

# Unlock assets from adjacent markets

Cultivating opportunities on the edge



A pattern study from the Center for the Edge's  
*Patterns of Disruption* series



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# Contents

Overview		2
Case studies		10
Is my market vulnerable?		18
Endnotes		19
Contacts		24
Acknowledgements		24
About the authors		25
About the research team		26

# Overview

## Unlock assets from adjacent markets

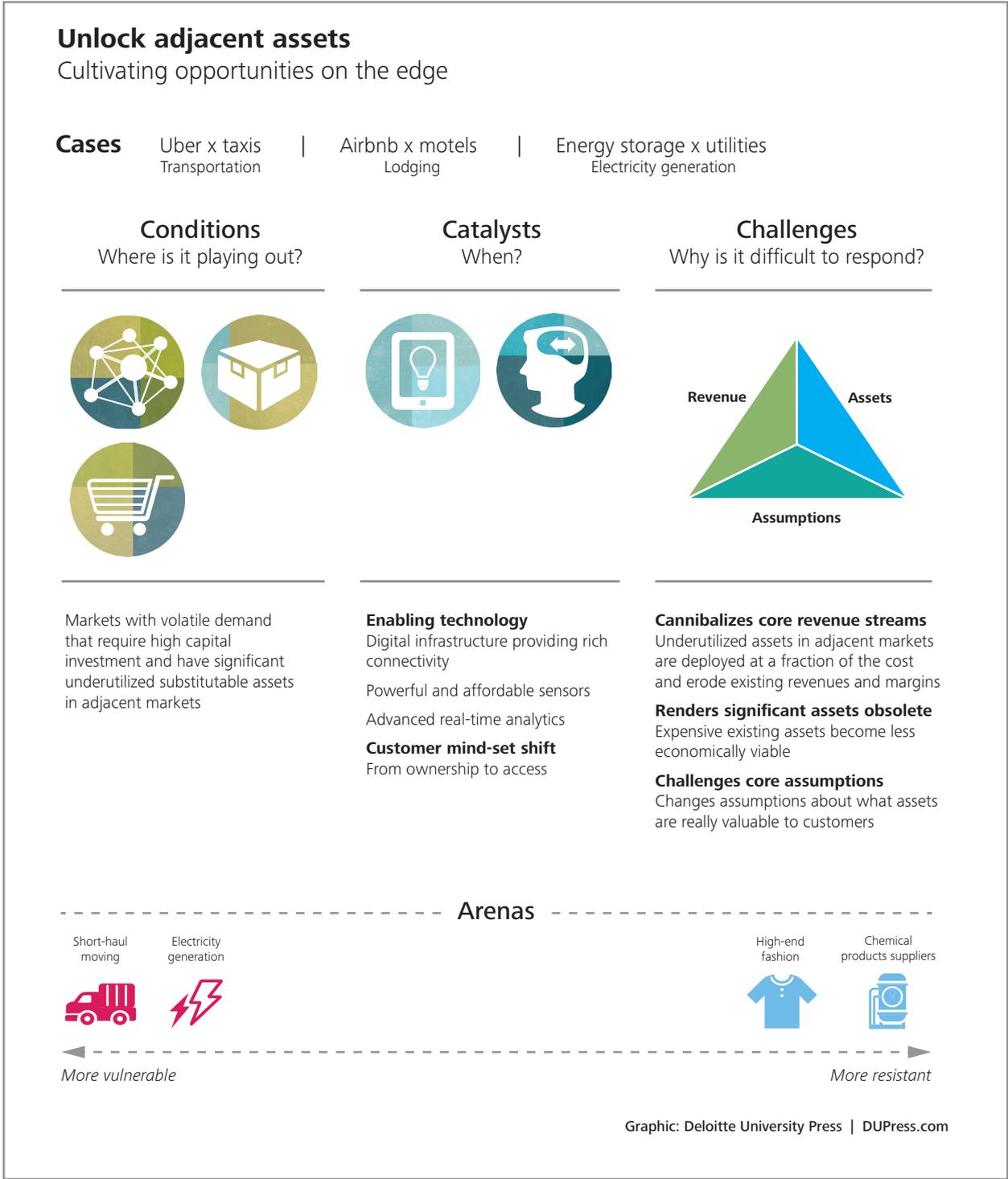
### Cultivating opportunities on the edge

*Def.* Provide effective access to significant stockpiles of underutilized assets in adjacent markets.

Across diverse industries, a new breed of companies is turning to underused assets from adjacent markets to expand the range of prices and offerings in established markets. Many fast-scaling new entrants are becoming indispensable to customers by focusing on customer service and network value to meet diverse needs rather than on asset ownership. Without the capital burden of owning the assets in their networks, they can onboard incremental adjacent assets at minimal marginal cost and achieve critical mass quickly.

In the report *Patterns of disruption: Anticipating disruptive strategies in a world of unicorns, black swans, and exponentials*, we explored, from an established incumbent's point of view, the factors that turn a new technology or new approach into something cataclysmic to the marketplace—and to incumbents' businesses. In doing so, we identified nine distinct patterns of disruption: recognizable configurations of marketplace conditions and new entrants' approaches that can pose a disruptive threat to incumbents. Here, we take a deep dive into one of these nine patterns of disruption: **unlock adjacent assets**.

Figure 1. Pattern snapshot



Twenty years ago, it would have been difficult to imagine that, relatively soon, the world's largest for-hire vehicle company would own no vehicles, the largest accommodation company would own no hotels, and the world's largest international phone company would own little infrastructure. Today, that is reality.<sup>1</sup> Companies like Uber, Airbnb, and others using new models based on widespread connectivity have quickly created new customer value by deploying assets from adjacent markets to serve their customers.

Acting as *network orchestrators*,<sup>2</sup> companies like these provide access to the assets of fragmented suppliers—assets that were not previously in the market—to better meet volatile demand and satisfy customer preferences. For example, a customer searching for accommodations on Airbnb over the weekend of the Super Bowl might be able to choose from \$65/night guest bedrooms, \$650/night apartments, and \$6500/night homes, all in neighborhoods not served by hotels.

The effect of unlocking underused assets is to make supply more elastic. For customers, that often translates into better availability of the product or service, even in periods of high demand. Often, as has generally been the case with ridesharing and home-sharing networks, customers also experience greater choice, as the newly available adjacent supply tends to be fragmented and not standardized. The diversity of supply can also lead to offerings that span a wider price range, with potentially a large number of offerings with significant price advantages.

Products and services from unlocked assets tend to be more affordable because the network operators have fewer direct costs, and because new supply can be deployed with minimal incremental cost. For example, a new unit of lodging can be added to a home-share network for little more than the cost of a background check as compared to the cost (and large increment) of building a new hotel facility. By not owning assets, network orchestrators can focus

resources on creating and operating a network that works to deliver more value to the customer—whether that means speed, choice, price, or convenience—than incumbents' traditional, accepted offerings.

Mobilizing third-party resources rather than owning assets can also create significant economic value for the network operator. Relative to traditional *asset builders*—businesses that compete through controlling proprietary productive assets for scale advantage<sup>3</sup>—leveraging network resources to deliver customer value helps to reduce up-front capital costs, limits fixed asset investment, and diffuses risk among a larger pool of participants. Up-front investments in assets, from factories to taxi medallions to prime real estate, tend to share two common traits: delayed returns on investment and lower margins. In addition, owners incur the risk that the up-front investment in assets might not pay off as expected.<sup>4</sup> Companies functioning as network orchestrators typically can deploy assets more quickly, shortening lead time to new revenue opportunities at significantly lower marginal cost.<sup>5</sup> Network operators' profit margins are estimated to be 60 percent higher than those of asset builders,<sup>6</sup> and network operators tend to have higher market valuations; network operators average a price-to-revenue ratio of 8.2, more than four times that of asset builders.<sup>7</sup>

This pattern is powerful because, in addition to being able to create value for customers and network operators, it can also create value for the adjacent assets' owners. To achieve the critical mass to be relevant, the network operator has to create enough value for the potentially non-commercial asset owners to participate in the network. Many ridesharing transportation network companies have experimented with variable fare models and car/driver requirements to entice drivers of private vehicles to participate in their networks. A critical mass of supply buffers against spikes in demand and offers customers more choice.

If participation in a network is exclusive for asset owners or customers, scaling quickly is critical in order to secure the network against competitors. Even when networks are not exclusive—for instance, many drivers participate in multiple rideshare companies' networks—reaching critical mass quickly can lead to exponential growth; more supply attracts a larger number of diverse consumers, which can in turn entice new suppliers to on-board their assets to the network. To further support building critical mass, the network operator should aim to make participation as easy as possible, even if the participation of the asset owner is mostly passive, as is the case with adjacent energy or computing resources.

But where do these underutilized, affordable, yet relevant assets come from? The fundamental premise of this pattern is that there exists a stockpile of assets in an adjacent market that can be applied to meet a

customer's need, but that the asset has not yet been commercialized for that purpose. Perhaps the asset has not been deployed commercially because there was no way to economically connect the asset with a customer, or because there was no visibility into the unused capacity of the assets, or because the existing market was too narrowly defined around existing products rather than customer needs. Even identifying adjacent markets and the usable assets within those markets can be hard (see sidebar, "Identifying adjacent assets").

This strategy has become increasingly practicable as the world becomes more connected. It is made possible by advances in technologies such as location-aware devices, mobile payments, rich connectivity, and cloud computing power for matching and allocating algorithms. With powerful and affordable sensors and advanced real-time analytics, network operators can see asset usage and balance supply and price with demand at any given time.

Aggregation platforms help overcome many of the challenges previously associated with connecting fragmented supply and demand, such

as high search costs (in terms of both effort and time), transaction costs, and other risks.

This type of strategy also becomes more feasible as companies develop competencies around network management and customer engagement. Further, as this model is tested in more markets, insurance products to underwrite new types of risk are

likely to be introduced, making customers feel more comfortable with the quality and reliability of alternative supply, and helping asset owners to become more familiar with the model. Network effects serve to increase the incentive for owners to on-board their assets, as more markets with more offerings can attract a broader range of demand.

The regulatory environment plays a role in the disruptive potential for this pattern. Initially, as has been the case with cars and lodging, the new entrant and the owners of the

“Excess capacity is the low-cost fuel that makes the effort of platform-building worthwhile.”

—Robin Chase, *Peers, Inc.*<sup>8</sup>

adjacent asset supply tend not to be subject to the types of regulations faced by traditional incumbents. Complying with regulations can add time and expense to delivering offerings to consumers, often giving less-regulated network operators an advantage to scale more quickly and inexpensively. For example, municipalities regulate the price and number of permits issued for taxi medallions, while Uber's growth is limited primarily by how quickly they can attract new drivers.

This pattern is difficult for incumbents to respond to when it makes existing assets obsolete or significantly devalued. The incumbent has likely made a significant investment in fixed assets to gain scale, while the new competition can gain scale without owning those assets. Further, the incumbent's ability to monetize its investment is often impaired, because the new entrant, operating with a higher margin, can directly attack the incumbent's core

revenue streams with a lower-price offering. Even if the incumbent adapts by redeploying assets to create a new, lower-price offering that can compete with the new entrants' leveraged models, such an offering would likely cannibalize the incumbent's key revenue streams. Switching to a leveraged network model would challenge the incumbent's core beliefs around what customers value and how value can be delivered—for example, that customers will accept a service delivered by amateurs rather than professionals. Adopting the new model would require repurposing or reconfiguring existing capital and infrastructure investments,<sup>9</sup> and incumbents may not have the capabilities to cultivate and manage a network of fragmented suppliers.

The pattern of unlocking assets from adjacent markets can only occur in markets where two conditions exist: Customers' needs must be able to be satisfied with an alternative asset, and that asset must be available—either because it is not being fully utilized or is being used for a lower-value purpose—in significant quantities to be deployed in that market. The mere existence of an adjacent asset will not necessarily be disruptive. For example, the books

## Key stats

- Uber delivered its one-billionth ride five-and-a-half years after launching.<sup>10</sup>
- Uber covers 75 percent of the US population.<sup>11</sup>
- The top 40 Airbnb hosts in New York have each grossed at least \$400,000 over the past three years (from 2013).<sup>12</sup>
- If its pace of growth continues, Airbnb's supply could be larger than that of the top 10 hotel companies combined within two years.<sup>13</sup>
- Airbnb lists properties in 97 percent of the world's countries and has over 2 million listings.<sup>14</sup>

sitting on bookshelves in homes across the country are arguably underutilized and exist in significant quantity, yet they are unlikely to prove disruptive to booksellers, e-book purveyors, or libraries. The value of the item is small, demand is typically already met, and customers are able to satisfy their preferences for choice and affordability under current commercialization models.

On the other hand, deploying alternative assets to deliver a product or service will tend to be disruptive in markets with volatile demand or cyclical misalignment of supply and demand. Such misalignments occur either because supply is inelastic while demand is more volatile, or simply because adding additional supply capacity requires assets that are costly and require significant time to

## Identifying adjacent assets

Identifying potentially usable, undervalued, and underused assets is core to both executing this pattern and preparing for it. However, the valuable adjacent assets that can be leveraged to transform an industry tend to be, unfortunately, most obvious only once a competitor has deployed them.

Typically, the first step is to identify the fundamental value customers receive from a product or service. As Harvard Business School marketing professor Theodore Levitt once said: “People don’t want to buy a quarter-inch drill. They want a quarter-inch hole!”<sup>15</sup> By thinking in terms of the value proposition to customers rather than in terms of the product, and by considering how else the customer might achieve that value, companies can take a broader view of what other assets might be relevant and where to look for a significant supply of assets not being used to their full commercial potential. With this in mind, the competition is anything that satisfies the goal of the user. As Christensen et al. point out in “Finding the right job for your product,” the market defined by the “job” the product is hired to do—that is, the goal it achieves for the customer—is generally much larger than a traditional market defined by product categories and customer segmentation.<sup>16</sup>

Lower-tier customer needs that can be satisfied by alternative assets can further expand the market. For example, a customer may choose a Lyft car ride because they can choose the radio station, ride in the front seat, and chat with the driver in addition to getting affordable transportation.

Focusing on historical or predicted product use cases can limit opportunities for growth. Interestingly, incumbents might not notice that their market is expanding if they continue to define their market narrowly—for instance, if they see their business as providing telephone service rather than communication.

To help identify and unlock usable assets, incumbents should consider the following questions:

1. What is the fundamental need customers who choose your product are trying to satisfy?
2. What alternatives can satisfy that same need?
  - a. Are those alternative assets currently being used to their full capacity?
  - b. Can they be deployed to greater value?
  - c. Can you create a network of these assets that achieves critical mass?
3. Do the assets that address your primary value proposition also satisfy secondary customer needs?
4. Can the assets be made accessible and economically deployed to your customers?

“Scale makes big surpluses function differently from small ones.”

—RClay Shirky, *Cognitive Surplus*<sup>17</sup>

deploy. Assets need to be able to be used either simultaneously or in sequence without significantly losing value—thus, durable assets such as heavy equipment can be used repeatedly without per-use wear and tear impairing the value of the asset. Finally, markets with more diverse demand characteristics tend to be more vulnerable to disruption through this pattern: If every customer had standard preferences, such as for a \$200 room with a queen-sized bed located downtown, they would be less interested in or willing to accept alternatives to that standard.

Unlocking adjacent assets is both powerful and challenging. Network effects typically confer a significant advantage to those who can identify and deploy adjacent assets first, yet both the underutilized adjacent assets (and the fundamental customer need they are meeting) are often obvious only after they’ve been deployed. When these models succeed in significantly improving the customer experience and also in creating significant new value for the asset owners, they can swiftly reshape an industry and surprise incumbents who ignore the world of possible alternatives for their customers.

# Digging deeper



## Is deploying assets from adjacent markets the same thing as the sharing economy or collaborative consumption?

These concepts are related, but not all sharing models unlock underused assets. Companies that unlock adjacent assets operate networks of latent supply, building scale very quickly without investing as much capital as their asset-building counterparts. The supply already exists in the economy, and only needs to be identified and properly accessed for the market to take advantage.

Consider the difference between two common carsharing models. In each model, the company has built a digital platform that enables collaborative consumption of automobiles. In each case, members use an app to search for a convenient, available vehicle that they rent by the hour, picking it up from and returning it to its “home” garage. company A owns a fleet of cars that are garaged in fixed locations around the city. In contrast, company B merely connects customers who want to rent a vehicle with private owners of underutilized vehicles and facilitates the transaction (through automated unlocking, payment handling, and customer service). Building and maintaining company A’s fleet is more resource-intensive than recruiting the fleet of privately owned company B cars, although company A can typically deliver a more consistent experience.

The “unlocking assets from adjacent markets” pattern shares aspects of the model ZipCar founder Robin Chase defined as “Peers, Inc.” The model is predicated on three key elements: the existence of “excess capacity” in a market; the use of a platform to provide more efficient access to that capacity; and the collaborative, creative engagement of a group of peers who serve as suppliers and/or customers. However, the third element in particular is not necessary for disruption to occur (for example, Uber customers are not creatively collaborating with the company), although it is possible that deeper, collaborative engagement with suppliers or customers might prove useful in fending off copycat competition that could disrupt the disruptor. Be that as it may, the power of this pattern comes more from the ability to scale much more quickly and with less investment than is possible for more traditional businesses.

## How is this pattern different than simply being more resourceful and leveraging waste?

There are many types of underutilized assets, one of which is waste. For example, a tire company might decide to turn the used tires returned by customers into rubberized flooring surfaces, creating a new product line with very low raw material cost and saving on waste disposal costs as well. While reducing waste or repurposing the byproducts of other processes to create a new product or service can be an opportunity for cost savings and new growth, it is not likely to be disruptive. These applications do not necessarily change the fundamental underlying value of existing assets because supply tends to be concentrated and a large amount of processing is typically required to repurpose the asset.

# Case studies

## Uber disrupts taxis in their local markets

Offering rides “e-hailed” directly from a smartphone app, Uber Technologies, Inc. and other ride services have shaken the taxi industry.<sup>18</sup> The company capitalized on increasing customer trust of strangers and asset sharing as well as the connectivity enabled by widespread smartphone use to first deploy “for hire” town cars and then privately owned vehicles in the non-chartered ride marketplace.<sup>19</sup> While Uber is often labeled “disruptive” due to its high \$62.5 billion valuation,<sup>20</sup> the data demonstrate that Uber and one of its competitors, Lyft, have collectively displaced incumbents and expanded the market, truly disrupting the industry.<sup>21</sup> Of note, the disruptive impact of such private car networks will vary according to the local nature of taxi regulations,<sup>22</sup> but the data suggest the taxi industry everywhere has cause for concern when the unlocking pattern appears on the horizon.

To appreciate how the industry has evolved, consider the US taxi market pre-Uber (2009–2010). The taxi industry was long characterized by heavy regulations<sup>23</sup> and consumer dissatisfaction.<sup>24</sup> Although regulations were managed

locally, inefficiencies and reported problems were industry-wide. For example, a 1984 Federal Trade Commission report found that “there is no persuasive economic rationale for some of the most important regulations.”<sup>25</sup> The report cites limits on the number of participating firms and vehicles, as well as minimum fares, as a waste of resources and a burden on the lower-income population.<sup>26</sup> A more recent study by Princeton professor Henry Farber in October 2014 found that inadequate pricing incentives led to a scarcity of taxis under unpleasant or dangerous weather conditions, when taxis are most in demand.<sup>27</sup>

The US taxi industry has traditionally used a medallion system that has remained largely unchanged since the 1930s.<sup>28</sup> Medallions are legal certifications issued by local authorities that verify that the taxi driver is allowed to operate commercially and pick up passengers from street hails.<sup>29</sup> In major US cities, the number of medallions was fixed, and they have historically been in high demand as a result. Medallions traded for as much as \$1 million in New York City,<sup>30</sup> while in San Francisco,

medallion prices were capped and issued from a waiting list that could take years or even decades for drivers to have the opportunity to purchase a medallion.<sup>31</sup>

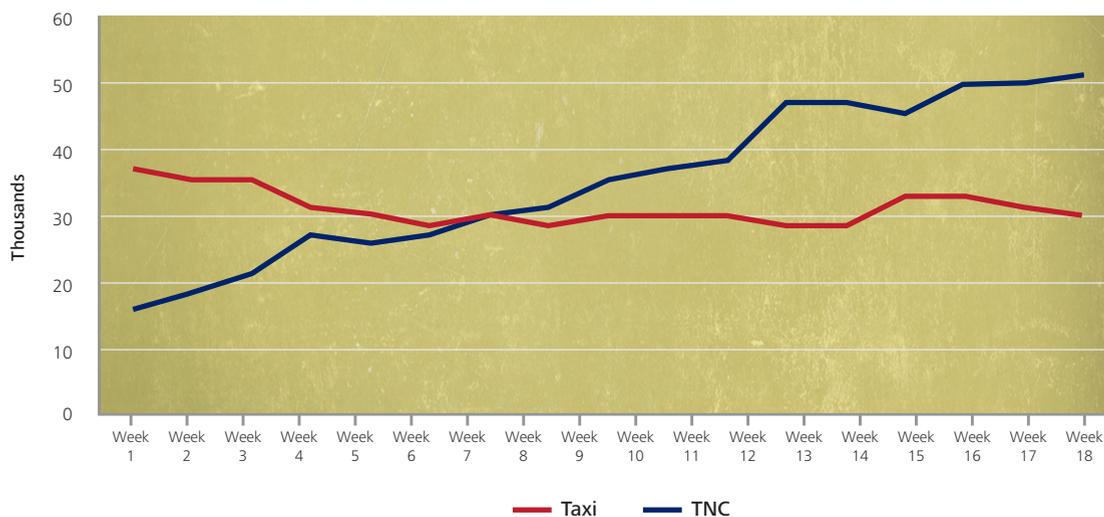
Local studies of the industry before ride-shares showed high consumer dissatisfaction and inefficient service. In a 2006 study of the New York City taxi ecosystem, industry experts Schaller Consulting reported that consumers were dissatisfied with their ability to get a cab on demand, the value relative to cost, safety from accidents, drivers’ ability to navigate, and driver courtesy.<sup>32</sup> New York cabs wasted 39 percent of total mileage in 2005 cruising for passengers.<sup>33</sup> In San Francisco, a 2007 dispatch survey found that the average time for a taxi to arrive after a request was around 16 minutes, and approximately 50 percent of the taxis dispatched never arrived. From the street, the average time to hail a taxi was approximately 8 minutes.<sup>34</sup>

Enter Uber: Uber identified idle town cars in the adjacent “for hire” market as viable substitutes to provide short-range transportation to dissatisfied taxi customers. Although regulations prohibited any car without a

medallion from picking up street hails—“for hire vehicles” had to rely on call-ahead reservations<sup>35</sup>—the increasing use of location-aware smartphones made it possible to request and dispatch rides without street hails, allowing the town cars to compete directly with taxis. Ubiquitous connectivity, Uber’s efficient hailing and driver apps, and increasing familiarity with user-rating systems to establish trust enabled Uber to unlock and deploy these assets as a more expensive, but more dependable, alternative to taxi rides. The cars were driven by professional, courteous drivers and were clean and comfortable.<sup>36</sup> With increased access to data from smartphones, Uber’s platform embedded an incentive structure to dynamically match supply with demand through “surge-pricing”—when demand was high, fares increased to entice more drivers on to the streets. Dynamic algorithms had finally addressed the “how to find a taxi in the rain” problem.<sup>37</sup>

Over time, the company moved down the market—any car meeting age requirements (newer than 10 years old) owned by a private individual with a license to drive was eligible

**Figure 2. Displacement of taxis in Portland**



Source: Reproduced from Steve Novick and Leah Treat, *Portland’s private for-hire transportation market: Summary report of the PFHT innovation pilot program*, Portland Bureau of Transportation, October 19, 2015.

## Uber—disruptive or not? A response to Christensen

In a recent *Harvard Business Review* article, Harvard Business School Professor Clayton Christensen states that Uber is not disruptive based on his theory of disruptive innovation. “Uber’s financial and strategic achievements do not qualify the company as genuinely disruptive . . .” While debating whether or not Uber is disruptive is not the purpose of this research into patterns of disruption, given the nature of his recent article, it is worth proactively addressing any confusion about the difference of perspective.

The differences are primarily definitional. Here, we refer to disruption as an outcome that can result from different strategies, including the “enter low and work up market” strategy, while Professor Christensen’s disruptive innovation is defined by the entry point and the process itself. The reasons Christensen provides for why Uber is not disruptive are that it 1) did not originate in the low end of the market or in a new market, either of which is required by his definition, and 2) did not start with an inferior product.

As we describe in the case study, Uber (and its competitor Lyft) both took significant market share from the incumbent taxi companies and expanded the market for on-demand mobility. Therefore, Uber and other ridesharing companies can be considered disruptive to the taxi industry.

to join Uber<sup>38</sup>—joining rideshare (or “ride-sourcing”) companies Lyft and Sidecar that were already in the market.<sup>39</sup> Eventually, as the network of private drivers grew,<sup>40</sup> Uber was able to price rides in the privately owned vehicles cheaper than a taxi.<sup>41</sup>

Although the taxi industry is highly local, a recent study from the Portland, Oregon, market seems indicative of the impact Uber and its ridesharing competitors are having on the taxi industry across the country. Uber and its ridesharing competitors, using the same unlocking strategy, are displacing incumbent taxi companies.<sup>42</sup> In 2015, Uber entered the Portland market with a price point initially higher than taxis.<sup>43</sup> Within just a month, Uber and Lyft had captured more than 40 percent of the rides market.<sup>44</sup> The ridesharing or “transportation network” companies collectively expanded the market and took share from the local taxi industry, as shown in figure 2.<sup>45</sup>

In San Francisco, taxis saw a 65 percent decline in average trips per cab in less than two years (January 2012–August 2014).<sup>46</sup> Nationally, data analysis by corporate expense technology provider Certify found that Uber now claims more of the business traveler market than taxis.<sup>47</sup> Another indicator of the

displacement is the declining value of taxi medallions in places such as New York City, Chicago, and Boston, where medallions have been a tradeable investment asset.<sup>48</sup> Finally, the numbers suggest that the transportation network company's growth, in terms of drivers, may continue to accelerate. Since its inception, the number of UberX (Uber's cheaper rideshare option) driver partners has increased at a seemingly exponential rate nationally.<sup>49</sup> It seems plausible that, with an increasing number of drivers, the company will also see an increasing number of trips.

Accustomed to the protective barriers to entry afforded by heavy regulations, taxi companies struggled to respond. The new ridesharing competition was delivering what customers valued better and customers were increasingly willing to

try new alternatives. As Uber became cheaper than regulated taxi fares,<sup>50</sup> the industry not only faced the threat of revenue erosion but was legally prohibited from lowering prices.<sup>51</sup> Now, the assets which once made the industry powerful, the medallions, are becoming obsolete. Owning a medallion or renting a taxicab from the taxi company is no longer the only

way to compete in the market.<sup>52</sup> Although they still faced the hurdle of owning a car, many taxi drivers simply responded by joining Uber, Lyft, and other competitors. In San Francisco, one-third of taxi drivers stopped driving registered cabs between 2013 and 2014 to join Uber, Lyft, and Sidecar.<sup>53</sup>

“In the collaborative economy, growth doesn't require us to expand production and consumption of physical goods. Instead, growth occurs when each individual peer joins a platform and contributes.”

—Robin Chase, *Peers, Inc.*<sup>54</sup>

# Airbnb challenges the affordable hotel market

In early 2008, two friends in San Francisco couldn't afford to pay their rent and decided to sublet their space with three airbeds and a promise of breakfast. After setting up a simple website and receiving three renters for \$80 each, the idea for Airbnb was born.<sup>55</sup> In the seven years since Airbnb's inception, the company has grown to host over 60 million guests in more than 2 million listings in over 34,000 cities and 192 countries.<sup>56</sup> Its funding-based valuation has eclipsed \$25 billion,<sup>57</sup> more than leading hotel brands.<sup>58</sup>

As a network orchestrator, Airbnb competes on a different basis than major hotel chain incumbents, whose expertise is in forecasting, management, and design and development of properties. One differentiator for Airbnb is its ability to rapidly scale; Airbnb can grow as quickly as it can attract owners to list their spare rooms or properties. In 2015, that pace exceeded 2,700 new listings per day.<sup>59</sup> In comparison, three hotel brands (Hilton, Marriott,

and InterContinental Hotels Group) added between 80 and 200 rooms per day on average,<sup>60</sup> and took an average of two to three years to fully develop a project in the pipeline.<sup>61</sup> In addition, because it commercializes existing properties rather than developing its own, Airbnb's incremental costs to add listings to the platform (for example, professional listing photos) are nominal.

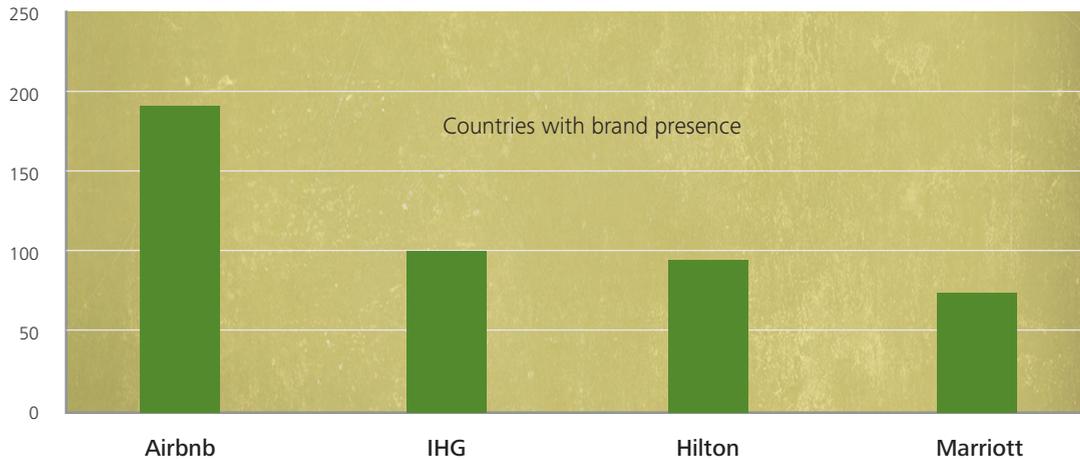
Airbnb's current listings nearly equal the combined rooms of the top three hotel companies globally (figure 3),<sup>62</sup> with brand presence in far more countries (figure 4).<sup>63</sup> At its current 85 percent annual growth,<sup>64</sup> Airbnb listings could eclipse those of the top 10 hoteliers combined within two years.<sup>65</sup> From small apartments to event spaces to entire castles, Airbnb provides a more diverse and versatile inventory for a broader market.

While Airbnb's platform provided a convenient marketplace to connect hosts and guests, its rapid growth was also due to its use of

Figure 3. Market share by listing



Source: Deloitte analysis. For data sources, see John Hagel III, John Seely Brown, Maggie Wooll, and Andrew de Maar, *Unlock assets from adjacent markets: Cultivating opportunities on the edge*, Deloitte University Press, February 2016.

**Figure 4. Airbnb is a global brand**

Source: Deloitte analysis. For data sources, see John Hagel III, John Seely Brown, Maggie Wooll, and Andrew de Maar, *Unlock assets from adjacent markets: Cultivating opportunities on the edge*, Deloitte University Press, February 2016.

Graphic: Deloitte University Press | DUPress.com

signaling mechanisms to build trust and maximize the likelihood of successful bookings. An online reputation system lets participants—both guests and hosts—rate and review each stay, and hosts and landlords are covered by an insurance policy of up to \$1 million.<sup>66</sup> These mechanisms reinforce transparency, encourage participatory quality control, and build trust in the privately owned assets, helping to create value for all participants.

Building trust and scale simultaneously became self-reinforcing, allowing Airbnb to build a vast network of underutilized privately owned lodgings. Yet, many hotels initially dismissed Airbnb because vacant rooms did not match up to the standards of the hotel industry, which typically competed by constantly improving room quality and services.<sup>67</sup> Airbnb units tend not to have full-service hotel amenities such as pools, gyms, restaurants, or daily maid service, and they typically are not subject to hotel or health and safety regulations. In addition, Richard Solomons, CEO of IHG, sees a difference in trust: “We’re trusted because we’re highly regulated: If we open a

hotel, we have food control, security, a building that is safe; if there is a fire in an Airbnb, you have no idea.”<sup>68</sup>

Major hotel chains maintain a pricing scheme that matches consumer demand for varying standards of quality and covers their high fixed costs. Airbnb hosts, on the other hand, are typically not hotel professionals and set prices they deem appropriate. Barclays found that in many cases, prospective consumers find that Airbnb offers a less expensive alternative to hotels, with some studies showing a 20–50 percent discount.<sup>69</sup>

Airbnb, however, is not posing the same degree of challenge to all tiers of the hotel industry. Most mid-scale and upscale hotels have seen little impact to date on their occupancy rates and revenue per available room. Despite its identified advantage in the number of listings, Airbnb’s fragmented supply base has far lower occupancy than hotels (30–50 percent versus hotels’ 65–70 percent) because properties are not available every day.<sup>70</sup> In addition, hotels tend to be concentrated in key tourism and business centers, whereas

more than 70 percent of Airbnb listings, even within major cities, are located outside key hotel areas.<sup>71</sup>

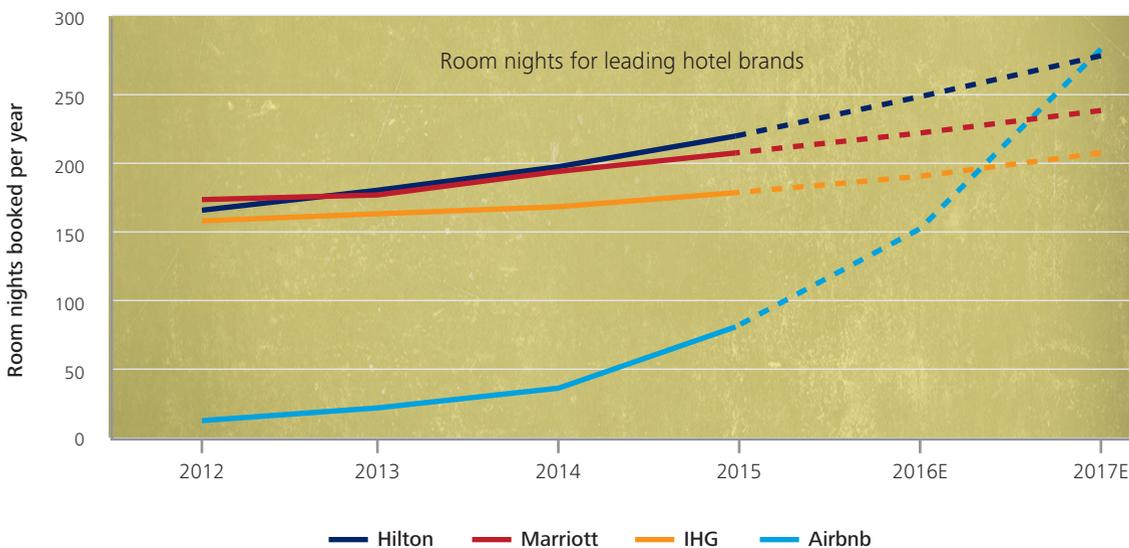
The distributed locations, combined with the lack of standardization or regulated quality, tends to deter the business traveler whom mid-scale hotels serve—only 10 percent of Airbnb guests are estimated to be business travelers versus 60 percent of hotel guests. Airbnb also caters to certain types of customers, like those whose stay exceeds 30 days or large groups renting entire properties, who could not otherwise stay at hotels—in New York City, almost a quarter of Airbnb stays would not be possible in hotels.<sup>72</sup>

Hotels of all tiers still have reason for concern. A study from Barclays points to the likely initial impact on low-end brands and properties within prime destinations for leisure tourists like New York, San Francisco, and Paris.<sup>73</sup> These cities have a cyclical mismatch of supply and demand and a large concentration

of potential Airbnb properties. Economy and mid-scale hotels tend to be more at risk than those in the luxury segment due to price competition and resort amenities. For example, in New York City, Airbnb supply equates to about 20 percent of the economy room supply and only 1 percent of the luxury supply.<sup>74</sup> In addition, Airbnb is taking aim at the more lucrative business travel segment with a new product to provide well-located properties with great amenities at affordable price points.<sup>75</sup> (Figure 5 projects the number of room nights for Airbnb and several competitors through 2017.)<sup>76</sup>

Finally, although Airbnb is generally considered to be the strongest challenger because of its fast-paced growth,<sup>77</sup> it is only part of the alternative accommodation landscape, with others like HomeAway, which target holiday rentals, also representing over a million listings.<sup>78</sup> The impact of this drastic increase in supply will likely be felt by companies across the industry.

Figure 5. Growth in room nights



Source: Deloitte analysis. For data sources, see John Hagel III, John Seely Brown, Maggie Wooll, and Andrew de Maar, *Unlock assets from adjacent markets: Cultivating opportunities on the edge*, Deloitte University Press, February 2016.

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## Short story

### On-site energy storage

The sun and the wind. Not assets in the traditional sense, but arguably the energy contained in the sun's rays beating down on the roof of a food processing plant or the winds whipping off the suburban hills is underutilized. And where wind turbines and solar panels are installed, their power-generating capacity often doesn't align with demand at any given point in time. Development of wind and solar has been hampered, in part, by the wide variability in output throughout the day and year. Solar panels on a home or business might provide adequate energy for the customer while the sun is shining, but when the sun goes down, the customer still needs power. When demand is low, the value of wind and solar assets exceeds the demand for power only as a result of net metering programs that require utility companies to buy the excess energy from customers at retail rates.<sup>79</sup> In fact, even traditional sources of power generation often represent excess capacity at different times throughout the day when the generating capacity is greater than customer demand.

Energy use, both by the customer and in aggregate, varies significantly across a 24-hour period. Although generally the timing and relative size of the peaks and valleys are predictable, for utility companies, the additional power plants used to meet peak demand, "peaker plants," are often expensive and fueled by natural gas.<sup>80</sup> Worse, upward variances in peak demand that exceed generating capacity can't be easily mitigated and can lead to rolling brownouts or even widespread blackouts.<sup>81</sup>

Today, however, advances in energy storage technologies (for example, batteries, flywheels) are enabling more widespread, distributed energy storage, enabling customers to have greater control over their use of energy from the grid and removing one barrier to the use of renewables.<sup>82</sup> This could prove disruptive to utility-owned generation. Whether or not it is disruptive to the incumbent providers of power—the utility companies—will depend on who owns the storage, its size, where it is located, and the level of connectedness (to the grid or to other users).

Customer-sited batteries, whether for the home or for a commercial user (for example, a food processing plant), have the potential to disrupt in two ways. One, they allow a user to store the excess energy generated by the on-site solar unit, wind turbine, or other energy generation source for use when demand is higher or generation is lower, potentially eliminating dependence on power from the utility provider. Two, customer-sited storage enables large commercial customers to store energy from the grid during off-peak times and consume electricity from storage during peak times without shutting down machinery or losing productivity. In doing so, the commercial customer avoids the "demand charges" utilities typically levy on commercial customers to offset the expensive peak power, eliminating a major revenue stream for utilities. These batteries could disrupt in another way as well: via microgrids that connect small-scale power generators (for example, individuals or businesses that have on-site generating assets) to other users—this would disrupt through the "connect peers" pattern and is also more subject to regulatory conditions in local markets.

Energy storage, itself, is still a relatively small market: According to the Energy Storage Association, the market was \$128 million in 2014 but was up 40 percent in just one year.<sup>83</sup> Forecasts for growth in this industry vary, and much of the growth is expected to be in utility-scale energy storage projects rather than the customer-sited batteries discussed here. At the same time, as the affordability and efficiency of customer-sited batteries improve, demand for them will likely increase, especially among the over 784,000 US homes and businesses that already have solar installations.<sup>84</sup> State incentives or regulations could further influence the adoption of batteries and other storage by nonutility power generators and will shape the ultimate impact energy storage has on incumbent utilities.

# Is my market vulnerable?

## **Are there other products or services, not yet commercialized, that can deliver the same basic function to consumers?**

If your product or service has a potential substitute in an adjacent market, you are vulnerable to this pattern. The potential substitute must have a similar function. There are many reasons the substitute might not yet be commercialized: Regulatory restrictions might prevent it from entering the marketplace or an entrepreneur has yet to see it for its full value. See the sidebar above on “Identifying adjacent assets” for more on recognizing substitute products or services in adjacent markets.

## **Is demand for my product or service volatile and the supply inelastic?**

Volatile demand and inelastic supply create a market disequilibrium that can make goods too expensive or unavailable. Companies that commercialize and orchestrate networks of fragmented supply can respond more flexibly to these situations.

## **Does your industry face stringent taxes or regulations that limit supply or increase cost?**

Assets unlocked from adjacent industries are usually not subject to the same regulations as those already commercialized, and can therefore be deployed at a lower cost.

# Endnotes

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# About the research team

This report and the Pattern write-up series would not have been possible without the hard work of our research team—colleagues who tracked down case studies and cheerfully dug for data and more data on the way to proving and debunking countless possible patterns.

**Tamara Samoylova** (former head of research, Deloitte Center for the Edge) led the Center's research agenda. Her particular interests include innovation and new growth opportunities, work environment redesign, and how technology and changing consumer preferences are reshaping the retail landscape.

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# About the Center for the Edge

The Deloitte Center for the Edge conducts original research and develops substantive points of view for new corporate growth. The center, anchored in Silicon Valley with teams in Europe and Australia, helps senior executives make sense of and profit from emerging opportunities on the edge of business and technology. Center leaders believe that what is created on the edge of the competitive landscape—in terms of technology, geography, demographics, markets—inevitably strikes at the very heart of a business. The Center for the Edge’s mission is to identify and explore emerging opportunities related to big shifts that are not yet on the senior management agenda, but ought to be. While Center leaders are focused on long-term trends and opportunities, they are equally focused on implications for near-term action, the day-to-day environment of executives.

Below the surface of current events, buried amid the latest headlines and competitive moves, executives are beginning to see the outlines of a new business landscape. Performance pressures are mounting. The old ways of doing things are generating diminishing returns. Companies are having a harder time making money—and increasingly, their very survival is challenged. Executives must learn ways not only to do their jobs differently, but also to do them better. That, in part, requires understanding the broader changes to the operating environment:

- What is really driving intensifying competitive pressures?
- What long-term opportunities are available?
- What needs to be done today to change course?

Decoding the deep structure of this economic shift will allow executives to thrive in the face of intensifying competition and growing economic pressure. The good news is that the actions needed to address short-term economic conditions are also the best long-term measures to take advantage of the opportunities these challenges create.

For more information about the Center’s unique perspective on these challenges, visit [www.deloitte.com/centerforedge](http://www.deloitte.com/centerforedge).





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