

## Industrial Performance Center

The [Industrial Performance Center](#) (IPC) is dedicated to the study of innovation, productivity, and competitiveness in the US and around the world. The center specializes in bringing together multidisciplinary teams of researchers in engineering, science, management, and the social sciences to carry out innovative applied research on industrial growth and transformation, national and regional economic growth and competitiveness, and innovation performance. The IPC seeks to help leaders in business, government, education, and other sectors of society better understand global industrial developments and create practical new approaches for strengthening public policies, business strategies, technical practices, and educational programs. Our interdisciplinary teams observe, analyze, debate, and report on strategic, technological, and organizational developments in a broad range of industries and examine the implications for society and the global economy. The IPC often convenes key actors from the public, private, and nonprofit sectors to discuss the challenges and opportunities facing firms, industries, regions, and countries in an increasingly dynamic, competitive, and global economy.

### Research Highlights

The center's research is currently organized around five major themes: innovation in the energy industries, production in the innovation economy, regional innovation systems, new concepts and frameworks for managing innovation, and globalization and global value chains. The following presents research highlights from the 2012–2013 academic year.

#### Energy Innovation

As an outgrowth of the IPC's multi-year Energy Innovation Project (EIP, completed in 2011), in spring 2013 the IPC launched a series of regional roundtables to discuss with energy stakeholders the path forward for accelerating innovation in the power sector in the US. Working in partnership with Advanced Energy Economy, a business-led nonprofit that promotes the adoption of clean energy technologies, the roundtables brought together leaders of electric utilities, advanced energy businesses, and regulatory agencies to discuss how new technologies and services can be adopted more rapidly in the electric power sector. One of the major themes to emerge from the Energy Innovation Project was the important role regions can play in catalyzing innovation in the energy sector. These roundtables provide a means for exploring a regional approach to innovation with leadership from across the country and within specific regions. The goal of the meetings is to develop both a research agenda and on-the-ground pilot projects to stimulate new thought and collaborations in existing regional energy systems around the US.

The first meeting was held in March 2013 at MIT and addressed broad national challenges to energy innovation adoption, and, in particular, the relationship between utilities and advanced energy companies. The second meeting was held in June in San Antonio, TX, hosted by CPS Energy; participants looked specifically at the case of Texas. The third meeting was held in August in Aspen, CO, with energy leaders from the western states. A final roundtable will be held in New York in fall 2013. Summary papers will be generated from each of the roundtables and synthesized into a white paper to be finalized in the beginning of 2014.

## **Production in the Innovation Economy**

The IPC completed its initial work as part of the MIT initiative, [Production in the Innovation Economy](#) (PIE), which seeks to analyze the relationship between innovation and production in the United States and propose ways in which the US might capture more of the downstream benefits of its innovative capacity. PIE is an Institute-wide effort modeled on the successful Made-in-America project of 20 years ago, which led to the creation of the IPC. Professor Suzanne Berger, an IPC affiliate, co-chaired the initiative with professor Philip Sharp. The project brought together MIT faculty from a variety of disciplines—economics, engineering, political science, management, biology, and others—to examine US manufacturing in the 21st century.

With funding from the Kauffman Foundation, the IPC led one of the central research modules of the PIE initiative on how innovative companies that require production capabilities scale up from prototypes to commercial production. A working paper was produced and the results were presented at an MIT event at the National Academy of Sciences in Washington, DC, in February 2013 and again in May to the Academy's Committee on Science, Technology and Economic Policy; the results were also presented in Tokyo in March to Keidanren, the main Japanese business association. The official release of the PIE results will take place in September 2013 at MIT, at which the IPC will lead a session on scaling innovative companies in the US.

## **Regional Innovation**

The IPC continued to work in a variety of ways on topics related to regional innovation systems. The IPC hosted the winter meeting of the Massachusetts Biomanufacturing Roundtable to discuss the region's production capabilities in cell therapy and regenerative medicine, bringing together for the first time industry leaders in these fields as well as research hospitals to discuss opportunities for collaboration.

The IPC also hosted visitors from Brazil and Puerto Rico to discuss regional innovation systems, using MIT and Massachusetts as a case study. The IPC entered into discussions with leaders from Brazil about possible collaborations in the future.

## **New Concepts and Frameworks for Managing Innovation**

The IPC continued its research project, *Managing Community: The Organization and Management of Federal Research Funding Agencies*, sponsored by the National Science Foundation's Science of Science and Innovation Policy division. The team, led by professor Michael Piore and including executive director Liz Reynolds and Sloan School of Management PhD student Phech Colatat, is studying the organization and management of three federal agencies—the Defense Advanced Research Projects Agency, the National Institutes of Health, and the National Science Foundation—that fund scientific and engineering research to identify the key differences among these agencies and their effect upon research outcomes and the behavior of the scientific community.

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