



2D barcodes case study

Woolworths Australia seeing multiple benefits from 2D barcodes

Woolworths and selected suppliers are using 2D barcodes with GS1 standards to achieve substantial results, including enhancing food safety and reducing food waste by up to 40%



Challenge

Facing shoppers with new expectations and suppliers with new challenges, Woolworths Australia knew they needed a way to make available more data—and more granular data—about the products they sold, without causing confusion or wasting precious label space.

Solution

By putting product identification and product information into one on-pack symbol, 2D barcodes have unlocked a new dimension of capabilities for Woolworths and enabled a variety of efficiencies for the retailer and for their suppliers.

Benefits

With 2D barcodes now in place for many items at Woolworths stores across Australia, the retailer can manage store inventory at a more granular level, alert cashiers that a scanned product is past its expiry date—and in the future—connect a consumer to the web to provide traceability information about a product's origin and more.

With more than 1,000 stores, Woolworths is the largest retailer in the Australia/New Zealand region, serving 20 million customers every week.

In recent years, Woolworths' teams identified a whole list of needs and opportunities that initiated the move to two-dimensional, or 2D, barcodes.

Entering a new dimension of barcodes

With their higher data capacity, 2D barcodes can carry product information in addition to product identification. Unlike linear barcodes that primarily served the needs of retailers, 2D barcodes offer benefits for everyone—manufacturers, retailers, logistics providers, solution partners and consumers.

One scan of these next-generation barcodes can connect business partners up and down the supply chain to data needed for inventory management, traceability programmes, sustainability initiatives, consumer engagement actions and more.

2D barcodes also have a more compact size than traditional 1D linear barcodes. Because 2D barcodes can contain additional data and enable connection to the web, information such as storage options, recycling instructions, origin and more can be taken off the packaging, freeing on-pack space for brand owners to use differently, or allowing them to remove excessive packaging to save costs and reduce waste.

Substantial benefits for Woolworths

In August 2019, Woolworths began piloting 2D barcodes fresh meat and poultry products sold in their supermarkets. These 2D barcodes embedded information about each item's batch, supplier and use-by date, among other data.

Since the first pilots, Woolworths has announced their intention to transition to 2D barcodes. Fresh food categories are expected to be the first to roll out, beginning with meat and poultry. As of early 2022, 2D barcodes were already on 50% of products in Woolworths meat range in over 1,000 stores—and that number is growing every month.

Less food waste, better manageability of expiry dates and recalls

Woolworths and selected suppliers who are now using 2D barcodes are achieving substantial results, including boosting food safety by restricting the sale of out-of-date items and reducing food waste by up to 40%.

2D barcodes enable store teams to more quickly and easily identify if a product is approaching its expiry date and proactively mark it down, so that the product can be sold without having to be disposed.

2D barcodes can also enable more-targeted and accurate product recalls, saving food from unnecessarily being sent to a landfill. The encoding of a product's batch, lot and/or serial number into a 2D barcode can be used to identify affected products anywhere across the supply chain, so only those products need to be withdrawn from store shelves. All other unaffected products can be saved and remain on the shelf for sale.

In the rare event that a recalled product does reach the checkout, the barcode can alert the cashier and the customer that the item mustn't be sold. Similarly, because 2D barcodes hold information about when a product is beyond its best-before or use-by date, a store worker scanning the item can be alerted that the item isn't available for sale before a customer purchases it.

By making expiry date management more efficient, Woolworths stores using 2D barcodes have seen up to 21% improvements in productivity. That's because 2D barcodes can include use-by dates, which offers retailers like Woolworths the possibility of having a system-driven solution to manage inventory by expiry date and, in the future, to automatically apply markdowns for products approaching expiry without requiring workers to relabel items one by one.

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2D barcodes have immense potential, and we're excited to see how they will improve traceability and stock management.”

—Richard Plunkett, General Manager for Business Enablement, Woolworths

Enhanced product appeal

2D barcodes provide producers, brand owners and retailers with new opportunities to digitally connect with their consumers and enhance the appeal of their products. A consumer who scans a 2D barcode with their smartphone can instantly receive information in a number of multimedia formats, which offers an engaging and educational digital experience right in the palm of their hand.

With 2D barcodes, Woolworths and their suppliers will, in the future, be able to make available to consumers sustainability information and certifications, including the crop and serial number, harvest information including a map of the farm, pack date; nutritional information, serving size; storage and recipe suggestions, packaging recycling instructions; and more.

Benefits for suppliers, too

Woolworths has found that the implementation of 2D barcodes can also provide operational benefits to suppliers, and in particular toward their efforts to boost quality assurance and to enhance traceability.

Woolworths can reduce food waste by up to 40% and improve productivity by up to 21% for articles that have fully transitioned to 2D barcodes

Barcode choice:

- GS1 DataMatrix with element string syntax

Data encoded:

- Global Trade Item Number® (GTIN®)
- Batch number
- Best-before date
- Net weight
- Price to pay



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At Woolworths, we plan to build on the potential of these barcodes to offer customers valuable information on provenance, quality and sustainability. As we work towards a better tomorrow with our suppliers, 2D barcodes can help us communicate a product’s verified sustainability credentials to customers.”

—Roberto Olivares, Senior Project Manager, Woolworths

About Woolworths Australia

Operating over 1,000 stores, Woolworths is Australia's largest supermarket chain. 96% of all fresh fruit and vegetables and 100% of fresh meat are sourced from Australian farmers and growers.

www.woolworths.com.au

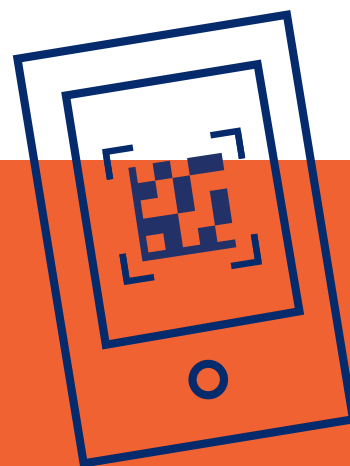
Find out more about GS1 Australia and 2D barcodes at

www.gs1au.org

About GS1

GS1 is a neutral, not-for-profit organisation that develops and maintains the most widely used global standards for efficient business communication. We are best known for the barcode, named by the BBC as one of “the 50 things that made the world economy”. GS1 standards improve the efficiency, safety and visibility of supply chains across physical and digital channels in 25 sectors. Our scale and reach—local Member Organisations in 116 countries, 2 million user companies and 6 billion transactions every day—help ensure that GS1 standards create a common language that supports systems and processes across the globe.

www.gs1.org



Get started with 2D barcodes

GS1 is working with industry to support 2D implementations and create guidance for assisting in the design of proof-of-concept demonstration pilots.

At a high level, consider the following elements:

Retailers: create a vision for use cases enabled by 2D barcodes, assess your current technical capabilities (scanners and back-office systems) to understand your roadmap to enable scanning of all barcodes, and collaborate with other stakeholders to ensure alignment on goals and outcomes.

Brands, Manufacturers and Suppliers: bring together your supply chain and marketing executives to collaborate on a combined barcode strategy that achieves both consumer engagement and supply chain goals.

Solution Providers: consider the upgrades needed to your systems to enable multiple barcode scanning/printing and support your end-users in achieving their top use cases enabled by 2D barcodes.

Questions about the 2D future?

Contact your local GS1 Member Organisation to see how GS1 can help you begin your journey toward a new dimension in barcodes!

www.gs1.org/contact

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