GS1 Japan

The Global Language of Business

Rurikouin temple (in Kyoto)

GS1 Japan Handbook

2024-2025

Message from the President

GS1 Japan was established in 1972 as a specialist organisation for the purpose of streamlining distribution systems, and in 1978, it became the first organisation outside of Europe to join the EAN Association. We believe that this breakthrough contributed to the global growth and development of GS1 today, which now has 118 member countries.

Since then, the foundation has been promoting the systemisation and efficiency improvement of supply chains through the proliferation of GTIN/barcodes, which was triggered by the introduction of POS systems, and the proliferation of various GS1 standards. Currently, the total number of GS1 Company Prefixes (GCPs) in Japan exceeds 140,000.

This year will be a memorable year as it will mark 50 years since the first commercial use of GS1 barcodes worldwide. Over the past half-century, barcodes have expanded geographically as the number of GS1 member countries has increased, and their use has expanded not only in retail settings but also in the medical field and e-commerce. During this time, the barcode has changed the world of business and everyday life for the better, making it one of the greatest innovations of the 20th century. GS1 aims to continue to make the world a better place in the next half-century through the provision of reliable, common product information and the use of two-dimensional symbols (i.e., QR codes). GS1 Japan also aims to contribute to the realisation of an even more efficient, effective, safe and secure society through the power of standards.

In today's Japan, digital transformation (DX) has become an imperative in order to tackle issues such as labour shortages, increasing prices and costs, and sustainability and traceability. GS1 standards, which are a 'common language of business' that links the real and digital worlds, will play a critical role in this environment. GS1 Japan continues to actively strive towards the further enhancement of efficiency and visibility of logistics and supply chains, as well as the improvement of the safety and security of medical care. As a foundation for this initiative, GS1 Japan is making solid progress towards establishing and further streamlining the GS1 Business Code Registration and Renewal System, developing databases for the provision of reliable, common product information, and promoting the use of distribution EDI standards. This handbook contains introductions to these initiatives.

As the GS1 Federation, we shall continue to uphold our slogan – 'let's see one vision, speak with one voice, and act as one organisation!'

豊永厚志

TOYONAGA Atsushi

President

GS1 Japan

Table of Contents

1 Sectors (Case Studies)

1.1 Retail and CPG

1.1.1 Dynamic pricing implemented using GS1 DataMatrix

-First pilot test of 2D at POS in Japan-

In February 2023, a pilot test was conducted in Japan to implement efficient dynamic pricing. The test was the first ever performed in Japan to scan GS1 2D symbols (GS1 DataMatrix) at POS cash registers.

1.1.1.1 Pilot test overview

The pilot test was conducted as part of the 'FY 2022 Infrastructure development project for improving efficiency of and creating added value in distribution and logistics (to create case studies on improving supply chain efficiency and reducing food loss using IoT technologies)', which was commissioned by the Ministry of Economy, Trade and Industry.

The purpose of the pilot test was to verify the effect that inventory management using products' expiration date and dynamic pricing have on supply chain efficiency improvement and food loss reduction.

Pilot venue: Maizuru Carrot Hamatama Store (Karatsu City, Saga Prefecture)

Pilot dates: 24 January to 26 February 2023 (34 days in total)

Target product: Bread 25 SKU

Companies participating in pilot: Imamura Corporation, SATO Holdings Corporation, Nishinihon Ishida Co., Ltd., Maizuru Department Store Co., Ltd., The Japan Research Institute, Limited

Photo 1.1.1.1-1 Maizuru Carrot Hamatama Store

1.1.1.2 Expected benefits in this pilot test

More efficient retail operations, solving labour shortages

Automatic price discounting of products was implemented by using a dynamic pricing system and electronic shelf labels. Verified what degree it was possible to reduce the large workload involved in replacing price tags and attaching discount labels.

Reduction of food loss and increasing sales

The achievement of food loss reduction has so far operated manually, detailed discounting operations. It was verified whether automatic discounting could keep the food loss rate as low as it had been in the past. It was also investigated whether the implementation of detailed price discounting in accordance with consumer behaviour had the effect of increasing sales.

More advanced production estimates at food manufacturers

Verified whether a higher level of production forecasting could be implemented by utilising sales data by exiration dates and discount rate.

1.1.1.3 How dynamic pricing is implemented

1.1.1.3.1 GS1 DataMatrix labels and group labels are placed on products.

- Once the products that are the subjects of the pilot test have been delivered in the store, GS1 DataMatrix label and **group**(*1) label are attached on the products.

Photo 1.1.1.3.1-1 GS1 DataMatrix label and group label on the products
(A target bread product has a group label on its package front and a GS1 Data Matrix label on its package back.)

(*1) **group**: 'group' indicates which products have the same expiration date.

Photo 1.1.1.3.1-2 GS1 Data Matrix with the GTIN and the expiration dates

1.1.1.3.2 The system(*2) automatically reduces prices

- The prices of the products are set by the POS system based on their expiration dates.
- The price of each group of products is displayed on the electronic shelf label.
- And the shelf label is changed automatically in accordance with the POS system at pre-determined times (before store opening, and at 1 p.m. and 4 p.m.).
- At the POS cash registers, the price of each group of products is also changed automatically at pre-determined times.

Photo 1.1.1.3.2-1 The prices are changed automatically at 1 p.m.

(*2) The pilot test used the Sato Dynamic Pricing Solution (SDPS).

1.1.1.3.3 Products are selected

- Consumers choose products according to their own needs. (e.g., a discounted product with a short expiration date if it is to be eaten soon, or a regular-priced product with a long expiration date if it is to be eaten at a later date).
- This allows precise price changes that are not possible with traditional price reduction labels, and is advantageous for both the store and the consumer.

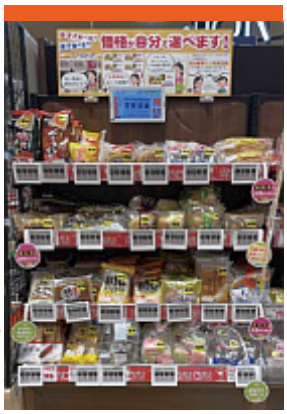


Photo 1.1.1.3.3-1 Products with the electronic shelf labels

1.1.1.3.4 Payment made at a POS cash register

- GS1 DataMatrix labels are scanned at a cash register as well as EAN symbols.
- The prices of products with GS1 DataMatrix labels are automatically calculated based on their expiration dates.

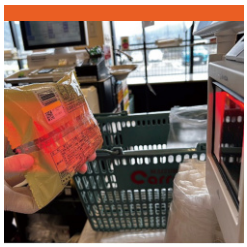


Photo 1.1.1.3.4-1 GS1 DataMatrix compatible POS cash register

1.1.1.4 Result of this pilot

■ Reading GS1 DataMatrix at POS cash register and cashier handling

Since this was the first time in Japan that a POS cash register could read the GS1 DataMatrix, the POS system needed to be modified before this pilot test. It was challenging for the system, which had previously identified products only by GTIN, to identify products by GTIN + expiration date and change prices according to this information.

Fortunately, however, the POS cash register scanners were capable of reading 2D symbols, so there was no need to replace the scanners. Smooth reading was achieved by modifying the scanner system based on the GS1 element string syntax.

Immediately after the start of the pilot, the cashier staffs seemed to have some difficulty with the readable distance and angle of view to read 2D symbols, but they got used to it quickly, and neither took longer to read nor was more difficult to read than the EAN symbol.

■ Improved operational efficiency and reduced labour costs

- Pilot Test Result

  A total of 1,682 products were sold at a discounted price during the pilot period. The average number of discounts for these 1,682 items was 1.375 times. If the traditional discounting process is calculated as 10 seconds per discount for one product, this means that 6.42 hours were saved in total.

- Preliminary Calculation (for all bread)

  The pilot test covered 10% of the bread sold in this store. This means that automating the discounting of all bread using this method would save 57 hours per month (6.42 hours x 100% / 10% x 30 days / 34 days). In case the wage is USD 15 per hour, a cost saving of USD 855 per month can be achieved.

Food loss percentage

The supermarket had previously had a low food loss rate of less than 1%. With the current pilot test, the food loss rate was initially higher than it had been before the pilot. This was because customers did not understand the process of checking prices by looking at the electronic shelf label. Therefore, various efforts were made to improve the display method. As a result, a food loss rate that was as low as before was achieved in the last stages of the pilot.

Photo 1.1.1.4-1 Adding POPs and videos

As discussed above, it was the first experiment in Japan in dynamic pricing at supermarkets that does not use reduction labels. Therefore, it is necessary to devise ways to make consumers aware of this new style of discounting. Trial and error will continue to be necessary with regard to this point.

Photo 1.1.1.4-2 Setting up a lowest-priced products section

1.1.1.5 Considerations and our next action

Of course, as the number of 2D symbols read at POS registers increases, the importance of correctly using the GS1 standard will also be heightened (e.g., data format and symbol size).

Furthermore, the importance of product identification with GTIN (migration RCN to GTIN) will increase in Japan, where DX, Digital Twin, data management in the cloud, and collaboration among companies are being actively explored as a response to logistics issues and labour shortages.

We will listen to the voices of such industries, attend to their current problems, and propose to companies various ways to utilise GS1 2D symbols. (For more information, refer to the 2.1 GS1 Japan's Industry Engagement for the Use of 2D Barcodes.)

1.2 Healthcare

1.2.1 Use of GS1 Barcodes in the Management of Reagents For In Vitro Diagnosis

Much attention has been paid in the clinical testing field to obtaining ISO 15189 (Medical laboratories—Requirements for quality and competence), an international standard for medical laboratories, in order to ensure the quality and improve reliability of the testing performed by these laboratories. Since 2005, the year ISO 15189 certification began, the number of certifications has continued to increase, and according to the Japan Accreditation Board (JAB), as of 25 June 2024, 303 medical institutions and laboratories have been certified.

ISO 15189 also includes requirements for the management of reagents for in vitro diagnosis (hereinafter referred to as 'reagents'), which stipulate that records be kept of each reagent's lot number, expiry date, date of receipt, date of commencement of use, and final date of use, as well as records of who journaled these records. It is also important to maintain and manage these records so that they can be accessed at any time. However, manually maintaining these reagent records is very labour-intensive and places a burden on the medical front line. For medical institutions that are aiming to obtain ISO 15189 certification, one challenge has been whether it is possible to accurately maintain this reagent management practice without undue burden.

In this context, on 1 December 2018, an amendment to the Medical Care Act concerning the accuracy control of laboratory tests came into force. The amendment covers all types of laboratory tests conducted by all medical institutions in Japan, and the creation of various work logs and ledgers was made compulsory for the purpose of the accuracy control of laboratory

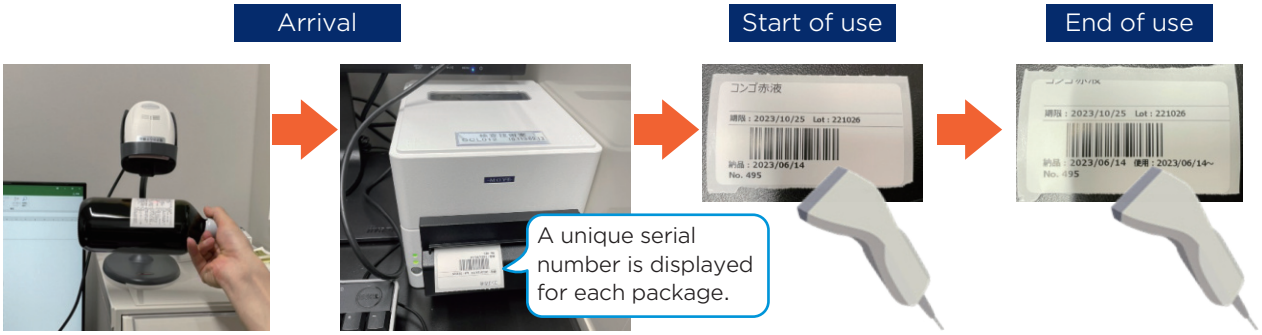
Figure 1.2.1-1 GS1 Barcodes Displayed on In-vitro Diagnostic Products

tests. The obligation also includes the creation of a reagent management logbook, and maintenance and management of reagent information, including lot numbers and expiry dates, is required here, as well. In other words, it can be said that the same level of reagent management requirements as ISO 15189 are now required at all facilities that perform laboratory testing in Japan.

Meanwhile, in Japan, the use of barcodes on in vitro diagnostic medical devices has been promoted since the 2000s, and in December 2022, such barcode labelling became compulsory under the Pharmaceutical and Medical Devices Act (the Act on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical Devices). GS1-128 symbols or GS1 DataMatrix was adopted for barcodes, and not only the GTIN but also information such as the expiry date and lot number of the products are to be included in the barcode. In other words, if the product is a reagent that falls under the category of in-vitro diagnostic pharmaceuticals, a barcode containing information that requires management is now displayed on all products (Figure 1.2.1-1).

Under these circumstances, the use of GS1 barcodes on products has been attracting attention in many medical institutions as a means of managing reagents in compliance with the requirements of the revised Act and ISO 15189, and in recent years, we have seen a succession of medical institutions actually introducing it. Here, as an example, we will introduce a case study on

Figure 1.2.1-2 Exterior View of Shizuoka Children's Hospital



The GS1 barcode is scanned to record the product information on arrival.

An in-hospital label is printed and attached to the product prior to its storage.

The in-hospital label is scanned to record the date the product was opened.

The in-hospital label is scanned to record the product's end date of use.

Figure 1.2.1-3 Workflow for Managing Reagents Using GS1 Barcodes

Shizuoka Children's Hospital.

Shizuoka Children's Hospital (Figure 1.2.1-2) is a general paediatric medical facility with 279 beds.

The hospital developed its own reagent management system with the aim of ensuring the quality of test data, and in September 2022, it obtained ISO 15189 certification, which it had been aiming for since the system was first developed. Excel VBA (Visual Basic for Applications) was adopted for its versatility in developing the system, and reagents are managed using GS1 barcodes within this system. The workflow using barcodes is as shown in Figure 1.2.1-3. When the product's GS1 Barcode is scanned on arrival, the product name is recorded along with the lot number and expiry date, using the GTIN on the barcode as a key. At the same time, an in-hospital label with a barcode is issued. They read the barcodes on the in-hospital labels every time they opened or completed the use of the packages. Upon reading the barcodes, the system automatically records the start or end dates of use accordingly (Figure 1.2.1-4).

The following information that is associated with the serial number is recorded by reading the GS1 barcode: GTIN, expiry date and lot number, the date and time of receipt, start of use, and end of use.

This system has made it possible to record

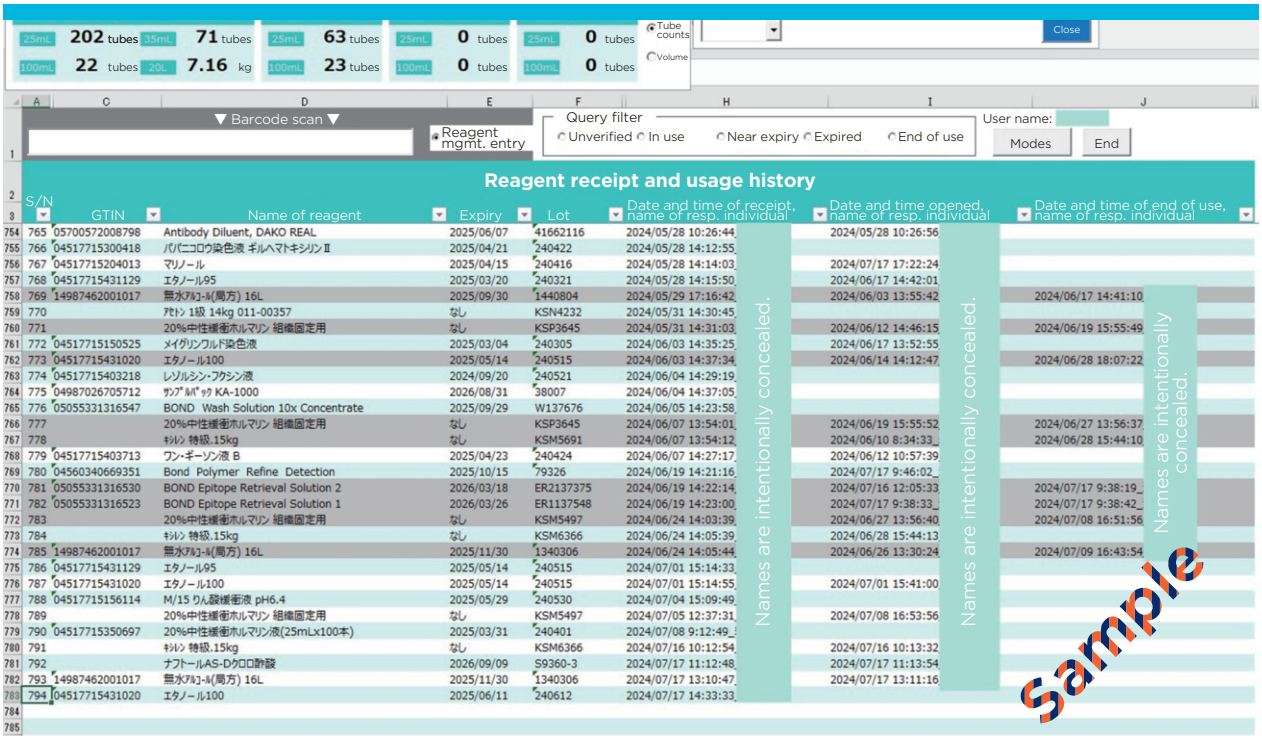


Figure 1.2.1-4 Snapshot of Reagent Management System Screen

information about reagents simply by scanning the barcodes, ensuring the accuracy of the records and improving efficiency at the same time. The time required to record each entry was approximately 30 seconds before the system was introduced, but subsequently this time has been reduced to merely a second, and the occurrence of recording errors has also been prevented. In addition, the reagent management ledger has been digitised, leading to the centralised management of the status of reagents of each department.

The use of GS1 barcodes in reagent management is expected to continue growing, so we will keep an eye on future trends.

1.3 Apparel

1.3.1 Case Study of EPC/RFID Application at DAIDOH LIMITED

1.3.1.1 Overview

Price tags enclosing RFID chips are attached to garments

Small items are attached adhesive RFID tags

Figure 1.3.1.1-1 RFID Tags Attached to Items

DAIDOH LIMITED (hereinafter, 'Daidoh') is a clothing manufacturer and retailer that was established in 1879. The Company utilises RFID technology in all of its directly managed stores and outlets for its main brand, 'NEWYORKER', enhancing operational efficiency. Garments are attached with price tags containing RFID chips, and small items are tagged with adhesive RFID tags. The RFID tags are encoded with SGTIN (serialised GTIN) codes.

1.3.1.2 Background to the Introduction of RFID

Daidoh had been hesitant to introduce RFID technology due to cost-related concerns, but in 2018, an RFID implementation project was initiated due to the cost of RFID technology itself falling and because it was necessary to reduce the workload of shop-floor employees. Daidoh also took cost reduction measures, such as consolidating various tags into a single one through scanning tests and the selection of appropriate tags, and choosing a type of RFID tag that is generally in wide use.

The process of attaching RFID tags to all three years' worth of inventory in the distribution warehouse took a month.

The on-site staff also participated in the in-store pilot study and during it they confirmed the operations involved in the implementation of RFID tags. Subsequently, the system was first introduced at the outlet store that had the highest number of customer visits, and then was gradually expanded to all directly managed stores.

Since FY2019, RFID has been put to use in Daidoh's actual operations. As of FY2023, the system has been introduced in all of its 18 outlet stores and 80 directly managed stores. At the time of the writing of this report, RFID tags have been attached to approximately 480,000 of the approximately 550,000 items in total, excluding some pattern-order items and the like.

As mentioned above, the RFID tags contain SGTIN. This is because Daidoh plans to utilise RFID technology throughout its entire supply chain in the future.

1.3.1.3 Use in Stores

Figure 1.3.1.3-1 Exterior of the NEWYORKER Outlet Store in Mitsui Outlet Park, Makuhari

1. Register Operations

   Instead of using a barcode scanner, the cashier scans the RFID tag to complete the transaction. This saves the time it takes to find the price tag on the product, and the cashier can now handle the work regarding payment by themselves, which was originally done by a team of two. In case the RFID tag is damaged, the cashier can also fall back to the barcode system.

2. Item Search

   When a member of staff is looking for a product, he or she uses an app that displays the direction and distance to it. The system has minimised the time required to locate any particular item.

3. Inspection at Time of Receipt of Merchandise

   The barcode scanning during the inspection process was replaced by RFID scanning. A task that used to take an entire day is now completed in 30 to 40 minutes.

4. Stock-taking

   Previously, it took seven to eight members of staff a whole day to do a stock-taking of the 4,000 to 8,000 items that each store has, but thanks to do the introduction of RFID, this work can now be completed in about an hour by two to three people. Before, the stock-taking had to be conducted during business hours, but now it can be completed before the store opens.

As described above, the system has lowered the staff's workload and them to focus on providing more attentive customer service.

1.3.1.4 Future Issues and Prospects

In the future, Daidoh is aiming to expand the application of RFID technology, such as in logistics and on e-commerce sites, and for product management on a serial basis.

In order to achieve this, various adjustments will be necessary, such as coordination with subcontractors and system implementation, but as the range of application expands, the cost-effectiveness of a single RFID tag will also increase, making it possible to acquire data with finer granularity.

1.3.2 Examples of EPC/RFID Application at Goldwin Inc.

■ Overview

Goldwin Inc. (hereinafter, Goldwin) is a sports apparel manufacturer established in 1950 which also operates its own stores. In addition to its own original brand, Goldwin is involved in everything from product planning to sales in Japan for global brands, such as The North Face, Helly Hansen, and Speedo, and has a wide customer base ranging from athletes to sports fans.

Payment Processing

Item Search

Inspection at Receipt and Stock-taking

Figure 1.3.1.3-2 Use of RFID at Stores

In 2019, Goldwin made the decision to introduce RFID as part of its efforts to promote digital transformation (DX). First, the company introduced the technology at the stores of its group company, nanamica inc., and is now attaching UHF RFID tags encoded with SGTIN to all the brands it handles at the manufacturing stage(*), and using them within stores and for logistics in order to drive operational efficiency.

(*) For some of the products sourced from external parties (such as sundries and foodstuff), tags are attached in-store.

1. Use of RFID in Stores

In stores, RFID is used for inventory counting and product searches. The benefits of introducing RFID for each of these operations are as follows.

a. Inventory Counting

Prior to the introduction of RFID, inventory counting is carried out twice a year. The operation used to take more than four hours after the stores closed at night. After the introduction of the technology, the time required is now less than half, i.e., around two hours, allowing this work to be carried out during the day. In addition, this saving of labour has made it possible to carry out a provisional inventory count once a month.

b. Product Search

Store managers of both The North Face Kids Harajuku (Photo 1.3.2-1) and Helly Hansen Harajuku (Photo 1.3.2-2) comment that product searches have become much easier, and they find it the most beneficial. In Harajuku, where several of the company's stores are concentrated, it has a central depot where products for multiple stores are stored together. Even at such joint storage locations, RFID enables the desired products to be located quickly.

2. Utilisation of RFID in Logistics

At distribution centres, RFID is used to sort products by shipping destination and check them. When Goldwin first introduced RFID, the main aim was to improve the efficiency of store operations, but the company also wanted to make use of the tags for logistics, so in January 2020, it started using the technology at its outsourced warehouses. The following is a summary of the RFID application at the Toyama and Kanto warehouses.

Photo 1.3.2-1 The North Face Kids Harajuku

Photo 1.3.2-2 Helly Hansen Harajuku

a. Toyama Warehouse

This facility has been using RFID since 2023 for shipping to stores. The workflow is as described in Figure 1.3.2-1.

- Sorting with 'PAS' (automated sorter) (Photo 1.3.2-3): The RFID tags are read, and the products are sorted by delivery destination.

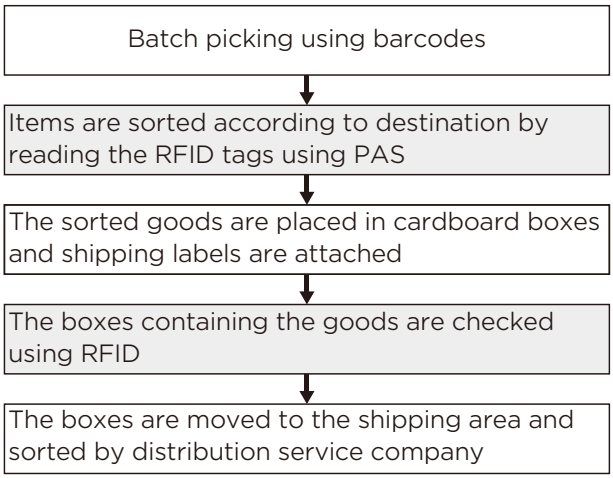


Figure 1.3.2-1 Process Flow of Shipments for Stores at Toyama Warehouse

Photo 1.3.2-3 'PAS'

The system has a processing capacity of 2,500 to 3,000 items per hour. When the warehouse relied on a sorter that scanned barcodes, the EAN/UPC symbols had to be placed face up in the scanning position each time, but this is now no longer necessary, and so the efficiency of the process of putting items in the sorter has improved dramatically.

- Verification before shipping (Photo 1.3.2-4): Tags for all of the products inside the cardboard boxes are read all at once, and the items to be shipped are checked by comparing this information with the scheduled shipping data.

  When reading the data, the target box alone is shielded off, so that no other tags are read. The system has the capacity to inspect 300 boxes per hour.

b. Kanto Warehouse
This facility has used RFID since 2023 for processing shipments to stores and e-commerce. The workflow is as described in Figure 1.3.2-2.

- Sorting with 'Omni Sorter' (Photo 1.3.2-5): In addition to RFID, this also reads EAN/UPC symbols for double-verification, and sorts by delivery destination.
- Sorting with 't-Sort' (Photo 1.3.2-6): When a product is placed on the automatic conveyor robot, the RFID reader installed

Photo 1.3.2-4 Verification before shipping

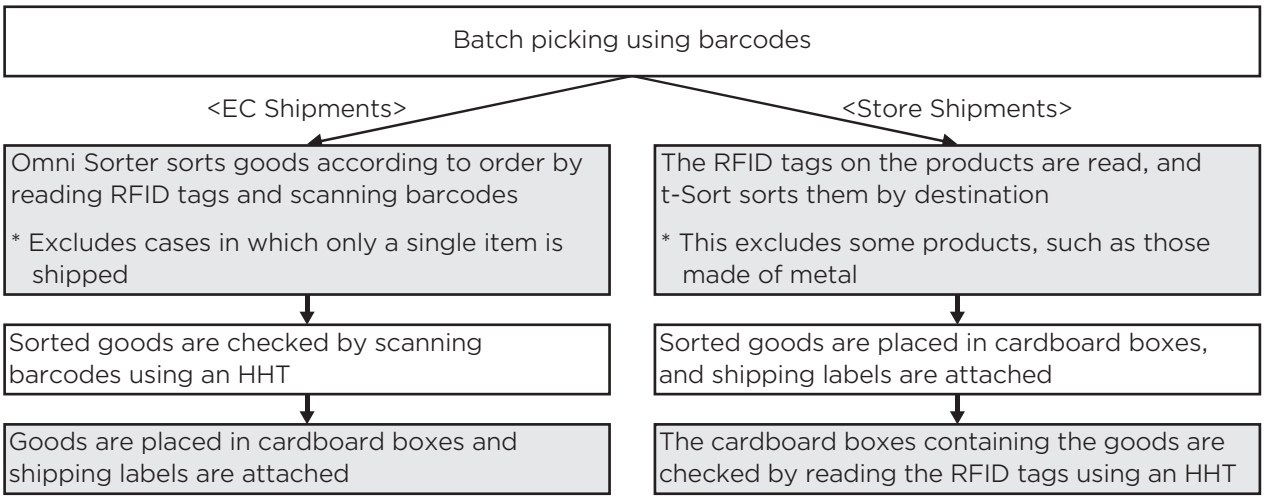
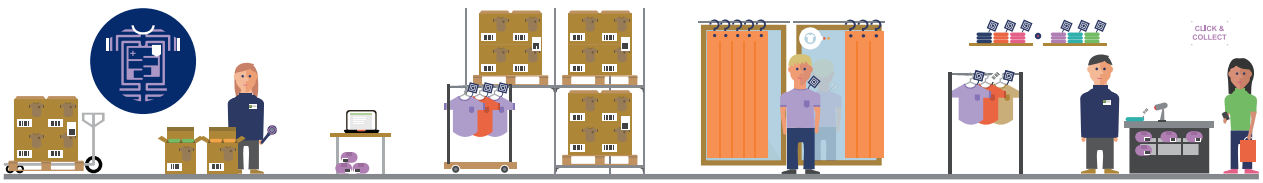


Figure 1.3.2-2 Process Flow for Outgoing Shipments at Kanto Warehouse



above the entry port reads the tag on the item and sends instructions to the robot, which then travels to the plastic sorting box and places the item into the box corresponding to its destination.

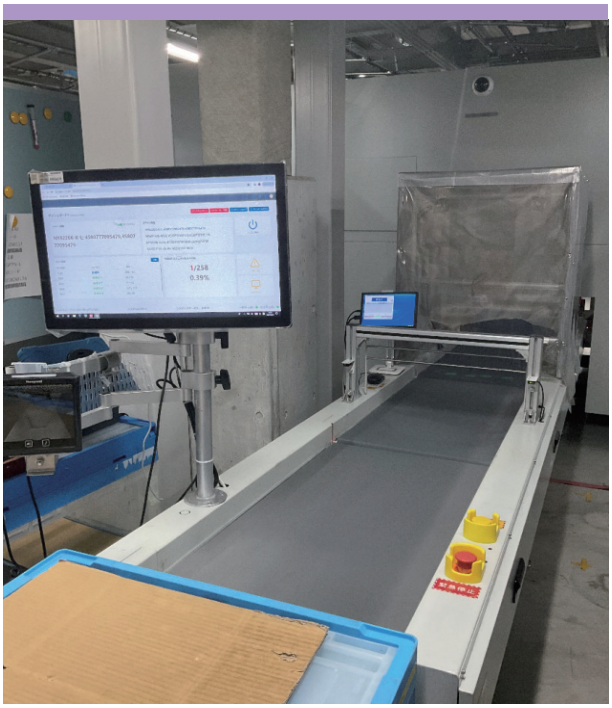


Photo 1.3.2-5 Omni Sorter

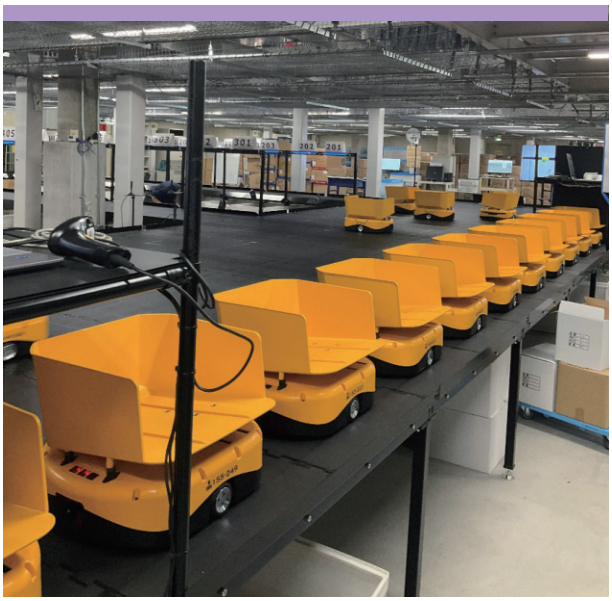


Photo 1.3.2-6 t-Sort

Once sorting is complete, the cardboard boxes containing the products are placed one by one in an electromagnetic shielding container (Photo 1.3.2-7), and product verification is performed by holding a hand-held terminal (HHT) in the container

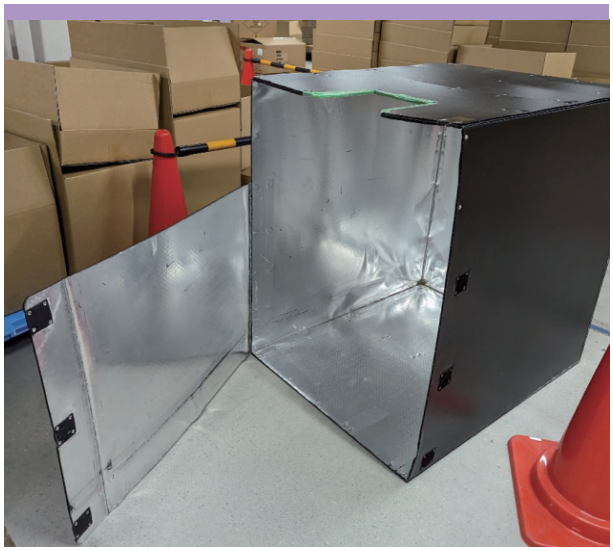


Photo 1.3.2-7 RFID Shielding Container for Inspections

and reading the product tags inside.

Although RFID is used for only a small part of the logistics operations, it has still increased productivity by approximately 20% overall, and reduced the number of incorrect shipments.

3. Challenges and Prospects for the Future

Extremely large improvements in efficiency can be expected through the implementation of inventory counting using RFID at sites with large amounts of stock, such as depots and warehouses where the stock for multiple stores is stored together. However, since RFID can read all tags within the range of its radio waves, location management becomes a challenge. In addition, Goldwin also carries some products that are made of metal. For such items that are difficult to read, the company is considering methods to improve scan accuracy, such as introducing on-metal tags.

As Goldwin stores SGTIN in its RFID tags, it is also possible to read and use RFID tags at delivery destination stores operated by other companies. This raises expectations for a future in which items are source-tagged and the tags are used effectively by all stakeholders in the supply chain, and RFID can be used to achieve traceability.

1.4 Transport & logistics

1.4.1 Pilot Study to Improve Efficiency of Logistics Operations Through Utilisation of Visualisation System Based on EPCIS

Here, we will describe an initiative to improve the efficiency of processed food logistics that is being promoted jointly by Ajinomoto Co., Inc., Nissin Food Products Co., Ltd., F-Line Co., Ltd., and several solution providers. The key point of this initiative is that it enables 'visualisation' of logistics by precisely digitising the movement of goods based on GS1 standards, and then feeds this information back into logistics operations.

In addition to GS1 identification keys centred around the GTIN, SSCC, GSIN and GLN, and GS1 data carriers that store them, this initiative also uses EPCIS and CBV standards (hereinafter collectively referred to as 'EPCIS standards'). EPCIS standards consider the various tasks carried out on an object as 'events', and thereby define the standards necessary for common use of event data across multiple parties. One easily understandable use of this data is traceability, which is visualisation of the history of an item from its time of manufacture to the present. At the same time, this is also raw data that captures and visualises the movement and history of an item in the real world. From this perspective, EPCIS event data can be used not only for traceability, but also for a variety of applications based on the real-world movement of objects.

One such use is the streamlining of logistics operations.

1.4.1.1 First Pilot Study: Improving the Efficiency of the Shipment Receiving Process Through Visualisation of Logistics Using EPCIS Standards

Among various logistics operations, the first pilot study, carried out in January 2024, focused on reducing labour associated with the shipment receiving process. It is currently common at logistical sites not to know what or how goods will arrive until their actual arrival. Using EPCIS event data, this invisible information is made visible. The current absence of this visualisation is one of the reasons why the shipment receiving process consumes so much of a truck driver's time.

This pilot study is based on the procurement and distribution of raw material supplied to Nissin Foods by Ajinomoto. Specifically, it refers to a scenario in which the relevant goods are shipped from F-Line's distribution centre—to which Ajinomoto outsources its logistics operations—to Nissin Foods' distribution centre. These goods are packed in cardboard boxes and are B2B only products. At F-Line's distribution centre, they are loaded onto pallets to form logistic units, which are then transported to Nissin Foods' distribution centre. The program assumes the use of a mixed pallet, which is a single logistic unit that contains multiple types of products. For domestic

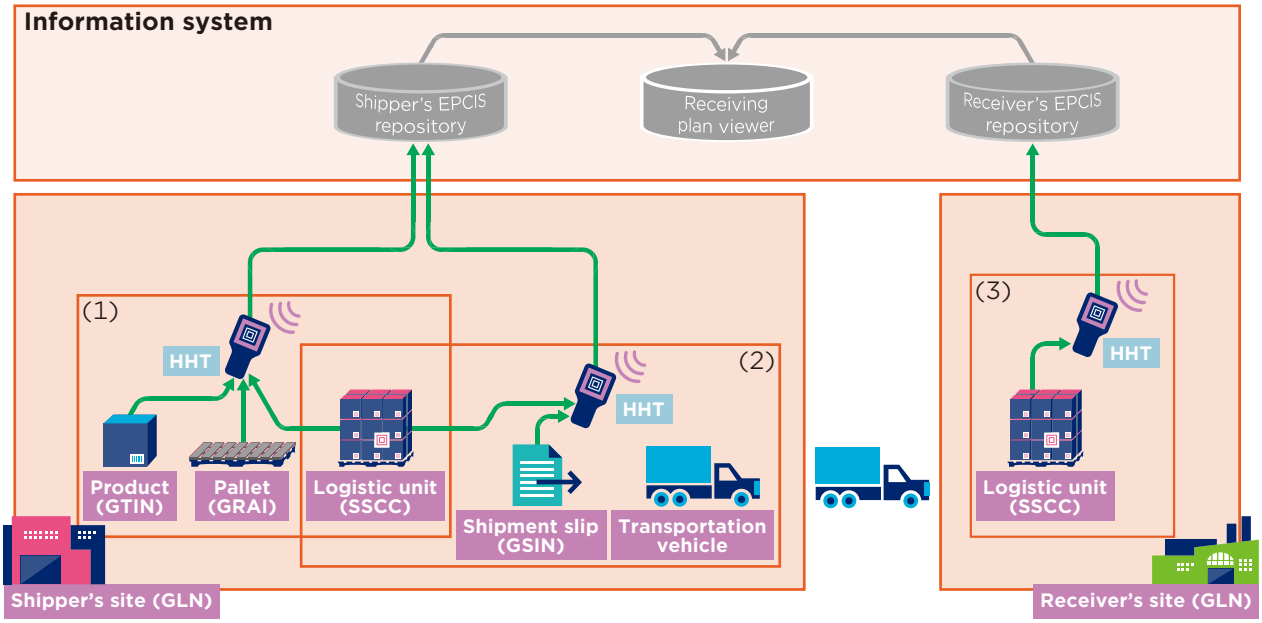


Figure 1.4.1.1-1 Assumed Workflow for First Pilot Study

distribution in Japan, where transport of a wide variety of small lots is often required, assumption of a mixed pallet is extremely realistic.

Figure 1.4.1.1-1 indicates the flow of work assumed in the pilot study. The details are as follows.

1. The work assumed in this pilot study starts from the originating site being ready to prepare the logistic units for transportation by truck. The relevant goods are identified by GTINs, and accompanying attribute information, such as lot numbers, production dates and expiration dates, are also attached. In addition, in the pilot study, individual items can be uniquely identified using SGTINs, which are combination of GTINs and serial numbers. Workers prepare the logistic units by loading the goods indicated by the GTINs shown on the shipping slip onto pallets. Labels displaying SSCCs, which enable individual identification, are attached to each of the assembled logistic units. At the same time, an EPCIS event is created to indicate that the logistic unit identified by that SSCC has been assembled from goods identified by SGTINs, and this event is registered in the EPCIS repository on the originating site. Note that there may be more than one logistic unit for a single shipping slip, in which case an EPCIS event is registered for each individual logistic unit.
2. The logistic units created for each shipping slip are logically grouped, and this group is identified by GSIN. GSIN is a GS1 identification key that identifies a logical grouping of one or sereval logistic units each identified by SSCC. In the pilot study, the GSIN is printed on the shipping slip in advance. The linkage between GSIN and SSCCs, and the dispatch of these SSCCs to the destination, i.e., the corresponding EPCIS events, are registered in the EPCIS repository on the originating site.
3. At the receiving site, the system is set up in advance so that it receives notification when an EPCIS event indicating a dispatch to the receiving site is registered in the EPCIS repository of the originating site. The receiving site is identified by a GLN, and the EPCIS event generated and registered in step (2) contains this GLN as the destination. This allows the receiving site to obtain information about the shipment scheduled to arrive there, flagged by the GSIN, together with the specific logistics units, i.e., SSCCs, contained in that shipment. Furthermore, the EPCIS event registered in the process in (1) for the relevant SSCC can also be searched and retrieved from the EPCIS repository of the originating site, so that information on the individual goods contained in each logistic unit, i.e., SGTINs and attribute information, can also be obtained. Obtaining this information before the actual arrival of the goods allows the receiving site to prepare for receipt. Furthermore, at the time of actual arrival, the receiving process can be carried out whilst knowing what goods are included in each logistic unit, without having to inspect the contents of each logistic unit individually. In addition, by retrieving the SSCC of the logistic unit and referencing it against the list of SSCCs linked to the GSIN of the relevant shipment, it can be verified whether all the logistic units that should be received in that shipment are present.

In the pilot study, GS1 QR codes were used as data carriers to display the SGTINs and attribute information on the goods, SSCCs on the logistic units, and GSINs on the shipping slips. However, GS1 QR codes are not essential to achieving the concept embodied in the study, and other printable symbology could be used instead, or utilisation of EPC/RFID could also be considered for the goods and logistic unit.

At the site where the pilot study was conducted, it was confirmed that the above concept and information system to implement it functioned without any issues; at the same time, the change in the working time expended receiving goods before and after application of this concept was recorded. Before implementation of the concept, upon arrival of the shipment, workers had to check the outer appearance of the logistic units for possible damage and, when necessary, break the logistic unit open to count the types and quantities of the goods individually. In contrast, once the concept had been implemented, information on the goods contained could be obtained from the SSCC indicated on the label attached to the logistic unit, and so it was only necessary to scan the SSCC of the logistic unit and check outer appearance for damage. Consequently, the amount of time required for the shipment receipt process was significantly reduced. Figure 1.4.1.1-2 shows an SSCC being scanned during shipment receipt.

Conversely, from the viewpoint of the originating site, creating information for each logistic unit at the time of dispatch, i.e., linking the SSCC of the relevant logistic unit to the GS1 identification key of the contents, purely increased the workload. In

particular, in the current study, the GS1 identification key for each of the goods contained was at the SGTIN level and the data carrier was a GS1 QR code, so the GS1 QR codes displayed on the goods had to be scanned individually and then linked to the SSCC. Figure 1.4.1.1-3 shows this being performed. This is a very labour-intensive task compared to current operation, so, in order to actually implement the concept set out in the pilot study, the burden imposed by this process must be reduced. It is necessary to consider automatic identification techniques and work procedures that are more suited to on-site implementation.

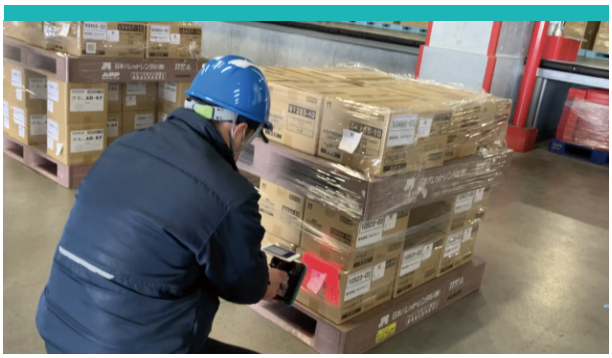


Figure 1.4.1.1-2 Scanning SSCC during shipment receipt in the pilot study

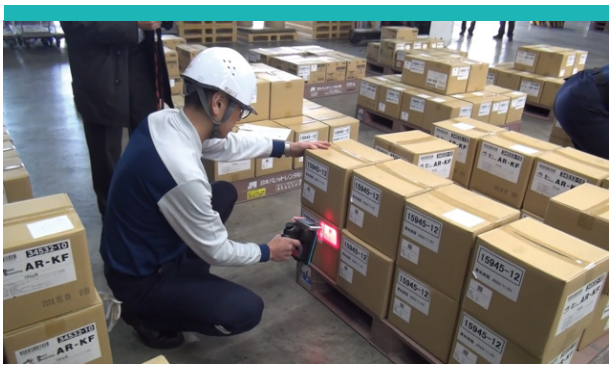


Figure 1.4.1.1-3 Linking SSCC and SGTIN during dispatch in the pilot study

1.4.1.2 Future Prospects

This initial pilot study was conducted as a one-off trial to firstly confirm that the concept is actually effective. In addition to reducing the workload involved in shipping operations, as mentioned above, there are still various other issues that remain to be considered, which we plan to continue investigating. Some examples are given below.

- Expansion of the pilot study concept: In this pilot study, the focus was on the workflow from shipping to receiving that exists between two parties, but when considering overall optimisation of logistics, the greater the number of parties that participate in the concept, the greater the optimising effect will be. EPCIS standards should be applicable not only to the flow of shipping and receiving between two parties, but also other operations among multiple parties.
- Creation of new added value in logistics: Furthermore, without being constrained to the concept of this pilot study, which was to utilise event data in order to improve the efficiency of logistics operations, it is also possible to consider adding other types of value to logistics. For example, traceability, which was mentioned earlier as a straightforward use of event data, does not directly lead to the streamlining of logistics operations, but can be considered as providing added value to logistics services.
- Scope of event data disclosure and sharing: EPCIS standards do not define what event data should be disclosed and shared among the parties involved. The standard only covers the arrangements that need to be made to ensure seamless sharing of event data when the necessity arises. It is the users of EPCIS standards that must decide which data to be disclosed and to whom. In logistics involving multiple parties, event data may include sensitive information belonging to each party, i.e., data involving areas of competition. In such a situation, it is necessary for the parties involved, and ultimately the industry as a whole, to consider what can be done to achieve overall optimisation of logistics, and where to draw the line between collaboration and competition for each party.
- Linkage with information other than EPCIS event data: In addition to EPCIS event data, there are various other types of data related to logistics, e.g.: logistics-related EDI messages, such as orders and advance shipment notifications; shipping slips or shipping slip data exchanged between parties when moving goods; and data related to the operation of transport vehicles, etc. Although some of these are similar in content, they have different characteristics and roles. It is believed that linking them together will enable use of a wider range of data, and it is necessary to consider system architecture that enables this objective.

GS1 Japan will continue to participate in programs like this initiative in order to advance studies regarding the use of GS1 standards in logistics.

1.5 B2C

1.5.1 B2B2C service with GS1 QR code

1.5.1.1 GTIN for product recall

SDG initiatives have been getting popular even in elementary schools, thus it has become increasingly important to communicate accurate product safety information not only to buyers, but also to users and others as part of the 'consumer right to know' . The Consumer Affairs Agency in Japan alerts consumers to recalled products on their website and Twitter. Reporting recalls to the Agency became mandatory, and this information, including GTIN and lot data, should now be registered to the Security Net (operated by METI) under the appropriate company gBiz ID (operated by the Digital Agency). Information of Lot number is indispensable in identifying the actual target, and if it is missing, finding the product is a heavy burden and give great pressure on the environment. This information is shared worldwide through OECD's recall portal website. Nowadays, GTIN is increasingly used to identify recall information as some other MOs do.

1.5.1.2 Sharing recall information with consumers using GS1 QR code

While, currently, some foodstuffs are labelled with a one-dimensional barcode symbol if they contain allergenic ingredients, the level of accuracy required for safety information is even higher, and many changes have been made to the related regulations, besides, confirmation of possible changes to registration details after shipment is also becoming increasingly important. In notifying users of product recall information, telephone calls, TV commercials, and emails are used, but even so, it is difficult to reach all target groups, so the government has announced that it will use some new technology to notify them. One such service is beginning to be used to check product safety via cloud systems by scanning GS1 QRs. In order to help the users, scodt®, a smartphone app using GS1 QR code, was developed. This app is based on a system for the communication of risk. It ensures that information is conveyed to the target user of a product in the event of a recall, and that the user can easily take the necessary action. (http://pl-taisaku.org)

The system is based on the patented 'Safety Check On-demand Technology (scodt®)', developed and filed by Yoshiaki WATANABE, and promoted by The Association for Product Liability (APL).

1.5.1.3 Service Overview

The system works as follows:

After installing the app on their mobile device, users scan the GS1 QR code printed on the product label or product itself. This GS1 QR code provides three types of information: the GTIN, lot number and product URL. Users can then check the following information on their mobile device;

- Product status (e.g., whether the product has reached end of life or not and whether it has been recalled or not)

Figure 1.5.1.3-2 Applications of scodt®

- Basic product information
- Product instruction manual
- Certificate of product quality testing, etc.
- Product expiry warning
- Directing users to other related information.
- The responsibility of the retail distribution operator is increased to prevent recalled products from being put on the market, and are required to detect and sort recalled products before they are sold.

Furthermore, it can be assumed that when target products are recycled, their management will be strengthened, and for that purpose, the utilisation of GS1 QR for individual products, e.g. sundries, hardware, and machinery, will be effective.

For further information on their services, please visit APL's website.

https://pl-taisaku.org/?page_id=2823 (only in Japanese)

Figure 1.5.1.3-1 Free GS1 QR Code (scodt®)

1.5.1.4 GS1 QR code case studies

<Trap products: Sakae industry>

Sakae Industry manufactures traps to catch all kind of animals from rats, marten and raccoons to bears. Sakae Industry was looking for a more effective tool to inform people about the correct installation of the traps (on site) because the traps need to be properly installed and used, otherwise there might be a risk for people nearby caused by escaping animals.

Figure 1.5.1.4-1 GS1 QR code attached vermin control trap

The company has devised a metal label with a GS1 QR code printed on it, which is attached to the body of the trap. This system frees users from needing paper instruction manuals at trap installation sites and ensures that the product information can be retrieved through a mobile device whenever and wherever required.

Animals are increasingly likely to invade human society as the population in Japan, especially in rural areas, decreases, and therefore services using GS1 QR code will continue to grow.

<Koji cosmetics: Sakura Koji Lab>

Sakura Koji Lab is a manufacturer that sells cosmetic products made from rice 'koji'. Because the ingredients in Sakura Koji Lab's products differ from those of common cosmetics, adequate information on their usage and features need to be provided to customers. As Sakura Koji Lab exports its products internationally, it needs to provide detailed product information to its international consumers. A GS1 QR code is displayed on each product's packaging, enabling users to check how to use the products via scodt®.

Figure 1.5.1.4-2 GS1 QR for Cosmetics

<Processed foods: Joan International>

Joan International (Joan) is an importer and distributor of olive oil.

Recently, both sellers and consumers are becoming increasingly concerned about food safety and security with the introduction of the mandatory notification of voluntary recalls in Japan.

The Italian olive farmer contracted by Joan grows their olives organically, and Joan prints the GS1 QR onto their product labels to convey this

information to buyers and others. The GS1 QR printed on the product also directs customers to the company's EC site, making it easier to inform customers of the product safety and increase their trust in the company, which has reportedly resulted in an increase in repeat purchases. Consumers can also scan the GS1 QR codes on the product packaging to obtain detailed information about the products' characteristics.

Figure 1.5.1.4-3 GS1 QR for olive oil products

1.5.1.5 Responsibility for product safety

In the field of industrial products and cosmetics, it is expected that consumers knowing how to correctly use products will have a significant effect in preventing undesirable accidents due to mistakes or misuse.

Imports of food products have increased rapidly in recent years, but many of these products contain ingredients that are not authorised in Japan, and consequently recalls relating to the labelling obligations of imported food products have increased rapidly. The Consumer Affairs Agency is strengthening regulations on proper labelling, and food recalls seem to be a major issue in the future. The PL Research Society will be conducting research on issues related to food recalls and labelling from 2022 and will deepen its cooperation with the government. Furthermore, in 2022, 'Act for the Protection of Consumers who use Digital Platforms' came into force, imposing on digital platform operators the obligation to stop advertising such as labelling violations and to report offending operators. This means that existing internet operators will likewise have to 'not sell the offending product', increasing the risk of recalls at DIY stores and others, and furthermore product traceability in the disposal process after recalls, which has been neglected, will also be required. This will require more and more identifying brand owners and product lots for single products.

Much is expected of solutions using GS1 QR codes as a tool for users to use products correctly and safely.(within facilities or areas such as factories and warehouses).

2. Services & Solutions

2.1 GS1 Japan's Industry Engagement for the Use of GS1 2D Barcodes

2.1.1 Overview of 2D Activities

GS1 Japan's 2D symbol initiative aims to help companies promote Digital Transformation and supply chain optimisation using GS1 2D symbols. We have been engaging in this initiative for over five years, not only for scanning products at POS, but also for raw materials and case units. Our first task in 2017 was to put together guidelines for the GS1 QR code labelling of raw materials.

Since 2022, we have been actively promoting the use of GS1 2D symbols at POS, and our first pilot was realised in February 2023 (see section 1.1.1). In addition, GS1 QR codes have already been displayed on CPG raw materials and trade item groupings at several companies, and GS1 2D symbols are increasingly being actively introduced in three areas (raw materials, trade item groupings, and POS).

2.1.2 2D in Retail

For 2D in Retail, we are actively engaging with the industry to conduct demonstrations and actual implementations, starting with a pilot in 2023. As several of our member firms have been inquiring about the latest case studies and ask technical questions, we provide a wide range of user support.

In 2024-2025, we plan to verify the technology for printing 2D symbols using various printing methods/materials and reading them at POS cash registers with our solution partners. We are steadily preparing for implementation by manufacturers and retailers.

2.1.3 Raw Material and Carton Cases

In response to the growing interest in logistics visibility and traceability, GS1 Japan has published guidelines for the use of 2D symbols on raw materials and the trade item grouping.

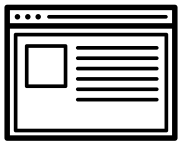
Raw Materials:
https://www.gs1jp.org/assets/img/pdf/SourceMarkingGuidelineforRawMaterials.pdf

Carton Cases (in Japanese only):
https://www.gs1jp.org/assets/img/pdf/carton_guide.pdf

For example, in the trade item grouping sector, Rokko Butter, a manufacturer of processed food products (mainly cheese products), leverages GS1 QR codes for their traceability system and has printed GS1 QR codes on more than 70 product SKUs as of February 2024. They are also exploring the option of printing QR codes with Digital Link on consumer trade items.

Ajinomoto and Nissin Foods, which are major manufacturers in Japan, are conducting a logistics visibility pilot using the GS1 standard. In this pilot, they are printing GS1 QR codes on raw materials delivered from Ajinomoto to Nissin Foods to verify the effectiveness of logistics visibility. (For more information, see 1.4.1.)

A manufacturer of raw materials received requests from suppliers to print QR codes with non-GS1 standard formats. As it was deemed difficult to respond to the needs of each supplier individually, the company decided to use GS1 QR codes. They use label printing or direct printing depending on what the symbol will be printed on.



Web page

2D in Retail Overview
https://www.gs1jp.org/standard/industry/2d-in-retail/

Search for your use cases
https://www.gs1jp.org/standard/industry/2d-in-retail/casestudies.html

YouTube

One scan, Infinite Possibilities
https://youtu.be/q2qEBKdwFgQ?si=pRtLpqIuxVnBEp4

QR code or QR code powered by GS1?
https://youtu.be/8_IURTaftsk?si=ploW8RhAHZolfdkZ

Document

GS1 element string syntax and GS1 Digital Link URI syntax
https://www.gs1jp.org/standard/industry/2d-in-retail/syntax.pdf

What is Scanner mode 1/2/3?
https://www.gs1jp.org/standard/industry/2d-in-retail/scannermode.pdf

Figure 2.1.2-1 2D in Retail

2.1.4 Project to Verify Direct Printing of GS1 DataMatrix on Cardboard Cases

Food ingredients and the trade item grouping are often traded in cardboard boxes, and it is expected that many manufacturers will adopt direct printing, which has lower running costs, for printing GS1 2D symbols on them.

Figure 2.1.4-1 GS1 DataMatrix directly printed on cardboard cases

However, as most cardboard cases are brown, direct printing tends to make it difficult to ensure sufficient contrast and may cause problems such as the symbols being hard to read or unreadable.

Therefore, we conducted a project in 2023 to verify whether it is possible to print GS1 DataMatrix directly on corrugated cardboard.

Because the project was a collaboration with several printer manufacturers, scanner manufacturers, and the Japan Automatic Identification System Association (JAISA), one of the outcomes was that knowledge was gained on the printing and reading of GS1 2D symbols.

The results of the project are summarised in a report (below, in Japanese only), which provides guidelines on three points for printing an easy-to-read GS1 DataMatrix.

www.gs1jp.org/standard/industry/carton/directprinting/gs1dm_report.pdf

1. Adhere to the GS1 standard size specifications.
2. Use ink recommended by the printer manufacturer and observe the correct density setting.
3. It is strongly recommended to print on the actual corrugated board material to be used and check the quality before printing.

2.2 GS1 Japan Data Bank (GJDB) -Product-

GS1 has announced a policy that is aimed at urgently creating and offering a centrally managed referable system for information that is interlinked with GS1 identification keys, such as GTIN and GLN, while also managing and operating GS1 Company Prefix allocations much more strictly.

Based on this policy, GS1 is launching a new database service called the 'GS1 Registry Platform', which stores thin information on GS1 Company Prefixes and GS1 Identification Keys, including GTIN and GLN, and provides essential information for identifying products and/or locations.

In principle, users need to be routed through the local GS1 MO (GS1 Japan in Japan) service to register for the GS1 Registry Platform, and the GS1 Japan Data Bank (GJDB) -Product- service provides the entry point for Japanese users.

Up and running since October 2019, GJDB -Product- employs a system that offers easy registration and management of GTINs and their associated information and allows the seamless release of the registered product data to the GS1 Registry Platform and domestic database systems.

Following GJDB -Product- initial release, brand owners can easily navigate the GTIN allocation, GTIN management, and barcode symbol generation/download processes. Further functional enhancements are planned for future releases.

2.2.1 Challenges related to product information in Japan

In Japan, there are a lot of brand owners of small and medium-sized enterprises (SMEs), and they are struggling significantly with the registration and management of product information.

In contrast, the wholesalers and retailers that handle the products produced by these SMEs are suffering from inefficiencies in product data exchanges.

2.2.1.1 Challenges related to product information registration and management

Determining whether they can afford a product management system from the perspective of cost-effectiveness is a big decision for SMEs.

Therefore, companies who cannot acquire such systems mostly process their product information by keeping handwritten records or entering data in a spreadsheet.

However, if GTINs are allocated manually without sufficient knowledge of the GTIN structure (composed of three elements: a GS1 Company Prefix, an item reference, and a check digit), there is an increased risk of incorrect product information registration, which includes registering incorrect GTINs and allocating the same GTIN to different products (duplicate).

Incorrect GTIN allocation also causes problems for the brand owner's trading partners, including their wholesalers and retailers, as GTINs are the key to information throughout the value chain.

2.2.1.2 Challenges related to product information exchanges

Retailers and wholesalers need to receive the correct product information in a timely manner, but they have been struggling to acquire this information.

In Japan, a database that centrally manages all the product information that retailers need for reference has yet to be developed.

As a result, wholesalers and retailers have to ask the brand owners for the necessary product information.

The product information is transmitted from the brand owners in various ways, such as entering the data into the retailer's Web system or sending retailer-specific spreadsheets with the required data as email attachments.

Manual operations such as these impose an undesirable burden on the brand owners and involve cumbersome operations, which may result in entries containing erroneous information even for the same product or entries containing inconsistent information.

Product information is vital for order placement, logistics, and sales operations, so incorrect information affects the entire business.

2.2.2 Functions offered by GJDB -Product-

GJDB -Product- initial release has been prepared mainly to mitigate issues concerning product information registration and management or product information exchanges, including GTIN allocation. The initial release offers the following functions.

1. Easy allocation of GTINs
2. Easy management of GTINs
3. Easy generation of barcode symbols for GTINs
4. Seamlessly interlinked operations with domestic databases.

2.2.2.1 Easy allocation of GTINs

GTINs must be allocated correctly by using the setting item references according to the rules and then calculating the check digit.

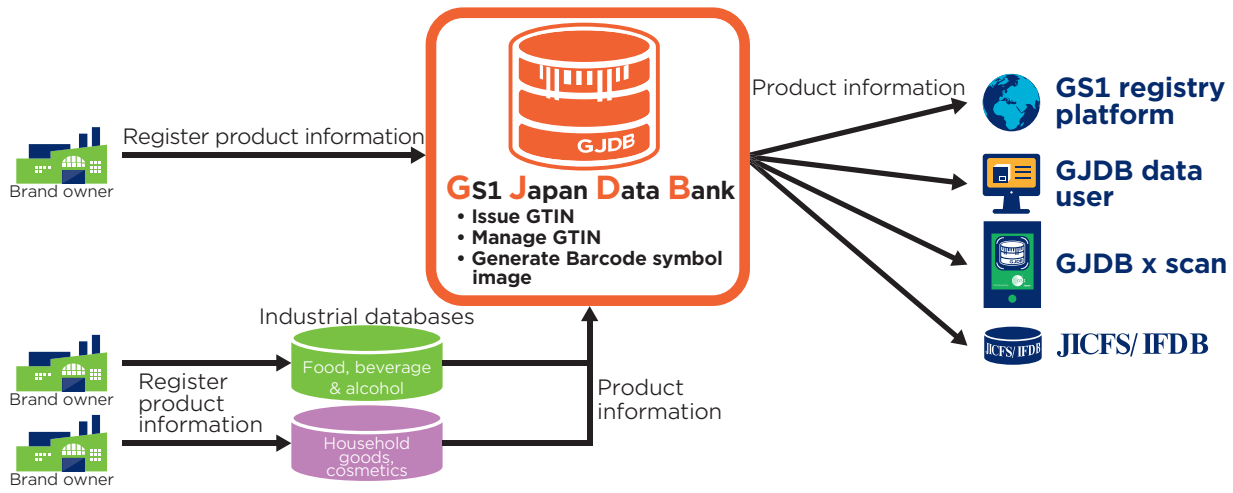


Figure 2.2-1 Overview of the GS1 Japan Data Bank

This process can be a burden, especially for SMEs, but GTIN allocation has been made easy by the release of GJDB -Product- service, which requires only the following three steps.

<Three steps of GTIN allocation>

1. Select the relevant GS1 Company Prefix
2. Enter the basic product information
3. Press the 'Issue GTIN' button
4. Seamlessly interlinked operations with domestic databases.

2.2.2.2 Easy management of GTINs

The main reason for using GTINs is their global uniqueness.

Any reduplication of GTINs causes confusion for the stakeholders who handle the products, including wholesalers and retailers, and undermines the supply chain efficiency.

To avoid such confusion, each brand owner must make sure to allocate GTINs correctly without reduplication.

Brand owners do not need to worry about GTIN reduplication once they have registered all their products to GJDB -Product- because doing so will ensure that the GTINs are correctly managed.

Furthermore, the GTIN allocation status, including counts for the allocated GTINs (and the remaining unallocated GTIN count), for each GS1 Company Prefix is visualised using a coloured bar chart.

2.2.2.3 Easy generation of barcode symbol images for GTINs

Brand owners need to allocate GTINs for their products and then display their barcodes.

If the brand owner leaves this work to a printing company, they just need to provide the GTIN data. However, if the brand owner decides to carry out this process by themselves, they need to find suitable software to generate the symbol and then display it on the product.

SMEs that are familiar with the process should have no problem printing the barcode, but those that are not familiar with may find generating the symbol for the allocated GTIN difficult.

By utilising GJDB -Product- functions, brand owners can easily generate the necessary EAN/UPC symbols and download them in an electronic format after publishing the product information to GJDB -Product- and its connected database.

2.2.2.4 Seamlessly interlinked operations with the GS1 Registry Platform and domestic databases

Brand owners expect their products to be widely sold. Given this, they need to share accurate product data among their stakeholders and make sure that the data is well known to the parties concerned.

Currently, however, brand owners need to share product information in many different ways according to the relevant party's requested

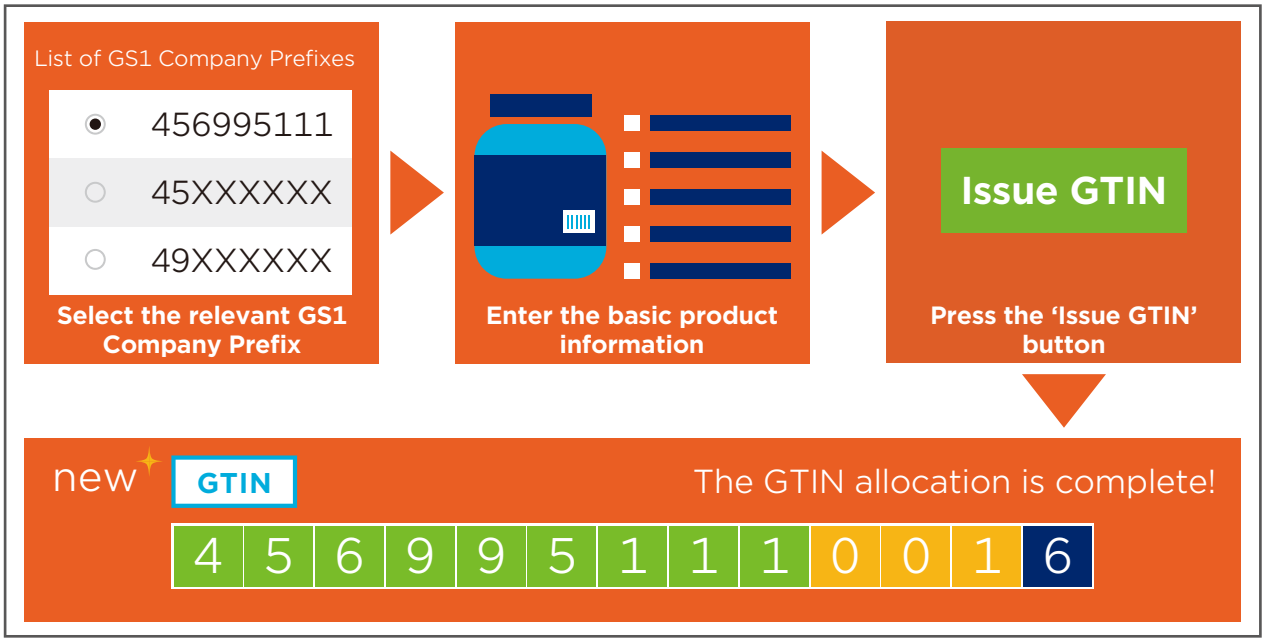


Figure 2.2.2.1-1 GTIN allocation made easy (three steps)

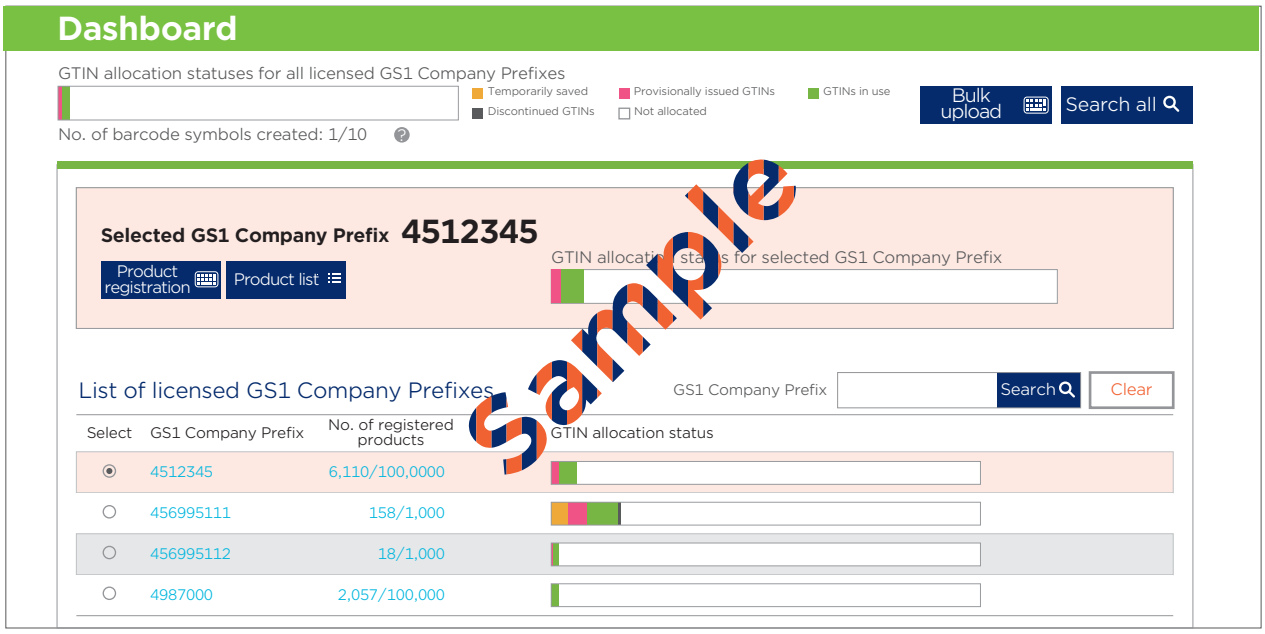


Figure 2.2.2.3-1 Visualised GTIN allocation status using coloured bar charts

format, which can be a burden.

GJDB -Product- allows users to publish accurate product information globally as it has already been seamlessly integrated with the GS1 Registry Platform, JICFS/IFDB (2.4), and GJDB × scan (2.3).

2.2.3 Number of items registered in GJDB -Product-

As of June 2024, about 4,000,000 items have been registered in GJDB -Product- by approximately 39,000 brand owners. During the service launch period, we asked companies with newly allocated GS1 Company Prefixes to register their product information, but we are now expanding this to customers that had already been licenced GS1 Company Prefixes before the launch. Therefore, the number of items and brand owners is expected to increase further.

Table 2.2.3-1 Item counts by category

Category	Item count
Food	837,432
Healthcare supplies	48,737
General merchandise, household items, and durable consumer goods	804,400
Cultural goods	1,634,569
Apparel and personal items	635,457
Others	6,861
Total	**3,967,456**

2.2.4 GJDB -Product- update history information

Since the release of GJDB -Product- in October 2019, we have made several updates to make product information registration easier and improve usability.

We will continue to update GJDB -Product- in order to incorporate features that meet the requirements of local users and the direction of the GS1 data services.

Table 2.2.4-1 below shows the update history for GJDB -Product-.

2.2.5 Future of GJDB -Product-

We aim to widen the product information coverage for GJDB -Product- by seeking the cooperation of product information databases in related industries and then gradually strengthen its features to facilitate the resolution of various issues associated with domestic product information exchanges.

Through these efforts, it is our sincere desire that GJDB -Product- will be a service that is the benefit of not only brand owners but also wholesalers and retailers who utilise product information in GJDB -Product-.

Table 2.2.4-1 GJDB update history

Date	Contents
Q1 2020	• Enhancement of functions for those who register product information Bulk upload/download, bulk update, and assistance for classification selection • Launch of functions for those who browse product information Product information search and browse functions
Q3 2020	• Enhancement of function for those who register product information Barcode symbol form patterns added Support for migration of JICFS/IFDB data to GJDB
Q1 2021	• Launch of daily uploads of GTIN data to GRP
Q1 2022	• Launch of receiving product information from two industrial databases* * One is Food, beverage and alcohol industry, and the other is household goods, cosmetics industry
Q2 2022	• Launch of a dashboard that shows product information data quality report for those who register product information

2.3 GJDB × scan

2.3.1 Overview

In January 2021, we launched a smartphone app called 'GJDB × scan', which allows users to display product information by scanning the barcode on the product package. It can be downloaded for free on iOS or Android devices.

GJDB × scan displays product information registered in GJDB (refer to 2.2) when a user scans the EAN symbol on the product package. It also confirms whether the GTIN is based on a valid GS1 Company Prefix that is licensed by GS1 Japan.

Users can also use this app to send feedback on the displayed product information and request the registration of product information.

These inputs are shared with the brand owners.

2.3.2 Features

GJDB × scan shows different results, depending on whether the GTIN is registered in GJDB or not as follows..

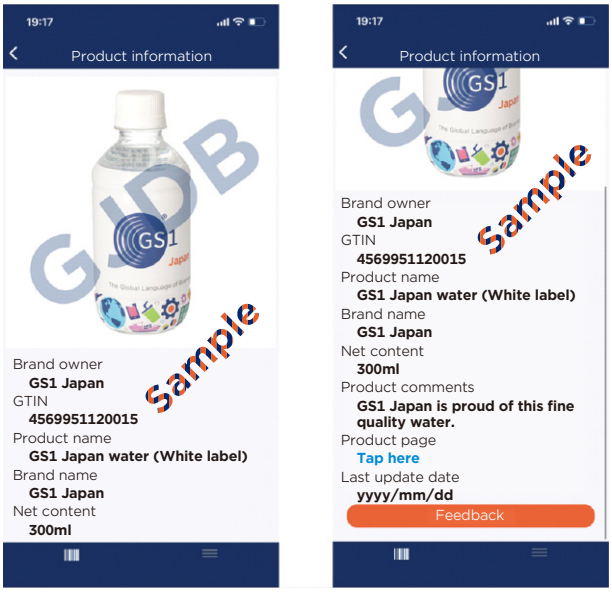


Figure 2.3.2-1 Product information (example)

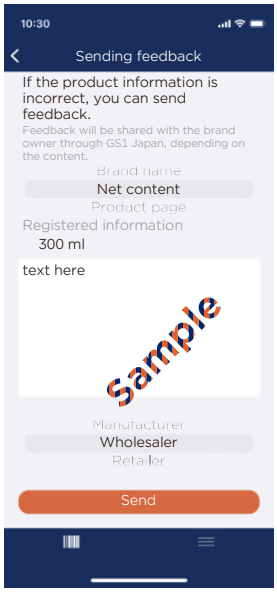


Figure 2.3.2-2 Sending feedback

Figure 2.3.2-3 Requesting product information registration

1. GTINs that are registered in GJDB

   If the GTIN is registered in GJDB, the app displays the product information shown below.

   - Brand owner
   - GTIN
   - Product name
   - Brand name
   - Net content
   - Product comments
   - Last update date
   - Product image
   - Product website

   The product information includes useful information such as a link to the product page on the brand owner's website, so users can access additional information that is not provided on the product packaging.

   In addition, if a user finds that the registered product information is incorrect, they can after selecting the business category send a message to the brand owner via the app so that it can correct its product information.

2. GTINs that are not registered in GJDB

   If the GTIN is not registered in GJDB, the app displays only the GTIN and the brand owner's name.

   In this case, just tap the Request product registration button to send a request to the brand owner after selecting the business category.

   This will prompt the brand owner to register the product information.

2.4 JICFS/IFDB (JAN Item Code File Service/Integrated Flexible Data Base)

Since 1988, GS1 Japan has been operating JICFS/IFDB, a product catalogue database, and has been collecting basic product attributes, such as GTIN, product names, product categories, weights, and quantities.

Product data are not only registered directly by product manufacturers, but also are collected from product information databases of various industries including alcoholic beverages and processed foods, household goods and cosmetics, consumer electronics, and OTC drugs. These data are then entered into the database after manually conducted maintenance according to the JICFS/IFDB standard and are made available to retailers, wholesalers, and other users via JICFS Database Providers (JDPs) (Figure 2.4-1).

Table 2.4-1 shows the number of the products registered in JICFS/IFDB as of March 2024. Approximately 20,000 new products are registered in the database every month.

Similarly, more variations are seen in case studies on the use of product data in JICFS/IFDB.

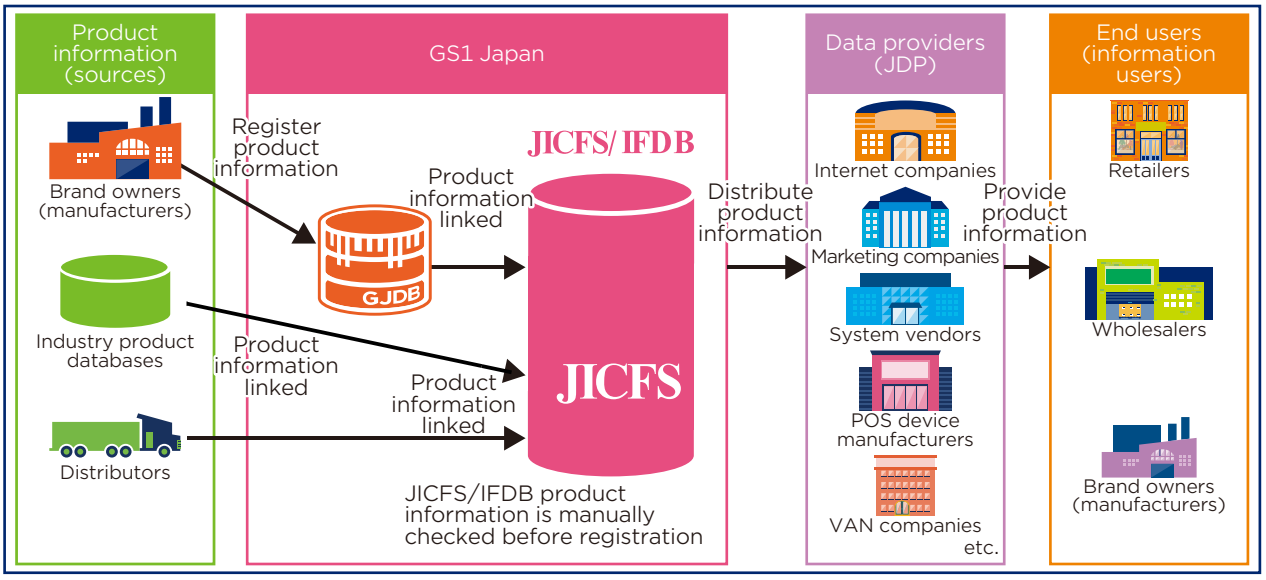


Figure 2.4-1 JICFS/IFDB system flow

In the past, these data were mostly used in the business-to-business field (B2B).

In other words, to support retailers in creating master data to introduce a point-of-sale (POS) system or an electronic ordering system (EOS), to suggest shelf allocations, and to analyse POS data.

Recently, however, usage in the Business-to-Consumer field (B2C) is growing according to the increase of online shopping sites and consumer apps for Consumer Panel Survey.

Since many stores in online shopping malls register product information using their own codes and product names, products are sometimes repeatedly registered under different names and categories.

To solve this problem, several companies operating online shopping malls use GTIN for product information control.

Data collection applications for Consumer Panel Survey use product information from JICFS/IFDB as data which assists users (consumers) in inputting merchandise information that they purchased into the application.

The product information in JICFS/IFDB includes the JICFS Classification Code System (Table 2.4-2), which indicates product categories.

These codes are used as search keys for extracting the necessary product groups, and as aggregate keys for grouping similar products together for data analysis.

The JICFS-classification is revised as necessary.

Table 2.4-1 Number of Registered Products

	2024	2023	2022	2021	2020	2019	2018
Food	2,077,459	1,998,630	1,921,582	1,842,309	1,766,776	1,688,487	1,628,262
Commodity	1,190,102	1,145,897	1,097,244	1,032,509	976,486	937,338	897,873
Recreation and miscellaneous	888,264	848,880	803,756	738,773	695,942	653,634	616,509
Durable goods	635,924	576,124	556,217	515,591	485,633	459,415	406,105
Apparel, personal items & sporting goods	676,663	610,669	556,732	480,251	430,390	397,709	367,305
Others	3,058	3,062	3,072	3,080	3,092	3,111	3,123
Active item total	**5,471,470**	**5,183,262**	**4,938,603**	**4,612,513**	**4,358,319**	**4,139,694**	**3,919,177**
Inactive data	3,104,154	3,104,154	3,104,154	3,104,154	3,104,154	3,104,154	3,104,154
Grand total	**8,575,624**	**8,287,416**	**8,042,757**	**7,716,667**	**7,462,473**	**7,243,848**	**7,023,331**
Increase in number of items (year-on-year)	288,208	244,659	326,090	254,194	218,625	220,517	270,851
Rate of increase (year-on-year)	103.47%	103.04%	104.22%	103.40%	103.02%	103.14%	104.01%

Table 2.4-2 JICFS Classification Code System <Example:110109:Salt>

Food	Processed Food	Seasonings	Table Salt
(Broad category)	(Main category)	(Sub-category)	(Sub-sub-category)
1	1	01	09

2.5 GS1 Japan Data Bank (GJDB) -Party and Location-

In 2006, GS1 Japan created the GLN database.

Eighteen years have passed since the service was launched, and during that time, requests have been received from users such as, 'I want to be able to easily register and update information through just the website' and 'I want to be able to accurately register the addresses of our overseas offices' .

GS1 Japan has responded to these requests and renewed the GLN database to make GLN registration and management even more convenient, and in April 2024, the service was transferred to the GS1 Japan Data Bank (GJDB) -Party and Location-.

As of June 2024, there were approximately 140,000 GLNs registered in the GJDB -Party and Location- (including data transferred from the database prior to the renewal).

The potential applications of the GJDB -Party and Location- are as follows.

1. Easy assignment of GLNs

GLN may be set up easily by following the following procedure.

a. Select the GS1 Company Prefix that has been allocated

b. Select the GLN type

c. Enter the location reference

d. Click on 'Check digit setting'

e. Click on 'Begin using GLN'

2. Accurate GLN Management

Duplicate GLNs can be avoided by managing them using the system. By using it as a registration ledger, it is possible to avoid uncertainties regarding which GLNs were assigned to what products, which may arise due to the member of staff who manages GLNs leaving the company, or the loss of the ledger that manages GLN data.

3. Seamless Integration with Databases in Japan

As the GLN data registered in the GJDB -Party and Location- is made public via the GLN Information Search Service managed by GS1 Japan, it is possible to smoothly share information with business partners and other parties.

The GJDB -Party and Location- may be accessed from a portal site for businesses that have been allocated a GS1 Company Prefix by GS1 Japan.

Figure 2.5-1 Illustration of New GLN Registration Screen

2.6 Verified by GS1

GS1 believes that, in a digitised society, it is important to manage not only information about businesses that have been allocated a GS1 Company Prefix but also GS1 identification codes, such as GTINs set by those business operators. Hence, in 2019, GS1 began providing the GS1 Registry Platform (GRP).

GRP currently stores information on businesses that have been allocated GS1 Company Prefixes through GS1 member organisations in over 110 countries and regions, as well as information related to GTINs and GLNs set by those businesses and also links to other sources of data with any GS1 key.

The name of the service that references the information stored in this GRP is 'Verified by GS1'.

GS1 Japan has created a Japanese version of Verified by GS1 based on the Verified by GS1 service provided by GS1, and in March 2022, began providing a service that can be used from the GS1 Japan website.

Figure 2.6-1 Screen image of 'Verified by GS1' after the functional upgrade

At the time the service launched, the user was able to reference basic information on the product associated with an entered GTIN, as well as information about the business that registered the GTIN.

In November 2023, GS1 Japan followed up on the functional enhancements of Verified by GS1 provided by GS1, adding the following functions and making overall improvements accordingly.

1. Verify Product (existing function)

   By querying a GTIN that has been entered, the user can reference the basic information on a product and the information for the business that registered the GTIN.

2. Verify Location/party (newly added function)

   By querying a GLN that has been entered, the user can

reference information on the business that registered the business and location data.

3. Verify other keys (newly added function)

   By querying any GS1 key that has been entered, the user is able to reference information on the business that registered the GS1 key.

4. Find company (newly added function)

   By querying the name of a business operator that has been entered, the user is able to reference information on the business that has been allocated the GS1 Company Prefix.

Figure 2.6-1 shows a screenshot of Verified by GS1 after the functional upgrade has been completed.

At present, Verified by GS1 is available to all free of charge, and users can conduct a maximum of 30 queries per day.

In October 2024, users will be able to conduct an additional 30 queries per day by logging onto the GS1 Japan portal site.

In addition, a service that will allow users to reference information more efficiently on businesses that have been allocated the subject GS1 Company Prefix is being planned.

2.7 GPC Translation and OECD product recall portal

Global Product Classification (GPC) is a product classification developed and managed by GS1.

GPC is a required attribute when registering product information into the data pools of the Global Data Synchronisation Network (GDSN). As of June 2024, the development of 43 broad categories, including Food/Beverage, Tobacco/Cannabis, Kitchenware and Tableware, Beauty/Personal Care/Hygiene, and Pet Care/Food, have been completed and released on the GS1 website (www.gs1.org/standards/gpc).

Localisation has been progressing, with translations into 27 languages including Japanese available on the GS1 website.

Recently, there have been increasing demand to use GPC for other purposes than GDSN. The recall portal website managed by OECD has adopted GPC for its product categorisation.

The aim of this portal site is to facilitate the efficient sharing of international product safety information in multiple languages, as a response to current trends in global trading. The portal site started operation in October 2012 in English and French, with the participation of the U.S., Australia, Canada, and countries in the EU. Japan also joined in January 2015, providing product recall information on Japanese products, as well as adding a link to the Japanese-language version on the home page of the site.

We expect the more recall-related information is supplied by OECD members to this site, the more GPC utilisation will expand.

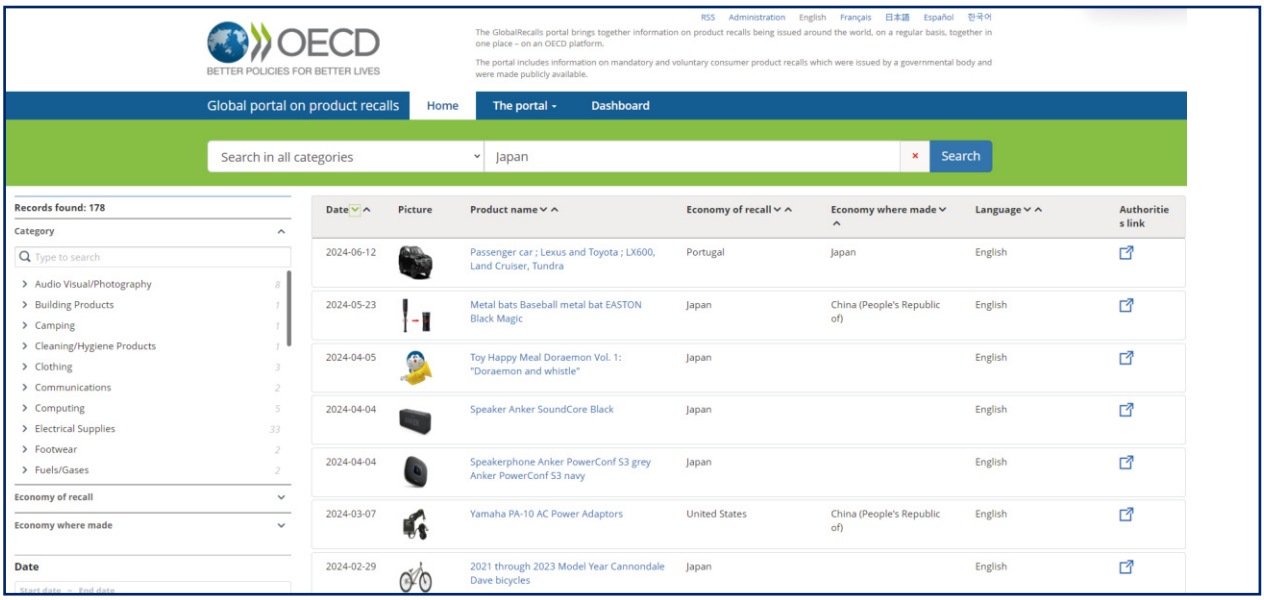


Figure 2.7-1 The Global Recalls portal showing Japanese products subject to recall

2.8 Ryutsu BMS (Business Message Standards)

The use of EDI in Japan's retail sector started with the adoption of the Electronic Ordering System (EOS) using the **JCA Protocol**, a standard data communication protocol that was drawn up in 1980 by the Japan Chain Stores Association (JCA). Since the 1990s, EDI has also been adopted for business processes other than ordering.

Furthermore, **Ryutsu** Business Message Standards (Ryutsu BMS) were established in the 2000s based on Efficient Consumer Response (ECR) and Quick Response (QR) procedures with the aim of improving information sharing between retailers and suppliers.

JCA Protocol: The standard communications protocol for electronic ordering, this was established in 1980 by the Japan Chain Stores Association (JCA). The communication circuits available for this protocol are public circuits (2,400 bps) and DDX circuits (9,600 bps). It cannot transmit kanji characters and images. DDX circuits are packet type communication services that use telephone lines.

Ryutsu: This Japanese word refers to the entire supply and demand chain, which typically consists of three groups in the form of manufacturers, wholesalers, and retailers.

2.8.1 Development of Ryutsu BMS

Drawn up in 1980, the JCA Protocol became widespread as an EOS for retail businesses.

In the 1990s, the business procedures covered by EDI expanded from EOS to the shipping and receipt of goods, invoicing, and payments. However, from the late 1990s to the early 2000s, the system was found to have the following problems.

- Low speed
- Inability to deal with kanji characters and images
- Discontinuation of necessary communication equipment
- Difficulty in adding new data fields due to fixed length data format
- Differences in message formats from one retailer to the next

Concerned about this situation, two Japanese supermarket organisations agreed to cooperate and started developing a next-generation EDI in June 2005. With the support of the Ministry of Economy, Trade and Industry (METI), Ryutsu BMS was created as the new EDI standard in April 2007. Ryutsu BMS is now being increasingly adopted throughout the Japanese retail industry.

2.8.2 Outline of Ryutsu BMS

Ryutsu BMS defines the following.

1. Communication infrastructure

   There are three standard communication protocols for exchanging Ryutsu BMS messages.

   - Server-to-Server Protocols: ebMS and AS2
   - Client-to-Server Protocol: **JX Protocol**

     In addition, guidelines for secure internet communications have been prepared, and the use of a certificate authority that meets the requirements of the guidelines is recommended.

   JX Protocol: A communications protocol for sending and receiving messages from a client terminal to a corresponding server on a TCP/IP network. Using the international SOAP-RPC standard, the protocol delivers functions that are equivalent to those of the J Protocol. The JX Protocol has become the standard communications protocol for exchanging EDI messages between clients and servers within Ryutsu BMS.

2. Standard messages

   There are two types of message collections.

   - Basic messages

     Intended for use at supermarkets, chain drug stores, and the like, 28 basic messages were published based on the Order to Cash business model.

   - Department store messages

     Japanese department stores have unique transaction models that differ from those used by other retailers. For example, they register a merchandise purchase when the merchandise has actually been sold.

     Therefore, department stores use 27 unique messages in their transactions.

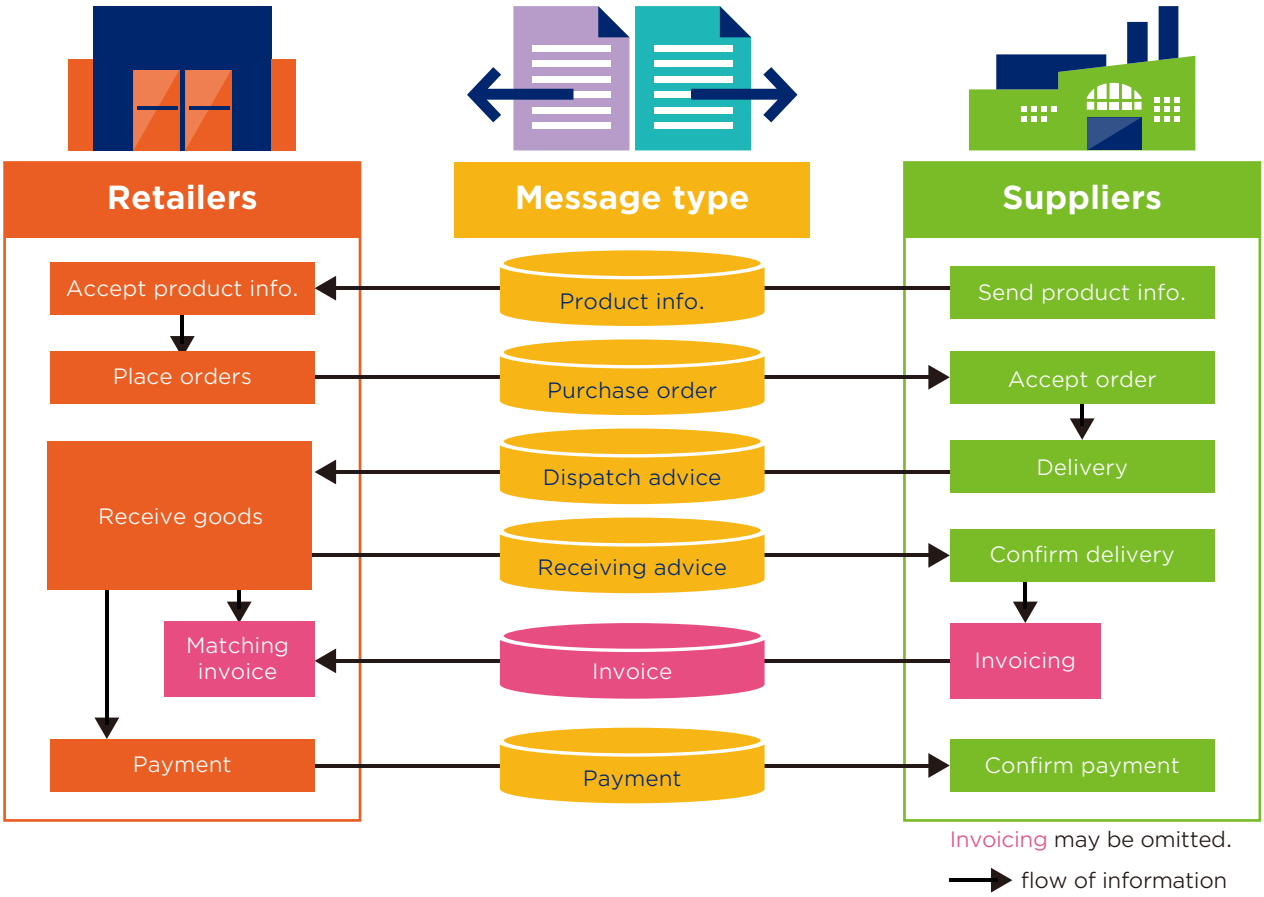


Figure 2.8.2-1 Typical turnaround business processes and Ryutsu BMS messages between retailers and suppliers

- Message upgrade

  In Japan, the current input tax credit system was changed in October 2023, and the 'qualified invoice based method' was implemented.

  Ryutsu BMS has been modified and released to meet the requirements.

2.8.3 Efforts to promote Ryutsu BMS

GS1 Japan, together with the Supply Chain Standards Management and Promotion Council (see 3.2), has been taking various efforts to encourage the wider use of Ryutsu BMS.

- Trainings and seminars:

  GS1 Japan offers a wide range of training courses, from introductory courses to advanced implementation courses. Some of these courses are available as e-learning. We also hold seminars to introduce best practices to Ryutsu BMS users and solution providers.

- Promotional materials:

  Flyers, brochures, and videos have been made available to anyone interested in Ryutsu BMS. We also operate a dedicated Ryutsu BMS website that is constantly kept up to date.

2.8.4 User commitments to Ryutsu BMS

By 2024, about 600 retailers and 20,100 wholesalers and manufacturers had already adopted Ryutsu BMS.

3. Community engagement and standards implementation

3.1 GS1 Japan Partners

In April 2015, GS1 Japan launched GS1 Japan Partners (GJP), a program mainly for solution providers. This program is aimed at sharing information on the latest systematisation trends and case studies while also utilising GS1 standards to promote the systematisation of information and greater efficiency in the overall distribution industry.

In FY2023, the program had 107 members, including many of Japan's leading solution providers (Table 3.1-1).

Table 3.1-1 Membership breakdown (as of March 2024)

Sales [unit: JPY]	No. of members
Less than 1 billion yen	47
1 billion – 10 billion yen	29
10 billion – 1 trillion yen	29
1 trillion yen and above	2
Total	**107**

Table 3.1-2 Seminars held in FY2023

Date	Events	Topics
May 2023	1st Special Seminar	• Reading the State of Distribution and Consumption Today - Focussing on Food and Department Stores
Jun 2023	2nd Special Seminar	• Expanding Use of 2D Symbols: Focussing on Standard Trends and Case Studies • METI Project Overview of the 'Maizuru Department Store Pilot Study'
Aug 2023	3rd Special Seminar	• Progress of Studies on Improvement of Logistics Efficiency at the Collaborative Council of Manufacturers, Wholesalers, and Retailers
Oct 2023	4th Special Seminar • The Growing Need for Supply Chain Visibility and Traceability	• Traceability as a Solution to Problems Regarding the Ocean • Introduction to EPCIS/Pilot Study to Improve Efficiency of Logistics Operations Based on EPCIS Visualisation Data
Nov 2023	5th Special Seminar	• Latest Trends for GS1 Company Prefix • Trends and Future of Domestic and Overseas Product Information Databases • Termination of GEPIR Service - Introducing the New 'Verified by GS1' Service - • Toward Common Use of Product master data - Toward Use of GJDB -
Feb 2024	Open Seminar • Mobile Seminar 2023 (Business Process Re-Engineering in an Omni-Channel Environment Using GS1 Standards) (refer to 3.9.2)	• About 'Green Beans' Fresh Food Delivery Service – An Initiative of AEON Next Co., Ltd. - • Increasing Use of GS1 Standards in Online Sales Around the World • Industry-wide Product master data 'J-MORA' - Radical Change at the Forefront of Product master data through Generative AI -

GS1 Japan
GS1 Japan パートナー会員

GS1 Japan
GS1 Japan パートナー会員

3.2 Supply Chain Standards Management and Promotion Council

The Supply Chain Standards Management and Promotion Council was founded in April 2009 by various industry groups and businesses to help promote an efficient supply chain information system in Japan's retail sector.

The activities carried out by the council include maintaining and promoting Ryutsu BMS (see 2.8), which was initially developed with the support of the Ministry of Economy, Trade and Industry. At present, GS1 Japan serves as the council's secretariat.

The council held its inaugural General Assembly in Tokyo in April 2009. The council's full members consist of trade associations for manufacturers, distributors, and retailers in the consumer goods industry. As of May 2023, the council is composed of 47 full member organisations. In 2023, the council is being operated under the following structure.

3.2.1 Organisational structure

1. General Assembly

   Once a year, the council holds its General Assembly to share and confirm its activity results for the previous fiscal year and approve its agenda for the new fiscal year. In addition, the officers of the council are appointed at the General Assembly to serve two-year terms.

2. Executive Committee

   The role of the Executive Committee includes making important decisions concerning the management of the council, such as admitting new members, establishing and discontinuing working groups, and appointing working group members. As of 2023, the committee is composed of representatives from 16 full member organisations.

3. Working groups (task forces)

   The council has the following three working groups (Figure 3.2.1-1).

   a. Message Maintenance Working Group

      This group maintains and manages Ryutsu BMS messages, except for product master data, as well as various guidelines.

      The group's work is conducted in response to requests from full members for changes or additions to the established standards.

      The group examines such requests, decides on the steps to be taken, revises the relevant guidelines, and then publishes them as a new standard.

   b. Technical Specification Working Group

      This group maintains and manages guidelines for the network technologies and information processing technologies that are used to exchange standard Ryutsu BMS messages via communications circuits.

   c. Promotion Working Group

      This group examines and implements steps aimed at encouraging the more widespread adoption of Ryutsu BMS among SMEs. The group also monitors 'off the standard usage' of Ryutsu BMS.

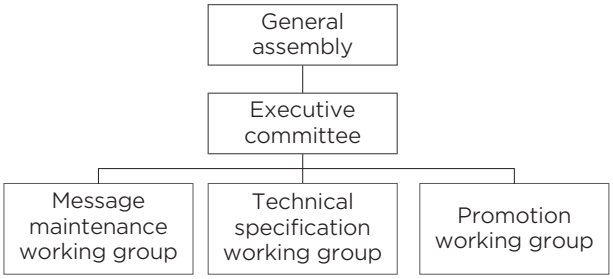


Figure 3.2.1-1 Organisational structure of the council

3.2.2 Activities for promoting and increasing the adoption of Ryutsu BMS

GS1 Japan and the council are working together to carry out various initiatives aimed at encouraging the more widespread adoption of Ryutsu BMS. For details, see 2.8.

3.2.3 Registration of the Ryutsu BMS trademark

GS1 Japan has registered the Ryutsu BMS logo for use with products and services that comply with Ryutsu BMS specifications. As of May 2023, 131 accredited products are permitted to use the logo.

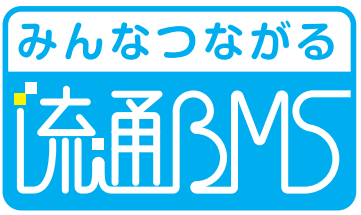


Figure 3.2.3-1 Ryutsu BMS logo

3.3 GS1 Healthcare Japan

GS1 Healthcare Japan is a voluntary group that is made up of domestic medical institutions, pharmaceutical and medical device manufacturers, wholesalers, and solution providers.

The group works with GS1 Healthcare, the Ministry of Health, Labour and Welfare, and other organisations to promote standardisation with the aim of ensuring patient safety, maintaining traceability, and enhancing efficiency in distribution and medical management.

As of May 2024, GS1 Healthcare Japan has 123 members.

3.3.1 Activities

The members of GS1 Healthcare Japan are actively engaged in three groups: the International Standards and Regulations Study Work Group; the Medical Solutions Study Work Group; and the Planning and Public Relations Group.

3.3.2 Activities of work groups

- **International Standards and Regulations Study Work Group**

  Research into trends in international regulations and standardisation, propel medical safety system installations to hospitals.

- **Medical Solutions Study Work Group**

  Promotion of GS1 standards as measures aimed at improving safety and supply chain efficiency throughout the entire medical industry.

- **Planning and Public Relations Group**

  Promotion of using GS1 standards to medical institutions.

3.3.3 Topics in 2023/2024

GS1 Healthcare Japan holds its annual conference every spring to share case studies of GS1 barcode usage at medical institutions and the latest regulatory information.

This year's conference was held through a combination of online and face-to-face events. At the conference, six speakers from medical institutions and other healthcare-related organisations that have implemented GS1 standards gave lectures and participated in panel discussions. Some of the GS1 Healthcare Japan members exhibited their medical products at the event venue, which facilitated matching between the manufacturers and healthcare service providers.

This event attracted 817 attendees on the day itself, and the streaming views increased this number to 854 later dates. Those attendees were from medical institutions, medical device manufacturers, pharmaceutical companies, automatic identification technology-related companies, and others. The conference was generally very well received by those who attended.

We remain committed to actively sharing information related to the utilisation of GS1 standards.

3.4 ICT-Oriented Wholesale Industry Study Group

With GS1 Japan acting as its secretariat, the ICT-Oriented Wholesale Industry Study Group was established in August 1985 in accordance with instructions issued by the Ministry of Economy, Trade and Industry (METI).

The purpose of this group is to promote the rationalisation of the wholesale industry. To this end, member wholesale companies take the lead in studying common issues every year.

Wholesalers play a major role in Japan's supply chain system since most manufactured products are delivered to retailers through wholesalers.

This study group is operated primarily by wholesalers dealing in fast-moving consumer goods (FMCG) in a variety of different industries (foods, household products, etc.). It has 43 members as of June 2024.

The group is further divided into several sub-working groups according to themes related to the interests of its members, with each sub-working group holding monthly meetings.

In line with its mission of pursuing 'Transformation into Next-generation Wholesalers', the study group worked on the following six topics in FY2023.

1. Improving efficiency of wholesale logistics for

the next generation

2. Collaboration and co-creation in the wholesale industry, and the ideal next generation wholesaler
3. Digital transformation for the next generation wholesaler.
4. Core systems, infrastructure, and information security for the next generation wholesaler.
5. The ideal state of the information system department of the wholesale industry, and reskilling.
6. Data management for the next generation wholesaler.

3.5 Collaborative Council of Manufacturers, Wholesalers, and Retailers

The Collaborative Council of Manufacturers, Wholesalers, and Retailers (herein under the council) was formally established in May 2011 with 43 member companies, with the aim of improving global competitiveness and contributing to a more prosperous lifestyle through the pursuit of extensive innovations and improvements to supply chain management in the consumer product industry. As of June 2024, 54 companies are participating in the council.

GS1 Japan and the Distribution Economics Institute of Japan (DEIJ) jointly serve as the council's secretariat.

Since its launch, the council has received continuous support from the Ministry of Economy, Trade and Industry (METI).

The council employs a three-tier structure that consists of the following: general meetings, steering committee meetings, and working group meetings. The outcomes of the working groups are reported at the annual general meeting.

3.5.1 Recent Activities of the Council

Recent major topics that the council has studied during its activities have been the identification of logistics issues and their resolution in order to realise a 'physical internet'.

The physical internet, conceptually applied the internet communications to logistics, is a new logistics, and joint transportation-and-delivery system. For its realisation, digital technology utilisation is indispensable in order to visualise the availability of goods, warehouses, and vehicles, and to establish a network in which multiple companies can share logistics assets such as standardised transportation containers, logistics depots, and delivery trucks.

In FY 2023, four working groups were established to cover the following topics.

- Maintain various master data such as product catalogues and business location databases.
- Standardise Returnable Transport Items ('RTI'; referred to as 'Smart Box') and discuss how to operate them.
- Review business practices that prevent ultimate open joint logistics.
- Standardise various data formats and make rules for their operation in order for effective data sharing.

The council is carrying out discussions towards the identification of issues and measures to solve them. The Action Plan compiled in FY 2021 aims to achieve the physical internet by 2030. At the general meeting held in July 2024, the Declaration of Action Towards the Realisation of the Physical Internet was announced, which summarises the content to be implemented by the end of FY 2025.

3.6 Study Group for Information Systems in Food, Beverage, and Alcohol Industry

It is important for food producers to cooperate with wholesalers, as they are positioned between retailers and the product manufacturers.

This voluntary study group for liquor and processed food businesses was established in 1983 with the aim of conducting studies to identify the most appropriate information systems for use.

The study group consists of 51 Japanese leading companies in the processed food, marine product, and liquor industries.

GS1 Japan serves as the group's secretariat.

It holds regular quarterly meetings to introduce best practices for the pursuit of information systemisation by its members.

It also organises seminars where outside lecturers are invited to discuss the latest topics and conducts study tours of pioneering businesses.

Figure 3.6-1 Regular meeting

3.7 User support

GS1 Japan offers various training and e-learning courses so businesses can better understand GS1 standards.

The following are being offered as scheduled seminars and e-learning courses:

1. Introduction to Barcodes
2. Introduction to EPC/RFID
3. Introduction and Implementation of Ryutsu BMS
4. Introduction to EPCIS
5. Introduction to GS1 Digital Link
6. Technical Seminar on EPC Encoding/Decoding
7. Introduction to Barcodes for Prescription Drugs and Medical Devices

3.7.1 Introduction to Barcodes

This regularly scheduled online course is mainly intended for businesses that have newly acquired or are considering acquiring a GS1 Company Prefix.

By attending this course, participants will acquire a basic knowledge of GTIN-13 and of how to display it on products, as well as basic knowledge of GTIN-14, which is required at many logistics sites.

In some cases, courses are also held in response to requests from businesses requiring barcode compliance from their suppliers or local governments wanting to promote barcodes to expand their sales channels.

In addition to the above courses, we also offer an e-learning program that allows participants to learn the basics of barcoding without being restricted by time or location.

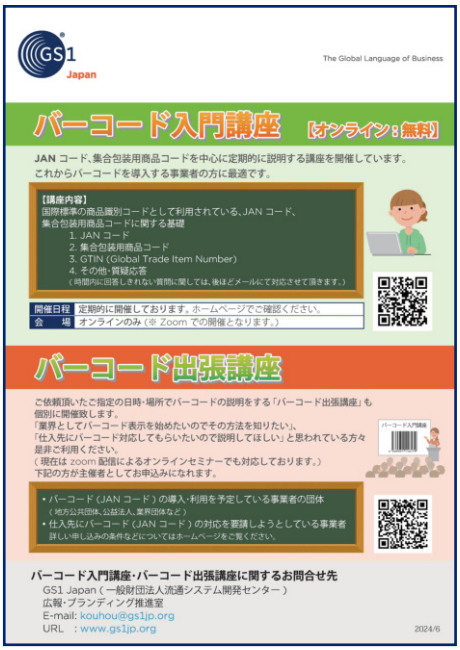


Figure 3.7.1-1 Introduction to Barcodes flyer

3.7.2 Introduction to EPC/RFID

This program is intended to give newcomers to EPC/RFID an understanding of approaches to the utilisation of EPC/RFID. Participants are expected to learn about the characteristics of RFID, case studies on the successful implementation of EPC/RFID systems, GS1 EPC/RFID standards, and other related information. This seminar is held regularly four times a year.

3.7.3 Introduction and Implementation of Ryutsu BMS

The program 'Introduction of Ryutsu BMS' explains EDI from the basics through to an outline of Ryutsu BMS, the results of implementation, and more.

This program is intended for persons related to CPG supply chains, especially persons newly assigned to information system departments or who are considering introducing Ryutsu BMS.

In addition, it is also useful for solution providers or consultants when supporting user companies.

The e-learning course called 'Introduction to Ryutsu BMS' offers participants to learn the basics of Ryutsu BMS online.

As the next step after Introduction to Ryutsu BMS, another e-learning course called 'Ryutsu BMS Implementation Course' is also offered. This course explains the key points in effectively introducing Ryutsu BMS while complying with the standard specifications.

3.7.4 Introduction to EPCIS

This course explains the concepts behind supply chain visibility systems using the EPCIS and Core Business Vocabulary (CBV) standards (collectively referred to below as the 'EPCIS standards').

Expected participants for this course are anyone who is interested in the supply chain visibility, and this course does not require any background knowledge of computer systems.

The following is explained during the course: background knowledge of GS1 systems; core concepts of the EPCIS standards; use cases; and basic methodology for visibility system design using the EPCIS standards.

3.7.5 Introduction to GS1 Digital Link

This program is designed to give an overview of GS1 Digital Link to participants who do not know anything about GS1 Digital Link but are interested in it.

Expected participants for this program are from any type of business, including brand owners and solution providers.

The course firstly shows the core concepts of GS1 Digital Link, then explains how it works in an easy-to-understand way. Finally, the course introduces some envisaged use cases and existing case studies on GS1 Digital Link.

3.7.6 Technical Seminar on EPC Encoding/Decoding

The objective of this course is for participants to become able to understand the procedures to encode and decode the memory contents of EPC/RFID tags based on the EPC Tag Data Standard (TDS).

Expected participants for this course are technical engineers at RFID solution providers.

Recently, we have significantly revised the contents of this seminar in order to provide information on the new encoding system introduced in the TDS 2.0 published in August 2022.

The existing course, which describes the encoding schemes introduced in the previous TDS Release 1.x, is also available.

This course is one of our membership services for member companies of the GS1 Japan Partners program. Staff at member companies can take this course for free.

3.7.7 Introduction to Barcodes for Prescription Drugs and Medical Devices

This program provides practical knowledge about the guidelines released by the Ministry of Health, Labour and Welfare (MHLW), which specifies barcode marking rules for prescription drugs and medical devices. This program is designed for people working at drug or medical device manufacturers, wholesalers, medical service providers and related solution providers.

3.8 Publications and PR tools to promote GS1 standards

3.8.1 Guidelines

GS1 Japan has been providing materials about the GS1 standards to retailers, wholesalers, products manufacturers, and solution providers.

This information is published in order to promote the GS1 standards, and most of the materials are also available on our website.

The following are examples of our current publications:

3.8.1.1 JAN symbol marking manual

This manual explains the technical basics of EAN (called 'JAN' in Japan) symbols, such as their structure, size, and colour, as well as some examples of practical symbol creation to avoid

the creation of incorrect symbols which take a long time to or are difficult to read. The manual is intended not only for brand owners who are responsible for displaying EAN symbols, but also for companies providing equipment and services related to printing, acquiring and verifying symbols.

Figure 3.8.1.1-1 JAN symbol marking manual
www.gs1jp.org/code/jan/jan_marking_manual.html

3.8.1.2 Barcode guidelines for UDI

With regard to barcode labelling of medical devices, there are subtle differences between the GS1 standards and the rules of each country, including Japan. As barcodes are increasingly used for the import and export of products, it is important for brand owners to correctly understand the regulations and industry rules of each country in addition to the international GS1 standards. This guide provides basic information about the GS1 standards as well as points to note when distributing healthcare products in Japanese markets. Furthermore, it provides fundamental information to exporters about FDA UDI regulations in the US.

Figure 3.8.1.2-1 Barcode guidelines for UDI
www.gs1jp.org/group/gshealth/guide-tools/guide.html

3.8.1.3 Let's Scan —Barcodes on pharmaceuticals make work efficient and safe—

Let's Scan, a manga (cartoon) promoting the use of GS1 barcodes, explains in simple terms the benefits of using GS1 barcodes in healthcare institutions, such as preventing medication mix-ups, managing checks when mixing orders and correcting medication errors.

Figure 3.8.1.3-1 Let's Scan —Barcodes on pharmaceuticals make work efficient and safe—
www.gs1jp.org/group/gshealth/guide-tools/tools.html

3.8.1.4 GS1 QR code/GS1-128 barcode guidelines for carton cases

These guidelines outline the rules and provides useful information for utilising GS1 QR codes or other GS1 standard barcodes to encode GTIN, date information (production, best-before and expiry date) and lot numbers on carton cases.

It has been developed to enable the efficient management of date information for packaged consumer goods, including processed foods requiring strict FIFO inventory control.

Figure 3.8.1.4-1 GS1 QR code/GS1-128 barcode guidelines for carton cases
www.gs1jp.org/standard/barcode/gs1-qr/carton/

3.8.1.5 Source marking guideline for raw materials

These guidelines define standard data items such as GTIN, lot number and date information (e.g. expiry date) to be displayed, as well as recommended barcodes for raw materials. We hope that these guidelines will encourage the use of barcodes with globally unique identification (i.e., without any duplicates) anywhere in the world, helping make supply chains more efficient and improve food safety and security.

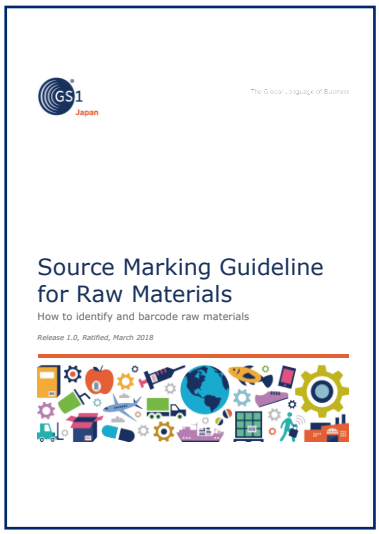


Figure 3.8.1.5-1 Source Marking Guideline for Raw Materials
www.gs1jp.org/standard/industry/upstream/

3.8.1.6 GS1 Barcodes Basic Guide

This guide is a significant revision of 'GS1 AIDC standards conformity check guide' providing

Figure 3.8.1.6-1 GS1 Barcodes Basic Guide
www.gs1jp.org/standard/barcode/

technical information on GS1 identification codes and GS1 barcodes.

It contains essential information for companies manufacturing and selling barcode-related equipment and users utilising GS1 barcodes.

3.8.2 Periodical Publications

We also issue two periodical publications: GS1 Japan News and GS1 Japan Review.

GS1 Japan News is issued six times per year and provides the latest information about GS1

Figure 3.8.2-1 GS1 Japan Review
www.gs1jp.org/seminar_book/publication/gs1japanreview/

standards, events and trends in industry standardisation. GS1 Japan Review is issued twice a year and provides more detailed information, including case studies, in addition to the above.

Figure 3.8.2-2 GS1 Japan News
www.gs1jp.org/seminar_book/publication/gs1japannews/index.html

3.8.3 Videos and GS1 Japan Scan mobile app

Addition to the above, GS1 Japan creates educational videos about GS1 standards,

Figure 3.8.3-1 QR code for the video URL
www.gs1jp.org/seminar_book/movie/index.html

including EAN and ITF symbols, GTIN, EPC/RFID, GS1 Healthcare, and Ryutsu BMS.

Besides those videos, we also have created many other informative educational videos that are mostly used during seminar programs.

All the videos are available both on our website and the GS1 Japan YouTube channel. (www.youtube.com/channel/UCWaw3zjmvvjytr0x4kLK1hw)

Moreover, in 2018 GS1 Japan has developed a mobile app called 'GS1 Japan Scan' to promote the utilisation of the GS1 standards.

This app allows users to easily check their products' barcodes to provisionally find if they meet GS1 standards and the Japanese industry rules for medical devices, pharmaceuticals, or food raw materials.

Figure 3.8.3-2 GS1 Japan Scan
www.gs1jp.org/seminar_book/application/index.html

3.9 Events

GS1 Japan organises and sponsors various events. Key events are introduced below.

3.9.1 GS1 Japan Annual Seminar

Every year in December, we hold the GS1 Japan Annual Seminar meeting at the Meiji Kinenkan reception hall, which is usually attended by more than 300 people from various organisations and companies.

At the meeting, industry leaders give special speeches and annual awards are presented to organisations and persons who made outstanding contributions.

3.9.2 Mobile Seminar 2024

To promote GS1 standards in B2C environments, GS1 Japan has been holding seminars for several years. It has been endorsed by a wide range of industrial bodies, such as Japan Retailers Association (JRA), National Supermarket Association of Japan (NSAJ), Japan Automatic Identification Systems Association (JAISA), Mobile Computing Promotion Consortium (MCPC), Mobile Content Forum (MCF), and Japan Academic Society of Direct Marketing (JASDM).

Mobile Seminar 2024 was held on 9 February 2024. It was attended by 80 representatives from

both brick-and-mortar and online retailers, as well as from manufacturers.

The seminar's theme was 'Business Innovation in the Omnichannel Environment Utilising GS1 Standards in 2023'. The following three lectures were given at the event.

- Fresh food home delivery service by AEON Green Beans

  Mr. Mitunori KOMABA (IT manager, AEON Next Co, Ltd.)

- Expanding adoption of GS1 e-commerce standards throughout the world

  Mr. Hideki ICHIHARA (GS1 Japan)

- JMORA, a catalogue service for industrial common products; the latest trend in product catalogue services, which are being dramatically changed by generative AI

  Mr. Shuichirou IMAMURA (CEO, Imamura Corporation

The seminar proved a great success. Participants could learn about the importance of marketing functions in B2C and GS1 standards in B2C, and the latest trends in business practices. GS1 Japan will continue holding such seminars to help promote GS1 standards on B2C.

Figure 3.9.2-1 Seminar venue

3.9.3 EPC RFID FORUM

GS1 Japan and the Auto-ID Laboratory Japan (Keio University) have jointly hosted this periodic forum, aiming to promote the widespread use of EPC/RFID and to encourage its appropriate usage.

In September 2023, the 18th forum was held in hybrid format, with both online and in-person participation. 'Expanding the use of RFID: distribution, logistics, healthcare, and construction' was the main theme, and presenters from each industry were invited to give lectures. Presentations on RFID use cases and demonstrations were given, relating to prevention of errors, responding to labour shortages, joint deliveries, and improving operational efficiency.

The forum was successful, with approximately 400 participants. (100 in-person participants and 300 online participants.) Since the webcast was well received by participants, we will continue to make the content of the forum available to view online, as well as offering in-person attendance.

3.9.4 RETAILTECH JAPAN 2024

RETAILTECH JAPAN is an annual four-day trade show held by Nikkei Inc., which specialises in retail information systems. GS1 Japan supports the show as a special collaborator.

With keywords such as AI and data utilisation, e-commerce and digital marketing, logistics and IoT, and IT solutions, more than 200 exhibitors showcase cutting-edge retail information technology.

The latest conference, RETAILTECH JAPAN 2024 (held 12–15 March 2024) attracted 86,954 visitors, around 10 thousand more than in 2023.

GS1 Japan set up a joint booth with the 'Supply Chain Standards Management and Promotion Council' to actively promote Ryutsu BMS and GS1 standards (refer to 3.2).

In a seminar zone that we set up inside the booth, we held mini seminars on GS1 standards, and offered members of the GS1 Japan Partners program an opportunity to promote their solutions.

Figure 3.9.4-1 GS1 Japan booth at 'RETAILTECH JAPAN 2024'

3.9.5 RETAILTECH OSAKA 2023

Starting in 2021, RETAILTECH OSAKA has been held regularly over a two-day period each year, and GS1 Japan has exhibited at each of these events.

This year, we demonstrated the benefits of GS1 standards at RETAILTECH OSAKA 2023 (held 20-21 July 2023), explaining the utility of EPC/RFID standards and the benefits and future development of 2D barcodes at POS.

Figure 3.9.5-1 GS1 Japan booth at 'RETAILTECH OSAKA'

3.9.6 Discover GS1 2024

This year marks the 50th anniversary of the world' s first scan of a GS1 standard barcode at a retail store, and to celebrate, GS1 Japan hosted 'Discover GS1 2024' on the 4th and 5th of March.

The event title 'Discover' carries two meanings: (1) the discovery of GS1 standards, and (2) the discovery of new solutions through GS1 standards.

The event was designed to help participants learn about Identify (GS1 identification keys and attributes), Capture (GS1 data carriers like barcodes and EPC/RFID tags) and Share (like EPCIS and GS1 Digital Link). We intended that user companies would 'discover' through this event that the GS1 standards are 'USEable' .

The sessions for this event are listed in Table 3.9.6-1.

Day 1 started with a plenary session on 'What GS1 standards are needed in today's business?' , followed by seminars that introduced the benefits of using GS1 standard data carriers (barcodes and EPC/RFID tags) to represent GTIN + attribute data, along with real-world implementations in the healthcare and grocery sectors.

On Day 2, the focus shifted to GS1 identification keys other than GTIN, the integration of GS1 standards with the web through GS1 Digital Link, and EPCIS, the standard for sharing and exchanging information about the movement of goods across the entire supply chain. The final session of the event introduced a pilot project on

Table 3.9.6-1 The sessions of 'Discover GS1 2024'

Discover GS1 2024

Day 1	Day 2
What GS1 standards are needed in today' s business?	What are GS1 Identification Keys, which can identify various targets?
The transformation from GTIN alone to GTIN + attribute data	GS1 Digital Link—connecting GS1 Identification Keys to the web
Make the most use of GS1 standard barcodes and EPC/RFID tags!	EPCIS, the GS1 standard for supply chain visibility
	Learn the fundamental GTIN management rules
Case study of GS1 2D symbols applications for food ingredients and trade item grouping	Dive deeper into GTIN management rules
What is '2D in Retail' —next generation barcode—	(For Engineers) ALL OF GS1 SYNTAX
Understanding the rules of GS1 2D symbols usages in the grocery sector	EPC/RFID tags —cross-industry applications and the importance of standards
Trends in GS1 standards utilisation in the healthcare sector	Pilot of logistics visualisation using various GS1 standards by major processed food manufacturers

future-oriented logistics visibility, leveraging various GS1 standards discussed over the two days.

Meanwhile, a basic session was provided for those just starting to utilise GTINs or those who wanted to review the fundamental rules. Additionally, the session 'ALL OF GS1 SYNTAX' offered detailed explanations to engineers on the three syntax types: GS1 element string syntax, GS1 Digital Link URI syntax, and EPC syntax.

4. About GS1 Japan

4.1 Overview

GS1 Japan was originally founded in 1972, mainly through the efforts of the then Ministry of International Trade and Industry (now the Ministry of Economy, Trade and Industry [METI]) as the Distribution System Research Institute (DSRI), a non-profit organisation for promoting the introduction of distribution systems. Since then, we have been striving to rationalise and increase the efficiency of supply chains. For our first mission, we conducted studies into the standardisation of national product codes for apparel and groceries. We began working to develop a system of standard product codes and symbols for Japanese industries by studying and incorporating systems that had already been standardised in both Europe and the US. In 1978, we were accepted as the first non-European member of the EAN Association.

In the latter half of the 1970s, we paved the way to adopting the EAN system in Japan, starting with the incorporation of EAN symbols in the Japanese Industrial Standards (JIS). The feasibility of source marking was tested with the cooperation of Kikkoman Corporation (a soy sauce manufacturer), Coca-Cola (Japan) Company, Limited, and Kai Corporation (a cutlery manufacturer), while retailers began conducting storefront practical demonstrations of the POS system.

In the 1980s, Jusco Co., Ltd. (now AEON Co., Ltd.), Co-op supermarkets, and other retailers conducted pilots of the POS system. We held many seminars on the EAN system and the POS system throughout Japan with the aim of encouraging stakeholders to adopt source marking.

One of the most remarkable milestones in expanding the use of source marking was the adoption in 1982 of the POS system by SEVENELEVEN JAPAN CO., LTD., a leading convenience store chain, at all of its stores (1,650 at the time, but this number had increased to about 21,200 by 2021). Another remarkable contribution to the widespread adoption of the POS system was the introduction of consumption tax in 1989. As our next step, we established study groups for selected industries in the 1980s to study business process improvements together with members of various industries. Members of the processed foods, sporting goods, consumer electronics, and books and magazines industries participated positively in the study groups. The study group for wholesalers was established under the leadership of representatives from various industries. These study groups soon began cooperating in the adoption of EAN standards.

In the mid-1980s, we launched the JAN Item Code File Service (JICFS; refer to 2.4), which contains cleaned and proofed product data that is useful in the collection and provision of POS data.

During the 1990s, we studied product codes, EDI messages, and other matters in cooperation with the apparel industry under a METI-funded study of the quick response (QR) system. Retailers used to assign their own proprietary codes to apparel products. Together with members of the apparel industry, we studied a way of encouraging the use of EAN source marking for apparel products.

This proved to be a success. Another notable accomplishment was the adoption of GS1-128 for the labelling of wooden crates containing various products for delivery to department stores. We then successfully developed the Japan EDI for Commerce Systems (JEDICOS), which is a standard for Japanese EDI messages, based on EANCOM to comply with Japanese business practices.

In the 2000s, a new business model was established in Japan that involved convenience stores acting as agencies for the receipt of public utility payments from customers. As a tool for realising this service, GS1-128 was adopted for public utility bills. Furthermore, the meat industry also decided to adopt GS1-128 for its standard labels for traceability. A means of identification is necessary not only for physical products but also for non-physical products.

In the latter half of the 2000s, GTINs were being employed to identify non-physical music streaming services, and online and mail-order companies began using GTINs for the identification and management of their products.

In 2017, we hosted the GS1 Asia Pacific Regional

Forum in Tokyo, which was attended by more than 80 people from GS1 GO and 18 AP MOs.

GS1 Japan celebrates its 50th anniversary in 2022.

4.1.1 EPC/RFID

Between 2003 and 2009, we supported METI's RFID pilot projects aimed at identifying and resolving issues related to the introduction of RFIDs in various industries (apparel, footwear, books, home appliances, international logistics, etc.). These efforts led to us building a foundation for the promotion of EPC/RFID.

Following the development of the EPC/RFID standards suite, we have been actively developing the industry's awareness of EPC/RFID, as well as striving for its adoption.

4.1.2 Healthcare

Since the late 1990s, we have carried out various initiatives in cooperation with the healthcare industry to utilise the GS1 system in healthcare fields.

In 2009, GS1 Healthcare Japan was established as a voluntary group for the promotion of GS1 standards in the healthcare sector.

4.1.3 New developments

In the area of EDI, we have created an XMLFormat EDI standard (Ryutsu BMS) that supports domestic business practices and we have been working to promote the use of this standard together with 49 trade organisations. In addition to the above, we have initiated the following new developments.

In 2015, we launched GS1 Japan Partners (refer to 3.1) with the aim of sharing information and best practices among solution providers.

4.2 GCP allocation by GS1 Japan

GS1 Japan joined GS1 in 1978 and obtained the GS1 prefixes '490 – 499'.

We subsequently applied for additional prefixes in 1992, obtaining the prefixes '450 – 459'.

Initially, we were allocating seven-digit GS1 Company Prefixes (GCPs), but since January 2001, we have started to allocate nine-digit GCPs, given the diffusion of GTIN usage rise and a recommendation from GS1.

To provide GCPs in a more appropriate manner for the effective use of GCP resources, we started to allocate 10-digit GCPs in 2021.

Currently, GS1 Japan generally allocates nine- or 10-digit GCPs to new applications.

70% of all applicants in FY2022 registration applications were allocated 10-digit GCPs.

4.2.1 Revision of the GCP Registration and Renewal System

In 2021, we implemented a major revision of the GCP registration and renewal system for the first time in 40 years since the launch of the system to respond to the changing circumstances surrounding GTIN.

There are three key points in the revision.

Firstly, we started to allocate 10-digit GCPs, as mentioned earlier.

Secondly, licensees can choose the term of their GCP license contract. The contract term available at the time of registration and renewal used to be for three years only, but the revision allows licensees to choose either one year or three years for their contract term when registering or renewing.

Thirdly, we annually provide licensees with their registration data and request that they keep it up to date and accurate.

The revision has enabled GS1 Japan to provide GCPs with the appropriate number of digits, effectively use code resources, and improve the accuracy of registered licensees' data.

4.2.2 GCP Registration Status

The top product categories handled by new licensees in the FY 2023 are as follows. (multiple choice)

1) Sundries (25%)

2) Processed foods (24%)

3) Apparel (12%)

4) Cosmetics and hairdressing products (11%)

5) Confectionery (10%).

Since 2009, the healthcare sector has accounted for a certain percentage, although not as high as other categories.

This is partly because the Ministry of Health, Labour and Welfare (MHLW) is promoting the labelling of GTINs and other information on medical devices and medical supplies with GS1 barcodes in addition to ethical drugs, which already have GS1 barcodes.

As of the end of April 2024, the number of GCP licensee reached 142,265.

The number of GCP licensee in Japan is expected to grow steadily, given the expansion of online sales channels and the increase of source marking in areas with previously low source marking rates, such as apparel and specialty products.

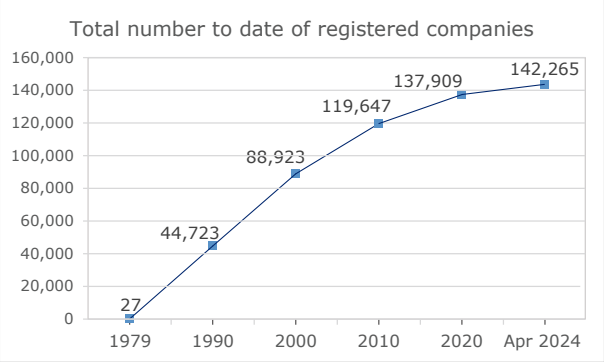


Figure 4.2.2-1 GS1 Company Prefix allocation

4.3 History

Year	Events
1972	DSRI (Distribution Systems Research Institute) is established. (Shinagawa-ward)
1973	'Supply Chain Information Network Models' is developed.
1974	'Standardised Transaction Code' study is conducted by industry types.
	'Distribution & System' (quarterly journal) first issue is published.
1975	'Distribution System Design Engineer Course' and 'Distribution System Management Course' are started.
1977	'Distribution Information System Study Committee' is started.
	'Distribution Code Centre' is opened. (predecessor of GS1 Japan)
	Allocation of 'Common Supplier Codes' is started.
1978	Joins 'EAN International' and GS1 Prefix '49x' is allocated.
	EAN/UPC symbol is defined as a JIS standard (JIS B 9550).
	Allocation of 'GS1 Company Prefix' starts.
1979	First POS pilot is conducted at a supermarket in Tokyo (Tatsumi Chain, Tokyu Store).
1980	'JCA (Japan Chain Stores Association) Protocol' for Retail industry is defined.
	Second POS pilot is conducted at some selected supermarkets (AEON, Co-op Supermarket, etc.)
1981	Third POS pilot is conducted at some selected retailers (Kasmi Convenience Store (now called: United Supermarkets Holdings Inc.), Kishi Shopping Center (now called: Watahan & Co., Ltd.), etc.).
1982	'DCC Japan Newsletter' (later, the name changed to 'RYUKAI Centre News' (Bi-monthly)) is first published.
	SEVEN-ELEVEN JAPAN (Convenience Store) has introduced POS.
	Moves office to another location in Shinagawa-ward.
1983	'Low-interest financing for POS introduction' is provided to SME retailers by the government (Small and Medium Enterprise Agency).
	'Study Group for Information System in Food, Beverage, and Alcohol Industry (called F-KEN)' is started.
1985	'Study Group for ICT-Oriented Wholesale Industry (called OROSHI-KEN)' is started.
	Ryutsu POS Database Service (RDS) Project is started.
	JICFS (Jan Item Code File Service) Project is started.
	Ito-Yokado (GMS) has introduced POS.
1987	Sporting Goods Information System Study Group has started.
	'Common Magazine Code' registration has started.
	ITF symbol is defined as a JIS standard (JIS X 0502).
	Utility bills collection service system using multiple EAN-13 symbols has started.
1988	Practical application experiment of JICFS (JAN Item Code File Service) is started.
	Standard EOS (Electronic Ordering System) using GTIN-13 is developed.
	EAN International General Assembly is held in Tokyo.
	U.P.C. Company Prefix application service is started.
1989	'Consumption Tax' is introduced.
	Research and pilots of POS are conducted for small retailers located in the shopping street.
1990	Barcoding in Book Industry.
1991	Multi-functional card for regional shopping streets is developed.
	Daiei (GMS) has employed EAN codes for all the products.
1993	Heiwado (supermarket in Western Japan) has first employed ITF as a retailer.
1995	Acquires additional GS1 Prefix '45x' and started allocating '45x' GS1 Company prefix.
1996	Study for computerisation of trade for perishables is started.
	Moves office to Minato-ward.
	Open Business Network (OBN) system is developed.
	Code-128 is defined as a JIS standard (JIS X 0504).
1997	Heiwado (Supermarket) has begun CRP (continuous replenishment program) with several manufacturers.
	JEDICOS, Japanese version of EANCOM, has been developed.
1999	GLN utilisation study and verification test are started to realise efficient and effective distribution system for the supply chain.

Year	Events
2001	Nine-digit GS1 Company Prefix has been introduced.
2002	EAN International's Asia Pacific Regional Meeting is held in Tokyo.
2003	GEPIR operation has started.
	EPCglobal subscription has started.
	GS1 Application Identifier is defined as a Japanese Industrial Standard (JIS X 0531).
2004	'EPCglobal Japan' is set up.
2005	MHLW (Ministry of Health, Labour & Welfare) issues a guideline 'Implementation Guideline for Bar Code Labelling of Prescription Drugs', which uses GS1 barcodes.
	Promotion of GTIN has started.
	'DCC Japan' changed name to 'GS1 Japan'.
2006	GTIN is employed for online sales of music products.
	EPCglobal Board Meeting is held in Tokyo.
2007	Ryutsu BMS (Japanese XML-EDI Message Standards) has published.
	GS1 Mobile Conference held in Tokyo.
	'GS1 DataBar Study Group' is set up.
2008	'GS1 Healthcare conference' is held in Tokyo.
	Several Online Shopping companies have started to use JICFS/IFDB.
2009	'Supply Chain Standards Management and Promotion Council' is set up.
	'GS1 Healthcare Japan' is set up.
2010	Verification test of GS1 DataBar utilisation is conducted at some supermarkets.
	Mobile Day Seminar is held in Tokyo.
2011	Mobile Day event held in Tokyo.
	'The Collaborative Council of Manufacturers, Wholesalers, and Retailers' has started.
2012	'GS1 Advisory Council Meeting' is held in Tokyo.
	Changes corporate form to 'General Incorporated Foundation'.
2013	GS1 B2C mobile and omnichannel Seminar are held in Tokyo.
2014	'GS1 Healthcare Japan UDI and Prescription Drug Traceability Seminar' is held in Tokyo.
2015	'GS1 Japan Partners' membership has started.
	'GS1 Company Prefix' application on the web has started.
2017	'Source Marking Guideline for Raw Materials' has published.
	Hosts 'GS1 Asia Pacific Regional Forum' in Tokyo.
2018	'GS1 Japan Scan' app distribution has started.
2019	GS1 Japan has launched 'GS1 Japan Data Bank - Product information database -' service.
2020	'GS1 AIDC standards conformity check guide' has published.
	Moves office to Minami-Aoyama. (Minato-ward: Current location)
	Renewed 'RYUKAI Centre News' design and changed the name to 'GS1 Japan News'.
	Renewed 'Distribution & System' design and changed the name to 'GS1 Japan Review'.
	'GS1 QR Code/GS1-128 Barcode Guidelines for Carton Cases' has published.
2021	'GJDB × scan' app distribution has started.
	'10-digit GCP' allocation has started.
	'GCP one-year-renewal' system has started.
	'Tenbun Navi' app distribution has started.
2022	GS1 Japan celebrates its 50th anniversary.
	GS1 Japan launches 'Verified by GS1' information retrieval service via GJDB.
2023	GS1 Japan has jointly conducted Japan's first demonstration of dynamic pricing using GS1 DataMatrix.
2024	GS1 Japan has commenced 'GS1 Japan Data Bank - Business and location information database -' service.

5. References

5.1 Statistics on Japanese Retail Industry

Table 5.1-1 Number of establishments, number of employees, annual sales of goods and sales floor space. (2021)

	Stores			Annual sales (JPYm)			Employees (*1)	Store space (k sq m)
	2021	Ratio	vs 2016	2021	Ratio	vs 2016		
Department store, General supermarket	1,097	0.1%	(31.0%)	7,527,383	5.4%	(40.4%)	245,975	11,004,042
Other various product retailers (less than 50 regular employees)	1,652	0.2%	7.6%	472,726	0.3%	93.3%	21,660	950,996
Draper, fabric, bedding	11,454	1.3%	(22.1%)	332,854	0.2%	(31.2%)	40,573	811,370
Men's clothing	14,982	1.7%	(14.0%)	1,045,443	0.8%	(31.8%)	72,080	2,691,169
Women's and children's clothing	49,948	5.7%	(22.0%)	3,717,495	2.7%	(25.1%)	262,096	7,923,710
Shoes and Footwear	8,465	1.0%	(19.6%)	504,488	0.4%	(32.8%)	36,364	1,232,718
Other textiles, clothes, personal goods	27,711	3.1%	(15.3%)	2,062,824	1.5%	(8.7%)	161,137	5,543,566
Various food	23,860	2.7%	(13.1%)	23,044,341	16.7%	12.1%	1,101,681	24,804,025
Vegetable and fruit	14,379	1.6%	(21.8%)	712,244	0.5%	(26.6%)	75,418	763,674
Meat	9,322	1.1%	(15.7%)	621,953	0.5%	(14.6%)	54,530	330,493
Fresh fish	10,244	1.2%	(25.3%)	528,856	0.4%	(27.4%)	46,867	297,073
Liquor	24,210	2.8%	(24.9%)	934,386	0.7%	(40.3%)	73,189	979,445
Confectionery and bread	55,447	6.3%	(10.5%)	1,661,946	1.2%	(30.5%)	355,491	1,647,863
Other food and beverage	119,428	13.6%	(9.9%)	12,470,463	9.0%	(14.8%)	1,366,941	12,500,992
Motor vehicle	82,205	9.3%	(2.0%)	17,622,706	12.8%	1.5%	562,399	2,871,247
Bicycle	9,552	1.1%	(14.8%)	231,252	0.2%	(3.7%)	25,609	673,251
Machinery and equipment (except motor vehicles and bicycles)	40,399	4.6%	(12.7%)	9,553,946	6.9%	0.5%	276,161	9,745,591
Furniture, fittings, tatami	16,555	1.9%	(17.8%)	1,361,500	1.0%	(12.2%)	82,528	4,822,424
Utensil	14,730	1.7%	(3.3%)	418,450	0.3%	(7.2%)	54,819	1,053,353
Pharmaceutical and cosmetics	90,343	10.3%	1.0%	13,394,919	9.7%	5.8%	656,901	13,062,594
Agricultural supplies	10,778	1.2%	(9.7%)	1,556,254	1.1%	(4.3%)	59,065	1,534,265
Fuel	43,677	5.0%	(9.5%)	10,922,270	7.9%	(9.9%)	287,303	358,248
Books and stationery	27,627	3.1%	(20.7%)	2,322,705	1.7%	(26.4%)	345,184	3,394,082
Sporting goods, toys, entertainment goods, musical instrument	20,601	2.3%	(7.8%)	1,997,926	1.4%	(11.1%)	127,507	4,566,887
Camera, clock, glasses	18,142	2.1%	(10.1%)	979,444	0.7%	(13.6%)	70,952	1,143,500
Not classified above	83,475	9.5%	(18.2%)	8,210,111	5.9%	(1.6%)	534,320	22,246,019
Mail order and door-to-door sales point of sale	31,353	3.6%	11.9%	11,200,270	8.1%	37.2%	279,150	-
Automatic vending machine sales	2,852	0.3%	(23.7%)	1,191,326	0.9%	31.5%	34,067	-
Other non-storefront primary retailers	8,164	0.9%	61.4%	1,560,498	1.1%	39.7%	69,710	-
Total	880,031	100.0%	(11.1%)	138,180,412	100.0%	(4.8%)	7,540,345	136,952,597

(*1): The number of Employees is the total of 'sole proprietors', 'unpaid family employees', 'paid executives', and 'regular employees', thus 'temporary employees' are not included.

(*2): Total and breakdown may not match as the figures include establishments that could not methodically be classified.

The source: Ministry of Economy, Trade and Industry of Japan

(https://www.stat.go.jp/data/e-census/2021/kekka/index.html)

Table 5.1-2 Current survey of commerce [Sales: unit JPYb, 2023]

Companies			2023		2022		2021	
			Sales	Growth	Sales	Growth	Sales	Growth
Total			594,050	1.6%	584,982	6.0%	551,910	9.7%
Wholesale			431,017	0.1%	430,580	7.3%	401,448	12.6%
	General Merchandise		18,813	(15.8%)	22,340	0.1%	22,324	2.5%
	Textiles		2,196	(1.5%)	2,229	7.7%	2,069	(2.3%)
	Apparel & Accessories		4,214	2.1%	4,126	3.4%	3,990	0.1%
	Livestock & Aquatic Products		40,755	8.2%	37,681	8.4%	34,773	4.2%
	Food & Beverages		63,343	10.8%	57,185	7.0%	53,433	1.0%
	Building Materials		21,537	2.0%	21,108	(1.7%)	21,465	2.7%
	Chemicals		26,390	(0.5%)	26,534	7.6%	24,654	16.4%
	Minerals & Metals		74,638	(5.1%)	78,680	27.9%	61,510	33.2%
	Machinery & Equipment		103,229	(3.3%)	106,769	0.3%	106,414	17.5%
		Industry Machinery & Equipment	18,194	(10.0%)	20,204	(1.8%)	20,576	11.5%
		Motor Vehicles	17,688	9.6%	16,143	(1.5%)	16,385	13.1%
		Electrical Machinery & Equipment	57,818	(5.5%)	61,173	1.4%	60,323	21.5%
		Others	9,529	3.0%	9,248	1.3%	9,131	14.6%
	Furniture & House Furnishings		4,513	4.3%	4,329	(2.9%)	4,460	8.2%
	Medicines & Toiletries		34,567	8.5%	31,850	3.8%	30,698	8.9%
	Others		36,823	(2.5%)	37,749	5.9%	35,658	13.6%
Retail			163,034	5.6%	154,402	2.6%	150,462	2.7%
	General Merchandise		11,574	5.5%	10,968	6.0%	10,346	1.4%
	Fabrics Apparel & Accessories		8,516	(2.2%)	8,707	1.1%	8,610	(0.3%)
	Food & Beverages		48,379	6.3%	45,521	0.4%	45,328	0.4%
	Motor Vehicles (*1)		18,355	12.7%	16,285	(4.2%)	17,001	2.5%
	Machinery & Equipment (*2)		9,819	0.8%	9,745	(2.9%)	10,035	6.4%
	Fuel (*3)		15,383	0.9%	15,248	10.2%	13,839	16.4%
	Medicine & Toiletry Stores (*4)		17,327	6.6%	16,256	8.2%	15,026	5.4%
	Others (*5)		22,048	8.6%	20,304	7.7%	18,862	(3.3%)
	Non-store retailers		11,631	2.3%	11,369	(0.4%)	11,416	5.8%
Reference (*4) & (*5)			39,376	7.7%	36,561	7.9%	33,888	0.4%

(*1): From April 1996, we excluded transaction values related to precious metal dealing.
Hence, for the sake of chronological continuity, the sales figures were revised to exclude the value of those transactions, going back to 1990.
Consequently, there is a discontinuity with the figures for 1989 and before.

(*2): The figures for the years before 1991 and the quarters before 1993 have been calculated by accumulating the monthly figures as the figures have not been compiled.

(*3): There is a discontinuity in the data before and after 1988, as the Japanese Standard Industrial Classification (JSIC) was revised in October 1993, and sales time series data were recalculated based on the new classification until 1989.

(*4): The 1999 Survey of Commercial Statistics was conducted simultaneously with the Survey of Establishments and Enterprises under the jurisdiction of the Ministry of Internal Affairs and Communications (MIC), which was also conducted to capture existing target establishments. As a result, there are discrepancies between the figures before March 1998 and after April 1998.

(*5): The 2002 Survey of Commercial Statistics changed the definition of sales in the wholesale motor vehicle industry. This has led to fault lines in the figures before March 1999 and after April 1999.

Source: Ministry of Economy, Monthly Report on the Current Survey of Commerce

(https://www.meti.go.jp/english/statistics/tyo/syoudou_kakuho/index.html)

Table 5.1-3 Top 30 Wholesalers in Japan (2023) [unit: JPYm]

2023	2022	Companies	Head office	Annual sales (JPYm)	Growth (%)	Industries
1	1	MEDIPAL HOLDINGS CORPORATION	Tokyo	3,558,732	5.91%	Pharmaceutical
2	2	Alfresa Holdings Corporation	Tokyo	2,858,500	6.02%	Pharmaceutical
3	3	SUZUKEN CO., LTD.	Aichi	2,386,493	3.10%	Pharmaceutical
4	4	NIPPON ACCESS,INC.	Tokyo	2,336,607	11.40%	Food
5	5	Mitsubishi Shokuhin Co., Ltd.	Tokyo	2,076,381	3.99%	Food
6	6	KOKUBU GROUP CORP.	Tokyo	2,068,417	7.00%	Food
7	7	TOHO HOLDINGS CO., LTD.	Tokyo	1,476,712	6.35%	Pharmaceutical
8	8	KATO SANGYO CO., LTD.	Hyogo	1,099,391	6.15%	Food
9	9	ARATA CORPORATION	Tokyo	944,149	5.89%	Household items, Medical supplies
10	10	TOMOSHIA HOLDINGS CO.,LTD.	Tokyo	840,453	8.37%	Food
11	11	Mitsui & Co. Retail Group, Ltd.	Tokyo	717,000	5.92%	Food
12	12	ITOCHU-SHOKUHIN Co.,Ltd.	Osaka	672,451	4.59%	Food
13	13	VITAL KSK HOLDINGS, INC.	Tokyo	587,481	1.33%	Pharmaceutical
14	14	NIHONSHURUIHANBAI CO., LTD.	Tokyo	584,004	5.97%	Food
15	15	Forest Holdings inc.	Oita	504,770	4.67%	Pharmaceutical
16	17	YAMAE HISANO Co., Ltd.	Fukuoka	456,209	4.15%	Food
17	18	Starzen Co., Ltd.	Tokyo	410,534	(3.44%)	Food
18	16	NIPPAN GROUP HOLDINGS, INC.	Tokyo	402,171	(9.42%)	Books, Music, Video, Instruments
19	19	TOHAN CORPORATION	Tokyo	398,826	(0.93%)	Books, Music, Video, Instruments
20	20	SHINMEI Co., LTD.	Hyogo	385,033	7.63%	Food
21	23	HAPPINET CORPORATION	Tokyo	350,461	14.06%	Toy
22	24	YAMABOSHIYA Co., Ltd.	Osaka	334,783	10.87%	Food
23	25	OHKI HEALTHCARE HOLDINGS CO., LTD.	Tokyo	332,350	10.07%	Pharmaceutical
24	22	Central Forest Group,Inc	Aichi	328,838	5.18%	Food
25	21	CHORI CO.,LTD.	Osaka	307,699	(6.58%)	Textile
26	26	HOKUYAKU TAKEYAMA Holdings,Inc.	Hokkaido	275,364	5.11%	Pharmaceutical
27	27	MARUICHI CO.,LTD.	Nagano	254,805	3.28%	Food
28	28	TOHO Co.,Ltd	Hyogo	244,930	13.62%	Food
29	30	Mizuno Corporation	Osaka	229,711	8.33%	Sporting goods
30	31	TAKAYAMA CO.,LTD.	Tokyo	217,502	5.22%	Food

The source: The Nikkei Marketing Journal, 4 September 2024

Table 5.1-4 Top 25 Retailers in Japan (2023) [unit: JPYm]

2023	2022	Companies	Business	Annual sales (JPYm)	Growth (%)
1	1	Seven & i Holdings Co., Ltd.	Holding Company	11,471,753	(2.87%)
2	2	AEON CO., LTD.	Holding Company	9,553,557	4.79%
3	3	Amazon Japan G.K. (*2)	Mail-order	3,652,761	13.97%
4	4	FAST RETAILING CO., LTD.	Holding Company	2,766,557	20.23%
5	5	Pan Pacific International Holdings Corporation	Holding Company	1,936,783	5.76%
-	-	AEON RETAIL Co.,Ltd.	Supermarket	1,841,900	5.16%
6	6	YAMADA HOLDINGS CO., LTD.	Holding Company	1,592,009	(0.54%)
-	-	YAMADA DENKI CO., LTD.	Specialty Shop	1,218,694	(5.80%)
-	-	WELCIA HOLDINGS CO.,LTD.	Holding Company	1,217,339	6.38%
7	7	Lawson, Inc.	Convenience Store (Corner shop)	1,087,964	8.75%
8	8	MatsukiyoCocokara & Co.	Specialty Shop	1,022,531	7.49%
-	-	WELCIA YAKKYOKU CO.,LTD.	Specialty Shop	1,019,587	5.00%
9	9	TSURUHA HOLDINGS INC.	Holding Company	970,079	5.94%
10	-	Nitori Holdings Co., Ltd.	Holding Company	895,799	(5.52%)
-	-	SEVEN-ELEVEN JAPAN CO.,LTD.	Convenience Store (Corner shop)	894,659	2.51%
-	-	UNIQLO CO., LTD.	Specialty Shop	890,427	9.89%
11	14	COSMOS Pharmaceutical Corporation	Specialty Shop	827,697	9.57%
12	10	BICCAMERA INC.	Specialty Shop	815,560	2.93%
-	-	Ito-Yokado Co., Ltd.	Supermarket	814,964	11.74%
13	12	LIFE CORPORATION	Supermarket	809,709	5.79%
14	13	Valor Holdings Co., Ltd.	Holding Company	807,795	6.29%
15	20	Nojima Corporation	Specialty Shop	761,301	21.58%
16	11	Yodobashi Camera Co.,Ltd.	Specialty Shop	756,027	(2.88%)
-	-	Don Quijote Co., Ltd.	Specialty Shop	753,035	9.06%
17	17	Sundrug Co.,Ltd.	Specialty Shop	751,777	8.88%
18	18	Sugi Holdings Co., Ltd.	Holding Company	744,477	11.51%
-	-	Sugi Pharmacy Co., Ltd.	Specialty Shop	741,314	11.39%
19	16	EDION Corporation	Specialty Shop	721,085	0.07%
20	15	K'S HOLDINGS CORPORATION	Specialty Shop	718,369	(2.57%)
-	-	United Super Markets Holdings Inc.	Holding Company	706,657	(0.29%)
21	19	H2O RETAILING CORPORATION	Holding Company	657,400	4.67%
22	-	Trial Holdings Inc.	Holding Company	653,112	9.67%
23	21	SHIMAMURA Co.,Ltd.	Specialty Shop	635,091	3.08%
24	22	Daiso Industries Co., Ltd.	Specialty Shop	624,900	6.08%
25	25	OK Corporation	Supermarket	623,812	12.74%

(*1): Companies with a hyphen (-) in the rank column are consolidated subsidiaries whose parent companies are listed on the top 500 list.

(*2): The total annual sales is calculated using the annual average exchange rate.

(*3): 'Convenience Store' means 'Corner shop' in the UK.

The source: The Nikkei Marketing Journal, 17 July 2024

Table 5.1-5 Top 8 Convenience Store Chains in Japan (2023) [unit: JPYm]

2023	2022	Shop Names	Companies	Groups	Annual sales (JPYm)	Growth (%)	Shops
1	1	7-Eleven	SEVEN-ELEVEN JAPAN CO.,LTD.	Seven & i Holdings Co., Ltd.	5,345,200	3.82	21,327
2	2	FamilyMart	FamilyMart Co.,Ltd.	FamilyMart UNY Holdings Co., Ltd.	3,069,200	3.78	15,646
3	3	LAWSON	Lawson, Inc.	Mitsubishi Corporation	3,274,100	19.37	14,656
4	4	MINI STOP	MINISTOP Co., Ltd.	AEON CO., LTD.	283,000	(1.36)	1,959
5	5	Seicomart	Secoma Company Limited	Independent	214,800	7.13	1,176
6	6	Daily YAMAZAKI	YAMAZAKI BAKING CO.,LTD.	Independent	161,600	3.26	1,361
7	7	NewDays	JR East Retail Net Co.,Ltd.	East Japan Railway Company	107,200	16.90	496
8	8	POPLAR, SEIKATSU SAIKA, Kurashi House, Three Eight	POPLAR. CO., LTD	Independent	12,700	(2.31)	253

This survey was conducted with chain convenience stores which meet the following four criteria: (1) self-service, (2) food and beverage, (3) open at least 14 hours a day, and (4) have a sales floor area of at least 30 square meters but less than 250 square meters. In addition, this year's survey targeted companies that meet the following criteria: (5) total shop sales of at least 10 billion yen and (6) excluding (area) franchisee companies.

Overseas stores are excluded.

The source: The Nikkei Marketing Journal, 21 August 2024

Table 5.1-6 Top 40 Speciality Store Chains in Japan (2023) [unit: JPYm]

2023	Companies	Business Areas	Sales (JPYm)		Ordinary Income (JPYm)	Stores
			2023	Growth (%)		
1	YAMADA DENKI CO., LTD.	Home electrical appliances	1,218,694	(5.8%)	35,058	1,144
2	WELCIA YAKKYOKU CO.,LTD.	Chemists & Medicines	1,019,587	5.0%	46,669	2,199
3	Nitori Holdings Co., Ltd.	Furniture	895,799	(5.5%)	132,377	-
4	UNIQLO CO., LTD.	Casual clothing	890,427	9.9%	-	800
5	COSMOS Pharmaceutical Corporation	Chemists & Medicines	827,696	9.6%	33,070	1,358
6	Yodobashi Camera Co.,Ltd.	Home electrical appliances	756,027	(2.9%)	60,887	24
7	Don Quijote Co., Ltd.	General warehouse stores	753,035	9.1%	47,910	377
8	Sugi Pharmacy Co., Ltd.	Chemists & Medicines	741,314	11.4%	16,217	1,673
9	Trial Company ,Inc.	General warehouse stores	653,112	9.7%	14,358	285
10	EDION Corporation	Home electrical appliances	648,384	(0.1%)	15,771	1,140
11	SHIMAMURA Co.,Ltd.	Women's and children's clothing	628,488	2.9%	56,311	2,185
12	Daiso Industries Co., Ltd.	100-yen shops	624,900	6.1%	-	4,341
13	K'S HOLDINGS CORPORATION	Home electrical appliances	584,118	(7.4%)	12,104	155
14	TSURUHA HOLDINGS INC.	Chemists & Medicines	466,409	5.7%	22,898	1,423
15	Sundrug Co.,Ltd.	Chemists & Medicines	463,474	7.0%	25,297	-
16	Cainz Co., Ltd.	DIY stores & Motor car accessories stores	455,775	3.4%	20,890	239
17	BICCAMERA INC.	Home electrical appliances	425,526	4.9%	3,860	43
18	Ryohin Keikaku Co.,Ltd. (MUJI)	Daily necessities	422,039	15.1%	29,362	562
19	KOHNAN SHOJI CO., LTD.	DIY stores & Motor car accessories stores	408,178	4.9%	21,295	470
20	Joshin Denki Co.,Ltd.	Home electrical appliances	402,108	(1.1%)	6,466	218
21	Matsumotokiyoshi Holdings Co., Ltd.	Chemists & Medicines	389,927	13.1%	36,634	1,904
22	KUSURI NO AOKI HOLDINGS CO.,LTD.	Chemists & Medicines	378,874	15.4%	19,129	903
23	CREATE SD.CO.,LTD.	Chemists & Medicines	376,135	9.2%	18,129	717
24	ＤＣＭ Holdings Co., Ltd.	DIY stores & Motor car accessories stores	368,462	(4.8%)	25,774	509
25	KOMERI Co.,Ltd.	DIY stores & Motor car accessories stores	359,911	(2.4%)	19,921	1,220
26	cocokara fine Inc.	Chemists & Medicines	355,717	4.1%	28,318	1,560
27	Ain Pharmaciez Inc.	Chemists & Medicines	303,541	16.4%	11,434	-
28	G.U. CO., Ltd.	Casual clothing	295,206	20.0%	-	463
29	Nojima Corporation	Home electrical appliances	278,861	(1.9%)	22,378	239
30	Cawachi Ltd.	Chemists & Medicines	270,825	1.7%	8,517	337
31	Kojima Co.,Ltd.	Home electrical appliances	267,893	(4.1%)	5,146	141
32	ARCLANDS CORPORATION	DIY stores & Motor car accessories stores	264,397	49.9%	11,125	167
33	Alpen Co., Ltd.	Sports goods	242,332	5.5%	6,810	402
34	ABC-MART,INC.	Shoes	231,586	17.0%	48,219	1,081
35	Seria Co.,Ltd.	100-yen shops	223,202	5.1%	15,315	2,023
36	Adastria Co., Ltd.	Casual clothing	220,078	11.9%	16,320	1,242
37	UD Retail Co., Ltd.	General warehouse stores	219,863	4.5%	6,370	63
38	GEO HOLDINGS CORPORATION	Secondhand shop	216,159	9.6%	1,497	1,084
39	World Co., Ltd.	Women's and children's clothing	202,342	(5.6%)	11,186	2,344
40	DRUGSTORE MORI co..,Ltd.	Chemists & Medicines	198,906	9.1%	-	378

The source: The Nikkei Marketing Journal, 7 August 2024

Table 5.1-7 Top 30 Department Stores by Sales (2023) [unit: JPYm]

2023	2022	Company names	Stores	Loc.	Annual sales (JPYm) 2023	vs 2022	2022	Floor area (m²) 2023	vs 2022
1	1	Isetan Mitsukoshi Ltd	Shinjuku	TY	375,895	14.73%	327,627	65,976	0.00%
2	2	Hankyu Hanshin Department Stores,Inc.	Osaka Umeda	OS	314,028	20.28%	261,077	98,418	0.00%
3	4	JR Tokai Takashimaya Co,Ltd.	JR Nagoya Takashimaya	AI	194,089	12.53%	172,477	103,600	0.00%
4	7	Takashimaya Company, Limited	Osaka (*a)	OS	159,152	20.63%	131,932	65,943	0.00%
5	6	Isetan Mitsukoshi Ltd	Nihombashi	TY	152,866	10.44%	138,414	62,318	0.00%
6	5	Takashimaya Company, Limited	Nihombashi	TY	149,349	4.42%	143,027	47,322	0.00%
7	8	Takashimaya Company, Limited	Yokohama (*a)	KN	134,630	2.14%	131,803	56,403	(2.11%)
8	9	Daimaru Matsuzakaya Department Stores Co.Ltd.	Nagoya	AI	126,852	7.74%	117,737	86,758	0.00%
9	10	Kintetsu Department Store Co., Ltd.	Abeno Harukas	OS	121,198	6.60%	113,696	100,000	0.00%
10	17	Isetan Mitsukoshi Ltd	Ginza	TY	104,792	35.56%	77,304	36,626	0.00%
11	18	Matsuya Co., Ltd.	Ginza	TY	101,794	35.47%	75,142	32,182	0.00%
12	12	TOBU DEPARTMENT STORE CO.,LTD.	Ikebukuro	TY	97,585	6.17%	91,914	82,963	0.00%
13	13	Takashimaya Company, Limited	Kyoto	KY	97,271	15.68%	84,087	57,920	(0.12%)
14	21	Daimaru Matsuzakaya Department Stores Co.Ltd.	Shinsaibashi	OS	95,731	35.20%	70,805	46,490	0.00%
15	14	Daimaru Matsuzakaya Department Stores Co.Ltd.	Kobe	HG	91,849	9.40%	83,954	50,656	0.00%
16	15	Takashimaya Company, Limited	Shinjuku (*a)	TY	88,128	10.85%	79,505	53,693	0.00%
17	22	KEIO DEPARTMENT STORE CO., LTD.	Shinjuku	TY	78,824	17.85%	66,884	45,424	(0.34%)
18	23	Daimaru Matsuzakaya Department Stores Co.Ltd.	Tokyo	TY	78,341	21.96%	64,236	46,000	0.00%
19	24	Daimaru Matsuzakaya Department Stores Co.Ltd.	Sapporo	HK	75,473	21.60%	62,068	45,000	0.00%
20	26	Daimaru Matsuzakaya Department Stores Co.Ltd.	Kyoto	KY	70,532	14.65%	61,520	50,830	0.00%
21	27	Hankyu Hanshin Department Stores,Inc.	Umeda	OS	66,088	19.42%	55,343	52,996	0.00%
22	25	Nagoya Mitsukoshi Ltd.	Nagoya Sakae	AI	65,887	6.95%	61,608	80,626	0.00%
23	29	Hankyu Hanshin Department Stores,Inc.	Hakata	FO	62,339	23.29%	50,563	41,835	0.00%
24	31	Daimaru Matsuzakaya Department Stores Co.Ltd.	Umeda	OS	55,010	13.87%	48,311	64,000	0.00%
25	32	The Hakata Daimaru,inc.	Tenjin, Fukuoka	FO	54,096	14.83%	47,108	44,192	0.00%
26	28	TOKIWA Co.,Ltd.	Head office	OI	53,610	3.04%	52,028	136,797	0.00%
27	-	TOKYU DEPARTMENT STORE CO.,LTD	Shibuya stores	TY	52,654		-	27,877	
28	33	Fukuya Co., Ltd.	Hatchobori	HS	47,236	2.16%	46,238	74,124	0.00%
29	35	Takashimaya Company, Limited	Tamagawa (*a)	TY	46,527	3.67%	44,878	24,165	0.00%
30	34	Tsuruya Department Store Co., Ltd	Kumamoto	KU	46,421	3.30%	44,939	67,398	(0.92%)

*a: Sales and gross floor area do not include tenants.
Sogo & Seibu did not respond this time.

Abbreviations:

AI: Aichi	HG: Hyogo	KN: Kanagawa	OI: Oita
CB: Chiba	HK: Hokkaido	KU: Kumamoto	OS: Osaka
FO: Fukuoka	HS: Hiroshima	KY: Kyoto	TY: Tokyo

The source: The Nikkei Marketing Journal, 28 August 2024

Table 5.1-8 Sales by Type of Merchandise in Department Stores (2023) [unit: JPYk]

	2023	Growth (%)	Ratio (%)	2022
Grand Total	**5,421,133,689**	**8.83%**	**100.00%**	**4,981,230,097**
Apparel	**1,458,064,079**	**9.88%**	**26.90%**	**1,326,981,136**
Men's	296,522,791	7.34%	5.47%	276,233,865
Women's	992,469,478	12.85%	18.31%	879,433,106
Children's	89,323,280	(0.18%)	1.65%	89,486,342
Others	79,748,530	(2.54%)	1.47%	81,827,823
Personal items	**888,579,538**	**16.45%**	**16.39%**	**763,042,995**
Accessories	**1,092,595,585**	**11.16%**	**20.15%**	**982,935,837**
Cosmetics	441,598,214	16.35%	8.15%	379,538,899
Jewelleries	492,815,304	8.87%	9.09%	452,674,550
Others	158,182,067	4.95%	2.92%	150,722,388
Household Items	**188,656,459**	**2.03%**	**3.48%**	**184,908,169**
Furniture	49,323,408	1.92%	0.91%	48,396,088
Home electrical appliances	17,212,350	9.10%	0.32%	15,777,338
Others	122,120,701	1.15%	2.25%	120,734,743
Foods	**1,482,958,466**	**2.60%**	**27.36%**	**1,445,336,395**
Fresh foods	246,179,149	(0.71%)	4.54%	247,934,386
Confectioneries	466,323,717	7.49%	8.60%	433,816,501
Delicatessen	343,071,736	2.22%	6.33%	335,613,523
Others	427,383,864	(0.14%)	7.88%	427,971,985
Restaurant	127,850,124	18.52%	2.36%	107,872,960
Services	**47,313,851**	**(6.12%)**	**0.87%**	**50,395,951**
Others	**135,115,587**	**12.83%**	**2.49%**	**119,756,654**
Gift Vouchers	**91,891,340**	**(6.09%)**	**1.70%**	**97,848,913**

The sales of Gift Vouchers are excluded from the total sales.

The source: Japan Department Stores Association (www.depart.or.jp/store_sale/)

Table 5.1-9 Sales by Type of Merchandise in Chain Stores (2023) [unit: JPYm]

	2023	Growth (%)	Ratio (%)	2022
Grand Total	**13,727,638**	**3.43%**	**100.00%**	**13,272,768**
Foods	**9,633,345**	**4.86%**	**70.17%**	**9,186,733**
Agricultural products	1,348,921	3.92%	9.83%	1,298,011
Livestock products	1,107,511	2.72%	8.07%	1,078,229
Fishery products	825,927	0.46%	6.02%	822,111
Delicatessen	1,295,377	5.87%	9.44%	1,223,518
Other foods	5,055,609	6.10%	36.83%	4,764,864
Apparel	**736,545**	**(0.93%)**	**5.37%**	**743,422**
Men's	123,745	(4.87%)	0.90%	130,087
Women's	187,462	0.16%	1.37%	187,157
Other apparels	425,338	(0.20%)	3.10%	426,179
Household items	**2,560,308**	**2.49%**	**18.65%**	**2,498,033**
Sundries	1,134,062	3.93%	8.26%	1,091,200
Healthcare & cosmetics	339,146	4.24%	2.47%	325,355
Furniture & interior accessories	712,448	0.68%	5.19%	707,650
Home electrical appliances	50,212	(28.59%)	0.37%	70,312
Other products	324,439	6.89%	2.36%	303,516
Services	**28,616**	**(0.40%)**	**0.21%**	**28,731**
Others	**768,823**	**(5.76%)**	**5.60%**	**815,849**

The source: Japan Chain Stores Association (54 member companies and 10,920 stores)
(www.jcsa.gr.jp/public/statistics.html)

Table 5.1-10 BtoC EC market size in Japan (2022) [unit: JPYb]

		2022	EC Ratio (%) (*1)	Growth (%)	2021	EC Ratio (%)
Grand Total		**22,744.80**		**9.90%**	**20,695.00**	
Retail	**Total**	**13,999.70**	**9.13%**	**5.37%**	**13,286.50**	**8.78%**
	Foods, beverages, liquors	2,750.50	4.16%	9.15%	2,519.90	3.77%
	Home electrical appliances, audio & visual equipment, PC & peripherals	2,552.80	42.01%	3.84%	2,458.40	38.13%
	Books, video & music software	1,822.20	52.16%	4.02%	1,751.80	0.46%
	Cosmetics, healthcare	919.10	8.24%	7.47%	855.20	7.52%
	Household items, furniture, interior accessories	2,354.10	29.59%	3.47%	2,275.20	28.25%
	Apparels & accessories	2,549.90	21.56%	5.02%	2,427.90	21.15%
	Motor vehicles, motorbike, parts etc.	318.30	3.98%	5.54%	301.60	3.86%
	Others	732.70	1.89%	5.21%	696.40	1.96%
Services	**Total**	**6,147.70**		**32.43%**	**4,642.40**	
	Travel	2,351.80		67.95%	1,400.30	
	Food & drinks	660.10		33.68%	493.80	
	Tickets	558.10		73.86%	321.00	
	Financing	755.70		6.11%	712.20	
	Beauty & barber	613.90		3.02%	595.90	
	Food delivery	530.00		10.55%	479.40	
	Others (Healthcare, insurances, homes, educations)	678.20		6.00%	639.80	
Digital Contents	**Total**	**2,597.40**		**(6.10%)**	**2,766.10**	
	e-publication (Books & magazines)	625.30		10.17%	567.60	
	Charged music distribution	102.30		14.30%	89.50	
	Charged movie distribution	435.90		14.98%	379.10	
	On-line games	1,309.70		(18.79%)	1,612.70	
	Others	124.20		6.06%	117.10	

The '**EC Ratio**' means the ratio of EC market size to the amount of business transaction (Market size) including telephone, e-mail, and face-to-face based sales.

The source: METI (Ministry of Economy, Trade and Industry) 'Research on Infrastructure Development in Japan's Information-based Economy Society (E-Commerce Market Survey)'
(www.meti.go.jp/policy/it_policy/statistics/outlook/ie_outlook.html)
(www.meti.go.jp/policy/it_policy/statistics/outlook/230831_new_kohyoshiryo.pdf)

Table 5.1-11 Top 25 E-Commerce (B2C) Players in Japan (2022) [unit: JPYm]

2022	2021	Companies (Main Website)	Sales (JPYm)	Growth (%)	EC Ratio (%)	Main Products
1	1	Amazon Japan G.K. (amazon.co.jp) (*1)	3,209,700	26.60%	100%	General
2	2	Yodobashi Camera Co.,Ltd (yodobashi.com)	209,948	(1.7%)	100%	Home electrical appliances
3	3	ZOZO, Inc. (zozo.jp) (*3)	183,423	10.40%	100%	Apparel
4	4	YAMADA HOLDINGS CO., LTD. (www.yamada-holdings.jp/)	150,500	4.20%	100%	Home electrical appliances
5	5	BICCAMERA INC. (biccamera.com) (*5)	143,400	(8.3%)	100%	Home electrical appliances
6	6	UNIQLO CO., LTD. (uniqlo.com)	130,900	3.20%	100%	Apparel
7	7	Oisix ra daichi Inc. (oisixradaichi.co.jp)	115,176	1.50%	100%	Foods
8	8	NITORI Co., Ltd. (nitori-net.jp/store) (*8)	91,100	27.20%	100%	Furniture, sundrixes
9	9	Japanet Takata Co.,Ltd. (japanet.co.jp/shopping)	(*a)84,600	2.30%	34%	Home electrical applianxces
10	10	Joshin Denki Co.,Ltd. (joshinweb.jp)	75,552	(0.4%)	100%	Home electrical appliances
11	11	AEON Next Co., Ltd. (shop.aeon.com/netsuper/)	(*a)75,000	0.00%	100%	Foods
12	12	IRIS PLAZA (www.irisplaza.co.jp)	(*a)75,000	50.00%	100%	Sundries
13	13	Adastria Co., Ltd. (www.adastria.co.jp) (*13)	62,600	9.10%	100%	Apparel
14	14	Dell Japan Inc. (dell.com)	(*a)60,000	1.70%	100%	PC
15	15	BAYCREW'S STORE (baycrews.jp) (*15)	(*a)56,000	2.80%	100%	Apparel
16	16	D C M Holdings Co., Ltd (XPRICE) (www.dcm-hldgs.co.jp/grp/english/) (*16)	55,640	(14.0%)	100%	Home electrical appliances
17	17	MouseComputer Co.,Ltd. (mouse-jp.co.jp)	53,443	(1.2%)	100%	PC
18	18	QVCJapan, Inc. (corporate.qvc.jp/corporate-information/)	(*a)53,000	39.50%	100%	General
19	18	Jupiter Shop Channel Co.,Ltd. (shopch.jp)	(*a)51,300	(1.3%)	33%	General
20	20	World Co., Ltd. (corp.world.co.jp/english/) (*20)	46,267	30.10%	100%	Apparel
21	21	ASKUL Corporation (askul.co.jp)	46,176	(15.0%)	100%	Household items
22	22	ONWARD HOLDINGS CO., LTD. (www.onward-hd.co.jp) (*22)	44,798	3.90%	100%	Apparel
23	23	Belluna Co., Ltd. (belluna.jp)	44,679	(7.3%)	31%	General
24	24	Senshukai CO.,LTD. (bellemaison.jp)	(*a,b)44,222	(16.6%)	83%	General
25	25	DINOS CORPORATION (dinos-corp.co.jp) (*25)	(*b)43,779	0.00%	77%	General

(*1): Amazon Japan: Amazon's total sales in Japan, including other businesses except product sales.

(*2): ZOZO: Sales values for accounting purposes, and their product turnover (total distribution value) is JPY 544,317 million.

(*5): BIC CAMERA: Consolidated group total sales including Kojima and Sofmap.

(*8): NITORI: Irregular 13-month financial results.

(*13): ADASTRIA: Total e-commerce sales in Japan including via malls.

(*15): BAYCREW'S: Estimated value of all EC sales including those via malls.

(*16): D C M: Sum of the EC businesses of XPLICE, which became a subsidiary of DCM in March 2010, and DCM, which changed its fiscal year-end to January. XPRICE changed its fiscal year end up to January, so that the totales XPRICE value is calculated with 19 month sales, and their total sales by June 2022 was JPY 67.874b.

(*20): World: Group's total EC sales.

(*22): ONWARD HOLDINGS: Domestic EC sales including via malls.

(*25): DINOS CORPORATION: EC conversion ratio is calculated by multiplying total distribution sales by order-based online sales, which differs from the sales-based EC conversion ratio.

(*a): Estimation

(*b): Sales calculated from the ratio of orders received.

The source: Koubunshuppan Corporation (https://nethanbai.co.jp/archives/15100)

Table 5.1-12 Top 30 Service business companies in Japan (2022) [unit: JPY]

2022	2021	Companies	Services	H.Q.	Sales [JPYm]		
					2022	Growth (%)	2021
1	1	Recruit Holdings Co., Ltd.	Other services	Tokyo	3,429,519	19.42%	2,871,705
2	3	MARUHAN Corporation	Pachinko (Pinball) parlor	Kyoto	1,249,600	3.17%	1,211,173
3	5	JCOM Co., Ltd.	Urban CATV	Tokyo	828,800	3.85%	798,100
4	7	DYNAM JAPAN HOLDINGS Co.,Ltd.	Pachinko (Pinball) parlor	Tokyo	464,364	0.25%	463,213
5	-	Oriental Land Co., Ltd.	Amusement/entertainment park	Chiba	396,098	-	-
6	8	Undertree Corporation(KICONA)	Pachinko (Pinball) parlor	Osaka	282,862	10.76%	255,378
7	-	PARK24 CO., LTD.(Times parking)	Parking place rental	Tokyo	211,793	-	-
8	9	Benesse Corporation (Products & services related to education & life)	Other services	Okayama	182,945	(3.42%)	189,421
9	10	Benesse Style Care Co.,Ltd. (Aria, Grandma and Grandpa, Kurara, etc.)	Pay nursing home	Tokyo	125,953	3.46%	121,741
10	-	Resorttrust, Inc. (XIV, Baycourt Club, Sun members)	Membership resort clubs	Aichi	124,692	-	-
11	12	DUSKIN CO., LTD.(Products & services related to rental general & life)	Other services	Osaka	90,377	(0.06%)	90,429
12	-	Mitsui Fudosan Realty Co., Ltd. (Mitsui's Repark)	Parking place rental	Tokyo	89,970	-	-
13	13	KITAMURA Co., Ltd.(DPE)	Other services	Kochi	87,898	5.63%	83,210
14	14	Sompo Care Inc.(Sompo Care, Sompo-no-yie(Sompo's nursing homes), etc.)	Pay nursing home	Tokyo	85,989	3.65%	82,964
15	17	Premium Water Holdings, Inc. (Water delivery service)	Other services	Tokyo	76,463	11.70%	68,452
16	16	TSUKUI CORPORATION	Welfare services at home	Kanagawa	72,502	3.39%	70,128
17	19	SAINT-CARE HOLDING CORPORATION	Welfare services at home	Tokyo	51,545	7.88%	47,782
18	20	YARUKI Switch Group Holdings Co., Ltd.	Cram/preparatory schools	Tokyo	50,679	6.08%	47,773
19	22	Kyoritsu Maintenance Co., Ltd. (Management of student and company dorm)	Other services	Tokyo	50,358	6.59%	47,246
20	21	Solasto Corporation	Welfare services at home	Tokyo	48,536	1.96%	47,602
21	24	Konami Sports Co., Ltd. (Konami Sports Club, GRANCISE, etc.)	Sporting facilities	Tokyo	45,473	8.38%	41,957
22	25	Central Sports CO., Ltd.	Sporting facilities	Tokyo	43,602	8.09%	40,338
23	28	Nova Holdings Co., Ltd.(NOVA, etc.)	Spec. SS (Lg, Cert., PC), CLC	Tokyo	42,730	12.75%	37,897
24	27	Hannan barber & beauty(PLAGE)	Beauty & Barber	Osaka	41,294	5.89%	38,996
25	74	GAKKEN HOLDINGS CO.,LTD. (Gakken Cocofump Co., Ltd.)	Welfare services at home	Tokyo	41,064	280.68%	10,787
26	33	TAKE AND GIVE. NEEDS Co., Ltd.	Wed. ctr., wed. arr.	Tokyo	40,848	12.38%	36,347
27	31	RENAISSANCE INCORPORATED (sports club RENAISSANCE)	Sporting facilities	Tokyo	40,760	9.81%	37,120
28	32	CARE TWENTYONE CORPORATION	Welfare services at home	Osaka	38,398	5.60%	36,361
29	73	DAIICHIKOSHO CO., LTD.(BIG ECHO, etc.)	Karaoke lounges	Tokyo	37,874	105.29%	18,449
30	30	BestLife Inc.(BestLife, La vie)	Pay nursing home	Tokyo	37,495	0.34%	37,368

The source: The Nikkei Marketing Journal, 25 October 2023

Table 5.1-13 Number of Vending Machines and Annual sales in Japan (2023) [unit: JPYk]

Type	Product examples	Machines in operation					Sales (JPYk) 2016
		2023	Growth (%)	2022	2021	2016	
Beverages	Soft drinks	1,977,200	(0.8%)	1,994,000	1,999,000	2,133,000	1,740,528,000
	Milk drinks	97,500	(2.9%)	100,400	101,000	148,000	120,620,000
	Coffee, cocoa (Cup)	124,600	(2.7%)	128,000	134,000	169,000	137,904,000
	Alcoholic drinks	19,300	(4.9%)	20,300	20,400	24,600	30,750,000
Total (Beverages)		**2,218,600**	**(1.1%)**	**2,242,700**	**2,254,400**	**2,474,600**	**2,029,802,000**
Foods	**Instant noodles, frozen foods, ice creams, confectioneries, etc.**	**81,000**	**4.2%**	**77,700**	**72,800**	**69,400**	**54,132,000**
Cigarettes	**Cigarettes**	**75,300**	**(18.4%)**	**92,300**	**116,000**	**193,300**	**209,356,000**
Thickets	Passenger tickets	14,100	(0.7%)	14,200	14,400	14,800	1,415,842,000
	Meals, admissions, etc.	49,500	1.2%	48,900	48,000	35,400	410,972,800
Total (Tickets)		**63,600**	**0.8%**	**63,100**	**62,400**	**50,200**	**1,826,814,800**
Household items	Prepaid cards, sanitary goods, newspapers, toys, etc.	201,400	0.0%	201,500	202,900	722,300	417,967,500
	Others (Newspapers, sanitary goods, toys, etc.)	-	-	-	-	138,800	52,762,400
Total (Household items)		**201,400**	**0.0%**	**201,500**	**202,900**	**861,100**	**470,729,900**
Total (Vending machines)		**2,639,900**	**(1.4%)**	**2,677,300**	**2,708,000**	**3,648,600**	**4,590,834,700**
Automated self-service machines	Money changer	62,800	(1.1%)	63,500	64,100	61,000	-
	Automatic fare adjustment machine (Parking, hotels, hospitals, etc.)	158,400	0.4%	157,700	159,800	21,800	-
	Others (Automatic lockers, lending machines, etc.)	1,070,800	0.0%	1,071,000	1,071,200	1,210,000	145,200,000
Total (Automated self-service machines)		**1,292,000**	**0.0%**	**1,292,200**	**1,295,100**	**1,292,800**	**145,200,000**
Grand total		**3,931,900**	**(0.9%)**	**3,969,500**	**4,003,600**	**4,941,400**	**4,736,034,700**

The source: Japan Vending Machine Manufacturers Association (www.jvma.or.jp/information/information_3.html)

Table 5.1-14 Top 30 restaurant businesses in Japan in Japan (2023) [unit: JPYm]

2023	2022	Companies	Services	H.Q.	Sales [JPYm]						# Stores			
					2023	Growth (%)	2022	2021	2023 Direct	2023 Franchise	2023	Growth (%)	2022	2021
1	1	McDonald's Holdings Company (Japan), Ltd.(McDonald's)	FF	TY	777,752	8.4%	717,589	652,047	259,692	518,060	2,982	0.5%	2,967	2,942
2	3	Zensho Holdings Co., Ltd. (Sukiya, Nakau, Lotteria, Coco's Japan, Hanaya Yohei, others)	FF	TY	621,430	26.5%	491,121	434,217	-	-	4,854	8.1%	4,492	4,388
3	5	COLOWIDE Co., Ltd. (Gyu-Kaku, KAPPA, Steak Miya, OOTOYA)	Multi	KN	381,568	10.2%	346,128	275,346	215,742	165,827	2,194	(2.3%)	2,245	2,409
4	7	NISSIN HEALTHCARE FOOD SERVICE CO.,LTD.	CFS	TY	350,000	8.0%	324,020	315,691	350,000	0	8,600	2.2%	8,415	8,254
5	-	SKYLARK HOLDINGS CO., LTD. (Gusto, Bamiyan, Syabuyo, Jonathan's, Yumean)	FR(W)	TY	338,796	16.2%	291,637	256,846	336,814	1,982	2,902	(2.7%)	2,984	3,031
6	8	FOOD&LIFE COMPANIES (AKINDO SUSHIRO) (*1)	CBS	OS	205,906	(5.6%)	218,058	213,237	205,906	0	653	1.4%	644	610
7	-	Plenus Company Limited (Hotto Motto, Yayoiken, MK RESTAURANTS)	To go/PF	FO	200,666	5.1%	190,914	184,422	65,783	134,883	2,830	(0.8%)	2,853	2,884
8	9	KFC HOLDINGS JAPAN, LTD. (KENTUCKY FRIED CHICKEN)	FF(W)	KN	176,048	10.5%	159,325	153,559	49,494	126,553	1,232	2.9%	1,197	1,172
9	10	Kura Sushi, Inc.(Muten Kura Sushi)	CBS	OS	163,861	9.3%	149,938	131,563	163,861	0	543	3.2%	526	495
10	-	TORIDOLL Holdings Corporation (Marugame Udon, Inc., Kona's Coffee, others)	FF(Noodles)	TY	143,315	21.9%	117,538	106,827	143,315	0	1,090	2.5%	1,063	1,076
11	12	DOUTOR・NICHIRES Holdings Co., Ltd.	CS	TY	135,931	10.7%	122,843	106,338	90,621	45,310	2,021	(0.8%)	2,038	2,068
12	-	MONOGATARI CORPORATION (Yakiniku King, Marugen, Yuzu-An, Okonomiyaki Honpo, others)	Multi	AI	132,047	24.4%	106,149	93,179	83,362	48,685	644	5.9%	608	569
13	13	AIM SERVICES CO., LTD.	CFS	TY	131,934	11.2%	118,677	115,368	131,934	0	1,517	0.7%	1,507	1,526
14	14	MOS FOOD SERVICES, INC. (MOS BURGER)	FF(W)	TY	130,204	7.8%	120,738	114,570	-	-	1,336	1.6%	1,315	1,277
15	17	Green House Co., Ltd.	CFS	TY	126,800	13.1%	112,100	100,200	126,800	0	2,697	33.3%	2,023	1,998
16	16	YOSHINOYA HOLDINGS CO., LTD. (YOSHINOYA) (*2)	FF(J)	TY	126,460	11.2%	113,767	101,150	121,252	5,208	1,229	2.7%	1,197	1,190
17	19	Duskin Co., Ltd.(Mister Donut) (*3)	FF(W)	OS	124,848	18.3%	105,571	92,951	-	-	1,017	1.9%	998	979
18	20	Matsuya Foods Holdings Co., Ltd. (Matsuya, Matsunoya, Mycurry Shokudo, others)	FF(J)	TY	120,937	19.2%	101,431	88,512	120,591	346	1,250	4.0%	1,202	1,196
19	22	Saizeriya Co., Ltd.	FR(W/Gen)	ST	120,482	19.1%	101,126	86,181	120,482	0	1,055	(1.3%)	1,069	1,089
20	21	LEOC Co.,Ltd.	CFS	TY	118,200	12.9%	104,666	95,895	118,200	0	3,013	5.0%	2,869	1,675
21	24	OHSHO FOOD SERVICE Corporation (Gyoza no Ohsho, GYOZA OHSHO, others)	Rest(C)	KY	116,891	8.7%	107,498	97,768	92,557	24,334	729	(0.1%)	730	732
22	25	create restaurants holdings inc. (Kagonoya, Shabu sai, Desert Oukoku, Icchou Inc.)	Multi	TY	115,866	17.4%	98,668	67,406	-	-	922	(9.9%)	1,023	982
23	28	ICHIBANYA CO., LTD. (CURRY HOUSE CoCo ICHIBANYA, others)	FR(J/Var Intl)	AI	88,485	12.3%	78,764	74,576	10,009	78,476	1,245	(0.2%)	1,247	1,259
24	27	Fujisangyo Co.,Ltd	CFS	TY	86,868	5.5%	82,358	82,045	86,868	0	2,011	(1.3%)	2,038	2,045
25	74	Domino's Pizza Japan, Inc. (Domino's Pizza)	HD	TY	79,235	(2.5%)	81,277	77,594	29,361	49,874	986	5.6%	934	800
26	33	aleph-inc.(Bikkuri Donkey, Dishers, others)	FR(W/Gen)	HK	76,780	14.4%	67,139	54,095	31,280	45,500	351	1.7%	345	344
27	31	Watami Co., Ltd.(MIRAIZAKA, Torimero, Yakiniku no Watami, Watami Takushoku)	Pub/J Rest	TY	72,101	4.8%	68,781	55,595	-	-	851	(2.4%)	872	936
28	32	ARCLAND SERVICE HOLDINGS CO., LTD. (KATSUYA, Karayama, Mangotree, others)	FF(J)	TY	69,212	9.7%	63,088	57,937	27,545	41,667	689	1.9%	676	667
29	73	Uokuni Food Services Co.,Ltd. (O-noya, Il piatto, Caffe Luca, Robinson)	CFS	OS	66,300	5.7%	62,700	61,500	66,300	0	2,500	(1.3%)	2,534	2,530
30	30	FOUR SEEDS CORPORATION (PIZZA-LA, TO THE HERBS, KUA'AINA)	HD	TY	66,000	4.8%	63,000	65,000	41,000	25,000	1,380	0.9%	1,368	1,366

(*1): FOOD & LIFE COMPANIES: Total store sales and number of stores are for Akindo Sushiro only.

(*2): Yoshinoya Holdings: Total store sales and number of stores are the sum of six regional operating companies that operate only Yoshinoya restaurants.

(*3): Duskin: Data is only for Mister Donut business.

The source: The Nikkei Marketing Journal, 19 June 2024

Abbreviations

C: Chinese
CBS: Conveyor belt sushi
CFS: Contract food service
CS: Coffee shop
FF: Fast food
FR: Family restaurant
Gen: General
HD: Home delivery
Intl: international
J: Japanese
PF: Prepared food
Rest: Restaurant
Var: Variety
W: western
AI: Aichi
FO :Fukuoka
HK :Hokkaido
KN :Kanagawa
KY :Kyoto
OS :Osaka
ST :Saitama
TY :Tokyo

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