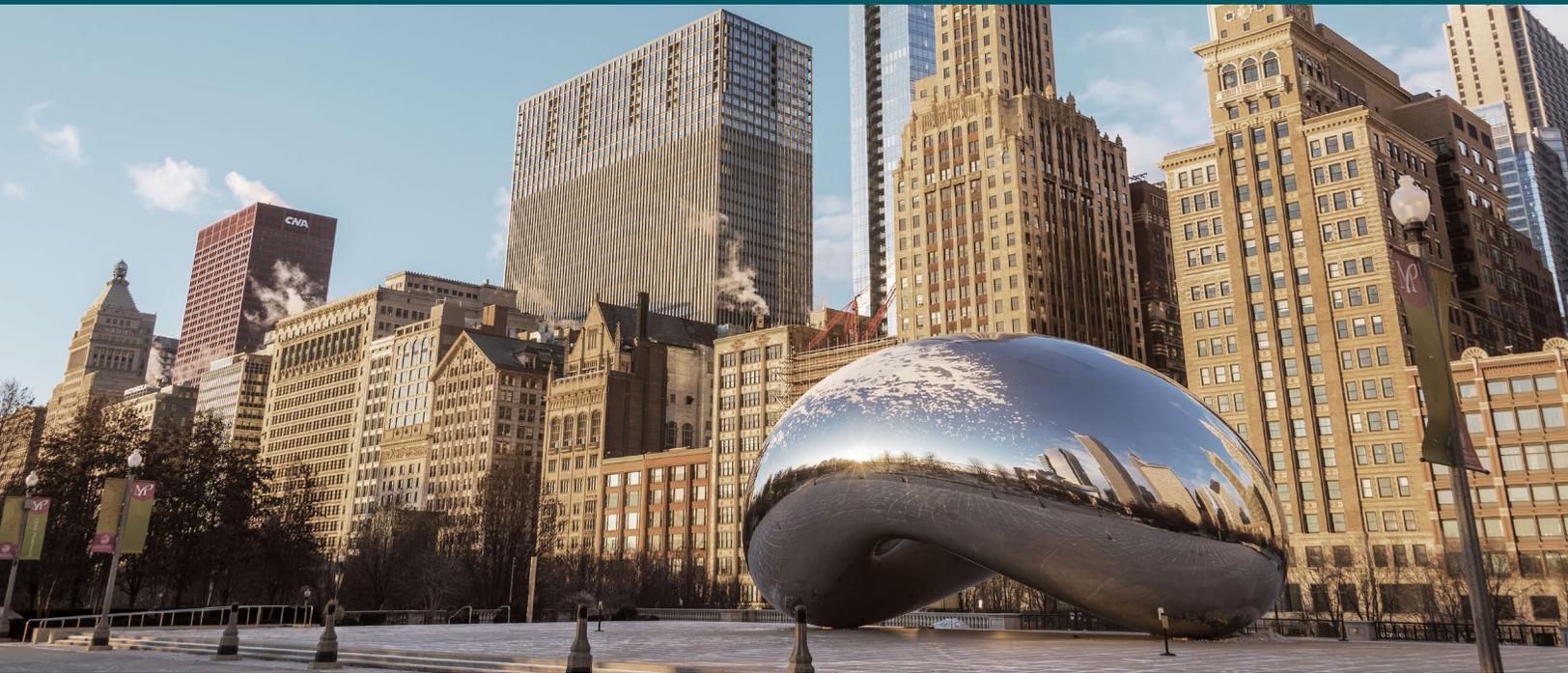


CHICAGO'S INNOVATION ERA: 3 INDUSTRY SECTORS ARE LEADING THE WAY

A COMMERCIAL BANKING PERSPECTIVE



For decades, Chicago has been a hub for many industries in the U.S. as a result of its central location, access to waterways and the ability to reach over two-thirds of the country in less than a day's drive. These realities have historically attracted top-tier companies and talent that have played essential roles in developing the city's reputation for vibrancy and innovation.

But the Great Recession took its toll on many industries and cost the city 62,000 jobs in its manufacturing sector¹ – one of its most revered and traditionally resilient industries. Fortunately, many of the city's pillar industries – manufacturing, transportation and technology – are experiencing a surge of growth and innovation that is generating benefits for most businesses in the region.

ADVANCED MANUFACTURING

Advanced manufacturing is taking off in Chicago and what was once defined by the assembly line has become smarter and sleeker. This is no longer an industry of large, cumbersome machinery but rather one with highly flexible, cost-efficient, data-driven processes. For example, factories now use robots for menial tasks, freeing up time for workers to focus on more meaningful work. With new technologies, managers can rapidly prototype and test new products before mass producing, as well as monitor production data remotely.² These investments bode well for Chicago, seeing as three-quarters of U.S. manufacturing executives expect to see improved productivity as a result of advanced manufacturing.³

But the benefits are not limited to productivity as costs are being reduced by 20 to 40%⁴, allowing smaller players to become more competitive and gain market share.

To further manufacturing advancements, the city has begun creating infrastructure to support the sector. In 2015, a digital manufacturing incubator called the Digital Manufacturing and Design Innovation Institute (DMDII) opened on Goose Island. Its goal is to attract talent and further the development of manufacturing technologies, for which it has already received over \$70 million in federal grants, \$10 million from the City of Chicago and over \$1 million from corporate sponsors.⁵ Some of their existing ventures include real-time diagnostics and troubleshooting, mobile computing and data visualization. Furthermore, the DMDII expects to add 1,000 new jobs to the city's existing workforce.⁶ Ultimately, advanced manufacturing is creating robust opportunities for the region and helping companies to reduce costs and improve productivity.

TRANSPORTATION

Chicago has been at the center of transportation and distribution networks nationally and globally for decades. Its geographical position makes it a natural nexus for many industries. However, the popularity of the hub city has led to congestion and a "bottleneck" effect, slowing momentum for businesses where every minute is critical.

Rail, trucking and aviation have all experienced congestion woes and stand to reap the benefits of investments in transportation innovation.



- Over a quarter of U.S. rail traffic touches Chicago⁷ and solutions for the resulting strain on rail traffic have come in the form of the Chicago Region Environmental and Transportation Efficiency Program (CREATE) – a private-public effort to fund new infrastructure and equipment upgrades to increase jobs, safety and the efficiency of the Chicago rail system.
- The successful O’Hare Modernization Program (OMP) was a \$15 billion endeavor to enhance and streamline the runway, terminal and roadway systems that come and go from the airport. OMP is paying dividends by contributing more than \$18 billion in annual activity to the region’s economy, including an estimated 195,000 new jobs in construction, design and other fields.⁸ Furthermore, since the start of the program, Chicago’s use of intermodal transportation has grown by over a quarter.⁹

Ultimately, the benefits of transportation innovation are two-fold: increased efficiency that makes the hub city an essential part of the supply chain and a strengthened economy.

TECHNOLOGY

When thinking of tech hubs, places like Silicon Valley or Cambridge, Massachusetts, typically come to mind but surprisingly, Chicago ranks as the 5th largest and 11th fastest growing tech market in the country and has the 2nd highest number of high-tech startups.¹⁰ Some of the most well-known start up success stories – such as Groupon and Grubhub – began in the Windy City.¹¹

One catalyst for this has been incubators like 1871 – the city’s leading tech startup center. Named for the year of the famous Chicago fire, 1871 received its original grant of \$2.3 million from the state of Illinois to fund innovation and job growth in the region.¹² Corporations such as Google and Comcast have provided financial support as well, while top universities – including the University of Chicago, Northwestern University and Illinois Institute of Technology among others – have partnered with the innovation incubator to facilitate educational opportunities and space for students and faculty to work on their businesses and participate in Chicago’s entrepreneurial community.¹³

Already the birthplace of over 300 companies, 1871 has fostered companies like SparX, which has introduced a new, safer ignition technology now being used in automobile airbags and mining and demolition explosives.

The relationship between technological innovation and the progress of Chicago’s core industries is highly symbiotic. In advanced manufacturing, digitization has begun to permeate the full gamut of the production process. Rapid technology improvements in sensors, robotics and nanomaterials are lowering the cost of production and increasing performance, which is ideal given the mounting pressure for companies to improve productivity while being increasingly responsive to customer desires. The city that fostered the invention of the cell phone and the first wireless remote control¹⁴ shows no signs of slowing.

WHAT’S THE FUTURE FOR CHICAGO?

Big cities thrive on innovation and rightly so. Innovation attracts talent which in turn leads to more jobs, commerce and investment. It benefits everyone and once started, grows exponentially. But innovation takes capital and a strategic partner to help navigate challenging economic and regulatory environments. Our Chicago team of commercial banking specialists has the expertise and resources to help you reach your business objectives in this promising marketplace.

ABOUT CITIZENS COMMERCIAL BANKING

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¹ Chicago Tribune, June 2014

² “Why Advanced Manufacturing Will Boost Productivity”, Boston Consulting Group, 2015

³ Ibid.

⁴ Ibid.

⁵ DMDII.org, 2016

⁶ World Business Chicago, 2015

⁷ Medill Reports Chicago, 2015

⁸ Chicago Department of Aviation, 2015

⁹ Crain’s Chicago Business, 2015

¹⁰ CBRE.com, 2015

¹¹ Forbes.com, 2015

¹² Ibid.

¹³ 1871.com, 2016

¹⁴ Chicago Tribune, 2014