

Simulation Software Market by Software Type (Computer-aided Design (CAD) Simulation, Physics and Multiphysics Simulation, Finite Element Analysis (FEA), Computational Fluid Dynamics (CFD), Gaming, AR/VR, and Training Simulation) - Global Forecast to 2030

Market Report | 2024-11-06 | 492 pages | MarketsandMarkets

AVAILABLE LICENSES:

- Single User \$4950.00
- Multi User \$6650.00
- Corporate License \$8150.00
- Enterprise Site License \$10000.00

Report description:

The global Simulation Software market size is estimated to grow from USD 19.95 Billion in 2024 to USD 36.22 Billion by 2030 at a compound annual growth rate (CAGR) of 10.4 % during the forecast period.

The growth in the simulation software market is attributed to the need for more cost-effective approaches to reduce production expenses and training costs, the development of digital twin technology, the growing intricacy and interconnectedness of systems across various industries, , and efficient processes surrounding training and optimization. However, the market faces challenges, such as a very costly implementation process, deterring smaller companies from joining, difficulties in integrating simulation tools with existing IT systems, and a lack of awareness of the software's benefits. The uncertainty about the maturity of simulation technologies and intense competition from established solutions fuels wariness among potential customers. In this regard, competition in cost barriers, complexity of integration, and lack of awareness are the key challenges that must be countered to enable more widespread expansion of simulation software usage into industries.

By Software Type, Gaming, AR, VR, and Training Simulation Software accounts for the highest CAGR during the forecast period. The gaming, augmented reality (AR), virtual reality (VR), and training simulation software is expected to grow at the fastest rate within the simulation software market owing to factors such as rising demand for immersive experiences and enhanced user engagement. The use of AR and VR technologies in gaming has set high standards, with popular applications like Pokemon GO and Half-Life: Alyx driving consumer interest. Additionally, technological innovations such as generative AI and wireless VR headsets are expanding access to dynamic virtual environments, boosting the adoption of AR/VR. Beyond gaming, these technologies are widely used in training simulations for industries like healthcare, aviation, and the military, providing realistic,

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

risk-free environments for skill building and retention. The ability to personalize training, reduce costs, and enhance collaboration makes AR/VR tools indispensable for both entertainment and business applications, fueling further innovation and growth in this segment.

US to hold the largest market size for North America simulation software market.

The U.S. leads the North American simulation software market due to its diverse industrial base, technological advancements, and significant investments in simulation for training, design, and decision-making. Key sectors like healthcare, automotive, and aerospace drive demand for advanced simulation tools, supported by major government initiatives, including NASA's research and training programs. The integration of AI for predictive capabilities, coupled with innovations in digital twins, further strengthens the U.S. market, enhancing efficiency, cost savings, and continuous optimization across industries.

Breakdown of primaries

The study contains insights from various industry experts, from component suppliers to Tier 1 companies and OEMs. The break-up of the primaries is as follows:

-□By Company Type: Tier 1 - 40%, Tier 2 - 35%, and Tier 3 - 25%

-□By Designation: C-level Executives - 45%, Directors - 35%, and Managers- 20%

-□By Region: North America - 35%, Asia Pacific - 30%, Europe - 25%, Middle East & Africa- 5%, and Latin America - 5%

Major vendors in the Simulation Software market include Dassault Systemes (France), Ansys (US), Autodesk (US), AVL List GmbH (Austria), MathWorks(US), Siemens (Germany), Hexagon (US), Synopsys (Canada), Texas Instruments (US), SAS (US), CAE (Canada), Emerson (US), Honeywell (US), Rockwell Automation (US), Altair (US), PTC (US), AspenTech (US), Keysight (US), Aveva (UK), Spirent (UK), Bentley (US), Certara (US).

The study includes an in-depth competitive analysis of the key players in the simulation software market, their company profiles, recent developments, and key market strategies.

?

Research Coverage

The report segments the simulation software market by offerings, software type, deployment mode, organization size, application vertical, and region. It forecasts its size by offering (Software Professional Services).

By software type (Computer-Aided Design Simulation Software, Physics and Multiphysics Simulation Software, Finite Element Analysis Software, Computational Fluid Dynamics Software, Process Simulation Software, Electronic Simulation Software, Electromagnetic Simulation Software, Healthcare and Epidemiological Simulation Software, Gaming, AR, VR, and Training Simulation Software, Manufacturing simulation software, Other Software Types (Robotics, Financial & Economic, Environmental, Molecular & Chemical, Social, and Traffic))

By Deployment (On-Premises, Cloud), By Organization Size (Large Enterprises and SMEs), By Application (Engineering, Research, Modeling, and Simulated Testing, Automotive and Vehicle Simulation, Gamification, VR, AR, and Immersive Experience, Manufacturing and Process Optimization, Urban Planning, Supply Chain, Logistics Management, and Transportation, Healthcare and Medical Device Simulation, Other Applications (cyber simulation, financial and risk management, energy, and environmental)), By Vertical (Automotive, Aerospace & Defense, Electrical & Electronics, Healthcare & Pharmaceuticals, Oil & Gas And Mining, Construction, Shipbuilding & Marine Engineering, Chemicals, Gaming, Othe verticals (Include Robotics, Media & Entertainment, Transportation, And Education)), By Region (North America, Europe, Asia Pacific, Middle East and Africa, Latin America).

The study also includes an in-depth competitive analysis of the market's key players, their company profiles, key observations related to product and business offerings, recent developments, and key market strategies.

Key Benefits of Buying the Report

The report will help the market leaders/new entrants with information on the closest approximations of the revenue numbers for the simulation software market and the subsegments. This report will help stakeholders understand the competitive landscape and gain more insights to position their businesses better and plan suitable go-to-market strategies. The report also helps stakeholders understand the market pulse and provides information on key market drivers, restraints, challenges, and opportunities.

The report provides insights on the following pointers:

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Analysis of key drivers, such as (Increasing capabilities of simulation about advanced technologies such as digital twin, AR/VR, and 3D printing, Growing demand from the healthcare/medical industry, Increasing demand for effective solutions to reduce production expenses, and training costs, Advancements in computing power, and cloud technology); Restraints (High cost of simulation software and services, Lack of skilled professionals to operate simulation software, complexity of simulation software); Opportunities (Growth of automotive industry, expansion of healthcare industry, development of new technologies such as quantum computing and artificial intelligence) and Challenges (Lack of standardization, Regulatory and compliance challenges, Integration and compatibility).

- Product Development/Innovation: Detailed insights on upcoming technologies, research development activities, new products, and service launches in the simulation software market.

- Market Development: Comprehensive information about lucrative markets - the report analyses the simulation software market across varied regions.

- Market Diversification: Exhaustive information about new products and services, untapped geographies, recent developments, and investments in the simulation software market.

- Competitive Assessment: In-depth assessment of market shares, growth strategies, and service offerings of leading players Dassault Systemes (France), Ansys (US), Autodesk (US), AVL List GmbH (Austria), MathWorks(US), Siemens (Germany), Hexagon (US), Synopsys (Canada), Texas Instruments (US), SAS (US), CAE (Canada), Emerson (US), Honeywell (US), Rockwell Automation (US), Altair (US), PTC (US), AspenTech (US), Keysight (US), Aveva (UK), Spirent (UK), Bentley (US), Certara (US) among others, in the simulation software market strategies.

Table of Contents:

1□INTRODUCTION□	43
1.1□STUDY OBJECTIVES□	43
1.2□MARKET DEFINITION□	43
1.2.1□INCLUSIONS & EXCLUSIONS□	44
1.3□STUDY SCOPE□	45
1.3.1□MARKET SEGMENTATION□	45
1.3.2□YEARS CONSIDERED□	46
1.4□CURRENCY CONSIDERED□	46
1.5□STAKEHOLDERS□	47
1.6□SUMMARY OF CHANGES□	47
2□RESEARCH METHODOLOGY□	48
2.1□RESEARCH DATA□	48
2.1.1□SECONDARY DATA□	49
2.1.2□PRIMARY DATA□	50
2.1.2.1□Breakdown of primary profiles□	50
2.1.2.2□Key insights from industry experts□	51
2.2□DATA TRIANGULATION□	51
2.3□MARKET SIZE ESTIMATION□	52
2.3.1□TOP-DOWN APPROACH□	53
2.3.2□BOTTOM-UP APPROACH□	54
2.4□MARKET FORECAST□	55
2.5□RESEARCH ASSUMPTIONS□	55
2.6□RESEARCH LIMITATIONS□	56
3□EXECUTIVE SUMMARY□	57
4□PREMIUM INSIGHTS□	61
4.1□ATTRACTIVE OPPORTUNITIES FOR KEY PLAYERS IN SIMULATION SOFTWARE MARKET□	61

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

4.2	SIMULATION SOFTWARE MARKET, BY OFFERING, 2024-2030	61
4.3	SIMULATION SOFTWARE MARKET, BY SOFTWARE TYPE, 2024-2030	62
4.4	SIMULATION SOFTWARE MARKET, BY DEPLOYMENT MODE, 2024-2030	62
4.5	SIMULATION SOFTWARE MARKET, BY ORGANIZATION SIZE, 2024-2030	63
4.6	SIMULATION SOFTWARE MARKET, BY APPLICATION, 2024-2030	63
4.7	SIMULATION SOFTWARE MARKET, BY VERTICAL, 2024-2030	64
4.8	MARKET INVESTMENT SCENARIO, BY REGION	64
?		
5	MARKET OVERVIEW AND INDUSTRY TRENDS	65
5.1	INTRODUCTION	65
5.2	MARKET DYNAMICS	65
5.2.1	DRIVERS	66
5.2.1.1	Increasing capabilities of simulation with regard to advanced technologies	66
5.2.1.2	Advancements in computing power and cloud technology	66
5.2.1.3	Increasing demand for effective solutions to reduce production expenses and training costs	66
5.2.2	RESTRAINTS	67
5.2.2.1	High cost of simulation software and services	67
5.2.2.2	Lack of skilled professionals	67
5.2.2.3	Complexity and threat of data leakage	67
5.2.3	OPPORTUNITIES	67
5.2.3.1	Growth of automotive industry	67
5.2.3.2	Expansion of healthcare industry	68
5.2.3.3	Development of new technologies, such as quantum computing and AI	68
5.2.4	CHALLENGES	68
5.2.4.1	Lack of standardization	68
5.2.4.2	Regulatory and compliance challenges	68
5.2.4.3	Issues in integration and compatibility	69
5.3	TRENDS/DISRUPTIONS IMPACTING CUSTOMER BUSINESS	69
5.4	PRICING ANALYSIS	70
5.4.1	AVERAGE SELLING PRICE TREND, BY SIMULATION SOFTWARE TYPE, 2024	70
5.4.2	INDICATIVE PRICING ANALYSIS, BY VENDOR	71
5.5	VALUE CHAIN ANALYSIS	74
5.6	ECOSYSTEM	75
5.7	TECHNOLOGY ANALYSIS	77
5.7.1	KEY TECHNOLOGIES	77
5.7.1.1	Agent-based simulation	77
5.7.1.2	Monte Carlo Simulation (MCS)	78
5.7.1.3	Discrete Event Simulation (DES)	78
5.7.1.4	Multi-disciplinary simulation	79
5.7.2	COMPLEMENTARY TECHNOLOGIES	79
5.7.2.1	AI and ML	79
5.7.2.2	IoT	79
5.7.2.3	Cloud-based simulation	79
5.7.3	ADJACENT TECHNOLOGIES	80
5.7.3.1	Digital twins	80
5.7.3.2	AR and VR	80
5.7.3.3	5G	80

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

5.8	PATENT ANALYSIS	81
5.8.1	METHODOLOGY	81
5.9	KEY CONFERENCES AND EVENTS, 2024-2025	84
5.10	REGULATORY LANDSCAPE	84
5.10.1	REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS	85
5.10.2	REGULATORY FRAMEWORK	93
5.10.2.1	German Civil Code	93
5.10.2.2	Simulation Interoperability Standards Organization (SISO)	93
5.10.2.3	International Nursing Association for Clinical Simulation and Learning (INACSL)	93
5.10.2.4	European Chemicals Agency (ECHA)	93
5.10.2.5	Open Geospatial Consortium (OGC)	93
5.11	PORTER'S FIVE FORCES ANALYSIS	95
5.11.1	THREAT OF NEW ENTRANTS	96
5.11.2	THREAT OF SUBSTITUTES	96
5.11.3	BARGAINING POWER OF SUPPLIERS	97
5.11.4	BARGAINING POWER OF BUYERS	97
5.11.5	INTENSITY OF COMPETITIVE RIVALRY	97
5.12	KEY STAKEHOLDERS AND BUYING CRITERIA	97
5.12.1	KEY STAKEHOLDERS IN BUYING PROCESS	97
5.12.2	BUYING CRITERIA	98
5.13	IMPACT OF GENERATIVE AI/AI ON SIMULATION SOFTWARE MARKET	99
5.13.1	TOP USE CASES & MARKET POTENTIAL	99
5.13.1.1	Key use cases	99
5.13.2	IMPACT OF GEN AI ON INTERCONNECTED AND ADJACENT ECOSYSTEM	100
5.13.2.1	Artificial Intelligence (AI) and Machine Learning (ML):	100
5.13.2.2	Edge computing in simulation	100
5.13.2.3	Quantum computing	101
5.13.2.4	Digital twin technology	101
5.13.2.5	Blockchain for secure simulation data	101
5.13.2.6	Virtual Reality (VR) and Augmented Reality (AR)	101
5.14	INVESTMENT AND FUNDING SCENARIO	101
5.15	TYPES OF DESIGN AND MODELLING SIMULATION SOFTWARE	102
5.15.1	2D CAD	102
5.15.2	3D CAD	102
5.16	CASE STUDY ANALYSIS	103
5.16.1	ALTAIR STREAMLINED FEA POST-PROCESSING FOR NORTHROP GRUMMAN MARINE SYSTEMS	103
5.16.2	ANYWAVES ACHIEVED RAPID ANTENNA INNOVATION WITH SIMULIA CST STUDIO	104
5.16.3	GEA FARM TECHNOLOGIES ENHANCED AGRICULTURAL MACHINERY DESIGN EFFICIENCY WITH SOLID-EDGE SIMULATION	105
5.16.4	ANSYS-POWERED SIMULATION OPTIMIZED INNOVATIVE BATTERY STORAGE SYSTEM FOR WARTSILA	105
5.16.5	NAPINO UTILIZED AUTODESK MOLDFLOW TO RESOLVE AUTOMOTIVE SWITCH DEFORMATION	106
6	SIMULATION SOFTWARE MARKET, BY OFFERING	108
6.1	INTRODUCTION	109
6.1.1	OFFERINGS: SIMULATION SOFTWARE MARKET DRIVERS	109
6.2	SOFTWARE	110
6.2.1	SIMULATION SOFTWARE TO CREATE MODEL GOVERNED BY EQUATIONS AND MATHEMATICAL DATA FOR ENGINEERS TO OBSERVE	110
6.3	PROFESSIONAL SERVICES	111

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

6.3.1	CUSTOMIZED SERVICES TO HELP IN EFFICIENT AND EFFECTIVE DESIGNING AND IMPLEMENTATION OF SIMULATION SOFTWARE	111
6.3.2	SIMULATION DEVELOPMENT SERVICES	111
6.3.3	TRAINING & CONSULTATION	112
6.3.4	SUPPORT & MAINTENANCE	113
7	SIMULATION SOFTWARE MARKET, BY SOFTWARE TYPE	114
7.1	INTRODUCTION	115
7.1.1	SOFTWARE TYPES: SIMULATION SOFTWARE MARKET DRIVERS	115
7.2	COMPUTER-AIDED DESIGN SIMULATION SOFTWARE	117
7.2.1	DESIGN VALIDATION AND OPTIMIZATION THROUGH COMPUTER-AIDED SIMULATIONS TO DRIVE MARKET GROWTH	117
7.3	PHYSICS & MULTIPHYSICS SIMULATION SOFTWARE	118
7.3.1	REALISTIC VIRTUAL MODELS FOR STUDYING PHYSICAL PHENOMENA TO FUEL MARKET GROWTH	118
7.4	FINITE ELEMENT ANALYSIS SOFTWARE	120
7.4.1	FINITE ELEMENT ANALYSIS SOFTWARE TO MODEL COMPLEX STRUCTURES FOR ENGINEERING ANALYSIS	120
7.5	COMPUTATIONAL FLUID DYNAMICS SOFTWARE	122
7.5.1	COMPUTATIONAL FLUID DYNAMICS SOFTWARE TO OPTIMIZE FLUID BEHAVIOR FOR DIVERSE APPLICATIONS	122
7.6	PROCESS SIMULATION SOFTWARE	123
7.6.1	PROCESS SIMULATION SOFTWARE TO OPTIMIZE INDUSTRIAL PROCESSES THROUGH VIRTUAL MODELING AND ANALYSIS	123
7.7	ELECTRONIC SIMULATION SOFTWARE	125
7.7.1	ELECTRONIC SIMULATION SOFTWARE TO ENHANCE CIRCUIT DESIGN AND ANALYSIS FOR ELECTRONICS INDUSTRY	125
7.8	ELECTROMAGNETIC SIMULATION SOFTWARE	126
7.8.1	NEED FOR OPTIMIZING DEVICE PERFORMANCE WITH ADVANCED ELECTROMAGNETIC SIMULATION SOFTWARE TOOLS TO BOOST MARKET GROWTH	126
7.9	HEALTHCARE & EPIDEMIOLOGICAL SIMULATION SOFTWARE	128
7.9.1	EPIDEMIOLOGICAL SIMULATIONS TO HELP MODEL DISEASE SPREAD TO AID PUBLIC HEALTH PLANNING	128
7.10	GAMING, AR, VR, AND TRAINING SIMULATION SOFTWARE	130
7.10.1	SIMULATION SOFTWARE TO ENABLE IMMERSIVE VR AND TRANSFORM TRAINING AND VISUALIZATION EXPERIENCES	130
7.11	MANUFACTURING SIMULATION SOFTWARE	131
7.11.1	MANUFACTURING SIMULATION SOFTWARE TO CREATE VIRTUAL MODELS OF PRODUCTION PROCESSES AND FACILITATE EFFICIENT TESTING, OPTIMIZATION, AND TROUBLESHOOTING	131
7.12	OTHER SOFTWARE TYPES	132
8	SIMULATION SOFTWARE MARKET, BY DEPLOYMENT MODE	134
8.1	INTRODUCTION	135
8.1.1	DEPLOYMENT MODES: SIMULATION SOFTWARE MARKET DRIVERS	135
8.2	ON-PREMISES	136
8.2.1	DEPLOYMENT OF ON-PREMISES DEPLOYMENT MODE FOR LOCALIZED SIMULATION SOLUTIONS TO FUEL MARKET GROWTH	136
8.3	CLOUD	137
8.3.1	CLOUD-BASED SIMULATION SOFTWARE TO ENABLE SCALABLE AND ACCESSIBLE SIMULATIONS	137
9	SIMULATION SOFTWARE MARKET, BY ORGANIZATION SIZE	139
9.1	INTRODUCTION	140
9.1.1	ORGANIZATION SIZES: SIMULATION SOFTWARE MARKET DRIVERS	140
9.2	LARGE ENTERPRISES	141
9.2.1	LARGE ENTERPRISES TO PROMOTE INDUSTRY-WIDE STANDARDS, ACCELERATE DIGITAL TRANSFORMATION, AND OPTIMIZE ENERGY USE WITH SIMULATION SOFTWARE	141
9.3	SMALL AND MEDIUM-SIZED ENTERPRISES	142
9.3.1	SUBSCRIPTION MODELS AND EMERGING TECHNOLOGIES TO BOOST ACCESSIBILITY FOR SMALL AND MEDIUM-SIZED ENTERPRISES	142

10	SIMULATION SOFTWARE MARKET, BY APPLICATION	144
10.1	INTRODUCTION	145
10.1.1	APPLICATIONS: SIMULATION SOFTWARE MARKET DRIVERS	145
10.2	ENGINEERING, RESEARCH, MODELING, AND SIMULATED TESTING	147
10.2.1	VIRTUAL PROTOTYPING USING SIMULATION SOFTWARE TO ACCELERATE DESIGN AND REDUCE DEVELOPMENT COSTS	147
10.3	AUTOMOTIVE & VEHICLE SIMULATION	149
10.3.1	SIMULATION SOFTWARE TO HELP ENHANCE AUTOMOTIVE INNOVATION THROUGH VIRTUAL TESTING AND OPTIMIZATION	149
10.4	GAMIFICATION, VR, AR, AND IMMERSIVE EXPERIENCE	151
10.4.1	SIMULATION SOFTWARE TO GAIN TRACTION DUE TO REALISTIC EXPERIENCES THROUGH IMMERSIVE SIMULATIONS	151
10.5	MANUFACTURING & PROCESS OPTIMIZATION	152
10.5.1	SIMULATION SOFTWARE IN MANUFACTURING AND PROCESS OPTIMIZATION TO ENHANCE EFFICIENCY AND REDUCE COSTS	152
	?	
10.6	URBAN PLANNING	155
10.6.1	SIMULATION SOFTWARE TO ENABLE VISUALIZATION AND ASSESSMENT OF URBAN LANDSCAPES	155
10.7	SUPPLY CHAIN, LOGISTICS MANAGEMENT, AND TRANSPORTATION	156
10.7.1	SIMULATION SOFTWARE TO OPTIMIZE URBAN PLANS AND STREAMLINE LOGISTICS OPERATIONS	156
10.8	HEALTHCARE & MEDICAL DEVICE SIMULATION	158
10.8.1	SIMULATION SOFTWARE TO HELP ENHANCE MEDICAL TRAINING, SAFETY, AND PERSONALIZED PATIENT CARE	158
10.9	OTHER APPLICATIONS	160
11	SIMULATION SOFTWARE MARKET, BY VERTICAL	162
11.1	INTRODUCTION	163
11.1.1	VERTICALS: SIMULATION SOFTWARE MARKET DRIVERS	163
11.2	AUTOMOTIVE	166
11.2.1	SIMULATIONS TO ENABLE ENHANCED VEHICLE DESIGN, SAFETY, AND PERFORMANCE	166
11.3	AEROSPACE & DEFENSE	167
11.3.1	ADVANCED SIMULATIONS TO INCREASE AEROSPACE EFFICIENCY AND SAFETY	167
11.4	ELECTRICAL & ELECTRONICS	168
11.4.1	SIMULATION SOFTWARE TO ENABLE EFFICIENT CIRCUIT DESIGN AND ANALYSIS	168
11.5	HEALTHCARE & PHARMACEUTICALS	169
11.5.1	SIMULATION SOFTWARE TO AUTOMATE AND VALIDATE ROUTINE STRUCTURES AND COMMON REPETITIVE PRACTICES IN HEALTHCARE	169
11.6	OIL, GAS, AND MINING	170
11.6.1	NEED TO OPTIMIZE FIELD PRODUCTION, DESIGN PIPELINE NETWORKS TO SAVE CAPITAL, AND ANALYZE AND DESIGN OIL TRANSFER PROCESSES TO BOLSTER MARKET GROWTH	170
11.7	CONSTRUCTION	171
11.7.1	USE OF SIMULATION SOFTWARE TO LEAD TO EFFICIENT DESIGNS, RESOURCES, AND REDUCTION IN COST OF CONSTRUCTION	171
11.8	SHIPBUILDING & MARINE ENGINEERING	172
11.8.1	SIMULATION SOFTWARE TO OPTIMIZE SHIP DESIGN, SAFETY, AND PERFORMANCE	172
11.9	CHEMICALS	173
11.9.1	SIMULATION SOFTWARE TO ENSURE PROCESS OPTIMIZATION, SAFETY, AND QUALITY IN CHEMICAL INDUSTRY	173
11.10	GAMING	174
11.10.1	NEED FOR ENHANCING GAME REALISM WITH ADVANCED SIMULATION TOOLS TO BOOST MARKET GROWTH	174
11.11	OTHER VERTICALS	175
	?	
12	SIMULATION SOFTWARE MARKET, BY REGION	177

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

12.1	INTRODUCTION	178
12.2	NORTH AMERICA	179
12.2.1	NORTH AMERICA: SIMULATION SOFTWARE MARKET DRIVERS	179
12.2.2	NORTH AMERICA: MACROECONOMIC OUTLOOK	179
12.2.3	US	186
12.2.3.1	Need for enhancing predictive capabilities, automating processes, and enabling real-time decision-making to drive market	186
12.2.4	CANADA	191
12.2.4.1	Advanced technology, dynamic deep learning algorithms, and government initiatives to propel market	191
12.3	EUROPE	196
12.3.1	EUROPE: SIMULATION SOFTWARE MARKET DRIVERS	196
12.3.2	EUROPE: MACROECONOMIC OUTLOOK	197
12.3.3	UK	202
12.3.3.1	Partnerships and collaborative efforts to fuel expansion of simulation software	202
12.3.4	GERMANY	207
12.3.4.1	Advancements in simulation technology within automotive and healthcare verticals to bolster market growth	207
12.3.5	FRANCE	212
12.3.5.1	Support from government and non-profit organizations to fuel demand for simulation software	212
12.3.6	ITALY	217
12.3.6.1	Advancements in technology and rising demand for simulation software in start-ups to boost market growth	217
12.3.7	REST OF EUROPE	222
12.4	ASIA PACIFIC	227
12.4.1	ASIA PACIFIC: SIMULATION SOFTWARE MARKET DRIVERS	227
12.4.2	ASIA PACIFIC: MACROECONOMIC OUTLOOK	228
12.4.3	CHINA	234
12.4.3.1	Economic growth, dense population, increasing per capita income, and rapid industrialization and urbanization to enhance market growth	234
12.4.4	JAPAN	238
12.4.4.1	Rising government initiative for adoption of advanced simulation techniques within manufacturing firms to foster market growth	238
12.4.5	INDIA	243
12.4.5.1	Innovative partnerships and initiatives to drive simulation software landscape	243
12.4.6	SINGAPORE	248
12.4.6.1	Simulation software to boost growth in aviation sector	248
12.4.7	REST OF ASIA PACIFIC	253
?		
12.5	MIDDLE EAST & AFRICA	258
12.5.1	MIDDLE EAST & AFRICA: SIMULATION SOFTWARE MARKET DRIVERS	258
12.5.2	MIDDLE EAST & AFRICA: MACROECONOMIC OUTLOOK	259
12.5.3	GCC COUNTRIES	264
12.5.3.1	Digital transformation, cloud adoption, and industry-specific applications to fuel market growth	264
12.5.3.2	UAE	270
12.5.3.2.1	Rapid digitalization to lead to adoption of simulation solutions	270
12.5.3.3	KSA	274
12.5.3.3.1	Advancements in technology, increased industry adoption, and government support through Vision 2030 to boost market growth	274
12.5.3.4	Rest of GCC countries	279

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

12.5.4	SOUTH AFRICA	285
12.5.4.1	Presence of major vendors providing simulation software solutions to drive market growth	285
12.5.5	REST OF MIDDLE EAST & AFRICA	290
12.6	LATIN AMERICA	295
12.6.1	LATIN AMERICA: SIMULATION SOFTWARE MARKET DRIVERS	295
12.6.2	LATIN AMERICA: MACROECONOMIC OUTLOOK	296
12.6.3	BRAZIL	301
12.6.3.1	Utilization of simulation software in electronics and construction sector to boost market growth	301
12.6.4	MEXICO	306
12.6.4.1	Integration of simulation software in maritime sector to fuel growth in Mexico	306
12.6.5	REST OF LATIN AMERICA	310
13	COMPETITIVE LANDSCAPE	316
13.1	OVERVIEW	316
13.2	KEY PLAYER STRATEGIES/RIGHT TO WIN	316
13.3	REVENUE ANALYSIS	318
13.4	MARKET SHARE ANALYSIS	319
13.5	COMPANY EVALUATION MATRIX: KEY PLAYERS, 2023	321
13.5.1	STARS	321
13.5.2	EMERGING LEADERS	321
13.5.3	PERVASIVE PLAYERS	322
13.5.4	PARTICIPANTS	322
13.5.5	COMPANY FOOTPRINT: KEY PLAYERS, 2024	323
13.5.5.1	Company footprint	323
13.5.5.2	Offering footprint	324
13.5.5.3	Deployment mode footprint	325
13.5.5.4	Vertical footprint	326
13.5.5.5	Regional footprint	327
13.6	COMPANY EVALUATION MATRIX: START-UPS/SMES, 2023	328
13.6.1	PROGRESSIVE COMPANIES	328
13.6.2	RESPONSIVE COMPANIES	328
13.6.3	DYNAMIC COMPANIES	328
13.6.4	STARTING BLOCKS	329
13.6.5	COMPETITIVE BENCHMARKING: COMPANY START-UPS/SMES, 2023	330
13.6.5.1	Detailed list of key start-ups/SMEs	330
13.6.5.2	Competitive benchmarking of key start-ups/SMEs	330
13.7	BRAND/PRODUCT COMPARISON	333
13.8	COMPANY VALUATION AND FINANCIAL METRICS	333
13.8.1	COMPANY VALUATION	333
13.8.2	FINANCIAL METRICS USING EV/EBIDTA	334
13.9	COMPETITIVE SCENARIO AND TRENDS	334
13.9.1	PRODUCT LAUNCHES AND ENHANCEMENTS	334
13.9.2	DEALS	343
14	COMPANY PROFILES	360
14.1	KEY PLAYERS	360
14.1.1	DASSAULT SYSTEMES	360
14.1.1.1	Business overview	360
14.1.1.2	Products/Solutions/Services offered	361

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

14.1.1.3	Recent developments	362
14.1.1.4	MnM view	363
14.1.1.4.1	Right to win	363
14.1.1.4.2	Strategic choices	364
14.1.1.4.3	Weaknesses and competitive threats	364
14.1.2	ANSYS	365
14.1.2.1	Business overview	365
14.1.2.2	Products/Solutions/Services offered	366
14.1.2.3	Recent developments	377
14.1.2.3.1	Product launches and enhancements	377
14.1.2.3.2	Deals	379
14.1.2.4	MnM view	380
14.1.2.4.1	Right to win	380
14.1.2.4.2	Strategic choices	380
14.1.2.4.3	Weaknesses and competitive threats	380
14.1.3	AUTODESK	381
14.1.3.1	Business overview	381
14.1.3.2	Products/Solutions/Services offered	382
14.1.3.3	Recent developments	384
14.1.3.3.1	Deals	384
14.1.3.4	MnM view	385
14.1.3.4.1	Right to win	385
14.1.3.4.2	Strategic choices	385
14.1.3.4.3	Weaknesses and competitive threats	385
14.1.4	AVL	386
14.1.4.1	Business overview	386
14.1.4.2	Products/Solutions/Services offered	386
14.1.4.3	Recent developments	387
14.1.4.3.1	Deals	388
14.1.4.4	MnM view	388
14.1.4.4.1	Right to win	388
14.1.4.4.2	Strategic choices	388
14.1.4.4.3	Weaknesses and competitive threats	388
14.1.5	MATHWORKS	389
14.1.5.1	Business overview	389
14.1.5.2	Products/Solutions/Services offered	389
14.1.5.3	Recent developments	391
14.1.5.3.1	Product launches	391
14.1.5.3.2	Deals	392
14.1.5.4	MnM view	393
14.1.5.4.1	Right to win	393
14.1.5.4.2	Strategic choices	393
14.1.5.4.3	Weaknesses and competitive threats	393
14.1.6	SIEMENS	394
14.1.6.1	Business overview	394
14.1.6.2	Products/Solutions/Services offered	395
14.1.6.3	Recent developments	400

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

14.1.6.3.1	Product launches and enhancements	400
14.1.6.3.2	Deals	401
14.1.6.4	MnM view	402
14.1.6.4.1	Right to win	402
14.1.6.4.2	Strategic choices	402
14.1.6.4.3	Weaknesses and competitive threats	402
14.1.7	HEXAGON	403
14.1.7.1	Business overview	403
14.1.7.2	Products/Solutions/Services offered	404
14.1.7.3	Recent developments	406
14.1.7.3.1	Product launches and enhancements	406
14.1.7.3.2	Deals	407
?		
14.1.8	SYNOPSIS	409
14.1.8.1	Business overview	409
14.1.8.2	Products/Solutions/Services offered	410
14.1.8.3	Recent developments	413
14.1.8.3.1	Deals	413
14.1.9	TEXAS INSTRUMENTS	414
14.1.9.1	Business overview	414
14.1.9.2	Products/Solutions/Services offered	415
14.1.9.3	Recent developments	416
14.1.9.3.1	Product launches and enhancements	416
14.1.9.3.2	Deals	417
14.1.10	SAS	418
14.1.10.1	Business overview	418
14.1.10.2	Products/Solutions/Services offered	418
14.1.10.3	Recent developments	419
14.1.10.3.1	Product launches and enhancements	419
14.1.10.3.2	Deals	419
14.1.11	CAE	420
14.1.11.1	Business overview	420
14.1.11.2	Products/Solutions/Services offered	421
14.1.11.3	Recent developments	421
14.1.11.3.1	Product launches and enhancements	421
14.1.11.3.2	Deals	422
14.1.12	EMERSON	424
14.1.12.1	Business overview	424
14.1.12.2	Products/Solutions/Services offered	425
14.1.12.3	Recent developments	426
14.1.12.3.1	Product launches and enhancements	426
14.1.12.3.2	Deals	427
14.1.13	HONEYWELL	428
14.1.13.1	Business overview	428
14.1.13.2	Products/Solutions/Services offered	429
14.1.13.3	Recent developments	432
14.1.13.3.1	Deals	432

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

14.1.14	ROCKWELL AUTOMATION	433
14.1.14.1	Business overview	433
14.1.14.2	Products/Solutions/Services offered	434
14.1.14.3	Recent developments	434
14.1.14.3.1	Product launches and enhancements	434
14.1.14.3.2	Deals	435
?		
14.1.15	ALTAIR	437
14.1.15.1	Business overview	437
14.1.15.2	Products/Solutions/Services offered	438
14.1.15.3	Recent developments	445
14.1.15.3.1	Product launches and enhancements	445
14.1.15.3.2	Deals	446
14.1.16	PTC	448
14.1.16.1	Business overview	448
14.1.16.2	Products/Solutions/Services offered	449
14.1.16.3	Recent developments	452
14.1.16.3.1	Product launches and enhancements	452
14.1.17	ASPENTECH	453
14.1.17.1	Business overview	453
14.1.17.2	Products/Solutions/Services offered	454
14.1.17.3	Recent developments	459
14.1.17.3.1	Deals	459
14.1.18	KEYSIGHT	460
14.1.18.1	Business overview	460
14.1.18.2	Products/Solutions/Services offered	461
14.1.18.3	Recent developments	462
14.1.18.3.1	Product launches and enhancements	462
14.1.18.3.2	Deals	463
14.1.19	AVEVA	465
14.1.20	SPIRENT	466
14.1.21	BENTLEY	467
14.1.22	CERTARA	468
14.2	OTHER PLAYERS	469
14.2.1	APRIORI	469
14.2.2	ANYLOGIC	470
14.2.3	SIMSCALE	470
14.2.4	SIMUL8	471
14.2.5	SIMIO	472
14.2.6	FLEXSIM	473
14.2.7	MOSIMTEC	474
14.2.8	FIVES PROSIM	475
14.2.9	CYBERNET	476
14.2.10	CESIM	477
14.2.11	AIRSHAPER	478
?		
15	ADJACENT AND RELATED MARKETS	479

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

15.1	INTRODUCTION	479
15.2	LIMITATIONS	479
15.3	SIMULATION SOFTWARE ECOSYSTEM AND ADJACENT MARKETS	479
15.4	DIGITAL TWIN MARKET	479
15.4.1	DIGITAL TWIN MARKET, BY ENTERPRISE SIZE	480
15.4.2	DIGITAL TWIN MARKET, BY APPLICATION	480
15.5	COMPUTER-AIDED MANUFACTURING MARKET	482
15.5.1	COMPUTER-AIDED MANUFACTURING MARKET, BY COMPONENT	482
15.5.2	COMPUTER-AIDED MANUFACTURING MARKET, BY DEPLOYMENT TYPE	483
16	APPENDIX	484
16.1	DISCUSSION GUIDE	484
16.2	KNOWLEDGESTORE: MARKETSANDMARKETS' SUBSCRIPTION PORTAL	488
16.3	CUSTOMIZATION OPTIONS	490
16.4	RELATED REPORTS	490
16.5	AUTHOR DETAILS	491

Simulation Software Market by Software Type (Computer-aided Design (CAD) Simulation, Physics and Multiphysics Simulation, Finite Element Analysis (FEA), Computational Fluid Dynamics (CFD), Gaming, AR/VR, and Training Simulation) - Global Forecast to 2030

Market Report | 2024-11-06 | 492 pages | MarketsandMarkets

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	\$4950.00
	Multi User	\$6650.00
	Corporate License	\$8150.00
	Enterprise Site License	\$10000.00
		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*	<input type="text"/>	Phone*	<input type="text"/>
First Name*	<input type="text"/>	Last Name*	<input type="text"/>
Job title*	<input type="text"/>		
Company Name*	<input type="text"/>	EU Vat / Tax ID / NIP number*	<input type="text"/>
Address*	<input type="text"/>	City*	<input type="text"/>

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Zip Code*

Country*

Date

Signature