



# What Does the Gas Station of the Future Look Like? The Future is Here!



WHITE PAPER

Most of the conversation around the changes coming for fuel retailers is focused on the coming shift from internal combustion engines to electric vehicles. Fuel delivery is an important part of modern convenience store's business, but delivering gasoline and diesel is only a component of these locations do. It's by far the least profitable, and that margin shrinks as the cost of fuel increases.

According to NACS, the leading global trade association dedicated to advancing convenience and fuel retailing, there are approximately 120,000 convenience stores across the United States that sell gasoline. Additionally, those outlets sell more than 80 percent of the fuel in the United States<sup>1</sup>.

Gas Stations sell a lot more than gasoline, diesel fuel, or a convenient place to charge an electric vehicle. And as consumer demands increase every year, these retailers need to evolve to meet the demand. "Modern c-stores are dynamic retail environments that can offer tremendous customer experiences," writes Michael Jaszczuk, CEO, GK Software USA. Headless commerce – automated checkouts without an attendant ringing the transaction – "can allow convenience stores to power app-based technology, implement a modern POS, and offer more personalized customer experiences," according to Jaszczuk.

"Within the next decade or two, the gas station around the corner will likely be catering to everything from hybrids to autonomous cars to electric vehicles to car shares – and selling them a lot more than just regular and premium," according to the Oliver Wyman Risk Journal. Gas stations with c-stores are already elevating the quality of food they deliver. In the future, "gas stations" transform into "energy stations," servicing EVs as well as internal combustion powered vehicles. But they also act as one-stop shops for the sharing economy, offering a convenient location for drone-delivered package pickup. "In essence," the Oliver Wyman Risk Journal says "your gas station becomes a giant post office box or a personal concierge<sup>2</sup>".

Managing all the moving parts in one store, and across chains, is more complex than it might seem. Gas stations of the future, and present, will soon require dramatic shifts in technology, and the always-on, secure connectivity that makes that technology operate, in the store, throughout hundreds of locations and headquarters, and even to the passing motorists nearing the highway exits.

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<sup>1</sup> "Fuel Sales Fact Sheet," NACS, 2022

<sup>2</sup> "The Gas Station's Digital Future is Around the Corner," *Oliver Wyman Risk Journal*, Vol. 7, December 2017





## THE CONVENIENCE STORE/RETAIL FUEL LANDSCAPE

According to Statista, in 2020, the bulk of convenience stores in the United States were independents – single store operators – with 66 percent of the market<sup>3</sup>. But that reality is shifting. In 2022, 22 percent of convenience stores are operated by chains defined as “large,” with more than 500 stores. Another 12 percent are small to medium sized chains with 2 to 499 locations. According to NACS, “the percentage of single-store operators that sell fuel dropped to 54.6% in 2021, the lowest since the metric has been tracked in 2005<sup>4</sup>. Technology continues to drive change. In just a few short years, the market has progressed from tablet-based sandwich ordering to push communications with passing vehicles. It’s large chains with IT knowledge and experience that will deliver more services with increased value to their customers.

In addition, according to CStore Decisions – a trade publication that covers the convenience store industry – “the decrease in the industry store count was more pronounced among stores that did not sell fuel. Of the total 2,446-store decline, 1,986 did not sell fuel, compared to 460 that sold it.” While customers may be stopping to fill up or charge an EV, they’re delivering more profit inside the store. In-store sales only represent 30 percent of a convenience store’s revenues, it generates 70 percent of an average store’s profitability<sup>5</sup>.

As single-store locations decline, the chains have picked up the slack. CStore Decisions tracks the top 111 chains across North America. The top 20 chains alone represent 20 percent of the entire fuel-selling convenience store market.

<sup>3</sup> “Distribution of convenience stores in the United States in 2020, by chain size,” *Statista*, 2022

<sup>4</sup> “US convenience store count,” *NACS*, January 2022

<sup>5</sup> “Why most gas stations don’t make money from selling gas” – *The Hustle*, September 2021



Chain	Headquarters	Retail Locations
1 7-Eleven	Irving, TX	9,519
2 Alimentation Couche-Tard	Laval, Quebec	7,142
3 Speedway	Enon, OH	3,854
4 Casey's	Ankeny, IA	2,230
5 EG America	Westborough, MA	1,704
6 Murphy USA	El Dorado, AR	1,650
7 GPM Investments	Richmond, VA	1,330
8 BP America	La Palma, CA	1,026
9 ExtraMile	Pleasanton, CA	980
10 Wawa	Wawa, PA	917
11 QuikTrip	Tulsa, OK	906
12 Pilot Co.	Knoxville, TN	789
13 Kwik Trip	La Crosse, WI	768
14 RaceTrac	Atlanta, GA	670
15 Sheetz	Claysburg, PA	614
16 Love's Travel Stops	Oklahoma City, OK	563
17 United Pacific	Long Beach, CA	509
18 Kum & Go	Des Moines, IA	408
19 Yesway	Fort Worth, TX	402
20 Sunshine Gasoline Distributors	Doral, FL	395

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And as customer desires shift from simple “gas up and go” requirements, these chains are actively evolving into the energy retailers of the future. In 2021 for example, 7-11 grew systemwide sales by 3.1 percent to \$91.8 billion, based largely on what they call “Evolution” stores, which have transformed from gas and Big Gulp operations to “Quick Service Restaurants.”

“The convenience store industry is a destination for food and refreshments. With falling revenues from fuels and tobacco products, [foodservice](#) sales are increasingly becoming convenience stores’ most profitable category,” according to NCAS.

<sup>6</sup> “2021 Top 111 Chains,” *CStoreDecisions*, 2022



## INVEST IN TECHNOLOGY

Fuel retailers that expect to survive in the future need to provide the most convenient service available.

NCAS reports that, “[t]he average time it takes a customer to walk in, purchase an item and depart is between three to four minutes. Here’s the breakdown: 35 seconds to walk from the car to the store, 71 seconds to select item(s), 42 seconds to wait in line to pay, 21 seconds to pay and 44 seconds to leave store.”

How does a gas station retailer make the most of that three to four minutes? How do they transform the customer’s decision process in 71 seconds? How do they reduce the 21 seconds spent standing in line to zero? These are the challenges facing retail fuel providers, and every single one of them depends on a digital transformation and the connectivity required to make it possible.

Right now, a retailer may be exploring ways for streaming services to provide music videos straight from a customer’s Spotify playlist at the pump while they fill their fuel tanks. Soon, though, future gas stations will serve customers with electric cars, which may mean serving a full movie or series episode while EV drivers charge from 0 to 80 percent in 60 minutes at a Level 3 charging station.

Data mining, inventory management, customer service, augmented reality for employee training: It all requires that the filling station of the future make a massive investment in technology, but there’s a compelling return on that investment. Robotics to complete repetitive tasks can free up already constrained workers to engage customers and upsell. Grab-and-go checkout lines allow customers to make their purchases without staff at a cash register.

For some retailers, that may mean home-grown novel technologies customized for their operations. Others may rely upon digital integrations with partners. But either way, the connectivity requirements are the same. They require secure, redundant, fast connectivity that facilitates volumes of data both at data centers at headquarters, and at the very edge where the transactions are happening. It’s important to note that these days, more and more data is being captured, processed, and even analyzed near where it is actually created.

C-stores are also innovating beyond the point of sale. 7-Eleven is piloting autonomous commercial delivery in California with a new service available via its delivery app, partnering with self-navigating vehicle technology company Nuro.

At the same time, Casey's General Stores – the fourth largest C-store chain in North America – is using Engage3's Competitive Intelligence Management (CIM) MissionScanner as a mobile integrated pricing platform. The technology allows the retailer to track competitive pricing data and quality control algorithms and use machine learning to identify pricing opportunities and make the most of localized pricing strategies<sup>7</sup>.

## SNAPSHOT: Revolutionizing the Checkout Line

Reorienting the checkout line is an opportunity for technical revolution at a fuel retailer. Startups such as Zystra – a division of the checkout giant NCR – are offering retailers “line-busting point-of-sale (POS) tablets,” virtualized, PCI compliant devices that push the final sale away from the conventional cash register to any location inside the store, and even the curbside while customers charge their EVs. The technology promises to not only reduce lines but increase sales and improve the customer experience. That customer experience alone equates to a 63 percent increase in sales reported by Wawa in a profile in Inc. magazine.

Location staff will be empowered by augmented reality training tools, data-driven inventory management, and deep insight into customer behavior. They will be more free to roam the locations with the confidence to interact with customers and help them make decisions. Location staff will also be able to provide real-time offers on food, beverages, fuel options and concierge services.

Frictionless payment options are available via smartphone apps, mobile wallets, contactless cards and Near Field Communications (NFC – Apple Pay is the most visible). They will become more prevalent both for fleet customers with large fuel accounts as well as retail consumers.

### According to CStoreDecisions, the benefits of frictionless payment include:

- Shorter wait times
- Improved analysis of individual customer preferences
- Reduced stress—no PIN, loyalty card, coupons, etc.
- Reduced shopping cart abandonment
- Improved hygiene

Inside the store, it's currently a mix of payment procedures. “Specific to the c-store space, we have seen a slower investment in the development of mobile wallets and mobile apps that support payments,” Perry Kramer, managing partner at consulting firm Retail Consulting Partners told CStoreDecisions. “This can often result in a disjointed experience if the c-store has a franchise like a Dunkin’ Donuts in it that has a powerful mobile wallet that speeds checkout, and then that same customer has to stand in line at the c-store register under the same four walls and have a slower legacy experience.”

Frictionless payments are driven by changing demographics. According to CStoreDecisions 65 percent of customers under 37 say that mobile app or wallet transactions influence where they shop, while only 33 percent of those over 37 said their purchase decisions are influenced by touchless payment options.<sup>8</sup>

These technologies depend on virtualized edge servers that reside in the retail location. These servers provide platforms for both front-end and back-office applications, and also provide security and PCI DSS compliance required to complete transactions with credit cards.

Communication between the fuel pump, the POS, the edge server, and the cloud requires robust, reliable connectivity, especially as retailers grow to geographically dispersed locations.

<sup>7</sup> “Casey's General Stores selects Engage3 to improve efficiency and provide market insights,” Engage3 Press Release, 2021

<sup>8</sup> “What are frictionless payments?” CStoreDecisions, 2021

## DATA DRIVES THE DECISIONS

In a profile in CIO magazine, Wawa's CIO John Collier noted "The more they shop, the more we learn about them to be more convenient before they know they need it." To increase-per-transaction sales, and influence purchase decisions in the future, fuel retailers require an analytics platform that extracts data from hundreds or thousands, of retail locations in real-time.

Not only will retailers be able to know what item is a particularly hot seller in a location on a particular day, but what items and individual customer regularly purchases. Cloud connectivity and edge computing allow quick, data-driven decision-making, at the location, rather than at a central knowledge hub, allowing your locations to quickly pivot based on changing traffic conditions, and even weather-related events.

With an average of three to four minutes to grab a customer on the journey from opening the front door to exiting through it, gas station retailers are going to rely on future-proof connectivity to analyze data not only as the customer opens the door, but as they near the highway exit for that location.

It's the next step in retail convenience marketing, and it absolutely depends on robust connectivity between the customer and the retail location.

## THE DIGITAL ROAD SIGN

From the dawn of the automobile until right this moment, fuel retailers engaged consumers with nothing more than a tall sign beside the highway.

Moving forward, successful fuel retailers will require a robust digital network to predict customer needs, communicate with either their mobile devices or their vehicle to present offers based on fuel level or state of charge, and engage that customer before they even think about exiting the highway.

With data about a customer's routine and preferences, a retailer can proactively deliver an offer. With opt-in permission, a retailer can initiate an alert via the app that refueling is necessary, direct consumers to an open pump or charging station, activate the pumps with the customer's preferred octane rating and facilitate frictionless payment. Simultaneously, the retailer can deliver an offer for a favorite sandwich or hot beverage ready for pickup.

By integrating digital signs with loyalty apps, Samsung indicates that its customers are reporting a "35 to 40 percent increase in the average ticket item<sup>9</sup>."

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<sup>9</sup> "Preparing for digital transformation in convenience stores," *Samsung Insights*, October 2021



## THE VALUE OF A STRATEGIC PARTNER

Connectivity will power the gas station of the future. Retailers that expect to provide an agile, personalized and premium customer experience need to leverage a robust connectivity architecture to facilitate the digital transformation it requires. As they assess network providers, gas station retailers should consider a partner that offers unrivaled industry experience, embraces a collaborative mindset and is focused on building a true partnership with their organization.

T-Mobile offers many of the benefits desired by retailers. We have industry segment advisors with relevant experience who act as industry consultants and partner with internal teams to collaborate and deliver customized business solutions. On the technology side, we offer network technologies that drive cost efficiencies, such as dynamically optimized rate plans based on usage, automation that reduces staff time or the need for additional headcount, and solutions that reduce the ongoing expense of maintaining legacy systems. We also have expertise in emerging technologies, a comprehensive security portfolio, and ultra-capacity and extended range network coverage—not just across high-band frequencies. Retailers need a network provider that can help them build a true ecosystem. As retailers assess potential providers, they should prioritize these capabilities and choose a partner that largely checks all these boxes.

A network provider's partnership ecosystem is another important factor. T-Mobile collaborates with other vendors to bring holistic network, software, and hardware solutions to banking clients. We also offer global wireline services, giving financial institutions the flexible, scalable connectivity they need to build a more agile and connected enterprise.

With future-proof, secure, and reliable connectivity both at the retail location and headquarters, the refueling/convenience industry is unrestricted to meet their customer service needs now, and pivot, adding microservices to facilitate the needs of the future. From easy fill-ups to custom food orders to non-existent checkout lines, customers benefit from seamless, personalized interactions.



To learn more about T-Mobile for Business retail services solutions, [visit our website](#) or chat with us at 844-983-2351.