

The Smart Casino

Survival to Thrival



Leveraging Digital
Transformation for Growth

Adapt or die. This has become the battle cry of many modern businesses — and nowhere has this mantra been more vigorously adopted than in the casino sector. Given the pandemic-related challenges of the past year, one thing has been made clear: casinos who embrace change and as a competitive catalyst for growth can survive and indeed thrive, while those who reject it will often falter and slowly, if not rapidly, decline.

2020 was a year to forget for most gaming organizations. Without humans on premises to work or play, business at many casinos came to a screeching halt. Now, as the world returns to a new relative normal, casinos are envisioning themselves in new ways — adopting new technologies and strategies to create safe and inviting environments for customers today, while building more resilient businesses for the challenges of tomorrow. As with all changes, these new strategies introduce new benefits as well as challenges.

The challenges are clear: as businesses everywhere expand digital transformation strategies, connected digital experiences have become a baseline requirement to engage and retain a new breed of customers. These customers have learned to work and play entirely online, with digital, contactless experiences throughout the pandemic. Long after the pandemic subsides, casino-goers will expect to connect from anywhere, place bets at any time, and enjoy seamless digital offerings in a highly personalized gaming experience. From digital sportsbooks, to mobile gaming, to 5G-connected casino floors, gaming organizations are already adopting new digital strategies to maintain a competitive advantage and realize the vision of a true Smart Casino.



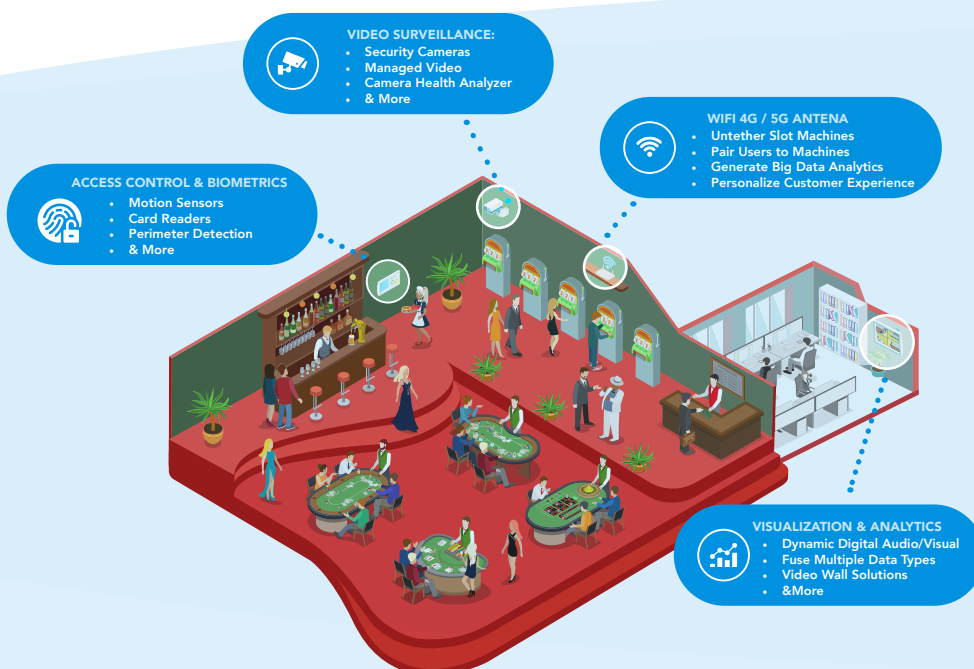
At the heart of this transformation is data. To be successful, casinos need data in real time — on their users, their identity, their location, their behavior and activity patterns, where they place their bets, where and what information they share on social media platforms, and the triggers that finally cause them to quit and leave the casino. This data has existed before; what's new is the transformative shift from siloed IT teams, operations, and policies to a unified, centralized effort that enables real-time access to data and coordinated campaigns in minutes, rather than hours.

While there are numerous digital strategies currently being pursued by gaming organizations, only a core set of digital features will truly transform the customer experience and provide a competitive advantage for organizations. In the current economic and consumer environment, disruption for these organizations is mandatory. The key to these changes is data — in real-time. Already, casinos are working to enable accurate real-positioning and monitoring for their customers. This requires user identification, precise positioning via embedded sensors, and the correlation of human and machine data for detailed user activity and behavior insights. But in the end, this allows casinos to make split-second business decisions that can transform the customer experience.

Besides security, system control, and device accessibility, IoT technology allows land-based gambling casinos' to comprehensively track and analyze a user's experience.

Real-Time Marketing

We have entered an age of a completely connected universe in which instant gratification is an expectation by everyone. With our increased tendency to remain glued to our smartphones, monitoring and responding to every notification that flies by, digital marketing strategies have become a requirement for modern businesses to thrive. This on-the-fly, ever-changing advertising method is real-time marketing. However, to enable real-time marketing on the vast, dense, and noisy casino floors, organizations must have the power to track the real-time positioning of the users.



Real-time marketing is a strategy that utilizes customer data and current trends to anticipate customer needs. We live in a fast-paced and evolving culture where what is popular one day may be completely forgotten the next. By leveraging the power of social media, data collection and other digital techniques, businesses can stay relevant and profitable.



Real-time marketing is, at its essence, using data-led insights to personalize digital gaming and incentive rewards/offers on a per customer basis using their behavior, loyalty, preferences and/or location as insights. This allows casinos to provide a continuous feedback loop for customer engagement — meeting patrons’ particular needs, as they arise in real time. In practice, real-time marketing could mean:

- Sending targeted marketing to customers who have enjoyed a particular game, incentivizing them to try similar gaming features — or to continue their streak.
- Sending a customer a mobile push notification for a new restaurant offer, based on their previous dining experiences - or that their location happens to be right next to the cafe.
- Providing a loyalty incentive for customers who are heading towards the exit to entice them to return to the slot machine that they were playing on last.

The casino industry is ready for a change, and real-time marketing can help bring this more antiquated business category into the modern world. Through the power of novel marketing techniques, casinos and other businesses can navigate their way to success in today’s environment.

Smart Casino Floor

To increase engagement, leading gaming organizations are also applying data-led techniques to the casino floor. In particular, digital heat maps generated by customer location data are providing new insights into how they can generate more engagement and revenue. These maps show customer movement on the floor, enabling casinos to understand their level of engagement with games, features, and more. With such technology, casinos have unlocked a number of new capabilities:

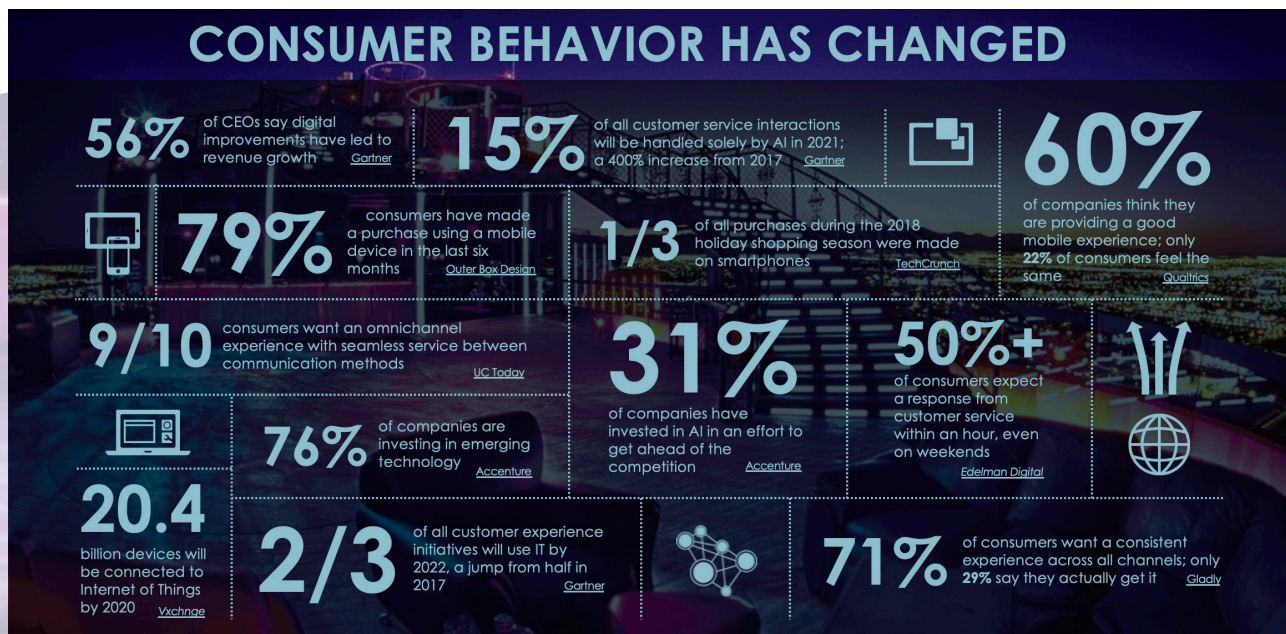
- Performance tracking for digital efforts. For instance, can casinos measure whether customers who receive digital incentives try out or explore the dining or entertainment options offered.
- Real-time performance tracking for new slot machines and casino games.
- An ability to identify casino zones and machines that patrons frequent or avoid — helping to drive customers to best-performing experiences, while identifying and remediating lower-performance areas.

- An ability to integrate location data into their security protocols, to provide enhanced security and keep an eye on the locations of suspicious patrons.
- Improved cybersecurity, with the ability to track every wireless device in the physical casino environment. Moreover, casinos can assess whether any device poses a potential threat to data or networks and automatically respond to an incident.

In recent years, the accuracy and prevalence of geotracking have improved by leaps and bounds. Geotracking is common in just about every smartphone application, so most people are accustomed to having their location tracked for various purposes.

Casinos need smart floor operations and location tracking for their real-time marketing to be effective, as well as for surveillance purposes. With the prolific use of wireless connectivity, bolstered by the rise of 5G, an intelligent mesh of RF sensors can track every device in the environment, as well as identify the user by their loyalty membership, and build baseline behavior and activity analytics. This is crucial to deliver the tailored experience that the user expects, as well as manage the entire business and revenue stream in an optimized fashion. Moreover, when an AI/ML inference engine can crunch through this individual user and bulk user data, organizations can enable dynamic game and floor configuration changes to maximize customer happiness and revenue.

This kind of analytic power has numerous applications in the casino — particularly real-time marketing feedback loops that use geotracking to guide and satisfy customer needs. For example, as patrons move about the casino floor, a broad-spectrum radio frequency sensor network monitors their movements via the casino’s smartphone app and provides personalized



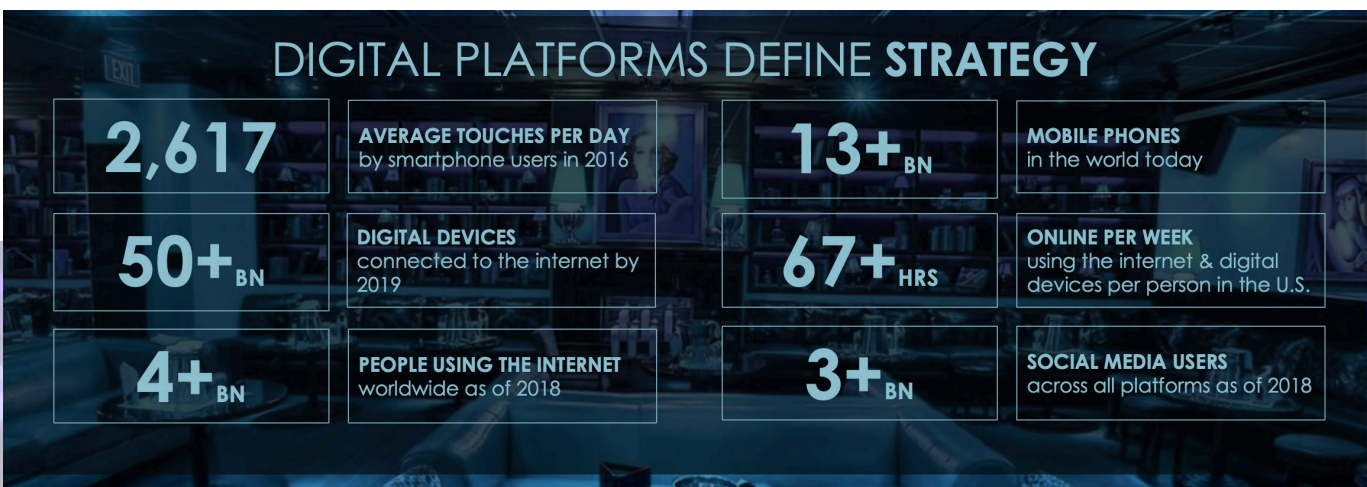
recommendations and special offers. As patrons approach various games and restaurant options, incentives can be offered to interact with those products or services. Or, if customers are on their way out, heading towards the exit, notifications can be sent in an effort to entice them back, before they leave the property.

Finally, there is another critical use of real-time smart casino floors: preventing the illegal use of casino products, by ensuring that their services can only be accessed in legal jurisdictions. For instance, there are mandates that, to gamble, customers must be in the state of Nevada, or in some states, physically on a riverboat. While advancements have been made to prevent location spoofing or manipulation of location data, these advances are not sufficient. In the riverboat, for instance, device fencing that uses IP addresses or relies on base-stations or cell phone towers will not work, as users who are merely nearby, not physically on the boat, can still be detected as “onboard.” Geofencing requirements in this context must be much more ‘local,’ pinpointing the exact location of users. Here, casinos will need a web of local RF sensors that can measure user location with extreme accuracy — confidently assessing whether access is legal.

Social Listening

These days, it is easy to feel out of the loop if you’re not a regular user of social media. Services like Facebook, Instagram, and Twitter have made it possible for ideas to quickly find an audience, become a trending topic, and then fade away just as quickly as they popped up. Social listening refers to the real-time marketing practice of picking up on and reacting to these trends, all before the next one takes its place.

Companies can use the idea of social listening to curate their marketing tactics. Advertisements can be formulated and released in a matter of minutes, allowing casinos to connect with potential customers about the ideas and issues that matter to them now. Having the ability to push out notifications in an instance is now a new key requirement, in order to thrive in today’s competitive world whereby casinos are one click away from revenue or missed revenue.



Sophisticated software performs this audience research for large companies and helps make the most of the large amounts of data. This data is crucial to creating a focused marketing approach, but businesses need a competent marketing team in place to translate and utilize the data properly. If wrongly interpreted, marketing efforts and dollars can go to waste. Casinos are now using this real-time data to craft effective digital campaigns.

While data collection is key and it drives the next steps for the casinos, connecting with the user on that same social media platform that has their attention at that unique moment is also key to making real-time marketing effective. With the never ending fusillade of notifications, one that is embedded inside the app that is currently being used is much more effective.

Secure Digital Sportsbook

Digital sports betting has proliferated across the country in recent years with over 25 states now allowing the practice. With the ongoing issues related to COVID-19, it may be a while before in-person casino attendance recovers. This reality has caused many brick-and-mortar casinos to adopt an omnichannel business model. More specifically, casinos around the country have begun offering digital sportsbooks as a new product.



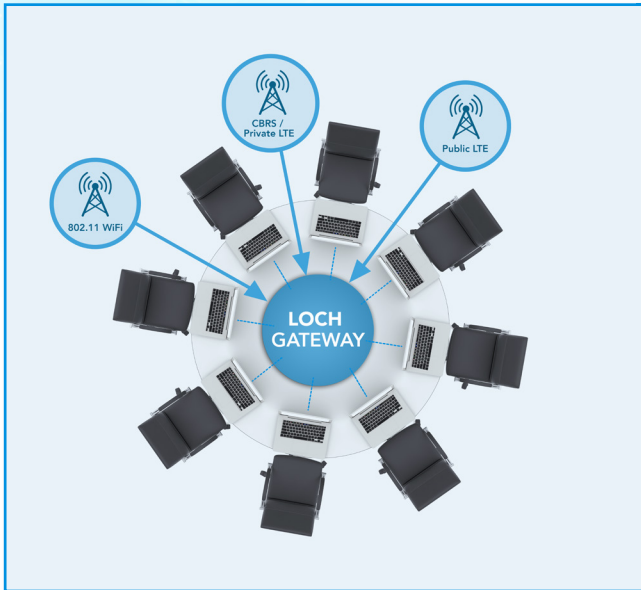
Some growing pains are expected with the creation of a new online business like digital sportsbooks. However, most potential problems can be prevented with technology-based solutions. Data management and security will be of utmost importance to companies that choose to expand to an omnichannel business model. In this way, casinos can cater to and engage with customers beyond in-person entertainment with solutions that span formats and meet customers where they spend their time.

But, inside the sportsbook venue itself there is a need for extra layers of surveillance to prevent fraud and cheating. Since by nature this is off-site betting, away from the actual location of the event; there is a time lag in the video broadcast — and with this, the opportunity to place bets with real-time information coming via a side-channel. The ability to cordon off the off-site sportsbook venue is a must-have for casinos to protect themselves. Moreover, casinos must continuously monitor all wireless communications, including broad spectrum and cellular, to prevent any side-channel communications.

From there, the use of AI/ML inference engines can be used to associate any winning sprees with potential suspect activity.

From Ethernet to Wireless Connectivity

Until recently, wired Ethernet networks provided the fastest interconnectivity speeds. Increasingly fast mobile network speeds have the capability to completely transform a business that chooses to adopt the technology. When a casino makes the transition to a high-speed wireless infrastructure, management can capitalize on marketing and operational advantages that are simply not possible in a connected Ethernet environment.



At its core, a wireless infrastructure allows for sales and work to be performed anywhere in the building, not just at stationary desks or points of sale kiosks. Customers can order and pay for food and beverages anywhere and at any time.

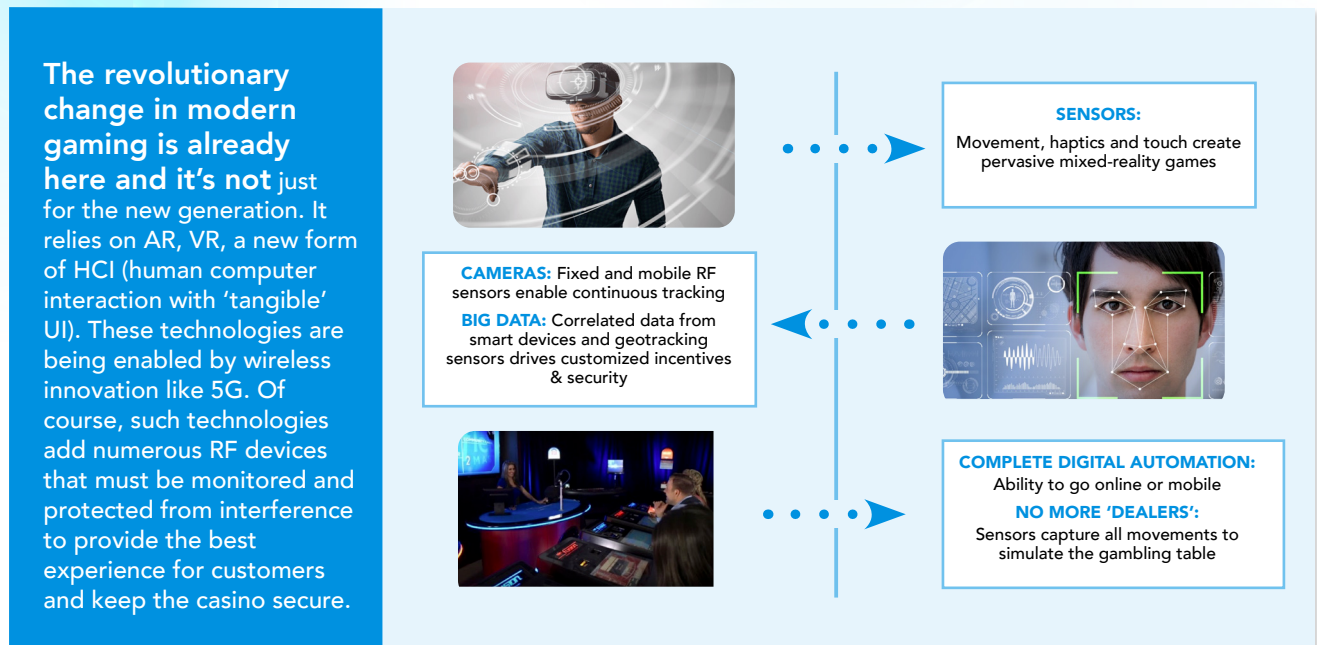
The biggest advantage of a wireless-connected casino games and slot machines is the speed at which configuration changes on the gaming floors can be driven by user behavior and popularity. In contrast, changes in a wired environment are both time and cost prohibitive, involving weeks of down time and having to physically rip up the carpet, remove asbestos, and close down sections for long periods of time.

Wireless infrastructure also enables real-time marketing efforts and customization of the game based on the identity of the user at the machine, an idea that has become increasingly important in an online world dependent on social media and instant gratification. Continuous feedback loops can be implemented in casinos by building a wireless sensor network to track devices, map them to individual customer identity and then to the gaming machine that they are playing on. This procedure tactic helps businesses monitor, listen, and customize their reaction to the needs of their customers in real time and also incentivize them via offers and bonuses to keep them further engaged and drive revenue. By observing customer preferences and movement patterns, targeted advertising can be produced to satisfy their immediate desires.

5G for Casino Customers and Operations

The 5G network is poised to become the backbone of modern business communication - the new network that is designed to connect virtually everyone and everything together, including machines, objects, and devices. The core value of 5G is that it delivers higher bandwidth, lower latency and above all is completely 'software defined' — it is easy to set up and run on commercial off-the-shelf hardware. This idea of an interconnected world is changing the way many companies operate and provide services for their customers.

The opportunity to build a private 5G network inside the casino property is not one to overlook. Moreover, casinos can also choose to bring the public 5G network inside the casino. In either case, the 5G network and wireless technology can create new opportunities for casino operations and engagement.



The added advantage of a private 5G network inside the casino is a seamless and continued connectivity to the external 5G network. This means that customers are guaranteed to have cell coverage wherever they go, so they can not only remain connected with casino systems, but stay connected with their family, friends, work and respond to any emergencies should they arise. A uniform and ubiquitous 5G network holds the promise of having customers, every device, and every system — including slot machines — on the same network, allowing casinos to realize the fullest benefits of these transformation strategies and initiatives.

Powerful Tools Require Responsible Users & Oversight

With new advancements in sportsbooks and 'any device anywhere' betting technology, extra attention will need to be placed on data collection and security. Such an operation requires the collection of highly sensitive data including names, locations, and social security numbers. Customers will want to know that their data and privacy are being handled in a professional manner. Protecting the customers involves the strict adherence to 'best practices' typically followed for online access of any application: user access credentials, PII (personal identifiable information), and the wallet itself.

Along with Smart Casino innovation comes the need for gaming organizations

to protect and secure their growing networks, devices, and data. To ensure that every wireless device is protected and that customer PII is never compromised, casinos must:

- Identify and categorize every wireless and broad spectrum RF device in real-time
- Assess known device vulnerabilities and stack rank them by the severity of threat
- Enable Zero Trust access controls for wireless devices and networks
- Implement policy-based threat monitoring, detection, and remediation to support regulatory compliance
- Integrate their wireless security strategies with existing SIEM and ITSM platforms

A third-party compliance audit can help ease customer anxieties as they hand over their personal data. Even with the best intentions, unprepared organizations can make mistakes and lose the trust of their customers. Relying on compliance alone is insufficient; CIOs and CISOs should strive to have a process in place to thwart breaches, with security verification, validation with swift and accurate remediation, and most importantly continuous security posture validation of all their assets that support the online product. Was there an anomaly in the access logs that shows correct credentials, but on an unknown device, from an unexpected location?

Feedback loops can be used to reinforce both positive and negative behaviors. This fact raises some ethical concerns and places a large amount of power in the hands of casino operators. The encouragement of addictive gambling behaviors

is an obvious issue that unscrupulous businesses could exploit. The industry as a whole will need to monitor and adapt to problems as they arise, creating a positive feedback loop of their own to protect their users as well.

While the concept of continuous feedback loops has been available to businesses for decades, the possibilities have greatly increased with the introduction of faster wireless networks, sensors that tie devices to back-end databases and real-time positioning. Casino premises can now be set up to access and react to customer needs in real time, an option that would have seemed impossible until recent technology advancements.

Summary

Casinos face the choice: adapt or die. When the current industry environment has caused many casino operations to go the way of the dinosaur, adaptability and velocity are the antidotes to these problems. By developing insightful, outcome-driven strategies and harnessing the power of wireless innovation, gaming organizations can leverage speed and precision as key differentiators and best position the casino for success. Doing so requires embracing decisiveness, openness, and speed. However, by challenging the status quo, the inevitable result is that organizations deliver better experiences for their customers, drive new revenue, and place themselves in a stronger position than they were pre-pandemic as they extend their brand value. Change is never easy, but the upside is limitless.