AT A GLANCE

Three ways digital twin is poised to benefit project delivery

Project workflows in the architecture, engineering, and construction industry are deeply fragmented. Gaps in handoffs between planning, design, building, and operations lead to loss of valuable data. Data loss leads to revenue loss. According to McKinsey in 2016, large projects are up to 80% over budget on average.

Armed with data-rich, intelligent digital twin technology, owners and AEC project stakeholders can use dynamic views of projects and asset information to improve delivery efficiency, reduce risk and uncertainty, and increase the resilience and sustainability of their portfolio.

Design & Construction

Project teams spend countless unbillable hours updating models.

Digital twin solutions such as Autodesk Tandem bring project data together from its many sources, formats, and phases to create a data-rich digital hub that tracks asset data from design through operations. The result is a single-pane view of all project insights.

89%

Up to 89% of all IoT Platforms will contain some form of digital twinning capability by 2025.

–Researchandmarkets.com

Operations

The digital twin can be connected to the built asset's systems to collect operational performance data and system models can be created to perform simulation. Owners and operators can monitor and tune energy consumption and carbon emissions, as well as support facility utilization and contact tracing. To accomplish these goals, the digital twin must evolve over time and requires a constant feed of data. But in return, nearly 80 percent of an asset's lifetime value is realized in operations.

31%

As a result of COVID-19, 31% of all respondents use digital twins to improve employee or customer safety, such as the use of remote asset monitoring to reduce the frequency of in-person monitoring.

–Gartner

Planning the Next Facility

Operational data collected through a digital twin informs long-term decisions about investments. The digital twin can be used to produce realistic simulations of updates, predict failures, and even forecast planning needs.

When owners begin operations with a data-rich digital twin made up of objects rather than PDFs and spreadsheets, there is an incredible opportunity to reduce risk inherent to decision-making.

↑48.2 B

The global digital twin market size was valued at USD 3.1 billion in 2020 and is projected to reach USD 48.2 billion by 2026.

–MarketsandMarkets

AUTODESK.