



Thought Leadership

Industry Ideas and Innovation

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Digital Transformation and Industrialization Drives Change in Construction

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The construction industry is finally covering ground in the digital age. Digital Transformation, as it's widely known, is a broad term applied differently across many industries. In construction, the necessary, yet rather disruptive integration is about improving efficiency, productivity, communication, and safety by changing processes and harnessing the power of digital technology.

And, although other sectors have been building digital technology into business areas for decades, the construction industry has lagged behind due to technical limitations and a lack of innovation.

That is, until 2015, when the concept of Industrialized Construction became a major focus in our industry. When software companies realized the untapped potential in the built environment, more innovative techniques were introduced, and design and production processes became more integrated and automated. Construction developments included: purpose-built software, artificial intelligence, Internet of Things (IoT), machine learning, prefabrication automation, wearable devices and enhanced Building Information Modeling (BIM).

BIM, data, and prefabrication practices were, and continue to be, at the core of our industry's shift. In fact, the U.S. market size of BIM is projected to grow from \$4.5 billion in 2020 to \$8.8 billion by 2025, according to MarketsandMarkets™. BIM is the 3D model-based process that allows architects, engineers, and construction professionals to efficiently plan, design, construct, and manage structures—it's the ability to create a virtual building before constructing it in the field.

But, again, despite these advancements, the construction industry is still among the least digitized. In a 2020 International Data Corporation survey of 835 construction companies across 12 countries, 72% said they were just starting their digital transformation journey. With the culture change required, not to mention challenging the status quo, experimenting with the unknown, and potential failures, a slow

adoption is not surprising. However, while the journey may not be easy, it is imperative.

Why? Industry drivers. Namely, changing customer needs, competition, labor shortages and material costs. Each continues to force contractors to reevaluate key business processes and while the disruption level can be high, transformation is necessary to meet and deliver end-to-end value to customers. The construction industry must get on board or it'll miss the opportunity to improve productivity, value and effectiveness...thus not remaining competitive in this ever-changing world.

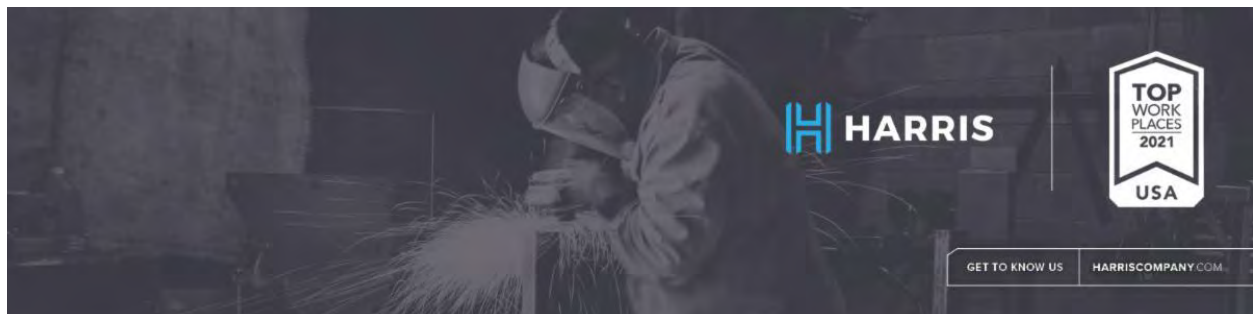
So, how do you go about it? For change management and cultural shifts to be effective—especially when navigating digital transformation—leadership must communicate a compelling message that explains not only why the old ways of doing things cannot be sustained, but also why and how the new ways will benefit employees, the company and customers. This is about communicating a vision for the future.

That vision must include a strategic roadmap that is easy to follow and understand, which will also help accelerate pace. Creating a centralized, digital function is also ideal. Though business groups and IT are a core part of the change, a dedicated department for Digital Transformation helps signify a steadfast commitment. The team should be expected to deliver end-to-end innovation, empower a change management group to achieve the desired value and outcome, and minimize associated risk.

An established innovation framework will play a significant role, as will having the right skills and available resources. Will there be bumps along the way? Absolutely. That's why, along with structure, organizations must be ready to pivot and make course corrections to ensure success.

Communication, feedback, and progress-tracking will help ensure strategic initiatives remain on target. But don't forget, it's not just about implementing technology, it's about focusing on process improvement, helping team members through the change, gaining the right insight, and providing end-to-end value to customers.

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