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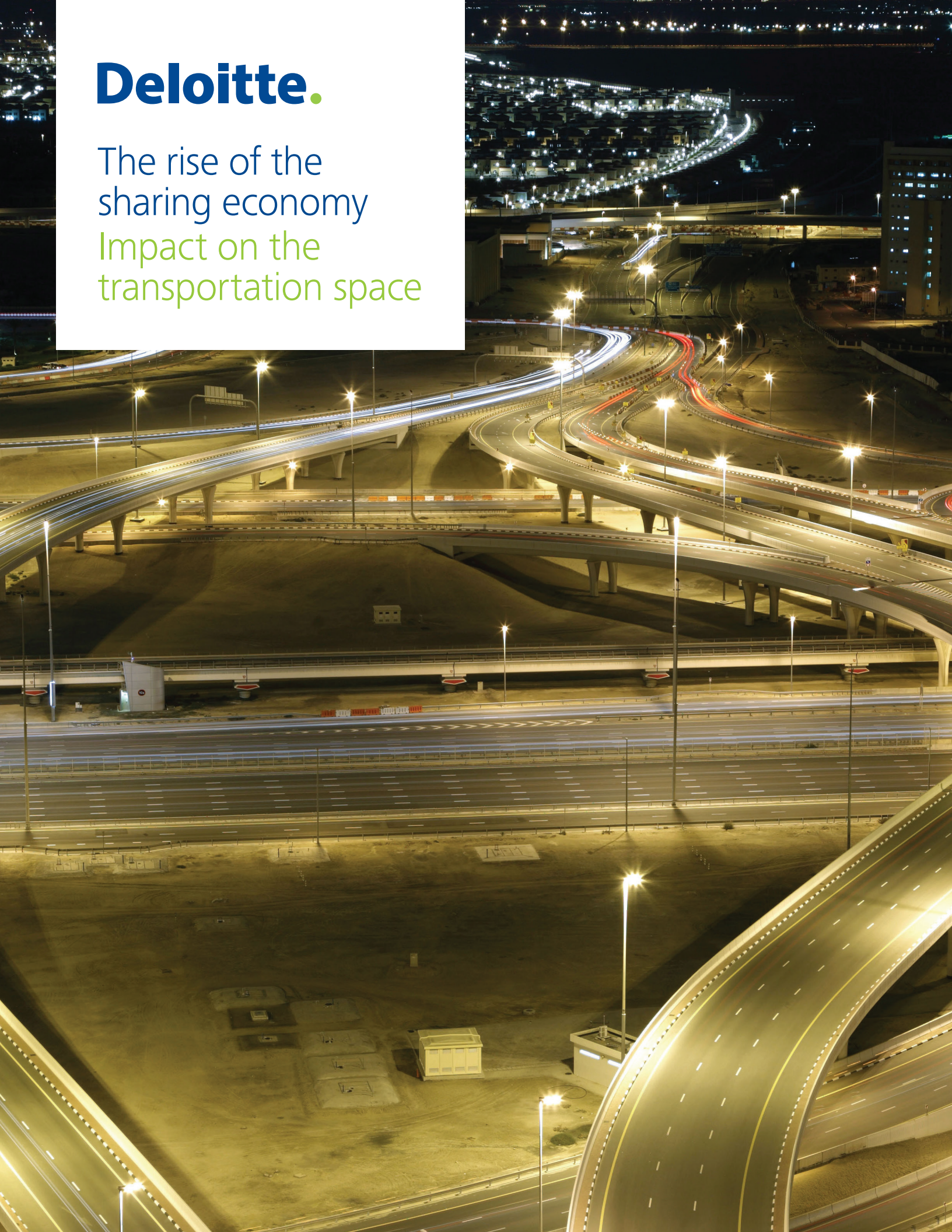
The rise of the sharing economy

Impact on the transportation space



In a world of shared assets, changing economics and customer preferences are increasingly driving transportation players not to go it alone.

In only a few short years, the sharing economy has become a ubiquitous concept. As recently noted in the Wall Street Journal, "there's an Uber for everything now," ranging from Shyp, which uses a network of individual providers to pick up, pack and ship items using their own cars, to Zeel, which taps a network of independent licensed therapists to offer customers same-day, in-home massages.[1] While mobile apps have facilitated this type of collaborative consumption, changing consumer preferences may be the biggest indicator that the sharing economy is here to stay. Younger people in particular embrace the core idea of eschewing individual ownership, and its accompanying higher costs, in favor of on-demand access to a flexible, lower-cost network of shared assets or service providers.[2] And, these younger consumers may have more and more networks to choose from as pure-play technology companies continue to enter the marketplace. This generational shift toward shared models will likely have profound implications for businesses since today's teens and young adults will soon become employees and customers—if they haven't already.

The sharing economy can be defined as the preference to pay for assets or services by consumption or on-demand, rather than owning assets permanently or signing long-term contracts for services.

While still in its infancy, the sharing economy has disrupted a number of industries with lightning speed. Consider, for instance, how Uber has up-ended the taxi business and how Airbnb has brought a formidable new tier of competition to the incumbents in the hospitality sector, both within a few short years. As noted by Salim Ismail, Founding Executive Director, Singularity University, the internet has created an environment where a "viral loop" can generate demand at near-zero cost, and new entrants can add supply to a platform for far less than traditional players.[3] With Airbnb, for example, the cost of adding another room is near zero, but traditional players typically incur the substantial cost of physically building out the incremental assets.[4] And, this type of change is just the beginning. New entrants will continue to emerge since technology has eroded the traditional barrier to entry: asset ownership. Particularly within the B2B space, traditional operating models may be in jeopardy. As shared platforms gain a broader user base, pricing may become more transparent and assets more fungible between traditional market verticals. This could allow players to expand beyond their traditional lines of business to offer adjacent services, without having to do it the old fashioned way: investing huge sums of capital to build capabilities and acquire companies. It seems the sharing economy has the power to bring not only customers but also competitors closer together.

Indeed, any industry could potentially benefit from, or be disrupted by, the rise of collaborative consumption and the proliferation of asset-sharing models. However, due to its natural fragmentation and asset intensity, the sharing economy is especially relevant to core transportation companies as well as to heavy users of transportation services.

When thinking about the transportation ecosystem, there are two broad categories of players: core transportation companies and heavy users of transportation services

Core transportation companies

- Core transportation companies are defined as those with transportation services as their main revenue stream
- They include small parcel carriers, full truckload (FTL) and less-than-full truckload (LTL) carriers, railroad companies and truck leasing firms

Heavy users of transportation

- Heavy users of transportation services are defined as those incurring significant transportation-related expenses and whose main revenue stream comes from non-transportation activities
- They include retailers, consumer packaged goods companies, construction equipment rental companies, computer hardware providers, auto manufacturers, heavy equipment manufacturers, process and chemical companies, wholesale distributors, and others

Disruption has arrived

In the small parcel space and beyond, disruption in the core transportation industry is already taking off. Based on its initial success leveraging a driver partner pool and their assets to enable its ride hailing service, Uber has expanded its platform to engage drivers in providing delivery services with its UberRUSH offering.[5]

A scan of the marketplace indicates the transportation ecosystem is evolving and new collaborative opportunities are emerging.

Signs of a changing landscape

Technology-enabled coordination for regional parcel carriers	Real-time marketplace for long-haul trucking	Application of multi-modal technology to the crowd	Crowdsourced assets in the core supply chain
• One regional carrier could leverage the assets of others to deliver outside of its normal coverage area, effectively employing a shared model • Regional parcel carriers already coordinate to provide a wider coverage area, but as coordination increases through technology-enabled capabilities, this could begin to look like a seamless, national, or even global network	• A transparent real-time platform for long-haul trucking that seamlessly interfaces with logistics management software could be used to leverage additional truck capacity, especially for less-than-truckload shipments • This idea is already being mobilized by start-ups such as uShip, and as the technology matures it may become a larger part of the transportation portfolio[6]	• The reach of the crowd could be extended by coordinating handoffs between carriers at intermediate way points. This could effectively create a multi-regional or national network using a point-to-point delivery model • Coordination of warehouse space would be needed to establish the waypoints and reduce friction in the handoff process	• Retailers are increasingly turning to the crowd to fulfill deliveries from stores, but as they become more comfortable with the sharing model, they could leverage it to move goods between stores or from distribution centers to store

Another tech startup, Sidecar, developed a multimodal version of this concept. It mobilized third-party vehicles, bicycles, and walkers to optimize the delivery route for a single package, capturing the value of multimodal transport for urban deliveries.[7] Using a particular mode and delivery route, costs were reduced and problems were avoided (i.e., cars needing to find parking to pick-up food). Additionally, the platform used real-time data to dynamically slot new deliveries into a network that is already in motion. And, if this micro-modal model seems too small to be taken seriously, then think again. In January 2016, General Motors acquired select assets and employees from Sidecar, with the intention of folding them into Maven, its own car-sharing service.[8]

Other large players are joining the fray as well. In 2015, UPS acquired Coyote Logistics, a tech-enabled freight broker and logistics service provider.[9] Coyote Logistics' software connects shipping customers with contract carriers and offers full tracking and visibility for loads.[10] The acquisition allows UPS to connect with additional customers to fill empty space on trucks, potentially increasing revenue. It will also allow UPS to tap a large network of contract carriers during the peak shipping season, helping it manage peaks in demand using shared assets.

Retailers and other heavy users of transportation services have taken note of industry developments. In response to rising consumer expectations for omni-channel interaction and fulfillment, retailers are beginning to explore how nimble networks of shared assets, inventory, and agile services can meet their needs.[11] Take Deliv for example. This startup offers a crowd-sourced delivery solution for fulfilling retail orders. When checking out via a participating retailer's web site, customers can select a same-day delivery option. The order is then fulfilled from a nearby store by local drivers in their personal vehicles. Deliv has over 100 participating retailers, and is not the only player in the space.[12] Postmates, ShopRunner, Shyp, FlexPort, and Shipwise also offer logistics solutions. Although they have yet to be widely disruptive to core transportation companies, these types of services are enabling retailers to re-think their fulfillment models by offering faster delivery from a local store, in contrast with typical warehouse distribution.

The freight and logistics space is not immune to disruption either. B2B shippers are starting to move beyond traditional freight brokers to fulfill local and regional needs. For example, Seattle-based Convoy connects local truck drivers to area shippers to fulfill LTL and FTL requests.[13] Using a proprietary algorithm, a mobile app prices the proposed shipment and offers it to the carriers that are best suited to handle the load. Convoy may charge less than a freight broker to facilitate the transaction, and it is designed to offer a more streamlined service than a call-and-quote broker. Tech-enabled players are changing the international shipment landscape as well. For example, Freightos has developed an integrated quoting solution that connects

the quote management systems of carriers and forwarders to a search tool for shippers.[14] Through this shared platform, the solution is designed to provide prices for cross-border freight shipments in minutes.[15]

Even with momentum building, shippers and carriers still face barriers to participating in the sharing economy. For shippers, integrating shared platforms into complex distribution networks is only the first challenge. For many, maintaining the customer connection through delivery touchpoints is important for cross-selling and up-selling, and shippers will need to think about how to maintain these relationships when utilizing shared resources. Shippers in certain segments, food and chemicals for example, must also contend with regulatory constraints that govern shipping conditions. FTL and LTL carriers must adjust as well. For them, being connected to shippers through a shared platform could mean moving faster. Many are used to working on a 24-hour cycle with customers, i.e., take an order on one day and pick it up the next. However, carriers will need to be even more responsive within a dynamic marketplace to add value to shippers. Additionally, carriers will need to monitor their insurance coverage, as restrictions can limit the type of loads they can transport.

However, new entrants to the space are starting to break down these barriers, and in the process, are helping incumbents to better understand the potential of shared platforms. One example is Dropoff, a company that provides a courier service for B2B and B2C shipments.[16] Dropoff uses independent contractors and their own vehicles to offer same-day package delivery within a city. It offers confirmation functionality as well as insured, bonded, and HIPAA-certified agents to meet B2B service expectations.[17] Other companies connect customers to carriers with special equipment to fulfill special needs. For example, uShip can connect customers shipping food products to carriers with reefers to help meet special shipping requirements.[18]

Playing in a world of shared assets

With the force of changing consumer expectations behind it, the momentum of the sharing economy is unlikely to dissipate anytime soon. As a result, core transportation companies and heavy users of transportation services (i.e., mostly B2B) need to learn how to play in a world of shared assets. The bad news is that the mobile technologies and digital platforms used to power startup companies like Postmates and Convoy are eroding the traditional barrier to entry (i.e., asset ownership) and opening the core transportation industry to a spate of new competitors.

Startup companies' platforms are eroding the typical barrier to entry, asset ownership; however, the same technologies are creating new opportunities for forward-thinking incumbents

The good news, however, is that these same technologies are also creating new opportunities for forward-thinking incumbents to leverage a shared platform to grow their businesses and enhance their margins. This transformation could occur in a few ways, including:

1. Core transportation companies could leverage a network of shared services and assets with a goal of delivering higher value services to companies, while increasing profitability.
2. Heavy users of transportation services could shift to a shared platform to fulfill certain types of demand, potentially freeing up cash, minimizing vendor lock-in, and keeping prices aligned with the marketplace.

Core providers connect

In the first scenario, core transportation providers could gain greater efficiency and provide better customer service by incorporating a shared platform into their business models. Traditionally, core providers, such as truck leasing companies, either dedicate assets to specific customer accounts or carry planned loads at pre-negotiated rates. They then sell remaining excess capacity through brokers at a premium. Because most assets reside exclusively with specific customers and demand signals for planned loads are fuzzy at best, there is limited ability to manage utilization peaks and valleys. Ultimately, this lost utilization is either absorbed by the provider or passed along to the customer.

By utilizing a shared platform, a truck leasing company or other core transportation provider could more effectively market excess capacity across its own customer base or with a broader network. In either case, customers would only lease the base

capacity needed to fulfill core demand, while peak demand would be fulfilled by a shared fleet.

For customers, this could help ease forecasting concerns as well as lower total transportation costs. For providers, the same volume of customer demand could be fulfilled by fewer assets, thus enhancing the effectiveness of the fleet. Ultimately, this scenario would increase asset utilization across the supply chain, creating value that both providers and customers could share. For example, a specialty FTL carrier might be able to leverage a sharing platform to increase utilization of its reefer trucks. These trucks are typically deployed during the day for food distribution, but could be used for other temperature-controlled shipments at night. Or, in another scenario, B2B providers could potentially benefit from using a shared network to complete urgent runs, outside planned delivery windows. This would likely be less expensive than adjusting their planned delivery schedules or setting aside assets so they have the capacity to handle last-minute requests from customers.

To enable this strategy, core transportation companies could either connect to an existing shared platform or build their own. At a minimum, those exploring the former option would need to develop the capabilities to:

- Integrate existing logistics and telematics systems with the shared platform
- Manage and monetize excess capacity through the shared platform

Companies exploring the latter option of building their own platform may wish to acquire or partner with a tech company. If so, in addition to the aforementioned capabilities, they would need to develop the ability to:

- Integrate the acquisition or leverage the partnership/JV to maximize learning opportunities while keeping the core business intact
- Develop and maintain the shared platform for an ecosystem of partners, which requires different skills than supporting internal legacy systems

FedEx and UPS offer a case study in how excess capacity can be effectively shared to improve customer service and lower costs. Historically, FedEx and UPS have handled the shipment of packages from origin to destination using their own networks of hubs, trucks and planes. In the early 2000s, both companies began offering a service where packages would be consolidated and dropped at local post offices for final delivery.[19,20] These services effectively leverage the assets of the United States Postal Service (USPS) to cover the "last mile," allowing both FedEx and UPS to better serve their customers by offering a lower-cost solution for residential packages.[21,22]

Having demonstrated they can share assets to effectively deliver packages, parcel carriers could extend this idea a step further to offer additional services to customers. One possibility is leveraging a crowd-sourced mobile workforce to deliver packages directly from a distribution center or retail outlet to a customer's door. In this case, the crowd could bid on driving pre-determined routes for delivery. Another possibility is leveraging excess capacity in the marketplace to take packages from destination hubs to residential areas having low delivery concentrations. Here, demand could be forecast a day ahead and matched with availability in the marketplace.

Heavy users get "asset right"

In the second transformation scenario, heavy users of transportation services could become "asset right" by focusing on the core business while effectively using the excess capacity in the broader transportation system. At present, retailers and other heavy users of transportation services typically invest in transportation assets (e.g., trucks or rail cars) or hire a third-party logistics (3PL) provider to fulfill key needs. In the case of asset ownership, demand seasonality often affects asset utilization, thus increasing costs during low-demand months. In the case of using a 3PL provider, a company can be exposed to sub-optimal costs in a different way. Companies pay a premium to 3PL providers in the form of a margin. As 3PL providers have expanded their services, many heavy users no longer have in-house transportation coordination capabilities, creating high switching costs. This lack of in-house capabilities often forces companies to stick with a vendor even when the margin becomes unacceptably high. Without being able to commoditize providers, it becomes challenging for companies to recalibrate prices in order to keep them aligned with the marketplace.

In the sharing economy, a retailer, or another heavy user of transportation services, could choose to own only those assets that are needed to fulfill core product demand. It would then leverage a shared transportation platform to handle marginal demand. This shift would allow it to divest transportation assets that are used to fulfill seasonal spikes.

This strategy could potentially generate a cash influx from the asset sales, while giving the company greater ability to manage its transportation needs. It could also allow the company to minimize vendor lock-in and gain the capacity to continually align its transportation costs with the marketplace.

To shift to an "asset-right" model whereby asset ownership is balanced with excess capacity in the broader transportation system, heavy users would at least need to develop the capabilities to:

- Forecast the supply and price of excess assets in the marketplace
- Integrate logistics, warehouse management, and telematics systems
- Manage an increasing number of transportation service providers across the network
- Enable dynamic, real-time decision-making in the supply chain to move products efficiently through the shared network

Amazon, as it builds delivery capabilities designed for competitive advantage, is one example of how shared platforms and "asset-right" models are transforming the space for both retailers and their transportation service providers. Driven by the success of large e-tailers, consumer expectations for fast, reliable delivery are already high and likely to grow. A recent Internet Retailer study indicated that while same-day delivery is only important to 19 percent of all customers, it is important to 30 percent of millennials.[23] This suggests that the ability to deliver faster will become increasingly important to retailers in the coming years. Even beyond shipping speed, some retailers are adding white-glove services, time-targeted deliveries, and on-call returns to their portfolios. To meet these expectations and to support its growth, Amazon continues to invest in creating its own delivery capabilities. For example, it has established a fleet of delivery vehicles in select cities to support its grocery offering, AmazonFresh.[24] Additionally, Amazon has launched its own same-day, crowd-sourced delivery service, AmazonFlex, to support PrimeNow.[25]

Traditional, brick-and-mortar retailers have responded by offering same-day shipment of goods but are increasingly looking beyond traditional parcel delivery companies to third-party logistics providers and crowd-sourced platforms to meet demand.[26] For example, Kohl's has partnered with Deliv to offer same-day delivery to customers, thus cutting into revenue from traditional parcel carriers.[27] However, as retailers get comfortable with crowdsourcing delivery of online orders, they may begin to consider alternative sharing models to move products within their core distribution networks—effectively becoming even more

"asset-right." Small retailers may even be able to obtain these services from Amazon as it continues to build out its own capabilities. For example, Amazon's internal delivery capability could be integrated into its fulfillment offering and then expanded into a standalone logistics services offering for other retailers.

Transportation companies and heavy users of their services do not have the luxury of waiting to see if the sharing economy persists as an increasingly preferred method of exchange.

At a minimum: start exploring

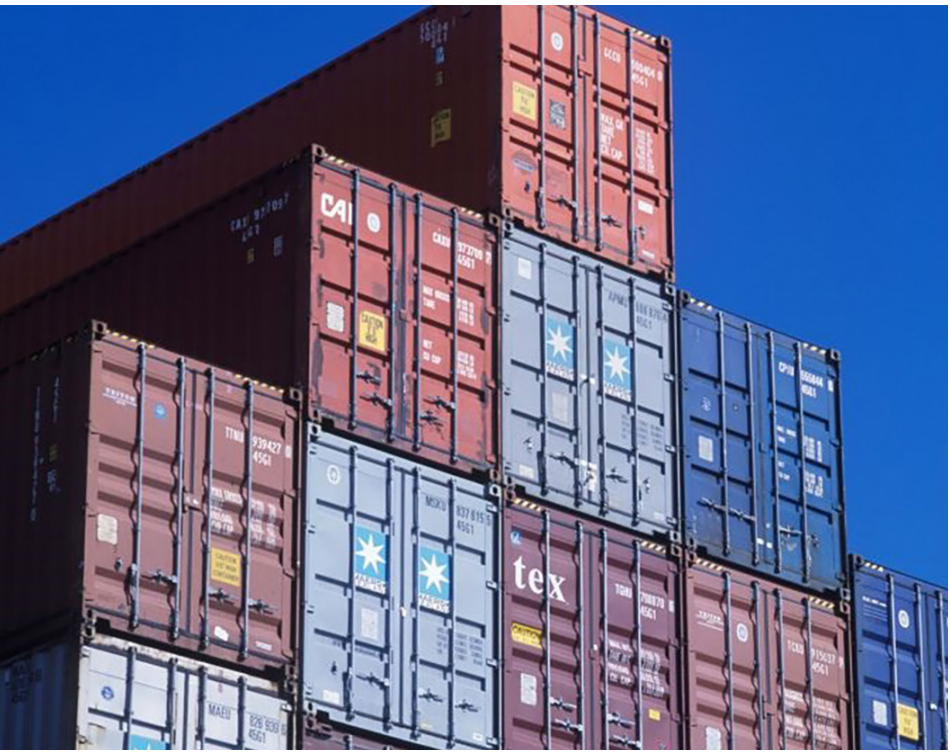
These examples illustrate how the industry could be disrupted by shared platforms as well as how early movers could take advantage of them. As outlined in the Deloitte article, "The Future of Mobility," the rise of the sharing economy isn't the only potential disruptor facing the transportation sector.[28] Battery and electric vehicles, in conjunction with lighter weight materials, are making vehicles cleaner and more efficient, while putting pressure on the traditional fossil-fuel-based economy. Simultaneously, autonomous vehicles are looming on the horizon. Rapid advances in the "'connected car',—innovations that integrate communications technologies and the Internet of Things to provide valuable services to drivers," have already led to prototypes of fully autonomous vehicles.[29] As the article further notes, it is unclear if the transportation ecosystem will evolve slowly or will be subject to dramatic changes, but it is clear that the current tide in the space has the potential to change the landscape.

Whatever the pace of change, core providers and heavy users should consider the potential implications for their businesses holistically across the following dimensions:

- **Customers, Suppliers, and Partners**
  - How will we redefine our market value proposition to customers, suppliers, and partners?
  - Should we serve the same customers through the same channels?
  - Can we acquire customers from different channels?
  - How should we tap the capacity base to provide services?
- **Financial**
  - How will industry disruption affect our cash flow models?
  - What are the balance sheet implications of using a shared platform?
- **Operating**
  - How might the changing landscape impact our operating model, decision rights, and funding mechanisms?
  - How can we create and sustain a new ecosystem within the organization?
- **Technology**
  - How will our legacy technology platforms be challenged? Are they ready to participate in an "integrated" network?
  - Are IT budgets aligned to accommodate a fluid environment with shorter sprints? How can we allocate the IT budget both to sustain legacy systems and develop new platforms?

Whatever the pace of change, core providers and heavy users should start exploring the capabilities needed to utilize shared platforms so they do not fall behind. As companies embark on this journey, they may wish to consider taking a "minimum viable transformation" approach to evolving their business models and developing the requisite capabilities. At its core, minimum viable transformation is a five-principle approach for "gathering validated learning about individual business model elements and how they interact to form one cohesive strategy."[30] The five principles are:

1. Learn How to Learn: Encourage rapid iteration and see each failure as a learning opportunity rather than a setback
2. Pick Up Speed: Push the pace of experimentation recognizing that the market is evolving rapidly and that the competition will be learning quickly from your moves
3. Embrace Constraints: Limitations often compel creative thinking. Well-defined time and scope constraints can force teams to focus on the essential elements and encourage them to engage third-party capabilities
4. Have a Hypothesis: Define the need and the direction of the transformation in terms of assumptions, strategies, and tactics and challenge these through testing
5. Start at the Edge: Explore new models on a micro scale to minimize risk and avoid disruption to the core revenue-generating business[31]



Conclusion

While the debate ensues regarding how fast and to what extent the sharing economy will impact core transportation companies and heavy users of transportation services, the industry as a whole could be poised for profound disruption. In the coming years, every aspect of commerce based on the assumption of wholly owned fleets of human-driven, fossil-fuel-powered vehicles will likely be challenged. Transportation companies and heavy users of their services do not have the luxury of waiting to see if the sharing economy persists as an increasingly preferred method of exchange. Incumbents should identify the new capabilities they need to participate in the evolving transportation ecosystem and start experimenting with how they can be applied. The train, as they say, has left the station. New entrants may continue to redefine how value is created within the sector, but they can't go it alone.

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Contacts:

Ted Choe
Principal
Deloitte Consulting LLP
techoe@deloitte.com

Mauricio Garza
Senior Manager
Deloitte Consulting LLP
maugarza@deloitte.com

Remzi Ural
Senior Manager
Deloitte Consulting LLP
rural@deloitte.com

Jon Woolfolk
Manager
Deloitte Consulting LLP
jwoolfolk@deloitte.com