

The Foodservice GS1 US Standards Initiative: What Food Distributors Should Know

When the average American diner sits down to a birthday meal at an expensive restaurant; when schoolchildren pile lunch trays with their favorite sides; when farmers slice open another bag of feed; and when shoppers squeeze the avocados at the neighborhood grocery store, none of them think much about barcodes.

Maybe they should. The humble barcode is what logistics experts call a *data carrier*. It allows manufacturers, shippers, and regulators to track food products on their journey from origin to consumer.

A data carrier can share crucial product information on food shipments when and where supply chain operators need it. The data concealed within a barcode or RFID chip (another form of data carrier) can prevent spoilage, preserve freshness, and enhance food safety all over the world.

But in order to function in a global supply chain, data carriers must be perfectly standardized to communicate across a wide range of languages and computer systems. The work of achieving that standardization falls to a behind-the-scenes institution called the Foodservice GS1 US Standards Initiative.

And your company might be just what the Initiative needs to complete their work.

What is the Foodservice GS1 US Standards Initiative?

You can't understand this institution or its goals without knowing a thing or two about GS1, the parent organization to the Foodservice Initiative. GS1 US is a not-for-profit organization with a stated mission to create, support, and implement information standards, largely through the use of data carriers like barcodes.

(While GS1 US is a registered not-for-profit, they do charge fees to obtain a Company Prefix based on the number of unique products you handle in your business.)

So far, GS1 US' greatest success story is probably the Universal Product Code, better known as a UPC barcode. Since [the first barcoded commercial product](#) — a 10-pack of chewing gum — was scanned in an Ohio grocer in 1974, GS1 US has ensured standardization and functionality for the identification codes and data carriers that we use all across the economy.



The UPC contains the kernel of everything the Foodservice GS1 US Standards Initiative is trying to do. It standardizes data and a shorthand language for that data across all stakeholders in the supply chain. Then it packs that information into a standard data carrier, the barcode.

The Initiative attempts to accomplish similar goals for the food supply chain. Its tools are different, but the aims are similar. In addition to UPC barcodes, which are designated point-of-sale data carriers, the Foodservice GS1 US Standards Initiative recognizes a handful of barcode symbologies:

- For pallet-loads of consumables, either fixed-weight or variable-weight, GS1 US recommends using a **Serialized Shipping Container Code (SSCC)** in conjunction with the wider **GS1-128 barcode**.
- Moving down to the case level, GS1 US prefers **GS1-128 barcodes**.
- For fixed-weight-only cases, the Initiative uses **ITF-14 barcodes**.
- Fixed-weight consumer items may use **UPC-A, UPC-E, EAN-8, or EAN-13 barcodes**.
- At the level of the consumer item, such as a single package of food sold in a grocery store, GS1 US suggests using the **UPC-Type 2 barcode**.

So what do all these codes and digits mean? In order to understand that, we need to start with the GS1 US identification numbers — the data stored within the data carrier of these different types of barcodes.

Foodservice GS1 US Standards Identification Numbers

Each barcode type contains different individual pieces of data. Here are the key data points coded into each GS1 US data carrier in the foodservice supply chain:

- The **company prefix** is a unique number GS1 assigns to your business. It appears on all your products' barcodes, telling every stakeholder along the supply chain the origin of the items you ship.
- A **Global Trade Item Number (GTIN)** identifies individual products within your trade operation. GS1 US defines a "trade item" as "any item (product or service) upon which there is a need to retrieve pre-defined information and that may be priced, or ordered, or invoiced at any point in the supply chain."
- **Global Location Numbers (GLNs)** assist with tracking shipments throughout the supply chain. These codes identify particular locations, whether that's at one company's distribution center, a manufacturer's shipping yard, or even a particular loading dock within a broader operation.
- **Serial Shipping Container Codes (SSCCs)** are necessary for one of the great innovations made possible by GS1's work: Advance Ship Notice (ASN). Advance Ship Notice systems share necessary information on incoming shipments to receivers before the actual physical items arrive, allowing them to plan for appropriate cross-docking, putaway, or other flowthrough strategies. The SSCC is the carrier of this information for commonly used ASN systems.

- Finally, food shipments often contain any of several **Application Identifiers (AI)**. These contain crucial data on food safety and quality. For instance, AI 11 encodes the food product's production date; AI 13 covers the packaging date; and AI 15 provides the item's best-before date.

By encoding all this information into easily shareable, standardized data carriers, GS1 barcode systems allow shippers to improve efficiency across the supply chain, while also ensuring higher rates of optimal quality and safety in global food products.

Why Join the Foodservice GS1 US Standards Initiative?

So far, we've covered the basics of GS1's data carrier technology, and glossed over the advantages of this global system. The question remains: What do companies that join the Initiative actually do, and how can participating help create a safer, more efficient food system more generally?

The Initiative is made up of frontline foodservice stakeholders. Manufacturers, distributors, end-sellers, and industry groups all collaborate to determine the best ways to standardize data sharing across the supply chain. Since the collective's establishment in 2009, more than 130 industry players have joined.

As a contributing member of the Foodservice GS1 US Standards Initiative, participants can provide crucial perspective on adoption of data-sharing systems in the global food supply chain. The Initiative divides itself into a handful of workgroups, assigned to specific problems of implementation and standardization of data sharing. A few examples include:

- **The Supply Chain Visibility Workgroup** - Members of this group make suggestions on the best ways to make food shipments more traceable. This is the group that studies Advanced Ship Notices within the foodservice supply chain.
- **The GDSN Implementation Workgroup** - This suborganization studies the intersections between food product shipments and the Global Data Synchronization Network (GDSN), a collaborative data system designed to universally reflect changes in master shipping data. In other words, GDSN allows a receiver to check in a shipment, and have that change in status reflected across the whole supply chain, similar to collaborative work in a cloud-based application.
- **The Cross-Industry Blockchain Discussion Workgroup** - This group looks at a technology that could represent the future of collaborative data sharing in many supply chains, including those dedicated to food products. [Blockchain technology](#) offers the opportunity to synchronize data changes within a distributed ledger on a peer-to-peer basis; members of the Blockchain Workgroup look into how that could serve foodservice stakeholders.

In addition to the contribution of valuable experience, letting your company's voice be heard, participation in the Foodservice GS1 US Standards Initiative may provide side benefits to businesses in foodservice industries. One participant supplied the Initiative with a [representative quote](#):

We were able to obtain a new, very large customer account because we were participating in the GDSN and were able to supply them with all the data they wanted.

The key advantage of joining the Foodservice GS1 US Standards Initiative is to have a hand in building the future of data sharing in the global supply chain within your industry. But if that's not enough, participation also offers unprecedented networking and note-trading with peers in the industry.

The rules and recommendations that come out of the Initiative can also influence federal and state regulators, giving market participants a voice in laws about food safety and tracking food shipments.

To learn more about the Foodservice GS1 US Standards Initiative, visit their website, [here](#). To apply as a participant, opening up membership in particular working groups, fill out [this form](#). Note that charges may apply; it is unclear from the outside, but the Initiative may require members to be GS1 US customers.

Pricing information for GS1 US barcodes is [available here](#).

References:

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