What is GS1?

Australia: Size 5.5

Europe: Size 37.5

UK: Size 4.5

USA: Size 7

China: Size 38

Japan: Size 23

What are standards? 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 think about **what happens when there aren't standards.** Take shoe sizes, for instance. A size 7 woman's shoe in New York 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 traveller 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 how complex non-standardised 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. And 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 globalised economy. This helps keep costs down for everyone.**

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For the last 30 years, we at GS1 have dedicated ourselves to the design and implementation of global standards for use in the supply chain. GS1 standards provide a framework that allows products, services, and information about them to move efficiently and securely for the benefit of businesses and the improvement of people's lives, everyday, everywhere. Our standards ensure effective exchanges between companies, and act as basic guidelines that facilitate interoperability and provide structure to many industries.

GS1 standards bring together companies representing all parts of the supply chain – manufacturers, distributors, retailers, hospitals, transporters, customs organisations, software developers, local and international regulatory authorities, and more. GS1 standards are used by huge multinational chains and by small corner shops; by world-famous brands and by individual craftsmen.

These companies, who may in fact have diverging business interests, work together under our leadership to agree upon standards that make the supply chain faster, more efficient, less complex and less costly.

Without a neutral, not-for-profit and global organisation like GS1, such very diverse companies would probably not be able to agree on standards. We make it happen, and consumers and businesses benefit. GS1 has offices in 108 countries and more than 2,000 people helping us achieve our vision. Our work is funded by the contributions of our users.

Originally created by manufacturers and retailers to improve the efficiency of the distribution of food and consumer goods to supermarkets, GS1 standards today are used by millions of companies in dozens of sectors including healthcare, transportation and logistics, aeronautics, defence, chemicals, high tech, and still, of course, the retail supply chain.

The bar code. A tiny, discreet tool that changed the world.

Every day, at least 5 billion bar codes are read all over the planet.

From Altanta to Zagreb, from Auckland to Zurich, scanners read bar codes on all sorts of goods produced by millions of companies of all sizes. They transmit them to thousands of computers of different kinds, using numerous software programs designed by competing companies in order to manage shipments, storage, ordering, sales.

GS1 BarCodes are certainly the most well-known and universally recognizable part of the GS1 system of standards. Ever since they were invented over thirty years ago, GS1 has been building and managing bar code standards that enable businesses and organisations around the world to automatically identify products, pallets and places.

GS1 BarCodes enable businesses to manage the supply chain more efficiently.

And in today's global economy, an efficient supply chain is a must. As more businesses adopt global sourcing strategies, the management of supply chains has become more difficult – while at the same time even more important to a company's success.

Insufficient or inaccurate data travelling along the supply can damage brands if things go wrong. Improving data quality can result in an immediate benefit to profits.

GS1 standards, such as bar codes, enable businesses to respond to the challenges of a globalised supply chain by increasing their efficiency and maximizing profitability.

For thirty years, GS1 standards have been used to create a better experience for consumers in supermarkets and shops around the world. And we don't intend to stop any time soon.

Some of the next services on the horizon will come from a new barcode. Today the familiar old GS1 BarCode comes in a new version called GS1 DataBar.

GS1 DataBar is smaller than its predecessor, and yet it can contain more information. As a result, it can be placed on very small items, like individual pieces of fruit. And it can hold lots of information details, like "best-before" dates. And it can be used to make discount coupons, because it can hold all the information needed to process those coupons at the cash register.
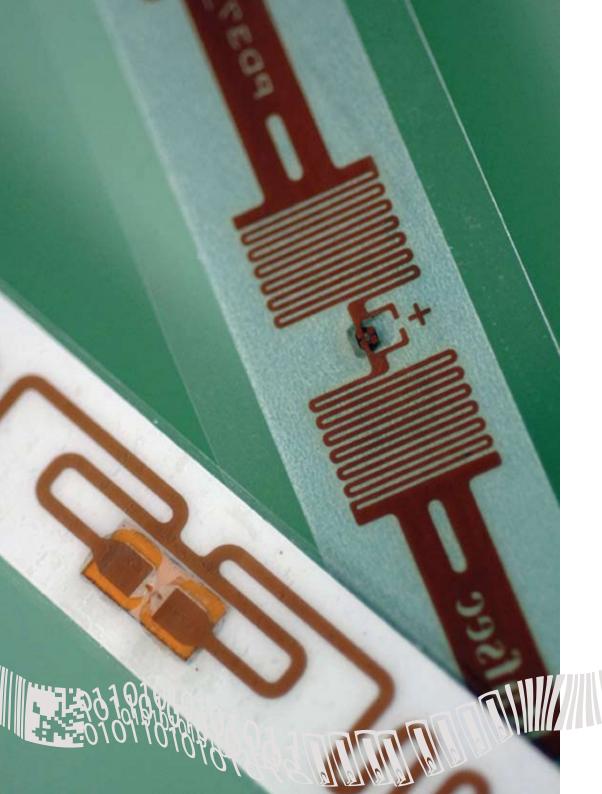
These are all things that a Bar Code of the previous generation cannot do.

So someday soon, there will be new services for you at the supermarket. New services that are all possible thanks to GS1 standards encoded onto a new GS1 DataBar.

For example, thanks to GS1 DataBar, you will spend less time at the checkout, because the store employee won't have to look up the code for the kiwis you are buying, or stop to read the details and the expiration date on a coupon you hand to her. Thanks to GS1 DataBar, you can be sure that all of the chicken in the display case is fresh and ready for your family to eat.

These are just some of the ways that GS1 standards can support the creation of new services and contribute to a better experience for shoppers.

RFID, or Radio Frequency Identification, is a technology using tags that are found in many places today, from passports to ID badges to beepers opening access to the "fast lane" at toll booths on bridges or the highway.

These RFID tags contain silicon chips and antennas, and they can hold a lot of data, which can be "read" without needing to pass a scanner directly over the tags. This is a very technical and complex process. Using RFID means properly managing all the elements involved: the tags and their very small components, handheld readers, gate-sized readers, software, the precise frequencies in which the tags will transmit... even the proper kinds of paper and glue used to make the stickers with RFID tags in them.

All over the world, companies are getting ready to benefit from the revolutionary improvements brought to the supply chain and the consumer by this technology. RFID can help manage shipments, inventories and assets, reduce counterfeiting and medical errors, fight theft, and numerous other applications. But because RFID is so complex and multi-faceted, standards are vitally important.

That's where we come in. **GS1's EPCglobal® standards put RFID technology to work for businesses and for people.**

When the GS1 standards encoded onto RFID tags are read, warehouse workers and store employees can know not only what an item is, but also where it is now and where it has been before. This results in more effective and streamlined processes in a number of different sectors.

GS1 EPCglobal, a subsidiary of GS1, is devoted to leading the development of the RFID technology by defining and supporting implementation of the standards that makes RFID operational across geographies, boundaries and sectors. It also ensures that its members adhere to strict privacy guidelines so that consumers' rights are respected.

The medical sector is an extremely complex environment in which people, drugs and medical devices need to be permanently traced to ensure that the right drug is administrated to the right patient at the right time in the right dosage.

But doctors and nurses are only human, and unfortunately that means that errors are made on a daily basis in hospitals around the world. Tired from long hours, often forced to do more than their share due to understaffing, sometimes the wrong dose is given to a patient. Or the wrong medicine. Or the right dose of the right medicine... but the wrong patient.

Every day, hundreds of people die because of medication errors like these. Most of those mistakes could be easily prevented and the medical sector is working toward that end.

And GS1 is helping.

The GS1 Healthcare group brings together hospitals, pharmaceutical companies, medical device manufacturers, transporters, and more. These companies, many of whom are competitors, work together under our leadership to develop standards that will increase patient safety and improve patient care through reduced medication errors and improved product traceability.

Combatting counterfeiting

Counterfeit handbags and watches are a problem. Counterfeit prescription drugs are a serious problem.
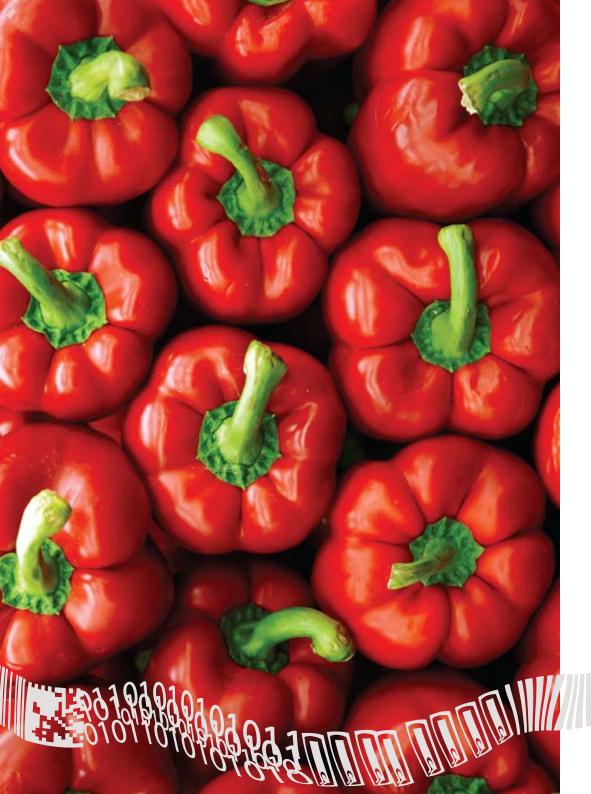
In hundreds of places around the world, makeshift laboratories are using sugar or wax or worse to produce counterfeit pills that look exactly like real ones. Counterfeiting has become so sophisticated that in some cases, even the companies whose own products have been duplicated can't differentiate between real and fake without performing chemical tests.

Despite the best efforts of the medical sector, those useless or even dangerous pills reach the markets.

Luckily, work has begun on establishing an early warning system for counterfeit medical products so they never get anywhere near a person who needs the real thing.

GS1 standards are already playing a key role in the fight against counterfeiting. The GS1 EPCglobal Electronic Pedigree Messaging Standard for the pharmaceutical industry is just one example of several projects underway.

And of course, our work on preventing counterfeit pharmaceutical products puts us in an excellent position to assist other industries whose products are also frequently counterfeited, such as cosmetics, electronics and automobile parts.

Where does the food your family eats come from? How did it get to your supermarket? What route did it take to get there? The label says "organic", but is it really? Does it contain anything your daughter is allergic to? Is it grown and harvested in an eco-friendly, sustainable way?

The ability to answer these questions lies in traceability applications and systems.

In order to work, traceability systems need to know everything that happens, at every step of the way, from the farm to your kitchen table. But with the increase in extended and highly global supply chains and the growing use of contract manufacturing, tracing food products from end of end has become more difficult.

GS1 standards make traceability systems possible, on a global scale – no matter how many companies are involved or how many borders are crossed as food and food ingredients travel from one end of the supply chain all the way to the consumer.

Traceability is especially important if something goes wrong and food products must be recalled. Recent legislation in the European Union obliges manufacturers to inform authorities and consumers of any potential risk to consumers from their products. Many other countries are reviewing their own legislation on this same theme. Individual growers, producers and manufacturers, eager to protect their brands from the harm done by tainted materials or poorly-managed recalls, are boosting their own internal recall policies and methodologies.

GS1 standards can play a vital role in product recalls. Because they are global, reaching from one end of the supply chain to the other, they ensure immediate access to accurate product information, which enables swift, comprehensive recalls.

But perhaps more importantly, our standards also facilitate quality assurance and accurate inventory control. And that contributes to making recalls as unnecessary and as infrequent as possible.

Business is global now. That means you, and your suppliers, and your logistics firm, and your accounting department, and everyone else involved in your business deals, need to be able to communicate efficiently with your clients in China. And the ones in France, Brazil, India and South Korea, too.
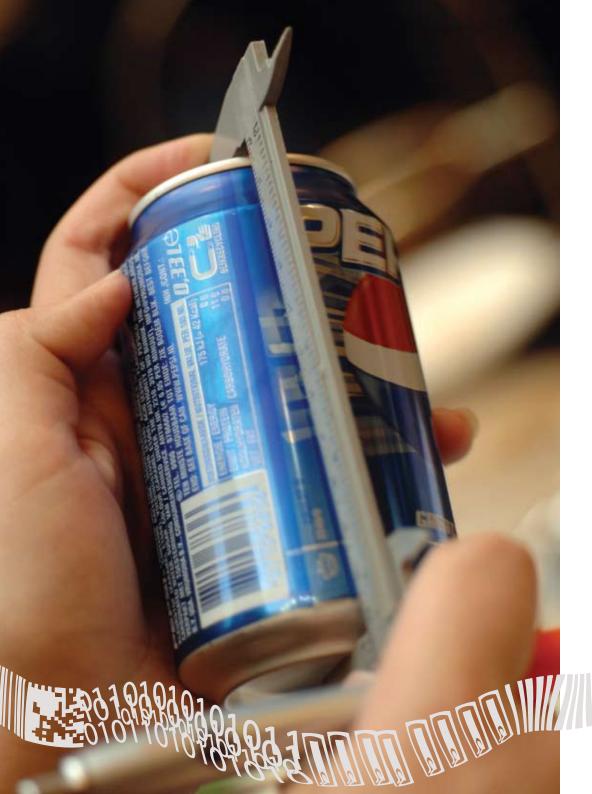
No matter what languages you can speak, you'll also need a way of swiftly and smoothly sharing business information across the entire supply chain.

And why not do it without quite so many piles and piles of paper! Offices today can be buried in paper. Purchase orders. Despatch orders. Shipping manifests. Delivery slips. Receipts. Invoices. Payment statements. Paper to verify. Paper to type into the computer system. Paper to file away. And every piece of it a waste of time, effort, money and CO_2.

Luckily, GS1 can provide a better way.

GS1 eCom standards provide clear guidelines for creating electronic versions of all these sorts of business documents. Our standards enable trading partners to smoothly exchange information electronically. No matter what their internal hardware or software systems. No matter what language they speak at home.

With such standards, partners in a supply chain can work together to respond more rapidly to consumers' demands. Fewer mistakes are made from poor keying or bad handwriting. Not quite so much paper is wasted. And no one has to master a dozen foreign languages to succeed internationally.

Every company in the world has databases filled with information about the products they make, sell, or buy. These databases act very much like catalogues that customers can use to place orders and manage their supply chain. Difficulties happen when one company needs to change any of the information in their database or add a new item to it: suddenly their "catalogue" isn't up to date anymore and the information is no longer reliable.

This has become even more important in recent years: errors in invoices and inefficiencies in a globalised supply chain reduce business profitability and effectiveness.

The GS1 Global Data Synchronisation Network or GDSN® enables companies who do business with each other to always have the same information in their systems. Any changes made by one company are automatically and immediately available to all of the other companies who do business with them.

Accurate, detailed and up-to-date product information helps both companies and consumers. Brand owners can get new products out to the market faster and more smoothly. Retailers have less administrative work and fewer mistakes in orders and shipments. And supermarket shoppers will be able to buy the products they want, instead of seeing an empty shelf.

GS1's Global Data Synchronisation Network enables supply chain partners to continuously synchronise information improving efficiency in their supply chains, and provide better service to the consumer.

Working with GS1

To succeed at projects like the ones described in these pages, hundreds of stakeholders around the world need to come together. That's why there is an organisation like GS1.

At GS1, our vision is a world where things, and information about them move efficiently and securely for the benefit of businesses and improvement of peoples' lives, everyday, everywhere.

Our mission is to be the neutral leader enabling communities to develop and implement global standards providing the tools, trust and confidence needed to achieve our vision.

GS1 offers a full range of services and solutions, all built upon the foundation of the GS1 System of standards and its GS1 Identification Keys.

Our four key product areas are

GS1 also has a full range of **solutions** that combine a selection of GS1 standards into a package that provides true business-focused relevance on topics such as traceability.

If your company needs a barcode number, or wants to set up a traceability program, or is wondering about the potential of RFID, or wishes to begin exchanging electronic invoices with a partner, or is interested in any of the many other solutions and services made possible by GS1 standards, then simply contact your local GS1 Member Organisation.

We're present in 108 countries around the globe. Find the GS1 Member Organisation in *your* country on our website at www.gs1.org/contact