Phocuswright White Paper

Travel Innovation and Technology Trends 2016

Hewlett Packard
Enterprise

Written and researched by

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Phocuswright

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Travel Innovation and Technology Trends 2016.

About Phocuswright

Phocuswright is the travel industry research authority on how travelers, suppliers and intermediaries connect. Independent, rigorous and unbiased, Phocuswright fosters smart strategic planning, tactical decision-making and organizational effectiveness.

Phocuswright delivers qualitative and quantitative research on the evolving dynamics that influence travel, tourism and hospitality distribution. Our marketplace intelligence is the industry standard for segmentation, sizing, forecasting, trends, analysis and consumer travel planning behavior. Every day around the world, senior executives, marketers, strategists and research professionals from all segments of the industry value chain use Phocuswright research for competitive advantage.

To complement its primary research in North and Latin America, Europe and Asia, Phocuswright produces several high-profile conferences in the United States, Europe and India, and partners with conferences in China and Singapore. Industry leaders and company analysts bring this intelligence to life by debating issues, sharing ideas and defining the ever-evolving reality of travel commerce.

The company is headquartered in the United States with Asia Pacific operations based in India and local analysts on five continents.

Phocuswright is a wholly owned subsidary of Northstar Travel Media, LLC.

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Contents

Table of Contents

Table of Charts

Travel Innovation and Technology Trends 2016

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Introduction

Each year, Phocuswright publishes its pick of the top business and technology trends that will affect the future of travel distribution. Once a technology leader, the travel industry has had difficulty breaking from the success of the past and embracing the future. The Phocuswright trends that define the future of travel distribution are divided into two parts:

- Newly emerging trends that have the potential to be game changers

- Updates of previously published Phocuswright trends that are gaining momentum, pivoting or both

The Phocuswright Game-Changing Trends for 2016:

1. Block chain: a new way to move value

2. The Internet of Things: a world of opportunity

3. E-commerce and social networks converge

4. Augmented and virtual reality: *Total Recall* realized?

5. Messaging: the new old

The Phocuswright Gaining Momentum/Pivoting Trends for 2016:

1. Quality digital experiences = customer loyalty

2. "Uberization" of the world

3. Contextualization: best when taken with personalization and customization

4. Traditional travel distribution: death by a thousand cuts

Game-Changing Trend 1 –
Block chain: A New Way to Move Value

This trend is one of the most controversial. If realized, the topography of global payment systems, including those that support travel, will be transformed. While there are doubters, there are also a large number of cautious proponents.

Our current payment systems use an intermediary to move value (funds) from one owner to another. Inefficient as these systems may be – they are an automated ver-

sion of processes established over the last 2,000 years – they have stood the test of time (see Figure 1).

A simplified view is shown in Figure 2, which illustrates the dependence of today's financial transfer systems on a central ledger.

FIGURE 1: *Legacy Bank Settlement Process*
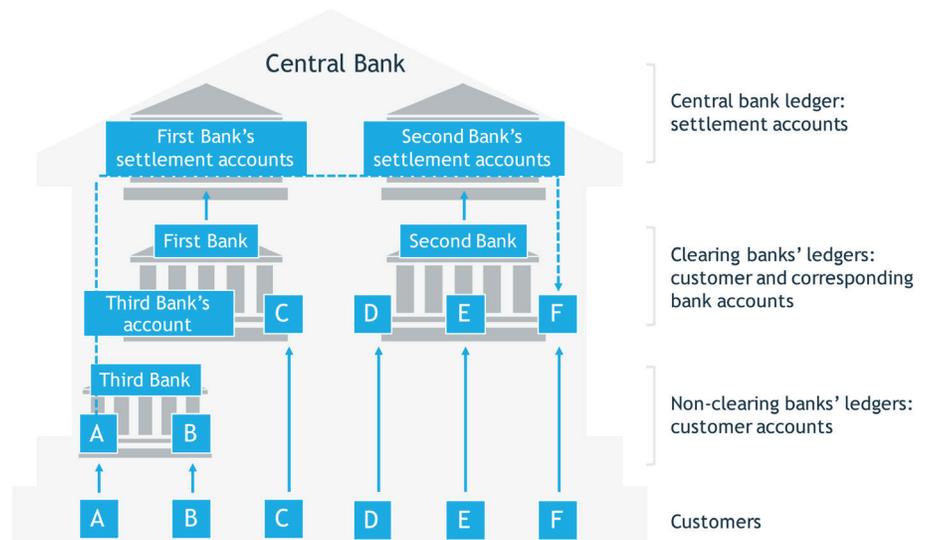
Note: A payment from A's account to F's account passes through a number of intermediaries, which verify each step of the process. Participants only have sight of their own assets and liabilities. The solid lines indicate deposits and the dashed line payments.
Source: Bank of England,
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**FIGURE 2:** *Banking With a Central Electronic Ledger*
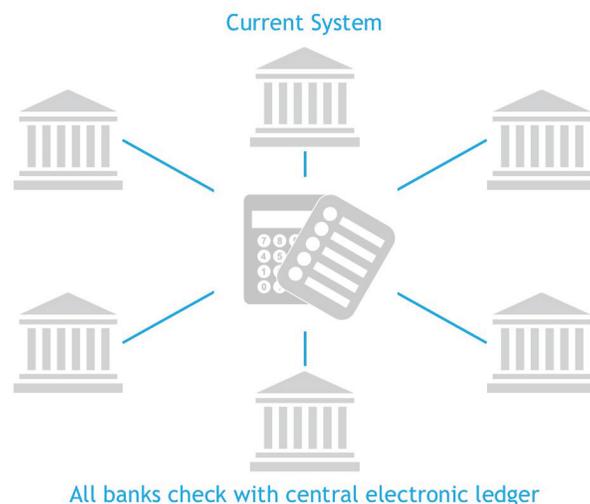
Source: Financial Times
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Financial settlement in travel can be particularly complex. Now with the Internet, high-speed computers and low-cost storage, technology is enabling new approaches to financial settlement.

The alternative to the traditional approach that is gaining momentum is the use of block chain technology. [Note: block chain technology is often confused with the crypto-currency Bitcoin. Almost all of the more than 600 types of crypto-currency use block chain technology as their foundation (see Figures 3, 4 and 5). Block chain technology essentially

FIGURE 3: *Banking With a Distributed Public Ledger*

Public blockchain (permissionless)
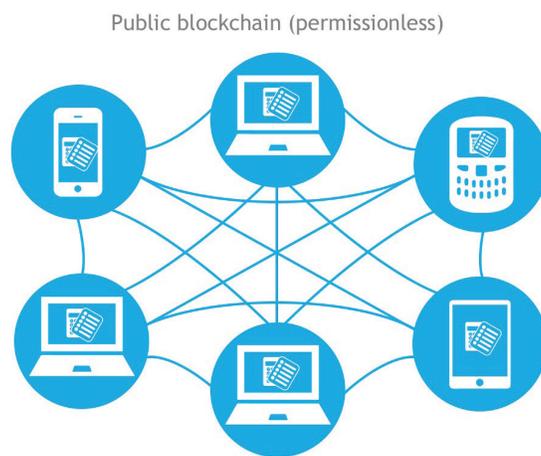
An open network that anybody can access, like the bitcon model. The digital ledger of transactions is shared, transparent and run by all participants.

Source: Financial Times
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FIGURE 4: *Block Chain Fundamentals*

How a blockchain works

1. A wants to send money to B

2. The transaction is represented online as a "block"

3. The block is broadcast to every party in the network

4. Those in the network approve the transaction is valid

5. The block then can be added to the chain, which provides an indelible and transparent record of transactions

6. The money moves from A to B
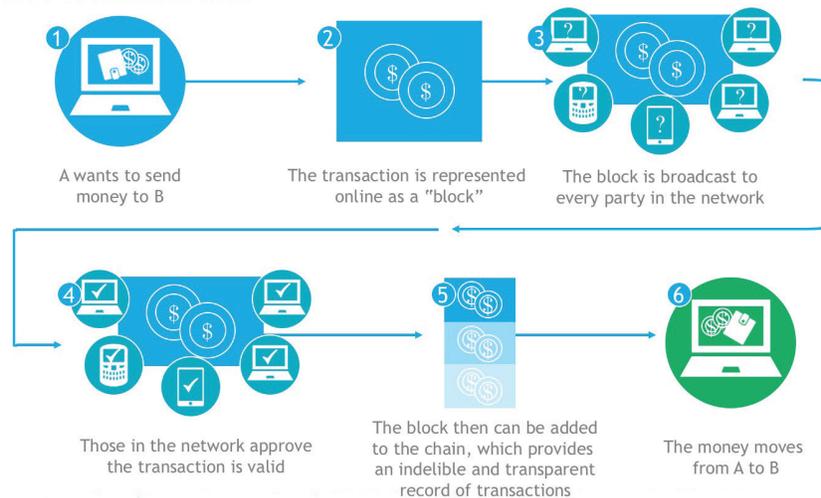
Source: Financial Times
© 2016 Phocuswright Inc. All Rights Reserved.

FIGURE 5: *Private Block Chain (Permissioned)*
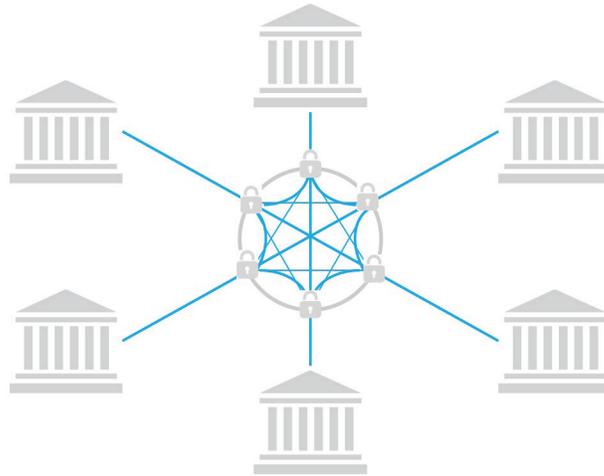
Source: Financial Times
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uses a distributed ledger (as opposed to a central ledger) to transfer value from one entity to another (see Figures 4 and 5)].

The main benefits of using block chain technology are:

1) It is virtually unhackable due to its distributed nature, so if you lose one ledger, others pick up the slack.

2) It is substantially lower in cost than a traditional central ledger system.

Figure 4 shows a layperson's view of how block chain technology works. It should be noted that transactions are deeply encrypted with both public and private crypto keys as appropriate. Think of block chain as three components: the storage of some form of value, the rail to move this value to another entity, and the storage of this value for the transferee.

If successful, block chain technology could substantially alter and reduce the cost of travel financial processing, even down to the vendor on the street level.

Although block chain technology has many potential uses outside the financial system, banks have been among the first to look at the cost advantages and efficiency that the technology offers them. According to Santander InnoVentures, "distributed ledger technology could reduce banks' infrastructure costs . . . by between $15-$20B per annum by 2022." This potential savings has led at least 40 banks[1] and multiple financial institutions to experiment with block chain technology, including Citigroup, LHV Bank, UBS, Santander, the NASDAQ, Singapore Central Bank, ING, Amro and Rabobank.

In travel, the transfer of value has been accomplished by a suite of well-established and stable processes, particularly in air where the airlines themselves have established pay-

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1) Prableen Bajpai, "Bitcoin's Blockchain Technology Tested by 40 Banks," *Investopedia* (March 4, 2016).

ment and settlement processes. In North America, the airline-owned Airlines Reporting Corporation (ARC)[2] handles airline payment and ticketing processing (see Figure 6). In other countries, the settlement is coordinated by the International Air Transport Association (IATA), which has established Billing and Settlement Plans (BSPs) to enable the flow of funds and data between travel agents and airlines. At the end of 2014 there were BSP operations in 181 countries and territories. In 2014 these BSP and ARC operations served 400 participating airlines, processing US$255.7 billion. All of these services are either threatened by block chain technology or see it as a new opportunity.

Block chain technology has the potential to completely redesign the payment and settlement process in all aspects of travel distribution. For example, ARC processes do not include hotels, other forms of ground transportation, events, etc. Block chain technology could easily be a vehicle for consolidation of settlement and commission processing in these fragmented areas. If you are involved in this area and if you don't have prototypes in process, you may well be in trouble.

FIGURE 6: ARC Settlement
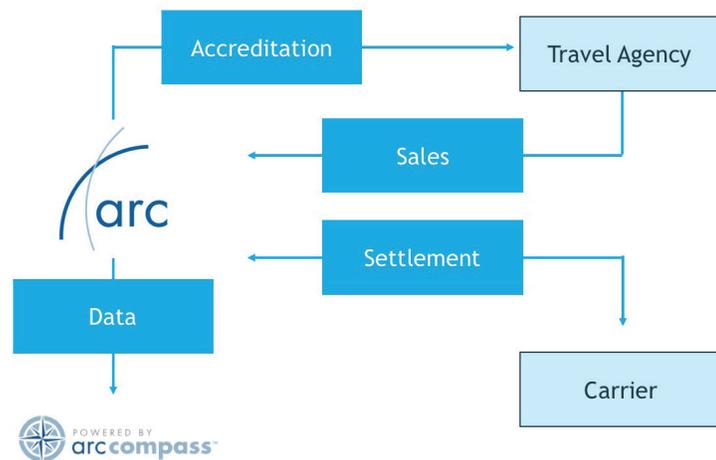
Source: Airlines Reporting Corporation.
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Game-Changing Trend 2 – The Internet of Things: A World of Opportunity

The headlines report that the Internet of Things (IoT) will penetrate every facet of everyday life. We are already seeing the tip of the iceberg with smart thermostats, smart lighting controls and remote security monitoring, to name a few. The IoT can tell you if a restaurant or movie is full, what state park has the most available campgrounds, what roads are iced, and so much more. The potential uses boggle the mind.

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2) Beth Seavey and Jennifer Watkins, "Airlines Reporting Corporation, Presentation to Society of Government Travel Professionals" (February 5, 2009).

Tiles

A novel application of IoT Technology is Tiles, a small, low-cost device that will find lost phones and keys as well as enlist other Tile-equipped devices to do an extended search (thetileapp.com).

Computer costs are coming down. The price of basic computing systems has dropped from US$100 to about $10. The Raspberry Pi Zero is a 1 GHz Linux computer that you can buy for $5. And the challenge of powering these devices is well on the way to being a non-issue. Researchers at the University of Washington have invented a way to harvest energy from TV, cell phone or Wi-Fi signals to power small Internet-connected devices.

IoT technology is already being deployed in the travel and hospitality industry: Disney's Magic Band tracks and supports park visitors; hotels allow customers to use their smart phones as room keys; and airports are installing beacons that can monitor a passenger's journey through the airport providing security line information, baggage location, geolocated services and merchant offers. These instances are just the beginning. With real-time data, travel services providers can adjust prices to reflect current situations. For example, an airline with a nearly empty lounge could broadcast a low one-day price to gain additional revenue. The IoT is also being used in travel operations in not-so-obvious ways (e.g., hotels for control to their HVAC systems and airline's operational support).

To date, most of the IoT's application in travel is tied to either operational improvement or passenger efficiency. It is relatively easy to use IoT technology to monitor a single type of sensor (like airport security line length, available parking spaces, and the location of luggage, baggage carts and plane tractors). The challenge in an airport scenario would be to put information from multiple sensors together, along with intra-airport travel times and the traveler's departure gate number, to calculate, for example, the quickest path from ticketing to the departure gate.

Beyond operational efficiency, it is sometimes difficult to determine the return on investment (ROI) for IoT projects. IoT is a technology looking for problems to solve or business opportunities to create. That said, there are likely many uses for IoT that have not yet surfaced. It is time for everyone in the travel value chain to anticipate the potential of IoT technology and develop the appropriate business cases that will lead to successful deployments.

Game-Changing Trend 3 – E-commerce and Social Networks Converge

Social networks and user-generated content (UGC) have become part of our everyday lives. From Twitter to Facebook, from TripAdvisor to Yelp as well as Instagram, YouTube, Flickr, Pinterest, and Wikipedia, we have some involvement with the world of social media. It is only natural that the lines that separate e-commerce from social networks are beginning to blur.

Consider these three use cases:

Use Case 1

UGC – such as travel blogs, online accounts of trips, TV travelogues or ads, or ratings for travel products and services – as a launchpad to a booking. This enables suppliers to sponsor content directly to shoppers in the early phases of travel planning reaching directly to "lookers" and supporting their needs all the way through the booking process. This connection can be a link through an embedded URL, or even just a listed URL (like on a TV program) for the user to manually enter. The alternative is a tight coupling where the user books through the content site. TripAdvisor uses both of these models as shown in Figure 7.

FIGURE 7: *TripAdvisor's Hotel Booking Alternatives*
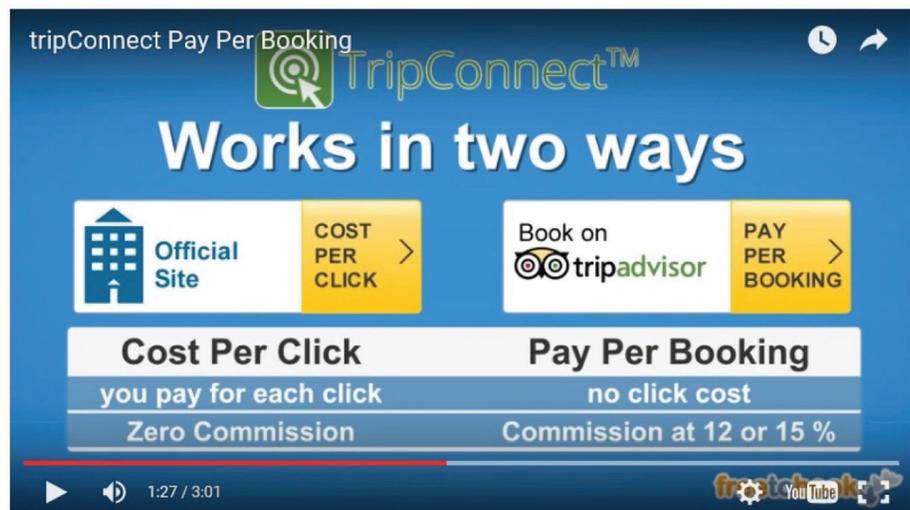
Source: freetobook.com
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KLM, a leader in social media usage among airlines, is using Facebook Messenger (see Figure 8). Flyers on KLM will be able to access things like boarding passes and itineraries, get check-in reminders and flight status updates, rebook flights, and contact customer support through a Messenger chat thread.

Use Case 2

Social media provides the foundation for a group of people to plan a trip together. By sharing ideas and plans, groups are able to select a destination, determine the travel mode and schedule, and select things to do and see (see Figure 9).

Although several good online group booking solutions are available, a recent report[3] found that 25% of planned group activities will not go forward because of hassles involved with booking as a group. While the type of group travel planning shown in

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3) Social Lives: Group Bookings-UK and US", http://www.ticketingtechnologyforum.com/public_down-loads/TTF16-ResearchPaper04-GroupBookings.pdf

Figure 9 may not be successful, there are ongoing efforts to apply a similar approach to tour planning.

FIGURE 8: *KLM Pioneers Use of Facebook Messenger for Customer Interaction*
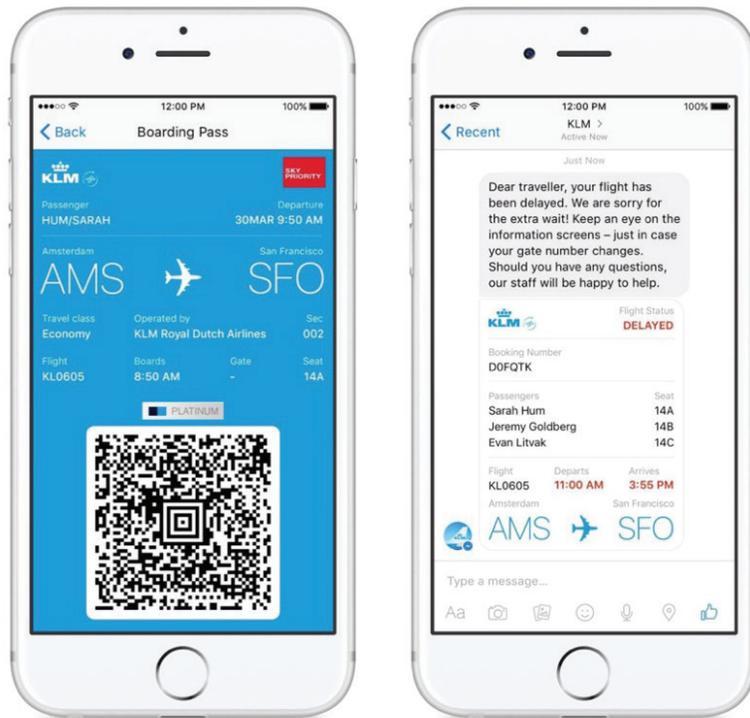
Source: consumermediallc.com
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FIGURE 9: *Components of Group Travel Planning*

Plan together. Pay together.

Discover, discuss, and organize trip ideas together.

Collect money and deposits to cover trip expenses.

Build awesome mobile-friendly itineraries in minutes

Source: travefy.com
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Use Case 3

Social listening involves monitoring digital Internet channels to understand consumer behavior and preferences, as well as to determine the public's perception of a company

and how a company compares to its competitors. Some big brands such as Pitney-Bowes and AT&T use this approach.

What you listen to and process depends on what questions you are trying to answer. An air travel services provider targeting the top 10 airlines in the U.S. asked the following questions around social interaction[4]:

- Is there a relationship between engagement on social media and consumer sentiment toward an airline?

- Which airlines have the highest positive and negative sentiment on social media, and how do their methods differ from those of their competitors?

- What are the challenges airlines need to overcome in order to maintain a successful customer service program on social media?

- How can airlines utilize insights gained from social data in order to inform customer service strategy?

A different suite of questions, and tailored monitoring, requiring different analysis, was developed when comparing Budweiser to Sam Adams beer.

Game-Changing Trend 4 – Augmented and Virtual Reality: *Total Recall* Realized?

Though virtual reality (VR) and augmented reality (AR) have similar names, they play significantly different roles in the travel value chain (TVC).

VR is the total sensory immersion experience. Through a VR device, the user sees everything around them as if they were in the location specified. Early adopters in the travel space include Qantas Airlines, which launched a pilot program that provides travelers with 3D viewers so they can experience key Australian destinations as if they were there in person. Similarly, Marriott has developed VR applications to make travelers feel like they are in downtown London, the beaches in Hawaii, or other locales (see Figure 10). Thomas Cook is testing whether virtual reality tours could be used to showcase experience-related products and lead to conversions. To promote tourism, the South African Tourist Agency has developed VR content that allows the potential traveler to experience the highlights of visits to markets and beaches, shark diving, kitesurfing and paragliding. Clearly VR will have the greatest value in the dreaming and shopping phases of the TVC (see Figure 15).

The low cost of new viewing devices makes VR easily accessible by the masses. Google's cardboard VR viewer will sell for less than $20. More expensive units such as Microsoft's yet to be released HoloLens and Facebook's Oculus Rift will be about $600 with other units costing between $100 and $3,000.

AR is best described as an intelligent overlay to a screen (or sign). Quite simply it is just a picture viewer that has relevant information added to the screen display (see Figure 11). The background is in real time. The AR system recognizes the area and overlays relevant local information. This would be very valuable on tours, when coming to a new area,

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4) crimsonhexagon.com

museums, art galleries, etc. Unfortunately, AR is limited by the completeness of reference photographs and the overlay information.

AR is most effective in the experience phase of the travel value chain and in addition to being informative; it could be extended as a platform to enable merchants to offer goods and services by inserting commercial content into the AR experience.

AR and VR have significant potential; however, since neither leads directly to a booking, developing a business case could be challenging. These technologies definitely have a place in the future but travel companies have to make them work.

FIGURE 10: *Marriott's Virtual Reality Experience*
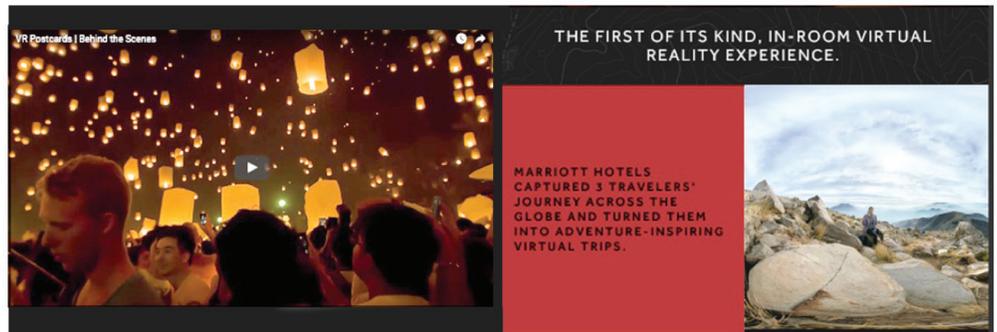
Source: marriott.com
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FIGURE 11: *Augmented Reality Example*
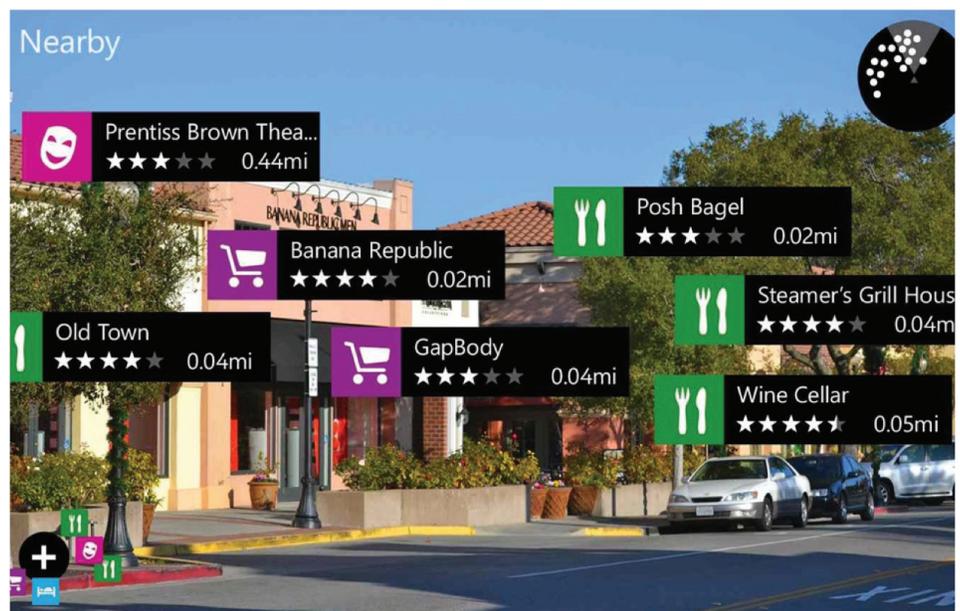
Source: thedigitalmarketingbureau.com
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Game-Changing Trend 5 – Messaging: The New Old

Although we may not realize it, we are attuned to messaging as part of our daily lives. Messaging in forms such as notifications, alerts, text messages, and responses to intelligent queries are all examples of messaging apps. In metropolitan China, 54% of online adults use mobile messaging apps daily. In the U.S., where we are not used to shopping with messaging apps, this number is only 22%.[5] By contrast messaging is quite popular in the rest of the world (see Figure 12 for global messaging activity).

FIGURE 12: *Global Messaging App Penetration*

Chat Apps & Their Users

1 billion use WhatsApp[1]

800 million use Facebook Messenger[2]

700 million use WeChat (Weixin) [3]

275 million use kik[4]

200 million use Snapchat[5]

1. https://blog.whatsapp.com/616/One-billion
2. http://newsroom.fb.com/news/2016/01/heres-to-2016-with-messenger/
3. http://www.statista.com/statistics/255778/number-of-active-wechat-messenger-accounts/
4. http://techcrunch.com/2016/02/02/what-is-this-a-gif-for-brands/?ncid=rss
5. Snapchat users June 2015: http://www.adweek.com/socialtimes/snapchat-is-the-fastest-growing-social-network-infograph-ic/624116

Source: WhatsApp, Facebook, statista.com, TechCrunch, adweek.com
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In China, consumers can use WeChat to check into hotel rooms, schedule doctor's appointments and track prescriptions, buy train tickets, pay school tuition fees and order items for delivery. Figure 13 shows the sequence when using messaging to order from a mobile device.

There are several factors that would indicate a potential upsurge in messaging outside of Asia. These include:

1) The rise of intelligent agents: Ask Google, Siri and Cortana which are messaging platforms that use cognitive computing to respond to message queries from users. The responses are in the form of messages (or web pages depending on the source of content)

2) Increasing use of the mobile device as the primary means of sending queries and receiving a reply

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5) Evelyn Cheng, "Texting apps are doing more than just sending messages," CNBC.com (April 16, 2014).

3) Growth in the use of messages with in-car systems to communicate and query

4) Proliferation of online chat as part of the customer service process
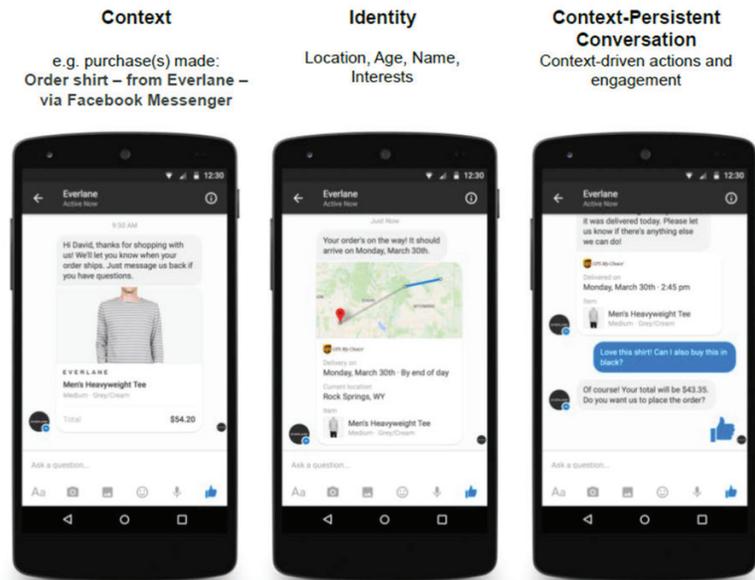
Source: Kleiner Perkins Caulfield Byers
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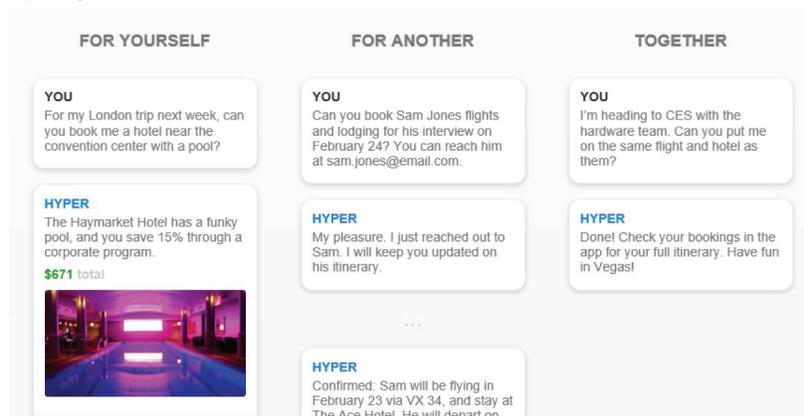
Figure 14 from the Hyper Travel Company shows what message-based reservation exchanges might look like.

Source: usehyper.com
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Gaining Momentum/Pivoting Trend 1 – Quality Digital Experiences = Customer Loyalty

Today's marketers are focused on acquiring new customers rather than recognizing the lifetime value of their existing ones. A recent Forbes/Sitecore survey[6] of 312 senior executives from North America found that only 38% focused on repeat customers while 49% concentrated on new customer acquisition. Only 58% calculate average customer lifetime value (CLV) regularly, 18% have plans to calculate it and 24% have no plans to calculate CLV or don't know it; 47% do not know the maximum potential of their customer's lifetime value.

FIGURE 15: *The Travel Value Chain (TVC)*

Source: Phocuswright Inc.
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In the travel business the goal should be to use digital technology to provide shopping and traveling experiences that engender loyalty. This is an incredible opportunity in the travel distribution channel and should pit suppliers against OTAs, travel agents, tour operators and travel management companies.

For those who are successful, the payoff can be substantial. Expedia shifted from its sole focus on transactions to also knowing and servicing its customers' needs. This involved building a database to develop a single view of the customer and using that view to provide custom content and offers. Expedia did not stop there. It developed an app to provide the traveler with information such as schedule changes and flight delays throughout the journey. This customer focus resulted in 24% revenue growth in Q2 of 2014[7] mostly attributed to repeat shopping and booking. More recently, Hotel Urbano, a leading Brazilian OTA, has used digital tools to realize a 34% higher return in ad spend.[8]

Expedia's experience is just the tip of the iceberg. In travel much of the focus has been on the transaction since that is where the money is. Other parts of the TVC need to be self-sufficient through ancillary sales or advertising or should be subsidized by the booking fee, commissions or incentives.

Then there is the question of who should provision customer value throughout the TVC. Interestingly enough the customer has the most trust in the supplier since they are the ultimate service deliverers;[9] however, there is not any indication that suppliers will step up to the plate beyond their area of service responsibility (the hotelier for the hotel, the airline for flying, etc.).

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6) "Customers for Life," Forbes Insights (2014).
7) Ibid.
8) "Hotel Urbano Makes More Vacations Happen With Dynamic Remarketing," Think With Google (September 2014).
9) "Customer Experience In Hospitality: Embrace Customer Data And Elevate The Guest Experience," Forrester (November 2015).

Customer needs are multifaceted, as are their devices (see Figure 16). Their digital infor-
mation needs should be satisfied consistently across devices. Data entered on a desktop,
for example, should be available (without rekeying) on a mobile device or a digital watch.
The more a travel company can meet these needs, the greater the customer loyalty and
lifetime value.

FIGURE 16: *Examples of Customer Digital Needs*

Stage	Customer Needs
Dream	Destinations that fit his/her lifestyle, travel history, family circumstance, budget, social needs
Search	Choice, price transparency and flexibility to mix and match, social media recommendations. Search requires both web search and deep links into apps that contain relevant data
Shop	Tools that aggregate contextualized content, provide accurate price comparisons and minimize the hours it takes today to shop for travel
Buy	Accept multiple forms of currency, change/cancellation/refund rules, travel insurance, medical emergency repatriation and in destination activity bookings
Experience	Parking, gate and security line information, airport merchant offers. In destination information, transportation, Uber, things to do and see, in destination booking, places to eat and party.
Share	Dialogs and postings on social media

Source: Phocuswright Inc.
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Gaining Momentum/Pivoting Trend 2 – "Uberization" of the World

Whether you call it the sharing economy, collaborative consumption, peer to peer (PtoP)
or "Uberization,"[10] this phenomenon is not a new trend. It existed long before Uber and
Airbnb with initiatives such as eBay, Craigslist, PayPal and VRBO, but it continues to chal-
lenge the status quo.

There are many barriers to a totally free market.[11] But these barriers are being challenged
and are falling one by one. At the same time, established travel businesses – including
airlines (e.g., American Airlines, Alaska Airlines, Southwest and Brussels Airlines) and ho-
tels (e.g., Starwood, Hilton and IHG) – are beginning to embrace "Uberized" services and
include them in their product offerings.

Figure 17 shows successful categories and brands for PtoP services, although not all of
these start-ups are still standing today.

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10) "Uberization" is the alignment of supply including excess capacity and demand in a free market
enabled by the Internet.
11) Over the years, we, as a society have developed norms that restrict the free market. One example is
the limited number of taxi licenses (medallions) in New York City. This limited supply kept fares artificially
high and created a secondary market for medallions. "Uberization" substantially devalued this second-
ary market and enabled expanded availability of on-demand transportation. Another example is the
short-term housing market where property owners (or lease holders) desire to rent some or all of their
lodging facilities on a short-term basis but are thwarted by local zoning or land use laws.

FIGURE 17: *The Sharing Economy Circa March 2015...*
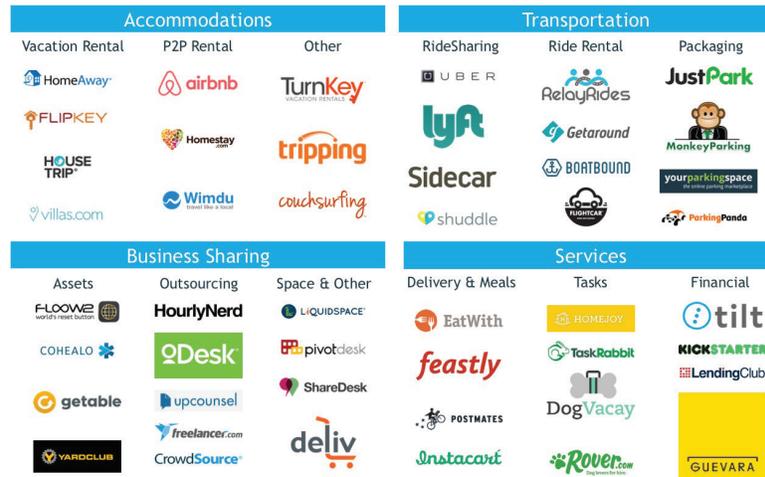
Source: collaborativeeconomy.com
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TMCs, OTAs and travel agents enjoy a special place in the travel value chain, due to corporate contracts and trust by travel purchasers. This unique positioning is being threatened by the alternatives of the sharing economy with new intermediaries and new business models.

The sharing economy has the tools to not only shift share from commercial providers but to expand the marketplace providing new products and services. In Texas, for example, sharing economy organizers are providing "Uber" pickup trucks for people who don't have the right vehicle to transport larger loads.

The sharing economy and the "Uberization" of the world represent substantial erosion of current travel transaction revenues (share shift) as well as opportunities for new products and services. The growth is far greater than expected and is indicative of latent demand.

Consider these factoids:

• During 2015 people steadily moved from taxis and rental cars to Uber services. By year's end 41% of business travelers used Uber services versus 39% for rental cars and 20% for taxis.[12]

• Airbnb usage is also popular among business travelers, with a 2015 annual growth rate of 261% domestically and 249% internationally.[13]

There are still opportunities in PtoP. For example:

1) Traditional intermediaries succeed by providing a world-class suite of service alternatives to their travelers. It is time that these alternatives include "Uberized" services. Uber has an open Application Program Interface (API) that provides easy access to Uber's content. This API facilitate linking Uber service offerings with the intermediary's systems.

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12) "Certify Releases its Third Annual SpendSmart Report on Current Business Travel Spending Trends," Certify press release (Jan. 21, 2015).
13) Ibid.

2) The PtoP marketplace has many new competing services making it difficult for the traveler to find the best one. This is a great opportunity for metasearch (such as Stay22) to catalog and present the various alternatives.

Gaining Momentum/Pivoting Trend 3 – Contextualization: Best When Taken with Personalization and Customization

In last year's trends we discussed "a market of one" – a highly personalized approach to customer service.

That direction is definitely underway. One success story is Vegas.com, which engaged Canopy Labs to personalize its email marketing. The Canopy platform automatically generates tour and general attraction recommendations for each email recipient. The result was a 28% increase in revenue per email. Personalization is still at the forefront of priorities for over 6,000 business professionals across multiple industries surveyed by Econsultancy.

But, personalization is not enough. The customer's context must be used to deliver relevant content. Contextualization involves recognizing three types of data that provide a relevant digital experience to customers:

1) Profile: Who the customer is and what are their online behaviors

2) History: What the customer did in the past

3) Situation: What is happening to the customer now

A traveler en route to Chicago does not need Las Vegas dining recommendations. A person in their hotel room in Seattle does not need airport transportation alternatives for San Francisco. When eating at a high-end restaurant, a traveler does not want (or need) pizza coupons. When you look at the customer digital experience, personalization without context only delivers part of the opportunity.

Gaining Momentum/Pivoting Trend 4 – Traditional Travel Distribution: Death by a Thousand Cuts

The global distribution system (GDS) model has served the travel industry for well over four decades. GDSs were the aggregation points that provided one-stop shopping for travel services. The GDS model was augmented by switches such as Pegasus, which converted content to a standard format. Due to the complexities and high (in the 1970s) cost of the aggregation and switch technology, travel companies were dependent on the content in the GDSs. But while the core GDS services have changed little, the technology and capabilities GDS enables have undergone major changes. Mobile has grown substantially; cost of storage and computing power have dropped and are available as cloud services or in a dedicated data center. The frequency of the "cuts" is increasing.

Some examples:

Air Distribution

IATA, working with several airlines, technology suppliers and an airline industry advocacy group, Open Axis, has established a new messaging standard (New Distribution Capability [NDC] 787) that supports connectivity from points of sale or intermediaries using new (XML) technology that is widely employed in other industries.

Lufthansa has taken advantage of its dominant European position to add a €16 surcharge to the cost of bookings made through the GDS without changing the cost of booking direct with Lufthansa. If Lufthansa succeeds then it is likely that other airlines will follow suit.

Lufthansa is using the NDC787 technology to provide the connectivity from the point of sale directly to Lufthansa. So far Lufthansa has Google Flights, Hogg Robinson, AER Ticket, FTI-Ticketshop, Lufthansa City Center (a business travel agency) and tour operators L'Tur and Vtours using the direct connect technology to either test or implement NDC787 to bypass the GDS.[14]

As the airline ancillary products (e.g., prefunded baggage check, one-day lounge pass, onboard movie, and over 135 more) proliferate, NDC787 will enable improved connectivity between suppliers and intermediaries providing access to these products at the point of sale.

Hospitality

1) The use cases in Trend 3 showed two scenarios for TripAdvisor: a traditional distributed booking model and "Instant Booking" where the shopping is done on TripAdvisor and the booking made through TripAdvisor directly with the property, bypassing the GDS.

2) Expedia is changing the business model for page placement through a "bid for position" approach where page placement in an online search is based on the amount of commission the property wants to pay. (Note: This is not a new concept. Booking.com has been using it for over 25 years. The uptake by Expedia simply adds weight to the concept.)

The travel industry is on the cusp of change. A July 2014 study by Tnooz and Amadeus indicated that travel company respondents considered disruption as the new norm. Figure 18 shows the results of the survey. It should be noted that almost three quarters (73.3%) thought the disruption would be more of an evolution than a revolution.
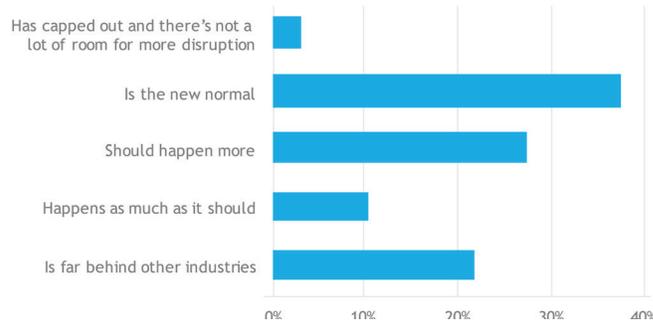
Disruption (More "Cuts") is Here to Stay

Change is in the air. Wherever there are large costs like GDS and bankcard transaction fees, then there will be efforts to reduce or eliminate them. After a long successful run, GDSs are facing some major challenges from alternate business models and new technology.

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12) "Lufthansa Group successfully positions distribution strategy in the market," Lufthansa Group press release (March 10, 2016).

FIGURE 18: *Disruption Survey Results*

Disruption is the new normal
Question #7: What best completes this statement: Disruption in the travel industry...

Response	
Has capped out and there's not a lot of room for more disruption	
Is the new normal	
Should happen more	
Happens as much as it should	
Is far behind other industries	

0%　10%　20%　30%　40%

Source: tnooz
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Conclusion: Pursuing Meaningful Innovation

This is not a case of "gentlemen, start your engines" but rather a case of adding nitro to your fuel system, getting out of the complacency of being in the middle of the pack and striking for the checkered flag with a solid foundation from the past to the incredible set of opportunities that is in the future. Innovation for innovation's sake is a mistake that many companies make. It is not enough to put a bunch of bright employees in a room and tell them to invent the future. Your innovation investment must take a portfolio approach that addresses the following three time horizons:

1) Short-term projects that yield minimal value should be directed at improving existing operations.

2) Projects with a longer horizon should be focused on enabling business leaders to develop new revenue opportunities.

3) Innovation that will lead your company into the future.

Companies participating in the Phocuswright Travel Innovation Summit have raised over US$1.8 billion in investment funding since 2008 alone. With this kind of investment, there is ample opportunity to develop a totally disruptive innovation that could redefine your future business.

Travel is the world's largest business. It will continue to draw investors hoping that someday they will get to second base if not hitting a home run.

If you don't invent the future, someone else will.

One thing that is inevitable is change. The array of new technologies, lower technology acquisition costs and cloud services that are available to today's businesses remove or reduce many barriers to innovation, leaving management to deal with vision, insight, market understanding, the "art of the possible" and risk tolerance. Travel companies have to define their paths going forward. They can lead, follow or get out of the way.

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