

# **Software Engineering Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented, By Application (CAD, PDM, PLM, and Design Quality), By Deployment (Cloud and On-premises), By Industry (Automotive, Aerospace & Defense, Manufacturing, Healthcare, Semiconductor & Electronics, Retail, and Others), By Region & Competition, 2021-2031F**

<https://marketpublishers.com/r/SB5F2F00E73CEN.html>

Date: January 2026

Pages: 181

Price: US\$ 4,500.00 (Single User License)

ID: SB5F2F00E73CEN

## **Abstracts**

The Global Software Engineering Market is projected to expand from USD 66.33 Billion in 2025 to USD 142.41 Billion by 2031, achieving a CAGR of 13.58%. Software engineering involves the structured application of engineering principles to the design, development, maintenance, and evaluation of software systems to guarantee efficiency and reliability. The market is primarily underpinned by the rapid pace of enterprise digital transformation and the critical need for scalable cloud infrastructure that supports modern business activities. These factors continuously drive the demand for robust software solutions capable of handling complex data ecosystems and automation processes. According to CompTIA, net tech employment in the United States was projected to rise by 3.1 percent in 2024, underscoring the sustained expansion of the workforce needed to meet these engineering requirements.

Despite this positive growth trajectory, the sector confronts a major obstacle in the form of a persistent shortage of skilled professionals, which hinders the ability of organizations to deliver projects on time. This scarcity of specialized talent causes operational bottlenecks and increases development costs, ultimately restricting companies from fully capitalizing on market opportunities. Consequently, the widening disparity between the high demand for technical expertise and the limited supply of qualified engineers remains a critical challenge that could potentially decelerate the

broader expansion of the global software engineering market.

## **Market Driver**

The incorporation of generative AI and automation into development lifecycles is fundamentally transforming the Global Software Engineering Market by significantly minimizing manual coding efforts and enhancing workflow efficiency. Engineering teams are increasingly utilizing AI-driven coding assistants and automated testing frameworks to expedite routine tasks, enabling developers to concentrate on complex architectural problems rather than repetitive syntax generation. This widespread adoption of intelligent tools is highlighted by a surge in AI-focused development activity worldwide. According to GitHub's 'Octoverse 2024' report from October 2024, there was a 98% year-over-year increase in the number of public generative AI projects on the platform, demonstrating the rapid integration of these technologies into modern software ecosystems.

Simultaneously, the accelerated adoption of SaaS models and cloud-native architectures offers the necessary resilience and scalability for these advanced applications. Organizations are actively migrating legacy systems to distributed cloud environments to support real-time data processing and microservices, thereby driving substantial investment in cloud infrastructure services. This trend is evident in major provider performance; according to Alphabet Inc.'s 'Third Quarter 2024 Results' released in October 2024, Google Cloud revenue rose 35% year-over-year to \$11.4 billion, largely due to the essential demand for core services and AI infrastructure. The combination of these cloud capabilities with automated development practices is delivering tangible operational improvements, as noted in GitLab's '2024 Global DevSecOps Report' from June 2024, where 69% of CxOs reported that their organizations are shipping software at least twice as fast as the previous year.

## **Market Challenge**

The shortage of skilled professionals serves as a critical barrier hindering the growth of the Global Software Engineering Market. As organizations aggressively pursue cloud integration and digital transformation, the technical complexity of required software systems has escalated, creating a demand for expertise that significantly exceeds the available labor supply. This imbalance forces companies to face severe operational bottlenecks, as the inability to secure qualified engineers results in prolonged project timelines and delayed product launches. Consequently, businesses often miss crucial market windows, stalling their ability to capitalize on new opportunities and stifling

overall industry innovation.

Furthermore, this talent scarcity places substantial financial pressure on the market, inflating development costs as competition for limited resources intensifies. The difficulty in sourcing qualified personnel limits the capacity of organizations to scale their operations effectively. According to The Linux Foundation, in 2024, 64 percent of surveyed tech leaders admitted to a lack of essential skills or experience in candidates, highlighting the severity of this workforce deficiency. This persistent gap restricts the volume of projects that can be successfully delivered, thereby directly slowing the expansion of the global market.

## **Market Trends**

The emergence of Platform Engineering and Internal Developer Portals is rapidly establishing itself as a critical trend to address the complexity of modern cloud-native environments. Organizations are increasingly creating dedicated platform teams to build Internal Developer Platforms (IDPs) that standardize infrastructure management and alleviate the cognitive load on development teams. By offering self-service capabilities and golden paths for deployment, these portals enable engineers to focus on coding rather than configuration, effectively resolving operational bottlenecks caused by fragmented toolchains. The surge in this adoption is significant; according to Humanitec's 'State of Platform Engineering Report Volume 3' from November 2024, 56 percent of surveyed organizations have had platform teams for less than two years, indicating a massive shift toward professionalizing internal infrastructure services to support scaling engineering organizations.

Concurrently, the mainstreaming of DevSecOps and Shift-Left Security is reshaping the market by integrating vulnerability management and compliance directly into the early stages of the software development lifecycle. As reliance on third-party components increases, engineering teams are moving beyond reactive security measures to implement proactive strategies such as rigorous management of Software Bill of Materials (SBOMs) and automated scanning. This transition is driven by the urgent necessity to secure the software supply chain against sophisticated attacks targeting open-source dependencies. This security gap remains a primary focus; according to GitLab's '2024 Global DevSecOps Report' from June 2024, while 67 percent of developers reported that open-source libraries constitute a significant portion of their code, only 21 percent of organizations are currently using an SBOM to document these components, highlighting the critical market push toward integrated security governance.

## Key Market Players

IBM Corporation

Oracle Corporation

Microsoft Corporation

SAP SE

Accenture plc

Capgemini SE

Tata Consultancy Services Limited

Infosys Limited

Cognizant Technology Solutions Corporation

Wipro Limited

## Report Scope

In this report, the Global Software Engineering Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

Software Engineering Market, By Application

CAD

PDM

PLM

Design Quality

## Software Engineering Market, By Deployment

Cloud

On-premises

## Software Engineering Market, By Industry

Automotive

Aerospace & Defense

Manufacturing

Healthcare

Semiconductor & Electronics

Retail

Others

## Software Engineering Market, By Region

North America

United States

Canada

Mexico

Europe

France

United Kingdom

Italy

Germany

Spain

Asia Pacific

China

India

Japan

Australia

South Korea

South America

Brazil

Argentina

Colombia

Middle East & Africa

South Africa

Saudi Arabia

UAE

## **Competitive Landscape**

Company Profiles: Detailed analysis of the major companies present in the Global Software Engineering Market.

*Software Engineering Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented, By Ap...*

**Available Customizations:**

Global Software Engineering Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

**Company Information**

Detailed analysis and profiling of additional market players (up to five).

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