ONE SMALL CHANGE IN BARCODES THAT'S GOING TO CREATE ENORMOUS BENEFITS FOR YOUR BUSINESS AND YOUR CUSTOMERS.

Presenters from this 2D barcode webinar:

Roberto Olivares, Senior Project Manager for Woolworths Australia. Roberto has been instrumental in enabling the use of 2D barcodes across 1,400 Woolworths and Countdown stores, including implementing 2D barcodes on +300 products and counting! Last year, he was the winner of the GS1 Australia Standards in Action award for displaying outstanding supply chain innovation. His perspective and experience in this journey will be valuable for suppliers and retailers alike.

Phil Archer, a self-titled web geek, has been bridging the gap between the physical and online world for many years. At GS1 that means connecting products, pharma, shipments, and assets to the web. As Director of Web Solutions, Phil has been fundamental in the development of the GS1 Digital Link. His work prior to this for W3C – the web standards body - has similarly focused on making data more accessible, usable and valuable to citizens, business partners and scientists.

The session was led by **Dr Peter Stevens**, CEO of GS1 New Zealand.

Why are 2D barcodes being rolled out?

Consumers, retailers, businesses and regulators, are wanting to know more about a product – on the shelf, online and throughout the supply chain. More specific individual product information such as - what is it made of, expiry dates, where it comes from, where it is right now, it's sustainability.

The GS1 2D barcodes (i.e., GS1 DataMatrix, GS1 QR Code) can have significantly more product information encoded in them, such as a batch/lot number, best before date, use-by-date and weight – all in one, single (and small) symbol. And, they still include the GS1 unique barcode number that is currently used in your linear barcodes (you won't need new numbers).

The GS1 Digital Link 2D barcode can also have webpage URLs encoded in them – so consumers and others can be guided to information online such as a full brand or product story (including where that product is from for example).

> **"2D barcodes have immense potential, and we're excited to see how they will improve food safety, traceability, and stock management."**
>
> Richard Plunkett, GM Business Enablement, Woolworths

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After fresh food products (meat and poultry, ready meals, fruit, and vegetables like packaged salads) what other categories are Woolworths Australia's looking at?

We're also rolling out initially to all our own brands and then prioritising other categories based on what would get the most benefit from 2D. Looking at a wine use case for example, what are the issues we're trying to solve – wine has 'vintage' so differentiating different types of wine from the vintage would be an interesting use case and benefit.

From a fruit perspective, do you see a use case at the fruit piece level? E.g.: single apple/ kiwifruit?

Yes. Because the 2D barcode can have information such as best before date and expiry date encoded into it, it means the retailers will know when these dates are approaching. Retailers could than offer discounts or 'specials' when the dates are coming up. For shoppers, they will be able to scan the barcode with their cell phone or use an in-store scanner to find out the same information to make better, more informed buying decisions.

A mandatory use-by date has the potential to increase food waste. How do you deal with use by/best before/expiry?

From the industry perspective all of them are the expiration date so at the point of expiry we remove it from the shelf and look at where else it can be used e.g., prepared ready meals and charities. So, what the supplier encodes as expiry is important and should be consistent.

Will a 'used-by date' be mandatory on all products? Some like wine do not usually require one?

This has been topical and is being approached on a category basis to determine what mandatory fields will be required.

Did you have to change your barcode printers?

For fresh produce the data is variable, so we needed on-demand printing (as opposed to pre-printed on packaging); with the suppliers we've worked with they have had to configure the computers to use the 2D barcodes and thermal printing. Some printers were already capable of printing 2D, and some had to make an investment in printer equipment to print. You still need to print the use-by date on the product, so you already have that capability, but it comes down to the quality of the print of the 2D barcode – so it will be a case-by-case basis and you need to look at what your printers are capable of.

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When will this 2D be coming to NZ?

This is likely be led by the larger retailers and like Australia is likely to be a slow and considered roll out. In the same way GS1 NZ works with industry to collaborate on cross retailer and sector issues, we'll be talking to our retailer community as well as our suppliers members, printers etc.

The Countdown team is still working on making it available in New Zealand – some of the suppliers in Australia also supply to New Zealand so it's coming but there might be some differences between NZ and AUS market which need to be identified before it is implemented.

If a large retailer changes to use 2D barcodes, does that mean that every supplier must also change? How does a supplier manage when one retailer asks for 2D and the others don't?

We were very conscious of that when we started on this journey and realise that at a point in the transition some suppliers will likely have both 2D barcodes and linear barcodes on their packaging as we wait for retailers – big and small - to all get on board.

We already use QR codes for consumers to link through to our website for more product information, how's this different? And, will this cause issues for scanners as supply chains start also moving to 2D barcodes?

Ultimately, the aim is that you'll just need **the one** GS1 QR code – the GS1 Digital Link - on your packaging that includes all the information including the barcode number (the GTIN). Often with other [non GS1] QR codes, the URL embedded in the QR Code changes and so the link to the website fails.

The GS1 DigitialLink QR code identifies the specific **product**, just like the traditional barcode has always done by using the product's, **Global Trade Item Number** (barcode number). Because the DigitalLink is encoded into the 2D barcode in a very specific, GS1 standardised way, scanners will be able to both recognise and interpret the encoded data to ensure the URL directs the search to a product on a webpage correctly. This means the product's brand owner can manage the product quickly and efficiently and can change and update information about the product as required and the URL link will still work e.g., for a 10% off promo for one-week, next week a new promo.

A GS1 DigitalLink URL follows a specific pattern using specialised technology which enables barcode scanners to identify which QR codes matters and which one they can ignore.

Have you considered AI 8200 (extended packaging URL) to publish a URL to link to online info to customers i.e., ingredients etc?

Application Identifier AI 8200 (Extended Packaging URL), can be encoded into the GS1 Digital Link as a data attribute and is available for demonstration purposes on the GS1 GiTHUB 2D barcode generator site.

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Do 2D barcodes allow for other unique identifiers at an individual product container level? So a unique barcode on every product, including the individual units within a multipack. For example, in the context of a container return scheme, could a 2D code allow for individual tracking of 2.57 billion unique beverage containers annually in NZ?

Yes you can include a number of data fields or AI's (Application Identifiers). You'll see in the webinar video (Emma from Trust Codes) the individual tracing of a reusable water bottle where consumers can track their individual impact. Here are some commonly used ones (note GTIN / bar code numbers are mandatory):

Data element	AI	Use cases
Global Trade Item Number (GTIN) **- Required -**	01	•Consumer engagement: digital twin, post purchase interaction •Improved packaging design: need for smaller and/or less symbols •All below
Batch/lot number	10	•Traceability: product authentication, product traceability, recall readiness •Sustainability: product freshness, waste prevention
Best before date	15	•Sustainability: product freshness, waste prevention
Expiration date	17	•Sustainability: product freshness, waste prevention •Variable measure items: prevention of sale of out-of-date product
Serial number	21	•Traceability: product authentication, product traceability, recall readiness •Inventory management: returns management
Country of origin	422	•Traceability: product authentication, product traceability
Net weight	310n	•Variable measure items: migrating away from RCNs
Price	392n, 395n	•Variable measure items: migrating away from RCNs •Internal mark down labelling