



CONVENIENCE RETAIL TECHNOLOGY IMPLEMENTATION MAPPING & RFP GUIDE

PART TWO OF A TWO-PART STUDY

NACS

Research &
Technology

OVERVIEW

This research brief details the convenience retail technology landscape across six categories represented by 41 distinct technologies. Mapping convenience retail technology adoption is vital for retailers and technology providers to understand what comes next for planning purposes and to ensure technology plays a pivotal role in the success of the business.

This research explores:



The industry implementation stage of each technology

(Embedded, Adopting, or Exploring)



The perceived level of impact on the business for each technology



The relative level of difficulty to implement each technology



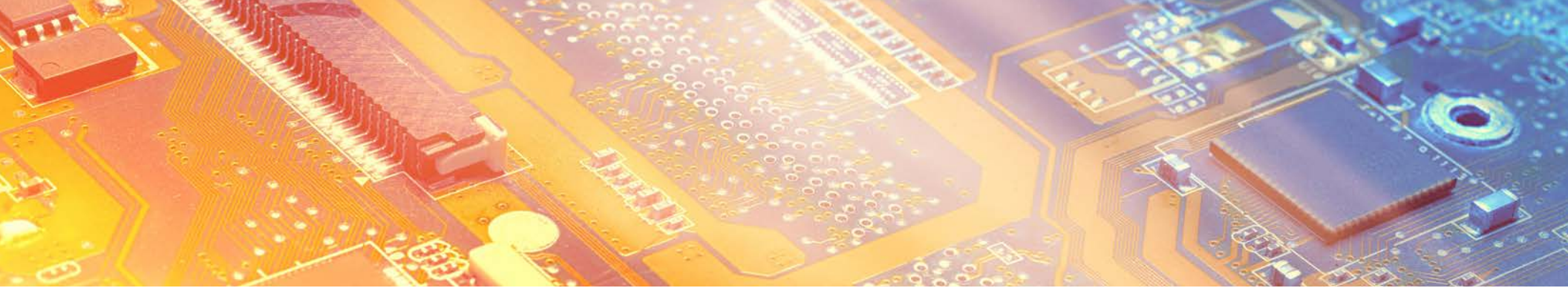
Considerations for crafting your next technology provider RFP and preparing for implementation

USE CASES

- Determine technology prioritization by impact on the business relative to the convenience retail benchmark
- Identify whether your company is ahead or behind other retailers in implementation of key technology solutions
- Determine whether your company is focused on adopting technology that is relatively easy or more difficult to implement relative to the technology's business impact
- Understand what to consider before implementing a technology solution or beginning your technology provider search
- Identify important criteria that should be included in your next technology RFP and how to evaluate technology providers

CONVENIENCE RETAIL TECHNOLOGY IMPLEMENTATION RADAR





TOP 5 Technologies by Maturity of Implementation (Most Mature):

1. Pricebook Software
2. Integrated POS System
3. Inventory/Category Management Software
4. EMV
5. Social Media Advertising

BOTTOM 5 Technologies by Maturity of Implementation (Least Mature):

1. Checkout-Free Technology
2. Cryptocurrency Payment Acceptance
3. Automatic, Anonymous Age Verification
4. Voice SEO
5. Connected Car Technology

TOP 5 Technologies by Impact on the Business:

1. Pricebook Software
2. Integrated POS System
3. Inventory/Category Management Software
4. Loyalty Program Technology
5. Loyalty Solutions Software

BOTTOM 5 Technologies by Impact on the Business:

1. Cryptocurrency Payment Acceptance
2. Voice SEO
3. Connected Car Technology
4. Electric Vehicle Charging
5. Native Advertising

TOP 5 Technologies by Difficulty of Implementation:

1. Checkout-Free Technology
2. Electric Vehicle Charging
3. Connected Car Technology
4. EMV
5. Personalization Technology

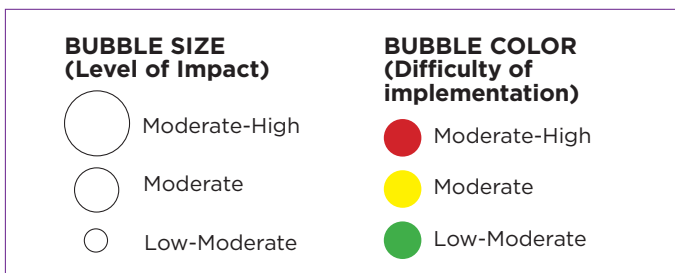
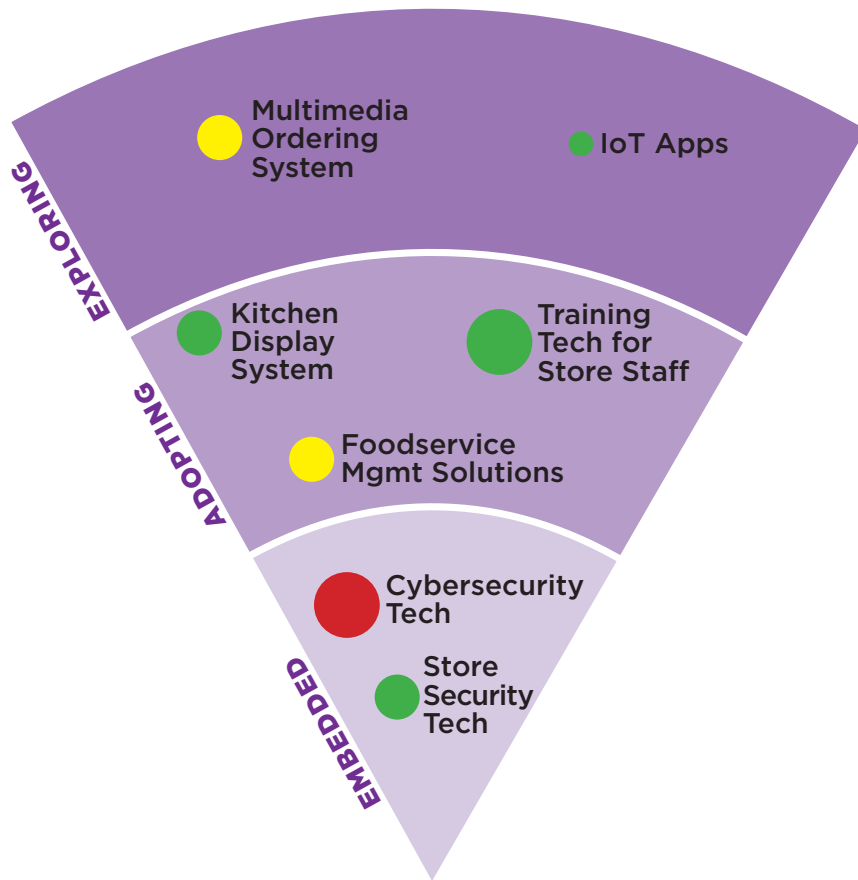
BOTTOM 5 Technologies by Difficulty of Implementation:

1. Social Media Advertising
2. Digital Signage
3. Native Advertising
4. Training/Onboarding Technology for Store Staff
5. Geolocation Advertising Technology

OVERALL FINDINGS

- Technologies rated as “embedded” in terms of implementation generally have the highest impact on the business, but these technologies are not necessarily the easiest to implement
- Overall, technologies that retailers rate as “exploratory” in terms of adoption are considered more difficult to implement with low to moderate business impact potential
- Marketing technologies are considered the least difficult to implement, while customer-facing technologies are the most difficult
- Retailers have focused more attention on adopting back-office technologies and believe these technologies have the most impact on the business
- Customer-facing and payments technology advancements are currently under-leveraged by many convenience retailers

STORE OPERATIONS TECHNOLOGIES



- > Retailers prioritized the implementation of cybersecurity technology. Although the technology is difficult to implement, retailers recognize its high business impact.
- > Training and onboarding technology for store staff is considered high impact for the business and is currently in the “adopting” stage across retailers.
- > Although IoT apps are viewed as relatively easy to implement, the business impact is not considered to be as high as other store operations technologies.
- > Foodservice-related technologies are rated as moderate in terms of business impact and are currently in the “adopting” stage by retailers.

Store Security Technology – technology used to monitor front and back of the store space and forecourt, typically used to deter crime and safety issues

Kitchen Display Systems – back of the store technology for intake and completion of food orders

Multimedia Order Placement System – front of the store technology for customers to place food orders, including menu boards and touch-screen order systems

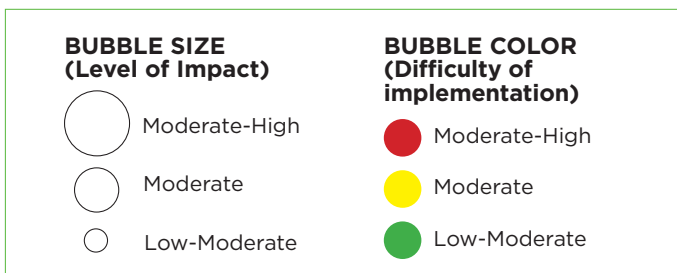
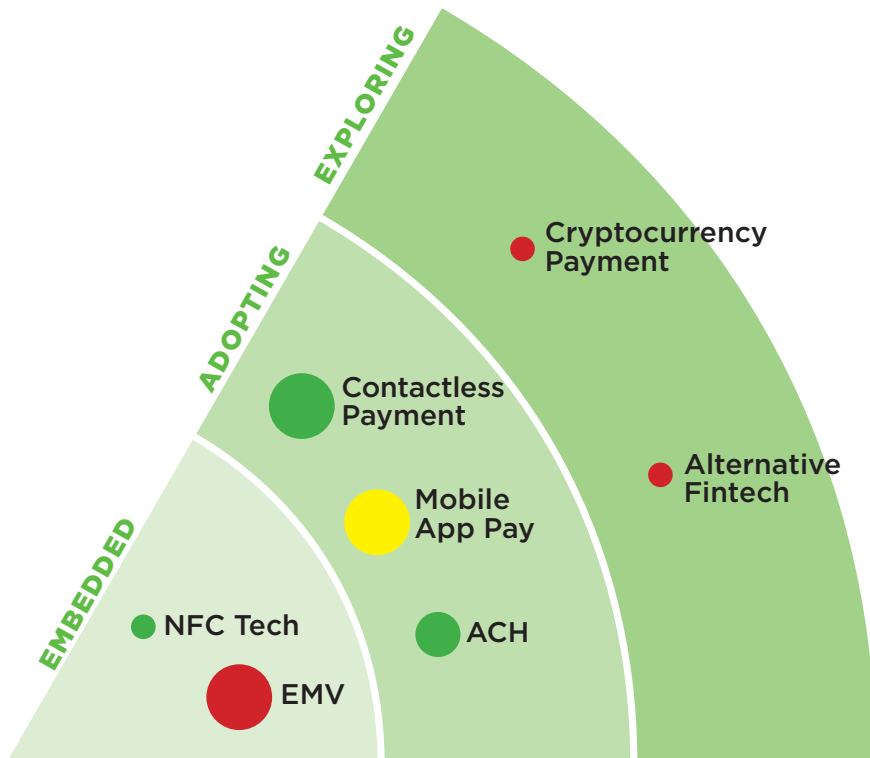
Foodservice Management Solutions – back or front of the store technology used for keeping prepared food and commissary products fresh

IoT Applications – sensors, software, and other technologies used for the purpose of connecting and exchanging information across devices and systems over the Internet

Training/Onboarding Technology for Store Staff – videos, gamification, or other technologies used for safety, operational, foodservice, fueling, or customer service training

Cybersecurity Technology – technology used to prevent data, server, computer, and network systems breaches

PAYMENT TECHNOLOGIES



- > Retailers consider near field communication (NFC) technology to be embedded and relatively easy to implement but perceive NFC's business impact as low.
- > Cryptocurrency payment and alternative fintech (such as Venmo and PayPal) are considered to have low business impact and are rated as difficult to implement.
- > Contactless payments and mobile app pay have high levels of business impact and are being rapidly adopted by convenience retailers.

EMV - international technology standards that defines the interoperability and acceptance of secure payment transactions

Contactless Payment/Check-Out - paying for products without needing to interact with another person, typically done via a self-checkout station

Cryptocurrency Payment Acceptance - payment from one device to another using a cryptocurrency wallet or mobile app designed for exchanging cryptocurrencies

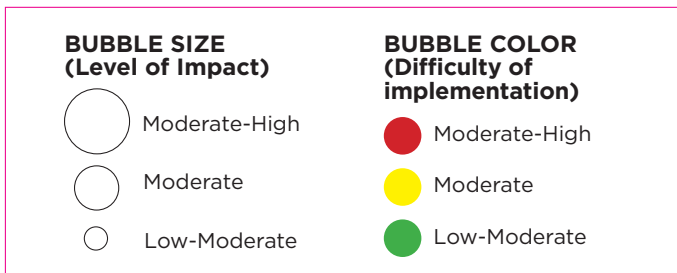
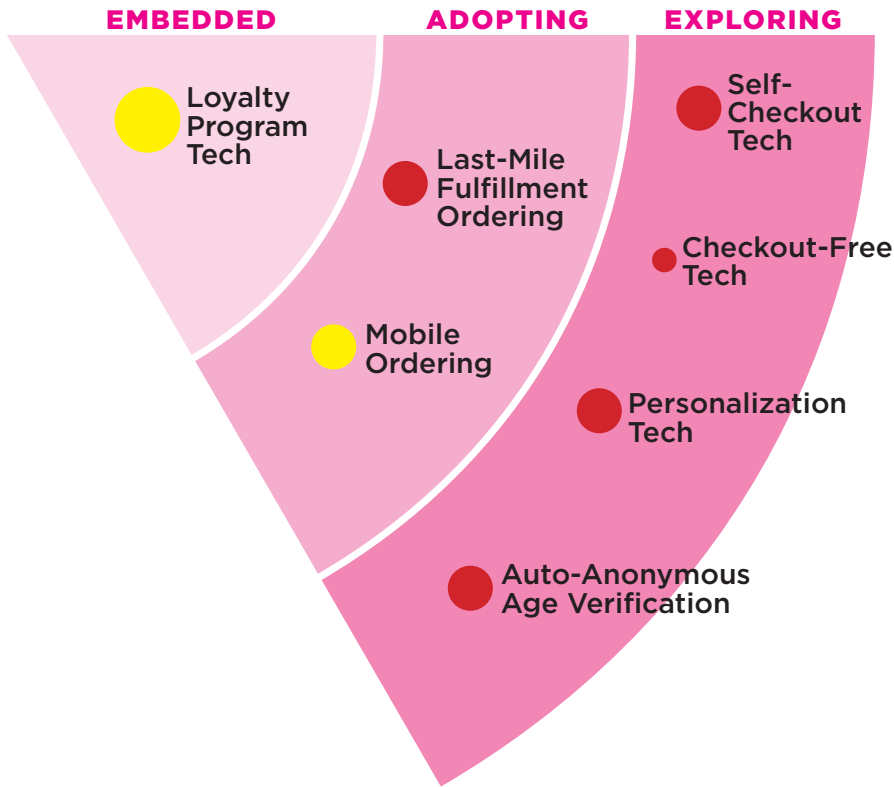
Near Field Communication (NFC) Technology - payment acceptance reader that deducts funds for a purchase through a mobile device/app when placed in close proximity (typically under 2 inches)

Mobile App Pay - payment processed through a mobile device app by touching the device to a reader or automatically from app to app (i.e. ApplePay)

Alternative Fintech - payment processed digitally from an app (i.e. Venmo, PayPal) with automatic deduction of funds necessary for purchase

Automated Clearing House (ACH) - bank-to-bank payment processed electronically, typically through the use of a credit card

CUSTOMER-FACING TECHNOLOGIES



- > Collectively, customer-facing technologies are considered the most difficult to implement.
- > COVID-19 accelerated retailer adoption of last-mile fulfillment ordering despite it being difficult to implement.
- > Convenience retail technology leaders believe self-checkout, personalization technology, and auto-anonymous age verification will have a moderate level of impact on the business but will be difficult to implement.
- > Customer-facing technologies such as auto-anonymous age verification, checkout-free technology, and personalization technology have the largest gap between business impact and maturity of implementation.

Loyalty Program Technology – technology that tracks customer purchases and issues rewards/promotions or points that can be redeemed at a later date for discounts on purchases. Typically offered and tracked via a mobile app

Mobile Ordering/Wallet – a mobile app allowing for foodservice order placement or making purchases. Payment for the purchase is done directly via the app

Last-Mile Fulfillment Ordering – placing an order via phone, computer, or mobile app (either in-house or through a third party) that allows for picking up the purchase in-store, at a locker, curbside, drive-thru, at the pump, or delivery to an off-site location

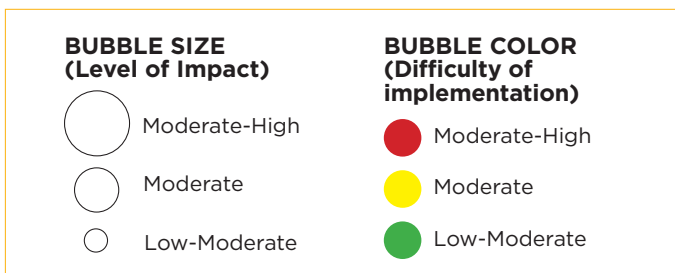
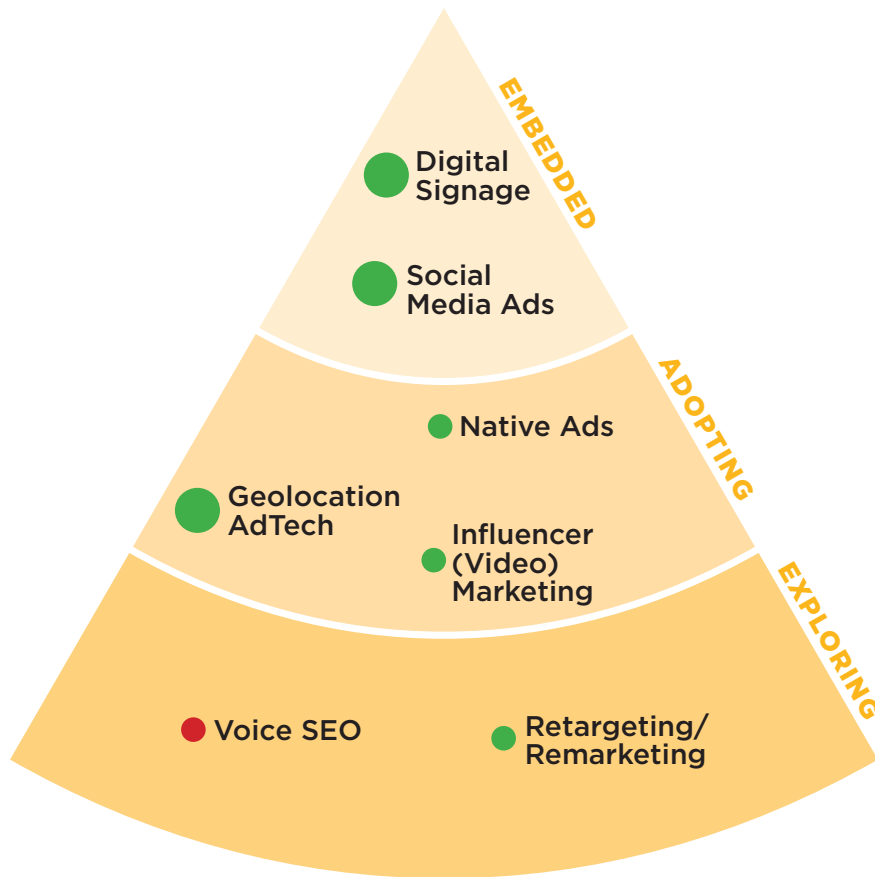
Self-Checkout Technology – a kiosk/station that allows for a customer to scan products and make a payment without needing to interact with store staff

Checkout-Free Technology – technology that allows a customer to make a purchase by scanning a product and completing payment via a mobile device and leave without needing to interact with store staff or any other in-store device

Personalization Technology – technology that captures prior customer purchases or product interest and provides suggestions/offers/promotions for purchase based on this information or other shopping behaviors. Typically done via a mobile app

Automatic, Anonymous Age Verification – technology that scans an ID or individual's face and validates age to allow for the purchase of age-restricted products. Does not store customer information

MARKETING TECHNOLOGIES



- > Collectively, marketing technologies are considered the easiest to implement but have low to moderate impact on the business.
- > Convenience retailers focused on adopting marketing technologies viewed digital signage and social media ads as the easiest to implement.
- > Geolocation adtech is recognized as having the most business impact among marketing technologies not already at the “embedded” adoption stage.
- > Voice SEO, retargeting, native ads, and influencer marketing are the marketing technologies that retailers believe will have the lowest impact on the business.

Social Media Advertising – use of social media channels such as Twitter, Facebook, Instagram, etc for marketing campaigns and brand awareness to support business goals, including social selling

Geo-Location Advertising Technology – GPS technology that maps an individual’s location and displays targeted, customized content or advertisements based on the user’s real-time, geographic location (i.e., geofencing)

Digital Signage – installations used to display video or multimedia content or advertisements to customers in-store or outside of the store. Digital signage may update based on factors such as time of day or shopper information

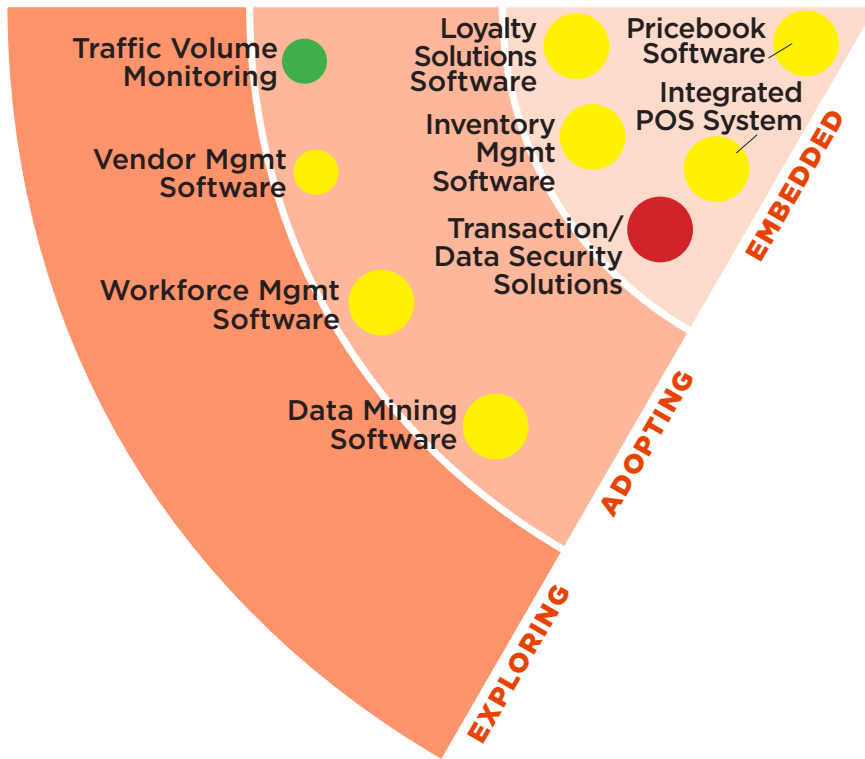
Retargeting/Remarketing – advertising displays that targets users who have previously interacted with your website or brand







Voice Search Optimization (Voice SEO) – optimizing existing and new website content for voice search to earn your website or brand the featured snippet or “zero-click” search result. Voice assistants use the snippet to respond to voice searches

Native Advertising – paid ads that match the look, feel, and function of the media format in which they appear. Often found in social media feeds, search and promoted listings, or as recommended content on a web page. Native ads are non-disruptive—they’re intended to look like part of the editorial flow of the page, versus a traditional ad

Influencer (Video) Marketing – social marketing that uses endorsements and product mentions from influencers—individuals who have a dedicated social following and are viewed as experts/celebrities

BACK-OFFICE TECHNOLOGIES



BUBBLE SIZE (Level of Impact)	BUBBLE COLOR (Difficulty of implementation)
 Moderate-High	 Moderate-High
 Moderate	 Moderate
 Low-Moderate	 Low-Moderate

- Back-office technologies are the most embedded and are believed to have the most business impact among all convenience retail technologies.
- Traffic volume monitoring is considered the easiest to implement but has not been adopted as quickly compared to other back-office technologies.
- Similar to cybersecurity technology, transaction/data security solutions are difficult to implement but are recognized as having a large impact on the business.

Pricebook Software - application that allows for the automatic update of prices, analytics, and optimization to improve pricing decisions

Inventory/Category Management Software - application that tracks inventory levels, orders, sales, and deliveries to more efficiently manage product/category stock

Data Mining/Tracking Software - application that stores large amounts of customer, inventory, fueling, or other store-related data and allows for performing analysis on this data

Transaction/Data Security Solutions - software that ensures customer and transaction data remains secure from malicious attacks/theft

Traffic Volume Monitoring Software - application that tracks and logs vehicular traffic volume and flow through designated areas

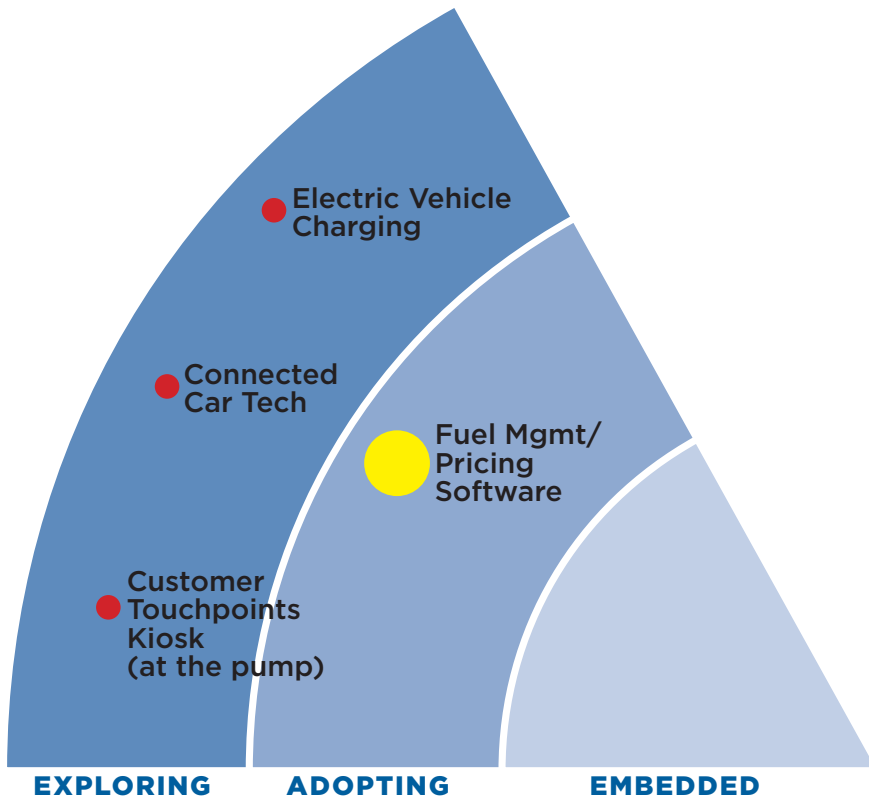
Integrated POS System - technology that creates a seamless way to process a transaction by eliminating separate terminals for scanning products and accepting payment

Loyalty Solutions Software - application that integrates the loyalty rewards program/app with additional customer data and offers to customers that are part of the loyalty program

Vendor/Supplier Management Software - application that allows for monitoring and adjusting the store's supply chain

Workforce Management Software - application that organizes staff shifts, time, and work responsibilities

FUELING TECHNOLOGIES



- > Retailers are largely in the “exploring” phase of more advanced fueling technologies such as connected car technology, Electric Vehicle Charging, and customer touchpoint kiosks at the pump.
- > More advanced fueling technologies are viewed as having relatively low impact on the business.
- > Fuel management and pricing software is believed to have the highest impact and be the most difficult to implement among fueling technologies.

Electric Vehicle Charging - a dedicated power supply station designed to recharge plug-in electric vehicle batteries. May or may not be equipped with Electric Vehicle Supply Equipment (EVSE) control protocol

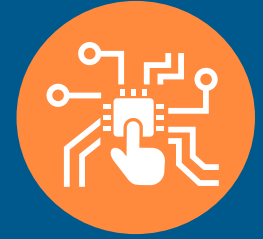
Connected Car Technology - bi-directional communication technology that enables devices inside the vehicle to communicate to networks, services, and devices outside the car for navigation, infotainment, safety and payments

Fuel Management/Pricing Tracking Software - technology that makes price updates to fuel more seamless/automatic rather than requiring a manual change

Customer Touchpoints Kiosk (at the pump) - forecourt order management technology that allow for placing orders or provide customers with other information for an in-store purchase

BUBBLE SIZE (Level of Impact)	BUBBLE COLOR (Difficulty of implementation)
Moderate-High	Moderate-High
Moderate	Moderate
Low-Moderate	Low-Moderate

TECHNOLOGY PROVIDER RFP GUIDE



The process for selecting a new technology or switching providers is not a task many convenience retail technology leaders relish. To help make this process less burdensome, NACS developed the following tips for technology implementation preparation and RFP creation based on feedback from convenience retail technology leaders. This outline underscores less commonly considered (but very important) criteria and evaluation points for your next technology provider search.

Crafting an RFP and evaluating technology provider submissions includes several components. NACS breaks down these factors into three sections on the following pages:

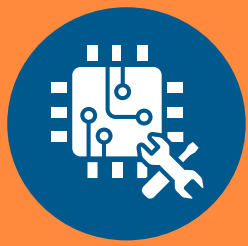
- **What to consider before issuing a technology provider RFP**
- **Criteria to ask technology providers in your RFP (general and security-specific criteria)**
- **How to evaluate technology providers**

The considerations and criteria in each section call attention to areas that are not typically part of a procurement-driven RFP. The highlights on the following pages should be blended with traditional RFP requirements to create a more well-rounded evaluation for technology partner scoping and evaluation.



BEFORE ISSUING A TECHNOLOGY PROVIDER RFP

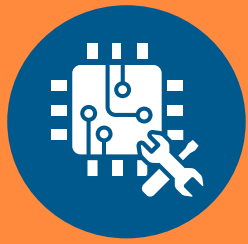
- Clearly define the **total cost of ownership** before beginning any technology implementation. Understand the monetary cost of the implementation and also the people and resources required. Identify a project manager and team responsible for the implementation.
- Secure **buy-in from company leaders** for the need to change providers or adopt a new technology and ensure the implementation leader has the authority necessary to move change forward.
- Ensure all **functions required for the implementation** are notified of requirements early in the scoping process— involving procurement, accounting and financial decision makers at the outset will streamline the overall process.
- Involve the **representative end-user stakeholders early** in the provider selection process. Involving all levels of technology users will require more work upfront but result in better acceptance from necessary parts of the business.
- Understand the full **spectrum of steps necessary to complete the implementation**. Clearly define the roles and responsibilities of each functional area impacted directly and indirectly.
- Establish **measurable indicators** for what **success** of the implementation looks like once complete.
- Understand the **landscape of potential providers**. Should consolidation in the provider's industry occur, what are the potential outcomes for your technology stack and what complications could arise for your business and customers?



WHAT TO ASK TECHNOLOGY PROVIDERS IN YOUR RFP

General Criteria:

- > Provide potential technology partners with **information about your business**, such as current technology ecosystem, processes in place for technology use and updates, and user needs.
- > Establish a well-defined **implementation timeline** that builds steps for early test & learn or pilots to fine tune and ensure success.
- > Understand how and why a technology may experience **disruptions or temporary failure**. Ensure the provider is **transparent about situations** when the technology may experience disruptions and be forthcoming about the circumstances when failures may occur.
- > Define a **service level agreement (SLA)** that indicates periods of downtime for maintenance and the time that the solution is available for use.
- > Demonstrate how the solution will **communicate results** or performance to your business. Identify how success of the technology implementation will be evaluated by yourself and the technology provider.
- > Detail how the provider's solution will **integrate with existing systems** currently in place.
- > Understand if the required **solution is standardized** for the provider (it has been implemented many times before) or if it will **require customization** for your business.
- > Gain clarity on the provider's **implementation support team** personnel, their responsibilities and your company's responsibilities.
- > Determine whether it is possible to **network with existing customers** regarding their experience or if the provider has **case studies or proof points** similar to what is required for your business.
- > Understand the provider's **approach for how they conduct their work**—i.e., agile process, SAFe framework, internal professional services, managed services, etc. Preview the **project implementation plan**, including how the provider manages resources to complete the required work.
- > Develop a **challenging use case** or scenario that requires the provider to demonstrate their capabilities.



WHAT TO ASK TECHNOLOGY PROVIDERS IN YOUR RFP

(continued)

Security & Technology-Specific Criteria:

- > Conduct due diligence on providers to **minimize the risk of data breaches**. Ask technology providers for a penetration test (i.e., authorized simulated cyberattack) of the provider services and review the report for potential vulnerabilities.
- > Ask for **certifications** (if applicable), such as: SOC II Type 2, SSAE 18s, CCPA/GDPR, PCI DSS AOC. Depending on the solution, additional data security certifications such as NIST, ISO, OWASP, and CIA may be necessary.
- > Clearly define the dollar **amount of the provider's liability insurance policy** and the number of customers the policy covers should a data breach occur.
- > Understand whether the provider has **experienced a data breach** or a possible security incident in the past.
- > Ask if the provider conducts **network logging**, what the retention period is for the log and can the log be provided in the event of a security incident.
- > Understand whether the provider employs a **Security Incident and Event Management (SIEM)** tool and if their network logs feed into the tool for monitoring and alerts.
- > Detail which employees have **access to shared data**, both in your organization and your partner's.
- > Identify whether the provider has a **Security Operations Center (SOC)** in-house or if they outsource the center.
- > Outline the **backup or redundancy center** available for information storage that safeguards against loss.
- > Clearly define the **ownership and rights to data** during and post-contract. Determine the exclusivity stipulations for data use.
- > POS specific: Determine if the provider allows for the **export and import of data** into the system via a request.
- > POS specific: Determine if the system has an **open architecture**—i.e., can it communicate across multiple platforms in the event the store includes a QSR, car wash, etc.?
- > POS specific: Determine if the system is **SQL based with cloud capabilities**.
- > POS specific: Determine if **data pulls** are available at the **transaction level** and with what frequency.



TECHNOLOGY PROVIDER EVALUATION CONSIDERATIONS

- Did the provider effectively **put the solution in your terms**? What impact will the solution have in terms of cost and time savings for your business? What impact will the solution have on store staff, and how will it impact shoppers?
- Does the provider have a **proven track record** of working with convenience retailers?
- What, if any, impact will the provider have on **existing technology capabilities**?
- Evaluate whether the potential technology provider **thinks strategically** in instances where the technology implementation requires broader integration into your technology stack and/or long-term planning.
- Clearly lay out the **risks associated** with the provider's solution. Ensure the risk of partnering with the provider does not outweigh the risks of the necessary solution.
- Identify how the potential partner will **integrate without adding risk** associated with security and PCI.
- What are the **provider's limitations** in terms of the product/service and support they provide? Was the provider honest and forthcoming with information about limitations?
- What are the provider's capabilities and plans for **adding more functionality or services in the future**. What additional costs will my business incur from future enhanced capabilities?
- Gauge the willingness of a provider to **partner with third parties** on a solution or potential integration effort.
- Evaluate the **training requirement** for the implementation and use of the technology.
- If the solution will **impact customers**, which provider has the most potential to improve shopper experience?



ABOUT THIS RESEARCH

This research is based on data from the NACS Convenience Retail Technology Survey conducted from April to June 2021. The analysis is based on a total of 104 responses from convenience retail technology leaders representing over 35,000 store locations globally. 83% of responses were from the United States, and the remaining 17% were from Australia, Central America, Europe, South America, Southeast Asia and the Middle East.

Results presented in this white paper represent part two of a two-part study. In the companion white paper, titled *Building Convenience Retail Success Through Technology*, NACS research examines the challenges retailers are solving through technology, how the technology roadmap and spend impacts retailer success and future technology adoption targets.

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- Improve customer loyalty and **reduce out-of-stocks** with strong inventory controls
- Maximize sales and margin by understanding customer behavior with **time-of-day sales** and **product affinities**
- Keep foodservice profitable with **accurate recipe management** and **easy substitutions**
- Understand labor needs with **traffic analysis**
- Take advantage of the latest technology for **frictionless shopping** and last mile delivery



"We took jobs that were taking a whole day, jobs that were taking 3-4 hours a day, and consolidated those down to a few moments in the morning and a couple hours once a week." Charles Roe, Gaubert Oil/ GoBears Stores

"The reporting brings an amazing amount of information to me instantaneously and makes it much easier to make timely decisions." Michael Lipton, Lipton Energy/LiptonMart Stores

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- **The most mature platform** in our space. We are in the process of opening dozens of stores in the next few months.
- **Real-time insights** that transform retail operations. We're the only autonomous checkout company to offer real-time operations like store positioning and shelf real-o-grams and best-in-class time-to-receipt for shoppers (receipts in minutes!)
- **Increased shopper loyalty and lift.** We let in-store teams focus on store operations and delivering the best customer service possible.

We're setting a new standard for retail. Join us!

See the Standard AI platform in action here: <https://www.youtube.com/watch?v=-H86CL8aK9I>

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