

Transforming Tomorrow



**Thank you for your
collaboration since 1982!**

South Africa

50 years ago,
the GS1 barcode
started a revolution...



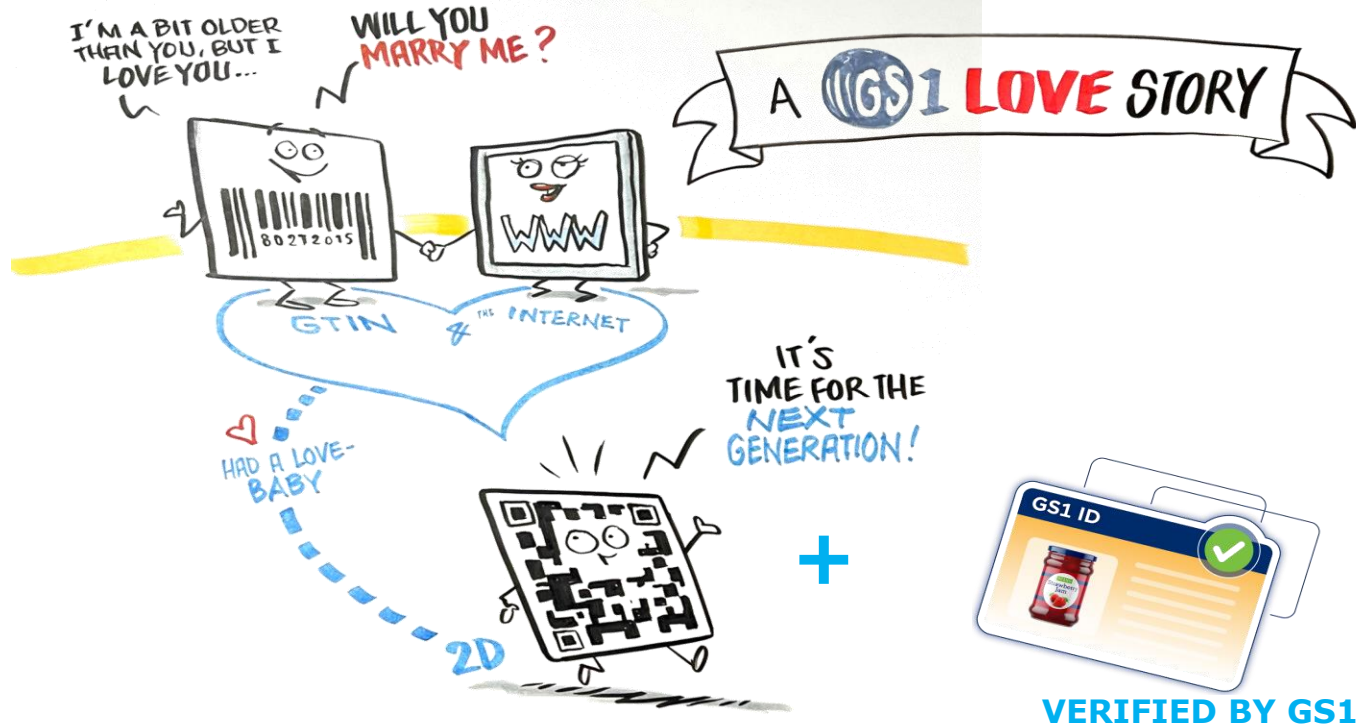
Join us in celebrating!

**This year we celebrate
the first scan**
and 50 years of
transforming tomorrow.



50 years of
**transforming
tomorrow**

The beginning of a new revolution...



Imagine a world
where consumers...





Imagine a world
where patients...

Imagine a world with a circular economy...



Global Awareness to 2D Migration



RetailWire
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FRIDAY, 04/20/2023

Acumatica How to achieve omnichannel retail excellence [Get solution brief](#)

Smarter barcodes are coming to a store near you

18 content creators

This is an opportunity with ample potential for anyone involved - retailers, suppliers...

CSCMP EDGE 2023

Pepsi exec highlights four key structural changes in the supply chain

Omnichannel retailing, smart packaging, work-life balance, and automation top the list of key trends that John Phillips is keeping a close eye on.



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The tiny UPC had a giant role in retail's evolution. It's going 2-D next

14 July 2023

Operations

5 questions with Melanie Nuce, the innovation lead at barcode standards organization GS1 US.

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April 10, 2023 - Technology

QR-style "2D barcodes" will revolutionize retail as we know it

1 Jennifer A. Hingston

The humble (Universal Product Code) barcode, left, will be supplanted by 2027 with a more data-rich improvement, the 2D barcode, at right. Image courtesy GS1.

The humble and familiar barcode — a staple on consumer packaging for nearly 50 years — will soon be replaced with a more robust and muscular successor that offers far more information about the product inside.

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Celebrating the barcode's 50th birthday with next-gen promise

GS1 Australia

Monday, 03 April 2023

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The BBC has called the barcode "one of the 50 things that made the modern economy", and rightfully so. Since its creation in 1973, the symbol is now present on over 1 billion products, and the "beep" at the checkout counter of every store is instantly recognizable worldwide.

The barcode has changed the way we have shopped over the past 50 years. Although all

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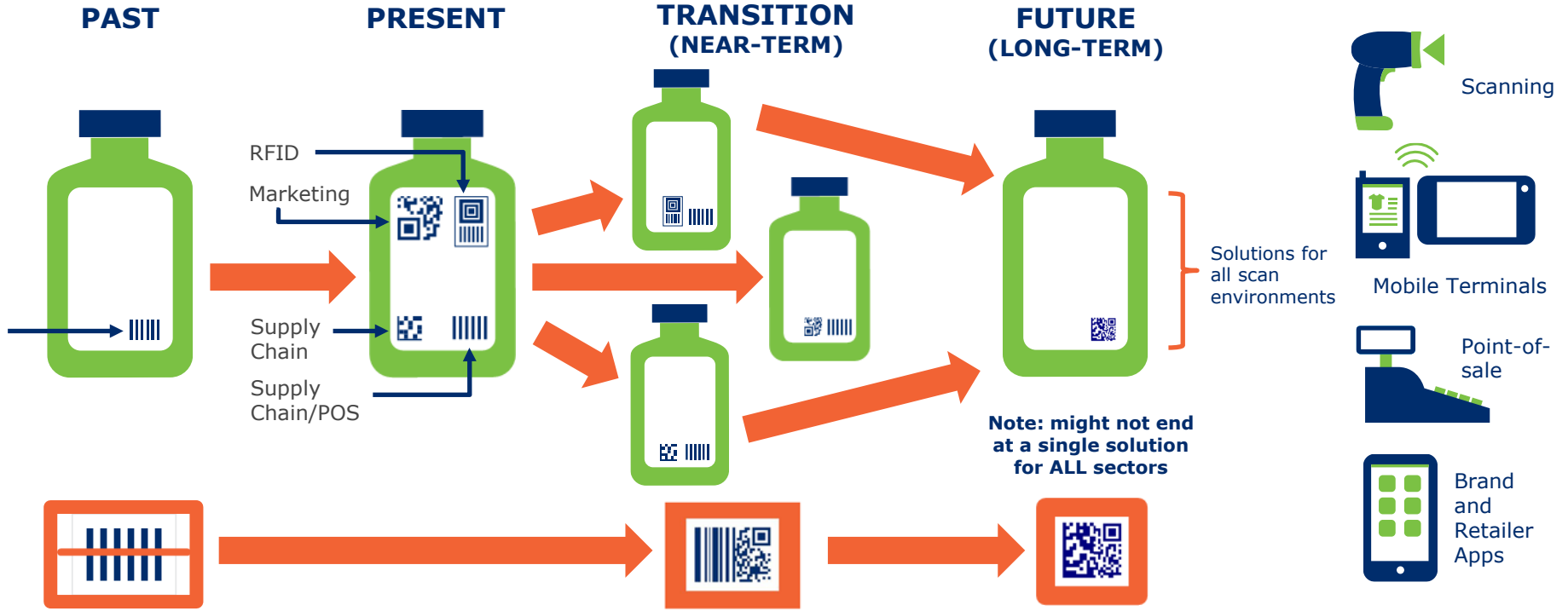
New dimensions for barcodes in the supply chain

By Scott Martin for RangeGate
Johannesburg, 19 Apr 2002

Two-dimensional (2D) barcodes look set to impact on the transport and logistics components of the supply chain as profoundly as linear barcodes did on the retail and distribution industries just a few years ago.

This is according to Scott Martin, business development manager for the industrial and manufacturing sectors at RangeGate. He says 2D barcodes have powerful applications in the parts of the supply chain that one-dimensional (1D) barcodes do not reach.

2D Migration Timeline



1D vs 2D Barcode Comparison



1D (*linear*)

- Contains only a GTIN
- Can be scanned by traditional laser scanners or image-based scanners



2D (*two-dimensional*)

- **Smaller** than most 1D barcodes, but they can carry **more data**
- **More reliable** due to error-correction
- Require an image-based scanner to read, so traditional laser scanners are not compatible



QR Code

Consumer scannable with all smartphone cameras
Connects to the web



Data Matrix

Connects to the web but requires an app to scan with a smartphone
Can be printed a little smaller than a QR with same data

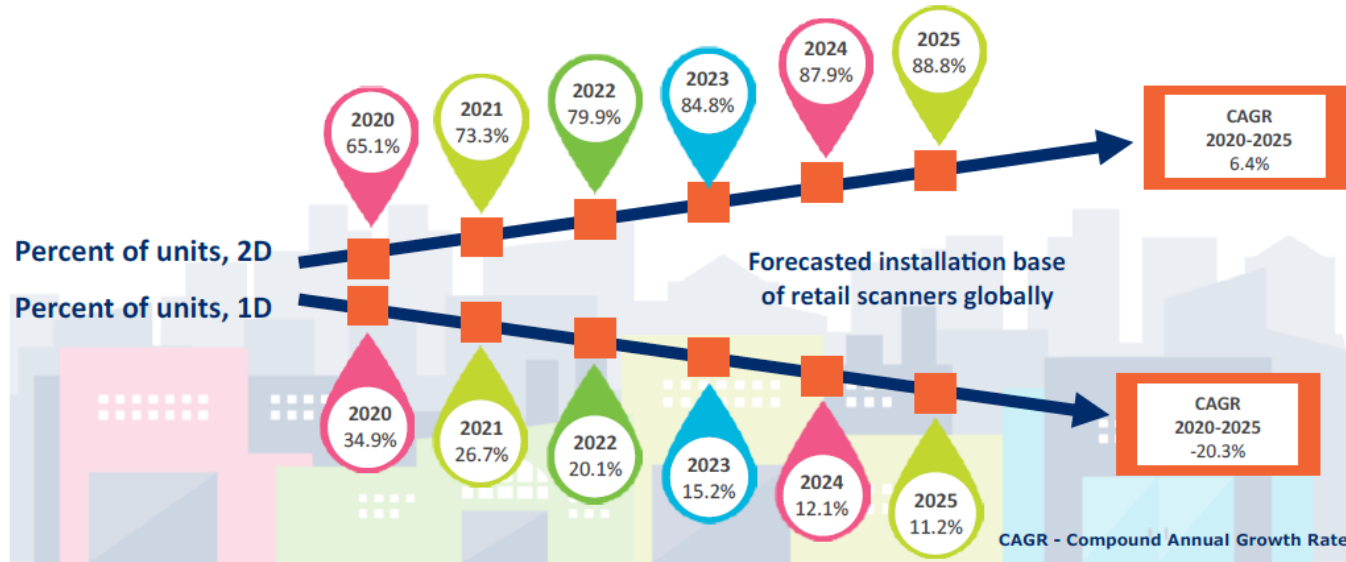


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GS1 DataMatrix

Useful in supply chain applications where consumer engagement is not a requirement (ie. variable-measure products at POS)







Project Adoption of Optical Scanners



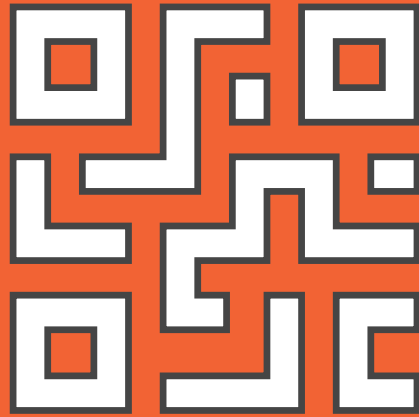
Source: 2021 VDC research for GS1 on Global image-based scanner adoption

Some Business Use Case Opportunities for 2D



<h3>Inventory Management</h3>  <ul style="list-style-type: none">• Maintain FIFO• Inventory Accuracy• Availability and Location Insight• Avoid Waste, Ensure Freshness	<h3>Traceability</h3>  <ul style="list-style-type: none">• Product Authentication• Ingredient Sourcing info• Supply Chain Visibility• Consumer Trust	<h3>Safety</h3>  <ul style="list-style-type: none">• Brand Integrity• Prevent sale of expired or recalled product• Fight Counterfeiting
<h3>Sustainability</h3>  <ul style="list-style-type: none">• Recycling info• Enables Circular Economy• Waste Prevention• Farm to Fork	<h3>Consumer Engagement</h3>  <ul style="list-style-type: none">• Access to Brand authorised info• Promotions• Recipes• Opportunities to engage with the brand	<h3>Improved Packaging</h3>  <ul style="list-style-type: none">• Marketing goals on-pack• Regulatory compliance• Enhanced Consumer Experience

2D barcodes



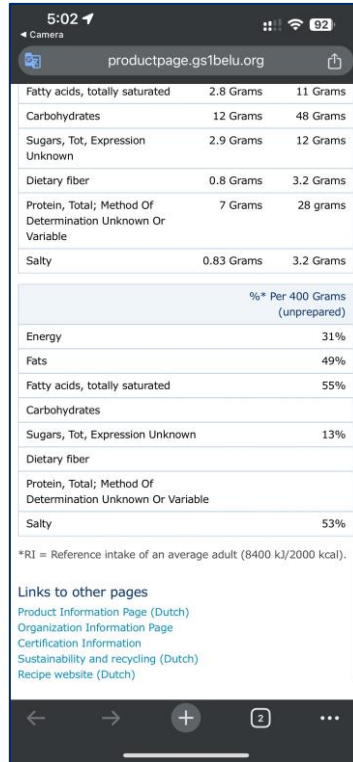
VERIFIED BY GS1

2D barcodes powered by GS1.



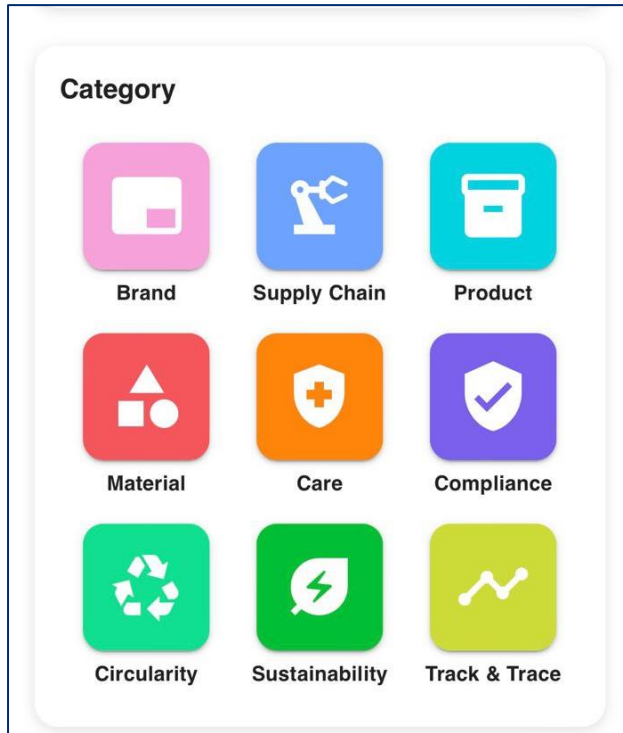
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Certifications and traceability








Crew neck white t-shirt

The white t-shirt is made of soft and lightweight cotton jersey, ensuring comfort, whilst a refined mélange texture adds sporty appeal.

i Made from 100% cotton

GTIN: 9506000164908



Product Certificates Sustainability Track & Trace Recycling

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Daniel Rüfenacht
CEO
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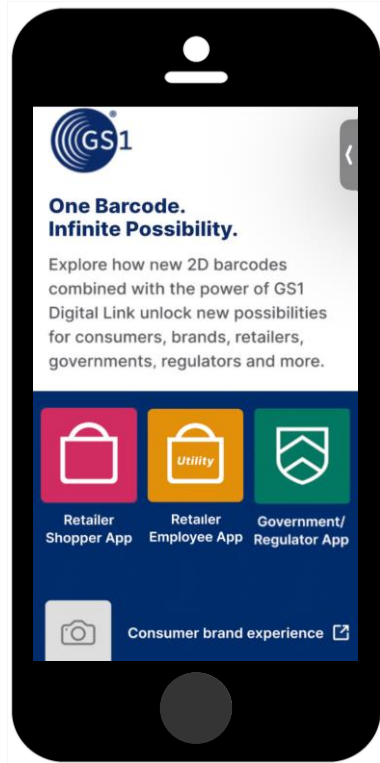
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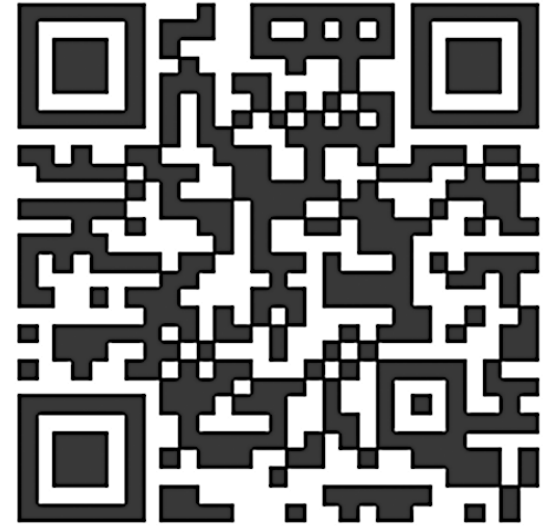
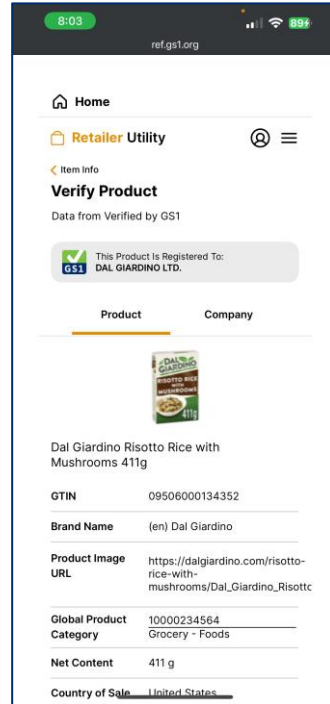


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And it works with your app...

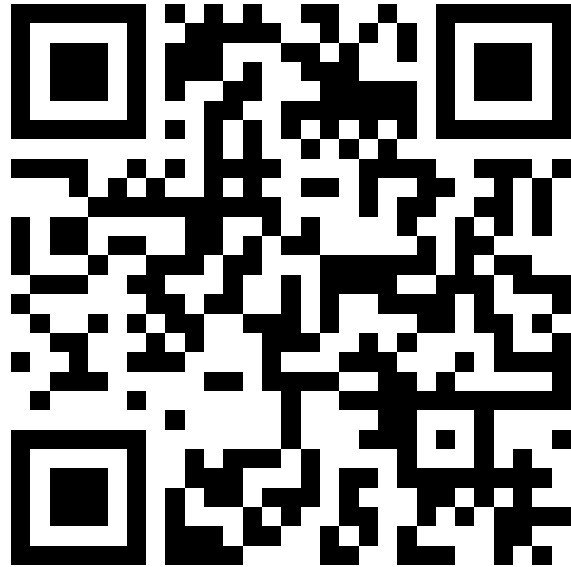


Verifying a product



(01) 09506000134352

Getting Started Support



Woolworths Australia implements 2D barcodes



GS1 Digital Link

One layer at a time



phil.archer@gs1.org
[@philarcher1](https://twitter.com/philarcher1)



Implementation Guideline



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The Global Language of Business

Release 1.0.0, Ratified May 2024

2D Barcodes at Retail Point-of-Sale Implementation Guideline

Implementation guidance for industry to enable a smooth transition from linear barcodes

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1. Executive summary

This *2D Barcodes at Retail Point-of-Sale Implementation Guideline* is focused on the considerations and implications of utilising 2D barcodes encoded with GS1 barcode syntaxes at retail point-of-sale (POS) for brand owners, manufacturers, retailers and solution providers. The purpose of this document is to provide implementation guidance for industry to use in their 2D barcode journey and to enable a smooth, voluntary transition from linear barcodes, to using more capable 2D barcodes while minimising disruptions to existing business processes.

1.1. The changing landscape of the retail industry

To better enable the digital consumer and unlock current and emerging business use cases, such as sustainability and circular economies, the retail industry is embarking on one of the biggest changes since the original introduction of the EAN/UPC barcode: the adoption of 2D barcodes. 2D barcodes, like GS1 DataMatrix, Data Matrix or QR Codes, can be encoded with more data than the EAN/UPC linear barcode. Within these 2D barcodes, both additional data and links to web-enabled information can be included through the use of GS1 Digital Link URI in Data Matrix and QR Codes. Data might, for example, include the product's expiry date, batch/lot number or serial number. Additionally, access to additional information on the web can include ingredient and allergen information, product pictures and videos, consumer reviews, recycling information services related to the product and more. Access to this additional information and data enhances the experiences of consumers, brands, retailers and everyone in between.