

sabre labs

# HOSPITALITY EXECUTIVE SUMMARY

2018 EMERGING TECHNOLOGY  
IN TRAVEL REPORT

**Sabre**



# NOTE FROM LABS

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There are countless ways to segment the digital landscape, but for 2018 Sabre Labs has chosen automation, authenticity and blockchain as three threads which, when woven together, give us a way to talk about a broad array of technologies.

In addition to the full [Emerging Technology in Travel](#) report, we've prepared executive summaries distilling core concepts and content targeted for three key industry segments: airlines, hotels and agencies.

Hoteliers face an incredibly complex distribution landscape, but new technologies and platforms are providing increasingly sophisticated tools to share content and connect with guests. Hotels are well positioned to leverage emerging technologies to provide personalized engagement to minimize traveler friction and maximize memorable experiences.

***This executive summary provides hoteliers recommendations for action now and over the next few years.*** But the summary and full report are not intended to be the final word on any of these trends; rather, this is a starting point for discussion. Please reach out to the Sabre Labs team to begin a conversation about how new technologies can be used to improve how we enable people to move through and experience the world.



Philip Likens, Sabre Labs Director  
and the rest of the Sabre Labs team



# AUTOMATION

For most of history, automation focused on physical tasks. Today, new technologies spurred by advances in artificial intelligence are automating mental tasks as well, changing the landscape of employment and the future of work in dramatic ways.

## TOP KEY TAKEAWAYS FROM THE FULL REPORT

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**1 ADAPTABILITY IS ESSENTIAL TO THRIVE ALONGSIDE AUTOMATION.** *Businesses need to shift their focus from jobs and roles to tasks and skills. Studies on the near-term effects of automation (by [McKinsey Global Institute](#) and [PwC Global](#), among others) forecast massive change in the tasks that make up present day jobs, predicting half of all current tasks could be automated by 2030. The focus on task automation is important—in most cases, the same set of skills can be applied to accomplish a wide variety of tasks.*

❑ **Hoteliers should hire for adaptability and human connection.** The ability to use current skills to complete new tasks and an ability to embrace change are essential to increasing tenure and job satisfaction. Soft skills, such as the ability to interact well and build connections with other humans are some of the hardest skills to automate and should be increasingly prioritized in hiring decisions.

❑ **Human intuition works where data is sparse.** Human staff can be trained to provide excellent, personalized service without needing a lot of prior context. This is in contrast with algorithms which rely on having extensive personal data to customize recommendations. Human engagement skills are especially valuable for new guests and for guests who choose to restrict access to personal data.

❑ **Physical automation is here for some things, but not everything.** Moving objects around—whether guest bags or a breakfast tray—is relatively easy to automate. Room service robots exist already, so delivery-focused staff may need to be retasked or retrained. In contrast, variable tasks requiring high adaptability will be very slow to automate. Tasks like making a bed or cleaning all the surfaces in a bathroom are easy for a human but very difficult for a robot.

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**2 EMBRACE THE STRENGTHS AND LIMITATIONS OF ARTIFICIAL INTELLIGENCE.** *Today, most automation of mental tasks uses an AI technique called “machine learning,” where an algorithm applies a data set or rules to iteratively improve its performance at an explicit task. Data-driven tasks like image recognition and optimizing pricing are ideal for machine learning. Creative tasks and human engagement tasks are outside the optimal scope of current AI.*

❑ **Make use of existing AI platforms to streamline business processes.** Hoteliers don’t necessarily need to build custom AI tools, or even use industry-specific tools. [Narrative Science](#) automates turning data points into stories to help make quantitative trends more accessible. [Cogito](#) augments emotional intelligence for service interactions. A host of other AI-driven business tools are available to augment humans to improve decision making and customer engagement.

❑ **Real-time translation expands the reach of guest service.** Automation can help flatten global access to guest services. For instance, as real-time text and voice translation improves, knowledgeable support staff can increasingly be located anywhere in the world to help with bookings and guest requests without concern for accents or language barriers. Real-time translation is also being tested for face-to-face engagement.

❑ **Chatbots offer near-term, high-efficiency solutions to augment existing human expertise.** Hotels can incorporate chatbots in various ways, whether as part of a booking tool, or as service and support. The digital concierge model allows a chatbot to partner with a human concierge to increase time for direct interaction with guests; the chatbot responds to basic requests and hands off to the human when higher expertise or customization is required.

❑ **Sentiment analysis algorithms can improve service.** AIs are being used to analyze peoples’ moods based on both spoken and written language. Sentiment analysis can alert a staff member when a guest is frustrated, upset, excited, pleased, etc., helping provide additional context to anticipate and meet guests’ needs.

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**3 EXPLOSIVE GROWTH OF SENSORS AND DATA HAS LONG-TERM OPPORTUNITIES AND CHALLENGES.** *Data fuels most current machine learning algorithms, but there’s not yet a clear understanding of what we may learn from the data, or how to adequately secure individual devices and data streams for the long-term. Prioritization of security and privacy issues varies by region, but it’s essential to be planning now for long-term effects.*

❑ **“Smart” and “dumb” guest rooms may soon be desired options.** Some guests may want smart rooms with voice assistants and other connected devices. They may also be willing to provide hotels access to personal data if they believe it will improve personalization, data such as biometrics from fitness trackers and environmental data from home thermostats. Other guests may not want any of their data tracked or stored and may start looking for guarantees of sensor-free rooms. These room features won’t be needed in every hotel, but may become a powerful differentiator, empowering guests to choose the data footprint they leave behind.

❑ **Leverage local strengths in deploying automated solutions.** Global adoption of digital automation is very uneven, so be skeptical of any “one-size-fits-all” approach. Using a software algorithm or a physical robot to automate a task only makes sense when it’s more efficient than the human alternative. Automation of digital and physical tasks will be much slower in regions with low wages and/or inconsistent digital infrastructure (unreliable power or Internet access). In developed nations, automation is happening much more rapidly, but even there the specific tech and software platforms being adopted vary tremendously from region to region.



# AUTHENTICITY

“Authenticity” has emerged as a buzzword across culture; in travel, it translates to a desire for trusted, reliable experiences and a more personal connection with people and places. In the digital age, the rise of information overload, fake content and intangible assets are increasing the premium placed on simplicity, certainty and trust.

## TOP KEY TAKEAWAYS FROM THE FULL REPORT

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**1** **NOVELTY CANNOT BE OVERVALUED.** *The claim “experiences matter more than products” plays out throughout the travel ecosystem, especially for Millennials and Gen Z travelers. We’re seeing a continued growth of exclusive experiences, made more desirable by their scarcity. There’s also a parallel opportunity to embrace local uniqueness.*

❑ **Be aware of local experience offerings on new technology platforms.** [EatWith](#), [Vayable](#), [Triple](#), and [Airbnb Experiences](#) (among many others), are platforms helping connect travelers to locals who are passionate experts in niche areas. The diversity of local offerings goes way beyond what’s in the tour books, often focusing on interests like lifestyle diets, cultural movements, social activism and hobbyist communities. Hotel staff—especially the concierge—should familiarize themselves with local offerings on these platforms to suggest more personalized experiences to guests.

❑ **Dedicate a few room to niche experiences.** Consider experimenting with a few rooms dedicated to different kinds of guest experiences. Trends like “digital detox” rooms without TVs or WiFi access but with books and board games are a low-investment way to offer guests a different kind of experience. Consider niche trends that make sense for your market and target demographics.

❑ **In-room VR is an opportunity for guest engagement.** VR content for hotels exists but is still relatively niche; economically, content creation is probably best used to promote top-tier offerings. However, hotels are ideally positioned to offer in-room VR to travelers, either as an upsell or a status benefit. Hotel rooms offer a safe space and time for travelers to explore content they might never get to at home. Standalone VR headsets debuting this year, notably the [Oculus Go](#) and the [Lenovo Mirage Solo](#), reduce costs and simplify barriers to entry. Loaned headsets are also an opportunity for hotels to form partnerships featuring local content, helping travelers connect more deeply to a place and have additional reasons to return. VR gives the viewer autonomy to control their experience (where to look and for how long), which instills authenticity and builds trust.



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## 2 **THERE'S NO SHORTCUT TO PHYSICAL PRESENCE.** *Travel has a tremendous authenticity advantage over most industries because in the end, it's all about the physical world—about experiencing places and engaging with people firsthand.*

### ❑ **Context is essential for personalization to be effective.**

The same guest at the same hotel will have different goals and engagement expectations for a one-night business trip vs. a long-weekend trip with family. Options like online check-in and digital room keys are increasingly enabling hotels to allow travelers to choose their level of human interaction for each trip, helping signal to the hotelier the appropriate level for engaging the traveler before, during and after their stay.

### ❑ **Hire for and train staff to provide personal context.**

The broadening appeal of boutique hotels and niche brands is a trend embracing diverse neighborhoods, historic architecture, and local culture. Every hotel, whether brand new or 500 years old, has an opportunity to train staff to provide a positive, memorable experience. Staff with local roots may be particularly valuable to provide personal experience and historic context for guests.

### ❑ **Digital check-in and room keys can empower travelers.**

Giving guests the option to skip human interaction can make them feel more in control of their stay, especially when in a hurry. Options like the ability to schedule their room cleaning can further increase that sense of empowerment and customization. Along with these tools comes staff training in new scenarios like how to handle a stay extension on a room that has been preselected by another guest.

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## 3 **TRUSTED BRANDS ARE MORE IMPORTANT THAN EVER.** *Gartner predicts that by 2022, “the majority of individuals in mature economies will consume more false information than true information.” To combat this rise, personal filters must be increasingly rigorous. Trusted brands and safe spaces provide people the luxury of mental rest and time off from constant skepticism.*

❑ **Brands that maintain robust traveler profiles will have an advantage.** Algorithmic analysis of stay history, spending, preferences and other background data can consolidate quick insights to empower front-of-house staff to know how best to relate to each guest. A fully-integrated, unified view of each guest, available across all systems and guest touchpoints, maximizes the opportunity to provide a personalized guest experience.

❑ **Social media influencers are a viable option for authentic visibility.** Alongside enabling embedded connections, social platforms enable sharing broadly. Personal experience is the highest commodity in travel, and an increasing use of key influencers on platforms like WeChat, Instagram and Snapchat is a way for hotels to reach key audiences, especially younger guests. Unfiltered reviews—from both travel celebrities and

non-professionals—are the validation of success or failure and a strong driver of brand impressions and future bookings.

❑ **Rapid response and transparency are essential.** The digital age accelerates the realization of risks and rewards. Negative press is often viral and almost always separated from context. This makes it especially important for hotels to address both opportunities and potential problems quickly, proactively and transparently. Responding in person to a guest who's posting on Twitter or Instagram is an opportunity to create a positive experience while they are still onsite, and before lasting impressions are widely shared. Cultivating a public presence as open, honest and always ready to change for the better can become self-reinforcing; it will benefit the brand, its employees and its guests.



# BLOCKCHAIN

Blockchain headlines have been focused on the rollercoaster rise of Bitcoin and other cryptocurrencies, but the real world use cases are much broader. And it's the broader use cases for blockchain as a technology which have the greatest potential impact on hotels and the travel industry at large.

## TOP KEY TAKEAWAYS FROM THE FULL REPORT

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**1 SABRE LABS EXPLAINS BLOCKCHAIN.** *Blockchains are a way of storing a record of any kind of value—a monetary unit, a deed, a vote, an image, an airline ticket, a hotel room, a biometric identity, etc. And for those values, blockchains create scarcity, allow shared oversight, and instill permanence.*

❑ **Invest the time necessary to understand why blockchain may be important.** There's a lot of hype and misinformation around blockchain, but the best antidote to being caught up in hype is knowledge and experience. Understanding blockchain can be a steep learning curve, so it's important for hoteliers to start now. Being informed is being prepared to make wise strategic decisions. If you need a solid, accessible primer the blockchain section of the [Emerging Technology in Travel](#) report is worthwhile reading.

❑ **Be thinking now about use cases where your business could benefit from data that should be scarce, shared and permanent.** Blockchain isn't magic, it's just a new tool to put in the toolbox of transaction and data storage solutions. That said, as a tool, it's distinct from other tools, so it makes new kinds of solutions possible. Once you understand the core features of blockchain it's possible to start to strategize about how it might be useful in the future for your business.

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**2** **BLOCKCHAIN IS VERY EARLY IN ITS DEVELOPMENT, BUT REGULATION IS BEGINNING TO RAMP UP.** *It's widely agreed blockchain is in its infancy; community support for blockchain protocols is not as robust as it is in more traditional areas of programming (limited developer support, content libraries, FAQs, etc.) It's also unclear which protocols will have lasting viability. However, blockchain is at a turning point where it's moving into the mainstream and receiving heightened visibility, including by governments. Prediction: in 2018, the hype and headlines will remain dominated by cryptocurrencies but the discussion will shift to focus on regulation and its role in long-term growth and adoption.*

❑ **Assign a specific person in your organization to follow blockchain-related news.** The environment around blockchain is fast-moving and volatile, so rather than piecemeal headlines from many sources, it may be worth tasking one or two specific, tech-savvy individuals in your organization to follow blockchain and think about its potential effects. Over the last year, government regulation has been almost as volatile as the cryptocurrency market itself, with governments taking very different positions on blockchain (some banning cryptocurrencies entirely, some embracing blockchain development, and many in the middle). And governments are daily changing their positions as the technology evolves. Sabre Labs makes specific predictions for 2018 regulatory trends in our full report.

❑ **Be wise in where and how and with whom you partner and share data.** If you choose to experiment or participate in a blockchain project, do due diligence on the partner organizations. Blockchain doesn't eliminate the need to trust people; it just shifts where trust is placed. In many cases, the permanence of blockchain records and the difficulty in changing underlying structures once implemented could be a challenge and a liability, especially until we have a deeper understanding of how regulatory issues will evolve.

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**3** **BLOCKCHAIN IS NOT A ONE-SIZE-FITS ALL TECHNOLOGY;** *public, permissioned and private blockchains each have their uses. Appropriately scoping a problem to be solved by blockchain requires an understanding of the various options. Within those broad structures, the need to trust and collaborate with humans remains essential.*

❑ **Ethereum and Hyperledger are the most viable platforms for experimentation.** There are many different blockchain platforms, each with different underlying features. And any blockchain is only as useful as the community that supports it. Right now, [Ethereum](#) and [Hyperledger](#) are the two open platforms with the highest community investment of people, time, ideas and resources. Many of the world's largest businesses across many industries are supporting and experimenting with both. Any business wanting to experiment with blockchain should look into these two platforms as a starting point for exploration. Even just learning the differences between these two platforms is an education in the breadth of how blockchains can be structured. Sabre Labs has experimented with both Ethereum and Hyperledger and continues to explore these and other blockchain platforms.

❑ **Understand the differences in how blockchains can be structured.** Public blockchain solutions have shared infrastructure open to all participants: anyone who wants to can run a node (hosting a copy of the blockchain and validating transactions), anyone can use the blockchain, and anyone can read values from it. But there are real-world challenges to using public blockchains for enterprise solutions. Permissioned and private blockchains retain many of the core features of public blockchains but can be applied to enterprise-level solutions while avoiding many of the current drawbacks of public blockchains.