



Talent Dynamics Driving Innovation and Implications for Regional Competitiveness

August 5, 2015



David Johnson,
President & CEO,
Central Indiana Corporate Partnership
and BioCrossroads

Thank You

Official Printer for Frameworx



A certified **100%** Women Owned Business Enterprise

www.milesprinting.com



Indy's Talent Dynamics Driving Innovation and Implications for Regional Competitiveness

August 2015



Today's Discussion

- *The Context*: The Importance of Innovation for Regional Competitiveness and the Essential Role of Talent
- *The Study Approach*: Measuring Talent Dynamics
- *The Findings*: How is Indy Metro Performing?
- *The Implications*: What do the Findings Point to for Improving Talent Driving Innovation and Regional Growth?
- *The Recommendations*: What should the Indy Metro Do?

The Context: Economics Literature Points to the Importance of Innovation and Human Capital for Regional Growth

- Innovation drives economic growth

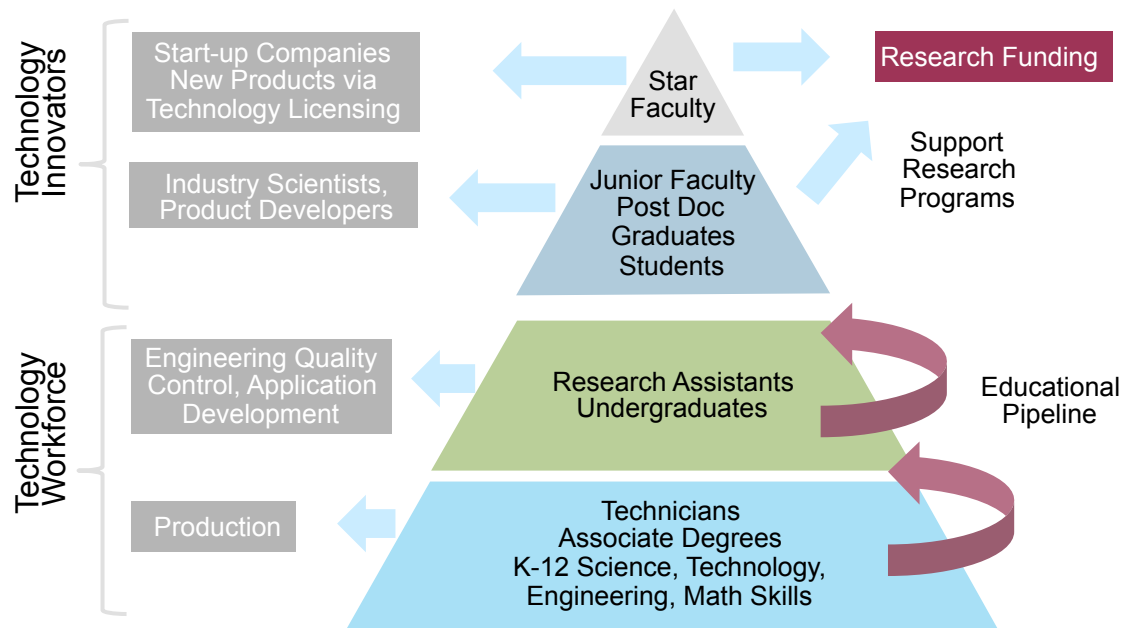


- What drives innovation? ... bringing human capital together to generate and mobilize new knowledge

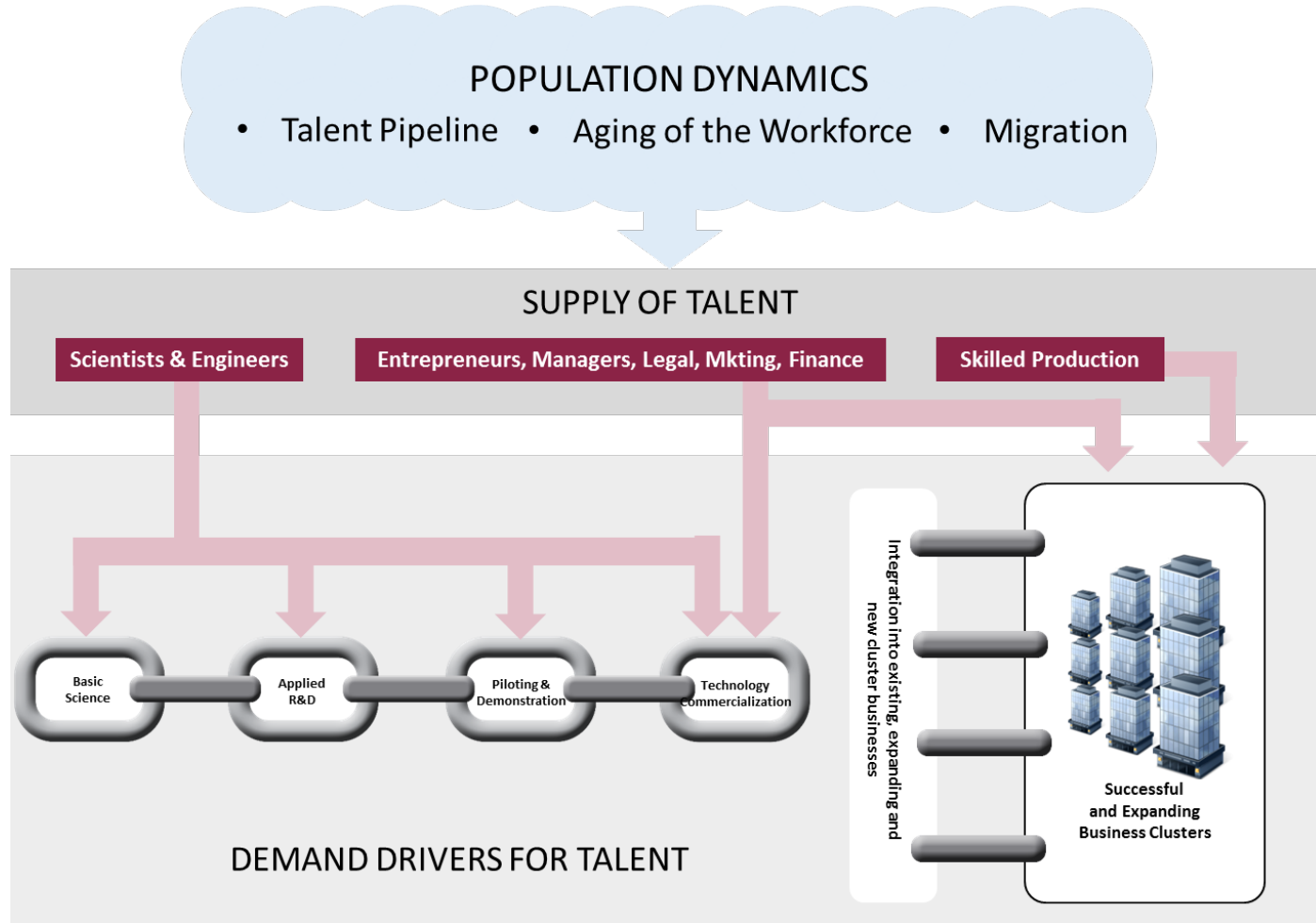
The Context: Role of Talent in Driving and Supporting Innovation

Talent = **Technology Innovators to spur innovation** + **Technology Workforce to realize economic gains from innovation**

Generate Jobs, Investments, Wealth, Pay Taxes

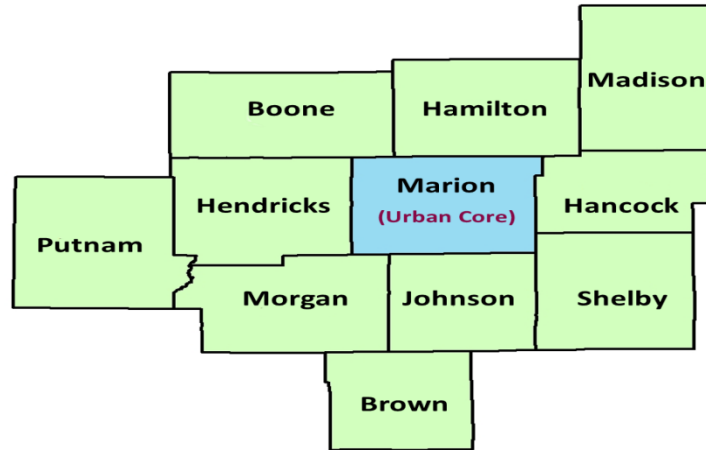


The Study Approach: How Talent and Innovation Generate a Thriving Regional Economy – *It's the Ecosystem*



Parameters of the Analysis – By Geography

Indy Metro Geography



Benchmark Regions

Measures (2013)	Indy Metro	Baltimore	Columbus	Denver	Nashville	Pittsburgh
Metro Population	1,953,613	2,770,738	1,967,066	2,697,476	1,757,424	2,360,867
Share of Population Highly Educated	20%	25%	22%	27%	21%	23%
Advanced Industry Employment	86,691	117,284	76,643	133,207	66,830	99,468
Academic R&D Anchors Present in Urban Core	✓	✓	✓		✓	✓

Parameters of the Analysis – By Talent and Industry

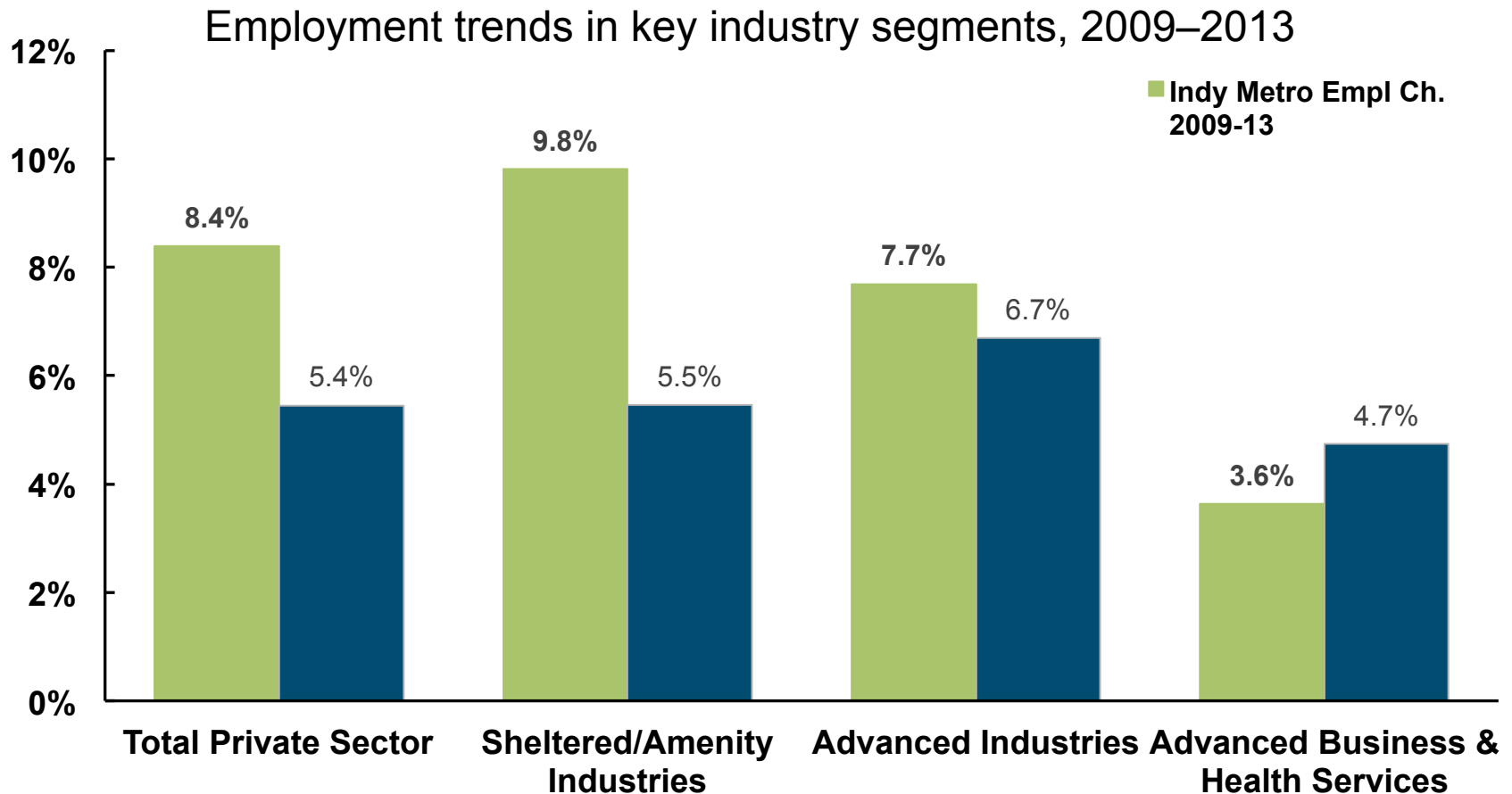
Broad Talent Categories

- **High Skilled** – Jobs requiring bachelor's degree and above, such as engineers and scientists
- **Middle Skilled** – Jobs requiring more than high school education, including some college or AA degree, post-secondary certificate, or training
- **Low Skilled** – Jobs requiring a high school degree or less

Broad Industry Categories

- **Advanced Industries** – innovation-driven, skilled and export-oriented
- **Advanced Business & Health Services** – key complement to Advanced Industries and locally, may also drive growing economic activity
- **Sheltered Industries** – offer highly valued amenities and local services

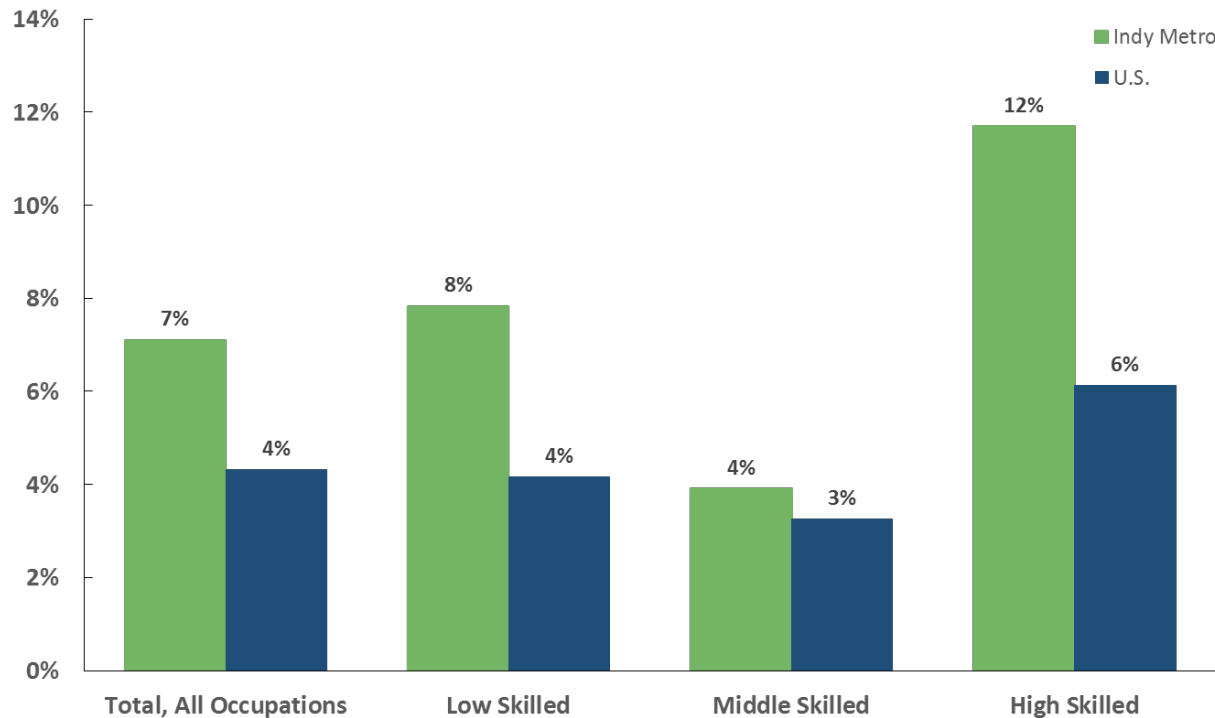
Key Findings: Indy Metro Recovering Strongly from the Recession, led by Advanced Industries and Amenity Industries



Source: Battelle analysis of Bureau of Labor Statistics, QCEW data; enhanced file from IMPLAN.

Key Findings: Reflecting Industry Growth, both High Skilled and Low Skilled Job Growth in Indy Metro Well Outpacing the Nation

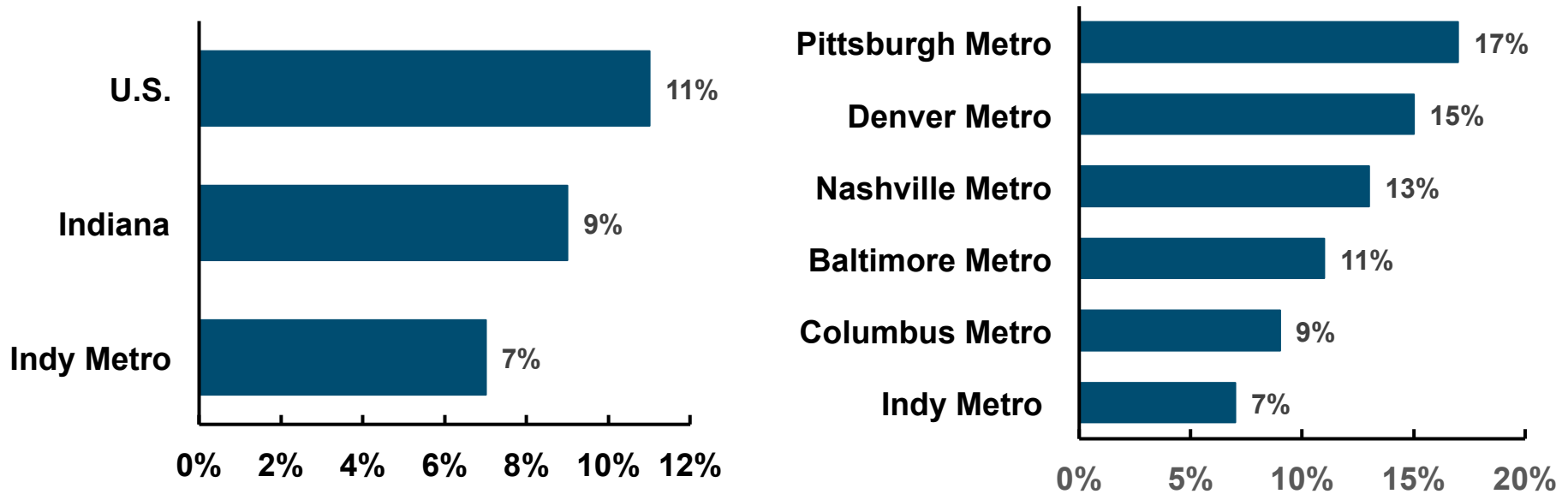
Occupational employment trends by major skills groups, 2010–2013



Source: Battelle analysis of Bureau of Labor Statistics, Occupational Employment Statistics data.

Key Findings: While Highly Educated Population in Indy Metro Growing Faster than the Overall Population Growth of 4.1%, Not Keeping Pace with Nation or Benchmark Regions

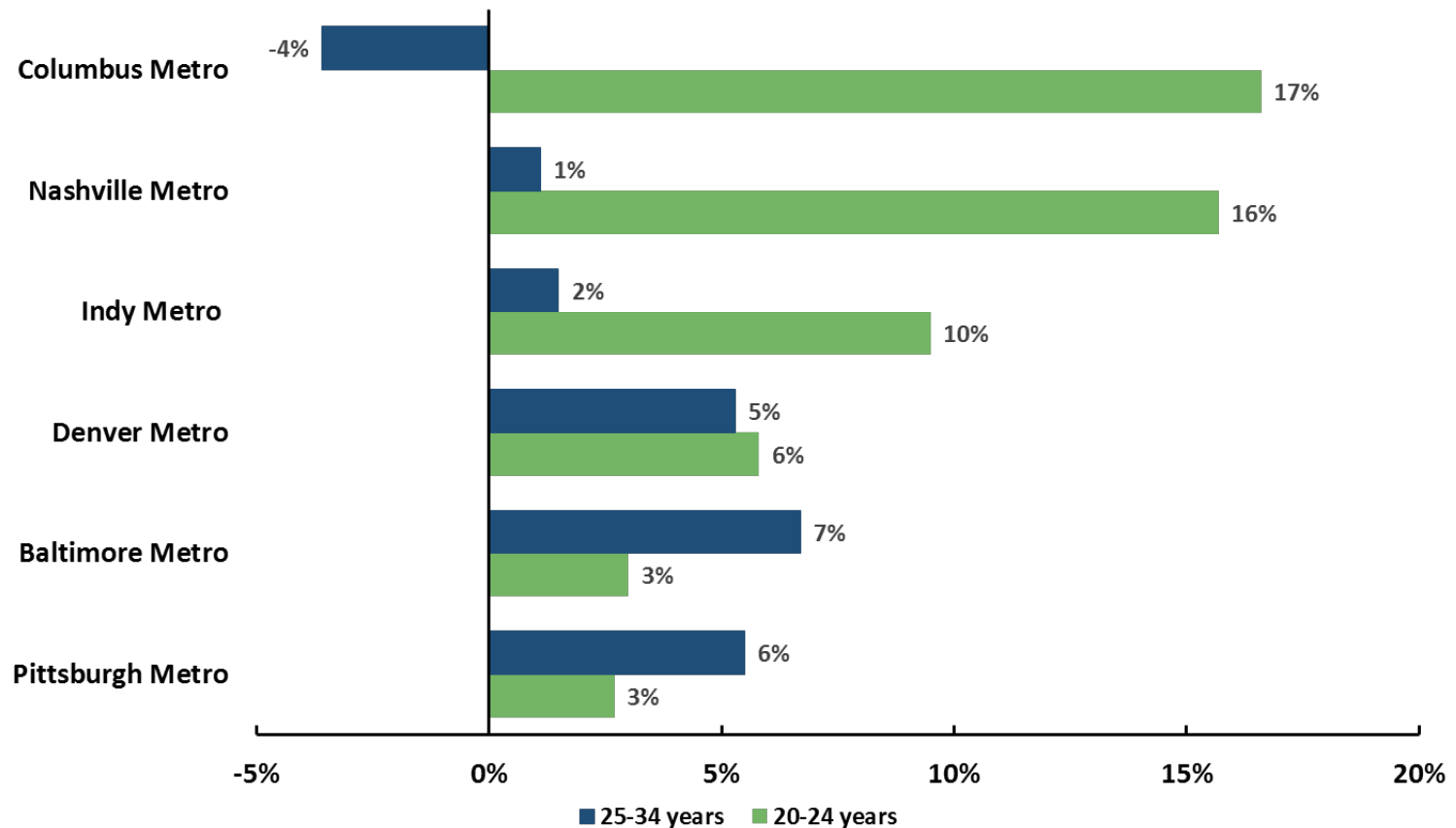
Growth in highly educated population over age 25
(Bachelor's Degree and above), 2009–2013



Source: U.S. Census Bureau, American Community Survey.

Key Findings: Indy Metro Making Solid Gains in 20-25 Year Olds, But Slower Growth for 25-34 Year Olds

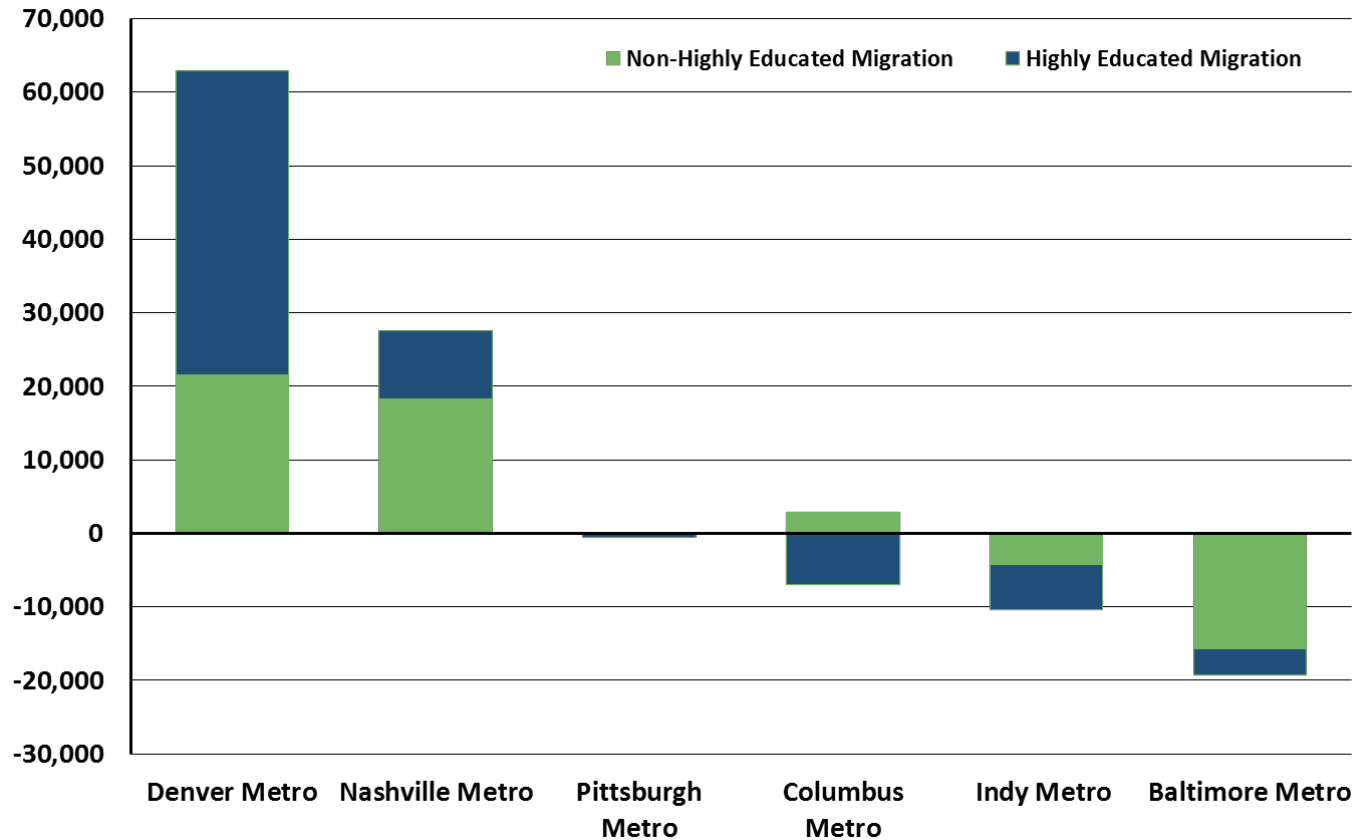
Growth in Population of Young Working Age Groups, 2009–2013



Source: U.S. Census Bureau, American Community Survey.

Key Findings: Indy Metro Not Faring Well on Net Migration to Other States

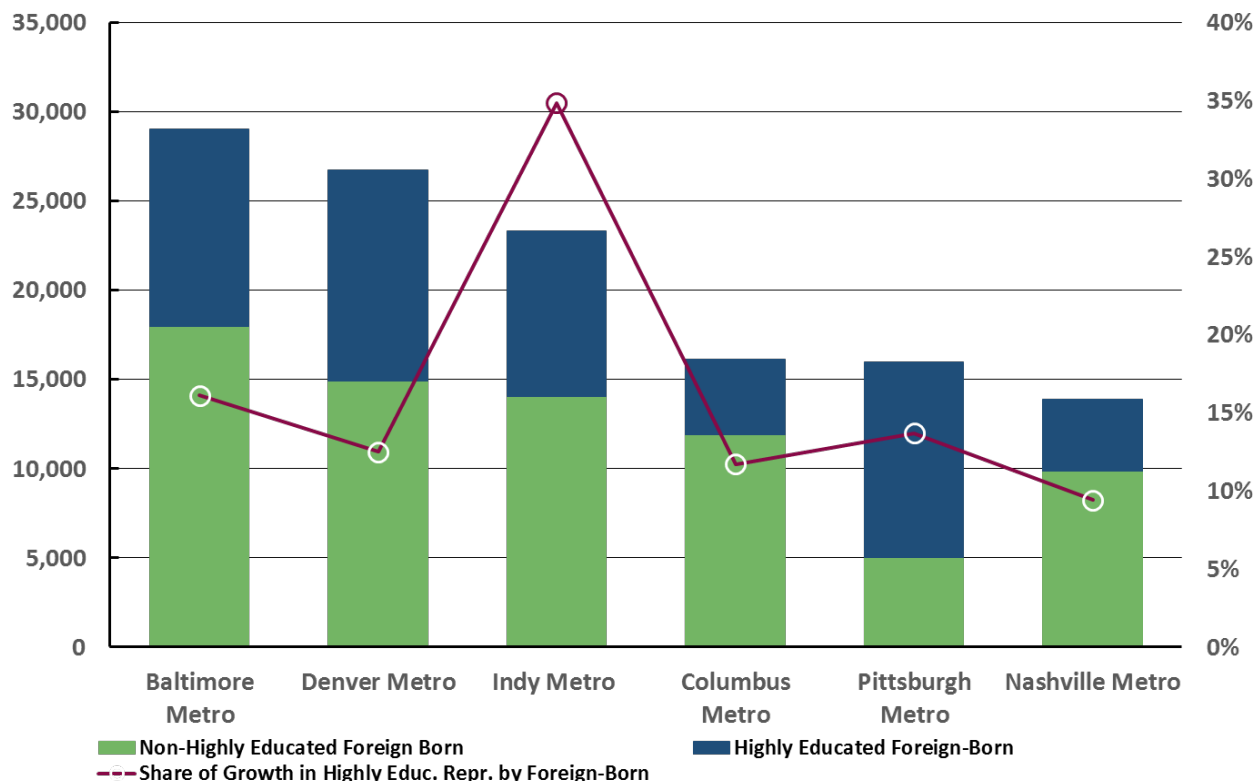
Net Migration from Region to Other States by Educational Attainment, 2009–2013



Source: U.S. Census Bureau, American Community Survey.

Key Findings: Still Indy Metro Making Strong Gains in Foreign Born Population Growth, Including Highly Educated. Indy Metro leads other benchmarks in the share that foreign born comprises of gains in highly educated.

Change in foreign-born population over 25 years old, 2009–2013



Source: U.S. Census Bureau, American Community Survey.

Key Findings: The Indy Metro has a Substantial Base of Innovation Activities, But Doesn't Translate Well to Formation and Growth of New Businesses

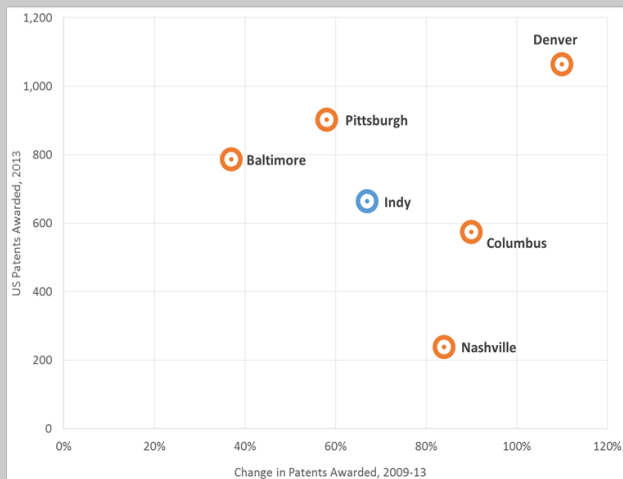
Positives

- The Indy Metro has a sizable and growing university research base.
- Indy Metro is on par with the nation and benchmarks in the generation of patents.

Weaknesses

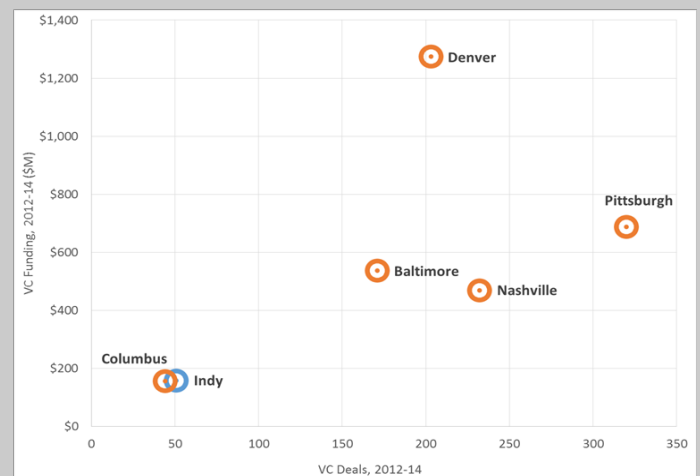
- The Indy Metro suffers from a lack of innovation capital to fuel new businesses and technology development -- raises need for place-based strategies to leverage innovation drivers.

U.S. patents awarded, 2013 and recent growth in patents, 2009–2013



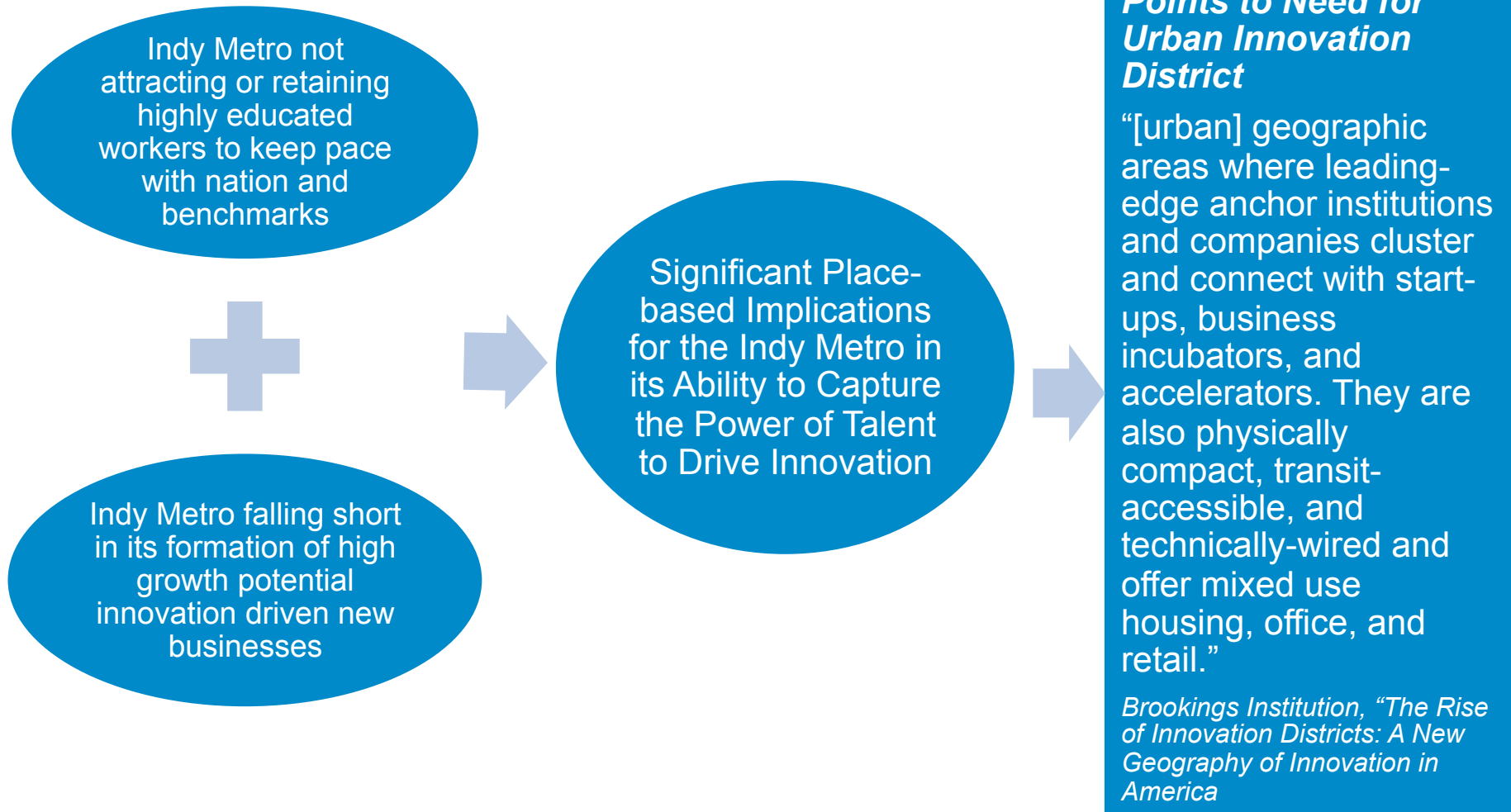
Source: U.S. Patent and Trademark Office, Patents in Technology Classes. Note: The geographic assignment of patents is based on the location of the first named inventor in the patent record.

Venture Capital Deals and Funding Amounts, 2012–2014



Source: Battelle analysis of Thomson Reuters VentureOne venture capital database.

Implications: Findings Suggest Two Longer-Term Critical Challenges for the Indy Metro in the Supply and Demand for Talent to Drive Innovation and Economic Growth:



Implications: A Closer Examination of the Dynamics of the Supply and Demand for Talent in the Indy Metro Suggests the Lack of An Innovation District is Holding the Region Back

- *Indy's urban core of Marion County is the region's center for innovation assets, but its performance is lagging.*

Innovation Assets of Indy's Urban Core:

- Institutional -- IU Health, IUPUI, Roudebush VA Medical Center, Eskenazi Hospital
- Industry -- Eli Lilly's corporate and research facilities, Rolls Royce, Salesforce, Angie's List and the new Cummins Engine campus
- 67% of Indy Metro's Advanced Industry base

Performance of Indy's Urban Core lagging:

- No growth among 25 to 34 year olds, while Denver grew by 7%, Nashville 9% and Pittsburgh 9%.
- Lowest level of growth of any region in highly educated population with a bachelor's degree or higher, rising a scant 3%, while all other regions grew by 9% or higher.
- A net migration population loss of 5,353 to other states among highly educated stands out among the benchmarks.
- In Advanced Industries, 0% growth for the Indy urban core compared to the Indy suburbs grew 28%.

The Data on Indy Metro's Lagging Urban Core Performance Compared to Benchmark Urban Cores

Urban core performance measures for benchmark regions

Performance Measures		Indy Metro Urban Core	Baltimore Urban Core	Columbus Urban Core	Denver Urban Core	Nashville Urban Core	Pittsburgh Urban Core
Advanced Industries	Job Growth from 2009–2013 (% change)	-0.1%	-8.5%	5.7%	14.6%	6.2%	9.8%
	Share of Metro Advanced Industries Employment	67%	14%	64%	31%	32%	62%
population	Total	4%	-2%	5%	6%	4%	1%
	20-24 years old	15%	5%	17%	7%	9%	5%
	25-34 years old	0%	0%	-5%	7%	5%	9%
Growth in	Highly educated	3%	9%	9%	20%	11%	17%
	Highly educated foreign-born	2,016	3,230	1,577	1,042	1,899	9,477
Net migration to other states of highly educated		-5,353	-2,281	-5,429	17,890	4,115	-247

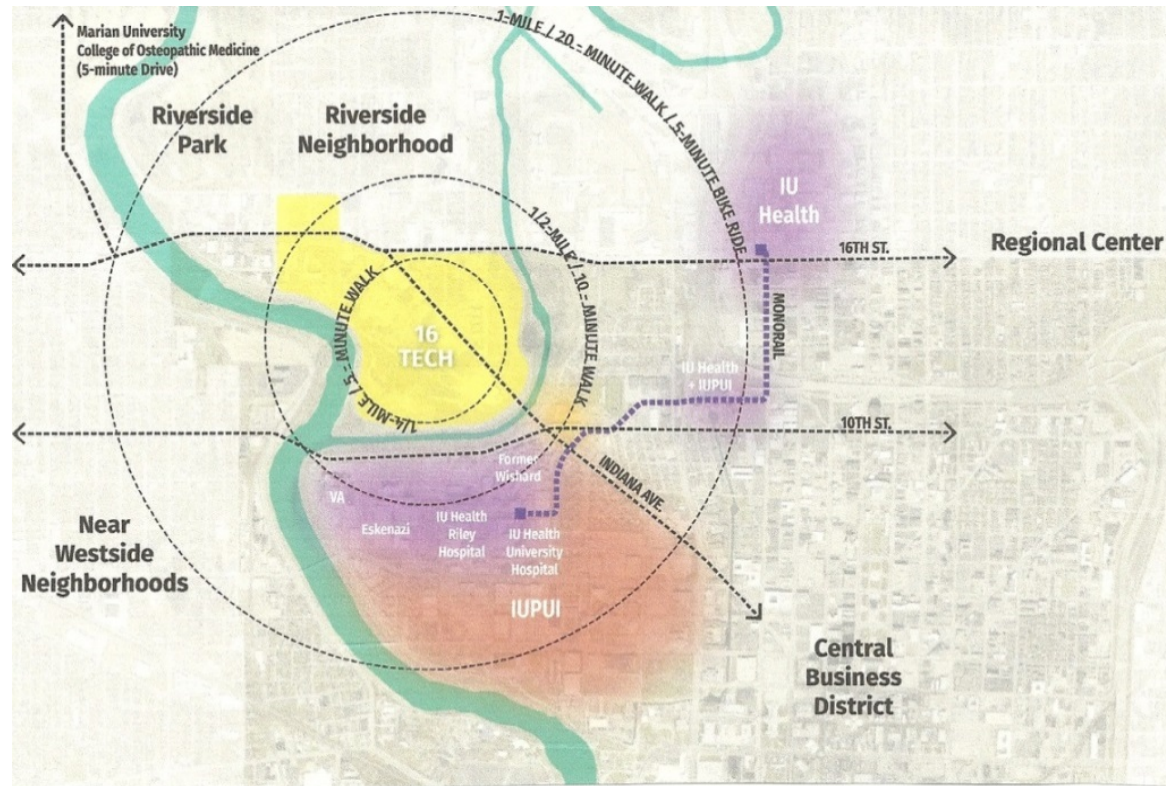
Implications: Value Proposition of Innovation Districts

- Innovation Districts combine the economic driver of talent and innovation with the powerful real estate trend of live/work/play enabled by transit and walkability
- Why does it matter? – ***Innovation Districts are likely to be more than the sum of their parts!***



Recommendations: 16 Tech Well Positioned to Be a Leading Innovation District

- 16 Tech is well-positioned to create a “livable urban setting” involving work-live-play activities with a growing base of technology space development underway to complement the Indy Metro’s research and innovation drivers in life sciences, information technology and advanced manufacturing.



Recommendations: Importance of Establishing a World Class Innovation District to Propel Economic Growth for Indy's Urban Core

- These initiatives identified based on interviews with key stakeholders from industry, business and community organizations, city government and the foundation community, as well as a review of a number of recent studies.

- **Leverage presence of Indy Metro's innovation-led anchors**, which are concentrated in Indy's Urban Core ... proximity to spur innovation matters!
- **Enhancing the commercialization** of research discoveries and technology advances through initial technology and market validation activities.
- **Improving the entrepreneurial talent** in Indiana to lead the formation of new innovation-driven businesses.
- **Ensuring the availability of specialized, multi-tenant technology space** and access to shared use labs to tap a broad range of innovation-based industry tenants.
- **Extending opportunities** for ongoing career development.

Thank You! Questions?

Mitch Horowitz

Vice President and Managing Director

**Battelle Technology Partnership
Practice**

Phone: 240-462-5456

E-mail: horowitzm@battelle.org

Battelle
The Business of Innovation

800.201.2011 | solutions@battelle.org | www.battelle.org



An Idea Exchange for Indiana Life Sciences



@BioCrossroads
#talent=innovation
#INlifesciences



<http://www.biointellex.com>

Thank You

Official Printer for Frameworx



A certified **100%** Women Owned Business Enterprise

www.milesprinting.com