

## Industrial Performance Center

The [Industrial Performance Center \(IPC\)](#) is dedicated to the study of innovation, productivity, and competitiveness in the United States 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 applied research on industrial growth and transformation as well as national and regional economic growth and competitiveness.

The IPC seeks to help leaders in business, government, education, and other sectors better understand global industrial and technological developments. It strives to create practical new approaches for strengthening public policies, business strategies, technical practices, and education programs. The IPC often convenes public, private, and nonprofit sector leaders to discuss the challenges facing firms, industries, regions, and countries in a changing economic and technological environment.

### Research Highlights

The center is currently focused on research in three areas: work of the future, advanced manufacturing, and systems of innovation and production.

#### Work of the Future

In 2018, President Reif convened the Work of the Future Task Force to understand and reinvent the work of the future. Covering all MIT schools and the Schwarzman College of Computing, the task force engaged more than 20 faculty and 2- graduate students across a dozen departments. It also brought together an advisory board of more than 20 distinguished leaders from industry, government, and nonprofit organizations.

In November 2020, the task force released its final report, which was featured in the *New York Times* and other media outlets. The final report was a culmination of two years of research across disciplines, including 19 research briefs and 13 working papers. Since the task force's final report, there has been continued interest from policymakers, industry leaders, and the public. Many seek to understand how to implement the report's recommendations to shape technology, innovate in skills training, and improve job quality.

Several strands of research from the task force are ongoing, including research on automation in the healthcare industry that examines the consequences of robotic process automation and artificial intelligence for administrative and clinical workers. A global research network—including partners in Brazil, Turkey, and Malaysia—is conducting comparative research on the impact of new technologies on the workforce across national contexts.

#### Advanced Manufacturing

IPC researchers are engaged in two research streams related to advanced manufacturing in the United States.

The first focuses on manufacturing in response to the COVID-19 pandemic. In partnership with the University of Massachusetts Lowell, Worcester Polytechnic Institute, and the Massachusetts Technology Collaborative, a team from MIT studied the role of manufacturers in responding to the supply and demand shocks of the pandemic. The focus of this research was to identify the role of “manufacturing ecosystems” — networks of market and nonmarket actors focused on improving manufacturing performance—in meeting spikes in demand for personal protective equipment (PPE) and other critical goods during the pandemic. This research was funded by the National Science Foundation.

The second manufacturing research stream aims to identify policies to improve the capabilities of the US manufacturing workforce. Sponsored by the Defense-Wide Manufacturing Science and Technology Program and in partnership with the Initiative for Knowledge and Innovation in Manufacturing, IPC researchers have studied the barriers to improving US manufacturing competitiveness. The key finding from this research has been that small and medium enterprise (SME) manufacturers in the United States often lag behind technologically, which helps explain low productivity growth and stagnant wages at these firms. This research finds that supporting technological upgrading at SMEs can create opportunities for workforce development and training and improved job opportunities in US factories.

### **Innovation in Brazil**

Since 2015, the IPC has been in a research partnership with Serviço Nacional de Aprendizagem Industrial in Brazil. The research continues with engagement from multiple IPC affiliates, including Postdoctoral Associate Cauam Ferreira Cardoso and Professor Michael Piore, whose joint work explores the role of collaborative innovation networks in Brazil. Senior Researcher Tim Sturgeon continues to conduct collaborative research with partners in Brazil, in addition to his work coordinating IPC’s Global Research Network.

### **Other**

After more than a decade as executive director of the IPC, Elisabeth Reynolds joined the Biden Administration as special assistant to the president for manufacturing and economic development on the National Economic Council. Ben Armstrong was appointed interim executive director on April 1, 2021.

**Ben Armstrong**  
**Interim Executive Director**