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Grocery POS Systems 101

A Basic Introduction to Grocery Point of Sale (POS) Systems

Operating a nutrition incentive (NI) project with brick-and-mortar retailers inevitably requires a basic understanding of grocery point of sale (POS) systems (AKA cash registers). This document provides a basic introduction to grocery POS systems and covers the following topics:

1. Point of Sale Overview
2. Incentive Mechanisms
3. Challenges to NI Project Implementation
4. POS Requirements Guide
5. Planning a Retail-based NI Project

Point of Sale Overview

Key Terms

There are common terms you will hear referenced when discussing grocery POS.

POS Manufacturer/Developer: The brand or maker of POS systems. The POS company may produce multiple types of POS systems. Some POS companies manufacture both POS hardware and software, while some companies only produce software capable of running on multiple hardware systems.

The POS System: The hardware (PC's, scanners, and displays) and software.

POS Vendor/Dealer: A separate company selling and supporting POS systems to retailers.

POS Technician: This technician maintains and services the POS system.

In-store POS Coordinator or Technician: This is often a store employee who manages the POS system's inventory database, ensures prices and promotions ring up correctly, and coordinates with the POS dealer for system maintenance and repairs. Retailers have different titles for this role.

Additional Context for Key Terms

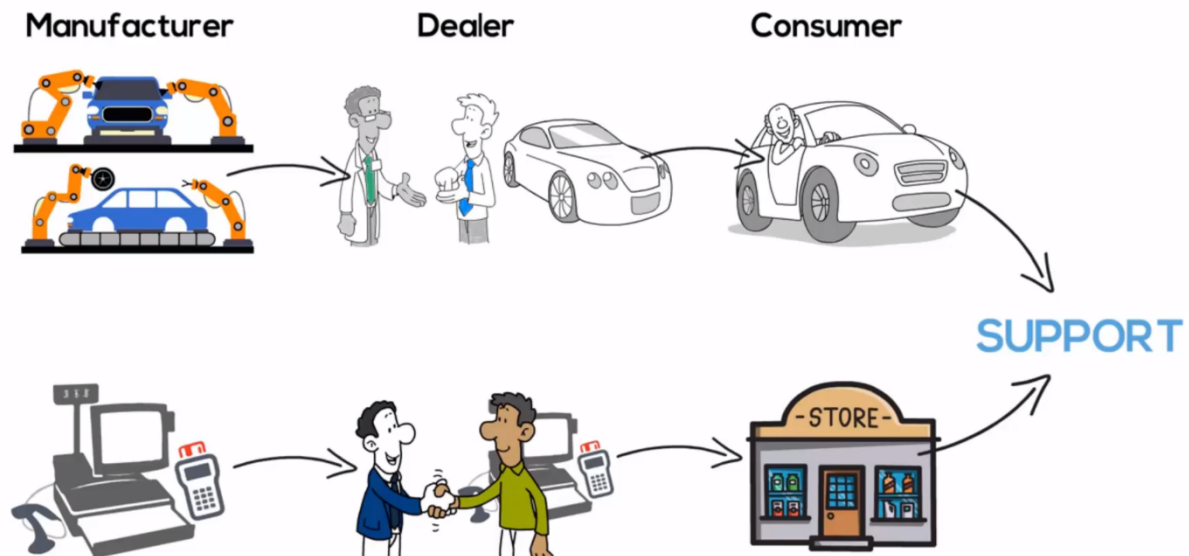


Figure A. Comparing the car industry to the POS industry

In addition to selling and installing systems, the **POS vendor/dealer** also administers maintenance for the retailer's hardware and software. They may perform system upgrades as needed or requested by the retailer. Many also provide custom configurations or programming, but not all dealers offer this service.

It is common that a **retailer's service provider** (or the dealer who sold them the system) is also their main **POS technician**. For comparison, think of the car industry (see Figure A., above). Just like you might repair your car at home or outsource car maintenance to the car mechanic or dealership, a retailer might have an in-house POS technician and/or outsource to the service provider or an external POS contractor. Large chains are more likely to have an in-house POS technician or team. Many chains have both in-house POS teams and external contractors.

POS vendors/dealers may sell and support multiple brands of POS hardware and software. Some POS dealers serve a defined geographic region, while others sell and support systems nationally. Every geography is unique, and it is likely that your state has multiple POS vendor/dealers selling multiple systems.

Basic POS System Anatomy

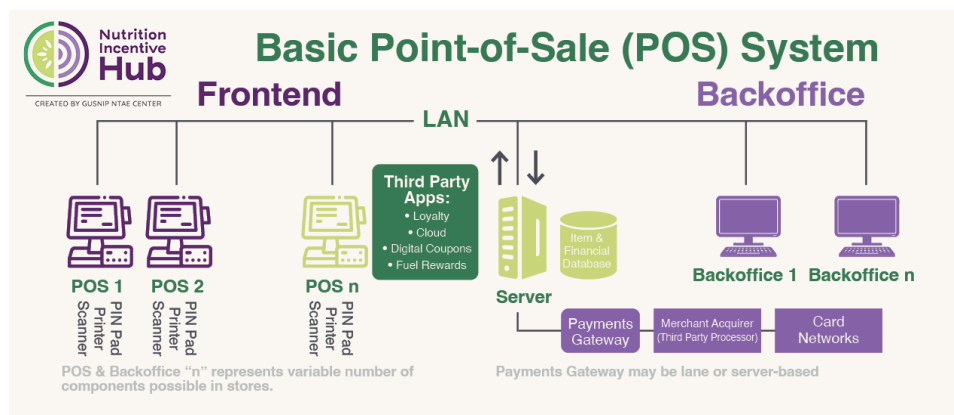


Figure B: Basic POS System

There are many components, generally referred to as **peripherals**, needed for a POS system to operate. The POS system and peripherals listed below generally play important roles in processing nutrition incentive transactions.

Frontend Software

The software package is the “engine” conducting customer transactions and providing store financial accountability. Common brands found in the retail setting include NCR, IBM, LOC SMS, ECRS, Clover, Square, and many others.

Frontend Hardware

The hardware is the actual computer processor and cash register unit, designed to be robust enough to withstand the grueling physical conditions of the checkout counter. Sometimes the software and hardware are from the same manufacturer or brand, while in other cases they are independent and are from separate makers. The retailer and POS dealer will be able to provide details about their specific system.

Barcode Scanners & Scales

There are two common scanner types.

Flatbed scanner and scale combo units: Fit flatly into the checkout counter. Cashiers or customers using self-checkout lanes can use the unit for weighted items or pass product barcodes over the scanner to ring up an order.

Handheld or countertop scanners: Smaller units and are popular options for smaller retail outlets, such as corner stores. Many of these scanners can also scan smart device screens and

QR codes. Due to this ability and the fact handheld scanners make it easier to scan bulky items, some retailers will have them in addition to their flatbed scanners.

Backend Software

Backend software generally manages the database of store products and their corresponding prices. It also handles other attributes such as promotions, deals, and any taxes that should be applied to a product. In many cases, the frontend and backend software may be from the same POS system developer, but some retailers may choose different frontend and backend components to work best for their unique needs. Maintenance and support for both frontend and backend software is generally provided by the same POS technician and/or vendor/dealer.

Payment Terminal or PIN Pad

PIN pads contain magnetic stripe readers, card chip readers, and contactless readers. These contactless or near-field readers are able to use high frequency radio waves between the PIN pad and card to process payments from enabled cards and mobile devices. PIN pads are sophisticated devices with high levels of security and encryption services to protect credit, debit, electronic benefits transfer (EBT), and other transactions from theft and fraud.

Miscellaneous Peripherals

Other peripheral devices include customer and cashier screen displays, cash drawers, and printers for receipts and coupons.

Maintenance and Support

Over the lifespan of a POS system, the maker will enhance the software and address bug fixes by releasing updates in the form of new upgraded versions and “patches.” Some retailers pay additional fees for yearly hardware and software support that may include version upgrades and patch fixes. Some POS dealers may also include certain levels of custom programming within their ongoing support fees. Keeping a system updated can be an added expense for retailers; therefore, some may choose to “pay as they go” for hardware and software support. Due to this expense, there are cases where retailers may be several versions behind the current POS system software. As POS systems are further enhanced, retailers operating older systems without upgrades may be required to pay substantial fees to bring their software up to the latest revision level to allow for new capabilities not previously supported.

POS System Replacement

POS systems for multi-lane traditional grocery stores and supermarkets are expensive – costing \$10K to \$15K per lane. Grocery/supermarket owners will operate a POS system for as long as possible before replacing it. If you encounter a retailer who is considering replacing their POS system, the ideal replacement POS system should be able to conduct an electronic incentive transaction without cashier intervention.

For corner stores and bodegas, POS systems are substantially less expensive than grocery and supermarkets. POS systems for these stores may range in price from a few hundred dollars to \$2K depending on the number of terminals and peripherals. In some cases, grantees have worked with smaller retailers to provide financial assistance for them in replacing the store system with a new system capable of conducting incentive transactions.

Incentive Mechanisms

Incentive mechanism refers to how incentive issuance and redemption occurs at the register. Below are four major categories of mechanisms. For further information, see the Incentive Mechanism documents in the toolkit.

Coupons

There are two main types of coupons.

In Store: These are register-generated and print as a receipt (requires programming from POS technician).

Coupon company: A coupon company prints coupons through a machine at the register. An example of a common coupon company is Catalina Coupon.

- **Pros:** Incentivizes customers to come back for a future purchase; earnings are machine generated; customer knows how much they earned.
- **Cons:** Setting up a coupon-based system can be cumbersome for the store; sometimes requires the cashier to act to trigger the issuance of a coupon; easy to misplace.

Loyalty Platform

There are three main types of shopper loyalty accounts.

Store branded loyalty/rewards cards: Incorporates incentives into a store's existing rewards systems (e.g., Yes card at Spartan Nash in MI). Not all reward systems are able to incorporate an incentive program.

Member account number: Accounts are tied to phone numbers, card numbers, and/or EBT numbers. This is most commonly seen at food co-ops but is also used at corporate and independent stores.

Third-party incentive loyalty: Outside company supports an incentive-branded loyalty card, and may offer interoperability between firms (e.g., Epic Technology's card used in MI, NY).

- **Pros:** Customers can use their normal loyalty card and don't need to remember a coupon; customers know how much they've been issued and have a balance they can check; balance counts to the penny both for issuing and redeeming incentives, offering further value to customers; depending on the software and POS configuration, retailers and grantees may have access to more robust/advanced reports and data than coupon or auto-discount.
- **Cons:** Customers may not realize they earned an incentive; customers need to enroll at the store to activate a loyalty card; can be expensive to implement or modify depending on set up of POS; issuance of cards is an added expense.

A second element of a loyalty platform to keep in mind is automatic redemption and shopper choice.

- **Automatic redemption:** Once a shopper earns incentive dollars, spending will automatically occur on the shoppers' next visit and any subsequent visits until the balance is depleted.
- **Shopper choice:** Customers choose to earn or spend incentive dollars. This allows the shopper to continue to accrue and save their incentives to spend on a later date (e.g., saving for holiday shopping).

Automatic Discount

This method automatically applies a percentage discount to all eligible products upon payment with an EBT card. This method leaves no option for shoppers to choose when to use their incentive.

- **Pros:** Often it is easy and quick to implement a program; ensures a 100% redemption rate; helpful to spend through funds quickly in the short term.
- **Cons:** May reduce incentive to purchase more produce as shopper can be unaware of program; doesn't encourage return shoppers (no loyalty for grocer); removes ability to accrue and save incentives for future use.

Vouchers

These are pre-printed coupons with a set value and function. Vouchers are comparable to the use of tokens in farmers markets. This is an alternative option for low-tech firms which have POS units with very limited capabilities.

- **Pros:** Often is easy and quick to implement; easy to understand for customers familiar with market tokens; encourages return shopping trips; potential interoperability between sites.
- **Cons:** Hard to track; easy for customers to lose; requires cashiers to be responsible for determining correct incentive amounts; reconciling can be time consuming.

Challenges to NI Project Implementation

POS systems vary in functionality and capability to process incentives. A fundamental capability that is *missing* in grocery POS systems is the ability to provide a discount or promotion on a product based on the payment type a customer is using. Below are some common challenges you may encounter.

Recognizing SNAP Tender

It's not always possible for POS systems to automatically recognize SNAP tender during a transaction. Two handy work arounds are either creating a specific PLU code (a register identification number) that cashiers key in, or a scannable barcoded sticker to adhere to an EBT card, which the cashier scans during a transaction.

Limiting Earning to Qualifying Produce

Items that are classified as produce vary by retailer (e.g., deli salads sometimes ring up as produce). Therefore, the POS system needs a way to identify items that qualify for incentive earning. Most POS systems can flag items or create qualifying department lists. This will require the retailer to make changes to the items database and may require the assistance of the POS technician to implement.

Limiting Redemption to Qualifying Produce

Redeeming qualifying items is often trickier than earning. In the case of coupons, the system may automatically apply the discount to the entire order, so the cashier will need to ring up qualifying produce separately from the rest of the purchase. Some POS software can be programmed to subtotal qualifying items, indicating the total dollar amount of eligible products before payment is processed and/or on the receipt. This automatic subtotal can be helpful for the cashiers and increase checkout speed. Explore this with the POS support contact.

Differentiating Earning from Redeeming

When qualifying items differ between earning and redeeming, two categories will need to be created for each function. For example, many programs earn on all produce and redeem on local produce only.

POS Requirements Document

As you work with a retailer and their POS support, an important reference is the [Nutrition Incentives Retailer POS Requirements](#) document. This document was developed by 23 NI project operators from across the country as guidance for POS system providers to use in incentive solution development. Many POS-related companies have approved the document and have begun incorporating functionality and parameters from the document into new

solutions. Please be sure to consider sharing this free document with POS providers and retailers. It is also important to encourage use of the document as part of NI projects.

Planning a Retail-based NI Project

You will need to connect with key retail contacts to discuss details of program implementation and to decide which incentive mechanism will work best at that retail outlet. Do your research ahead of time to be prepared to talk through possible challenges before they arise and to help move through this process more smoothly and quickly.

Who is involved?

Find out who needs to be part of the conversation and gather updated contact information. Generally, the following individuals should be part of the POS discussion:

- Store Manager(s)
- IT Contact or Instore POS Coordinator
- POS Provider or Dealer
- Anyone else the store manager suggests – this could be the Produce Manager, the Cashier Manager, etc.

Considerations

Ensure reporting requirements are met.

Reporting on NI project performance is mandatory for GusNIP projects. While POS systems have improved on many overall reporting capabilities, you will need to work with your retailer and their POS provider to make sure data required for GusNIP reporting will be available. In some POS systems (i.e., NCR ENCOR/S4), one-click reporting may be available to the retailer to produce a single report containing all the information needed for basic GusNIP reporting. Regardless, the retailer should know how to generate required reports (or is trained by the POS vendor) and a specific person is designated to pull this report every reporting period (this could be the store manager, cashier manager, in-store POS coordinator, or in some cases the POS vendor).

Prepare information and send documents ahead of time.

Ensure you have all ducks in a row ahead of time to be able to share resources most effectively with grocers. Send reminders to ensure all stakeholders have reviewed pertinent information, such as program rules and reporting requirements.

Gather POS system specs in advance.

As you become more familiar with POS system capabilities, knowing POS details ahead of time will give you an idea of the possible solutions available for the retailer.

Anticipate upgrade costs.

Sometimes operating incentives means updating POS software. Discuss with the retailer how much they are willing invest, the long-term benefits of investment, and if available, cost sharing options.

Develop a plan and mechanism which works best for the store.

Sometimes system upgrades and time investments are not feasible for the retailer. Be solution-oriented and willing to compromise.

Consider a “soft-launch” approach.

Work out bugs and give the store employees time to get used to new procedures by allowing the retailer to operate the program for a couple weeks before publicly promoting the program.

Be flexible with your timeline.

Sometimes unforeseen technical snafus can delay a firm’s readiness for launch.

***To hear some of today’s leading solution providers discuss their own platforms’ interactions with nutrition incentives, [click here](#).**

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