



The Global Language of Business

1974-2019

Happy Birthday, Barcode!

Celebrating 45 Years of the Barcode Scan



GS1 US Frequently Asked Questions

Q. Why are standards important?

Standards are agreements that structure any activity or any industry. They may be rules or guidelines that everyone applies. They may be a way of measuring, or describing, or classifying products or services. One of the easiest ways to understand the usefulness of standards is to think about what happens when there aren't standards. Take shoe sizes, for instance. A size 7 woman's shoe in New York City is a size 38 in Shanghai, a size 4.5 in London, a size 37.5 in Paris, a size 23 in Tokyo and a size 5.5 in Sydney. That's inconvenient and troublesome for an international traveler who may want to shop. And it's very inconvenient and troublesome for companies that make shoes. Because there aren't any global standards for shoe sizes, companies have to mark the same shoes differently for different countries. They have to specify the right size reference on all the purchase orders and invoices and delivery slips for each country. And because it takes more time to pay attention to all those region-by-region specificities, it costs more money - costs which shoe companies must pass on to consumers in the form of higher prices for shoes. And shoes are only a very simple example!

Think about the various electrical adapters you have to carry when you travel internationally. There's one for the United States, one for Europe, another for the United Kingdom, and others for Asia. Think about how complex non-standardized business processes would be for global companies that manufacture products from a large number of components that come from many different places. Think as well about how the rising costs of energy and the increase of international trade combine to generate costs. It is for these sorts of reasons that so much attention is being focused on finding ways to make the logistics of the international supply chain more efficient. This is why standards play such an important role, for businesses and for consumers alike. Standards are the foundation for clear, understandable exchanges between companies in an increasingly globalized economy. This helps keep costs down for everyone.

The best-known GS1 Standard is the Global Trade Item Number (GTIN) and Universal Product Code (UPC) barcode. Its familiar beep is heard at least 6 billion times a day all over the planet. Scanners read barcodes on all sorts of goods produced by millions of companies of all sizes, quickly and accurately capturing data at every point in the supply chain. The information is transmitted to thousands of computers of different kinds, using numerous software programs designed by competing companies in order to manage shipments, storage, ordering, and sales. The result is that the GS1 barcode

enables businesses to maximize profitability by managing the supply chain more efficiently, which is a must in today's globalized economy. Consumers benefit because barcodes help keep store shelves stocked and speed up time at the checkout counter.

Q. What is GS1?

GS1 is an international, neutral, non-profit organization based in Brussels, Belgium. GS1 US is located in Lawrenceville, NJ. It is dedicated to developing and implementing a system of standards and solutions to improve the efficiency and visibility of supply and demand chains globally and across multiple sectors. The GS1 System of Standards is the most widely used system of supply-chain standards in the world.

Q. How many companies use the GS1 System of Standards?

The GS1 System of Standards is used by 2 million companies in more than 20 industries worldwide.

Q: What does the GS1 System of Standards do?

The GS1 System of Standards provides a way to accurately identify, capture, and share information about products, assets, services, and locations. The standards include numbers for the identification of objects, standards for data carriers (barcodes, RFID tags), and standards for exchanging electronic messages between trading partners.

Q: What standards make up the GS1 System of Standards?

GS1 Standards may be divided into the following groups:

- Standards that provide the means to identify real-world entities: GS1 identification standards include 10 GS1 Identification Keys that are globally unique and designed to unambiguously identify companies and locations, trade items, logistic units, shipments, consignments, assets, returnable assets, documents, coupons, and people involved in a service relation, e.g. a patient, caregiver, or consumer.
- Standards that provide the means to automatically capture data that is carried directly on physical objects, bridging the world of physical things and the world of electronic information: GS1 data capture standards currently include definitions of barcode and radio-frequency identification (RFID) data carriers, which allow GS1 Identification Keys and supplementary data to be affixed directly to a physical object.
- Standards that provide the means to share information between trading partners: GS1 standards for information sharing include data standards for master data, business transaction data, and physical event data, as well as communication standards for sharing this data between applications and trading partners.

Q: What benefit does a company get from using the GS1 System of Standards?

GS1 Standards can result in significant improvements in logistics operations, a reduction in paperwork costs, shorter order and delivery lead times, increased accuracy, and better management of the entire supply chain, from producer to consumer. Significant cost savings are realized daily by companies using GS1 Standards because they apply one solution to communicate with all of their trading partners. GS1 Standards also reduce medical errors, contribute to combatting counterfeiting, and help ensure food safety.

Q. How did the GS1 System of Standards become the world's most widely used system of supply chain standards and solutions?

GS1 traces its origins to a historic decision in the United States on April 3, 1973 by an Ad Hoc Committee for a Uniform Grocery Product Identification Code appointed by the heads of 10 companies (five retailers/wholesalers and five manufacturers), to select the linear barcode as the Universal Product Code (UPC) symbology. In September of 1974, the Uniform Product Code Council (UPCC) was appointed as the administrator coding system. Three years later, the European Article Numbering Association (EAN) was chartered in Brussels, Belgium by leading organizations from 12 European countries and developed a barcode fully compatible with the UPC. In November 1984, The UPCC became the Uniform Code Council, Inc. (UCC). The UCC and EAN grew well beyond the grocery industry and expanded into many market segments. During this time the use of the barcode also greatly expanded and was adopted for use in coupons, logistics, medicine, and many other areas. In 2005, EAN changed its name to GS1. On June 7 of that year, the UCC merged with GS1, became part of the large GS1 family, and changed its name to GS1 US. The GS1 System of Standards is now used by 2 million companies across 20-plus industries worldwide.

Q. How is the GS1 global system structured?

GS1 is globally governed by the GS1 General Assembly, which includes representatives from all GS1 Member Organizations. The GS1 Management Board provides global strategic direction and is made up of key leaders from User Companies and Member Organizations.

Q. Is the GS1 barcode the best-known of the GS1 Standards? If so, why?

Among consumers, the barcode is the best-known standard. The barcode was the first standard and therefore has been around the longest. It's also on products consumers buy each and every day. In fact, the familiar beep of the barcode is heard 6 billion times around the world every day.

Q. What is a barcode?

A barcode is a machine-readable representation of information in a visual format on a surface. Barcodes can be read by optical scanners called barcode readers or scanned from an image by special software. Barcodes are widely used to implement Automatic Identification and Data Capture (AIDC) systems that improve the speed and accuracy of computer data entry.

Q. Are all barcodes the same?

No. Different types of barcodes fit the needs of different applications. For example, check out systems in retail stores use EAN/UPC barcodes that represent the identification of the item, while logistic applications often use GS1-128, a barcode designed to encode the item ID and additional information such as a lot number or a "best before" date. Barcodes used by GS1 include EAN/UPC, GS1 DataBar, GS1-128, ITF-14, GS1 DataMatrix, GS1 QR Code, and Composite Barcode.

Q. What is the benefit of using the GS1 barcode?

GS1 barcodes benefit all parties in the trading cycle by reducing costs, saving time, and increasing accuracy and efficiency through management of the entire supply chain. GS1 endorsed barcodes allow the globally recognized GS1 Identification Keys to be used on things such as trade items, locations, logistic units, and assets. The more advanced barcodes, like GS1-128, GS1 DataBar, GS QR Code, and GS1 DataMatrix, allow attribute information such as Batch Numbers and Expiration Dates.

Q. What does the future hold for GS1?

The "digital consumer" has caused traditional business models to be overturned. GS1 plans to respond to the changes in consumer habits and business practices with the same type of visionary leadership that inspired the organization to develop the most widely used supply chain standards in the world today. GS1 plans to increase the value of its System of Standards so that users are ready to meet the new challenges. GS1 US continues to facilitate important industry collaboration with brands and retailers to explore future barcode uses with a focus on empowering consumers with detailed product information such as ingredients, expiration dates, discount offers, and shopper reviews – both in store and online. For example, web-enabled barcodes will soon connect the shopper to enhanced, up-to-date online product content ranging from ingredients and expiration dates to discount offers, shopper reviews and warranty information.