

# Digital Twin In Aerospace And Defense Market - Opportunities, Share, Growth and Competitive Analysis and Forecast 2029

*The Business Research Company's Digital Twin In Aerospace And Defense Global Market Report 2025 – Market Size, Trends, And Global Forecast 2025-2034*

LONDON, GREATER LONDON, UNITED KINGDOM, August 25, 2025

[/EINPresswire.com/](https://EINPresswire.com/) -- What Is The

Forecast For The Digital Twin In

Aerospace And Defense Market From 2024 To 2029?

In recent times, the aerospace and defense market for digital twins has experienced a remarkable growth. Its size is projected to expand from \$2.02 billion in 2024 to \$2.49 billion in 2025, demonstrating a compound annual growth rate (CAGR) of 23.2%. This historic rise in

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growth is due to an augmented demand for predictive maintenance, increased embrace of Industry 4.0, escalating intricacy in defense systems, the need for economical testing, focus on lifecycle management, and initiatives on military modernization.

In the aerospace and defense sector, the market size of the digital twin is projected to experience a significant upsurge in the upcoming years. The expected value of this market by 2029 is \$5.68 billion, with an impressive compound annual growth rate (CAGR) of 22.9%. Several factors are accountable for the projected growth during this period,

including the mounting demand for predictive maintenance, the expanding acceptance of Industry 4.0, a heightened focus on optimizing lifecycle, the broadening of connected aircraft systems, the stress on defense preparedness and mission planning, along with an increasing requirement for cost-effective design and testing solutions. The major trends for this period encompass the integration of AI-driven analytics, the enhancement of real-time predictive maintenance, IoT connectivity advancements, adoption for optimizing supply chain, cybersecurity advances for digital clones, and the usage of autonomous system testing and

validation.

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### What Are The Core Growth Drivers Shaping The Future Of The Digital Twin In Aerospace And Defense Market?

The anticipated rise in defense spending is predicted to boost the expansion of the digital twin sector within aerospace and defense industries. The term "defense expenditure" denotes the monies allotted by a country's military to procure, refurbish, and sustain their arsenal of bullets, missiles, and other ammunitions. This spending is on an upswing due to escalating geopolitical conflicts, broadened military operations, and the obligation to replenish dwindling ammunition supplies. Such expenditure contributes to the progress of digital twin technology in the aerospace and defense arena, facilitating ongoing ventures into advanced simulation, real-time data amalgamation, and lifecycle management tools. For example, data from the House of Commons Library in UK disclosed that in December 2023, the UK secured defense orders valued at \$16.04 (£12.0 billion) in real terms in 2022, a \$6.15 (£4.6 billion) jump from 2021. This signifies a considerable escalation in defense procurement and investment in superior military capabilities. Consequently, this upsurge in defense spending is steering the growth of the digital twin in aerospace and defense market.

### Which Companies Are Currently Leading In The Digital Twin In Aerospace And Defense Market?

Major players in the Digital Twin In Aerospace And Defense Global Market Report 2025 include:

- Microsoft Corporation
- Siemens AG
- Boeing Company
- Lockheed Martin Corporation
- Airbus SE
- International Business Machines Corporation
- Oracle Corporation
- Northrop Grumman Corporation
- Honeywell International Inc.
- SAP SE

### What Are The Top Trends In The Digital Twin In Aerospace And Defense Industry?

Leading firms in the [digital twin in aerospace and defense sector](#) are investing in creative initiatives, such as the smart airport program. The program aims to increase operational performance, improve passenger satisfaction, fine-tune asset management, and aid real-time decision-making through sophisticated simulation and data analysis techniques. A smart airport employs contemporary digital technologies to make procedures automated, enhance productivity, and provide a seamless experience for travelers. For example, in July 2022, Hamad International Airport (HIA), based in Qatar, introduced a Digital Twin program, utilizing AI, real time data, and 3D modelling to maximize airport operations, minimize downtime, and improve

decision-making, earning it the accolade of 'Smart Solution of the Year' in Qatar. With a 3D interface that presents a real-time, comprehensive view of the entire airport, the Digital Twin enables operational teams to supervise airport activities in real-time and make faster, better-informed decisions.

#### Comparative Analysis Of Leading Digital Twin In Aerospace And Defense Market Segments

The digital twin in aerospace and defense market covered in this report is segmented –

- 1) By Component: Software, Services, Hardware
- 2) By Deployment: On-Premises, Cloud-Based
- 3) By Technology: Artificial Intelligence, Internet Of Things (IoT), Big Data Analytics, Cloud Computing, Machine Learning
- 4) By Application: Predictive Maintenance, Design And Development, Simulation And Testing, Supply Chain Management, Asset Management
- 5) By End-User: Military, Civil Aviation, Space Exploration, Defense Contractors

#### Subsegments:

- 1) By Software: Design Software, Simulation Software, Predictive Analytics Software, Visualization Software
- 2) By Services: Consulting Services, Implementation Services, Support and Maintenance Services, Managed Services
- 3) By Hardware: Sensors, Actuators, Communication Devices, Processors, Storage Devices

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Which Regions Are Dominating The Digital Twin In Aerospace And Defense Market Landscape? In the Digital Twin In Aerospace And Defense Global Market Report 2025, North America ranked as the most dominant region for the year 2024. The report anticipates that the Asia-Pacific region will experience the most accelerated growth during the forecast period. The report thoroughly covers the following regions: Asia-Pacific, Western Europe, Eastern Europe, North America, South America, Middle East, and Africa.

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