Simulation Software - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-06-01 | 120 pages | Mordor Intelligence

AVAILABLE LICENSES:

- Single User License $4750.00
- Team License (1-7 Users) $5250.00
- Site License $6500.00
- Corporate License $8750.00

Report description:

Simulation Software Market Analysis

The simulation software market size is valued at USD 13.58 billion in 2025, and it is projected to reach USD 26.26 billion by 2030, advancing at a 14.10% CAGR. Growing preference for AI-enhanced digital twins, tighter sustainability mandates, and the push for virtual validation across regulated industries combine to lift demand. Enterprises increasingly view advanced modeling as a strategic lever for faster product launches and quality gains rather than a narrow cost-reduction exercise. Cloud elasticity lowers entry barriers, while on-premise control remains vital for sectors that handle highly sensitive data. Acquisitive activity among incumbents shows that end-to-end platforms capable of blending physics-based solvers with predictive analytics now set the competitive pace. North American dominance persists, yet rapid industrialization in Asia-Pacific accelerates geographic diversification within the simulation software market.

Global Simulation Software Market Trends and Insights

Rising Cloud-Native Simulation Adoption

Elastic compute removes hardware bottlenecks and allows distributed engineering teams to collaborate without location constraints. Predictable pay-as-you-go pricing aligns with project budgets, and managed HPC services reduce internal IT overhead. Adoption accelerates further as hybrid deployments let firms keep sensitive workloads on-premise while exploiting cloud bursts for large runs. The shift broadens participation in the simulation software market and pressures license models to move toward subscriptions.

Automotive Demand for Virtual Validation

Automakers rely on digital twins to replicate millions of driving scenarios for advanced driver-assistance systems. The approach streamlines compliance with evolving safety rules and lowers physical prototype costs. High-fidelity models derived from proving-ground data narrow the gap between virtual and physical testing, cutting development cycles. Growing EV penetration intensifies the need for multiphysics platforms that address thermal, electromagnetic, and structural effects in a single workflow.

High Total Cost of Ownership for HPC

Continuous growth in model fidelity inflates memory and accelerator requirements, stretching capital budgets. Smaller enterprises weigh the predictability of owning clusters against the variability of cloud bursts. Specialized hardware lengthens refresh cycles and complicates ROI analyses. Service providers step in with simulation-as-a-service offers that amortize infrastructure across clients and keep adoption on track in the simulation software market

Other drivers and restraints analyzed in the detailed report include:

Rapid Uptake of Digital-Twin Initiatives / AI-Driven Generative Simulation Workflows / Scarcity of Vertical-Domain Simulation Talent /

For complete list of drivers and restraints, kindly check the Table Of Contents.

Segment Analysis

On-premise installations still dominate the simulation software market with a 61% share in 2024. Enterprises with established HPC clusters value deterministic cost structures and direct oversight of sensitive intellectual property. Engineering teams in aerospace and defense continue to favor in-house hardware to simplify security accreditation workflows. However, cloud deployments show an 16.40% CAGR and draw adopters looking to scale workloads without purchasing peak-capacity hardware.

Hybrid topologies emerge, storing proprietary models locally while sending compute-heavy runs to public clouds during spike periods. Vendors respond with unified orchestration layers that schedule jobs across on-premise and cloud resources, reducing idle capacity and improving utilization. Subscription pricing aligns expenses with budget cycles, and self-service portals shorten provisioning times from weeks to minutes. As bandwidth improves, latency-sensitive coupling of simulators and test benches can occur off-site, broadening the simulation software market footprint across dispersed teams.

Automotive led the simulation software market with a 27% share in 2024, using digital twins to validate autonomous features and electrified powertrains. Stringent crash and emissions norms drive vehicle makers toward virtual homologation, trimming prototype fleets, and compressing program timelines. Yet healthcare stands out as the fastest learner, poised for a 17.10% CAGR through 2030.

Pharmaceutical firms simulate molecular interactions in silico to cut early-stage failures, while med-tech developers employ patient-specific models to verify implant fit and longevity. Regulatory bodies now accept virtual cohorts to augment clinical evidence, shaving months from approval cycles and spotlighting the simulation software market size benefits for life-science innovators. Aerospace and defense keep steady investment in multi-physics solvers for next-generation airframes, whereas electronics groups intensify electromagnetic modeling for 5G antenna arrays and chip-package co-design. Energy majors adopt subsurface simulators to optimize carbon-capture wells and hydrogen storage, aligning with decarbonization targets.

Simulation Software Market is Segmented by Deployment (On-Premises, and More), End-User Industry (Automotive, IT and More), Simulation Type (Finite-Element Analysis (FEA) and More), Application Area (Product Design & Engineering and More), Component (Software Licenses and More) and by Geography. The Market Forecasts are Provided in Terms of Value (USD).

Geography Analysis

North America maintained 38% of simulation software market share in 2024 on the back of mature aerospace, defense, and automotive ecosystems. Federal research grants seeded advanced solvers decades ago, and the presence of big-tech cloud providers accelerates AI-driven functionality today. Broad adoption of subscription models streamlines budgets and shortens procurement cycles. The region still contends with tightening labor pools that limit scaling programs, causing firms to outsource specialized tasks offshore when security rules permit.

Europe leverages a strong automotive base and sustainability-focused regulations to stimulate adoption. Stringent carbon policies encourage virtual exhaust testing, and electric-vehicle incentives channel funds into battery and thermal simulations. Industry 4.0 frameworks such as Germany's Plattform Industrie 4.0 foster public-private pilots that demonstrate tangible ROI, nurturing demand within the simulation software market. Skills shortages emerge in high-end multiphysics roles, prompting cross-border academies to update curricula around model-based engineering.

Asia-Pacific posts the fastest 14.80% CAGR through 2030 thanks to manufacturing scale-up and government digitalization roadmaps. China sponsors smart-city pilots requiring urban-scale energy and traffic models, while India's electronics push drives chip-package simulations. Southeast Asian nations court foreign investment with tax breaks on digital R&D infrastructure, spurring local adoption of cloud-hosted platforms. Intellectual-property protection remains a consideration, so multinationals often start with non-sensitive workloads when entering the simulation software market. Domestic vendors emphasize cost-effective offerings tailored to medium enterprises, further expanding the regional user base.

List of Companies Covered in this Report:

Ansys Inc. / Dassault Systmes SE / Siemens Digital Industries Software / Altair Engineering Inc. / Autodesk Inc. / Hexagon AB (MSC Software) / MathWorks Inc. / PTC Inc. / Synopsys Inc. / ESI Group SA / CPFD Software LLC / Rockwell Automation (ARENA) / Bentley Systems Inc. / Simio LLC / Lanner Group Ltd / SIMUL8 Corporation / Flow Science Inc. / COMSOL Inc. / Schneider Electric (SE Electromechanical) / SolidWorks Corporation /

Additional Benefits:

The market estimate (ME) sheet in Excel format /
3 months of analyst support /

Table of Contents:

4 MARKET LANDSCAPE
4.1 Market Overview
4.2 Market Drivers
4.2.1 Rising cloud-native simulation adoption
4.2.2 Automotive demand for virtual validation
4.2.3 Rapid uptake of digital-twin initiatives
4.2.4 AI-driven generative simulation workflows
4.2.5 ESG-mandated virtual sustainability assessments
4.2.6 5G/ORAN network-function virtualization testing
4.3 Market Restraints
4.3.1 High total cost of ownership for HPC
4.3.2 Data-interoperability and standards gaps
4.3.3 IP-security concerns in cloud outsourcing
4.3.4 Scarcity of vertical-domain simulation talent
4.4 Value / Supply-Chain Analysis
4.5 Regulatory Landscape
4.6 Technological Outlook
4.7 Porters Five Forces Analysis
4.7.1 Threat of New Entrants
4.7.2 Bargaining Power of Buyers
4.7.3 Bargaining Power of Suppliers
4.7.4 Threat of Substitutes
4.7.5 Intensity of Competitive Rivalry

5 MARKET SIZE AND GROWTH FORECASTS (VALUE)
5.1 By Deployment Type
5.1.1 On-premise
5.1.2 Cloud / SaaS
5.2 By End-user Industry
5.2.1 Automotive
5.2.2 Aerospace and Defense
5.2.3 Electrical and Electronics
5.2.4 Energy, Oil and Mining
5.2.5 IT and Telecom
5.2.6 Healthcare and Life Sciences
5.2.7 Education and Research
5.2.8 Others
5.3 By Simulation Type
5.3.1 Finite-Element Analysis (FEA)
5.3.2 Computational Fluid Dynamics (CFD)
5.3.3 Multibody and Dynamics
5.3.4 Discrete-Event and Process Simulation
5.3.5 Electromagnetic and RF
5.3.6 System-level and 1-D
5.4 By Application Area
5.4.1 Product Design and Engineering
5.4.2 Research and Development / Innovation

5.4.3 Process and Operations Optimization
5.4.4 Training, Safety and Digital Mock-up
5.4.5 Digital Twin Lifecycle Management
5.5 By Component
5.5.1 Software Licenses
5.5.2 Services and Consulting
5.5.3 Platform and Integration
5.6 By Geography
5.6.1 North America
5.6.1.1 United States
5.6.1.2 Canada
5.6.1.3 Mexico
5.6.2 South America
5.6.2.1 Brazil
5.6.2.2 Argentina
5.6.2.3 Rest of South America
5.6.3 Europe
5.6.3.1 Germany
5.6.3.2 United Kingdom
5.6.3.3 France
5.6.3.4 Italy
5.6.3.5 Russia
5.6.3.6 Rest of Europe
5.6.4 APAC
5.6.4.1 China
5.6.4.2 Japan
5.6.4.3 India
5.6.4.4 South Korea
5.6.4.5 ASEAN
5.6.4.6 Rest of APAC
5.6.5 Middle East and Africa
5.6.5.1 GCC
5.6.5.2 Turkey
5.6.5.3 South Africa
5.6.5.4 Rest of Middle East and Africa

6 COMPETITIVE LANDSCAPE
6.1 Market Concentration
6.2 Strategic Moves
6.3 Market Share Analysis
6.4 Company Profiles (Includes Global level Overview, Market level overview, Core Segments, Financials as available, Strategic Information, Market Rank/Share for key companies, Products & Services, and Recent Developments)
6.4.1 Ansys Inc.
6.4.2 Dassault Systmes SE
6.4.3 Siemens Digital Industries Software
6.4.4 Altair Engineering Inc.
6.4.5 Autodesk Inc.

SCOTTS INTERNATIONAL

Simulation Software - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-06-01 | 120 pages | Mordor Intelligence

To place an Order with Scotts International:

- - Print this form
- - Complete the relevant blank fields and sign
- - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	$4750.00
	Team License (1-7 Users)	$5250.00
	Site License	$6500.00
	Corporate License	$8750.00
	VAT	
	Total	

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*		Phone*	
First Name*		Last Name*	
Job title*			
Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	
		Date	2026-02-26
		Signature	

Scotts International. EU Vat number: PL 6772247784
tel. 0048 603 394 346 e-mail: support@scotts-international.com
www.scotts-international.com