Supply Chain Start-Ups Are Coming of Age

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"Logistics is notorious for being an old-fashioned business, but changing shipper expectations, new market players, and eroded margins have prompted industry leaders to reassess strategies."

Zvi Schreiber, Freightos

Start-ups in Supply Chain Management and Logistics are less asset dependent compared to their traditional peers

Supply Chain - An industry ripe for digital disruption

Over the course of the last five years there has been a significant push of Supply Chain Management & Logistics related start-ups to the market

For decades the supply chain management and logistics industry has been dominated by giants like UPS, FedEx, or Deutsche Post DHL. These large players typically have a holistic offering that covers a variety of integrated services along the global supply chain. In addition, they frequently act as an integrator that accumulates resources, capabilities, and technologies to provide end-to-end solutions to customers. As a result, they now house hundred thousands of employees globally, billions of revenue and a significant market capitalization each. Economies of scale – secured via enormous assets - has been their key competitive advantage that typically raised large entry barriers to new players in the industry. This is changing.

Technological advances, increasing levels of connectivity, industry convergence and digitalization are disrupting the industry. Emerging

Supply-Chain start-ups are capitalizing on these trends and often have an Internet-of-Things (IoT), Analytics or Digital related background. Their business model typically builds upon an agile, asset-light, technology driven infrastructure, allowing them to reach scale and often even grow exponentially with a very lean setup and limited risk exposure. Transportation start-up Uber, and hoteling platform AirBnB are two prominent examples that illustrate that exponential growth is not tied to the amount of assets. This principle seemingly starts to extend to industries such as Supply Chain Management and Logistics as well.

At the same time, customer expectations are continuously on the rise - Convenience is key. Ever faster delivery times, constant price optimization and greater flexibility in terms of modes, pickup locations, or specific delivery windows are expected. This is driving demand for innovative and specialized supply chain solutions, especially in the urban delivery and medium-haul segment. Often young start-ups can take better advantage of their low levels of bureaucracy in coming up highly targeted, innovative and customized supply chain firms compared to their more traditional peers, which historically lack the flexibility and speed in responding quickly to changing dynamics.

As little surprise, between 2010 and 2016 there has been a significant increase in the number of SCM & Logistics related start-ups. Correspondingly, the amount of investment deals and related company valuations has been surging. In 2016, more than 5 billion US dollar venture capital were invested in start-ups in the SCM & Logistics industry globally, according to industry sources. This doubles the prior year’s funding sum and presents a tenfold increase over the previous three years.

A new breed of Supply Chain firms and business models

Deloitte surveyed more than 250 start-ups in the Supply Chain Management (SCM) & Logistics space to make the new market dynamics transparent

Deloitte’s recent survey[1] of SCM & Logistics start-ups founded over the past decade - between 2007 and 2016 - reveals that 74 percent had been founded only within the last five years. The majority (52 percent) of surveyed companies are located in North America, along the typical start-up clusters in Silicon Valley, New York, Atlanta, and Chicago. 32 percent of start-ups were based in Europe, the Middle East or Africa. Within the Europe, Middle East and Africa region, Germany has seen noteworthy market dynamics in recent years. More than 30 start-ups have been

[1] Deloitte’s survey of publically available information focused on companies founded within the last ten years that were established independently by a limited group of entrepreneurs and often subsequently underwent significant funding from external investors

founded in the country since 2012. In Germany, innovative start-ups in SCM & Logistics can typically be found in the start-up hubs of Berlin, Munich, and Hamburg. We monitor an equal financial interest with a corresponding rise of investment deals and venture capital. Two prominent founding examples in the year 2016 are FreightHub, led by the well-known German brothers Heilemann, as well as InstaCargo, supported by the incubator Rocket Internet. Both companies offer supply-chain brokerage services somewhat comparable to those of the successful US-based start-up firm Flexport, which has received funding from Google Ventures and the Founders Fund. The companies surveyed by Deloitte average a headcount of 50-60 employees. This underscores the maturing trajectory of start-ups in the industry.

The survey also reviews the go-to-market strategy of the SCM & Logistics start-ups. Here we observe an "unbundling" of supply chain services. A select number of start-ups provides a number of services across multiple customer segments. However, the majority of new players takes a much more focused approach to solutions and concentrates on providing a very specific type of service or offering. This is a major contrast to the more integrated business models of traditional logistics service providers. Nonetheless, large parts of the physical transport of goods remain with the established players, as they own the assets required to execute deliveries. Start-ups own and optimize an increasing share of the customer interaction, rather than disrupting the entire value chain.

A large number of SCM & Logistics start-ups focuses on freight brokerage, last mile delivery, convenient solutions and supply chain analytics. A few examples will illustrate their innovative, very distinct offerings. Companies like Flexport, Haven or Roadie offer platforms for price comparison and booking services for freight shipments. Firms such as Postmates, Flirtey or Rickshaw focus on short distance transport in metropolitan areas. Their offering is to secure the urban delivery within a few hours via either courier, drone or self-driving robotic vehicles. InstaFreight, Shyp or Swapbox offer combined easy-to-use solutions incl. pick-up, packing, labelling and warehousing services. This is often going along with an e-commerce integration offering. Route optimization, tracking of shipments and other analytics belong to the business model characteristics of firms such as Routific, Supply Vision, or OptimoRoute.

Most of these new firms have a digital DNA with elements of IoT, connectivity, analytics, mobile apps or easy-to-use web portals. As such, they have three major advantages of their more traditional peers:

(I) They work with **asset-light or in some cases asset-zero** infrastructure and business models. Making use of modern technologies, they challenge historic assumptions of their industries.

(II) While creating online marketplaces, interfaces, and dashboards, they effectively **connect the demand with the supply side**. Hereby they gain ownership of the customer interfaces, customer data, and further supply-chain transparency.

(III) Eventually, their "born digital" character more **naturally embraces lean structures and an agile working style**. This leads to a very high degree of flexibility when serving customer needs.

In the survey we identified patterns of business models and customer segments. The majority of companies focuses on leveraging big data and cloud technologies to perform analytical and brokerage services. They collect rates and information from other logistics service providers and create transparency where previously there was little. This is particulary true for the freight and transportation related segments. In major metropolitan areas, some start-ups act as supplements to their traditional peers by focusing on the express delivery segment, only. Increasingly, these start-ups test and pilot innovative modes of delivery such as autonomous vehicles, robots or drones. Not surprisingly, supply chain segments with the largest asset requirements – overland and ocean / air – still run scarce in start-ups providing actual delivery capabilities.

Business Models and Supply Chain Segments (Select Examples)

	Warehousing and Fulfillment	Express Delivery	Overland Transportation	Ocean/ Air Transportation
Broker / Aggregator	LocaFox, Roost, Flexe	lugg, stuart, shutl	Haven, Roadie, nimber, Transfix	FreightHub, Freightos, Flexport
Analyst	Supply Vision, CargoBee, Loginext	OptimoRoute, Rickshaw, rivigo	shippo, ShipHawk, convey, Routific	Xeneta, project44, Windward, 40ft
Niche Operator	MakeSpace, cloud fulfilment, SwapBox, Boxbee	Lalamove, Deliv, Postmates	Instafreight, EcomExpress, shyp	Shipster, bluegrace
Technologist	Magazino, Righthand robotics, fetch robotics	Starship, Matternet, Flirtey	Otto, Veniam, Macropoint	Weft, Staxxon

Source: Deloitte analysis

Brokers / Aggregator
Nearly a third of surveyed start-ups focuses on providing "on demand" brokerage platforms, single market places or bundles of multiple market places. These typically facilitate customers in bidding and bargaining for the best transportation modes. An example that very well illustrates this segment is the firm Transfix. It offers a brokerage platform that enables smaller logistics companies and individual truck drivers to offer free capacities on a digital market place. The most significant benefit Brokers / Aggregators typically provide is to create greater, real-time transparency around rates and logistics options along the long-tail of demand and supply.

Case Study: Shippo simplifies and automates shipping for retailers

The business-to-business focused start-up was founded in California in 2013 and offers technology to connect retailers and logistics providers through an interface. Shippo raised $9M+ from investors and is serving more than 10,000 customers across the globe.

At the frontend, the company provides an application programming interface (API) and dashboard to retailers. This simplifies and automates the selection of a service provider as well as manages the logistics operations starting from the creation of shipping labels until subsequent tracking of individual orders. At the backend, Shippo bundles customer orders with shipping companies to achieve volume and generate discounts. Discounts are then shared amongst the stakeholders.

Analysts

More than a quarter of surveyed Supply Chain Management & Logistics start-ups provide analytics, ranging from descriptive analytics (e.g. better visualization of data), KPIs and dashboards towards advanced analytics solutions. ShipHawk, as one example, promises to enhance buyer experience, logistics automation, and shipping intelligence. This is managed by consolidating 200+ delivery options and rates in a cloud solution. The company analyses spend and shipping performance by carrier to provide recommendations that offer ways to optimize packaging strategies and to improve profitability. Benefits firms in the segment of “Analysts” typically provide center around increased transparency, simplified workflows, and towards better decision-making for customers to handle their orders.

Niche Operators

Almost exactly a quarter of surveyed companies offer services in the segment “Niche Operator”. Here firms usually provide a one-stop-shop solution for selective customer segments or within a limited geographical area (often focused on major metropolitan areas). Shyp, as one example, integrates its solution into customers’ fulfillment workflows. Here it provides carrier comparison services, labelling printing, pickup, and packaging services that can be built into existing e-commerce solutions. The company’s pickup and packaging services focus on major cities in the United States. Pricing models change based on the number of shipped items per month. Niche Operators offer an increased level of flexibility in payment modes (e.g. switching on-demand or subscription models) and response time towards changing customer needs.

Technologists

The smallest group of surveyed companies acts as “Technologists”. Firms in this area typically develop and market technology that bridge a gap between traditional customers and logistics service providers. Cardrops is one company of this kind that sells and installs small hardware devices in a customer’s car. This technology allows logistics partners to remotely open the car’s trunk and deposit deliveries. In addition, the start-up collects mobility information through their device and conducts analytics in order to optimize and improve delivery windows and locations over time. Companies in this segment are innovators at the very heart of the industry. They aim to holistically disrupt the modes of transportation or types of packaging and improve customer experience or significantly reduce cost.

"We can react faster to business needs than other large logistics service providers"

**Michael Loehr
Tiramizoo**

Outlook for incumbent players and start-ups

Start-ups are a thread and opportunity for existing players, alike. They need to act swiftly and decisively

The increasing number of agile start-ups in the Supply Chain Management & Logistics industry might easily be perceived as a threat by established players as well as overwhelm customers with the sheer number of new names and offerings. Nonetheless, it equally offers plenty opportunity to both groups alike.

Established Logistics service providers
A lot of the disruption from technologically advanced and innovative start-ups still centers on metropolitan regions, or specific supply chain segments. Nonetheless, we see maturing players quickly gaining traction in terms of reach and market significance. Traditional players cannot ignore that development. They will need to increase their pace to adapt to a new reality that favors customer centricity and increasingly equips customers with tools to create market transparency. We recommend do explore the following four strategies to leverage the current start-up boom:

Collaborate – Many start-ups, especially in the Broker/ Aggregator and Technologist role heavily rely on traditional logistics service providers to provide physical order fulfilment. Partnering on asset sharing and providing a smooth technological integration with their services will ensure exposure to often underserved customer groups, especially at the long tail. In 2017, FedEx will sponsor a logistics focused start-up accelerator program in Memphis for the third consecutive year. The company chose Memphis as one of America's major distribution hubs and will be providing access to their logistics experts as well as seed investments for young companies working on application and hardware issues related to final-mile / last-mile delivery, Internet of Things, additive manufacturing, smart packaging, or robotics.

Incubate – Traditional logistics service providers have started internal incubator programs to leverage their own resources, experience, and significant treasure troves of data to come up with new innovative ventures that can build into existing services or be spun-off to create incremental revenue sources. Shipping giant DHL established its "DHL Innovation Center" in Germany and Singapore. This incubator is used as a platform for innovation to connect customers, business and industry partners, and DHL experts to envision new solutions for the logistics industry. DHL previously incubated a smart sensor technology and risk management related service offering using their innovation hub.

Invest – Providing seed investments or venture funding for existing Supply Chain Management & Logistics start-ups offers a chance to not only keep a finger on the pulse of a young and innovative community, but can offer future revenue sources. In 2016, UPS' venture capital arm helped raise $28 million for the same-day-delivery start-up Deliv. The company focuses on delivering from local retailers, businesses, and e-commerce companies across 100 U.S. cities. UPS had been experimenting with same-day-delivery for the healthcare or replacement parts markets. It explored the investment as a means to better understand other market segments and customer requirements in order to better adapt its own services in the future.

Acquire – More mature start-ups, especially those in the Analyst and Technologist segment, can present interesting acquisition targets to close internal capability gaps, offer adjacent services or provide incremental revenue streams in adjacent markets. In 2015, UPS acquired Coyote Logistics, a transportation and shipping services start-up. This target offers a proprietary software to broker shipping services and optimizes capacities by allowing customers to book and sell empty space on existing truck runs.

Supply Chain Management & Logistics Start-Ups

The founding boom of supply chain management & logistics start-ups in recent years as well as the increasing interest from venture capital firms and their increasingly significant investments for now seems to have established a diverse and lucrative new subsector. As these companies continue to evolve, the next years will be important to determine how sustainable their business model and trajectory really are. Especially when compared to their historical peers – incumbent logistics service providers such as DHL and FedEx – and the services and scope these provide, start-ups are faced with a number of hurdles to overcome:

Managing complexity: How can complex bundles of services be brokered and delivered using easy-to-use interfaces? How can customer groups outside of major metropolitan areas best be served? How will additive manufacturing and 3D printing affect last-mile delivery?

Understanding competitive forces: Will U.S. and Asian start-ups remain the dominant force or will European companies catch up? Are start-ups underestimating the innovation capacity of incumbent players? How long will logistics service providers tolerate start-ups encroaching upon their services? How will new mega-players (e.g. Amazon) impact the logistics market?

Achieving scale: How can start-ups realize more significant market share aside from only serving niche segments or handling peak capacity? At what point will unbundling of the existing marketplace no longer be effective and attractive to customers?

Moving beyond partnerships: How can start-ups truly disrupt the incumbent heavyweights of the industry or will they be restrained to a need to partner and form alliances with them? How can start-ups build meaningful collaborative models and partnerships amongst themselves?

In an environment that relies on asset-light infrastructures and business models, connects multiple dimensions in supply networks, and embraces lean structure and agile working styles, addressing these questions holistically matters. Solutions rooted in a digital DNA and launched with a strategic, market-oriented perspective will be key.

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