



# Building “What’s Next” in Travel and Hospitality

How travel and hospitality companies are innovating through disruption





## About AWS Travel and Hospitality

AWS Travel and Hospitality is the global industry practice for Amazon Web Services (AWS), with a charter to support customers as they accelerate cloud adoption.

Companies around the world, across every segment of the travel and hospitality industry - and of every size - run on AWS. This includes industry leaders like Airbnb, Amtrak, Avis Budget Group, Best Western, Choice Hotels, Changi Airport Group, Carnival, DoorDash, Dunkin' Brands, Expedia Group, Korean Air, McDonald's, Ryanair, SiteMinder, Sysco, Toast, United Airlines, and Wyndham Hotels. These companies and many others are transforming their business by leveraging technology to enhance customer experiences and increase operational efficiency.

For more information about AWS Travel and Hospitality, please visit [aws.com/travel](https://aws.com/travel).

Keep up-to-date with executive insights and industry viewpoints at the AWS Travel and Hospitality [Blog](#). Click [here](#) to be contacted by an AWS representative.

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Chapter 1

Building *What's Next*



## Building What's Next in Travel and Hospitality on AWS

By Phil Le-Brun, Enterprise Strategist, AWS

### Identify and Capitalize on What's Next in Travel and Hospitality

"The best way to predict your future is to create it."

—Abraham Lincoln

In last year's AWS Travel & Hospitality "[Building Resilience for the Long Run](#)," eBook I wrote about consistently, unflinchingly committing to best practices during an event which became a generational disruptor. Survival was the order of the day. Companies grappled to preserve liquidity while attempting to navigate the crisis.

While companies vied with cost control, customers didn't relax their expectations. No, they demanded fast responses from airlines, restaurants, and hotels on such specific needs as refunds, deliveries, and clarification on changing rules.

Whilst too early to draw a line under this tumultuous event, we can look back on what we've learned, and forward to what we can achieve. Success will belong to those who capitalise on these learnings and grab the future with vigour and agility. Yes, the cloud features here, but it is a combination of culture, leadership, and technology which has differentiated companies' progression through the pandemic.

The crisis was a wake-up call to many that customer-obsessed decision-making triumphs over slow, introspective organisations. It's not just about reacting to crises, but about continually responding to and delighting your customers.

Last summer I was delighted to talk to Peter Hinssen, an author and serial entrepreneur. Peter doesn't make wild predictions about the next magical technology, rather he deeply considers topics such as business fragility and agility, two sides of the same coin.

These, and other elements of Peter's perspective such as creativity, velocity, and experimentation, are all elements which AWS embraces as essential to any modern company's operating model. He challenged the popular notion of the "New Normal."

He used this as the title of one of his books in 2010, but now prefers the term "the never normal," a reflection of our own beliefs that agility is the competitive advantage companies need to strive for.

### Finding Common Threads of Success in Enterprise Leadership

We have been privileged to talk to thousands of C-Suite leaders during the pandemic. Their ability to rapidly deliver solutions was amazing. In the industry I have the most affinity to, restaurants, the pivot to delivery was notable. Examples abound: [Domino's Pizza Enterprises'](#) Project 3TEN using Machine Learning to predict and rapidly delivery pizzas safely to their customers, [McDonald's](#) brisk scaling of home delivery to over 30,000 restaurants, and [Taco Bell](#) enabling delivery using AWS serverless technology to minimise unnecessary infrastructure work and cost.

The use of technology was impressive, but another theme also caught my attention: a different style of leadership, one that liberates employee potential, promotes customer-centricity, and sets bold goals. These are the hallmark characteristics we look for in our own leaders at AWS. These leaders are ones who understand that the solution to uncertainty and volatility is a stubborn vision executed through experimentation. They are leaders who get that value is delivered despite the organisational silos, not because of them. They have discovered through planning or circumstance that pushing decisions deeper down into their companies acted as an organisational force multiplier and a motivator for their employees.

They showed a deep level of concern for their customers and employees not just through the words they spoke, but through the actions they took. This could be seen at [Meliá Hotels International](#) with an innovative zero-contact check-in experience and [Korean Air](#) who went the extra mile to reassure customers about their health on flights. Seemingly simple changes which are so easily overlooked were applauded by customers as we saw with [Priceline's](#) automated Amazon Connect call-back feature used when lines were busy.

The mantra of "it takes a crisis to trigger change" held true, but what can we learn from the past to more deliberately power the future? Here are a few thoughts from talking to our customers.



**Phil Le-Brun**

Director, Enterprise Strategy

"These leaders are ones who understand that the solution to uncertainty and volatility is a stubborn vision executed through experimentation."

## Building What's Next in Travel and Hospitality on AWS (continued)

By Phil Le-Brun

### Innovate to Meet Evolving Customer Expectations and Needs

There is no returning to normal with your customers. A new bar on convenience has been set. Personalised, frictionless eCommerce is being embraced by demographics previously not engaged online. While we all hunger to get back to the physical world, much of this online uptick will remain such as premium meal delivery from restaurants and hotel's support of hybrid virtual-physical. What do your customers and employees really want? Not what do *you* really want them to want?

If you survived and thrived during the pandemic, you have likely adopted some element of a digital DNA whether consciously or not. You might identify with Amazon's Day One culture of customer obsession, high velocity decisions, and an aversion to inertia. Several customers remarked that decisions they have anguished over for years were executed in days. The enforced move to remote work is a common example, prompting companies to rethink how they engage with their own staff. These operating model changes need to be nurtured and embedded in your culture, fighting that desire to return to the status quo.

Companies do this by not being a prisoner of their org chart. Many of you brought together cross-functional teams to address pressing pandemic issues, a go-to solution when something is important because they work! Amazon turbocharges these decisions by assigning single-threaded leaders to these efforts, who wake up every morning thinking about just one goal. This might seem a luxury, but it forces an attitude of "out with the important, in with the critical." It's easy to declare priorities, harder to decide what not to do so teams can focus on driving success at speed. Knowing what really differentiates your business is key as Best Western recognised, rapidly deploying a multi-lingual Amazon Connect footprint to deliver exemplary customer service.

This is natural segue to the cloud. Electricity is critical to our businesses, but I haven't heard a single company make the case for why they need to generate their own electricity. The same is true with the cloud. Leaders who believe differently are more than likely a little confused about the business they are in and what the cloud actually is.

I've heard stories of companies who couldn't get into their data centre during the pandemic or suffered from the lack of investment in business continuity and compute elasticity. This doesn't need to be you. Recognising the cloud as a business enabler allows you to more focus on your guests and their needs.

This isn't just about stopping doing things; it's also about taking different approaches. For instance, talent will be at a premium as life returns to some semblance of normality. We are already seeing difficulties in recruitment as businesses reopen, just like before the pandemic. Where there aren't physical workplace constraints, look for talent in places you haven't looked before. Invest in automation whether in your functional departments or physical outlets to free up your employees to focus on the most valuable, differentiated activities. Look for opportunities to bring together data for machine learning experiments to reimagine areas of your business and embed a continual improvement mindset. Opportunities such as predictive maintenance and inventory forecasting can improve resilience, improve cash flow, and reduce manual processes. "I don't have time" is not a phrase customers are willing to accept from a company that lags their demands.

All of this comes together with bold, customer-led goals from leadership, clearly and regularly communicated. I've taken heart from how leaders have made communication a higher priority, not wrapped in ceremonies of formal gatherings to hear words of wisdom, but more in the genuine desire to regularly connect with employees at all levels. This inclusiveness is the new norm. The imposition of multiple management layers makes it difficult to tap into our employees' motivation and passion. The last year gave us no choice here, treating many more employees as leaders, giving them a voice in how work needed to get done.

Whether you are a restaurateur, hotelier, airliner, create related technology, or play another role altogether, you can reinvent the customer experience and your company in some of the most people-centric industries. Don't predict the future or wait for it to happen to you: create it. AWS, with customer obsession at our heart, stand ready to share learnings and to help you on your journey.

## Chapter 2

# State of the Industry



# State of the Industry

By David Peller, Managing Director, AWS Travel & Hospitality

## Where Does Travel and Hospitality Go from Here?

2021 is in full swing. And for many of us in the travel and hospitality industry, it could not have come soon enough. The past year was unprecedented in so many ways. At AWS, we observed first-hand the tenacity of the women and men across our industry, around the world, who serve tirelessly to make travelers and guests alike feel welcome, valued, and appreciated. Inspired by so many of their stories, in June of 2020 — in the midst of COVID-19 — AWS published its own guide to managing through the disruption, [“Building Resilience for the Long Run,”](#).

One year later, while change and uncertainty remain, things look much different. We now know more about the science of the pandemic and how to prevent its spread. Vaccines are being rolled out at varying degrees around the world. The industry is showing signs of life, with tourism campaigns launching, planes becoming more crowded, hotel occupancy rates inching back up and restaurants around the world increasing capacity. During this time, we’ve seen AWS customer able to respond quickly to rapidly changing demands due to the agility, cost savings, elasticity, innovation and the ability to go global, AWS provides. This is helping travel and hospitality customers of all sizes adopt to changing demands. It’s against this backdrop that we are releasing our follow up eBook: *“Building What’s Next in Travel and Hospitality”*.

## Disruptive Times Call for Extraordinary Measures

There are so many examples of travel and hospitality companies innovating in the face of disruption, some of which are highlighted in this eBook. One great example is [Star Alliance](#), the world’s largest airline alliance, who chose to go all-in on AWS. Star Alliance has been leveraging its AWS technologies to improve operational efficiency, while also using it to focus on health, cleanliness, safety, and improved customer experience during the coronavirus crisis. They credit AWS for helping the organization with resiliency and innovation and looks to AWS to help with future air travel efforts.

Another example is [Just Eat Takeaway](#), the largest food delivery company outside China. By building on AWS, Just Eat Takeaway was able to respond to spikes in demand and provide new and innovative ways to help its staff work from home and continue to onboard restaurants. This means their customers will have more choices than ever and as Just Eat Takeaway goes forward; they are confident they have a continuously dependable platform that enables them to innovate even as that scale and pace increases.

[Best Western](#), a hotels and resorts brand with 4,500+ locations worldwide, migrated its contact center to Amazon Connect in just one month amidst COVID-19. Their design allows Best Western to navigate various customer experiences across multiple languages, backend integrations, and build environments within the same contact flows, reducing management complexity by 51%. They also automated its prompt recording process by building dynamic messaging logic that supports 14 languages and 35+ countries, which reduced its annual telecom expense by \$200,000, eliminated associated hardware and moved agents to remote work environments. Now, when their guests return to travel, they’ll return to find a superior customer service experience.

None of these customers expected a global pandemic in 2020, but by building on AWS they were prepared to adapt quickly to whatever came and will be even more ready for the next disruption—whatever that may be.

Sometimes our customers need a little help to get to that point and that is where our AWS Partners come in. We recently launched an [AWS Travel and Hospitality Partner Competency](#) to connect companies to partners with a proven track record for success. You’ll see examples from many of these partners within this book, and many could serve as a great resource.



David Peller

Managing Director, AWS Travel & Hospitality

“We’ve seen many of our AWS Travel & Hospitality customers respond quickly to dynamic and changing demand, due in part to the agility, cost savings, elasticity, and innovative capabilities provided by AWS.”



# State of the Industry (continued)

By David Peller

## Effectively Identify and Adapt to Evolving Customer Needs

So many organizations across travel and hospitality have been forced to rethink how they conduct business. More so now than ever before, companies need to adjust quickly to evolving needs of customers. This includes enhancing customer experiences with ever-more sophisticated levels of personalization, delivering against emerging health and safety requirements, and optimizing their operations to maximize efficiency.

So, while we can't predict the future, we are certain companies will emerge stronger and the innovation born out of disruption will improve the way we fly, stay, eat, and experience the world in the years to come.

We hope you find this eBook insightful, and even get inspired to build on AWS or work with one of our partners. The pandemic's impact on the industry was remarkable. But even more remarkable is how travel and hospitality companies responded. Thanks to those efforts, when travelers and guests return, they will not just return to normal but return to a something better. Better operations. Better customer experience.

It's What's Next in Travel and Hospitality.

**“The pandemic’s impact on the industry was remarkable. But even more remarkable is how travel and hospitality companies responded.”**

**David Peller**

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**State of  
the Industry**

Accelerating  
Outcomes  
with Partners

AWS Customer  
Stories

Strategy and  
Deployment

Data

Smart Assets

Core Applications

Digital Customer  
Engagement

Cross-Amazon  
Opportunities

Chapter 3

# Accelerating Outcomes with AWS Partners



# Accelerating Outcomes with AWS Partners

By Florian Tinnus, Worldwide Partner Leader, AWS Travel and Hospitality

## Why AWS Partners Matter in Travel and Hospitality

When we talk to executives in travel and hospitality organizations about their move to the cloud, most always their desire to get there is "immediately." The immediate benefits of a pay-as-you-go model for operational efficiency and accelerated innovation are undeniable. When customers start to match desire with reality though, it becomes clear that a cloud migration strategy requires a combination of skills, resources, and experience that isn't immediately available in most organizations. Working backwards from the transition to a cloud-based environment, it helps to look at one key metric. "Time to value," to sum up the need to achieve cloud benefits as fast and effectively as possible.

Recognizing the importance of time to value, customers can rely on the [AWS Partner Network](#). AWS Partners leverage AWS to build solutions and services for customers. More than 90% of Fortune 100 companies, as well as a majority of Fortune 500 companies, use AWS Partner solutions and services. In a sense, partners provide the core advantage of elastic compute: The ability to scale resources up and down as workloads demand. Combine this with domain expertise and proven methodologies, and AWS Partners become your fast start button and trusted advisor over time.

The [AWS Travel and Hospitality practice](#) works with AWS Partners around the world, of every size and in every segment of the industry. They are constantly creating solutions that support global businesses like Southwest Airlines, McDonald's, Marriott, and many others.



Florian Tinnus

Worldwide Partner Leader, AWS Travel and Hospitality

## AWS Travel & Hospitality Customers Looking to Define the Future with AWS Partner Solutions

To support customers at this crucial time between building resilience now and preparing for what's next, we launched the [AWS Travel and Hospitality Competency](#). The AWS Competency Program is one of the toughest designations an AWS Partner can achieve and maintain. It takes on the heavy lifting for a customer of identifying and validating the most experienced AWS Partners

In turn, these partners provide technology products and services to accelerate the industry's modernization and innovation journey - from behind-the-scenes operational efficiencies to optimal, guest-facing experiences. The AWS Travel and Hospitality Competency is structured around four technology solution areas and a consulting partner category. Selecting an AWS Travel & Hospitality Competency Partner greatly increases the likelihood of working with someone who can address the unique needs specific to your travel and hospitality business.

## AWS Travel & Hospitality Competency Categories

### Consulting Services

AWS Consulting Partners that offer strategy and deployment services to help travel and hospitality customers to accelerate their digital transformation

### Core Applications

Offer and build cloud solutions for Travel and Hospitality Applications such as Revenue Management, Point of Sale Systems, Predictive Maintenance, Reservations, or Property Management

### Data 360

Data Lake, Customer Data Platforms, MI/AI, and Analytic Solutions provide operational and customer insights to improve efficiency and engagement

### Digital Customer Engagement

Personalized recommendations, marketing and marketing resource management, call center automation, messaging, and automated service channels to attract and retain customers

### Smart Assets

Digitally connected physical spaces and seamless experiences from connected airports to smart hotel rooms and connected kitchens



## Accelerating Outcomes with AWS Partners (continued)

By Florian Tinnus

### AWS Partners Looking to Define the Future of Travel and Hospitality with Us

If you are a consulting or technology company who likes to help Travel & Hospitality customers prepare to transform for what's next, the AWS Travel & Hospitality Competency is your north star. It showcases proven customer success and technical proficiency, setting the bar higher and differentiating your business.

Start your application for this competency with the prescriptive guidance found in [APN Navigate](#) for Travel & Hospitality. As an existing AWS Partner, you can access this program via the Partner Central Portal to learn about the requirements and process. If you are new to AWS, register [here](#) to start your journey as a partner and

discover how the AWS Partner Network can support you with programmatic, technical, business, and go-to-market support.

We don't know the specifics on what will come next for the travel and hospitality industry. Yet we do know that companies building on AWS—often working with well-vetted partners—will take the industry to the next level.

As a well-vetted partner building solutions for Travel & Hospitality customers on AWS, you will be part of taking the industry to the next level.



### Consulting Partners



### Technology Partners



## Chapter 4

# Customer Stories



## Customer Stories



### What's Next in Digital Ordering: Taco Bell

During the COVID-19 pandemic, Taco Bell closed much of its indoor dining. This led to a shift in delivery, mobile and web ordering. Taco Bell used AWS technology to rapidly integrate with the major delivery providers in order to meet shifting consumer demands. And by leveraging AWS serverless technologies they can easily scale without worrying about infrastructure, while only paying for what is consumed. Moving forward, Taco Bell sees a future where 50% of orders will be digital, and the changes made during COVID, will provide their diners with more options and a better customer experience than ever before.

[Learn more](#)



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# Customer Stories



## What's Next in the In-Room Experience: IHG Hotels and Resorts

IHG Hotels and Resorts includes world famous brands such as Holiday Inn, Crowne Plaza Hotels and Resorts, Intercontinental Hotels & Resorts, Kimpton Hotels, and more. IHG Hotels and Resorts builds on AWS to help them quickly innovate, test and roll out new services. This includes IHG Studio, an industry-leading guest in-room digital experience. IHG Studio allows guest to connect and stream content securely from their personal devices to their guest room TV, request services, order room service and pay with points—all action which became even more valuable during COVID-19. Leveraging AWS technology, IHG Hotels and Resorts is enhancing the end-to-end guest experience now, and in the years to come.

[Learn more](#)



## Customer Stories



### What's Next in Security: Japan Airlines

Japan Airlines is undergoing a Digital Transformation on AWS. The system supports a connected, seamless travel experience from booking a reservation to boarding so data security is paramount. Addressing the importance of security requirements, Minoru Shoji, the head of JAL's IT Planning Division, IT Operations and Planning Department, Technology Strategy Group, said, "AWS helped us understand how the support of AWS Professional Services can solve our concerns about managing data in the cloud as well as other security concerns by explaining how they think about security at AWS."

Currently, JAL has separate accounts for development of the same system and for the production environment. They have also revised existing guidelines so they can be applied to cloud environments without lowering the level of security.

[Learn more](#)



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## Customer Stories



### What's Next in Customer Service: Priceline

Priceline, part of Booking Holdings, is a global provider of online travel. Priceline utilizes Amazon Connect to better predict customer needs and adjust and more rapidly adapt to provide superior customer service. Surveys reveal Priceline customers' enjoyment of the efficiency of the callback queue, leading to Priceline keeping it even when not experiencing extended wait times.

They also optimized their interactive voice response menu to make it simpler for customers to communicate exactly what they want to do quickly and efficiently. Changes to that menu are now as simple as typing a message into [Amazon Polly](#)—a service that turns text into lifelike speech, available to Amazon Connect users. Eliminating the need for a developer to implement these day-to-day changes has allowed Priceline developers to focus on the bigger picture.

Jennifer Featherling, Priceline's Senior Director of Contact Center Technology says, "It frees them to focus on innovation—and finding new ways to improve the lives of both the customer and the agent."

[Learn more](#)



## Customer Stories



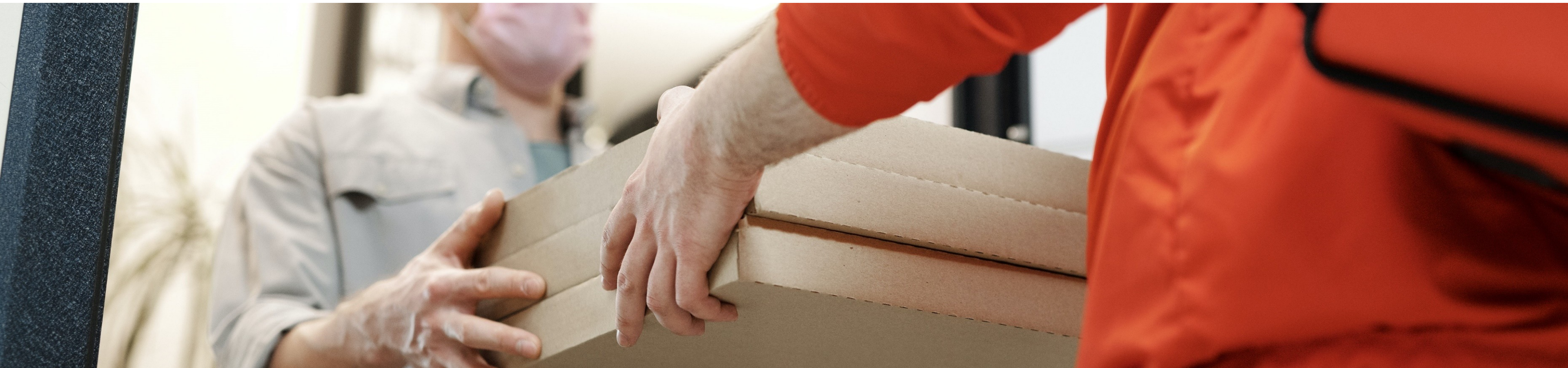
### What's Next in Delivery: Deliveroo

Deliveroo is a data-driven food-delivery platform with the stated aim of bringing the best local restaurants to customers' homes. They operate in nearly 800 towns and cities across 12 markets, including Australia, Belgium, France, Hong Kong, Italy, Ireland, Netherlands, Singapore, Spain, United Arab Emirates, Kuwait, and the United Kingdom.

Over the course of the COVID-19 lockdown, they introduced new services, such as grocery delivery. Afterward, it scaled up deliveries and launched a new table service that allows customers to order food and pay for meals in a restaurant without interacting with staff.

Deliveroo uses Amazon SageMaker to recommend restaurants, products, and features to users based on their past orders. When a customer starts to browse options, serverless functions publish ML models into managed Kafka clusters so that the user sees restaurants in the order that the customer is most likely to choose. Efficient rider dispatch means filling customers' orders while allowing drivers to deliver more orders per hour and earn more money.

[Learn more](#)



## Chapter 5

# What's Next in Strategy and Deployment

AWS Consulting Partners deliver solutions that help their travel and hospitality customers accelerate digital transformation



# What's Next in Strategy and Deployment



## Perspective from Capgemini

The top three items that will be the focus for hospitality are all direct results of the pandemic: adoption of new models, increased personalization of the guest experience and safety of customers. Hospitality customers will have to transform and adopt their business model to ensure they stay relevant in the industry. For example, cruise lines will need to shift to an experience-based, multi-destination experience allowing for the individualization of a journey, not just a single destination.

To continue their relevance, hospitality customers will also need to revamp their loyalty program strategy. The pandemic has caused loyalty to lose importance with customers. They will need to find an innovative way to encourage customer spend of loyalty points and redefine guest loyalty. The guest experience will need to be executed with hyper-personalization to ensure continued loyalty.

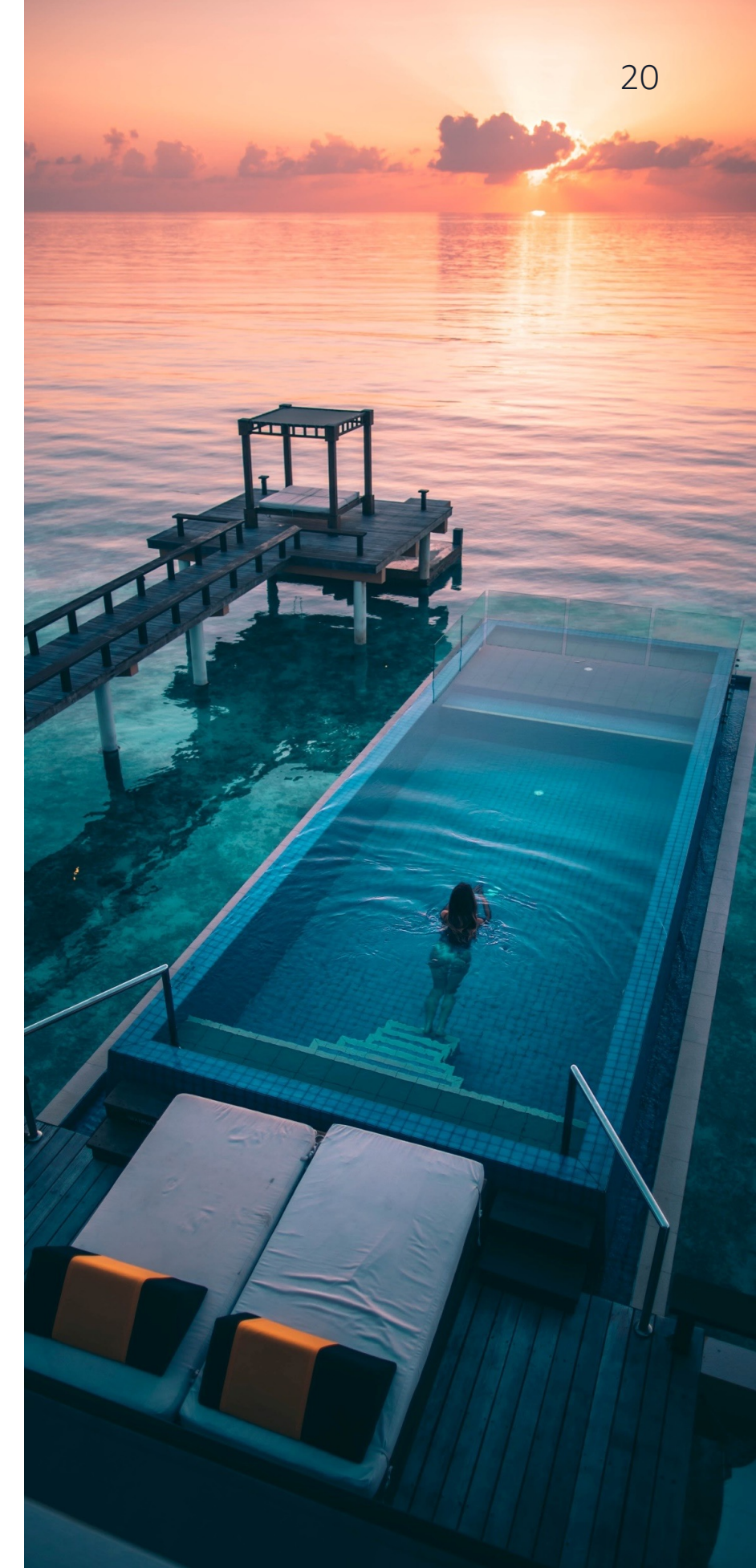
Focus on gathering key details about the travel-customers' experience by implementing modernized IT and biotech solutions. Incorporating these services enables travel and hospitality professionals to gain insights on how their customers respond to content and offers, positioning them to cultivate more positive traveler and guest experiences based on individual preferences.

Changes in the hospitality industry can be accelerated by the cross-leveraging of other industries. For instance, as AI and telecom mature, so will online gaming, Esports and betting. By leveraging the advancement of other industries, revenue streams will diversify in hospitality. Casinos will also need to adopt an online-based gaming model.

In addition, another focus of hospitality will have long-term benefits from near-term changes. This focus will be on environmental impact of the hospitality industry and how technology can reduce its footprint. With impending regulation changes to sustainability and hospitality customers can implement technology to improve the impact on the planet.

## Solution Spotlight: Vision Model

Capgemini's Computer Vision Model will continue to transform the hospitality industry. This model enables the identification of the guest and provides a touchless experience therefore ensuring the health and safety of customers. To double down on safety, this model is used to support social distancing by analyzing crowd density, alerting providers in real time of crowded spaces, identifying groups of people and allowing thermal temperature checks using cameras all while assessing the risk of crowd density and gathering. This technology will benefit customers not only on cruise ships but in many use cases across hospitality.



# What's Next in Strategy and Deployment



## Customer Spotlight

Online Travel Agencies are the billboard of the hospitality industry. On average, ~70% of cruise lines bookings, ~45% theme parks bookings, and ~39% hotels bookings are done through online travel agencies. Hospitality customers are trying to find ways to reduce dependency on online travel agencies by booking directly. Capgemini has built booking platforms for hospitality customer which allows direct booking of hotels, flight and car rental while booking cruises or theme park visits. Successful implementation of these platforms has helped in reducing customer friction, increased guest loyalty and boosted revenue for our customers.

## Partner Spotlight: Capgemini

Capgemini is a leader in hospitality and has a wide breadth of experience, executing a variety of digital-transformation programs for Fortune 500 hospitality customers. We serve clients with a broad range of digital needs and maturity levels. Our areas of focus for hospitality customers are digital customer experience, data-driven enterprise, direct-to-consumer with personalization, integrated ecosystem with cloud infrastructure, and automated business operations.



# What's Next in Strategy and Deployment



## Perspective from Mphasis

Anticipating rapid growth as concerns over the global pandemic subside, Travel and Hospitality organizations will need to address and overcome important challenges. Among these are persistent problems accessing and managing key customer data across multiple systems. Solutions that enable synchronized use of this valuable data will help them gain insights and meet their business goals. Leveraging the breadth and depth of services available on AWS can help resolve these issues, by prioritizing these five areas of focus:

1. **Scale-to-zero semantics:** Enterprises are moving to attain the next level of efficiency by aggressive adoption of serverless technologies for lowest cost of run with increased agility. Today, AWS lambda functions support container images and millisecond metering increasing the applicable workload types. This enables run cost to be near zero when systems are not in use by leveraging AWS serverless at all layers, increasing use of APIs and SaaS solutions like Airline Data Platform
2. **Monetize applications and data:** Enterprises are exposing and using platforms through private and public marketplaces to drive innovation, speed, revenue generation and reuse. Shopify, which started as a store for snowboarding equipment and transformed into successful ecommerce platform, is an example of this.
3. **Drive experimentation** Embrace a startup at scale model to enable business, IT and operations to continuously ideate, design, solution and deliver business value at speed
4. **ZeroOps:** Organizations with IT infrastructure on cloud and application development largely based on serverless computing now moving toward NoOps / ZeroOps. With this approach, all operations (ITOps, FinOps, SecOps, DevOps) are automated completely eliminating need of operation teams for day-to-day technology-related tasks
5. **Function as a service:** Enterprises are able to harness API based services available to perform key tasks that drive both top line and bottom-line impact (See: Mphasis Airlines Data Platform described below).

## Solution Spotlight

Airline data is not intuitive and to unlock the value of the data requires an in-depth understanding of the business workflows. Further, obtaining actionable insights at a depth is still not possible before due to the temporal and disparate system aspects within the airline's ecosystem.

Mphasis brings together multiple decades of industry knowledge, extensive familiarity with data standards, comprehensive understanding of the industry evolution in the Order Management & New Distribution functionalities, proficiency in Big Data & Analytics and expertise in the AWS native services to build an Airline Data Platform (ADP). ADP comprises of a purpose-built Data Lake, an Operational Data Store and an Analytics engine that resolves one of the biggest challenges in the industry related to true synchronization of multiple data from different passenger functions (PNRs, tickets, loyalty, schedule, etc.) which is critical to derive data driven business insights.

## The Technical Design of the Airline Data Platform

1. **Data Ingestion:** Allows for data to be accepted in different formats and delivery channels with fewer restrictions on specific formats/layouts and data elements. The design principles coalesce both operational and analytical needs whereby the same data feeds populate both the data lake and operational data store.
2. **Data Processing & Transformation:** Add new ways of data enrichment that will add greater value to the data. Further, it enables asynchronous communication of insightful data from the data lake to operational data store.
3. **Data Delivery:** Adds new ways of delivering data to the client's systems (Data Lake access sharing, API connectivity, Data visualization through Amazon QuickSight) all in a controlled manner with the Airline admins having the option to manage each delivery channel directly.
4. **Data Security:** Single sign-on, role-based access, and PII data identification and tagging.



## What's Next in Strategy and Deployment



### Partner Spotlight: Mphasis

Mphasis is a proud AWS Premier Consulting Partner with more than 8,000 consultants in the USA and 27,000 total around the world. Mphasis teams have helped 100s of clients unlock the true value of AWS by leveraging latest AWS services, frameworks and accelerators as well as all technical and financial funding programs. Our rapidly growing team of AWS experts are passionate about applying latest technology to deliver transformative approaches for each client's requirement. Mphasis delivers market-leading native Application Modernization, DevOps, DevSecOps, Mainframe modernization, Data solutions, and Security Automation as our core AWS offering.

### Solution Spotlight: eAWBLink

Mphasis e-Airway Bill manager (eAWBLink), available as SaaS solution in AWS Marketplace, is a best-in-class web-based solution which follows the International Air Transport Association (IATA) mandated program to generate the electronic airway bill. The smart solution offers simplified cargo management capability facilitating faster cargo handling, which is central to improved revenues and enables the e-freight supply chain to provide connectivity to over 200 Airlines.

You can also find Mphasis in [AWS Marketplace](#).

### Features of eAWBLink:

- Submit electronic master & house airway bills to airline cargo systems
- Create and issue – eCSD
- Manage airway bill stock
- Create electronic airway bill documents, cargo security declarations, cargo receipt, warehouse receipt, and house manifest as PDF
- Transmit IATA compliant XML messages via DESCARTES to airline cargo system
- A single system for forwarders/agents, airline, and ground handlers
- Track and trace real time airway bill status
- Convert Cargo-XML to Cargo-IMP compliant with IATA standards

### Benefits of eAWBLink:

- Easy connectivity to all airline partners and CCS with no IT investment costs
- Significant improvement in the time spent to create the AWB
  - Paper AWB to Airlines - 60 mins
  - eAWB to Airlines via eAWBLink - 10 mins
  - eAWB to Airlines using template via eAWBLink – 4 minutes.

# What's Next in Strategy and Deployment



## Perspective from Slalom

In the early days of the pandemic, one of the biggest challenges we heard from our customers was, how do we handle this immense, ongoing disruption while planning for the future? Many were being asked to respond to change, adapt accordingly, and then reinvent what tomorrow looks like in a very short time period. That ask was felt deeply by our travel and hospitality customers who were directly impacted by consumers sheltering at home. Yet we are inspired by how these same travel and hospitality companies have responded, innovating in ways that are pushing the entire industry forward. They're creating customer experiences that are safer, yes, but also just plain better.

Our travel and hospitality customers who are now thriving have accepted that the demand for change, adaptation, and reinvention is never going away. Increasing numbers of their consumers expect optimal experiences that continuously and seamlessly evolve and improve. An essential ingredient for meeting this expectation is strategy. Strategy forms the roadmap to reinvention, and the road itself is an environment of continuous deployment.

## Solution Spotlight

Slalom and AWS have combined the strategy and deployment capabilities required for true digital transformation—the kind that the pandemic has called for—into one model: AWS | Slalom Launch Centers. The vision of Launch Centers is for organizations including travel and hospitality companies to achieve real business value from digital transformation, at high speed and enterprise scale. In addition to physical Launch Center locations around the world that are staffed by experts from AWS and Slalom, there are 100% virtual Launch Center engagements designed with the same philosophy of immersion.

The Launch Center approach is multidisciplinary, with teams that encompass business strategy, organizational change management, and cloud-native development.

From a strategic standpoint, we begin by aligning your stakeholders to a common understanding of what is possible and how your organization can use AWS to more effectively achieve it.

From a deployment standpoint, we work in tandem with your teams to accelerate and operationalize your cloud strategy and execution. It's an experience that's about building *with* your teams—not *for* them—to modernize and create the solutions that tackle your organization's toughest challenges.







### Customer spotlight: Royal Caribbean

While not a Launch Center engagement, our recent work with Royal Caribbean called for the same bigger thinking and rapid deployment.

In light of new safety guidelines coming from the Centers for Disease Control, the World Health Organization, and local governments, Royal Caribbean wanted to re-envision the debarkation experience for guests and crew alike.

Together, we strategized and built a new application on the AWS platform that acts as a virtual queuing tool for guests. On debarkation days, guests will have the ability to know wait times across the ship and join a virtual line with the push of a button, dramatically reducing the amount of time that they are physically grouped together waiting. Then, the crew has its own custom tool to manage guests who are entering in and out of these queues.

Although the application's primary use case is debarkation, Royal Caribbean has plans in the works to do much more with the virtual queuing tool. Ultimately, the envision implementing it at restaurants, bars, with on-board activities, guest services, and more for the foreseeable future.

What we love about this work is that it helped us capitalize on a previously unrecognized opportunity to address one of the age-old, industry-wide customer pain points of waiting in line—all while making safety the top priority.

## What's Next in Strategy and Deployment



### Partner spotlight

Slalom is a modern consulting firm and AWS Premier Consulting Partner focused on strategy, technology, and business transformation. We bring passion and optimism to every cloud project, along with deep expertise in helping customers maximize the value of the cloud—from planning and migration to all that comes next. In 40 markets around the world, Slalom's teams are backed by regional innovation hubs, a global culture of collaboration, and partnerships with leading technology providers. Founded in 2001 and headquartered in Seattle, Slalom has organically grown to over 9,000 employees.

[Learn more](#)

## Chapter 6

# What's Next in Data

Data Lake, Customer Data Platform, ML/AI, and Analytics solutions provide operational and customer insights to improve engagements



# Accelerating Outcomes with AWS Partners



## Perspective from 3Victors

A generational change from traditional batch analytics to **real-time**, AI based, data-driven decision making is coming to travel and hospitality, and it's none too soon. **Forrester** projected this near the end of 2016, saying: "Insights derived from data and analytics have a shelf life. Some are fragile as avocados, some as timeless as Twinkies."

This is analogous with what we are seeing in the Covid-19 travel business recovery. No longer are data warehouses, where vast amounts of data went untouched, the norm. Now, cloud-based data lakes are in vogue, gobbling up time series nuggets 24x7 in their natural form, ripe for harvesting hidden but readily accessible insights. This generational change was made evident when the largest credit card company, a member the stodgiest vertical of all, championed **democratizing data in their organization**.

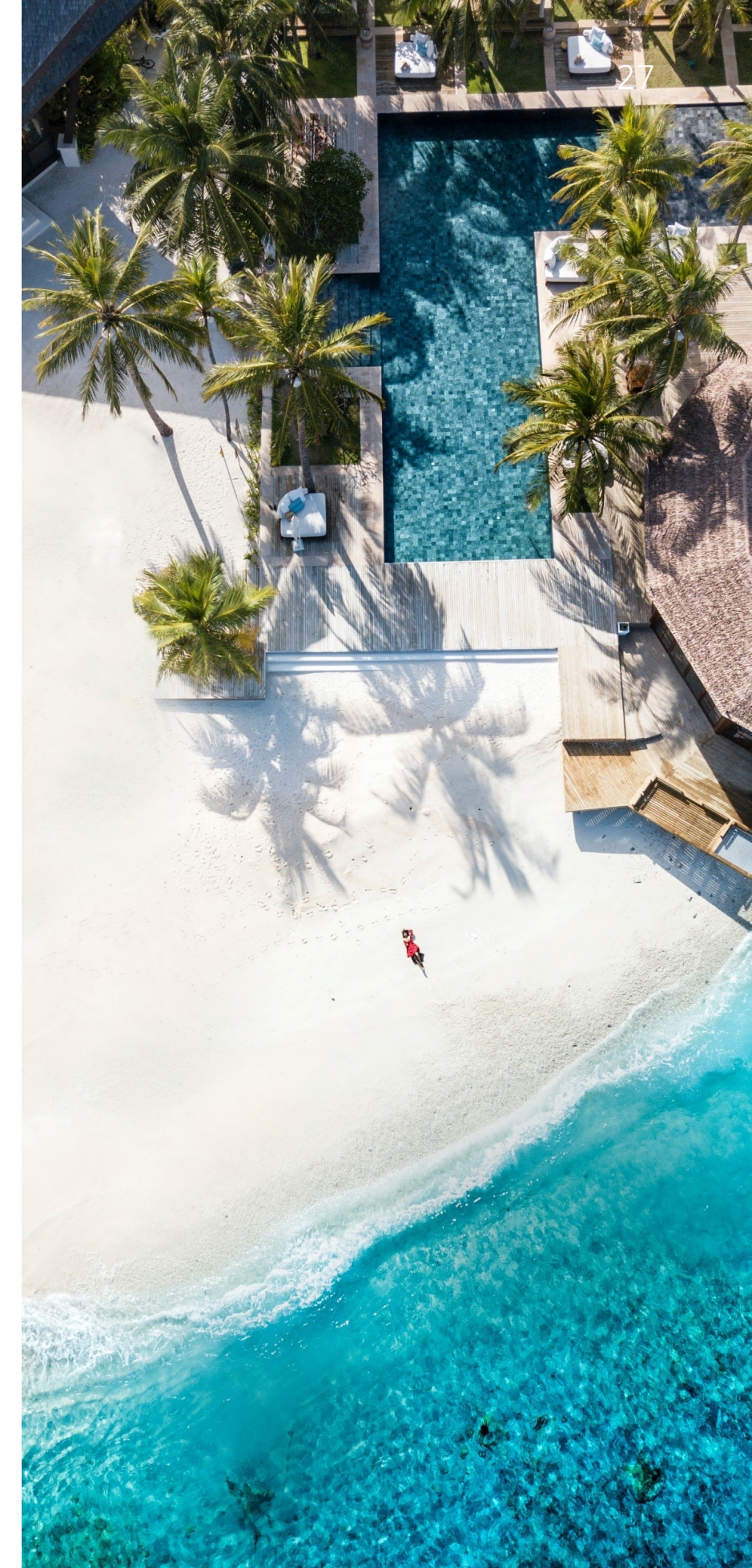
Clearly the transition won't be easy, but executives need to understand that AI algorithms aren't magic; they're pretty much high school geometry (albeit with some clever packaging). Further the tech giants are working at breakneck speed to demystify data science, so you don't have to find those mythical data science unicorns you'll simply deploy your clever internal cadre of **citizen data scientists** with these new tools on freshly democratized data and reap the benefits of optimal data-driven decision making.

## Solution Spotlight

Estimates have pegged the pre-pandemic worldwide travel and hospitality online digital marketing spend in 2019 to have been well over \$25 billion. We believe that up to 30% of this primarily auction based spend is nonoptimal, benefitting the auctioneer—namely Google and Facebook.

In most cases this spend is from online travel agencies (OTAs) and metasearch sites where the product they offer is priced in real-time by a third party—mostly airlines, hoteliers, and car renters—who each use yield management techniques to optimize unit revenue. Theoretically each one of these quotes may have a different price for the same item, gyrating the likelihood of an ad click converting to a booking throughout the day. These online marketing companies use automated bidding systems (required to handle the complexity of such large amounts of spend and content) which typically update their bids once a day based on analytics of a weighted blend of past seasonal and previous day paid clicks and booking revenue.

3Victors offers a variety of optimization services on these bid auction processes to monitor price changes. This is combined with the solution's ability to predict the click to book ratio in real-time, whereby existing daily baseline bids are augmented with intraday bid modifications (bid up, down or pause).



## Accelerating Outcomes with AWS Partners



### Partner Spotlight: 3Victors

3Victors is leading the generational change to real-time data driven insights in the travel industry. Travel focused companies heavily rely on historical data to forecast travel demand and make profitable decisions. The problem is that the data is not very good! 3Victors meets the industry problem head-on with a new way to think about data and analytics for the travel industry. We serve our customers through feed subscriptions and SaaS products. We built the industry's first travel data analytics as a service platform capturing in real-time 1B searches and 300B prices worldwide daily along with other time series travel purchase funnel data assets including capacity (flight schedules), competitive intelligence (pricing), demand (search demand) and bookings (tickets/bookings). Our products extract insight from our data sets so that our clients can concentrate fully on the problem at hand and not the painfully time consuming and costly process of acquiring, cleansing, combining, and preparing data for analytics and machine learning.

You can also find 3Victors in [AWS Marketplace](#).



OUR PLATFORM

We built the industry's first travel data analytics as a service platform



Cloud Data Platform

- 1B searches daily
- 300B prices daily
- Schedule, search, pricing, and booking data

| Schedules   | Search   | Pricing   | Booking                                   |
|---|--|---|---|
| Historic and current capacity data including seats by cabin | Echoed search from 500K+ agencies with 82% non-US data | Global travel agency and web/OTA pricing delivered up to hourly | Market size estimation based on MIDT data |

### Customer Spotlight: Travel Redemption Technology Company

Customers expect to see thousands of flight pricing options every time they query to feel like they have left no stone unturned in finding the best deal. Popular metasearch sites typically fill this bill by pulling data from several sources for each customer quote. However, credit card redemption sites are notorious for only offering a fraction of these flight options when a consumer goes to redeem their hard-earned points (virtual currency). As a result, customer service gets inundated with phone calls asking why flight A on site B isn't being offered for redemption. 3Victors was approached to solve this problem for a major supplier of redemption technology and using recent and historical pricing baselines and regularly updated flight schedules created a pricing engine query planner algorithm that mapped out the most optimal set of queries required for the loyalty quoting process that met or exceeded popular comparison-shopping sites. Deploying the analytics-based technology, the 3Victors client saw a significant drop in complaints and uplift in redemption rates in the months following the rollout.

# What's Next in Data



## Perspective from Amperity

As we edge closer to a return to “normal,” the bar has been raised for travel & hospitality brands to deliver even more personalized experiences to their devotees through both digital and physical channels. Loyalty is no longer strictly limited to miles or points earned and redeemed. Instead, loyalty is now based on a much bigger and more holistic picture: the level of customer engagement with the brand, the depth of the relationship built, and the customer’s lifetime value.

For travel & hospitality companies, this means putting customer data at the center of their engagement strategy to more effectively engage with travelers and guests, attract, retain, and re-engage loyal members, and measure the impact of programs and campaigns. Obtaining centralized customer data, analyzing complete and accurate customer profiles, and gaining predictive customer insights are foundational to help travel & hospitality interests identify their most valuable customers are all so important, especially as our economy enters this recovery phase.

However, to complicate the recovery, brands are also facing the **death of the third-party cookie**. Being able to collect, access, and operationalize first-party customer data, and analyze data holistically, is going to be crucial to any brand.

We at Amperity believe this imminent “*cookiepocalypse*” will fuel an increase in partnerships that offer brands the opportunity to share customer data, especially for airlines and hotels. The need for these brands to establish a firm and durable foundation for valuable first-party customer data as the new linchpin for targeted marketing and personalized commerce is more pressing than ever.

Here are some suggestions to help build toward that future more quickly:

1. The most robust first-party data assets and the most accurate identity graphs are based on a unique and ongoing relationship with real people. This means crafting the best customer experience possible, so that customers will feel good about sharing their personal information with you.
2. Centralize PII Data Into a First-Party ID Graph: Collecting permissioned data is only the first step; the real power comes when brands can build a first-party ID graph that synthesizes the best available PII from across all consumer touchpoints. This requires a Customer Data Platform (CDP) that can handle messy and multi-sourced PII at a massive scale.
3. Build a comprehensive and rich Customer 360 database: With the data in one place and identities resolved, brands should develop and maintain persistent customer profiles that can serve as the basis for analytics and personalization for teams across the operation.



## WYNDHAM

HOTELS & RESORTS

### Customer Spotlight: Wyndham Hotels and Resorts

Wyndham Hotels & Resorts, with over 9,000 hotels across approximately 90 countries, is driving the continued elevation of its global marketing capabilities through the deployment of Amperity's customer data platform. They wanted a scalable and secure ISV solution that could provide and support accurate ingress, egress, and analysis of hundreds of millions of customer records daily. On AWS, we enabled Wyndham to transform data use by unifying and centralizing customer databases and data from online and offline transactions, loyalty program activities, email interactions, and other systems. Data ingestion from their Amazon S3 terminals, Amperity's ability to meet Wyndham's security requirements, and the fact that Amperity is architected on AWS were key factors that have made it possible for them to create hyper-local campaigns that connect high-value guests with key new hotel openings, deploy personalized offers designed to help convert repeat guests into loyal Wyndham Rewards members, and powered emails aiming to convert non-members into members.

## What's Next in Data



### Solution Spotlight: Customer Data Platform

Amperity is a Customer Data Platform (CDP) that helps travel & hospitality organizations more quickly and efficiently solve the customer data puzzle and deliver personalized experiences using cloud-based intelligence. Commonly, these businesses face hurdles when creating a 360-degree view of their customers. In many cases, this is because they are relying on consumer data that is splintered across dozens of legacy systems and/or fragmented and inaccurate. As a result, queries can take days to run, and campaigns do not align with the customer journey.

Deploying this solution simplifies the transformation of raw, dirty, and siloed customer data into a 360-degree customer view, enabling the extraction of actionable and measurable segmentation and attribution. Ultimately, customer intelligence becomes an optimal, personalized customer experience that creates brand loyalty and competitive advantage.

Our comprehensive offering ingests billions of consumer records daily for our largest enterprise travel & hospitality customers and pulls crucial customer data from any source—including data co-located in Amazon S3. As a result, queries that once took days are reduced to minutes with concurrent real-time access to data for multiple teams and users.

The payoff is realized by our travel & hospitality customers leveraging their consumer data and having it stitched by Amperity. This subsequently hydrates downstream AWS services such as the analytics capabilities provided by Amazon Redshift, the contact center services delivered by Amazon Connect, and the customer engagement efficiencies offered by Amazon Pinpoint.



### Partner Spotlight: Amperity

Amperity's mission is to help companies use data to serve their customers. Amperity is the most comprehensive enterprise Customer Data Platform that leverages machine learning to turn raw customer data into a single customer view and personalized insights and experiences that create brand loyalty and competitive advantage. Our patented technology delivers real-time data ingestion at scale, AI-powered customer identity management, and data aggregation with no ETL or schema mapping required.

Unlike other marketing clouds, data and identity providers, and other CDPs, our scalable solution offers the power and flexibility to meet the unique needs of the enterprise. Amperity clients, on average, experienced a 993% return on investment, as a result of increased revenue from Amperity-powered use cases as well as efficiency and productivity gains from Amperity's better data management.

You can also find Amperity in [AWS Marketplace](#).

# What's Next in Data



## Perspective from mParticle

As the travel industry continues to explore new opportunities as part of its recovery process, the incorporation of safety measures has become a key part of the physical service. Yet new ways to conduct business have also emerged, and updates to the digital experience, such as mobile ordering, personalized messaging, and hands-free check in present untapped avenues to success.

To deliver digital experiences that meet the expectations of the customer—while making them feel safe—it's important that travel & hospitality brands invest in data infrastructure that allows them to simplify cross-device data collection, identity resolution, data governance, and data quality management at scale.

In addition, as vaccines are rolled out and they begin to welcome customers back, industry leaders will have to be mindful of how recent changes to third-party tracking—such as Google's discontinued support of third-party identifiers and Apple's iOS 14 release—will impact the efficacy of previously used media strategies. To acquire new customers and re-engage dormant customers, travel and hospitality leaders will need to develop a first-party data strategy that enables them to deliver personalized customer experiences and take ownership of their customer relationships.

## Solution Spotlight

If personalized, privacy-conscious experiences seem like magic when they're delivered, it's because there are numerous systems at work throughout the data pipeline making them appear so. The messaging tools allowing you to communicate with customers via push, email, and in-app are key components, of course, but equally important is the data infrastructure that enables you to get the right data to the right place in real time while optimizing engineering resources.

Infrastructure Customer Data Platforms simplify your data pipeline by making it easier to collect customer data, manage data quality, unify that data to create a 360-degree customer view, and integrate that data across your tech stack, all while automating data privacy. By improving access to high-quality customer data and enabling marketers and product managers to define which downstream tools that data is sent to in a UI, infrastructure CDPs allow growth teams to deliver data-driven experiences at the pace of the modern customer.





### Customer spotlight: Delivery Hero

Delivery Hero, now the world's leading local delivery platform, offers online food delivery services in over 40 countries, powering apps many use to order their favorite foods. As they grew, the marketing organization's Audience team saw an opportunity to use the information being collected across channels to strategically re-engage their customers and increase order frequency.

They implemented mParticle as their central data orchestration layer, allowing them to streamline their data pipeline and simplify audience building. They now collect data from across channels into a single system and activate that data without developer support, enabling them to strategically re-engage their customers more effectively.

Specifically, the team used mParticle to power reactivation campaigns that increased engagement, cross-sell campaigns that increased new product adoption, and regionally-specific campaigns in distinct markets across the world. These helped Delivery Hero generate increases in order frequency and reactivations, and fuel sustained business growth.

## What's Next in Data



### Partner spotlight: mParticle

We believe data is a team sport. Teams across companies like Starbucks, NBCUniversal, Spotify and Airbnb use mParticle solutions on AWS to deliver great customer experiences and accelerate growth.

We simplify customer data infrastructure, ensuring teams have real-time access to high quality customer data that helps improve customer experiences and accelerate growth, and can provide added agility by holistically managing customer data along the entire product and customer lifecycle.

Founded in New York City in 2013, mParticle now has employees in San Francisco, Seattle, Sydney, and London.







# What's Next in Data

## Perspective from Reltio

For most of us, 2020 was a year of testing resilience. We saw the social and economic fabric of our world radically change, and businesses and individuals operate very differently than they did in December of 2019.

Through all this change, data has provided us with a unique ability to adjust and evolve. For the individuals who moved to a work-from-home environment, we began to access data differently and our patterns changed. Enterprises from restaurants and hotels to Fortune 500 companies, found that data about customers, engagement preferences, and purchasing patterns informed and enhanced new approaches to business. It was these quick, innovative pivots that kept life moving for companies and people during 2020.

## Solution Spotlight

While life after 2020 presents a new business landscape for the travel and hospitality industry, many are hoping it goes back to something like pre-pandemic levels. Realistically, it will probably have new and different dynamics, as brands pull out all the stops to increase their competitive advantage to try and make up for losses. Additionally, consumers will likely maintain an awareness of health and well-being that they may not have had before. The good news for companies that have already invested in next-generation master data management (MDM), software as a service (SaaS), and strategic data analysis tools, is that they have positioned themselves to thrive.

MDM enables organizations to integrate data from disparate sources, multiple online and in-person/in-store channels, and offer a cohesive, connected understanding of customers, suppliers, products and more. It will be this single source of truth that powers success for many travel and hospitality companies in 2021. Deploying an MDM solution on a cloud-native SaaS platform will enable virtually continuous uptime, as software updates and patches can be delivered seamlessly, and practically infinite scalability means unlimited flexibility.



## What's Next in Data



### Customer Spotlight

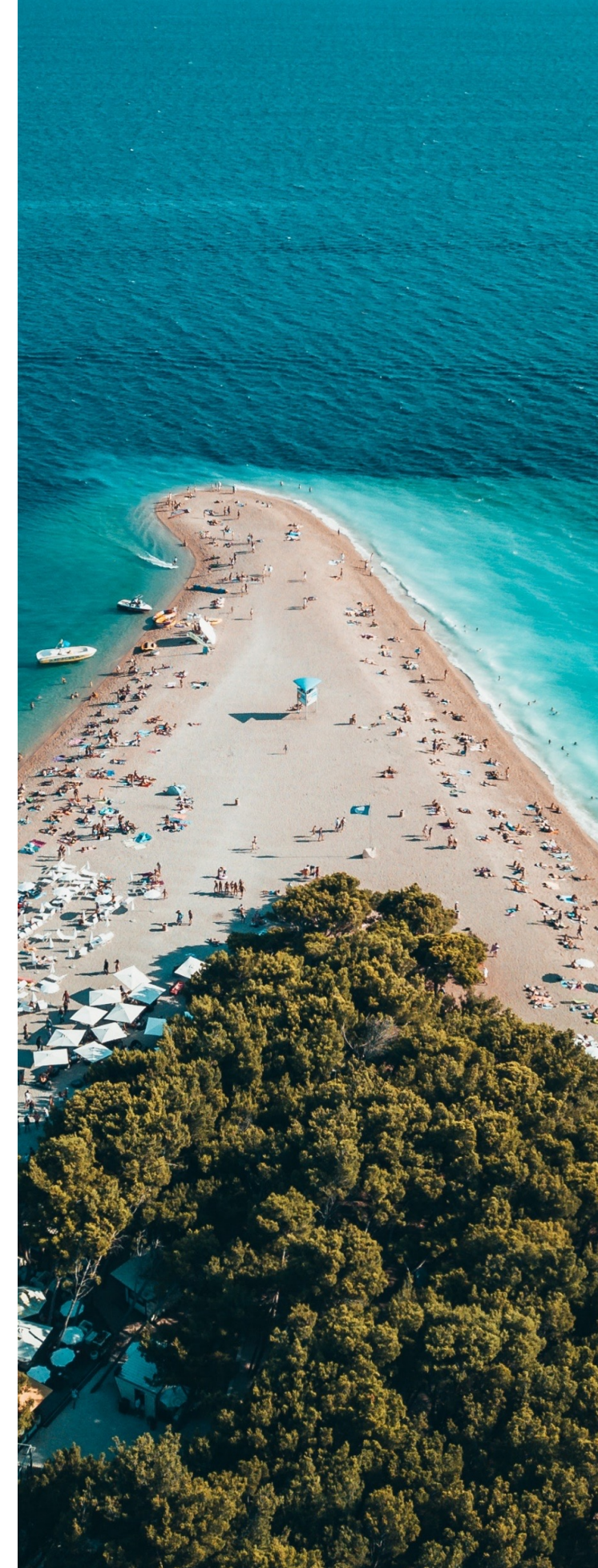
One large fast-food restaurant is already leveraging Reltio's MDM solution on AWS to improve the customer experience. This chain—with more than 20,000 franchise locations in 100 countries—is tapping into personalized messaging to increase customer engagement and drive return visits.

They are boosting loyalty through targeted and experiential communication with the help of their mobile app. All the customer information collected helps the chain deliver personalized, one-to-one communication such as discounted pricing based on a customer's visits. For example, if a \$5 sandwich enticed 'Joe' to visit twice, a \$4 sandwich will entice him yet again—increasing revenue. That one-to-one relationship with customers, at scale, is what will help the company thrive in a hyper-competitive post-pandemic environment.

### Partner Spotlight: Reltio

Reltio understands that the digital economy requires travel and hospitality organizations to be responsive and have a master data management platform that is highly scalable and delivers real-time operations to support hyper-personalization. Reltio Connected Data Platform is a cloud-native data management platform that supports billions of customer profiles, enriched with thousands of attributes, relationships, transactions, and interactions from hundreds of data sources. Reltio powers enterprise-class mission-critical applications to operate 24/7 with thousands of internal and external users.

You can also find Reltio in [AWS Marketplace](#).



## What's Next in Data



### Perspective from Tealium

As the world (hopefully) begins experiencing relief from a global pandemic, businesses are also coming out of 12 months of extreme acceleration in digital transformation. No industry has been changed more than the travel and hospitality industry, which needed to reinvent its business models in a matter of weeks and significantly adapt the ways in which it engaged customers, provided support, and generated revenue. Consumers (who weren't already doing so) learned to engage with businesses digitally--across multiple channels--and that preference will only continue to increase.

As demand returns, travelers will continue to expect personalized communication and need even more information from the travel and hospitality brands they choose. Moving forward, services and experiences will be fully-powered by data since most of them will be conducted via web or app.

Consider that travelers may now want to schedule a flight security check-in through an app, prepare to use contactless technology at a restaurant to order and pay, or even understand the current health status of their destination ahead of booking accommodations. The way in which travel and hospitality brands harness and activate this data will become the next great brand differentiator.

The biggest innovations are typically born out of disruption. Data connections will allow the industry to innovate beyond the purchase stage to meet customers where they are, personalize experiences and promote at scale, and coordinate engagement across sales, marketing, support, and engagement channels.

Despite the tough past year-plus, our travel and hospitality customers at Tealium have been incredibly resilient. A renewed focus on powering better experiences with better data will ultimately improve the way we fly, stay, and experience our future world away from home.

### Solution Spotlight

While it would be great to talk to every customer one-to-one, we all know that experience doesn't scale. Understanding customers through data is the next best thing. Many travel and hospitality brands recognize the importance of customer data but struggle with how best to access all the relevant data, bring it together, and then act on it. This is where Customer Data Platforms (CDPs) like Tealium come into play. CDPs help businesses reduce the time spent collecting and integrating customer data as well as provide a single point through which to disseminate a unified customer profile to the entire tech stack. Specifically, CDPs will:

- Aggregate customer data from all of your customer touchpoints, including AWS
- Transform disjointed data points into a single, unified profile of the customer.
- Activate that context-rich data across channels of customer engagement and analytics

As the pace of digital transformation has accelerated, more organizations are focusing on customer data and recognizing how important it is to have a neutral data platform that works across the company and with the tools that are already in place. Tealium's focus is to help businesses approach data as a team sport and get the most out of customer data through turnkey integrations into their stack, providing tools that drive real-time customer data collection, unification, and activation.



# Barceló

HOTEL GROUP

## Customer spotlight: Barceló Hotel Group

**Barceló Hotel Group** now has over 250 hotels in 22 countries. Seeking to transform the way they attract and keep guests, they wanted to be data-driven and customer-centric. Yet this goal was hampered by their highly-siloed technology stack, a lack of data-driven organizational processes, and limited data governance and data quality.

Using Tealium in tandem with their Marketing Cloud and Data Management Platform, Barceló has been able to significantly improve their audience segmentation practices. They have moved from event-based segmentation to pattern-based segmentation, which considers customers' interests as shown by their behavioral data on the company's website.

It's been a two-year journey for Barceló to get from where they were to being a data-driven, customer-centric company, but the effort has been well worth the investment. Not only has Barceló seen significant improvements in campaign performance, but they've also been able to increase their revenue by 37% and decrease their marketing costs by almost 6%.

## What's Next in Data



### Partner spotlight: Tealium

**Tealium connects data so you can connect to your customers.** Having built our trusted platform on AWS, we have been at the forefront of delivering customer data solutions to enterprises for over a decade.

Currently, the Tealium Customer Data Hub encompasses tag management, an API hub, a customer data platform (CDP) with ML, and data management solutions that enable travel and hospitality organizations to leverage real-time data and gain valuable insights that enable them to create and enhance personalized digital experiences across every organizational team, technology, and customer touchpoint.

You can also find Tealium in [AWS Marketplace](#).



# What's Next in Data



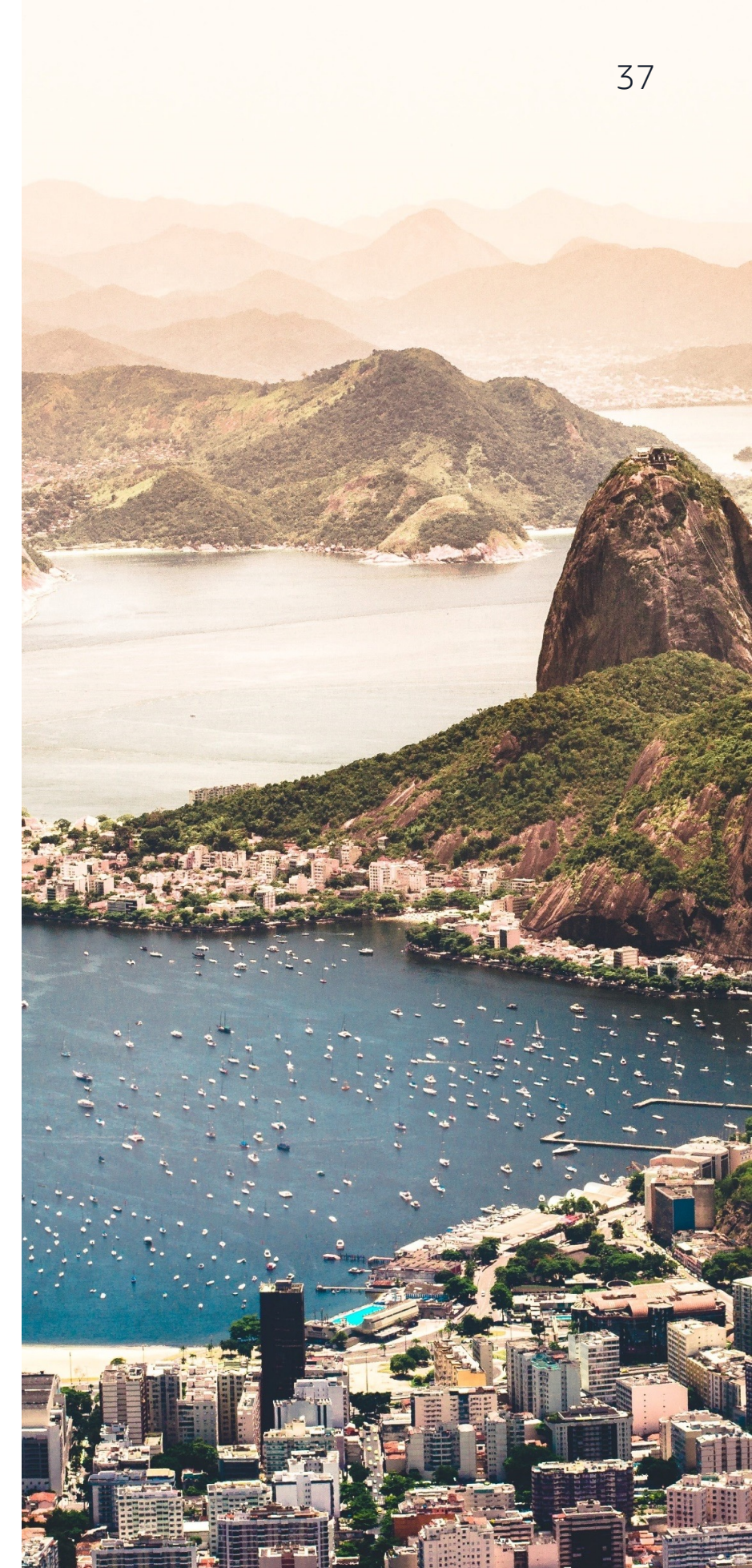
## Perspective from Wavicle

Artificial Intelligence (AI) and Machine Learning (ML) solutions are incredibly hot areas right now across nearly every industry. However, one specific area within the space that is bursting with opportunity is the usage of AI/ML to drive better business processes and decision-making using text, voice, video, and images as inputs.

As we talk to our travel and hospitality clients, we are constantly seeing new, innovative use cases that have enabled them to do things that were simply impossible before AWS began offering such AI/ML services as Amazon Comprehend, Amazon Transcribe, and Amazon Rekognition. Whether it is a hotel doing real-time analysis of conversations between guests and reservations agents, a restaurant analyzing feedback to spot trends, or a travel company using NLP to resolve inbound customer complaints, the opportunities are limitless.

## Solution Spotlight: ActiveInsights

Wavicle's ActiveInsights platform powered by AWS enables travel and hospitality organizations to understand and act on feedback from their customers using cutting-edge AI capabilities. ActiveInsights is a cost-effective, "voice of customer" solution that provides more accurate insights into consumer sentiments faster, with just a few clicks. It aggregates millions of unstructured customer data points – from social reviews to survey comments to emails and chats and more – breaks them down into sub-comments, assigns sentiment scores, and visualizes the information in an easy-to-use dashboard. Armed with this information, travel and hospitality companies can identify opportunities to improve the customer experience and profitability.



## What's Next in Data



### Partner spotlight: Wavicle

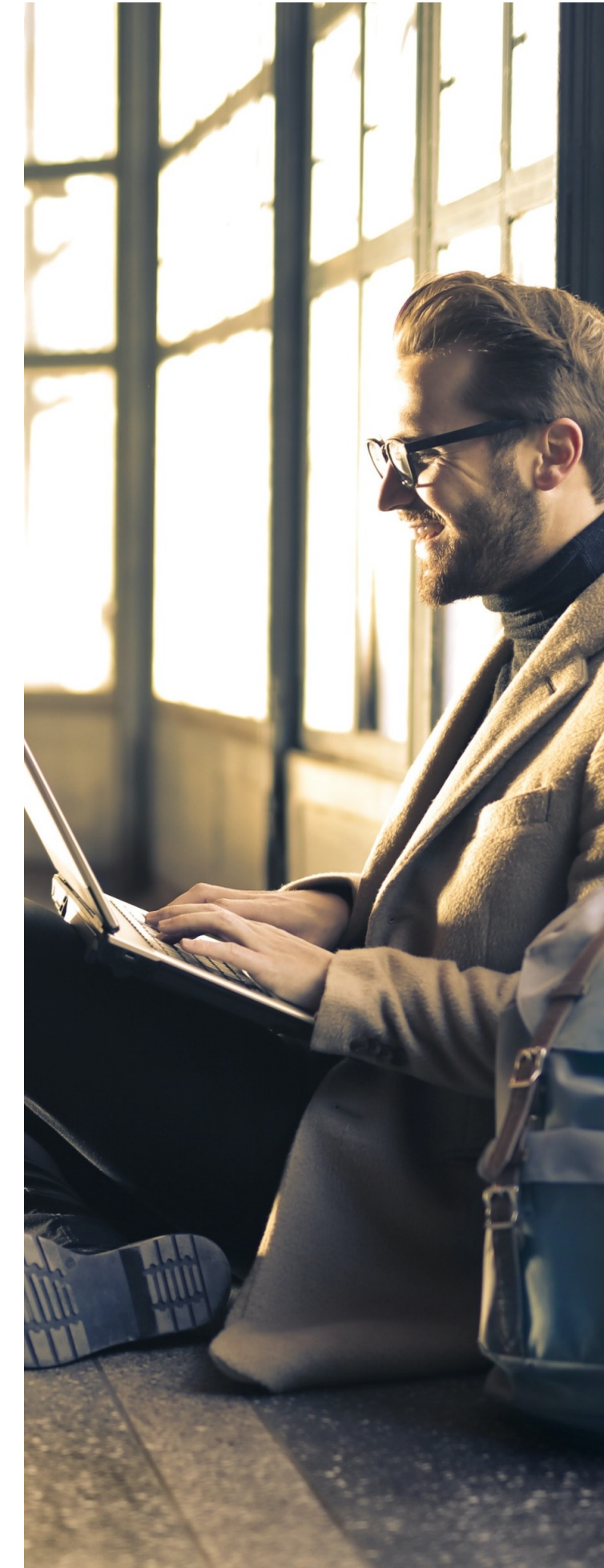
Wavicle Data Solutions, an AWS Travel and Hospitality Competency Partner, delivers rapid data and analytics solutions to reduce the time, cost, and risks of companies' data projects, while improving the quality of their analytics and decisions.

In fact, we're 100% focused on providing end-to-end data and analytics support. With our deep technology expertise, domain experience, and robust toolkit of proprietary accelerators, Wavicle's consultants empower our clients to utilize analytics to achieve business outcomes quickly and cost-effectively.

### Customer Spotlight: Largest Restaurant Chain

The world's largest quick service restaurant chain wanted to more quickly and accurately interpret customer experience data for improved decision-making. While they collected millions of customer satisfaction surveys each year, they struggled to holistically analyze customer feedback due to data silos.

Ultimately, they partnered with Wavicle and AWS to build a custom solution to bring all their raw customer data together in an easy, consumable way. By pairing superior Natural Language Capabilities (NLP) with Amazon Comprehend, we were able to deliver accurate sentiment analysis the client via an interactive dashboard with little to no lag time. As a result, this restaurant chain can more quickly discover and act upon customer feedback trends.



## Chapter 7

# What's Next in Smart Assets

Digitally connected physical spaces and  
seamless experiences from connected  
airports to smart hotel rooms and kitchens



# What's Next in Smart Assets

## Perspective from Rigado

Currently, we see increasing numbers of our Travel and Hospitality partners deploying technology to analyze and improve reliability of service across locations. This is indicative of an industry-wide transition toward workflow automation and asset tracking as means to improve guest experiences and reduce overhead costs. This is in contrast to what was done in the past, when employees had to manually spot check assets, verify safety status of equipment, and take customer traffic counts in and out of certain areas.

As a result, we anticipate more technologies traditionally found in large enterprise and even industrial spaces to make their way into Travel and Hospitality venues. Examples would be sensor networks and automation platforms, which will become more accessible for Travel and Hospitality customers because of lower startup costs.





# What's Next in Smart Assets



## Solution Spotlight

Rigado provides edge sensor networks for Travel and Hospitality, with pre-integrated devices and workflows that allow solution providers to build a variety of use cases, such as:

- Temperature, humidity, and air quality monitoring for refrigerators, freezers, and open areas.
- People counting and occupancy in restrooms, elevators, and common areas
- Employee and asset monitoring with badge and asset tag location

## Partner Spotlight: Rigado

Rigado is a leader in edge-sensor networks for the Enterprise. We have deployed over 100,000 networks globally and have over 75 customers in the smart buildings, retail, travel & hospitality markets.

This [AWS Quick Start](#) from Rigado helps optimize the onboarding experience for smart devices.



## Customer Spotlight: Radius Networks



Radius Networks uses Rigado sensor networks to provide its FlyBuy service to quick service restaurants across the world. Radius ensures accurate table, pickup, and drive-thru order service using Rigado's Cascade-500 gateway and Bluetooth-enabled devices and applications. The result has been improved customer satisfaction and increased store revenue.



## What's Next in Smart Assets

### Perspective from Volara

No longer a gimmick, smart technologies are providing real value on commercial properties in 2021. Whether the building features thermostats with room occupancy sensors, beacons that geo-locate people in proximity to departments or outlets, or smart voice assistants that are enabling guests and other occupants to have the full suite of services available to them on voice command, the growing impact of smart technologies on commercial properties is undeniable. WiFi connectivity enables hardware “to speak” with other hardware, software, and the people charged with interfacing to both, eliminating silos of data that previously hampered efficient operations. What makes smart assets intelligent is their interoperability and ease of integration. The weak link has traditionally been the immobile, friction-filled, and multi-step interface. Today, the power of voice technology is making that interface intuitive, flexible, and downright easy.

Viceroy Hotels & Resorts is one of many companies leveraging voice technology and redefining how services are requested by hotel guests. Inspiring travelers with one-of-a-kind authentic lifestyle experiences is at the core of its culture, as reflected by their addition of automated voice services at its luxury boutique hotels with Amazon Alexa powered by Volara.



### Solution Spotlight

Viceroy L'Ermitage Beverly Hills, Hotel Zetta San Francisco, and Viceroy Los Cabos in Baja California, have added Alexa to all guestrooms. With seamless and secure integrations into more than 45 hotel technologies, Volara is enabling Viceroy L'Ermitage Beverly Hills guests to control lighting, Do Not Disturb/Make up Room settings, and room temperature through INNCOM by Honeywell; use their voices to control the TV, change channels and adjust the volume through Sonifi; seamlessly transmit requests for in-room services through the ALICE Hotel Operations Platform; play music and listen to podcasts via iHeartRadio; and place direct calls through Alexa to the front desk, concierge, valet etc.

At Hotel Zetta, Volara integrations include ALICE, the MCOMS Guest Room Entertainment Platform, and iHeartRadio. At Viceroy Los Cabos, Volara integrations include ALICE and Innspire. Guest feedback on having Alexa in rooms has been positive and reflected in online reviews and post-stay surveys. In addition to guestrooms, the Hotel Zetta San Francisco has placed Volara-powered Alexa in the lobby to extend guest interaction and add another touchpoint to engage with the hotel. Discussion for a meeting room application is underway that would enable meeting planners and social groups to use voice commands to control lighting, start video presentations, order food-and-beverage, and place additional requests from meeting rooms at the hotels. Viceroy is leveraging voice technology for back-of-house applications to streamline engineering tasks, enable room status changes, and facilitate staff-to-staff communications. In these ways and many more, voice technology is proving to be a natural extension of how guests engage, and staff operates in the smart hotel environment.



# HOTEL **zetta**

SAN FRANCISCO

## Customer Spotlight: Hotel Zetta

Hotel Zetta is in San Francisco's SoMa district, just three blocks from Union Square. This boutique hotel remained open during the pandemic to provide accommodations to essential workers. General Manager Mark Beevor said because guests are increasingly comfortable with voice technology, investing in smart voice assistants just made sense — especially since the devices are touch free.

Although occupancy is still low due to the pandemic, the GM said guests (who would not have used the device in the past) are now more open to exploring voice-on-command experiences because they don't want to encounter staff or touch in-room devices.

## What's Next in Smart Assets

### Partner Spotlight: Volara

With voice command becoming the new on demand, engagement between guests and the smart hotel via in-room voice assistants is taking on a whole new dynamic. Volara, an Alexa for Hospitality launch partner, is the voice hub of the hotel industry and today it is serving as the exclusive provider of voice-based technologies for more than 50 ownership/management groups. Its conversation-management software turns the leading natural language processing platforms into a hotel business tool that drives more efficient guest service, influences guests' behavior, improves net promoter scores and helps hoteliers understand guests better. Volara protects guests' privacy and the hotels' proprietary data from disclosure, plus it ensures that guests get what they requested through its patent-pending Accuracy Engine. With Volara, hotels can deliver contextually relevant, totally awesome, conversational experiences at scale..



## What's Next in Smart Assets



### Perspective from TensorIoT

Travel and Hospitality is poised for a dramatic resurgence as people who have been unable to safely travel for over a year make up for lost time. Businesses that cater to clientele using smart asset systems to provide seamless service and integrated rewards will entice consumers away from competitors.

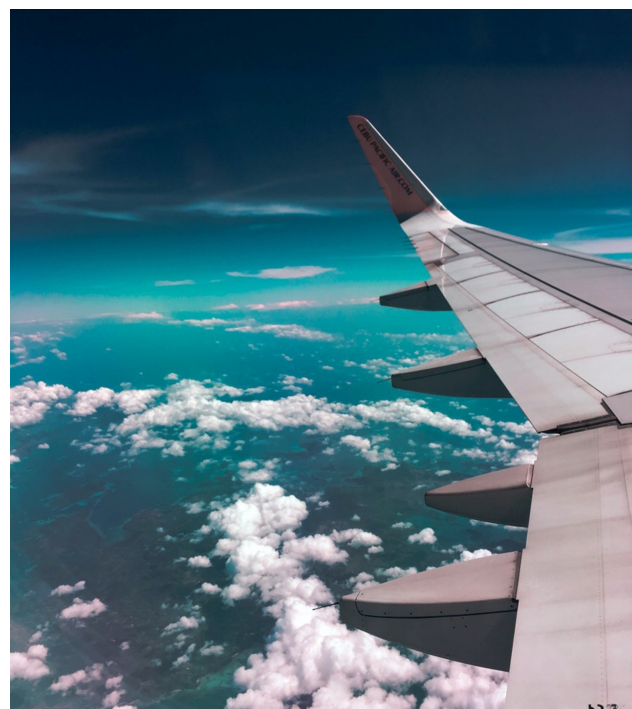
Smart asset technology helps reduce friction for clients while traveling. For example, smart asset technology will give hotels the ability to proactively offer rewards to top clients without requiring reward card swipes and can even adapt to customer preferences without requiring the customer to talk to a service agent. After one of the most stressful years in recent memory, it is imperative that the first guests back have amazing experiences that propel word-of-mouth reviews and reinforce brand loyalty. Intelligent adoption of smart assets is a meaningful investment toward future prosperity for this industry.

### Partner Spotlight: TensorIoT

TensorIoT is an AWS Advanced Consulting Partner that has earned the AWS Travel & Hospitality Competency designations along with 6 other AWS competencies and multiple AWS Service Delivery credentials for AWS IoT services. Founded by a former AWS employee, TensorIoT has delivered successful projects across the world in the IoT & ML space and has offices in the U.S., the UK, and India. TensorIoT is customer obsessed and practices the AWS leadership principles. From our computer vision protection solution SafetyVisor to our IoT device management platform Rubix, TensorIoT has multiple tools to help T&H companies efficiently and effectively leverage IoT and ML to improve their businesses. With our deep experience delivering complete end-to-end solutions, from edge devices to end users in IoT, or data engineering to automated ML pipeline, our team of AWS certified architects can quickly assist customers in realizing their technology and business goals.

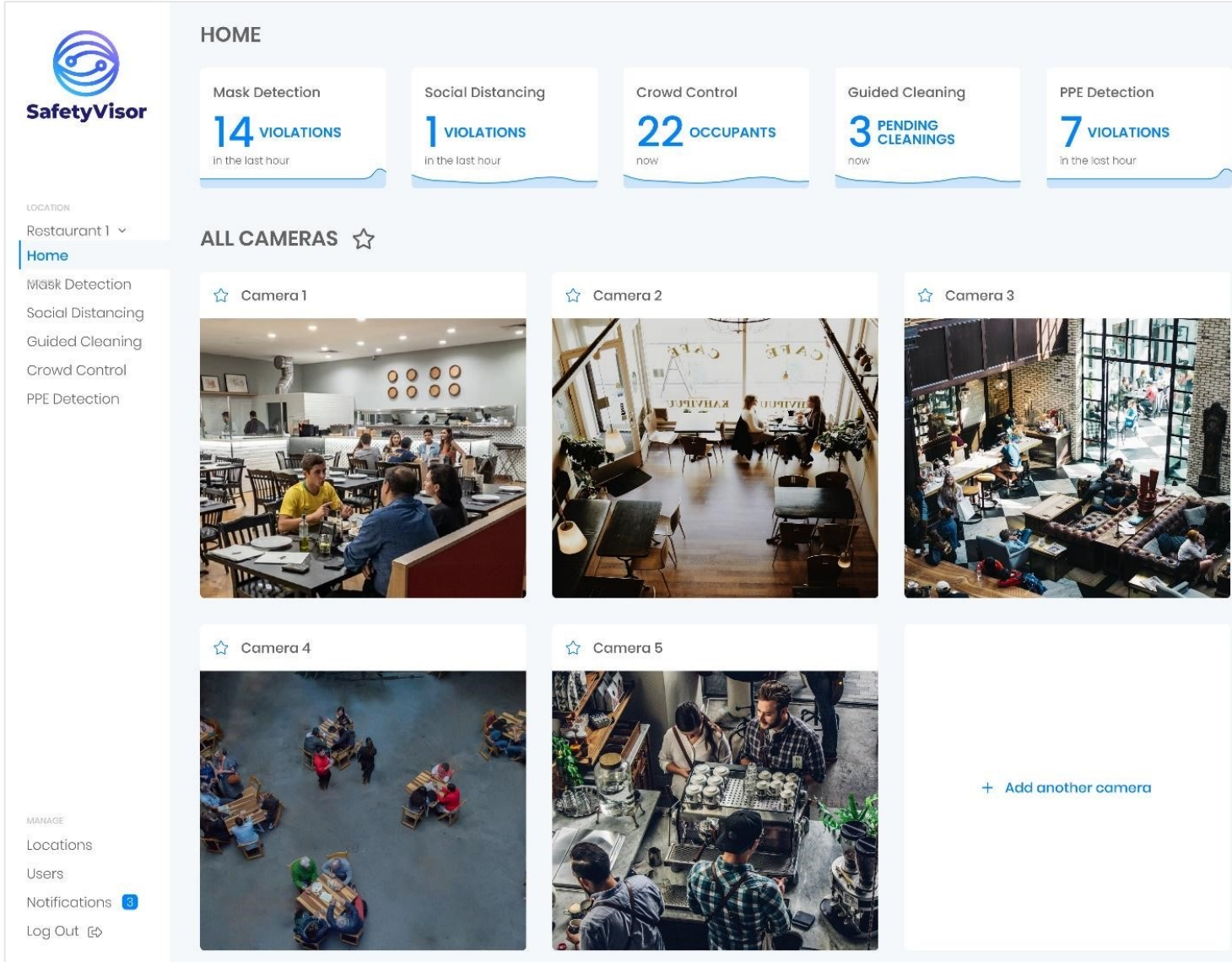


## What's Next in Smart Assets: TensorIoT SafetyVisor



### Solution Spotlight: SafetyVisor

Although vaccinations have become widespread, there remains a need for additional monitoring in certain locations. TensorIoT's SafetyVisor is a Computer Vision Monitoring solution that can be deployed to the cloud or edge to ensure proper safety precautions are being followed. SafetyVisor integrates with a property's existing camera systems, creating a system where machine learning models monitor key health and safety elements to provide peace of mind for employees and guests. SafetyVisor tracks PPE compliance (including facemasks), social distancing, space utilization, room/area occupancy tracking, and even sanitization procedure compliance. Having health protection systems in place helps create a safe environment for guests to relax and unwind without feeling at risk of any new potential issues. And even when masks are no longer required, traffic monitoring and targeted cleaning optimize staff efforts for property upkeep.



### Customer spotlight

Casinos and other gaming Travel & Hospitality destinations have constant surveillance in place to prevent cheating and theft, but the industry still relies on outdated rewards card systems to provide perks and benefits to loyal clients. Using rewards cards requires the customer to manually insert their card into a machine or show the card at a table each time they play, which constantly reminds the customer that they're being tracked and adds an extra layer of interaction between the casino and the customer. To reduce friction and improve the customer experience, a leading gaming casino asked TensorIoT to develop a robust system with the ability to collect and compile player data at a central location for reference. The project required the use of facial recognition and telemetry data to help measure key metrics that the client requested to perform data-driven analysis and set the groundwork for a card-free reward program. In terms of information gathering, facial recognition was necessary in order to identify patrons, and tracking people through the casino required the incorporation of raw telemetry data linked to the patrons identified by facial recognition. TensorIoT leveraged AWS Rekognition to develop a system that monitors client motion within a casino from gaming tables to bars and restaurants to hospitality, tracking client activities to provide the foundation for reward programs that don't require the use of a physical card or other client-operated action."

## Chapter 8

# What's Next in Core Applications

Deliver cloud-based solutions for Travel and Hospitality applications like Revenue Management, Reservations, and more



## What's Next in Core Applications



### Perspective from Datalex

The pandemic has fueled the power of digital. We are now living a digital first reality – and this is encouraging airlines to accelerate their digital transformation – for a transformative future of travel, with the customer at the heart. Some of the key trends we see for 'What's Next' in the industry are:

- Real-time Retail Control  
Engagement with travelers is to become increasingly real-time as they seek reassurance and regular travel updates. Airlines likewise need to be supported by products that enable them to react to market and customer demands in real-time with the right products, promotions and services that meet their customers' needs, when they need it and according to a regularly changing travel environment.
- Customer Centric Digital Servicing – The Shift to Complete Self Service Travel  
The shift to full digital servicing throughout the travel lifecycle is accelerating, empowering travellers with digital self-service at every step and bridging the gap between the online and offline worlds. To achieve the reality of this end-to-end contactless, self-service journey, automation is key - both for the airline and the end-traveller.
- Faster and smarter data driven pricing powered by AI  
Intelligent dynamic pricing and more sophisticated product determination is a key trend for airlines which will play a very important role in their recovery and growth post-COVID. Applying smarter, faster and more accurate data-driven dynamic pricing and product determination, beyond initial booking to the full merchandising flow, will create a much better shopping experience and will increase conversion.

- Unlocking of Revenues Beyond the Seat  
As bookings will take some time to return to pre-pandemic levels, driving a deeper customer bond and a deeper wallet share is key. The ability for airlines to unlock revenue beyond the seat -- and to monetize content across the travel lifecycle to increase revenue beyond traditional ancillaries of seats and bags – is important. Central to this will be the ability to use customer intelligence to optimize the position, timing and targeting of ancillaries at each touchpoint across the travel lifecycle.

### Partner Spotlight: Datalex

Datalex is a market leader in digital commerce for travel retail. We provide airlines with a sophisticated and comprehensive product portfolio to drive revenue and profit as digital retailers – Datalex Direct, Datalex Dynamic, Datalex Merchandiser and Datalex NDC.

Our deep technical expertise and our products help set our airline customers apart, with the ability to deliver a market leading and differentiated digital retail experience on every device, across every sales channel and at every touchpoint in the customer journey. Our products and platform operate at scale with over one billion shoppers annually, covering every corner of the globe and used by some of the world's most innovative airline retail brands. [www.datalex.com](http://www.datalex.com)

**“We see bookings paid by voucher only, as well as voucher plus credit card. It was a very smooth delivery. Congratulations to the Datalex team and great job!”**

**Bamba Sissoko**

VP, Information Systems Air Transat

## What's Next in Core Applications



**Customer Spotlight: Air Transat**  
*Implementing this joint Air Transat/Datalex solution has enabled rapid, efficient responses through digital vouchers to more efficiently compensate passengers for flight cancellations caused by COVID-19*

In March 2020, airlines worldwide cancelled flights as the COVID-19 pandemic spread across the globe. Air Transat needed to quickly launch a smooth, seamless and speedy voucher solution, covering the complete cost of the flight booking including any associated ancillaries.

Datalex and Air Transat designed and delivered a customer-centric solution, fully hosted on AWS, that enables online validation and fulfilment of vouchers. Providing a sophisticated and seamless digital voucher alternative to refund, not only improved the customer experience, but also reduced refund costs by effectively managing flight compensation and passenger care. Customers simply enter their voucher numbers as an online payment option, where a single customer can use multiple vouchers at the same time.

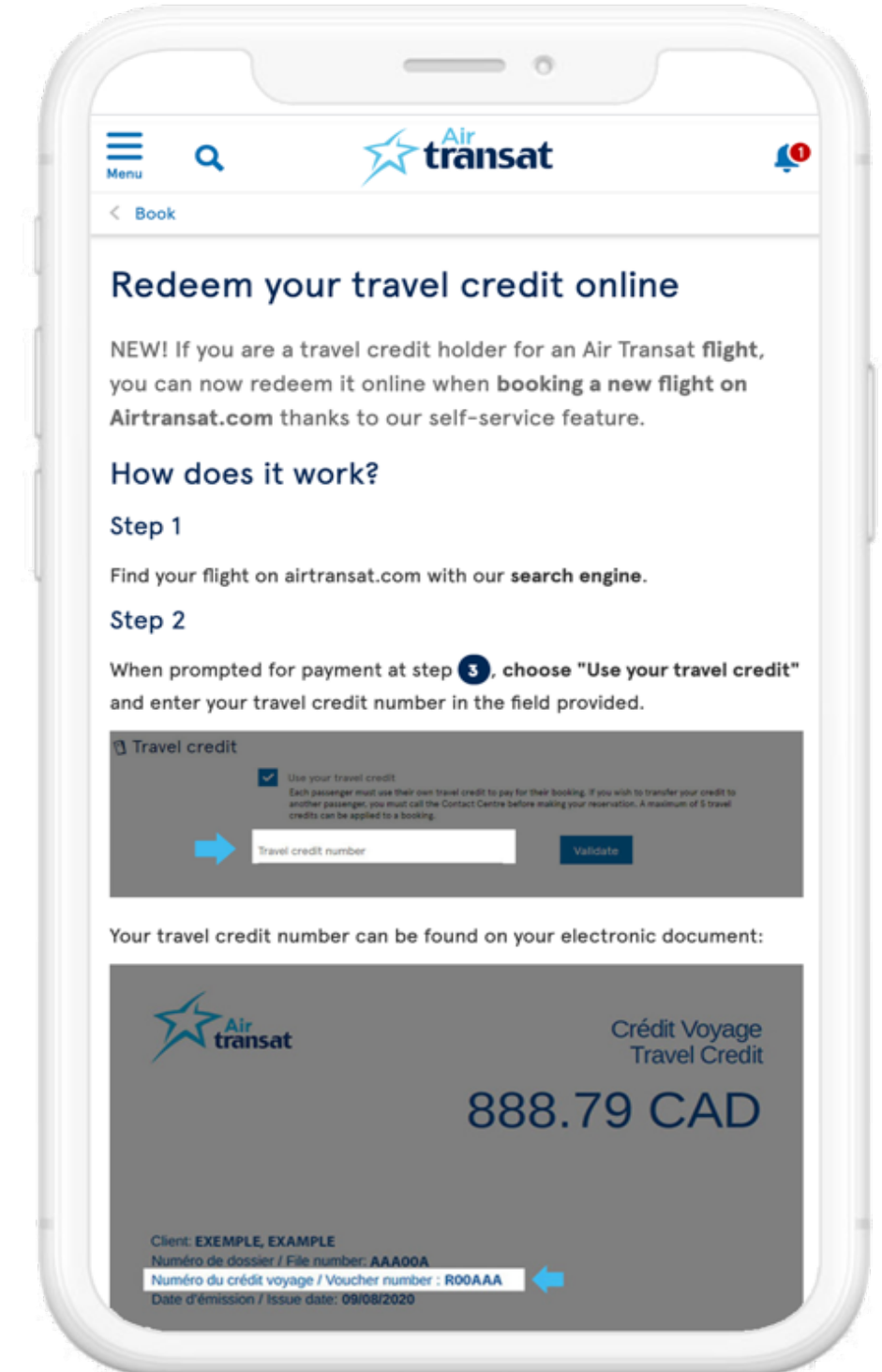
In response to this COVID-19 urgent requirement, Datalex rapidly deployed and went live with this key capability for Air Transat on October 1, 2020.



**Solution Spotlight**

Pre COVID-19, Datalex had recognized the need to empower airlines with greater control of their digital retail strategy by providing sophisticated tools and products that enable much faster speed to market, flexibility to react to competitive and customer demands, and experimentation at scale with new products and pricing. The need for this agility and laser focus on digital transformation has been accelerated by COVID.

Datalex developed the Digital Configurator to provide unrivalled and game-changing levels of data configuration control to airline business users. With a core focus on simplicity and speed, it allows them to bring their business changes to production without IT intervention, adapting products and pricing in real-time, and realising significant savings in time and cost. Another important trend is the acceleration to true digital retailing, enhanced with real-time, dynamic pricing. Our Datalex Dynamic product equips airlines with a powerful, data-driven product determination and pricing strategy and with the ultra-flexibility needed to create offers in real-time that reflect and adapt to fast-moving demand trends and that vastly improve conversion.





# What's Next in Core Applications



## Perspective from DocMX

The worldwide pandemic has been a catalyst for change, pushing all industries to transform their ways of working, and to embrace technology for remote working and doing more with fewer resources. In hospitality, it shined a spotlight on certain vulnerabilities and inefficiencies – such as the tendency to stick to traditional operating ways, which have been extremely profitable over many years.

With unpredictable occupancy levels for 2021-22 and beyond, the resilience of hospitality businesses is likely to be tested further. Therefore, now is the time for the hospitality sector to match pace with other more innovative industries and begin reviewing and implementing digital automation technology that is readily available to them.

While cash preservation and liquidity are critical in the short term, investing in smart technology brings concrete medium to long-term savings. We have seen first-hand how digitising and automating processes allows our hospitality customers to do more with less: meet consumer demand with lower resources, preserve margins through time and cost-saving, and future-proof operations.

We believe that in the coming months, many hospitality organizations will invest in new technology for their core operations, change the status quo, and reinvent themselves for the future.

## Solution Spotlight

Hospitality businesses must look at ways to maximize productivity, and one of the simplest ways of doing this is automating administrative and manual tasks. This includes many back-office processes that are often still paper-based and inefficiently managed across different systems and departments.

DocMX is a SaaS technology that ingests hospitality information from various mediums and third-party systems, using rules-based machine learning and artificial intelligence to capture the relevant key information and process it onto automated reconciliation and audited workflows. DocMX enables our customers to automate up to 70% of transactions in revenue auditing, Accounts Payable & Receivable, HR, Sales, and many other processes.

This also enables hospitality groups to standardize efficiencies in different business areas, share workloads across dispersed locations and securely store information utilizing AWS technology in compliance with local legislation. No more chasing information around the office taking you away from more value-add activities! Additionally, automation guarantees concrete financial savings: up to 70% of time reclaimed, print related expenditure reduced by up to 90%, and a single staff member can take care of multiple roles and locations.





### Customer Spotlight: InterContinental Hotels Group and Deployment

InterContinental Hotels Group (IHG) Portugal are utilizing DocMX solutions built on AWS to digitize and streamline various finance processes during this pandemic era. After developing and implementing streamlined processes to increase efficiency in completing tasks, the processes are then digitized and standardized. This makes it possible for them to be expanded to other IHG properties across Europe in preparation of re-opening.

With audited savings achieved as a result of the Portuguese project described above, IHG is now able to easily roll out these efficiencies and savings to locations around the world without the prohibitive cost of enterprise deployments. Based on this improved performance, properties are now able to do more with less, maintaining the same high standards of service without the burden of manual processing.

## What's Next in Core Applications



### Partner Spotlight: DocMX

With years of success working globally with some of the world's leading hospitality groups, DocMX have developed a unique proposition for the hospitality industry. DocMX is an AWS/SaaS document management and process automation technology that can be molded around any business process. DocMX has a proven track record of automating over 75 hotels around the world, bringing significant time and money savings to all their properties, while reducing the environmental impact of any organization. Leveraging AWS technology, DocMX enables hospitality businesses to digitise their way of working - without the complexity or costs typically associated with leading-edge enterprise solutions.

You can also find DocMX in [AWS Marketplace](#).



# What's Next in Core Applications



## Perspective from IBS Software

Keeping up with rapidly changing market behavior and evolving technology is challenging for any business. It's even more so for travel companies given many of the industry's underlying legacy systems, which despite their high-cost of total ownership, lack flexibility, customer-centricity and responsiveness. This is where cloud-first and digitally native technologies are raising the bar and can cut through the decades-old technology patchwork.

Highly resilient and available, cloud tech scales with business needs and offers more agility so adopters can become more customer-centric by innovating quicker and collaborating with partners more openly. They also lower core application operating costs and increase technology architecture investment utility as they can be integrated more easily and upgraded more regularly.

## Partner Spotlight: IBS Software

IBS Software is helping to redefine the future of air travel air cargo by continuously innovating and developing new technologies.

Leading airlines, ground handlers, airports, hotels, cruise lines, and tour operators from around the world count on our travel industry expertise and mission-critical SaaS technology to drive their success.

Our cloud-first architecture provides these travel brands with the agility, scalability, and partnership opportunities they need to manage and optimize their business, profitably and efficiently, while delivering superior customer experiences across the journey.





### Customer Spotlight: Korean Air Cargo

Korean Air Cargo is a leading global cargo carrier that implemented iCargo in 2019 to replace a combination of core mainframe systems integrated to 35 satellite systems. Since deploying, they have realized such benefits as:

- Increased yield, revenue, and cashflow performance through richer data capabilities, an integrated O&D based revenue management system, and real-time billing and settlement
- Increased customer satisfaction thanks to instant shipment profitability analysis that allows real-time booking confirmation, and accelerated innovation go-to-market capabilities through platform flexibility and scalability
- Improved productivity through mission-critical process automations that reduce manual interventions, errors and associated revenue leakage
- Deeper digital collaboration with partners beyond simple message interchanges and improved business performance by integrating best practices shared through a community comprised of the world's top 30 cargo airlines.

## What's Next in Core Applications



### Solution Spotlight

Air cargo has been a lifeline for many airlines during the pandemic. Co-created with the world's leading cargo carriers, our iCargo helps airlines increase revenues, deliver operational efficiency, accelerate revenue reconciliation, and reduce costs associated with ongoing legacy system integrations and maintenance. Driving success for the world's top 50 cargo carriers, iCargo automates airline, airport, and ground handling operations, from end-to-end. Underpinned by a highly configurable new generation SaaS platform, iCargo scales to business needs, and is quick to deploy and easy to maintain. As a result, airlines are maximizing the utilization, performance, and ROI of their core cargo applications.



## Chapter 9

# What's Next in Digital Customer Engagement

Personalize recommendations and  
messaging to more effectively identify,  
attract, and retain customers



# What's Next in Digital Customer Engagement

## Perspective from Algonomy

Digital has firmly established itself as one of the most important drivers for business growth in travel & hospitality. In the face of ever-evolving customer needs and behavior, leading brands need intelligent ways to forge meaningful relationships for the long term.

As they develop their digital engagement strategies to address customer needs in the moment, travel & hospitality brands are seeking and implementing solutions that leverage data and provide deep insights to power individualized experiences across channels. Based on this, the hope is that these insights have a lasting impression on their customer relationships.

Hence, decisioning, not data, is becoming the linchpin of the new digital world. Algorithms will infuse intelligence into customer engagement decisions - one that is contextually relevant, personal, engaging and dynamic. Algorithms, with their ability to quickly innovate and curate a deeply personal, brand-centric shopping environment, will help translate customers' happiness and satisfaction into greater value over the lifetime of that relationship.

# ALGONOMY

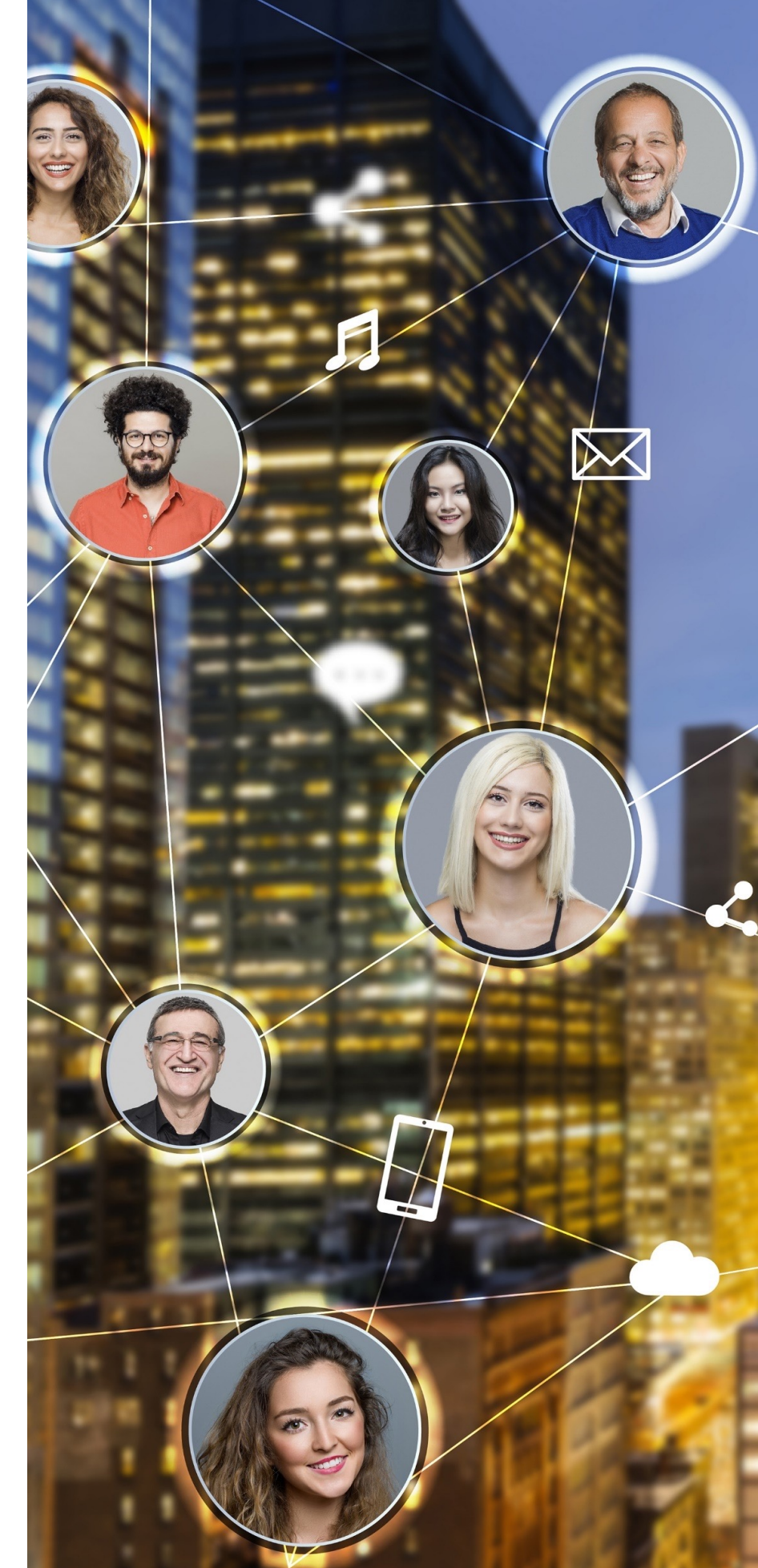
## Solution Spotlight

Algonomy Powers the Digital "New Normal" for Travel & Hospitality Brands with Algorithms; Activate, Engage, Align, and Convert every digital interaction in real time for hyper-personalized customer experiences. Algonomy is powered by a proven real-time customer data and analytics platform and industry expertise. It replaces the cost and imprecision of manual decision-making with an intelligent, ensemble-based algorithmic decisioning engine.

Now you can precisely integrate demand & supply, engage customers with contextually relevant experiences across their lifecycle and enable rapid time-to-market, driving immediate ROI for your business.

Here are the main components of the ACE Platform:

1. Real-time Customer Data Platform- Algonomy's CDP enables real-time audience activation by creating granular segments with unified customer data, across online & stores.
2. Algonomy's advanced Customer Analytics is a cloud-based analytics module that enables AI-powered, autonomous decision-making for retailers.
3. Omnichannel Personalization- With Algonomy, commerce teams can turn every digital interaction into a personal experience by connecting digital touchpoints such as search, browsing, content and product recommendations.
4. Customer Journey Orchestration- Algonomy enables retailers to authentically engage audiences with perfectly timed personalized campaigns and offers across all channels.
5. Merchandising and supplier collaboration - helps retailers automate key merchandise processes, provides prescriptive recommendations for timely course corrections to price and inventory, and transforms vendor relationships through data monetization.





### Customer Spotlight: Pizza Restaurant Chain in India

The client is a global brand and No. 1 pizza chain in India. Their strength is in excellent customer service, quick delivery, product innovation and strategic store locations – owned and franchisee. With increased popularity of delivery, the client was looking to enhance customer engagement through mobile app marketing across the customer lifecycle.

The need was to have a unified, 360-degree view of their customers across online and offline channels which would act as the bedrock for successful campaigns driving increased response rates and conversions. Attempts to unify offline and online data had failed, as past vendors specialized in only one channel and the mobile app was under-utilized due to limited marketing capabilities enabled on the app.

Algonomy's Customer Data Platform and Journey Orchestration enabled personalized customer engagement on their mobile app. The approach helped increase customer acquisitions through increased mobile app installations across its customer base, as apps provide better ability to reach customers in their micro-moments and drive conversions.

To grow existing customers, they were segmented on multiple dimensions and content was personalized based on their preferences. The client's mobile app was used to show interstitials during app sessions and upsell tactics were deployed to add value to the customer's order. Based on RFME segmentation, 55% of the best customers who had downgraded to lower categories were targeted and brought back to a higher frequency category with propensity models that suggested the best tactic to engage them.

Algonomy's solution enabled real-time, personalized app engagement which resulted in 3.5% incremental revenue and 750K new app installs per month.

## What's Next in Digital Customer Engagement



# ALGONOMY

### Partner Spotlight: Algonomy

[Algonomy](#), previously Manthan-RichRelevance, powers the digital "New Normal" for travel and hospitality brands with AI. It provides a dependable cloud data and analytics platform, along with experts that are dedicated to the customer's success.

Over 400 of the world's most demanding retail brands choose Algonomy for its unmatched retail expertise and breadth of digital best practices across data management, marketing, merchandising, analytics and ecommerce.

# What's Next in Digital Customer Engagement



## Perspective from Braze

After a year that saw hotel rooms sit unused and flights come to a grinding halt around the globe, travel and hospitality brands are poised to bounce back as—with vaccinations on the rise—travelers begin to emerge, ready to explore the world once again. There are reasons to be hopeful, with [65% of US residents](#) saying they plan to travel even more this year than they did before the pandemic. Still, a full recovery is not expected [until 2024](#).

For the time being, the new reality for travel and hospitality brands is a challenging—but promising—one. The immediate priority is to make up lost ground while assessing and responding to new needs and opportunities in a fast-changing marketplace. Within that context, companies are increasingly competing on their ability to meet customer expectations and deliver seamless experiences in the moment. In the words of the [Harvard Business Review](#), yesterday's conventional wisdom that customer relationships matter has become today's truth: Customer relationships are everything. And that's where the right customer messaging strategy can play a crucial role in helping brands in this space not only stand out but compete effectively.

## Solution Spotlight

Modern customer engagement is built on data. For travel and hospitality brands, understanding the consumer data at their disposal, processing it, and taking action on it to deliver personalized, relevant experiences to travelers in the channels that speak to them is one of today's biggest challenges and biggest opportunities. To make that happen, it's important to ensure you have the technologies and strategy you need to meet customers where they are—and help them get where they're planning to go next.

Consider the classic cart abandonment campaign. Cart abandonment is a problem for brands across industries, and within travel and hospitality, [booking abandonment rates](#) range as high as 92.04% for rental car companies, 79.95% for travel companies, and 87.55% for hotels. But by leveraging first-party data, brands in the space can personalize their follow-up outreach to highlight specific trips/bookings that customers engaged

with and ensure that they're reaching each individual on the messaging channels that speak to them.

That's why brands looking to extend customer lifetime value (LTV) and minimize churn are investing in comprehensive, cross-channel engagement campaigns to recover near misses and encourage successful booking completions.

Behind the scenes, these personalized, cross-channel campaigns are seamlessly powered by:

### 1. Live User Profiles

Built on cross-device, cross-platform, real-time data, and informed by information collected by the Braze SDK (among other sources), these live-updating customer profiles collect key user data, such as:

- Location
- Time zone
- Country
- App/website usage, activity
- Loyalty membership activity and status
- Search activity and conversion activity (abandonment activity)
- Purchase activity and history
- Messaging history and activity (opt-ins, subscription statuses)

For travel and hospitality brands who find they're missing key data they need to personalize, segment, or enrich their abandoned cart messaging, one tool that's worth considering is [in-app](#) or [in-browser messages](#).

### 2. Dynamic Segments

This out-of-the-box-ready solution enables marketing teams at Travel and Hospitality brands to intuitively build audiences based on custom events and attributes—like a specific user's loyalty status. These valuable traits are then fed through the SDK—or using an API—and leveraged in real time to more effectively appeal to users with specific, similar behaviors and/or preferences.







## What's Next in Digital Customer Engagement

### Customer Spotlight: GetYourGuide

In the early days of the pandemic, faced with a 99% drop-in booking activities, European travel and hospitality brand [GetYourGuide](#) made the call to double down on smart, data-driven cross-channel messaging to deliver continued value to its user base, even while its travel-loving customers were stuck at home. As part of that shift, the brand rolled out inspirational campaigns, such travel quizzes and travel-themed coloring books for kids, which it promoted via a fully cross-channel messaging strategy that helped the company deliver 45% email open rates—bucking industry trends.

### 3. Customer-journey mapping technology

Using the Braze platform's Canvas drag-and-drop customer journey management feature, travel and hospitality brands can create custom experiences at every touchpoint, with:

- **A unique KPI or objective for the campaign:** Brands can encourage users who abandon a booking to complete a purchase within a given timeframe—for instance, within three days
- **Custom targeting possibilities:** Focus personalized, cross-channel outreach on a given geographic region or by criteria like attributes and past activity
- **Multiple delivery options:** Messages in a journey can be scheduled to be sent on a given day or cadence—or they can be triggered automatically (or via API) based on specific user actions, such as when someone cancels/abandons the booking process
- **No-code tools:** Simple composers and drag-and-drop features enabling users of all technical capabilities to build and edit campaigns on all major messaging channels (e.g. email, push notifications, SMS, in-app messages) with ease
- **Personalization:** Messages can be tailored in a 1:1 way, making it possible for abandoned cart messaging to seamlessly include a user's first name, loyalty membership details, or preferred home airport, among many other data points
- **AI-backed intelligence features:** Use [Braze Intelligent Channel](#) to determine which channel to use for each user based on their individual channel preferences—and leverage [Braze Intelligent Timing](#) to send your message at optimal time for engagement based on past user behavior
- **Exception events:** Ensure your abandoned cart campaign won't be sent if the user has already completed the booking at the time of send, avoiding confusing or frustrating customer experiences

- **A/B testing:** Enables marketers to test up to 8 variants at once, across messaging, channel selections, the discount/promotion offered, enabling success to be more accurately measured against a control group and gauge the incremental impact being driven by the strategies being used

### Partner Spotlight: Braze

Braze is a comprehensive customer engagement platform built on Amazon Web Services (AWS) that helps brands bring modern, stream processing, and data-science frameworks to their engagement strategies. In 2019, Braze sent more than 600 billion personalized emails, mobile and browser push notifications, in-app and in-browser messages, SMS and MMS messages, [Braze Content Cards](#), and more to billions of monthly active users. Braze customers in the travel and hospitality vertical delivered more than 87 billion messages overall in the last six months of 2020 alone and roughly half of these clients use Braze across four or more channels.

The Braze customer engagement platform is built for today's on-demand, always-connected customers. They replace decades-old databases and poorly integrated internal and external tools with live views of every customer, highly intuitive customer journey building, in-the-moment campaign optimization, and more.

The importance of speed at scale cannot be overestimated as consumers' expectations for on-demand, hyper-personalized communications continue to increase. When a minute can make or break an experience, brands need a customer engagement ecosystem that allows them to make virtually instantaneous and meaningful connections with every one of their customers in real time.

If you're ready to create best-in-class experiences across every step of the guest and traveler journey, find out [how Braze has helped leading travel and hospitality brands](#) drive customer engagement.

# What's Next in Digital Customer Engagement



## Perspective from MoEngage

As countries go in and out of lockdowns in bursts, travelers have become more responsive to short windows of opportunities. They have moved away from scheduled and well-planned travel itineraries and are making swifter decisions.

Brands that are not “in the moment” with their customers will be losing out on precious sales opportunities. Relevant and real-time communication is now more critical than ever.

Looking ahead, the most immediate area of focus for Travel & Hospitality brands will be improving customer insights and expanding the scope of collecting impactful user data. This is likely to lead to an increase in the adoption of modern cloud solutions that enable brands to understand their customers, and, more importantly, their behavior and preferences.

Technology platforms that provide a 360-degree view of every individual customer and can build predictive models that determine the next potential steps a customer can take will become a pivotal addition to the existing tech stack for Travel & Hospitality brands.

## Solution Spotlight

Travel & Hospitality brands will need to reimagine their approach to customer engagement by understanding the critical moments in a traveler's lifecycle and communicating them with the relevant message at the right time, and on the right digital channel.

Until recently, the typical customer engagement cycle looked like this:

- plan -> run -> analyze -> course-correct

Now, marketers need to change the order of operations to:

- analyze -> plan -> run -> measure -> course-correct

To help implement this new approach, we've built an Insight-led Engagement framework that brands can follow:

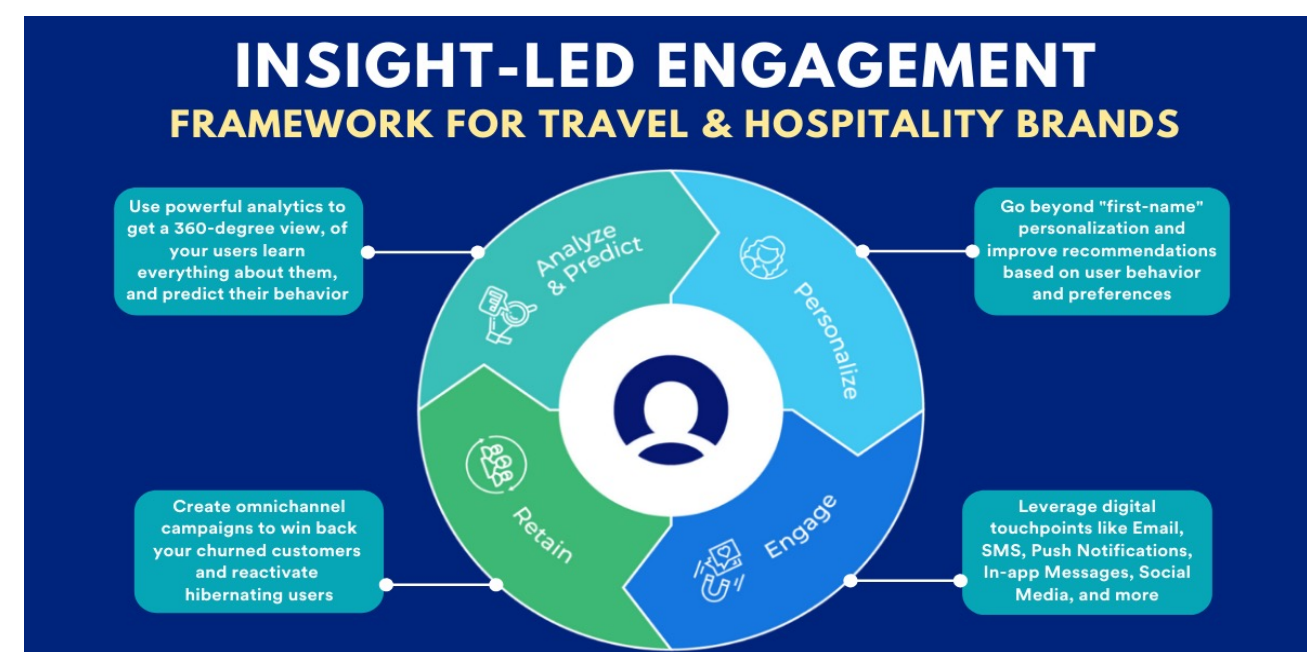
**Step 1:** Analyze the behavior of every user and use every interaction they have with your platform to build predictive models.

**Step 2:** Use the insights and data you've gathered to personalize every customer experience – from relevant communication to strategically placed nudges.

**Step 3:** Communicate with your users on their preferred digital channels.

**Step 4:** Create an omnichannel strategy that leverages all available digital touchpoints to get users back by sending them the right message at the right time.

**Step 5:** Rinse and repeat. A well-known but less-implemented practice in Digital Customer Engagement is optimization. By constantly running experiments, brands can gauge the tone of their communication, use specific phrases and synonyms that resonate with a particular user segment, and measure the impact of localization.





### Customer spotlight: OYO

OYO is a hospitality company valued at over \$1 Billion and known for its technology-driven process that emphasizes user experience and engagement heavily. They operate in over 800 cities in 80 countries, including the U.S., Europe, the U.K., India, the Middle East, Southeast Asia, and Japan. Focused on enhancing the room-booking experience for their guests, OYO implemented MoEngage's Customer Engagement Platform to create personalized hotel recommendations based on their customer's past booking trends and browsing patterns. They also used MoEngage's Analytics suite to understand the price preferences of their customers to create highly personalized and relevant offers.

OYO has a highly fragmented user base with different approaches to hotel booking. They search online via mobile devices, look at social media reviews, make inquiries through email, and then complete a booking through OYO's website or mobile app. OYO delivered a seamless user experience with uniform and consistent messaging across all the channels using MoEngage's omnichannel suite.

This resulted in an 8X increase in the performance of their hotel recommendation campaigns and an overall increase of 5X in the Click-through Rates of Push Notifications, SMS, and Emails sent via MoEngage.

## What's Next in Digital Customer Engagement



moengage

### Partner spotlight: MoEngage

Founded in 2014, MoEngage is an intelligent customer engagement platform built for the user-obsessed marketer. Our AI-powered customer journey orchestration, personalization capabilities, and in-built analytics have led us to be recognized as a leader by Gartner, Forrester, and G2 in the mobile engagement space.

Fortune 500, enterprise, and mobile-first companies worldwide use MoEngage to implement Insight-led Engagement and delight their customers with thoughtful messages delivered at the perfect moment across multiple digital touchpoints.

Right from providing frictionless booking experiences by sending flight alerts, travel tips, and personalized itineraries, and cancellation policy updates – Travel & Hospitality companies like OYO Rooms, Travelodge, FabHotels, Luxstay, and Yatra proactively engage their customers by sending billions of push notifications, emails, in-app interstitials, and text messages through MoEngage.

In 2020, MoEngage achieved the Amazon Web Services (AWS) Travel and Hospitality Competency status, validating MoEngage's deep domain expertise in [Customer Engagement for Travel & Hospitality brands](#).

# What's Next in Digital Customer Engagement



## Perspective from Local Measure

More than anything, customers want seamless, frictionless experiences. Businesses have finally switched on to the idea that bumps in the customer journey don't have to end in painful customer support phone calls.

Taking a pro-active approach to customer service entails giving them the information and tools they need to self-serve— which, in the end, saves everyone time.

On the other end, businesses need the customer intelligence to know how to handle each unique situation so that simple tasks can happen automatically, and human attention can be spent where it's most valued

## Solution Spotlight: Engage for Amazon Connect

Our solution, Engage for Amazon Connect, leverages AWS Lambda functions to power multiple, simultaneous digital experiences. As a result, intelligent decision flows can happen not just during typical call flows, but also during customer contact through other channels such as email, web chat and social media.

Gaining an intelligent, cloud-based omnichannel contact center is no longer just for big enterprises. Even small businesses can get up and running quickly and efficiently with no-contract, on-demand pricing designed with the flexibility to meet specific, evolving business needs.





### Customer Spotlight

At the start of the pandemic, one of our clients was looking for a cloud-based contact center solution so that their agents could work remotely. They liked Amazon Connect but wanted a solution that would bring in email and other channels in the future.

Our solution, Engage for Amazon Connect, allowed them to achieve this while reducing implementation costs by 40% and speeding up training time by up to 75%. The efficiency gained through the solution was beneficial as the company was going through a recent expansion.

# What's Next in Digital Customer Engagement

## Partner Spotlight: Local Measure

Local Measure is a customer communications management platform that helps businesses connect with their customers. We provide a single pane of glass for customer service staff to respond to customers, whether at hospitality venues or contact centers.

Founded in 2014, our global team is spread across Sydney, Miami, Amsterdam, Barcelona, and Singapore, serving some of the world's largest hospitality, financial services, government, and telecommunications businesses.

Our flagship product, Engage for Amazon Connect, is an omnichannel agent desktop and platform purpose-built for Amazon Connect, enabling contact centers to manage inbound customer queries across voice and digital channels.

You can also find Local Measure in [AWS Marketplace](#).



# What's Next in Digital Customer Engagement



## Perspective from NLX

Digital Customer Engagement is accelerating as digital transformation increasingly enables travel and hospitality organizations to deliver the right message, in the right channel, at the right time. As this occurs, the challenge horizon is rapidly shifting from the power of data to drive segmentation and profiling to ensuring that organizations use that power for prompt, personalized engagement.

Customers are real people with real needs, not just a number. If their needs are not met during the digital customer engagement experience, they will shift their brand loyalty to another organization that will personalize and meet their needs. Organizations must deliver warm, relevant, and personalized experiences with the focus always on the customer engagement - just as they've come to expect in live agent calls and in-person interactions.

While the operational efficiency of simultaneously accommodating thousands of customers across multiple digital channels is a new capability, there is risk to over-rely on speed and overwhelm customers by repeatedly asking for information the organization already has. Trend data shows that users increasingly seek quality, customer self-service options for routine tasks. They will share details about themselves and expect personalization in return. They also want to be able to escalate to a live agent if they get stuck.

## Solution Spotlight

NLX Voice Compass provides a personalized customer self-service experience.

Pulling from existing data on product or customer profiles, recent transactions, and account history, or payment systems, Voice Compass enables travel and hospitality brands to leverage their existing digital assets (a website, a mobile application, or IoT Device) to build rich customer journeys.

Customer engagement is enhanced using a digital Journey Assistant™ to accompany and guide the customer by providing a voice narrative that helps take them through each step required to complete tasks. These can be requests as simple as 'Password Reset' or 'Set Room Temperature,' or more complex, such as 'Change Flight,' 'Book a Room,' or 'Create an Order.'

Using Voice Compass, the customer controls the pace of their self-service journey while experiencing high levels of personalization and clear navigation. Available in multiple languages, Voice Compass delivers the extra help that would ordinarily require a live agent to provide the service needed.

In addition, Voice Compass journeys can be designed to move across multiple digital channels to create a unified customer experience, while enabling the organization to leverage their investment in and drive traffic to existing digital assets.





### Customer Spotlight: Copa Airlines

Travel impacts wrought by the global pandemic left Panama-based Copa Airlines experiencing frequent flight disruptions resulting in an increasing number of flight scheduling changes. Passengers needed to be notified as well as the crew. To ensure Copa Airlines maintained streamlined travel operations, notifications being sent to crew had to be clear and timely. As a global carrier, Copa Airlines was also challenged with making notification calls to customers in multiple languages, across multiple locations, and in different time zones.

Within 2 weeks, NLX helped solve these problems by standing up a dynamic conversational AI solution that allowed Copa Airlines to automatically reach out to impacted crew members and notify them of a change to their travel schedule. Powered by Amazon Connect, Copa Airlines was able to send batches of interactive voice notifications, personalized in the recipient's preferred language. A personalized link could be delivered using Amazon Pinpoint instantly taking the crew member to the Copa Airlines website to verify any additional information regarding their schedule. All crew members were prompted for verbal confirmation of notification receipt for communications and operational efficiency. Notifications and digital customer engagement for crew actions were tracked using built-in analytics to help inform Copa Airlines on the response rates, performance, and effectiveness of the automated voice notifications.

## What's Next in Digital Customer Engagement



### Partner Spotlight: NLX

New York-based NLX® powers conversational experiences. Our rapid-prototyping Conversational AI platform helps organizations build next-generation, personalized conversations that are automated, integrated, measurable, highly scalable, and available anytime from anywhere.

NLX Studio enables comprehensive build, manage and monitoring functions while NLX Voice Compass® leverages the full strength of the NLX platform to create best-in-class, multimodal customer journey experiences.

NLX is an Amazon Advanced Technology partner and Amazon Travel & Hospitality competency specialist. We proudly partner with Amazon Connect and Amazon Pinpoint to optimize the customer experience.

You can also find NLX in [AWS Marketplace](#).

# What's Next in Digital Customer Engagement



## Perspective from Whistle

It's clear a lot changed last year. The hospitality industry will have to build from the ground up, so now is the time for a strong digital foundation. Travelers, more than ever before, are demanding contactless experiences. The expectation of guests is to have easy, instant communication with their hotel – they don't want to wait on hold, in a line, or for an email response. Are we suggesting hotels remove human interaction and rely on robots staffed at the front desk? No, but we are advocating for more automation and a focus on digital. Digitizing guest experiences and workplace operations translates to increased consistency and personalization, which means more time available for human interaction when it is needed to fill the gaps.

## Solution Spotlight

When selecting a hotel technology, it's imperative to focus on the pain points that need to be solved.

Whistle's software addresses real and common pain points for hoteliers via a suite of features, which include AI-powered chatbots, customizable messaging responses, digital registration flows, task management, team messaging, marketing and upsell automations, and instant property management system integrations.

With Whistle, hotels can quickly respond to inquiries, requests, and issues within seconds. This, along with management features that make it simple to track in real-time tasks, checklists, and inspections that are all easily accessible from the Whistle dashboard.







# What's Next in Digital Customer Engagement

### Partner Spotlight: Whistle

Meet the revolutionary hospitality software that brings modern, faster, contactless communication to hotels.

Whistle's easy-to-use messaging solution drives more bookings, enhances guest experiences, and streamlines operations. And with over 50 hotel systems integrations, Whistle makes it seamless to add AI-powered messaging, digital registration, team & task management, marketing & upsell features, translations, and more to your hotel tech stack.

### Customer Spotlight: C&L Hospitality

C&L Hospitality is an award-winning hotel management company with a growing portfolio of managed hotels. They began using Whistle to help in the communication and management of their five Suburban and MainStay hotels and found unparalleled success. With their immediate access to guests, these properties have found a multitude of benefits, such as the "unhappy guest detection" feature. Before there was no way to know whether a guest had an issue, but now, staff receives an alert on their phone within seconds and can immediately remedy it within minutes. The staff has also found that the amount of time spent on phone calls has been hugely reduced by using messaging thus improving productivity. Whistle makes the process of contacting many guests at once easy, and guests are responding positively because of this product.



## Chapter 10

# Cross-Amazon Opportunities

Besides building on AWS, travel and hospitality customers work with the most customer-centric company on earth in many ways



## Cross-Amazon Opportunities



Amazon Pay can be integrated with your digital channels to enable payment by Amazon. It provides your customers an easy, secure and low-cost way to pay for online transactions.



Audible offers a growing collection of over 450,000 audiobooks, which can be curated to provide brand-relevant and personal customer experiences. Hotel companies for example offer curated audio libraries to customers while checked-in and on-property.



Amazon Business is a Marketplace to procure your long-tail of essential office and business requirements – from IT consumables to on-property (restaurant / hotel) cleaning supplies, consumables and more.



Amazon Advertising brings together the breadth of Amazon's portfolio of media assets – both digital and offline – to enable personalized, customized and curated marketing opportunities for brands. From promotional listings on Amazon.com, to branded advertising on Prime Video, IMDb.com and more – Amazon Advertising provides compelling channels and opportunities for customer engagement.



Amazon Hub attracts more customers to your business location and creates opportunities for additional revenue. As an Amazon Hub partner, you offer Amazon customers the benefit of convenient Amazon package pickup and return—and your business gets more viability, foot traffic and revenue opportunities.



Alexa for Hospitality provides device fleet management to build Alexa capabilities at scale. Alexa simplifies tasks for guests like playing music, checking the weather, calling the front desk, ordering room service, controlling in-room temperature or lighting, and even checking out. Use voice immersive experiences to help your property increase revenues, reduce costs, and improve guest satisfaction.

# A Special Offer for the Travel and Hospitality Community



## Exclusive Offer for Your Organization

In an effort to help drive demand and accelerate recovery as travel begins to return to parts of the world, Amazon Advertising has put together several exclusive offers for the Travel and Hospitality community.

With a focus on allowing marketers to reach the right customers, at the right time, with the right messaging, Amazon Advertising offers a personalized and brand safe environment that inspires results. By partnering with Amazon Advertising, marketers can gain access to:

- **Trusted environment:** Feature your brand, product, and message in trusted environments that not only inform, but also inspire future customer decisions.
- **Meaningful Differentiation:** Drive greater differentiation and reengagement with your brand story to create connections, encourage discovery, and grow loyalty.
- **Ownable Moments:** Own the moment across key tentpoles at Amazon such as Prime Day, Black Friday/Cyber Monday, Travel Tuesday, Holiday, and more.
- **Ads for every stage of the funnel:** Reach and inspire customers at every point in their purchase journey – watching, browsing, researching, or ready to take action.
- **Measurement and results:** Measure your campaigns, both on and off Amazon, so you can see how they are performing to help improve results and maximize efficiency.

**Offers:** For new and lapsed\* advertisers, Amazon is extending the following offers, exclusively for Travel & Hospitality partners:

- **Offer 1 – Video:** New or lapsed T&H advertisers are eligible to receive 10% bonus impressions on Amazon Video advertising – up to \$50K in added value.
- **Offer 2 – Audio:** New or lapsed T&H advertisers that spend \$50K on Audio Ads, get \$50K on Audio Ads as full added value.
- **Offer 3 – Devices (Display):** New or lapsed T&H advertisers are eligible for a 1:1 media match up to \$100K in added value across Fire TV and Tablet devices.

For preexisting partners, additional incentives may apply. To see if you qualify, please contact your dedicated Amazon Advertising Account Executive, or send us an email to learn more at: [HospitalityAds-Inquiries@amazon.com](mailto:HospitalityAds-Inquiries@amazon.com).

*\*Lapsed = Travel & Hospitality Advertisers that have not invested in Amazon in the last 12 months. Note offers run through Q3'21.*





For more information about AWS Travel and Hospitality, please visit [aws.com/travel](https://aws.com/travel).



Keep up-to-date with executive insights and industry viewpoints at the [AWS Travel and Hospitality Blog](#).



For questions or help getting started, [click here](#) to be contacted by an AWS representative.

