

The Chauffeured Transportation Market | At the Crossroads

The chauffeured transportation market is under siege by highly-disruptive technological and economic forces that threaten to destroy the industry as we know it, leaving no provider unaffected regardless of the scale of their operation, the power of their brand or the segment they serve. In less than five years the upstarts that ushered in these forces, also known as Transportation Network Companies (TNCs), have grown larger and more powerful than the entire traditional chauffeured transportation industry and they are just getting started.

It is time to quickly evolve or die.

"Disruptive innovation describes a process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors."

Clayton Christensen | Harvard Business School

The competitive advantages of incumbents in traditional business models, historically measured by the amount of brick and mortar or steel and rubber they have under management, are now being exploited as financial liabilities by these disruptors. The high fixed cost structure of the incumbent is increasingly a competitive disadvantage as the next generation disruptors, unburdened by these costs, can combine near-zero marginal cost models with the ability to create near-infinite network supply, while in some cases also concurrently increasing per-unit utilization rates of fixed assets to nearly 100%.

Disruptive technology-enabled business models respect no brand, stop for no industry and there is no incumbent that is immune. For perspective, look no further than these well-known disruptive models:

- Facebook, the world's largest media property, creates no content.
- Google, the world's largest advertising company, employs no creative talent.
- Airbnb, the world's largest hospitality company, owns no real estate.
- Alibaba, the world's largest and most valuable retailer, holds no inventory.

While this must seem unfair to the incumbents given their capital investments, hard work and brand equity, it remains an economic, historical and technological reality. The only path forward for those at risk is to aggressively embrace next generation technology stacks and business models and to be as agile as their

new competition. In many respects, these disruptors are simply practicing a form of technology and business Judo in which they are using the incumbent's weight and strength against it.

Given this, the incumbent must neutralize the strength of the disruptor by embracing the very same set of technological capabilities and ultimately prevail by redeploying its legacy assets (e.g. brand, infrastructure and people) in novel ways, exploiting the power of this technology paradigm. If properly executed, the incumbent can emerge victorious and stronger than ever, with higher revenue and margins and a more durable business model. However, and I cannot underscore this enough, it requires a complete reimagining of the incumbent's business model. If the operator chooses to fight this war based upon the competitive tactics of battles past, it will surely lose.

Uber, Lyft and the Rise of the TNCs

The TNCs represent the very latest version of these new low-cost and disruptive models. Uber, founded less than five years ago, is the world's largest car service company and yet doesn't employ drivers or own vehicles. In addition to the inherent power of its economic model, which also combines a near-zero marginal cost structure with the ability to create near-infinite network supply while concurrently increasing per-unit utilization rates of fixed assets to nearly 100%, Uber has created a world-class user experience, engendering a loyal and rapidly growing following that has broken through early adopter and youth demographics to appeal to consumers and employees of all types.

This collection of assets represents a perfect storm and existential risk to chauffeured transportation providers. No longer speculative or anecdotal, established customer bases are in fact eroding and ride attrition is indeed increasing. These trends are going to accelerate at a remarkable rate absent a rapid pivot by the industry toward a new, innovative and collaborative business model enabled by modern cloud, mobile and real-time technologies. I must underscore something for those that still feel immune to the rise of the TNCs because they currently serve a segment of the market that the TNC hasn't yet aggressively attacked. With an aggregate market value of more than \$50 billion, the TNCs are left with no choice but to be in all areas of ground transportation – corporate, premium and advanced reservation – in order to deliver returns to their investors from these valuation levels. No segment, even the smallest niche, will remain protected.

Early Reactions to the TNC Threat

Like all entrenched markets facing disruption, the chauffeured transportation industry at first ignored, then ridiculed and is now vilifying these disruptive forces and their respective leaders. While these are perfectly normal and easily understandable emotions given what is at risk for legacy operators, these responses do absolutely nothing to stem the inexorable tide of disruption history.

Equally as unproductive have been the attempts by some established operators to build their own competing cloud and mobile stacks. Hardcore computer science, and that's what this is, will never be their core competency and there is zero possibility that a critical mass of the best software engineers and data scientists from the world's top technology pool will seek employment at car service companies. The inevitable self-inflicted wounds from pursuing this approach will only lead to further financial and opportunity cost and certain corporate death. Operating in a market that is being disrupted requires you to understand your strengths and weaknesses as well as those of your new competitors.

"If you know the enemy and know yourself, you need not fear the result of a hundred battles. If you know yourself but not the enemy, for every victory gained you will also suffer a defeat. If you know neither the enemy nor yourself, you will succumb in every battle."

Sun Tzu | The Art of War

A further waste of precious time and capital has been the attempt by some operators to acquire inferior technology components from subscale legacy software companies. These vendors traffic in buzzwords like cloud and mobile with little-to-no understanding of their real meaning and have no legitimate expertise, resources or scale in these vital areas. They are opportunistic body shops that are simply taking advantage of the anxiety and technological naivety within the operator community. Partnering with them is tantamount to bringing a rubber knife to a gun fight.

Understanding the Rules of the Game: The Enemy of Your Enemy is Now Very Much Your Friend; the Power of Network Effects

It is imperative to understand that no operator or sub-group of operators alone will be able to provide a credible alternative to the TNC threat. Competing with the TNCs will require unprecedented operator collaboration to achieve scale. Conversely, content fragmentation and internecine battles within the chauffeured transportation community will lead to inventory deficits, a lack of customer adoption and catastrophic failure.

Like eBay, Amazon, Google, Alibaba and other network-based models, the core growth engine of the TNC is a virtuous network effect in which the value of their service increases for all participants with the addition of each new network participant. For the TNC, each new driver and vehicle provides more geographic coverage, choice and convenience which leads to more and more consumers and business travelers transacting, which in turn leads to more revenue opportunities for more and more drivers. These self-reinforcing network effects provide essential and powerful competitive advantages.

For the traditional chauffeured transportation industry, the absence of a single operator degrades the value of any new network by reducing geographic coverage, choice and convenience, thereby lessening the value to consumers and business travelers. In summary, the industry needs to understand that traditional competition between and among traditional operators is a secondary or even tertiary concern to the real risk and competition, which is the TNC.

If you are an operator of an existing chauffeured transportation fleet and choose to not join the network that I'm proposing below, you will be highly disadvantaged not only against the TNCs but also your traditional competition, which will benefit from all of its technological, economic and strategic advantages.

The Road Forward

To date, there has been no credible, scalable, integrated and holistic technology-enabled service and business model in the market to allow chauffeured transportation providers to compete with TNCs on a level playing field. We at Deem are here to provide a clear road forward for this very important and asset-advantaged industry. Before laying out our recommendations and the path to prosperity, I'd like to share some more thoughts on the challenges as we see them based upon talks with hundreds of large and small operators.

TNC Proliferation and Customer Attrition

Again, TNCs have gained significant and growing market share and customer adoption by providing a world-class mobile user experience and broad vehicle availability in dozens of markets worldwide. Their success has been primarily achieved by providing an intuitive mobile user experience, a 100% cloud-based infrastructure, vehicle density and availability that leverages data analytics while avoiding the capital expenditures and operational overhead of traditional chauffeured transportation fleets.

TNCs allow chauffeured transportation fleets to participate, but only after being anonymously grouped into a homogenized offering – to the detriment of their unique brands. The lack of a compelling real-time ride request capability that differentiates brands and service levels, and more importantly a world-class user experience and high vehicle availability and density is sorely lacking. This further prevents chauffeured transportation fleets from competing and growing their businesses.

Industry Fragmentation

According to LCT statistics, there are more than 8,300 chauffeured transportation operators in the United States, many with an average of 10 cars or less. Many of these operators have established affiliate networks as a way to virtually expand their service and distribution footprint both domestically and internationally and provide value-add to their larger and multinational corporate customers. Smaller operators also participate in affiliate networks as a way to grow their business. Despite this, no one has created a truly comprehensive affiliate platform that allows operators to challenge the TNC model.

Lack of Technology and Platform Standardization

Car service operators are not able to credibly provide cloud and mobile solutions to their corporate customers because there is no industry standard for exchanging data over a well-supported, robust affiliate network. The existing applications that have tried to solve for this lack robust application programming interfaces (APIs), content and distribution capabilities and real-time vehicle availability and, as a result, have seen anemic user adoption rates.

High Overhead and Operational Costs

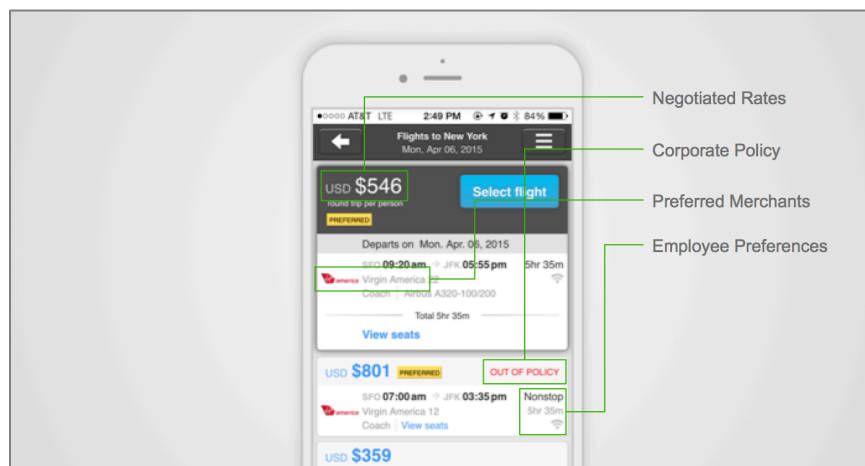
Chauffeured transportation operators have inordinately high operational costs because they lack compelling cloud and mobile technology solutions to support their fleets. These costs are primarily linked to manual processes such as reservation staff for booking by phone, dispatching and accounting along with decision analysis without the support of data analytics.

Lack of Compelling Solutions for Corporate Customers

Corporate travel managers and procurement officers are looking for a new and specific set of capabilities when implementing and maintaining a corporate ground transportation program. In the absence of these, they will tacitly or even explicitly support TNC usage within their organizations.

They are seeking a mobile application with a world-class consumer experience that takes into account – at the point of purchase – the employee's preferences, the company's policies and negotiated rates with preferred providers to execute the perfect transaction for the employee, the company and the provider. They want this capability augmented by itinerary integration and more importantly, real-time ride hailing.

They also expect this be implemented in this same format in which they've implemented their travel program. In other words, they demand a single application that allows for x number of their preferred operators to be accessible by their user community. They are as unprepared to have every operator deploy an app to their user community as they have been to allow every airline, hotel and car-rental company to do so. The diagram below illustrates how Deem's mobile app takes into account the employee's preferences, the company's policies and negotiated rates with their preferred providers at the point of purchase to execute the perfect transaction.



Until the chauffeured ground transportation industry can consistently provide all of these, it will continue to cede mindshare, marketshare and margin to TNC competitors.

Deem Offers Safe Passage

Deem is a leading cloud and mobile commerce company enabling businesses to lower costs, increase revenue and enhance customer loyalty. Deem connects more than 29,000 companies and scores of market-leading channel partners and their millions of users to a network of hundreds of thousands of national and local merchants and more than 11 million unique products and services. Deem's investors include Fidelity Investments, the mutual fund giant, Hony Capital, China's largest private equity fund, and numerous leading venture capital funds.

Deem's significant and ongoing investments in research, development and network operations to continuously improve our service is evidenced in our robust intellectual property program, with 41 issued patents and 24 more on file. Among these issued patents are some of the most important in the ground transportation markets and we intend to vigorously protect our intellectual property by aggressively enforcing these patents.

Deem Car Service 1.0

Deem's current car service network offers end-to-end ground transportation technology solutions for corporations, travel management companies and chauffeured ground transportation operators. Ground transportation operators benefit from seamless corporate reservation solutions and software to help efficiently track fleet management reservations. Deem Car Service helps grow your business and manage your fleet operations by operating the most widely-used and comprehensive ecosystem in the B2B ground transportation industry.

Deem Car Service 2.0

It's essential to note that Deem is one of the most prominent and recognized pioneers in cloud and mobile commerce and that all of its applications outside of those that it acquired from Global Ground Automation take advantage of this modern architecture. Cloud and mobile commerce apps aren't new to us and they're not buzzwords to us; we helped the industry understand their power by creating them and they are our lifeblood.

In the next phase of our investment and commitment to the chauffeured transportation industry, Deem is leveraging its core cloud and mobile infrastructure to deliver the only credible, scalable, integrated and

holistic technology-enabled service and business model in the marketplace that will allow chauffeured transportation providers to compete with TNCs. If the industry partners with Deem it not only has an opportunity to counterbalance the TNCs, but to regain the advantage by converting its newfound liabilities (e.g. fleets, infrastructure and people) back to assets and competitive advantages.

The Dawn of the Clearinghouse Age

To provide a real-time ride hailing solution that competes with the distribution footprint of the TNCs, the chauffeured transportation industry must adopt a central clearinghouse for vehicle availability and GPS location data. The clearinghouse must be 100% cloud-based and use a highly scalable architecture that can meet the content-rich demands of both customers as well as chauffeured transportation fleets. Additional availability and content density can be achieved by leveraging rule-sets for affiliate networks.

To power this ubiquitous real-time clearinghouse, any fleet that meets the National Limousine Association (NLA) service level standards will be allowed and encouraged to participate in both publishing and consuming vehicle GPS content and availability. A set of open standards (e.g. RESTful APIs, open source) will be introduced for publishing and retrieving vehicle availability and content. Deem will also offer a set of cloud-based dashboards and driver apps for managing and publishing fleet content within the real-time clearinghouse.

Car service back office software suppliers and other third party application developers will be given the opportunity to publish and retrieve available vehicle content in the real-time clearinghouse.

Real-time Ride Matching and True Vehicle Availability

Existing TNCs that allow ground transportation fleets to participate in a ride hailing solution force operators to designate one or more vehicles as “available” for real-time ride matching. This effectively reduces the number of vehicles available for reservation dispatching and causes considerable disruption to fleet management operations.

Fueling proliferation of a well-adopted, real-time ride matching solution for the chauffeured transportation industry requires a well-defined algorithm for determining availability of a given driver/vehicle in real time. The solution must co-exist with existing dispatch applications to determine not only the GPS location and ride status (e.g. in-progress, unoccupied) of a given driver/vehicle, but also leverage pre-assigned or

dispatched ride data (e.g. pickup location, drop-off location, pickup time, etc.) within the availability equation. This is a far more complex availability model than existing TNCs, but is the only practical solution for determining true vehicle availability when introducing real-time rides in tandem with traditional reserved rides...

Leverage Affiliate Networks

A universal clearinghouse must be able to consume affiliate relationship rules when surfacing content to a given customer. Maximizing affiliate rules for surfacing available vehicle content will result in a multiplier-effect across the real-time clearinghouse, providing far more availability and content for customers, along with a higher percentage of ride matching results and increased adoption.

All participants in the Deem Car Affiliate Network will receive access to cloud-based dashboards and vehicle tracking applications that will allow an operator to track internal fleet vehicles as well as affiliate vehicle availability and rides in progress. Vehicle status updates, including GPS, from affiliate rides can be leveraged via the tracking dashboard or via APIs for additional duty of care in managing an affiliate network. Affiliate rules can be modified through the dashboard to account for an operator's lack of presence in a given region, a desire to give precedence to one partnered operator over another and allow for defined aliasing rules. This allows for leverage of available vehicles of said partner for ride matching even if a given operator does not have real-time availability in a given region, and will allow an operator to provide complete coverage to their customers and provide a TNC-like user experience for vehicle availability.

In addition to real-time availability, the clearinghouse will also manage reservation transmission and ride tracking after ride assignment or dispatching.

Stop Attrition and Grow Your Business

Deem has perfected cloud and mobile apps designed for corporate employees by delivering a simple, intuitive user experience that combines the employee's preferences, the company's policies and their negotiated rates with their preferred suppliers at the point of purchase. A great app is only as good as the cloud network and underlying APIs that power it for content. Deem has established well-adopted cloud solutions for all travel verticals including air, hotel, car rental, and car service. According to LCT figures, more than 63% of chauffeured transportation rides are airport/travel related, and a streamlined, intuitive

user experience that allows a corporate employee to leverage the travel itinerary for reserving car service will further drive adoption and brand loyalty if a corporate traveler can purchase all of their travel needs using one app.

Leverage Your Brand

As a business owner, the ability to differentiate your brand from your competitors by highlighting service levels, amenities, white glove support and customer care is paramount. Providing a strong value proposition with commercially insured vehicles, comprehensive driver background checks and training programs and well-established vehicle replacement and maintenance programs is also critical in both preventing ride attrition to TNC services and growing your business with new customers.

TNC ride hailing solutions homogenize chauffeured transportation services and content to present a single unified brand to their customers. Operators that participate in these generic TNC offerings have no opportunity to market their brands directly to consumers and in many cases cannibalize their existing business in exchange for quick, short term revenue. Deem allows you to preserve the integrity of your brand and highlight its merits, without losing the benefits that an affiliate platform has to offer.

Reduce Costs

According to LCT 2014 statistics, roughly 33% of total expenditures for chauffeured transportation operators are labor, including wages and benefits. Excluding chauffeurs, sales and management, primary labor costs for operators typically include reservationists, dispatchers, and affiliate management staff. A well-adopted customer booking and ride-hailing solution should drive down these operational costs in reservation acquisition and customer support, reduce dispatching overhead with automated real-time clearinghouse capabilities and provide automated ride transmission with affiliate management. As an added bonus, it will build customer loyalty and expand existing business lines in a similar fashion to existing TNCs.

Variable Pricing

The chauffeured transportation industry has by and large been saddled with an inflexible pricing model based upon a combination of point-to-point rate books and hourly pricing. There is an acute need for a combination of distance and time-based pricing that provides the flexibility of both offerings.

Distance-based pricing should incorporate scalable geocoding and route calculation APIs to determine both initial quotes and calculate a final price based upon the route for a particular ride. Operators and fleet managers must be given the flexibility to establish distance and time-based pricing rules by region and configurable distance-based thresholds. For instance, in the Los Angeles area, charge a base rate of \$10 and \$2 per mile for the first 10 miles, \$4 per mile for the next 10 miles, etc.

Pricing by region is critical since fixed costs (taxes, insurance, regulatory fees, etc.) can vary dramatically. This will eliminate inefficient and illogical point-to-point and hourly pricing, and also provide a far more transparent method that allows operators to compete with TNCs at premium service levels.

Most importantly, incorporating variable pricing algorithms should lead to a pricing model that incorporates both supply (available vehicles) and demand (customer reservation and real-time ride requests) with the freedom to increase and discount rates accordingly.

Data Analytics

Adoption of an industry-wide clearinghouse for vehicle content and availability is a necessity for proliferating a highly available solution to real-time ride hailing. Without a scalable ride matching engine, both customers and operators will be disappointed by long ride matching wait times, service unavailability, and a lack of adoption and incremental business. A dynamic ride-matching engine should incorporate a matching algorithm based upon vehicle GPS locations, current and future assigned rides, customer policy and affiliate rules to insure vehicle content density. To continue to improve and streamline the performance of the ride-matching engine, tuning the engine based on historical and real-time data, including customer requests and vehicle statuses, becomes critical. Data analytics and the Deem patented science behind it is the key.

Based on data compiled from incoming customer requests, vehicle status updates, estimated drive times and actual vehicle arrival times, a data analytics engine can determine that actual arrival times are far higher than the estimated arrival time calculated during the ride matching process, that drive times are

being underestimated and that there are not enough available vehicles in the given proximity to match customer demand.

Based on data inferences, the ride-matching engine can be tuned or adapted to bring further efficiencies and improve ride matching arrival times. The data inferences can also be shared with chauffeured transportation fleet operators so that better choices can be made to capture additional rides based upon customer demand. Data analytics also allow chauffeured transportation operators to make better business decisions with regard to capital expenditures, including vehicle purchases and maintenance.

Premium Real-time Ride Matching Service

The chauffeured transportation industry has a choice whether to engage in a “race to the bottom” with TNCs. Ultimately, the outcome of this choice could make-or-break premium businesses and brands.

Benefits of a premium ride matching service include:

- A ride matching service that can designate any number of vehicles available in the real-time clearinghouse.
- Any available vehicle can receive a ride request from a customer within proximity if categorized as:
- No trip in progress for the given vehicle/driver.
- No pre-assigned future trips that could potentially be disrupted by a ride matching request.
- Available to receive ride matching requests as designated by the fleet manager.

Customers utilizing this service will be willing to pay a premium for the service - above and beyond TNC pricing - to ensure a higher level of safety and service.

- The customer app will clearly display the operator brand and any supported amenities to the user during the ride matching process to optimize need with availability.
- The service can be leveraged for corporate employees as well as premium leisure travelers.
- The customer app can be white-labeled or branded for a particular operator if necessary.

Requirements for Participation

Broad vehicle density and coverage will power the customer-facing app and provide convenience and availability comparable to TNC ride-hailing solutions. The following is a set of requirements for participation in the ride-matching clearinghouse:

Chauffeured transportation operators must opt-in to the program.

- Deem Driver– Deem will publish a driver app that reports assigned trips, GPS vehicle updates and ride status updates into the real-time clearinghouse. Operators have the choice to adopt the driver app across their entire fleet.
- Open APIs – Deem will publish a set of APIs that will report vehicle GPS, current and pre-assigned trips, publish ride status updates and retrieve vehicles for the purpose of ride matching or inventory tracking.
- Any technology provider, including back office platforms, will have the opportunity to publish and retrieve content from the real-time clearinghouse by consuming Deem’s open APIs. Participation applies only to technology providers that have been vetted and are not violating the intellectual property of Deem.

Summary

The chauffeured transportation market is under siege by highly disruptive technological and economic forces that threaten to destroy the industry as we know it. Whether you are managing a mom-and-pop boutique provider or a private equity owned national operator, regardless of the size and scope of your operations and aspirations, this is a clarion call for you to protect your business for your families, investors and stakeholders, post-haste.

The Transportation Network Companies have been able to combine modern cloud, mobile and real-time technologies and no small amount of business ingenuity to transform your greatest assets into liabilities in their effort to take away your business. While they are now larger than all of you in the aggregate, you have a real opportunity to leverage the very same modern cloud, mobile and real-time technologies to reestablish your fleets, people and brands as competitive advantages in this war. It's now up to you to seize this opportunity.

Deem is a San Francisco-based pioneer in cloud and mobile technologies. The "Amazon of B2B", we connect more than 29,000 companies and scores of market-leading channel partners and their millions of users to a network of hundreds of thousands of national and local merchants and more than 11 million unique products and services. We are backed by deep-pocketed and world-class investors including Fidelity Investments, the mutual fund giant, Hony Capital, China's largest private equity fund, and numerous leading venture capital funds.

More than just a leading technology company, Deem has a documented track record of helping brick and mortar companies (e.g. Corporate Travel Agencies) successfully compete with consumer sites (e.g. Online Travel Agencies) that were taking major marketshare from them through easier-to-use applications and broader content offerings. We were able to do this through a combination of world-class innovation and serving as a trusted partner that didn't want to compete with these corporate travel agencies. Similarly, we are neither a chauffeured transportation company nor a TNC. We are however the most perfect of all partners to the industry insofar as we uniquely combine cloud, mobile and real-time infrastructure with more than a decade of experience in the chauffeured transportation market and deep intellectual property and seminal patents in the car service and mobile GPS markets.

Deem Car Service 2.0 | Next Steps

I began to outline my views at LCT West in Las Vegas in April, have expounded upon them in this letter and I will be at the LCT Leadership Summit in Miami covering this and more on May 18th, 2015.

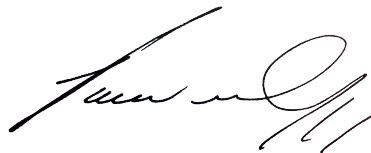
In parallel, we have been talking with many of you in one-on-one conversations and we are holding group sessions in San Francisco in the coming days and weeks. This is all designed to socialize with you our plans for Deem's Car Service 2.0 network and ensure that you know how to partner with us to defend your businesses from the TNC threat.

Week-over-week we will be providing more information, both technological and financial, to help onboard those of you interested in joining our "first mover" program. Deem will be implementing the real-time clearinghouse in an iterative, transparent, collaborative and milestone-based manner.

Together we can build a networked service that is far more durable and valuable than today's TNC model and one which keeps passengers safe. We are excited and honored by the opportunity to collaborate.

If you would like to be a member of the first mover program please email us at firstmover@deem.com.

Best,

A handwritten signature in black ink, appearing to read "Patrick Grady". The signature is fluid and cursive, with a large initial "P" and "G".

Patrick Grady
CEO and Founder, Deem