



BioCrossroads[®]
where ideas find **LIFE**

IUPUI School of Engineering and Technology
Joint Board of Advisors Meeting
September 23, 2011

www.biocrossroads.com



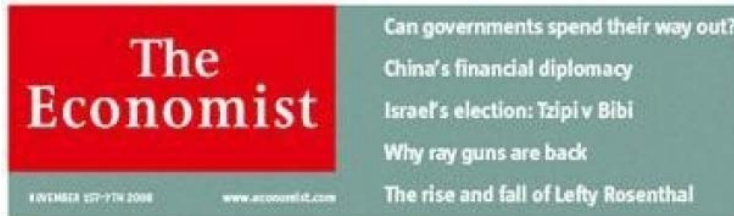
we connect



we invest



we educate



“Though every state wants to be a hub for life sciences, Indiana really is one... Life sciences accounted for 23% of all [Indiana] job growth from 2001 to 2007.”

The Economist, June 4, 2009



“This intense concentration is the magic elixir of modern economies... why San Diego and Indianapolis are global players in life sciences...”

Time Magazine Nov. 1, 2010

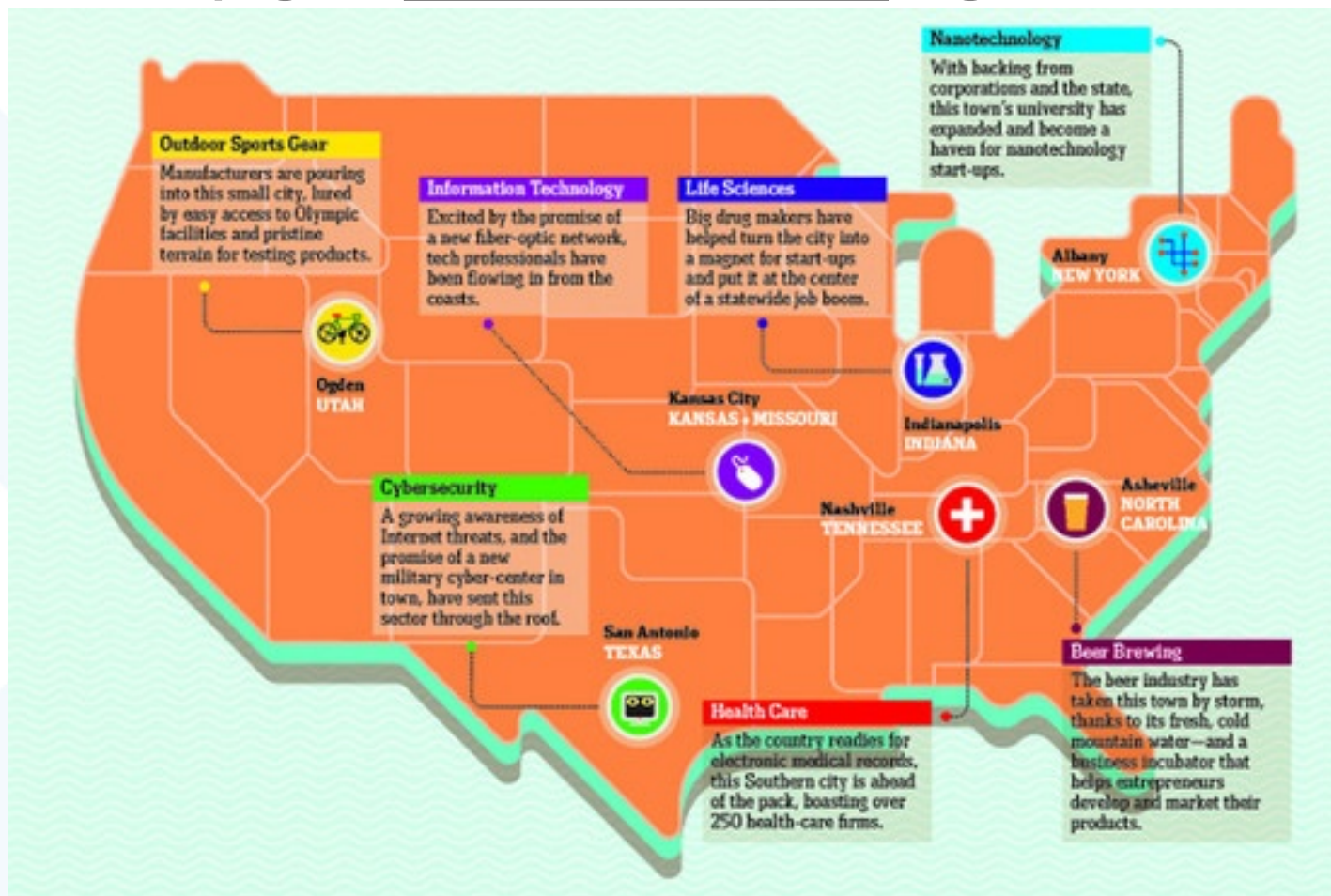


INDIANA'S STRENGTHS:

We start with an enviable number of leading life science and biotech companies. These companies put thousands of Hoosiers to work every day in great, highly skilled and high-paying jobs.

Four maps tell the story.....

“Where the Action is”, Wall Street Journal front page of The Journal Report, Aug. 22, 2011



Indiana's life sciences leaders (and workforce)

Lafayette

- Evonik (700)
- Purdue University
- Purdue Research Park

Terre Haute

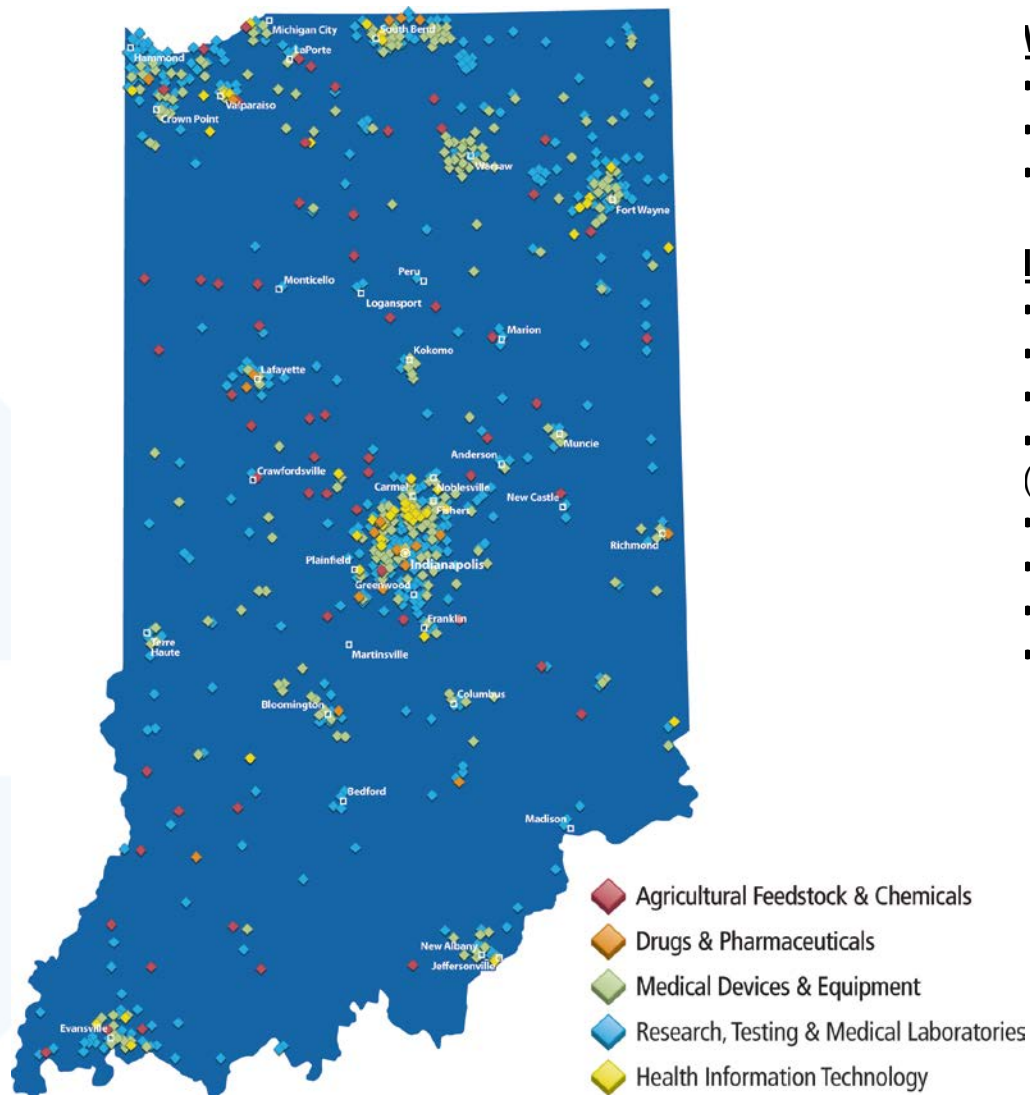
- Eli Lilly and Company (200)
- Rose-Hulman Institute of Technology

Bloomington

- Indiana University
- Baxter Biopharma Solutions (1,000)
- Cook Group (4,500)

Evansville

- Bristol Myers Squibb (300)
- Covance (200)
- Mead Johnson (1,500)



Warsaw

- Zimmer (2,800)
- DePuy (1,200)
- Biomet (1,400)

Indianapolis

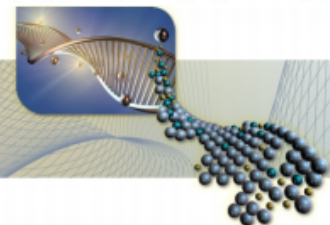
- Beckman Coulter (600)
- Covance (1,500)
- Dow AgroSciences (1,100)
- Eli Lilly and Company (11,000)
- Hologic (200)
- Medco (1,300)
- Roche Diagnostics (2,700)
- WellPoint (4,200)

Seymour/Spencer/

Batesville

- Boston Scientific (1,100)
- Cook Urology (525)
- Hill-Rom (2,000)
- UCB Group (360)

The largest 25 metro areas in the biosciences



Indianapolis has the 11th largest sector in the U.S.



Battelle
The Business of Innovation

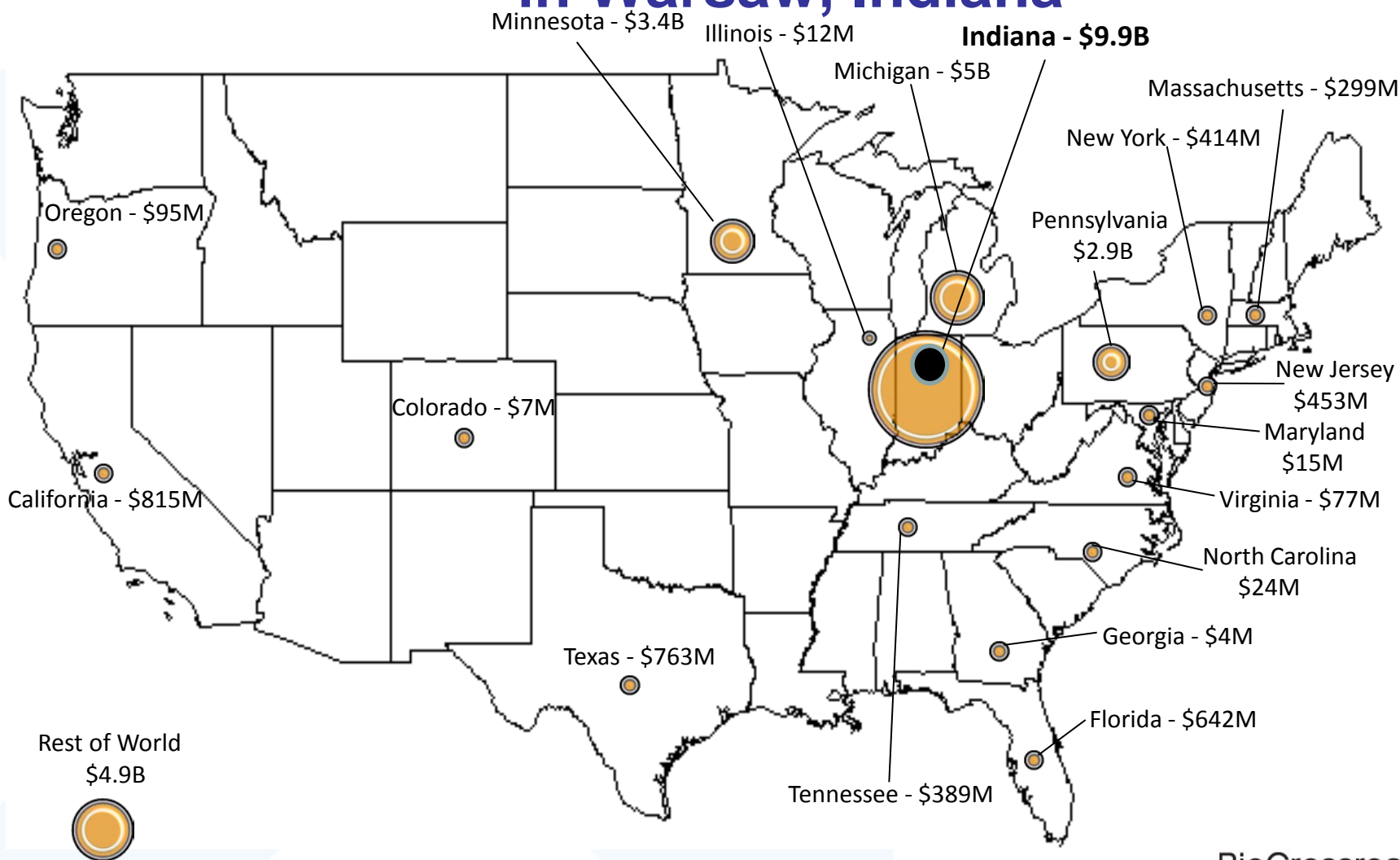
Battelle/BIO State Biosciences Initiatives 2010

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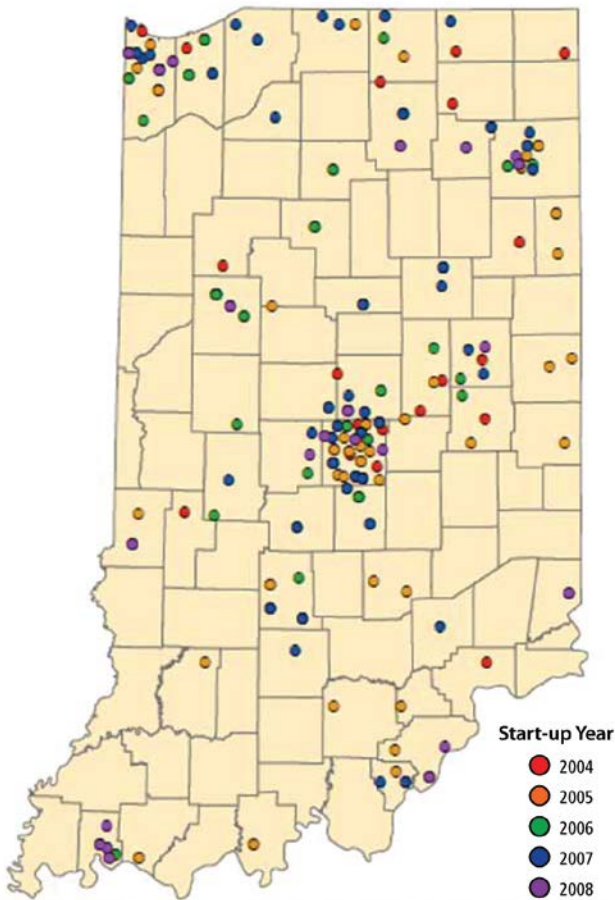
25 metro areas with the largest total employment levels (greater than 10,000) in the BioSciences by Major Subsector Composition, 2008. Battelle/BIO "State Biosciences Initiatives" 2010

BioCrossroads™
where ideas find **LIFE**

33% of the global orthopedics industry is based in Warsaw, Indiana

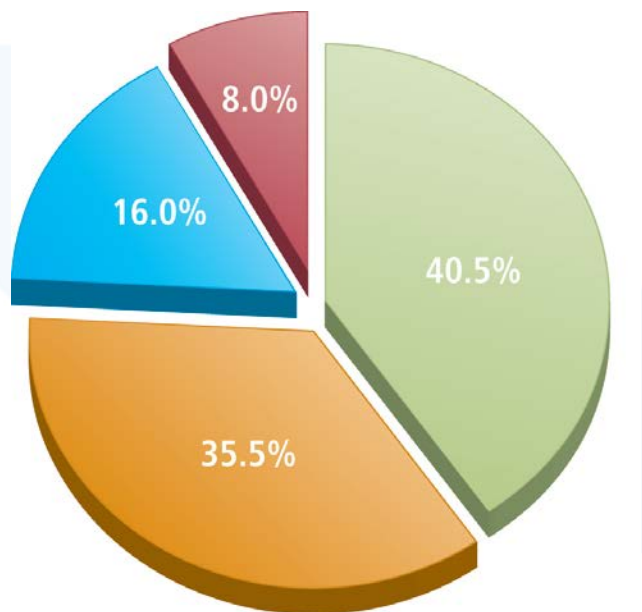


Indiana launched 220 life sciences start-up companies from 2004-2008 – and is just warming up...



- **Average of 44 start ups/year**
- **University-based incubators and research parks drive volume and geographic dispersion of start ups**
- **Company formation clustered around established life sciences enterprises**

Indiana's Life Sciences Industry Includes All Major Segments

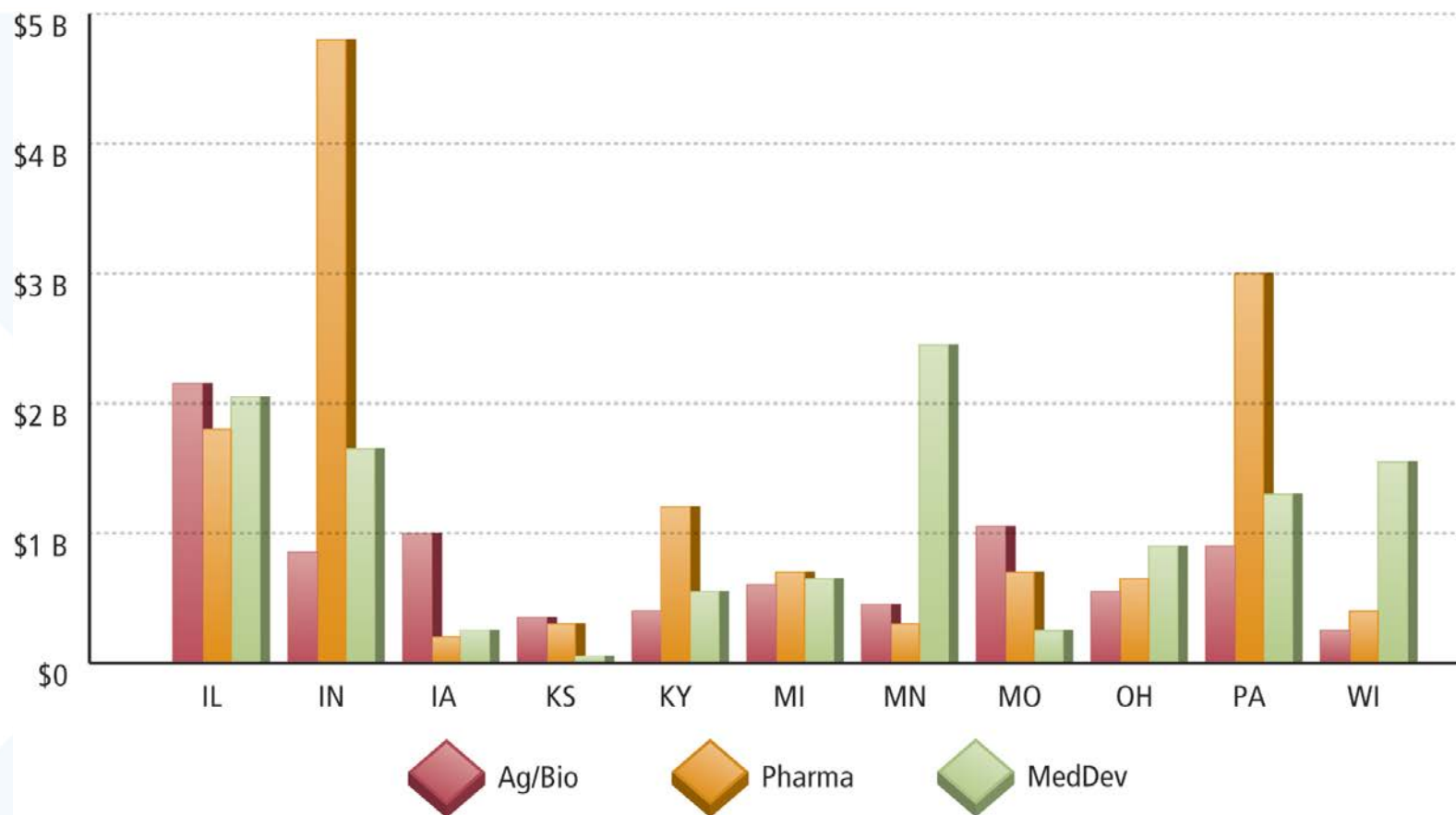


- Medical Devices and Equipment: **40.5%**
- Drugs and Pharmaceuticals: **35.5%**
- Research, Testing and Medical Labs: **16%**
- Agricultural Feedstock and Chemicals: **8%**

• Total 2009 employment across all segments was **50,000+**

UP **21.4%** SINCE 2002

Indiana stands among the top three life sciences exporters in the U.S. – behind only California and Texas; exports nearly tripled between 2002 and 2009 to \$7.4 billion



The life sciences industry has a \$44 billion Indiana impact

Economic impact indicators (2009) (Indiana Business Research Center)

Sector	Direct	Ripple Effect	Total	Multiplier
Employment				
Total	50,002	105,500	155,502	3.7
Ag/Biotech	4,002	24,000	28,002	7.0
Pharma	17,760	46,500	64,260	3.6
Med Devices	20,264	28,800	49,064	2.4
Research Labs	7,976	6,200	14,176	1.8
Output (millions)				
Total	\$26,833	\$16,840	\$43,673	1.7
Ag/Biotech	\$7,180	\$4,700	\$11,880	1.7
Pharma	\$12,286	\$7,300	\$19,586	1.6
Med Devices	\$6,244	\$4,100	\$10,344	1.7
Research Labs	\$1,123	\$740	\$1,863	1.7

What is BioCrossroads?

BioCrossroads is Indiana's initiative to build on our life sciences strengths

WE INVEST:

By launching and investing in new life sciences enterprises



WE CONNECT:

By partnering with Indiana's life sciences research institutions, corporations, philanthropic organizations and state government to build new opportunities

WE EDUCATE:

By expanding science and math education in grades K-12 and higher learning institutions



WE SPREAD THE WORD:

By marketing Indiana's life sciences industry

How BioCrossroads Works


WE INVEST by organizing and fundraising to build our own venture capital funds to provide money for new companies:

- **Indiana Future Fund** – a **\$73 million** venture capital fund-of-funds (managed by Credit Suisse, with 10 Indiana institutional investors) for early-stage life sciences investments; this fund started things off in 2003
- **INext Fund** – a **\$58 million** venture capital fund-of-funds (managed by Credit Suisse, with 6 Indiana institutional investors) raised as a follow-on fund to the Indiana Future Fund in 2009
- **Indiana Seed Fund I** – a **\$6 million** “pre-venture” fund (managed by BioCrossroads) since 2005
- **Indiana Enterprise Fund** – a **\$3 million** special purpose (health information technology commercialization) fund managed by BioCrossroads with other strategic investors since 2007

How BioCrossroads Works

WE INVEST by operating our own \$6 million **Indiana Seed Fund** to find, fund and prepare promising new life sciences companies for additional venture capital investment:

- 12 investments to date, ranging from \$250,000 to \$500,000 in therapeutic, device or diagnostic company start-ups
- All companies based in Indiana and coming from university technology transfer
- Return-driven investments made by convertible debt to avoid premature valuation issues
- Goal is venture A round or exit
- We employ a rigorous diligence process that encourages venture investors to participate early
- We actively manage all investments by taking board seats, setting performance milestones, and helping portfolio companies in their search for further funding



Beyond our investments, BioCrossroads has now supported more than 275 start-up companies and collaborations

We help these enterprises by –

- Connecting them with industry partners
- Providing basic business planning guidance
- Advising on patent and IP strategies
- Opening connections to sources for further commercial development
- Linking with additional funding sources

How BioCrossroads Works

WE CONNECT by creating and branding new and financially self-sustaining life sciences enterprises:

- **IHIE** – Indiana Health Information Exchange, Inc., a non-profit corporation advancing a national, revenue-based model for the secure sharing of clinical information among healthcare patients, providers and other healthcare entities. **IHIE has recently been recognized for its promise to bring better healthcare through better information through the award of one of 15 highly competitive “Beacon Community” grants (\$16m) from the U.S. Department of Health and Human Services (ONC).**
- **Fairbanks Institute for Healthy Communities** – a non-profit enterprise utilizing Indiana’s vast clinical resources to gather comprehensive patient clinical and biological information for the prediction, prevention and treatment of disease.
- **BioCrossroadsLINX** – a related non-profit organization specifically focused on advancing Indiana's strengths in drug development and manufacturing through educational and workforce development programs and regional collaborations.



BioCrossroads® LINX



How BioCrossroads Works

WE CONNECT by creating and branding new and financially self-sustaining life sciences enterprises:

- **Datalys Center for Sports Injury Research & Prevention** – a national non-profit providing research and surveillance services to sports and health organizations.
- **OrthoWorx** – a Warsaw-based, industry, community and educational non-profit initiative to advance and support growth and innovation within northern Indiana's uniquely concentrated, globally significant orthopedics device sector.
- **ExibHIT Indiana** (Expanding Indiana's Breakthroughs in Health Information Technology) – a branding initiative focused on advancing the development and effective use of HIT within Indiana and across the U.S. To date, and with BioCrossroads' direct facilitation, Indiana and Indiana-based organizations have received over \$50 million in federal ARRA funds to advance Indiana HIT.



WE CONNECT through the BIOCROSSROADS BOARD OF DIRECTORS

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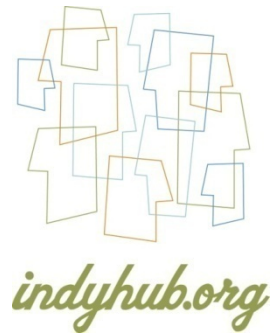
Chairman Emeritus, Eli Lilly and Company

How BioCrossroads Works

WE EDUCATE through responding to the industry's human capital needs:

- **Talent Recruitment and Retention:**

- To connect young professionals 21-40 years old in the Indianapolis area and facilitate community engagement, **BioCrossroads** formed **IndyHub** in 2005
- Supported by Eli Lilly and Company, Indy Hub actively participates in recruitment efforts for Lilly and other major companies and helps in the recruitment of scientific and management leadership for start-ups



- **Training and Workforce Development:**

- To respond to training needs -- e.g. developing the Biotech Associate's degree and market-demanded, specialized orthopedics training programs at Ivy Tech

- **Improving K-12 Science and Math Education:**

- To provide the skilled workforce for STEM businesses, in 2006 **BioCrossroads** formed the **I-STEM** Resource Network
- Working with State of Indiana, educators and industry on specific steps to advance science education reform
- Working with the University of Notre Dame to broaden availability of AP courses in STEM throughout Indiana



How BioCrossroads Works

WE SPREAD THE WORD by building awareness and marketing Indiana's life sciences industry

- BioCrossroads provides the public profile for the life sciences as a leading economic sector in the state of Indiana.
- Representatives are quoted frequently in local and national publications and serve as speakers at regional and national life sciences conferences
- BioCrossroads.com gets more than 230 hits per day and visitors spend more than 3 minutes on the site
- BioCrossroadsLINX.com serves as a national resource for information on Indiana's contract services providers

✕ we connect ✕ we invest ✕ we educate

A Catalyst for Life Sciences

BioCrossroads makes connections for Indiana's life sciences companies by partnering with universities and industry. Our venture capital funds accelerate life sciences growth and bring vital support to our entrepreneurs. Our focus on better K-12 science and math education will bring a brighter tomorrow for Hoosier students. Advancing the state's life sciences leadership, BioCrossroads is working to strengthen Indiana's health, economy and future.

Discover how the best ideas find life. [Biocrossroads.com](http://biocrossroads.com)

Supported more than 250
companies and collaborations to date

Raised more
to build new life

Partnering with
research, philanthropy
government and en

A Catalytic State

- Over one-quarter of a billion dollars raised for Indiana life sciences opportunities
- Indiana's life sciences sector has a \$44 billion direct economic impact
- In 2010, Indiana's life sciences exports totaled over \$9 billion, ranking the third highest in the United States
- Indiana has the third highest life sciences employment concentration in the country with over 50,000 workers, including 8,800 jobs added from 2002 to 2009

BioCrossroads[®]
where ideas find **LIFE**

Indiana is a national center for the life sciences, creating collaborations and opportunities, growing our economy, and advancing life-saving medical innovation.
Learn more at www.biocrossroads.com

where ideas find **LIFE**

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where ideas find **LIFE**

AND WE DELIVER: Since 2003, BioCrossroads has --

- Directly raised over **one-quarter of a billion dollars (and counting)** of market capital and philanthropic funding to identify and pursue promising new Indiana life sciences opportunities
- Organized two life sciences venture capital funds – the **Indiana Future Fund** and the **INext Fund** – and organized and actively managed both the **Indiana Seed Fund** and the **Indiana Enterprise Fund**
- Brought venture capital investment from these **four funds** to **24 start-up** Indiana life sciences companies
- Attracted **over \$260 million** of additional outside venture capital to join our Indiana funds and companies
- Formed **8 new sustainable enterprises** (e.g., Fairbanks Institute for Healthy Communities, IHIE, OrthoWorx) to advance signature Indiana life sciences strengths (and resulting so far in a collective total of more than **100 new jobs**)
- Significantly assisted in the attraction of over **3,000 new jobs** in existing life sciences companies expanding or consolidating operations in Indiana
- Elevated Indiana's visibility on the national map of **biotechnology, medical device and healthcare IT centers**