Digital Twin, Simulation, and Manufacturing Software

M&A Review and Analysis

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Technology Investment Banking

Digital Twin, Simulation, and Manufacturing Software
Market Analysis

Sector Overview: The engineering, digital twin and simulation software market surpassed €16B+ in 2025 and continues to expand at a 30–40%+ CAGR across key industries. Alkali anticipates sustained strength in the M&A landscape. This will be driven by rapid enterprise adoption of simulation-led design, the accelerating maturity of digital twin platforms, and the transformative impact of AI-enabled predictive modeling. There are abundant examples of generative engineering across manufacturing, infrastructure and industrial operations.
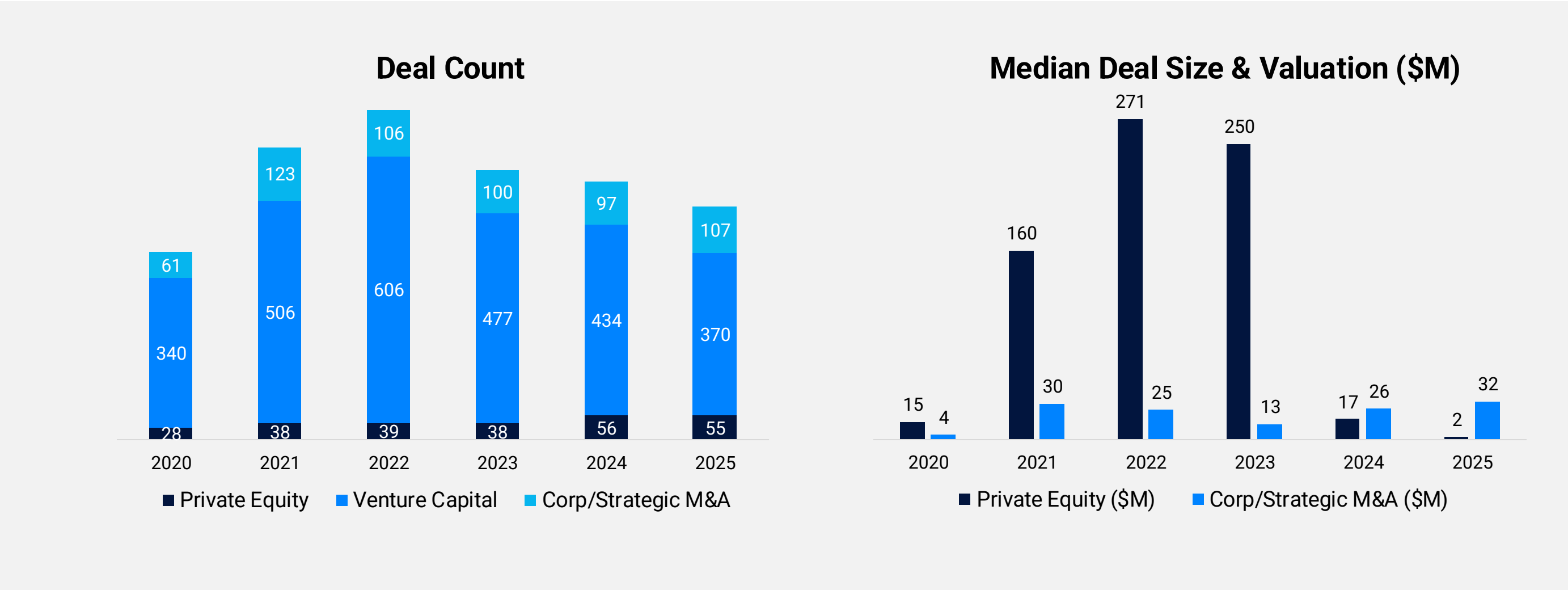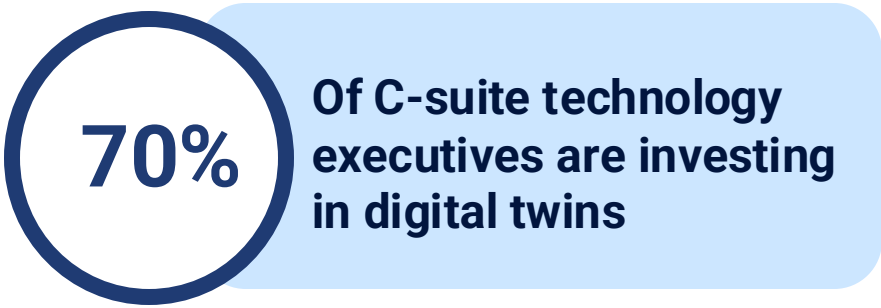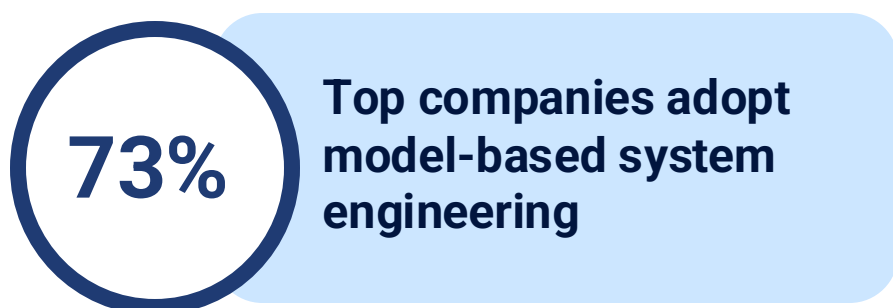
Enterprise Engineering Transformation: Enterprises are scaling digital twin adoption to gain real-time visibility into products, assets and operations, enabling predictive maintenance, and shortening development cycles across industrial environments.

AI-Driven Engineering Automation: Advancements in AI are transforming engineering workflows through predictive modeling, generative design and automated optimization, allowing teams to accelerate simulation throughput, boost accuracy and reduce manual engineering effort.

Sector-Wide Operational Optimization: Manufacturing, aerospace, construction and energy organizations are integrating simulation and digital twin platforms to optimize asset performance, enhance sustainability outcomes and unlock substantial efficiency gains across the full lifecycle.

73% Top companies adopt model-based system engineering

70% Of C-suite technology executives are investing in digital twins

50% Of development time has been reduced by employing product digital twins

56% Of companies are piloting to smart manufacturing solutions

Deal Count

Year	Private Equity	Venture Capital	Corp/Strategic M&A
2020	28	340	61
2021	38	506	123
2022	39	606	106
2023	38	477	100
2024	56	434	97
2025	55	370	107

Median Deal Size & Valuation ($M)

Year	Private Equity ($M)	Corp/Strategic M&A ($M)
2020	15	4
2021	160	30
2022	271	25
2023	250	13
2024	17	26
2025	2	32

Sponsors: Growth-Oriented
KKR, TA, Applied Ventures, Azulis Capital, Insight Partners, PSG, Summit Partners, Battery

Sponsors: Traditional Buyout
FP Francisco Partners, Vista, Thoma Bravo, Bain Capital, Carlyle, Clearlake, EQT, TPG

Most Active Acquirers
Autodesk, Trimble, Hexagon, Dassault Systèmes, Ansys, Siemens, Synopsys, Altair, ptc, Bentley

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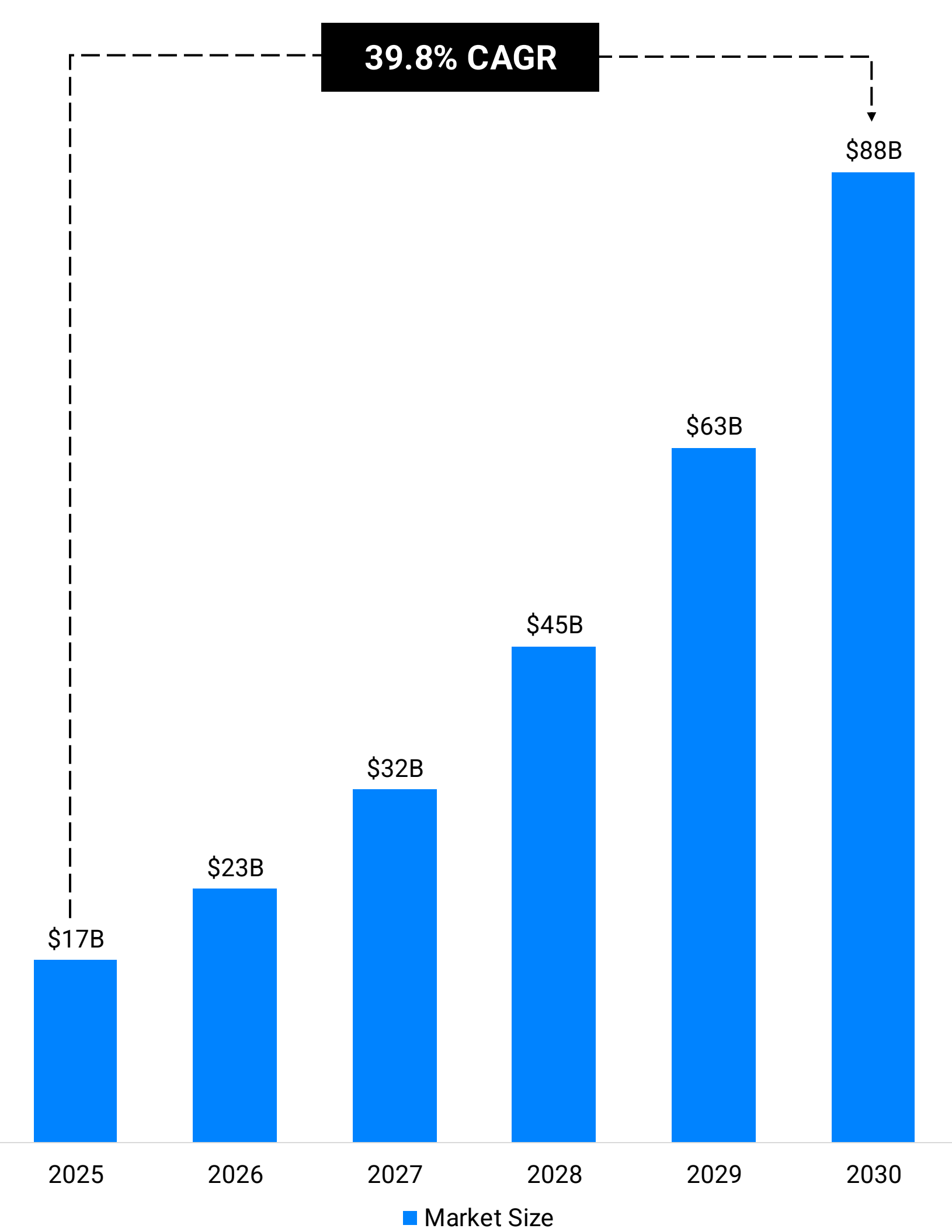# Digital Twin, Simulation, and Manufacturing Software
MARKET OVERVIEW

MARKET TAILWINDS

- **Rapid Adoption of Digital Twins and Simulation:** Global momentum behind digital twins and advanced simulation is accelerating as enterprises pursue real time visibility, predictive analytics and faster design cycles. Strong ROI, including double digit efficiency gains and reduced downtime, is driving adoption across manufacturing, aerospace, construction and energy.

- **AI and Cloud Enabling Next Generation Engineering:** The maturation of AI, IoT and cloud native architectures is transforming engineering workflows, enabling more accurate modeling, automated optimization and scalable simulation throughput

- **Industrial Modernization and Sustainability Mandates:** Large scale investments in factory automation, supply chain resilience and sustainability initiatives are increasing demand for engineering, PLM and CAE tools. Governments and enterprises are prioritizing digital infrastructure that supports lifecycle modelling, emissions tracking and operational optimization.

MARKET HEADWINDS

- **High Implementation Costs and Fragmented Legacy Systems:** Despite clear benefits, many organizations face significant upfront investment requirements and integration challenges with ageing OT or IT environments. These constraints can delay deployment timelines and slow broad-based adoption of digital twin and simulation platforms.

- **Regulatory, Data Security and IP Protection Concerns:** Greater interconnectivity introduces heightened risk around cybersecurity, data privacy and protection of proprietary engineering models. Maintaining compliance with sector specific requirements in aerospace, automotive and industrial markets remains complex and resource intensive.

- **Talent Gaps and Interoperability Limitations:** A shortage of specialized engineering and data talent, combined with inconsistent standards across simulation tools and digital twin frameworks, continues to hinder scalability.

Sources: Fortune Business Insights, Hexagon, Capgemini, McKinsey

Digital Twin and Simulation Market Size Projections ($B)

39.8% CAGR

Year	Market Size
2025	$17B
2026	$23B
2027	$32B
2028	$45B
2029	$63B
2030	$88B

■ Market Size

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Platform Expansion Through Transformational M&A

Multi-Billion Dollar Deals Driving Platform Expansion in Digital Twin & Simulation Software

SYNOPSYS®
has acquired
Ansys

Date: 7/17/2025

Deal Size: $35B

EV/Revenue: 13.78x

EV/EBITDA: 42x

Segment: Simulation, Multi-Physics Modeling, and System-Level Digital Twin Software

Rationale: Synopsys' $35B acquisition of Ansys unifies multi-physics simulation, chip-to-system modeling, and AI-enabled digital twin capabilities into a single engineering platform.

The combination integrates Ansys' leading structural, thermal, and electromagnetic solvers with Synopsys' silicon design tools, expanding the digital twin envelope from semiconductors to full-engineered systems across automotive, aerospace, and industrial markets.

Industry Outlook: This transaction underscores the growing importance of simulation and digital twins in next-generation product development. The combined platform enhances end-to-end modeling fidelity, enabling earlier design validation and reducing reliance on physical prototypes.

$400M Annual Cost Savings and Revenue Uplift

29% Premium to Share Price

SIEMENS
has acquired
ALTAIR

Date: 3/26/2025

Deal Size: $10.6B

EV/Revenue: 14x

EV/EBITDA: 31x

Segment: Industrial Digital Twin Platforms, CAE, HPC, and Manufacturing Simulation Software

Rationale: Siemens' acquisition of Altair strengthens its industrial software strategy by integrating Altair's mechanical simulation, data analytics, multiphysics modeling and HPC capabilities into Siemens' digital twin and automation stack.

Embedding Altair's solvers into Siemens Xcelerator enhances system-level modeling accuracy, manufacturing simulation and closed-loop digital twin execution across plant operations and product lifecycles.

Industry Outlook: The deal reflects accelerating consolidation across industrial simulation, manufacturing software and operational digital twin ecosystems. Altair's leadership in multiphysics, AI-driven optimization and generative simulation enables Siemens to meet rising demand for factory-level digital twins.

$150M Cost Synergies

$500M Revenue Synergies

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Digital Twin, Simulation, and Manufacturing Software
MARKET MAP

Computer-Aided Design (CAD)

AUTODESK · ptc · Trimble · DASSAULT SYSTEMES · HEXAGON · Bentley

BRICSYS · SIEMENS ALTAIR · NEMETSCHEK GROUP · ZWSOFT · IronCAD (3D Design Software Built for 3D Thinkers) · VECTORWORKS

Computer-Aided Engineering (CAE)

Ansys · Synopsys · esrd · DASSAULT SYSTEMES · SIEMENS ALTAIR · HEXAGON · SIMSCALE

COMSOL · esi get it right · AUTODESK · MathWorks · ptc · SMT · cadence

Electronic Design Automation (EDA)

SIEMENS ALTAIR · cadence · KEYSIGHT · ZUKEN · AMD · EasyEDA

Altium · Ansys Synopsys · AUTODESK · ALDEC (THE DESIGN VERIFICATION COMPANY) · SILVACO · Blue Pearl Software

Product Lifestyle Management (PLM)

DASSAULT SYSTEMES · SIEMENS ALTAIR · ptc · AUTODESK · SAP · odoo

ORACLE · aras · infor · propel · duro

Simulation and Analysis

Ansys Synopsys · HEXAGON · SIMSCALE

SIEMENS ALTAIR · AUTODESK · COMSOL

MathWorks · DASSAULT SYSTEMES · FLOW SCIENCES. INC.

KEYSIGHT · ptc · esi get it right · slb

Project Management

ORACLE · Microsoft · asana

DASSAULT SYSTEMES · HEXAGON · Trimble

SAP · INEIGHT · Deltek

AUTODESK · Bentley · PROCORE

ASITE · CMiC · BLUEBEAM (A NEMETSCHEK COMPANY)

Industrial Internet of Things (IoT) Platforms

ptc · SIEMENS ALTAIR · GE

HITACHI · software AG · aws

CISCO · ABB · IBM

ORACLE · Microsoft · RA Rockwell Automation

Additive Manufacturing (3D Printing) Software

AUTODESK · materialise · stratasys

DASSAULT SYSTEMES · Ansys Synopsys · SLM SOLUTIONS

GE · 3D SYSTEMS · eos · SIEMENS ALTAIR

Sources: Pitchbook, CB Insights

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M&A Activity in the Digital Twin, Simulation, and Manufacturing Software Market

FLARETOT — Acquired by **KBC** A Yokogawa Company

SIMUMATIK — Acquired by **VIRTUALWARE**

HI-LINE Industries — Acquired by **IWS** INTEGRATED WATER SERVICES

NOVACON powertrain — Acquired by **etteplan**

BlocksCAD — Acquired by **zSpace**

CADENAS — Acquired by **KEYENCE**

VACCO — Acquired by **RBC BEARINGS**

ECLIPSE AUTOMATION — Acquired by **accenture**

Read N — Acquired by **OptiCore**

PUNCHKICK — Acquired by **Eidra**

GSE SOLUTIONS Future of Power Operations — Acquired by **PELICAN ENERGY PARTNERS**

SIMUL8 — Acquired by **Minitab**

POSEIDA THERAPEUTICS — Acquired by **Roche**

ALTAIR — Acquired by **SIEMENS**

ipes 3D ENGINEERING — Acquired by **PLM**

Ansys — Acquired by **SYNOPSYS**

dawn/dusk — Acquired by **CUBESPACE**

OZEN — Acquired by **SimuTech Group**

Sep-24 — Nov-24 — Jan-25 — Mar-25 — May-25 — Jul-25 — Sep-25

JUXT — Acquired by **Grid Dynamics**

QUALITY INDUSTRIAL PRODUCTS, INC. — Acquired by **FUSION FUEL**

Compro COMPUTER SERVICES INC. — Acquired by **AECHELON**

Matterport — Acquired by **CoStar Group**

OPERANCE — Acquired by **BUILDDATA**

PlantStream — Acquired by **ARENT**

DAC INTERNATIONAL — Acquired by **ADDTRONICS**

VERISURF 3D Measurement Solutions — Acquired by **SANDVIK**

Xybion — Acquired by **ARCHIMED**

AEGIS SOFTWARE — Acquired by **PEAK ROCK CAPITAL**
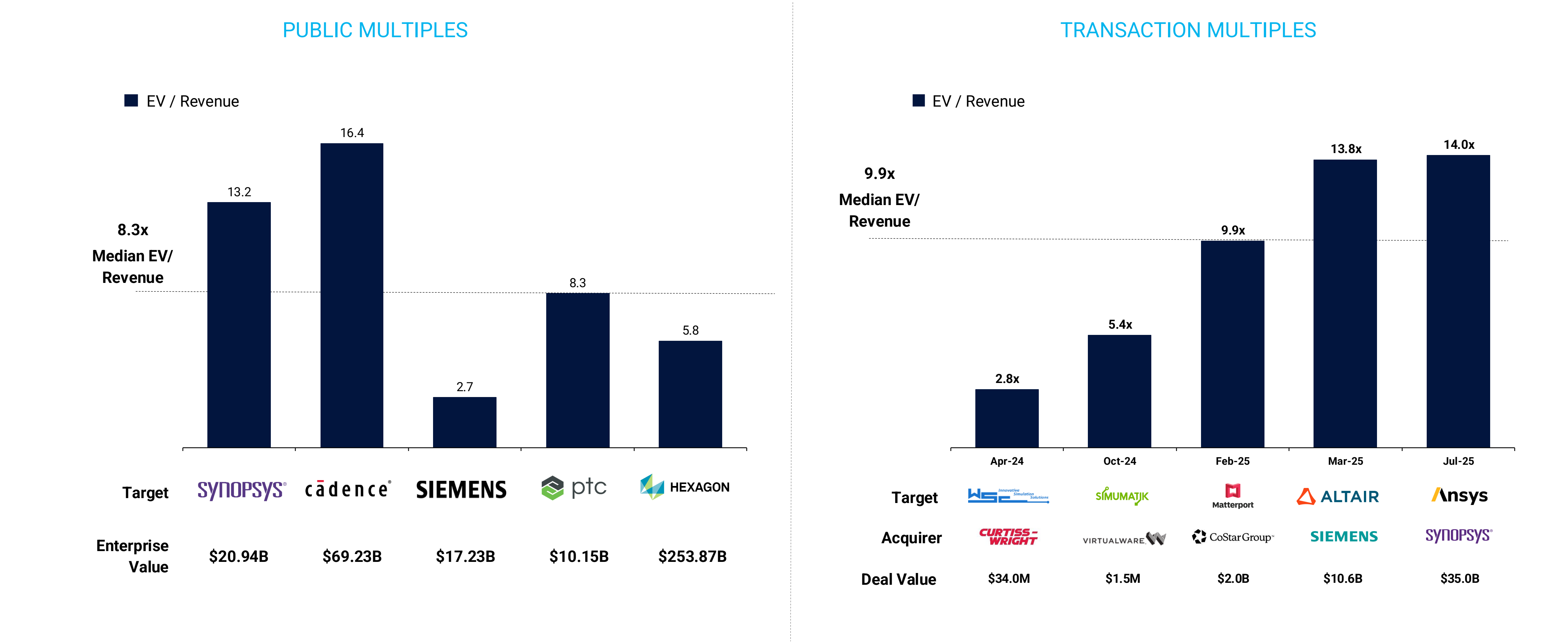
M&A activity in the space has remained strong throughout the last *18 months*.

While many industries have seen a significant portion of transactions trend towards going on hold as businesses *fall short* of projected budgets – transactions in *engineering software are still going through as forecasts hold true*.

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MARKET COMPARABLES

Public companies in the digital twin and simulation sector currently have a median EV/Revenue multiple of 8.3x. Conversely, private companies in the sector currently have a median EV/Revenue multiple of 9.9x.

PUBLIC MULTIPLES

■ EV / Revenue

8.3x
Median EV/Revenue

Target	Synopsys	Cadence	SIEMENS	ptc	HEXAGON
EV / Revenue	13.2	16.4	2.7	8.3	5.8
Enterprise Value	$20.94B	$69.23B	$17.23B	$10.15B	$253.87B

TRANSACTION MULTIPLES

■ EV / Revenue

9.9x
Median EV/Revenue

	Apr-24	Oct-24	Feb-25	Mar-25	Jul-25
EV / Revenue	2.8x	5.4x	9.9x	13.8x	14.0x
Target	WSC Innovative Simulation Solutions	SIMUMATIK	Matterport	ALTAIR	Ansys
Acquirer	CURTISS-WRIGHT	VIRTUALWARE	CoStar Group	SIEMENS	SYNOPSYS
Deal Value	$34.0M	$1.5M	$2.0B	$10.6B	$35.0B

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APPENDIX – SELECTED M&A TRANSACTIONS

Select Industry Transactions

Date	Target	Acquirer	Deal Value
07/17/2025	Ansys	Synopsys	$35,407.31M
07/01/2025	Dotmatics	Siemens	$5,100.00M
06/03/2025	Verisurf Software	Sandvik	Undisclosed
05/20/2025	Cadenas	Keyence	Undisclosed
04/29/2025	Tech-X	Silvaco	Undisclosed
04/05/2025	Multisys Technologies	PLDT Global Investments Holdings	$4.49M
03/26/2025	Altair Engineering	Siemens	$10,600.00M
03/17/2025	PlantStream	Arent	$1.54M
03/11/2025	BlocksCAD	zSpace	Undisclosed
02/04/2025	Mcam Northwest	Mastercam	Undisclosed

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Select Industry Transactions

Date	Target	Acquirer	Deal Value
01/27/2025	Kranze Technology Solutions	SPX Technologies	$342.00M
12/05/2024	SIMUL8	Minitab	Undisclosed
11/12/2024	Neural Magic	Red Hat	Undisclosed
10/21/2024	Simumatik	Virtualware	$1.51M
09/26/2024	Juxt	Grid Dynamics	$61.97M
09/17/2024	Flaretot	KBC Advanced Technologies	Undisclosed
08/20/2024	OPTIMAD Engineering	Esteco	Undisclosed
06/03/2024	Beta Simulation Solutions	Cadence Design Systems	$1,240.00M
04/02/2024	Western Services Corporation	Curtiss-Wright	$34.00M
02/14/2024	Altium	Renesas Electronics	$6,000.00M

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APPENDIX – SELECTED M&A TRANSACTIONS

Select Industry Transactions

Date	Target	Acquirer	Deal Value
12/31/2023	Cybernet Systems	FujiSoft	$84.85M
12/12/2023	Applied BioMath	Certara	$36.60M
11/03/2023	ESI Group	Keysight Technologies International	$1,430.00M
10/23/2023	National Instruments	Emerson Electric	$8,200M
10/04/2023	Pure Systems	PTC	$93.46M
09/07/2023	Dynavac	Weiss Technik	Undisclosed
09/01/2023	SKVR Software Solution	Sify Technologies	$4.83M
09/01/2023	OmniQuest	Altair Engineering	Undisclosed
08/31/2023	BBS Automation	Durr	$480.30M
06/23/2023	CADS Additive	Hexagon	Undisclosed

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