

# Digital Twin for Buildings Market to Surpass at a Revenue of US\$ 15,972 Million By 2031 | Astute Analytica

CHICAGO, UNITED STATES, September 16, 2023 /EINPresswire.com/ -- The global <u>digital twin for buildings</u> <u>market</u> revenue was US\$ 1,260.36 million in 2022 and is projected to reach a market size of US\$ 15,972.2 million by 2031, growing at a CAGR of 32.6% during the forecast period from 2023 to 2031.

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The digital twins of buildings market is developing quickly owing to the extensive use of digital technologies. Building digital twins has emerged as a significant trend in the architectural, engineering, and construction (AEC)

sector. The use of the Internet of Things (IoT) and big data analytics is predicted to increase along with the demand for cost-effective operations, have streamlined processes, and take less time to market. As a result, the global market is anticipated to expand significantly over the forecast period.

One of the main factors driving the global market is the Internet of Things (IoT) integration. The industry is positioned for significant expansion in the use of IoT, with an estimated 75 billion IoT devices anticipated to be in use by 2025. According to Astute Analytica, the IoT market will be worth \$581 billion by 2025. The potential for IoT integration with digital twins in the construction industry is tremendous. For instance, a survey by the American Council for an Energy-Efficient Economy (ACEEE) revealed that installing IoT-based energy management systems might result in energy savings of up to 25% for commercial buildings.

The market for digital twins of buildings has seen a significant increase in the use of artificial intelligence (AI) and machine learning (ML). An analysis found that AI has the potential to boost the world economy by up to \$5.8 trillion a year. AI and ML have applications in areas like energy management, predictive maintenance, and occupancy analytics in the context of the digital twins for the buildings market. An analysis found that AI can boost the world economy by up to \$5.8



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Growing Smart Cities: An Untapped Potential for the Market Growth

The rising demand for smart cities is presenting significant market potential. By offering a digital representation of physical assets and enabling real-time monitoring and analysis of urban infrastructure, digital twins are a crucial component of the smart city ecosystem.

The World Economic Forum estimates that by 2025, the economic potential in smart cities will be worth \$2.46 trillion. The market will continue to have more prospects as long as cities prioritize sustainability and smart technologies.

Applications for the use of digital twins in smart cities include waste management, energy management, transportation, and urban planning. Digital twins can be utilized in the context of buildings to minimize energy use, enhance building performance, and improve occupant comfort.

Companies Majorly Use Digital Twin for Resource Management and Logistics and Safety Monitoring in Buildings

With 21.87% of the market, the resource management and logistics segment has the largest market share globally. The safety monitoring segment is anticipated to develop at the highest CAGR of 33.3% over the forecast years.

In order to optimize resource allocation, enhance supply chain management, and improve logistical operations, digital twins are employed in the resource management and logistics sector. They make it possible to track resources in real-time, maintain equipment via predictive maintenance, and simulate logistics operations, which improve productivity and lower costs.

In the Safety Monitoring section, digital twins are used to track building security, spot potential risks, and take preventative action. The demand for digital twins for safety monitoring is anticipated to rise as safety becomes a major priority for building owners, construction managers, and facility operators, propelling the growth of this market.

North America Accounts for Over 46.8% of Market Revenue Share

North America is predicted to hold a 46.82% share of the global market for digital twins for buildings due to its robust technological infrastructure and the existence of significant digital twin market players,

Major corporations with headquarters in the area, including General Electric Company, Bentley Systems, IBM Corporation, and ANSYS, have helped to extend the use of digital twin technology.

These businesses have made significant investments in the digital twin market, accelerating its development.

Due to the early availability and adoption of new technology, the North American regional market has expanded during the past few years. Using process digital twins, AI, and machine learning technologies makes it easier to find problems, comprehend their origins, predict performance in the future, and automate solutions. Using cutting-edge technology like digital twins, the U.S. construction sector may save more than \$15.8 billion annually, according to a report by the National Institute of Standards and Technology (NIST).

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#### Competitive Landscape

Due to the involvement of significant competitors like General Electric Company, Bentley Systems, IBM Corporation, and ANSYS, the digital twins for buildings market is fragmented. Market participants are implementing tactics like alliances and acquisitions to improve their service offerings and obtain a long-term competitive advantage.

Some of the Prominent Players

- ABB
- Accenture PLC
- Ansys, Inc.
- Priori Technologies, Inc.
- Bentley Systems, Incorporated
- Cisco Systems, Inc.
- Dassault Systems, Inc.
- DHL International GmbH.
- DXC Technology Company
- GE Digital (Predix)
- IBM Corporation
- Microsoft Azure
- Oracle Corporation
- PTC Inc.
- Robert Bosch GmbH
- SAP SE
- Siemens AG
- Other Major Players

Segmentation Outline

The global digital twin for buildings market segmentation focuses on Component, Type, Application, Industry, and Region.

By Component

- Software
- o Cloud
- o On-premise
- Services
- o Professional
- o Managed

#### Ву Туре

- Descriptive twin
- Informative twin
- Predictive twin
- Comprehensive twin
- Autonomous twin
- By Application
- Automated Progress Monitoring
- As-executed Vs. As-planned Models
- Resource Management and Logistics
- Safety Monitoring
- Quality Assessment
- Optimization Of Equipment Usage
- Monitoring And Tracking Of Workers

### By Industry

- Manufacturing
- Aerospace & Defense
- Oil & Gas
- Utilities
- Healthcare & Life Sciences
- Automotive
- Construction
- IT & Telecom
- Retail
- Consumer Goods & Packaging
- Transportation
- Smart Cities
- Other

By Region

- North America
- o The U.S.
- o Canada
- o Mexico

- Europe
- Western Europe
- 🛛 The UK
- 🛛 Germany
- □ France
- 🛛 Italy
- 🛛 Spain
- o Rest of Western Europe
- Eastern Europe
- Poland
- 🛛 Russia
- o Rest of Eastern Europe
- Asia Pacific
- o China
- o India
- o Japan
- o Australia & New Zealand
- o South Korea
- o ASEAN
- o Rest of Asia Pacific
- Middle East & Africa (MEA)
- o Saudi Arabia
- o South Africa
- o UAE
- o Rest of MEA
- South America
- o Argentina
- o Brazil
- o Rest of South America

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They are able to make well-calibrated decisions and leverage highly lucrative opportunities while surmounting the fierce challenges all because we analyze for them the complex business environment, segment-wise existing and emerging possibilities, technology formations, growth estimates, and even the strategic choices available. In short, a complete package. All this is possible because we have a highly qualified, competent, and experienced team of professionals comprising business analysts, economists, consultants, and technology experts. In our list of priorities, you-our patron-come at the top. You can be sure of the best cost-effective, value-added package from us, should you decide to engage with us.

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