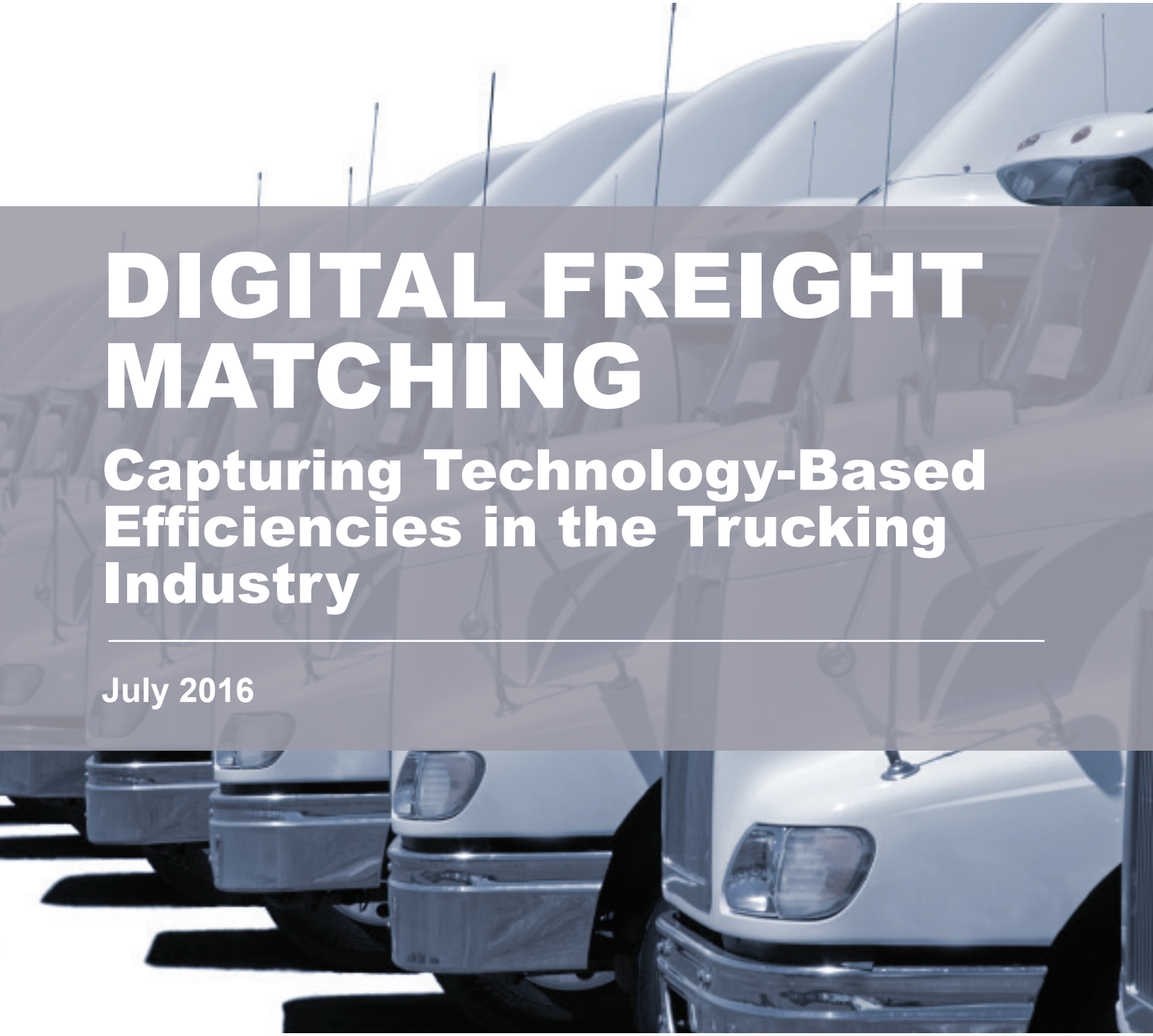

DIGITAL FREIGHT MATCHING

Capturing Technology-Based Efficiencies in the Trucking Industry

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ABOUT ARMSTRONG & ASSOCIATES, INC.

Armstrong & Associates, Inc. (A&A) was established in 1980 to meet the needs of a newly deregulated domestic transportation market. Since then, through its leading Third-Party Logistics (3PL) market research and history of helping companies outsource logistics functions, A&A has become an internationally recognized key resource for 3PL market information and consulting.

A&A's mission is to have leading proprietary supply chain knowledge and market research not available anywhere else. As proof of our continued work in supporting our mission, A&A's 3PL market research is frequently cited in media articles, publications, and securities filings by publicly traded 3PLs. In addition, A&A's email newsletter currently has over 30,000 subscribers globally.

A&A's market research complements its consulting activities by providing continually updated data for analysis. Based upon its unsurpassed knowledge of the 3PL market and the operations of leading 3PLs, A&A has provided strategic planning consulting services to over 30 3PLs, supported 16 closed investment transactions, and provided advice to numerous companies looking to benchmark existing 3PL operations or outsource logistics functions.

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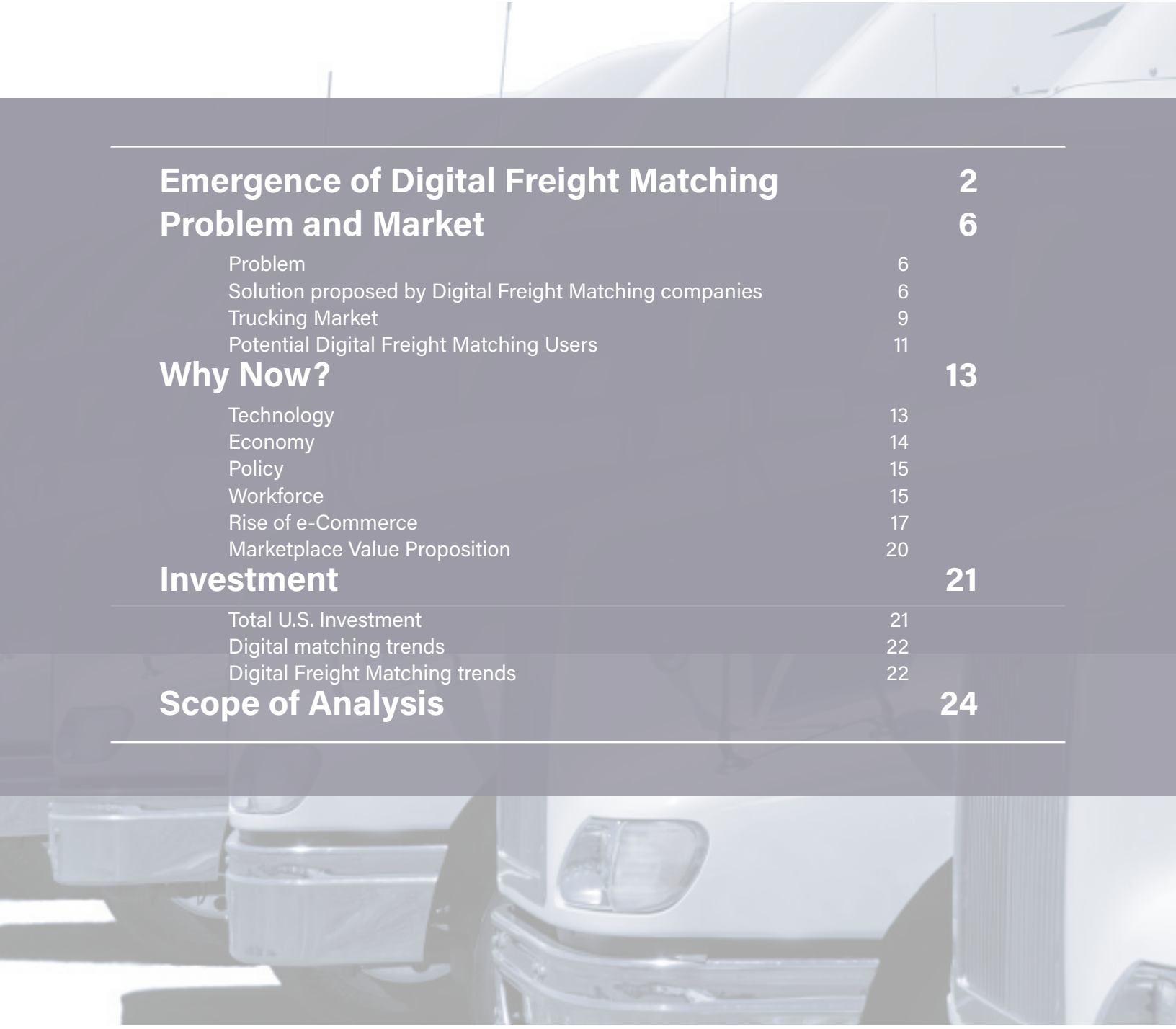


Emergence of Digital Freight Matching

Digital Freight Matching companies aim to match Shipper demand (the need to transport a product) with Carrier supply (truck capacity) via digital (web- or mobile-based) platforms, usually in the form of apps. In the past five years, several Digital Freight Matching ("DFM") companies have emerged. The sector has attracted over $180 million in Venture Capital investment since 2011. Armstrong & Associates (A&A) recognizes the potential of new technology to efficiently match freight. We therefore undertook a study of twenty-seven DFM companies to provide an overview of current product offerings. We also assessed current market conditions, industry challenges, and potential uses for DFM technology.

Digital Freight Matching is possible due to the development of a larger phenomenon: the genesis of the Sharing Economy and the concurrent rise of Digital Matching firms in other industries. The Sharing Economy goes by many names — the on demand economy, the access economy, and the collaborative economy, to name a few. The principle has existed for eons: sharing assets or labor to squeeze maximum efficiency from a single unit. However, digital platforms vastly increase the scale and speed in which demand can be matched with supply. As a result, companies operating within this space, such as Uber and Airbnb, have expanded from small startups to multi-billion dollar companies in less than a decade. Uber, the clear leader, was most recently valued at $62.5 billion and has attracted venture capital investment of $12.5 billion.

Following the success of these vanguards in the ride-hailing and hospitality industries, the startup arena has been flooded with companies aiming to use Digital Matching to revolutionize other industries. Meanwhile, Uber became a byword for any sort of Digital Matching within the Sharing Economy — hence the now-common term "Uber for X," and now, of course "Uber for Trucking." At face value, it certainly seems Uber can be applied to trucking. Uber pairs a similar problem (underutilized capacity in taxis) with a similar solution (a mobile-based app which matches passenger demand with taxi-driver supply). However, many of those engaged in Digital Freight Matching companies are loath to be characterized this way. Furthermore, a number of important distinctions separate the Uber problem and solution from those of Digital Freight Matching companies. After studying many of the solutions on the market, A&A found that most DFM companies aren't simply mimicking the Uber model, and we agree the term distorts the true functionality DFMs offer and conflates the "freight problem" with the "Uber problem." We do use Uber functionality as a reference point frequently throughout the paper, but generally maintain the opinion that Digital Freight Matching is a more apt moniker than Uber for Trucking.

This is not, of course, the first time a technology-based solution has been proposed. In the late 1990s and early 2000s, many startups seized on the excitement (and available capital) of the dot-com era to establish online freight exchanges. Today, most of these companies are defunct. However, a number of conditions (in addition to the growth of the Sharing Economy) make today's market more accommodating to DFM companies: technology improvements and access; policy changes to further define the Sharing Economy; a workforce increasingly taking on supplementary, part-time or independent contractor work; and the rise of e-commerce freight and corresponding pressures for improved, speedier performance.

A&A compiled profiles for twenty-seven DFM companies. To qualify for inclusion, companies had to incorporate:

- A digital platform for matching Shipper demand with Carrier supply
- Bundled functionality to automate tasks (i.e. automatic driver payment) and/or reduce transaction friction (i.e. eliminating pricing negotiations)
- Value-added features (such as rewards programs or trip planners)

Each company attempts to digitally match supply and demand and capture other efficiencies, but nuances separate them naturally into five groups. Based on common business models, app characteristics, and functionalities, we separated the analysis into the following categories:

Business Models	# Companies Studied	Description
Uber-like	10	Apps have characteristics such as GPS-based alerts for nearby loads, track-and-trace, task automation, algorithmic/single pricing, digital document storage, and elimination of third-party interaction.
Loadboard-Plus	7	Apps based off existing loadboards which also provide digital freight matching access to Carriers seeking to fill capacity on-the-go. Carriers can search by location or enable GPS tracking to find loads meeting their parameters.
Broker-Plus	5	Proprietary apps published by Freight Brokerage companies for Carrier partners. Functionality frequently includes communication streamlining and digital document storage.
Specialty	3	Apps similar to those in the 'Uber-like' category, but geared towards specialty freight, like heavy haul equipment, automotive transportation, or household goods.
Last Mile	2	Apps used in local peer-to-peer networks or to fulfill last mile delivery (such as e-commerce fulfillment).

A discussion of characteristics and functionalities for each model is discussed, and a profile of each company is included in the report. A summary is included below:

Characteristics	Functionality
Startup activity	Digital device availability
Downloads	Payment via app
Executive background	Carrier payment time
Service area	TMS integration
Property broker status	Track-and-trace
Target users	Document storage
	Value-added features

Uber-like	Loadboard-Plus	Broker-Plus
Cargomatic	10-4 Systems (10-4 Marketplace)	Cargo Chief
Convoy	123Loadboard	CHRWTrucks
DashHaul, Inc.	DAT Trucker	CoyoteGO
Dispatcher, Inc.	FreightFriend (MercuryGate)	TQL Carrier Dashboard
Go by Truck, Inc.	GetLoaded	Trucker Path Truckloads
Keychain Logistics	Traansmission	
LaneHoney	ITS Trucker (Truckstop.com)	
LoadSmart, Inc.	**Last Mile**	**Specialty**
Next Trucking, Inc.	Amazon Flex	Roadie, Inc.
Transfix	Shipster	uShip, Inc.
		Veritread LLC

DFM companies will face several challenges: competition, regulations, investment, possible cannibalization by other emerging technologies, and issues specific to the nature of the trucking industry.

- Long-established Freight Brokers provide exception handling, backup in the case of equipment breakdown, relationship management, access to Transportation Management Systems, and access to a wide variety of Carriers. DFM companies are therefore competing against formidable incumbents.
- Secondly, the ambiguous nature of the Sharing Economy is both an asset and a liability. While the space sometimes allows circumvention of regulations faced by more traditional industries, it also presents new challenges. Other companies forging the parameters of the Sharing Economy, such as Uber and Airbnb, have encountered policy disputes. Furthermore, as companies operating in this environment face increasing scrutiny, new regulations are also a possibility.
- While investment in Digital Matching companies has increased severalfold over the last five years, a sharp dropoff occurred in the last quarter of 2015 and the first quarter of 2016. Future investment levels are always uncertain and should be monitored.
- Digital Freight Matching is just one of many emerging technologies. Innovations like self-driving vehicles and drones will compete with DFM companies or could preempt them entirely.
- The very nature of the trucking industry and the 'freight problem' presents their own challenges. On

the surface, the problem of freight capacity looks very much like Uber's problem of available taxi capacity. However, further examination shows the problems have fundamental differences, and DFM success will rely on addressing nuances of the underlying problem.

A&A envisions different applications for long-haul trucking versus last-mile delivery. Improved freight matching may be achieved through a DFM company, or by technology developed internally at large Third-Party Logistics (3PL) providers with budgets, scale, and existing Carrier/Shipper relationships. Finally, aspects of technologies present in DFM apps may be implemented piecemeal by loadboards and Freight Brokers to automate tasks and streamline communications.

Problem and Market

Problem

Digital Freight Matching companies are trying to solve two problems:

1. Decrease underutilized capacity (or "empty miles")
2. Improve inefficient processes in the current state of matching Shippers and Carriers

Empty Miles

Empty mile estimates have ranged from 10-23% in the last five years. In general, empty miles have increased for for-hire trucking and decreased for private companies. These estimates come from various surveys, industry groups, for-hire trucking companies, annual reports, owner-operators, and private fleets. Empty miles by segment is broken down further in the sections below.

The benefits of filling underutilized capacity are apparent for all parties. Carriers have the potential to increase revenue and decrease operational costs. In a competitive market, some of this savings will be passed on to Shippers. Efficient utilization resulting in emissions reduction is also environmentally sound.

Inefficiencies in the status quo

Inefficiencies in current processes fall largely into two categories: non-automated tasks which have the potential to be automated, and transactional frictions, in which a single transaction involves many steps with potential for consolidation.

Examples of non-automated tasks:

- Driver payments
- Paper document delivery
- Paper document management
- Location notifications
- Non-digital dispatch

Examples of transactional friction:

- Multiple Carrier/Shipper/Broker interactions to negotiate price
- Non-immediate booking
- Multi-party interaction (shipment is not arranged solely between Shipper and Carrier)
- Non-centralized communications, or communication via phone, fax, and email

All this is not to say there aren't logical reasons for the status quo. For example, on routes shorter than 150 miles, it is usually not worth finding backhauls. Due to the hourly cost of the driver, it's more efficient to simply return to the point of origin. Many of the processes found in the industry today are ingrained, time-tested processes — the result of years of trial-and-error to work most efficiently within a complex industry. Some elements inherently classified as transactional friction, such as the multi-party interaction due to the existence of Freight Brokers, also add important benefits (discussed later in the report). Finally, many trucking companies may face only a fraction of the problems listed.

Solution proposed by Digital Freight Matching companies

Despite the rationale for the status quo, continuous improvement is a key initiative for many

transportation providers. Newly available technology presents the potential to increase capacity utilization and transition processes to a centralized and convenient digital platform, usually in the form of a mobile application ("app"). While functionality of DFM apps varies, companies incorporate features to solve some or all of the problems detailed above. To decrease empty miles, Digital Freight Matching companies match Shipper freight with Carrier capacity. To improve upon existing processes, DFM apps offer some combination of digital payment, automatic track-and-trace, document management, single pricing interactions, algorithmic pricing, digital dispatch/load alerts to drivers, immediate booking, and in-app communication tools. In addition to core functionality, many apps also include features which appeal to drivers, such as trip planning tools and rate benchmarking. Finally, DFM companies offer other benefits such as a 24-hour payment cycle, a referral or rewards program, fuel card, or discounts.

DFM apps are not the first to offer many of the functions discussed. Many one-off app solutions exist, such as trucker logbook apps, document scanning apps, and driver check-in apps. However, the principle behind most DFM apps is to bundle the solutions to all problems and become the 'go to' app for both Shippers and Carriers.

How is the problem being solved today?

To match freight demand and supply today, Shippers and Carriers either work together directly or with an intermediary — a Third-Party Logistics provider ("3PL") — to arrange transportation.

Even if DFMs can disrupt the industry, the technology is unlikely to elicit latent demand. Instead, DFM companies will need to attract business from existing Shipper-Carrier relationships or win business away from competitors. DFM companies are most likely to compete with Loadboards and Freight Brokers for business. To understand the competitors DFMs will face, we have included descriptions of how Loadboards and Freight Brokers match freight today.

Loadboards

Loads are posted on Loadboards by Freight Brokers and Shippers. They can be accessed online, via a Loadboard's mobile app, and at truck stops. Loadboards are used by trucking companies, fleets, Owner-Operators, and Freight Brokers. It is more common for loads to be posted than available trucks, and Carriers will contact the Broker who posted the load to discuss rates and agree on the job.

Loadboards are subscription-based with tiered pricing; basic plans allow load searching, and higher tiers offer features such as lane rate benchmarking and credit data on Freight Brokers. Pricing/rates are quickly responsive to market conditions

Inefficiencies arise when posted loads are no longer available, criteria for a load doesn't match a Carrier's parameters, Carriers must make multiple calls to get rates, loads are cancelled after agreement, and loads are posted multiple times (when Shippers work with multiple Brokers which each post the load).

Domestic Loadboard leader DAT states that over 200 million loads were searched by carriers in 2015[1]. DAT suggests Loadboard use is correlated with fewer empty miles. According to the company, "frequent for-hire users of Loadboards (61%+ Loadboard use) had about 8% empty loads in 2011, while occasional and moderate users had 10.2-10.5%."[2]

1 DAT http://www.dat.com/load-board

2 DAT http://www.werc.org/assets/1/Publications/935 CarrierBenchmarkSurvey2011.pdf

DAT's 2013 Carrier Benchmark Survey also indicates that Loadboards are the primary source of freight for for-hire carriers and owner-operators[3].

Freight Brokers

Shippers choose to work with Freight Brokers for a number of reasons.

- Brokers help find flexible excess capacity (particularly during peak seasons in late summer and fall).
- As a result of the trucking shortage, tractor capacity is tight. Freight Brokers help Shippers secure necessary capacity.
- Working with a Broker decreases the number of parties Shippers need to work with, as the Broker manages contact with multiple Carriers.
- Brokers can plan complex shipments (such as LTL to truckload consolidation).
- Brokers manage exception handling and source replacements for broken-down equipment.
- Some Freight Brokers provide value-added services, give capacity prioritization to large accounts, and guarantee on-time shipments even at a loss.
- Access to Transportation Management Systems (TMS).
- Some large Shippers negotiate contracts directly with Carriers, and the Domestic Transportation Manager (DTM) will manage daily transportation planning and execution for the Shippers.

Freight Brokers handle an estimated 15% of all less-than-truckload ("LTL") and full truckload ("TL") shipments in North America. About 50,000 Shippers use DTMs. A&A estimates 1,850 licensed Freight Broker companies of size in the United States, 50 of which have net revenue[4] of greater than $20 million. The top 40 account for more than 70% of net revenue. Shippers are accustomed to using more than one source to find capacity: 48% of large shippers use 2-5 brokers; 38% use 6 or more[5]. A DAT survey found about 28% of for-hire and owner-operator carriers use Freight Brokers or 3PLs as their primary source of freight.

U.S. DTM 3PL Segment gross revenue was $58.7 billion in 2015. On average, DTMs operated at a 16.4% margin; 2015 net revenue was $9.6 billion. The segment is growing rapidly. Net revenue increased 12.4% between 2014 and 2015, and more than 20% the year prior. The segment has a 20-year compound annual growth rate of 11.5% and A&A projects a future gross revenue growth rate of about 10% per year. The sector's revenue is growing at a faster rate than the trucking industry as a whole; A&A estimates trucking revenues are growing at about a third that rate. Gross Profit varies by Shipper size, ranging from 5% for enterprise accounts to 25% for smaller customers.

The majority of Freight Broker revenue is derived from full truckload shipments (85%), while LTL accounts for 9% (the remainder is derived from Intermodal). Of TL revenue, dry freight makes up nearly three quarters, and refrigerated over 20%.

Freight Brokers vary in technology and operations sophistication. "Network Transportation Managers" optimize routes and LTL shipment consolidation with TMS, generally use electronic communication, and use one to three year contracts. DTMs such as C.H. Robinson use load-matching algorithms. Meanwhile, "Transactional Freight Brokers," are characterized by use of IT for support purposes, pre-approved/ simpler contract agreements, pre-approved carrier bases, and key performance indicator (KPI) tracking. Some communication occurs by email or phone.

3 DAT http://www.dat.com/Resources/~/media/Files/DAT/Resources/Whitepapers/2013_Carrier_BenchMark_Surveyfinal.ashx

4 Gross revenue less purchased transportation

5 Morgan Stanley

Other Third-Party Logistics services

Other means of matching freight include more comprehensive 3PL segments, including asset-intensive Dedicated Contract Carriage and Value-Added Warehousing and Distribution. In the near-term, we do not view transportation via these avenues as direct competition to Digital Freight Matching companies, as the level of value-added services exceeds the capabilities offered by DFM companies.

Trucking Market

The trucking industry is highly fragmented. According to the Transportation Intermediaries Association, the top 10 truckload carriers represent less than 5% of total trucks[6].

Total trucking industry size

A&A estimates a total 2014 U.S. Transportation market revenue of $901.2 billion. Of that, trucking accounts for 77.7%, or $700.3 billion. According to the American Trucking Associations (ATA), trucks account for 68.8% of all tonnage moved in the U.S., about 10 billion tons annually[7].

Trucking industry growth

The ATA expects revenue growth of 5.0% per year through 2021 and 3.8% per year from 2021–2026. Longer term projections from the U.S. Department of Transportation anticipate tonnage will increase 43% by 2040, while the value of all freight moved will increase 125%[8].

Full Truckload

U.S. Transportation Market Revenue (2014) - $Billions	901.2
Total U.S. Trucking Costs	700.3
For-Hire	392.2
Less than Truckload	57.3
Truckload for Hire by Equipment	334.9
Dry Freight	241.1
Refrigerated	73.7
Flatbed/Platform	13.4
Bulk	6.7
Private Fleet	308.1
All Other (Rail, Water, Pipeline, etc.)	200.9

Trucking is commonly discussed in three categories: full truckload ("TL"), less-than-truckload ("LTL"), and private. Full truckload shipments are generally greater than 20,000 pounds. A&A estimates TL revenue of $334.9 billion, or 47.8% of all trucking revenue. The average length of haul for all for-hire (both TL and LTL) is 508 miles. Full truckload averages 22% empty miles[9]. However, TL empty miles vary greatly by length of haul. For loads with lengths of haul over 500 miles, empty miles will be in the 15% or lower range. Often short-haul TLs in metro areas backhaul empty due to driver cost and hour constraints. These types of TLs would have total empty miles near 50%. Large carriers such as Werner consistently run at 12-13% empty miles.

TL can further be separated into dry van, refrigerated, and flatbed/platform/bulk. Dry van accounts for 72% of revenue, followed by refrigerated (22%). Flatbed, platform, and bulk make up the remaining 6%.

6 TIA https://www.tianet.org/TIAnetOrg/docs/Frameworks/CSF_0615_TIA.pdf

7 ATA https://www.atabusinesssolutions.com/Default.aspx?TabID=1415&productId=2954880

8 DOT https://cms.dot.gov/sites/dot.gov/files/docs/Draft_Beyond_Traffic_Framework.pdf

9 ATRI http://truckexec.typepad.com/files/atri-operational-costs-of-trucking-2013-final.pdf

Specialized TL equipment includes flatbed trailers, refrigerated, temperature controlled, hazardous, tank trucks, heavy haul (auto transport), oversize, and double/triple trailers. The American Transportation Research Institute (ATRI) estimates 15% empty miles on specialized equipment.

LTL

Less-than-truckload shipments are usually 150-10,000 pounds, and consist of multiple shipments on a single truck. LTL operates within a static network of terminals (a hub and spoke model) and therefore allows for little flexibility; activities include pickup, origin terminal crossdocking, destination terminal crossdocking, line-haul, and, if a hub is utilized for an intermediate sort, break bulk sorting. This sector accounts for 8.2% of total trucking revenue, or $57.3 billion. ATA anticipates significant near-term revenue annual growth of 7.8% through 2021, and subsequently 5.8% per year through 2026. Again, LTL equipment consists of mostly dry van and some refregirated trailers.

LTL carries the highest marginal cost of the three types of trucking due to frequent pick-ups and delivery, smaller shipment handling overhead, dock labor costs, and a higher number of terminals and equipment[10].

About 25% of LTL is handled by 3PLs. DTMs/Freight Brokers have been expanding LTL volumes as they diversify offerings outside of traditional truckload brokerage. Prior to 2009, only 30% of 3PLs surveyed by the Transportation Intermediaries Association handled LTL shipments (the rest being handled directly between Shipper and Carrier); the proportion has since increased to 71%[11].

LTL freight is likewise appearing more frequently on Loadboards. As of April 2015, LTL accounted for 10-15% of loads on Loadboards[12], and according to a DAT representative, LTL's share on Loadboards continues to increase.

LTL freight predominantly consists of manufactured goods; therefore, recent double-digit growth in e-commerce is impacting LTL. XPO Logistics CEO Bradley Jacobs said the growth of e-commerce is increasing the "number of online orders that are too big for the parcel carriers but don't require the 'white glove' treatment of last-mile logistics."

While there is an increased appetite for shipments via LTL and an anticipated increase of revenues for the sector, the network complexity may make this sector difficult to manage through a DFM solution.

Private

Private trucking is conducted by companies that transport their own freight with their own truck fleets, such as manufacturers or retailers; the most common reason for doing so is to provide differentiated customer service. Other primary reasons are cost, capacity issues, need for specialized equipment, and competitive advantage. In addition to outbound freight shipments for the private company, private fleets that have for-hire authority can also seek to fill available capacity as backhauls. Drivers include company employees, leased drivers, and/or owner-operators. Average length of haul is very short, averaging 58 miles per shipment[13]. The National Private Truck Council (NPTC) reports 21% empty miles (a 30% decrease since 2009), though this statistic varies by equipment type (ranging from 18% for private fleet

10 ATRI http://www.atri-online.org/wp-content/uploads/2014/09/ATRI-Operational-Costs-of-Trucking-2014-FINAL.pdf

11 Journal of Commerce http://www.joc.com/trucking-logistics/ltl-shipping/us-third-party-logistics-providers-controlling-more-ltl-freight_20160219.html

12 DC Velocity http://www.dcvelocity.com/articles/20150417-ltl-capturing-more-load-board-mind-share-spot-market-posts-double-that-of-truckload-dat-says/

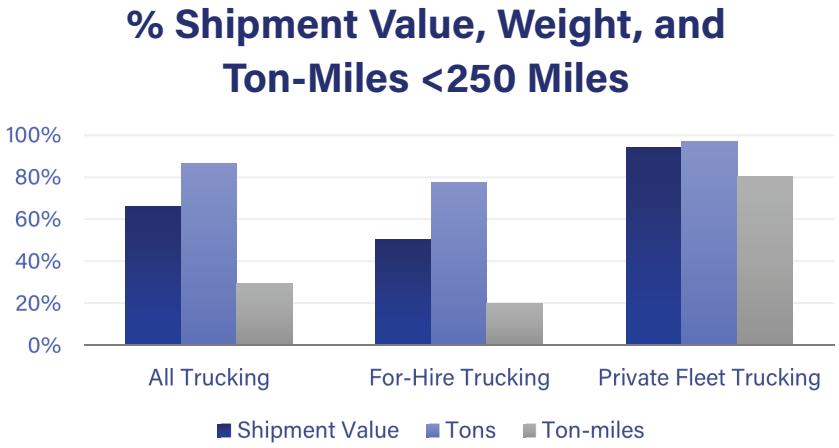
13 DOT Commodity Flow Survey 2012 http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/ec12tcf-us-hm.pdf

dry-vans to 28% for private fleet flatbed loads[14]).

This sector accounts for 44% of U.S. trucking revenue. Respondents to NPTC's 2015 benchmarking survey reported a year-over-year mileage increase of 14.5%, volume increase of 16%, and freight value increase of 23%.

NPTC also notes an increase in "inbound freight movements" by private fleets, and found that 67% of private fleets have for-hire authority — a requirement for using DFM companies to find freight. Although operated by private companies, private fleets do not keep all activities in-house. A majority (77%) use 3PLs. NPTC found that in 2015, 69% acted as their own brokers — as opposed to just 35% in the previous year's survey. This increased interest in finding alternate sources to fill capacity is a positive indicator of interest in using DFM companies.

Shipment length of haul



Digital Freight Matching solutions may have a particularly useful application in short-haul trucking, local trucking, and last-mile e-commerce fulfillment. A high proportion of shipment value is transported 250 miles or less, as seen in the chart above[15].

Potential Digital Freight Matching Users

Owner-Operators

Owner-Operators (O-Os) use purchased or leased equipment and drive as independent contractors with any number of companies, lease their truck to a specific trucking company, and/or fill capacity through means such as Loadboards and Freight Brokers. According to the Owner-Operator Independent Drivers Assocation, approximately 350,000 O-Os are registered in the U.S. and most lease to larger TL carriers. In a DAT survey of O-Os, respondents reported owning an average of 1.2 power units[16]. Their average age is 55 and they have been in the trucking business for 26 years[17].

Owner Operators are heavy users of Loadboards. According to DAT, 45.1% of Owner Operators use Loadboards as the primary source of freight, followed by Freight Brokers/3PLs (28.1%).

14 National Private Truck Council annual benchmarking survey

15 DOT Commodity Flow Survey http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=CFS_2012_00A11&prodType=table Distance measured as Great Circle Distance; Value represents net selling dollar value of entire shipment exclusive of freight charges and excise taxes.

16 DAT http://www.dat.com/Resources/~/media/Files/DAT/Resources/Whitepapers/2013_Carrier_BenchMark_Surveyfinal.ashx

17 OOIDA Foundation http://www.ooida.com/OOIDA Foundation/RecentResearch/OOfacts.asp

Dispatch/Fleet Owners/For Hire

More than 180,000 active for-hire carriers operate in the U.S. (though many more inactive carriers are registered with the Federal Motor Carrier Safety Administration)[18], and have an average of 7.8 trucks per fleet, though the range extends to 100,000[19]. Revenue of the top 100 companies totals $210 million, each with an average of 4400 trailers.

For-hire motor carriers rely on dispatchers to match loads to drivers and find backhaul loads. Diverting dispatchers altogether, even if this is the long-term vision for DFM companies, would be an unlikely entry to the segment in the short term. To crack into this segment, DFM companies will need to figure out how to work in conjunction with the dispatcher.

According to DAT, 37.1% of for-hire loads came from Loadboards (via the dispatcher), 28.2% from Brokers/3PLs, and 31.1% from contracts with shippers.

Freight Brokers

Freight Brokers themselves may well end up being users of DFM apps. The purpose of Loadboards was originally to connect Carriers and Shippers, but Freight Brokers ended up being major users; this trend may repeat with DFM companies.

18 Qualified Carriers http://www.joc.com/trucking-logistics/truckload-freight/number-active-trucking-firms-rises-10000-qualifiedcarriers-says_20140914.html

19 Ibid.

Why Now?

In the late 1990s and early 2000s, a wealth of online freight exchanges promised to revolutionize the transportation business. In fact, Armstrong & Associates profiled nearly 100 of these exchanges in 2000; today, few remain. In the last twenty years, changes in technology, the economy, policy, competitive landscape, workforce, and consumer behavior have made today's environment more amenable to technology-based solutions. Below, we detail advancements indicating DFM companies are entering the market at a favorable time.

Technology

Technological developments and ubiquity of access have made Digital Matching apps possible. Digital Freight Matching apps rely on a userbase equipped with internet access and smartphones. The apps themselves leverage GPS-location, map integration, and mobile payment technology, all of which have been developed in the past several years.

- **Internet access.** According to the World Bank, in 2014, 87.4% of people in the United States had access to the internet, as compared to 68% in 2005, 43.1% in 2000, and 9.2% in 1995[1].

- **Smartphone access.** Smartphones are an essential tool for participation in DFM, allowing drivers to easily search for or receive alerts for loads. Smartphone subscriptions have more than tripled in recent years, increasing from 18% in 2009 to 64% in 2014[2]. Access to a smartphone is not a barrier to entry for those wishing to engage in Digital Freight Matching. In Uber's early years, the company provided phones to drivers and waived data fees to attract new employees; now the company leases phones to drivers.

- **GPS.** For companies to operate a true Uber-like app, the app must access a driver's location. This allows algorithmic matching of a driver's location with nearby/en route available loads (rather than the less efficient and more time consuming manual search). It also provides visibility to Shippers via real time track-and-trace. Many companies also use embedded map application program interfaces (APIs). For example, Uber uses the Google Maps API for routing and calculating estimated time-to-arrival.

- **Apps.** Nearly all of the Uber for Trucking companies studied are available as a mobile app, either in conjunction with a desktop app, or exclusively for mobile. On the Carrier side, mobile apps are the primary transaction mechanism; for Shippers, companies usually offer both desktop and mobile apps. Since 2008, apps have been offered via two dominant operating systems, Apple's iOS and the Android operating system. Mobile analytics company Flurry found mobile app use is increasing dramatically every year. Measuring use through number of sessions, the company reported growth rates of 103% in 2013, 76% in 2014, and 58% in 2015[3]. Furthermore, the share of digital media accessed on mobile apps is increasing relative to other platforms. 67% of all digital media time is via Mobile[4]. Apps aimed at the automotive sector in particular have seen a recent increase in utilization. In the second quarter of 2015, year-over-year visits to auto-related apps increased 25%. Along with the Health sector, Auto experienced the highest sector growth rate in mobile visits[5].

1 World Bank http://data.worldbank.org/indicator/IT.NET.USER.P2

2 Informa/KPCB http://www.kpcb.com/internet-trends

3 Flurry http://flurrymobile.tumblr.com/post/136677391508/stateofmobile2015

4 ComScore http://www.comscore.com/Insights/Presentations-and-Whitepapers/2015/The-2015-US-Mobile-App-Report

5 Adobe Digital Index https://offers.adobe.com/en/na/marketing/landings/_50263_adi_best_of_the_best_benchmark.html

- **Mobile payments.** Mobile payments are a key requirement for any sort of Digital Matching. The U.S. Department of Commerce's definition of Digital Matching firms includes IT-based transactions (i.e., mobile payments) as the first defining element of companies operating within this space. Mobile payments have steadily increased over time. A November 2015 survey by the Federal Reserve found that 24% of all mobile phone owners reported making a mobile payment in the prior year, as compared to 12% in 2011[6]. On the other hand, 24% is a relatively low proportion of users. This is still an area that must be improved to gain acceptance among both Shippers and Carriers. Frequently cited deterrents to mobile payment include concerns about ease/convenience, security, trust, or simply user confusion.

Economy

The Sharing Economy is characterized by renting an asset, and made popular by companies such as Uber, Airbnb, and Lyft. As these leaders shape the economy, drive consumer acceptance, and impact policy, the field is opened to more players. The Sharing Economy extends past Silicon Valley startups; the principles are being adopted by large corporations, both through innovation and partnerships. The normalization of the Sharing Economy allows DFM companies to innovate in a new space.

- **Size and growth of the Sharing Economy.** PricewaterhouseCoopers projects that Sharing Economy global revenues could increase from $15 billion in 2015 to $335 billion in 2025[7]. Rockbridge Associates estimates about 10% of Sharing Economy spend in the U.S. is directed to companies in the transportation sector[8].

- **Participation.** The popularity and media coverage of apps like Uber has begun to normalize the experience of participating in the Sharing Economy. A survey by the Pew Research Center found that 72% of adults surveyed have used at least one shared/collaborative/on-demand service. 15% have used ride-hailing apps. On the other hand, 33% have never even heard of these apps (such as Uber and Lyft). Furthermore, use is highly skewed towards those living in cities. Despite media frenzy, there is work to be done to make Sharing Economy services ubiquitous[9].

- **Changing business models.** The Sharing Economy is changing the way we think about assets and transforming existing business models. An underlying principle of the Sharing Economy is to increase utilization and efficiency of assets. On a larger scale, global companies are beginning to embrace this mode of thinking, evident in investment in new companies and technologies. In a recent Wall Street Journal interview[10], Mark Fields, CEO of Ford Motor Company, said Ford is changing its way of thinking about cars. Rather than simply considering the number of units sold, Ford will "look at… vehicle miles traveled… it changes your mind to think about what kind of services can we offer via our products." Ford, as part of its Ford Smart Mobility program, is also piloting several Sharing Economy solutions[11].

- **Partnerships.** Many partnerships are being formed between automakers and Sharing Economy technology companies. GM entered a partnership with Lyft, which will include passenger/driver

6 Federal Reserve http://www.federalreserve.gov/econresdata/consumers-and-mobile-financial-services-report-201603.pdf

7 PricewaterhouseCoopers https://www.pwc.com/us/en/technology/publications/assets/pwc-consumer-intelligence-series-the-sharing-economy.pdf

8 Rockbridge Associates' National Technology Readiness Survey http://rockresearch.com/techqual/

9 Pew Research Center survey http://www.pewinternet.org/2016/05/19/the-new-digital-economy/

10 Wall Street Journal http://www.wsj.com/articles/ceo-mark-fields-maps-fords-future-1460502908

11 Ford Motor Co. https://media.ford.com/content/fordmedia/fna/us/en/news/2016/03/11/ford-smart-mobility-llc-established--jim-hackett-named-chairman.html

matching software and calculate routes, as part of a longer term roadmap to autonomous vehicles. Both Toyota and Ford are planning to link smartphone apps to vehicle dashboards[12].

Policy

As the Sharing Economy grows, policy changes have been necessary to support the new landscape. Leading companies in the Sharing Economy are creating precedents which will affect new entrants to the market, including DFM companies. Many recent policy developments have been advantageous to the Sharing Economy policy, but this is still a new and fluctuating arena. DFM companies should expect challenges in negotiating existing and developing policies.

- **Uber leads the way in legislation.** Uber has a seasoned team strictly dedicated to shaping policy. In 2015, 'pro-Uber' legislation was passed in 22 states[13]. The company reached settlements on high-profile class action lawsuits regarding the status of drivers (as employees or independent contractors), and maintained driver categorization as independent contractors, an advantageous outcome to Uber. Decisions on these issues are costly (the settlement of the suit mentioned above will range from $84–100 million), and Uber is paying the cost of legislation affecting all participants in the Sharing Economy, including Digital Freight Matching companies.

- **Magnitude for change.** Companies such as Uber now have the magnitude and resources to take a stand against policies unfavorable to the businesses. In May 2016, voters in Austin, TX, voted against an ordinance that would have been favorable to Uber. The company, along with competitor Lyft, withdrew from the Austin, TX, market, walking away from an $8 million marketing investment in the city[14].

- **A long way to go.** The Sharing Economy only became economically significant in the last few years; Uber was founded in 2009. Despite already frequent legal disputes, the Sharing Economy has a long way to go in clarifying the laws and regulations in which it operates. Several key suits have been settled, rather than decided, meaning the cases do not set legal precedent. Any entrants to this economy will operate in a realm of uncertainty, and could be subject to increased regulation. The Sharing Economy has already attracted the notice of influential politicians and interest groups. Several undecided hot-button topics will affect DFM companies. Among these are continuing questions regarding employee/contractor status, organization and bargaining rights, safety and screening standards, and data use and tracking.

  Furthermore, many decisions have occurred at state, rather than federal, level. As a result, practices differ from city to city or state to state, a challenge for businesses wishing to operate nationally.

  Policy challenges are discussed in depth in the 'Industry Challenges' section.

Workforce

The workforce is changing in a positive way for companies in the Sharing Economy. This economy relies on a workforce willing to perform work as independent contractors. Not only are workers interested in contract work, but they are also seeking ways to supplement primary sources of income. The nature of DFM apps seems to indicate these companies will follow suit with the industry trend of hiring independent contractors. Two of the three companies which make public their terms of service explicitly

12 Reuters http://www.reuters.com/article/us-gm-lyft-investment-idUSKBN0UI1A820160105

13 Quartz http://qz.com/589041/uber-pulled-off-a-spectacular-political-coup-and-hardly-anyone-noticed/

14 CNN http://money.cnn.com/2016/05/08/technology/uber-lyft-austin-vote-fingerprinting/

establish an independent contractor relationship with the carrier.

- **Increase in part-time, freelance, and contract work.** In 2006, 10.1% of workers engaged in contract work; by 2015, that group grew to 15.8%[15]. Even more significantly, economists Lawrence Katz and Alan Kreuger found that this group is wholly responsible for net employment growth between 2005 and 2015[16]. A report released by the U.S. Government Accountability Office in April 2015 suggests the number may even be higher. The report indicates 20.7% of workers fell into the categories used by Katz and Kreuger[17].

- **Interest in wage diversification.** A majority of contractors within the Sharing Economy use Digital Matching apps to supplement a primary source of income. They often use multiple platforms and source up to 25% of income via the Sharing Economy. 69% of Uber drivers have other full-time or part-time work, while 20% rely on Uber as their only personal source of income[18].

- **Increased participation in the online platform economy.** While only a small subset of independent contractors work for online intermediaries (0.5% of all workers in 2015)[19], the sector is growing at a dramatic rate. A study conducted by JPMorgan Chase found the number of participants in the online platform economy in a given month increased 10-fold between 2012 and 2015[20].

  Participants are also shifting from occasional to more regular use. The result is an increased reliance on wages from online platforms; freelancers earning more than 10% of their income from online platforms increased from 17% in 2014 to 31% in 2015[21].

- **Benefits of independent contractor status.** Independent contractor status lacks many benefits of employment, such as health benefits, employer contribution to social security, and insurance. However, workers are drawn to the flexibility and earning opportunities inherent to contract work. In a survey of Uber drivers, 74% reported improved control over their schedule, 70% cited improved flexibility in work-life-balance, and 71% reported an increase in income[22]. Findings from Edelman corroborate these statistics; freelancers report 'To earn extra money' (75%) and 'To have flexibility in my schedule' (68%) as the top drivers for choosing to engage in freelance work[23].

- **Independent contractor alternative access to healthcare.** Finally, the Affordable Care Act makes health insurance more accessible for independent contractors, and may be a factor in the decision to accept contract work[24, 25].

15 http://scholar.harvard.edu/files/lkatz/files/katz_krueger_cws_v3.pdf?m=1459369766 Definition includes temporary help agency workers, on-call workers, contract workers, and independent contractors or freelancers — based on a person's main job.

16 New York Times http://www.nytimes.com/2016/03/31/upshot/contractors-and-temps-accounted-for-all-of-the-growth-in-employment-in-the-last-decade.html

17 U.S. GAO http://www.gao.gov/assets/670/669899.pdf 40.4% of the workforce is considered 'contingent workers': temps, on-call workers, contract company workers, independent contractors, self-employed workers, and part-time workers — or, using the same definition as Katz and Kreuger, 20.7%.

18 Uber https://newsroom.uber.com/wp-content/uploads/2015/12/BSG_Uber-Driver-Roadmap-2.0_12.7.15_FIN2.pdf

19 http://scholar.harvard.edu/files/lkatz/files/katz_krueger_cws_v3.pdf?m=1459369766

20 Ibid.

21 Ibid.

22 Uber https://newsroom.uber.com/wp-content/uploads/2015/01/BSG_Uber_Report.pdf

23 Edelman Berland http://www.slideshare.net/upwork/2015-us-freelancer-survey-53166722/1

24 New York Times http://www.nytimes.com/2016/03/31/upshot/contractors-and-temps-accounted-for-all-of-the-growth-in-employment-in-the-last-decade.html

25 The White House https://www.whitehouse.gov/blog/2014/02/06/six-economic-benefits-affordable-care-act

- **Changing demographics and the growth of the Millennial Workforce.** In 2015, Millennials (those born 1981-1997) became the largest contingent of the workforce (35%), surpassing Generation X (31%) in Q1 of 2015[26]. Of the changing workforce trends listed above, many are most pronounced in the Millennial segment of the workforce. In other words, the current trends which make the environment ripe for DFM apps is only expected to continue or increase.

  This group is the most likely to be freelancers, representing 34% of the U.S. workforce but 43% of freelancers. Those who are not currently freelancing are willing to consider it: of Millennials who are not currently freelancing, 83% (more than any other age group) are willing to do work outside of their primary job, as compared to the overall average of 76%[27].

  Millennials are also likely to prefer incorporating mobile apps into their work. 81% of Millennials own smartphones (compared to the national average of 64%)[28]. Similarly, 88% of Millennials prefer to be contacted for business purposes via internet/social media/electronic messaging/or apps, and just 12% on the phone[29].

- **Risks/issues.** Expect the question of employee classification to resurface. While companies like Uber have published numerous studies touting the benefits of independent contractor status and collected statistics on contractor satisfaction, labor groups and contractors alike have consistently lobbied for workers' rights. Of the policy issues affecting companies in the Sharing Economy, worker classification is perhaps the most prominent, costly, and potentially disruptive. This topic is discussed in the 'Industry Challenges' section.

Rise of e-Commerce

As we will describe later in this paper, Digital Freight Matching may be especially successful in local, last-mile delivery, in which it can benefit from network effects and pooling. The growth of e-commerce, the normalization of two-day (or less) shipping, increasing fulfillment costs, shorter routes, and increased emphasis on last-mile delivery cause Shippers and Carriers alike to seek performance improvements.

- **Increase in e-commerce freight.** The Department of Transportation projects online purchases to account for 10% of all purchases by 2020. Other researchers estimate current spending closer to 10%: the Federal Reserve Bank of St. Louis finds that e-commerce represents more than 10% of all retail sales ($340 billion in total spend), and the sector growing four times the rate of traditional retail[30]. Forrester Research's estimate is similar, with an expected $334 billion in e-commerce spend in 2015, and a five-year 10% CAGR[31]. UPS forecasts a 12% CAGR in the U.S., and expects more than 50% of all U.S. domestic packages to be Business-to-Consumer (B2C) by 2019[32].

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26 Pew Research Center http://www.pewresearch.org/fact-tank/2015/05/11/millennials-surpass-gen-xers-as-the-largest-generation-in-u-s-labor-force/

27 Edelman Berland http://www.slideshare.net/upwork/2015-us-freelancer-survey-53166722/1

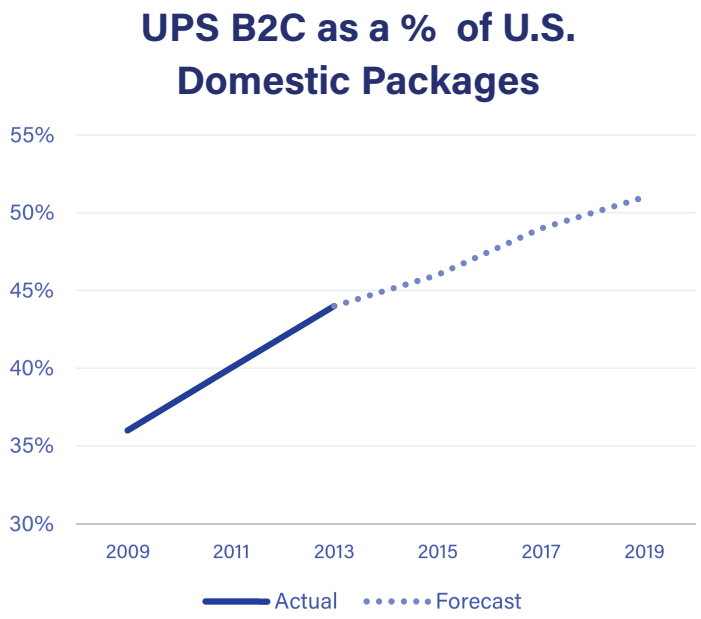
28 Collaborative Economy Library http://collaborativeeconomy.com/wp/wp-content/uploads/2015/04/Sharing-Economy-An-In-Depth-Look-At-Its-Evolution-and-Trajectory-Across-Industries-.pdf

29 MBO Partners https://www.mbopartners.com/uploads/files/state-of-independence-reports/2016_MBO_Partners_State_of_Independence_Report.pdf

30 Federal Reserve Bank of St. Louis, retail data (excluding food service, gas stations, and motor vehicles) https://www.stlouisfed.org/

31 Forrester Research https://www.forrester.com/report/Forrester+Research+eCommerce+Forecast+2014+To+2019+US/-/E-RES116713

32 UPS http://www.slideshare.net/col1mjn_IR/ups-overview



- **Pressure for increased performance.** As e-commerce has grown, companies have leveraged shipping speed as a competitive advantage. Amazon and others normalized two-day delivery; now the company offers same-day delivery in 27 metro areas[33]. Retailers realize that two-day shipping is, in many cases, no longer aspirational and instead is the cost of doing business and remaining competitive. Therefore, there is a desire for greater efficiency and improved last-mile and local delivery.

  UPS's Pulse of the Online Shopper study found two in three online shoppers expect to be able to place an order up to 5 p.m. for next-day delivery, 60% believe orders placed before noon should be delivered the same day. One in three say speed of delivery is a reason they choose to buy from marketplaces. Other expectations include the ability to reroute packages in transit (28% of those surveyed reroute packages), and (often free) online returns[34].

  Major brick-and-mortar retailers are following suit to compete with new consumer expectations. Walmart, the nation's largest retailer (with FY2015 e-commerce sales of $13.7 billion to Amazon's $107 billion in sales), recently invested $2 billion in tech and logistics, part of which will be used to expand a pilot program called ShippingPass, which offers two-day shipping on 1 million items and free same-day deliveries in select metros for $49/year[35].

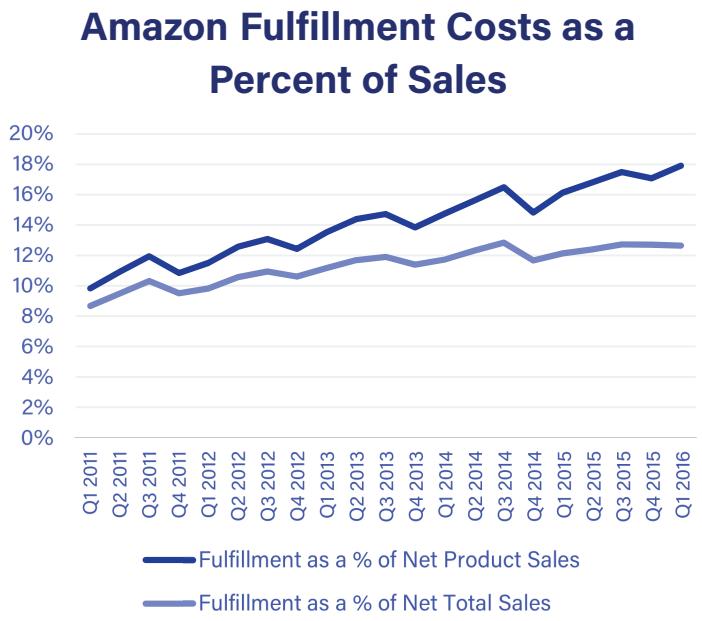
- **Increase in e-commerce fulfillment costs.** As e-commerce freight volume increases along with increased service standards, e-commerce fulfillment costs are on the rise. At Amazon, fulfillment costs as a percent of product sales have increased 55% since 2011. B2C as a rule "generate[s] lower revenue than the average shipment and have higher operating costs."[36] Deliveries of last-mile shipments account for about 30% of total shipment cost.

33 Amazon https://www.amazon.com/b?node=8729023011

34 UPS https://solvers.ups.com/assets/2016_UPS_Pulse_of_the_Online_Shopper.pdf

35 Wall Street Journal http://www.wsj.com/articles/wal-mart-bets-on-free-two-day-shipping-1463045580

36 CSCMP, A.T. Kearney 2016 State of Logistics Report https://cscmp.org/member-benefits/state-of-logistics



- **Decrease in miles traveled.** To support two-day delivery and same-day delivery, large e-commerce players are minimizing shipping distance and optimizing product assortment for same-day delivery. This is accomplished via additional warehouses for certain high-demand products. The transportation consequence is shorter lengths of haul and fewer miles traveled (due to increased delivery route density).

  In the past few years, Amazon has rapidly expanded warehouses specific to two-day, one-day, and same-day delivery. Walmart has opened eight e-commerce warehouses (each over one million square feet) and utilizes 80 stores as delivery hubs[37].

  Transportation providers have noted decreased length of haul. Derek Leathers, CEO of Werner Enterprises, said: since 2007, "miles are down nearly 25%, and that is a direct effect of shorter length of haul, because you cannot deliver the same number of miles-per-day when you are stopping and starting that often." He cited past average length of haul at around 700–800 miles, now down to high 400s–500[38].

  As a result, companies must seek to lower fulfillment costs and improve B2C and last-mile delivery. Amazon has been willing to outsource last-mile delivery to companies like Dynamex and route local deliveries through Amazon Flex (discussed later in this report). Walmart plans to use its own transportation network for these deliveries. As companies aim to decrease reliance on UPS and FedEx, it will be useful to have flexibile options, such as Uber for Trucking, to smooth fulfillment[39].

37 Wall Street Journal http://www.wsj.com/articles/wal-mart-builds-supply-chain-to-meet-e-commerce-demands-1431016708

38 Logistics Management http://www.logisticsmgmt.com/article/industry_executives_weigh_in_on_e_commerce_and_how_it_is_changing_logistics citing Derek Leathers' remarks at the National Shippers Strategic Transportation Council Conference

39 Wall Street Juornal http://www.wsj.com/articles/wal-mart-bets-on-free-two-day-shipping-1463045580

Marketplace Value Proposition

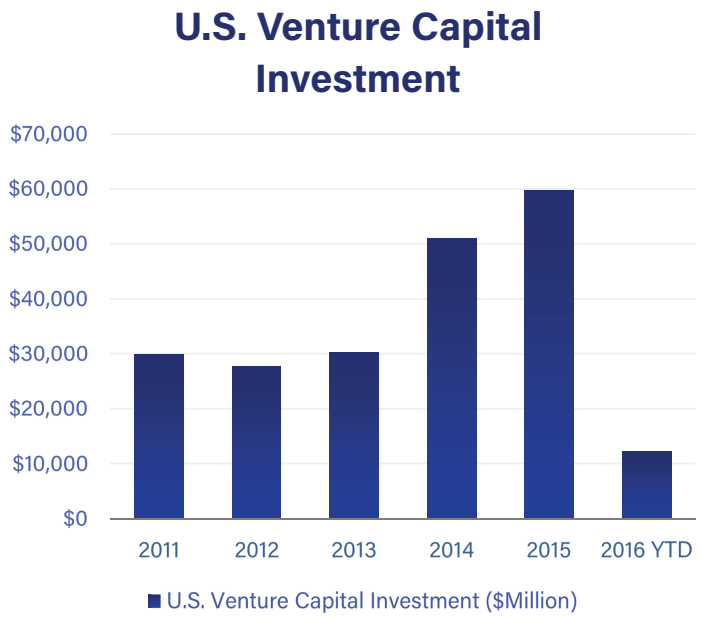
- **Benefits for Shippers and Carriers.** The online exchanges of the early 2000s were primarily reverse auction models: Shippers posted freight and Carriers bid down. The balance of power was clearly to the Shipper. DFM apps are geared equally towards Carriers and Shippers, and in some cases Freight Brokers. DFM companies see the importance of presenting a strong value proposition to both parties. The websites and apps are designed with this in mind.

Investment

About half of the apps studied are true startups, funded with private capital or venture capital. The other half are companies offering an app as a supplement to primary services (such as Coyote's CoyoteGO or Truckstop.com's app), and are therefore funded through each company's resources. Ten of the companies studied have published information on venture capital funding, and the discussion below is based on data reported on these investments.

Investment Trends

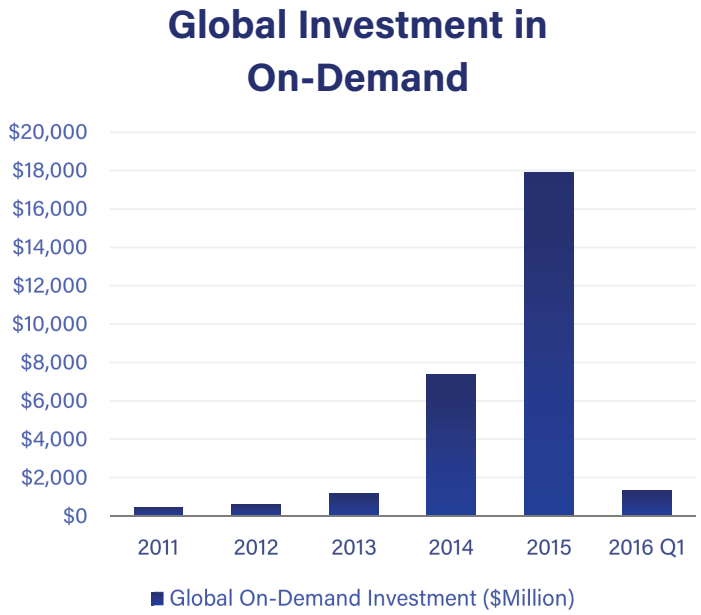
Total U.S. Investment



Annual VC investment in the U.S. has been increasing since 2012[1]. 2015 was the highest year on record, with investment of $58.8 billion, a 17% increase over 2014. As expected, the largest industry represented is software (the segment in which DFM falls), accounting for 40% of venture capital invested.

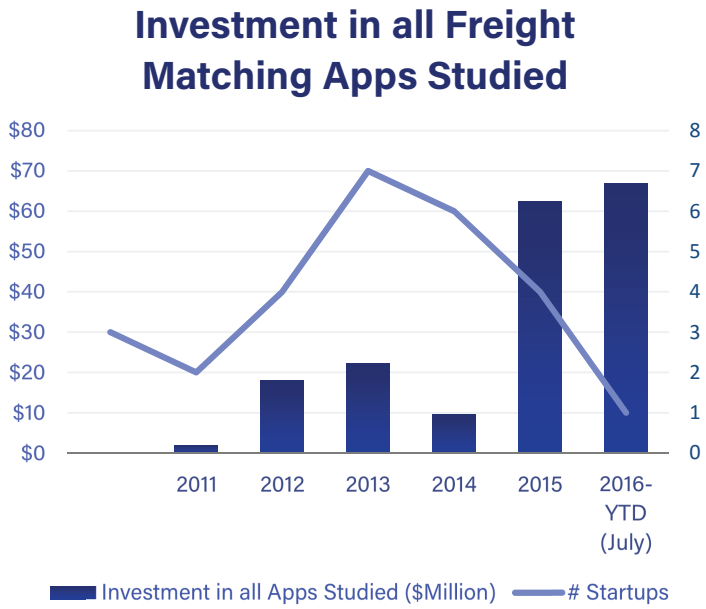
1 "U.S. Venture Capital Investment" table data from PricewaterhouseCoopers PWC Moneytree — cash-for-equity investments by the professional venture capital community in private emerging companies in the US, based on data provided by Thomson Reuters. PwC/NVCA MoneyTree Report, Data: Thomson Reuters https://www.dropbox.com/sh/v368agsbelc5p3t/AACYcgw-jXQJiEeYQ1LntHxva?dl=0

Digital matching trends



CB Insights, which measures trends in on-demand investment (a definition similar to A&A's use of 'Digital Matching'), estimates global VC investment of nearly $18 billion in 2015, an increase of 142% over 2014[2].

Digital Freight Matching trends



VC investment data is available for 10 of the companies studied[3]. Since 2011, the total VC funding for these 10 companies totals over $180 million. Most companies were founded between 2012 and 2015; the number of startups peaked in 2013 at 7. In July of 2016, investment amounts already exceded the entirety

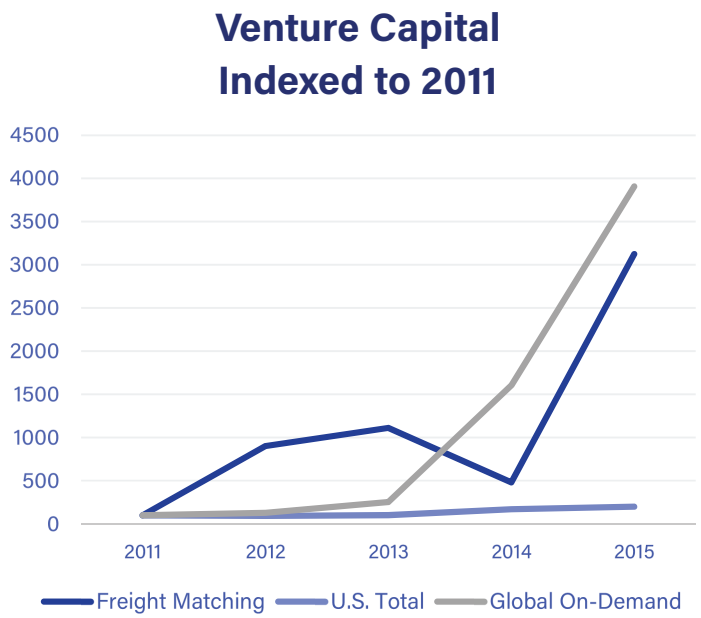
2 "Global Investment in 'On Demand'" data from CB Insights https://www.cbinsights.com/blog/on-demand-funding-trends/

3 CrunchBase https://www.crunchbase.com

of 2015 investment.

Investments in 2015 and 2016 YTD include: Transfix ($34M), Roadie, Inc. ($25M), Trucker Path ($20M)[4], Convoy ($18.5M), 10-4 ($13.9M)[5], Cargo Chief ($10M), and Cargomatic ($8M). The first of the companies studied to land a large investment was uShip, which received $18M in late 2012.

Notable lead VCs investing in DFM include Greylock Partners (Convoy), Canaan Partners (Cargomatic), Canvas Ventures (Transfix), New Enterprise Associates (Transfix), Renren Inc. (Trucker Path), Stephens Inc. (Roadie, Inc.), Wicklow Capital (Trucker Path), and Walden Venture Capital (Cargo Chief).



Indexed to 2011, Global On-Demand and U.S.-based DFM investment have both increased significantly. Of course, the fraction of total VC funding attributed to DFM companies is minuscule (Uber alone received over $10B since January 2015), making its increase as compared to total U.S. VC funding appear quite dramatic. Still, as the indexing chart shows, On-Demand and DFM companies have garnered significant interest in the last few years.

4 Trucker Path app includes other features besides an Uber-like app, but their Truckloads feature was released in 2015.

5 10-4 appears to be moving away from freight matching so it remains to be seen whether this investment should truly fall into this investment category.

Scope of Analysis

Uber-like apps and services exist for trucking, as well as for and air and ocean freight forwarding. A number of other complementary apps also exist, such as those for invoice management, payroll, driver logs, e-commerce fulfillment, and document management. For the scope of this paper, we have limited the discussion to apps for domestic trucking.

No one app is a true replication of the Uber model. We identified 10 Digital Freight Matching companies closely resembling Uber. However, many other apps, though not mirror-images of Uber, attempt to solve for some of the same business problems. For that reason, we expanded the scope of research to include technologies aiming to decrease empty miles, transition parts of the shipping process to mobile devices, automate pricing, and digitize the process of payment and document collection. There are also several apps with a large user base and some of the technology associated with Uber-like apps, and these too have been included as they have the opportunity to expand offerings to an already-large customer base.

We have also included online exchanges and Loadboards, such as GetLoaded and DAT Trucker. These Loadboards include mobile apps as secondary services, which provide either searchable loads or send push-notifications to drivers. They also have a significant number of existing users. For that reason, these apps are competitors with the pure Uber-like apps.

Similarly, proprietary Freight Broker apps, such as Coyote's CoyoteGO, have a large user base, provide push-notifications to drivers, and are integrated with Freight Broker dispatching. These apps also compete with the more Uber-like apps mentioned above and have the potential for scalability.

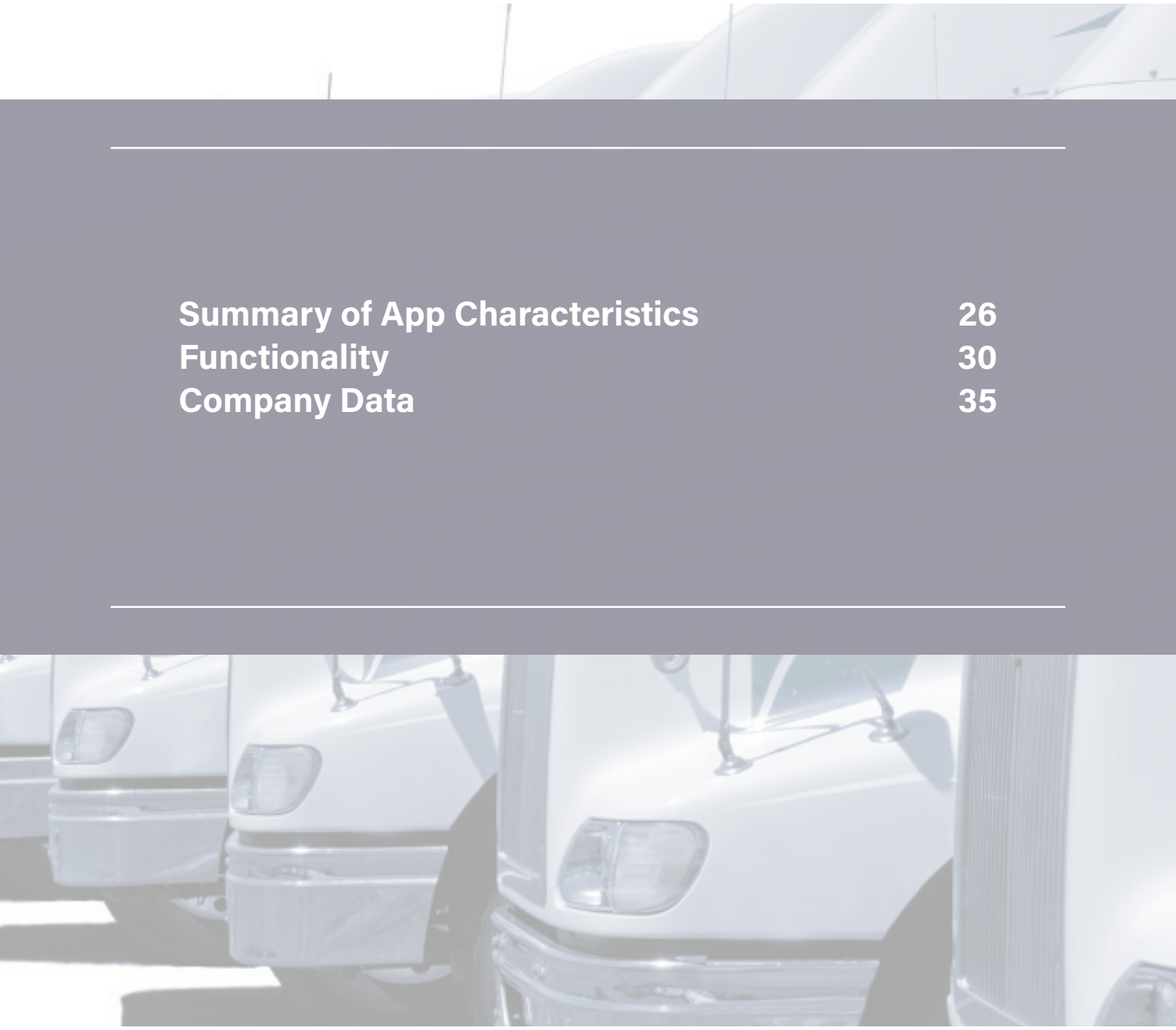
Finally, we have also included a small number of representative examples of last-mile/parcel delivery (such as Amazon Flex) and non-palletized freight shipping apps (such as uShip) for the purposes of comparing functionality, business models, and target customer bases. Each of these business models resembles Uber's and has the potential to exploit their technology and fulfill part of the market for freight delivery.

For the remainder of the report, apps will be grouped into the following categories to simplify discussion:

- Uber-like
- Loadboard-plus
- Freight Broker-plus
- Last-Mile
- Specialty

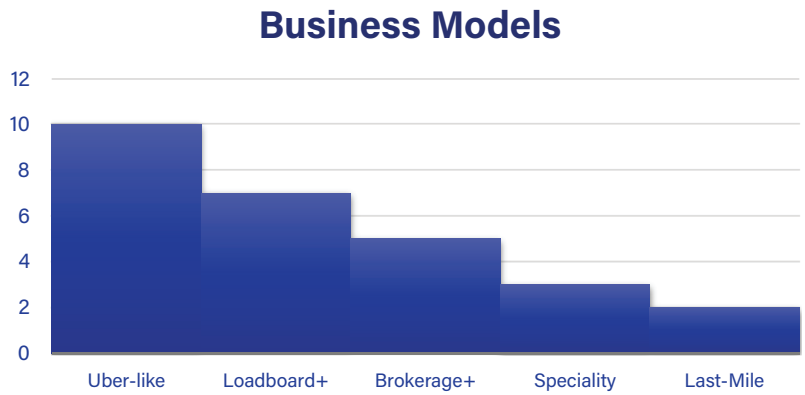
The Uber-like apps receive the most attention; however, we chose to include the other types of apps as they approach different aspects of the 'Uber problem,' and all provide valuable technology related efficiencies to the trucking industry.

Characteristics and Functionality



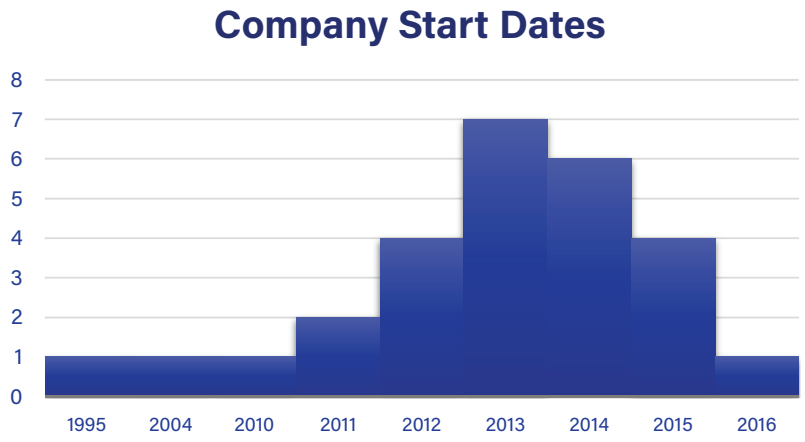
Summary of App Characteristics

A&A studied 27 applications aiming to increase trucking efficiency; decrease empty miles; speed communication between carriers, shippers, and third parties; automate aspects of arranging transport; and automate aspects of the trucker workload. Common characteristics of these apps are summarized below.

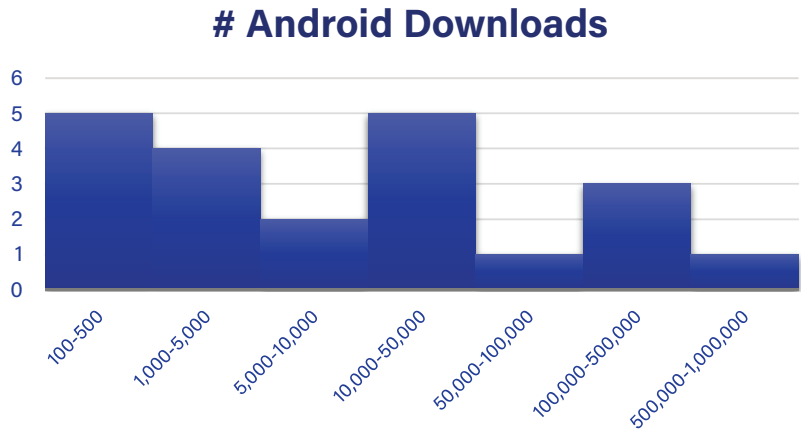


Five different business models are studied, ranging from those most closely resembling Uber to apps that resemble extensions of brokerages and loadboards.
As discussed in the previous chapter, different apps attempt to provide solutions to different Shipper and Carrier needs.

- Ten of the apps studied are similar to Uber, in that they have characteristics such as automatic payment, algorithmic/single pricing, digital document storage, eliminate third-party (Broker) interaction, and location tracking.
- Seven apps are considered 'Loadboard-plus,' meaning they are based off existing Loadboards, but also provide mobile access to Carriers seeking to fill capacity "on-the-go." Carriers can search by location or enable GPS tracking to find loads meeting their parameters.
- Five apps are 'Broker-plus,' which we define as mobile technology based solutions provided by Brokers to Carriers in their networks.
- Three apps meet several of the conditions for Uber-like apps, but are geared towards specialty freight, like heavy haul equipment, vehicles, or household goods.
- Finally, two apps specializing in Last-Mile/Local delivery were studied. This is just a subset of the peer-to-peer and last-mile service market.

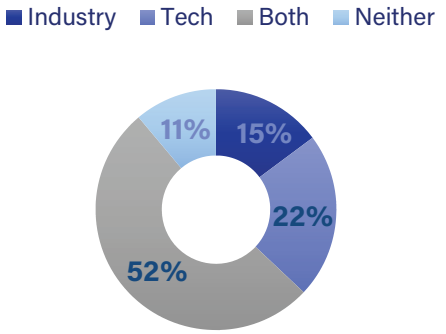


The highest startup activity occurred in 2013-2014.
Most companies were founded (or launched a secondary app) within the last five years. The oldest company studied was DAT, which began operations in 1978 as a load finder service, while the most recent, 123Loadboard, launched an app in early 2016. Apps most closely resembling Uber were launched between 2011 and 2015.



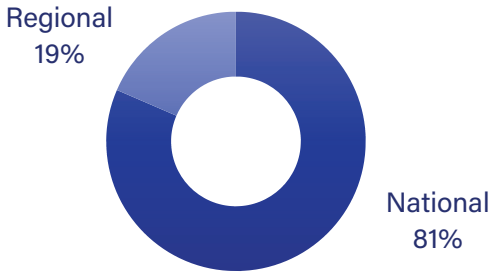
The popularity of apps varies vastly. Loadboard-plus and Broker-plus apps have, on average, the largest userbases.
Most of the apps studied are available for both iPhone and Android devices. Google Play, which sells Android apps, publishes the number of downloads for each app. While this number does not represent active users, it does provide a directional indicator of app popularity. Loadboard-plus and Broker-plus apps tend to have a larger number of downloads than Uber-like apps, in part because they are available to users nationwide, and in part because of their history and relationships with Carriers. To succeed in this arena, an app relies on a large number of Carrier users to match Shipper demand. Therefore, Loadboard-plus and Broker-plus apps have the potential to leverage their wide user bases.

Company Background



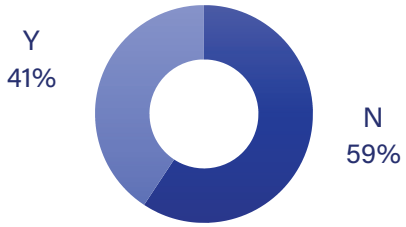
67% of apps have either company history as 3PLs or C-level executives from the transportation/3PL industry.
Technology companies don't require an industry connection to succeed; many startups such as Uber and Airbnb achieved initial success without a background in the taxi or hotel industry, instead opting to add industry experts as needed. 22% of apps studied have teams with tech experience. However, the 52% of companies that have backgrounds in both the tech and transportation industries are especially well-positioned. They have expertise in building software, pitching for capital, and understanding the intricacies of the complex trucking industry.

Service Area



Most apps offer loads nationwide.
Loadboard-plus and Broker-plus apps, such as DAT Trucker, Truckstop.com, and CoyoteGO, offer loads across the country. Some apps, such as Convoy and Cargomatic, follow Uber the model, and limit operations to regional loads within a few cities. This allows for a concentrated marketing push to achieve scale within limited markets before expansion.

FMCSA Property Broker $75,000 Bond

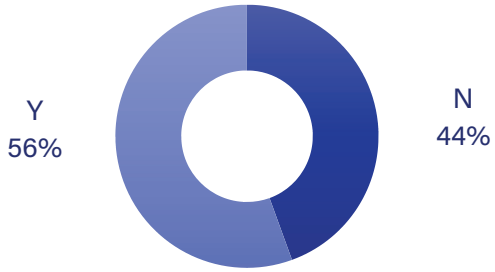


Most companies do not purport to perform brokerage services, but have Broker Authority through FMCSA.
The U.S. Department of Transportation Federal Motor Carrier Safety Administration offers a searchable database for Licensing and Insurance. The FMCSA defines broker services as: "the arranging of transportation or the physical movement of a motor vehicle or of property. It can be performed on behalf of a motor carrier, consignor, or consignee." 41% of the companies studied have Broker Authority and the requisite minimum surety bond of $75,000.

Loadboard-plus apps, by virtue of business type, do not represent themselves as property brokers and none have Broker Authority. By contrast, all companies offering Broker-plus apps are registered as Property Brokers.

The Uber-like apps studied do not position their companies as brokers, instead describing services as 'on-demand services for shipping,' 'shipment matching apps,' or 'marketplaces.' However, 70% of these apps were registered with the FMCSA as brokers. This disparity speaks to the ambiguity of the role platforms play. Odds are there will be some legal wrangling in figuring out which models are legally defined as Brokers.

Marketed to Brokers

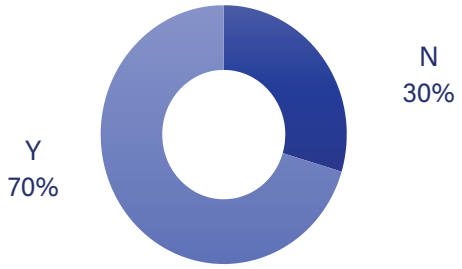


More than half of the apps market services to Brokers.
Loadboards, originally intended to directly connect Shippers and Carriers, are frequently used by brokers. In the same way, apps which can algorithmically price, auto-dispatch, locate vehicles via GPS, and centralize communications will also be useful to Brokers. Domestic Transportation Managers such

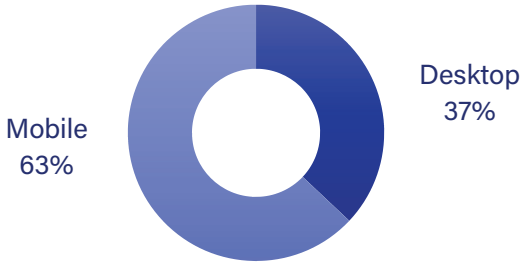
as Coyote and C.H. Robinson already incorporate much of this functionality into apps used by their Carrier partners; CoyoteGO is a particularly good example.

Functionality

Web App Available



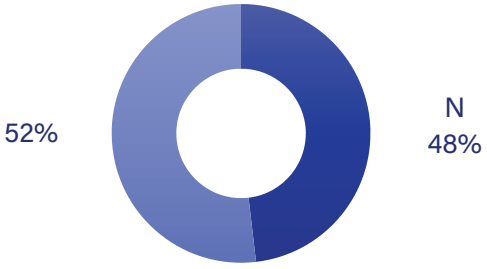
Primary Use



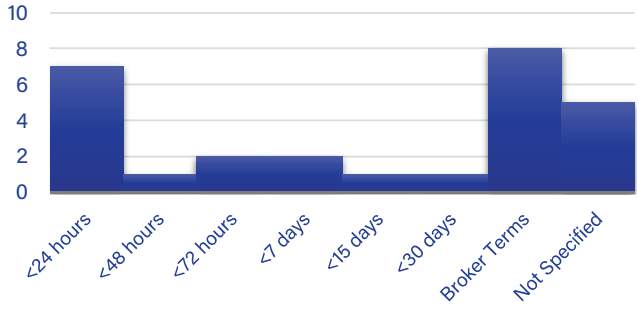
Most apps offer a web app in addition to mobile.
In most cases, apps are designed to be used by Carriers on-the-go. On the other hand, Shippers may prefer to input shipments on a desktop computer, either due to the number of parameters that must be entered as part of the administrative workflow, or because the app syncs with their TMS. Therefore, apps should be designed to meet the requirements of both Shippers and Carriers by including both mobile and web accessibility.

In some cases, companies have considerably developed the desktop or web app, and the mobile app is a secondary feature. In these cases, the desktop version is predominantly used by both Shippers and Carriers.

Payment Via App



Carrier Payment Time

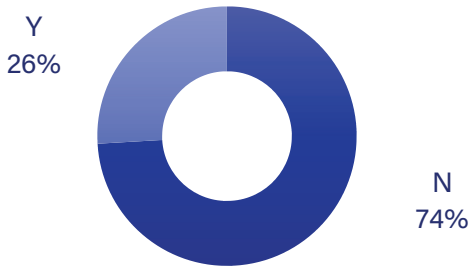


Processing payments entirely within apps is efficient, and Uber-like apps offer quick payments to Carriers.
Just over half of the apps studied offer payment via the app. One key benefit of the Uber app is the frictionless handling of all payments via the app. This allows for quick, transparent payment, with credit information only being entered once. Drivers do not need to procure payment equipment in cars and passengers do not need to worry about broken equipment.

Uber-like apps offer a compelling benefit to Carriers; rather than using factoring or expediting payments for a fee, 60% of Uber-like apps pay Carriers within 24 hours of Proof of Delivery. Another 20% offer payment within three days (all for no charge to the Carrier).

Broker-plus apps pay Carriers based on the Broker payment cycle. Loadboard-plus apps leave payment arrangements to the Shipper/Carrier or Broker/Carrier.

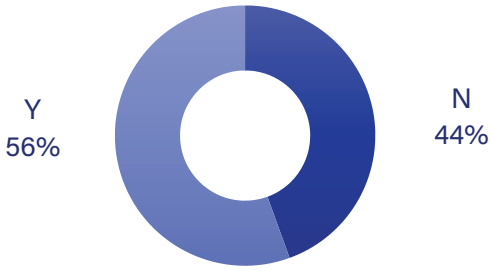
TMS Integration



A minority of apps offer TMS connection, predominantly Broker-plus and Loadboard-plus. Only one Uber-like app, Dispatcher Inc., can interface with Transportation Management Systems. Several Broker-plus and Loadboard-plus apps interface with TMS.

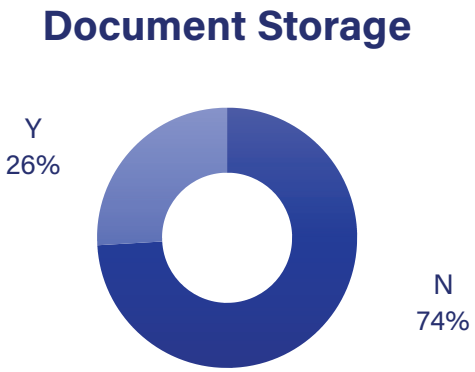
The question of whether apps should interface with Transportation Management Systems depends on the intended use. Is the purpose of these apps to find backhaul loads, primarily by small trucking companies and owner-operators? Or should the apps be a cog in the larger machine of a broker or fleet manager's software managed higher upstream by an overarching TMS? Both models may have a place, but this is an important question to consider.

Track-and-Trace



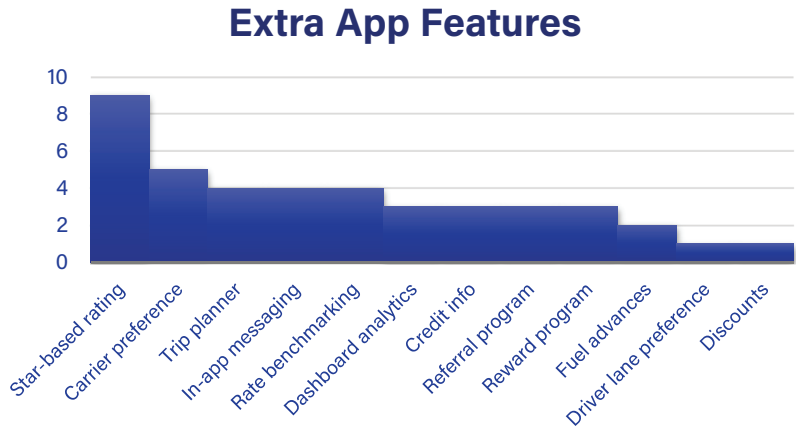
Over half of apps offer real time track-and-trace, a valuable feature for Shippers. Real time track-and-trace is found in 80% of Uber-like apps and some Broker-plus apps (but with visibility to the Broker, rather than the Shipper). Track-and-trace is much less common in Loadboard-plus

apps. Shippers want real time track-and-trace, or, at the minimum, alerts at key shipment milestones.



A quarter of apps keep track of documents such as bills of lading.
Digital documentation storage is offered in some apps. It benefits all parties to the shipment, since information like load/rate confirmation and documentation history is stored in one place.

Other non-DFM apps on the market offer other paperless document storage functionality. These include BigRoad and KeepTruckin's Trucker Logbook for driver log books, and Truck Track for invoice management. Others perform Carrier verification and store the document digitally. Incorporating document storage features in DFM apps would improve the efficiency of a Carrier's workflow.



A trip satisfaction rating system is the most common of the 12 additional features offered in conjunction with apps.
Most apps offer one or more features in addition to core functionality. Most additional features are free.

- **Trip Satisfaction Rating:** Nine apps allow Carriers and Shippers to rate completed trips on a five-star system. Uber relies heavily on driver ratings; any driver with an average below four stars may be suspended from the system. It does not appear that any of the apps have an end-use for satisfaction ratings at this time. However, if apps aim to compete with brokers and existing customer relationships, a rating system is the most basic way to monitor the satisfaction of all parties.

- **Carrier Preference:** Some apps allow Shippers to limit potential Carriers to a preferred list, and vice-versa. Alternatively, both Shippers and Carriers can 'friend' one another, and the list of potential partners is limited to friends. Others show the preferred partners first and then list remaining Carrier options. This could be another important feature in developing private networks and preferred relationships, but on the other hand limits the number of options to Carriers and Shippers.

- **Trip Planner:** Four of the apps researched also include a trip planner. The most notable is Trucker Path Pro, which is the most downloaded app on Google Play of all 27 companies studied, falling in the range of 500,000-1,000,000 downloads. The app is primarily a trip planning app and includes truck stops, fuel locations and prices, available parking spots, hotels, and restaurants. Trucker Path Pro also allows a search on available loads; sheer user scale could help its load matching service advance.

- **In-app Messaging:** All communication between Shipper/Carrier/Broker via a single app increases efficiency by eliminating the need for email, phone, and fax communication. This functionality also helps alleviate the concern that a posted load will subvert the app and be arranged outside the app between a Shipper and Carrier. Having all communication flow through the app makes such transactions visible.

- **Rate Benchmarking/Current Market Prices:** Four apps (two Uber-like, two Loadboard-plus) provide transparent lane pricing information, allowing both Shippers and Carriers to make informed pricing decisions.

- **Dashboard Analytics:** Three companies offer some level of dashboard analytics. However, information available via the apps is limited and should not be considered comparable to TMS dashboards.

- **Broker Credit Info:** Some Loadboard-plus apps provide Broker credit information and average payment times. Since payments are handled between Carriers and Brokers, this is useful for Carriers deciding on which loads to handle. The average payment time feature is usually fee-based as part of a premium Loadboard subscription.

- **Referral Program:** Uber aims to always have capacity available. To grow its driver and customer base, Uber relies heavily on word-of-mouth marketing when launching in a new market. It also often offers temporary promotions, sometimes at a loss, to onboard new users. One way DFM apps attempt to achieve scale is through referral incentives.

    - DashHaul offers a referral program for Carriers. Carriers can share a referral code which other Carriers use while signing up. Referrers receive a small commission on each load moved by Carriers using their referral code.

    - LoadSmart offers a referral/commission program for Brokers ("Freight Agents"), including up to 70% commission for shipments booked via LoadSmart, $50 when referred Carriers complete a transaction on the platform, and a 5% commission on referred Freight Agent margins.

    - GoByTruck offers a referral program for both Carriers and Shippers. The referrer receives a commission on each load booked or transported by parties using a referral code.

- **Fuel Advances:** Transfix and CoyoteGO offer fuel advances to Carriers, to cover a load's fuel costs at the time of pickup.
- **Driver Lane Preference:** Transfix allows Carriers to limit load matching to preferred lanes.
- **Discounts:** Roadie Inc. offers drivers discounts for restaurants and services such as Waffle House, ZipCar, and StoreX.

Company Data

	Convoy	CargoMatic	DashHaul	Transfix	Keychain Logistics	Go by Truck	LaneHoney	Dispatcher App	Next Trucking	LoadSmart	Trucker Path	CoyoteGO	Cargo Chief	TQL Carrier Dashboard 4.1
Start dates	Apr-15	Jan-14	Mid-2014	Aug-13	2012	Mar-11	2013	Nov-13	Sep-15	2014	Mid-2015	Apr-13	2014 (launch)	Feb-12
Start Year	2015	2014	2014	2013	2012	2011	2013	2013	2015	2014	2015	2013	2014	2012
Industry/Brokerage Connection		Y	Y	Y					Y		Y	Y	Y	Y
Tech/Startup Connection	Y	Y		Y	Y			Y	Y		Y		Y	
Brokers	N	N	Y	N	N/S	N	N	N	N	Y	Y	Y	N	Y
Primary Use (mobile/desktop)	Mobile	Mobile	Desktop	Mobile	Mobile	Mobile	Desktop	Desktop	Mobile	Desktop	Mobile	Mobile	Desktop + email	Mobile
Mobile App	Y	Y		Y	Y	Y		Y	Y	Y	Y	Y	Y	Y
Android Downloads	1000-5000	1000-5000	N/A	1000-5000	5000-10000	100-500	N/A	5,000-10,000	1,000-5,000	100-500	500,000-1,000,000	10,000-50,000	100-500	10,000-50,000
Web App	Y			Y		Y	Y	Y	Y	Y	Y		Y	
$75K bond	Y	Y	N	Y		Y	N	Y	Y	Y	N	Y	N	Y
TL	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y
LTL		Y				Y	Y	Y		Y-flatbed, reefer	Y	Y	Y	Y
Specialized		Drayage, Cargo Vans		Reefer/frozen, flatbed		Y	Y	Y			Y	Y	intermodal	Y
Short Haul	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y
Long Haul			Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y
Parcel												Broker terms:		
Payment Terms	within 24 hr	w/in 30 day ACH	within 72 hours	within 24 hours	within 24 hours	"Instantly"	within 24 hours	within 24 hours	within 15 business days, or within 24 for 3% fee	within 48 hours	Broker/shipper terms	within 30 days or advance with 4% fee	72 hours	Broker/shipper terms
Limited to regions	WA, OR, ID	NY, CA (LA & SF)			CA (SF, LA), NYC, MA (Boston), TX (Houston, Dallas)									

Company Data, Continued

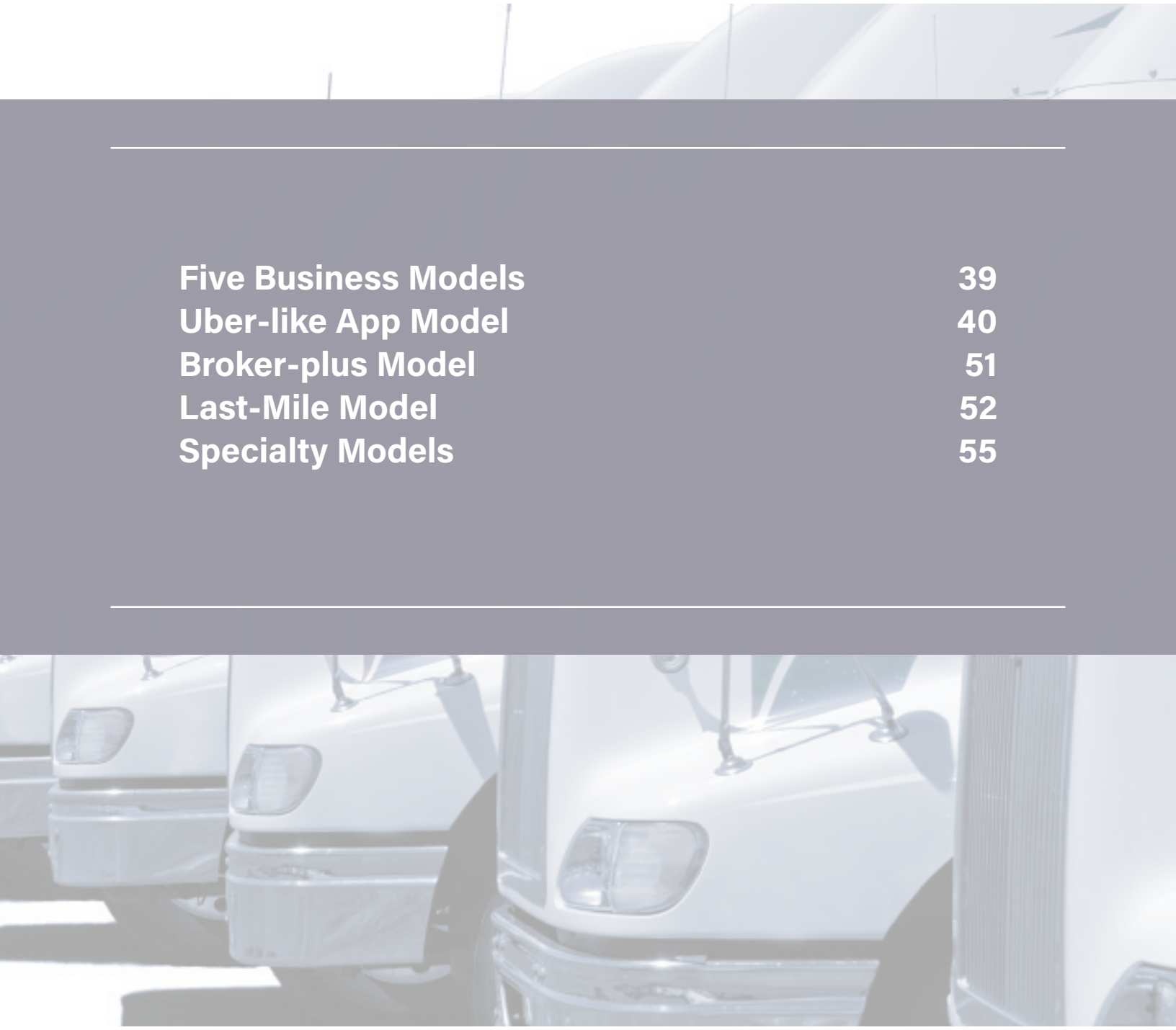
	CHRWTrucks + Navisphere	DAT Trucker	FreightFriend	GetLoaded	Truckstop.com	10-4.com	Traansmission	123 Loadboard	Roadie Inc	uShip	Veritread	Amazon Flex	Shipster
Start dates	Jul-14	2013	Apr-11	Feb-10	1995	Oct-12	Sep-13	Mar-16	Jul-13	2004	2012	Sep-15	Jul-14
Start Year	2014	2013	2011	2010	1995	2012	2013	2016	2013	2004	2012	2015	2014
Industry/Brokerage Connection	Y	Y	Y	Y	Y	Y		Y		Y	Y	Y	
Tech/Startup Connection	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y
Brokers	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N	N
Primary Use (mobile/desktop)	Mobile	Mobile	Desktop	Mobile	Desktop	Desktop	Desktop	Mobile	Mobile	Mobile	Desktop	N/A	Mobile
Mobile App	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y - Android	Y
Android Downloads	50,000-100,000	100,000-500,000	N/A	10,000-50,000	10,000-50,000	100-500	100-500	10,000-50,000	100,000-500,000	100,000-500,000	N/A	N/A	N/A (itunes only)
Web App			Y	Y	Y	Y	Y	Y	Y	Y	Y		Y
$75K bond	Y	N	N	N	N	N	N - Dismissed?	N	N	N	N		N
TL	Y	Y	Y	Y	Y	Y	Y	Y		Y	N		
LTL	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y		Y
Specialized	Y	Y	Y	Y	Y	Y	Y	Y		Y - all types	Y - heavy haul		
Short Haul	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y
Long Haul	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y
Parcel									Y			Y	Y
Payment Terms	Broker/shipper terms	Broker/shipper terms	N/S	Broker/shipper terms	Broker/shipper terms	N/S	N/S	Broker/shipper terms	N/S	"almost immediately"	N/S	Weekly	Weekly
Limited to regions												27 metros	NY (NYC, Brooklyn), NJ, CA (SF)

Company Data — Features

	Convoy	CargoMatic	DashHaul	Transfix	Keychain Logistics	Go by Truck	LaneHoney	Dispatcher App	Next Trucking	LoadSmart	Trucker Path	CoyoteGO	Cargo Chief	TQL Carrier Dashboard 4.1
Referral Program			Y			Y				Y				
Reward Program													Y	
Fuel Card														
Trip planner				Y							Y			
Driver lane preference				Y										
Carrier preference							Y							
TMS Integration								Y			Y		Y	
In-app messaging							Y							
Fuel Advances				Y								Y		
Dashboard analytics						Y		Y						
Driver Rating	Y	Y	Y			Y	Y		Y					Y
Loadboard														
Rate Benchmarking							Y		Y					
Credit info														
Discounts														

	CHRWTrucks + Navisphere	DAT Trucker	FreightFriend	GetLoaded	Truckstop.com	10-4.com	Traansmission	123 Loadboard	Roadie Inc	uShip	Veritread	Amazon Flex	Shipster
Referral Program													
Reward Program										Y			Y
Fuel Card													
Trip planner		Y			Y								
Driver lane preference													
Carrier preference			Y		Y		Y				Y		
TMS Integration			Y		Y	Y				Y			
In-app messaging					Y	Y				Y			
Fuel Advances													
Dashboard analytics					Y								
Driver Rating									Y	Y			
Loadboard		Y		Y	Y			Y					
Rate Benchmarking					Y			Y					
Credit info				Y	Y			Y					
Discounts									Y				

Five Business Models



Five Business Models

The apps studied fall into five business models, each of which is discussed in this chapter.

Business Models	# Companies Studied	Description
Uber-like	10	Apps have characteristics such as GPS-based alerts for nearby loads, track-and-trace, task automation, algorithmic/single pricing, digital document storage, and elimination of third-party interaction.
Loadboard-Plus	7	Apps based off existing loadboards which also provide digital freight matching access to Carriers seeking to fill capacity on-the-go. Carriers can search by location or enable GPS tracking to find loads meeting their parameters.
Broker-Plus	5	Proprietary apps published by Freight Brokerage companies for Carrier partners. Functionality frequently includes communication streamlining and digital document storage.
Specialty	3	Apps similar to those in the 'Uber-like' category, but geared towards specialty freight, like heavy haul equipment, automotive transportation, or household goods.
Last Mile	2	Apps used in local peer-to-peer networks or to fulfill last mile delivery (such as e-commerce fulfillment).

Uber-like	Loadboard-Plus	Broker-Plus
Cargomatic	10-4 Systems (10-4 Marketplace)	Cargo Chief
Convoy	123Loadboard	CHRWTrucks
DashHaul, Inc.	DAT Trucker	CoyoteGO
Dispatcher, Inc.	FreightFriend (MercuryGate)	TQL Carrier Dashboard
Go by Truck, Inc.	GetLoaded	Trucker Path Truckloads
Keychain Logistics	Traansmission	
LaneHoney	ITS Trucker (Truckstop.com)	
LoadSmart, Inc.	**Last Mile**	**Specialty**
Next Trucking, Inc.	Amazon Flex	Roadie, Inc.
Transfix	Shipster	uShip, Inc.
		Veritread LLC

Uber-like App Model

Overview

Apps following an Uber-like model rely on GPS-enabled tracking, transparent algorithmic non-negotiable pricing, automatic parameter matching, documentation and payment via app, two-party involvement (Shipper and Carrier), and push-notifications to Carriers.

While none of the apps studied encompass all of the features of Uber, the 10 apps discussed in this section most closely resemble Uber's business model. All of the companies studied are privately owned. The companies in the Uber-like app model are Cargomatic, Convoy, DashHaul, Dispatcher App, Go by Truck, Keychain Logistics, LaneHoney, LoadSmart, Next Trucking, and Transfix.

All of these companies have functionality for full truckloads, and a few can handle LTL shipments. A handful of specialty transportation mode selections include drayage, reefer, and flatbed. Some apps operate regionally, either between networked cities (San Francisco and LA, for example), or within a set radius of a city (<150 miles). In all cases, the Bill of Lading is handled by in the conventional fasion between Shipper and Carrier, not by the DFM company.

Variations on the model include examples in which Carriers can search for loads, initial quoted price is negotiable, and Carriers post desired locations rather than relying on GPS location.

Resemblance to the Uber model

The Uber-like apps studied for this report are most similar to Uber in the features that minimize transaction friction. These include features such as communication via the app, limiting transactions to Carriers and Shippers (and excluding Brokers), automating parts of the workflow, such as track-and-trace to automate Shipper check-ins, GPS location and push-notifications, and payment handling via the app.

On the other hand, currently the apps lack sufficient scale and face challenges due to the non-commodity nature of the service provided. The individual features are described in detail below.

Similarities to Uber

Many of the Uber-like apps (70% or more) share the following characteristics with Uber.

- **Communication via app:** All 10 Uber-like apps researched allow any necessary communication between Shipper and Carrier to take place via the app, whether through in-app messaging or transactions occuring entirely through the app without need for direct communication (as is the case with Uber).

- **Limited to two-party interaction:** Eight of the 10 apps are designed to limit transactions to Shippers and Carriers, without the need for any other third-party (broker) intervention. The philosophy behind the Uber model is that the most efficient and price optimized transactions occur without dispatcher intervention. Dispatchers have been eliminated from the equation.

- **Location visibility:** Nine of 10 apps allow Shippers to view the location of en route Carriers. Real time track-and-trace is becoming standard. It adds to Shipper confidence and reduces the need for back-and-forth status updates.

- **GPS Locations:** Once a passenger requests a ride, Uber pings the nearest driver. This is an important facet of the Uber software, which minimizes passenger pickup time, thereby increasing efficiency. Similarly, seven apps attempt to match loads to Carriers using Carrier location.

- **Push-Notifications:** As an extension of the feature mentioned above, seven apps will send a push-notification to a Carrier to alert a new shipment. The other option is to search by location, which adds time and work for the Carrier.

- **Auto payment:** Seven of 10 companies allow payment via the app, reducing time and complexity of payment outside the app. This allows for speedier settlement to Carriers.

Some features differ from Uber's model

As mentioned previously, none of the apps studied encompass all of the characteristics of Uber. Below is a summary of features not commonly found, even in the apps most closely resembling Uber. 60% or less of apps studied have these features:

- **Immediate booking:** Only six of 10 Uber-like apps allow immediate booking, meaning Shippers can book a load with a Carrier directly from the app after seeing its rate/pricing. The converse is booking only after loads are sent out to check for Carrier capacity, or after a quote is accepted.

- **Single pricing interaction & Auto-pricing:** Uber's algorithm determines pricing; passengers see the fare upon booking the ride. The price is equal to (base fare) + (time*per minute charge) + (miles*per mile charge) + (additional rider fee), or minimum fare, whichever is greater. When demand is high, surge pricing is enacted in order to incentivize drivers to go on shift. Automatic pricing allows drivers and passengers to make informed decisions on transparent and consistent pricing. It also eliminates the need for any back-and-forth negotiation, which is time consuming and inefficient. This practice is a shift from negotiated Broker/Carrier pricing. Five of the Uber-like apps automatically calculate rices. Six can transact with a single pricing interaction.

- **Closed network/scale:** Uber benefits from having both drivers and passengers located in a closed network (the metro service area). Uber only works becuase there is always supply to meed demand. This is a make-or-break feature of Digital Matching apps and is difficult to accomplish. This is due to the 'chicken and egg' nature: both demand and supply must grow at equal rates. Uber accomplishes scale in metro markets through marketing, often at a loss until desired scale is achieved. It also permits target marketing and staggered ramp-up periods in new markets. Increased trip density enables drivers to get from one fare to the next without trafelling to far. Three companies — Convoy, Cargomatic, and Keychain Logistics — limit operations to a closed metro network.

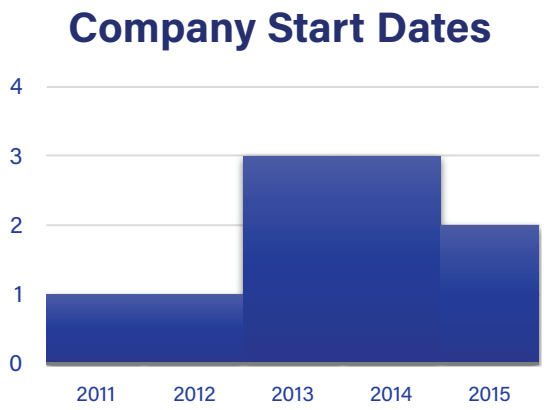
- **Auto-Dispatch:** Auto-dispatch sends an alert to a driver's phone signifying the next pickup. Uber's algorithm identifies the closest driver-passenger match and assigns the fare. Drivers do not engage in pricing negotiations and do not see the final destination/price. Drivers have 15 seconds to accept or decline; too many declines may result in suspension from the app. Of the Uber-like apps, only Cargomatic uses this method.

- **Pooling:** Uber introduced Uber POOL in select markets in 2015, which allows passengers traveling along the same route to share rides with other passengers for a decreased fare. This further fills unutilized space in Uber cars. All passenger pickups are priced and assigned algorithmically, meaning that drivers do not have to spend any time seeking out passengers along routes. The

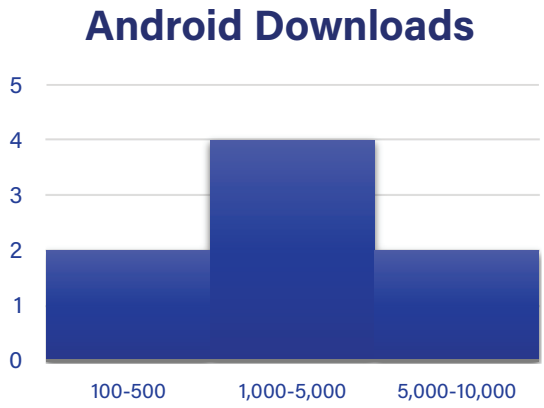
parallel for trucking, of course, is converting LTL shipments along routes to multi-pickup truckloads. As most of the Uber-like apps seem to be focusing at this juncture on TL, this feature is not yet as relevant, and none of the companies studied offer route optimization for LTL. However, LTL to TL consolidation would be a natural (if complex) next step as these apps become more advanced, especially if the mobile technology companies aim to be a substitute for TMS.

Uber-like apps: Summary Characteristics

Apps are designed for Android and Mac operating systems.
When available for mobile, nearly all apps are available for both Android and iPhone/iPad devices.

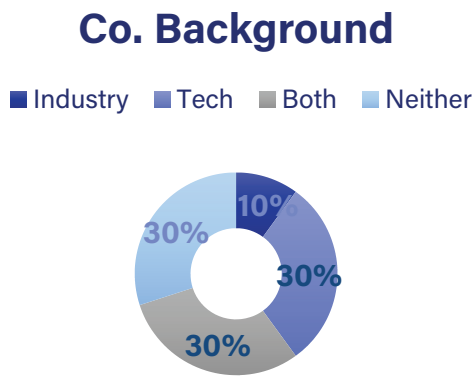


Startup Dates and Funding
Uber-like DFM apps were established between 2011 and 2015. Publicly released venture capital funding since 2011 is $83.6M.

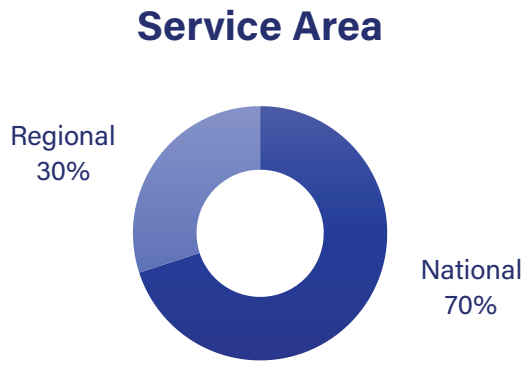


Target Customers and Number of Users
Unlike the reverse-auction exchanges popular in the late 1990s and early 2000s, which by virtue of the pricing method were in favor of the Shipper, the websites for these companies are geared equally towards Carriers and Shippers. Equal benefits are touted for both parties. The algorithmic pricing model is intended to resemble the spot market's supply-and-demand equilibrium and therefore be equally advantageous to both parties. Carriers can be owner-operators, the owners of small fleets, or private carriers with for hire authority seeking backhauls. Two of the apps are also marketed to Brokers (Dashhaul and LoadSmart).

Active user data is not available, but the number of downloads from the Google Play store (for Android devices) offers a comparison between companies. Two fall in the range of 100-500 downloads, four are in the range of 1,000-5,000, and two (Keychain Logistics and Dispatcher Inc.) have between 5,000-10,000.



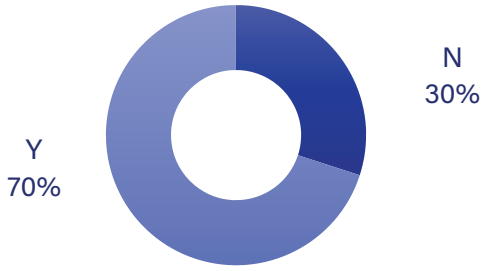
Executive Experience
40% of companies studied have founders and/or executives with backgrounds in trucking or the 3PL industry. Industry background, though not essential, is very beneficial. Those 30% of companies with expertise in both arenas (Cargomatic, Transfix, and Next Trucking) are well positioned to navigate the complexities of both the software and industry sides of the business.



Area of Operation
70% of these companies operate nationally. Those that operate regionally are expanding or have plans to do so.

The regional expansion model, the same one many startups (including Uber) use, allows for marketing on a limited budget, ability to test out kinks in the apps, and perhaps most importantly, the ability to build scale within a region. Scale is an essential component for success; the efficiencies associated with DFM apps depend on ample Carrier supply and Shipper demand.

FMCSA Broker

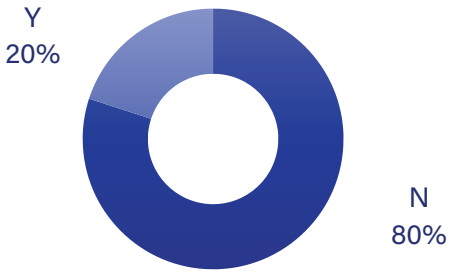


FMCSA Brokerage Licensing
None of the Uber-like services bills itself as a broker. However, seven of 10 are registered as property brokers with FMCSA and have secured the necessary $75,000 bond.

Moreover, in the Terms of Service documents, companies explicitly state they do not act as brokers:

- "DashHaul.com is a Neutral Venue. DashHaul.com is not a Transportation Service Provider (TSP), Freight Broker or freight forwarder."
- LaneHoney: "We automate (and provide to our Members) many services that are typically performed by fleets or brokers for the benefit of Carriers and Shippers.... To be clear, LaneHoney is not a Carrier, Shipper or Broker."
- Cargomatic's Terms of Service never refer to the company as a broker, and state: "Cargomatic offers a platform to connect shippers and carriers, but does not and does not intend to provide shipping services or act in any way as a carrier, courier, or shipping provider."

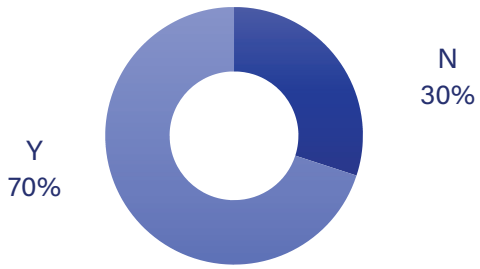
Marketed to Brokers



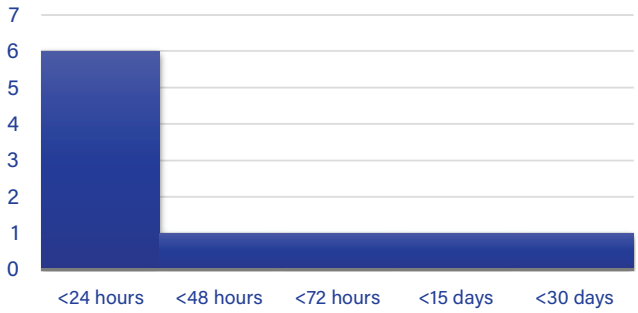
Broker Use of Uber-like Apps
Generally, Uber-like apps attempt to limit interactions to two parties. 80% limit use to Shippers and Carriers. DashHaul and LoadSmart are the only two companies in this category that market their app to Freight Brokers.

Uber-like apps: Functionality

Payment Via App



Carrier Payment Time

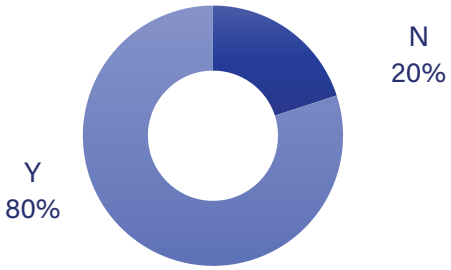


Fees and Pricing
Transaction-based commissions, where available (7 of 10 companies), range from 3-20%. Transactions occur via the application, and drivers are in most cases paid within 24-72 hours, with two exceptions (15 days with 24-hour payment for a 3% fee, and 30 days). Two apps, LaneHoney and Next Trucking, provide transparency into lane rates.

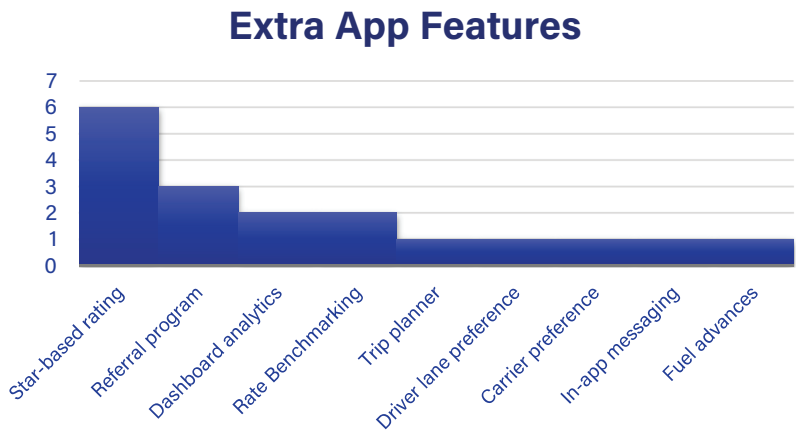
Fees are not uniformly reported, but a summary of stated fees (either listed on website or quoted to the press) is below. All fees are based off shipment price:

- Variable fee of less than 20%
- 20% commission
- 3% 'technology fee'
- 7% fee
- 2-3% transaction fee
- Transaction fee of 10% for Long-haul (>500 miles) or 20% for short-haul or LTL
- Flat fee of 4% + 3% for Carrier quick pay

Track-and-Trace



Track-and-trace
80% of Uber-like apps provide real time track-and-trace to Shippers. LaneHoney does not, and instead sends automated alerts at key points in the journey.



Other Features

The applications offer a smattering of other features. Six of the 10 apps have a star-based satisfaction rating system for Carriers, similar to Uber.

DashHaul, Go by Truck, and LoadSmart have referral programs. LaneHoney allows carrier preference and in-app messaging. Dispatcher Inc. can integrate with TMS. Transfix has a trip-planner built into the app. Seven also allow log-in through a web-app.

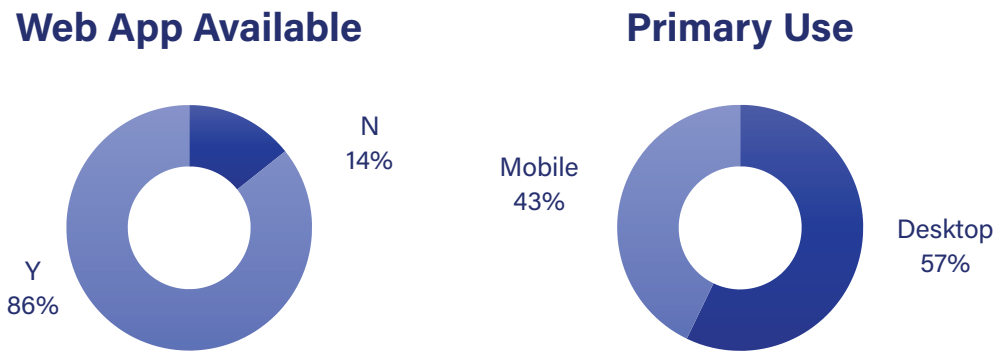
Loadboard-plus Model

Seven companies studied are classified as 'Loadboard-plus.' Loadboards offer mobile apps where loads are searchable by Carriers, sometimes with the option of GPS-enabled location matching. Some offer booking via the app, thereby eliminating the need for phone calls and email. Carriers can view all accepted loads in one place via the app.

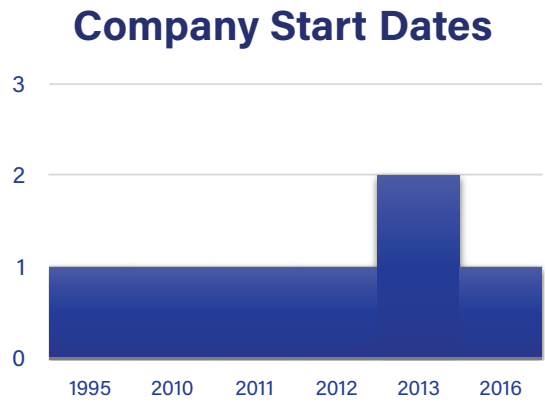
Advantages of Loadboard-plus apps include scale, nationwide adoption, customer trust, and familiarity to both Carriers and Brokers.

The apps are marketed as secondary products to pre-existing Loadboards. In some cases (such as Truckstop.com and 10-4 Systems), the mobile app is just one part of a larger product offerring.

Loadboard-plus apps: Summary Characteristics

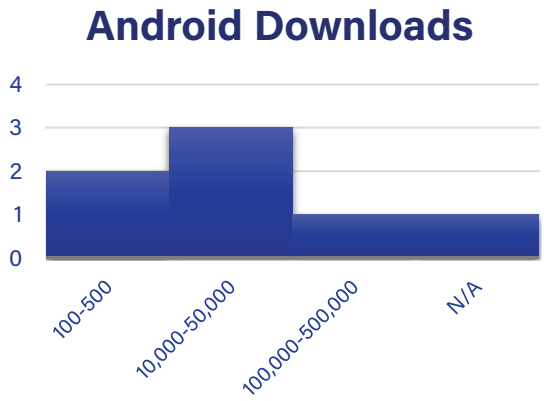


Operating Systems
Apps are add-ons to Loadboards, which are also available via the web. Mobile use is for Carrier convenience rather than intended to stream all interactions via the mobile app. Shippers and Freight Brokers post loads via the web.



Startup Dates
Loadboards have existed for years (Truckstop.com appeared on the web in 1995 for example; DAT has

existed since 1978). However, they didn't begin offering apps until 2010 (GetLoaded), with the most recent (123Loadboard) launching its app in early 2016.



Target Customers and Number of Users

Target customers for Loadboards are Brokers and Carriers. The apps are targeted towards Carriers. DAT Trucker has 100,000-500,000 downloads on Google Play; GetLoaded, Truckstop.com, and 123Loadboard have 10,000-50,000; and 10-4 and Traansmission have 100-500 downloads.

Area of Operation; Equipment Type and Services

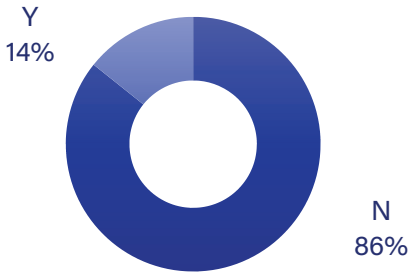
Loadboard-plus apps operate nationwide, and cover all types of equipment.

FMCSA Broker

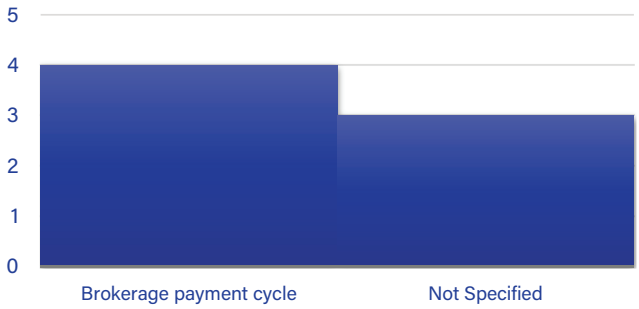
FMCSA Brokerage Licensing
None of the Loadboards researched are registered as property brokers with the FMCSA.

Loadboard-plus apps: Functionality

Payment Via App



Carrier Payment Time

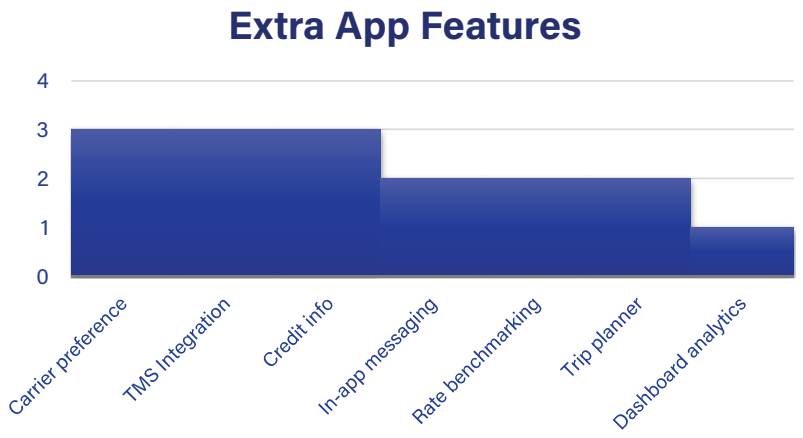


Fees and Pricing
As opposed to the Uber-like model, pricing is set by Shippers or Brokers, and can in some instances be negotiated by the Carrier. These negotiations in some cases can occur via the app. More frequently, however, negotiations will take place offline via phone or email. Booking loads follows the same pattern — sometimes possible in-app, but otherwise confirmed via phone or email.

Access to a Loadboard-plus app requires a subscription to the associated Loadboard. Subscriptions are monthly fees, sometimes tiered by service and user-type (Carrier, Shipper, or Freight Broker).

Payment is not handled via the app, and payment terms are dependent on the originating Shipper or Freight Broker.

In many cases, pricing is transparent, and Carriers have access to lane rate benchmarking.



Other Functionality

These apps tend to have more bundled functionality for Carriers: trip planners, in-app messaging, rate benchmarking, broker credit ratings, TMS integration. Some allow for limitations to only preferred or 'friend' broker/carriers.

Apps are not designed to provide alerts such as track-and-trace or automatic updates back to the Shipper.

Variations

Traansmission and 10-4 Systems offer private or friend-based Loadboards. These limit Carriers and Shippers visibility to those chosen as 'friends' or those that have worked together previously. Another company, MercuryGate's Freight Friend, offers an online freight-matching marketplace as part of its product suite (not attached to a major laodboard).

Broker-plus Model

Five of the apps studied are extensions of existing Freight Brokers. They are used by Freight Brokers and their Carriers.

Two of the companies studied, Cargo Chief and Trucker Path, provide alerts to Carriers when loads matching their criteria are posted; the other three allow load searching. None of the apps include GPS-enabled location; instead Carriers post current or desired location parameters.

Apps store documents and history, collect all loads into one location, allow a dispatcher to assign drivers, and send status updates.

Broker-plus apps: Summary Characteristics

Area of Operation; Equipment Type and Services

Operation is nationwide. TL, LTL, Intermodal, and specialized equipment are available.

Operating Systems

Apps are mobile-only, with the exception of Cargo Chief and Trucker Path. CoyoteGO offers limited functionality (text) to non-smart phone users.

Fees and Pricing

Pricing is set by the Brokerage and accepted by Carriers. Cargo Chief and Trucker Path allow back-and-forth price negotiation via the app.

Startup Dates and Capital

Apps were launched between 2012 and 2015. Trucker Path received $20M Series A funding in June 2015.

Other Functionality

Functionality is focused on searching for loads. Cargo Chief offers a Reward program, Cargo Chief and Trucker Path offers TMS integration. Trucker Path offers Broker functionality as an addition to the primary app, Trucker Path Pro. TQL Carrier Dashboard has voice search capability, so Carriers can perform hands-free load searches.

Target Customers and Number of Users

All apps are available to Brokers except Cargo Chief. Trucker Path has 500,000-1,000,000 downloads on Google Play. CHRWTrucks has 50,000-100,000. CoyoteGO and TQL Carrier Dashboard have 10,000-50,000. Cargo Chief has 100-500 downloads.

Last-Mile Model

Local Last-Mile delivery services can encompass B2C, business-to-business, and consumer-to-consumer business. Typically, Carriers can include anyone with a car, and the only qualification is often being 21+ with a valid drivers license. Rather than palletized or LTL freight, the items transported are often parcels, documents, single pieces of furniture, bulky items, pets, or store deliveries. Often special handling and delivery services are required making them less compatible with modern LTL trucking services.

An in-depth study of Last-Mile delivery services isn't relevant to this report. However, aspects of this market do pertain to freight. For illustrative purposes, we studied two companies (Amazon Flex and Shipster) using Uber-like technology to capture portions of the local/Last-Mile delivery market. These companies are worth mentioning as their use of technology comes closest to a truly Uber-model, and because heavy/bulky goods Last-Mile delivery is an estimated $10 billion market, which is growing quickly thanks to e-commerce.

Shipster

New York-based Shipster handles courier to LTL-size shipments, and delivers locally or arranges for worldwide transportation (via partners such as FedEx, UPS, and DHL). Founded in 2014, Shipster expanded to San Francisco in July 2015. Shippers take a photo of the item to be shipped, and pickup is on-demand (within 20 minutes). Orders are placed on an iPhone or via web app.

Marketing for Shipster, along with similar apps such as Shyp and Dropoff, is geared towards small businesses and shipments of personal/household goods (eBay shippers, garment delivery, documents, and furniture).

Pricing is determined via an image recognition algorithm which parses item dimensions and determines the type of shipment. High frequency shippers can receive volume discounts.

Last-Mile Potential

Shipster has entered two urban markets, New York and San Francisco, in which adoption of sharing-economy apps is high; the customer base is large and likely to use an app such as Shipster. Serving as a delivery service for small, growing businesses creates customer relationships, which could eventually be extended to include local LTL or TL delivery. Continuing to develop technology for algorithmic pricing and shipment/dimension imaging, positions this type of technology to do well in the future.

Amazon Flex

The emergence of two-day, one-day, and now same-day shipping calls for technology and the workforce to execute quick order fulfillment and delivery. Amazon hires companies such as Dynamex and OnTrac for last-mile Amazon Prime deliveries (two-day delivery on 30 million items). As of September 2015, Amazon Flex fulfills Amazon Prime Now's 1–2 hour deliveries. With an Amazon Prime membership, two-hour delivery is free (in 27 cities). One-hour delivery is $7.99. Over 25,000 products qualify.

Amazon Flex Carriers must be age 21 or older with a valid drivers license and vehicle, along with a background check which includes a review of motor vehicle records. Carriers receive a flat rate of $18/hr plus tips. Carriers work in shifts (four-hour blocks which can even be scheduled the same day). They arrive at the Amazon distribution facility and wait for shipments. They can be tendered either as a single

package or multiple packages on the same route. Carriers use an Android app to scan packages at the distribution center and upon delivery. Preferred street routes can be determined by the driver.

Since shifts are fixed, to eliminate any 'leftover time' at the end of a driver's delivery schedule, drivers may be assigned a final nearby food delivery.

Similarity to Uber

Local, small package delivery is a commoditizable service in the same way that local taxi pickups are. Once the service is expanded to new markets, the companies can ramp up quickly to scale. Amazon's large customer base and product offering mean there is a significant volume of customers. Since drivers do not need specialized skills or equipment, there are also plenty of carriers.

Like Uber, many parts of the process are automated. Pricing is automatic, transparent, and frictionless. Driver assignments require no manual intervention or decision making; determinations are made by Amazon and dispatched centrally.

Amazon's Potential

Amazon is well known for its focus on growth versus profit, and this trend is expected to continue in 2016, according to the company's 2015 annual report: "We will balance our focus on growth with emphasis on long-term profitability and capital management. At this stage, we choose to prioritize growth because we believe that scale is central to achieving the potential of our business model."[1]

While ostensibly building a retail empire, a distribution network grew in support of the company's goal. Transportation costs historically have been approximately double transportation revenue[2]. The company is not devoted to the idea of focusing solely on retail. Instead, Amazon repurposes the technology and networks it has developed to the company's greatest advantage: "We will make bold rather than timid investment decisions where we see a sufficient probability of gaining market leadership advantages."[3] The company is also embracing its role; in a recent 10-K filing, it referred to itself as a 'transportation service provider.'

Currently, Amazon is rapidly expanding its Prime Now program. The necessary distribution network is growing in support of the program. The company is accruing warehousing, a workforce, and partnerships to fulfill the program. Most importantly for this discussion, Amazon is building transportation networks and the technology to optimize transportation within local delivery areas.

The company can act quickly: Amazon Prime Now expanded from one city (Manhattan) in Q4 2014, and has since expanded to more than 30 cities, prompting more than 20 (and counting) distribution facilities for Prime Now product. The initial launch of the program in Manhattan occurred in less than four months.

Amazon is not the only company that will benefit from these developments. Fulfillment by Amazon, the company's program to allow third-party sellers to leverage Amazon's fulfillment network, is growing. About half of all items are sold via Amazon Marketplace. Sellers meeting a certain volume threshold and meeting certain KPIs are able to ship products via Prime.

1 Amazon http://phx.corporate-ir.net/phoenix.zhtml?c=97664&p=irol-reportsannual

2 Ibid.

3 Ibid.

What could this mean in terms of DFM?

- Drivers with an app that builds optimal multi-stop delivery routes.
- A competitive last-mile delivery network.
- Automated pricing and payment.
- A contractor workforce where overtime pay, benefits, and other costs are eliminated.
- The technology could be used to in-source Amazon's own Last-Mile delivery; the company would no longer need to outsource Last-Mile to Dynamex, Pilot, and others.
- Growth in scale and competitive advantage, as ever-increasing efficiency and speed dominate competitors.

Specialty Models

Three DFM companies specialize in particular types of transportation and products.

VeriTread
VeriTread specializes in heavy-haul shipping. The marketplace is designed for Carriers, Brokers, and Freight Forwarders. VeriTread solicits detailed information about Shippers' equipment, capabilities, and service area at the time of sign-up to enable freight matching. VeriTread is avaialble only as a web-app.

uShip
uShip is one of the older companies studied. Beginning operations in 2004, it was one of the forerunners in the DFM space. More than 100,000 people have downloaded its app. The app is intended to be used by Shippers, Brokers, and Carriers. The company has received $26.7 million in several venture capital rounds. App functionality includes auto payment, track-and-trace, immediate booking, and communication via the app. Special features include a reward program, TMS integration, in-app messaging, and star-based satisfaction rating.

uShip offers transportation of household goods, heavy equipment and vehicles, freight (TL and LTL), and live animals.

uShip reported $160M revenue in 2015.

In June 2016, DB Schenker (the 3rd largest 3PL as measured by 2015 revenue) bought the European rights to uShip for "tens of millions of dollars," to utilize freight matching immediately rather than continue developing a proprietary solution.

uShip is also known for its presence on the television show "Shipping Wars."

Roadie Inc.
Roadie Inc. specializes in C2C deliveries, both locally and nationwide, including delivery of small items, furniture, gear, and pets. More than 100,000 people have downloaded its app. The app offers auto payment, track-and-trace, single pricing interaction, immediate booking, two-party interaction, and communication via the app. Special features include a star-based satisfaction rating system and discounts for drivers.

Drivers must be 18 years old, have a valid driver's license, and a current auto insurance policy. Once on the app, drivers must maintain a 4-star rating (the same criteria used by Uber).

Roadie Inc. has raised $25.3 million in venture capital, most recently $15 million in June 2016.

Industry Challenges

Competing with Freight Brokers

Freight broker classification

None of the ten companies falling into the 'Uber-like' model is marketed as a Freight Broker, and in the three Terms of Service documents readily available, two explicitly state the company's role is not that of a broker, while the third doesn't mention Freight Broker either way. However, seven of the companies are registered with the FMCSA as Freight Brokers.

FMCSA defines a Freight Broker as a company which is responsible for "the arranging of transportation or the physical movement of a motor vehicle or of property. It can be performed on behalf of a motor carrier, consignor, or consignee." Many industry experts have noted in interviews that the "Uberization" of freight resembles the Freight Broker business.

If the Digital Freight Matching industry grows and becomes more formalized, so too will the definition of these companies as either Freight Brokers or under a newly developed definition.

If the companies are deemed Brokers, each will be required to obtain Freight Broker authority through the FMCSA, which be acquired with a $300 application processing fee and proof of insurance coverage (a Surety Bond of Trust Fund Agreement) in the amount of $75,000[1]. Brokers will also often have supplemental insurance (such as vicarious auto liability insurance) and/or contingent cargo insurance (in the case that shippers hold the brokers liable for cargo loss). Many Carriers expect Brokers to have this insurance.

Carriers are reluctant to work with Brokers without established credit, as payment completion and timeliness is a potential issue. If DFM companies are classified as brokers and payment is transmitted from Shipper to Broker to Carrier, the companies will need to establish solid credit ratings.

Additional responsibilities of Brokers including exception handling

Freight Brokers offer a number of benefits to Shippers, such as supplemental 3PL services (for instance, claims handling and auditing). Brokers check Carrier insurance, DOT safety ratings, and FMCSA CSA scores for compliance. Brokers also handle operational exceptions and find alternate Carrier capacity in case of equipment breakdowns.

If a shipment is in route and a truck breaks down, Brokers arrange for an alternate truck to complete the delivery. Since Brokers have relationships with many Carriers, they can find capacity for a variety of equipment types, at all hours of the day, even in remote areas. DFM companies will need to match this level of exception-handling to compete with traditional Freight Brokers, which will require relationships with many Carriers and dedicated 24/7 customer support personnel.

Not all shipments are straightforward. Freight Brokers arrange transportation utilizing multiple modes. Though this represents a small percentage of total trucking shipments (2.4% of shipment value is transported via both truck and rail or both truck and water[2]) this complexity is another reason Shippers turn to Brokers, as Brokers often have relationships with companies specializing different modes.

1 FMCSA https://www.fmcsa.dot.gov/registration/broker-registration

2 U.S. Department of Transportation http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/ec12tcf-us.pdf

Specialized equipment

14.5% of trucking involves the transportation of hazardous materials[3], 13.9% involves temperature control[4], and another portion is transported on specialized equipment such as flat bed or heavy haul trucks. If DFM companies wish to include these equipment types, they must either specialize or build a network large enough to allow filtering by equipment type.

DFM pricing compared with Freight Broker pricing

Freight Brokers operate at an average gross profit margin of 15%. Based on the data available, DFM apps take a commission of anywhere between 3% and 20%. While DFM apps offer some of the same benefits as Freight Brokers (allowing Shippers to find Carrier capacity, posting loads to multiple Carriers, etc.), Freight Brokers provide valuable exception handling, complex transportation management, and find specialized equipment. At this point, no one can parse the value of each of these components to the Shipper. Therefore, we will not know the optimal commission for a DFM company without trial-and-error pricing.

Customer Relationships

By their very nature, Digital Matching services are fundamentally low information systems and require user trust to function. As a result, virtually every Digital Matching app relies extensively on user satisfaction ratings, usually on a five-star based system. Uber relies solely on the star system, and the results are only visible to the driver and the company. Other Digital Matching companies, such as Airbnb, provide both a rating system and allow users to provide written feedback which is visible to all potential customers. In most cases, both the customer and the service provider are rated, though companies tend to act upon the service provider rating. The consequence of a bad rating is either a temporary or permanent prohibition from the platform. The system has generally worked very well to manage customers' experiences.

A Pew Center Survey found that users of ride-hailing services such as Uber expect both the Uber driver and the Uber company to share the role of managing customer experience[5]. If this same expectation is translated to freight, Shippers will rely not just on Carriers, but also on DFM companies to meet service standards.

Rating systems will be essential for DFM companies. According to the DOT, the average value per ton transported by truck is over $1,200[6]. Therefore, Shippers must have a high level of trust in the DFM to use the app, and will rely on other users signaling positive experiences through ratings. Shippers have many options and one bad experience will very likely cause them to send business elsewhere, notably to Freight Brokers who have 24-hour points of contact to manage customer relationships.

Legal and Policy

Legal issues implicit in the Sharing Economy

Operating within the Sharing Economy exposes companies to legal risk; disruptive businesses are by definition operating in a space in which existing laws and regulations may be ambiguous. Even the sector in which the companies operate is undefined; it's not clear whether the companies are technology companies or transportation providers. Over 100 lawsuits have been filed against Uber in state and

3 As measured by value. DOT Commodity Flow Survey 2012 http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/ec12tcf-us-hm.pdf

4 As measured by value. DOT Commodity Flow Survey 2012 http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/ec12tcf-us.pdf

5 Pew Center http://www.pewinternet.org/2016/05/19/on-demand-ride-hailing-apps/

6 Ibid.

federal courts regarding employee/contractor classification, background checks, "antitrust breach of contract, personal injury, personal property, and civil rights violations."[7] Suits have been filed by drivers, labor groups, taxi companies, and customers.

Resolving these legal issues, whether favorably or unfavorably, is expensive, time consuming, distracting, and bad publicity. A recent settlement regarding Uber driver independent contractor status will cost Uber anywhere between $84-$100 million.

While Uber has borne the brunt of legal issues, its competitors have not been spared. Law360 lists over 40 suits filed against Lyft. Similarly, other companies in the Sharing Economy and 15 against Airbnb[8]. DFM companies are likely to face legal challenges, perhaps regarding many of the same issues. Whichever company emerges as the forerunner will naturally face the biggest burden and fight legal battles on behalf of others in the industry.

Possibility of new regulations.
In the past few years, Digital Matching firms have experienced increasing regulatory scrutiny. In November 2015, taxi owners sued New York City and its Taxi and Limousine Commission, arguing that Uber drivers had an advantage: encountering fewer regulations while providing a comparable service[9].

Some aspects of the Sharing Economy are becoming more regulated. Airbnb, for example, started operations while facing few regulations. Home owners ("hosts") made vacant properties available to rent, and customers paid the homeowner. Now, in Chicago, hosts must register with the city, pay a per-transaction tax, and limit the number of apartments rented in a building. In San Francisco, hosts face a limit on the number of days an apartment can be rented. In Santa Monica, hosts must have business licenses. More legislation is pending in Los Angeles and New York (the company's biggest market)[10]. The complexity of varying regulations in different markets is operationally challenging.

Just as Uber may be regulated more like a taxi company and Airbnb more like a hotel or landlord, DFM companies may become more regulated, and expected to operate more like trucking companies or Freight Brokers — or even as an entirely new classification. Regulation could differ by state or metro-area, and may come in the form of taxes and fees, increased background checks, Freight Broker authority with the FMCSA, liability, employee classification, and safety ratings.

Digital Matching firms gaining scale and strength.
The size of Uber now allows the company to wield greater power in opposing unfavorable legislation. The company plans to combat legal problems and influence global policy with a public policy advisory board, which boasts a formidable staff including Ray LaHood, former U.S. Transportation Secretary and former EU Vice President Neelie Kroes[11].

Public attitudes towards regulation for companies in the Sharing Economy is mixed; 42% believe digital ride hailing companies should not be required to follow the same regulations as taxi companies, while 35% think they should (23% are undecided)[12]. Companies within the Sharing Economy are hoping

7 Law360 http://www.law360.com/articles/785147/the-7-uber-cases-to-watch
8 Ibid.
9 Reuters http://www.reuters.com/article/us-newyorkcity-taxis-uber-idUSKCN0T700J20151118
10 The Atlantic http://www.theatlantic.com/business/archive/2016/07/uber-airbnb-regulations/489683/
11 Bloomberg http://www.bloomberg.com/news/articles/2016-05-04/uber-names-former-eu-vice-president-kroes-to-new-advisory-board
12 Pew Research Center http://www.pewinternet.org/2016/05/19/the-new-digital-economy/

to leverage changing customer attitudes to help shape policy. Uber formed a Public Affairs team to influence consumer attitudes[13]. As noted in The Atlantic, "city officials can't write regulations as quickly as consumers get hooked."

Some Digital Matching firms can now selectively enter markets with favorable regulations, and, likewise, can afford to exit markets that don't cooperate. In May 2016, voters in Austin, TX, voted against an ordinance that would allow ride-sharing companies to use their own driver background checks (as opposed to the city's checks which include fingerprinting). Uber (along with competitor Lyft) withdrew from the Austin, TX, market, walking away from an $8 million marketing investment in the city[14].

As the parameters of the Sharing Economy are defined, DFM companies will benefit from the policy precedents shaped by Uber, Lyft, and others. DFM companies should pay close attention to the challenges experienced by Uber and others as an anticipation of potential issues.

Employee Classification

16% of suits filed against Uber, and by far those representing the highest profile and value, regard driver classification. Uber brands itself as a neutral intermediary and classifies drivers as independent contractors. However, some drivers, labor groups, and academics argue that drivers more closely resemble employees. Thus far, cases have been settled (one in Massachusetts, one in California). Drivers will continue to be classified as independent contractors. Since the cases were settled, not decided, they do not set legal precedent. Therefore, the question of classification has not yet been definitively resolved and the issue will certainly arise again.

DFM companies are likely to consider all Carrier users of the app independent contractors. Two examples include LaneHoney, which states, "The relationship between the parties will only be that of independent contractors… "[15], and Cargomatic: "Your relationship to Cargomatic is that of an independent contractor."[16] This is reflective of the relationship between Carrier and Broker in the traditional Freight Brokerage model. The model Carrier/Broker agreement published by the American Trucking Associations states "The relationship of Carrier to Broker is that of an independent contractor… Under no circumstances shall employees or agents of Carrier be deemed employees or agents of Broker or Shipper, nor shall Broker or Shipper be liable for any wages, fees, payroll taxes, assessments or other expenses relating to employees or agents of Carrier." The National Transportation Brokers Association sample agreement contains similar wording.

Even so, employment classification is already a contentious topic for trucking companies. For example, in 2015, FedEx settled a decade-long case regarding driver employment status for $228 million[17].

At the moment, independent contractor status makes more sense for Carriers finding loads through DFM companies. However, if the aim is to disrupt the industry long-term, then the nature of work could change. DFM companies should consider the ramifications of more stringent labor laws.

Investment

13 Uber Under the Hood https://medium.com/uber-under-the-hood

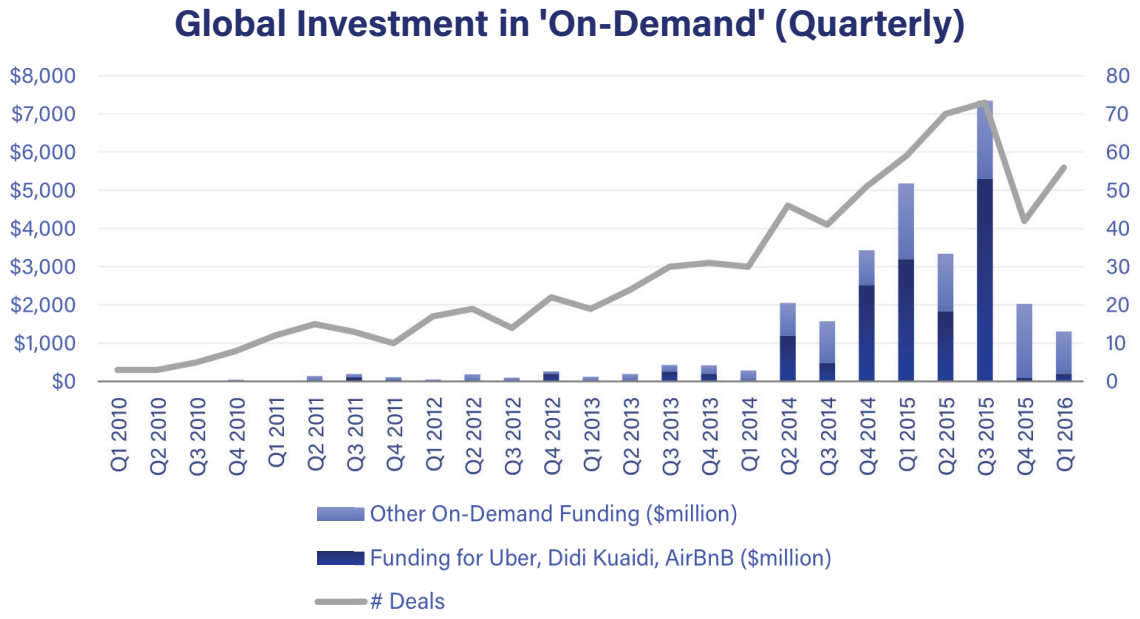
14 CNN http://money.cnn.com/2016/05/08/technology/uber-lyft-austin-vote-fingerprinting/

15 LaneHoney Terms of Service https://www.lanehoney.com/terms.html

16 Cargomatic Terms of Service https://www.cargomatic.com/terms-of-service/

17 Forbes http://www.forbes.com/sites/robertwood/2015/06/16/fedex-settles-driver-mislabeling-case-for-228-million/#1c1034f55f5a

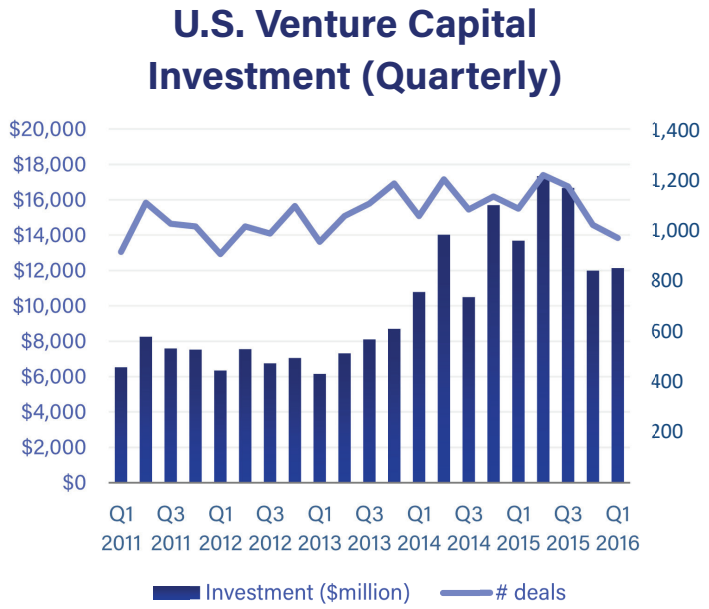
Investment recently trended downward for On Demand.
As noted earlier in this report, total U.S. VC investment, global 'On-Demand' investment, and DFM investment each reached an all-time high in 2015. However, analytics firm CB Insights notes a recent cooling in On-Demand financing, reporting Q4 2015 and Q1 2016 global investment in 'On-Demand' companies was at its lowest since Q3 of 2014 , both in terms of investment amount and number of deals[18]. Note that the Q4 2015 trend is largely driven by no astronomical investments in the three dominant global players (Uber, Airbnb, and Didi Kuaidi, the Chinese ride-hailing company). When these companies are excluded, Q4 2015 On-Demand investment is only down 8.7% from the previous quarter, so the dramatic drop is not necessarily indicative of all apps. However, Q1 2016 showed a significant drop even after the 'big three' were excluded.



In tune with general 3PL M&A activity, U.S. Venture Capital Investment also shows a dropoff in Q4 2015 and Q1 2016[19].

18 CB Insights https://www.cbinsights.com/blog/on-demand-funding-trends/

19 PwC/NVCA MoneyTree Report, Data: Thomson Reuters http://www.pwcmoneytree.com/Reports/FullArchive/National_2016-1.pdf



Finally, JPMorgan Chase Institute found that participation rates in the Online Platform Economy decelerated in 2015[20].

As anyone who followed transportation exchanges during the late 1990s and early 2000s is aware, transportation exchanges were not seamlessly translatable to "the next big thing" — in that case, the internet, in this case, the Sharing Economy — as they were presumed to be. Signs of promising investment were in no means a sure thing. DFMs should continue to monitor the market to determine if and when investment declines.

Technology

Other disruptors on the horizon

Disruption of the freight industry may occur independently of DFM companies. Other potentially disruptive technologies may transform the industry before DFM does.

Many major car manufacturers are piloting self-driving vehicles (Google stated the company has self-driven more than 1.5 million miles, while Tesla customers have driven 100 million miles with Autopilot active)[21]. Timeframe predictions range anywhere from five to 30 years[22]. Even Uber itself is in the self-driving vehicle business with Toyota. And, GM is working on an autonomous vehicle with Lyft[23].

The problem DFM companies are trying solve might easily be solved by an existing company that has scale and a big budget. Many car companies are hedging their bets and investing in all avenues: self-driving vehicles, app-to-dashboard integration, and partnerships/investments. UPS (which owns Coyote), implemented On-Road Integrated Optimization & Navigation (ORION) on over 80% of its

20 JPMorgan Chase Institute https://www.jpmorganchase.com/corporate/institute/document/jpmc-institute-volatility-2-report.pdf

21 KPBC http://www.kpcb.com/blog/2016-internet-trends-report

22 IEEESpectrum http://spectrum.ieee.org/cars-that-think/transportation/self-driving/google-selfdriving-car-will-be-ready-soon-for-some-in-decades-for-others

23 Uber https://newsroom.uber.com/us-pennsylvania/new-wheels/

routes. It optimizes routes using mathematical models, data from planning a system, and customized map data. ORION also allows "what if" modeling[24].

Then, of course, there is the prospect of drones, which companies like Amazon, Google, and Walmart have started testing.

Another possibility is that technology developed by Digital Matching companies could be absorbed by another type of technology. The algorithms powering Uber could be incorporated into optimizing freight routes for self-driving vehicles, as an example.

Technology be adapted for other uses by competitors like Uber, Loadboards, and Brokers
The potential of DFM companies has its critics, but it is generally agreed that the transportation industry will benefit from efficiencies offered through improved technology. The advantages evident in DFMs — automatic notification to Carriers of nearby loads, digital document management, track-and-trace, cloud-based data storage — can all be implemented piecemeal by any variety of other technologies. Companies specializing in Last-Mile delivery can incorporate matching algorithms into apps for drivers. The large user base of Loadboard-plus and Broker-plus apps can be leveraged to more efficiently alert nearby Carriers to loads. In other words, Digital Freight Matching could be a concept integrated as part of a suite of other technologies used by Carriers, Shippers, and Brokers alike, and not necessarily as the end-state product.

Nature of the Trucking Industry

Carrier barriers to entry
As compared to the barriers to entry for Uber drivers (must have access to a registered vehicle, car insurance, 21 years of age, mobile phone, driver's license, and pass a background check), the barrier to those wishing to participate in DFM is more formidable.

According to the American Transportation Research Institute, common qualifications for truck drivers include "a commercial driver's license, a medical card, multiple lines of insurance, port access cards, transportation security credentials and a variety of 'endorsements' such as the hazmat endorsement. The training, costs and standards required to obtain these and additional certifications are not inconsequential… The commercial driver's license itself requires multiple weeks of training and testing and the tuition can run as high as $6,500." Drivers must also maintain good FMCSA CSA records and be at least 21 to hold a commercial driver's license, or older for certain specialized sectors such as hazmat or long-haul[25]. The American Trucking Associations found that 88% of fleets surveyed said that most applicants were not qualified[26]. The barriers to becoming an owner-operator are, of course, more stringent, and include the cost of equipment, operating authority, and the ability to run a business.

In other words, DFM companies do not have the luxury of a seemingly endless potential workforce (as of early 2015, over 160,000 people drove for Uber, and the number was on trend to rapidly increase[27]). DFM companies, at least in the short term, will need to solicit Carriers from the existing driver pool.

24 UPS http://www.slideshare.net/col1mjn_IR/ups-overview

25 ATRI http://www.mmta.com/document_upload/Analysis of Truck Driver Age Demographics FINAL 12 2014.pdf

26 ATA Benchmarking Guide for Driver Recruitment & Retention http://www.trucking.org/ATA Docs/News and Information/Reports Trends and Statistics/10 6 15 ATAs Driver Shortage Report 2015.pdf

27 Hall, Jonathan V. And Krueger, Alan B. http://arks.princeton.edu/ark:/88435/dsp010z708z67d

Industry acceptance

Uber debuted in San Francisco, arguably the city most prone to early adoption of new technology. Carriers may be reluctant to experiment with new technology, especially when proven options such as Loadboards or working with Freight Brokers are available. However, as Dan Lewis, CEO of Convoy, stated: "Not everybody has to shift over, and if the new way is better than the old way, then people using the Uber-for-trucking model will do better than those who don't."[28]

Nature of the Freight Problem

Solving a different problem

It may be that neither the problem nor the solution is Uber-like enough that DFM companies can capture the market by vastly outperforming existing services. As mentioned previously in the report, Last-Mile DFMs closely match the "Uber problem," and Uber-like DFMs match the problem to an extent.

Uber's success could be attributed to the unique problem it wholly solves, and companies which only solve for a portion of the problem could have challenges disrupting an industry.

Providing an incomplete solution

Many customers use Uber because it solves many problems at once, and offers that solution simply, conveniently, and entirely within the app. If DFMs leave many inefficiencies unaddressed, such as two-party interactions, negotiated pricing, Carrier decisioning, then DFM services are not as valuable as they could be. Customers seeking a complete solution will not be interested in using an app if their capacity issues are only partially solved.

An adequate solution already exists

In an interview with Trucks.com, Bob Costello, the chief economist at the American Trucking Associations, pointed out DFM companies don't offer a significant value-add to existing services. He said, "It is unclear what they offer the industry that isn't already provided by existing brokers, load boards and other similar services… this seems like the broker model but with a different platform."[29] If DFMs do not differentiate services on price, speed, convenience, or efficiency, they will simply be a digital rehash of services truckers have relied on for decades.

Scale and network

Princeton University economists Judd Cramer and Alan Krueger cite 'network efficiencies from scale' as one of the reasons Uber has a high capacity utilization rate (i.e. minimizes 'empty miles'). Cramer and Krueger found that having scale helped Uber improve capacity utilization rate by 30% (as measured by time) and 50% (as measured by miles)[30].

Uber also cites performance improvements due to increased scale, saying the increase of passengers and drivers was responsible for decreased average passenger pickup time — 3.4 minutes in 2015, as compared to 6.6 minutes in 2012. During this same period, capacity utilization increased from 40% to 67% — all due to scale[31].

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28 Trucks.com https://www.trucks.com/2016/04/13/on-demand-shipping-startups-compete-to-be-uber/

29 Ibid.

30 Cramer, Judd and Krueger, Alan B. NBERDisruptive Change in the Taxi Business: The Case of Uber http://www.nber.org/papers/w22083

31 Uber https://newsroom.uber.com/us-new-york/4-septembers-of-uberx-in-nyc/

Anecdotal evidence based on user reviews on the Google Play site shows Carriers will quickly abandon an app if an insufficient number of loads is available. Therefore, once scale is achieved, companies must ensure constant adequate supply and demand moderated by pricing. Uber achieves this through 'Surge Pricing,' sudden spikes in price to lure more of their driver base into a shift (driver payment rates increase proportionately during Surge Pricing periods). As a result, passengers will always find an Uber car through the app if the price is right.

If DFMs wish to improve capacity utilization (or even to remain viable), achieving scale is necessary. DFM companies must recruit a sufficient pool of Carriers and Shippers.

The "Uber problem" might be incorrectly defined

Finally, Uber's success may have more to do with navigating around regulations while its direct competitor industry (i.e., the taxi industry) is heavily regulated[32]. Regulations in the taxi industry set price, limit supply, and decrease competition. Additionally, taxi companies pay for medallions/licenses. The costs of such regulations are inevitably passed to the consumer. When Uber entered the market, the company faced none of these rules and, as a result, could offer lower prices, greater supply, all while operating with lower fixed costs. Some have suggested the majority of Uber's advantage is not its matching algorithm or digital nature, but its freedom to grow in an unregulated space. In other words, "what made Uber so noteworthy wasn't the technology per se — it was the way the technology worked as a regulatory hack to unleash economic value that was previously tied up with taxi licenses."[33]

The upshot for other companies attempting to be Uber for X is that "Other on-demand services… don't have the game-changing element of undermining an economically costly regulatory regime. Applying smartphone technology to the generic problem of urban delivery services offers some gains over phone-based or even desktop-based ordering. But the gains are modest."[34] Still, this argument has not stopped companies from entering the marketplace or venture capital firms from backing entrants.

32 Harvard Business Review https://hbr.org/2016/04/spontaneous-deregulation

33 Vox http://www.vox.com/2016/4/19/11439558/uber-model-regulatory-arbitrage

34 Ibid.

Do Digital Freight Matching Companies Truly Resemble Uber?

At first glance the problem for ride-hailing companies and trucking companies seems comparable: to match capacity and demand. Ride-hailing companies match empty taxis with passengers. Digital Freight Matching companies match empty truck capacity with Shippers' freight. The ideas are similar in principle — hence the "Uber for Trucking" moniker.

However, when we more specifically define the capacity, demand, and operating conditions for Uber and DFM companies, many differences are clear. The following table summarizes the similarities and differences. Cells are colored green if the criteria is met, orange if the criteria is partially met, and red if the DFM category does not meet Uber's criteria.

	Uber	Uber-like	Freight Broker-Plus	Loadboard-Plus	Last-Mile
Demand	Commoditizable demand (passengers)	Non-commoditizable demand (freight)	Non-commoditizable demand (freight)	Non-commoditizable demand (freight)	Commoditizable demand (parcel)
Supply	Commoditizable supply (capacity in the form of car seats)	Somewhat comoditizable supply (equipment type and size can be filtered by app users)	Somewhat comoditizable supply (equipment type and size can be filtered by app users)	Somewhat comoditizable supply (equipment type and size can be filtered by app users)	Commoditizable supply (any local delivery method)
Workforce	Low barrier to entry	High barrier to entry	High barrier to entry	High barrier to entry	Low barrier to entry
Exceptions	Few	Some - equipment damage or breakdown	Some - equipment damage or breakdown	Some - equipment damage or breakdown	Few
Network size	Local	Some operate locally, some nationally	National	National	Local
Regulatory environment	Averting regulations in a highly regulated industry	Operating in a deregulated industry	Operating in a deregulated industry	Operating in a deregulated industry	Averting regulations in a somewhat regulated industry
Customer Experience	Managed through star-based ratings system	Managed through star-based ratings system	Managed via personal contact	Shipper-Carrier interaction not managed	Not managed or managed through KPIs
Elimination of third-parties	Two-party only transactions	Some are two-party, some allow three-pary (Fleet Dispatcher; Freight Broker)	No - by nature includes Freight Broker	No - loads can be posted by Freight Brokers	Two-party only transactions
Convenient Functionality	Very	See section below	See section below	See section below	See section below
Translatability to Uber-like Model		Some companies meet serveral criteria; criteria are partially met	Most criteria are not met	Most criteria are not met	Meets several criteria

Last-Mile DFM companies closely match the "Uber problem," and the Uber-like DFM apps somewhat match. These companies are well suited to capture the same efficiencies as Uber. However, there are some key differences between Uber and DFM that should be considered.

Some differences can be managed:

- **Network size.** DFM companies can achieve scale within a small operations network (a city or limited to a few nearby cities). Some DFM companies such as Cargomatic and Convoy use this approach.

- **Workforce.** While Uber has been able to quickly grow a new workforce of over 150,000 drivers due to low barriers to entry, DFM companies will rely on the current trucking workforce, as the barriers to entry are much higher. Still, DFM companies have an ample workforce of truck drivers to work with, and this would only become an issue much further down the road.

- **Functionality which automates the experience and minimizes transaction friction.** All parts of a transaction occur through the Uber app: driver locations, pricing, payments, visibility of time-to-pickup, the automatic alert to the nearest driver, the action of hailing a ride, and rating. DFM companies have ample room to improve similar functions, as illustrated in the section below.

Some will require behavior/status-quo changes of the market:

- **Elimination of third-parties.** Uber brands itself as a neutral intermediary; all interactions occur via the app between two parties, the driver and the passenger. Every additional party to a transaction ultimately results in higher prices. To truly accept an Uber-like model, Carriers and Shippers would need to accept a scenario that would disintermediate a Freight Broker.

Some differences are inherent in the nature of the business and will require additional solutions not provided by Uber:

- **Non-commoditizable demand and supply.** Perhaps the most basic of criteria of "Uberization," the very demand and supply which is matched, is fundamentally different for transportation. Any successful DFM will need to smoothly accommodate different types of commodities and modes, or limit their users to only certain specified types of each.

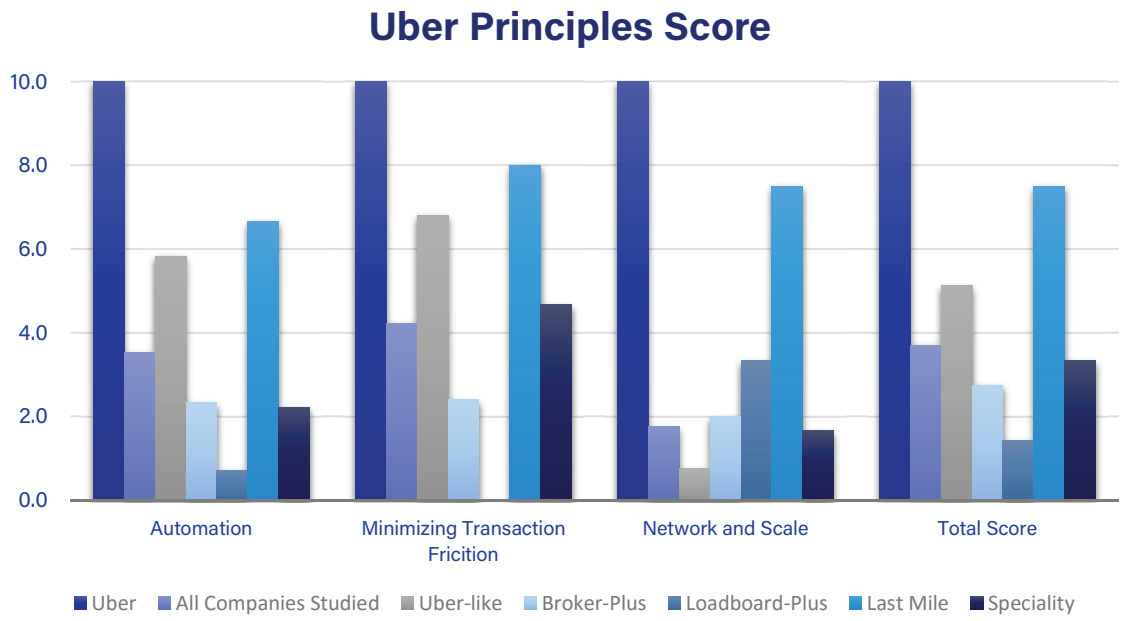
- **Customer experience.** Shippers will likely expect DFMs to handle exceptions and source backup Carriers in the case of delays or equipment breakdowns. Additionally, Shippers may expect claims handling and/or claims auditing. To compete with Freight Brokers, DFMs will need to provide solutions to meet these needs.

While Last-Mile and Uber-like DFM companies are best positioned to tackle the challenges above, this is not to say we do not see potential in Loadboard-plus and Broker-plus apps. These apps may streamline many elements of the Loadboard or Freight Broker workflow. Continuing to integrate functionality, especially features which allow communication to occur through mobile, document storage, and track-and-trace or automated check-in calls can have real benefits. While many Loadboards and Freight Brokers are not aiming to become the "Uber for Trucking," if this type of business begins to gain traction, they can leverage their large user bases, integrate improved freight matching functionality, and compete in the Digital Freight Matching arena.

Functionality

Solutions to the "Uber problem" can be defined by the following categories: automation, transaction friction, and network and scale. Using a checklist of 16 different functionality types (such as auto payment, immediate booking, and number of app downloads) which were then bucketed into these

three categories, A&A measured the degree to which each of the business models studied compare to Uber. The data used to compare functionality can be found in the Appendix.



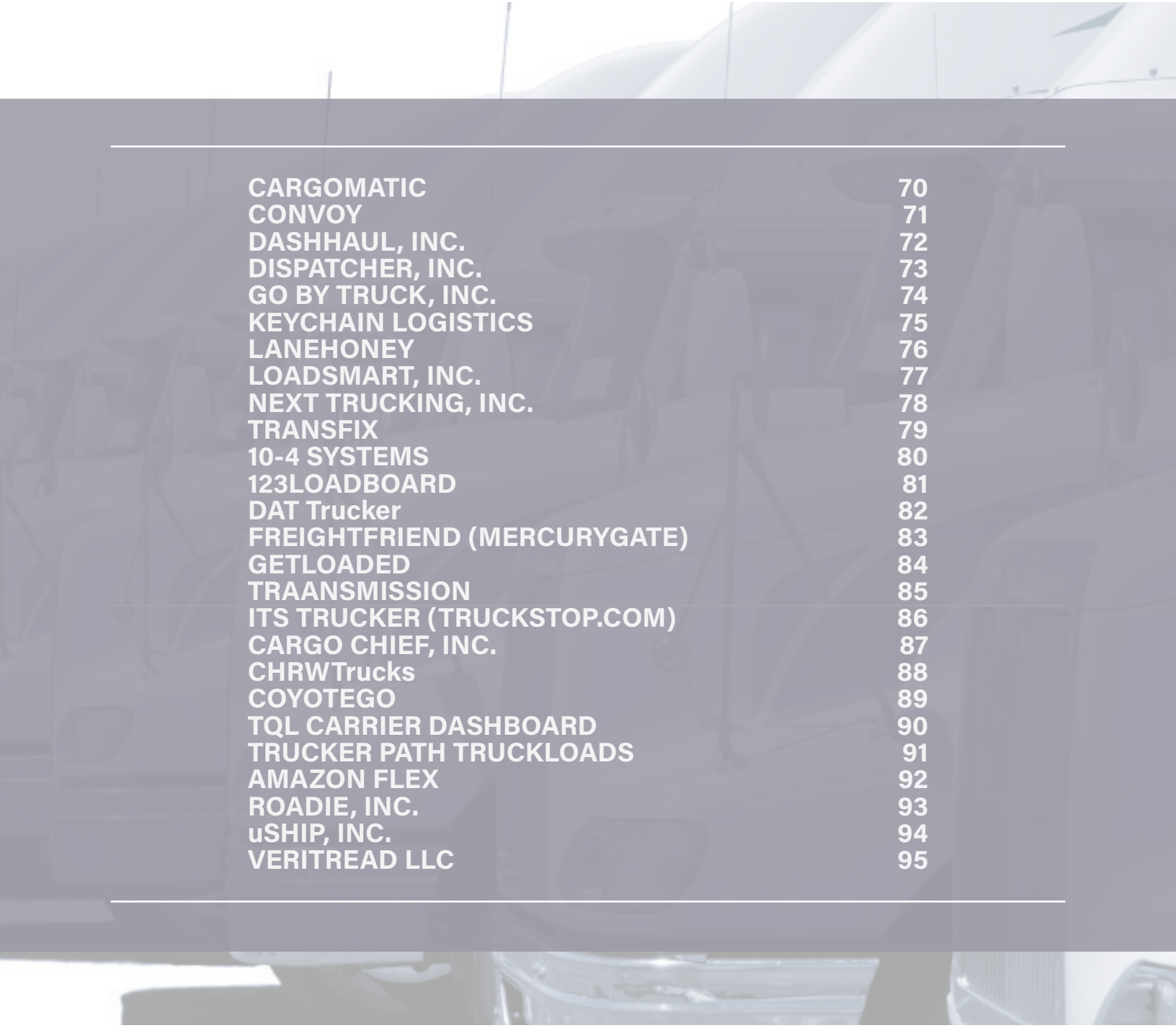
Again, Last-Mile and Uber-like DFM apps displayed functionality most similar to Uber. By contrast, Loadboard-plus apps least resembled Uber. Automating the user experience and eliminating inefficiencies would be useful to all these apps, whether they aim to be "Uber for Trucking" or not.

In particular, DFM companies scored lowest on the following functionality:

- Auto dispatch
- Shipment consolidation/pooling options
- Paperless document storage
- Auto pricing
- Auto payment
- Single pricing interaction within app

Of all the DFM apps studied, Cargomatic, Convoy, and Next Trucking have the overall functionality most closely resembling Uber.

Company Profiles



CARGOMATIC

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https://www.cargomatic.com | (866)513-2343 | support@cargomatic.com

Editor's Notes

Cargomatic operates regionally, within a 150 mile radius of New York, Los Angeles, and San Francisco metro areas. The company launched in NYC in August 2015, and in San Francisco in December 2015.

The focus is on local trucking for most types of commercial trucks (straight trucks, tractor trailers, flatbeds, cargo van, and drayage tractors). Drayage is offered at the Ports of Los Angeles, Long Beach, Oakland, New York, and New Jersey.

The company stated they take a fee of 20%.

Cargomatic follows a model simliar to Uber in that load alerts are pushed to Carriers (two hours prior to shipment), and a nearby Carrier will accept the shipment. Loads are limited only to those within 10-20 miles of the Carrier.

In April 2016, the company laid off about half its workforce (estimated at 50-60 employees). The co-founder and former CEO Jonathan Kessler took a new role as CPO in May 2016; the CEO role has not yet been backfilled.

Investors (Lead)

Series A
Canaan Partners

Seed
Canaan Partners
Morado Venture Partners
Sherpa Capital
SV Angel

Executives

CEO: Vacant
Chief Product Officer/Co-founder: Jonathan Kessler
President/Co-founder: Brett Parker
COO: Sean Whitely
Director of Engineering/Co-founder: Martin Hendleman

Key Dates

Start Date: January 2014
App launched (NYC): August 2015
App launched (SF): December 2015
Seed VC funding: June 2014
Series A VC funding: January 2015

Market Area

New York, California (Los Angeles & San Francisco)

Functionality Summary

Overview

Industry/Brokerage Connection	X
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Mobile
Mobile App Available	X
Android Downloads (as of 7/2016)	1000-5000
Web App Available	
TL	X
LTL	X
Specialized	X
Short Haul	X
Long Haul	
Parcel	
Driver Payment Time	30 day ACH

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	
TMS Integration	
In-App Messaging	
Fuel Advances	
Dashboard Analytics	
Driver Rating	X
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	X
Auto Pricing	X
Auto Dispatch	X
GPS Locations	X
Track & Trace	X
Push Notifications	X
Single Pricing Interaction	X
Immediate Booking	X
Paperless Document Storage	
Two-Party Interaction	X
All Communication Via App	X
Pooling (Automated)	
Scale (10,000+ downloads)	
Commodity Nature of Service	
Closed Network (Local Freight)	X

CONVOY

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https://convoy.com | 855.5.CONVOY | info@convoy.com

Editor's Notes

Seattle-based Convoy operates regionally in the Northwest. Operations in Washington began in 2015; the company expanded to Oregon and Idaho in early 2016, with plans to operate in more markets.

The company received Series A funding of $16M in March 2016. The funds will be used to further develop technology and expand to more regions.

Board members include Rein Hoffman and Simon Rothman (Greylock Partners) and Hadi Partovi (Code.org).

The company has 30+ employees and recently expanded into larger headquarters.

The company says the main focus is on short-haul trucking, usually one-day B2B, and on three industries: distribution and wholesale, construction, and manufacturing.

Convoy has received significant press and boasts a number of prominent investors.

The company charges a variable fee of less than 20%.

Investors (Lead)

Series A
March 2016 — $16M
Greylock Partners

Seed
October 2015 — $2.5M
Unknown

Executives

CEO/Co-founder: Dan Lewis
CTO/Co-Founder: Grant Goodale
Head of Product: Oliver Messenger

Key Dates

Beta testing: April 2015

App launched: October 2015

Seed VC funding: October 2015

Series A VC funding: March 2016

Market Area

Regional shipments in Washington, Oregon, and Idaho.

Functionality Summary

Overview

Industry/Brokerage Connection	
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Mobile
Mobile App Available	X
Android Downloads (as of 7/2016)	1000-5000
Web App Available	X
TL	N/S
LTL	N/S
Specialized	N/S
Short Haul	X
Long Haul	
Parcel	N
Driver Payment Time	24 hr

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	
TMS Integration	
In-App Messaging	
Fuel Advances	
Dashboard Analytics	
Driver Rating	X
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	X
Auto Pricing	X
Auto Dispatch	
GPS Locations	X
Track & Trace	X
Push Notifications	X
Single Pricing Interaction	X
Immediate Booking	X
Paperless Document Storage	
Two-Party Interaction	X
All Communication Via App	X
Pooling (Automated)	
Scale (10,000+ downloads)	
Commodity Nature of Service	
Closed Network (Local Freight)	X

DASHHAUL, INC.

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Editor's Notes

DashHaul operates similarly to an online exchange or marketplace.

A 3-6% 'technology fee' is applied to online rates (to shipper only). Pricing is determined by Shipper-set rates or by algorithm.

Company focus, during the development stage, is on independent carriers, smaller firms, and brokers seeking excess capacity. The Company is aimed towards Carriers, Shippers, and Brokers. A statement from DashHaul's CEO pointed out "there has been a little push-back from [brokers] to the instant rate... their business model is to negotiate off-line to try to get that highest-spread margin," but smaller brokers are willing to use such platforms as one resource to find capacity.

Carrier location is based on input of ZIP code plus maximum distance the Carrier is willing to travel for load pickup; location is not GPS-based and load alerts are not automatically pushed to Carriers.

The Company CEO previously owned a Freight Broker called Lane Source, Inc.

Executives

CEO/Co-founder: Mike Schreiber
Co-founder: Brian LeVert

Key Dates

Web launch date: Mid-2014

Market Area

Functionality Summary

Overview

Industry/Brokerage Connection	X
Tech/Startup Connection	
Primary Use (Mobile/Desktop)	Desktop
Mobile App Available	
Android Downloads (as of 7/2016)	
Web App Available	
TL	X
LTL	X
Specialized	
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	72 hrs

Features

Referral Program	X
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	
TMS Integration	
In-App Messaging	
Fuel Advances	
Dashboard Analytics	
Driver Rating	X
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	X
Auto Pricing	X
Auto Dispatch	
GPS Locations	X
Track & Trace	X
Push Notifications	X
Single Pricing Interaction	X
Immediate Booking	
Paperless Document Storage	
Two-Party Interaction	
All Communication Via App	X
Pooling (Automated)	
Scale (10,000+ downloads)	
Commodity Nature of Service	
Closed Network (Local Freight)	

DISPATCHER, INC.

527 Howard Street, Fl. 3, San Fransisco, CA 94105
https://dispatchertrucking.com | (855)782-4404

Editor's Notes

Dispatcher, Inc.'s focus is long-haul trucking and operates nationwide.

The company takes an unspecified flat rate commission.

Carriers can either accept the price proposed by a Shipper, or engage in negotiations via the app.

The app performs load matching by custom integration with the Shipper's TMS.

Executives

CEO/Co-founder: AJ Balance
CTO/Co-founder: Kevin Stumpf

Key Dates

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Desktop
Mobile App Available	X
Android Downloads (as of 7/2016)	5K-10K
Web App Available	X
TL	X
LTL	X
Specialized	X
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	24 hrs

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	
TMS Integration	X
In-App Messaging	
Fuel Advances	
Dashboard Analytics	X
Driver Rating	
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	
Auto Pricing	X
Auto Dispatch	
GPS Locations	X
Track & Trace	
Push Notifications	X
Single Pricing Interaction	
Immediate Booking	X
Paperless Document Storage	
Two-Party Interaction	X
All Communication Via App	X
Pooling (Automated)	
Scale (10,000+ downloads)	
Commodity Nature of Service	
Closed Network (Local Freight)	

GO BY TRUCK, INC.

6565 N MacArthur Blvd #470, Irving, TX 75039
https://www.gobytruck.com | (417)501-8919 | info@gobytruck.com

Editor's Notes

Go By Truck, based in Texas, offers nationwide service. A mobile app is available but transactions predominantly occur on web-based app. The Company offers an analytics dashboard, track & trace, messaging, document handling, and daily carrier compliance checking. Go By Truck also offers a referral program for referred Shippers and Carriers.

Co-founder Dawn Stroebel has a strong marketing platform — she has over 160,000 followers on LinkedIn and posts regularly about Go By Truck and the transportation industry.

Executives

CEO/Co-founder: Kevin Hiller
President/Co-founder: Dawn Strobel

Key Dates

Company Start Date: March 2011

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	
Tech/Startup Connection	
Primary Use (Mobile/Desktop)	Desktop
Mobile App Available	X
Android Downloads (as of 7/2016)	100-500
Web App Available	X
TL	X
LTL	X
Specialized	X
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	"instantly"

Features

Referral Program	X
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	
TMS Integration	
In-App Messaging	
Fuel Advances	
Dashboard Analytics	X
Driver Rating	X
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	X
Auto Pricing	
Auto Dispatch	
GPS Locations	
Track & Trace	X
Push Notifications	
Single Pricing Interaction	
Immediate Booking	X
Paperless Document Storage	X
Two-Party Interaction	X
All Communication Via App	X
Pooling (Automated)	
Scale (10,000+ downloads)	
Commodity Nature of Service	
Closed Network (Local Freight)	

KEYCHAIN LOGISTICS

San Francisco, CA
https://www.keychainlogistics.com | (910)338-3998 | bryan@keychainlogistics.com

Editor's Notes

Keychain Logistics, founded in 2012, operates regionally, in California, New York, Massachusetts, and Texas.

The company completes background and insurance checks on carriers.

Keychain charges a transaction fee of 2-3%.

Recent user reviews on Google Play indicate that some users were not finding loads on the app.

Investors (Lead)

Seed
January 2013 — $2.52M
Unknown

Executives

Founder: Bryan Beshore

Key Dates

Company Start Date: 2012

Seed VC funding: January 2013

Market Area

California (San Francisco, Los Angeles), New York (NYC), Massachusetts (Boston), Texas (Houston, Dallas)

Functionality Summary

Overview

Industry/Brokerage Connection	
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Mobile
Mobile App Available	X
Android Downloads (as of 7/2016)	5K-10K
Web App Available	
TL	N/S
LTL	N/S
Specialized	N/S
Short Haul	N/S
Long Haul	N/S
Parcel	N/S
Driver Payment Time	24 hrs

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	
TMS Integration	
In-App Messaging	
Fuel Advances	
Dashboard Analytics	
Driver Rating	
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	
Auto Pricing	X
Auto Dispatch	
GPS Locations	
Track & Trace	X
Push Notifications	
Single Pricing Interaction	
Immediate Booking	
Paperless Document Storage	
Two-Party Interaction	X
All Communication Via App	X
Pooling (Automated)	
Scale (10,000+ downloads)	
Commodity Nature of Service	
Closed Network (Local Freight)	X

LANEHONEY

https://www.lanehoney.com

Editor's Notes

LaneHoney operates as a web app only (not available on mobile).

The company is focused on Shippers and Carriers; Brokers are prohibited from using the app. The company has started to experiment with Intermodal shipments and specialty shippers like auto carriers. Shippers enter loads, and Carriers quote the shipments. Shippers can select preferred Carriers.

The app does not offer GPS track & trace. Instead, the Shipper receives alerts at key shipment milestones.

LaneHoney's selling point is transparency, including showing transparent lane pricing and shipment demand. The company will post all rates, rates by non-LaneHoney carriers, and display performance data on Carriers from previous shipments.

The company charges a 10% transaction fee on long-haul routes (>500 mi) and 20% on short-haul and LTL.

Executives

CEO/Co-founder: Roseanne Stanzione

Key Dates

Company Start Date: 2013

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Desktop
Mobile App Available	
Android Downloads (as of 7/2016)	
Web App Available	X
TL	X
LTL	X
Specialized	X
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	24 hrs

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	X
TMS Integration	
In-App Messaging	X
Fuel Advances	
Dashboard Analytics	
Driver Rating	X
Loadboard	
Rate Benchmarking	X
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	X
Auto Pricing	
Auto Dispatch	
GPS Locations	X
Track & Trace	
Push Notifications	X
Single Pricing Interaction	X
Immediate Booking	X
Paperless Document Storage	
Two-Party Interaction	X
All Communication Via App	X
Pooling (Automated)	
Scale (10,000+ downloads)	
Commodity Nature of Service	
Closed Network (Local Freight)	

LOADSMART, INC.

39 Wooster Street, 3rd Floor, New York, NY 10013
https://loadsmart.com | (646)88-SMART | info@loadsmart.com

Editor's Notes

Loadsmart is focused on FTL. In addition to features for O-Os the company has resources for fleet managers, including services such as fleet management tools, GPS tracking, and driver messaging via the app. Loadsmart will communicate directly with fleet managers rather than drivers; dispatchers can assign drivers who will receive text message notifcations.

Loadsmart markets to Produce sector shippers.

In addition to a web platform, the company launched its web app in March 2016.

Carriers can browse for "Live jobs" posted by Shippers, or opt in to email alerts for selected locations.

The company also recruits Freight Agents (brokers) to help grow the Shipper and Carrier base. Loadsmart offers up to 70% commission on booked orders (with recruited Shippers), $50 for first Carrier transaction on the platform, and 5% commission on any other referred Freight Agent earnings.

Executives

CEO/Co-founder: Ricardo Salgado
Co-founder: Felipe Capella

Key Dates

Company start date: May 2014
App launch: March 2016

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	
Tech/Startup Connection	
Primary Use (Mobile/Desktop)	Desktop
Mobile App Available	X
Android Downloads (as of 7/2016)	100-500
Web App Available	X
TL	X
LTL	
Specialized	X
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	48 hrs

Features

Referral Program	X
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	
TMS Integration	
In-App Messaging	
Fuel Advances	
Dashboard Analytics	
Driver Rating	
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	
Auto Pricing	
Auto Dispatch	
GPS Locations	X
Track & Trace	X
Push Notifications	X
Single Pricing Interaction	X
Immediate Booking	
Paperless Document Storage	X
Two-Party Interaction	
All Communication Via App	X
Pooling (Automated)	X
Scale (10,000+ downloads)	X
Commodity Nature of Service	
Closed Network (Local Freight)	X

NEXT TRUCKING, INC.

2700 E Imperial Hwy, Lynwood, CA 90262
https://nexttrucking.com | (855)688-NEXT | carrier@convoy.com

Editor's Notes

Next Trucking operates nationwide. The company focuses on OTR Carriers. Carriers will post preferred routes and desired pay, and Shippers search for availability.

Before Next Trucking, co-founder Elton Chung previously founded iDC Logistics, a large TV distribution center on the West Coast and Megatrans Logistics.

Executives

Co-founder: Lidia Yan
Co-founder: Elton Chung

Key Dates

Company Start Date: March 2015

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	X
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Mobile
Mobile App Available	X
Android Downloads (as of 7/2016)	1000-5000
Web App Available	X
TL	X
LTL	
Specialized	
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	24 hrs

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	
TMS Integration	
In-App Messaging	
Fuel Advances	
Dashboard Analytics	
Driver Rating	X
Loadboard	
Rate Benchmarking	X
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	X
Auto Pricing	
Auto Dispatch	
GPS Locations	X
Track & Trace	X
Push Notifications	X
Single Pricing Interaction	X
Immediate Booking	X
Paperless Document Storage	X
Two-Party Interaction	X
All Communication Via App	X
Pooling (Automated)	
Scale (10,000+ downloads)	
Commodity Nature of Service	
Closed Network (Local Freight)	

TRANSFIX

394 Broadway, 2nd Floor, New York, NY 10013
https://transfix.io | (646)844-2200 | info@transfix.io

Editor's Notes

Transfix's focus is on TL, particularly interstate owner-operaters and small carriers. The Carrier base (6,000 carriers) is approximately 30% O-O and 70% trucking companies with fewer than 20 trucks.

Priorities include a focus on driver experience and investment in fuctionality for drivers. Other featuers to appeal to Carriers include detention pay, fuel advances, 24-hour direct deposit, social networking, and a trip planning tool in the app called TransPath. Industry know-how is a big selling point for the company.

Transfix offers free custom integration with a Shipper's TMS.

Company co-founders have background in both the 3PL (CEO was the president of his family's 3PL/ Freight Broker firm with $12M in revenue), and Technology sectors.

The company has 26 employees, with a goal of employing 75 by November 2016.

The company charges a 7% fee.

At the time of Series B funding, the Wall Street Journal quoted an anonymous source who stated the company was valued at $75 million.

Investors (Lead)

Series B
July 2016 — $22M
New Enterprise Associates

Series A
November 2015 — $12M
Canvas Ventures

Seed
July 2014 — $2.5M
Bowery Capital
Lerer Hippeau Ventures

Executives

CEO/Co-founder: Drew McElroy
CTO/Co-founder: Jonathan Salama

Key Dates

Start Date: August 2015

Seed VC funding: July 2014

Series A VC Funding: November 2015

Series B VC Funding: July 2016

Market Area

Continental United States

Functionality Summary

Overview

Industry/Brokerage Connection	X
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Mobile
Mobile App Available	X
Android Downloads (as of 7/2016)	5K-10K
Web App Available	X
TL	X
LTL	
Specialized	
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	24 hrs

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	X
Driver Lane Preference	X
Carrier Preference	
TMS Integration	X
In-App Messaging	
Fuel Advances	X
Dashboard Analytics	
Driver Rating	
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	X
Auto Pricing	
Auto Dispatch	
GPS Locations	
Track & Trace	X
Push Notifications	
Single Pricing Interaction	
Immediate Booking	
Paperless Document Storage	X
Two-Party Interaction	X
All Communication Via App	X
Pooling (Automated)	
Scale (10,000+ downloads)	
Commodity Nature of Service	
Closed Network (Local Freight)	

10-4 SYSTEMS

4888 Pearl East Circle, Suite 300W, Boulder, CO 80301
https://www.10-4.com | (855)489-2655 | support@10-4.com

Editor's Notes

10-4 is intended to be used by Carriers, Brokers, and Shippers, and gives end-to-end visibility to all partiers. Carriers use 10-4 for freight visibility and performance metrics.

The app allows document image upload, trip status updates, and calendar reminders for future loads.

Series A funding was led by GlobalTranz co-founder Andrew Leto. At the time of funding, the company spun-off from then-parent company GlobalTranz. The company said the spin-off will allow increased focus on product development and customer acquisition. Also in June 2016, Loren Burnett, an experienced technology executive, joined the company.

While the company previously advertised a "Live Freight Marketplace" for freight matching, the company seems to be quickly evolving and leaning towards a SaaS solution rather than an Uber-like one.

Investors (Lead)

Series A
June 2016 — $13.9M
Andrew Leto

Executives

CEO/Co-founder: Travis Rhyan
EVP, Sales & Marketing: Jeremy Estep
VP, Business Development: Gordy Ferguson
CFO/COO: Loren Burnett

Key Dates

Company Start Date: October 2012

Series A VC funding: June 2016

Company spinoff from GlobalTranz: June 2016

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	X
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Desktop
Mobile App Available	X
Android Downloads (as of 7/2016)	100-500
Web App Available	X
TL	X
LTL	X
Specialized	X
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	Not Specified

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	
TMS Integration	X
In-App Messaging	X
Fuel Advances	
Dashboard Analytics	X
Driver Rating	
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	
Auto Pricing	
Auto Dispatch	
GPS Locations	
Track & Trace	X
Push Notifications	
Single Pricing Interaction	
Immediate Booking	X
Paperless Document Storage	
Two-Party Interaction	
All Communication Via App	
Pooling (Automated)	
Scale (10,000+ downloads)	
Commodity Nature of Service	
Closed Network (Local Freight)	

123LOADBOARD

1321 Upland Drive, Suite 1120, Houston, TX 77043
https://123loadboard.com

Editor's Notes

123Loadboard is the app published by 123Loadboard.com. Loadboard access requires a monthly subscription starting at $35/month.

Loads are searchable by location or by enabling GPS for nearby loads or loads home. Rate Check (which shows average rate per mile, linehaul revenue, toll costs, and estimated fuel costs) and Credit scores/days-to-pay are available. Fleet managers can post trucks and manage them.

Executives

Vice President: Loarn Metzen

Key Dates

Company Start Date: 2003

App launched: March 2106

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	X
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Mobile
Mobile App Available	X
Android Downloads (as of 7/2016)	10K-50K
Web App Available	X
TL	X
LTL	X
Specialized	X
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	Broker Terms

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	
TMS Integration	
In-App Messaging	
Fuel Advances	
Dashboard Analytics	
Driver Rating	
Loadboard	X
Rate Benchmarking	X
Credit Info	X
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	
Auto Pricing	
Auto Dispatch	
GPS Locations	
Track & Trace	
Push Notifications	
Single Pricing Interaction	
Immediate Booking	
Paperless Document Storage	
Two-Party Interaction	
All Communication Via App	
Pooling (Automated)	
Scale (10,000+ downloads)	X
Commodity Nature of Service	
Closed Network (Local Freight)	

DAT Trucker

11000 SW Stratus St #200, Beaverton, OR 97008
https://www.dat.com/products/trucker-apps | (800)551-8847 | dattruckstop.dat.com

Editor's Notes

DAT Trucker, previously known as MyDAT Trucker, is an app published by DAT Solutions, the leading loadboard company. The app can be used in conjunction with the DAT loadboard which requires a monthly fee starting at $34.95.

The app is intended for use by Carriers operating any equipment types and Brokers. DAT posts a subset of DAT loads on the app. Nearby loads are visible and can be flitered by equipment type. Users can opt in to fee-based RateReview (freight rate benchmarking) and TriHaul (triangle-shaped route suggestions to maximize trips). The app also includes truck stops, rest stops, hotels, diesel prices, CAT scales.

The company says over 250,000 users have downloaded the app.

DAT Solutions is a wholly owned subsidiary of Roper Enterprises.

Executives

SVP Sales & Marketing: Don Thornton
VP Products: Greg Sikes
VP Technology: Fergus Caldicott

Key Dates

App Launched: 2013

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	X
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Mobile
Mobile App Available	X
Android Downloads (as of 7/2016)	100K-500K
Web App Available	
TL	X
LTL	X
Specialized	X
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	Broker Terms

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	X
Driver Lane Preference	
Carrier Preference	
TMS Integration	
In-App Messaging	
Fuel Advances	
Dashboard Analytics	
Driver Rating	
Loadboard	X
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	
Auto Pricing	
Auto Dispatch	
GPS Locations	
Track & Trace	
Push Notifications	
Single Pricing Interaction	
Immediate Booking	
Paperless Document Storage	
Two-Party Interaction	
All Communication Via App	
Pooling (Automated)	
Scale (10,000+ downloads)	X
Commodity Nature of Service	
Closed Network (Local Freight)	

FREIGHTFRIEND (MERCURYGATE)

200 Regency Forest Drive, Suite 400, Cary, NC, 27518
https://freightfriend.com | (919)469-8057 | sales@mercurygate.com

Editor's Notes

FreightFriend is a service offered by MercuryGate TMS. It is a relationship-based posting service available as a TMS integration. It is designed to be used by Shippers, Carriers, and Brokers. The company provides matching and communication benefits of a public loadboard with connections limited to 'friends.'

The service is free for Carriers. Brokers pay a monthly price of $250. Shippers/3PLs pay a monthly fee of $500.

As of June 2014, the company said 1,500+ Carriers had signed up at a rate of about 80 per month.

While this company is not a mobile app, we chose to include FreightFriend in our analysis as an example of a company offerring freight matching to selected carriers on a private network. One of the hurdles freight matching services face is the task of providing differentiated customer service and relationship building on an exchange-type network. The concept of 'friend' or preferred Carriers is one method to gain customer trust and this idea could be incorporated into other apps.

Executives

CEO/Co-founder: Monica B. Wooden
Co-founder: Steve Blough
CTO: Brian Armieri
Co-founder: Noam Frankel

Key Dates

Compay Start Date (MercuryGate): August 2000

FreightFriend Launched: April 2011

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	X
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Desktop
Mobile App Available	
Android Downloads (as of 7/2016)	
Web App Available	X
TL	X
LTL	X
Specialized	X
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	Broker Terms

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	X
TMS Integration	X
In-App Messaging	
Fuel Advances	
Dashboard Analytics	
Driver Rating	
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	
Auto Pricing	
Auto Dispatch	
GPS Locations	
Track & Trace	
Push Notifications	
Single Pricing Interaction	
Immediate Booking	
Paperless Document Storage	
Two-Party Interaction	
All Communication Via App	
Pooling (Automated)	
Scale (10,000+ downloads)	
Commodity Nature of Service	
Closed Network (Local Freight)	

GETLOADED

One Park West Circle, Suite 306A, Midlothian, VA 23114
https://getloaded.com | (888)565-3921

Editor's Notes

GetLoaded is designed to be used with the GetLoaded loadboards, which require monthly subscriptions starting at $29.99/month. Intended users of the app are Carriers, fleet managers, and Brokers.

Carriers can search nearby loads or use the 'take me home' feature. Fleet managers can manage loads and trucks from the app.

Like DAT Solutions, Getloaded is a wholly owned subsidiary of Roper Enterprises.

Additional features include rate indexing, TransCredit scores (access to each depends on the loadboard package purchased).

Investors (Lead)

Acquisition
February 2001 — Undisclosed Amount
TransCore

Acquisition (TransCore)
2004 — Undisclosed Amount
Roper Industries

Executives

CEO/Co-founder: Dan Lewis

Key Dates

Load board launched: 1999

App launched: February 2010

Acquisition: July 2008

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	X
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Mobile
Mobile App Available	X
Android Downloads (as of 7/2016)	10K-50K
Web App Available	X
TL	X
LTL	X
Specialized	X
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	Broker Terms

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	
TMS Integration	
In-App Messaging	
Fuel Advances	
Dashboard Analytics	
Driver Rating	
Loadboard	X
Rate Benchmarking	
Credit Info	X
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	
Auto Pricing	
Auto Dispatch	
GPS Locations	
Track & Trace	
Push Notifications	
Single Pricing Interaction	
Immediate Booking	
Paperless Document Storage	
Two-Party Interaction	
All Communication Via App	
Pooling (Automated)	
Scale (10,000+ downloads)	X
Commodity Nature of Service	
Closed Network (Local Freight)	

TRAANSMISSION

145 Nelson St, Brooklyn, NY 11231
https://www.traansmission.com

Editor's Notes

Traansmission is a fee-based platform for dispatchers and drivers. The company's app works in conjunction with a Traansmission account.

There is a fee for dispatchers and drivers to access the platform, payable montly or annually. Monthly fees start at $35/mo for one dispatcher and one driver.

The latest app update indicates that the company is moving away from "Uber for trucking" in favor of operating more like a TMS. The potential user base was expanded from solely drivers to include admin/dispatchers.

Investors (Lead)

Seed
June 2014 — $40K
Unknown

Executives

CEO/Co-founder: Jason Cahill
CTO/Co-founder: Emil Lamm Nielsen

Key Dates

App launched: September 2013

Seed VC funding: June 2014

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Desktop
Mobile App Available	X
Android Downloads (as of 7/2016)	100-500
Web App Available	X
TL	X
LTL	X
Specialized	X
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	Not Specified

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	X
TMS Integration	
In-App Messaging	
Fuel Advances	
Dashboard Analytics	
Driver Rating	
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	X
Auto Pricing	
Auto Dispatch	
GPS Locations	
Track & Trace	X
Push Notifications	
Single Pricing Interaction	
Immediate Booking	X
Paperless Document Storage	
Two-Party Interaction	
All Communication Via App	
Pooling (Automated)	
Scale (10,000+ downloads)	
Commodity Nature of Service	
Closed Network (Local Freight)	

ITS TRUCKER (TRUCKSTOP.COM)

4291 SW 2nd Ave, New Plymouth, ID 83655
https://www.truckstop.com | (208)278-5097

Editor's Notes

ITS Trucker is the app connected to the Truckstop.com loadboard; users must have a subscription which starts at $35/month. The app provides mobile access to the Truckstop.com loadboard. A similar app called ITS Broker is available for Broker and Shippers.

Users can save favorite searches, store preferences, search loads or use "get me home" to identify nearby loads to a specified location. Depending on the loadboard fee, users can also access CreditStop Broker and Days-to-Pay information.

Executives

Chairman/Founder: Scott Moscrip
CEO: Paris Cole
CTO: Jim Vrtis

Key Dates

Company Start Date: 1995

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	X
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Desktop
Mobile App Available	X
Android Downloads (as of 7/2016)	10K-50K
Web App Available	X
TL	X
LTL	X
Specialized	X
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	Broker Terms

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	X
Driver Lane Preference	
Carrier Preference	X
TMS Integration	X
In-App Messaging	X
Fuel Advances	
Dashboard Analytics	X
Driver Rating	
Loadboard	X
Rate Benchmarking	X
Credit Info	X
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	
Auto Pricing	
Auto Dispatch	
GPS Locations	
Track & Trace	
Push Notifications	
Single Pricing Interaction	
Immediate Booking	
Paperless Document Storage	
Two-Party Interaction	
All Communication Via App	
Pooling (Automated)	
Scale (10,000+ downloads)	X
Commodity Nature of Service	
Closed Network (Local Freight)	

CARGO CHIEF, INC.

1060 La Avenida Street, Mountain View, CA 94043
https://www.cargochief.com | (650)265-6100

Editor's Notes

Cargo Chief operates like a web-based Freight Broker. Carriers are notified about potential loads by email.

The company focuses on FTL including flatbed and reefer, with some regional and national LTL, intermodal, and, in the future, international freight.

Cargo Chief offers a rewards program for frequent users. Shippers receive points for booking LTL and TL shipments and new Shipper referrals. Carriers accrue points for shipment completion, enabling GPS track & trace via the app, and new Carrier and Shipper referrals. Points are exchanged for cash gift cards.

The app is backed by Cargo Chief's Tomahawk TMS.

Investors (Lead)

Series A
September 2015 — $10M
Walden Venture Capital

Executives

CEO/Co-founder: Russell Jones
Co-founder: Abtin Hamidi

Key Dates

Company Start Date: May 2012

Operations Launch Date: 2014

Series A VC Funding: September 2015

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	X
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Desktop
Mobile App Available	X
Android Downloads (as of 7/2016)	100-500
Web App Available	X
TL	X
LTL	X
Specialized	X
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	72 hrs

Features

Referral Program	
Reward Program	X
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	
TMS Integration	X
In-App Messaging	
Fuel Advances	
Dashboard Analytics	
Driver Rating	
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	
Auto Pricing	
Auto Dispatch	
GPS Locations	X
Track & Trace	X
Push Notifications	X
Single Pricing Interaction	
Immediate Booking	
Paperless Document Storage	
Two-Party Interaction	X
All Communication Via App	
Pooling (Automated)	
Scale (10,000+ downloads)	
Commodity Nature of Service	
Closed Network (Local Freight)	

CHRWTrucks

14701 Charlson Road, Eden Prairie, MN 55347
https://www.chrobinson.com/en/us/Carriers/Carrier-Technology | (952)683-3987 |
chrwtrucks@chronbinson.com

Editor's Notes

The CHRWTrucks app is the proprietary app of C.H. Robinson (the largest Freight Broker company in the U.S. as measured by 2015 net revenue). Carriers can search for loads by origin or destination radius, post available capacity, and can send check calls via the app. While load visibility is available on the app, all loads will still be confirmed on the phone. The app is designed both for drivers and managers of fleets.

Executives

CEO (C.H. Robinson): John Wiehoff
CIO: Chad M. Lindbloom

Key Dates

App launched: July 2014

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	X
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Mobile
Mobile App Available	X
Android Downloads (as of 7/2016)	50K-100K
Web App Available	X
TL	X
LTL	X
Specialized	X
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	Broker Terms

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	
TMS Integration	
In-App Messaging	
Fuel Advances	
Dashboard Analytics	
Driver Rating	
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	
Auto Pricing	
Auto Dispatch	
GPS Locations	
Track & Trace	
Push Notifications	
Single Pricing Interaction	
Immediate Booking	
Paperless Document Storage	
Two-Party Interaction	
All Communication Via App	
Pooling (Automated)	
Scale (10,000+ downloads)	X
Commodity Nature of Service	
Closed Network (Local Freight)	

COYOTEGO

2545 W Diversey Ave, Chicago, IL 60647
https://http://www.coyote.com/technology/mobile-logistics-planning/ | (877)6-COYOTE

Editor's Notes

CoyoteGO is an app developed specifically for Coyote Carriers. It is used by drivers, but not Shippers. Features include track & trace, self-dispatch, document handling (such as image uploads of BOLs and PODs), lumper reporting, and a load finder. Loads are limited to those in the Coyote network. While the app has more than 10,000 downloads on Google Play, the primary function is still driver communication. However, the large user base offers the opportunity of converting users to users of the load finding functionality.

Coyote also offers a more minimal version for non-smartphone mobile users called Coyote Text.

Payment terms for drivers are within the Coyote standard of 30 days or an advance request for a 4% fee.

Coyote Logistics was purchased by UPS in 2015.

Executives

CEO (Coyote): Jeff Silver
Chief Information Officer: Darren Cockrel

Key Dates

Coyote (Freight Broker): 2008

CoyoteGO App launched: April 2013

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	X
Tech/Startup Connection	
Primary Use (Mobile/Desktop)	Mobile
Mobile App Available	X
Android Downloads (as of 7/2016)	10K-50K
Web App Available	
TL	X
LTL	X
Specialized	X
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	30 days

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	
TMS Integration	
In-App Messaging	
Fuel Advances	X
Dashboard Analytics	
Driver Rating	
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	
Auto Pricing	
Auto Dispatch	
GPS Locations	
Track & Trace	X
Push Notifications	
Single Pricing Interaction	X
Immediate Booking	
Paperless Document Storage	X
Two-Party Interaction	
All Communication Via App	X
Pooling (Automated)	
Scale (10,000+ downloads)	X
Commodity Nature of Service	
Closed Network (Local Freight)	

TQL CARRIER DASHBOARD

4289 Ivy Pointe Blvd., Cincinnati, OH 45245
https://www.tql.com/carriers/carrier-dashboard | (800)580-3101 | carrierservices@tql.com

Editor's Notes

TQL Carrier Dashboard is designed to be used by Carriers working for Total Quality Logistics Freight Broker (the third largest Freight Broker company in the U.S. as measured by 2015 net revenue). Shippers can find loads posted by the Freight Broker using a "Freight Finder" feature.

The application offers hands-free "speak-and-search" capability for Carriers. The app also allows automated Check Calls which sends the driver location every two hours. Document image uploading is also available.

Executives

CEO (TQL): Ken Oaks
Executive Vice President: Kerry Byrne
CFO: Mike Zins
CIO: George Rewick

Key Dates

TQL Company Start Date: 1997

App launched: February 2012

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	X
Tech/Startup Connection	
Primary Use (Mobile/Desktop)	Mobile
Mobile App Available	X
Android Downloads (as of 7/2016)	10K-50K
Web App Available	
TL	X
LTL	X
Specialized	X
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	TQL terms

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	
TMS Integration	
In-App Messaging	
Fuel Advances	
Dashboard Analytics	
Driver Rating	X
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	
Auto Pricing	
Auto Dispatch	
GPS Locations	
Track & Trace	X
Push Notifications	
Single Pricing Interaction	
Immediate Booking	
Paperless Document Storage	X
Two-Party Interaction	
All Communication Via App	X
Pooling (Automated)	
Scale (10,000+ downloads)	X
Commodity Nature of Service	
Closed Network (Local Freight)	

TRUCKER PATH TRUCKLOADS

51 East Campbell Ave, Campbell, CA 95008
https://www.truckerpath.com | (877)890-0377 | support@truckerpath.com

Editor's Notes

The Trucker Path Pro app is a very popular trip planning app used by truckers, including features such as truck stop finders, fuel prices, route planning, etc.

In 2015, the app also launched load finder functionality, called Truckloads. The app has 500K-1.0M downloads on Google Play; the sheer popularity and appeal of its existing functionality poises the app to potentially pivot towards growing the load finding portion of the app. The large and loyal user base would be a valuable target group of users.

Investors (Lead)

Series A
June 2015 — $20M
Renren Inc.
Wicklow Capital

Seed
September 2014 — $1.5M
Unknown

Executives

CEO/Co-founder: Ivan Tsybaev

Key Dates

Trucker Path Pro app launched: August 2013
Truckloads app launched: 2015

Seed VC funding: September 2014

Series A VC funding: June 2015

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	X
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Mobile
Mobile App Available	X
Android Downloads (as of 7/2016)	500K-1M
Web App Available	X
TL	X
LTL	X
Specialized	X
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	Broker terms

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	X
Driver Lane Preference	
Carrier Preference	
TMS Integration	X
In-App Messaging	
Fuel Advances	
Dashboard Analytics	
Driver Rating	
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	
Auto Pricing	
Auto Dispatch	
GPS Locations	X
Track & Trace	
Push Notifications	X
Single Pricing Interaction	
Immediate Booking	
Paperless Document Storage	
Two-Party Interaction	
All Communication Via App	
Pooling (Automated)	
Scale (10,000+ downloads)	X
Commodity Nature of Service	
Closed Network (Local Freight)	

AMAZON FLEX

410 Terry Avenue North, Seattle, WA 98108
https://flex.amazon.com | (206)266-1000

Editor's Notes

Amazon Flex is Amazon's method of providing same-day delivery to Amazon Prime Now customers. Employees, who make $18/hour, pick blocks of shifts and go to Amazon warehouses to start the shift. Each is given a delivery or group of deliveries on the same route. The process is repeated until the shift is complete. If the delivery-person finishes early (without time to complete another delivery), the delivery-person will do a food delivery (also through Amazon).

Although Amazon Flex doesn't function as a mobile app, it shares many important characteristics with a company such as Uber. It operates within a closed network, all routing occurs via an algorithm, and pricing is set and completed completely digitially. In other words, the company capitalizes on the frictionless transactions and supply-demand matching optimization like Uber.

Executives

CEO/President/Chairman: Jeffrey Bezos

Key Dates

Company Start Date: 1994

Amazon Flex launched: September 2015

Market Area

Regional: Arlington (VA), Atlanta, Austin, Baltimore, Cincinnati, Columbus, Dallas/Fort Worth, Houston, Indianapolis, Las Vegas, Miami, Milwaukee, Minneapolis/St. Paul, Nashville, New York, Orlando, Philadelphia, Phoenix, Pittsburgh, Portland, Raleigh, Richmond, Rockville (MD), San Antonio, Seattle, Springfield (VA), Tampa Bay, and Virginia Beach

Functionality Summary

Overview

Industry/Brokerage Connection	X
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	N/A
Mobile App Available	X
Android Downloads (as of 7/2016)	iTunes only
Web App Available	X
TL	
LTL	
Specialized	
Short Haul	
Long Haul	
Parcel	X
Driver Payment Time	Weekly

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	
TMS Integration	
In-App Messaging	
Fuel Advances	
Dashboard Analytics	
Driver Rating	
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	
Auto Pricing	X
Auto Dispatch	X
GPS Locations	X
Track & Trace	
Push Notifications	X
Single Pricing Interaction	X
Immediate Booking	X
Paperless Document Storage	
Two-Party Interaction	X
All Communication Via App	X
Pooling (Automated)	X
Scale (10,000+ downloads)	X
Commodity Nature of Service	X
Closed Network (Local Freight)	X

ROADIE, INC.

3565 Piedmont Road, Atlanta, GA 30305
https://www.roadie.com | (844)4-ROADIE | support@roadie.com

Editor's Notes

Roadie Inc. specializes in C2C-type deliveries, both locally and nationwide, including delivery of small items, furniture, gear, and pets.

Drivers must be 18 years old, have a valid driver's license, and a current auto insurance policy. Once on the app, drivers must maintain a 4-star rating (the same criteria used by Uber).

Investors (Lead)

Series B
June 2016 — $15M
Stephens Inc

Series A
January 2015 — $10M
Unknown

Seed
May 2014 — $25K
July 2013 — Undisclosed Amount
Unknown

Executives

CEO/Co-founder: Marc J. Gorlin
Head of Product and Design: Mary Frances Jones
Head of Operations: Dennis Moon
Head of Customer Experience: Matt Finger
Head of Digital Marketing: Lisa Friedrich
Head of Field Marketing: Valerie Metzker
Head of Engineering: Chris Ibarra

Key Dates

App launched: July 2013
Seed VC funding: July 2013, May 2014
Series A VC funding: January 2015
Series B VC funding: June 2016

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Mobile
Mobile App Available	X
Android Downloads (as of 7/2016)	100K-500K
Web App Available	X
TL	
LTL	
Specialized	
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	Not Specified

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	
TMS Integration	
In-App Messaging	
Fuel Advances	
Dashboard Analytics	
Driver Rating	X
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	X

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	X
Auto Pricing	
Auto Dispatch	
GPS Locations	
Track & Trace	X
Push Notifications	
Single Pricing Interaction	X
Immediate Booking	X
Paperless Document Storage	
Two-Party Interaction	X
All Communication Via App	X
Pooling (Automated)	
Scale (10,000+ downloads)	X
Commodity Nature of Service	
Closed Network (Local Freight)	

uSHIP, INC.

205 Brazos St, Austin, TX 78701
https://www.uship.com | (800)698-7447

Editor's Notes

uShip is one of the older companies studied — beginning operations in 2004 — and was one of the forerunners for an Uber of transport type app. More than 100,000 people have downloaded the app. The app is intended to be used by Shippers, Brokers, and Carriers.

The company offers transportation of household goods, moves, heavy equipment and vehicles, freight (TL and LTL), and animals.

uShip reported $160M revenue in 2015.

In June 2016, DB Schenker (the 3rd largest 3PL as measured by 2015 revenue) bought the European rights to uShip for "tens of millions of dollars," to utilize freight matching immediately rather than continue developing a proprietary solution.

uShip is also known for its presence on the TV show Shipping Wars.

Investors (Lead)

Private Equity
June 2013 — $18.35M
Unknown

Series C
March 2013 — $1.36M, December 2012 — $18M
Unknown

Venture
February 2011 — $2M
Unknown

Series B
October 2006 — $5M
Unknown

Executives

CEO/Co-founder/Board Member: Matt Chasen
CFO: Bob Bearden
CMO: Dick Metzler
CTO: Nick Parker

Key Dates

Company Start Date: 2003
Online marketplace launched: 2004
Series B funding: October 2006
VC funding: February 2011
Series C funding: December 2012, March 2013
Private Equity funding: June 2013

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	X
Tech/Startup Connection	X
Primary Use (Mobile/Desktop)	Mobile
Mobile App Available	X
Android Downloads (as of 7/2016)	100K-500K
Web App Available	X
TL	X
LTL	X
Specialized	X
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	"Immediately"

Features

Referral Program	
Reward Program	X
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	
TMS Integration	X
In-App Messaging	X
Fuel Advances	
Dashboard Analytics	
Driver Rating	X
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	X
Auto Pricing	
Auto Dispatch	
GPS Locations	
Track & Trace	X
Push Notifications	
Single Pricing Interaction	
Immediate Booking	X
Paperless Document Storage	
Two-Party Interaction	
All Communication Via App	X
Pooling (Automated)	
Scale (10,000+ downloads)	X
Commodity Nature of Service	
Closed Network (Local Freight)	

VERITREAD LLC

6850 New Tampa Hwy, Lakeland, FL 33815
https://www.veritread.com | (800)880-0468 | sales@veritread.com

Editor's Notes

VeriTread specializes in heavy-haul shipping. The marketplace is for Carriers, Brokers, and Freight Forwarders. VeriTread solicits detailed information about Shippers' equipment, capabilities, and service area at the time of sign-up to enable freight matching.

Executives

Owner/Founder: Jeffrey Cox Jr.

Key Dates

Company start date (as asset-based heavy-haul company): 2004

Web app launched: 2004/2005

App launched: 2012

Market Area

Nationwide

Functionality Summary

Overview

Industry/Brokerage Connection	X
Tech/Startup Connection	
Primary Use (Mobile/Desktop)	Desktop
Mobile App Available	
Android Downloads (as of 7/2016)	
Web App Available	X
TL	
LTL	X
Specialized	X
Short Haul	X
Long Haul	X
Parcel	
Driver Payment Time	Not Specified

Features

Referral Program	
Reward Program	
Fuel Card	
Trip Planner	
Driver Lane Preference	
Carrier Preference	X
TMS Integration	
In-App Messaging	
Fuel Advances	
Dashboard Analytics	
Driver Rating	
Loadboard	
Rate Benchmarking	
Credit Info	
Discounts	

Uber-like Functionality

Digital Transactions/Parameter Matching	X
Auto Payment	
Auto Pricing	
Auto Dispatch	
GPS Locations	
Track & Trace	
Push Notifications	
Single Pricing Interaction	
Immediate Booking	
Paperless Document Storage	
Two-Party Interaction	
All Communication Via App	X
Pooling (Automated)	
Scale (10,000+ downloads)	
Commodity Nature of Service	
Closed Network (Local Freight)	

Appendix

	Digital Transactions, Parameter Matching	Auto Payment	Auto Pricing	Auto Dispatch	GPS Locations	Location visibility (Track & Trace)	Push-notifications	**Automation Score**	Single pricing interaction	Immediate booking	Paperless document storage	Two-party interaction	All communication via app	**Minimizing Transactions Score**	Pooling (automated)	Scale (10,000+ downloads)	Commodity nature of service	Closed network (local freight)	**Network and Scale Score**	**Category Score**
Uber	X	X	X	X	X	X	X	***6***	X	X	X	X	X	***5***	X	X	X	X	***4***	**16**
Uber-like																				
Cargomatic	X	X	X	X	X	X	X	***6***	X	X		X	X	***4***				X	***1***	12
Convoy	X	X	X		X	X	X	***5***	X	X		X	X	***4***				X	***1***	11
Next Trucking, Inc.	X	X			X	X	X	***4***	X	X	X	X	X	***5***					***0***	10
DashHaul, Inc.	X	X	X		X	X	X	***5***	X				X	***2***					***0***	8
LaneHoney	X	X			X		X	***3***	X	X		X	X	***4***					***0***	8
Go by Truck	X	X				X		***2***		X	X	X	X	***4***					***0***	7
Dispatcher, Inc.	X		X		X		X	***3***		X		X	X	***3***					***0***	7
LoadSmart, Inc.	X				X	X	X	***3***	X		X		X	***3***					***0***	7
Transfix	X	X				X		***2***			X	X	X	***3***					***0***	6
Keychain Logistics	X		X			X		***2***				X	X	***2***				X	***1***	6
Broker+																				
CoyoteGO	X					X		***1***	X		X		X	***3***		X			***1***	6
Cargo Chief	X				X	X	X	***3***				X		***1***					***0***	5
TQL Carrier Dashboard	X					X		***1***			X		X	***2***		X			***1***	5
Trucker Path	X				X		X	***2***						***0***		X			***1***	4
CHRWTrucks	X							***0***						***0***		X			***1***	2
Loadboard+																				
Traansmission	X	X				X		***2***		X				***1***					***0***	4
10-4 Systems	X					X		***1***		X				***1***					***0***	3
DAT Trucker	X							***0***						***0***		X			***1***	2
GetLoaded	X							***0***						***0***		X			***1***	2
Truckstop.com	X							***0***						***0***		X			***1***	2
123Loadboard	X							***0***						***0***		X			***1***	2
FreightFriend (MercuryGate)	X							***0***						***0***					***0***	1
Last Mile																				
Amazon Flex	X		X	X	X		X	***4***	X	X		X	X	***4***	X	X	X	X	***4***	13
Shipster	X		X	X	X		X	***4***	X	X		X	X	***4***			X	X	***2***	11
Specialty																				
Roadie, Inc.	X	X				X		***2***	X	X		X	X	***4***		X			***1***	8
uShip, Inc.	X	X				X		***2***		X			X	***2***		X			***1***	6
VeriTread LLC	X							***0***					X	***1***					***0***	2