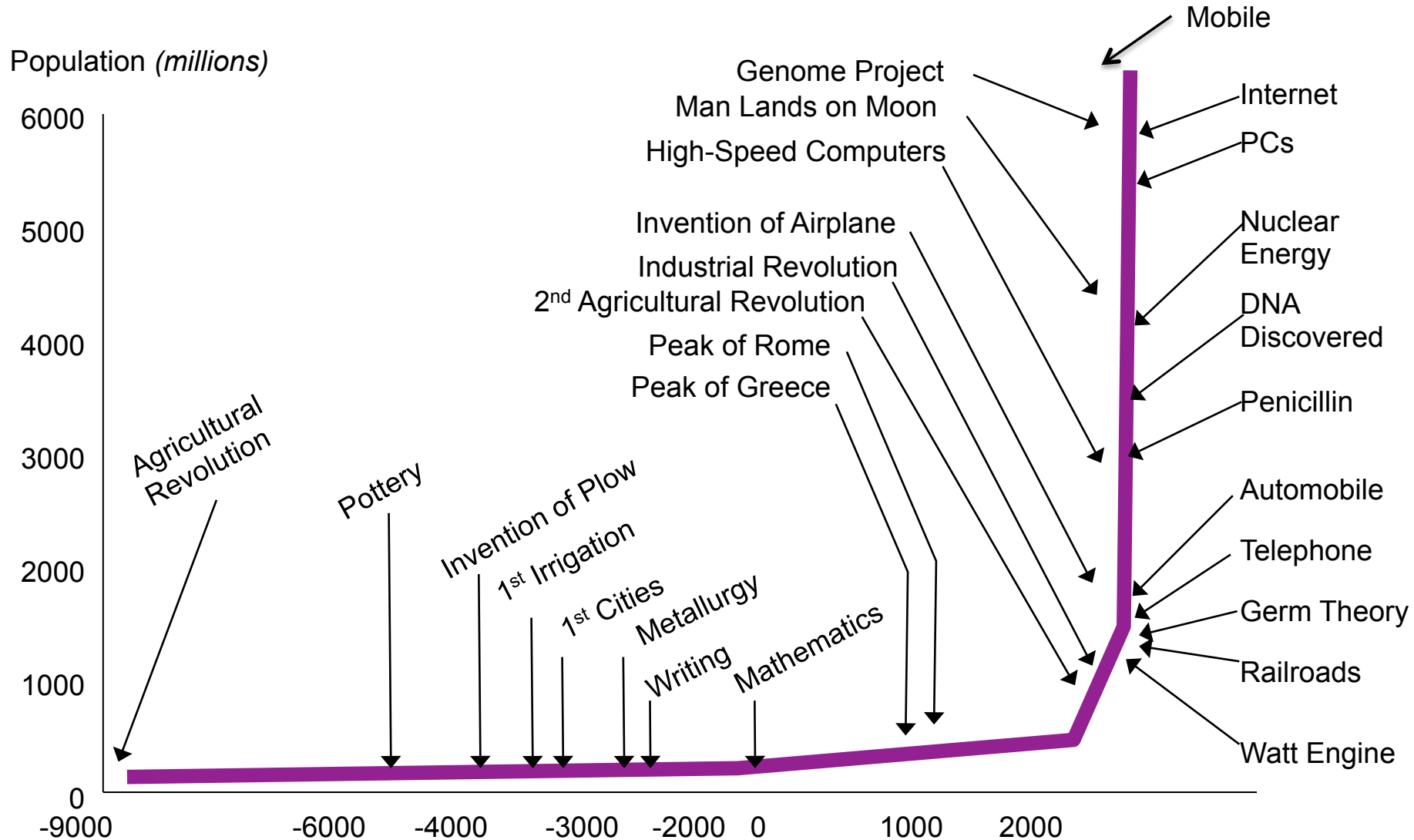
The Global Innovation Imperative

- 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



**OPEN
INNOVATION
MATTERS**

Growth of World Population and the History of Technology



Source: Milken Institute, Robert Fogel/University of Chicago

Why Is Innovation Essential?



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

- STEVE JOBS

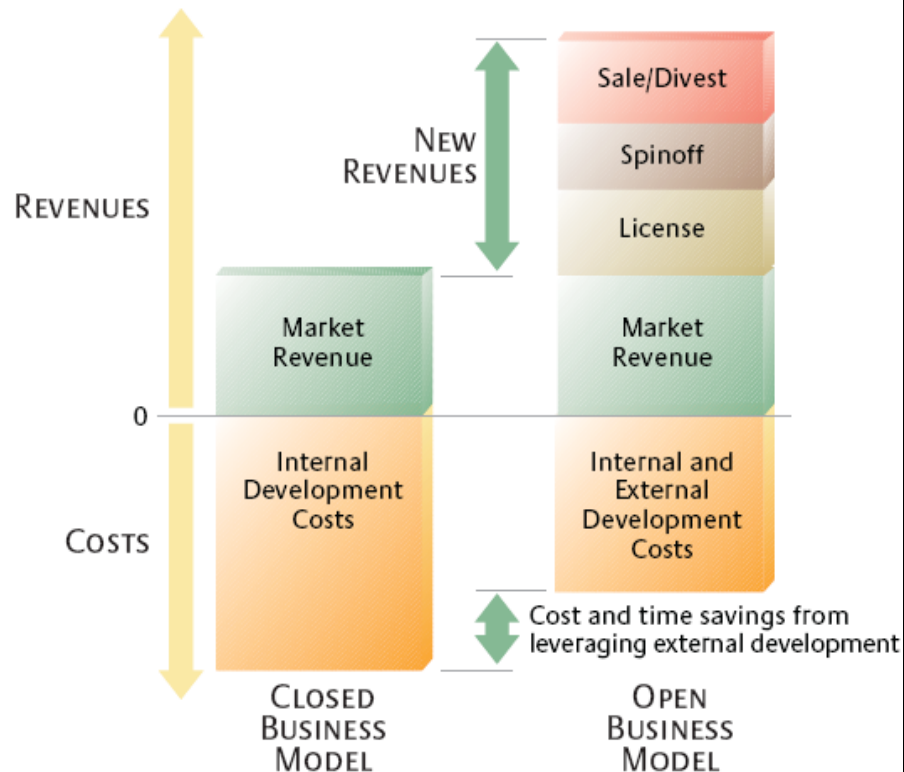
INNOVATION is the creation and transformation of knowledge into new products, processes, and services that meet market need.....and interactions, entertainment forms, and ways of communicating and collaborating

CLOSED & OPEN BUSINESS

OPEN

MODEL

INNOVATION!



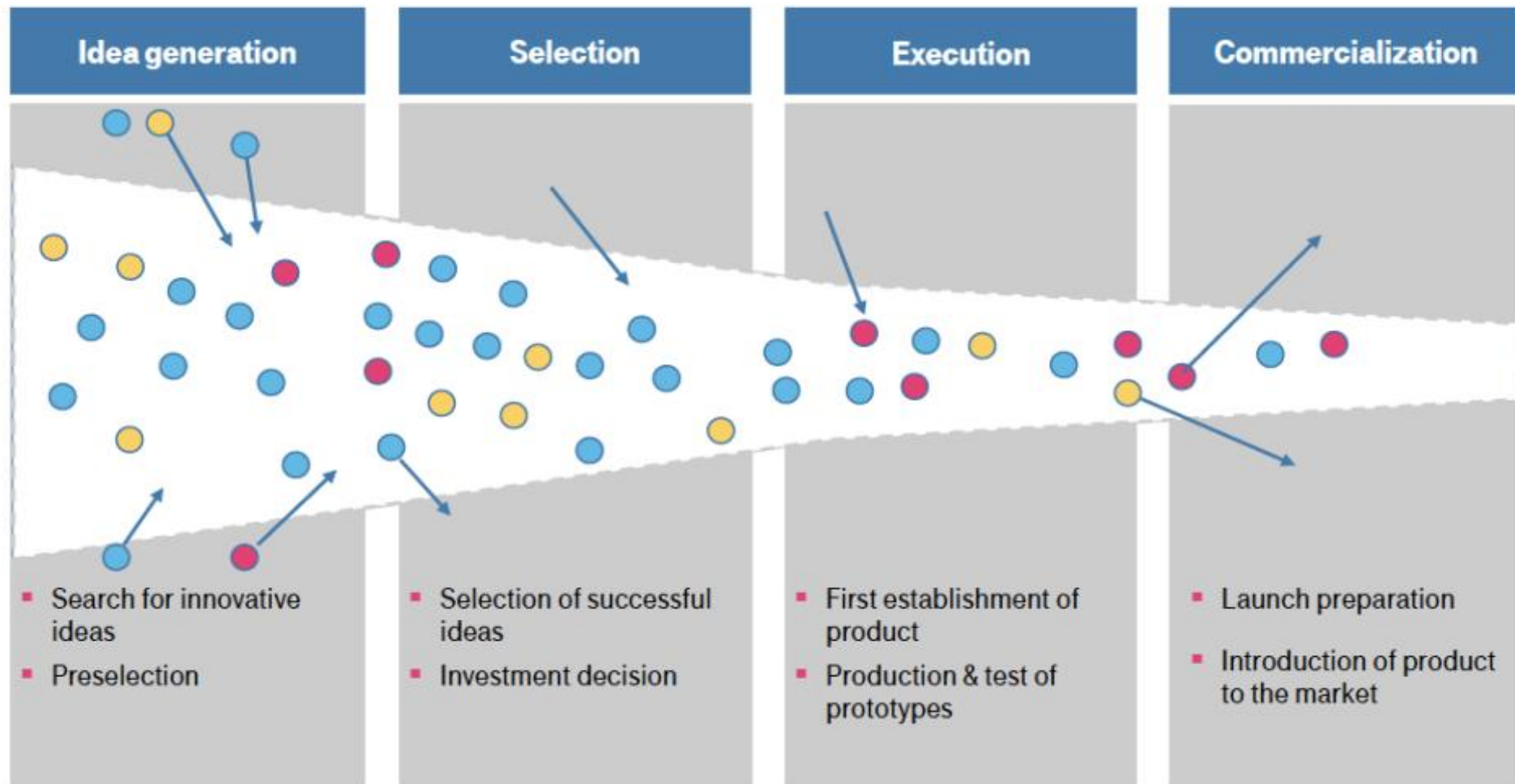
^{1,2} H.Chesbrough, 2003

Open Innovation means that valuable ideas can come from inside or outside the company (industry) and can go to market from inside or outside the company (industry) as well¹.

This approach places external ideas and external path to market on the same level of importance as that reserved for internal ideas and paths to market during the Closed Innovation era².

Open Innovation

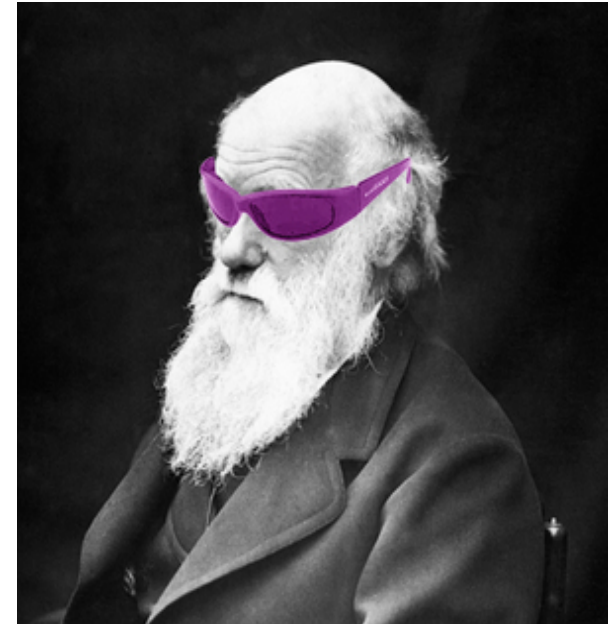
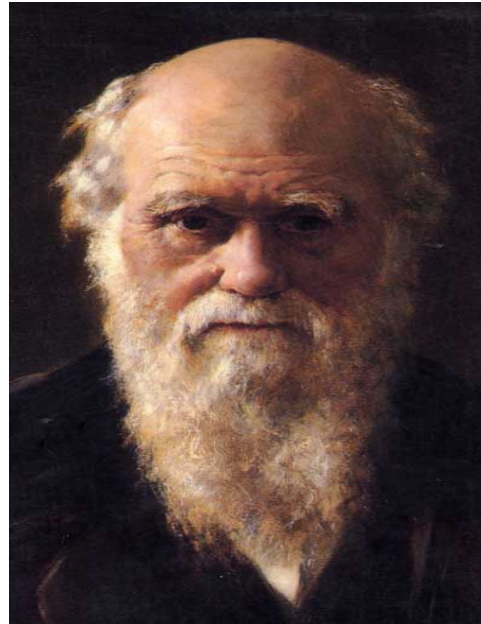
Using the established innovation process phases to assess implementation of open innovation instruments.



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

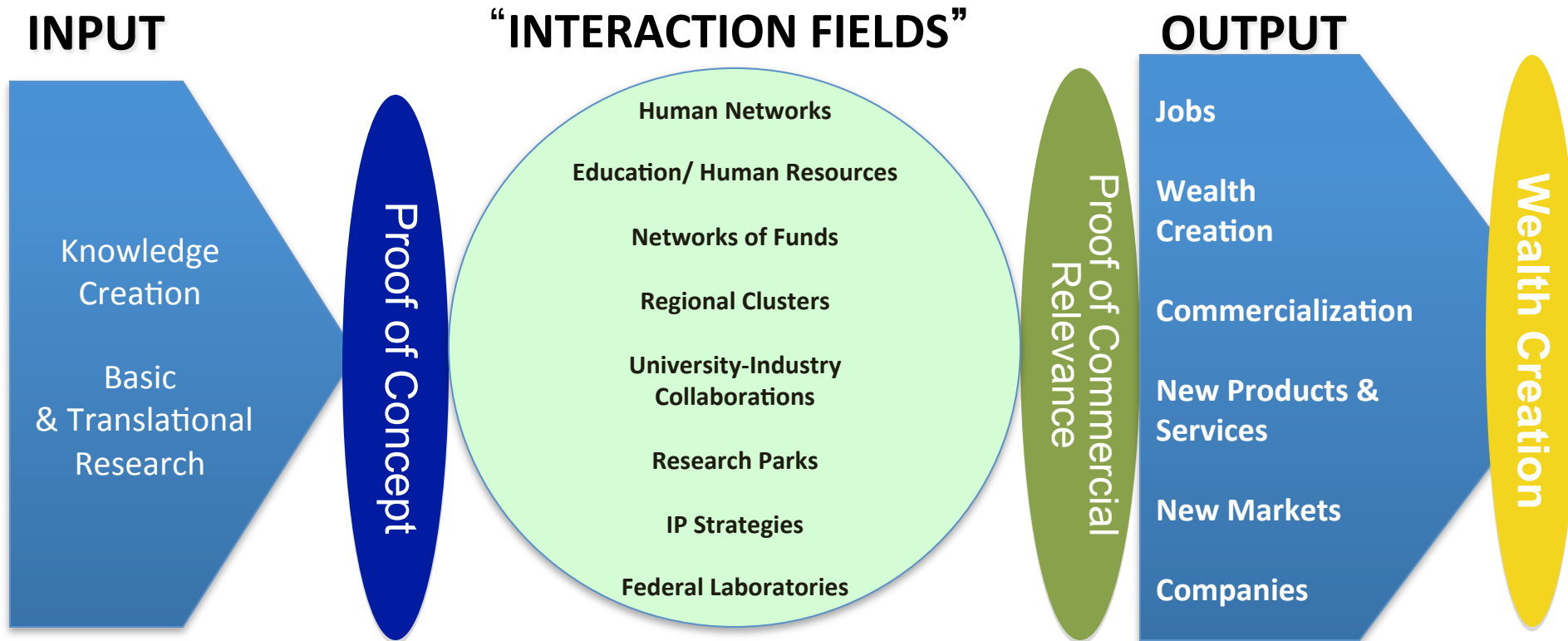


The Six Driving Forces of Change

- Commoditization
- The Digital Revolution
- Social Mediaization throughout society
- Global Open Innovation
- The Turbulent World
- Acceleration (or running faster to stay in the same place)



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.

Innovation Ecosystem Partners

ACADEMIA

- RESEARCH/T2
- LIFELONG LEARNING
- ECONOMIC DEVELOPMENT

INDUSTRY

- PROFIT
- PROCESS
- PRODUCT

INSEPARABLE MISSIONS

GOVERNMENT

- FEDERAL INSTALLATIONS
 - SUSTAINABILITY
 - QUALITY OF LIFE
 - ECONOMIC POLICY

FOUNDATIONS

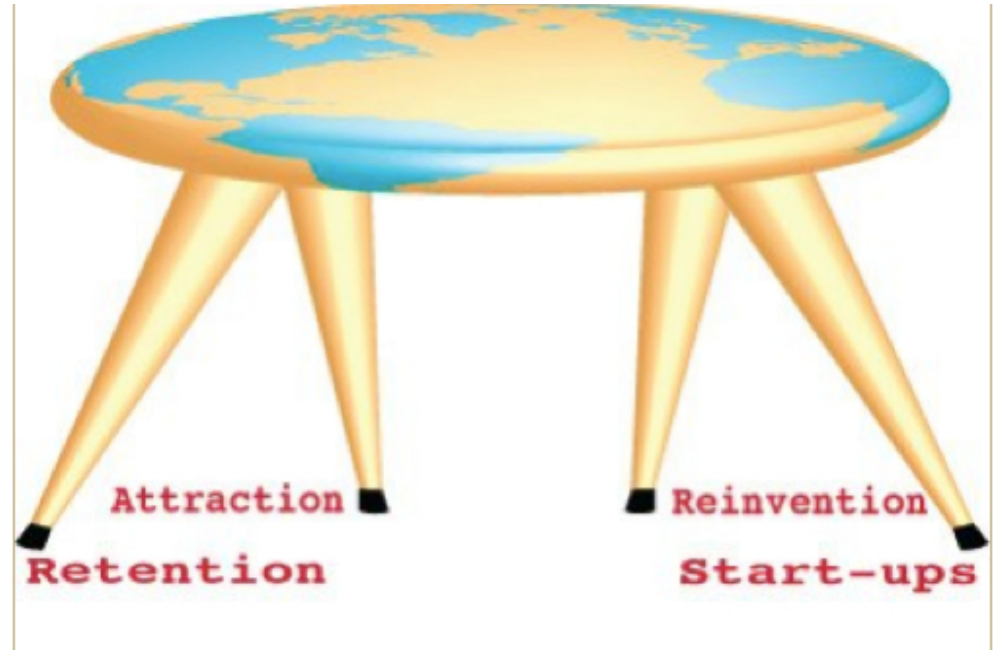
- ECONOMIC GROWTH
- COMMUNITY INVESTMENT
- REGIONAL COLLABORATION

Federal Innovation Programs



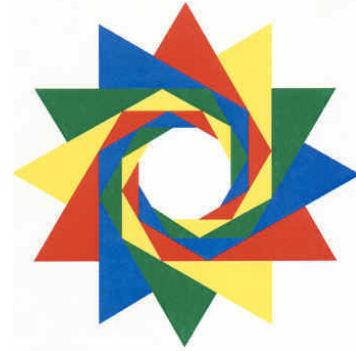
Economic Development

- Economic Development is like a 4 - legged stool:
 - **Attraction**
 - **Retention**
 - **REINVENTION**
 - **Grow Your Own**
- IBED requires patience and persistence, continuity and consistency
- Working with early-stage companies takes time
- A balanced portfolio economic development strategy is best!



Implementing a New Innovation Paradigm

- Deviate from traditional perspectives
- Encourage public investment and risk taking
- Develop trust through collaboration
- Ensuring responsiveness to partners' missions
- Build consensus of all constituents through education, participation, and positive outcomes
- Move from Tech-Based Economic Development (TBED) to.....



Innovation-Based Economic Development (IBED)

Convergence of Traditional Eco Devo & IBED

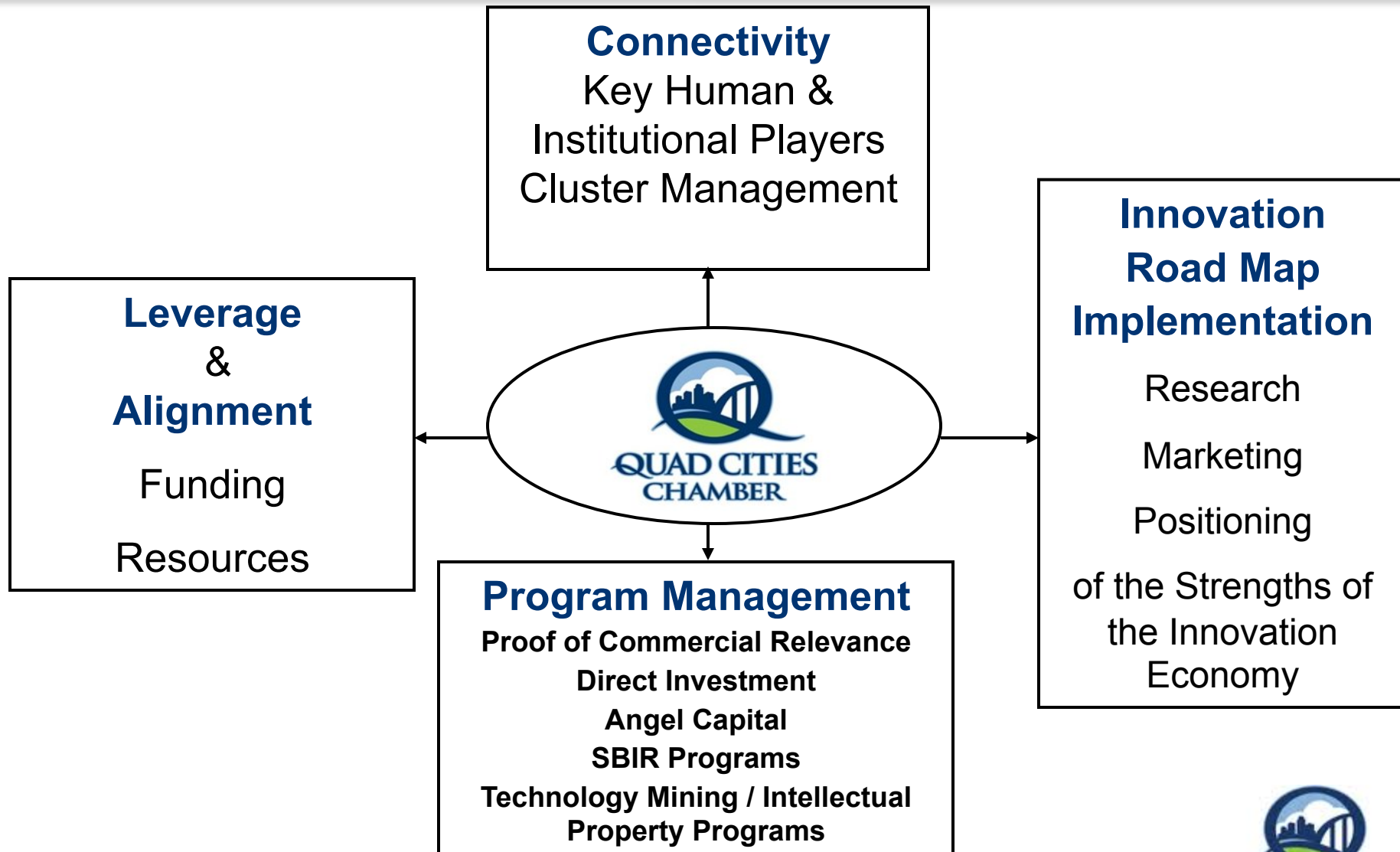
	<u>Traditional</u>		<u>Innovation</u>
Assets:	PHYSICAL		KNOWLEDGE
Competitive Basis:	Natural resources Highways / Rail Proximity Costs	➔	Specialized talent Networks, Clusters, University research Industry partnerships Commercialization, Market Positioning Globalization
Key values/offerings:	University Research Parks Incentives	➔	Research Parks Workforce competencies Lifestyle
Lead Organization:	Chambers / EDCs	➔	Economic developers INNOVATION INTERMEDIARIES

What is a 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



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



Regional Innovation Clusters

Five Key Components to Consider When Defining Unique Regional Assets

*What you make, including
your existing &
prospective industry
clusters*

**ECONOMIC
BASE**

**ENTRE-
PRENEURSHIP**

*Your capacity to create
companies wholly new or
from existing firms*

*What you do: your
workforce skills & human
capital base*

TALENT

**INNOVATION
& IDEAS**

*Your capacity to innovate
and generate new ideas*

**Location, Infrastructure, Amenities,
Factor Costs, Natural Resources**

*The basic conditions defining the
economic milieu of the region*



Quad Cities Strategy

Advanced Manufacturing Innovation Cluster

**Quad Cities Strategic Framework for
Strengthening Advanced Manufacturing is
being Developed**

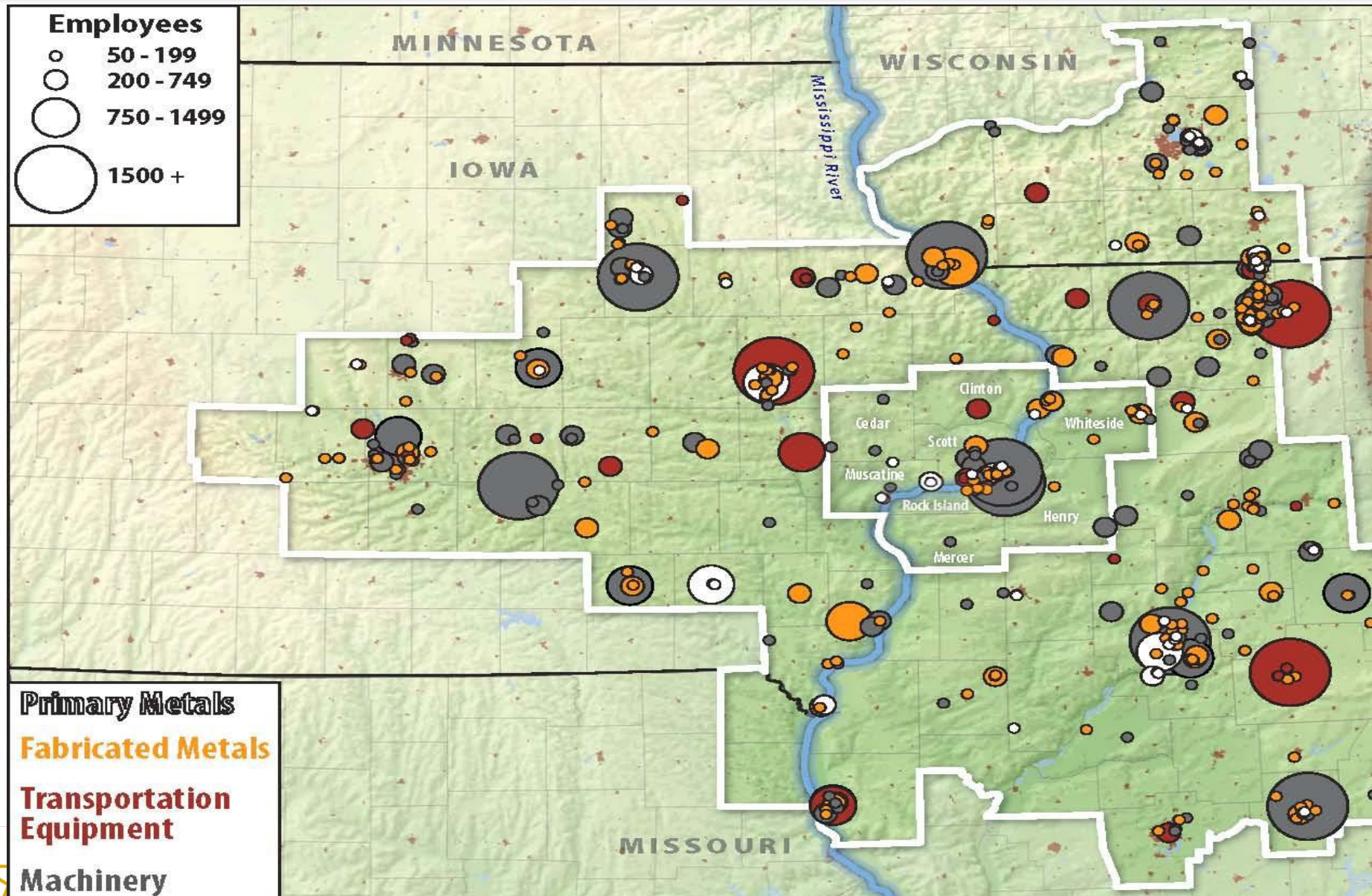
*“Creating a Regional Innovation Hub to Forge
Partnerships, Commercialize Research, Unleash
Entrepreneurs, and Grow Businesses”*

"I will never put my name on a product that does not have in it... the best that is in me."



John Deere

Quad Cities' Manufacturing Clusters



Quad Cities Manufacturing Cluster

- ***Advanced manufacturing in the metal and materials industry is a large and vital sector of the Quad Cities economy...***
- ***However, the region needs to work together, embrace innovation, discover new opportunities, and access new markets to keep this sector competitive.***

Quad Cities Innovation Resources



Midwest Intellectual Property
Management Institute

People • Patents • Progress



- New Ventures Program
- Advancing the Midwest Intellectual Property Institute
- Connections with Angel Investors and Venture Capital
- Manufacturing Extension Partnerships



Innovation Assets – Quad Cities Companies



JOHN DEERE

MONOXIVENT®
Source Capture Systems

COBHAM



McLAUGHLIN



Innovation Assets - Rock Island Arsenal

- Non-progressed Intellectual Properties
- Research & Development
- Quad City Manufacturing Lab
- Technology Transfer
- Federal contracting opportunities



US Regional IBED Intermediaries



Northeast Ohio IBED Intermediaries



NorTech, (the Northeast Ohio Technology Coalition) is a nonprofit Technology-Based Economic Development (TBED) organization that champions growth in Northeast Ohio's 21 county region. Foundation funded.



JumpStart is creating economic transformation in Northeast Ohio by providing resources to entrepreneurs to grow their high potential, early stage companies.



BioEnterprise is a business formation, recruitment, and acceleration initiative designed to grow health care companies and commercialize bioscience technologies



Team NEO advances Northeast Ohio's economy by attracting businesses worldwide to the 16-county Cleveland Plus region.



Cleveland Clinic Innovations advances commercial oriented innovation and transforms promising therapies, devices and diagnostics into products by creating spin-off companies, licensing to established companies and enabling equity partnerships.



An Ohio Advanced Manufacturing Cluster

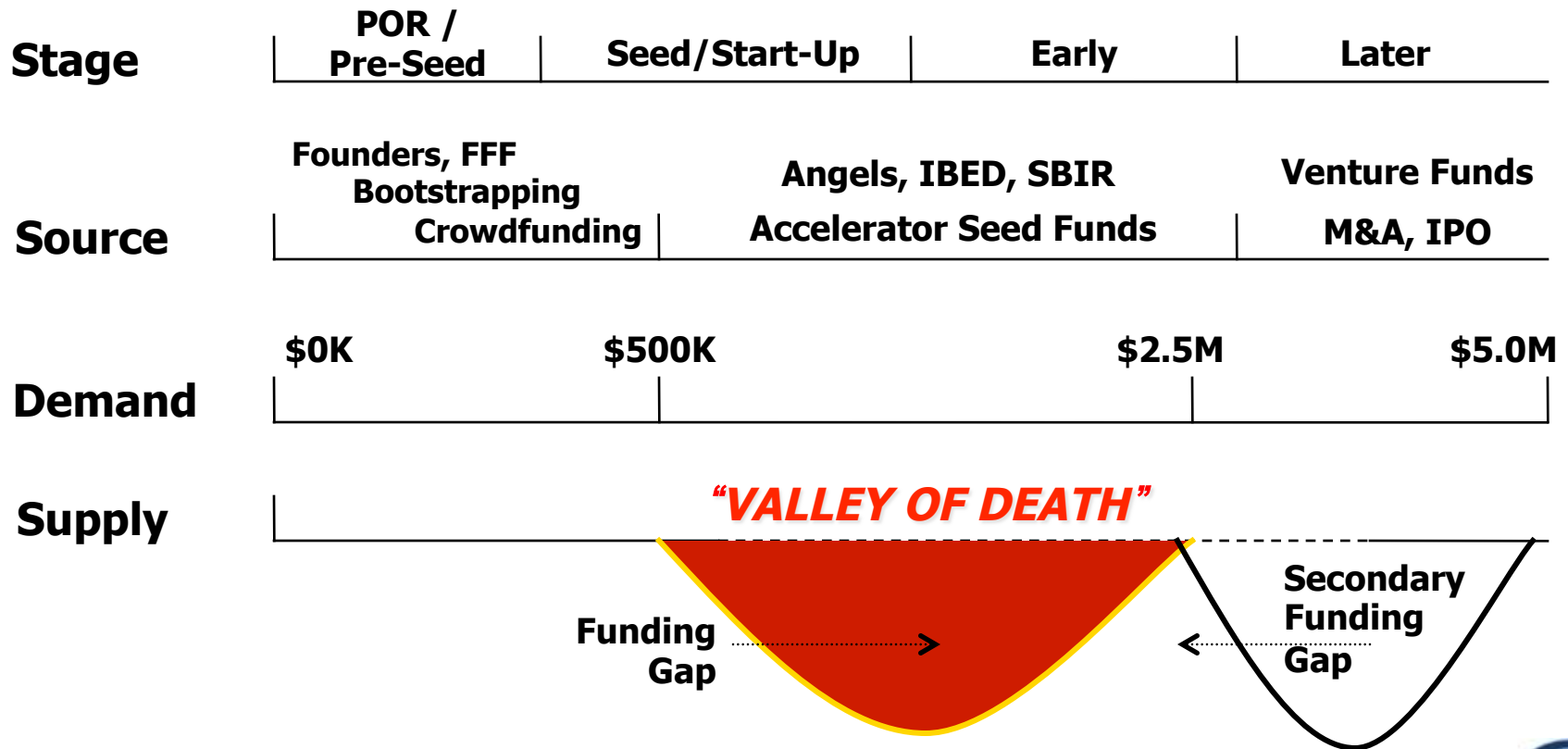


Flexible electronics is a new science and manufacturing opportunity for printing electronic devices on flexible plastic materials. The flexible electronics industry is driven by the global demand for electronic products to get smaller, lighter and consume less power.



Innovation Capital Valley of Death

“VALLEY OF DEATH”



Innovation Paradigm Shift

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



The Historic  Garage
invent

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



CASH IS KING!

Innovation Funding Continuum

DREAM	CONCEPT	APPLIED	COMMERCIAL RELEVANCE	STARTUP	ROLL OUT	GROWTH
FoundersFFF Bootstrapping Crowdfunding	Seed	Incubators/ Accelerators	IBED	Federal State Regional	ANGEL	VC
     	     	    	     <p>79</p>	      	     	    

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*”

Crowdfunding

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



Leading Crowd Funding Organizations

	Traditional Angel Funding	CrowdFunding
Investors	Individual professional investor or a small team	Potentially hundreds of micro-investors
Business Network	Limited to Angel's network	Extended to all of the investors network
Pre-Launch Buzz	Usually nothing	Tremendous buzz potential
Community	Relies on company to create one	Built in seed community from investors and followers
Strategic Coaching	Usually very good	Over time will improve, but nothing structured now
Process: Access to capital	Usually slow to very slow	extremely fast
Process: Transparency	Usually very opaque	Transparent to everyone involved.

KICKSTARTER



 **MicroVentures**

 **profounder**



peerbackers
crowdfunding big ideas

FundWeaver

STARTUPFUEL 

Seed Accelerator Model May Be Relevant



- > 130 accelerators exist & spreading rapidly
- Could grow > 400 to 500 in 5 years
- Focus on emerging tech sectors

Jobs! Jobs! Jobs!

Does Seed Investing **REALLY** Create Jobs?



Public Investment In Job Creation

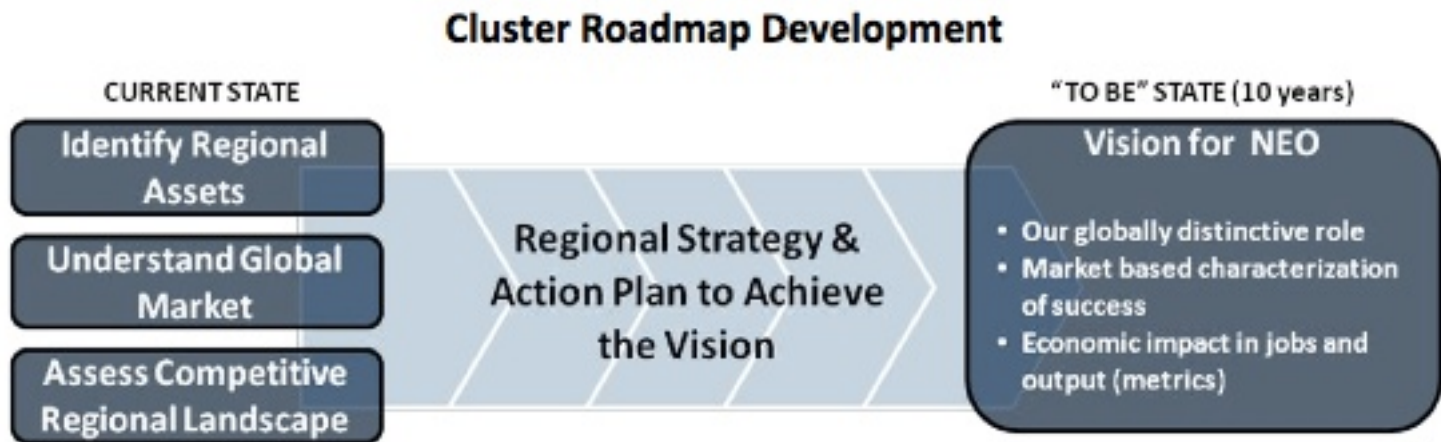
Category	CDVCA*	State of PA	State of MI	State of UTAH	Stimulus Bill*
Funds Invested	\$26M	\$90M	\$291M	\$60M	\$728.9B
Jobs Created	3,700	8,150	28,854	2,047	400,803
\$ Per Job Invested	\$7,100	\$11,000	\$11,728	\$29,300	\$1,818,000

*Community Development Venture Capital Alliance

** Source: Recovery.gov 2011

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 & GIS Mapping/Cluster Analysis
4. Innovation Benchmarking/Index (Peer 2 Peer)
5. Innovation & Entrepreneurship Resource Guide
6. Innovation Economic Development Organizational Analysis
7. Innovation & Commercialization Program Gap Analysis
8. Innovation Ecosystem Public Policy Recommendations
9. Innovation Strategic and Organization Plan
10. Operations & Implementation Plan
11. Branding & Marketing Strategy
12. Economic Impact Analysis - Celebrate Your Success



“The Region” --Central Maryland

Unrivalled Research Assets Unfulfilled Commercial Promise



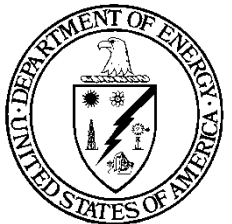
State of Maryland: Federal Resources

- **59 Federal Laboratories, Centers, & Institutes in Maryland**



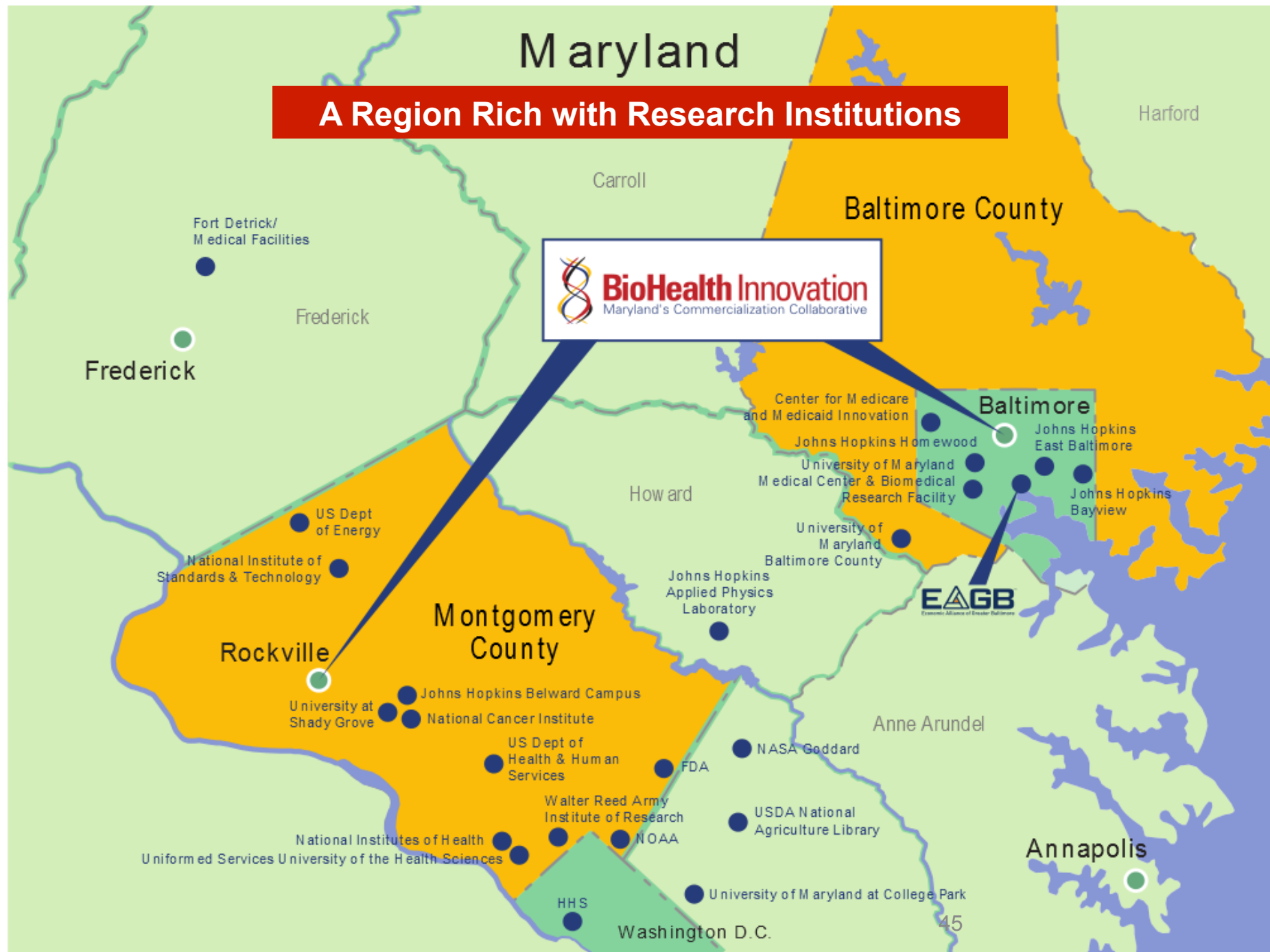
- **Maryland Federal R&D investment exceeding \$12 billion annually**

BioHealth Regional Innovation Cluster Assets

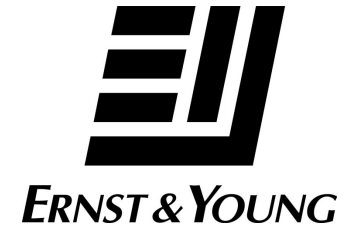


Maryland

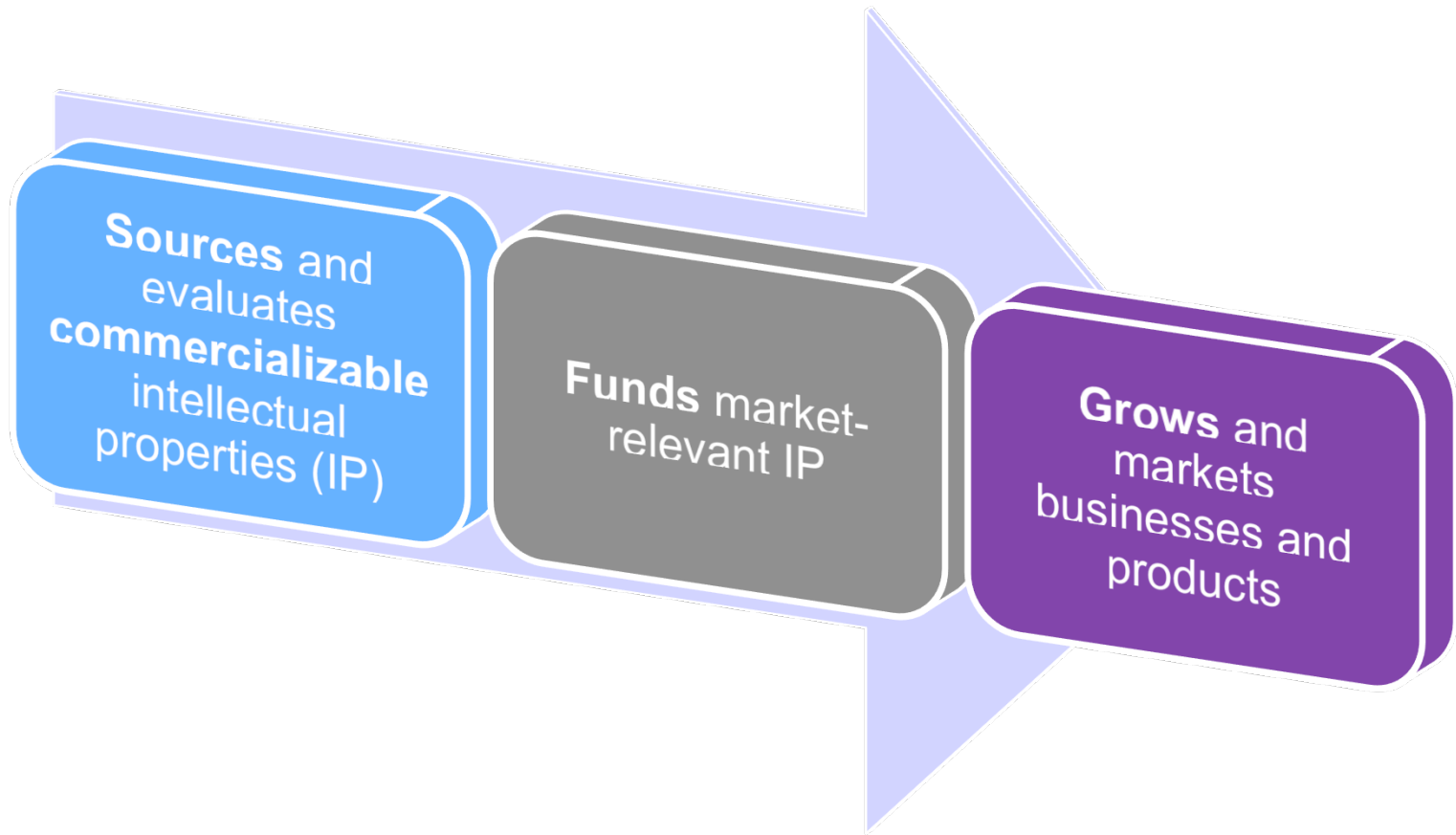
A Region Rich with Research Institutions



BHI Partners and Sponsors



How does BHI Commercialization Pipeline work?



How is Success Measured?

BHI Metrics – First 5 Years

	Now	In 5 Years
VC Funding for Biotech	\$79 Million	\$150
Government Funding for Biotech	Increased SBIR proposals & success	Improve Maryland's ranking
Source Prospective Deals Annually	30	150

Improve return on R&D investment by leveraging equity investment

Create and retain 1,300 jobs

Recruit entrepreneurs, experienced managers and businesses

Commercialize biohealth technologies and create biohealth companies

Economic Alliance of Greater Baltimore



- Core strengths in business attraction and site selection, and business and economic information
- Transitioning into the development of innovation-based clusters and entrepreneur-driven programming for Greater Baltimore region
- Partnering with BioHealth Innovation



What Should We Do To Grow Our Region?

- Think Globally – Act Locally
- Advanced Manufacturing Innovation
- Practice Collaborative Capitalism
- Build Upon Assets & Fill Gaps
- Grow Private-Public Partnerships
- Fully Engage Private-Sector
- Support Startups Growth into SME's & Mid-Size Companies



Quad Cities Growth

Five Focus Areas

1. Execute a **comprehensive economic development** plan to stimulate balanced growth in the Quad Cities region
2. Actively seek and pursue opportunities tied to the **Rock Island Arsenal**
3. Ensure a **high-quality workforce** to support economic and community vitality
4. Enhance **livability and attractiveness** of the Quad Cities region
5. Institutionalize a world-class **Chamber of Commerce** to advance the Quad Cities region

Through work aligned with the five focus areas, we are moving closer to achieving the goals set out in the **Regional Growth Plan**

Henry Ford

"Coming together is a beginning, staying together is progress, and working together is success." —

Henry Ford



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