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WHITE PAPER:

ENABLING C-STORE DIGITAL TRANSFORMATION AT SCALE

Managed services for the infinitely scalable enterprises of next-generation c-stores

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866.480.2263 | www.sagenet.com

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EXECUTIVE SUMMARY

Convenience stores have always been about creating quick and easy shopping experiences for time-starved consumers. With technology innovations and social conditions creating a shift in consumer behaviors, C-stores are in the process of reinventing themselves in order to remain a relevant option.

What makes a convenience store convenient? Throughout most of the industry's history, the essential qualities for a C-store included extended hours of operation, an easily accessible location, and ready availability of a limited mix of products. Those are still important characteristics, but today's consumers are looking for much more.

Today's tech-savvy customers are accustomed to finding and purchasing what they want using smartphones, web browsers, mobile applications, social media, and other digital tools. They want the option to shop in the store or make online purchases for curbside pickup or home delivery. They have little tolerance for supply shortages, are looking for more upscale food choices, and expect to be rewarded for their loyalty.

To address this cultural shift, C-store operators are relying on a variety of technologies to enhance the customer experience, gain insight into purchasing habits and market trends, streamline store management, and improve operational efficiency. In this whitepaper, we will examine some of the key technologies necessary to not only create next-generation convenience stores, but to continue growing in a sustainable, reproducible way. We'll explore how to intelligently and systematically deliver a consistent customer experience from location to location through the four basic tenants of digital transformation: design, deployment, maintenance, and optimization.

DIGITAL ENGAGEMENT

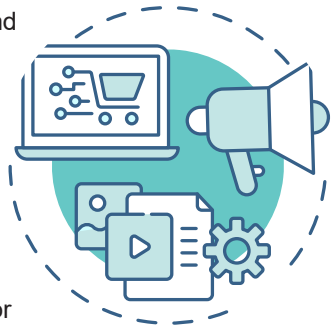
With face-to-face interactions limited during the pandemic, convenience store operators leveraged websites, social media, chatbots, applications, and other digital channels to engage with customers. Consumers have overwhelmingly embraced the digital commerce concept. Roughly 80 percent of the U.S. population now regularly shop online and more than half say they prefer online to in-store shopping, according to research from Statista. Over the next few years, successful C-stores will continue expanding their digital presence to meet customers where they are.

More than half of C-store operators say implementing new technology is a top priority, according to a recent Technomic survey. In addition to improving the customer experience with online options, store operators are also looking to leverage the data-collection capacity of their IT systems to increase efficiency, innovation, and revenues.

Following are some of the key ways C-store operators are expanding their digital presence:

Digital Signage

A key to customer loyalty is delivering the same message, from coast to coast, every time. The ability to quickly and efficiently update, modify, and rotate messaging contributes to an immersive and interactive customer experience. With a dynamic mix of text, video, photos, animation, and streaming content, digital signage helps you deliver more personalized content to customers in real-time.



The signage infrastructure also supports integration with a variety of data sources, including in-store databases, point-of-sales (POS) systems, menu boards, loyalty apps, RSS feeds, weather apps, and more. Real-time data integration enables extreme flexibility in choosing messaging and promotions. You can change sale items, prices, and promotions based on inventory, availability, or customer data. Data integration also makes it possible to implement on-the-spot discounts on slow-moving items and remove information or promotions on items that are out of stock.

In addition, displays fitted with system on a chip (SoC) circuits and sensors can capture data that can be used to evaluate advertising campaigns, understand traffic patterns, and identify peak business hours. By applying AI-driven analytics to that data, you can learn which messages draw the most attention, determine sales conversion rates, evaluate product placement, and more. You can also cross-reference that data with POS data to evaluate the effectiveness of your content strategy.

Mobile Applications

Successful C-store operations have always depended on having a convenient physical location. Now they also must stand out in a crowded digital landscape. Today's consumers expect to be able to engage with C-stores and other retailers through a variety of digital channels, including websites, social media, email, live chat, and text messaging. That makes the smartphone a critical piece of digital real estate. On average, Americans check their phones 344 times per day — once every four minutes — according to a new survey from Reviews.org. Analysts say nearly 10 percent of all U.S. retail sales now occur via mobile phones.

Your mobile app can help a customer feel at home even when they're hundreds or thousands of miles away. User-friendly mobile applications make it possible to integrate all digital channels through a single interface consistently from store to store across the nation. A well-designed mobile app should offer simple search and ordering functions, contactless payments, push notifications and geolocation services. An integrated loyalty program is also an essential feature, offering discounts, exclusive offers, freebies, or personalized recommendations that can drive increased in-store traffic, larger purchases and more return visits.

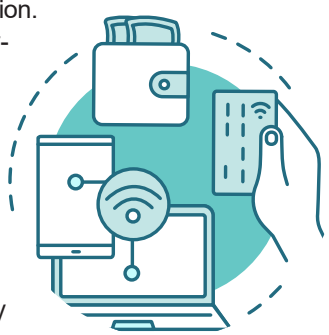
One of the biggest benefits of using mobile apps to connect with consumers is the ability to capture data about customers' purchase history and spending habits. When integrated with back-office management systems, that data can help operators make decisions about inventory, merchandising and staffing.

PAYMENT SOLUTIONS

A consistent, frictionless checkout experience is key to winning over the 71% of consumers who say that the checkout is their biggest pain point. The speed, convenience and payment flexibility offered by network-based POS systems not only improve the customer experience but also give store operators valuable insights into customer behaviors, sales patterns, staffing requirements and more. Additionally, networked POS systems can be augmented with specialty software for fuel sales, tobacco and liquor sales, lottery ticket sales, and food orders.

Integrated POS systems can seamlessly exchange data with key business applications such as CRM, inventory, accounting and employee management. For example, built-in inventory management functions automatically update inventory after each purchase to ensure accurate information about items in stock. Workforce management features support scheduling options, payroll reporting and time-and-attendance tracking.

Data analytics capabilities make it possible to extract valuable data from every POS transaction. Sales data, profit margins, discounts, store performance, purchasing behaviors, customer loyalty, and other information from any number of POS devices can be viewed through a management interface and processed with data analytics software. This data can be used for sales forecasting, operations optimization and marketing strategy.



Integrated POS systems also provide the foundation for these emerging payment options:

Contactless Payments

The use of cash has been declining in the U.S. for years, and consumers are increasingly using credit or debit cards for even small transactions. Only about 20 percent of all consumer transactions involve cash payments, according to the 2021 Diary of Consumer Payment Choice study. While health concerns fueled adoption of contactless payments during the pandemic, convenience is giving the technology staying power. No-touch payments are faster and easier than swiping a credit card, inserting a chipped card, writing a check or counting out cash. In fact, contactless payment methods are up to 10 times faster than other payment methods, according to the Credit Union National Association.

Businesses are also showing a preference for contactless payments, in part because they reduce operational expenses, manual errors, and the risk of burglary and theft. The number of U.S. companies offering no-touch payments has quadrupled since the beginning of the pandemic, according to a Wakefield Research survey.

Implementing contactless payments requires an evaluation of your POS system to determine if updates are needed. Some POS hardware supports plug-in contactless-enabled readers and terminal applications while others will need to be upgraded to an integrated solution.

Mobile Payments

A truly convenient shopping experience must include an option for using smartphones and mobile applications. The vast majority of U.S. consumers (94 percent) have shopping apps installed on their phones, and more than two-thirds say they are shopping via mobile apps more often now than they were two years ago, according to a new study from Klarna.

Since the pandemic, C-store customers increasingly use mobile apps to make purchases for curbside pickup or BOPIS (buy online, pick up in store) transactions. Stores also report that more fuel customers are ordering food and other in-store products while at the pump. In fact, a recent study by Pymnts.com found that 57 percent of consumers who pay for gas with mobile apps would visit C-stores more often if those apps could also pay for in-store products.

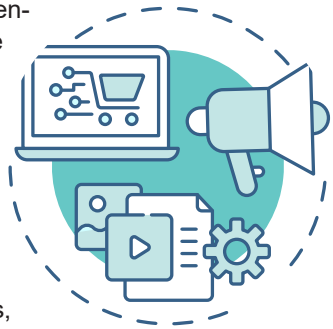
Mobile payment systems like Google Pay and Apple Pay use near-field communication to wirelessly transfer data from the phone to an NFC-enabled terminal. However, in-app payments are increasingly popular because they ensure customers are shopping within an ecosystem that the store controls. To efficiently accept in-app mobile payments, stores need special software to integrate app payments with the store POS system.

CONNECTIVITY

More than 80 percent of retail organizations expect to deploy a significant number of new technologies in their stores over the next few years, according to a new Verizon study. Those technologies will almost certainly require additional network capacity and a solid infrastructure for connecting individual stores to the corporate data center via a wide-area network. Yet, more than 70 percent of those surveyed for the Verizon study said their existing networks can't support their future technology needs. Top areas of concern included managing peak traffic, application response time and network bandwidth availability.

C-stores can't tolerate unreliable connectivity. POS systems require fast, reliable connectivity in order to access payment networks and transmit payment card data. Additionally, POS systems are essential for many other important business processes such as sales reporting, inventory management, employee scheduling and payroll services.

Network downtime costs C-stores an average of $855 per hour, according to a recent Censuswide study. The study also concludes that it takes an average of 5.43 hours to restore connectivity, resulting in $4,643 of lost revenue.



Here are some of the technologies that can help C-stores maintain reliable network connections.

SD-WAN

Supporting multisite operations with traditional hub-and-spoke WAN architectures is challenging due to the increased network connectivity demands of growing numbers of users, devices and applications. Software-defined WAN (SD-WAN) solutions simplify multisite connectivity by virtualizing all network services, allowing all network functions to be centrally deployed and managed from a single device. With point-to-point connectivity and automatic failover to multiple transport types, SD-WAN helps ensure users have reliable access to the data and applications they need.

Wi-Fi

About one-third of the world's Wi-Fi networks experience regular performance issues resulting in outages and business interruptions, according to a recent survey of wireless networking professionals. As they implement new technologies, many C-stores are finding that their existing wireless networks cannot handle rapid increases in device densities and bandwidth requirements, creating latencies that result in a poor user experience. Most of these challenges can be addressed with an upgrade to Wi-Fi 6 networking gear. Analysts say the latest standard more than doubles Wi-Fi 5 speeds and will efficiently support twice as many devices.

Cellular

Conventional connectivity options are not always available where they are needed. Internet connectivity is a challenge in rural and remote areas without reliable broadband. Last-mile fiber networks are too costly in sparsely populated areas, and physical barriers such as hills, mountains, forests and bodies of water interfere with line-of-sight Wi-Fi connections. In such environments, cellular connectivity can be a viable option — particularly with the emergence of fifth-generation (5G) broadband cellular networks that support multigigabit data transmission speeds.

Satellite

Satellite communications provide reliable backup connectivity in natural disasters or other events that shut down more conventional telecommunication options. Under some circumstances, it may be the only reliable connectivity option for stores operating in extremely remote areas. Satellite solutions have modest infrastructure requirements — they need little more than a power source to function, and they don't need terrestrial connections to transport voice or data. Satellite networks are more than capable of handling the data requirements of POS transactions.

CYBERSECURITY

As C-stores expand their digital presence, their attack surface also grows. A breach in one store, whether corporate owned or franchisee, impacts the entire brand. The retail sector has become a top target for ransomware and data theft, with 44 percent of retail organizations hit by ransomware in 2021, according to Sophos' most recent State of Ransomware study. The average cost to recover from such an attack was $1.97 million, including the ransom paid, downtime, lost productivity, lost opportunities, device replacement costs and more.

POS systems and the customer data they contain are enticing targets. Compromised payment terminals have been responsible for some of the largest data breaches in history, including the notorious Target, Home Depot and Heartland Payment System breaches. In many cases, failures to update operating systems or install software patches opened the door for these attacks.

These are some of the ways operators can secure their POS environments:

Implement EMV

EMV credit cards with embedded smart chips create a unique, one-time token for each transaction. Because the security codes change each time a card is used, it is difficult for hackers to use the card. Unlike traditional payment cards that store customer data in plain text within a magnetic stripe, EMV cards use advanced encryption to protect card data. C-stores that are not EMV-compliant will need to upgrade or replace POS equipment to accept EMV cards.

Maintain PCI Compliance

C-store operators should monitor and assess systems regularly to ensure compliance with the Payment Card Industry Data Security Standard (PCI DSS) across all card readers, networks, routers and servers. End-to-end encryption, multifactor authentication and network segmentation are among the security measures required for PCI DSS compliance. Credit card information should be encrypted the instant it is received on a POS terminal and remain encrypted until the payment processor receives it. Operators should change the default manufacturer passwords on all POS terminals and implement two-factor authentication. Cardholder data should be isolated from other network segments and the public Internet.

Update Patch and Software

Software drives all POS system functionality but unpatched and outdated software creates openings for malicious actors. Operators should monitor and assess systems regularly to ensure PCI DSS compliance across all card readers, networks, routers and servers. Automated patch management solutions streamline the process by scanning endpoints across the network to identify which devices need patching, automatically downloading needed patches from vendor sites and setting a schedule for deploying patches in staggered intervals to minimize service interruptions.

CONCLUSION

C-store operators understand the value these technologies can deliver, and what that means for building and maintaining a strong customer base across and throughout your brand. Designing, deploying, maintaining, and optimizing the solutions is a significant challenge, however. According to research from the National Association of Convenience Stores, 60 percent of C-store operators lack the right technologies to meet market demands. Furthermore, nearly a quarter don't have a technology roadmap of any kind.

SageNet is uniquely qualified to help. Our integrated solutions eliminate the challenges associated with deploying and managing a wide range of advanced technologies at scale. We help some of the nation's largest C-store chains implement the data networks, point-of-sale systems, signage solutions, and security tools across hundreds, thousands, and even tens of thousands of locations.

About SageNet

SageNet is passionate about trusted connections. The company believes that by creating, discovering and nurturing trusted connections with its customers, associates and community, SageNet enhances the world that connects us all.

As a leader in managed network and cybersecurity services, SageNet connects, manages and protects technologies and devices across the enterprise. SageNet's collaborative approach provides peace of mind and systems-confidence that empowers an organization to focus on its core mission.

The company offers world-class service and support via its three US-based 24/7 Network Operations Centers (NOCs) and Security Operations Centers (SOCs), geographically-diverse teleports, a central National Logistics Center, multiple data centers, and a nationwide field service organization.

With a three-decade track record in managed services, SageNet boasts a long-term customer base that includes the nation's largest retail, healthcare, financial, utilities and energy organizations. SageNet manages communications at more than 220,000 endpoints. Headquartered in Tulsa, SageNet has regional offices in Atlanta, Chicago, Philadelphia, Toronto and Washington D.C.