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# Overview: A decade of growth, the onset of growing pains

2019 marks a decade since the US travel industry emerged from the depths of economic recession. And what a decade it's been. Over the past ten years, the recovery collided with an economic turning point in global emerging markets—fueling a historic burst in travel demand felt by segments across the travel industry.

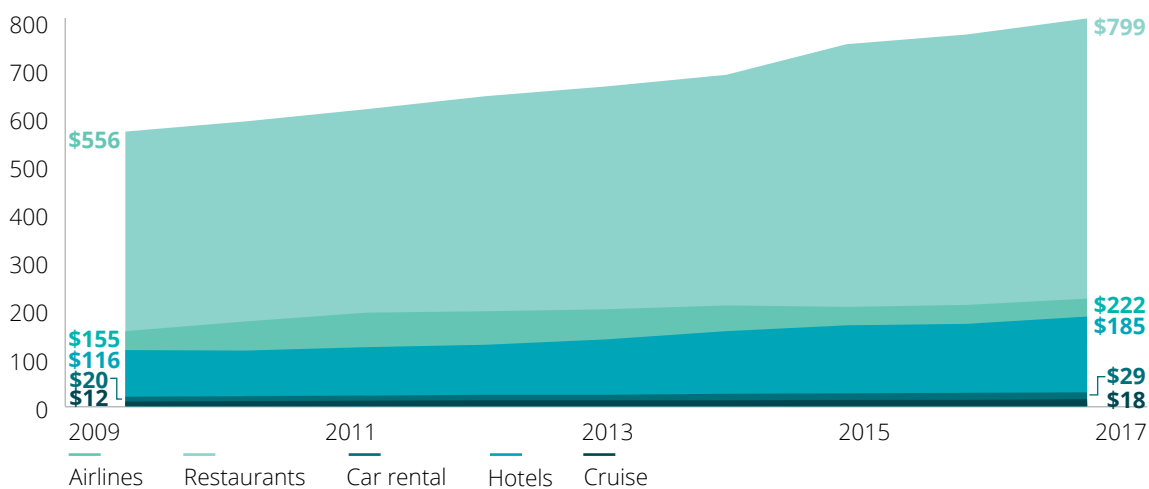
The numbers tell the story well. From 2009 to 2017, US hotel gross bookings grew from \$116 billion to \$185 billion (see figure 1). Airline revenue jumped from \$155 billion to \$222 billion.<sup>1</sup> Other sectors, from cruise to ground transportation and restaurants, also benefited as US consumers reconnected with an inherent love for travel, international travel demand flourished, and more companies leaned on the power of business travel to help their organizations connect and grow.<sup>2</sup>

But growth was not limited to traditional players. It's also been a remarkable decade for travel tech. Digital innovation helped form a lattice for entirely new segments to enter the market—and thrive. Some private accommodation and ride-hailing brands just finding their legs in 2009 now sit side by side with the titans of travel.

It's easy to lose perspective on just how much technology has shaped travel in such a relatively short time. In 2009, the first hotel and airline apps were just hitting the market. Instagram and iPads didn't exist. Most travelers scoured newspapers and magazines for vacation rentals. Taxis were hailed by hand, and small luxury hotels were among the only businesses that could attempt to create a personalized experience for every guest—and even then, mostly in the physical realm. Perhaps even more remarkable, ten years of travel innovation could be dwarfed in the next three or four.

Unprecedented growth, driven by a robust economy, rising global consumer purchasing power, and digital innovation, however, comes with strings attached. While market conditions are generally expected to remain strong in 2019, significant challenges capable of throwing the US travel industry off its growth trajectory loom on the horizon—many the unfortunate growing pains of an expanding industry.

**Figure 1. US travel industry gross bookings and revenue, by segment (2009–2017) (US\$B)**



**CAGR (2009-2017)**



Restaurants  
4.4%



Airlines  
4.6%



Hotels  
6.0%



Car rental  
4.6%



Cruise  
5.2%

Source: Airlines: Bureau of transportation statistics (Operational revenue), Restaurants: National Restaurant Association, Hotels: IBIS, Car Rental: Auto Rental News, Cruise: Phocuswright.

**Competing for tomorrow's international traveler:**

As the global traveler pool grows, so do the number of attractive destinations competing for their dollars. Hotels and airlines continue to expand supply in promising growth markets while destination marketers fine-tune digital and social strategies, helping them tap into rising global demand for “off the beaten path” experiences. Popular destinations like New York are competing with a crop of rising stars like Portugal and Vietnam—some of which are growing visitation by 20–30 percent annually.<sup>3</sup> Inbound tourism has always been a bright spot for the US travel industry. But competition for the lucrative international travel segment is rising—and the United States is feeling the pressure. While international arrivals into the country increased by 0.7 percent in 2017, the global share of long-haul travel is dropping, down to 12.2 percent in 2017 from 13.8 in 2015.<sup>4</sup>

**Driving demand through infrastructure**

**investment:** Smooth-running airports and even well-paved roads and waste management are integral to keeping the United States competitive as a global destination. But recent travel growth, combined with other factors like urbanization, has US travel infrastructure bursting at the seams. The problem is twofold—capacity and modernization. According to the American Society of Civil Engineers, the United States needs \$4.5 trillion in infrastructure investment by 2025—before the problem potentially impacts GDP and job growth. Key travel infrastructure, including airports, parks and recreation, rail, ports, roads, and transit, requires some of the biggest improvements.

**Absorbing demand while improving security:**

Improving security, particularly at airports, is a challenge of its own. Doing so while absorbing growing travel demand, creating a more seamless experience, and staying ahead of evolving threats is a true test facing the industry in 2019. A community of stakeholders, from transportation and aviation authorities, to airlines, government agencies, and technology players must combine efforts around promising security solutions such as biometrics, e-visas, and advanced cyber reconnaissance and analytics. Balancing traveler safety with traveler experience will continue to define the challenge throughout 2019.

**Expenses threaten margins:** Rising operating costs are putting travel brands under immense pressure—even in an era of record-breaking revenue. Fuel costs are rising. Labor gaps drive wage increases. Real estate appreciates. Finding relief won't be easy. Travel brands are already leaning on a mix of cost-cutting strategies to rein in expenses, including improved revenue management practices, supply chain optimization, and higher airline load factors. Creating leaner, more efficient businesses may require bolder thinking in 2019. The evolving field of cognitive technology may offer the industry a valuable lifeline (see section 3).

**The travel industry can't grow without talent:**

Labor gaps are not new to travel, but the magnitude of the current workforce shortage certainly is. In 2009, the US Bureau of Labor Statistics estimated 353,000 job openings across the leisure and hospitality sector.<sup>5</sup> As of 2018, with the travel industry surging, that number swelled to 1,139,000.<sup>6</sup> In fact, travel leads all industries in open positions.<sup>7</sup> While a multifaceted problem, rapid industry growth and an evolving workforce remain key drivers. And the problem doesn't just center around unskilled labor. In the airline industry, for example, pilot shortages are constricting growth, even threatening the viability of some smaller, regional carriers. How does industry tackle the problem? Forward progress might be limited without collaborative effort from travel providers, industry associations, and the public sector all aimed at attracting tomorrow's talent to the industry, improving employee retention, and exploring ways to use emerging tech to empower smarter workforces (see section 3).



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**1,139,000.**

**Eyes up for a downturn:** At some point, all expansion cycles come to an end. With the hospitality industry reaching almost 10 years of consecutive growth, and the potential of broader economic slowdown looming, brands must prepare for the possibility of softening demand. While many proved their ability to drive growth in favorable market conditions, downturns, while typically short-lived, create the environment for loyalty programs, revenue management, and product and customer experience initiatives to prove their worth. Brands that can weather any potential storm while keeping perspective of the long term can be well positioned in the next cycle (see section 2).

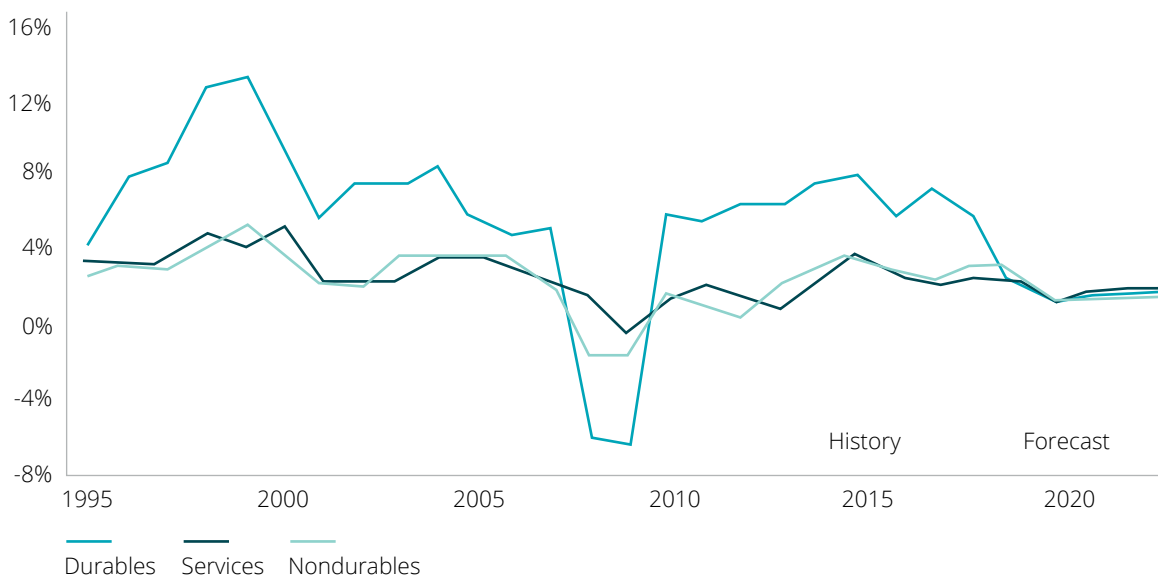
**Bigger businesses, bigger risks:** Decades of industry growth and consolidation have created travel brands of unprecedented size. They're operating in more corners of the globe, leveraging extended enterprise partnerships for growth, and increasingly connected through new digital platforms. Ultimately, the strategies that underpin brand growth also create vulnerability to risk—from cyberattacks and fraud to natural disasters and geopolitical tension. Recent Deloitte research found that roughly half of US CEOs (across industries) felt they lack robust plans to develop or acquire tools to address reputation risks, including crisis response capabilities.<sup>8</sup> Fortunately, risk-sensing tools and processes to monitor and predict risks are maturing, opening new doors for risk management in 2019.

### A steady outlook for travel spending ... at least in the near term

With rumblings of potential economic downturn gaining some momentum, travel brands must keep eyes on consumer spending and sentiment. The last downturn served as a stark reminder of the strong connection between economic insecurity and discretionary travel spending in the United States. Unlike their European counterparts, US consumers are well known for cutting vacations out of their budgets entirely—rather than downgrading accommodations or destinations. Case in point: Nearly half of US adults went the entire year without spending on a vacation in 2008.<sup>9</sup>

Overall, consumer spending should remain strong for the majority of 2019 (see figure 2). Over the past few years, the household sector provided a steady foundation for US economic growth. Even while business investment remained a bit weak, exports faced headwinds, and housing stalled—consumer spending grew steadily.<sup>10</sup> Job growth provided a strong foundation. Even with a relatively low uptick in wages, those jobs put money in consumers' pockets and helped households spend. The continued (if modest) growth in house prices is helping, too, since houses are most households' main form of wealth.

**Figure 2. Consumer spending growth**



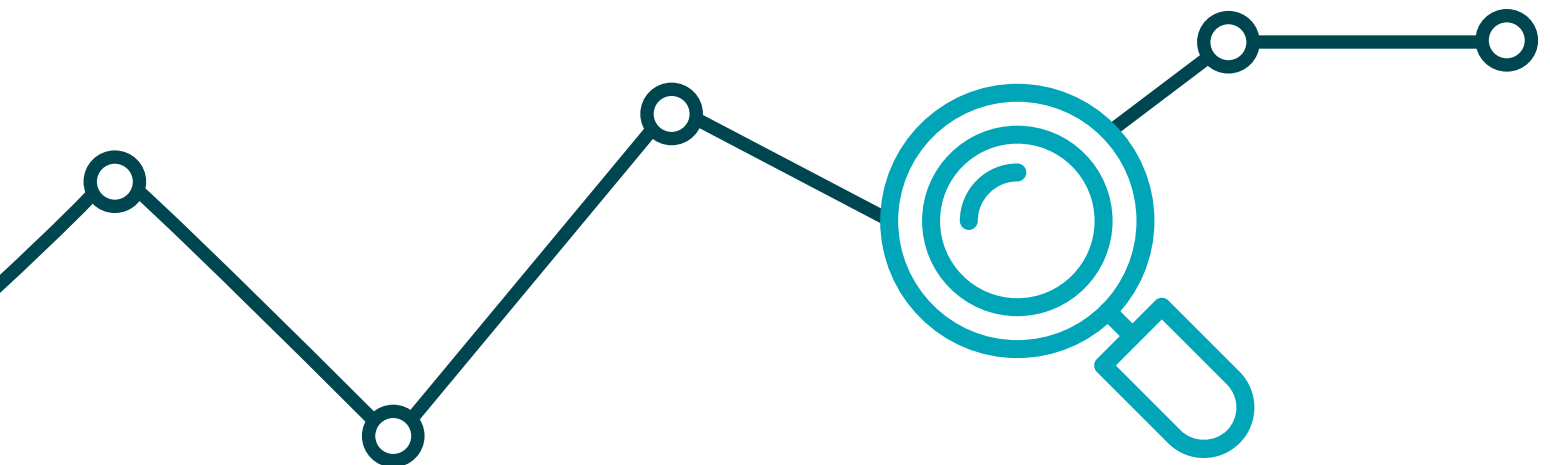
Source: Deloitte economic analysis.

For all the daily speculation about how political developments might impact spending decisions, political noise seems to be just that—in the background—among consumers who seem focused on their own situations. As long as employment holds up and housing remains strong, consumer travel spending should be robust. And the tax cut, while modest for most consumers, will likely continue to bolster confidence. More importantly, the tax bill's fiscal stimulus may tighten the job market even further. If wages begin to rise, travel spending is likely to get a further boost.

The medium term presents a slightly less optimistic picture. Many American consumers spent the 1990s and '00s trying to maintain spending even as incomes stagnated. But now they are wiser and older, which presents new challenges. Many Baby Boomers face imminent retirement with inadequate savings, which may limit vacation splurging for some. And although American households seem to face fewer obstacles in their pursuit of the "good life" than just a few years ago, growing income inequality also poses a significant long-term challenge. Low unemployment hasn't alleviated many people's economic insecurity. Four in ten US adults can only cover an unexpected \$400 expense by borrowing money or selling something.<sup>11</sup>

International trade, particularly the trade policy of both the United States and its current trading partners, is also a source of growing uncertainty. The magnitude of the impact of the administration's tariffs depends on whether they turn out to be temporary or permanent. Temporary trade restrictions might slow growth for a year or two; permanent restrictions could have substantial impact on the economy. In the long run, permanent tariffs would reduce aggregate output: The economy would simply be less efficient and companies overall less profitable. Deloitte assumes that tariffs will reduce GDP growth by about 0.4 percentage points in 2019, offsetting some of the stimulus from 2017's tax cut and budget agreement.<sup>12</sup> Tariffs by themselves are unlikely to be large enough to create a recession. But growth is likely to slow as costs rise, shortages appear, and businesses slow investment due to trade policy uncertainty. Overall, these forces make the economy and its impact on discretionary travel spending more vulnerable to other shocks.

The combined potential impact of some of these factors contributes to a 25 percent probability of a recession scenario playing out in 2019.<sup>13</sup> That's still quite unlikely, but it does indicate that risks are rising, and businesses should be prepared.



# A view across the segments



## Hospitality: Sustaining momentum

The hospitality industry approaches nearly 10 consecutive years of growth.

At this late stage of the cycle, it should come as no surprise that years of prolonged optimism finally began giving way to some caution. Historically, hotel upcycles generally burn for roughly a decade before the industry experiences a period of soft demand.

Similar to broader economic forecasts, most indicators suggest the current expansion cycle still has legs—even though those legs may be tiring. Industry forecasts—leaning on continued GDP growth, low unemployment, and recent tax cuts—remain positive for 2019.<sup>14</sup> But, while all major industry metrics are projected to remain in the green, they do suggest a slight loss of momentum. 2019 forecasts for Average Daily Rate (ADR, +2.4 percent), Revenue per Available Room (RevPAR, +2.4 percent), and Occupancy (+0.2 percent) are expected to slip compared to 2018 levels.

Hotel industry downturns often begin with an external catalyst. The previous downcycle was triggered by the financial collapse of 2008. The one prior was sparked by economic recession and exacerbated by the September 11 terror attacks. Given the current strength in the economy, it's difficult to forecast a hospitality market reversal without a significant force acting on travel demand. At best, the potential of a broader economic slowdown could lead to some level of softening travel demand, but that scenario still seems unlikely for 2019.

Given the late stage of the cycle, the industry should remain alert for downturn indicators, but so far, the few existing traces are weak at best. Late in 2018, national hotel RevPAR dipped into the red, ending a 102-month run of growth.<sup>15</sup> While the event could represent a significant indicator, a single underperforming city acted as an outlier, dragging down an otherwise strong national RevPAR average. Across the country, only 25 percent of hospitality submarkets are currently experiencing negative RevPAR—far from the 40–45 percent threshold that typically signals a broader downturn.<sup>16</sup>





Regardless of “when” or “if” a downturn materializes, hospitality leaders can always benefit from early planning. In the event of softening demand, the pressure will be on for revenue managers to maintain rates as pricing power shifts to the consumer. Effective strategies used in the last downturn included a mix of price-based and non-price-based strategies, including leveraging opaque distribution channels and product bundling to mask any significant rate cuts that could tarnish consumer brand perceptions in the long run—as well as competing on the basis of quality, leveraging loyalty programs, managing costs, and developing additional revenue sources and market segments.

Hoteliers should also consider historical maneuvers against the backdrop of today’s market—because the hospitality landscape has changed significantly since the last downcycle. The arrival (and quick maturity) of the private accommodation space is an important development to consider. It’s difficult to predict how the rental space will react to a broader economic recession—mostly because it’s never happened before. A recession could entice more consumers to supplement their income by renting their apartments and houses online—in turn flooding markets with low-cost supply attractive to travelers on tight budgets. This scenario could also create more competition across the flood of economy-priced limited-service hotel supply added to the market in recent years.

Overall, it’s important for hoteliers to plan for the long term. Looking back over the past 30 years of up- and downcycles proves that downturns are typically short-lived. Hotel owners looking to cut costs will inevitably clash with operators looking to maintain service levels. But those able to weather any potential storm without drastic reductions in service quality and rates will be better positioned for profitability when the bull market returns.

### Relevant experiences transcend the cycle

Regardless of an up or down market, competition for travelers’ hotel dollars will remain stiff. Hotels will likely continue to introduce innovative concepts, products, and loyalty strategies to cut through the noise of the more than 270 trademarked brands (and virtually innumerable independents) that currently exist worldwide. The rollout of new lifestyle, boutique,

and contemporary brands in recent years demonstrates the sector’s unrelenting willingness to adapt to an evolving traveler. However, given that traveler preferences are ever-changing, opportunities will always remain.

- Private rentals, from adversary to ally?** Hospitality might stand to benefit from rethinking a resistance to private rentals. While regulatory hurdles remain, rental demand is proven. The core rental experience, however, isn’t without flaws—flaws hotels may be well positioned to improve. For all their guest-attracting attributes, rentals can often lack the amenities, consistency, and service quality of the traditional hotel experience. With some creativity, hotel brands have an immense opportunity to combine the best of both worlds and create something new. Some hospitality players are already experimenting, fusing new rental inventory with hotel-style amenities such as concierge services, elevating product quality with more stringent host selection processes, and even integrating rentals into loyalty programs.
- Do well in well-being:** Hotel brands without a well-being strategy may already be behind the curve. Travelers have two distinct needs around well-being travel—using trips as a primary means to focus on their health versus maintaining healthy habits during typical vacations and business trips. Hotels should consider acquisitions, partnerships, and programming to gain exposure to either opportunity—or both. Fitness and lifestyle brands are already establishing a beachhead in well-being hospitality—but industry outsiders lack the experience of hospitality veterans.
- Tap into destinations:** The in-destination activities market, from local wine tours to surf lessons, is undergoing a digital revolution similar to that which transformed hotel and airline distribution decades ago. The reasons for the delay? An extremely longtail of suppliers and lack of content and booking standardization. But the space is maturing quickly. Plugging into vast inventories of real-time, local activity content is getting easier by the month, and with the global in-destination activities industry poised to hit \$183 billion by 2020, in-destination activities represent an opportunity for hotels to connect guests to unique experiences and drive incremental revenue.





## Cruise: Niche experiences hit the high seas

The cruise industry is yet another beneficiary of solid travel demand.

From 2009 to 2017, US cruise passengers grew from 10.4 million to 12.4 million—helping drive industry revenue growth from \$12 billion to \$18 billion.<sup>17</sup> While strong, the growth trajectory for cruise falls just short of its close hotel cousin—and for good reason. Cruise is simply a more specialized experience. Consumer perceptions around spending extended periods of time at sea tend to be polarized.

Travelers often stick to traditional vacation experiences (avoiding the segment entirely) or develop into avid cruise loyalists. The dichotomy underpins recent customer strategy within the segment—with brands often flipping between new customer acquisition and extracting greater value from existing cruisers.

Even as cruise lines successfully drive ancillary revenue among existing customers, from a long-term perspective, new customer acquisition seems the more promising strategy—particularly considering the untapped global market. The United States still represents more than half (55 percent) of all global cruise passengers.<sup>18</sup> The Chinese market, of course, is a largely untapped opportunity—but challenges in the region continue to pile. Cruise lines continue to pull back on introducing new supply into the market as travel demand in the region cools and cruise brands flesh out how to maximize yields within a local distribution framework unlike the United States. The market holds massive upside potential, but cruise lines stand to benefit from embracing long-term strategies to tailor the cruise product to the unique Chinese market.

Despite challenges abroad, there is still plenty of room for growth in the United States. While the core cruise product already captures a loyal audience, attracting new cruisers out to sea may require suppliers to connect with potential customers from a different angle—their passions and interests. Gastrotourism, ecotourism, and well-being travel, for example, are outpacing broader travel industry growth,<sup>19</sup> but many travelers may not connect those interests to cruise. Given cruise's ability to cover multiple locations, larger distances, and connect communities while onboard, the segment can offer a level of immersion that other segments can't provide. Many lines are well on their way to building around the opportunity. River cruises navigate down multiple stretches of wine region in France. Arctic expeditions connect travelers to nature, wildlife, and conservation. The market can continue to expand by focusing on the niche.



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## Airlines: Finding opportunity in commoditization backlash

If asked to reflect on the experience of flying over the past decade or so, travelers around long enough will probably offer some perspective on change. Airline transformation has been (and will continue to be) enormous. The early success of the first low-cost carriers (LCCs) kicked off an industry-wide revolution, as traditional carriers raced to unbundle products and services to expose base fares and compete for budget-minded flyers. Even now, airline commoditization continues. The recent rollout of basic-economy products among legacy players proves that the combined purchasing power of the deal-hunting masses is a difficult segment to completely ignore.

But heavy commoditization also creates opportunity. Yes, flyers like cheap fares. But a market where competitors big and small seem intent on shoehorning budget-minded travelers into tighter cabins also helped set the bar on the airline experience quite low. Many want the extras. And perhaps more importantly, they are proving a willingness to pay for them. In 2017, some airlines reported nearly 20 percent annual increases on premium product revenue.<sup>20</sup> Flyers want opportunities to add value back into the flying experience, and carriers should continue exploring cabin segmentation and broad product strategies to drive additional revenue.

But creating new products and selling them are two different things. With more seat classes, upgrades, and add-ons in their inventory, the question now becomes—can an airline sell like an Amazon? Getting the right product, to the right traveler, at the right time, through the right device is only part of the battle. Unlocking the power of dynamic pricing is another. While dynamic pricing isn't new to airlines, carriers have more variables and data-driven techniques at their disposal to follow the path of more sophisticated online retailers. Building on traditional pricing levelers such as time of year, day of the week, or whether the airline is selling through a leisure or corporate distribution channel, emerging dynamic pricing engines power the sale of every individual seat and upgrade against the real-time backdrop of changing demand and market conditions—and marry it all with AI, dynamic bundling, and granular customer profiling.

It will be an exciting time in 2019 for carriers to drive creatively around revenue management. Technology and techniques are evolving quickly—with some travel suppliers already leveraging new pricing engines to update fares as quickly as every 15 seconds. But for all its potential, dynamic pricing is not a simple plug-and-play solution. For many carriers, reaching this level of sophistication requires structural change in data management processes and integration with legacy and siloed operating functions such as sales, marketing, and operations. For example, many airlines need to build real-time integration between CRM and revenue management systems.

Whether airlines explore paths around revenue management, cabin segmentation, or other product initiatives, the destination ultimately remains the same—the ability to drive revenue from price-conscious flyers while simultaneously extracting as much premium revenue as possible from guests who desire a premium flying experience. Advanced analytics, cognitive technologies, and optimization and retailing techniques are some of the critical tools carriers can leverage in the year ahead. With limited opportunities to offset rising fuel costs due to cost reductions in other areas, it is imperative that airlines prioritize identifying, developing, and implementing new revenue-generating capabilities.





## Ground transportation: The next stage of evolution

Leaders from most industries often talk at length about the powerful disruptive forces shaping their sectors. But few have felt the impact like ground transportation. And the rise of ride-hailing may just be the very beginning.

While ride-hailing brands were first to add a digital layer to the ground transportation experience—incumbent players are quickly catching up with new digital functionality of their own. Some car rental brands are on track to deliver fully IoT-connected fleets by 2020. Cities and municipalities are leveraging the power of smart city technology to transform public transportation systems. Even taxis are investing in digital upgrades, aiming to make the taxi experience more “ride-hailing-like.”

Disparate modes of transportation are exploring their own paths to digitization—setting the stage for the next wave of evolution—integration, and the rise of multimodal platforms. From ride-hailing and P2P rentals to on-demand shuttles (and now bikes and scooters and autonomous mobility pilots), tech-enabled mobility spawned a swarm of new entrants into an already-crowded network of car rental suppliers, car services, taxis, buses, trains, and subways. Often, the most efficient (and low-cost) route from point A to point B

involves a combination of these options—a combination that changes day to day with variables around weather, traffic congestion, available inventory, and surge pricing. Even the most diligent of travel planners can get it wrong—particularly those navigating unfamiliar cities or making spontaneous trip decisions.

For ground transportation suppliers with ambitions of evolving with changing customer expectations, multimodal integration offers a promising path forward. Next-gen trip services will combine disparate supply, new types of content like transfers and parking, and real-time transit information—and tie it all together with AI, personalization, and a single, integrated payment.

Early traces of multimodal evolution are already surfacing. OEM manufacturers are piloting single apps that manage a range of mobility options. Ride-hailing providers are incorporating bike-sharing into their platforms. It’s still early days, and more may come. Going forward, existing ground transportation providers can look to both organic product initiatives and ecosystem partnerships to expand their multimodal solutions. Data integration will be the key challenge. The industry should start preparing for new data processing rules required of integrated transportation platforms. Some may need to completely overhaul their data management processes. The recent launch of a monthly “Netflix-like” ride-hailing subscription service suggests business models in ground transportation are poised to change dramatically over the next few years.



# Industry imperatives

## A focus on the future of work

With all the focus on emerging technology, it's often easy to forget that people will remain one of travel and hospitality's biggest challenges throughout 2019. In an industry built on service excellence, people can be a brand's most powerful competitive asset. Recent years served as a stark reminder that talent can also inhibit growth.

Tourism already employs roughly 1 in 10 people in the global economy.<sup>21</sup> In order for the industry to grow, it simply needs more talent. But that represents a very significant problem. Over the past decade, the US travel industry expanded—all while the gig economy soared, national employment approached full saturation, the workforce aged and became more educated, and the nation's next generation of talent increasingly pursued attractive careers in emerging fields. Considering the confluence of trends, it should come as no surprise that the travel industry now faces an incredible talent shortage.

While talent gaps in travel and hospitality are not new, the magnitude of the current shortage is unprecedented. In the United States, at the height of the Great Recession, there were roughly 353,000 open positions in hospitality.<sup>22</sup> As of 2018, with the travel industry surging, that number swelled to 1,139,000. The gap spans both skilled and unskilled labor. In the airline industry, for example, while crew shortages restrict route expansion—some smaller, regional carriers are ceasing operations entirely due to pilot shortages.

It's a multifaceted, global issue—with similar struggles occurring in France, Germany, United Kingdom, and Portugal. In order to attract new employees, hotels, restaurants, and other travel suppliers are forced to increase wages, which now account for 25 to 30 percent of the revenue—up from 15 percent a few years back.<sup>23</sup> So even while travel industry revenue

grows, operating expenses put pressure on margins. Shifting immigration policy can exacerbate the problem. Even though immigrants comprise only 13 percent of the US population—they account for 31 percent of the workforce in the hotel and lodging industry and 22 percent in restaurants.<sup>24</sup>

## Filling the void

Moving the needle on progress requires collaborative effort—with industry, adjacent industry associations, and the public sector all having an important role to play. Progress in three key areas can help make an impact, including attracting more talent to positions and careers in the travel industry, driving employee engagement initiatives to mitigate perennially high industry turnover, and leveraging emerging technology to empower smarter, more efficient workforces.

Attracting talent to the travel industry requires outreach. The existing workforce, as well as tomorrow's talent, needs inspiration to pursue careers in aviation, culinary arts, and hospitality, both as a fulfilling and stable source of short-term work and as platforms for long-term career advancement. Through apprenticeship and training programs, career events, and partnerships with academia and nonprofits in career development, leaders from both industry and associations have opportunities to create smoother transitions to the field and showcase the field to a community of educators, parents, and students who perhaps wouldn't have previously considered the option.

Tourism already employs **roughly 1 in 10 people** in the global economy.



Some employee engagement initiatives are proven to improve staff retention, but travel brands must be realistic about the high-turnover nature of the business. Despite limitations, opportunities around employee engagement are extensive, ranging from training and development programs, to upgrading staff workspaces, boosting benefits to parents, and transforming company culture. Particularly for larger travel brands, effective programs often start by standing up better processes to capture the voice of employees and using the feedback to drive new employee programming.

Finally, the quickly maturing field of cognitive tech offers new possibilities for travel brands to redefine how work gets done, streamline operations, and empower smart workforces. The following section discusses some of the different ways travel and hospitality companies can aim to leverage cognitive technology in the year ahead.

## Cognitive permeates the travel space

Cognitive technology can truly shine in the travel industry. The unique mix of people-to-people interaction, repetitive tasks and operations, and unpredictability created from variation in traveler preferences and variables like weather disruptions create opportunities for different shades of cognitive—including insight, automation, and engagement—to make an impact. As the cognitive story evolves in the years ahead, the benefits that ensue may become ever richer in their variability.

**Cognitive insight:** Cognitive insight creates large-scale organizational intelligence by analyzing and isolating relationships among multiple data sources to identify new opportunities, organizational processes, and risks. When embedded with sensors and cameras, these cognitive technologies can allow tracking and reporting of structured and unstructured information in real time.

Consider the daily symphony of organized chaos that takes place at busy airline terminals. Airport operations teams are challenged with managing a tight schedule of arrivals and departures, coordinating baggage, refueling and restocking planes, as well as maintaining aircraft. In a perfect world, these processes can be orchestrated to precision. But there are simply too many variables—including weather, mechanical failure, and traffic congestion—for historical data to dictate real-time operations. It's a key reason why roughly 25 percent of flights are delayed in the United States every year.<sup>25</sup>

Considering that 7 percent of flights are delayed due to factors within the airline's control, and that airlines can lose anywhere from \$30 to \$50 for every minute a plane remains grounded, there are immediate incentives to streamlining processes, even if only slightly—not to mention improving passenger experience.<sup>26</sup>

Cognitive insights give operations teams new abilities to manage aircraft flows by harmonizing historical and real-time operations data with external data sources (i.e., weather) and predictive analytics, so that instead of reacting to a weather disruption, airlines can redeploy assets in real time, based on the growing likelihood of disruption. With intuitive, employee-facing mobile interfaces, operations teams receive guidance on every step to take—from juggling gate assignments, to designating crew teams, scheduling maintenance, and boarding.

The applications extend far beyond airlines. Cognitive insight also brings enormous implications for more intelligent hospitality. Task-management systems can automate and streamline communication between hotel staff, enabling management to improve and optimize daily activities—from more effectively preparing for guest arrivals, to prioritizing task checklists and housekeeping.

Overall, cognitive insights bring much larger implications than simply shaving a few minutes off an airline departure. Cognitive technologies make it possible for airlines, hotels, and other travel providers to completely reconceptualize work, not as a set of discrete tasks laid end to end in a predefined process, but as a collaborative problem-solving effort where humans define the problems, machines help find the solutions, and humans verify the acceptability of those solutions.

**Cognitive automation:** Robotic and cognitive automation (R&CA) processes can range from simple bots that perform high-volume, repetitive tasks to machine learning that automates subtle, complex, and often broken processes.

Cognitive automation can make impact any place there is a high quantity of repetitive, rules-based business processes. And in the travel industry, there are many. From processing passports and visas, to helping hotels and airlines manage bookings and payments through complex distribution channels, any consumer-facing businesses transacting with millions of customers daily have immense opportunity to benefit from the application of cognitive automation. Recent sophistication in the technology is helping expand potential solutions, from automating compliance tasks and invoicing, streamlining audits, to helping airline finance teams with detecting errors and revenue leakage.

**Cognitive engagement:** Combining insight and automation with machine learning can reinvent service delivery by deploying intelligent agents that can interact meaningfully with customers, employees, suppliers, and others in a company's ecosystem. This creates a more seamless, personalized experience; adds value and convenience; and drives efficiency, savings, and safety.

Chatbots and virtual travel assistants are already pervasive across the travel industry. While there's still plenty of industry debate as to whether these platforms can help travelers with complex tasks like planning an entire family vacation, the technology is at least sophisticated enough to help travelers get extra towels up to their hotel room or order room service—and travel suppliers should be well on their way to exploring ways to use virtual assistants across the travel journey.

There's also untapped opportunity for travel brands to broaden the application of intelligent agents in 2019. Staff recruitment and the candidate experience remain an overlooked use case. Travel brands can experiment with using chatbots to converse with potential job candidates much like a human recruiter, guiding them to apply for open jobs based on their skills and location, even providing them education, promoting the company culture and values as an engaging way to learn about the company they might be working for. By applying cognitive engagement, HR teams can reduce time to screen, source, and interview job candidates and fill new job openings.

## The path to a redefined guest relationship

Instead of slowly fading away like the dozens of buzzwords that came before it, the term personalization seems to have done just the opposite. It's become a key pillar of customer strategy. Why has personalization become such a big deal in travel? Where is the industry headed?

In some ways, personalization enables travel providers to play defense and offense at the same time—defending from the growing influence of big industry outsiders, while helping suppliers gain market share from close competitors through redefined customer relationships.

There's been much debate about whether "big tech" outsiders will make a significant push into the travel industry—particularly in the realm of online distribution. In the long run, it seems unlikely that these larger players

will ignore a \$1.6 trillion global travel industry.<sup>27</sup> And in many ways, big tech's presence is already widely felt. A steady, decade-long rollout of travel tools—from evolving air and hotel search platforms to personal trip planners and flight-delay predictors—could represent intentions of moving farther down the booking funnel. Perhaps more importantly, big tech's predictive powers grow with every new travel tool and feature. Years of search queries, calendar itineraries, and other data points all link back to the individual traveler and offer incredible insight into trip preferences and future trip behavior. All this insight can drive action—from tailored flight results and hotel recommendations to notifications about nearby activities while in destination.

But travel providers have many opportunities to be more relevant to travelers as well. And a good place to start is the one big thing that big tech doesn't have—physical guest interaction.



**The new planes of personalization:  
Autonomy and action**

With on-property guest interaction as a foundation, hotels, for example, can approach personalization through autonomy and action—and both are inextricably linked. Autonomy represents a hotel's ability to give travelers the freedom and flexibility to personalize their own guest experience. Guest-facing hotel functionality like mobile check-in and room selection, in-room smart-home technology, and chat concierge services all center around the concept of autonomy—giving travelers the freedom to experience the core hotel product as they want to.

Enabling autonomy creates opportunity for guest decision making—whether a guest prefers a certain room temperature or uses the hotel app to pick a corner suite with a view—and decisions can be captured. Armed with visibility into guest preferences, action represents a hotel's ability to leverage guest microdata in real time and in targeted ways across the travel life cycle—manifesting in events like repeat bookings, upgrades, and moments of convenience.

Setting up hotel environments with the ability to capture and leverage guest microdata is a big undertaking. For hotels looking to drive capability around personalization in 2019, ecosystem integration should be a priority. Consider a week-long stay at a full-service resort. Guests leave clues about their preferences everywhere—from the check-in counter, on-property restaurants and room service, to the spa and golf course. In many hotels, Property Management Systems (PMS) not only remain siloed but often lack integration with neighboring properties, other brands in the hotel portfolio, and different regions of the world. When these systems are integrated, they often lack back-end connectivity to Customer Relationship Management (CRM) systems and loyalty programs.

In this data environment, personalization opportunities get missed. For example, hotel marketing staff lack the ability to reach out to a potential high-spending guest with a complimentary spa treatment, even when that same guest may frequent the spa at a sister property or brand. It inhibits hoteliers from extending their hospitality into the digital realm with data-driven and profit-generating intervention programs.

While challenging, the evolution of cloud-based PMS solutions is creating new paths to connectivity—helping hotels join more disparate points of operation in ways that are more cost-effective. The more connections hotels can make, across their own physical brands and properties, digital functionality, and even with creative partnerships, the more they enable their guests to act autonomously in larger ecosystems.

These are not lofty visions of the future. Redefined guest relationships are actively forming. Some hotel brands can already match the temperature of a room, lighting, entertainment settings, and complimentary drink to their guest's preferences before they ever set foot on the property. Hotel brands contemplating the heavy investment needed to build the infrastructure should also contemplate having a market full of competitors capable of bridging the digital and physical.





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