

Upskill Project Managers to Meet Growing Infrastructure Construction Opportunities

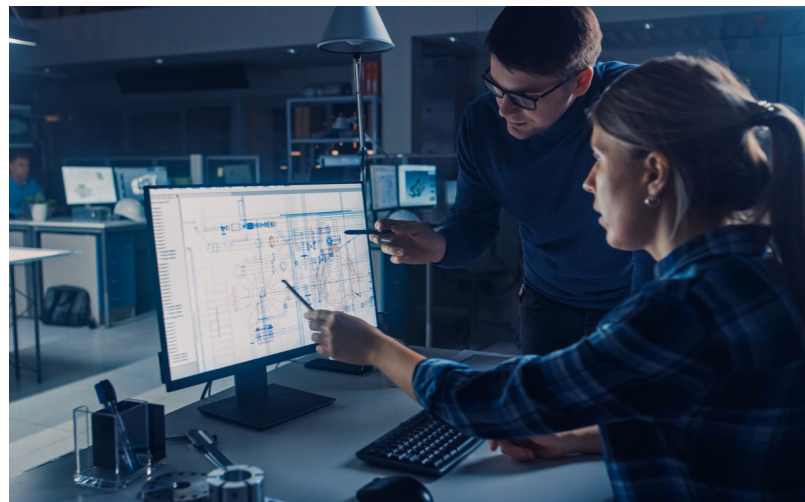
Written by: Ben Breen, Managing Director, Asia Pacific, and Global Head of Construction, Project Management Institute

We're entering an era of unprecedented investment in infrastructure in the United States and around the world. While that's good news for the construction industry, it raises important questions about whether the industry is investing enough of its own capabilities to meet the growing demand.

The fact remains that despite significant investment spent on digital transformation by businesses around the world, the construction industry is among the least digitized in the world. And pressure is mounting to address critical pain points that have plagued the industry for decades, including cost overruns and significant project delays.

These challenges, however, don't belie the opportunities that lay ahead. In the United States, Congress recently passed the Infrastructure Investment and Jobs Act, the biggest infrastructure bill in generations. It calls for spending \$1.2 trillion over the next 10 years, including \$550 billion in newly authorized spending, to improve the surface transportation system and core infrastructure.

Included are investments in roads and bridges, public transit systems, airports and ports, passenger and freight rail service, water and wastewater infrastructure, electrical vehicle charging stations, and the energy transmission grid. The act is projected to generate 1.5 million jobs per year for the next 10 years and has been compared to such ground-breaking infrastructure initiatives as the interstate highway system.



Globally, the construction industry is responding to the growing demand in the developing world, as populations swell, urbanization expands, and climate change intensifies. Climate change will be an important factor driving infrastructure development. Both the United States and European Union have committed to carbon neutrality by 2050, and China has pledged to do the same by 2060. All told, McKinsey estimates that \$3.7 trillion per year in global economic infrastructure development will be required to meet overall demand through 2035.

This development is illustrated in Project Management Institute's (PMI) 2021 Most Influential Projects, a list of ground-breaking initiatives with an outsized impact on society. It includes an impressive array of infrastructure projects—from a

new underground rail system in Mumbai to a vast flood control system in Venice to a new expressway in Nairobi.

All this growth, however, is placing significant strains on the industry. Skilled labor shortages have become a major issue in several markets. According to PMI's 2021 Talent Gap report, more than 61 million project management positions in manufacturing and construction will be needed by 2030, a 13% increase over 2019. Part of this demand is being driven by retirements—NCCER found 41% of the current U.S. construction workforce is expected to retire by 2031.

But staffing isn't the only challenge. As noted, the construction industry is one of the least digitized industries and has also lagged in productivity and R&D investment. A 2020 IDC survey of 835 construction firms across 12 countries reports that only 13% of construction firms are well on their way to digitizing operations, and 6 in 10 (58%) remain in early stages of digitization.

What can be done to address these challenges?

The first order of business is to embrace technology. That's already happening to some extent, as construction organizations experiment with AI, drones, and robotics, as well as mobile apps and cloud storage. But there are a range of other technologies that hold enormous potential. These include high-definition surveying and geolocation, 5-G building information modeling, and the Internet of Things.

Adopting and deploying these technologies will require more tech-savvy construction teams and a commitment to upskill employees.



About the Author

Ben Breen is Managing Director, Asia Pacific, and Global Head of Construction for [Project Management Institute \(PMI\)](#), where he oversees regional activity to ensure PMI can stay close to the needs of stakeholders and provide solutions that create value for individuals and organizations. Ben also represents PMI chapters in the region, allowing a like-minded community of professionals who share a passion to drive change in their organizations and communities to come together.

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