



Technology, Media & Telecom

SUPPLY CHAIN AND LOGISTICS TECHNOLOGY
SECTOR REVIEW | 4Q 2019

HW Harris Williams

Harris Williams' Supply Chain & Logistics Technology Practice

HARRIS WILLIAMS ("HW")

- 370+ professionals across eight offices globally
- 160+ closed transactions in the last 24 months
- 10 industry groups



TECHNOLOGY, MEDIA & TELECOM ("TMT") GROUP

- 35 professionals across Boston, San Francisco, and London

HORIZONTAL FOCUS SECTORS

- Compliance Software
- CRM and Member Management Software
- Data & Analytics
- Enterprise Software
- Human Capital Management
- Infrastructure & Security Software
- IT& Tech Enabled Services
- Managed Services, Hosting & Data Center Solutions
- Online Marketing, Data & Research

VERTICAL FOCUS SECTORS

- Architecture, Engineering & Construction
- eCommerce & Retail Software
- Education Technology
- Energy Technology
- Facilities & Real Estate Technology
- Financial Technology
- Government Technology
- Healthcare IT
- Industrial & Supply Chain Software

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SELECT HW SUPPLY CHAIN AND LOGISTICS TECHNOLOGY AND SERVICES TRANSACTIONS

 Provider of enterprise resource planning and supply chain management software has been acquired by 		 Manufacturing Software Provider of cloud-based manufacturing and supply chain software for midmarket manufacturers has been acquired by 	 Provider of intelligent traffic software (ITS) and IoT solutions for the transportation industry has been acquired by 	 Provider of a non-asset-based 3PL platform specializing in multimodal freight brokerage has received a majority investment from 	 Provider of technology-enabled enterprise logistics solutions has received a majority investment from
 Provider of multimodal transportation management and logistics technology solutions has been acquired by 		 Provider of ERP and warehouse management software solutions for 3PL, eCommerce, manufacturing, and retail companies has received a majority investment from 	 Provider of safety solutions to fleet vehicle manufacturers and operators has been acquired by 	 Provider of supply chain logistics and purchasing software solutions for healthcare providers and facilities has acquired 	 Provider of commercial maritime logistics execution and planning software and data solutions has received a growth investment from

Supply Chain & Logistics Technology Focus Areas

SOURCE AND PLAN



Solutions designed to increase visibility and communication, and control costs for the upstream supply chain.

Sales & Operations
Planning

Procurement /
Spend Management

Trading Partner
Networks

Select Market Participants



Key Trends

Increased competition and price sensitivity as a result of continued globalization of commerce is resulting in accelerating adoption of sourcing and planning software by companies of all sizes and across many verticals

Digital solutions are streamlining the S&OP process with real-time data visibility and technical capabilities that enable companies to improve planning collaboration, increase agility, and speed planning cycle times

MANAGE AND EXECUTE



Solutions to connect manufacturing execution and warehouse management processes.

PLM / MES /
QMS

Warehouse
Management

eCommerce
Fulfillment

Factory
Automation

Devices /
Barcodes

Select Market Participants



Key Trends

Orders are growing in volume, speed, and complexity as a result of direct-to-consumer and multichannel commerce in consumer goods and retail, forcing warehouse leaders to invest in new processes and technologies

Incorporating real-time performance data into design and execution management software through IoT devices is allowing for closed-loop manufacturing and continuous improvement of processes

TRANSPORT AND DELIVER



Software solutions that enable the planning and execution of the transportation of goods across supply chains.

Transportation
Mgmt.

Freight Exchange
Matching

Freight Audit /
Payments

Reverse
Logistics

Fleet Mgmt. /
Telematics

Select Market Participants

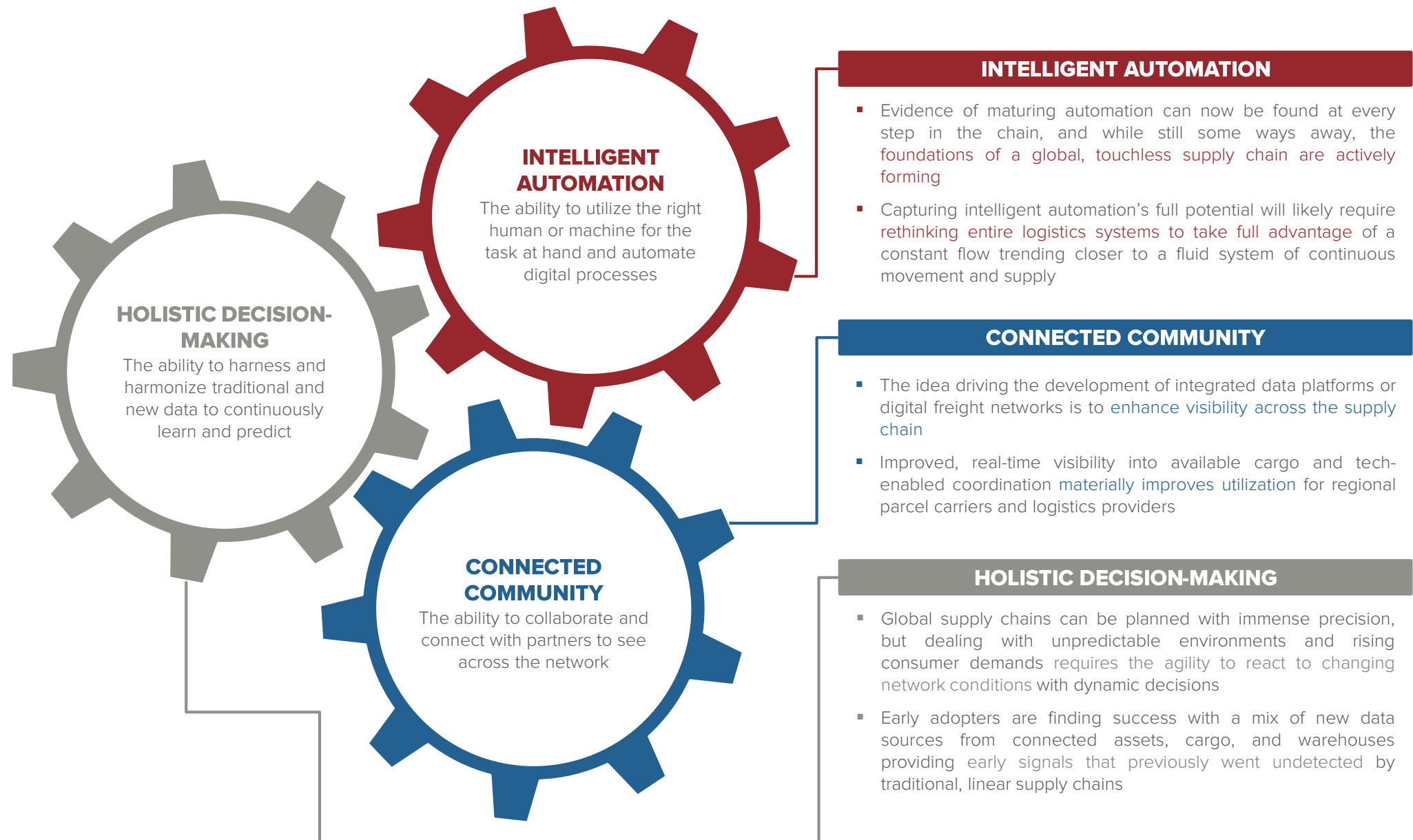


Key Trends

Rising freight rates, driver shortages, tight truck capacity, and changing customer demands are pushing shippers to utilize TMS software to manage increasingly sophisticated transportation networks

Fleet management software solutions are improving routing and scheduling of deliveries, driver mobility, and integration with onboard vehicle telematics

Organizations are investing in technology to automate their supply chains and drive greater transparency

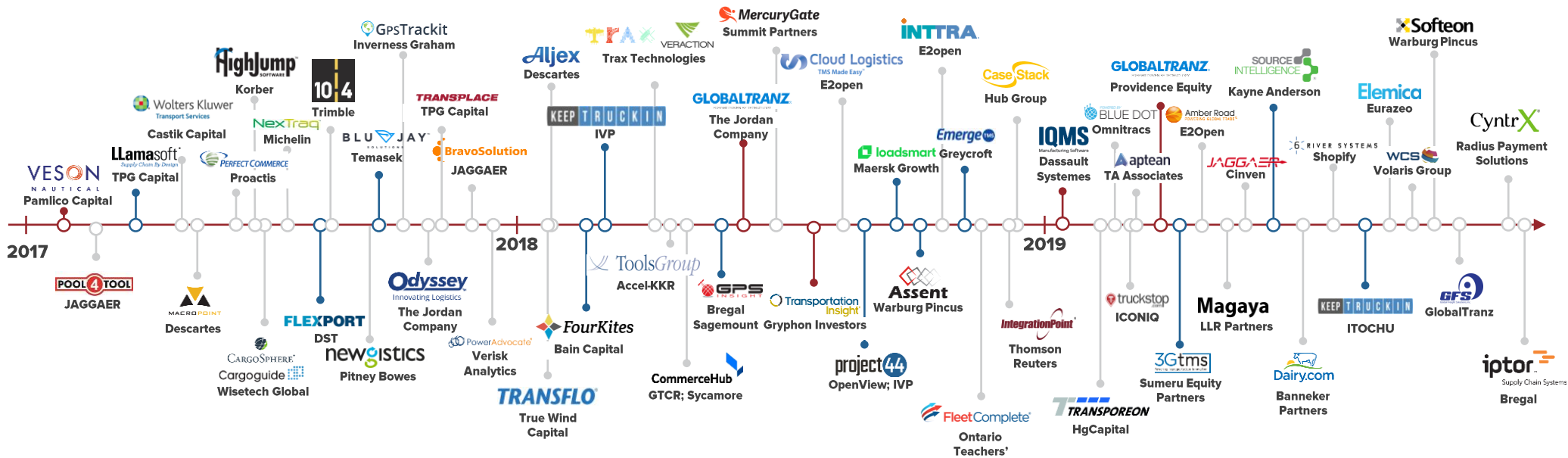




Increasing M&A Momentum across the Broader Supply Chain and Logistics Technology Market

Recent Supply Chain & Logistics Technology M&A Activity

- Capital Raise
- HW Transaction



Notable Industry Consolidators



Recent Select Supply Chain & Logistics Technology Transactions³

Completed: November 21, 2019

CyntrX

radius
Payment Solutions

Enterprise Value: NP

EV / Rev: NP

Revenue: NP

EV / EBITDA: NM

Radius Payment Solutions' acquisition of CyntrX

- CyntrX provides a comprehensive telematics platform including analytics and reporting solutions that are designed to help enhance fleet management capabilities
- The company has over 175,000 tracked vehicles and assets on its platform and operates primarily in North America
- By acquiring CyntrX, Radius further extends its global telematics portfolio while providing additional resources and global influence for CyntrX to continue to expand its North American footprint

Completed: November 20, 2019

WAXX DIGITAL

MARLIN EQUITY
PARTNERS

Enterprise Value: NP

EV / Rev: NP

Revenue: NP

EV / EBITDA: NP

Marlin's acquisition of Wax Digital

- Wax Digital provides procurement solutions to enhance automation, visibility, and control throughout the purchasing process
- The company's source-to-pay solutions are used in 102 countries worldwide, with ~\$25B of spend under management across 260,000 users
- Marlin plans to combine Wax Digital with its existing portfolio company, Medius, creating an industry-leading platform capturing a wide array of product and commercial synergies while delivering a holistic application for procurement and finance organizations

Completed: November 4, 2019

scout

workday

Enterprise Value: \$540M

EV / Rev: NP

Revenue: NP

EV / EBITDA: NP

Workday's acquisition of Scout RFP

- Scout RFP provides a cloud-based, comprehensive automated sourcing and supplier engagement platform for procurement teams across various industries
- The company's customer base of over 240 customers primarily consists of enterprise organizations (e.g., Best Buy, Salesforce, etc.) in 155 countries consisting of ~300,000 users
- The acquisition of Scout RFP builds on top of Workday's existing procurement solutions, Workday Procurement and Workday Inventory, while accelerating Workday's ability to deliver a comprehensive source-to-pay solution

Completed: October 18, 2019

GFS
Global Freight Solutions, Inc.

GLOBALTRANZ

Enterprise Value: NP

EV / Rev: NP

Revenue: NP

EV / EBITDA: NP

GlobalTranz's acquisition of Global Freight Solutions

- Global Freight Solutions provides tech-enabled freight brokerage and logistics services and solutions to shippers
- The company operates across five specialty transport and logistics divisions: GFS Food, GFS Aloha (Hawaii), GFS Eco, GFS Oil, and GFS International
- The acquisition of Global Freight Solutions will further expand GlobalTranz's market share and geographic reach as well as enhance GlobalTranz's profitability

Completed: October 17, 2019

Softeon

WARBURG PINCUS

Enterprise Value: NP

EV / Rev: NP













Revenue: NP

EV / EBITDA: NP

Warburg Pincus' minority investment in Softeon

- Softeon provides supply chain software including a warehouse management system, distributed order management, and warehouse execution system solutions
- The company also provides an array of complementary supply chain capabilities, including labor and resource management, store enablement, planning and network inventory management, 3PL billing, and freight auditing
- The investment from Warburg Pincus will allow Softeon to expand its sales and marketing teams, increase its geographic presence, and invest in product innovations

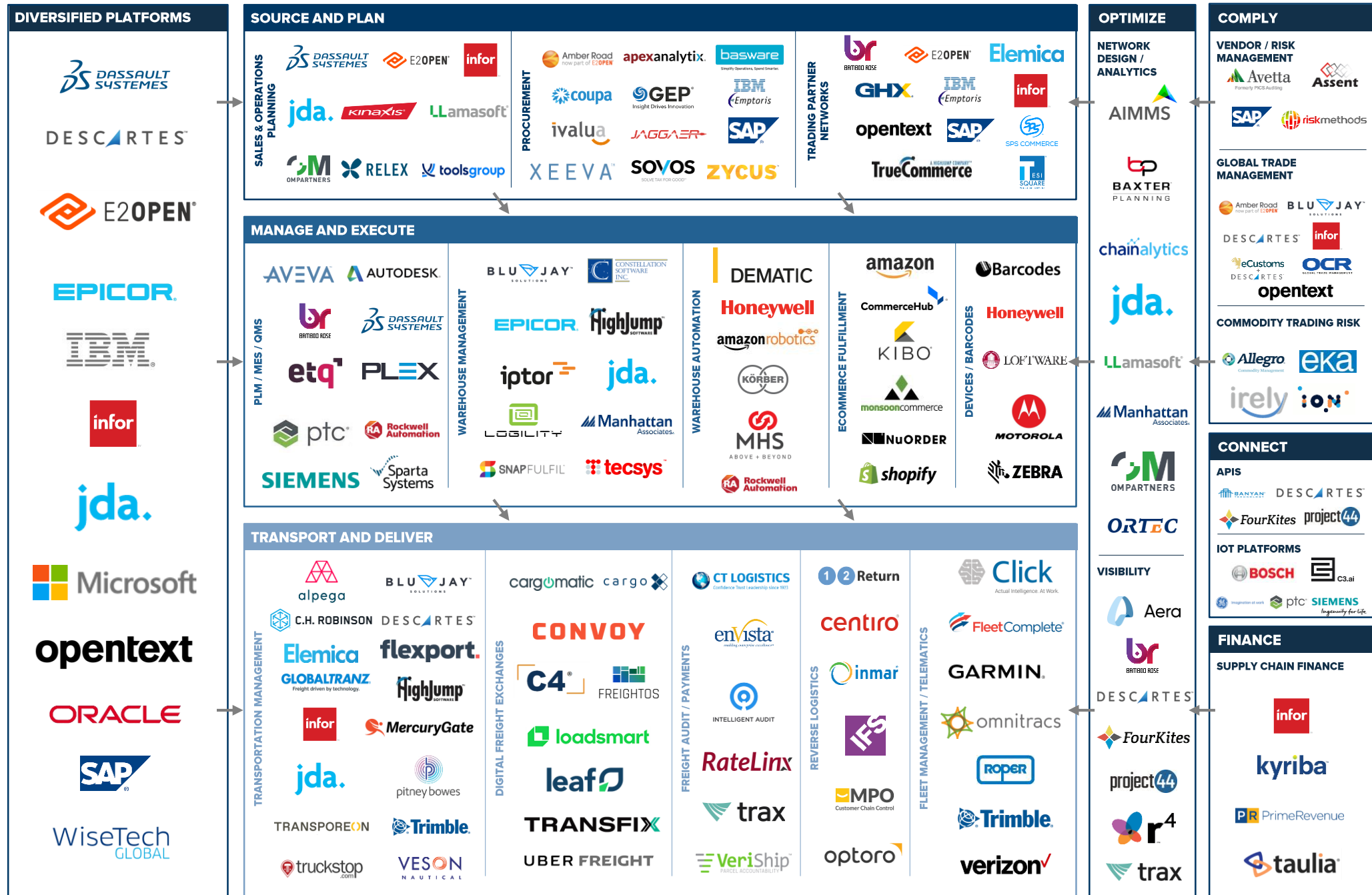
Select Recent Private Placements³

DATE	COMPANY	SECTOR	ROUND	ROUND SIZE (\$MM)	TOTAL RAISED (\$MM)	INVESTORS (CURRENT ROUND)	DESCRIPTION
12/11/19	 LeanDNA	Supply Chain	Series B	\$15M	\$20M	Next Coast Ventures	Provider of a cloud-based intelligence analytics and project execution platform created to improve manufacturing and supply chain operations
12/09/19	 Passport	Supply Chain	Series D	\$65M	\$142M	HIG Growth Equity	Provider of a parking and transportation management platform designed to centralize and control parking and transit systems
12/05/19	 shadowfax	Logistics	Series D	\$60M	\$100M	Flipkart	Provider of a business-to-business logistics network that works with neighborhood stores to use their real estate to store inventory
11/13/19	 CONVOY	Logistics	Series D	\$400M	\$666M	Generation Investment Management	Provider of a digital freight network intended to connect shippers to carriers
11/12/19	 TRUCKER	Logistics	Series A	\$23M	\$25M	Saudi Technology Ventures and International Finance Corporation	Provider of an online platform featuring truck aggregation services
11/11/19	 ISEE	Logistics	Series A	\$15M	\$18M	Founders Fund	Provider of an artificial intelligence platform designed to automate vehicle systems
11/08/19	 TRACKONOMY	Logistics	Growth Round	\$39M	\$49M	8VC	Provider of a package tracking application designed to simplify the process of parcel delivery
11/07/19	 CITI X SYS	Supply Chain	Series C	\$60M	\$105M	Goldman Sachs	Provider of software for retail management applications for the retail and wholesale distribution supply chain markets
10/29/19	 GREENRABBIT FRESH STORES FAST	Logistics	Growth Round	\$31M	\$31M	Guidepost Growth Equity	Provider of cold chain logistics solutions to the largest retailers, grocers, and CPG brands
10/23/19	 Fabric	Logistics	Series B	\$110M	\$136M	CPPIB	Provider of an on-demand fulfillment technology designed to redefine the way goods are fulfilled and delivered within cities
10/04/19	 unioncrate	Machine Learning	Series A	\$9M	\$12M	Bain Capital	Provider of an online supply chain platform that simplifies demand planning and daily operations for consumer goods companies
10/03/19	 OSARO	Logistics	Series B	\$16M	\$29M	King River Capital	Provider of hardware-agnostic AI software for the field of industrial automation, including software to power robots in factories and distribution centers

Note: Financial information presented above represents reported capital raised only.

Supply Chain & Logistics Technology Landscape

Representative providers



Supply Chain Networks and Procurement Solutions Help Increase Visibility and Communication, and Control Costs

SOURCE AND PLAN

SALES & OPERATIONS PLANNING

Breaks silos between sales and operations to streamline demand/supply planning

Market Leaders

Emerging Players

To receive the latest Supply Chain and Logistics Technology market maps, please contact HW at TMT_reader@harriswilliams.com

PROCUREMENT & SPEND MANAGEMENT

Automates and optimizes enterprise purchasing decisions

Market Leaders

Emerging Players

TRADING PARTNER NETWORKS

Provides connected marketplace for suppliers, manufacturers, distributors, and consumers

Market Leaders

Emerging Players

KEY TRENDS^{1,2}

- Increased competition and price sensitivity as a result of continued globalization of commerce is resulting in accelerating adoption of sourcing and planning software by companies of all sizes and across many verticals
- Leveraging predictive analytics in sales and operations planning is allowing businesses to integrate global data to enhance predictive sales planning, resulting in proprietary data-driven sales plans and a greater ability to assess the impact of potential macroeconomic events that could greatly affect consumer demand and company-wide forecasts
- Companies are turning to SaaS-based supply chain network solutions to mitigate the cost impacts associated with increased lead times, stock outs, and excessive inventory levels
- Cloud-based trading partner networks and enhanced supplier information are resulting in improved communication of order data between shippers and suppliers
- By 2020, 32% of worldwide deployments of sourcing and procurement software will be SaaS, more than double all deployments in 2016

Connected Manufacturing, Warehousing, and Fulfillment Processes Are Essential to Effective Supply Chain Execution

MANAGE AND EXECUTE

PRODUCT LIFE CYCLE (PLM), MANUFACTURING (MES), AND QUALITY MANAGEMENT (QMS)

Solutions that manage, monitor and synchronize the execution of manufacturing processes

Market Leaders

Emerging Players

To receive the latest Supply Chain and Logistics Technology market maps, please contact HW at TMT_reader@harriswilliams.com

WAREHOUSE MANAGEMENT SYSTEMS

Optimizes the movement and storage of materials within warehouses and distribution centers

Market Leaders

Emerging Players

WAREHOUSE AUTOMATION

Automates the manufacturing, shipping, receiving, put-away, picking, and packing of goods

Market Leaders

Emerging Players

ECOMMERCE FULFILLMENT

Provides real-time decision-making support for channel structure and fulfillment operations

Market Leaders

Emerging Players

KEY TRENDS^{1,2}

- Heightened demand for bringing products to market quickly has driven companies to invest in integrated PLM, MES, and quality management solutions to drive efficient production
- Incorporating real-time performance data into design and execution management software through IoT devices is allowing for closed-loop manufacturing and continuous improvement of processes
- Use of handheld devices for QMS and WMS has continued to evolve as more than 67% of warehouse and retail operators plan to use handheld mobile devices with real-time access to their management systems
- Significant investment in automated guided vehicles (AGVs) and robotics is putting inventory closer to market with quicker turnaround times and smaller order sizes
- Continued improvement of eCommerce customer experience and the prominence of “social shopping” is driving the consumer away from traditional brick-and-mortar purchases

Integrated Logistics Management Solutions Remain a Key Focus Area as Shippers Seek to Optimize Freight Spend across Modes

TRANSPORT AND DELIVER

TRANSPORTATION MANAGEMENT

Enables the planning and execution of the transportation of goods across supply chains

Market Leaders

Emerging Players

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DIGITAL FREIGHT EXCHANGES

Connects drivers and on-demand pickups through online marketplaces and applications

Market Leaders

Emerging Players

FREIGHT SPEND MANAGEMENT, AUDIT, AND PAYMENT

Manages post-shipment freight audit and drives efficiencies

Market Leaders

Emerging Players

REVERSE LOGISTICS

Automates return process, allowing retailers to quickly track, process, and reroute merchandise

Market Leaders

Emerging Players

FLEET MANAGEMENT / TELEMATICS

Enables routing and scheduling of deliveries, as well as dispatching and vehicle telematics

Market Leaders

Emerging Players

KEY TRENDS^{1,2}

- Significant investment in freight matching platforms is being driven by the opportunity to capitalize on the unused capacity within long-haul trucking and last-mile delivery markets
- By the end of 2020, 90% of U.S. states will have autonomous vehicle legislation that enables the motor freight industry to use self-driving trucks
- Constantly evolving regulatory policies are driving technology investments and digital flexibility requirements
- Costly and resource-heavy auditing of freight invoices and payments have encouraged companies to adopt automated software solutions to streamline processing, and reduce errors and operational costs
- Early integration of technology-enabled reverse logistics solutions has provided the capability to automate burdensome processes and boost efficiencies during the return process for retailers
- Fleet management software solutions are improving routing and scheduling of deliveries, driver mobility, and integration with onboard vehicle telematics

Real-Time Visibility into Supply Chains and Risk Mitigation Is a Key Theme for Both Shippers and Carriers

OPTIMIZE AND COMPLY

NETWORK DESIGN / OPTIMIZATION

Analyzes existing supply chain operations to improve visibility, increase efficiency, and cut costs

Market Leaders

Emerging Players

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VISIBILITY

Provides real-time insights into customers' supply chains, orders, and shipments

Market Leaders

Emerging Players

GLOBAL TRADE MANAGEMENT

Streamlines entire life cycle of global trade across order, logistics, and settlement

Market Leaders

Emerging Players

SUPPLIER / RISK MANAGEMENT

Identifies, monitors, and mitigates threats to supply chain continuity and profitability

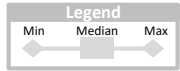
Market Leaders

Emerging Players

KEY TRENDS^{1,2}

- As supply chain networks become increasingly complex and global, companies are turning to new, data-driven approaches to model their operations and better identify improvements in cost, service, efficiency, and risk
- Automation of market data acquisition allows for timely and accurate business intelligence to drive increased visibility into the order process, inventory management, supplier collaboration, supply chain risk, and analytics
- Global trade management solutions are integrating the financial supply chain with the physical supply chain, enabling corporations to grow top-line revenue and better comply with required governmental reporting and security mandates
- Leading enterprises are taking cross-functional and cross-company approaches to their supply chain to minimize and prevent risks, manage compliance, and monitor threats as their supply chains expand around the world

Public Market Observations⁴

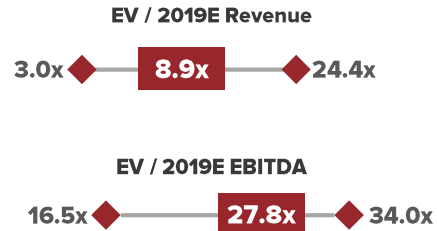


SUPPLY CHAIN
MANAGEMENT SOFTWARE

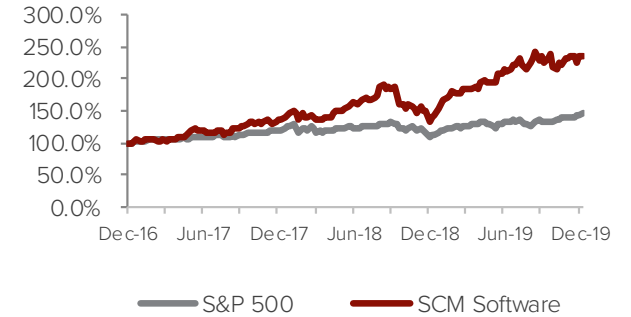
Key Public Comps



Trading Metrics



Indexed Stock Performance

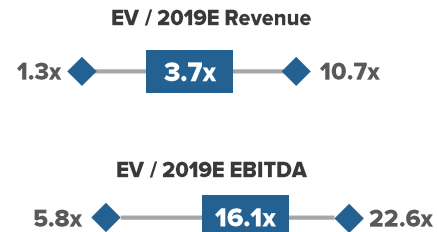


LOGISTICS & FLEET
MANAGEMENT SOFTWARE

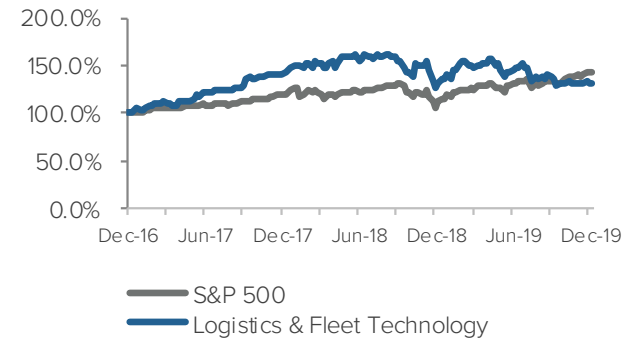
Key Public Comps



Trading Metrics



Indexed Stock Performance

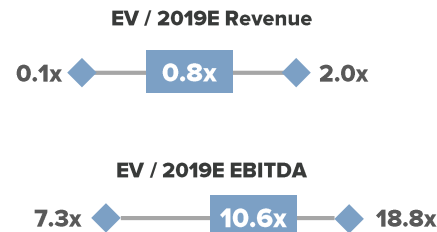


3PL TECHNOLOGY &
SERVICES

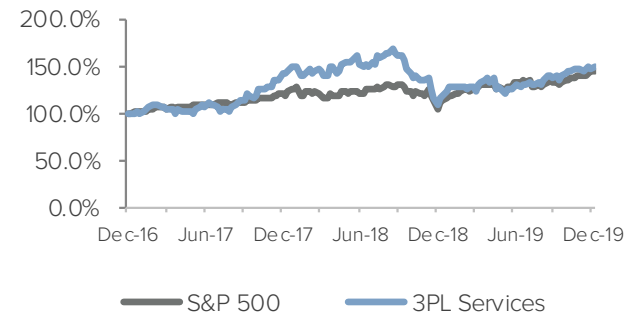
Key Public Comps



Trading Metrics



Indexed Stock Performance



Supply Chain & Logistics Technology – Trading Comparables⁴

VALUATION

(\$ in millions)

Company	Market Capitalization	Enterprise Value	Revenue		EBITDA Margin		Multiples Summary			
			LTM	CY2019P	LTM	CY2019P	Enterprise Value/Revenue		Enterprise Value / EBITDA	
			LTM	CY2019P	LTM	CY2019P	LTM	CY2019P	LTM	CY2019P
Supply Chain Management Software										
Dassault Systèmes SE	\$43,054,185	\$40,700,897	\$4,210,664	\$4,549,771	29.3%	35.0%	9.7x	8.9x	32.9x	25.6x
Coupa Software Incorporated	9,361,173	9,289,391	353,175	380,813	NM	12.9%	26.3x	24.4x	NM	NM
Aspen Technology, Inc.	8,246,351	8,543,635	618,267	613,735	48.8%	52.7%	13.8x	13.9x	28.3x	26.4x
WiseTech Global Limited	5,507,847	5,325,483	244,192	288,005	29.2%	32.1%	21.8x	18.5x	74.6x	NM
Manhattan Associates, Inc.	5,077,559	5,004,371	609,386	612,671	21.8%	24.3%	8.2x	8.2x	37.7x	33.6x
The Descartes Systems Group Inc	3,599,246	3,593,351	312,600	325,928	35.4%	37.5%	11.5x	11.0x	32.5x	29.4x
SPS Commerce, Inc.	1,926,612	1,744,944	271,580	279,014	18.8%	24.8%	6.4x	6.3x	34.1x	25.2x
Kinaxis Inc.	2,041,209	1,849,347	173,536	189,854	17.2%	28.6%	10.7x	9.7x	62.1x	34.0x
American Software, Inc.	479,300	387,667	108,867	109,744	7.0%	12.7%	3.6x	3.5x	50.7x	27.8x
Tecsys Inc.	218,547	225,338	68,499	75,752	5.1%	8.8%	3.3x	3.0x	64.9x	33.7x
Park City Group, Inc.	101,667	90,026	20,028	19,531	18.3%	27.9%	4.5x	4.6x	24.6x	16.5x
Median	\$3,599,246	\$2,721,349	\$271,580	\$288,005	20.3%	27.9%	9.7x	8.9x	35.9x	27.8x
Logistics & Fleet Technology										
Roper Technologies, Inc.	\$36,997,801	\$43,158,901	\$5,348,300	\$5,372,367	34.7%	35.6%	8.1x	8.0x	23.2x	22.6x
FleetCor Technologies, Inc.	24,838,512	28,347,444	2,593,389	2,654,827	55.9%	57.3%	10.9x	10.7x	19.5x	18.6x
Fortive Corporation	25,584,920	30,769,420	7,075,100	7,310,023	21.2%	23.1%	4.3x	4.2x	20.5x	18.3x
Garmin Ltd.	18,604,430	17,383,779	3,587,381	3,656,462	27.7%	27.1%	4.8x	4.8x	17.5x	17.5x
Trimble Inc.	10,381,401	12,086,501	3,225,800	3,229,709	19.9%	23.2%	3.7x	3.7x	18.9x	16.1x
TomTom N.V.	1,382,574	992,002	783,488	778,473	7.7%	9.3%	1.3x	1.3x	16.4x	13.7x
ORBCOMM Inc.	317,842	533,258	268,668	272,377	17.6%	23.2%	2.0x	2.0x	11.3x	8.5x
CalAmp Corp.	318,018	455,758	363,283	361,794	8.9%	11.2%	1.3x	1.3x	14.1x	11.3x
MiX Telematics Limited	281,501	272,609	137,353	148,946	27.5%	31.4%	2.0x	1.8x	7.2x	5.8x
Median	\$10,381,401	\$12,086,501	\$2,593,389	\$2,654,827	21.2%	23.2%	3.7x	3.7x	17.5x	16.1x
3PL Services										
DSV Panalpina A/S	\$26,397,893	\$28,898,744	\$12,488,774	\$14,450,149	7.9%	10.6%	2.3x	2.0x	29.4x	18.8x
Kuehne + Nagel International AG	20,182,479	22,023,640	21,299,136	22,070,479	5.8%	8.3%	1.0x	1.0x	17.7x	12.1x
XPO Logistics, Inc.	7,307,410	14,637,410	16,901,000	16,771,421	9.5%	9.9%	0.9x	0.9x	9.1x	8.8x
C.H. Robinson Worldwide, Inc.	10,484,613	11,625,737	15,654,090	15,287,878	6.3%	6.2%	0.7x	0.8x	11.7x	12.3x
Expeditors International of Washington, Inc.	13,273,279	12,434,633	8,366,082	8,310,325	10.2%	10.2%	1.5x	1.5x	14.5x	14.6x
World Fuel Services Corporation	2,843,257	3,492,057	37,449,500	36,719,643	1.1%	1.1%	0.1x	0.1x	8.7x	8.5x
Hub Group, Inc.	1,742,726	1,986,022	3,785,729	3,698,005	7.2%	7.3%	0.5x	0.5x	7.3x	7.3x
Echo Global Logistics, Inc.	571,827	737,908	2,236,278	2,174,121	3.0%	3.7%	0.3x	0.3x	10.9x	9.1x
Median	\$8,896,011	\$12,030,185	\$14,071,432	\$14,869,014	6.8%	7.8%	0.8x	0.8x	11.3x	10.6x
Total Median	\$5,292,703	\$5,004,371	\$1,509,883	\$1,476,297	17.6%	23.1%	3.7x	3.6x	19.5x	17.0x

Harris Williams Capabilities and Locations

Harris Williams has a broad range of industry expertise, which creates powerful opportunities. Our clients benefit from our deep-sector experience, integrated industry intelligence, and collaboration across the firm, and our commitment to learning what makes them unique. For more information, visit our website at www.harriswilliams.com/industries.



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Sources & Disclosures

Sources

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3. PITCHBOOK.
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