



Expert Insights

Forging the future of hospitality

Blockchain for trust now—and in a post-pandemic world

In collaboration with:



IBM Institute for Business Value



Experts on this topic



Kurt Wedgwood

IBM North America Blockchain
Leader for Retail, Consumer
Products, Travel & Transport
wedgwood@us.ibm.com
linkedin.com/in/wedgwood

Kurt leads IBM's Blockchain North America practice for the Retail, Consumer Product and Travel industries. He helps clients build deeper trust in information and process execution. He is an adjunct professor, chair emeritus of Seattle University's Innovation and Entrepreneurship Board, and is working with the World Business Council for Sustainable Development. Kurt lives in Seattle, WA and received his MBA from the University of Chicago.



Rob Grimes

International Food and Beverage
Technology Association
Founder & CEO
rob.grimes@ifbta.org
linkedin.com/in/rogrimes
www.ifbta.org

Robert ("Rob") Grimes is the Founder & CEO of the IFBTA (International Food & Beverage Technology Association), a non-profit professional trade association promoting and advancing technology and innovation for the global food and beverage industries. Previously, Rob also founded FSTEC (Foodservice Technology Conference and Showcase) and ConStrata Consulting & Services, which provides IT services for the global hospitality, foodservice and retail industries.



Greg Land

IBM Distinguished Industry Leader,
Travel & Transportation
greg.land@us.ibm.com
linkedin.com/in/gregland

Greg serves as Global Industry Leader with global responsibility for Aviation, Hospitality, and Travel Related Services industry segment. Prior to joining IBM, held leadership roles with American Airlines, Sabre, Wyndham Hotel Group and Radius Global Travel Management, spanning a 23-year career across the travel industry. Greg holds bachelor's degrees in Computer Science and Accounting, and an MBA from Oklahoma State University. He also completed the executive leadership program at The Wharton School of Business.



Michelle Menchin

Director, Client Engagement,
IBM Blockchain Services, GBS
michelle.menchin@us.ibm.com
linkedin.com/in/michelle-menchin
@MenchinRizzo

Michelle leads global offerings and client engagement for IBM Blockchain Services. She works closely with organizations to develop and drive transformational blockchain capabilities worldwide. With over 20+ years of business consulting experience in strategy and organizational change management, she brings deep industry expertise to design, deploy and integrate blockchain networks that streamline transactions across ecosystems and implement new blockchain-enabled business models.

Acknowledging there will be no speedy return to the way things were reveals an essential opportunity: it's time to rethink what's possible.

Key takeaways

Cultivate broad and non-traditional collaboration to build platforms of trust as an essential precursor to flexibility, resilience, and the ability to combat uncertainty and erratic demand.

Enlist blockchain to securely share data across the ecosystem and provide coordinated, personalized experiences that make employees and customers feel safe.

Apply exponential technologies—AI, IoT and blockchain—to customer and other operational data to create compelling experiences that will attract loyal customers.

Introduction

A seatless restaurant with nowhere to eat—or even to place an order—might seem to be something of an oxymoron, but Chipotle is counting on this model as the key to its future in urban markets.¹ The new restaurant will only accept orders online or through its app and serve them via pickup or third-party delivery services. It turns out a model that's worked for some pizza chains may prove valuable more broadly.

Chipotle says the idea was in development prior to the COVID-19 pandemic.² But it illustrates the kind of extensive change and application of lessons learned elsewhere that the hospitality industry needs to contemplate as it struggles to deal with the crisis and its ultimate implications.

Whatever the precise innovations restaurants, hotels, and airlines devise, they'll all have to focus on meeting today's most pressing need: making customers and employees feel safe and cared for throughout an entire hospitality experience. In a recent survey, customers and employees viewed “businesses having clear plans for ensuring sanitary and COVID-safe environments” as the top priority in order for them to resume in-person visits or a return to the workplace (see IBV report, “COVID-19 and the Future of Business study”).³

The availability of COVID-19 vaccines has added another variable to this trust equation. Beyond the question of testing, have workers and customers been vaccinated, and how can this be verified to reinforce trust in a particular travel or hospitality environment?

Earning that trust won't be easy, but it's a necessary precursor to higher revenue. Recent survey results predict a slow return of customers to travel, with a majority not planning to travel in the near future. Many doubt they will fly or board a cruise ship even after the virus wanes (see IBV report, "Navigating travel in the wake of COVID-19: Four ways the industry can rebound").⁴ Digital health passports provide one example of what will likely become an essential foundation for, not a return to a prior normal, but the emergence of a new standard for the hospitality industry (see Insight: The proof is in the passport).

In fact, acknowledging there will be no speedy return to the way things were underscores an essential opportunity. As the industry takes steps to reestablish trust, it's the time to rethink what's possible, reengage with customers and employees based on what they really want, and reimagine how best to deliver an experience that engenders trust enough to generate healthy demand.

Insight: The proof is in the passport

With the emerging availability of COVID-19 vaccines, hopes are running high for a return to individual mobility. But realistically, it will require that we carry the right health and vaccine information with us at all times to prove our health status. One proposed solution is a digital health passport. Many organizations are rushing to provide the means and standards necessary to make such passports a reality. Connecting organizations to healthcare data sources is possible, in part, due to open standards across healthcare, such as Fast Healthcare Interoperability Resources.

But not all efforts will be equal. A key element of engendering trust is verifiability—can we trust the data that is being presented? Another critical component is privacy—can I be sure I am sharing potentially sensitive personal information only with those I authorize? To accomplish this requires use of technology that enables a shared, immutable ledger to record transactions and tracking information across a network. Blockchain is one such technology, making it a critical component of a viable digital health passport, such as IBM Digital Health Pass.⁵

Working with Salesforce and the National Institutes of Health (NIH)—part of the U.S. Department of Health & Human Services—IBM Digital Health Pass provides a verifiable and privacy-preserving way to manage and share vaccination and health status on smartphones. It will integrate with the Salesforce Work.com Workplace Command Center, which gives companies a single unified hub to make data-driven decisions and safely bring employees back to offices and reopen other public spaces.

Once a person is vaccinated, for example, he or she would be issued a verifiable health credential via the IBM Digital Health Pass. It would be stored only in that individual's encrypted digital wallet on their smartphone. But it could later be shared with trusted parties—an airline, a hotel or restaurant—to prove current health status when making reservations or when physically boarding a plane or entering a facility.

In this manner, Digital Health Pass, using blockchain technology, can help organizations verify health credentials for employees, customers and visitors based on criteria specified by each organization and authorized by the involved individuals.

Explore opportunities to share data to expand the customer experience across the entire hospitality ecosystem.

Pulling in synch across the experience

Companies that rethink and retool now will emerge in a more competitive posture than those who focus solely on survival. They will be leaping ahead of the pack by pursuing what is, in fact, a new opportunity: better informed, more fully engaged customers and staff will help drive increased sales, loyalty and overall satisfaction (see Figure 1, “Organizations see a need for speed”).

To accomplish this, a “go-it-alone” strategy won’t be viable. A customer may feel safe in a hotel. But if they don’t trust how they’ll get there—airport, flight, transfer to the hotel—they won’t be staying, nor will they be frequenting any of the restaurants, theaters, sports venues, and other elements associated with that particular travel experience. Conversely, brands that collaborate to offer transparency and integration that support safety, security and trust will capture greater market share.

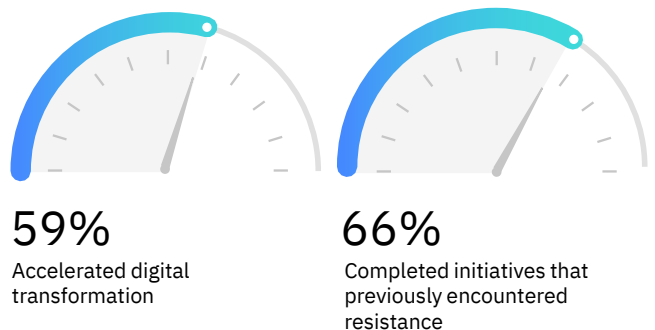
Viewed another way, in order to guarantee an outstanding customer experience that’s dependent on so many actors, all the parts must act as a whole. As with a rowing crew where everyone rowing in sync wins—and just one person not pulling their weight can drag the entire boat down—transparency and consistency across an entire experience is the key to unlocking customer trust.

Part of the reimagining that hospitality businesses will need to consider, then, is how to establish and participate in “platforms of trust,” active ecosystems that provide simple, integrated, consistent, safe experiences for a customer. The hospitality industry should also actively seek to learn from other industries—healthcare, for example. In healthcare, blockchain has been used to infuse speed, accountability, and transparency across the vaccine distribution system and help maintain public trust in a vaccine’s efficacy.⁶

—

Figure 1

Organizations see a need for speed
COVID-19 created a sense of urgency around digital transformation.



Source: IBM Institute for Business Value analysis.
<https://www.ibm.com/thought-leadership/institute-business-value/report/covid-19-future-business>

Customer data—not just for personalization

Perhaps most importantly, successful hospitality companies will redefine for themselves what it means to know their customers and how to build seamless experiences that cater to them. Prior to the pandemic, many were beginning to understand how best to use customer data and were focused, understandably, on personalization.

But the pandemic has accelerated the need to be more sophisticated. One way is by integrating customer data with self-service apps in real time. Another is by exploring opportunities to share data in ways that maintain privacy but improve and expand the scope of the customer experience across the entire hospitality ecosystem.

For example, with the Hilton Honors mobile app, a guest can book, check-in, pick a room, activate a mobile room key, request services, check-out and view their final folio of charges. However, there are still opportunities to infuse guest data for a more personalized digital experience.

These apps can also integrate with broader ecosystem partners across travel, food and beverage, retail, and wellness to expand the reach of the overall hospitality experience. The goal should be to make the guest experience as touchless as possible without diminishing important aspects.

Daunting, to say the least. But there are technologies—blockchain, in particular—that can assist. In fact, blockchain, working in concert with other exponential technologies, such as AI and IoT, will be a key ally in helping the hospitality industry thrive by reassuring customers and staff to make them feel safe and well-cared for, as well as enabling ways for partners in the value chain to coordinate more securely with each other.

Prepare: Meeting the trust imperative with blockchain

For the hospitality industry, earning trust is the precursor to stimulating demand. And while customers are of primary concern, employees must also trust that their work environment is safe and that the customers they're serving don't threaten their health. What's really needed is a way to verify identity, health status, and a host of related issues that touch each part of a hospitality experience. Blockchain's characteristics make it perfect to enable this.

Blockchain supports digital identity verification, credentialing of individual health status, known and trusted suppliers, and the certification of products and their provenance. It allows partners and stakeholders across the spectrum of a consumers' hospitality experience to first demonstrate, then communicate, their commitment to health, wellness and sustainability. (See sidebar, "Norwegian Seafood Association.")

Today's consumers also want to know the origin of what they're eating or buying, the authenticity and quality of ingredients and materials, and whether it was responsibly sourced (see IBV report, "Sustainability as a business strategy: Winning with purpose-driven consumers").⁷ With the immutable transparency of blockchain, such product characteristics can be clearly and easily communicated to customers. Providers can make better buying and selling decisions based on expiration dates, seasonal sourcing, and other time-sensitive parameters. With this identity and provenance capability, organizations can build and drive secured supply chains and value chains that will attract a larger customer base. In turn, they'll enjoy better collaboration while improving the experience.

Norwegian Seafood Association: Nothing fishy about the salmon⁸

The Norwegian Seafood Association is spearheading a new cross-industry collaboration to apply blockchain technology to share supply chain data in order to better engage with consumers. Participants include sea-farmed salmon producers, as well as providers of high-grade fish feed to those farms. The blockchain-enabled network will allow Nordic seafood companies to share the fish's journey from ocean to store and help assure consumers that what they are eating is safe and produced in a sustainable manner. It will also allow producers to tell their stories about their products, where they come from, and how best to prepare them.

The private blockchain network records data about catch location and time, supply chain events like shipping updates and customs clearance, and even temperature, which can then be shared with permissioned parties.

Portable, private proof of vaccination—and more

As previously mentioned, the arrival of vaccines for COVID-19 adds yet another element to validating health status. Many indicate that, with a vaccine available, they would have a greater desire and willingness to once again visit venues.

However, there's a twist: Significant uncertainty exists around whether people will opt to take a COVID-19 vaccine. In August 2020, only 45 percent of respondents in Germany and half of respondents in the United States said they would.⁹

This makes it all the more important that airlines, hotels, restaurants, shuttles and entertainment venues are able to verify whether or not the customers they are booking are safe—have they been tested? vaccinated?—and, if they are, to reassure employees and customers that a safe environment is being maintained.

Digital health passports, such as IBM's Digital Health Pass, are a viable solution.¹⁰ If they are built on a blockchain-enabled platform designed to combine multiple, dynamic data sources—such as test results and onsite temperature scans—they can provide individuals the ability to store and share their health status from their mobile phones. There is great opportunity for participants across the hospitality industry spectrum to use this capability in partnership with their employees, consumers, suppliers, and operators.

In an industry where many workers change jobs frequently or hold multiple positions, this capability can enable trust to be “worker portable”—it can travel with them. This kind of validation could also be a perceived advantage of working for an operator or association that provides it.

Finally, the value of open communication should not be underestimated. Being able to verify a safe environment is important to earn a customer's trust. But by itself, it's not enough. Explaining what customers should expect to do to contribute to a safe environment and communicating changes to normal operating procedures may be just as important. A traveling journalist recently noted how a major airline did this so well that passengers were well-prepared and ready to comply, despite the disruption to their normal flying routine.¹¹

Verifying an environment is safe is important to earn customer and employee trust. But by itself, it's not enough.

Partner: Building an ecosystem on a “platform of trust” with blockchain

While blockchain can provide a sound foundation for trust, it will only be effective if applied across the varied organizations that make up what is, from a customer perspective, a single hospitality experience. This is far more than strategic partnerships between an airline and a car rental agency, or a theme park and a hotel, or even such partners sharing two-way APIs to enhance their stand-alone apps.

It requires a complete ecosystem connecting all potential partners via a platform of trust that’s presented to the customer in a coherent manner. If properly constructed, such a platform would enable more than just, say, a

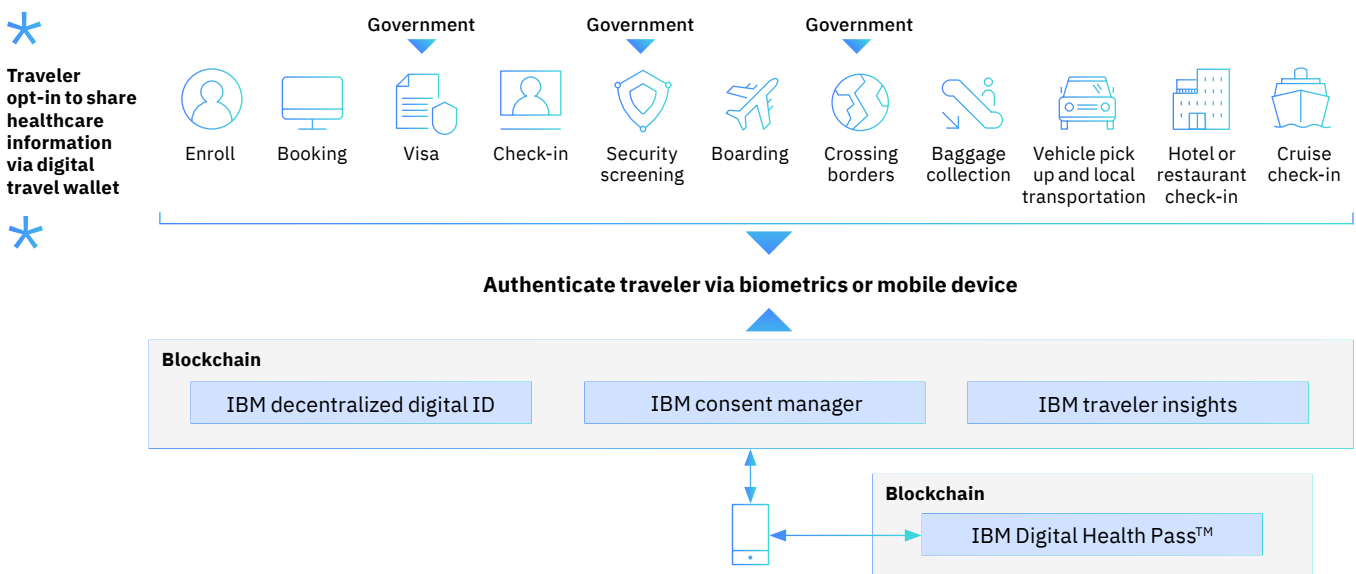
coherent vacation planning experience—flight, hotel, transfers, tours, restaurant reservations—that a competent travel agent or travel site can furnish (see Figure 2, “Building a hospitality platform of trust”).

Consider loyalty programs. Blockchain-enabled loyalty programs with cross-brand redemption have been tested in some markets.¹² How far could they be extended if points were viable across participants in a platform of trust? Hotel loyalty points good at local venues; airline loyalty points redeemable at destination restaurants.

Could participants in such a platform let loyalty points flow across them—hotels, restaurants, retail outlets—almost like an alternate currency? Could excess loyalty points be donated to a customer’s favorite local charity? Research indicates an increased consumer demand across nearly all countries for both local shopping and for goods that are produced locally.¹³

Figure 2
Building a hospitality platform of trust

A seamless, safe journey—for travelers and employees alike



Source: IBM analysis

Partnerships to confront uncertainty

Nontraditional collaboration is happening. One Rhode Island gift shop partnered with a local barbecue sauce purveyor to collaborate on a brand specifically linked to the pandemic and in support of a local COVID response charity.¹⁴ Recently, Chef David Chang’s Momofuku brand announced it had joined Goldbelly, a US nationwide platform to deliver food from iconic regional restaurants.¹⁵

Traditional restaurant delivery companies are now expanding what they deliver to include items such as pet food. Other farm to fork restaurants have expanded beyond prepared food into grocery delivery as well.¹⁶ This will likely not be just a short-term expansion as they realize providers of food can also source other things for consumer use—cleaning supplies, for example. Finding such non-traditional distribution points may lead to advances in vending and micro-markets as well.

Other unusual collaboration opportunities exist. With capacity reduced in the wake of the pandemic and social distancing, restaurants may be overbooked during prime time, while hotels may have unfilled banquet space—

could the two partner as part of a trusted ecosystem? Restaurants are also notoriously underutilized during many parts of the day. Could they be used by a trusted partner for other things during that downtime? Could hotels reduce community contact in lobbies and public spaces by off-loading some catering, meeting, and room service to local restaurants with capacity?

For these new ecosystem networks to form and flourish, participants will have to adjust their view of customer information, and how they use it in concert with the rest of their operational data. Instead of considering customer data as a competitive advantage to be held closely and used to generate sales, they’ll need to see that sharing it—while protecting the privacy of their customers—drives better service delivery. Ultimately, it’s in the best interest of the customer and everyone else participating in the trusted network. Again, blockchain can assist in this sharing. Properly implemented, its permissioned features mean only authorized, identifiable parties are privy to data customers have elected to share (see IBV report, “Blockchain as a force for good: Five principles to build trust and real value”).¹⁷

“In 2020, ‘pivot’ became the truest of words. We had to change menus and create entirely new sales channels and product lines. Visibility into our supply chain was more important than ever. As technology improves traceability through source and journey, I’m able to deliver more effectively on the promises we make to our customers, and to ourselves.”

Dan Simons, Founder and Co-Owner
of Farmers Restaurant Group

Contactless service doesn't mean a less personal experience. Quite the contrary.

Observe, learn and evolve

The hospitality industry need not figure all this out on its own. Individual companies in one part of the industry can learn from other parts. Food service, for example, was very quick to adapt to the new constraints and challenges the pandemic wrought, often in ways that hotels and airlines might take a cue from for their arrival experiences. And some of the applications developed for other related industries can easily be applied and adapted to food service.

Historically, hotels have primarily promoted their mobile apps as a perk for their most loyal customers to enjoy improved service, but they might benefit from the example of airlines that have used their apps to forge a new way of working.

And then there are lessons from other industries. The open source community has learned much about interoperability that hospitality participants in a platform of trust could apply. Open Travel Alliance provides data and API standards for hospitality and other travel providers to apply open source and support interoperability across the travel industry.

And in the entertainment industry, some cable providers have seen value in supporting third-party streaming apps via their network to provide a simpler, more complete entertainment experience for their customers.

Increasingly, that's the perspective hospitality companies will need to adopt—the customer's view—in order to successfully reimagine the guest experience. While the industry's mantra should be "don't go it alone," to the customer, it must appear to be an "ecosystem of me."

Differentiate: Superior experience for happier customers and cost improvement

Blockchain technology provides visibility to transactions, engendering trust. But to fully reimagine the customer experience and create compelling new ones, companies need to team blockchain with artificial intelligence (AI) and IoT. Applied to customer data, AI will learn, predict and yield better insight into individual customer needs and wants. It will enable companies to interact in new ways with their customers (see sidebar, "eProvenance").

Blockchain can help maintain data source integrity and make customer insights portable across the experience while protecting data privacy. Its network validation and enhanced data security also helps maintain data source integrity while protecting privacy. In today's connected world, blockchain-enabled platforms can help participating organizations become more flexible and resilient.

Applying this winning combination of blockchain, AI and IoT will enable the kinds of digital, at times even contactless, service required now. This doesn't necessarily mean a lower service level, or a less personal experience. Quite the contrary. As anyone who has ordered something online, then driven to a retail store to pick it up and had it loaded into the trunk has experienced, if done well, it can feel more personalized than wandering around a store appearing lost looking for a salesperson to help.

eProvenance: The best route from grape to glass¹⁸

eProvenance, a company specializing in monitoring and analyzing wine shipment conditions, is using a highly secured approach to tracking wines as they move through distribution from vineyard to consumer. It's using blockchain, AI and cloud to optimize outcomes for all participants and encourage transparency, accountability and the rapid exchange of data. For the consumer, this helps ensure that the exacting methods of the world's best winemakers are not undermined by supply chain errors, misinformation or improper conditions during transit.

Wine producers, négociants, importers, transporters, distributors, restaurants and retailers benefit from increased traceability and efficiency in the wine supply chain through this permissioned, permanent and shared record of data. Consumers will be able to use existing identifiers, such as a QR code on the bottle, to learn, for example, about the wine's provenance and flavor profiles, or if it meets certification standards for organic, biodynamic or sustainability practices.

Resiliency with cost savings

These improved experiences will not only make customers happier. They'll help companies improve their cost structure and reduce overall risk. AI based on actual customer interaction and insight about what customers really want leads to better forecasting. This can help avoid the "bullwhip effect" in supply chains, where demand trends can lead to overordering as trend signals get amplified across the supply chain and cannot be corrected quickly enough.

Digitization of processes, economies of scale and scope with existing and new vendors can drive deeper, trusted relationships and data sharing across the value chain and contribute to stronger and more resilient supply chains and cost savings. Further digital transformation opportunities include automation, artificial intelligence-driven workflows, and hybrid cloud capability that can also help hospitality companies transform their cost for more resilient operations (see IBV report, "Cost and value transformation in the era of COVID-19").¹⁹

Ultimately, the hospitality industry is a people industry. And in the current environment, people—customers and employees alike—must have full confidence in the industry as a whole and the brands they want to support in particular. Hospitality employees are the ambassadors of trust for the industry, and without trust, there will be no customers. Companies that band together to win that confidence will be best positioned to emerge from the current crisis environment strong and ready to thrive.

Action guide

Forging the future of hospitality

As companies across the hospitality ecosystem continue to plan for recovery and to emerge stronger, they should consider the following actions to engage, differentiate, optimize, and reimagine the guest experience.

Communicate effectively to both your customers and employees. To combat uncertainty, make sure you clearly set expectations with your clients and working standards for your employees, so they're fully aware of all the measures you're taking to establish a safe experience. Reiterate the message so there are no surprises, then make sure you deliver on the expectations you've set.

Identify and expand networks—and establish entirely new ones—for shared value. Use this as an opportunity to question the status quo and recalibrate the customer journey by differentiating yourself in the local community. Look for local partners with whom you can form lasting, mutually beneficial relationships and co-create unique customer experiences.

Look at your organization through the lens of your customer's journey. Develop ecosystems to expand the breadth of the guest experience, across related industries like travel, food and beverage, retail, wellness, and the like. Identify data you already have, critical gaps, what critical information to share, and with whom. Then talk through how information can be shared in trusted and transparent new ways with blockchain and embedded governance for sustainable change.

Embrace change. As processes and operations are digitized, use the opportunity to connect the ecosystem in new ways and innovate, don't just automate. Listen to customer feedback as you try new capabilities, while also engaging with partners where costs can be shared for mutual gain.

Our current crisis is causing companies to make lasting structural changes to help prevent the worst effects of future demand shocks. Hospitality companies must maintain cost discipline in an industry with high fixed costs, and inherently variable and uncontrollable operating expenses. They'll need to do this while partnering to transform operating models to establish trust with customers and employees. This, in turn, will position them to accelerate revenues once an upswing starts.

Notes and sources

- 1 “Chipotle To Open Its First Digital-Only Restaurant.” Chipotle website, News Releases. November 11, 2020. <https://newsroom.chipotle.com/2020-11-11-Chipotle-To-Open-Its-First-Digital-Only-Restaurant>
- 2 “Chipotle To Open Its First Digital-Only Restaurant.” Chipotle website, News Releases. November 11, 2020. <https://newsroom.chipotle.com/2020-11-11-Chipotle-To-Open-Its-First-Digital-Only-Restaurant>
- 3 “COVID19 and the Future of Business.” IBM Institute for Business Value. September 2020. <https://www.ibm.com/thought-leadership/institute-business-value/report/covid-19-future-business>
- 4 Bailey, John, Lauren Isbell and Greg Land. “Navigating travel in the wake of COVID-19.” IBM Institute for Business Value. July 2020. <https://www.ibm.com/thought-leadership/institute-business-value/report/navigating-travel-covid19>
- 5 Comeau, Zachary. “IBM, Salesforce Announce Integration Of Health, COVID-19 Solutions.” My Tech Decisions. December 21, 2020. <https://mytechdecisions.com/compliance/ibm-salesforce-work-covid-19>
- 6 “Trusted vaccine distribution enabled with blockchain.” IBM website. 2020. <https://www.ibm.com/blockchain/solutions/vaccine-distribution>
- 7 Gupta, Sachin and Sheila O’Hara. “Sustainability as a business strategy—Winning with purpose-driven consumers.” IBM Institute for Business Value. December 2020. <https://www.ibm.com/thought-leadership/institute-business-value/report/sustainability-strategy>
- 8 “Sustainable Seafood Gets a Boost from IBM Blockchain Technology for Insight into the Journey from Sea to Table.” IBM News Room. June 25, 2020. <https://newsroom.ibm.com/2020-06-25-Sustainable-Seafood-Gets-a-Boost-from-IBM-Blockchain-Technology-for-Insight-into-the-Journey-from-Sea-to-Table>
- 9 Continuous Insights Survey, August 2020. IBM Institute for Business Value.
- 10 Piscini, Eric. “IBM Digital Health Pass puts privacy first.” Watson Health Perspectives. August 25, 2020. <https://www.ibm.com/blogs/watson-health/health-pass-puts-privacy-first>
- 11 Aten, Jason. “I Flew on Delta to New York City During the Pandemic. I Didn’t Expect This.” Inc. August 29, 2020. <https://www.inc.com/jason-aten/i-flew-on-delta-to-new-york-city-during-pandemic-i-didnt-expect-this.html>
- 12 Hardy, Kevin. “Explaining the Rise of Blockchain in Restaurants.” QRS. July 2018. <https://www.qsrmagazine.com/technology/explaining-rise-blockchain-restaurants>
- 13 Continuous Insights Survey, August 2020. IBM Institute for Business Value.
- 14 Doiron, Sarah. “‘Knock it Off’ BBQ sauce the latest product to sport Raimondo’s COVID-19 catchphrase.” WPRI.com May 20, 2020. <https://www.wpri.com/business-news/knock-it-off-bbq-sauce-the-latest-product-to-sport-raimondos-covid-19-catchphrase>
- 15 Lucas, Amelia. “Momofuku joins Goldbelly’s delivery service as consumers seek out far-flung comfort food during the Covid pandemic.” CNBC. November 16, 2020. <https://www.cnbc.com/2020/11/16/momofuku-joins-goldbelly-as-delivery-service-sees-covid-pandemic-boom.html>
- 16 “Announcing Founding Farmers Market & Grocery.” Founding Farmers website. April 5, 2020. <https://www.wearefoundingfarmers.com/announcing-founding-farmers-market-grocery>
- 17 Wieck, Marie and Jerry Cuomo. “Blockchain as a force for good.” IBM Institute for Business Value. September 2019. <https://www.ibm.com/thought-leadership/institute-business-value/report/blockchain-principles>
- 18 “eProvenance Uncorks VinAssure™, an IBM Blockchain-Powered Platform to Strengthen Collaboration and Optimize the Wine Supply Chain.” IBM News Room. December 10, 2020. <https://newsroom.ibm.com/2020-12-10-eProvenance-Uncorks-VinAssure-TM-an-IBM-Blockchain-Powered-Platform-to-Strengthen-Collaboration-and-Optimize-the-Wine-Supply-Chain>
- 19 Giessen, Edward and Jean-Michel Fally. “Cost and Value Transformation in the Era of COVID-19.” IBM Institute for Business Value. September 2020. <https://www.ibm.com/thought-leadership/institute-business-value/report/cost-value-transformation-covid-19>

About Expert Insights

Expert Insights represent the opinions of thought leaders on newsworthy business and related technology topics. They are based upon conversations with leading subject matter experts from around the globe. For more information, contact the IBM Institute for Business Value at iibv@us.ibm.com.

© Copyright IBM Corporation 2021

IBM Corporation
New Orchard Road
Armonk, NY 10504
Produced in the United States of America
January 2021

IBM, the IBM logo, ibm.com are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at “Copyright and trademark information” at: ibm.com/legal/copytrade.shtml.

This document is current as of the initial date of publication and may be changed by IBM at any time. Not all offerings are available in every country in which IBM operates.

THE INFORMATION IN THIS DOCUMENT IS PROVIDED “AS IS” WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY OR CONDITION OF NON-INFRINGEMENT. IBM products are warranted according to the terms and conditions of the agreements under which they are provided.

This report is intended for general guidance only. It is not intended to be a substitute for detailed research or the exercise of professional judgment. IBM shall not be responsible for any loss whatsoever sustained by any organization or person who relies on this publication.

The data used in this report may be derived from third-party sources and IBM does not independently verify, validate or audit such data. The results from the use of such data are provided on an “as is” basis and IBM makes no representations or warranties, express or implied.

