

2DBarcodes by GS1 are the latest on-pack symbols for intelligent packaging, helping companies achieve increased waste reduction, product safety and sustainability, among other benefits. PKN takes a closer look at the technology.



Cracking the smart packaging code

TRADITIONAL linear barcodes have driven growth and efficiencies for more than 50 years for all industries and markets across the world. The next generation 2DBarcode is a single on-pack symbol, much like a QR code, that has multiple data elements encoded. Information within the 2DBarcode is made available once scanned anywhere along the line of production, including point-of-sale.

Due to the enhanced capacity of the 2DBarcode, numerous on-pack symbols can be combined into a single symbol, providing much more on-pack space for brand owners, while removing possible confusion for customers.

Supermarket giant Woolworths and selected suppliers have implemented the innovative on-pack 2D data carriers since September 2020.

Roberto Olivares, Woolworths senior project manager, says, "2DBarcodes add an additional line of defence to our established food safety protocols and support a more targeted response to risks thanks to improved traceability."

2DBarcodes that include a GS1 Digital Link can also be scanned by a smart phone, meaning consumers can instantly receive information about products, including food safety, provenance, and sustainability.

Today more than five million 2DBarcodes are scanned at point-of-sale every week, delivering benefits such as

a 40 per cent reduction in food waste and preventing the sale of expired or recalled products at the checkout.

GS1 Australia CEO Maria Palazzolo says the capacity of 2DBarcodes reflects the constantly evolving nature of consumers and business.

"The world has changed and so has the way that we do business. GS1 recognises the changes taking place globally and developed 2DBarcodes in response and to support the changing landscape," Palazzolo says.

GLOBAL SUCCESS

2DBarcodes are used in Europe, the USA, and throughout Asia. The impact has been clear, with up to 44 per cent improvement in Out of Code product dumps and stock adjustments. Similarly, there has been a 21 per cent increase in productivity as

ABOVE: 2DBarcodes that include a GS1 Digital Link can also be scanned by a smart phone.

BELOW: Scan the QR code for more information on 2DBarcodes.

employees simply scan and print a label for markdowns rather than having to enter dates manually.

Other efficiencies include targeted withdrawal/recall management by batch/lot ID/expiry date, and more accurate inventory for variable weight products and granular inventory by expiry date.

THE CIRCLE OF LIFE

The data-rich capabilities of the 2DBarcode is what sets it apart, giving brand owner, retailer, and consumer much more comprehensive information than ever before.

For consumers it can provide insights into the product's supply chain, the provenance of its ingredients and final product, ethical considerations, and sustainability information such as CO2 emissions.

The brand owner can load nutritional and sustainability information, promotional campaigns, marketing videos, and traceability data. They are also using the codes for consumers to scan and access a digital experience, promotion, loyalty program or provide a review.

WASTE NOT

Date confusion is a major cause of food waste, particularly when it comes to use by versus best before dates. The additional granular data in 2DBarcodes goes a long way to

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SCAN ME



eliminate this confusion, in turn enhancing product rotation and other aspects of inventory management.

They offer better first in/first out manageability using batch/lot or expiration date. Retailers that scan 2DBarcodes with expiration dates into inventory and out at checkout can monitor product freshness without having store team members physically check inventory.

When it comes to returns, 2DBarcodes provide a more seamless return system, which can improve the consumer experience and reduce operating costs. Retailers require more information than is available within the 1D barcode to effectively facilitate returns. 2DBarcodes allow the retailer to tie the item back to a specific transaction, method of payment, warranty, and other useful information.

PROTECTING AUTHENTICITY

Sharing richer product data such as product identification and place of purchase across the retail value chain creates improved consumer protection. By having a single barcode contain information about a product's identity and batch/lot provides greater supply chain visibility, which builds the infrastructure for faster and more targeted recalls. For instance, items such as fresh fish can be tracked from catch to store, giving consumers, manufacturers and retailers greater visibility of their food's origin and supply chain journey.

Barcoding of products, where every item is identified with a unique number, can verify that a product is genuine. Further attribute data can be encoded in a 2DBarcode for enhanced product authenticity. ■

NEW DATA DIMENSION

EXAMPLES of information that can be encoded in 2DBarcodes include, but are not limited to:

- Production information
- Batch/Lot number
- Serial number
- Best before or Use By date
- Packed on date
- Weight
- Price
- Delivery / shipping information
- Inventory location
- Pallet
- Production line and time
- GPS location
- Freight destination
- Recipient's name
- Recipient contact details
- Cubic dimensions
- Links to product information:
- Recall notifications
- Consumer reviews
- Ingredients
- Recipes
- Provenance
- Quality information
- Images
- Websites
- Recycling information
- Videos
- Waste prevention

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