The Global Language of Business

GS1 2D barcodes case study

Shenyang Lawson: Improving expiry-date management and food safety with GS1 2D barcodes

Shenyang Lawson is using GS1 2D barcodes across its private label fresh food range to support regulatory compliance, strengthen food safety and improve the management of products with short shelf lives. The implementation by Shenyang Lawson and Dalian Lawson now covers 789 stores and 16 factories across Liaoning Province, China.



Challenge

Managing fresh and ready-to-eat products with short shelf lives is a constant challenge for retailers. Shenyang Lawson was looking for a way to support compliance requirements, reduce the risk of expired products reaching consumers and provide access to digital product information through a single barcode. With hundreds of private label products distributed across a large store network, the convenience store chain needed a solution that could be implemented on a scale.

Solution

Working with GS1 China, Shenyang Lawson implemented GS1 2D barcodes on its private label fresh food products. To meet regulatory requirements, the factories supplying Lawson stores transitioned from using Restricted Circulation Numbers (RCNs) to GTIN-based identification and adopted QR Codes powered by GS1, combining product identification, production dates and expiry dates in a single barcode. Printing equipment and barcode verification processes were updated to support implementation, while GS1 China provided standards, GTIN allocation and technical implementation support.

Shenyang Lawson upgraded its software and point-of-sale systems while continuing to use most existing scanners, with scanner updates when required. Following a successful pilot, the rollout expanded progressively across fresh food categories including bento meals, porridge, rice balls, sushi, noodles and side dishes. More than 300 private label products now use GS1 2D barcodes.

Benefits

- **Improved expiry-date control** to help prevent expired products being sold at checkout.
- **Strengthened food safety**, with Shenyang Lawson Shenyang reporting zero expired self-branded products sold and zero related complaints after full implementation.
- **Supported product identification** by replacing RCNs with GTIN-based identification and encoding production and expiry dates in GS1 2D barcodes.
- **Helped avoid compliance-related complaints and reports** linked to expired products being offered for sale.
- **Created opportunities** for future digital labelling and traceability initiatives.

What were the results and key learnings?

The project demonstrated that GS1 2D barcodes can help convenience store chains address compliance and food safety challenges using a single standards-based barcode. Shenyang Lawson was able to build on existing store infrastructure, focusing upgrades on software and systems rather than replacing scanners, and scale the solution across hundreds of stores and products.

Next steps

Following the successful rollout in Liaoning Province, Shenyang Lawson is exploring opportunities to expand implementation to additional provinces and support future applications, including enhanced consumer information and traceability.

Interested in implementing GS1 2D barcodes in your organisation?

Explore how to get started withGS1 2D barcodes or contact your local GS1 Member Organisation for support.





"GS1 2D barcodes break the limitations of traditional barcodes and give products a dual digital identity: at the checkout, they are the pass for fast payment; in the hands of consumers, they are a window of trust to the brand's source. Implementing GS1 2D barcodes is not only about embracing the new retail infrastructure, but also about giving brands a transparent, efficient, and trusted digital edge."

Guo Yu, the Minister of Administration and General Affairs at Shenyang Lawson.

About GS1

GS1 is a neutral, not-for-profit organisation that develops and maintains the most widely used global standards for efficient business communication. Best known for the barcode, GS1 standards create a common language that supports systems and processes across the globe, improving the efficiency, safety and visibility of supply chains in over 25 sectors.

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