



Foreword

Welcome to the 2019 edition of Mobile Travel Trends. This is our third year publishing this expert-led report, which allows us to predict and advise travel brands on where they should make their digital investments in the coming year. As we look to 2019, we've decided to innovate our approach to this trends report. We invited experts from outside of our business to provide analysis, people who are 'at the coalface' in driving digital engagement in the airline and online travel agency space. We're delighted to share the thoughts of senior leaders in easyJet and Yatra in the report.

To complement their insights, we're also giving a consolidated view from the travel market. We interviewed people from both sides: the industry professionals and the end travelers they serve. We've expanded the scope of the research, giving insights from 100+ professionals and 1,100+ travelers across the world. We believe it gives both a practical and credible source of information to help shape your decisions this year.

There have been major leaps forward in mobile since we put together our first trends report. More web traffic now comes from mobile than desktop. Travelers are booking holidays using just an Instagram photo, asking Siri to check their flight status, getting their boarding passes from messenger platforms and using augmented reality to check their baggage size. We think it's fair to say that mobile is now an indispensable part of the travel experience.

Some of the trends we've called out here are new approaches to how to use mobile in travel–visual search to drive bookings is an example. Other themes

you may have seen before and in those areas, we focus on the developments in how those technologies are being applied and improved upon. It's amazing to see how quickly things have moved in just the last year, and what the future direction will look like.

When we look to the future of travel, mobile requires a very specific focus—phones are the one item that almost never leaves the side of the traveler. These travelers now demand a joined-up experience: continuity wherever and whenever they engage with a travel brand, through apps, bots, voice and messaging.

So what can travel brands do to make sure their mobile experience keeps customers engaged, so they don't lose those customers? As airlines and other travel companies expand their offer and reposition their brands, how can they ensure they don't fall flat in the customers eyes?

This report explores the intersection of mobile technology, trends and behavior. It offers some practical examples of how travel brands can shape their digital strategy in 2019. We hope you enjoy it.

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David MacHale Director of Marketing, Travelport Digital

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Introduction

Although it's only 11 years since the iPhone hit the shelves, it's hard to imagine a trip without smartphones. Mobile check-in and boarding passes, flight tracking, in-flight entertainment, directions to your hotel—getting from A to B without mobile is but a distant memory. For the last decade or so, mobile has been enhancing the travel experience and removing friction points at every step: so much so that 98% of travelers now carry their smartphone with them throughout their journey¹. Now, as we move into 2019, customer expectations are evolving at such lightning speed that travelers expect information to be available on-demand and to have their needs met at the swipe of a screen. This puts pressure on travel brands to engage with customers through the channels of their choosing.

This is what will define mobile travel trends in 2019: giving customers the choice of how, where and when they are going to engage with your brand. In this Mobile Travel Trends report, our experts delve further into what that will look like for travel brands in 2019.

We look to the future of search, and how voice and visual search will define how customers find information. Our experts also investigate how we are starting to move beyond search, with new predictive technologies removing the need for customers to search before booking at all.

Based on our end traveler research, which presents feedback from over 1,100 people in 8 countries, we look at the myriad of methods customers expect to be able to use to communicate with travel brands in 2019: chatbots, messaging, apps and voice.



It's clear that it's no longer enough for travel brands to have only an app; you should be prepared to engage with your customers across a variety of platforms and using multiple technologies. So what does 2019 hold? What trends will shape consumer travel and what technologies should travel brands be investing in? We asked the experts; here's what they said.

Data was a hot topic in 2018 and we can expect to see an even closer focus on this area over the next year. As customers continue to demand a tailored service, we can expect to see travel brands strive to combine 'big data' with individual customer information to create truly personalized experiences, all while conforming to legal and ethical data usage standards.

In 2019, airlines will continue to move closer to a 'retailer' model and we will see a shift in focus as the industry moves from a 'pushing product' to a 'customer needs' approach. This is thanks to the IATA AIR Think Tank, which kicked off in 2018 and will continue to make strides in these areas over the coming 12 months.

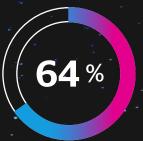
All of these trends combine insights from industry experts with data from our trends surveys, to bring you what the industry believes will be big areas of focus for next year. We've used this formula to give our predictions over the last three years, and our experts have hit the mark time and time again.

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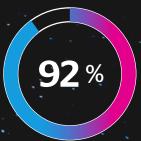
Mobile has become the linchpin that ensures continuity across a growing range of touchpoints

\$694.41 BILLION

This year digital travel sales worldwide will increase 10.4% to \$694.41 billion²



Mobile is the fastest growing check in channel, 64% would use an app to track their bags in real-time on their next flight ³



92% of travel brands said that having a mobile strategy is 'critical' or 'very important' to the future success of their organization ³⁷

1. Visual Search

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1. Looking and booking: The future of search



Dan Young Head of Digital Experience easyJet The travel industry loves a threeletter acronym or abbreviation. LCC, OTA, TMC, GDS—you name it, we've probably given it a three-letter code! Well, here's another to add to that list, VVV: Voice, Vertical and Visual.⁴

Tech giants like Microsoft, Apple and Google have become smarter at understanding images, or what we're pointing our phone at over the past 20 years and now those same technological advances are available to us, the masses... because of one thing that I just mentioned: mobile!

Using Google in 1998 as year dot in our timeline of the history of search, as that will be how most of us have experienced 'search' in the past 20 years (unless you're really geeky and know of Archie, Infoseek or Lycos), not much has changed. However, this year if you read any SEO blog, look at any tech site or listen to any expert in this area, then you'll know that they are all predicting that search is going to split into very different directions in the next few years—those three Vs.

I'm not going to go into detail on the first two, voice and vertical, as much has been already written about how 50% of searches will be via voice by 2020⁵ or that 6.6% of web searches are now done on Amazon and YouTube combined⁶. Another trend in this eBook also covers what 2019 holds for voice search. But I do want to focus on visual as I truly believe that this is the future of search. And I'm not alone.





That phone-based camera in your pocket has become so advanced—in fact so damn clever—that it's starting to shift how society uses and searches for the world's information. Don't believe me, just Google (maybe via Image Search) 'Lens', 'Style Match' or 'Find it On' to see how eBay, ASOS, Pinterest and Google themselves have all started to pivot to this new search paradigm, driven by the Instagram generation.

It's this shift that inspired us to develop Look&Book for the easyJet app. We could see two clear trends emerging: Instagram released stats showing that 43% of 19 to 28-year-olds use mobile devices to book holidays⁷ and 28% of people get their travel inspiration from Facebook and Instagram⁸. We could see huge potential and synergy, so we wanted to find a way to connect the dots from someone seeing a photo and thinking 'I want to go there!' to actually booking the trip, and the most obvious solution was visual search.

Using AI and machine learning, the Look&Book feature allows users to search for a flight by uploading an Instagram screenshot to the easyJet app. The app can detect the location of the post and performs a geolookup to find the destination and its nearest airports and suggests flights for the user to book. So, our users can search for a flight even if they don't know where the picture was taken—no context, keywords or additional information needed (one of the key advantages of visual search).

For us at easyJet, it's critical that any feature we introduce is both user-focused and commercially driven and Look&Book has been able to deliver in both of these areas. It's a feature that's genuinely useful for customers, and that's because we took a userfirst approach: going to where the customer is and leveraging the behaviors they are already exhibiting to create a more seamless customer journey.

Taking the user-first approach and implementing visual search into our mobile app is certainly paying off for us. Since it launched in October 2018, Look&Book has matched approximately 10,000 photos to destinations on the easyJet app and is running at a 5.3% conversion rate in its first two months.

While text-based search isn't going anywhere for now, with 62% of 'Gen Z' and millennial consumers looking for visual search capabilities over any other new technology⁹ the travel brands that deliver on that third 'V' will be the ones who will see the most success. The next 20 years of search is going to look (literally look– pun intended there) very different! 18% of industry professionals intend to invest in visual search in 2019³⁷

62% of 'Gen Z' and millennial consumers want visual search over any other new technology ⁹

62%

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The future of search will be about pictures rather than keywords

Pinterest CEO, Ben Silbermann

2. From digitization to datafication

2. From digitization to datafication



Sharon Doyle *Global Head of Product* Travelport Since the 1950s when IBM and American Airlines created the first semi-automated Customer Reservation System (CRS), and into the 1980s with the birth of Global Distribution Systems (GDS), the travel industry has worked to digitize everything from airfares, to hotel and car rates, cruises and tours.

This digitization in travel, and of course the growth of the internet, has allowed the industry to expand. We can offer nearly every option possible to the end traveler, through different online and offline channels: from traditional travel agents through to websites, mobile messaging, social, and multi-purpose apps like WeChat. It's been an exciting ride to get us here!

The next step I argue, moves beyond the technology itself and brings the end traveler and their data into the mix. Datafication is the term used to describe where every aspect of our digital lives is turned into valuable, computerized data that can be mined and used. This includes every search engine query we make, the locations we're tagged and recorded at, our Instagram uploads, tweets, likes and swipes. That's a lot of data by the way! 2018's edition of Domo's 'Data never sleeps'¹⁰ opens with the comment 'big data just keeps getting bigger', and nothing could be truer. We see metrics that tell us that 90% of all data that ever existed was generated in the last two years alone¹¹. And we are still only touching the boundaries.

Datafication's usage is big too. It is already making inroads in a range of areas. In HR, personality tests can



def request_seen(self, request):
fp = self.request_fingerprints
if fp in self.fingerprints
 return True
 return True
 returns.add(fp)

be replaced with analysis of data from a person's phone and apps. In banking, a lender can assess a customer's risk level to make future loan repayments based on social media posts. For some, this is a use of personal data in ways that was never intended or wanted. And it would certainly be wrong if used by corporations or individuals whose ethics are questionable.

Of course, there are companies and individuals who want to use my data in ways that are exploitive. However, with data policies like GDPR and my own propensity (or some may say naivety) to want technology to make my life better, I fall into the camp where more datafication can actually equate to a better service. Could I be happier in the longer term if I didn't take out that loan I could not repay for example? This is a difficult area, and I don't have all the answers as to what will happen. I do think, however, that we will see some separation of online personal 'social' data from that of the personal data we're prepared to share. This avoids a conflict between the online persona that may not reflect the reallife person's background or preferences.

In the travel industry we are certainly not short of data. At Travelport alone, we process between 10 and 12 billion searches a day on behalf of travelers researching or booking business or leisure trips. This data holds a lot of information on trends and numbers, but actually not a lot on the traveler as an individual who wants

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Travelport processes between 10 and 12 billion searches a day on behalf of travelers researching or booking trips focused, personalized offers; unless of course it can be linked with more personal data. This is where Travelport is looking to integrate approved mobile data. When we have that data, we can show more relevant images, flight options, room options, and ground transportation preferences. This makes sure we think: What is the offer the traveler wants and how do we meet it?

And that is an interesting term I use there: 'the offer'. When we saw IATA introduce the concept of the New Distribution Capability (NDC) back in 2012, airlines moved from the nomenclature of 'fare' to 'offer'. I believe this started to show the industry need to move towards datafication (even if none of us called it that at the time).

Historically, we have been a search-driven industry based on manually entered origin, destination, and date criteria. But what if we could personalize a trip better using mobile data that's willingly shared? Could we reduce the Paradox of Choice, where too much choice leads to our inability to make any decision? This is where datafication helps. It can find that perfect trip based on an individual traveler's preferences. What if as a company we were able to understand the intent and meaning to be relevant to the customer and this intent and meaning came from understanding personal data.

So what does this all mean for us as an industry? We will need to think about how we use personal data ethically, with integrity and responsibility. I believe this will become a new type of currency rating for technology companies. We need to think about the digital trust we earn and of course the legal implications. We need to find distinct ways to bring together the entire perfect trip, moving from an air-only option to the experience that the person is trying have. This is certainly what we're thinking at Travelport.



90% of all data that ever existed was generated in the last two years alone¹¹

90%

3. Battle for the 'Phono sapien'

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3. Battle for the 'Phono sapien'



Glenville Morris

Product Director, Digital Insights Travelport Digital Our human timeline began with 'Australopithecus afarensis', moved through 'Homo erectus' and for the past 200K years we've all been 'Homo sapiens'—but of course, any evolution expert will tell you that we haven't stopped there. We're still evolving.

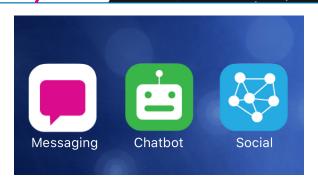
What those evolution geeks won't tell you though, is the fact that it hasn't taken another million years or even 100K years to evolve to the next stage of human: it's taken 11 years. 11 years of the iPhone has turned us into a brand-new species, the 'Phono sapien'!

It was The Economist that first identified this emerging new human in 2015¹² and it has continued to evolve over the past 3 years. The Phono sapien of 2018 now looks at their mobile phone every 12 minutes, checks it within 5 minutes of waking up and nearly 80%¹³ say they can't live without it and never switch it off. Our evolution is complete.

However, with this new species of mobile-first customer has come a new set of expectations of the travel industry. The Homo sapien of old (2007-2017) was quite happy to seek out an airline or travel brand by going to an App Store to download an app, or pinch and zoom numerous websites on their phone to book flights or get their boarding pass. The Phono sapien of today, however, expects the travel brand to be wherever they are. They want brands to be on whatever platform they are on and they want a seamless and optimized experience across each and every one of those platforms. I talked about this 'age of the customer' shift in last year's Mobile Travel Trends report¹⁴.







This rise of the Phono sapien has been driven by a number of factors in the past 11 years:

- An explosion in messaging six of the top 10 apps in the world are messaging apps¹⁵; in fact, 53% of users are more likely to shop with a brand they can message¹⁶.
- **App fatigue** with almost 6 million apps now available across the two big stores and nearly 65% of travel apps deleted one month after installation¹⁷, it's clear to see we're nearing app saturation.
- The rise of bots in May this year there were 300K active bots on Facebook Messenger. That's up from zero just two years ago¹⁸ and don't forget that those numbers are just Facebook! Add Skype, Slack, WeChat and we're talking really silly numbers.
- Mobile first has become mobile only 52% of worldwide online traffic was generated via mobile phones in 2018¹⁹ and by 2019 the number of mobile eCommerce transactions is expected to surpass desktop for the first time ever²⁰. Just sit there for a moment and drink that stat in... next year more people will make a purchase on their mobile phone than on a computer!

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So, like Caeser famously said in Planet of the Apes, *"prepare for war"*. The battle for the Phono sapien is still going to be won or lost on mobile, so the big question is: is your travel brand ready for the battle? Like I said last year, you don't need me to tell you that the travel landscape has shifted massively over the last few years. It's no longer enough to just have an app, your conversations with your customers should now also be done via voice, or a bot, or through messaging. But one platform, one device remains constant and will continue to run through all of those new conversations in 2019 and that's mobile. Mobile was and still is the best weapon in your arsenal.

EVERY 12 MINUTES

On average adults (16+) look at their mobile phone every 12 minutes¹³

78% say they can't live without their mobile phone 13

78%

4. Voice: Search and actions

4. Voice: Search and actions



Manish Amin *Co-Founder & CIO* Yatra.com The past decade has seen a constant growth in technological advancement, and with players in the technology and IT sector acing their innovation game, customers have been spoiled for choice.

Due to the intense competition, every industry is seeing a surge of changes in terms of technological innovation. Digitalization, automation and an enhanced experience with reduced touchpoints, are the key asks from any customer.

Last year's Mobile Travel Trends reported that 'the age of touch could soon come to end'. Well, with a year that saw the worldwide smart speaker market grow by 187%²¹, 1,000 Echo Dots reportedly sold every second during Cyber Monday²², Apple release Siri Shortcuts and Google's Assistant appear on its 500 millionth device worldwide²³, that prediction may already be out of date. 2018 has become the year that #VoiceFirst doesn't sound like a trend from the distant future anymore.

And nowhere is that voice first trend clearer than in my country, India. With a population of 400 million that speak over 20 languages, there is a large section of people from Tier II and III cities who are becoming more comfortable with lingual voice commands over typing—they are literally finding it easier to use their 'voice' to search. And it's not just in Yatra that we're seeing this movement. Google is predicting that India will soon become the world's first voice-driven internet market²⁴, with voice being both the primary input and output, and the latest Travelport research shows Indian travelers are leading the way in voice search, with 69% using the technology.





However, this accelerated move to voice by consumers is also causing a shift in how they interact with these devices and the questions and responses they want. Users are not simply asking for information anymore, like "find coffee shops near me"—instead they're commanding "order me a coffee". "Check my flight status" is turning into "check me in" and so on. Voice search was a trend that Travelport Digital predicted last year, however, in 2019 voice will become less about "I want to know" and more about "I want to do".

In turn, as these search queries become more conversational, search engines are now beginning to understand meaning and intent behind a query, which will result in better, faster and more personalized results. For example, when a customer currently types 'Hotels in New Delhi', the search engine will run a search to match these keywords. However with voice search, the consumer is likely to ask a complete question like 'hotels in New Delhi near Connaught Place under 5k', and the voice search will respond to this phrase by interpreting the meaning and intent behind it.

This incorporation of natural language processing and intent is something that we at Yatra have incorporated into our Yatra Universal Virtual Assistant (YUVA), but we've also taken a 'hybrid approach'. This unique and first in class hybrid allows the user to use either voice or text to communicate and complete the booking on the go. It enables intuitive customer interaction in a human-like way, answering questions about flight bookings and providing expertise in real-time. When we launched voice commands two years ago, it did not take off to the same extent that it has in the last 12 months but devices and assistants like Google Home, Amazon Echo, Siri and Cortana have made voice search more ubiquitous and the time is now ripe for voice actions to grow.

Voice is revolutionizing the way people interact with travel service providers and aggregators like Yatra globally, but the potential of voice commands and actions is still in its infancy, although the speed of developments is rapid. As the technology develops and allows for more natural, interactive conversations, voice search (and actions) will become a core part of how travelers book and manage their travel experience next year. This will usher in a new era of intelligent, personalized, omnipresent travel assistants accessible via multiple devices and in multiple languages and may truly mean the age of touch comes to an end!

Voice in the Indian internet is exploding

as users today seem too keen in talking to the internet instead of tapping or typing

VP of South East and India: Google, Rajan Anandan 45% of travel brands are investing in voice technology in 2019, but 22% feel it isn't enough³⁷

60%

60% of end travelers said they would

be open to using a chat platform to

search or book a trip³⁸

5. Conversational UI

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5. Conversational UI



Matthew Ovington

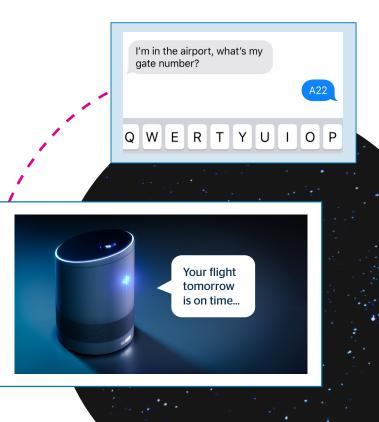
Head of UX Travelport

Tech commentators have been breathlessly talking up the potential of conversational UI the past few years.

Gartner, a management consultancy, have been particularly bullish:

'By 2021, early adopter brands that redesign their websites to support visual and voice search will increase digital commerce revenue by 30%. By 2019, half of major commerce companies and retailers with online stores will have redesigned their commerce sites to accommodate voice searches and voice navigation²⁶.'

Yet conversational interfaces aren't new. We've been exposed to them in science fiction movies since the 1960s ("Open the pod bay doors, HAL") but our real experience of them has been, up until the last few years, pretty awful. We've all encountered IVR systems (Interactive Voice Response) from banks and airlines that reduce the conversation to barking "Yes", "No" or "None of those options" down the phone – or worse having to say "Option Five". We would hardly consider these "conversations" but that's exactly what they were – human-computer interaction via voice. The difference between science fiction and science fact is now closer than ever. We're finally getting to the point, as demonstrated by the Google Duplex voice assistant in 2018²⁷, where human-computer interaction via conversation is close to what we've seen in the movies.



Vue-ey and Goo-ey

There are now several popular conversational 'platforms' in the market. They can be broken down into two main types: those in which we converse via voice (such as Siri or Alexa) and those with which we converse mainly via text (like WeChat, WhatsApp or Messenger).

These new conversational capabilities feed into the current trend towards digital fragmentation. That doesn't mean they're going to completely displace familiar, GUI (Graphical User Interface) modes of interaction. Conversational interfaces, whether they're text or voice, have their strengths and will no doubt find new niches where they will dominate, but conversational UIs will only win out where they are the preferred mode of interaction for the customer.

There's immense potential for companies to use these platforms to find better ways to interact with customers, and they should be viewed as a means to augment customer experience.

One clear strength of conversational UI is they play into a mode of usage first identified on mobile—filling in the gaps and spaces of modern life. This is the opposite of a 6-hour Netflix binge or an hour spent trawling the web shopping. It's short, sharp, specific interactions like checking the feed on Twitter or asking Siri to show the location of the nearest train station. If companies are going to get the benefit of conversational UIs then they need to understand why this mode of interaction works so well in certain cases. Conversational UIs, chatbots and AI agents are all innovative, yet innovation isn't simply about technology. It's about social adoption too. If travel companies are to successfully engage with customers on this platform, they need to understand how to engage on terms that their users find beneficial.

It's (not always) good to talk

If content is king, then context is queen. Sometimes it's better to talk, other times it's better to text. As we travel our surroundings are constantly changing, so therefore the context and opportunity for engaging via conversation changes too. Choosing the right mode to interact with a customer means understanding the user and the context.

Context is what happens to travelers. People use their eyes and hands to text, but their ears and mouth to talk. Depending on where they are one option for conversation may be better than another. **30**% of travelers have

researched or booked a trip using a chat platform³⁸

52% of travelers expect to be able to communicate with a travel brand using text/messaging ³⁸

52%



Choosing the right mode to interact with a customer means understanding the user and the context

Let's look at some typical travel scenarios:

Travel companies hoping to engage through conversational interaction need to consider the context their customers frequently find themselves in. They also need to consider how customers prefer to interact and this can be determined by looking at activities in public or private space. Voice is public– anyone can hear what you say. Text is private–it's only for your eyes.

Expecting a customer to interact via voice in busy airport might be possible, but that doesn't mean it's how they would prefer to interact. Requiring a traveler to go find a quiet place to talk is putting the problem back on the customer, and this means a poorer customer experience.

The early adopter brands that will see the greatest benefit from conversational interaction will be those that understand that riding the wave of digital fragmentation requires not just being open to conversation, but being able to interact at the right time and in the right way. Activity Limiting factor

Best for

Hands, sight occupied	Voice conversations
Ears occupied	Text conversations
Ears, voice negated (noisy airport)	Text conversations
None	Voice or text conversation
Hands, sight occupied	Voice conversations
	Ears occupied Ears, voice negated (noisy airport) None

6. Airline as retailer



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6. Airline as retailer



Mark Lenahan

Head of Propositions (*Air & Rail*) Travelport Airlines have been talking about being retailers for years, so what was different about 2018 and how will this trend progress next year?

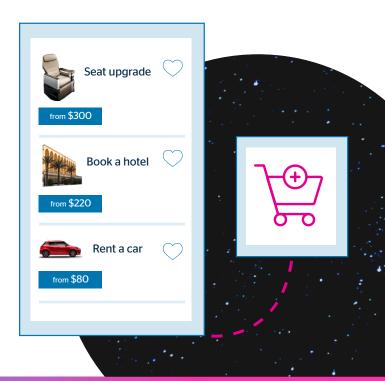
Retailing is a tough word to nail down. To some it means selling physical goods in physical locations, or at one time in the airline industry on-board duty free and gifts, but the trend we are talking about here is digital retailing as a much broader strategy. Retailing means focusing on meeting customer needs rather than pushing product. Airlines are selling a wider range of travel products beyond air, getting better at selling air products, and getting a greater share of the customer's overall travel spend (share of wallet) as a result.

Looking back, 2018 was the year airline retailing moved from being the aspiration of a few thought leaders to an accepted industry wide strategy. IATA officially retired the 13 year old Simplifying the Business program (StB²⁸), which brought us e-ticketing, barcode boarding passes and NDC, and replaced it with Airline Industry Retailing (AIR²⁹). The World Passenger Symposium became the AIR Symposium with an inaugural event in Rome in October 2018.

Although the definition is broad, when an airline CXO or CMO talks about 'retailing' there are some common themes:

Focus on the customer: Treat the customer and their needs as central to what you offer. Work from the customer to the product ("what should we be selling?"), not the other way around ("who will buy our stuff?").

Customer experience: Customer experience (CX) is what drives long-term retailing revenue and loyalty. Our customers, the travelers, experience and remember the entire trip, not just the flight. The real outcomes are conferences, sales wins, holidays, and weddings, not seat 26C. There is a noticeable shift away from the term 'passenger'.



Selling more products: Airline leadership are training themselves to think of 'product' as more than a seat. Retailing is about selling a wider array of travel products to meet more of your customer's total travel needs. For airlines this means not just air ancillaries, but products like hotel, car, insurance, lounge, loyalty and payment.

Retailing metrics: Adoption of online retailing performance metrics like attach rate, basket value, cost of acquisition, engagement rates, and lifetime value (LTV). Many of these metrics are influenced by eCommerce and behavioral economics across verticals including digital media and physical goods retailing.

Behavioral economics and loyalty: Airlines

increasingly use retail techniques like gamification and behavioral psychology. This is visible in the growing complexity of loyalty programs and up-sell and bundling (e.g. branded fares) to sell ancillaries. Frequent flyer programs have used gamification but now include features like revenue-based earn, multiple currencies, and cross/up-sell incentives.

Platform commercial model: Supplier integration does not always need to be deep to be effective. Some airlines have developed hotel contracting and tour operations subsidiaries, many prefer to be just a marketplace. An airline retailer is satisfied as long as their supply partners provide the right CX, and the product performs commercially. Vertical integration is less important than horizontal breadth.

New model interlining: Applying the platform commercial model to flights, the way airlines sell other airlines is also changing. New models of interlining are emerging, from connections built by OTAs, to nontraditional mechanism visible on LCC alliances like Value Alliance and Ufly, or the recent example of easyJet and Singapore³⁰. In the IATA Air Think Tank, we discussed how airlines present other airlines flights using codeshare and the resulting confusion for the passenger³¹.

API first: Customer and product consistency across channels is a key digital retailing trait, and airlines are enabling that with APIs and merchandising tools that provide product content and offers in all channels. API distribution, like NDC, is also part of a broader retailing strategy. Airlines differentiate their product from Ultra LCC with rich content and dynamic offers.

Digital transformation: Retailing requires a lot of structural and cultural change in any business, digital retailing even more so, hence the burgeoning industry of "digital transformation" consultants. You cannot simply buy or build retailing technology and thereby become a retailer. 2019 will see more airlines restructuring to overcome technology and business silos, so that all customer touchpoints (online, contact center, airport, onboard) provide a consistent customer experience.

Retailing is not always the right strategy for everyone. When Blockbuster decided they were a retailer and not an entertainment company (around the same time they turned down the opportunity to buy Netflix), they probably sealed their fate. Likewise, some airlines will continue to focus on being efficient operators first and foremost.

An effective airline retailer is one that can operationalize retailing technology at scale, and can harmonize customer experience, in all touch-points, in all direct and indirect channels, throughout the customer journey. 2019 will see a more cohesive approach to retailing in airlines as digital transformation programs and matching technology investments start to bear fruit. As a traveler in 2019 you will notice airlines being more aware of your needs for more of the journey. 35% of travelers have bought excursions in local destinations through mobile ³⁸

62% of travelers rate being able to book a hotel on a travel app as important ³⁸

62%

7. AR and VR

7. AR and VR



Colin Pierse Senior Software Developer Travelport Digital

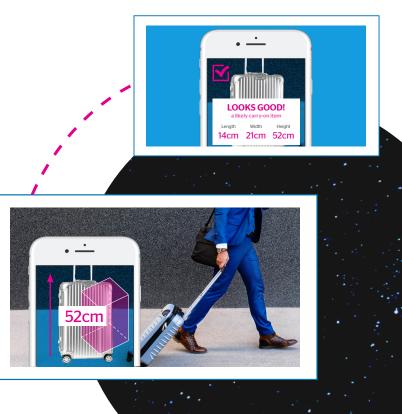
Augmented and virtual reality have long been on the list of emerging trends to watch, not only in travel, but across many industries like gaming, healthcare and engineering. Until now, they have been somewhat niche areas that seemed a long way off becoming mainstream.

However, at the time of writing this trend, there are over 500 million AR-enabled mobile devices in existence and over 2,000 AR apps in the App Store³² —there's no denying it's evolving quickly.

So what's happened to move AR into the mainstream? The main development that's happened in the last 18 months is that Google and Apple have made huge investments in the technology, which has made developing AR and VR capabilities cheaper, easier and quicker.

Google released its ARCore developer tool in March 2018, which supports many different platforms and game engines including iOS, Android, Unity and Unreal, which creates enormous scope for AR development. What's interesting here is that Google is not only investing in AR development on its own platform, but on competitors' platforms too.

In September 2018, Apple also released its ARKit 2.0 in iOS 12. Having released ARKit 1.0 in iOS 11 (September 2017) and ARKit 1.5 in iOS 11.3 (March 2018), this is one of the fastest growth trajectories for an Apple framework. Apple's developer conference WWDC also



dedicated a large amount of time to AR—so there's no arguing that this is where the big players see the future of mobile going.

As a result of these investments, we saw travel industry heavyweights experiment with AR and VR technology in 2018. American Airlines, KLM and Aeromexico are using AR bag sizers in their mobile apps, which lets travelers place a 3D bag overlay over their cabin bag and check if it is within the airline's baggage size allowance. In 2019, we can expect to see more of the major airlines and TMCs create similar features.

Kayak is using a similar approach with its AR bag scanner feature. If a traveler scans their bag and finds that it does not fit within the airline's allowance, the airline can upsell a bag upgrade. Another benefit of this approach for the airline is that it can track bag scans and estimate the number of bags that will be in the cabin, and how many need to be placed in the hold. This offers another opportunity to upsell, for example by encouraging travelers to choose priority boarding to make sure they can bring their hand luggage onboard.

We have also seen American Airlines experimenting with VR technologies and can expect more development in this area in 2019. For example, the airline is using both AR and VR to offer customers a view of how the plane looks from a chosen seat and how much leg room they will have at the booking stage. Again, this opens up an opportunity for the airline to upsell a seat upgrade.

While this technology is still in development, it is vital that airlines get this feature right and that the experience the user sees in an AR/VR world is what they're actually being sold. For example, if the virtual view is off by a few inches, this would set unrealistic expectations for passengers and provide a poor user experience.

While the current uses of AR and VR in travel are relatively limited, the future certainly looks exciting. There has been some experimentation with in-flight VR experiences, which allow passengers to use their mobile device to experience the environment outside the plane: essentially using their phone as a less restrictive window!

In the near future, travelers will also be able to track their luggage throughout the trip. For example, they could scan their bag with their phone and track it when it is checked in, put on the plane and placed on the baggage belt at their destination. Apple's ARKit 2.0 technology makes all of this possible, as it can identify 3D world objects and create unique reference points.

Other areas where this technology can provide an enhanced travel experience is in the TMC and destination marketing areas, with VR allowing customers to take tours of particular destinations and hotels before booking. For example, VisitWales created VR videos for its Dolphin dive and Flight of the kingfisher attractions³³ and hotels like the Atlantis Dubai are providing high-end tours through virtual reality technology³⁴.

If we think back to iOS 2.0, users had to be taught how to swipe up or down on a list of items, but now it's second nature. I predict that as AR becomes faster, more mainstream and easier to use, it too will become second nature and a core part of travel, removing key pain points and contributing to a more seamless customer journey.



20% of travel brands will invest in Virtual Reality in 2019³⁷

20%

8. The end of search

8. The end of search



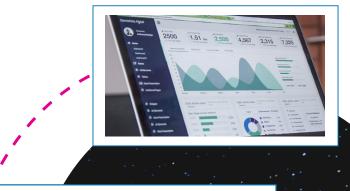
Mike Mulligan Director of Product Travelport Good design strives to adapt to its user, but more often, as users we adapt to technology. We learn how to use it and forget how alien it seemed at first.

For example, my family and I recently visited a history of technology exhibit at the British Museum and I found it funny to see my kids struggling to use an old-fashioned rotary phone. A few decades ago, using a rotary phone seemed like the most natural thing in the world—but that's because I'd forgotten the learning curve that came with it!

This brings me to search. Right now, search is ubiquitous: it's our rotary phone. When I travel, search is at the heart of my travel experience. When I want to book a flight, I search for it. When I need directions to the hotel, I search for it. The idea that we would move beyond it seems absurd. But that's what's happening, thanks to advances in artificial intelligence and predictive analytics.

Search by its very nature is a reactive technology – it responds to our requests. However, as customers our needs are becoming more sophisticated and we now want technology to anticipate our needs, not wait to be asked. In other words, we need information to be *proactive*. Here's a simple example. If I'm at an airport and my flight is delayed or the gate changes, I expect to be notified on my phone. I don't expect to need to search for my flight on my phone or on a wall display.

Consider another example: right now, my calendar is reminding me that I have a meeting in the Travelport HQ in the UK next week. It's a trip I take regularly; the





same flight, the same hotel. Despite the fact that I've booked this trip many times before, I will need to repeat the process of searching for flights and hotels to book my trip. This is where predictive analytics could really come into play: since I've taken this trip multiple times before, the system should remember my preferences and offer an itinerary without the need for me to search for it.

This isn't just blue sky thinking of a trend that is years away from coming to fruition. In 2018, we saw some big travel players invest in artificial intelligence to make this a reality. HRS has established an Innovation Hub to gather data and develop tools that understand traveler preferences, so it can optimize recommendations for those travelers and offer enhanced sourcing of hotel content for corporates³⁵. This means that travelers are being presented with the hotels that are most likely to hit their preferences, making subsequent searching unnecessary. It also enables organizations to ensure that their travelers book hotels within policy.

Martin Biermann, vice present of product development and chief technology officer for HRS, predicts that this type of technology will negate the need for business travelers to search at all: "You will just make the appointment in your calendar and you'll get the hotel recommendation right into it, maybe even the

Using the wealth of data now available will allow travel brands to know so much about individuals, that they can present offers based on their preferences reservation if the system is confident this is exactly what you want $^{\rm 36}.^{\prime\prime}$

There is no one technology enabling predictive analytics, it is a range of technologies, but at its heart is data. Using the wealth of data now available will allow travel brands to know so much about individuals that they can present offers based on their preferences. When we talk about data there are two kinds that are relevant: big data and small data. Big data involves large volumes that can be processed and analyzed to produce insights (e.g. trips, flights, hotels). Small data involves smaller data sets that we can digest and act on (traveler behavior data). Once we have both of these data sources, we can then bring machine learning to bear.

One great example of this in action is the IBM Travel Manager, which features advanced AI and integrated travel and expense data to help travel management teams optimize their travel program, control spend and enhance the traveler experience. It gives users complete, unified access to previously siloed information. When combined with travel data from the Travelport GDS, this information is then used to create real-time predictive analytics recommending how adjustments in travel booking behavior patterns can positively impact a company's travel budget.

What is most interesting about the IBM Travel Manager is the fact that it is not just a conceptual idea—it already exists. In a trend that is ultimately about data that is perhaps the most salient data point: the alternatives to search are already here and they are ready to help travelers book trips and businesses save on travel costs. 2018 was a big year for advancements in this area and we can expect even further adoption of this trend over the next 12 months. 68% of travel brands are planning to invest in business intelligence or predictive analytics in 2019³⁷

68%

65% of travelers would provide personal details if it resulted in a more personalized travel experience³⁸

65%

Behavioral Trends

The experts' analyses are in, but how does consumer behavior and opinions stack up against our predictions for 2019? We surveyed over 1,100 end travelers across 8 countries to find out how they are using mobile for travel. We investigated if people are in fact moving beyond using apps only and how they want to be communicated to during IROPs or disruptive situations. We also looked into how newer technology including chat, voice and messaging apps are being adopted. Here are our findings.

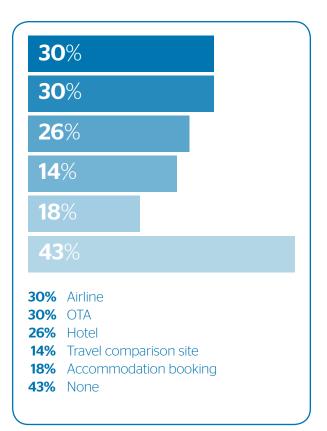
Travelers still rely on mobile apps

With new technology emerging and mobile usage going beyond just apps, travelers are now looking to have their entire experience consolidated onto their mobile phone. Therefore, it could be plausible to think that apps have lost their luster. However, far from it, apps are still thriving.

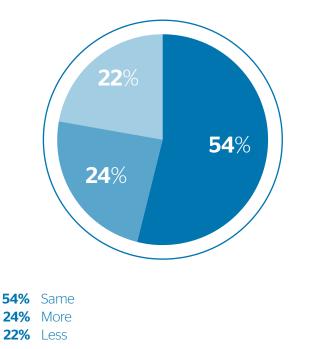
Our research found that 78% of respondents have downloaded the same or more travel apps than last year, with more than 60% of those using them on a regular basis. This shows that apps are still providing travel brands with an unparalleled opportunity to continuously engage with customers through a device they carry throughout their journey.

Airlines and OTAs came out on top in terms of popularity of travel apps.

Q. What travel apps do you currently have installed on your smartphone?



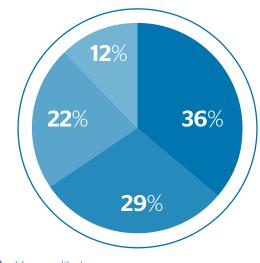
Q. Are you downloading more or less travel apps than last year?



The pull of apps is steadily increasing, becoming the 'go-to' for travelers' every need. Compared with our research from last year, search and booking through apps has increased significantly. App-only features are also hitting the mark with travelers, up 10% on last year. These include push notifications, mobile boarding passes and Apple Wallet, as well as relevant personalized offers and promotions solely available on the app (up 4% on last year).

All of this also points to the importance of a good user experience within the purchase process. Good UX cannot be underestimated as it can have a significant impact on advocacy and usage. Get it wrong and travel brands run the risk of losing customers to a brand that offers a slicker, more simplified experience.

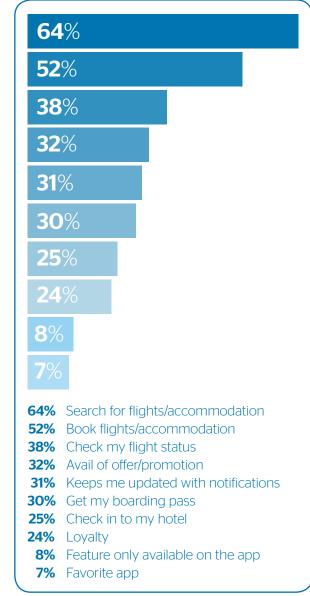
Q. How likely would you be to book with a travel brand again if you had a bad user experience on their app?



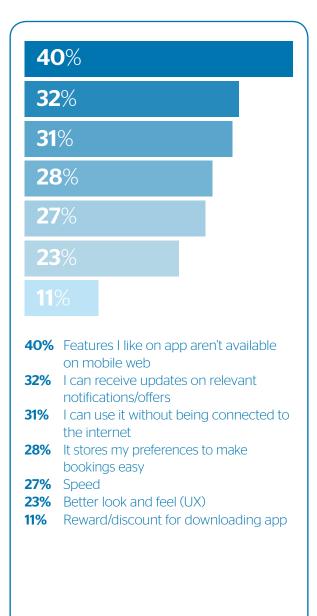
36% Very unlikely

- 29% Somewhat unlikely
- 22% Somewhat likely
- 12% Very likely

Q. Which of the following best describes your reasons for downloading a travel app to your smartphone?



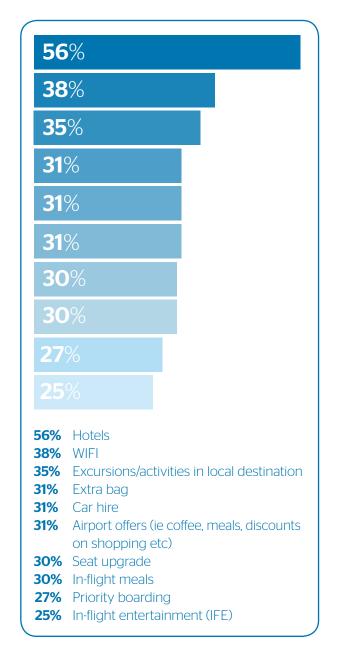
Q. What are your reasons for downloading travel apps and not just use a mobile website



Hotel attachment rates on mobile present a clear opportunity to increase revenue

Ancillaries are hugely important to travel brands and are instrumental in increasing revenue potential. The good news is that travelers are open to purchasing ancillaries; over a quarter of respondents bought products such as WIFI, airport offers, in-destination activities, and extra bags on mobile.

However, it's hotels that are leading the way. 56% said that they had booked a hotel room on mobile and a further 62% rated hotel booking as an important travel app feature. This gives airlines and TMCs a clear opportunity to increase hotel attachment rates, and ultimately revenue, through their app. Q. Have you bought any of the following on mobile?



Power of push in driving customer engagement

When it comes to communicating with customers, context is now every bit as important as content. Push notifications have opened up the opportunity for travel brands to be there for their customers at exactly the right time and through the right touchpoint.

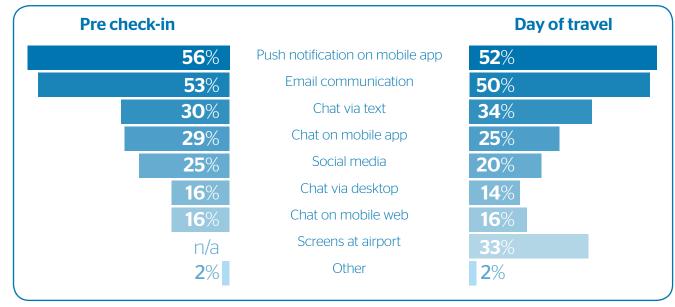
75% of people found push notifications related to travel useful. This is especially true during times of disruption, ranking as the number one way travelers want to be communicated to both pre-trip and on the day of travel. This was followed closely by email communications, with chat gaining traction as the technology becomes more widespread.

Voice is becoming the new currency of communication

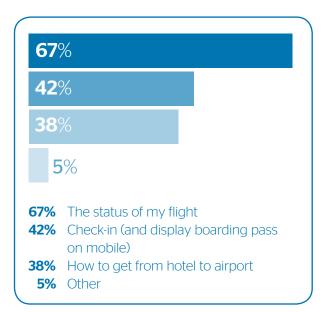
With emerging technology such as chat and voice making waves on mobile, investment in these areas is going to be essential to drive traveler engagement. Voice powered technology is gaining real traction, 39% of travelers have used voice assistants during a trip, primarily for flight related activity including flight status and check-in.

Travelers now expect to be able to chat with their travel brand at all stages throughout their trip, and on whatever platform they choose. Messaging capabilities and voice commands are no longer 'nice to have'-they're expected.

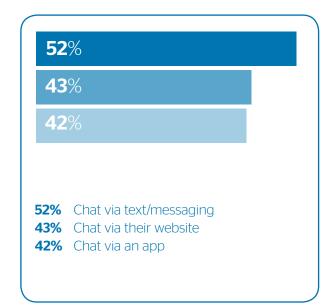
What's more, chat isn't just limited to questions or queries. 30% of travelers have used a chat platform to research or book a trip and 60% would be open to doing so in the future. Q. Where do you expect to find information relating to disruptions to your trip



Q. When traveling what would you like to ask using voice?



Q. How do you expect to be able to communicate with your travel brand/airline now?

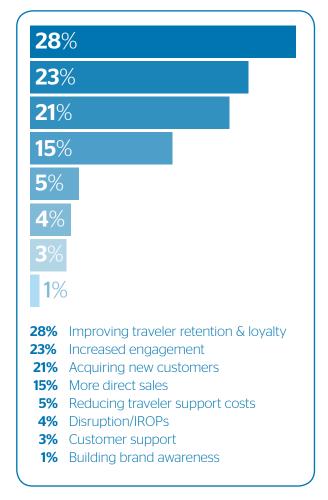


Conclusion

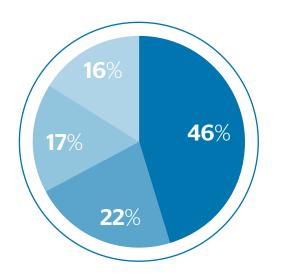
Mobile has revolutionized how we search, review, select and experience travel. The way customers interact with travel brands throughout the travel lifecycle—from research, purchase and support right through to advocacy—has truly moved to the small screen. We've become a generation of autonomous travelers who plan, book and manage our travel all on that single device, who find trip inspiration using a single photo, and who research destinations using our voices.

What this means for travel brands is opportunity—the chance to connect the dots between a variety of touchpoints across the trip. The emerging trends that will shape our industry over the next year will open up new ways of improving the travel experience, with mobile facilitating a more joined-up, frictionless journey. While travel brands must continue to understand and embrace new mobile technologies, the data that sits behind them will be just as important in 2019. Personalization will be the best way for brands to truly engage with customers, however this will involve ethically mining data from a number of channels and sources, including social, mobile web, apps and messaging platforms.

What's most exciting about the insights we've presented is that these trends are not futuristic technologies to look out for two years down the road; they're trends that can be tackled in 2019. Several of the technologies we mentioned—like conversational UI, voice, visual and AR—can be layered in on top of existing tech stacks and your travel brand can start reaping the benefits in a relatively short timeframe. Other trends, like datafication and predictive analytics, you can start to investigate now and build into your medium-term plans beyond 2019. Q. What is the biggest challenge you feel mobile could help your organisation address in 2019?

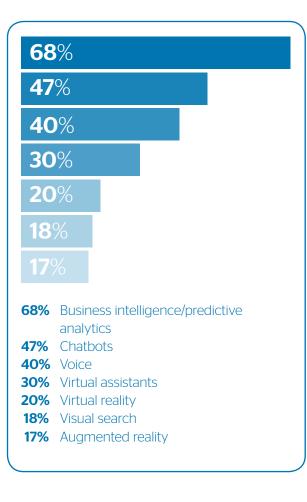


Q. How do you feel about your organisations level of investment in mobile?



- **46%** We're investing but not enough
- **22%** We're investing enough to keep up with the competition
- **17%** We're investing a lot as mobile is a big focus for us
- **16%** We aren't investing in mobile at all

Q. In 2019 what areas of mobile do you intend to invest in?



Q. What mobile goals are important to your organisation in 2019?

	%
49	%
42	%
34	%
32	%
28	%
	Payanua generation
7/0/	Revenue generation Customer service
49%	Customer engagement & acquisition
49% 42%	Customer engagement & acquisition Cost savings/operational benefits
49% 42% 34%	

Contributors



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Dan is a high caliber digital experience specialist and innovative leader with a wealth of aviation and digital experience. He has worked in the industry for over 15 years, delivering pioneering solutions and driving commercial and customer experience results. In his role as Head of Digital Experience at easyJet, Dan is responsible for all customer-facing mobile app development, associated mobile initiatives and innovation projects. He ensures easyJet are delivering best-in-class mobile customer experience through awardwinning mobile leadership.

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Sharon is a globally experienced senior leader and has spent over 20 years in technology across a number of industries including travel, finance and telecommunications. She has a deep understanding of both technology and the travel industry, and how these come together to drive innovation and new ways of thinking about distribution. In her role at Global Head of Product at Travelport she works closely with senior commercial and technology leadership teams to define and execute the overall product strategy, ensuring Travelport delivers worldclass, customer centric, digital-first product propositions to its customers.

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Glenville has over 13 years' experience as a mobile professional in the travel, entertainment and retail sectors. Before joining Travelport Digital, Glenville worked across analytics, SEO and mobile at easyJet, primarily as a product owner for their apps and mobile site. At Travelport Digital, Glenville heads up the Digital Insights team where he looks at market trends, operating system updates and how new technologies will affect the travel industry and customers now and in the future.

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Manish is a veteran of the travel industry with over 30 years of experience in the travel and IT sectors. 15 of those were with Ebookers, where he was responsible for managing 24/7 availability of the website and multi-location call centers. Being an avid traveler himself, he co-founded Yatra along with his colleague Dhruv Shringi with an aim to make travel easy and hassle free for the Indian populace. At Yatra, he is responsible for new product development, building mobile technology and managing data centers.

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Matthew has over 18 years' UX experience in both in-house and agency and in industries as diverse as travel, finance, online retail. eGovernment and gaming. With his background in research and usability engineering, Matthew has in more recent years specialized in product design strategy and design integration. As Head of UX, Matthew leads a global team of designers in Travelport, ensuring design is integrated into product management and development so that the next generation of Travelport products lead the industry in terms of customer experience.

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With 23 years of industry experience across airlines, agencies, loyalty programs and industry bodies, Mark is a frequent speaker and contributor on topics such as customer experience, e-commerce, sales, distribution and loyalty in the travel industry. As Head of Propositions for Airline and Rail at Travelport, Mark's mission is to represent the needs of airline and rail companies within Travelport and present them with a cohesive view of Travelport's products and services.

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Colin has more than 6 years' experience specializing in iOS development. In this time he has supported the development of iOS mobile apps for the entertainment, retail and online community sectors, including the launch of the first native online betting app for Paddy Power. At Travelport Digital, Colin is the lead iOS developer on the easyJet team. He runs initiatives to identify and implement new innovative features and technologies that keep abreast of industry trends. Colin is committed to educating others, is a regular speaker at meetups and is involved in mentoring at coder dojos.

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Mike Mulligan Director of Product Travelport

Mike has over 20 years' experience in the mobile industry working for companies such as Nokia, Blackberry and Telefonica O2, delivering digital services to mobile devices. Mike is a creative product manager with proven record of successfully developing products and introducing features to users. At Travelport Digital, Mike heads up our product vision and strategy, ensuring customers are equipped with the world class solutions they need to be successful in a digital economy.

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Travelport Digital 📚

About Travelport Digital

At Travelport Digital we deliver innovative digital travel solutions for airlines, TMCs and travel agencies to meet the expectations of today's ultra-connected travelers. We create superior, end-to-end travel experiences across multiple devices and channels with the latest in mobile technology, great UX and design, a travel focused product set and close collaboration with our clients. Our work enables airlines and travel companies to leverage 'every moment in travel' with mobile and digital services that transform how they interact with their customers.

- 45+ million app downloads (as of September 2018)
- 100 number 1 travel apps in App Store / Google Play
- 775 App Store promotions in the last two years
- 4.5 average app star rating
- 330+ mobile experts dedicated to travel
- 34 industry awards for our apps (2014 Present)

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