Travel distribution
The end of the world as we know it?

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Foreword

Amadeus has been an essential distribution partner to airlines, travel agencies and the wider travel industry since our creation in 1987. In the subsequent years we've seen changes such as the widespread introduction of the internet, the advent of mobile, new business strategies such as airline ancillary services and the introduction of meta-search firms – to name just a few. All have impacted on how travel providers distribute their content and how travel sellers present that content to consumers. Travellers today have an abundance of choice at their fingertips; airline.com, travel agencies and metasearch comparison combined with everything from a la carte unbundling to personalized service packaging - consumer choice has expanded substantially in our industry.

We have commissioned the London School of Economics to offer an independent and objective analysis of our industry today and over the next 10 years, precisely because we believe in bringing all stakeholders together to discuss the future. During this time of great change for travel distribution we look forward to engaging with you in relation to the topics raised in this report.

Holger Taubmann, Senior Vice-President Distribution, Amadeus

Executive summary

Looking into the future

The world of the consumer is on the cusp of momentous change. The combination of mobile devices, big data and artificial intelligence is set to revolutionise the consumer experience. Retail will permeate people's lives as mobile virtual assistants point out nearby restaurants and shops, and guide people's purchasing choices based on their personal preferences, buying history and moods at different times of the day. Bots will interact with social media conversations among friends and colleagues, suggesting locations to visit and products to buy while collecting data for tailoring individual retail experiences over the weeks ahead. Virtual and augmented reality will inspire people to visit new places, see how new furniture would look in their own home, and allow friends in different continents to meet up on an exotic beach without leaving their armchairs.

The effects of this new world, driven by consumer expectations, will rapidly spill over into the travel distribution industry. How long it takes, and how far the industry moves, is impossible to predict. But considering the waves of innovation that are already starting to impact on the industry, change is likely to be inevitable and far-reaching. As a result, the future for many industry players is at a crossroads.

Objectives of this report

The aim of this report is to provide insights into the future of the global travel distribution market, and stimulate an industry-wide debate about the emergence of new business models that can respond to the consumer revolution. Industry players interviewed for this report have a wide range of views – some of them conflicting - on how the industry should and will respond. The risk is that different players focus narrowly on their own area of the value chain without an industry-wide strategy, leading to a period of complexity and potential confusion for the consumer, and associated missed opportunities for growth.

Now is an opportune time for the travel industry to reflect on alternative pathways and examine new approaches that are more innovative and collaborative. This report is aimed to help support that process by providing an industry-wide view of the challenges and opportunities.

The report, commissioned by Amadeus IT Group, has been undertaken by an independent team of researchers at the London School of Economics and Political Science (LSE), providing an objective review of the disruptive factors that are likely to determine the pathways that the industry takes over the coming decade.

Disruptive factors

Travel distribution faces a range of potentially huge disruptions over the next 10 years that will significantly impact industry players and their business models. We examine the potential disruptive factors that are emerging – and could emerge – in the market, based on the interviews and surveys undertaken with industry leaders and experts. Five major disruptive factors were identified:

➢ **Consumer expectations.** As consumer expectations grow in the wider retail sector to include more choice, frictionless purchasing, inspirational shopping and personalised services, these expectations will spill over into the travel market. This is likely to be one of the major disruptors in the travel distribution industry.

➢ **Mobile.** Mobile devices are already shaping the market today and their role as a major disruptor in the industry will continue to grow. Their portability is modifying the way customers interact with the industry and is driving demand for 24-hour services during travel and in-destination. "Micro-moment" searching and booking is likely to grow, with consumers taking advantage of short moments to glance at their mobiles through the day. Mobile is displaying particularly rapid growth in emerging markets where it is becoming the booking device of choice.

➢ **Big data and AI.** Today's processing power allows for real-time analysis of consumer preferences and responses to consumer requests. Virtual assistants are already being integrated into mobile devices and messaging apps, directly interacting with online conversations between friends and business colleagues. The growing sophistication of assistants and virtual reality will change consumer behaviour and shift greater power to those players who control the technology.

➢ **Regulation.** National and international regulators determine the rules governing the level of competition in the industry. Examples include display neutrality and content parity. A major disruptive factor over the next decade will be the extent to which regulators intervene to limit the power of larger players such as large airline carriers, mega meta-online travel agencies (OTAs) and travel management companies (TMCs). In particular, the rise of gatekeepers such as Google and Facebook who thrive on the non-neutral advertising model will be determined largely by the level of regulation or deregulation in different regions.

➢ **Travel risk.** Consumer behaviour may be affected significantly by travel risk, such as terrorist attacks and natural disasters, at all stages of travel, with associated impacts on travel distribution. Demand may increase for low-risk destinations, safer times of the year or hotels with higher safety ratings. Regulations could be strengthened for advanced passenger information (API). At the same time, airport delays could result in increased demand for shopping or restaurant purchases, airport lounges and meal offers.

In addition to these five disruptive factors, drivers within the industry such as shared economy models, advertising models, product differentiation, industry consolidation and others will have impacts into the future. These are examined in pathways to the future.

Future pathways

Based on the analysis of disruptive factors facing the industry, as well as insights from industry leaders and experts in the interviews conducted, we identify four areas of the industry where the greatest changes are likely:

➢ complexity and innovation in air travel distribution;
➢ the revolution of shared economy models in the hotel and car hire sectors;
➢ innovation and hybridisation in online travel retail;
➢ the rise of gatekeepers such as Google and Facebook in traffic acquisition.

For each of the four areas, we examine the trends, industry drivers and potential pathways to the future for industry players and their business models (Fig. 1). The pathways are not intended to be mutually exclusive, and we suggest that a range of pathways will be taken by industry players simultaneously.

Figure 1. Disruptive factors and potential pathways for the future of travel distribution

Disruptive factors	Areas of distribution	Pathways to the future
1. Consumer expectations	**AIRLINES** Complexity and innovation	Growth in direct sales
		GDS innovation and IT partnerships
2. Mobile	**HOTELS AND CARS** New business models	Adapting to the shared economy
		Consolidation of large hotels
3. Big data & AI	**TRAVEL RETAIL** Innovation and hybridization	Enhancing the travel experience
		Consolidation and hybridization
4. Regulation	**GATEKEEPERS** Capturing the customer	Search control with virtual assistants
5. Travel risk		Harnessing social media and virtual reality

Airline distribution: complexity and innovation

The airline industry has faced increased competition from the rise of low cost carriers, which is pushing the trend for greater differentation and the rise of the retail model among full service carriers. Potential future pathways for distribution include:

- **Pathway 1.** Full service carriers (FSCs), particularly larger airlines with strong brand recognition, will grow their direct sales into the medium term. However, this expansion is likely to face limits in the longer term as complexity leads to greater demand for content aggregators.
- **Pathway 2.** Partnerships with IT companies, global distribution systems (GDSs) and other aggregators will be needed to drive innovation and manage increasingly complex content across the industry.

Full service carriers with strong brand recognition are likely to continue growing direct sales in home markets. They consider that direct distribution provides more flexibility to expand a retail model with differentiated products and services than current GDSs allow. Some airlines also view direct distribution as a way to circumvent GDS systems and other intermediaries.

On the other hand, many travel agents and GDS companies predict that the complexity of differentiation that airlines are pushing for will actually require more aggregation and indirect sales through intermediaries. Consequently, greater complexity could be an opportunity for aggregators such as GDSs and other IT companies. At the same time, a key question will be how regulators respond to airlines and gatekeepers who circumvent content parity and display neutrality, thereby undermining industry competition.

These different perspectives in airline travel distribution are likely to lead to the two pathways of direct and indirect distribution developing separately and in parallel over the short to medium term. This could lead to constraints on enhancing the traveller experience, with a period of complexity and potential confusion for the consumer. In the longer term, some in the industry would like these pathways to be integrated, for example through an industry standard such as IATA's New Distribution

Capability (NDC). However, given current trends, an industry-wide strategic approach seems unlikely in the near future without greater pro-active collaboration across the value chain.

The pressure to deliver more, differentiated travel content faster and in a digestible format also brings technical challenges and will require huge processing capacity. GDSs and other IT companies will need to develop the technology to deliver the airlines' evolving retail model and to meet consumer habits of increasing search frequency across multiple devices and channels. An effective way to innovate rapidly will be to forge new business models, opening up data platforms to third parties to leverage a wider pool of talent and solutions.

Hotels and cars: new business models

The hospitality and personal transport industries are being impacted by sharing economy platforms, such as Airbnb and Uber, and by the success of online travel agencies using commission-based and advertising models. Potential avenues for the industry include:

- **Pathway 1.** Hotels and car hire will need to continue adapting to the sharing economy by meeting higher consumer expectations of service and by incorporating business content into new sharing economy platforms.
- **Pathway 2.** The larger branded hotel chains are likely to continue consolidating to keep up with the growing power of OTAs to negotiate commissions.

Hotels and car hire companies face a future of two markets. On the one hand, sharing economy platforms will continue to create new markets and erode the market share of industry players who currently intermediate for suppliers such as small, independent hotels. On the other hand, large hotels chains and car hire companies who cater for business customers are likely to continue consolidating to maintain an arms race of negotiating power with the larger travel agents. Overall, the consumer should benefit from greater choice, lower costs and the opportunity to participate in the hotel and car hire industries themselves with their own homes and vehicles.

Travel retail: innovation and hybridisation

Travel agencies are facing growth in direct distribution from airlines and hotels, changing consumer expectations in retail and the rise of sharing economy business models. In response, potential avenues for the industry include:

- **Pathway 1.** Travel retailers will need to embrace consumer expectations and new technologies to enhance the travel experience. This experience may include more tailored travel packages or a greater flexibility to purchase additional services during the trip.
- **Pathway 2.** Consolidation and hybridisation of travel agencies and metasearch companies will continue. The rise of giant metasearch-OTA companies will provide greater negotiating power with the airline sector, though may be limited by the regulatory environment.

The two pathways of enhancing the travel experience and consolidation in the sector will be intertwined. The larger travel agents will be able to draw on significant technology investment and brand recognition to enhance the consumer experience whether by offering a seamless travel package, in-destination services, a personal mobile travel agent or through expanding the retail model. In contrast, OTAs or metasearch companies that fail to follow consumers into new channels for purchasing travel risk losing market share rapidly.

Consolidation will strengthen the negotiating power of larger travel agents in relation to suppliers. As travel agents transform into mega meta-OTAs, competition is likely to increase with technology giants who act as the industry's gatekeepers. The growing global brand recognition of mega meta-OTAs may

also act as a counter-weight to the larger airlines with aspirations of circumventing indirect distribution channels.

Capturing the customer: rise of the gatekeepers
Gatekeepers – tech giants such as Google, Facebook, Microsoft, Amazon and Apple - control the acquisition of billions of consumers, interfacing with millions of people every day. They have already begun to disrupt travel distribution through their advertising models.

- **Pathway 1.** The development of virtual assistants will enhance the customer experience by reducing search times and personalising purchases. At the same time, the search control of gatekeepers will grow, consolidating their traffic acquisition power, giving them greater access to consumer data and enabling more precise consumer targeting.
- **Pathway 2.** Travel booking is likely to be integrated increasingly into social media and messaging, with advertising and referrals tailored to social network discussions and searching. The rise of virtual reality will lead to more inspiration marketing and traffic acquisition.

Gatekeepers such as Google, Apple and Facebook have already disrupted the travel distribution industry through their advertising models. They have the power to direct consumers to particular players, whether airlines, hotels or travel agents, in return for a fee. In addition, they can target consumers with tailor-made advertising based on search history, profile or conversations through messaging apps.

Furthermore, gatekeepers are set to revolutionise the consumer experience in the retail sector, with consumer expectations quickly spilling over into the travel distribution industry. Rapid improvements in virtual assistants, messaging and virtual reality are likely to combine to give the traveller an inspirational experience that permeates their daily lives, rather than the proactive searching approach that consumers have traditionally used.

The impacts on the travel distribution industry are potentially huge. The new technologies will place even greater power in the hands of the gatekeepers. Other industry players will need to explore new business models and evolving opportunities for collaboration with the gatekeepers. At the same time, the power of the non-neutral advertising model will be determined largely by the level of regulation or deregulation in different regions.

The direction of travel

In a consumer driven market, success in the travel distribution industry will depend on a deeper understanding of consumer expectations and harnessing innovation to transform the travel experience for all customers. Furthermore, new business models based on collaboration, alliances and shared innovation will be needed to grasp the opportunities fully. The question then arises:

> *Is the travel distribution industry prepared for the consumer revolution, and how will players forge new collaborations of innovation in response?*

The results of the LSE review suggest that the importance of the consumer and the emerging technologies that will shape the future of travel distribution are relatively well known across the industry. However, the size and speed of the consumer revolution – and the potential power it places in the hands of innovative firms – is underestimated by many players.

As a result, much of the industry continues to focus on differentiation through bilateral partnerships and contractual relationships in narrow areas of the value chain. If this continues, the growth

opportunities that come with wider strategic innovation are likely to be delayed and possibly missed altogether by some in the industry. We recommend that the industry considers six key areas to focus on for future collaboration.

➢ **Responding to consumer expectations.** Consumer expectations will rapidly spill over from retail into travel distribution. Players in the travel distribution industry will need to respond with broad collaborations for aggregating, processing and harnessing the big data involved. Otherwise, the explosion of complexity and differentiation of services in the short term could translate into potential confusion for the consumer.

➢ **Responding to the rise of gatekeepers.** As the power of gatekeepers to acquire billions of consumers continues to grow, industry players will need to consider how to collaborate with them as their power grows.

➢ **Harnessing technology.** The travel distribution industry is rapidly becoming a technology industry. Currently, many airlines and travel retailers disagree on the relative importance of technologies used by GDS companies and metasearchers in shaping future distribution. Business models will need a more strategic approach that recognises the value creation of different technologies across the industry.

➢ **Integrating travel distribution.** To avoid consumer confusion and lost opportunities, industry collaborations need to go beyond bilateral partnerships and contractual relationships. Distribution business models will need to evolve to encompass more shared innovation, a culture of experimentation and cross-industry alliances to grasp the opportunities fully.

➢ **Adapting to sharing economy platforms.** Sharing economy platforms will continue to create new markets and erode the market share of industry players who intermediate for suppliers such as small, independent hotels. Industry players will need to adapt to this changing market and carefully monitor the impact of competition rulings in different regions as regulators play catch-up.

➢ **Preparing for the rise of giant meta-OTA hybrids.** The size and power of online travel agents with metasearch capabilities and global brands are likely to continue growing. Consequently, their influence will penetrate deeper into the distribution chain, with the ability to negotiate better content and conditions, whilst still receiving commissions. Other industry players will need to prepare for their rising power.

While these six key areas emerged from the interviews and surveys conducted for this report, the travel distribution industry faces many other challenges and opportunities going into the future. For some in the industry, travel distribution has appeared slow to keep pace with technological innovations over the last few decades. That seems set to change over the coming 10 years. Whether the imminent consumer revolution is perceived as a threat or an opportunity by the industry may well determine the winners and losers of the future.

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- ❖ Expedia
- ❖ Facebook
- ❖ Google
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- ❖ Qantas
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1. Introduction

Objectives

The overarching aim of this report is to provide new insights into the future of the global travel distribution market. The report, commissioned by Amadeus IT Group, has been undertaken by an independent team of researchers at the London School of Economics and Political Science (LSE), providing an objective analysis of the drivers of change and the impacts that these drivers are likely to have on the travel distribution industry over the coming decade.

A number of previous studies have used economic and statistical forecasting to project market trends into the far future. Our report draws on some of this analysis to provide a picture of business-as-usual pathways. However, forecasting cannot take account of major disruptive factors that may impact on the industry and the wider market unexpectedly over the medium to long term. As a consequence, the aim of this report is to examine those potential drivers and disruptive factors that are emerging – and could emerge - in the market, and explore the major opportunities and risks that may ensue.

The report is underpinned by the following specific objectives:

- ❖ To identify key disruptive factors and drivers that are likely to shape the industry.
- ❖ To identify key opportunities and business models that could emerge in the industry.
- ❖ To support an industry-wide debate on the future of travel distribution.

Scope and methodology

Travel distribution covers the process of searching, booking and confirming travel arrangements. However, as the travel distribution industry has become more complex with the rise of the internet, a simple definition of the industry has become more challenging. One approach is to focus purely on the intermediaries in the value chain. However, in order to understand the evolution of the industry, a more comprehensive view is needed. For example, an examination of opportunities and risks for intermediaries and aggregators such as global distribution systems (GDSs) or metasearch companies would be incomplete without an understanding of direct selling (e.g. airlines providing direct bookings on their own websites). As a result, the focus of this report is on how travel suppliers sell their products and services to consumers, whether intermediated or not. In this way, we include all actors in the industry, from suppliers (e.g. airlines, hotels, car hire companies) to aggregators and travel agents through to technology giants (e.g. Google, Facebook) who are transforming the way consumers purchase goods and services in the retail sector.

As well as covering the main actors in the travel distribution chain, the scope of the report is global in geographical coverage, and includes an examination of three key travel suppliers: airlines, hotels and car hire. Given the wide scope of the report, it is not possible to undertake detailed analyses of distribution for every type of travel supplier in every region.

The study used a mixed-methods approach, drawing on evidence from five main sources: literature, interviews, data analysis and two industry surveys. The literature review covered 1,410 sources, while structured interviews were conducted with 37 experts. The surveys received 377 responses in the travel retail industry and responses from 18 international airlines. More information on the methodology used can be found in Annex I.

2. The industry landscape today

The consumer: fast evolving

Overall consumer demand for travel is strong and rising. According to the World Travel and Tourism Council (2016), leisure travel spending, including inbound and domestic, generated USD 3.62 trillion in 2015 representing 76.6% of direct travel and tourism GDP. This compares with USD 1.1 trillion or 23.4% for business travel spending. Overall, travel & tourism contributed 9.8% of world GDP in 2015. Recent growth has been particularly strong in the Asia Pacific region, with overnight visitor flows from the region increasing by an average annual rate of 8.5% from 2002 to 2012 (Oxford Economics, 2014). This compares with 2.1% from Europe and 3.7% from North America.

Demand for travel is driven by a range of factors including general economic conditions, consumer confidence, and disposable income. Business travel is linked to corporate profitability. Leisure travellers are more price sensitive and they may use other travel options to reach their destinations (e.g. airlines, high-speed trains, cars, ferries, and coaches). In some cases, business customers may choose not to travel at all and to replace meetings by video conferencing. However, other business travel where personal relationships are key as well as long-haul air travel could remain relatively price insensitive due to the lack of alternatives.

There is no one mould for today's consumer. Travellers are often segmented by region, by age group and by travel purpose. However, these divisions are too simple to reflect the reality of how travel is purchased (Amadeus, Frost & Sullivan, 2015). The level of brand loyalty varies across consumers. The lowest cost seat on a plane may be the priority for some consumers, while others prefer a full value

service while flying or search out integrated packages through a travel agent or tour operator. Regional differences impact on these consumer choices. Business travel tends to be more prevalent in the Middle East. People in Africa or China who have never travelled before or owned a PC are more likely to demand a managed travel itinerary and turn straight to their mobile phone.

Furthermore, **the same consumer may demand different services** depending on the type of trip, who they are travelling with, or even their particular mood at a moment in time. The same person may travel for both business and leisure, sometimes even on the same trip. Another person may book a package for a family holiday online and use a travel management company (TMC) for a business conference.

While consumer segmentation is complex, a number of common factors around consumer behaviour did emerge from the interviews for this project. These factors include the continued rise of online booking, the rising demand for low cost products with greater online price transparency, and the demand for higher value, integrated travel services.

A range of industry experts interviewed pointed to a rising tide of consumer expectations across the whole travel life-cycle. Consumers are starting to demand more in terms of being inspired, the booking process being smooth, a responsive customer service during the travel itself, and the opportunity to reflect and share the experience afterwards with friends, family and through public reviews. To a large degree, these expectations come from consumer experiences in other sectors but they present a unique set of challenges for travel distribution into the future (see Chapter 3).

In summary, consumer segmentation is considerably more diverse than current methods of measurement in the distribution industry. The different ways in which consumers want to purchase travel, along with their expectations of the travel booking process and the travel experience itself, will impact significantly on the entire distribution industry, with huge potential for innovation, niche openings and more customer-focused services.

Suppliers: consolidation and fragmentation

The travel distribution industry consists of different suppliers - such as airlines, hotels, car hire, rail and tour operators - with very different levels of consolidation or fragmentation. In this report we examine three different supplier sectors: airlines, hotels and car hire (see Table 1).

The airline sector is relatively consolidated, with a small number of large full service carriers or airline groups, which themselves have formed alliances with a large shares in key markets. Nonetheless, smaller FSCs, and low cost carriers remain in the market for both short-haul and long-haul flights, with the low cost carriers increasingly competing head-to-head with full service carriers at major airports, especially in Europe.

In contrast to airlines, the hotel sector is highly fragmented. While the large hotel chain brands represent a significant percentage of the market (e.g. Wyndham, Intercontinental, Marriott and Jing Jiang), the industry has a significant 'longtail' represented by many small independent businesses.

The car hire sector is a mix of large and smaller local players. The potential for private individuals to provide a room or car hire has opened opportunities for sharing economy business models such as Airbnb and Uber. We discuss these disruptive models, which effectively create ultra-fragmentation in the market, in Chapter 4.

Table 1. Different structures in the travel industry

	Airlines	Hotels	Car rental
Main players	Full service carriers (FSC) Low cost carriers (LCC) Hybrid carriers (FSC & LCC) Private jet clubs	Independent hotels Branded chains	Few global brands Local independents
Nature of market	High consolidation and alliances between airlines with codeshare	High fragmentation Few large hotel chains	High consolidation of global firms Some local niche firms
Direct/indirect sales	Direct sales Indirect via GDS Direct connect to travel agents and to corporations	Direct sales Indirect e.g. online travel agents, airline websites Indirect via GDSs	Direct sales Some indirect sales via travel agents or airlines
Competition sharing economy platforms	No	Yes e.g. Airbnb, HomeAway	Yes e.g. Uber, BlaBlaCar, Cabify, Lyft

Distribution: a complex network

Today, the travel distribution industry is a complex network of players. In the past, consumers would purchase flights largely through bricks-and-mortar travel agents who liaised directly with the airline companies via call centres and/or airline ticketing offices. Following the creation of global distribution systems (GDSs), travel agents have increasingly used one or more of the GDSs to aggregate information from airlines and large hotel chains across the world. More recently, the rise of online retail has led to online travel agents (OTAs) and to the creation of metasearch companies that specialise in traffic acquisition through comparing prices across the internet without offering booking services. In Chapter 4, we examine each of the key types of industry players: suppliers, GDSs, travel agents, metasearch companies and gatekeepers. As discussed in Chapter 2, the line between OTAs and metasearch companies is blurring with consolidation in the industry.
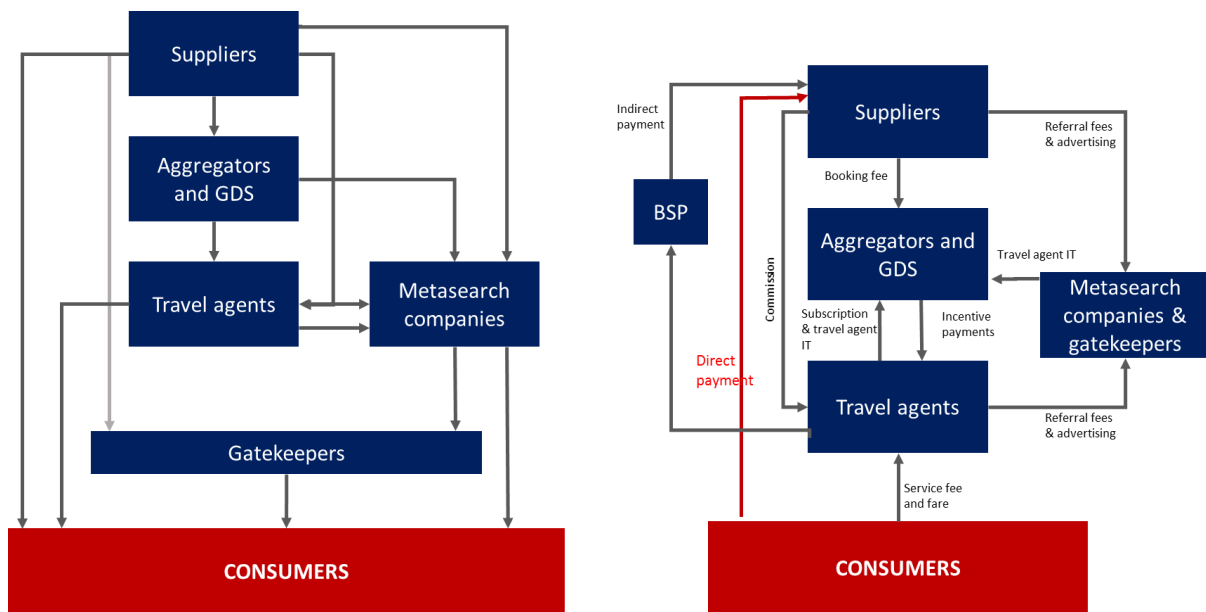
The inter-relationships among these players are many and diverse (Figure 2). Suppliers can sell direct to travellers (e.g. through airline.com websites, or through direct reception sales in hotels) or indirectly, through GDSs or travel agents. Metasearch companies and gatekeepers, such as Google and Facebook, can either direct bookings to industry players or perform a marketing role.

As the industry has matured, consolidation has been significant. Five global travel management companies now dominate the business travel agent sector. Three global companies lead the GDS sector, while Expedia, Booking.com and others have become global brands in online travel retail. At

the same time, companies have expanded across the distribution chain to blur the traditional lines between players. Examples include the metasearch company, TripAdvisor, expanding into OTA territory by offering bookings via its Instant Booking capability, or the takeover of the metasearch company, Kayak, by the OTA Priceline.

The industry will face pressures from both ends of the distribution chain. First, the relative consolidation of airlines provides negotiating power with intermediaries in the value chain. Second, the rapidly evolving expectations of the consumer – increasingly digitally-savvy with new online purchasing opportunities – continues to shape the distribution industry. Competitive pressures within the industry will also play a major role.

Figure 2. The travel distribution industry today.

Arrows in Fig.2a represent flows of content/information. Arrows in Fig.2b represent financial flows.

3. Disruptive factors shaping the future

In this chapter, we examine the potential disruptive factors that are emerging – and could emerge – in the market, based on the interviews undertaken by LSE with industry leaders and experts. Five disruptive factors emerged from the interviews and analysis: the consumer, mobile, big data and artificial intelligence (AI), regulation, and travel risk. In addition, drivers within the industry such as sharing economy models, advertising models, product differentiation and industry consolidation are examined in Chapter 4.

Consumer expectations

Consumer growth

Rising consumer demand will be one of the key drivers of the travel distribution industry into the future, with the global market projected to continue to grow strongly over the next 10 years (Oxford Economics 2014). Since the financial crisis in 2009, global overnight tourist flows have rebounded, growing at 16.5% in the three years to 2012.

Global population growth remains strong over the next decade. According to the United Nations Population Division, the world's population is growing by around 83 million people annually and is projected to increase by more than one billion people within the next 15 years, reaching 8.5 billion in 2030.

The population of Africa will grow 29.4% from 2015 to 2030, reaching 1.7 billion (United Nations, 2015). However, growth in incomes in Africa is expected to lag behind, with a small proportion of the population able to afford air travel and international tourism.

The Asia-Pacific region is forecast to display strong population and income growth over the next decade. The Asia-Pacific population is set to grow 10.8% from 2015 to 2030, reaching 4.4 billion (OECD 2016). At the same time, GDP growth in Emerging Asia (South-East Asia, China and India) is forecast to grow robustly at 6.2% annually from 2016 to 2020 (OECD, 2016). Asia's middle class is projected to represent 66% of the global middle class population compared to 28% in 2009 (Kharas, 2010). This middle class is driving demand for travel very strongly and will continue to do so in the foreseeable future (see Box 1 for an overview of regional trends in consumer demand).

Box 1: Regional market trends

North America and Europe
Reaping the benefits of competition and technology, consumers in North America and Europe have become experienced travellers, often searching different online sites, consulting peer reviews and using different devices before making the final booking choice. With rising online sales, metasearch companies and online travel agents have grown to accommodate demand for easier comparisons, the best price and/or value. Greater price transparency has historically also benefited low cost airlines which are strongly established especially in Europe. Most business travel is booked through travel management companies to provide integrated services and to ensure that the location of personnel is known. Industry consolidation has happened faster in the US than in Europe, with three dominant airlines now controlling the US market, and with large hotel companies merging to increase their market presence. Europe is experiencing a similar trend, with increasing market power of a small number of airlines in their respective home markets.

Asia Pacific
The Asian market for low cost carriers has grown rapidly, with 117 million passenger trips a year today, and is set to overtake Europe and North America over the next decade, partly driven by the forthcoming deregulation of the ASEAN aviation area. Affordability is a major underlying cause of rising consumer demand for travel and tourism bookings in the region. At the same time, many Asian consumers are prepared to pay travel agents to tailor travel packages for them. Many Asian travellers have never booked a flight or travelled abroad in their lives, and these inexperienced travellers are therefore looking for a more integrated service rather than do-it-yourself booking with separate components of their trip. Similarly, many Asian travellers are leapfrogging straight to mobile booking and payments, having never used bricks-and-mortar travel agents or a desktop computer to book travel. As a result, many of the big innovations in travel distribution are likely to arise from Asia.

Middle East
The Middle East has a large and growing business market. In response, airlines and airports in the region are aiming to become a global hub for long-haul travel. Dubai Airports is aiming to increase capacity of Dubai World Central to 200 million passengers a year. This compares to around 90 million passengers currently passing through today's largest airport – Atlanta, Georgia (USA).

Latin America
Despite recent political and economic instability in the region, Latin America's travel industry continues to grow strongly. LSE analysis of Amadeus data shows that in the five years between 2011 and 2016 the average year to year growth in bookings was 4.3%. According to Boeing, between 2004 and 2015, the region's airline fleet grew at an average rate of 5.2 percent per year, while Airbus forecasts a doubling of their fleet out to 2034 to meet long term growth in the region.

Africa
While Africa will continue to see huge population growth over the coming 10 years, incomes are not set to grow at the same rate. This means that consumer demand will remain largely untapped across wide areas of the region. Nonetheless, low cost carriers have begun entering the market since an open skies agreement in 1988. Examples include Kulula in South Africa and FastJet in Tanzania.

Sources: LSE interviews; UNDESA 2014; Oxford Economics 2014.

The consumer experience

Consumer expectations of retail are changing radically. As consumer expectations grow in the wider retail sector to include easy purchasing, inspirational shopping and personalised services, these expectations will spill over into the travel market. This is likely to lead to major disruptions in the travel distribution industry.

Consumers are already expecting more user-friendly websites and apps backed up by smooth and speedy transactions. Consumers are looking for the process to be frictionless and safe. They turn to online retailers who recall their profile and payment preferences, have a short and efficient purchasing process, provide clear delivery options and pricing, have websites that don't crash, and reassure the customer through payment confirmation.

> *In the future, consumers will demand more comparison and more convenience.*
> Greg Schulze,
> Senior Vice President of Commercial Strategy and Services, Expedia
> July 2016

Consumers are also responding to online price transparency. One of the consequences of e-commerce is that consumers have more information to compare services and more choice to purchase services from different suppliers. The ability to compare prices directly has increased with the advent of metasearch companies, OTAs and online peer reviews such as those used by TripAdvisor. According to industry experts interviewed, this has led to a decline in brand loyalty, support for the rise of low cost carriers in the airline industry, and the response of full service carriers to reduce their prices and further commoditise their service around the cost of a seat. This is particularly true for domestic and short regional flights.

> *Brand trust and content are critical. With growth in online and mobile shopping, and greater use of data analytics, it's about who do I trust? Where can I see the best content, the offers most relevant to me, the best prices, the most complete information, the best comparison?*
> David Orszaczky, Head of Sales and Commercial Planning, Qantas
> August 2016

> *What people want is changing. Expectations of ownership are changing, driven by companies like Uber, Netflix and Spotify with their on-demand services. Millennials are less interested in possessions and more into experiences. It's the lifestyle brands that will do well. You've got to be a 'community' not just a company.*
> Dr Wouter Geerts, Travel Analyst, Euromonitor International
> May 2016

Other consumers want to have the choice managed for them. Even with better price comparisons offered by metasearch companies and OTAs, a substantial proportion of consumers demand a managed service that can reduce their time searching as well as providing them with a tailored, integrated package. This is the case for businesses who use TMCs, as well as individuals. In China, where

many middle class travellers have never flown before, the demand for managed itineraries through travel agents is higher than in Europe and North America, where experienced travellers often prefer to search for, and book, their own travel online. Similarly, the reassurance of face-to-face time with a trusted agency in a bricks-and-mortar building has led to MakeMyTrip, an Indian OTA, investing in shops to build client confidence.

Many consumers want their transactions to work across different devices, starting a purchase on a mobile phone and completing it later on a PC. They expect complex transactions to be reduced to a couple of swipes and a fingerprint. Indeed, for many consumers today, the ease and reliability of websites and apps plays a more determinant role than brand loyalty. The rise of mobile may replace different devices, with searching, booking and sharing the experience all taking place through the smartphone. There will also be a growth of smart devices, whether wearable technologies or the internet of things, that will augment the challenge of integrating across devices.

Industry experts suggest that increasingly consumers will expect a more seamless travel experience, with different elements of travel being integrated. In the leisure market, 'experience shopping' has been steadily growing. The evidence of a travel experience (e.g. photos, video) and the sharing of that experience online becomes an opportunity to prolong the purchase. This is particularly the case for the Millennial generation.

Mobile

Almost all experts and leaders interviewed by LSE regarded mobile as a key disruptive factor shaping the travel distribution industry over the next decade. Mobile is already shaping the market today and its role as a major disruptor will continue to grow. According to industry experts, around 85% of the world's population already live within range of a data-capable network. This raises two related questions: how can all 85% of those people be enabled to gain access to those networks, and how can the networks be extended to the remaining 15% of people living in remote areas? One potential solution is for mobile operators and international donors to collaborate to bring down costs until incomes rise to a sufficient level to make it commercially viable. At the same time, tech giants are extending global networks to remote regions using satellite, solar planes (e.g. Facebook's Aquila) and high altitude balloons.

> It's truly the moment of mobile. There are over 3 billion people connected and they are using the internet in ways we have never seen before. Over 50% of our queries come from mobile phones
> Sundar Pichai, CEO Google
> May 2016

Mobile is becoming the booking device of choice in emerging markets. Mobile devices have different roles in different parts of the travel life cycle. In North America and Europe, mobile tends to be used for background research and last minute deals. Relatively few consumers use it for booking, though airlines have set up online check-in on a mobile app. In contrast, mobile is rapidly becoming the primary means of booking in emerging markets such as China and India. In these countries, mobile is often the only access people have to the internet. As a result, travel agents are moving to mobile booking, while TripAdvisor, traditionally a metasearch company, has expanded its services into travel agent territory with instant booking.

Portability is changing the way consumers interact with the industry. As a channel, mobiles offer unique capabilities that open up opportunities and risks for the travel industry. Unlike a fixed PC, mobile devices include camera, audio, video, location sensor, finger print scanner server and intelligent agent access. This range of functionalities has far-reaching disruptive impacts as it transforms traveller behaviour throughout the travel lifecycle, most notably while the traveller is on the go during the trip. The development of more sophisticated voice technology will also allow travellers to use their mobile more easily as a virtual assistant.

Mobile is creating "micro-moment" searching and booking. The portability of the mobile platform means that its use is pervasive: consumers are connected to the internet throughout their journeys and increasingly expect to be served continuously. This ease of use means that consumers are searching more, leading to an increase in the "look to book" ratio, with associated cost impacts on systems as well as opportunities for aggregators to provide more relevant and rapid content. Mobile has also led to "micro-moment" searching and booking, with consumers taking advantage of short opportunities at the bus stop, in a coffee break or waiting for dinner to cook. These "micro-moments" have implications for targeting advertising when consumers are in the right place and the right mood, as discussed in Chapter 4.

With smartphones, consumers can expect 24-hour services during travel and at their destination. Examples include shopping, theatre, tours, car hire and restaurants all booked at the touch of a finger. Making changes to flights and ordering hotel meals while mid-trip are also likely to grow. The value of the market for services consumed during the trip is huge – larger than the travel and hotel markets themselves. According to Rossini (2014), '*In-destination services accounted for almost USD 2,000 billion globally in 2013'.* While this inventory is already being brought online,[1] GDSs, suppliers and travel agents have a major opportunity to incorporate this offering into their services. Nonetheless, the extremely fragmented nature of in-destination services presents a challenge for aggregation and booking in terms of curating a different style of content.

The potential for geolocation to tailor mobile services is substantial. Consumers are becoming accustomed to wearable devices and interacting constantly with their smartphones. This is already paving the way for beacon technology. In the travel industry, the best known examples are airports or hotels using beacons to target travellers with special offers as they pass by. Other location-specific services include special offers at the airport, automatic hotel check-in on approaching the hotel, seamless automatic translation, or suitable restaurant suggestions at the right time and location when on a trip.

The main innovation in our industry is real-time platforms using geolocation services. Improvements in mapping technologies have helped route calculation.
Juan Garcia Braschi
Regional Manager for Spain & Portugal, Cabify
June 2016

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[1] Examples include Viator, Vayable, Isango and GetYourGuide and in dining reservations such as OpenTable and LaFourchette.
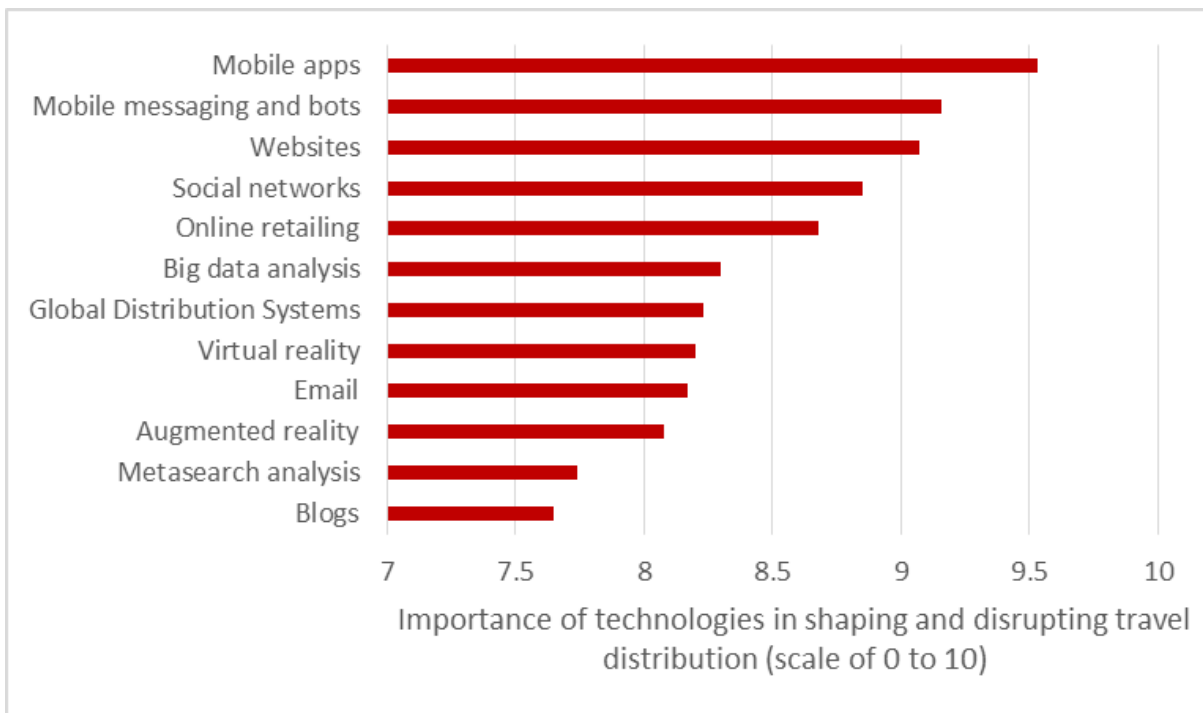
Big data and AI

Overall, experts surveyed by LSE regarded big data and artificial intelligence (AI) as key disruptive factors shaping the travel distribution industry over the next decade. Airlines surveyed scored the importance of big data at 9.5 out of 10, while travel retailers scored its importance at over 8 out of 10 (Fig. 3a & b). While its rise has long been heralded, AI has not yet delivered major change in the commercial world. However, its impact on travel distribution is now at the forefront of many industry analysts' minds. In particular, the industry has the potential to tap into huge amounts of traveller information that can be used to target consumers more precisely. This in turn provides opportunities for improving the travel experience, selling a wider range of services, and targeting advertising in a more personalised way. One example is Google's recent mobile app, 'Trips', which draws on data relating to how long people spend at particular tourist sites in order to plan sightseeing trips around the world's biggest cities.
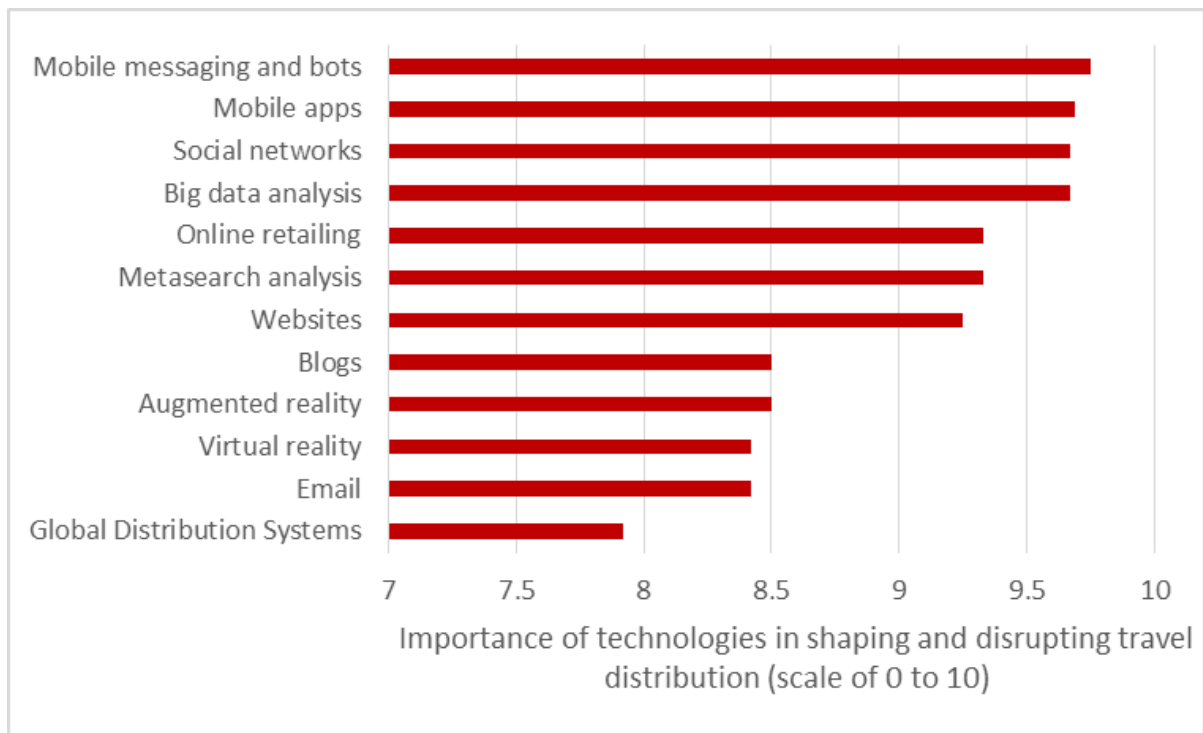
> Progress is accelerating thanks to profound advances machine learning and AI. I believe we are at a seminal moment.
> Sundar Pichai, CEO Google
> May 2016

Figure 3a. The importance of different technologies in disrupting travel distribution (travel retail view)

Source: LSE survey of 377 travel retail specialists, 2016

Figure 3b. The importance of different technologies in disrupting travel distribution (airline view)

Source: LSE survey of 18 international airlines, 2016

Big data and AI will develop hand in hand. Today's processing power allows for the analysis of big data to find hidden correlations, consumer information and other business-relevant insights. With developments in cloud services, the capabilities of data analysis are increasing at the same time as progress in the field of artificial intelligence such as deep learning (The Economist, 2016). Machine learning allows computers to crunch vast amounts of data, recognise patterns – including real time image recognition of shared photos – and get better at what they do with experience. This has the potential to disrupt many aspects of consumer purchases.

For the leisure traveller, virtual assistants will reduce the time needed to search for travel services. Virtual assistants will be able to learn the traveller's preferences more precisely, sift through the options and present tailored solutions, for example about a new destination, a new travel route or a multi-modal travel booking (see Box 2). A virtual assistant can gather personal data to make better recommendations on destinations, specific hotels or ancillary services. In addition, a virtual assistant could use location-based services for suggestions while on the trip.

For the business traveller, virtual assistants will reduce the time spent planning. A virtual assistant could book the traveller's usual flight, hotel and car hire as soon as a meeting request for another city is accepted. An assistant could suggest different components to a trip, an 'omni-booking', which might include a hotel near the conference venue, airport car parking if the trip is less than a week or a taxi if longer, automatic flight re-booking in the case of any cancellations, and propose automatic check-in to a hotel once the traveller has left the airport.

Artificial intelligence could have impacts on the travel industry that go beyond search and booking. Delivery robots could provide more sophisticated room service in hotels, while self-driving cars could become a threat to other forms of travel such as car hire, but also potentially short-haul flights and rail journeys. One expert interviewed even suggested that single passenger drones could open up the sharing economy business model in the airline industry, though the timeframe for this kind of revolution is difficult to predict.

> There is already a push to personalization - product differentiation, customer segmentation - but the scale will be much greater in 10 years. We're likely to see individualised pricing and product development. It makes that comparison more challenging but all the more important.
>
> Greg Schulze
> Senior Vice President of Commercial Strategy and Services, Expedia
> July 2016

Box 2: Bots and virtual assistants – lessons from the tech industry

Bots and virtual assistants are set to revolutionise the interface between consumers and services. A bot, also referred to as an internet robot, is a software application that automates tasks over the internet. Essentially, bots provide an opportunity for consumers to have their own virtual assistants who facilitate the consumer's decision-making online. The technology behind bots and online virtual assistants is evolving rapidly with several players entering the market: e.g. Siri (Apple), Google Now (Google), Cortana (Microsoft), Echo (Amazon), and Facebook's development of chat bots. Virtual assistants can be text-based or use voice recognition.

Virtual assistants are being developed to handle business diaries and scheduling meetings. For example, Amy – developed by New York start-up X.ai - is a virtual assistant who can schedule meetings with colleagues, reschedule automatically in response to colleagues, and compose emails to participants.

According to Google, "*We believe we are at a seminal moment. People are increasingly interacting naturally with Google, and aren't just looking for the world's information but actually expecting Google to help them with their daily tasks… The assistant is conversational—an ongoing two-way dialogue between you and Google that understands your world and helps you get things done. It makes it easy to buy movie tickets while on the go, to find that perfect restaurant for your family to grab a quick bite before the movie starts, and then help you navigate to the theatre.*"
Virtual assistants are already being integrated into messaging apps, so that the assistant interacts directly in online conversations with friends and business colleagues. Consumers will be able to ask the assistant about their agenda for the day, advice on travel itineraries, to see holiday photos or suggest a restaurant nearby when at the destination.

Source: LSE interviews, Google blog.

Regulation

In Europe, Global Distribution Systems are overseen by the Code of Conduct for Computerised Reservation Systems (CRSs). The Code was first implemented in 1989, and has been reviewed and amended in 1993, 1999 and 2009. The most recent "Fitness Check" of the Code in 2012 confirmed the need for a Code to safeguard airline competition and a neutral and transparent marketplace for air travel information, while highlighting the need for the EU Commission to follow the developments in the industry closely, e.g. the growth of metasearch players and their impact on neutrality. The EU Code of Conduct covers the following main areas: (1) any airline can participate in a CRS on an equal and non-discriminatory basis, (2) airlines controlling or participating in the capital of a CRS ('parent carriers') must communicate similar information to any other GDSs, (3) CRS companies must not discriminate between airlines in terms of loading or processing data, and (4) CRSs must provide display parity for airlines, i.e. displays of airline options must be neutral and contain accurate, non-misleading information and rank airlines based on objective criteria, and not on advertising or other revenue.

In the United States, travel distribution operates in a more deregulated market. The GDS market was deregulated in the US in 2004, though the Department of Transportation (DOT) retained its authority to investigate unfair competitive practices in the distribution of air travel services. In Canada, regulations remain in place, for example on display neutrality, though the level of regulation is lower than in the European Union.

Airlines, GDSs and travel agents have experienced strained contractual relationships. A number of lawsuits have been lodged between industry players over the last 15 years, particularly in the US. In many cases, players have remained distribution partners while at the same time taking each other to court. For example, in 2002, American Airlines (AA) formed an agreement with Orbitz to book fares on a direct connect system, bypassing the GDS. After the GDS Travelport acquired a majority share in Orbitz in 2006, Orbitz increased the proportion of its fares sold through Travelport rather than the direct connect. Following unsuccessful negotiations, AA de-listed their fares from Orbitz and Travelport responded by suing AA. In 2011, a court order reinstated AA fares on Orbitz. AA then took Sabre to court for similar practices.

Regulation has also been influential in the competitive environment of metasearchers. In 2011, the US Justice Department brought an action against Google for breaching anti-trust laws over their proposed takeover of ITA, the air travel fare pricing and shopping system. ITA's system included QPX - the system used by many metasearchers such as Kayak, Bing Travel and Orbitz. Google completed its takeover after agreeing to continued provision of the fare pricing and shopping systems to its competitive rivals.

In China, the market remains closed to foreign CRSs, despite the introduction of new, interim CRS regulations in 2011. Foreign companies face regulatory and administrative discrimination. Travel agents need to be licensed by the China National Tourism Administration, while almost all airlines in China sell fares through TravelSky, the state owned GDS, which is licensed by the China Air Transportation Association.

Future regulation and competition rulings could limit further consolidation in the airline and travel agent sectors. Competition rulings on any abuse of dominant position in certain markets would put constraints on the growth of large airline alliances and giant metasearch-OTA hybrids. The degree to which the consolidation of airlines, OTAs and travel management companies is tolerated by authorities, will determine both the survival of small players and the negotiating power that the larger players have through the rest of the distribution chain.

The growing power of metasearch companies and gatekeepers would be restricted if neutrality provisions were extended to include them. Metasearch companies that use an advertising model rely on non-neutral comparisons as their revenues are driven by favouring those paying a fee. In the US, 'ticket agents' currently cover GDSs and travel agents, obliging them to disclose any display bias. Whether Google and other metasearch companies should be covered by the definition is under discussion. Similarly, any review of the Code of Conduct in Europe could also affect the definition of industry players who fall under regulation: GDSs are currently clearly covered but uncertainty surrounds the position of metasearch companies.

Deregulation will impact on distribution channels in the hotel sector. With the removal of hotel rate parity in parts of Europe, hotels have started to differentiate their rooms through their own website sales. For example, Hyatt and Intercontinental offer a 10% reduction on room rates through loyalty schemes booked directly with them. Any further loosening of such parity provisions in the future could impact on travel agents.

Deregulation would radically disrupt travel distribution in China. Deregulation in Asian markets, most notably by opening up State monopolies in China, could lead to new players entering the market, such as LCCs and a greater choice of aggregators and travel agents.

Future regulatory developments are also likely in data protection and privacy laws. Experts interviewed by LSE considered that consumers accepted the increased use of their personal data where the improvements in product or service were clear and appreciated. However, if consumer concerns over the use of personal data increase, regulations could follow. Gatekeepers such as Google that pick up information from email and search terms to drive targeted advertising could be particularly affected.

Finally, the rise of sharing economy models is challenging the traditional regulatory environment. Sharing economy platforms tend to challenge incumbents and protected sectors, such as the effect that personal-transport schemes have had on local taxi monopolies. At the same time, incumbents argue that companies such as Uber and Airbnb should meet the same level of health & safety, environmental and other standards that are faced by traditional providers. Specific rulings are already creating different levels of competition from sharing economy models in different countries.
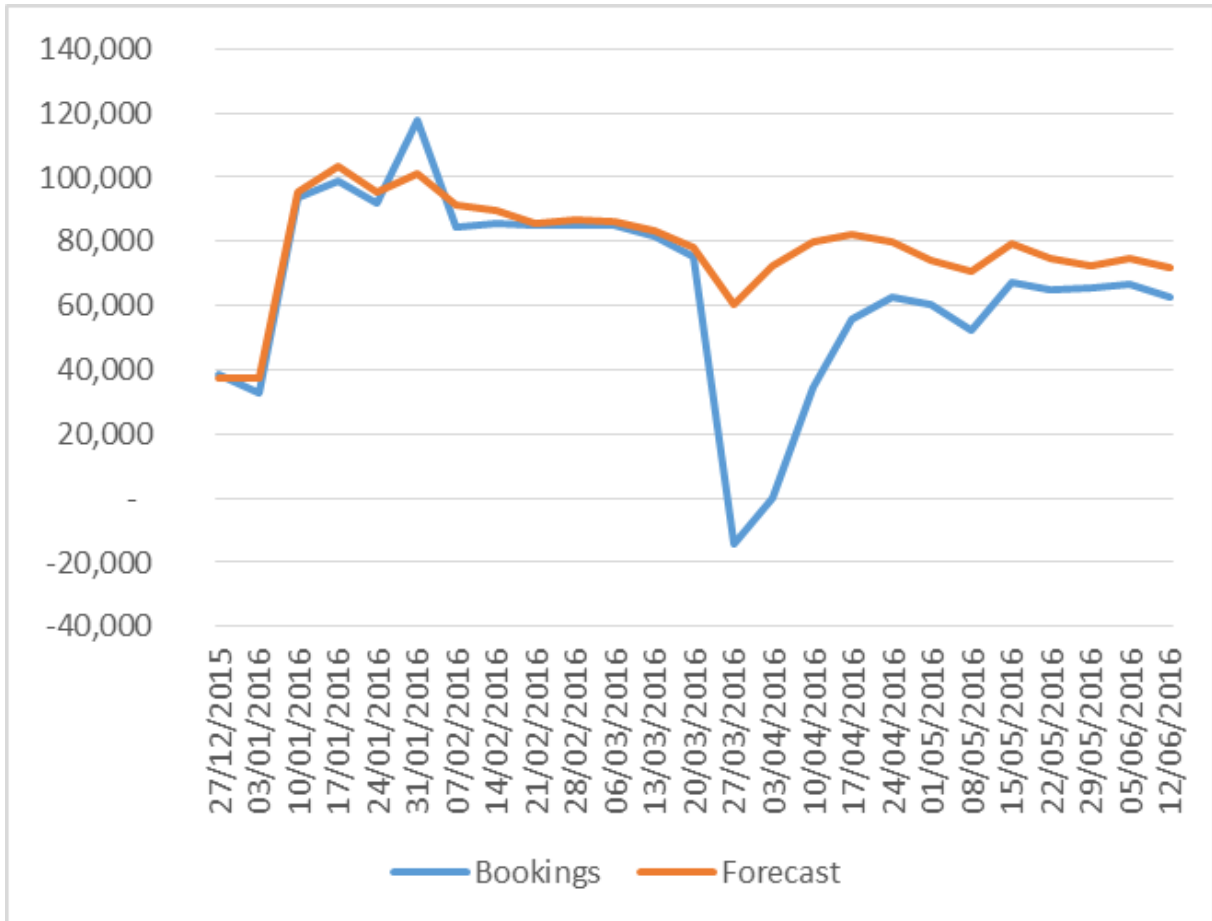
Travel risk

Travel distribution is affected by risks to the industry as a whole. Exogenous risks including oil prices, terrorist attacks, storms and natural disasters such as the Icelandic volcano ash cloud, influence consumer perceptions of travel and ultimately impacts on travel distribution. As part of the analysis for this report, LSE examined the impact of two risks that could potentially increase in the future – terrorist attacks and storms – with associated implications for the distribution industry.

Travel has always been exposed to political risks, and attacks on airports are still relatively unusual. However, international terrorism has grown over recent years as a major threat, particularly in Europe, Asia and Africa. Examples of attacks targeting airports include Glasgow Airport 2007, Peshawar Airport 2012, Brussels Airport 2016, and Istanbul Airport 2016.

Analysis shows that bookings for flights departing from Belgium dropped significantly following the Brussels attack, with many passengers also being reimbursed for cancelled flights (Fig. 4). In terms of Amadeus data alone, 74,700 fewer bookings were made (including reimbursements) during the week following the event compared to expected. Furthermore, booking rates have taken several months to

return closer to normal, and by early June a cumulative total of 317,000 bookings logged by Amadeus had been lost compared to business-as-usual. LSE's analysis also showed a significant drop of 308,000 bookings logged by Amadeus out of Paris in the three months following the 2015 Paris bombings, despite the airport not being targeted. The question then arises: could the risk of terrorism increase in frequency in the future, with a structural impact on the distribution process?
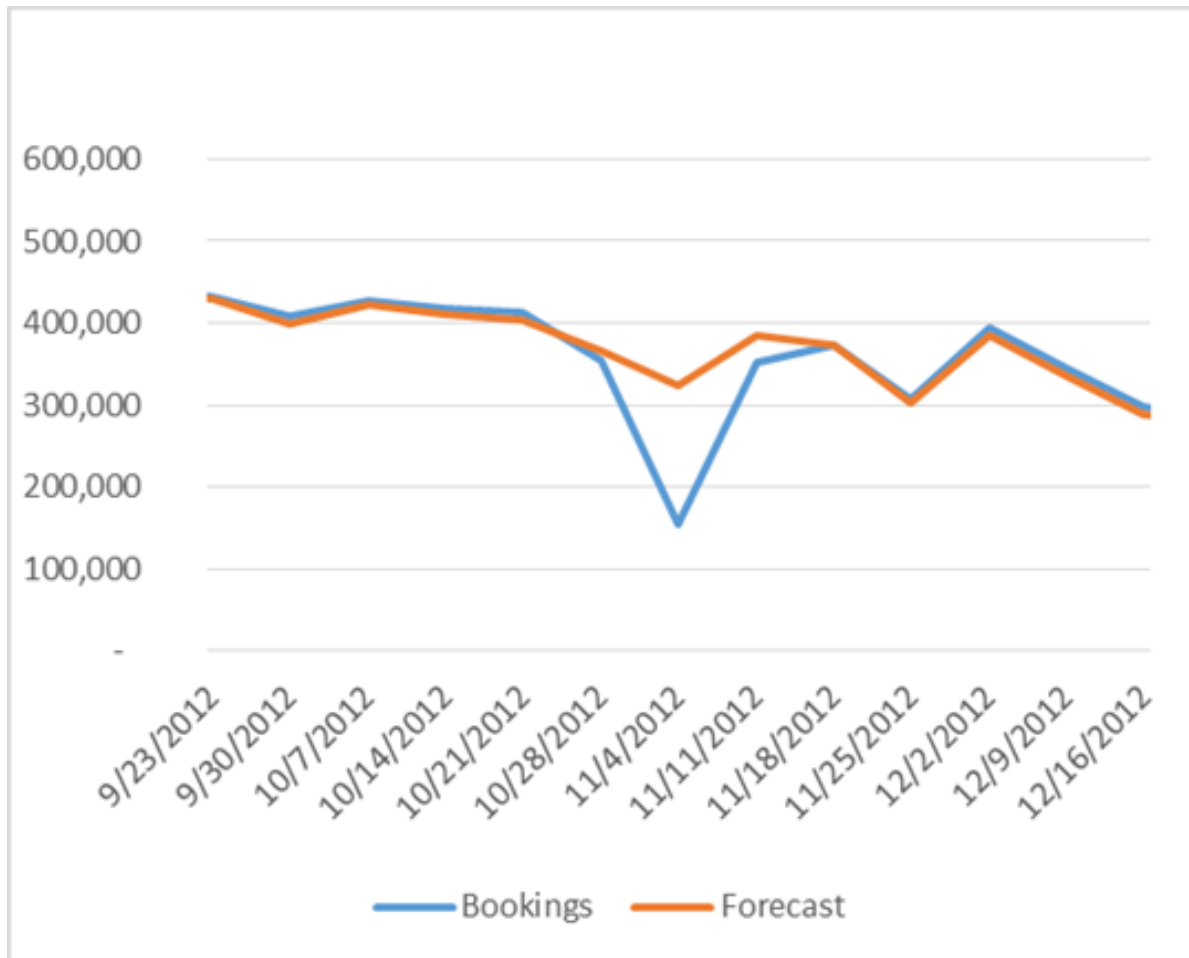
Figure 4. Impact of the Brussels Airport attack on flight bookings from Belgium

Source: LSE 2016. Data from Amadeus.

Severe storms can also have a major impact on travel bookings. In the week following Hurricane Sandy in 2012, 167,600 fewer bookings logged by Amadeus were made for flights departing from New York City. Booking rates following the storm recovered within a month – more rapidly compared to the Brussels attack (Fig. 5). As scientists predict an increased frequency of major storms globally as a result of climate change, this could have a significant impact on the travel industry in the decades to come.

Figure 5. Impact of Hurricane Sandy on flight bookings from New York

Consumer behaviour in the inspiration and booking stages of travel may be impacted by travel risk. For example, better information before a trip could lead to a change in location for a business conference affected by winter snowstorms, or a change in timing for a family travelling to the Caribbean in hurricane season. Airlines and travel retailers could provide an independent 'risk score' attached to the flight purchase, notably in corporate travel where risk assessment has particular value. Improved information could alter consumer decisions to purchase additional travel insurance at the moment of booking or nearer to the travel date.

During travel, disruption may result in the need for additional travel services and a responsive distribution agent. A virtual personal assistant, based on machine learning, could ease the traveller's discomfort by automatically booking a hotel room, informing the car hire company of delayed arrival or rescheduling meetings when a key participant is delayed. Mobile interaction will gain in importance as a communication channel with suppliers, especially during a crisis.

After the event, the suppliers and travel agents who respond to consumers adequately in terms of emergency response or compensation, will have significant reputational impacts beyond the immediate customers concerned. The ability of social media to broadcast personal experience, good or ill, magnifies the individual's experience and ultimately, affects the brand. Potentially, increased

risk perception could drive customers towards 'safe' brands or those with better customer service in a crisis, such as smooth re-booking or compensation.

Travel disruption can open opportunities for many industry players. Airport delays could result in increased shopping or restaurant purchases; travellers may be prepared to pay for access to lounges; hotels may see reservations extended for travellers with cancelled flights or opportunities to propose meal offers. The increased security requirements may present opportunities for aggregators to manage the additional information required: more integrated information management would save travellers giving out personal information several times.

In conclusion, while travel disruption is likely to impact on different players in the industry depending on their geographical presence and risk exposure, the perception of risk could be equally if not more important. Innovative solutions from the industry that minimise the inconvenience of travel will help reduce that risk and could provide opportunities for companies who meet consumer expectations. The response of the distribution industry to the consumer's perception of risk may play a role in reducing unnecessary behaviour, such as avoiding all flights. For example, adding independent information to advertised travel options, such as a travel risk score, might improve consumers' understanding of risk and its relative role in travel.

4. The industry: future pathways

In this chapter, we examine the potential future pathways that different areas of the travel distribution industry could take. These pathways are based on the analysis of current trends and disruptive factors explored in Chapter 3 (e.g. the rise of big data and artificial intelligence), as well as insights from industry leaders and experts in the interviews conducted by LSE.

> Everyone looks at their part of the industry from their own point of view and doesn't necessarily look at the consumer. The retail business is much more consumer orientated and has been for 25 years. The travel industry could learn a lot from retail in terms of opening up and what's the best solution for consumers.
>
> Kenny Jacobs, Chief Marketing Officer Ryanair
> August 2016

Based on this evidence, we identify four areas of the industry where the greatest changes are likely: complexity and innovation in air travel distribution, the revolution of sharing economy models in the hotel and car hire sectors, innovation and hybridisation in online travel retail to provide a seamless travel experience, and the rise of gatekeepers such as Google and Facebook in traffic acquisition.

For each of the four areas, we examine the trends, industry drivers and potential future pathways for industry players and their business models. The pathways are not intended to be mutually exclusive, and we suggest that a range of pathways will be taken by industry players simultaneously.

> It would be good to see more net pricing in hotels, where the commission is added on top of the net rate.
>
> Skye Legon, CEO Bookbedder
> June 2016

Box 3: Emerging business models in the travel distribution industry

Business models describe the process by which a company extracts value from its business. The complexity of the travel distribution industry lends itself to a wide variety of models. The following covers some existing and emerging models of relevance to travel distribution.

Transactional or commission based model
In this model, a service is delivered in exchange for a percentage of the value of the product or for a fixed fee. It provides an incentive for the two partners to increase sales of the product together. In the travel industry, this is the traditional way that travel agents and Global Distributions Systems (GDSs) have been remunerated by the airlines or hotels for the products sold.

Retail model
As it applies to the travel industry, the retail model encompasses more than a single purchase. The point of sale supports a 'bundle' of purchases in order to increase the overall value. It encourages the traveller to buy ancillary services on top of the main product purchase, and as such is favoured by many airlines increasingly as their future distribution business model.

Advertising model
Some companies generate their income, or part of it, through online advertising. They may not be involved in travel bookings directly, but provide a service, such as travel searches, on the basis of advertising revenue. Successful companies in this field, such as Google, command high premiums for sponsored search results or for content-relevant advertising.

Sharing economy
The sharing economy is a broad concept that encompasses the shared use of private assets and services. In the travel sphere, it includes online platforms that facilitate the rent of assets owned by private individuals such as a room or apartment (e.g. Airbnb) or the hire of services such as a car ride (e.g. Uber), where the car is usually owned and driven by a private individual. Sharing economy models are also known as peer-to-peer platforms (P2P).

Partnership model with third parties
Business partnerships can take many forms, including joint ventures or looser project collaborations. An innovative way to grow value is to open access to data and platforms to third parties in exchange for sharing future revenues or a commission for sales. This business model helps to create incentives for consumer-focused experimentation and can leverage expertise and innovation beyond the capabilities of the existing business. This model is being explored increasingly by airlines, IT companies and some GDSs in the travel distribution industry.

Auction model
An auction model is a method of price setting whereby potential buyers bid against each other for a specific product. Whereas most of the travel industry uses a dynamic 'menu pricing' system based on demand, some airlines are now looking at auctions for seat upgrades in order to maximise revenues. Some hotels are also considering auctioning for vacant rooms.
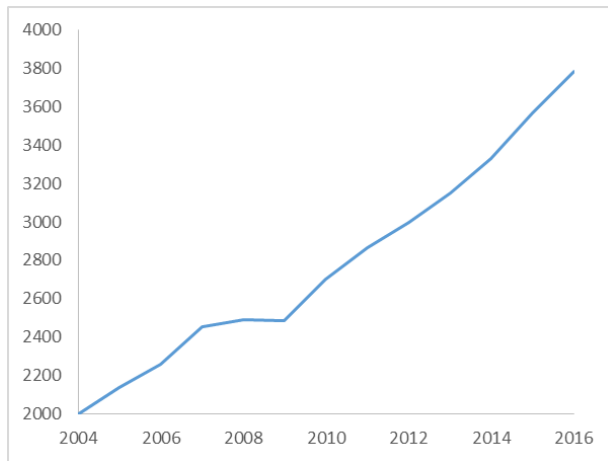
Sources: LSE interviews, The Economist

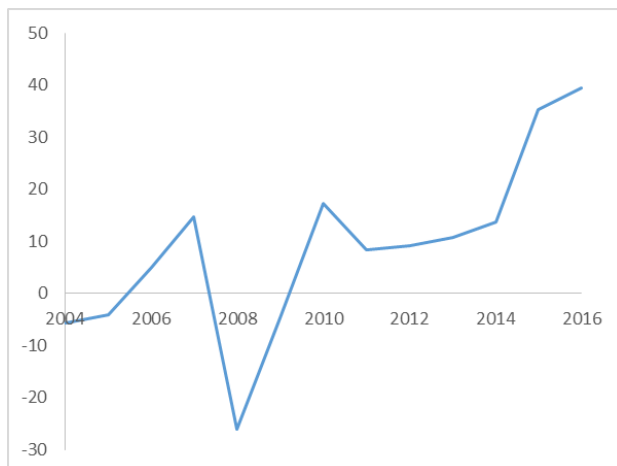# Airline distribution: complexity and innovation

Trends

The global airline market continues to grow strongly since rebounding after the global downturn in 2009. Global passenger growth was an estimated 7.4% in 2015, with 3.57 billion scheduled passenger numbers for the year (IATA 2016). The main drivers of growth currently are lower oil prices and strong consumer demand, which together compensate for a relatively weak global economy.

Figure 6. Global scheduled passenger numbers (million), 2004-2016

Source: IATA, 2016

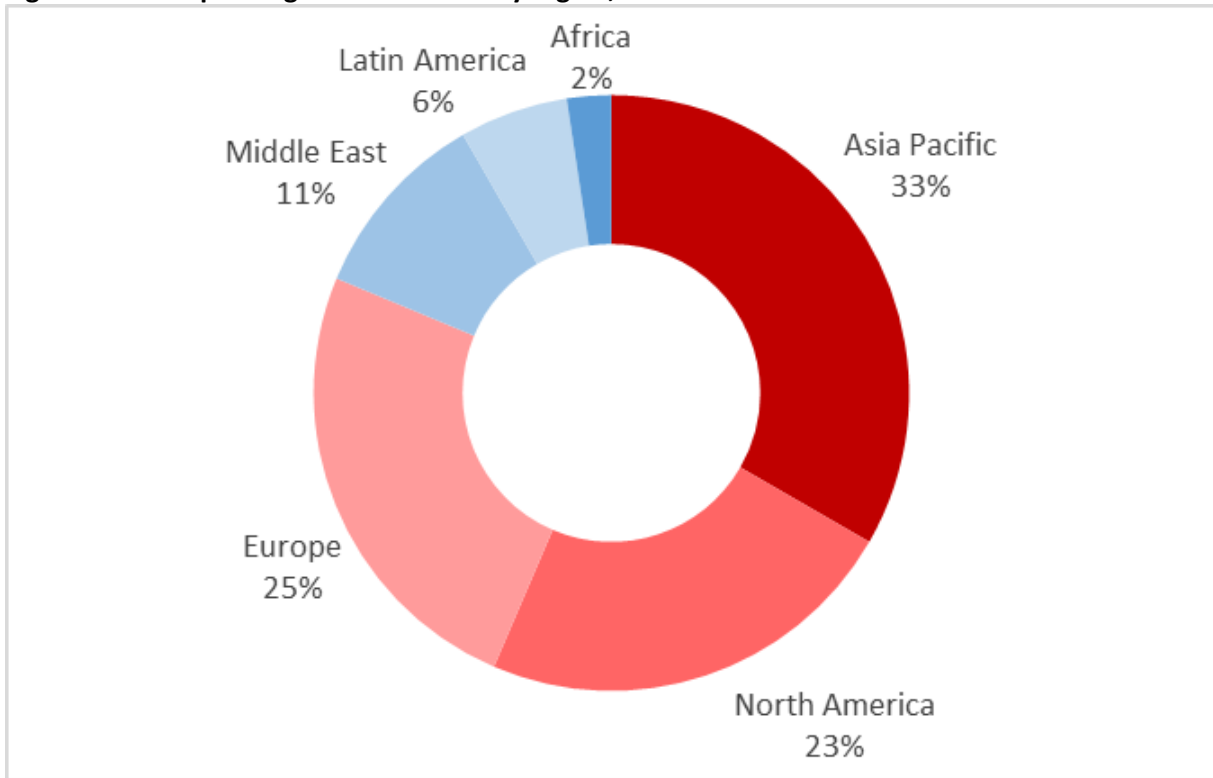**Figure 7. Annual net profit of global airline industry (USD bn)**

Source: IATA, 2016

Profit margins in the airline industry have been growing recently. The industry made estimated revenues of USD 718 billion in 2015 (IATA, 2016). Although this represents a 4.4% fall compared to 2014, it simply reflects lower costs (partly due to falling oil prices and efficiencies in the industry) and therefore lower ticket prices. Indeed, profitability of the airlines grew to USD 35.3 billion in 2015, representing an average 4.9% margin compared to margins below 2% in the preceding four years (see Fig. 7).
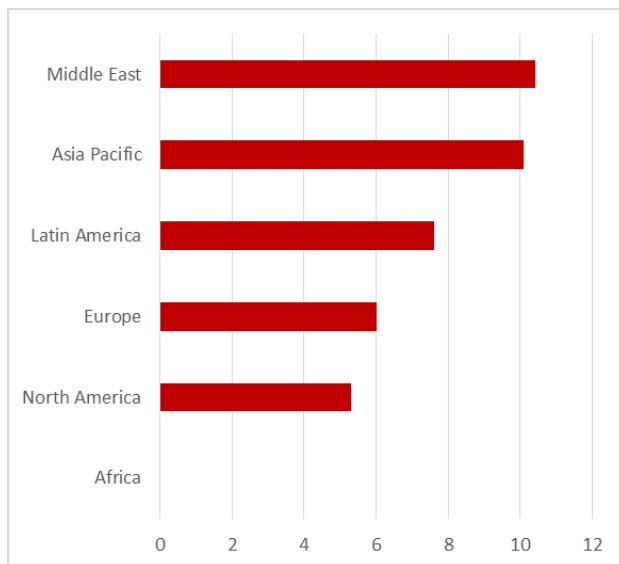
Market growth has been highly variable across different regions. The Middle East and Asia Pacific regions – now the largest region in terms of passenger numbers – both recorded passenger growth of over 10% in 2015 (Fig. 8a & b). In contrast, annual growth in Africa was zero, leading to an overall loss for the region of USD 0.5 billion.

Figure 8a. Total passenger traffic shares by region, 2015

Source: IATA, 2016

Figure 8b. Growth in passenger traffic (RPK), % year-on-year

Source: IATA, 2016

Airlines have historically relied on global distribution systems (GDSs) to reach their consumers. They provide a single port of aggregated content drawn from hundreds of travel suppliers including airlines, large hotel chains and car rental companies around the world. Airlines are able to reach a wider global traveller base by accessing regions where brand recognition and brand loyalty is lower, via a network of agents. Following the creation of Sabre in the 1960s by American Airlines, Galileo (now Travelport) in the 1970s and Amadeus by a consortia of European airlines in the 1980s, travel agents have increasingly used one or more of the GDSs to reach a wider consumer base as a one-stop-shop for searching and booking. China has developed its own GDS: TravelSky.

Industry drivers

A key driver in the airline industry will continue to be growing competition from low cost carriers (LCCs). Over the last 30 years, airline liberalisation in Europe and other regions has allowed the entry of new competitors, particularly low cost carriers (LCCs) such as Ryanair and easyJet. LCCs are now particularly strong in Europe and North America, with 250 and 173 million passenger trips a year respectively (Oxford Economics 2014). At the same time, LCCs such as Air Asia and Jetstar are penetrating the Asian market.

The rise of LCCs has created a different approach to the services offered by airlines. The costs of flights have been unbundled, with extras such as baggage, meals and seat allocation being charged as optional extras. The underlying business model of low cost carriers also differs in terms of their network, fleet and cost structure: traditional airlines operate a hub and spoke network structure with several aircraft types, whereas low-cost carriers operate on a point-to-point model and homogenous fleet in order to create additional maintenance efficiencies.

The rise of low cost carriers has led to the divergence of two markets: domestic and long-haul. In the domestic market, competition from low cost carriers has led to flights becoming a commodity, particularly in the leisure sector, where little else matters than the price of the seat. Consequently, domestic air travel has become a volume-incentivised industry,

> Global passenger numbers are growing, but LCCs in Europe and large carriers in emerging countries are eroding market share.
> Emmanuelle Gailland, VP Distribution, Air France
> September 2016

driving down unit costs and driving up passenger numbers. In the long-haul market, bundled services are still valued, with low cost carriers only now beginning to experiment with models with which to compete – largely enabled by new developments in aircraft design.

A number of experts interviewed suggested that differentiation of services by full service carriers will be a key industry driver over the next decade. Having competed with LCCs on cost in domestic markets, many full service carriers are already starting to explore ways of differentiation. Cost cutting and unbundling fight purchases has made flying a more generic experience. As a result, some airlines are beginning to differentiate themselves through improving the overall experience and the value of the flight. In this way they can move back away from flights as a commodity dictated by the price of the seat. At the same time, some full service carriers have launched low cost subsidiaries to compete with LCCs in domestic markets.

Differentiation is likely to see airlines growing a retail model for selling a value package of ancillary services and integrated travel. Current options for differentiating the services for sale are relatively limited. Examples include different classes of seat, different styles of carrier and various pricing mechanisms to reflect demand. However, most air industry cost structures depend on the average plane being above 80% of capacity, which restricts the variety of aircraft on offer and reduces less-commercially viable routes. Consequently, differentiation is likely to be through a wider range of fare families with different levels of service, more ancillary services, and more joined up travel – for example with hotels, car hire, fast track security, and airport car parking.

Box 4: Surveys on the growth in importance of distribution functions

Airlines and travel agents have different perspectives on future pathways. In the LSE's survey, airlines and travel agents were asked to score industry players in terms of their importance today and in 10 years. For airlines, direct sales scored most highly with 388% growth in importance (Fig. 9a), followed by metasearch companies with 281%, and online travel agents (OTAs) with 255%. However, travel retail respondents scored GDS companies most highly with 184% growth in importance over the next decade (Fig.9b), followed by OTAs and TMCs with 153% and 116% growth in importance respectively.

Figure 9a. Airlines survey

Source: LSE survey of 18 international airlines, 2016

Fig. 9b. Travel retailers survey

Source: LSE survey of 377 travel retail specialists, 2016

Future pathways

PATHWAY 1: GROWTH IN DIRECT SALES

Full service carriers with strong brand recognition are likely to continue growing direct sales in home markets. Large airlines such as Lufthansa, Air Canada and Air France are already actively expanding direct sales, particularly through their own websites, and airlines predict that their direct sales will grow strongly in importance (Box 4). These airlines consider that direct distribution provides more flexibility and freedom to differentiate their services and to expand a retail model compared to current GDSs. For example, Lufthansa has introduced its distribution cost charge for sales made through travel agents that rely on GDSs to access Lufthansa's content in 2015, as a means of encouraging more sales through their websites. Some airlines also view direct distribution as a way to circumvent GDS systems and other intermediaries.

> Tailoring the price, premium cabin options, bundling packages etc. puts control back in the hands of the airlines.
>
> Keith Wallis
> Director of Global Product Distribution, Air Canada
> August 2016

Direct sales are unlikely to replace indirect distribution channels in the global market. While direct distribution can be effective for FSCs with strong brands in home markets, reaching consumers in international markets requires global networks provided either by GDSs and travel agents or by gatekeepers and metasearchers. Big brand airlines could expand global direct sales in collaboration with gatekeepers such as Google and Facebook by paying higher fees for advertising and traffic acquisition. However, the power of the airlines to negotiate will decrease as the search control of gatekeepers increases. At the same time, smaller FSCs will need to rely on the transparent comparisons provided by GDSs to compete effectively. If the power of gatekeepers increases, and regulators allow them to remain outside the obligations for display neutrality, the smaller FSCs will be substantially threatened by the larger airlines.

The costs of direct distribution will rise with the advertising model. Some in the industry – particularly airlines – suggest that suppliers can cut costs by bypassing GDS and driving more travellers directly to airline websites. Others in the industry consider that the cost of direct distribution is similar to that of indirect distribution because servicing, marketing and referral costs need to be factored in. The increased permutations created by a network of direct connections with travel agents could further increase costs for airlines (see Figure 10b). In addition, the costs of consumer acquisition through gatekeeper advertising and referrals will continue to grow as the power of gatekeepers over billions of online consumers consolidates over the next years.

Direct distribution to business travellers will be limited. As well as website sales, airlines could seek to connect to corporate IT systems and sell directly in that way. This approach is likely to be limited to companies with sufficiently large volumes with one airline customer only. Furthermore, these direct bookings could potentially still require a servicing aspect, via an airline or travel agent, as these bookings are liable to modifications.

Metasearch may move traffic from direct to indirect channels. Metasearch companies are adept at acquiring consumers and passing them on to other partners, including direct to airlines, for booking. With the rise of mega-OTA hybrids, the metasearch model may gain broader adoption and impact the balance of traffic between online travel agent and airline.com channels, however the rise of new

channels such as mobile and chatbots requiring an integrated booking flow will potentially counter any shift towards the direct channels of airlines or other suppliers.

At the same time, low cost carriers may increase indirect sales via the GDS, particularly to capture the business travel market in some regions. LCCs have traditionally used direct selling (around 90% of their sales today) rather than GDS facilitated travel agency bookings. However, this is beginning to change in some regions, largely because LCCs want to access the business segment.

PATHWAY 2: GDS INNOVATION AND IT PARTNERSHIPS

Product differentiation by airlines will lead to more complexity, providing opportunities for GDSs. More fare families and ancillary services are harder to compare and may be subject to different levels of taxation. Consequently, many travel agents and GDS companies predict that the resulting increase in complexity could be a major opportunity for aggregators such as GDS and other IT companies.

> We've invested a lot in our direct channels and creating better customer experience that way. At the same time, direct sales will never be 100% of the business and we need to work with our partners to serve customers who prefer indirect channels.
>
> David Orszaczky, Head of Sales and Commercial Planning, Qantas

GDSs will need to meet new technology challenges stemming from complexity. GDSs will need to develop the technology to deliver the airlines' evolving retail model and to meet consumer habits of increasing search frequency across multiple devices and channels. Some interviewees focused on the need for investment in back-end systems that cope with the new type of airline content (such as ancillary products or premium fares). The challenge is to aggregate the Application Programme Interfaces (APIs) and present the information in a way that is useable and efficient. Some experts interviewed by LSE considered that the rise of the NDC may help systems become more inter-operable and may support current large players, such as GDSs, to aggregate more complex content.

Complexity will require huge investments in processing power. The pressure to deliver more, differentiated travel content faster and in a digestible format brings technical challenges and will require a huge processing capacity. The differentiated distribution methods will generate more transactions, with more search criteria, so the scale of computation will be significant, requiring major investment.

Distribution business models will need to foster increased innovation and a culture of experimentation. Companies willing to experiment with new distribution capabilities might find new opportunities and strengthen their market presence. Other sectors have found effective ways of multiplying the innovation potential including through opening up systems to third parties: Apple has taken this route in the development of new apps, and Amazon has applied the model to its market (see Box 5). For the travel distribution industry, this might mean that third parties are allowed to access data in a managed way in return for sharing the value from new applications. This would open the potential for new players to bring specific skills, such as artificial intelligence or algorithms from other high tech sectors, and work with GDS to deliver new distribution functionalities. New partnerships with data analysts may unlock the potential to personalise travel products.

NDC is a great step forward. Of course different airlines will make their own choice on APIs and other new technologies.
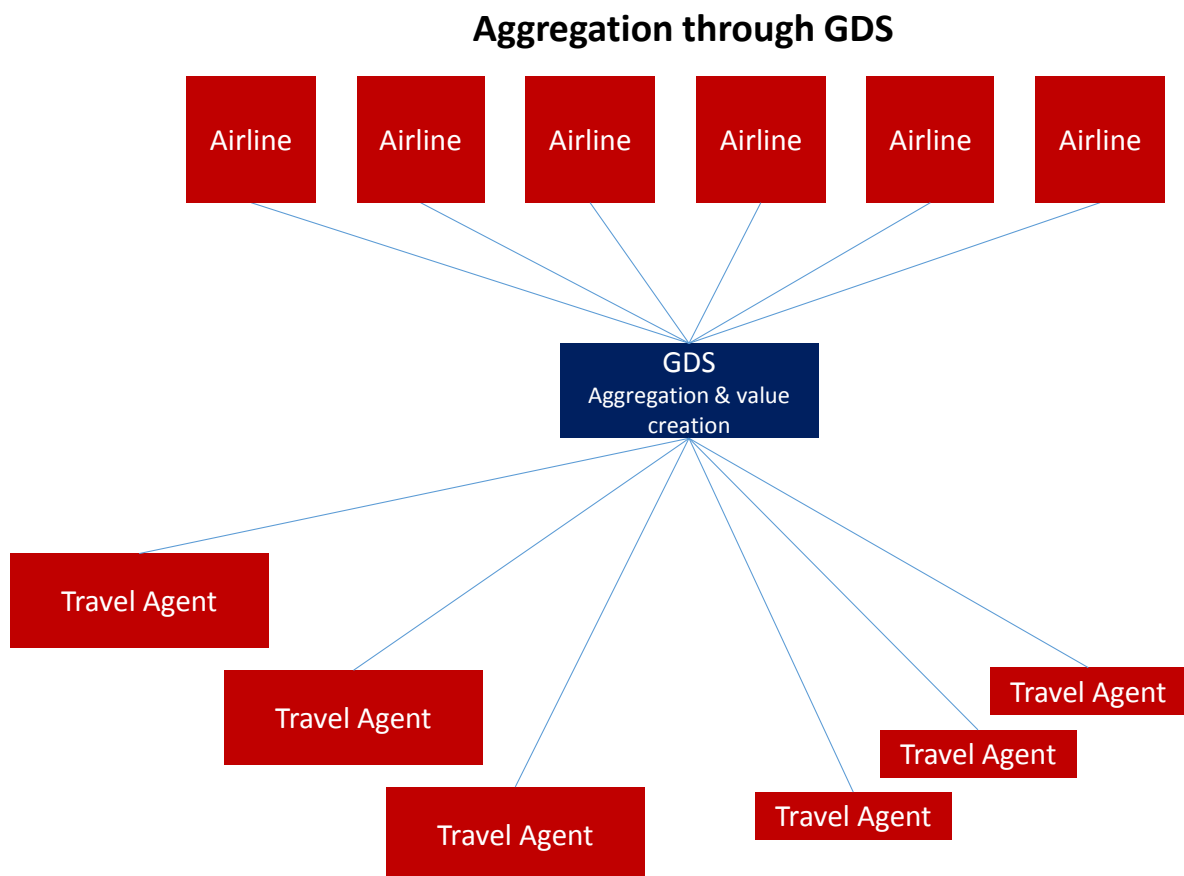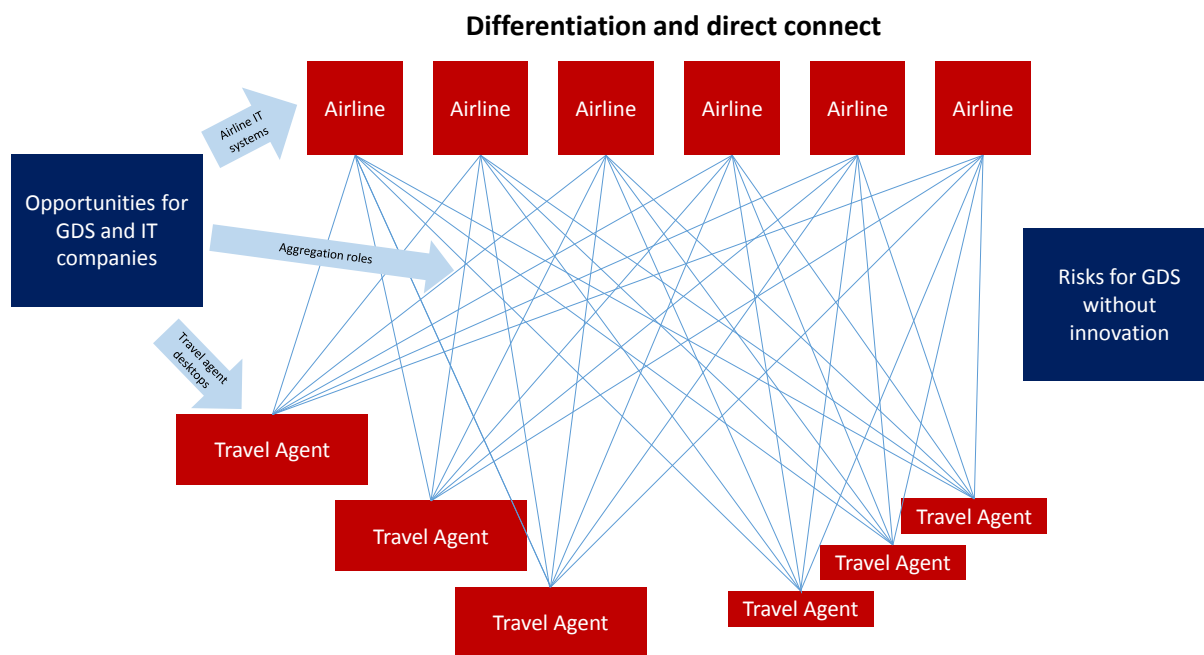Emmanuelle Gailland, VP Distribution, Air France
September 2016

One response to complexity is IATA's New Distribution Capability (NDC). NDC is an XML-standard that could harmonise the way that travel content is displayed. NDC aims to provide an industry standard that allows for greater product differentiation and time-to-market, access to full and rich air content and a transparent shopping experience. Some airlines interviewed by LSE considered that NDC will help them present their product differentiation to the consumer. Other airlines are developing their own systems or working with GDS and other IT companies.

NDC could be viewed either as an alternative to GDS or an opportunity for GDS expansion. Some airlines interviewed suggested that NDC could circumvent the GDS allowing airlines to connect directly with travel agents and other players in distribution (Fig. 10). At the same time, other experts suggested that the likelihood of airlines agreeing the detailed standards necessary for direct connect to operate at scale is very low and would take years. Other industry experts expect NDC to create new opportunities for GDS companies and other aggregators, as the complexity of information will require more sophisticated aggregation in the long run. A number of interviewees also expected that NDC would run in parallel with the EDIFACT system traditionally used by the travel industry companies in the short to medium term.

Figure 10. Different models of airline distribution. (a) GDS aggregation model, (b) Direct connect model.

Aggregation through GDS

Differentiation and direct connect

Smaller players will take advantage of new market opportunities with low entry barriers. Online content aggregators such as Farelogix or Travelfusion have been forging new partnerships with airlines in recent years and this is likely to continue into the future. These players are not large GDSs in the traditional sense and have no global network. However, they do provide IT-led distribution services and can facilitate the direct connects between airlines and travel agents.

The middleman will always be squeezed. But GDS is an important part of the value chain at scale. To take that disparate data requires significant computing power: that aggregation happens largely with GDS.

Greg Schulze
Senior Vice President of Commercial Strategy and Services, Expedia
July 2016

The uncertain future

The old GDS business model doesn't fit the new world – as airlines sell a wider range of products it will have to change.
Keith Wallis
Director of Global Product Distribution, Air Canada
August 2016

Full service carriers with strong brand recognition are likely to continue growing direct sales in home markets. They consider that direct distribution provides more flexibility to expand a retail model with differentiated products and services than current GDSs allow. Some airlines also view direct distribution as a way to circumvent GDS systems and other intermediaries.

On the other hand, many travel agents and GDS companies predict that the complexity of differentiation that airlines are pushing for will actually require more aggregation and indirect sales

through intermediaries. Consequently, greater complexity could be an opportunity for aggregators such as GDS and other IT companies. At the same time, a key question will be how regulators respond to airlines and gatekeepers who circumvent content parity and display neutrality, thereby undermining industry competition.

These different perspectives in airline travel distribution are likely to lead to the two pathways of direct and indirect distribution

We're likely to see the NDC system working in parallel with the old GDS system for a while.
David Orszaczky, Head of Sales and Commercial Planning, Qantas
August 2016

developing separately and in parallel over the short to medium term. This could lead to constraints on enhancing the traveller experience, with a period of complexity and potential confusion for the consumer. In the longer term, some in the industry would like these pathways to be integrated, for example through an industry standard such as IATA's New Distribution Capability. However, given current trends, an industry-wide strategic approach seems unlikely in the near future without greater pro-active collaboration across the value chain.

The pressure to deliver more, differentiated travel content faster and in a digestible format also brings technical challenges and will require huge processing capacity. GDSs and other IT companies will need to develop the technology to deliver the airlines' evolving retail model and to meet consumer habits of increasing search frequency across multiple devices and channels. An effective way to innovate rapidly will be to forge new business models, opening up data platforms to third parties to leverage a wider pool of talent and solutions.

Box 5: Amazon Marketplace – lessons in retail partnering

Since 2000, Amazon has opened up its online business to independent retailers through Amazon Marketplace. The retailers are often small and medium sized companies who sell their products alongside Amazon's own products. These third party vendors gain access to Amazon's customer base as well as its ready-made distribution system and pay Amazon a commission for this service. Amazon gains financially, is able to offer increased consumer choice and collects a wider range of valuable data on sales that may guide its own future product mix.

For third parties, retailing through Amazon is a complement to their direct sales: the distribution costs may be higher and the direct competition stiffer but the greater marketing and sales reach makes it worthwhile. For Amazon, opening up its platform to third parties has significantly created new value, accounting for around 40% of Amazon.com sales.

Sources: LSE interviews, Amazon, RW Baird's 'Amazon Selection Survey'.

Hotels and cars: new business models

Trends

HOTELS

The **global hotel industry comprises an estimated 15.5 million rooms and generates revenues of USD 550 billion** US dollars (Hospitality, 2015). There are key variations across different regions, with the highest occupancy rates of over 68% to be found in Europe and Asia Pacific and the most expensive room rates in the Middle East and Africa at US dollar USD 166 per night (Hospitality, 2015).

The hotel sector is highly fragmented and becoming more so with the expansion of sharing economy platforms. The hotel sector can be categorised into branded hotel chains (such as IHG, Accor, Hilton, Marriott or Starwood hotels) and many small independent hotels. Branded hotel chains are more dominant in the US than in many other regions, representing around 55% of the market according to Inter-Continental Hotels Group. Nonetheless, one expert interviewed by LSE considered that even the largest branded hotel chain represented only 5% of the global hotel market. Competition in the lodging industry is now growing from new rooms available through the sharing economy. These new business models are creating even greater fragmentation in the supply of accommodation.

The fragmentation of the hotel sector has impacted travel distribution differently from the more consolidated airline sector. Reaching travellers is more challenging for independent hotels with little brand recognition in a crowded marketplace. This has facilitated the growth of search and comparison websites, both those that take bookings (such as hotels.com or bookings.com) and those that do not (such as Kayak). As a result, the distribution industry has diverged into two broad areas: the independent hotels marketing themselves and taking the majority of their bookings through online comparison sites, and the large chains taking comparatively more bookings from travel agents via GDSs.

> Independent hotels need OTAs to open up markets they just can't reach themselves. Hotels can't rely on footfall to get business because of the way consumers book travel online now.
>
> Dr Wouter Geerts, Travel Analyst, Euromonitor International May 2016

Large hotel chains are currently attempting to increase direct sales. The success of online travel retail has had a knock-on effect on the cost structure of many hotels, with commissions to travel retailers averaging around 15-20% according to interviewees. That model works with a relatively even spread of distribution methods, but it is less sustainable when half of all bookings incur that level of commission. Methods of increasing direct sales include driving more consumers through hotels' own websites or repeat client offers.

The rise of metasearch companies to drive traffic to hotel websites could favour larger hotels in the future. There are fears in the independent hotel sector that the advertising model used by metasearch companies favours the branded hotels who can afford to pay higher rates for better visibility. On the other hand, one expert interviewed noted that, at least for now, TripAdvisor does not give preference to major hotel brands in its search results but instead bases its ratings purely on customer reviews.

CAR HIRE

The global car rental market was valued at USD 41.5 billion (Market Research Store, 2015), with US as the largest region. The market comprises four broad segments: intercity, intracity, on-airport, and others; of these, on-airport is the largest segment, with an estimated 49.5% share of the market in 2014 (Future Market Insights, 2015). The broader category of personal transportation includes not only car rental, but also taxis and mini-cabs.

There has been some consolidation in the car rental industry at the same time as a fragmentation of players. The sharing economy private transport players have disrupted the market considerably and have become direct competitors to traditional taxis. The impacts are discussed further below.

Personal transportation companies are both global players (e.g. Hertz, Budget, Europcar or Alamo) and local (e.g. city taxi companies) with knock-on effects for distribution: some global players are integrated into GDS and can be booked as part of travel packages through comparison websites.

Industry drivers

The hospitality and personal transport industries have been disrupted substantially from sharing economy platforms. Sharing economy companies, such as Airbnb, HomeAway, or 9flats in lodging and Uber, Lyft, Via, Cabify or Haxi in private transport, have been very successful in bringing new content to the market by supplying new rooms or cars that had previously been for personal use only. Globally, regulators are working to set the rules for fair competition in this new environment.

Sharing economy platforms have an impact on the traditional supply of travel accommodation and car rental services, directly on the volume of bookings and indirectly, on consumer expectations. According to experts interviewed by LSE, consumers appreciate many varied features of sharing economy platforms: lower cost, a degree of authenticity and local experience, slick online sites with frictionless booking, real-time information (such as the location of the Uber car), the convenience of direct billing and the peer reviews that filter the content. As highlighted in Chapter 3, these consumer expectations will continue to spill over into other travel purchases.

> Consumers are now purchasing travel on platforms with real-time solutions, like following the car in real time, and with more flexibility, to change itinerary. This is changing customer expectations everywhere.
> Juan Garcia Braschi,
> Regional Manager for Spain & Portugal, Cabify
> June 2016

The **second major dynamic to affect the hotel sector stems from the success of indirect distribution**: an increasing amount of hotel rooms are booked through OTAs with a consequent effect on the cost of distribution. Fierce online competition in traffic acquisition for hotels has increased the rate of bookings through OTAs. With a significant rate of commission (15-20% according to some interviewees) and a higher share of bookings (up to 50%) this distribution success has come at a price, putting pressure on the cost structure of many hotels.

Future pathways

PATHWAY 1: ADAPTING TO THE SHARING ECONOMY

Hotels and car hire companies are already adapting to the new markets opened up by the sharing economy. Some hotel chains are trying to promote their 'local' offering (by using the local expertise of their staff and promoting local products and services), while others are improving the technology behind online booking to keep up with rising consumer expectations. Similarly, some car rental companies are offering real-time services and the ability to rent the car by the ride or by the hour.

> The sharing economy is having a knock-on effect already. We're seeing the big chains - Hilton, Marriott and Starwood - all developing new brands that are focused on a younger traveller in search of authenticity.
>
> Dr Wouter Geerts, Travel Analyst, Euromonitor International
> May 2016

Greater experimentation with business models is likely to continue in response to the sharing economy. Greater experimentation with business models has been predicted, with a proliferation of auction-based models, low cost airline style pricing and a growth of 24-hour rental models replacing the fixed night option (Amadeus 2010). Alternative aggregation methods may develop through innovative on-line start-ups (see Box 6). Other responses to the threat of shared economy providers include using mobile technology to iron out the friction in the traveller's journey (more assistance in finding the hire car late at night in a strange airport, or easier mobile check-in before arrival at the hotel), and for car rental to get involved in multi-modal travel sales with an ongoing focus on the consumer.

Sharing economy platforms are likely to incorporate interface businesses into the sharing economy model. The first variant of this is where businesses step in as an interface between two sets of private individuals, known as 'P2B2P'. This could encompass a whole business ecosystem (for cleaning, handing over keys etc.) in between the private owners and private renters, in the lodging sector. For example, One Fine Stay, owned by Accor, has a business as the interface between room renters and the guests. A similar role could emerge for other hotels, particularly in city locations, in providing key and concierge services to sharing economy clients.

More business content will be included in sharing economy platforms. The evolution to 'B2P' has taken place in other, more mature, platforms, such as eBay, which started off as a peer-to-peer selling platform and has evolved so that it is now dominated by business sellers rather than private auctions. To some degree, this is already changing: some private individuals renting rooms on Airbnb are becoming professional. At the same time, the serviced apartment industry has shown an interest in being listed on sharing economy platforms.

Traditional hotels are likely to enter sharing economy platforms while GDSs could aggregate peer-to-peer content in the future. Evidently, there would be a number of technical challenges from such expanded content provision. But in a decade, could we see established hotels appear on sharing economy or peer-to-peer lodging listed on GDS? One could envisage potential consumer demand for a travel package provided by a travel agent that covers, for example, a flight, an Airbnb room and an Uber car.

I see more diversity in distribution and more diversity in the customer offering. Dynamic pricing should be part of the offering.
John Mangelaars,
CEO, Travix

Whilst these various models may gain some traction, the strength of the online travel retail market means that intermediated sales will continue to play a significant role in the overall distribution mix. However, it seems likely that some of the changing models will reshape the way rooms and car hire are sold in the future.

PATHWAY 2: CONSOLIDATION OF LARGE HOTELS

Some industry analysts see potential for more consolidation of branded hotel chains. A more concentrated hotel supply in this category would facilitate hotels achieving more balance and diversification in their distribution mix. More consolidation might allow hotels to redress the balance back to direct sales and reduce reliance on travel agents.

Some hotel chains are already pushing the end of room rate parity to discount rates on own websites. With further consolidation and market share, some branded hotel chains might be able to reduce the commission paid to travel agents. One interviewee also hoped to see net pricing in the hotel market, where the price of the travel agents' commission is added to the net fare in a more transparent way, thus letting the consumer decide.

The diversity of distribution methods is set to continue but the balance may move away from intermediated sales with a high commission-based model. Direct distribution may be a priority for large hotel chains, but the need to reach a large volume of customers will support continued intermediation, possibly with different models.
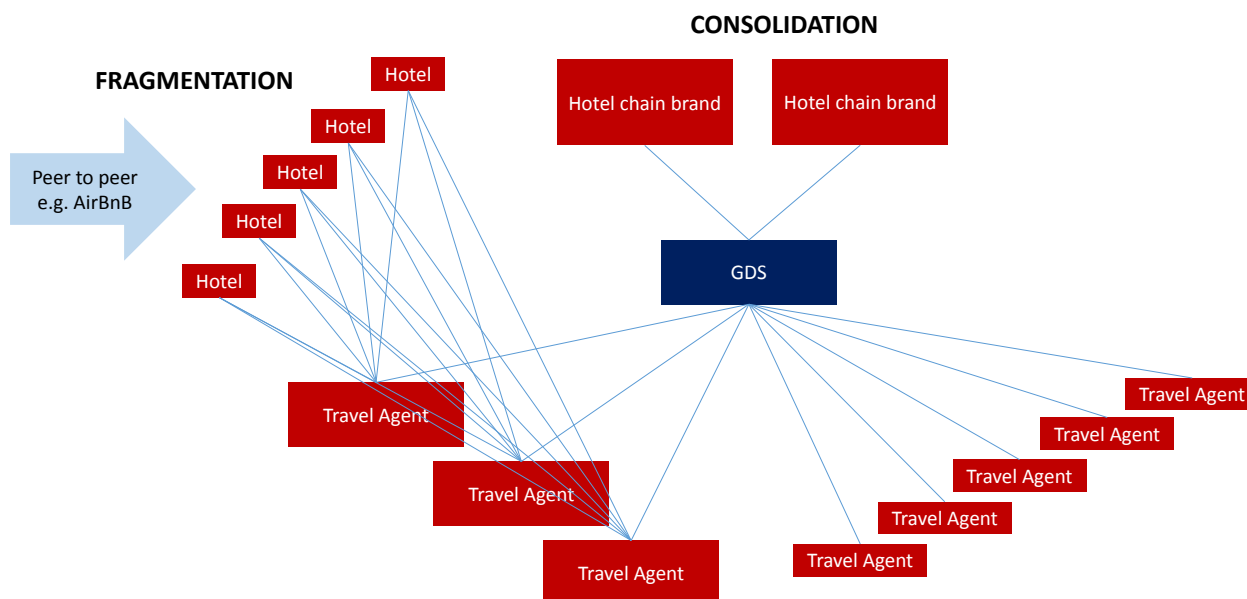
Hotels need more balance and diversification in their distribution. The success of OTAs comes at a price: OTAs now account for 50% of bookings in many independent hotels. That's great for occupancy, but most hotels can't afford to pay a high commission on half their bookings.
Skye Legon, CEO Bookbedder
June 2016

Diverging markets

Hotels and car hire companies face a future of two markets. On the one hand, sharing economy platforms will continue to create new markets and erode the market share of industry players who currently intermediate for suppliers such as small, independent hotels. On the other hand, large hotels chains and hire car companies who cater for business customers are likely to continue consolidating to maintain an arms race of negotiating power with the larger travel agents. Overall, the consumer should benefit, with greater choice, lower costs and the opportunity to participate in the hotel and hire car industries themselves with their own homes and vehicles.

Figure 11. Two markets: sharing economy platforms and large hotel chains

Travel retail: innovation and hybridisation

Trends

TRAVEL AGENTS

The point of sale for travel - where flights and holiday packages are booked - has traditionally been the travel agent. Offline travel agents include bricks-and-mortar businesses, as well as travel management companies (TMCs) which cater for business travellers.

With the rise of the internet, bricks-and-mortar travel agents have faced increasing competition from online travel agents (OTAs). However, the distinction between offline and online travel agents is not black and white. Many offline travel specialists have a complementary online presence, and many OTAs supplement their services through call centres. Furthermore, many businesses still use TMCs to manage travel for their staff.

Nonetheless, OTAs have grown rapidly and changed the landscape of travel distribution radically. The success of OTAs has been due to providing travellers with more choice and convenience. The successful OTAs are retailers at heart, using data scientists to ensure the best customer experience. Their relatively high levels of conversion (from browsing to booking) is attributed to a sophisticated use of retail techniques: adding a sense of urgency ('x seats left at this price'), providing peer confirmation ('x people booked this trip this week'), basket fulfilment reminders and frictionless booking. Some OTAs also upsell the travel purchase, moving the traveller higher up the fare family and adding on other additional services such as insurance, hotel or car hire.

Most OTAs work with global distribution systems (GDS) to supply their content, notably to access full-service carrier flights and branded hotel chains. They also use screen scraping, and connect directly to independent hotels and to some airlines, particularly those who may not use GDS such as

low cost carriers (LCC). However, the reliance of OTAs on GDS varies considerably according to regional market dynamics. In some regions such as Latin America, direct connections between OTAs and airlines are more common. One expert interviewed by LSE noted that only a third of flight bookings through Indian OTAs used a GDS as two thirds of flights sales were for low cost carriers. In contrast, in more mature markets such as Europe and North America, low cost carriers are starting to use GDS to reach business travellers.

METASEARCH

Metasearch companies perform a search and compare function. Industry players include TripAdvisor, Kayak, Momondo, Trivago Skyscanner or Wego. Their focus is on traffic acquisition, rather than conversion to sales, with the actual booking of travel undertaken either by travel agents or directly with airlines, hotels and other suppliers. They have been very successful in the marketplace since many travellers welcome the aggregation of information within the sector (such as flights) and expansion of links into other sectors (such as hotels or car hire). Some consumer segments, such as millennials, are accustomed to using search sites and demonstrate a preference for complementary information, such as reviews and maps.

Metasearch companies tend to rely on GDSs for providing their content, supplementing this with information from supplier websites through a procedure known as 'screen scraping'. Most metasearch companies use a GDS because of the speed and reliability of information but need to supplement this to capture travel content. While metasearchers and GDSs are both aggregators, GDSs are subject to display neutrality regulations, while metasearch companies currently can favour the display of clients that pay advertising or referral fees.

Industry drivers

The first disruptive factor for travel agents is the growth of direct selling by full service carriers (FSCs). Several large FSCs have attempted to bypass travel agents – and the GDS – by differentiating their direct sales. For example, in 2015 Lufthansa Group introduced a fee of €16 for ticket sales made outside their own websites and a lawsuit has followed over breach of contract. Northwest Airlines followed a similar strategy in 2004 before backing down to the wider industry.

Some industry experts consider that direct distribution could play a strong role in shaping the industry. Others interviewed consider that direct selling will play only a limited role, first because of the need to reach long-haul travellers in countries where an airline's brand is weaker, and second because the cost of direct distribution is underestimated.

The second disruptive factor for travel agents is from consumer demand. If OTAs or metasearch companies fail to follow consumers into new channels for purchasing travel, they risk losing market share rapidly. Some OTAs are moving into bookings on chat apps, for example LY.com, a Chinese OTA, are providing bookings on WeChat. In some markets, such as India, over half of OTA bookings are already made by mobile and this is set to rise. Some experts interviewed felt that metasearch struggled on a mobile platform as it is more difficult to switch screens on a mobile and so lose customers when they switch to a booking site.

The third disruptive factor for travel agents is the rise of the sharing economy model, providing attractive alternative travel options particularly for lodging. Longer term this could erode accommodation and even personal transportation bookings made through travel agents.

The hospitality industry needs its own independent distribution channel, and mutualising the marketing and crowdsourcing clients makes this possible. There is a market for more than the big OTAs... it's like grocery shopping – some clients opt for the low cost and convenience of a supermarket, but others appreciate a market with independent sellers.

Skye Legon, CEO Bookbedder
June 2016

Box 6: Innovative start-ups – lessons from the hotel sector

BookBedder is a start-up hotel distribution platform that aims to provide an alternative to the traditional OTAs or the Google advertising model. It reduces the commission paid by hotels and yet retains the advantages of online choice.

BookBedder aims to 'crowd-source the clients'. The idea is to mutualise hotel client lists: if a client books with another hotel, the original hotel receives a commission and if that client comes back for a repeat booking, no commission is paid. For the consumer, the model represents a collaborative booking platform to find independent and original hotels – with a loyalty system thrown in.

Sources: LSE interviews

Future pathways

PATHWAY 1: ENHANCING THE TRAVEL EXPERIENCE

Many travel agents are already considering how to support the traveller throughout their trip. The successful ones are likely to be those who manage to simplify the life of the traveller by more engagement on the journey (e.g. minimising disruption) or enhancing the experience (e.g. checking in to a hotel automatically).

In ten years' time, there will be more services available. Instead of booking Amsterdam to London, I'll book from Utrecht to Piccadilly with ground transportation and the tube involved. My bag will be picked up from my home and taken to the hotel.

John Mangelaars, CEO, Travix
July 2016

Some consumers are likely to demand more managed, integrated travel packages (such as multi-modal trips getting the consumer from home to hotel) and others might prefer the ability to construct their own itinerary and purchase distinct elements as they see fit. The rise of integrated travel services is likely to be particularly strong in some regions, such as China where newer travellers prefer a more supported itinerary, as discussed

in Chapter 3. The rise of integrated travel could, in some markets for some consumers, support bricks-and-mortar travel agents: whilst such travel agents have fallen behind in single flight bookings, they may retain an edge in big complex itineraries where consumers are prepared to pay for a personalised service and experience.

Within the travel agent market, any online retailer with a large base of reviews on local attractions and activities seems well placed to expand in-destination services: the value of this market is discussed in Section 3: mobile. Some OTAs, such as Cleartrip in India, are also extending the concept of travel to cover leisure services too: by providing apps for tourism-style services (events, fitness activities, workshops, etc.) that can be consumed at home.

A possible extension of these services by travel agents would be to harness big data and mobile phone innovations to create a personal mobile travel agent. Gathering information from emails, social media and the calendar function, a personalised mobile phone assistant could be more targeted in offering the right product at the right time, alongside more relevant and targeting advertising. This would support the whole travel experience, the in-destination services though apps and overall, strengthen OTAs' offers and ultimately support their revenues in a competitive market. There may also be a possibility for technology players to combine data from different sources (not just travel suppliers) and aggregate it to provide additional analytics.

In this way, and building on their experience as online retailers, OTAs could develop the retail model. Some interviewees thought the classic metasearch company may not be well positioned to increase the value of travel services: their future is limited to cost-conscious travellers because they offer a binary redirection of the basic travel search and are not well positioned to enrich that with ancillary services. Indeed, OTAs might be

> We can help the airlines upsell. Within the fare family, we get an uplift to a higher fare for 20% of bookings. That's based on technology we use from a GDS. Airlines should only pay on the upsell.
>
> John Mangelaars, CEO, Travix
> July 2016

better placed than metasearch companies to provide extra support for travellers throughout the travel process and at destination. Some interviewees felt that the advertising model, that is the basis for metasearch companies, makes traffic acquisition more expensive and it would be possible to cut costs with alternative models for consumer acquisition.

Therefore, there is room for travel agents to extend their product to their consumers whether by offering a seamless travel package, in-destination services, a personal mobile travel agent or through expanding the retail model. The take-up of these services by their consumers will depend on timing, the quality of the offering and to what extent they respond to genuine consumer demand. Experimentation along these lines will be constant for the most successful retailers.

PATHWAY 2: CONSOLIDATION AND HYBRIDISATION

The growth of online travel retailers is leading to greater OTA consolidation, **with global players such as Expedia and Priceline now dominating the market**. Other OTAs focus on specific regions or markets such as MakeMyTrip in India, Ctrip in China and Travelstart in South Africa. The travel agent market today is already less fragmented than in the past with two or three sizeable players. However, there has been less movement within TMCs; some interviewees considered that TMCs will consolidate further in the near future.

Following the initial entry and rise of metasearch, the sector has consolidated further. Many OTAs have already taken over metas as powerful traffic generators; for example, Priceline has bought Kayak whilst Expedia has acquired Trivago. The entry of Google into metasearch is another form of consolidation in the sector. Google has traditionally been a gatekeeper in terms of providing a search engine for many consumers, but their specific search function, Google Flights, is in direct competition with other metasearch companies.

A number of industry experts predict the rise of mega meta-OTA hybrids over the next 10 years. OTAs could offer a variety of distribution methods for the consumer to choose, including meta-style referrals to full-service carriers' websites. The traveller therefore would have the choice whether to book through the OTA or to book directly with the supplier, with concomitant variations in price and in loyalty rewards.

Through this consolidation, the larger online travel agents are gaining influence throughout the distribution chain: the larger travel agents are likely to negotiate better content and better conditions, whilst still receiving a commission. Future regulatory changes and competition rulings will affect how protected the small travel agents will be. Without regulatory protection, small travel agents may struggle to compete or may need to find alternative models, such as buying services from the bigger OTAs.

In sum, OTAs are likely to continue their rise when they continue to respond to consumer needs and take innovative approaches to meet evolving consumer preferences. Travel agents are strengthening power in the distribution chain and are well positioned to extend and enrich their interaction with the consumer.

Innovation and consolidation

The two pathways of enhancing the travel experience and consolidation in the sector will be intertwined. The larger travel agents will be able to draw on significant technology investment and brand recognition to enhance the consumer experience whether by offering a seamless travel package, in-destination services, a personal mobile travel agent or through expanding the retail model. At the same time, the travel agents who are most successful at meeting rising consumer expectations will be better placed to compete in the industry. In turn, this will drive further consolidation and hybridisation.

Consolidation will strengthen the negotiating power of larger travel agents in relation to suppliers. As travel agents transform into mega-hybrid travel agents, competition is likely to increase with technology giants who act as the industry's gatekeepers. Although the way in which this competition plays out is hard to predict, it could have far reaching consequences for the industry.

Capturing the customer: rise of the gatekeepers

Trends

Today, a small number of gatekeepers control the acquisition of billions of people. Gatekeepers are the tech giants, such as Google, Facebook, Microsoft, Amazon and Apple, who interface with consumers. According to Nielsen (2015), Facebook is the leading smartphone app, with over 126 million users each month in 2015 – 8% higher than the previous year. YouTube and Facebook

Messenger each had almost 100 million users per month, while Google Search, Google Play, Google Maps and Gmail clocked up a combined 348 million users per month.

> Travel is inherently a difficult technology problem to solve when you consider the trillions of permutations any one trip can take. Our brands give us access to tremendous amounts of travel data, and the secret to our longevity in this business is our ability to turn that data into consumer value in real-time.
>
> Greg Schulze
> Senior Vice President of Commercial Strategy and Services, Expedia
> July 2016

Pay-per-click raises huge revenues at little cost to the gatekeeper. Under an advertising model, advertisers bid for keyword phrases relevant to the target market. Examples include Google AdWords and Microsoft Bing Ads. Facebook and Twitter also use pay per click as an advertising model.

Industry drivers

Gatekeepers can disrupt the travel distribution industry through their advertising model. First, they can direct consumers to particular players, whether airlines, hotels or travel agents, in return for a fee. In addition, they can target consumers with tailor-made advertising based on search history, profile or conversations through messaging apps. Paid search results and targeted advertising allow gatekeepers to grow large volumes of traffic acquisition. At the same time, it increases the cost of online traffic acquisition for other players in the industry. The US travel industry spent $4.93 billion on digital advertising in 2015, and was predicted to reach $5.69 billion in 2016 and $8.28 billion in 2020 (eMarketeer 2016). A significant share of that spending was on paid search.

> In the longer term, Google's negotiating power will continue to grow.
> Emmanuelle Gailland, VP Distribution, Air France
> September 2016

Payment systems such as Android Pay or Apple Pay Gatekeepers can also increase the influence of gatekeepers. Whereas credit card companies provide suppliers with generic data about customers which helps target marketing and understand customer provenance, new gatekeeper-owned payment systems no longer guarantee visibility about the customer. Given the potential importance of big data and AI, this customer knowledge could further strengthen the role of gatekeepers in customer acquisition.

Social media is reshaping consumer loyalty. For some consumers, loyalty is built up through social media, by copying a friend's experience, or using the power of a personal recommendation. More travel businesses find they need a social media presence to engage with their customers and some are now exploring how to interact with their clients through messaging functions, such as Facebook Messenger, QQ, WeChat, Skype, Viber, LINE, Blackberry Messenger, Telegram, Kakaotalk or WhatsApp.

New technology is set to reshape the consumer's interface with online content. Many experts interviewed considered that virtual assistants and virtual reality will drive major change in the travel industry over the next 10 years. The technology is already being commercialised and is set to take off (see Box 7). A virtual assistant can use big data to make consumer-specific recommendations on destinations, hotels, ancillary services and in-destination services. At the same time, virtual reality will

reshape the way people interact with travel services and could even replace real travel as people experience life-like holidays and business meetings from their own homes and offices.

Online ratings and reviews will further undermine brand loyalty. User-generated content is driving the market and empowering consumer-driven services. The success of online review sites such as TripAdvisor and Amazon is based on the consumer's desire for impartial information and advice. This disrupts the ability of suppliers to control their own marketing and empowers the consumer.

Future pathways

PATHWAY 1: SEARCH CONTROL WITH VIRTUAL ASSISTANTS

Virtual assistants are set to strengthen the search control of gatekeepers over the coming decade. Amongst the technology experts interviewed, including Facebook and Google, all suggested that virtual assistants will play a powerful role in consumer lives in the future. The rise of online personal assistants is likely to move consumers away from using multiple websites or multiple apps on smart phones towards a single point of contact. This will strengthen the control of gatekeepers over the content that people access while searching online.

> *If a consumer is using Google email, Google calendar and Google search, they can really apply their insights in the travel category much more than anyone else. They know exactly what a consumer has been searching, they will know what a consumer has got booked. Google knows the consumer better than anyone else. That's their unique advantage.*
>
> Kenny Jacobs, Chief Marketing Officer Ryanair
> August 2016

Payment innovations will also help gatekeepers capture more consumer information. Using mobiles for electronic payment was developed in Japan by NTT Docomo in the early 2000s with the Osaifu-Keitai system. Since then, e-money and e-ticketing has become widespread. Examples include store loyalty cards and city transport. However, mobile payments are set to become more universal as Apple Pay and Android Pay are now vying for partnerships with major US banks and Facebook's Messenger is also being developed for payments. The technology has huge potential in China, India and many developing countries where mobile is leap-frogging PCs as the device of choice. For example, Alipay in China has 400 million registered users, while the African M-Pesa now has 17 million users in Kenya (70% of the population).

As gatekeepers improve virtual assistants, the role of pure metasearch could fade. A number of experts suggested that gatekeepers are currently on the back foot compared to metasearch companies such as Kayak and TripAdvisor. However, over the longer term, there may be a response by gatekeepers to regain control over consumer data in the travel sector so as to maintain and grow their relevance to advertisers. With new technologies such as virtual assistants, small, narrowly-focused metasearch companies could fade. Combined with consolidation of OTAs, this pressure from gatekeepers is likely to push metasearch companies into hybridisation with OTAs in the medium term (see section on Travel Retail earlier in this chapter).

Gatekeepers are unlikely to move further into the travel distribution chain in the medium term.

Almost all experts interviewed suggested that gatekeepers are unlikely to compete directly with travel agents and GDSs, at least in the medium term. One reason is that margins are considerably greater in their core area of gatekeeping, which they can continue to dominate without killing the industry that feeds them. A second reason is that the complexity of travel distribution requires specialised IT that cannot easily be bypassed by metasearch companies or gatekeepers without years of investment or, more likely, a GDS takeover. Finally, regulations on neutral display requirements may limit the power of the advertising model that gatekeepers use.

The growing power of gatekeepers would be limited if they were brought under neutral display regulations. Gatekeepers such as Google use an advertising model that relies on non-neutral comparisons as their revenues are driven by favouring those paying a fee. In contrast, GDSs and travel agents are obliged to provide neutral comparisons. If future regulatory amendments forced gatekeepers to meet neutral display obligations, the advantage of their advertising model would be lost.

PATHWAY 2: HARNESSING SOCIAL NETWORKS AND VIRTUAL REALITY

Travel services will be integrated increasingly into social media and messaging. In some messaging functions, such as WeChat, it is already possible to book travel. In this way, chat apps are positioned to become new market places and distribution channels. Many of the experts interviewed by LSE suggested that AI would play an increasingly central role in consumer's lives. In turn this will provide huge opportunities for advertising models. For example, an advertisement for a weekend in Paris could be targeted at a traveller based on

> Companies are looking to mirror the WeChat model - a lot of what we see in China now will become part of the way we shop in the rest of the world.
> Greg Schulze,
> Senior Vice President of Commercial Strategy and Services,
> Expedia
> July 2016

a private conversation in iMessage about the Louvre museum. The potential exists to harvest and mine billions of conversations between businesses and consumers through messaging and chat bots. Facebook's Messenger alone already has 900 million monthly active users while WhatsApp, owned by Facebook, now connects over 1 billion people.

Gatekeepers will use virtual reality to gather richer data and control access to the industry. Virtual reality (VR) is already commercialising rapidly in the gaming industry, with Facebook, Google, Sony and others investing heavily in the technology (see Box 7). VR will allow travellers to experience destinations and travel supplier services, while gatekeepers will have access to richer personal information and control over directing consumers to the industry.

> Virtual reality will change travel. It will bring 'try before you buy' to the travel market, which is a mainstay of other retail markets.
> Dr Wouter Geerts, Travel Analyst,
> Euromonitor International
> May 2016

Virtual reality will change the way consumers and businesses make purchasing decisions. The potential for virtual reality is particularly strong for the hotel industry, where brands such as Marriot and Shangri-La are already providing VR inspiration marketing. Similarly, if travellers are used to virtually testing their seats at the theatre or football match, demand will increase for airline seats, meals and so on. According to several experts interviewed, demand for this service is already growing with business travellers using a website like *seatguru.com* for seat maps and seat reviews in conjunction with traditional TMC bookings.

Virtual reality could also replace travel. While VR is likely to enhance the real travel experience, part of the travel market may be substituted by virtual reality holidays and business meetings. People may prefer to spend holidays virtually with their friends based in different locations, particularly if the costs are relatively low. While video conferencing already provides an alternative to business travel, face-to-face meetings are still valued more highly whether because of the dynamics of body language in the meeting or because a lot of business takes place in the corridors before or after the main meeting. Virtual reality may change that dynamic, enabling participants to experience a day of meetings as if they were actually in the location itself.

Box 7: Virtual reality – lessons from the gaming industry

Virtual reality (VR) is likely to revolutionise the consumer market over the next decade. VR is a computer-generated environment in which people can experience places and situations as if they were actually present. Although the concept has existed for a long time, the processing power now available in personal computers combined with new technologies suggests that VR could explode onto the mass market over the next decade.

Sony, Facebook and Google are all investing in VR, with Facebook having launched its first headset, Oculus Rift, with plans to develop 360 degree cameras that can capture the whole virtual environment. According to the company, customers have already watched 2 million hours of VR video, and more than 50 games have been launched. Touch controllers are also being developed that allow users to feel and manipulate objects in virtual space. The technology will also allow two people in different continents to play together virtually.

Virtual reality parks are already being created, such as The Void. Players not only wear a head mounted display, but also gloves to have a virtual view of their hands, and a vest that responds to being hit or attacked in the game. According to the company, *"Our technology allows us to create the illusion that the player is exploring miles of terrain or incredibly tall structures without ever leaving our game pod. The end result is a physical connection to the virtual world and a sense of exploration never before possible."*

Another form of virtual reality that is expanding in the gaming industry is augmented reality. With augmented reality, people see the real world with a digital display superimposed. Pokémon Go is already bringing augmented reality to a larger audience.

Mark Zuckerberg, CEO of Facebook, has suggested a future in which people jump into their own photos, go on a virtual holiday, and share experiences with friends who are physically in different countries. *"In the future if you want to pull out your photos, you could pull out your AR glasses and make it as big as you want and show it to people … objects like your TV could be replaced by $1 apps in the AR app store."*

Sources: LSE interviews, Google, Facebook

The consumer revolution

Gatekeepers such as Google, Apple and Facebook are set to revolutionise the consumer experience in the retail sector, with consumer expectations quickly spilling over into the travel distribution industry. Rapid improvements in virtual assistants, messaging and virtual reality are likely to combine to give the traveller an inspirational experience that permeates their daily lives, rather than the proactive searching approach that consumers have traditionally used.

The impacts on the travel distribution industry are potentially huge. The new technologies will place even greater power in the hands of the gatekeepers. At the same time, new business models and opportunities for innovation will be opened to all players in the industry.
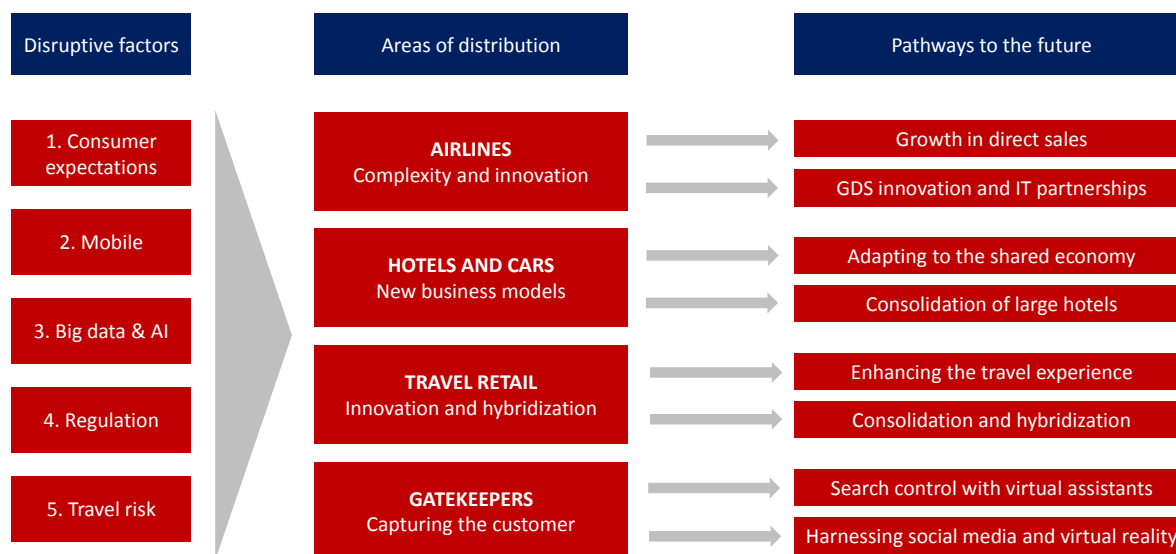
Conclusions: the direction of travel

Until recently, consumers have regarded travel purchasing with relatively limited expectations. However, with mobile devices, big data, artificial intelligence and virtual reality, consumer expectations are set to change rapidly in retail and other sectors, quickly spilling over into the travel distribution industry. Managing travel risk, including security concerns and natural disasters, will also rise as a priority for consumers.

As a result, five major factors emerge that, combined, will lead to huge changes in the industry over the coming decade: 1. Consumer expectations shaped in other sectors, 2. Mobile devices, 3. Big data & artificial intelligence (AI), and 4. Regulation and 5. Travel risk. These disruptive factors are likely to shape the future four key areas of the industry: airline distribution, hotels & cars, travel retail, including travel agents and metasearch companies, and gatekeepers – the tech giants such as Google and Facebook who control access and traffic acquisition worldwide.

Based on these disruptive factors and areas of distribution, we identify eight potential pathways that the industry could pursue (Fig. 1). The pathways are not mutually exclusive, and a range of pathways are likely to be taken by industry players simultaneously.

Figure 1. Disruptive factors and potential future pathways for the travel distribution industry

Disruptive factors	Areas of distribution	Pathways to the future
1. Consumer expectations	**AIRLINES** Complexity and innovation	Growth in direct sales / GDS innovation and IT partnerships
2. Mobile	**HOTELS AND CARS** New business models	Adapting to the shared economy / Consolidation of large hotels
3. Big data & AI	**TRAVEL RETAIL** Innovation and hybridization	Enhancing the travel experience / Consolidation and hybridization
4. Regulation	**GATEKEEPERS** Capturing the customer	Search control with virtual assistants / Harnessing social media and virtual reality
5. Travel risk		

In a consumer driven market, success in the travel distribution industry will depend on a deeper understanding of consumer expectations and harnessing innovation to transform the travel experience for all customers. Furthermore, new business models based on collaboration, alliances and shared innovation will be needed to grasp the opportunities fully. The question then arises:

➢ *Is the travel distribution industry prepared for the consumer revolution, and how will players forge new collaborations of innovation in response?*

The results of the LSE review suggest that the importance of the consumer and the emerging technologies that will shape the future of travel distribution are relatively well known across the industry. However, the size and speed of the consumer revolution – and the potential power it places in the hands of innovative firms - is underestimated by many players.

As a result, much of the industry continues to focus on differentiation through bilateral partnerships and contractual relationships in narrow areas of the value chain. If this continues, the growth opportunities that come with wider strategic innovation are likely to be delayed and possibly missed altogether by some in the industry. We recommend that the industry considers six key areas to focus on for future collaboration.

➢ **Responding to consumer expectations.** Consumer expectations will rapidly spill over from retail into travel distribution. Players in the travel distribution industry will need to respond with broad collaborations for aggregating, processing and harnessing the big data involved. Otherwise, the explosion of complexity and differentiation of services in the short term could translate into potential confusion for the consumer.

➢ **Responding to the rise of gatekeepers.** As the power of gatekeepers to acquire billions of consumers continues to grow, industry players will need to consider how to collaborate with them as their power grows.

➢ **Harnessing technology.** The travel distribution industry is rapidly becoming a technology industry. Currently, many airlines and travel retailers disagree on the relative importance of

technologies used by GDS companies and metasearchers in shaping future distribution. Business models will need a more strategic approach that recognises the value creation of different technologies across the industry.

➢ **Integrating travel distribution.** To avoid consumer confusion and lost opportunities, industry collaborations need to go beyond bilateral partnerships and contractual relationships. Distribution business models will need to evolve to encompass more shared innovation, a culture of experimentation and cross-industry alliances to grasp the opportunities fully.

➢ **Adapting to sharing economy platforms.** Sharing economy platforms will continue to create new markets and erode the market share of industry players who intermediate for suppliers such as small, independent hotels. Industry players will need to adapt to this changing market and carefully monitor the impact of competition rulings in different regions as regulators play catch-up.

➢ **Preparing for the rise of giant meta-OTA hybrids.** The size and power of online travel agents with metasearch capabilities and global brands are likely to continue to grow. Consequently, their influence will penetrate deeper into the distribution chain, with the ability to negotiate better content and conditions, whilst still receiving commissions. Other industry players will need to prepare for their rising power.

While these six key areas emerged from the interviews and surveys conducted for this report, the travel distribution industry faces many other challenges and opportunities going into the future. For some in the industry, travel distribution has appeared slow to keep pace with technological innovations over the last few decades. That seems set to change over the coming 10 years. Whether the imminent consumer revolution is perceived as a threat or an opportunity by the industry may well determine the winners and losers of the future.

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Annex I: Methodology

The study used a mixed-methods approach, drawing on evidence from four main sources: literature, interviews, data analysis and two industry surveys based on Amadeus customer groups. The literature review included a search of 1,410 sources in the market research industry, consultancy, international associations and organisations (e.g. IATA, UNWTO, World Economic Forum, and World Travel and Tourism Council) and industry players (e.g. Carson Wagonlit, Sabre, Lufthansa, easyJet). Over 100 reports and articles were identified as potentially relevant to the review and were researched in more detail. Sources that were considered particularly relevant are included in the Reference section of the report.

Structured interviews took place with a total of 37 experts across the travel distribution industry, IT and business innovation experts, travel commentators and thought leaders. In the industry, interviewees included representatives of the airline industry, hospitality industry, personal transportation, global distribution systems, online travel agents, technology giants and travel management companies. A standard set of questions was used to assess the level of consensus across experts around future developments (e.g. around technology innovations, new business models). In addition, interviewees were provided with the opportunity to give more detailed insights into their areas of expertise.

Data analysis included both primary analysis and secondary data collection from published sources undertaken by LSE's statistical experts. Primary analysis was conducted using data from Amadeus' Travel Intelligence division, focused on collating, analysing and interpreting data for the travel industry. The analysis included trends in bookings across different regions of the world between January 2011 and June 2016, as well as an examination of disruptions (e.g. strikes, storms, terror attacks) on national, regional and global impacts on bookings. This provided a benchmark for understanding the potential for disruptions that may increase in frequency in the future.

Overall, 377 people were surveyed in the travel retail sector across major regions of the world, including Africa, Asia Pacific, Western, Central & Eastern Europe, Latin America, the Middle East and North America. The participants were Amadeus customer groups covering online travel agencies, offline travel agencies, travel management companies, metasearch companies and other relevant actors in the sector. A parallel survey was undertaken with 18 international airlines. It should be noted that, although there was no indication of bias in terms of responses, participants did not represent a random sample of industry players, and the results should be assessed bearing in mind that respondents were from Amadeus databases. Nonetheless, the results do represent a large sample of industry players, and as such provide a useful survey of opinions.