May 2019

Logistics Review

The Unbundling and Innovation of Logistics

COMCAP
Where commerce meets capital

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An introduction to ComCap

- ComCap is a premier boutique investment bank focused on the intersection of commerce and capital, with key focus on B2B SaaS, B2C ecommerce, payments, mobile commerce, marketplaces and B2B services for retail technologies (IT and marketing services, in-store, fulfillment, logistics, call center, analytics or personalization).
- Headquartered in San Francisco with European coverage from London and Moscow, as well as Latin America coverage from Sao Paulo. Our firm works with mid-cap public companies on buyside initiatives along with public and private growth companies on financing and strategic M&A.
- In addition to being the only boutique focused on disruptive commerce models, we differentiate by:
  - Bringing bulge bracket techniques to emerging models;
  - A strong and uncommon buyside or strategy practice;
  - Deep understanding of industry drivers and synergy analyses;
  - Deep relationships across the sector; and
  - Worldwide coverage with closed transactions in the United States, Japan, China, the ASEAN region, Western and Eastern Europe, and Latin America
- Our global ComCap team:

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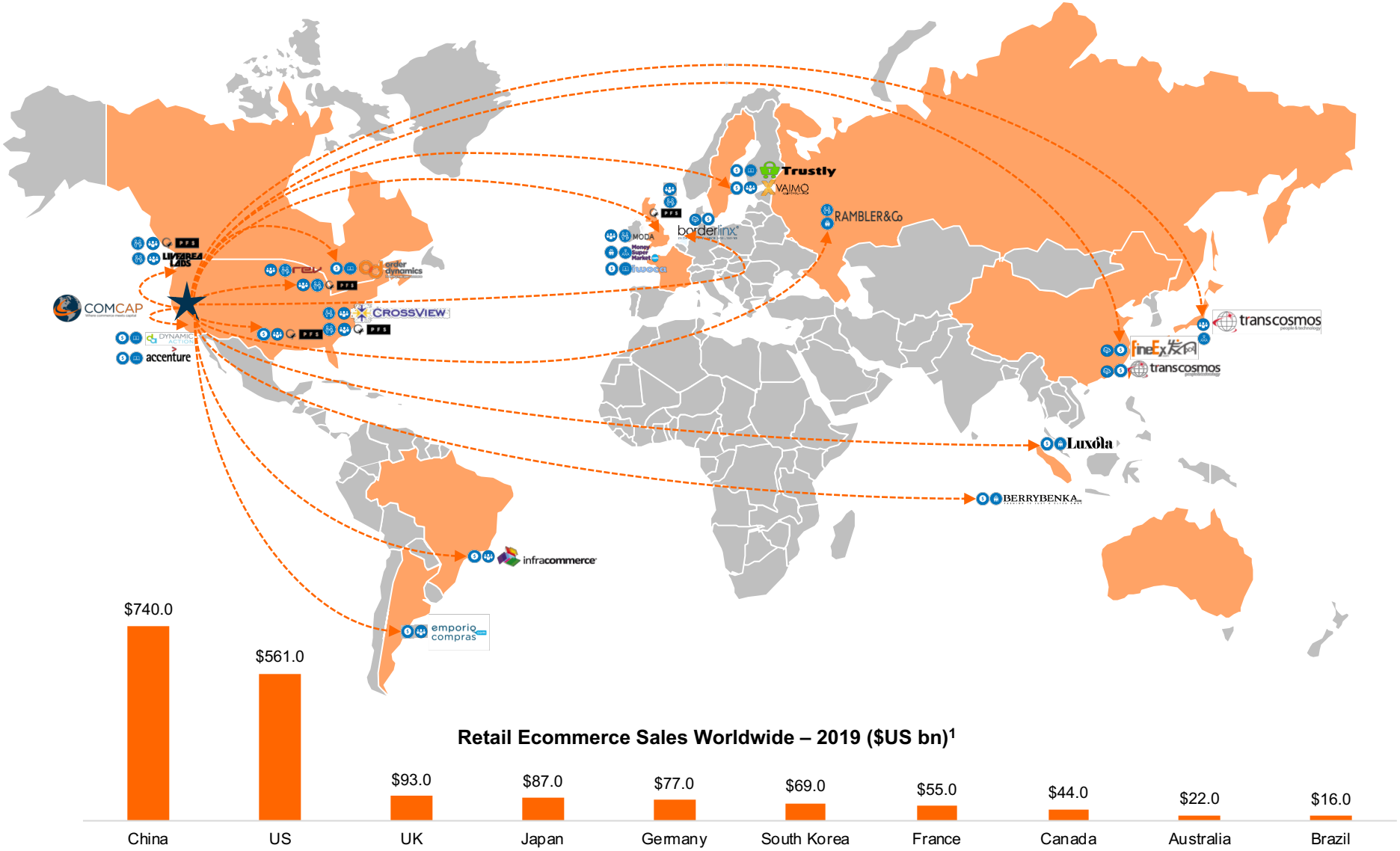
ComCap – Active in 14 countries, including 9 of the top 10 global ecommerce markets



[1]Source: Shopify Plus Ecommerce Playbook

ComCap's current thematic focus areas overview

Theme	Description	Select companies
Analytics	Disruptors in the analytics space focused on ecommerce, logistics, retail, predictive, payment, risk and marketing	bloomreach, Trax image recognition, DYNAMIC ACTION
AR/VR and content creation	Emerging technologies with retail applications that allow retailers to offer a differentiated customer experience and build brand awareness and loyalty	AUGMENT, LOOKLET, PERFECT
Beauty, health and wellness	Universe of beauty companies: manufacturers, retailers, disruptors and new entrants	REVLON, DAV/DK/ND, beleza NA WEB
Digitally native vertical brands (DNVBs)	D2C digitally native brands covering clothing, accessories, personal care, home and kitchen, furniture, and other consumer-focused products	BONOBOS, PARACHUTE, TAYLOR STITCH, chubbies
Ecommerce SaaS	Emerging and disruptive SaaS businesses in the ecommerce sector	bilawin, one book, volusion, order dynamics, HANDSHAKE, WebLinc
FinTech	Retail and commerce-related disruptors in the FinTech universe that focuses on payments, risk analytics, false declines and retail POS	ASSEMBLY, zuora, ripple, stripe, YAPSTONE, Paysafe, yoyo
Geospatial analytics	We are constantly evaluating new themes and evolving our focus. Other categories currently include logistics, shipping, IoT and SMB	PlaceIQ, Gravy ANALYTICS, Lotadata, REVEAL MOBILE
Marketing suites	Emerging platforms in the digital marketing space	yottaa, AGILONE, avocet, emarsys
Mobile	Focused on mobile solution providers that optimize the mobile experience from desktop-to-mobile website conversions and targeted mobile marketing to simplifying the mobile checkout experience	URBAN AIRSHIP, madmobile, MOOVWEB
Outsourcing and service providers	Companies that provide outsourcing and end-to-end ecommerce services, such as contact centers, platform, marketing, photo services, logistics, warehousing, etc.	PFS, trans cosmos, infracommerce, ösom
Personalization	Emerging players in the ecommerce personalization space	evergage, CERTONA, segmint, TRUE FIT
Robotics	Robotics is getting integrated into various aspects of supply chain and retail	fetch robotics, bossanova
Logistics	Emerging platforms and providers innovating and optimizing the many facets of the supply chain ecosystem	INTELLIGENT AUDIT, Deliverr, GOGOVAN, Happy Returns, BRINGG
System Integrators	Focus on large SIs covering multiple platform as well as smaller SIs covering just one or a handful of platforms	CORRA, VAIMO, astound COMMERCE, smartosc

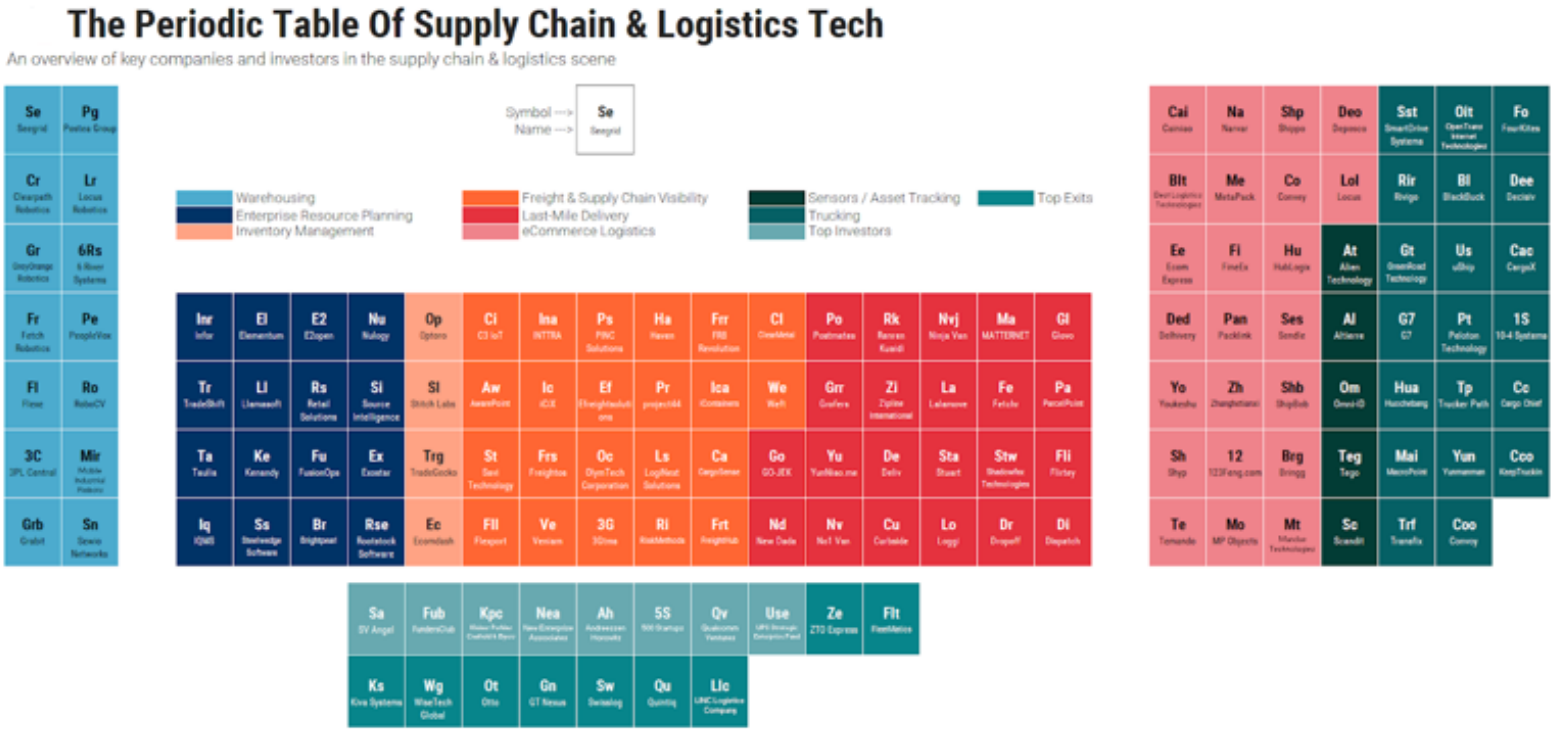
Logistics – a shifting paradigm

A paradigm shift in the logistics industry towards technology is affecting everything from omni-channel purchasing to reverse logistics.

- This technological leap is leading to the unbundling of the logistics sector.

The logistics market is buoyed by global ecommerce growth.

- With this growth, shipping efficiency is becoming increasingly important, driving demands for technology that can help logistics providers reduce shipping costs while meeting higher services standards as ecommerce deliveries increase.



Source: CB Insights, Disrupting Logistics, The Top Startups that are Unbundling FedEx and UPS

Logistics and supply chain landscape

Ecommerce Logistics

DEPOS, Ecom Express, temando, YKS, 百世, Delhivery, Anchanto, GATI, LOGINEXT, acommerce, sendle, ShipBob, 百世, 风先生, browntape, LOCUS, TNT, convey, Packlink, CAINIAO, Shyp, HubLogix, ForEye, MPO, shippo, atri, DPEX, DHL, COURIEX, Singapore POST, PARCEL PERFORM, Lazadaexpress, AVOS, POS Laju, aramex, SEKO, mandaé

Last Mile Delivery

CITY-LINK Express, 人人快递, aden, easyParcel, GO-JEK, NINJA VAN, SKOOTAR, POSTMATES, shadowfax, fetchr, Routific, OPINIO, NewDada 新达达, GROFERS, MATTERNET, Glovo, Doorman, Flirtey, stuart, deliv, Loggi, drop, ParcelPoint, 云鸟, zipline, LALAMOVE, Delhivery, Ecom Express, curbside, dispatch

Fulfilment & Tech

FedEx, Agility, DHL, Ryder, UPS, acommerce, FBL, DKSH, SmartHop, specommerce, Anchanto, southpacific, EMIZA, SnT, iCommerce, white, Quantium, MY CLOUD, aden, SCI Ecommerce, SOK CHAN, Shipyours, Siam Outlet, 8commerce, YAMATO LOGISTICS, VCA

Warehousing & Storage

BALYO, 6 RIVER SYSTEMS, VCA, Grabit, SKUVAULT, I am robotics, MakeSpace, sharemystorage.com, MAGAZINO, FLEXE, PEOPLEVOX, CLEARPATH, GETVU, RoboCV, SEEGRID, fetch, POSTEA, KINETIC, 3PL Central, GREYORANGE, SEWIO, SWAPBOX, shiphero, MiR

Logistics software

Inventory Management

stitchlabs, tradegecko, skuIQ, ecomdash, SALESWARP, RELEX, SHIPEDGE, LEANLOGISTICS, optoro, APL Logistics, BizSlate

ERP/Logistics/Software

CATAPULT, CTSI, IQMS, datex, EXTOL, CaseStack, LOGFIRE, brightpearl, rootstock, Llamasoft, elementum, taulia, RSi Retail Solutions, SIGHT MACHINE, nulogy, B2B·CENTER, EXOSTAR, fusionops, SOURCE INTELLIGENCE, CentricSoftware, Anchanto, TRADESHIFT, Kenandy, E2OPEN, Steelwedge, infor, fleetilla, GTG, arena

Big data

senseaware, Transmetrics, MATERNA, Agheera

Trucking

rivigo, OPENSPORT, SMARTDRIVE, TRANSFIX, Peloton, EZYHAUL, FleetUp, uShip, inthinc, CARGO CHIEF, CARGOX, TRUCKER PATH, GREENROAD, G7, cargomatic, Decisiv, vnomics, 10-4, SONTRA, BLACKBUCK, LOADSMART, BANYAN, CONVARGO, MACROPOINT, 货车帮, fourkites, KEEP TRUCKIN, KEYCHAIN, FREIGHTERA, oTMS, 运满满 ymm56.com, THE LORRY.COM, CONVOY

Crowd shipping

PiggyBee, UberCARGO, friendshippr, nimber, CX CARGOX

Freight Services

shipwaves, HAVEN, FLEXPORT, VERITREAD, cargohound, iLogistics, iContainers, FREIGHTOS, INTTRA, Olymtech, Carrier Logistics Inc., project44, FR8star.com, freightsolutions

Platform Services

shippo, ShipHawk, PRECYSE, ICIX, PINC, clearmetal, EVOS, riskmethods, LOGINEXT, FREIGHTHUB, awarepoint, WEFT, CARGOSENSE, 3GTMS

Moving

schlep, lugg, Bellhops, Ghostruck

New technology

UAVs

MATTERNET, imi tech, DroneDeploy, SKYCATCH, CHANG, DroneX, SWARM, ideaForge, Flirtey, PRENAV

AR

LFS glass, VUZIX, DSC

Localization

NUNAV, Streetspotr, placemeter, Byte Light, LOCOSLAB

Robotics & IoT

ROBLOG Multishuttle Moves, ALIEN, IoT, SSI SCHÄFER, altierre, SCANDIT, TEGO, VENIAM, KIVA automation, Savi, Omni-ID

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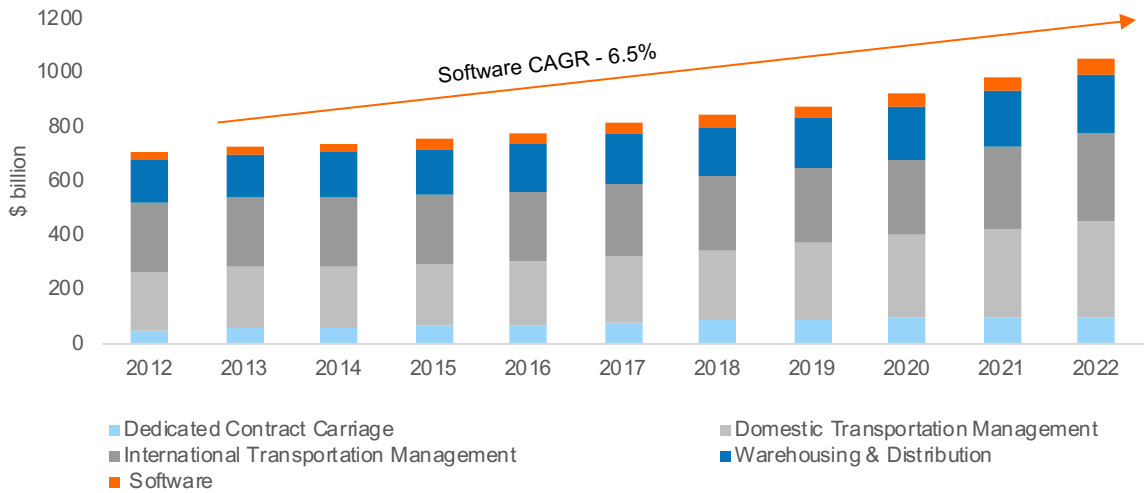
Source: news sources, CB Insights, logos from company website; note: the landscape is indicative and does not represent all players in a particular category

Paradigm shift in the logistics industry towards technology

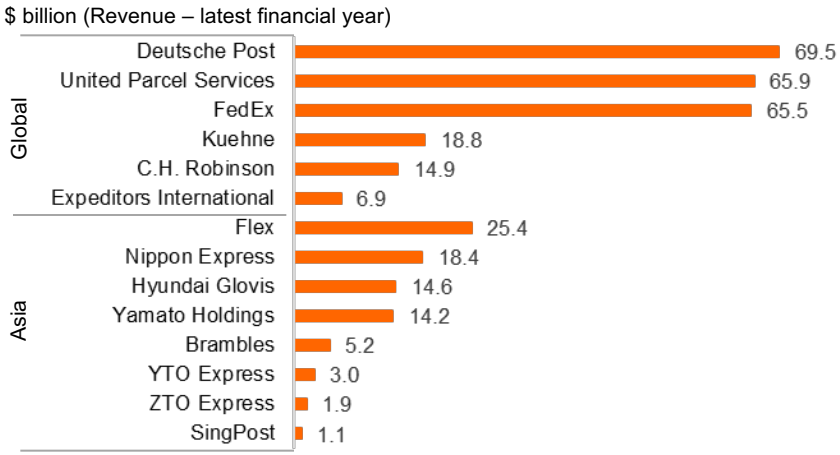
Large global players have been increasingly relying on technology for enhanced operational visibility and to drive efficiencies.

Software is expected to be the fastest growing component in the 3PL market during 2012-2022



- Innovation in supply chain management is expected to reduce costs for global 3PL players and, in turn, increase affordability to end customers
- While software is a small component of the overall 3PL market size, technology innovation is being adopted at every level to enhance operations and drive efficiency

Traditional logistics leaders are moving towards technology



FedEx
- Developing an "Alexa app" for consumers to initiate shipments by simply talking to a smart device
- Investing in self-driving technology

UPS
- UPS and SAP announced a deal to develop an end-to-end industry solution
- UPS' ocean container-tracking technology provides all travel details via an online dashboard

DHL Express
- Launched the 2nd innovation center to develop technology such as self-driving vehicles, robotics, IoT and augmented reality
- DHL Supply Chain UK and Fujitsu developed new services based on IoT

Singapore Post
- Developing drone technology
- Launched an automated parcel sorting facility and the Innovation Center to develop new technologies

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Source: CapitalIQ, Fractovia, company websites, ComCap analysis

Unbundling of the logistics sector

Cloud computing and ease of integration across providers and services have resulted in the unbundling of the logistics sector…

Shipping

- Create Shipment
- Get Rate Quote
- Schedule Pickup
- Order Supplies
- Shipping Advice
- Time and Day Definite (~On Demand)

Tracking

- Monitor Shipments
- Track by Shipper's Reference
- Tracking Tools
- Electronic Proof of Delivery

Insurance

- Freight Security
- Air and Ocean Cargo Insurance
- Road Freight Insurance

Freight services

- Air Freight
- Ocean Freight
- Road and Rail Freight
- Intermodal and Multimodal Transport
- Industrial Projects Transportation
- Carrier and Dedicated Transportation Management

Customs

- Customs Services

Additional services

- Value Added
- Data Analytics

Warehousing

- Dedicated Ops
- Shared Operations
- TMS
- Value Added Services
- WMS

Fulfilment

- Fulfilment services

Solutions by sector

- Aerospace
- Automotive
- Chemical
- Consumer
- Fashion
- Engineering and Manufacturing
- Life Sciences and Healthcare
- Retail
- Technology
- Green Logistics Solutions
- Cold Chain Logistics

Source: DHL; FedEx; NCSU, Trends and Services Offered in the 3PL Industry; UPS websites; CB Insights; ComCap analysis

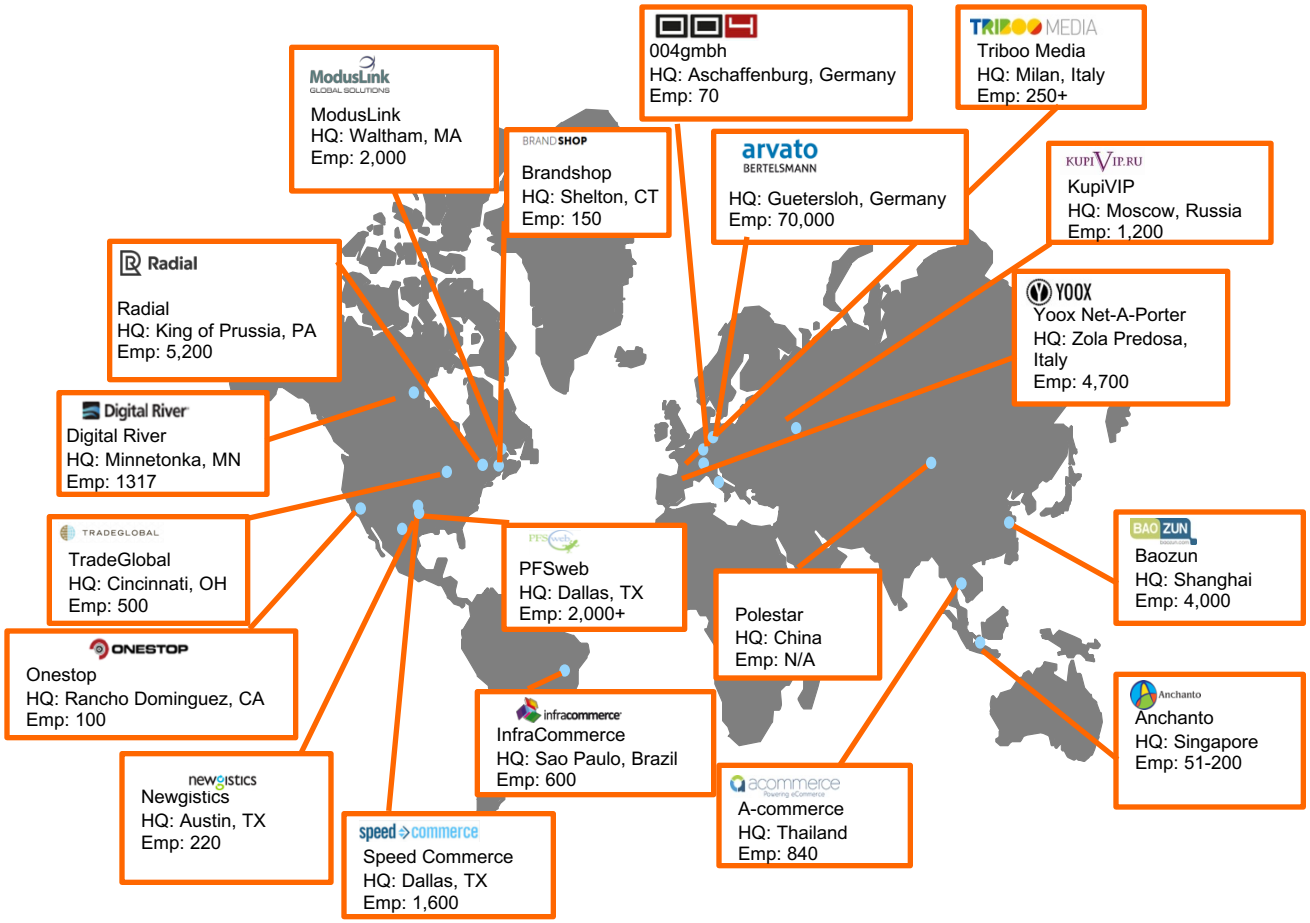
End-to-end players

…however, end-to-end players have retained their importance in offering one-stop shop solutions for customers.

Advantages of end-to-end logistics providers

- ✓ One centralized system to manage entire fleet
- ✓ Load optimization
- ✓ Optimal planning for multi-hub, multi-leg and multi-modal routes
- ✓ Real time feedback ensures prompt response to emergencies or rerouting / resource breakdowns
- ✓ Lesser bottlenecks
- ✓ Better asset and human resource utilization
- ✓ Overall enhanced efficiency for the organization

Select end-to-end Logistics providers globally



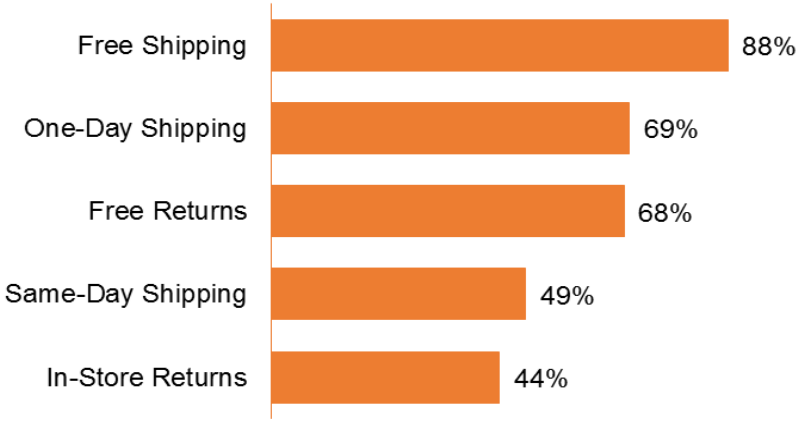
Source: news sources, logos from company websites

Ecommerce is re-shaping logistics and shipping expectations

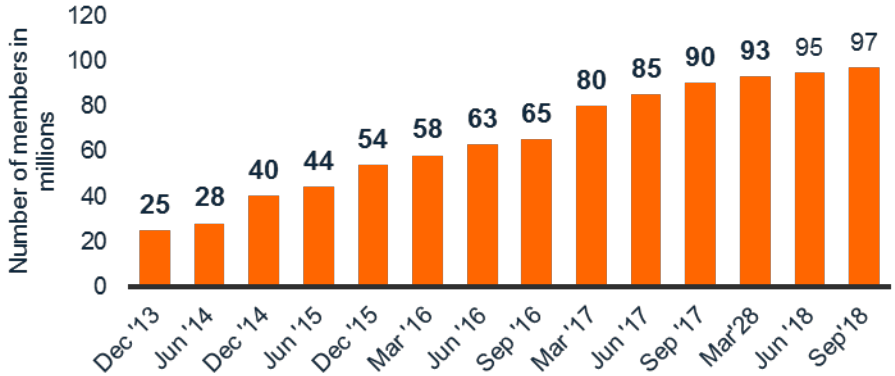
Logistics providers seek new ways to optimize shipping costs for retailers to prevent them from moving up the supply chain or turn to other retailers, like Amazon, to increase efficiency.

- ✓ Shipping efficiency is becoming increasingly important, driving demands for technology that can help logistics providers reduce shipping costs while meeting higher services standards as ecommerce deliveries increase.
- ✓ As shipping costs continue to rise, customer demands for free shipping on online purchases remain the norm creating additional pressure for retailers.
- ✓ As a result, retailers are looking for ways to reduce costs by optimizing their supply chain and packaging processes.

Services most Likely to convince US consumers to shop more online

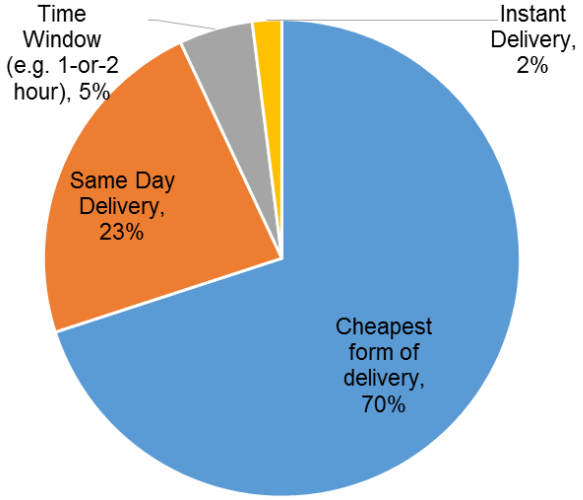


Amazon Prime members



- ✓ In order to improve delivery efficiency, many sellers use Fulfilment By Amazon (FBA) services, which has been around since 2006.
- ✓ Merchants using FBA automatically get their products flagged as eligible for fast Prime shipping.

Delivery options preferred by consumers (%)



Source: Business Insider; Statista, Number of Amazon Prime Members in the United States

Omni-channel influencing supply chain and logistics strategies

Over 40% of purchases involve channel crossing, i.e. more than one channel is used to shop and buy a product.

Benefits of omni-channel for customers

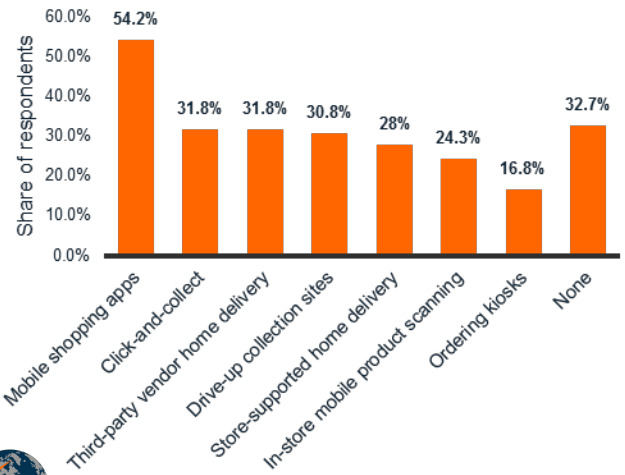
- ✓ Many access points such as online, mobile, stores
- ✓ Many delivery options, i.e. specific, after-hours, weekend delivery
- ✓ Shorter lead times: same-day delivery, less than 2 or 4 hours delivery
- ✓ Flexible delivery points
- ✓ Seamless transition and customer service across channels

Benefits of omni-channel for merchants

- ✓ Multiple touchpoints of gathering customer behaviour data creating a holistic customer journey
- ✓ Less reliance on storefront, hence less retail and labour expenses

Key considerations in logistics to adapt to an omni-channel approach

Distribution of omni-channel services offered by grocery retailers in the United States in 2018



- Order captured from all sources
- Inventory:
  - Visibility across all channels
  - Inventory forecasting
  - Item level logistics needs to be considered
- Handling of replenishment / fulfilment:
  - Merged online / offline warehouse may work for certain sectors
- Delivery:
  - Taking into account shipping preferences and in-store customer pick up post online purchase
- Reverse logistics

Home Delivery

Peapod, instacart, deliv, UBER RUSH, POSTMATES, Google Express

Collection Points

collect+ parcels made easy, curbside

Lockers

ByBox

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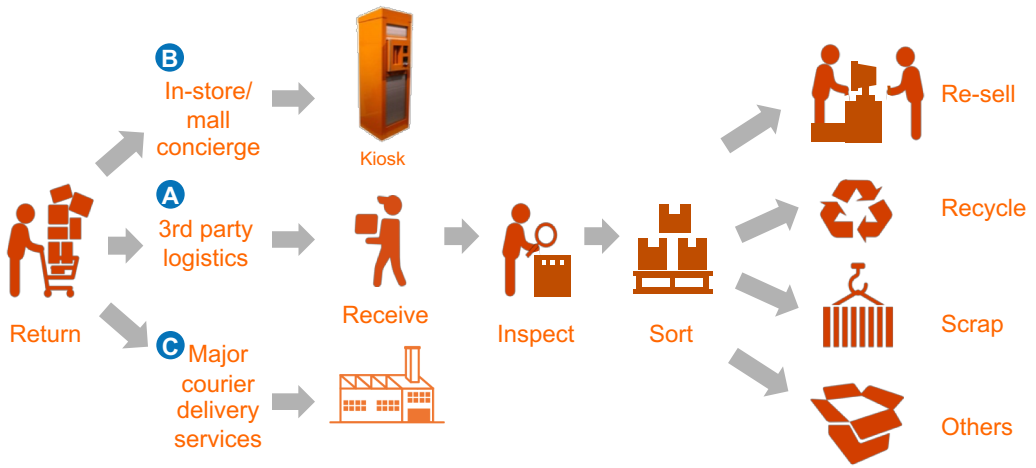
Source: Business Insider; UPS Survery; Statista, Distribution of Omnichannel Services Offered by Grocery Retailers in the US in 2018

Reverse logistics

Retail returns is outpacing growth in retail sales

- 11% returns vs. 3.6% sales[1] CAGR since 2011
- Retail returns amounted to $351B in 2017
- Ecommerce returns represented $105B[2]
  - 20% of apparel and soft goods are returned and high-value products reach up to 50% returns
  - 30% of all ecommerce holiday season orders are returned
- Retailers spend up to 4% of total supply chain costs on return logistics
  - The cost of a return can be as high as $15 (or 30% of the purchase price)
- Average manufacturer will spend 9-15% of total revenue on returns

Reverse logistics flows



Return policies are a key consideration for consumers

- 89% of online shoppers cited the return policy as a reason they would or would not buy from a company
- 92% of consumers will buy something again if returns are easy
- 79% of consumers want free return shipping
- 62% of shoppers are more likely to shop online if they can return an item in-store
- 27% of shoppers would purchase an item that costs more than $1,000 if offered free returns as compared to 10% who would purchase otherwise

Spotlight

A Newgistics	B Happy Returns	C UPS FedEx
Smart tag+	Concierge at mall	Direct to retailer / manufacturer
3rd party	Return bars	Reliability
Benefits • Retailers cost reduced • Single source tracking • National network	Benefits • High touch customer service • Integrated with retailer • Immediate refund	Benefits • Lack of education • Ubiquitous

Source: National Retail Federation, UPS, BizRate, USPS, eMarketer, Forbes
1) US Census Bureau
2) Applied estimated 30% online return rate to total US e-commerce sales

Uberization of logistics is just beginning

An Uber-type model can promote cost and resource efficiency for shipping and warehousing.

- Ecommerce has changed the dynamics of shipping and warehousing:
  - B2C ecommerce shipping is largely comprised of small quantities delivered to individual consumers
  - Time is critical, with same day, express shipping or specific day deliveries required by consumers
  - Highly variable demand influenced by social media and the internet

	Traditional trucking / shipping	Uber model
Advantages	✓ Long track record of operations ✓ Reliability of drivers and delivery history ✓ Visibility into costs	✓ Better capacity utilization due to real-time data ✓ Reduced fixed costs ✓ Improved supply chain visibility
Disadvantages	× Inefficiencies due to lack of real-time data, hence higher share of empty return trucks × High operating costs × Driver shortage	× Availability and cost of truckers during peak demand × Trucker loyalty

Market disruptors

TRANSFIX
CONVOY
LALAMOVE
NINJA VAN

Dynamic on-demand warehousing can be a partial or complete warehousing strategy for a company

Traditional warehousing

- Ship from location
- Own warehouse / distribution center network
- Partial use of 3PL network
- 100% distribution outsourcing

Dynamic on-demand warehousing

- Pay-per-use model
- Less capital cost
- Renting of smaller capacities available
- Electronic marketplaces available to find an ideal warehousing solution at short notice

Market disruptors

FLEXE
Shipwire
STORD

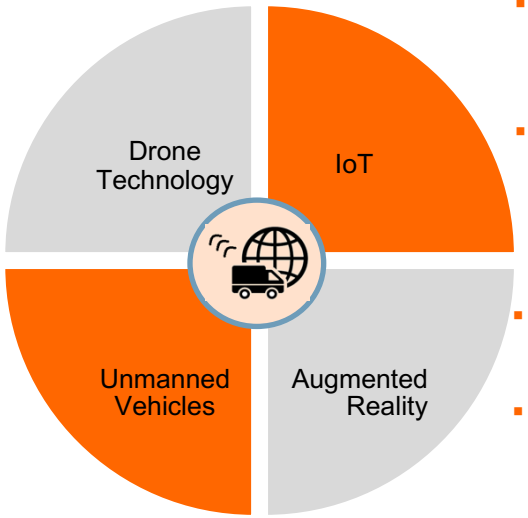
Source: News sources

Advanced technology is gaining traction

Augmented Reality (AR), Internet of Things (IoT), drones and autonomous vehicles have been tested for commercial use.

SWARMX
DroneX
MATTERNET
Flirtey

- Usage expected in product delivery, internal shipping, product tracking
- Regulations will be key
- Amazon, Rakuten, DHL, Swiss Post, SingPost and many others are testing drone technology



- IoT can empower logistics companies to keep track of goods and items at all levels of the supply chain
- Helps prevent shipments from being delayed or lost

- Driverless trucks can potentially reduce human error and costs
- Caution among 3PL players with respect to early trials

- AR involves virtual content directly projected on top of the real-world image
- Stationary AR systems, spatial Augmented Reality systems, head-mounted displays, smart glasses and smart lens are a few examples

LFS glass
VUZIX
DSC

Other technology: 3D printing, Localization and Local Intelligence (insights into asset utilization), wearable tech, low cost sensor technology

How DHL is transforming its logistics business through advanced technology

Distribution Processes
- Mobile piece picking
- Automated inventory management
- Co-packing
- Exoskeletons

More Flexible delivery and optimized routing

Collaborative Robotics

Automated Relief from strenuous manual labour

Chatbots

Smart Glasses
- Pick and scan trolley
- Find, pick and scan items
- Place order items in correct trolley boxes

DHL Parcelcopter (drone technology)

Source: News sources, DHL Annual Report 2016

Ultimately Moving Towards the "Physical Cloud"

Rapid tech advancement, led by higher investments in robots and drones are driving massive automation of the supply chain systems revolution.

Current reality

Automated warehouses

Near likely reality

Autonomous warehouses

+

Autonomous manufacturing and delivery

=

PHYSICAL CLOUD

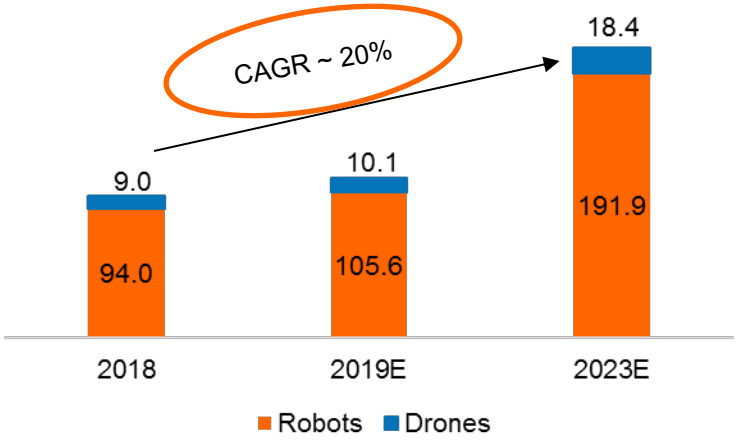
Fully automated supply chain

"Physical Cloud," a concept that refers to a fully automated e-commerce ecosystem, in which goods are stored and delivered as easily as data, but in the physical space – moving, storing, and delivering goods globally at maximum efficiency using robots and drones.

Companies leading the supply chain automation revolution

amazon.com, Walmart, JD.COM 京东, IKEA, BEST BUY, BOXED, Google, Uber, ocado The online supermarket, QuietLogistics Complete Fulfilment, TARGET, LOWE'S, MINISTRY OF SUPPLY, STAPLES

Investments on robots and rrones (In $B)



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Source: News Sources

Optimizing Product Returns: The Single Largest Profit Destroyer in Retail

Some existing and new players are coming out with solutions to optimize this aspect of the supply chain

- While making it progressively easier for customers to shop online with multiple delivery and pick-up options, retailers have also been fuelling a big supply chain problem for themselves: product returns.
- In some cases like apparel, return rates are ~40%, with less than 50% of returned items remaining saleable at their full price.
- Most apparel returns are due to fitting issues. Retailers realize this problem and are working towards delivering the right size in the first delivery in order to minimize returns. Companies like True Fit and Secret Sauce Partners are leading the way by providing customers with several AI-based, pre-purchase virtual fitting tools.
- Companies such as Happy Returns, Returnly, and Optoro have been capitalizing on this space.

The Beneficiaries

amazon.com FedEx TRUE FIT

UPS secret sauce PARTNERS Happy Returns Returnly optoro

Increase in Last-Mile Delivery Costs and Its Fallout

- USPS parcel rates sharply increased, effective as of Jan ’19. This is increasing logistics costs for e-commerce players as private parcel delivery companies (UPS & FedEx) follow suit.
- A cascading inflation is also likely for partial truck load and last mile logistics costs.
- It will also direct delivery volume to the private players. Amazon may hasten the process of internal deliveries, while UPS and FedEx may alternatively use the opportunity to increase their market share.

Source: News Sources

Last-mile delivery services

28% of a product's total transportation costs are in the last mile of delivery, with current trends aiming to tackle these high costs.

6 Key trends in the last-mile delivery space

Faster fulfillment and delivery speeds are demanded by customers

With Amazon guaranteeing 2-day delivery, and other retailers following suit, faster fulfillment is required. Customers are now accustomed to 2-day delivery and expect it.

Use of the gig-economy (apps like UberRUSH, Postmates, etc.)

The explosion of the gig-economy has allowed retailers to outsource some of their last-mile delivery services to independent contractors. These contractors complete local deliveries one package at a time on bikes or cars.

Delivery by self-driving cars, drones and robots

Autonomous delivery is not far off in the future. GM and Ford are already working on self-driving technology. Robot delivery is being tested in San Francisco for Yelp and Eat24. In the UK, Amazon Prime Air conducted private drone trials.

Smart technology is being used increasingly

Big Data and Data Analytics is being used increasingly to discover the best delivery routes and work in real time with traffic data and weather conditions. Fulfillment centers also use weather data to determine how to pack certain items during different seasons.

Order tracking is the key to win the hearts of the customers

Being able to track a package is integral to the customer. Thanks to smartphone apps and the use of GPS, customers can see more accurately where a driver is and when the package is delivered.

Upsales at the time of delivery

Retailers are increasingly tracking consumer spending habits by using big data and can predict what other items consumers are likely to buy, especially in the case of online shopping. Delivery people will bring additional inventory based on past purchases with the goal of making additional sales in person.

Key players in last-mile delivery services

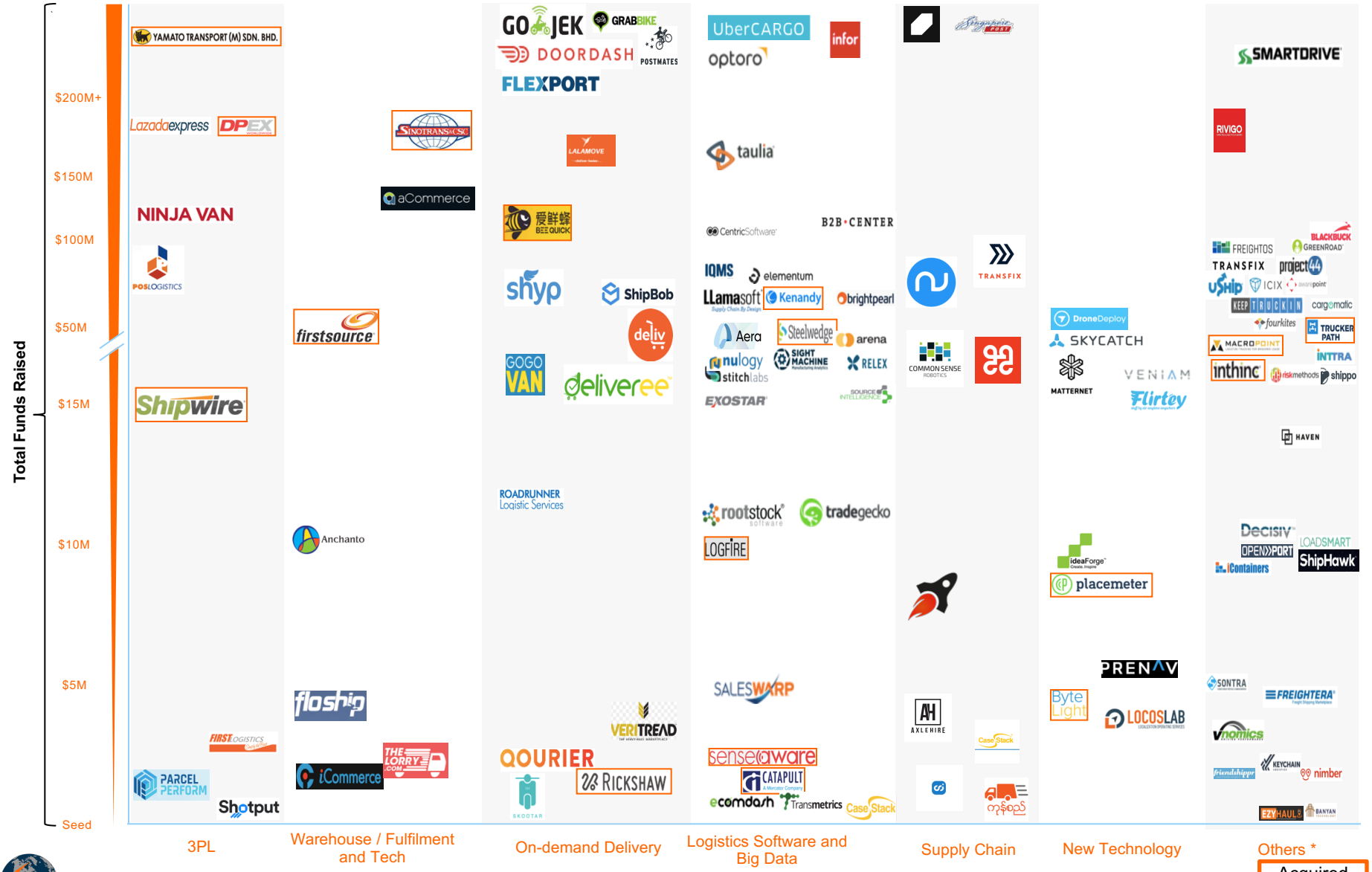
GO JEK – An Ojek For Every Need
Postmates
deliv
ninja van
LALAMOVE – deliver faster
fetchr
Glovo
shadowfax – we deliver.
丰巢 HIVE BOX

Key players in last-mile AV and drones

udelv
boxbot
marble
zipline
Flirtey – anything anytime anywhere
STARSHIP
nuro
MATTERNET

Source: CB Insights, Press Release, ComCap Research

Disruptors in the logistics space



Source: Capital IQ, and Crunchbase; * trucking, crowd shipping, freight services, platform services, moving; the above chart is not exhaustive and is an indicative set

Select logistics fundraising recipients

Company	Country	Description	Total amount raised	Notable investors
GOGOVAN		Mobile application-based platform that provides delivery services for customers in Asia	$276.5 million	InnoVision Capital, New Horizon Capital, Russia-China Investment Fund, Renren Inc.
ninja van		Specializes in next day deliveries for ecommerce companies	$117.5 million	DPD Group, B Capital Group, Abraaj Group, Monk's Hill Ventures, YJ Capital, Monk's Hill Ventures
Singapore POST		Provides mail, logistics and retail solutions in Singapore	$455.9 million	Alibaba (Post-IPO Equity Round)
FREIGHTOS Smooth shipping		Serves as an online freight marketplace with routing / pricing technology	$92.7 million	Aleph, ICV, Singapore Exchange, GE Ventures, OurCrowd, Gold Lion Holdings, ICV Capital Partners
arena		Serves as a product development platform that delivers a cloud platform to optimize supply chains	$50 million	SMI Equity, Scale Venture Partners, BA Venture Partners, Otter Capital, IDEO
BRINGG		Offers a mobile SaaS platform that enables businesses to conveniently manage deliveries	$52 million	Salesforce Ventures, O.G. Tech Ventures, Pereg Ventures, Aleph, Cambridge Capital, The Coca-Cola Company, Next47, Ituran
SMARTDRIVE		Fuel management and driver safety solutions for logistics customers	$221.2 million	Michelin North America Inc, WABCO Holdings Inc., Stanford Management Company, NEA, Founders Fund
INTELLIGENT AUDIT		Supply chain technology service that focuses on reducing transportation costs	NA	NA
SNOWFALL Technologies		Develops an ecommerce AI platform to enhance operations, order management and warehouse management	NA	NA
Happy Returns		Provides in-person return services such as immediate refunds for online shoppers	$14 million	US Venture Partners, Upfront Ventures, Maveron, Lowercase Capital, R/GA Accelerator

COMCAP Where commerce meets capital

Source: Press releases, Crunchbase

Select end-to-end provider fundraising recipients

Company	Country	Description	Total amount raised	Notable investors
PFSweb		Provides omni-channel commerce solutions including distribution facilities and infrastructure, facility operations and management	$125.8 million market cap	Transcosmos Inc., Renaissance Technologies Corp., AWM Investments, Wellington Trust Co., Privet Fund Management, Engine Capital Management
YNAP		Operates multiple online stores and also provides web marketing, web design, consulting and other web marketing services	$118.7 million	Alabbar Enterprises, Balderton Capital, Francesco Clarelli, 360 Capital Partners
BAO ZUN baozun.com		Provides end-to-end ecommerce solutions in China including T infrastructure setup and integration, warehousing, and order fulfillment.	$46.8 million	Alibaba Capital Partners, Goldman Sachs Investment Partners
infracommerce		Offers end-to-end ecommerce services, such as back-office integration, digital marketing, logistics and delivery, etc.	$30.3 million	Transcosmos Inc., eVentures, Inc., Flybridge Capital Partners, e.Bricks Ventures, Deltalpha Capital SA
floship		Offers total solution for clients' ecommerce business to reach new markets	$4.7 million	Big Bloom Investment, Mount Parker Ventures, Cherubic Ventures, Empiricus Capital, Ardent Capital, VPG Asia, Vectr Ventures
ONIBI		Manages end-to-end ecommerce platform, website creation, web marketing, logistics and customer relationship management	NA	Insign
Ecommerce 24		Provides end-to-end ecommerce solutions including a strong logistic network, warehousing, customers service and branding	NA	Mitashi Group, e-commerce wing

Source: Press releases, Crunchbase

Unsurprisingly, logistics software players command premiums compared to their industry sub-vertical peers

Revenue multiples[1]

Note: (1) Median revenue multiples as of 5/1/2019; applicable for larger and more mature companies globally; multiples may be significantly different for smaller companies in high growth stage

Source: CapitalIQ

Select 2018 M&A activity

Target	Buyer	Date announced	Consideration	Deal commentary
IQMS Manufacturing Software	Dassault Systemes	December 11, 2018	$425 million	▪ IQMS has developed a full-featured suite of manufacturing ERP and MES software solutions and with the acquisition Dassault Systemes will gain the ability to provide a nearly end-to-end planning, design and execution system for small and mid-sized manufacturers worldwide.
Case Stack	Hub Group	November 5, 2018	US$255 million (1.1x LTM revenue 11.6x LTM EBITDA)	▪ The acquisition further advances Hub Group's vision to diversify and enhance its service offering to its customers. The company is impressed with the business that the CaseStack management team has built. It will provide significant opportunities to enhance network optimization with its customers.
Cloud Logistics	E2open	October 1, 2018	Undisclosed	▪ Cloud Logistics has set a new standard in transportation management with their innovative technology and rapid deployments. The combination of this technology with the logistics ecosystem on E2open's network will further accelerate time-to-value for existing E2open customers.
ILG	Yusen Logistics	August 1, 2018	Undisclosed	▪ Yusen Logistics is reinforcing its commitment to continued investment in the UK, and their businesses compliment each other by connecting Yusen's services with ILG's specialist knowledge, people and infrastructure to deliver full end-to-end B2B and B2C supply chain solutions.
GlobalTranz	The Jordan Company	June 7, 2018	~$400 million	▪ GlobalTranz has strong synergies with The Jordan Company's existing portfolio companies. ▪ The plan is to create one of the leading global software logistics groups and provide the best solution to our customer.
MXD Group	Ryder	April 3, 2018	~$120 million	▪ Provides Ryder the opportunity to tap into an established network in the US and Canada serving manufacturers, retailers, and their customers, who have come to expect rapid deliveries. ▪ Ryder is focused on e-fulfillment, bettering turnkey solutions including warehousing, distribution, transportation management, home delivery and glove installation.
P2P covering every corner	FedEx Express	March 27, 2018	~$106.6 million (0.9x LTM revenue)	▪ P2P's capabilities complement and expand the FedEx portfolio of offerings important to the rapidly growing global ecommerce marketplace. Its industry-leading technology and processes provide plug-and-play options with carrier networks and customer systems.

COMCAP Where commerce meets capital

Source: CapIQ, Press

Rakuten acquires 100% of curbside in an all-Cash deal for an undisclosed sum

Rakuten aims to provide the location-centric mobile commerce platform with resources to expand globally.

Target overview

Founded: 2013
Website: www.shopcurbside.com
HQ: Palo Alto, CA, US
Employees: 101-250
Funds raised: $34.5M
Financing Type: Series B

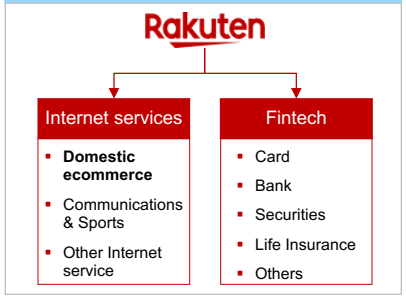
Business Overview:

- Curbside, Inc. develops mobile applications tos find, buy and pick up products and orders from stores / restaurants. Curbside's technology uses predictive arrival to help with order fulfillment.
- The company streamlines order fulfillment and enables merchants to scale their order-ahead programs and deliver products to customers.
- Curbside counts CVS, Sephora, Chipotle, Nordstrom, Pizza Hut, Chevron, Boston Market, Westfield, HEB and Yelp as major clients for its services.
- Curbside is a trusted technology partner to Fortune 100 retailers and quick-service restaurant chains.

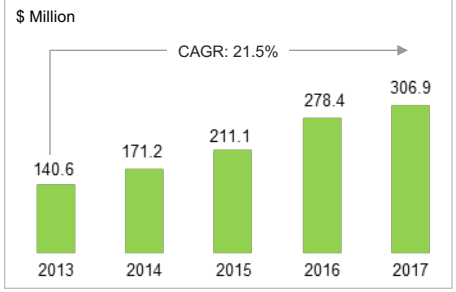
Acquirer overview

Rakuten, Inc. operates as an Internet service provider in Japan, the Americas, Europe, and internationally. The company operates in two segments, Internet Services and FinTech. The company is headquartered in Tokyo, Japan

Key business segments



Internet services segment revenue



Key strategic rationales of the deal closed on June 8, 2018

Leverage Rakuten's ecosystem
Post deal, Curbside retains its own identity, and as a company owned by Rakuten, is now able to have its partners utilize Rakuten's ecosystem, which encompasses more than 1 billion customers and merchants.

Global expansion of Curbside platform
Joining the Rakuten family will give Curbside resources to accelerate their platform and scale globally, it will also provide restaurants and retailers a convenient way to let consumers order ahead and drive growth.

Analytics + real time information to drive mobile shopping
Combining Curbside's mobile applications with Rakuten's existing customers and store operators will leverage the popularity of mobile shopping even further to enable real-time analytics to store operators and drive their businesses .

Management comments

"Curbside and Rakuten share the vision that the future of mobile commerce is local, and that extending our platform to merchants for delivering great, low friction commerce experiences in and around their stores is an area of huge opportunity. We couldn't have found a better partner as we grow our business."

- Jaron Waldman, co-founder and CEO of Curbside

"Curbside is changing the way traditional brick-and-mortar retailers and restaurants are interacting with their customers, Welcoming Curbside to the Rakuten family is all about the consumer, and we are excited to be able to empower consumers with even more ways to enjoy shopping."

- Yaz Iida, President of Rakuten USA Inc.

COMCAP Source: CapIQ, Crunchbase, Company Data, Press Releases

SmartHOP is a leading player in AI-driven freight dispatch market

SmartHOP

Business overview

Founded: 2016
Website: www.smarthop.co
HQ: Miami, FL, US
Employees: 11-50
Funds raised: -
Last Financing Type: -

- SmartHop is an Artificial Freight Dispatcher that helps the trucking industry make smart decisions to plan and match loads. Its AI-powered planning tool searches, analyzes and compares loads in real-time to provide smart data.
- This helps truckers to weigh and compare different routes on the basis of parameters such as empty miles, Avg. RPM, distance, idle times, trend, etc., and spotting best rates and opportunities in the market.

Services offered by SmartHOP

Dispatching
Backoffice/ Paper work
Taxes
Route planning
Compliance
Factoring

Select trends in the artificial freight dispatcher industry

AI virtual assistant to transform traditional freight dispatching industry

- With over 80% of all goods being transported by trucks, and 60% profits being lost due to manual paperwork / inefficiencies for traditional dispatching companies, automated route planning based on AI has grown rapidly in popularity.
- Players like SmartHOP and Cargofy have recently moved into this space. The AI Assistant analyzes supply / demand, price dynamics, seasonality, weather, road conditions, etc. to smartly derive the best and most profitable route for the truckers.

Dispatch is not static anymore—variable conditions are not a problem anymore

- Dispatch orders were static and didn't have the flexibility to improvise with the progressing trip. With the help of greater transparency, data analysis, real-time operations and predictive decision making, the scenario has changed for better.
- Now the transportation dispatch software has the agility to incorporate real-time scenarios like climatic, regional or other demographical reasons etc., resulting in more efficient scheduling and trip planning.

Transportation dispatch software are becoming truly mobile

- Current scenario demands image retrieval, real-time decision making and access to the present status of the shipments to be available to all the parties at one click especially when hosted on cloud.
- Mobile dispatch scheduler are becoming more popular due to instant work order capturing. It further smoothens the road for an uninterrupted dispatch cycle which performs efficiently irrespective of the location of the dispatcher.

Source: Crunchbase, Company Data, Press Releases, ComCap Research

FreightOS is a leading multi-modal digital freight marketplace

FREIGHTOS
Smooth shipping

FREIGHTOS

Business Overview

Founded: 2012
Website: www.freightos.com
HQ: Hong Kong
Employees: 101-250
Funds raised: $92.7M
Last Financing Type: Series C

- Freightos Marketplace helps importers and exporters reduce logistics spend and save time with an instant comparison, booking, and management of air, ocean, and land shipments from top logistics providers.
- Its patent-pending technology solutions, AcceleRate™ and Freightos WebCargo™ power rate management, automated pricing, and online freight sales for over 1,000 logistics service providers and carriers.

Core technology based offerings

AcceleRate™
Freight digitization platform

- Instant freight quotes
- Optimized routing
- Optimized pricing
- On-demand analytics
- Business intelligence

WebCargo™
Digital air freight sales platform

- Direct carrier connectivity
- Instant air freight quoting
- Air freight CRM
- Business intelligence insights
- Cutting-edge dynamic pricing

Select trends in the digital freight dispatcher industry

A new technology called "radio frequency identification" involves using IoT to track shipments

- Using IoT and the ecosystem comprising of a database, a reader, a chip and a GPS cloud based system, shippers can send useful information about parcels and containers automatically and autonomously directly to the internet.
- This new technology referred to as "radio frequency identification," enables freight industry to effectively track shipments, wherein confirmation receipts and barcodes no longer require scanning, and the technology enables shipments to be received automatically.

Advanced machine learning is one of the latest technologies providing freight industry with a competitive edge

- Machine learning is used in conjunction with supply chain management to turn passive data into targeted business intelligence. This improves incoming orders, the accuracy of forecasting, general performance and predictability.
- By analyzing data on thousands of trucking runs, machine learning can recommend which routes are more productive, what conditions create problems, and pinpoint other inefficiencies. E.g., In maritime, efficient choices of routes and ports are made using machine learning.

Connected applications as a reliable and efficient means of transmitting data

- Although EDI has been used as communication for a long period of time in the freight industry, data transmission in real-time has been compromised due to the strictness of the standards and formats.
- JSON and RESTful web services are capable of replacing EDI and are preferable for transmitting data. Mobile apps are capable of capturing data on-roads and warehouses. These apps will communicate with the existing systems and digitally transform the freight industry.

COMCAP Where commerce meets capital Source: Crunchbase, Company Data, Press Releases, ComCap Research

Select funds investing in logistics / supply chain technologies

Company	Profile	Additional details
SoftBank Investment Advisers	**SoftBank Investment Advisers (Vision Fund)** SoftBank Investment Advisers is a venture capital firm aiming be a catalyst for technology progress in order to expand SoftBank's capabilities, accelerating progress towards SoftBank 2.0. **Founded:** 2017 **Website:** www.softbank-ia.com/vision-fund **HQ:** London, UK **Committed Capital:** $93B **Total No. of investments:** 40 **No. of Investments in Logistics Tech.:** 4 **Funding Stage:** Growth, Late **CEO:** Rajeev Misra	**Stated strategy:** ▪ The firm seeks to invest in the technology sector with a focus on IoT, AI, robotics, comm. infrastructure, telecoms and consumer internet businesses. ▪ It typically invests a minimum of $100 million with a focus on both minority and majority in private or public companies. **Key investments in logistics technology:** Company: DoorDash; Date: Mar 2018 (Series D); Company details: DoorDash provides a web-based platform connecting customers with local businesses in Honolulu and Ottawa areas, which then provides on-demand restaurant food delivery services.; Amount: $535M Company: Loggi; Date: Oct 2018 (Series D); Company details: Loggi develops a smartphone-based app. which defines the quickest and shortest route for product delivery.; Amount: $100M
UPS	**UPS Strategic Enterprise Fund** UPS Strategic Enterprise Fund (the "SEF") is the PE arm of UPS. The fund is a corporate VC group, focusing on investments in logistics information technology companies and emerging market-spaces. **Founded:** 1997 **Website:** www.ups.com/sef/ **HQ:** Atlanta, US **Total No. of investments:** 21 (24 prior investments) **Average Ticket Size:** $0.25-1.5M **Funding Stage:** Early, Growth, Mid, Late **Managing Director:** Rimas Kapeskas	**Stated strategy:** ▪ The firm prefers to invest in products, services and technologies with a focus on emerging related technologies, such as Radio Frequency Identification (RFID), alternative fuels and biometrics, and new related business models, such as those fostered in digital communities or in supply chain management companies. ▪ The firm invests in companies based in the United States and in selected foreign locations. It usually invests in the first or second round of financing with a lead investor, and invests directly in private companies as a co-investor. **Key investments in logistics technology:** Company: Fleet Logistics; Date: Jan 2018 (Series A); Company details: Fleet operates an online marketplace that connects shippers with freight forwarding companies and other logistics service providers; Amount: $10M

Source: CapIQ, Crunchbase, Company Data

Select funds investing in logistics / supply chain technologies

Company	Profile	Additional Details
FundersClub	**FundersClub Inc.** FundersClub is the world's first online venture capital platform, backed by Y Combinator, First Round Capital, Spark Capital, Intel Capital, Draper, Andreessen Horowitz and Felicis Ventures. **Founded:** 2012 **Website:** www.fundersclub.com **HQ:** San Francisco, CA **Total Amt. invested so far:** $111M+ **No. of Investments in Logistics:** 13 **Funding Stage:** Seed, Series A **Typical ticket size:** Not disclosed **CEO:** Alex Mittal	**Stated strategy:** ▪ The VC firm invests in diversified industries including IT, healthcare, industrials, financials, consumer staples, real estate and transportation and logistics, etc. ▪ It actively supports portfolio companies by providing them leading software to help them expand. **Key investments in logistics technology:**
inventure partners	**Inventure Partners** Inventure Partners is a VC firm specializing in seed start up, early, mid and late venture companies The firm generally invests in companies based in Russia, US, CIS region, UK and in European Developed and Emerging Markets **Founded:** 2012 **Website:** www.inventurepartners.com **HQ:** Moscow, Russia **Total No. of investments:** 17 **No. of Investments in Logistics Tech.:** 2 **Funding Stage:** Seed, Early, Growth, Mid, Late **Chairman:** Sergey Azatyan	**Stated strategy:** ▪ The VC firm prefers to invest in online financial services and technology, marketing, digital media, mobile, technology, internet community, B2B, internet software, logistics and telecommunication services ▪ It typically invests between $0.5 million and $5 million in companies with target enterprise value between $1 million and $50 million **Key Investments in Logistics Technology:**

Key investments in logistics technology:

Company	Date	Company details	Amount
Rose Rocket	Aug 2016 (Seed)	Rose Rocket provides ERP software for trucking companies. They help trucking and freight providers manage critical steps in their order process.	Undisclosed
Flex Port	Oct 2017 (Venture)	Flex Port offers an online dashboard for businesses to understand, purchase, manage and track the freight and forwarding.	$110M

Key Investments in Logistics Technology:

Company	Date	Company details	Amount
Deliver	Jun 2017 (Seed)	Deliver develops a web-based platform which helps calculate the price and order the transport of goods by various modes.	$8.0M
Everoad	Oct 2017 (Series A)	Everoad's platform connects shippers with local carriers (truckers). It aims to bring Uber-like convenience to the shipping industry.	€16M

COMCAP Source: CapIQ, Crunchbase, Company Data

Select logistics platform players: Deliver and Darkstore

Company	Profile	Capabilities
Deliver.	**Deliver (Web Logistics LLC)** Develops a web-based platform which helps calculate the price and order the transport of goods by various modes. **Founded:** 2014 **Website:** https://deliver.ru/ **Employees:** N/A **Revenue:** N/A **HQ:** Moscow, Russia **Funds Raised**: $8M **Latest Financing Round:** $8M **Latest Financing Type:** Seed round, June 2017 **CEO:** Danil Rudakov	**Services offered:** ▪ Its platform connects customers with carriers for freight delivery purposes. ▪ Its efficient and smart algorithm finds the best price for customer's loads with no additional hidden fees and paperless transportation. **Key facts:** ▪ For shippers, the company provides 99% of applications for guaranteed volumes and 70% on the spot. Deliver also provides online a 24/7 "tracking machine" to ensure guaranteed and safe delivery. The platform incorporates full payment of taxes, inclusive of VAT and insurance for the risk of damage and loss of the cargo. ▪ For carriers, the platform ensures timely payment (within 10 days of delivery), assured job continuity (daily downloads to our regular carriers) and fuel discounts (registration of fuel cards). ▪ Deliver has serviced reputed clients like AbiMob, KUHNE+NAGEL, XPO Logistics, P&G and Simple to name a few.
	Darkstore (Black in 24 Inc.) Provides on-demand delivery 3PL services and operates a platform that facilitates same-day delivery for ecommerce brands. **Founded:** 2016 **Website:** www.darkstore.com **Employees:** 1-10 **Revenue:** N/A **HQ:** San Francisco, CA **Funds Raised**: $1.7M **Latest Financing Round:** $1.4M **Latest Financing Type:** Seed round, April 2017 **CEO:** Lee Hnetinka	**Services offered:** ▪ Darkstore differentiates itself as a guaranteed 1-hour delivery establishment for select locations and same-day delivery for other locations by using a feature called "Hosted Shopping Cart" which ensures this with just one line of code. ▪ It is accessible on every website and enables access to better products, gives choice to customer on using "Hosted Shopping Cart" or their own API. ▪ Orders are automatically routed to the fulfilment locations that provide the lowest rate for the delivery **Key facts:** ▪ Darkstore aims to build the largest fulfillment center network globally and accepts anyone with a smart phone and excess space (brick-and-mortar stores, malls, 3PL, cross-docking companies, etc.) ▪ It has exclusive tie-ups with reputed shipping carriers like Deliv, UPS, UBER RUSH, Tforce, FedEx, Postmates, AxleHire, DHL, OnTrac, US Postal Service and GSO. ▪ It has 2 additional locations in New York and Phoenix in addition to its headquarters in San Francisco.

Source: CapIQ, Crunchbase, Company Data

Select logistics platform players: Narvar and Happy Returns

Company	Profile	Capabilities
	Narvar Inc. Provides a shipping and delivery solutions platform for retailers. It helps retailers inspire long-term customer loyalty at all steps of the post-purchase journey. **Founded:** 2012 **Website:** www.narwar.com **Employees:** 101-250 **Revenue:** N/A **HQ:** San Mateo, CA **Funds Raised**: $63.3M **Latest Financing Round:** $30M **Latest Financing Type:** Series-C Rd. dt. Aug 2018 **CEO:** Amit Sharma	**Services offered:** ▪ The platform delivers real-time tracking information and engages customers with space to collect feedback and provide relevant marketing and surface social content. ▪ Narvar provides effortless order tracking, pro-active communications and seamless returns. It makes use of AI or machine-learning technology across billions of transactions to achieve this. **Key facts:** ▪ Since 2012, Narvar has served 200+ million consumers worldwide across 3.1 billion interactions, 36 countries and 45 languages. Over 70% of US adults have experienced better retail through Narvar. ▪ Narvar has exclusive strategic tie-ups with best-in-class ecommerce platforms like Shopify, SalesForce, SAP Hybris, IBM, Oracle, Microsoft Dynamics and Radial. It also uses reputed carriers like UPS, FedEx, dpd, DHL, OnTrac, US postal service, UKMail, Lasership and OnTrac as shipping carriers. ▪ Besides the HQ, Narwar also has 3 offices spread across London, Bagalore and Germany.
	Happy Returns Inc. Provides in-person returns for online shoppers. It develops a network of Return Bars, kiosks enabling shoppers to return items in-person for refund. **Founded:** 2015 **Website:** www.happyreturns.com **Employees:** 11-50 **Revenue:** N/A **HQ:** Santa Monica, CA **Funds Raised**: $14M **Latest Financing Round:** $8M **Latest Financing Type:** Series-B Rd. dt. Dec 2017 **CEO:** David Sobie	**Services offered:** ▪ Happy Returns transforms the return experience through an integrated set of services and logistics powered by world-class software. They connect with retailers' back-end to look up customer orders and process returns. ▪ They use their integrated set of services and logistics to aggregate returns before shipping, saving retailers money on each transaction. **Key facts:** ▪ Happy Returns gives options to shoppers to avail returns in person (from their 250+ Return Bar locations in 50+ metro areas nationwide), in store or via mail (using regional hubs and low shipping rates). ▪ Based on 2018 NPS® & CX benchmark reports, the company has an average net promotor score of 94 compared to retail average of 54. ▪ Serves market leading players such as Parachute, Rothy's, Eloqui and EverLane, helping them transform their customer experience.

Source: CapIQ, Crunchbase, Company Data