

Focus

Measuring innovation to identify challenges and opportunities

Submitted by Chicago Metropolitan Agency for Planning

Economic innovation drives productivity and job creation. It is what separates metropolitan regions that compete effectively from those that tend to be left out of today's global economy.

Metropolitan Chicago has a tradition of innovative commerce and industry, which for decades has made our region's economy the envy of other U.S. cities. But over the last decade, that competitive advantage has eroded for various reasons, including the lack of workforce development and education programs that respond directly to the needs of employers.

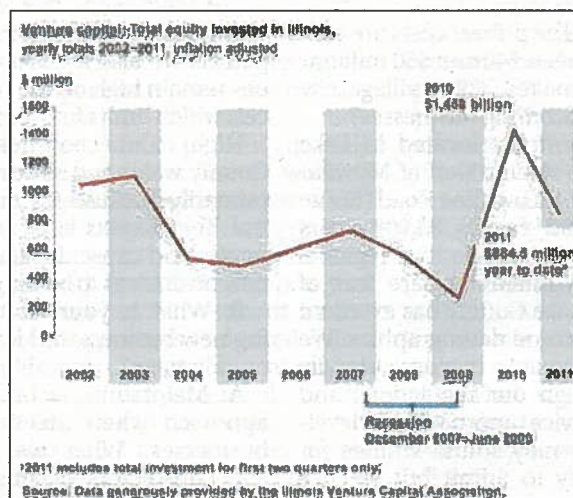
To shore up our traditional advantages, we need to measure and understand innovation as a path to sustainable prosperity. Economic development professionals, civic organizations, government leaders, and the business community agree on its importance, yet, as a society, we are just beginning to gauge the indicators that demonstrate whether a region will succeed at fostering innovation and reaping its benefits.

GO TO 2040, the first comprehensive plan for northeastern Illinois in more than 100 years, states that the region should track innovation, using data indicators to reveal opportunities and challenges that will inform policy development. The Chicago Metropolitan Agency for Planning is leading implementation of GO TO 2040 and has partnered with the Chicagoland Chamber of Commerce, World Business Chicago, the Illinois Science and Technology Coalition, and the Illinois Innovation Council to collect, analyze, and share regional and statewide innovation data through the Illinois Innovation Index. Available at www.illinoisinnovation.com/innovationindex/, the monthly Index highlights a different innovation "metric." To facilitate further research, all data for the Index is available from MetroPulse (www.metropulsechicago.org), the regional data portal that was created by CMAP and The Chicago Community Trust website to encourage informed decision making and to track implementation of the regional plan.

In recent months, the Index has examined eight different innovation metrics, including venture capital, research and development, and patents.

Venture Capital

Venture capital provides the capital that new and growing companies need to bring ideas and innovations to the market. Over the past decade, venture capital investment in Illinois companies has struggled to reach the peak of investment seen in 2003 at more than \$1.1 billion (See chart 1).



SOURCE: ILLINOIS INNOVATION INDEX, FEBRUARY 2012

Investment in 2010 spiked to a high of nearly \$1.5 billion, but it dropped to \$865 million as of August 2011.

Research and development funding

Research and development fuels innovation, leading to new technologies, processes, and overall product advancements. Nationally, universities, laboratories, and corporations spend hundreds of billions of dollars each year on R&D.

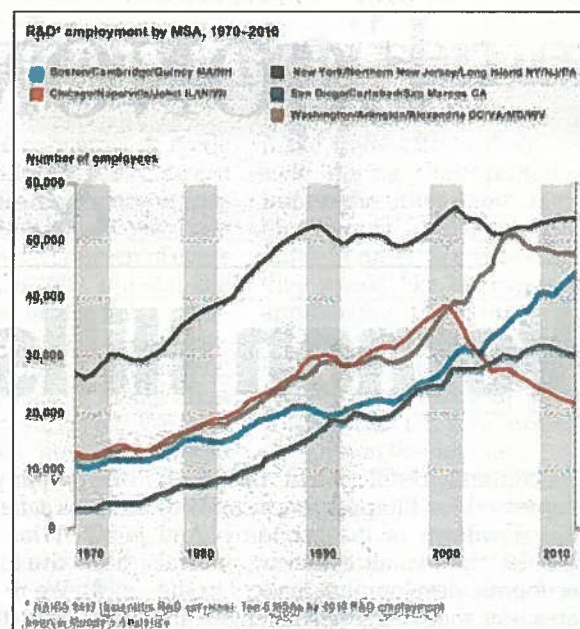
Illinois is fortunate to have more than 440 corporate R&D facilities and more than 200 academic, government, and nonprofit research institutions.

Despite these strengths, R&D employment in the Chicago region has been declining over the last decade, while other major metropolitan areas have seen growth (see chart 2). The exact causes are not yet clear, but this concerning trend is being explored through the Illinois Innovation Index.

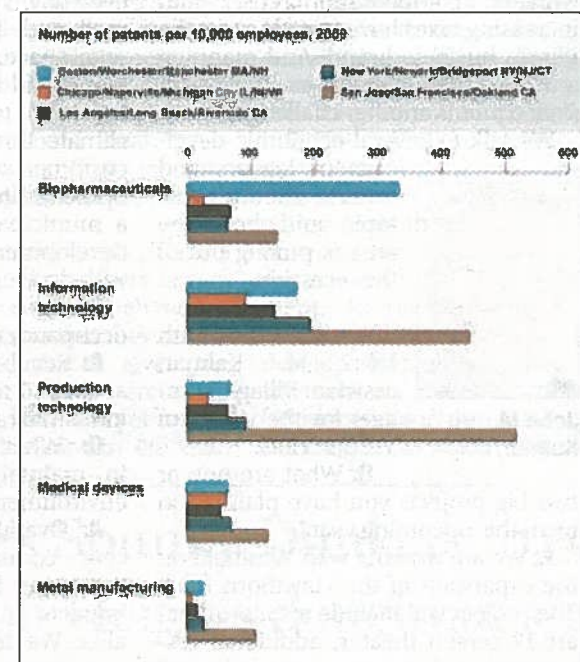
Patents

Patents are an important measure of innovation, signifying the critical transition of R&D from discovery to commercialization, when innovations are brought to the market.

Patent levels reflect the concentration of innovation intensive companies, level of R&D funding, and the collaboration between research institutions, the private sector, and funders. Patent data reveals which sectors of the economy are thriving or declining. For example, from 2006 to 2010, metropolitan Chicago experienced a dramatic increase of more than 300 percent in patents for financing and data



SOURCE: ILLINOIS INNOVATION INDEX, SEPTEMBER 2011



SOURCE: ILLINOIS INNOVATION INDEX, MARCH 2012

processing (from 29 to 117 patents).

Comparing patent data across regions also shows which industries give the Chicago area a competitive advantage. For several innovation-intensive industry clusters, Chart 3 shows how Chicago compares to other regions in terms of patents.

For more information about how the region is addressing innovation, see Moving Forward, 2010-11, the first GO TO 2040 implementation report, at www.cmap.illinois.gov/moving-forward/2010-11. CMAP and its partners are working to nurture regional industry clusters, creating a culture of innovation that increases the commercialization of R&D results. The Illinois Innovation Index illuminates many areas of improvement for the metropolitan Chicago region and state of Illinois. Policymakers need just this kind of data and analysis to make better decisions in guiding programs for our economic future.