



Technology Group

Industrial Software

Supply Chain, Engineering, and Manufacturing Software

MARKET UPDATE **SPRING 2023**



Houlihan Lokey

Industrial Software Market Update

Dear Clients and Friends,

Houlihan Lokey is pleased to present the spring 2023 edition of its Industrial Software Market Update. We have continued adapting to a recovering market and remain active in advising our clients as they pursue M&A, financing, and other strategic initiatives. We have included industry insights, selected recent transaction announcements, and a public markets overview to help you stay ahead in our dynamic and constantly evolving industry.

Market Activity:

- M&A and financing activity across the sector increased slightly throughout Q1 2023 despite continuing macro headwinds. Additionally, market activity has shown indications for further improvement as we progress further into 2023:
 - **~\$5 billion of LTM financing activity** as capital markets remain tight with investors focused on quality over quantity.
 - **~\$11 billion in LTM M&A deal volume⁽¹⁾** in line with a broader M&A slowdown in 2022.
- M&A and financing activity across industrial software will accelerate in 2023 as macroeconomic conditions improve and end customers look to drive operational efficiency to offset increased cost basis driven by inflation and cost of financing.

Regards,



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Representative Industry Subsectors Covered

 Procurement Management	 Supply Chain Planning/Execution	 Order Management and Fulfillment	 Warehouse Management	 Manufacturing Operations	 Asset Performance and Maintenance	 Product Design and Development	 EHS	 Industrial Control Systems
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Sources: PitchBook.com, S&P Capital IQ.
(1) M&A \$ volume includes only transactions with publicly available financial metrics.

Recent Momentum in the Connected Worker Sector

Connected worker software is designed to enhance productivity, quality, and safety in manufacturing environments by providing real-time data, communication tools, and training resources to workers on the shop floor.



acquired by



- On **January 2, 2023**, QAD, a Thoma Bravo portfolio company, announced its acquisition of Redzone for an estimated amount of **~\$1B**.⁽²⁾
- More than 1,000 plants and 300,000 frontline workers worldwide rely on Redzone's solutions to create a better employee experience for frontline teams.

Transaction Rationale


- The addition of Redzone's connected workforce product supercharges the QAD Adaptive Applications product suite by enabling QAD customers to drive rapid, tangible increases in empowerment, retention, and productivity on the frontline.
- Redzone's focus on people, their productivity, and their engagement addresses a primary area of opportunity for QAD customers.

~\$100M
FY23 Revenue Run Rate


35%
Organic SaaS Revenue Growth

300K
Frontline Workers

225+
Employees



received a minority investment led by



- On **April 18, 2023**, Augmentir announced that it completed a new financing round for **\$4M**.
- Augmentir's software includes a complete suite of connected worker capabilities, connectors to business systems, and broad extensibility that enable manufacturers to digitize their frontline operations, reduce onboarding time, and increase workforce productivity.

Transaction Rationale

- The investment will be used to expand Augmentir's global sales and marketing efforts while accelerating product development and innovation.
- In addition to the funding news, Augmentir has also announced organizational growth, including two new additions to the company's leadership team. Kiyomi Otani joins the team as Vice President of Operations, and Carsten Hunfeld will become the company's Director for EMEA.

\$41M
Pre-Money Valuation

50%+
Employee Growth Rate

\$19M
Total Raised to Date

30+
Employees



received a minority investment led by



- On **May 4, 2023**, Innovapptive announced it raised a Series B investment led by Vista Equity Partners for **\$26M**.
- Innovapptive uniquely unlocks all aspects of an enterprise's work management processes with its flagship patented no-code connected worker platform and integrated suite of apps that tightly integrate with enterprise ERPs.

Transaction Rationale

- Innovapptive will use the investment to accelerate product innovation and reach new regional markets while further establishing its leadership position in the emerging connected worker software category.
- The combination of Innovapptive and Vista will enhance Innovapptive's platform capabilities to integrate with enterprise systems, capture actionable insights, make recommendations for productivity and safety, and close the loop between assets and people.

\$105M
Pre-Money Valuation

100K+
Users

\$69M
Total Raised to Date

250+
Employees

Sources: 451 Research, S&P Capital IQ, PitchBook.com, company websites.
 (1) Post-money valuation.
 (2) Reuters EV estimation (financial terms not disclosed).

Financing Activity Continues Across Value Chain Categories

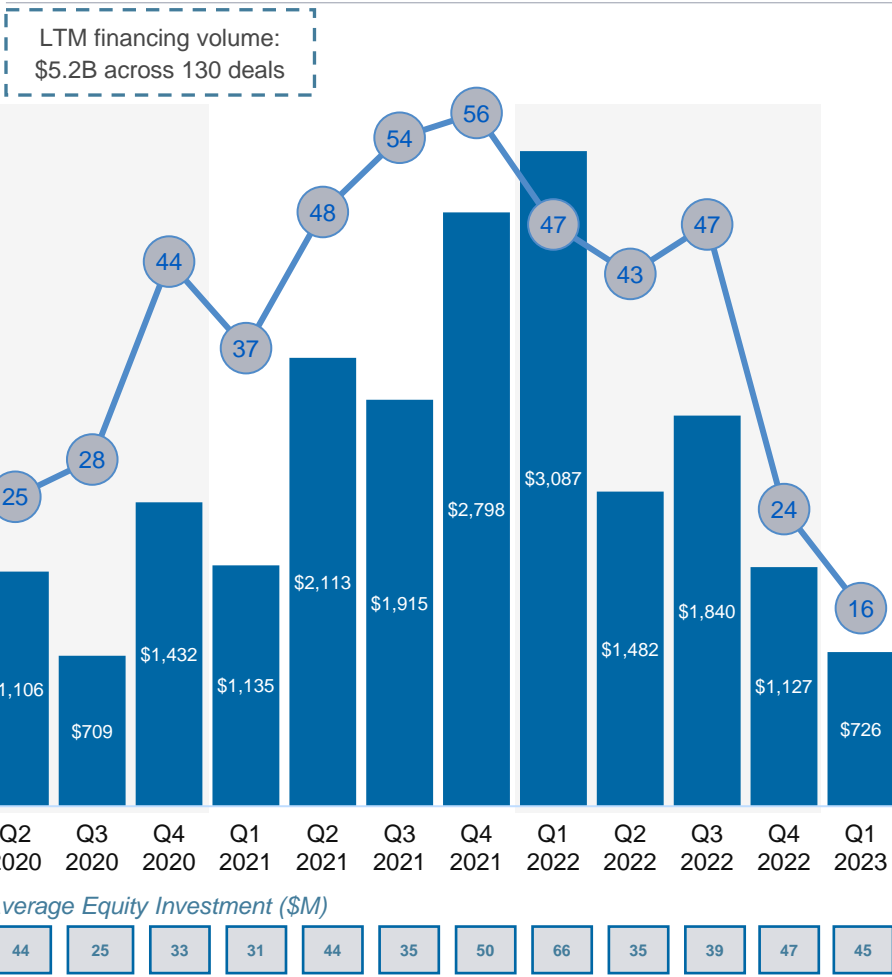
Fundraising frequency further retracted in Q1 2023, but average check size remained relatively stable as investors maintained interest in the domain while continuing to be more selective.

Select Industrial Software Financings (\$M)

Date	Company	Selected Investor(s)	Amount Invested	Pre-Money Valuation	Segment/ Value Chain
5/2023	resilinc	VISTA	N/A	N/A	
5/2023	INNOVAPPTIVE	VISTA	\$26	\$105	
4/2023	everstream ANALYTICS	Morgan Stanley INVESTMENT MANAGEMENT STEPSTONE	\$50	N/A	
4/2023	Augmentir	Gardner Lewis ASSET MANAGEMENT	\$4	\$41	
3/2023	Loftware	AKKR	N/A	N/A	
2/2023	QIO	WAVE EQUITY PARTNERS	\$10	N/A	
2/2023	OVERHAUL	Undisclosed	\$38	\$335	
1/2023	LOGIWA	PROLOGIS NewRoad RAM RELEVATE	\$26	\$85	
1/2023	Magaya	LLR Partners Apax	N/A	N/A	
1/2023	MACROFAB	FOUNDRY	\$42	\$128	

Supply Chain Management					Engineering and Manufacturing			
Procurement Management	Supply Chain Planning	Order Management and Fulfillment	Warehouse Management	Manufacturing Operations	Asset Performance and Maintenance	Product Design and Development	EHS	Industrial Control Systems

Industrial Software Quarterly Financing Activity (\$M)



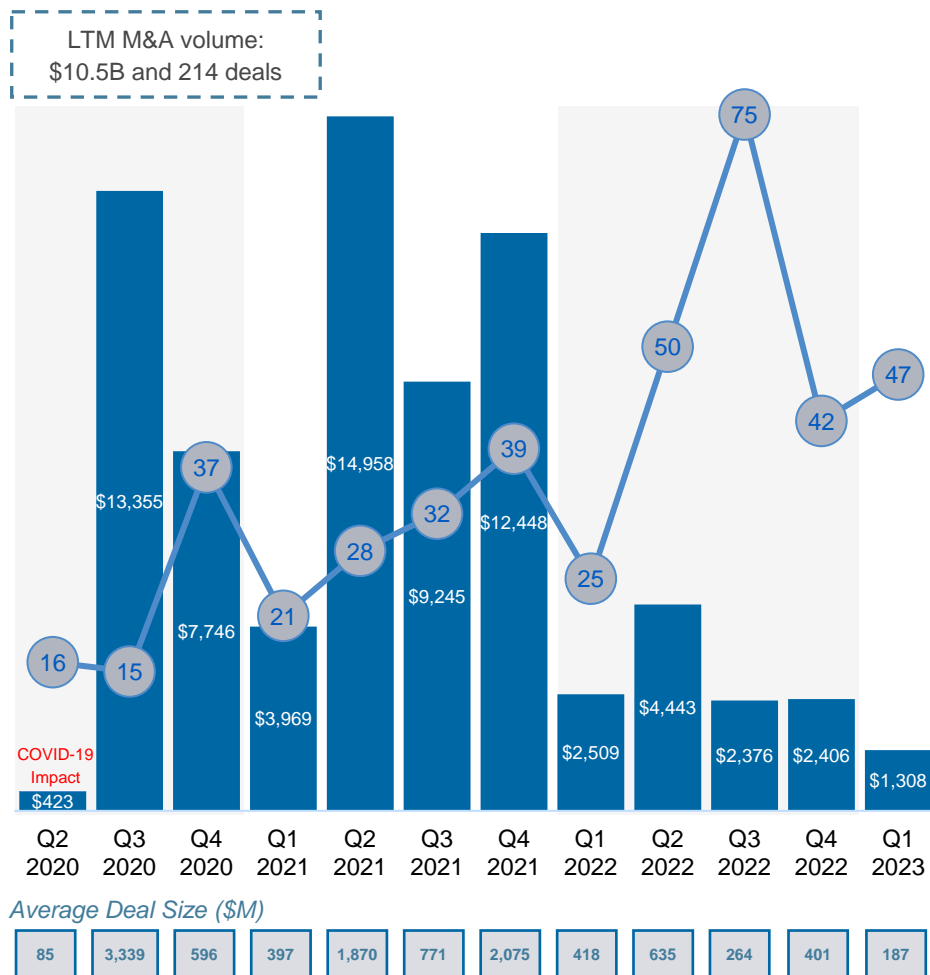
Sources: PitchBook.com, S&P Capital IQ.

Notes: Includes early-stage and later-stage venture investments from funds and strategics. Financing \$ volume and average deal size includes only transactions with publicly available financials.

Strategic M&A Activity Continues Across the Ecosystem

Q1 2023 continued trends from 2022, with consolidators driving activity with a healthy amount of frequency but reduced deal size.

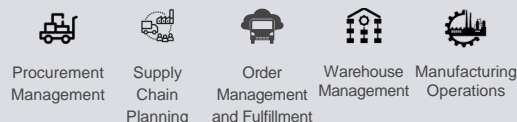
Industrial Software Quarterly M&A Activity (\$M)



Select Industrial Software M&A Transactions (\$M)

Date	Acquirer	Target	Transaction Value	Segment/Value Chain
5/2023	nalanda	dokify	N/A	Supply Chain Management
5/2023	Emphasys	CDK GLOBAL HEAVY EQUIPMENT	N/A	Manufacturing Operations
4/2023	GAINS	3TO TRENDS OPTIMIZATION	N/A	Supply Chain Management
4/2023	everstream ANALYTICS	BLUENODE	N/A	Supply Chain Management
2/2023	wisetech global	BLUME global	\$414	Supply Chain Management
2/2023	OVERHAUL	Subsidiary of SENSITECH	N/A	Supply Chain Management
2/2023	TEXADA	Subsidiary of UPTAKE	N/A	Manufacturing Operations
1/2023	QAD	Redzone	~\$1,000	Manufacturing Operations
1/2023	wisetech global	ENVASE	\$230	Supply Chain Management
1/2023	FREIGHTOS	GESHER ACQUISITION CORP	\$500	Supply Chain Management
1/2023	KEENSIGHT CAPITAL	onventis	Conf.	Manufacturing Operations

Supply Chain Management

































































































Engineering and Manufacturing



Sources: PitchBook.com, S&P Capital IQ, 451 Research, press releases.
Note: M&A \$ volume and average deal size include only transactions with publicly available financials.
















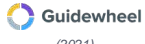
Most Active Industrial Software Strategic Acquirers

Acquirer	# Acquisitions (Since Jan. 1, 2020)	Targets							
 aptean	16	 DRINK-IT <small>From Aptean</small> (2023)	 Merlin (2022)	 PATCH (2022)	 T&H (2022)	 R&H (2022)	 R&L M Apparel Software (2022)	 DATA SYSTEMS <small>Solutions made in 2023</small> (2022)	 integrated <small>Food processing software</small> (2021)
 Objective (2021)		 RAMSAUER STÖRMER (2021)	 EXENTA (2021)	 technologies (2021)	 La'com (2020)	 OSAS (2020)	 agiles (2020)	 WorkWise (2020)	
 Bentley®	11	 EasyPower (2023)	 MINERVA <small>INTELLIGENCE</small> (2022)	 eagle.io (2022)	 ADINA (2022)	 POWER LINE SYSTEMS (2022)	 SEQUENT (2021)	 SPIDA <small>SOFTWARE</small> (2021)	 sensometrics (2021)
 VISTA DATA VISION (2021)		 INRO (2021)	 COHESIVE <small>SOLUTIONS</small> (2020)						
 HEXAGON	10	 LocLab ⁽¹⁾ <small>INTELLIGENCE</small> (2022)	 Accelerator <small>by KAS</small> (2022)	 etq (2022)	 Jovix (2021)	 infor <small>[EAM Business Solutions]</small> (2021)	 CADIM <small>RESPONSE TO BUSINESS</small> (2021)	 ESPRIT <small>OFFICIAL APPROVED</small> (2020)	 CAE fatigue (2020)
 Romax Technology (2020)		 PAS (2020)							
 AUTODESK	9	 THE WILD (2022)	 eyrus (2022)	 prodsmart (2022)	 E (2021)	 office (2021)	 āPriori (2021)	 upchain (2021)	 Innovyze (2021)
 COMPLETE <small>CONSTRUCTION SOFTWARE</small> (2020)									
 DESCARTES	8	 localiz (2023)	 GROUND CLOUD (2022)	 SUPPLY VISION (2023)	 foxtrot (2022)	 Net Chb. (2022)	 PLS <small>PLANNING & LOGISTICS</small> (2021)	 QuestaWeb, Inc. <small>Global Trade Management Solutions</small> (2021)	 Kontainers (2020)
 revalize	8	 PROFILE <small>PLANNING</small> (2021)	 TENADO <small>SOFTWARE</small> (2021)	 Sofon <small>by Qventus</small> (2021)	 BCA <small>Business Control Automation</small> (2021)	 CONFIGURE ONE (2021)	 FPX (2021)	 SpecPage <small>Recipe to Success</small> (2021)	 Axonom Inc. (2020)
 eci	7	 LOJIC (2022)	 TheGlobe <small>Production</small> (2022)	 MIP <small>Production</small> (2021)	 deacom <small>INDUSTRIAL SOFTWARE SOLUTIONS COMPANY</small> (2021)	 shoptech (2020)	 ThermoGRIE (2020)	 prosperity <small>SOFTWARE</small> (2020)	
 SANDVIK	6	 GCS (2021)	 JCAM (2021)	 Mastercam <small>by CADKEY</small> (2021)	 CAMBRIO (2021)	 OQTON (2021)	 CGTECH (2020)		
 wisetech global	5	 BLUME <small>global</small> (2023)	 ENVASE (2023)	 Shipamax (2022)	 Boleto (2022)	 SISA <small>Global</small> (2020)			
 ptc	5	 CloudMilling (2022)	 SERVICEMAX (2023)	 INTLAND SOFTWARE (2022)	 RE'FLEKT (2022)	 arena (2021)			

Sources: Company filings, S&P Capital IQ, PitchBook.com.

(1) Transaction is pending close.

Most Active Industrial Software Financial Sponsors

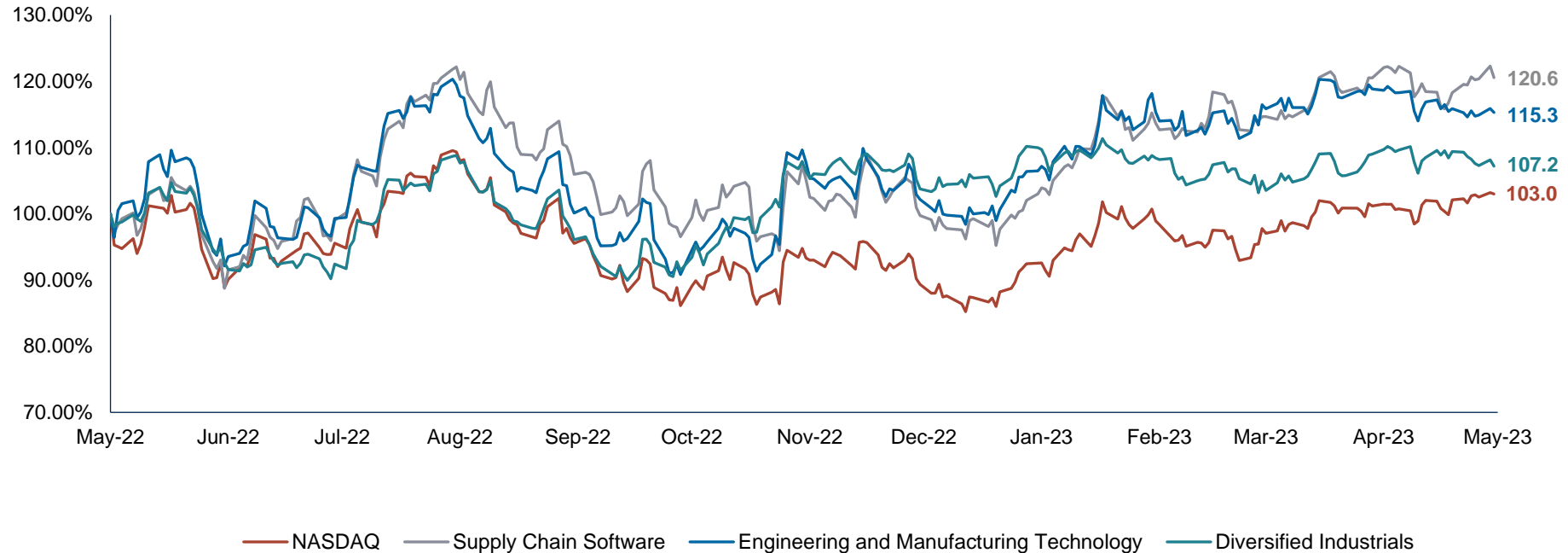
Acquirer	# Investments (Since Jan. 1, 2020)	Targets									
 TA ASSOCIATES	17	 DRINK-IT (2023)	 Aptean (2022, 2020)	 PATCH (2022)	 FH (2022)	 advantive (2022)	 integrator food processing software (2021)	 Emphasys (2021)	 Objective (2021)	 Magnitude (2021)	
		 CONFIGURE ONE (2021)	 revolize (2021)	 WORKWAVE (2021)	 EXENTA (2021)	 MODULA (2020)	 UNLEASHED (2020)	 IFS (2020)	 WorkWise (2020)		
 INSIGHT PARTNERS	13	 Aptean (2022)	 PPRENTICE (2022, 2020)	 GAMMA TECHNOLOGIES (2022)	 SOFTWARE AUTOMATION (2022)	 project44 (2022, 2021, 2020)	 LOGIXBOARD (2022)	 LIXIA (2022)	 EXPEDOCK (2022)		
		 nTopology (2021, 2020)	 EquipmentShare (2021)	 TULIP (2021)	 SIMSCALE (2021, 2020)	 UpKeep (2020)					
 TIGERGLOBAL	12	 INNOVAPPTIVE (2023)	 odeko (2023)	 ambi ROBOTICS (2022, 2021)	 waresix (2022)	 cogoport (2022)	 nTopology (2021)	 EquipmentShare (2021)	 Emerge (2021)		
		 SVT ROBOTICS (2021)	 RAPID (2021)	 Physna (2021)	 LOGINEXT (2020)						
 Hg	10	 Ideagen (2022)	 WORKWAVE (2022)	 SupplyStack by Transcendion (2022)	 Trackunit (2021)	 revolize (2021)	 Magnitude (2021)	 Fikuro (2021)	 AUVESY (2021)		
		 MBM Manufacturing Business Media (2020)	 UNLEASHED (2020)								
 AKKR	10	 Loftware (2023)	 palladium (2023)	 TITANGPS (2022)	 MarketMedium (2022)	 basware Supply Network Optimization (2022)	 toolsgroup (2021)	 VENDAVO (2021)	 NAVTOR (2020)		
		 KALERIS (2020)	 Tai (2020)								
 THOMABRAVO	9	 GLOBAL WORKER PASS (2023)	 Redzone (2022)	 coupa (2022)	 vuealta (2022)	 project44 (2022)	 ICIX (2022)	 QAD (2021)	 ICIX (2021)	 EXOSTAR (2020)	
 VISTA	9	 INNOVAPPTIVE (2023)	 resilinc (2023)	 FH (2022)	 Assent (2022)	 integrator food processing software (2021)	 Objective (2021)	 ARCOS (2021)	 MODULA IT WORKS (2020)	 WorkWise SOFTWARE (2020)	
 Charlesbank	7	 FH (2022)	 PATCH (2022)	 integrator food processing software (2021)	 Objective (2021)	 EXENTA (2021)	 MODULA IT WORKS (2020)	 Aptean (2020)			
 Battery	5	 KOJO (2022)	 SHIPP3O (2022, 2020)	 PROEMION (2022)	 fulcrum (2020)	 TECH SOFT 3D (2020)					
 GREYCROFT	3	 Emerge (2021, 2020)	 Guidewheel (2021)	 Tradeshift (2021)							

Sources: Company filings, S&P Capital IQ, PitchBook.com.

Note: Based on buyout and late-stage lead investments; excludes comparatively small add-ons.

Industrial Software Recovery Has Outperformed Broader Tech

Share Price Performance



Public Company Ecosystem Segmentation

Supply Chain Software

- AMERICAN SOFTWARE
- aspentech
- DESCARTES
- e2open
- kinaxis
- Manhattan Associates
- PARK CITY GROUP
- samsara
- Trimble
- wisetech global
- tecsys

Engineering and Manufacturing Technology

- ALTAIR
- Altium
- Ansys
- AUTODESK
- Bentley
- cadence
- DASSAULT SYSTEMES
- HEXAGON
- PSI
- SYNOPSYS

Diversified Industrials

- ABB
- COGNEX
- DANAHER
- EMERSON
- get it right
- FAST RADIUS
- FANUC
- FORTIVE
- GE
- HITACHI
- Honeywell
- KEYSIGHT TECHNOLOGIES
- materialise
- OMRON
- Rockwell Automation
- ROPER
- SANDVIK
- Schneider Electric
- SIEMENS
- VELO 10
- ZEBRA

Source: S&P Capital IQ.

Notes: Market data as of May 17, 2023. Figures shown as a percentage of VWAP on May 16, 2022.

Industrial Software Valuations Are Among the Highest Across All Software Domains

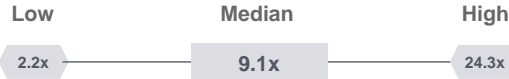
2023E Trading Metrics

Commentary

Relative Performance

Supply Chain Software

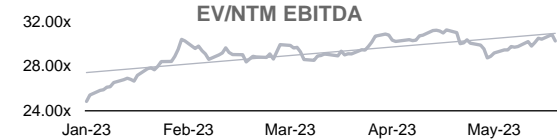
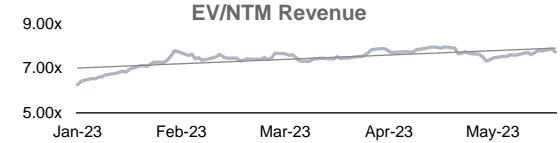
EV/2023E Revenue



EV/2023E EBITDA



- Focus has shifted from broad supply chain optimization to supply chain risk, emphasizing the importance investors are placing on visibility, resiliency, and intelligence.
- Investors are more comfortable with risk profiles of supply chain software businesses, as EBITDA multiples trade at six-month highs.



Engineering and Manufacturing Technology

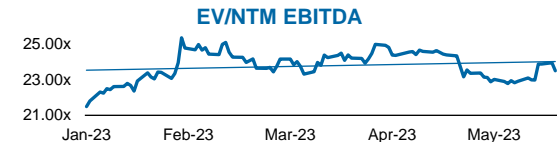
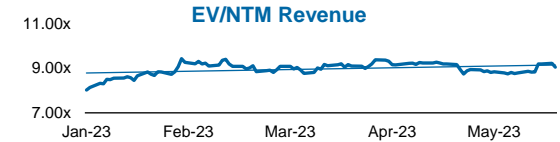
EV/2023E Revenue



EV/2023E EBITDA



- Least volatile of industrial software group given the established position of market incumbents and constant pace of end-market digitization.
- Stable revenue trading multiples but trading off below-median EBITDA multiples, illustrating a slight shift in risk appetite for revenue growth.



Diversified Industrials

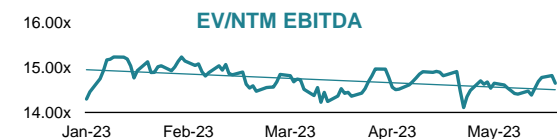
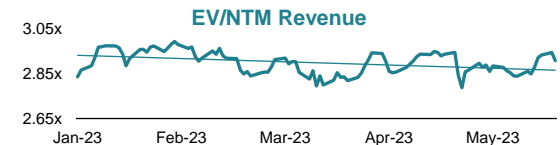
EV/2023E Revenue



EV/2023E EBITDA



- Traditional industrial valuations have remained relatively flat as uncertainty persists in the broader macro environment.
- Higher costs have been offset by favorable revenue mixes and increased digitization leading to consistent EBITDA valuations.



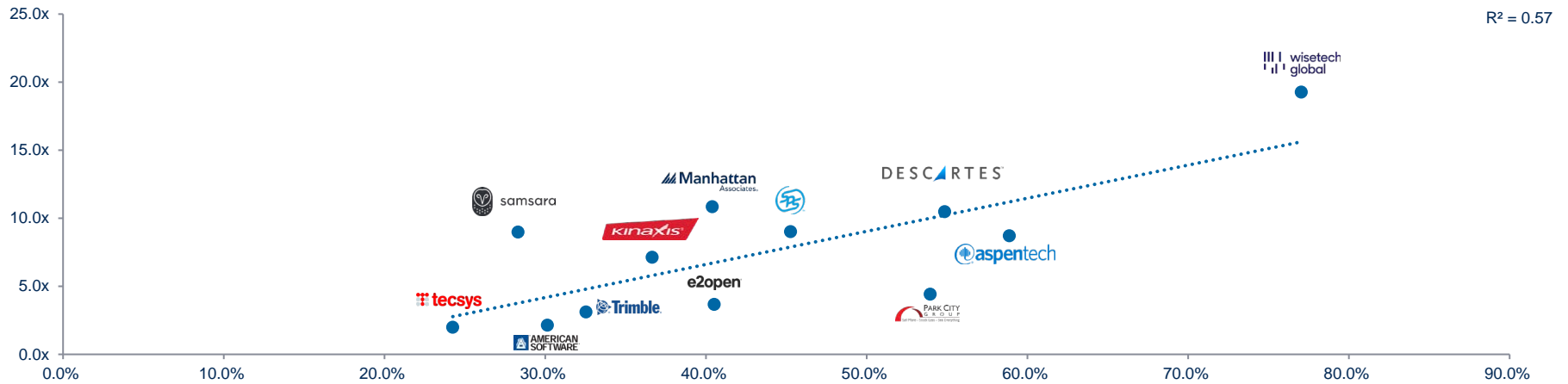
Sources: S&P Capital IQ, company information.

Notes: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of May 17, 2023. All financials calendarized to a December year-end.

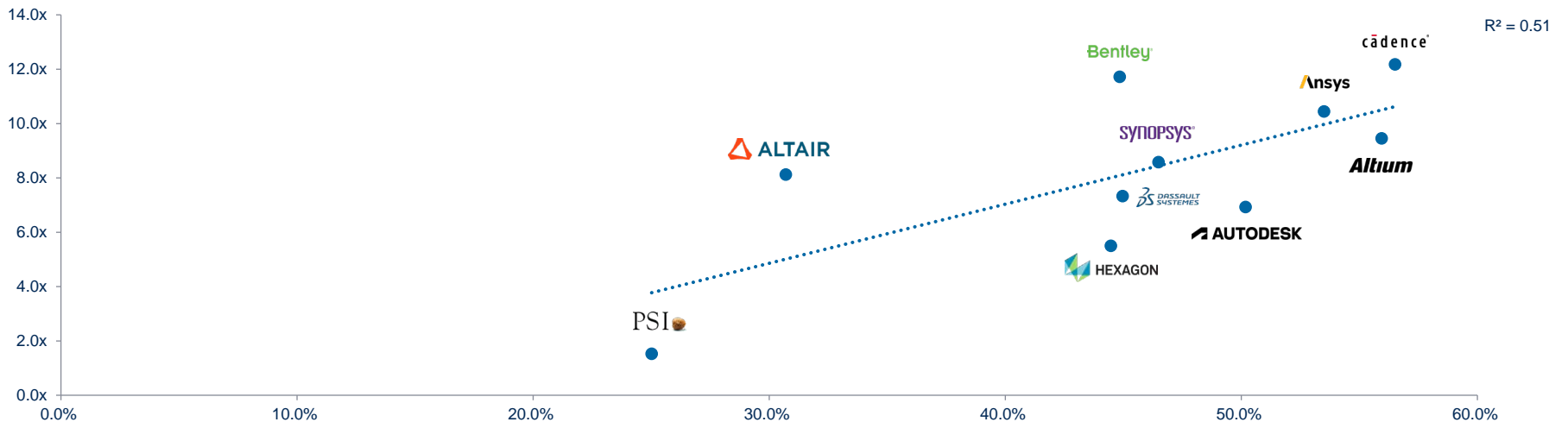
Valuation Correlated to Revenue Growth and EBITDA Margin

With the persistence of macro uncertainty, the focus on the combination of growth and profitability continues to drive valuations.

Rule of 40 vs. EV/2024E Revenue—Supply Chain Software



Rule of 40 vs. EV/2024E Revenue—Engineering and Manufacturing Technology



Sources: S&P Capital IQ, company information.

Notes: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of May 17, 2023. All financials calendarized to a December year-end.

Selected Publicly Listed Comparables

	Company Name	Market Cap USD M	EV USD M	EV/Revenue		EV/EBITDA		EBITDA Margin		2022E–2024E CAGR	
				2023	2024	2023	2024	2023	2024	Revenue	EBITDA
Supply Chain Software	American Software	\$424	\$311	2.4x	2.1x	15.4x	12.4x	15.7%	17.2%	6.4%	6.4%
	Aspen Technology	10,411	10,668	9.8x	8.7x	24.8x	18.7x	39.4%	46.6%	15.4%	16.0%
	Descartes Systems Group	6,635	6,353	11.5x	10.5x	26.4x	23.3x	43.5%	45.0%	11.7%	12.6%
	E2open	1,585	2,548	3.9x	3.7x	11.4x	10.5x	34.0%	34.8%	4.6%	7.4%
	Kinaxis	3,863	3,662	8.5x	7.1x	NM	40.8x	15.3%	17.5%	18.4%	6.3%
	Manhattan Associates	10,826	10,441	12.1x	10.8x	44.1x	37.9x	27.5%	28.6%	12.1%	12.2%
	Park City Group	127	101	5.0x	4.4x	13.3x	10.7x	37.4%	41.1%	10.6%	25.5%
	Samsara	10,242	9,717	11.5x	9.0x	NM	NM	NM	0.5%	28.8%	NA
	SPS Commerce	5,808	5,467	10.4x	9.0x	35.0x	29.6x	29.6%	30.4%	16.0%	18.1%
	Tecsys	286	265	2.2x	2.0x	30.4x	17.4x	7.4%	11.4%	10.6%	52.1%
	Trimble	11,916	12,718	3.3x	3.1x	12.8x	11.8x	25.7%	26.3%	5.5%	8.4%
	WiseTech Global	15,391	15,212	24.3x	19.3x	49.4x	37.9x	49.3%	50.8%	26.2%	26.5%
		Mean			8.7x	7.5x	26.3x	22.8x	29.5%	29.2%	13.9%
	Median			9.1x	7.9x	25.6x	18.7x	29.6%	29.5%	11.9%	12.6%
Engineering and Manufacturing Technology	Altair Engineering	\$5,446	\$5,446	8.8x	8.1x	43.5x	36.0x	20.2%	22.6%	8.3%	18.0%
	Altium Ltd.	3,211	3,004	11.1x	9.5x	29.6x	24.4x	37.5%	38.7%	16.0%	18.6%
	ANSYS	26,223	26,304	11.5x	10.4x	27.6x	24.1x	41.6%	43.4%	10.2%	10.2%
	Autodesk	42,748	41,877	7.7x	6.9x	20.4x	18.0x	37.9%	38.6%	9.9%	12.5%
	Bentley Systems	15,208	15,886	12.9x	11.7x	38.7x	33.9x	33.4%	34.6%	11.1%	13.1%
	Cadence Design Systems	55,904	54,969	13.5x	12.2x	30.4x	26.9x	44.5%	45.3%	12.6%	14.2%
	Dassault Systemes	52,620	51,386	7.9x	7.3x	22.2x	20.0x	35.8%	36.7%	7.6%	7.7%
	Hexagon AB	30,477	33,983	5.9x	5.5x	15.6x	14.5x	37.6%	38.1%	5.8%	8.3%
	PSI Software	525	492	1.7x	1.5x	11.6x	9.8x	14.4%	15.5%	10.3%	17.3%
	Synopsys	58,742	56,565	9.4x	8.6x	25.6x	23.4x	36.8%	36.7%	12.9%	15.3%
		Mean			9.0x	8.2x	26.5x	23.1x	34.0%	35.0%	10.5%
	Median			9.1x	8.4x	26.6x	23.7x	37.1%	37.4%	10.3%	13.6%

Sources: S&P Capital IQ, company information.

Notes: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of May 17, 2023. All financials calendarized to a December year-end.

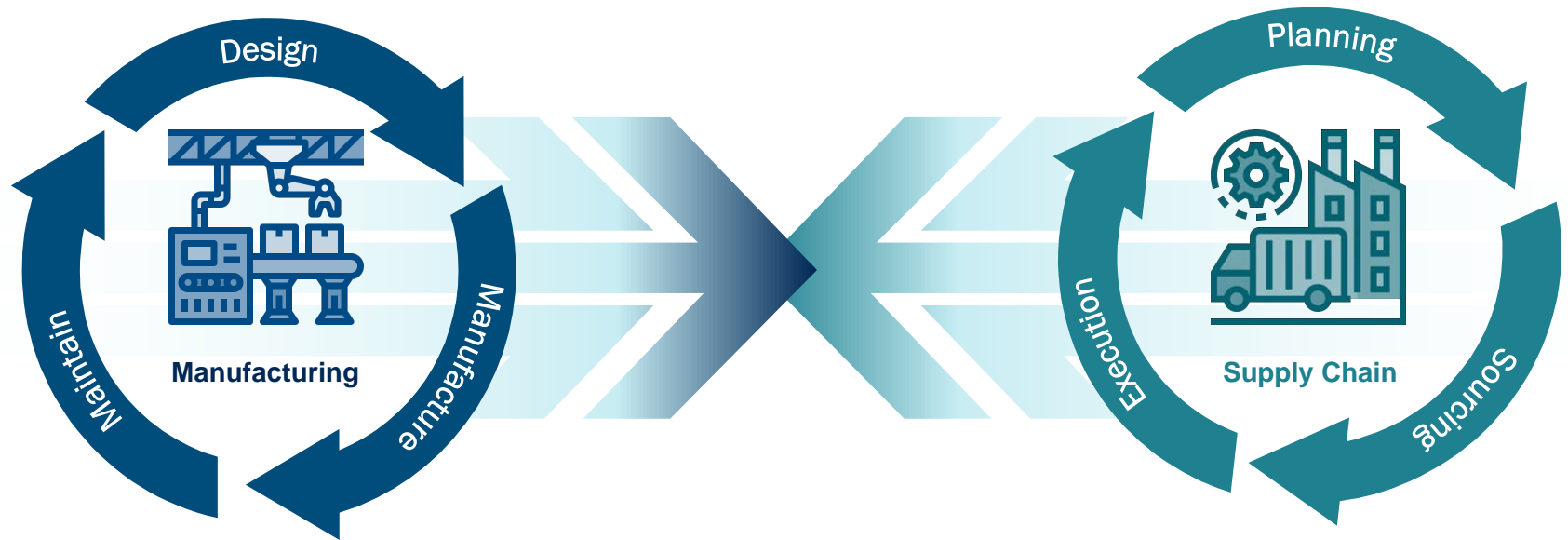
Selected Publicly Listed Comparables (cont.)

	Company Name	Market Cap USD M	EV USD M	EV/Revenue		EV/EBITDA		EBITDA Margin		2022E–2024E CAGR	
				2023	2024	2023	2024	2023	2024	Revenue	EBITDA
Diversified Industrials	ABB	\$70,352	\$76,832	2.4x	2.3x	14.0x	13.5x	17.1%	17.2%	6.0%	17.0%
	Cognex	8,871	8,392	9.0x	8.0x	36.4x	27.7x	24.9%	29.0%	1.9%	2.5%
	Danaher	166,034	181,249	6.1x	5.7x	18.9x	17.2x	32.4%	33.3%	0.4%	(1.6%)
	Emerson	54,055	60,888	4.0x	3.8x	15.6x	14.6x	25.5%	26.1%	(7.0%)	(9.8%)
	ESI Group	571	564	3.8x	3.6x	18.2x	14.8x	21.1%	24.5%	4.6%	18.5%
	Fanuc	31,381	27,448	4.4x	4.2x	15.7x	14.0x	28.2%	29.6%	2.4%	4.1%
	Fortive	23,221	25,235	4.2x	4.0x	15.5x	14.5x	26.8%	27.4%	4.3%	7.1%
	GE	113,798	113,390	1.8x	1.6x	15.8x	11.6x	11.3%	14.2%	(5.1%)	(1.0%)
	Hitachi	58,865	65,598	1.0x	1.0x	8.0x	6.8x	11.9%	14.1%	(9.5%)	(0.0%)
	Honeywell	132,702	140,977	3.8x	3.6x	14.9x	13.9x	25.5%	26.1%	4.8%	4.5%
	Keysight	28,253	25,626	4.6x	4.3x	14.3x	13.9x	32.3%	31.3%	3.1%	2.1%
	Materialise	523	437	1.6x	1.4x	14.2x	9.8x	11.0%	14.4%	11.7%	48.2%
	National Instruments	7,683	8,128	4.5x	4.2x	20.4x	18.5x	22.2%	22.8%	7.8%	24.5%
	OMRON	11,995	11,460	1.8x	1.7x	13.0x	12.5x	14.0%	13.8%	1.7%	(0.2%)
	Rockwell Automation	32,095	35,167	3.9x	3.8x	17.4x	16.4x	22.2%	23.1%	8.6%	14.7%
	Roper	48,668	54,497	9.0x	8.5x	22.4x	21.2x	40.3%	40.2%	9.1%	8.8%
	Sandvik	24,162	28,417	2.4x	2.4x	10.0x	9.6x	24.2%	24.6%	5.6%	10.5%
	Schneider Electric	98,301	110,621	2.8x	2.7x	13.8x	12.9x	20.5%	21.0%	5.7%	6.4%
	Siemens	139,749	179,941	2.1x	2.0x	11.8x	11.2x	18.0%	17.5%	8.0%	5.6%
	Velo3D	361	280	2.3x	1.7x	NM	NM	NM	NM	43.7%	(64.0%)
Zebra	14,040	15,879	2.9x	2.7x	13.2x	11.9x	21.8%	22.9%	0.5%	4.1%	
Mean				3.7x	3.5x	16.2x	14.3x	22.6%	23.7%	10.3%	5.9%
Median				3.8x	3.6x	15.2x	13.9x	22.2%	23.8%	7.9%	7.6%
Overall Mean				6.4x	5.7x	21.3x	18.7x	27.2%	27.9%	8.8%	10.2%
Overall Median				4.5x	4.2x	16.6x	14.8x	25.7%	26.9%	8.0%	9.5%

Sources: S&P Capital IQ, company information.

Notes: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of May 17, 2023. All financials calendarized to a December year-end.

Convergence of Industrial Software Is Accelerating



Driving Forces



Operational Convergence

Manufacturing complexities are evolving; industrial businesses are responding by expanding and deepening interconnections of production and efficient, nimble supply chain operations.



Data Synchronization

Data correlations between the ecosystems create a feedback loop of continuous improvement, driving ever-tighter integrations and pursuit of synchronization across the industrial workflow.



Market Evolution

Software categories such as warehouse management systems facilitate core aspects of both domains; product suite evolution toward end-to-end functionality has become a logical opportunity for technology providers.

How Houlihan Lokey Covers the Industrial Software Domain

- Supply chain and manufacturing processes converge to facilitate the industrial business workflow.
- Software has enabled the industrial business to digitalize and integrate their entire processes, from planning to manufacturing operations to supply chain execution.
- Overlap of end-customer bases for manufacturing and supply chain software has driven market incumbents to expand offerings across both categories.
- These dynamics create our holistic perspective of the industrial software ecosystem, a solution set focused on end-to-end industrial operations.



Manufacturing Software Landscape

Design/Engineer

CAD/CAE/EDA

Verification/Simulation

CAM

PLM/PIM/PDM

Execute/Manufacture

MES

QMS

MOM/Connected Worker

SCADA/IIoT/DCS/PLC/HMI

Manage/Maintain

EAM/CMMS/Repositories

EHS

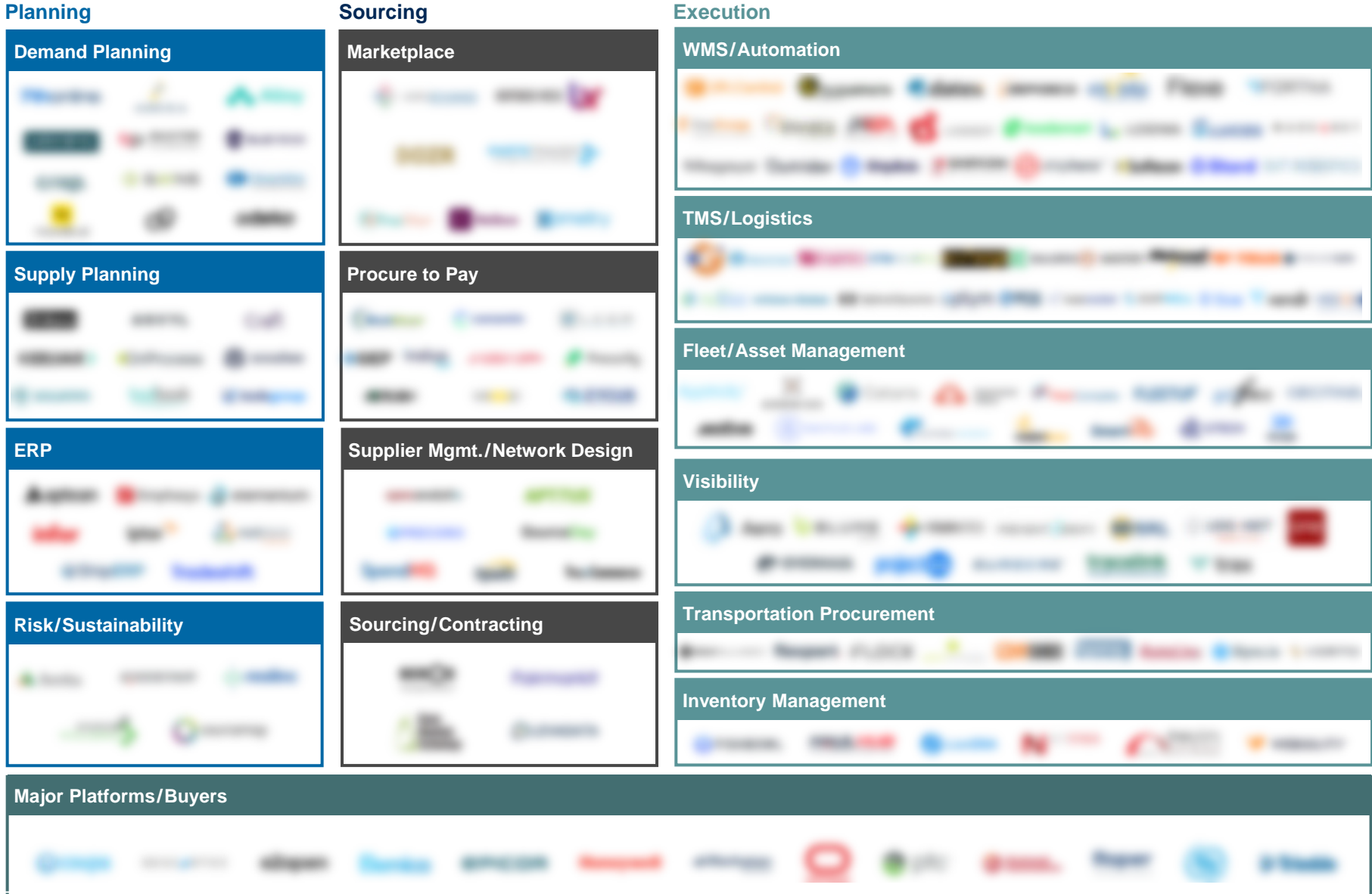
Risk/Requirements

Service/Repair

Major Platforms/Buyers

Note: Market maps are available by contacting Timothy Macholz or the team directly.

Supply Chain Software Landscape



Note: Market maps are available by contacting Timothy Macholz or the team directly.

Segmentation of Industrial Software by Size



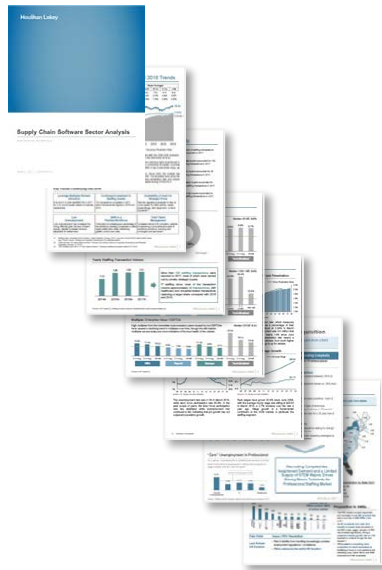
Source: PitchBook.com.
Note: Market maps are available by contacting Timothy Macholz or the team directly.

Houlihan Lokey Has Unmatched Experience in the Industrial Software Sector

Houlihan Lokey's widespread reach and recognized thought leadership across the industrial software market creates relationships with financial and strategic investors alike.

Thought-Leading Market Overview and Events

Industrial Software Sector Analysis



Industrial Software Market Trends

- Rapid technology advancements and change, coupled with the impact of the cloud, drive increasing demand for solutions from manufacturers and suppliers.
- Highly fragmented sector with opportunity for consolidation; larger industry participants aggressively pursuing acquisitions, while new market entrants cause disruption.



Annual Conferences

- Presence at key industry events throughout the year.



Active Ongoing Buyer Dialogue


























































Ongoing Strategic Buyer Discussions



Active Dialogue With Sponsors on Industrial Software



Domain Expertise: Manufacturing Software

 <p>has acquired</p>  <p>a portfolio company of</p>  <p>Buy-side Advisor</p>	 <p>has sold its stake in</p>  <p>to</p>  <p>Sell-side Advisor</p>	 <p>a portfolio company of</p>  <p>LEA PARTNERS</p> <p>has been acquired by</p>  <p>Sell-side Advisor</p>	 <p>has been acquired by</p>  <p>a portfolio company of</p>  <p>Sell-side Advisor</p>	 <p>has sold</p>  <p>to</p>  <p>a portfolio company of</p>  <p>Sell-side Advisor*</p>	 <p>has been acquired by</p>  <p>a portfolio company of</p>  <p>Sell-side Advisor*</p>	 <p>has been acquired by</p>  <p>Sell-side Advisor*</p>
Industrial Aftersales/ Digital Documentation	Industrial Enterprise Digitalization	Manufacturing and Design Tech	Product Lifecycle Management Tech	PLM/CPQ for F&B Industry	Digital Process Solutions Software	Automotive Control Systems
 <p>has sold</p>  <p>to</p>  <p>Sell-side Advisor*</p>	 <p>has sold</p>  <p>to</p>  <p>to</p>  <p>Sell-side Advisor*</p>	 <p>has been acquired by</p>  <p>Sell-side Advisor</p>	 <p>has been acquired by</p>  <p>Sell-side Advisor*</p>	 <p>has sold a majority stake in</p>  <p>to</p>  <p>Sell-side Advisor*</p>	 <p>has received growth investment from</p>  <p>Financial Advisor*</p>	 <p>has been acquired by</p>  <p>\$176,000,000</p> <p>Sell-side Advisor*</p>
Version Control/PLM	Digital Avatars/PLM	Manufacturing Verification Software	Enterprise Resource Planning	Enterprise Resource Planning	Industrial Manufacturing CRM	Commercial Monitoring
 <p>has been acquired by</p>  <p>a portfolio company of</p>  <p>Sell-side Advisor</p>	 <p>has been acquired by</p>  <p>an operating subsidiary of</p>  <p>Sell-side Advisor</p>	 <p>sold to</p>  <p>a portfolio company of</p>  <p>TA ASSOCIATES</p> <p>Sell-side Advisor*</p>	 <p>has been acquired by</p>  <p>Sell-side Advisor*</p>	 <p>has been acquired by</p>  <p>Sell-side Advisor*</p>	 <p>has been acquired by</p>  <p>a portfolio company of</p>  <p>Sell-side Advisor</p>	 <p>has been acquired by</p>  <p>Sell-side Advisor</p>
Operations Planning Software	Digital Content Management	Pricing and Analytics Software	Inspection Software and Sensor Tech	Maintenance and Repair Enablement	Industrial Asset Maintenance	Network Management Software

Tombstones included herein represent transactions closed from 2016 forward.

*Selected transactions were executed by Houlihan Lokey professionals while at other firms acquired by Houlihan Lokey or by professionals from a Houlihan Lokey joint venture company.

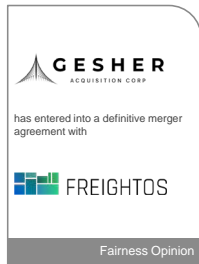
Domain Expertise: Supply Chain Management



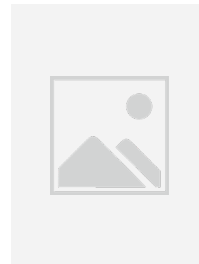
Supply Chain Orchestration



Procurement and Contract Management



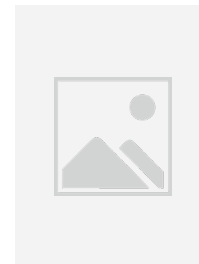
Digital Freight Booking and Payment Platform



Supply Chain Software



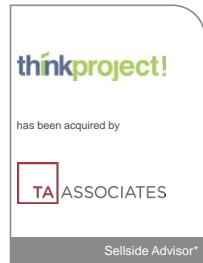
Supply Chain Analytics



Procurement and Asset Management Platform



Logistics, SCM, and DCM Software



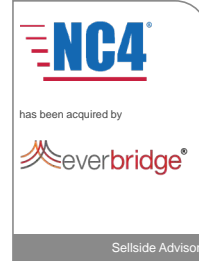
Relationship Network Management



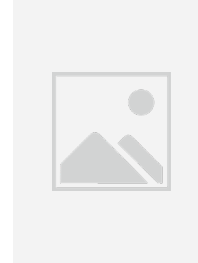
Logistics and SCM Software



Field Service/Fleet Management



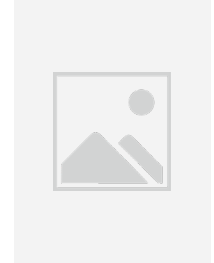
Alert Monitoring for Supply Chain Assets



SCM Connectivity and Efficiency



Smart Lockers and Management Software



Supply Chain Software



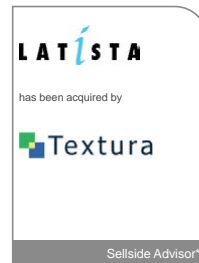
Dealer Marketing and Management



Diversified Asset Maintenance



Supply Chain Integration



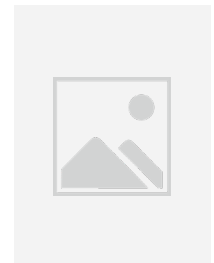
Mobile Field Workflow



Auto/Telematics Transport and Logistics



Field Service/Fleet Management



Contingent Labor SCM and DCM

Tombstones included herein represent transactions closed from 2010 forward.

*Selected transactions were executed by Houlihan Lokey professionals while at other firms acquired by Houlihan Lokey or by professionals from a Houlihan Lokey joint venture company.

Leading Independent, Global Advisory Firm



Houlihan Lokey

Houlihan Lokey is the trusted advisor to more top decision-makers than any other independent global investment bank.

2,600+

Employees

36

Locations

\$6 Billion⁽¹⁾

Market Cap



\$1.8 Billion⁽²⁾

Annual Revenue

~25%

Employee-Owned

No

Debt

Corporate Finance

- No. 1 Global M&A Advisor Under \$1 Billion
- Leading Capital Markets Advisor Raising More Than \$100 Billion in Past Five Years

2022 M&A Advisory Rankings Global Transactions Under \$1 Billion

Rank	Advisor	Deals
1	Houlihan Lokey	381
2	Rothschild	369
3	JP Morgan	217

Source: Refinitiv.
Excludes accounting firms and brokers.

Financial Restructuring

- No. 1 Global Restructuring Advisor
- \$3.0 Trillion of Aggregate Transaction Value Completed

2022 Global Distressed Debt & Bankruptcy Restructuring Advisory Rankings

Rank	Advisor	Deals
1	Houlihan Lokey	58
2	PJT Partners	30
3	Lazard	29

Source: Refinitiv.

Financial and Valuation Advisory

- No. 1 Global M&A Fairness Opinion Advisor Over the Past 25 Years
- 1,000+ Annual Valuation Engagements

1998 to 2022 Global M&A Fairness Advisory Rankings

Rank	Advisor	Deals
1	Houlihan Lokey	1,232
2	JP Morgan	1,030
3	Duff & Phelps, A Kroll Business	938

Source: Refinitiv.
Announced or completed transactions.

Financial Sponsors Coverage

- No. 1 Global Advisor to Private Equity Firms
- 1,000+ Sponsors Covered Globally

2022 Most Active Global Investment Banks to Private Equity Firms

Rank	Advisor	Deals
1	Houlihan Lokey	242
2	Lincoln International	192
3	Deloitte	190

Source: PitchBook.

Houlihan Lokey + **Oakley Advisory**

Houlihan Lokey has acquired Oakley Advisory, an independent advisory firm that provides a range of services to clients across the digital infrastructure, communications services, and cloud landscape.

With the addition of Oakley, Houlihan Lokey will cover the full spectrum of digital infrastructure and connectivity in the U.S. and Europe...

- Broadband and Connectivity
- Towers and Shared Infrastructure
- Data Centers and Managed Services
- Wireless and Spectrum
- Telecom Services
- Telecom Software

(1) As of May 2023.

(2) LTM ended March 31, 2023.

Houlihan Lokey Is the Trusted Advisor to More Top Decision-Makers Than Any Other Independent Global Investment Bank

2022 Investment Banking Rankings All Global Technology Transactions

	Advisor	Deals
1	Houlihan Lokey	116
2	Goldman Sachs	106
3	Morgan Stanley	79
4	Rothschild	76
5	JP Morgan	75

Source: Refinitiv. Excludes accounting firms and brokers.

2022 M&A Advisory Rankings Global Transactions Under \$1 Billion

	Advisor	Deals
1	Houlihan Lokey	381
2	Rothschild	369
3	JP Morgan	217
4	Lazard	206
5	Goldman Sachs	203

Source: Refinitiv. Excludes accounting firms and brokers.

No. 1

Global M&A Advisor
Under \$1 Billion

No. 1

Global Restructuring Advisor

No. 1

Global M&A Fairness Opinion
Advisor Over the Past 25 Years*

Leading

Capital Markets Advisor

1,500+

Transactions Completed Valued at
More Than \$3.0 Trillion Collectively

1,000+

Annual Valuation Engagements

Houlihan Lokey's Tech M&A Team Is No. 1 Globally With Unparalleled Reach

Americas

Atlanta
Baltimore
Boston
Chicago
Dallas
Houston
Los Angeles

Miami
Minneapolis
New York
San Francisco
São Paulo
Washington, D.C.

Europe and Middle East

Amsterdam
Antwerp
Dubai
Frankfurt
London
Madrid
Manchester

Milan
Munich
Paris
Stockholm
Tel Aviv
Zurich

Asia-Pacific

Beijing
Fukuoka
Gurugram
Hong Kong SAR
Mumbai

Nagoya
Shanghai
Singapore
Sydney
Tokyo

No. 1

TECH M&A
ADVISOR*

14

LOCATIONS
WORLDWIDE

200+

TECHNOLOGY
BANKERS

40+

MANAGING
DIRECTORS

116+

TECHNOLOGY
DEALS IN CY22




Local Technology team

*According to data provided by Refinitiv.

How Houlihan Lokey Can Help

Our firm is extremely well equipped to help our clients navigate uncertain times. We respond quickly to challenging situations and are constantly helping clients analyze, structure, negotiate, and execute the best possible solutions from both strategic and financial perspectives.

What We Offer

1  Corporate Finance	Mergers and Acquisitions
	Capital Markets
	Private Funds Advisory
	Board Advisory Services
2  Financial Restructuring	Company Advisory
	Special Situations
	Distressed M&A
	Liability Management
	Creditor Advisory
3  Financial and Valuation Advisory	Portfolio Valuation and Fund Advisory
	Transaction Opinions
	Corporate Valuation Advisory Services
	Transaction Advisory Services
	Real Estate Valuation and Advisory
	Dispute Resolution Consulting

We are widely recognized as a leading M&A advisor to the mid-cap and have long-standing relationships with capital providers, including commercial banks and other senior credit providers, insurance funds, asset managers, and mezzanine fund investors. Few other investment banks maintain the breadth of relationships and capital markets intelligence that we do.

We have the largest restructuring practice of any global investment bank. Since 1988, we have advised on more than 1,500 restructuring transactions (with aggregate debt claims in excess of \$3.0 trillion). We served as an advisor in 12 of the largest 15 bankruptcies from 2000 to 2022.

Over five decades, we have established ourselves as one of the largest financial and valuation advisory firms. Our transaction expertise and leadership in the field of valuation help inspire confidence in the financial executives, boards of directors, special committees, investors, and business owners we serve.

Why We're Different



No. 1 for Global Under \$1 Billion and Tech M&A*



Significant Experience With Financing Markets



Senior-Level Commitment and Dedication



Deep, Industry-Specific Expertise



Superior Work Product/ Technical Abilities



Creativity, Imagination, Tenacity, and Positivity

*Source: Refinitiv. Excludes accounting firms and brokers. Note: Global M&A represents global transactions under \$1 billion.

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