

3D Mapping And 3D Modelling - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2024 - 2029)

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Abstracts

The 3D Mapping And 3D Modelling Market size is estimated at USD 7.48 billion in 2024, and is expected to reach USD 14.82 billion by 2029, growing at a CAGR of 14.67% during the forecast period (2024-2029).

The growing availability of 3D content propels the 3D mapping and modeling industry. 3D content is the development of a physical item that can be measured in three different directions - typically the length, height, and breadth. As the need for 3D content grows, the demand for 3D mapping and modeling is also growing, which uses specialized software to produce a three-dimensional representation of an item. Additionally, in this competitive market, 3D mapping and modeling innovations are the easiest ways to create 3D environments. 3D mapping solutions quickly generate high-quality 3D maps of surroundings, ready to be integrated into professional visualization processes.

3D mapping and modeling are frequently used in the gaming and video entertainment industries to create action sequences that make viewers feel they are in the actual location. The market for 3D mapping and 3D modeling has grown significantly in recent years due to the rising demand for 3D animation in mobile gaming and other applications and the video entertainment industry's desire to deliver a better watching experience. Gaming firms such as Sony, Xbox, Microsoft, and Tencent already use 3D technology and develop 3D games by building a virtual world that can mimic the user's motion and give them a more realistic experience.

These developments in VR technology, particularly in the gaming industry, are

expected to substantially impact the global market for next-generation 3D displays throughout the projected period. According to the Game Developers Conference, the gaming world is fast evolving. In a 2023 study, 36% of participating game developers worldwide are actively developing games for the Meta Quest virtual reality gear, which would create a market growth opportunity for the 3D Modelling and mapping industry.

However, data piracy and the high cost associated with the use of technology are some of the factors that may affect the growth of the market over the forecast period. The cost of implementing 3D mapping and modeling software and the high-cost workforce required for developing the maps and models make it challenging to broadly adopt them in many end-user applications, which could be a potential challenge for market growth during the forecast period.

During the COVID-19 crisis, the 3D mapping and modeling industry has experienced an increase in consumer demand for 3D mapping and modeling software products and services. E-commerce, logistics, online learning, food delivery, healthcare, and many other online business collaborations witnessed substantial growth, exceeding the boundaries of their internal and customer-facing applications. For instance, iMap9 is a floor-disinfecting robot that can navigate and cleanse floors without human intervention. It cleanses the floors using 3D mapping technology. The companies use 3D mapping and modeling software solutions to manage massive volumes of geographical data while meeting user requirements, which shows the demand for the market during and after the COVID-19 pandemic.

3D Mapping & 3D Modelling Market Trends

Entertainment and Media Segment would Contribute Significantly to the Market Growth

Game-building companies, including Epic Games, Ubisoft, and Blizzard Entertainment, all use 3D modeling to create characters, environments, and objects that are then animated. For example, Blizzard Entertainment's game "Overwatch" uses 3D modelling to make its cast of characters, each with their unique abilities and personalities.

Applying 3D modelling technology in virtual reality experiences significantly creates immersive environments. Artists can use 3D modeling to create virtual

worlds, characters, and objects that users can interact with in VR experiences. For example, the VR game “Beat Saber” uses 3D modeling to create neon-colored blocks that players slice with virtual lightsabers.

The growing use of virtual reality in gaming propels global demand for the market. VR gaming consoles are becoming increasingly popular in major economies such as the United States, the United Kingdom, China, and Japan. Over the projected period, these technological advancements in VR gaming will boost the growth of the advanced 3D modelling industry worldwide in the future.

The growth of animations in the entertainment industry fuels the demand for 3D mapping, enabling developers and gamers a more immersive experience. Techniques such as texture mapping create visually stunning environments, and projection mapping can increase interactive experiences, supporting the market's growth.

Additionally, the growth of events and exhibitions for entertainment purposes after the post-pandemic period and the emergence of digital technology integration in event management are supporting the development of the market in the entertainment segment. For instance, in July 2023, London's leading event venue, ExCeL London, commissioned a new hyper-realistic digital twin to aid event organizers in making decisions about the location and flow of their event, working in partnership with OnePlan for using its 3D venue mapping, showing the demand for the market during the forecast period.

Asia-Pacific is Expected to Be the Fastest-growing Market

Asia-Pacific is anticipated to have a substantial 3D mapping and modeling market share. Its expansion may be attributable to the rising demand for 3D imaging sensors, 3D modeling, and 3D visualization, rendering software tools in healthcare and life sciences, manufacturing, construction, and media and entertainment industries.

The growing demand for a realistic representation of the product for marketing purposes by small and medium-sized companies and government agencies in the region would stimulate demand for 3D mapping and modeling products. Rising cloud and IoT adoption and increased web usage are some of the reasons driving the market.

The media and entertainment business are one of the region's thriving industries, propelled by increased digitalization and internet usage over the last decade. The region's gaming industry's rise is likely to present potential opportunities during the forecast period.

The application of 3D mapping in construction and urban planning is driving the demand for the market in the Asia Pacific region in line with the infrastructural development in the emerging economies in the area. For instance, in November 2023, the national mapping agency Survey of India (SoI) and Genesys International, a leading Indian mapping company, on Wednesday announced a strategic tie-up for a three-dimensional (3D) digital twin-mapping program in India to create digital twins of significant cities and towns in India, which would support the market growth.

China, Australia, Singapore, India, and Japan are among the countries in the region with well-developed cyber ecosystems. The region is also launching various attempts to utilize IT infrastructure, allowing business users to adopt more advanced technology. The region is expected to expand rapidly due to economic considerations driving the development and maintenance of production facilities throughout Asia. The region's rise may also be ascribed to its expanding economy, where many firms are increasingly embracing 3D mapping and modeling to innovate their products.

3D Mapping And 3D Modelling Industry Overview

The 3D mapping and 3D modeling market is highly fragmented, with the presence of major players like Autodesk Inc., Saab AB, Golden Software LLC, Trimble Inc., and Intermap Technologies. Players in the market are adopting strategies such as partnerships and acquisitions to enhance their product offerings and gain sustainable competitive advantage.

February 2024 - Dublin City University (DCU) has partnered with Bentley Systems to create an advanced digital twin of its campus as part of its Smart DCU initiative by using Bentley's open 3D and reality modeling technology can make a campus model intricately linked with the Internet of Things (IoT) data, which results in an immersive digital twin, showing the market demand for the 3D modelling and Mapping during the forecast period.

November 2023 - Cadence and Autodesk Collaborate on Smart Product Design, and with this collaboration, the Cadence Allegro X and OrCAD X would be integrated with the Autodesk Fusion, enabling the design and manufacturing companies to ease their printed Circuit Board (PCB) 3D modelling needs, showing the increasing partnerships in the market supporting the growth.

Additional Benefits:

The market estimate (ME) sheet in Excel format

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