



Technology Group

Industrial Software

Supply Chain, Engineering, and Manufacturing Software

MARKET UPDATE WINTER 2022



Houlihan Lokey

Industrial Software Market Update

Dear Clients and Friends,

Houlihan Lokey is pleased to present the winter 2022 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, select 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 retracted slightly throughout Q4 2022 due to broader macro headwinds. However, market activity has shown improvement as Q1 2023 progresses:
 - **~\$8 billion of LTM financing activity** as capital markets tighten relative to recent historical low cost of financing.
 - **~\$12 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



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

(1) M&A \$ volume includes only transactions with publicly available financial metrics.



Transaction Spotlight: WiseTech Acquires Blume Global

Transaction Overview



Houlihan Lokey acted as the exclusive financial advisor to Blume Global on its sale to WiseTech Global (ASX:WTC).

- On February 16, 2023, Blume Global (Blume) announced that it has been acquired by WiseTech Global.
- Blume provides visibility throughout the value chain, from sourcing to delivery, allowing customers to use Blume solutions to navigate disruptions and create agile plans amid supply chain uncertainty.
- Blume manages intermodal containers and chassis on behalf of six of the seven Class 1 U.S. railroads, ocean carriers, and global freight forwarders.

Company Highlights

\$65M–\$75M

FY24 Revenue⁽¹⁾

45%–55%

YoY Revenue Growth⁽¹⁾

~10%

FY24 EBITDA Margin⁽¹⁾

70+

TMS Integrations

10K+

Motor Carriers

1,100+

Terminals, Depots, and Rail Ramps

Select Transaction Commentary

Joining the WiseTech Global group means greater scale and resources to make logistics processes more productive, agile, dependable, and sustainable with innovative execution and visibility solutions.

–**Pervinder Johar**, CEO, Blume Global



This is another strategically significant acquisition...It further extends our capability in one of our six key CargoWise development priority areas, integrating rail into our landside logistics offering in North America.

–**Richard White**, CEO, WiseTech Global



Blume Global Product Suite



Logistics Execution and TMS



Contract Mgmt.



Payment and Audit



Asset Mgmt. and Reload



CarrierGo



Dynamic ETA



Order and Shipment Tracking



Maps and Control Tower



Order Mgmt.



Supplier Quality and Collaboration



Sourcing

Transaction Spotlight: QAD Acquires Redzone

Select Transaction Commentary

“ QAD has concentrated on delivering industry best practices to manufacturers supported by industry leading technology delivered through the cloud. Redzone’s focus on people, their productivity and engagement addresses a primary area of opportunity for our customers.

–Anton Chilton,
CEO, QAD



“ Joining QAD will accelerate our mission of transforming manufacturing by empowering the frontline. We have always put the frontline worker at the heart of our technology...fastest way to unlock productivity on the plant floor.

–Richard Tester, CEO,
Redzone



Redzone Software Product Suite



Frontline Collaboration



Productivity



Compliance



Reliability

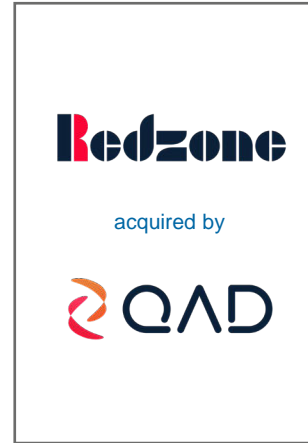


Learning



Integrations

Transaction Overview



- On February 1, 2023, QAD, a Thoma Bravo portfolio company, closed its acquisition of Redzone for an estimated amount of ~\$1 billion.⁽¹⁾
- Prior to the acquisition, Summit Partners made a significant minority investment in Redzone on January 1, 2020.
- 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 and transform productivity by energizing and arming teams with the digital workflows and collaboration tools to get the most out of every shift.

Company Highlights

~\$100M
FY23 Revenue Run Rate

35%
Organic SaaS Revenue Growth

2.4B
Frontline Collaborations

32%
Reduction in Staff Turnover⁽²⁾

22%
Productivity Increase⁽²⁾

74%
Increase in Engagement⁽²⁾

Sources: PitchBook.com, company website, press releases.

(1) Reuters EV estimation (financial terms not disclosed).

(2) Average results across 700 plants.

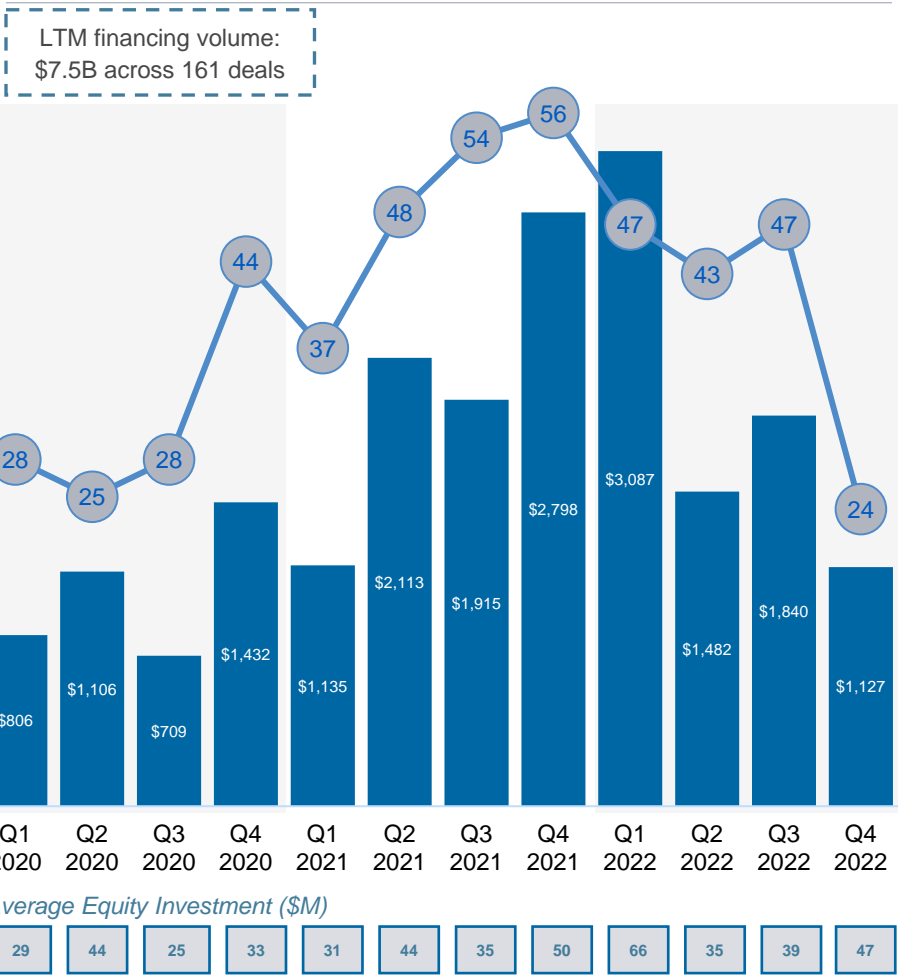
Financing Activity Continues Across Value Chain Categories

Fundraising frequency retracted in Q4 2022 but was offset by an increase in check size, indicating investors have become more selective but look to continue increasing exposure to the domain.

Select Industrial Software Financings (\$M)

Date	Company	Selected Investor(s)	Amount Invested	Pre-Money Valuation	Segment/ Value Chain
2/2023	QIO	WAVE EQUITY PARTNERS	\$10	N/A	Manufacturing, Industrial Control Systems
2/2023	OVERHAUL	Undisclosed	\$38	\$335	Manufacturing
1/2023	LOGIWA	PROLOGIS, NewRoad, BAM ELEVATE	\$26	\$85	Supply Chain Management, Warehouse Management, Manufacturing Operations
1/2023	Magaya	LLR Partners, Apax	N/A	N/A	Supply Chain Management, Warehouse Management, Manufacturing Operations
1/2023	MACROFAB	FOUNDRY	\$42	\$128	Manufacturing
11/2022	LOCUS	TIGERGLOBAL	\$117	\$1,830	Manufacturing Operations
10/2022	Altana	Activate capital	\$100	\$330	Manufacturing
5/2022	noodle.ai	Honeywell	\$25	\$230	Manufacturing
3/2022	Afresh	SPARK CAPITAL	\$115	\$300	Manufacturing, Industrial Control Systems
3/2022	INSTAFREIGHT	HELIAD	\$40	Conf.	Manufacturing, Industrial Control Systems

Industrial Software Quarterly Financing Activity (\$M)



Supply Chain Management

- Procurement Management
- Supply Chain Planning
- Order Management and Fulfillment
- Warehouse Management
- Manufacturing Operations

Engineering and Manufacturing

- Asset Performance and Maintenance
- Product Design and Development
- EHS
- Industrial Control Systems

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

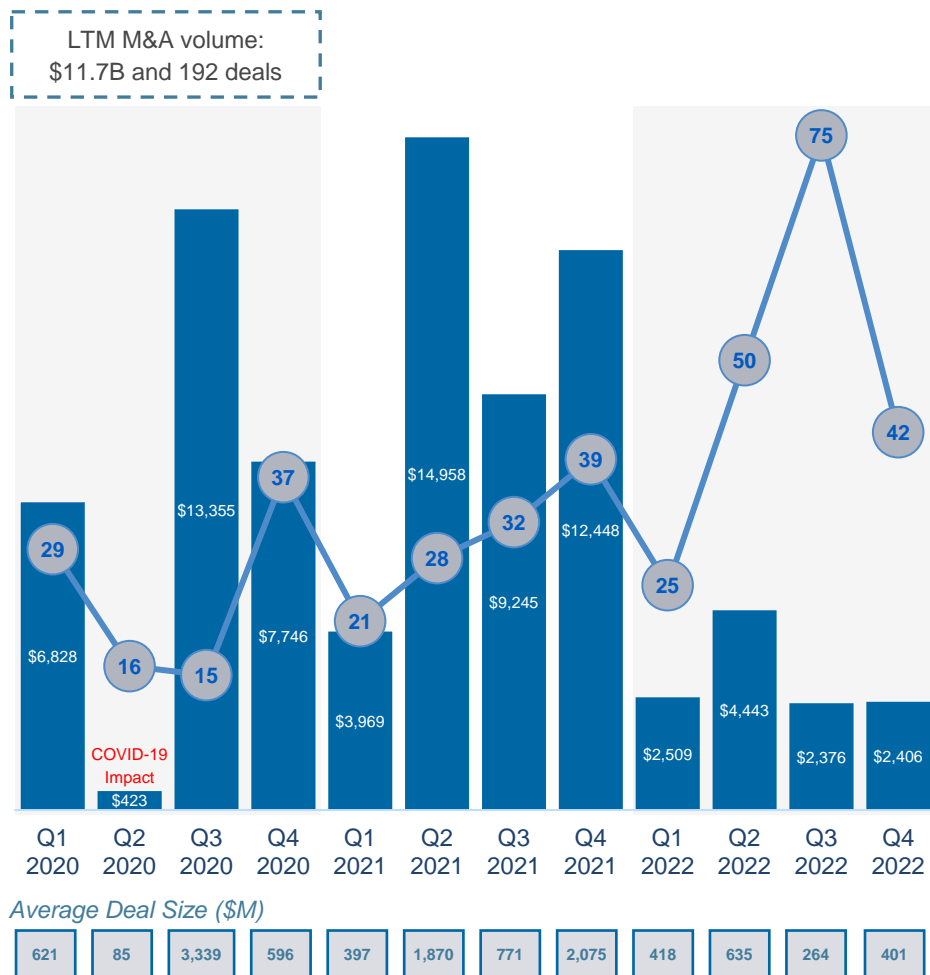
 Houlihan Lokey Advisory Transaction

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

Consolidators are currently driving activity with a healthy amount of frequency but reduced deal size over the LTM period.

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



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




























































































Date	Acquirer	Target	Transaction Value	Segment/ Value Chain
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
2/2023	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.	Supply Chain Management
12/2022	Trimble	TRANSPOREON	\$1,981	Supply Chain Management
12/2022	THOMABRAVO	coupa	\$8,000	Supply Chain Management
11/2022	ptc	SERVICEMAX	\$1,458	Manufacturing Operations
10/2022	EW EUROWAG	INELO	\$291	Supply Chain Management

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

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

Houlihan Lokey Advisory Transaction












Most Active Industrial Software Strategic Acquirers

Acquirer	# Acquisitions (Since Jan. 1, 2020)	Targets							
 aptean	15	 Merlin (2022)	 PRTCH (2022)	 FH (2022)	 Circor (2022)	 RDM APAREL (2022)	 DATA SYSTEMS (2022)	 Si intgreater (2021)	 Objective (2021)
 Bentley®	11	 RAMSAUER STÖRMER (2021)	 EXENTA (2021)	 technologies (2021)	 Larcom (2020)	 OSAS (2020)	 agiles (2020)	 WorkWise (2020)	
 HEXAGON	10	 EasyPower (2023)	 MINERVA INTELLIGENCE (2022)	 eagle.io (2022)	 ADINA (2022)	 POWER LINE SYSTEMS (2022)	 SESEQUENT (2021)	 SPIDA (2021)	 sensemetrics (2021)
 AUTODESK	9	 VISTA DATA VISION (2021)	 INRO (2021)	 COHESIVE SOFTWARE (2020)					
 revalize	8	 LoLab ⁽¹⁾ (2022)	 Accelerator (2022)	 etq (2022)	 Jovix (2021)	 infor (2021)	 CADIM (2021)	 ESPRIT (2020)	 CAEfatigue (2020)
 eci	7	 Romax TECHNOLOGY (2020)	 PAS (2020)						
 THE WILD (2022)		 eyrus (2022)	 prodsmart (2022)	 E (2021)	 office (2021)	 ãPriori (2021)	 upchain (2021)	 Innovyze (2021)	
 PRO.FILE (2021)		 TENADO (2021)	 Sofon (2021)	 BCA (2021)	 CONFIGURE ONE (2021)	 FPX (2021)	 SpecPage (2021)	 Axonom Inc. (2020)	
 LOJIC (2022)		 The Inventors (2022)	 MIP (2021)	 deacom (2021)	 shopTECH (2020)	 ThermoGRIE (2020)	 prosperity (2020)		
 SANDVIK	6	 OCS (2021)	 ICAM (2021)	 Mastercam (2021)	 CAMBRIO (2021)	 OQTON (2021)	 CGTECH (2020)		
 DESCARTES	6	 SUPPLY VISION (2023)	 foxtrot (2022)	 Net Chb (2022)	 PLS (2021)	 QuestaWeb, Inc. (2021)	 Kontainers (2020)		
 wisetech global	5	 BLUME (2023)	 ENVASE (2023)	 Shipamax (2022)	 Boleto (2022)	 SISA (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

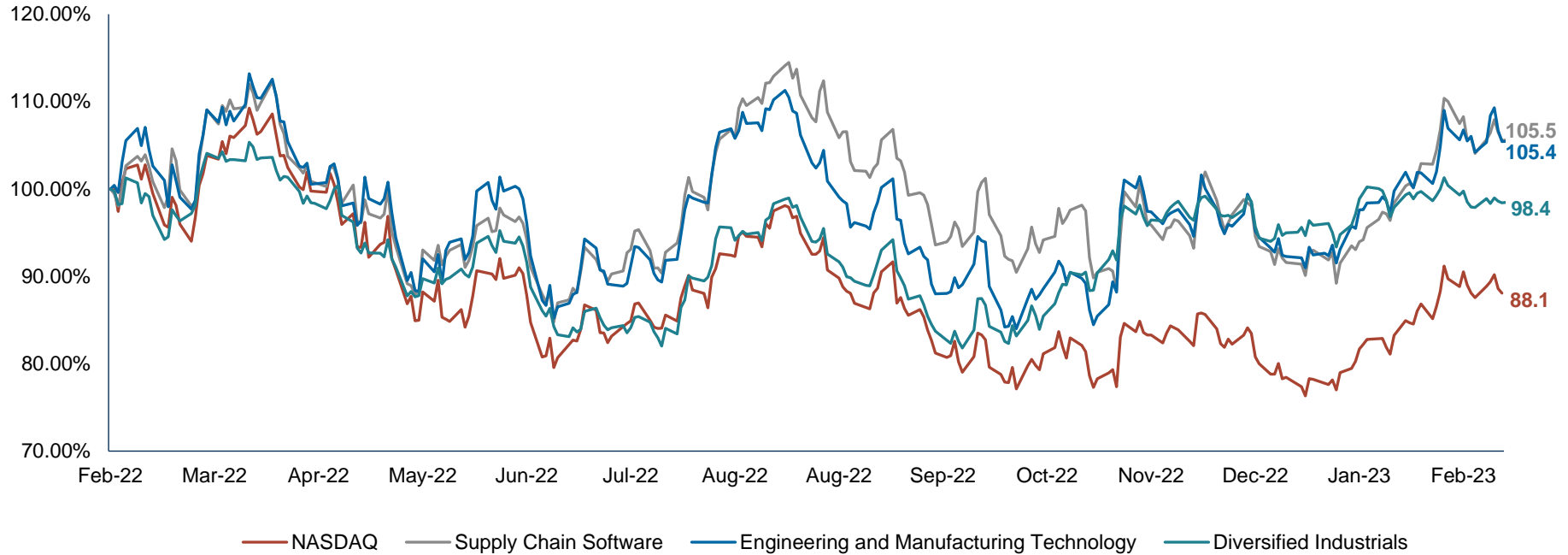
Acquirer	# Investments (Since Jan. 1, 2020)	Targets							
 ASSOCIATES	16	 aptean (2022, 2020)	 PATCH (2022)	 FH (2022)	 advantive (2022)	 integrator food processing software (2021)	 Emphasys (2021)	 Objective (2021)	 Magnitude (2021)
 PARTNERS	13	 aptean (2022)	 APPRENTICE (2022, 2020)	 GAMMA TECHNOLOGIES (2022)	 SOFTWARE AUTOMATION (2022)	 project44 (2022, 2021, 2020)	 LOGIXBOARD (2022)	 IFS (2020)	 EXPEDOCK (2022)
 Hg	10	 ideagen (2022)	 WORKWAVE (2022)	 SupplyStack by Transportation (2022)	 Trackunit (2021)	 revalize (2021)	 Magnitude (2021)	 Fikuro (2021)	 AUVESY. (2021)
 GLOBAL	10	 ambi ROBOTICS (2022, 2021)	 warex (2022)	 cogoport (2022)	 nTopology (2021)	 EquipmentShare (2021)	 Emerge (2021)	 SVT ROBOTICS (2021)	 RAPID (2021)
 ACCEL-KKR	8	 TITANGPS (2022)	 MarketMedium (2022)	 basware Simply Operations. Smart Stories. (2022)	 toolsgroup (2021)	 VENDAVO (2021)	 NAVTOR (2020)	 KALERIS (2020)	 Tai (2020)
 THOMABRAVO	8	 Redzone (2022)	 coupa (2022)	 vuealta (2022)	 project44 (2022)	 ICIX (2022)	 QAD (2021)	 ICIX (2021)	 EXOSTAR (2020)
 VISTA	7	 FH (2022)	 Assent (2022)	 integrator food processing software food tips (2021)	 Objective (2021)	 ARCOS (2021)	 MODUL A IT WORKS (2020)	 WorkWise SOFTWARE (2020)	
 CHARLESBANK	7	 FH (2022)	 PATCH (2022)	 integrator food processing software food tips (2021)	 Objective (2021)	 EXENTA (2021)	 MODUL A IT WORKS (2020)	 aptean (2020)	
 BATTERY	5	 KOJO (2022)	 SHIPP3O (2022, 2020)	 PROEMION (2022)	 fulcrum (2020)	 TECH SOFT3D (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's Recovery Has Continued to Outperform 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 February 20, 2023. Figures shown as a percentage of VWAP on February 1, 2022.

Industrial Software Valuations Are Among the Highest Across All Software Domains

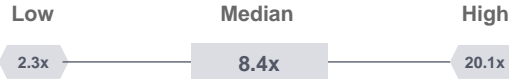
2023E Trading Metrics

Commentary

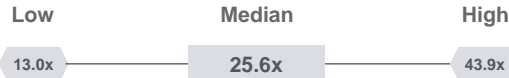
Relative Performance

Supply Chain Software

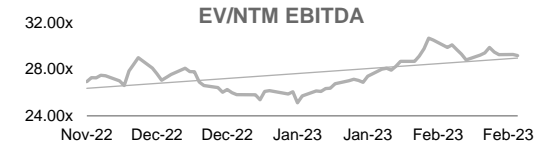
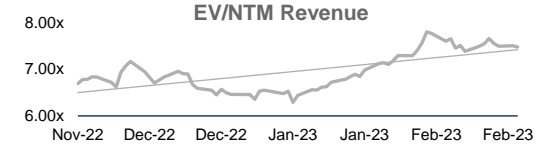
EV/2023E Revenue



EV/2023E EBITDA



- Supply chain optimization remains in focus, increasing throughout Q1 2023 as organizations look to solidify their SCM capabilities and diversify suppliers in response to geopolitical environment.
- Median trading multiples increased from prior three-month period, echoing the continued recovery within the sector.



Engineering and Manufacturing Technology

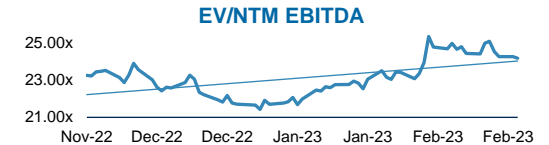
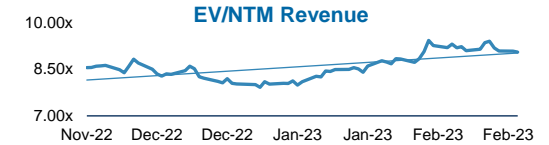
EV/2023E Revenue



EV/2023E EBITDA



- Least volatile of industrial software group given the established position of market incumbents and constant pace of end-market digitization.
- Trading off of lows, in line with broader technology industry.



Diversified Industrials

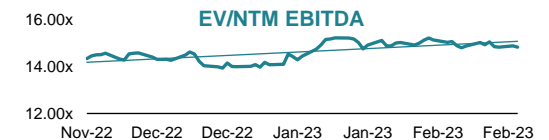
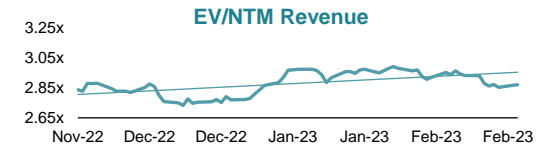
EV/2023E Revenue



EV/2023E EBITDA



- Traditional industrial valuations have improved as end of macro headwinds in sight.
- Organizations have maintained profitability as digitization persists, leading to more stable margins and favorable revenue mixes.



Sources: S&P Capital IQ, company information.

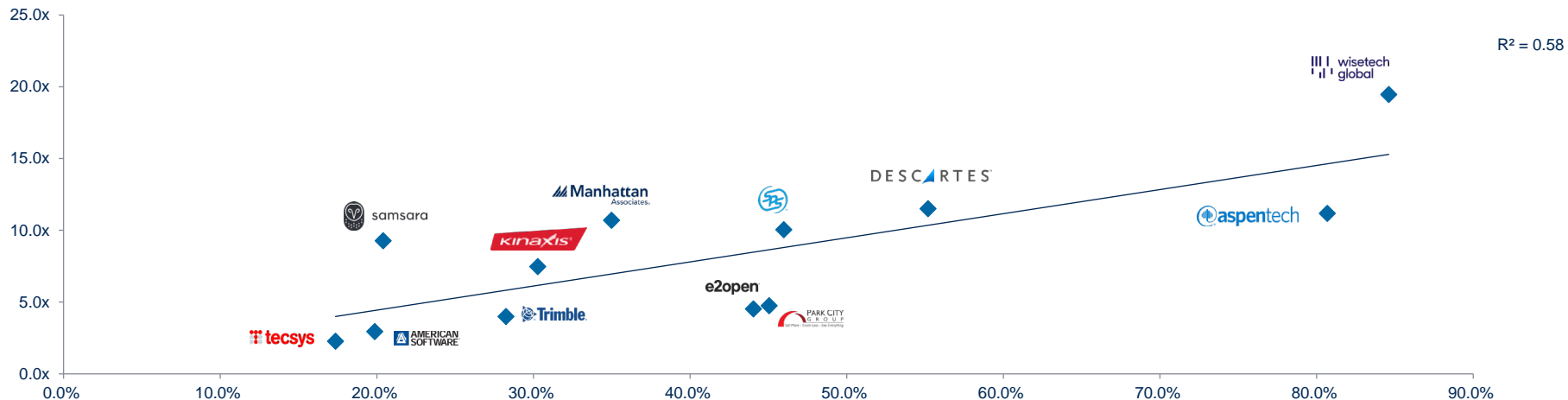
Notes: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of February 20, 2023.

All financials calendarized to a December year-end.

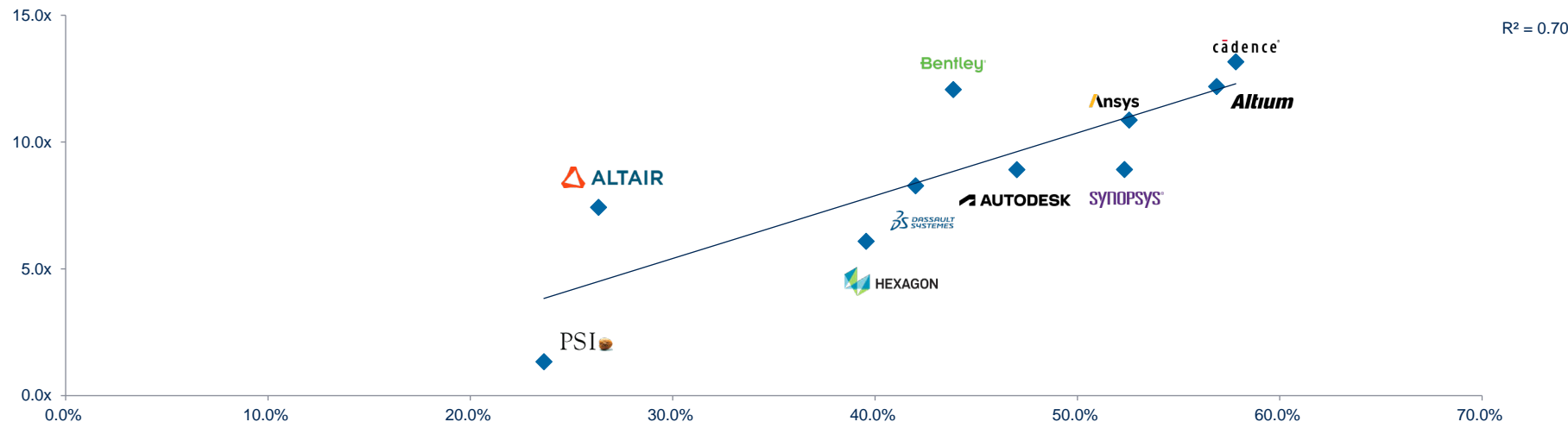
Valuation Is Correlated to Revenue Growth and EBITDA Margin

As markets have become more concerned about profitable scalability, the combination of growth and profitability yields the highest valuations.

Rule of 40 vs. EV/2023E Revenue—Supply Chain Software



Rule of 40 vs. EV/2023E Revenue—Engineering and Manufacturing Technology



Source: S&P Capital IQ.

Notes: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of February 20, 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	\$501	\$389	2.9x	2.7x	17.4x	15.8x	16.9%	17.3%	5.5%	7.2%
	Aspen Technology	11,794	13,779	11.2x	10.1x	23.9x	18.8x	46.8%	53.6%	21.8%	24.6%
	Descartes Systems Group	6,501	6,151	11.5x	10.4x	25.6x	23.0x	44.9%	45.3%	10.5%	11.7%
	E2open	2,144	3,154	4.5x	4.2x	13.1x	12.1x	34.5%	34.5%	9.2%	11.7%
	Kinaxis	3,253	3,113	7.5x	6.4x	43.9x	34.5x	17.0%	18.6%	14.8%	11.9%
	Manhattan Associates	9,214	8,876	10.7x	9.5x	39.9x	33.7x	26.8%	28.3%	10.1%	9.7%
	Park City Group	119	96	4.7x	4.2x	13.0x	10.5x	36.6%	40.3%	10.5%	24.0%
	Samsara	7,553	7,608	9.3x	7.3x	NM	NM	NM	NM	28.0%	(26.6%)
	SPS Commerce	5,612	5,276	10.0x	8.7x	34.1x	28.9x	29.4%	30.2%	15.8%	17.4%
	Tecsys	294	267	2.3x	2.0x	27.8x	15.5x	8.2%	13.2%	10.1%	70.6%
	Trimble	13,811	15,021	4.0x	3.7x	15.4x	14.4x	25.8%	26.1%	4.4%	6.7%
	WiseTech Global	12,723	12,419	20.1x	16.3x	38.7x	30.5x	51.1%	52.8%	26.2%	28.0%
		Mean			8.2x	7.1x	26.6x	21.5x	30.7%	32.7%	14.1%
	Median			8.4x	6.9x	25.6x	18.8x	29.4%	30.2%	10.5%	11.8%
Engineering and Manufacturing Technology	Altair Engineering	\$4,398	\$4,479	7.4x	6.8x	40.8x	33.4x	18.2%	20.4%	8.5%	19.9%
	Altium Ltd.	3,652	3,436	12.2x	10.4x	32.5x	27.0x	37.4%	38.5%	18.3%	20.5%
	ANSYS	23,738	23,837	10.9x	10.0x	24.5x	22.7x	44.3%	44.1%	8.4%	10.4%
	Autodesk	48,176	48,659	8.9x	7.9x	23.6x	20.6x	37.8%	38.6%	10.6%	12.8%
	Bentley Systems	13,399	14,426	12.1x	10.9x	35.0x	30.3x	34.5%	36.0%	10.0%	14.4%
	Cadence Design Systems	53,473	53,108	13.2x	12.0x	29.5x	26.1x	44.6%	45.9%	11.5%	13.9%
	Dassault Systemes	53,290	53,197	8.3x	7.6x	23.1x	20.0x	35.8%	38.0%	7.5%	9.4%
	Hexagon AB	30,943	34,406	6.1x	5.7x	16.4x	15.0x	37.0%	37.8%	4.8%	6.8%
	PSI Software	418	394	1.3x	1.2x	8.8x	7.6x	15.2%	16.1%	8.8%	22.0%
	Synopsys	55,313	53,455	8.9x	8.1x	24.5x	22.1x	36.5%	36.7%	12.8%	15.3%
		Mean			8.9x	8.1x	25.9x	22.5x	34.1%	35.2%	10.1%
	Median			8.9x	8.0x	24.5x	22.4x	36.7%	37.9%	9.4%	14.1%

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 February 20, 2023.

All financials calendarized to a December year-end.

Selected Publicly Listed Comparables (cont.)

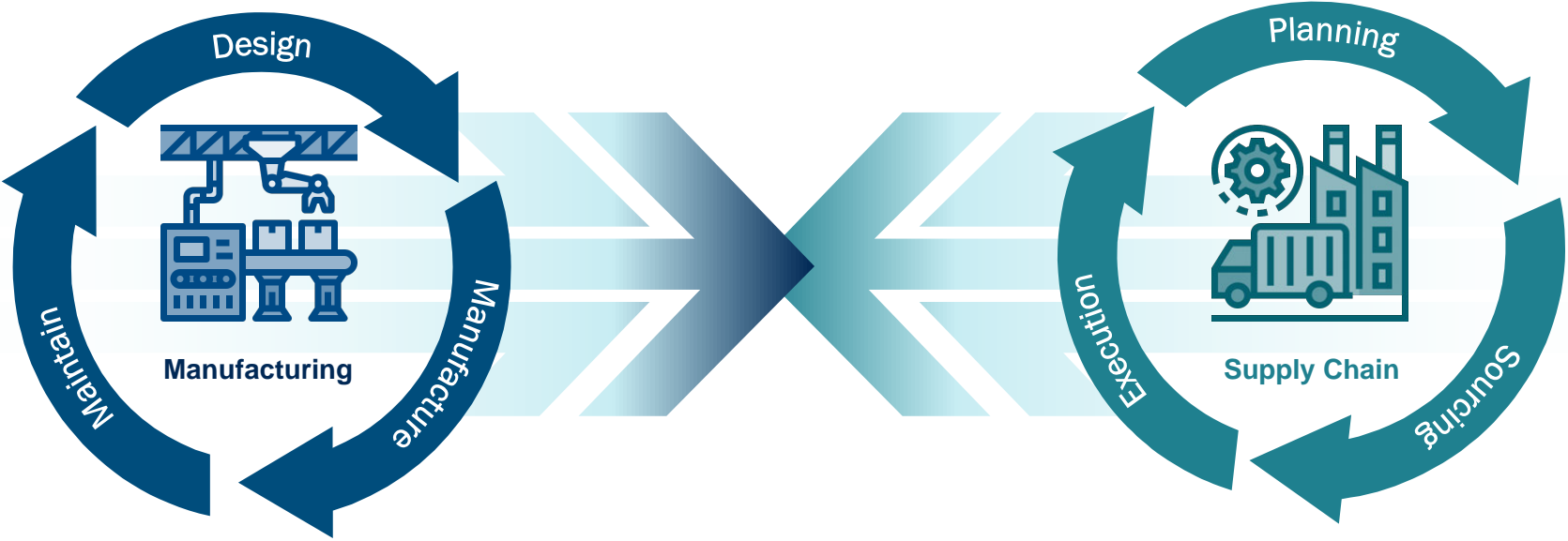
	Company Name	Market Cap USD M	EV USD M	EV/Revenue		EV/EBITDA		EBITDA Margin		2022E–2024E CAGR	
				2023	2024	2023	2024	2023	2024	Revenue	EBITDA
Diversified Industrials	ABB	\$65,560	\$68,050	2.2x	2.2x	13.5x	12.8x	16.4%	16.9%	3.3%	13.0%
	Cognex	8,418	7,946	8.5x	7.4x	32.1x	23.3x	26.5%	31.6%	3.5%	7.4%
	Danaher	188,919	202,014	6.7x	6.2x	19.8x	18.1x	33.8%	34.4%	1.5%	1.1%
	Emerson	56,691	62,924	4.1x	4.0x	16.7x	15.6x	24.9%	25.6%	(7.8%)	(11.6%)
	ESI Group	452	468	3.1x	2.9x	13.6x	11.1x	22.8%	26.1%	6.2%	21.6%
	Fanuc	32,486	28,376	4.5x	4.4x	15.6x	14.2x	29.0%	30.9%	1.5%	5.3%
	Fortive	25,030	27,024	4.5x	4.3x	16.8x	15.6x	26.7%	27.3%	4.3%	6.8%
	GE	92,643	104,648	1.7x	1.6x	15.2x	11.9x	11.0%	13.1%	(6.4%)	(0.0%)
	Hitachi	55,198	68,601	0.9x	0.9x	7.1x	6.7x	13.4%	13.7%	(5.4%)	1.1%
	Honeywell	138,219	145,633	4.0x	3.8x	15.5x	14.4x	25.5%	26.1%	4.6%	4.3%
	Keysight	33,812	33,109	5.8x	5.5x	18.6x	17.9x	31.2%	30.7%	4.1%	2.8%
	Materialise	537	473	1.7x	1.5x	16.1x	10.1x	10.7%	15.3%	11.3%	51.9%
	National Instruments	6,912	7,255	4.0x	3.7x	18.7x	16.7x	21.6%	22.4%	8.2%	23.9%
	OMRON	10,765	10,275	1.6x	1.6x	11.9x	11.3x	13.6%	14.2%	0.2%	2.2%
	Rockwell Automation	34,896	38,358	4.4x	4.2x	20.3x	18.6x	21.7%	22.4%	8.1%	12.4%
	Roper	45,676	51,225	8.6x	8.1x	21.1x	20.0x	40.7%	40.6%	8.4%	8.6%
	Sandvik	26,635	30,973	2.7x	2.6x	10.9x	10.5x	24.6%	25.1%	4.5%	10.5%
	Schneider Electric	95,262	102,567	2.7x	2.6x	13.5x	12.7x	19.8%	20.7%	3.6%	3.4%
	Siemens	130,488	170,213	2.0x	1.9x	11.4x	10.8x	17.7%	17.4%	7.2%	4.7%
	Velo3D	629	547	4.2x	2.4x	NM	NM	NM	NM	69.1%	(53.6%)
Zebra	16,954	18,651	3.3x	3.1x	14.6x	13.2x	22.3%	23.4%	2.2%	7.1%	
Mean				3.9x	3.6x	16.2x	14.3x	22.7%	23.9%	12.3%	7.1%
Median				4.0x	3.1x	15.6x	13.7x	22.5%	24.3%	7.7%	7.9%
Overall Mean				6.2x	5.6x	21.3x	18.2x	27.6%	29.0%	9.4%	10.9%
Overall Median				4.5x	4.3x	18.6x	15.8x	26.5%	27.3%	8.2%	10.4%

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 February 20, 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 a 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

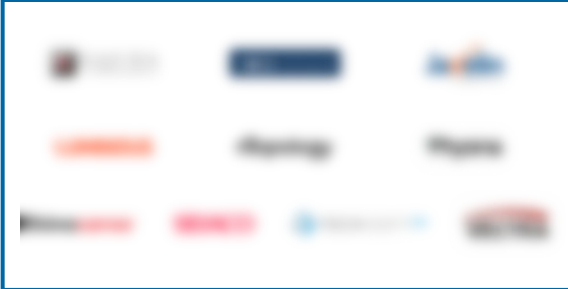
- Supply chain and manufacturing processes converge to facilitate the industrial business workflow.
- Software has enabled the industrial business to digitalize and integrate their entire processes, from planning to manufacturing operations to supply chain execution.
- Overlap of end-customer bases for 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.



Illustrative Manufacturing Software Landscape

Design/Engineer

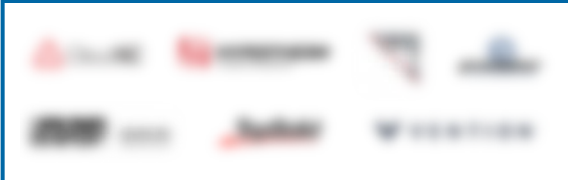
CAD/CAE/EDA



Verification/Simulation



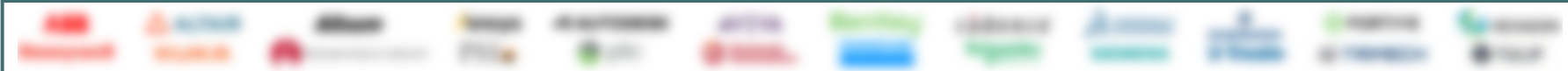
CAM



PLM/PIM/PDM

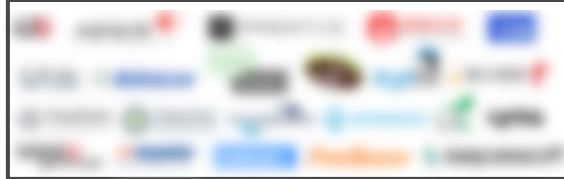


Major Platforms/Buyers



Execute/Manufacture

MES



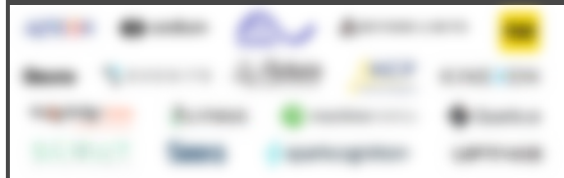
QMS



MOM/Connected Worker

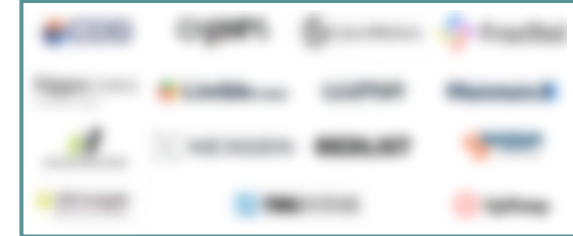


SCADA/IIoT/DCS/PLC/HMI



Manage/Maintain

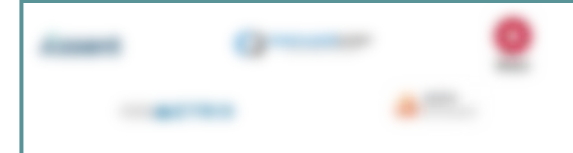
EAM/CMMS/Repositories



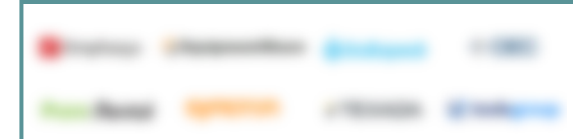
EHS



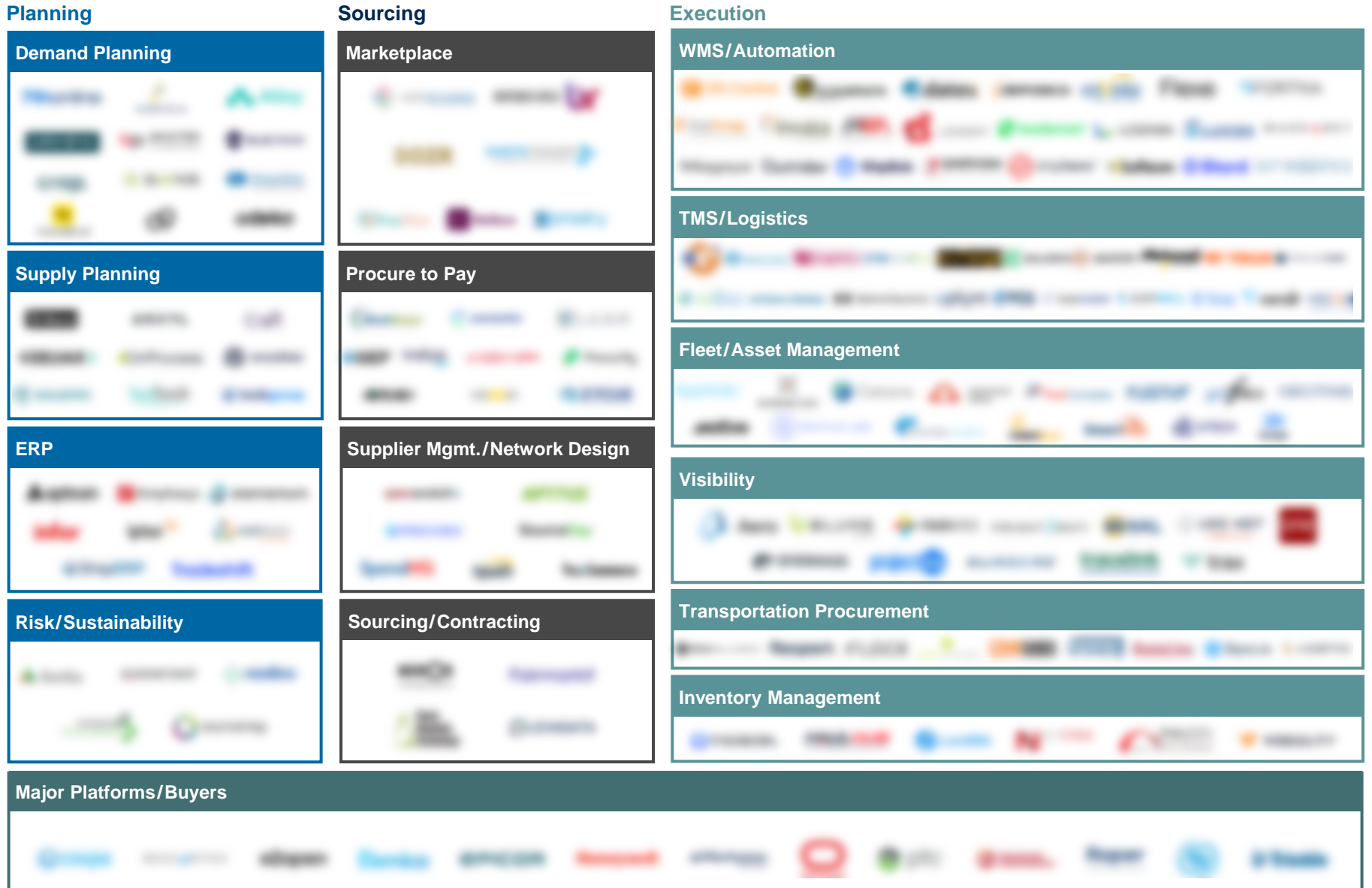
Risk/Requirements



Service/Repair



Illustrative Supply Chain Software Landscape



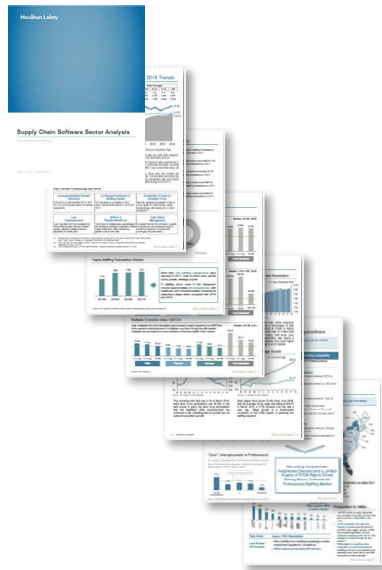
Note: Market maps are available by contacting Timothy Macholz or the team directly.

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

Transaction Pending



Deutsche Beteiligungs AG
has agreed to sell its stake in



Cloudflight

to



Partners Group
REALIZING POTENTIAL IN PRIVATE MARKETS

Sellside Advisor

Industrial Enterprise Digitalization



SEMA
a portfolio company of



VIA equity



LEA PARTNERS

has been acquired by



Bregal
Unternehmerkapital

Sellside Advisor

Manufacturing and Design Tech



Selerant
has been acquired by



Traceone


a portfolio company of




STG
SYNCHRONY TECHNOLOGY GROUP

Sellside Advisor

Product Lifecycle Management Tech




LEA PARTNERS
has sold




PRO.FILE

to



revalize


a portfolio company of




TA ASSOCIATES

Sellside Advisor*

PLM/CPQ for F&B Industry




SpecPage
has been acquired by



revalize

a portfolio company of



TA ASSOCIATES

Sellside Advisor*

Digital Process Solutions Software




DSE
has been acquired by




GENERAC

Sellside Advisor*

Automotive Control Systems




BROCKHAUS PRIVATE EQUITY
has sold



AUVESY

to



Hg

Sellside Advisor*

Version Control/PLM



PINOVA CAPITAL
has sold



HUMAN SOLUTIONS



AVALUTION


to




HUMANETICS

Sellside Advisor*

Digital Avatars/PLM




CGTECH
has been acquired by




SANDVIK

Sellside Advisor

Manufacturing Verification Software



OSAS
has been acquired by



apteon

Sellside Advisor*

Enterprise Resource Planning



Elvaston
has sold a majority stake in



GUS GROUP
Precision Quality, Precision and Efficient.

to



Bregal
Unternehmerkapital

Sellside Advisor*

Enterprise Resource Planning



IN MIND CLOUD
has received growth investment from



DIGITAL+ PARTNERS

Financial Advisor*

Industrial Manufacturing CRM



DATAWATCH
has been acquired by



Altair

\$176,000,000

Sellside Advisor*

Commercial Monitoring



Palantir
has been acquired by



Cesi Enersight

a portfolio company of



RUBICON
technology partners

Sellside Advisor

Operations Planning Software



BLUE
has been acquired by



ESKO

an operating subsidiary of



DANAHER

Sellside Advisor

Digital Content Management



Fuels Pricing
sold to



PDI

a portfolio company of




GENSTAR




TA ASSOCIATES

Sellside Advisor*

Pricing and Analytics Software




FRACTA
has been acquired by




KURITA

Sellside Advisor*

Inspection Software and Sensor Tech



iesa
has been acquired by



Electrocomponents plc

Sellside Advisor*

Maintenance and Repair Enablement



SELECT INTERNATIONAL
has been acquired by



psi


a portfolio company of




Waud Capital

Sellside Advisor

Industrial Asset Maintenance




Elemica
has been acquired by



THOMA BRAVO


Sellside Advisor

Network Management Software



AUTOFORM
Forming Reality

has been acquired by



astorg

Sellside Advisor*

PLM/CAE

*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. Tombstones included herein represent transactions closed from 2016 forward.

Domain Expertise: Supply Chain Management

Transaction Pending



a portfolio company of




has agreed to be acquired by




Sellside Advisor


Supply Chain
Orchestration



a portfolio company of




has been acquired by




Sellside Advisor

Procurement and
Contract Mgmt.



has entered into a definitive merger agreement with



Fairness Opinion

Digital Freight
Booking and Payment
Platform



has been acquired by




a portfolio company of





Sellside Advisor

Supply Chain
Software




has received a minority investment from





Sellside Advisor

Supply Chain
Analytics



has been acquired by



Sellside Advisor

Procurement and
Asset Mgmt. Platform

Acquisition Financing



has acquired




a portfolio company of




Financing Advisor*

Logistics, SCM, and
DCM Software



has been acquired by



Sellside Advisor*

Relationship Network
Management



has acquired



from



Buyside Advisor*

Logistics and SCM
Software




has been acquired by




Sellside Advisor*

Field Service/
Fleet Mgmt.



has been acquired by



Sellside Advisor

Alert Monitoring for
Supply Chain Assets




has acquired




Buyside Advisor

SCM Connectivity
and Efficiency



has completed an investment in



Buyside Advisor*

Smart Lockers and
Mgmt. Software




has been acquired by




Sellside Advisor*

Supply Chain
Software



has been acquired by




Sellside Advisor


Dealer Marketing and
Mgmt.



a portfolio company of




has acquired




Financial Advisor & Placement Agent

Diversified Asset
Maintenance




has been acquired by




Sellside Advisor*

Supply Chain
Integration



has been acquired by



Sellside Advisor*

Mobile Field
Workflow



has sold substantially all of its assets, pursuant to Section 363 of the U.S. Bankruptcy Code, to



Company Advisor

Auto/Telematics
Transport and
Logistics



has been acquired by



Sellside Advisor*

Field Service/Fleet
Mgmt.



has been acquired by



Sellside Advisor*

Contingent Labor
SCM and DCM

*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. Tombstones included herein represent transactions closed from 2010 forward.

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.

~2,500

Employees

35

Locations

\$6.5 Billion⁽¹⁾

Market Cap



\$1.8 Billion

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 January 2023.
(2) LTM ended December 31, 2022.

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

North America

Atlanta
Boston
Chicago
Dallas
Houston
Los Angeles
Miami
Minneapolis
New York
San Francisco
Washington, D.C.

Europe and Middle East

Amsterdam
Dubai
Frankfurt
London
Madrid
Manchester
Milan
Munich
Paris
Stockholm
Tel Aviv
Zurich

Asia-Pacific

Beijing
Fukuoka
Gurugram
Ho Chi Minh City
Hong Kong SAR
Mumbai
Nagoya
Osaka
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	<p>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.</p>
	Capital Markets	
	Private Funds Advisory	
	Board Advisory Services	
2  Financial Restructuring	Company Advisory	<p>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.</p>
	Special Situations	
	Distressed M&A	
	Liability Management	
	Creditor Advisory	
3  Financial and Valuation Advisory	Portfolio Valuation and Fund Advisory	<p>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.</p>
	Transaction Opinions	
	Corporate Valuation Advisory Services	
	Transaction Advisory Services	
	Real Estate Valuation and Advisory	
	Dispute Resolution Consulting	

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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Corporate Finance
Financial Restructuring
Financial and Valuation Advisory

[HL.com](https://www.hl.com)