Why Effective Project Information Management Is Key to Success

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The ongoing evolution of technology and the business landscape combined with continuing economic and cultural disruption have amplified the challenge of managing project information for architecture, engineering, construction, and operations (AECO) firms.

The industry continues to face long-term impacts and lingering effects in the aftermath of COVID-19, particularly the acceleration of existing labor shortages.

Architectural and engineering firms encounter a rapidly increasing volume of project data, generated by more, and more software applications shared and stored across a variety of platforms.

Managing information for a single project is more complex than ever, and rapidly moving from project to project demands unprecedented flexibility, a committed investment, and a comprehensive project information management strategy.

Unfortunately, many AECO firms still face significant gaps in communication, data sharing, technology, and overall strategy that prevent them from fully realizing the efficiency and productivity gains that result from effective project information management.

CURRENT CHALLENGES OF PROJECT INFORMATION MANAGEMENT

A recent study by Newforma and Dodge Data & Analytics surveyed 220 professionals from architectural and engineering firms to identify their current challenges, their vision for the future, and their strategy for technology investment.

» 75% of respondents say their company still struggles with manual administrative tasks associated with moving data between systems.

» 56% are challenged with processes and systems that make it difficult to share information with partners outside their organization.

» 47% report problems with document version control.

» 43% cannot track the status of items outside their organization.

» 53% report difficulty finding information needed to make informed decisions because that data is more spread out with a remote workforce.

» Seven out of 10 survey respondents report that the challenges related to manual administrative tasks result in a decrease in productivity.

» 56% say information not being delivered to team members hampers project performance by introducing potential schedule delays and rework.

» 44% do not have a complete enough picture of projects to make informed decisions, which also impacts performance.

WHY INTEROPERABILITY IS KEY

Successful project information management depends on several factors, including the source of the data, where and how it is stored, platform integration, and compatibility and security. A key principle for effective project information management is interoperability.

Thirty-seven percent of the survey respondents say at least some projects require their company to use a partner's software platform for some part of project information management. Nearly a quarter (22%) report they must adopt a partner platform for most projects. Such requirements may streamline communication and support collaboration across the project, but at the expense of other elements of productivity. Continually facing a learning curve with unfamiliar technology slows projects and introduces greater risk of human error that can lead to additional delays and expense. In addition, most firms require a record copy of information which requires manual data entry across multiple systems.

Each stage of a project presents new risks for ineffective collaboration based on incompatible or unfamiliar technology: collaboration between architects and engineers during design; the transition from design to construction; and during construction, as the number of documents generated increases exponentially.

Integrating design and construction workflows ensures information transfers from design to construction and back efficiently. Traditionally, data is shared in a linear fashion, which narrows the paths of communication from phase to phase. Accessing data holistically rather than in a linear manner enhances the entire process from start to finish.

Breaking up the silos that have traditionally isolated information streams in the AECO industry makes crucial data easily accessible throughout a project and in each of its stages, helping all the teams involved fully realize the potential gains of collaboration with radically increased productivity and efficiency.

MOVING TOWARD THE FUTURE

When asked if they had such a strategy in place, 70% of the Newforma and Dodge Data & Analytics survey respondents said they do not. Most of the survey participants rank the benefits of successful project information management — effective collaboration, the accessibility of shared data, and a centralized view of project data — among their top priorities.

Many respondents indicate that collaboration, overall firm strategy, and a remote workforce will drive future technology investment for their company. But while some productivity gains can be achieved through a traditional siloed approach to technology adoption, there are risks and inefficiencies that can result from haphazard or incomplete adoption, and implementation.

Without a specific strategy for identifying, adopting, and implementing a project information management technology solution, firms may only see minor gains that do not offset the investment.

AECO firms know that technology plays a critical role in all aspects of the industry, but they often don't know how to plan or execute a successful comprehensive project information management strategy.

For AECO professionals who regularly encounter the obstacles related to inefficient or ineffective project information management, the first step out of this frustrating cycle is to survey projects, partners, team members, and leadership for insight into frequent pain points and bottlenecks.

Assess data and workflows, identify essential data that is hard to locate or share, and identify the information that needs to be shared across workflows.

Software focused on interoperability and integration through standardization and application programming interfaces (APIs)

can streamline and automate the flow of information across project phases and disciplines. In addition, taking an enterprise view or firmwide approach to managing project information provides agility and flexibility needed to succeed in today's volatile environment.

A strategic investment in the right project information management solution for your firm is a critical step toward future success.

About the Author

Slater Latour is Chief Marketing and Product Officer at Newforma. Newforma has been dedicated to improving project delivery since 2004. Its software is used by more than 1,500 architecture, engineering, and construction companies around the world, including 191 of the ENR Top 500 Design Firms.

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