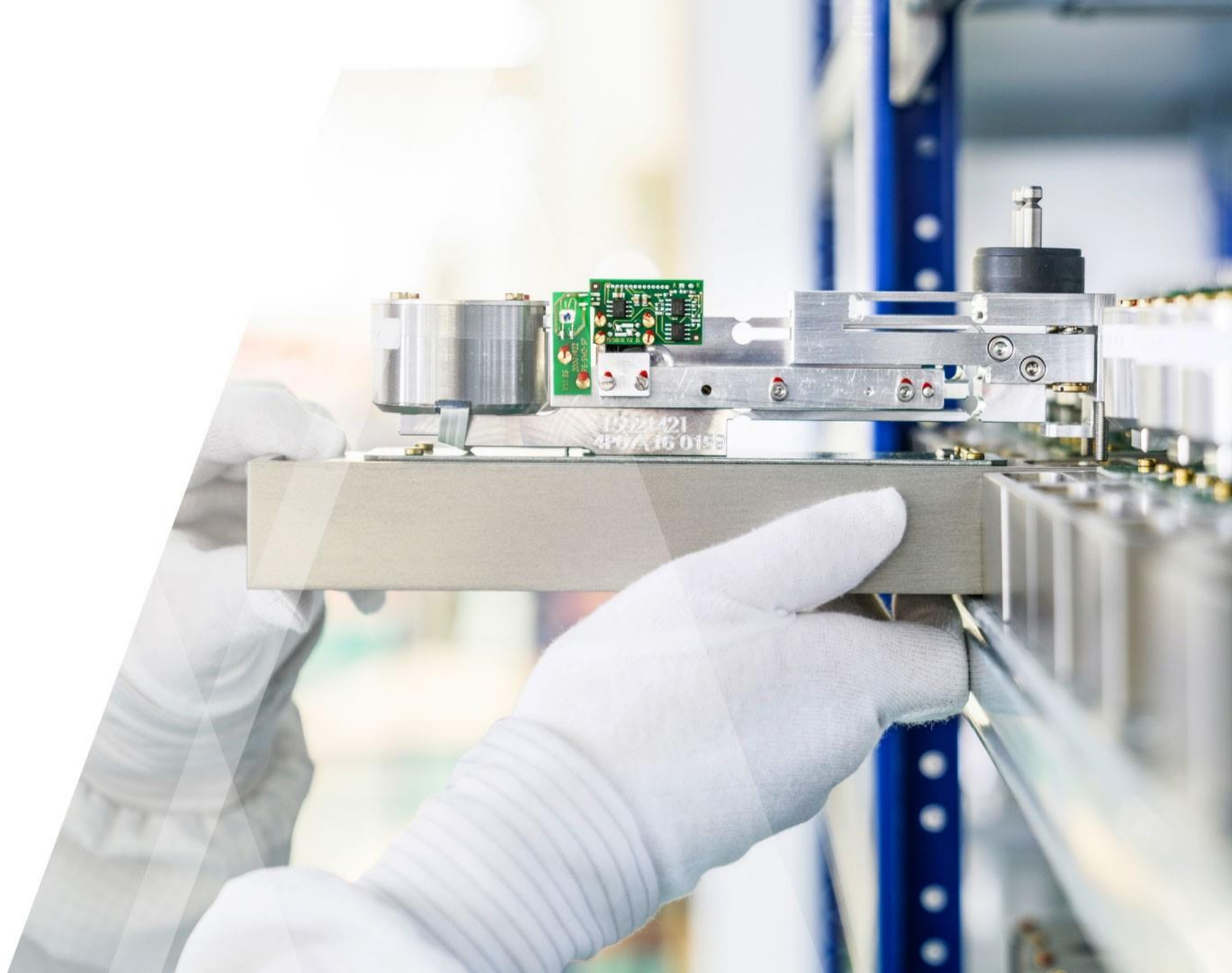
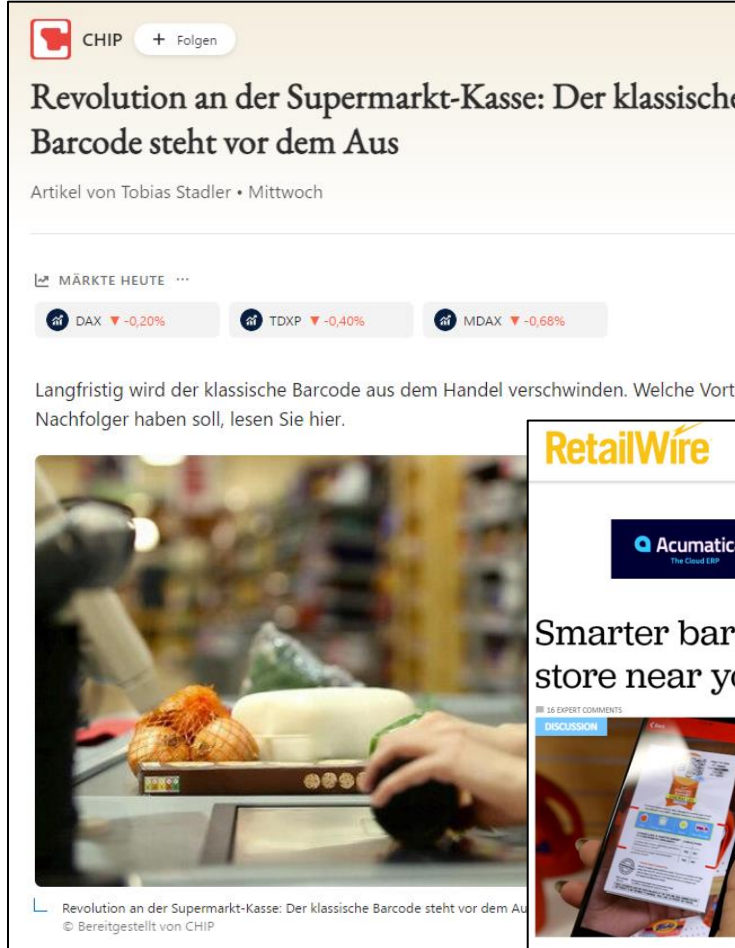


Sunrise 2027

Marvin Mies, WIPOTEC

March 5th, 2024





CHIP + Folgen


Revolution an der Supermarkt-Kasse: Der klassische Barcode steht vor dem Aus

Artikel von Tobias Stadler • Mittwoch

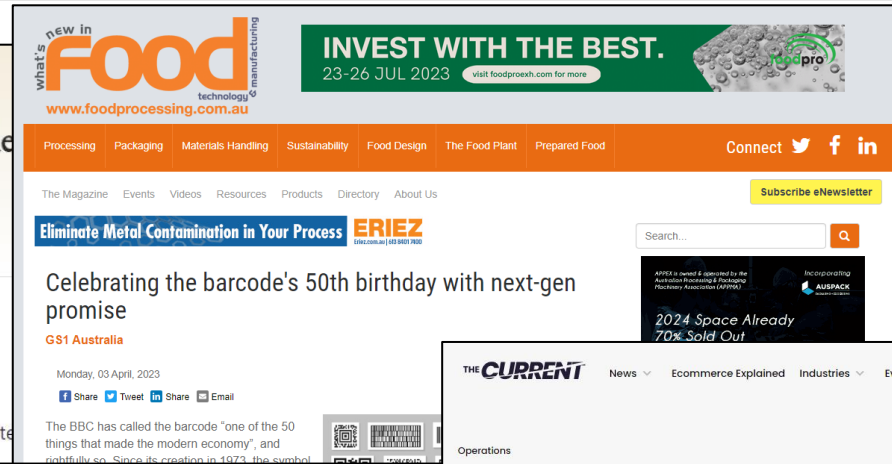
MÄRKTE HEUTE ...

- DAX ▼ -0,20%
- TDXP ▼ -0,40%
- MDAX ▼ -0,68%

Langfristig wird der klassische Barcode aus dem Handel verschwinden. Welche Vorteile Nachfolger haben soll, lesen Sie hier.






Revolution an der Supermarkt-Kasse: Der klassische Barcode steht vor dem Aus
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



Eliminate Metal Contamination in Your Process

ERIEZ

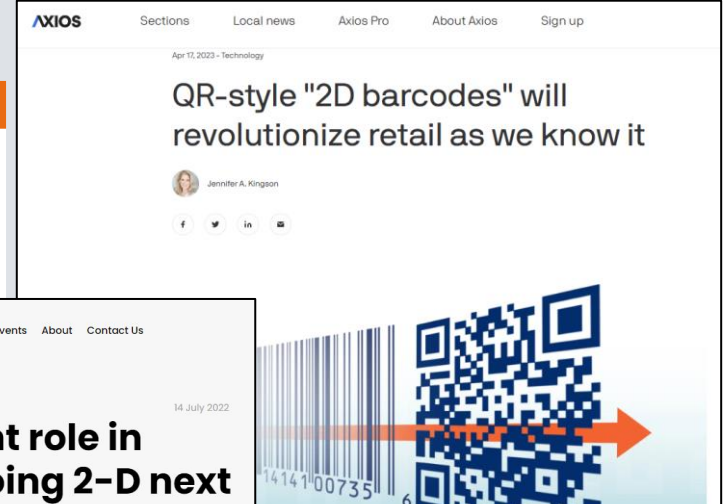
Celebrating the barcode's 50th birthday with next-gen promise

GS1 Australia

Monday, 03 April, 2023

Share    

The BBC has called the barcode "one of the 50 things that made the modern economy", and [notfully.co](#). Since its creation in 1973, the symbol

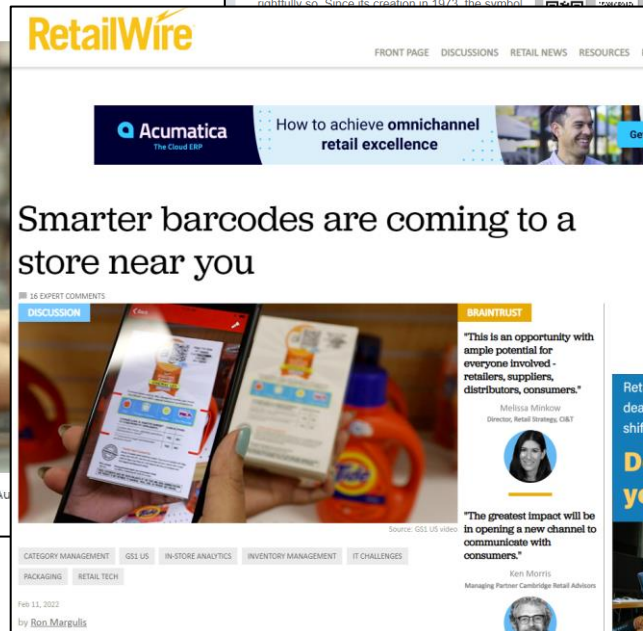



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Apr 11, 2023 - Technology

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

Jennifer A. Kingston



RetailWire

FRONT PAGE DISCUSSIONS RETAIL NEWS RESOURCES

Acumatica The Cloud ERP

Smarter barcodes are coming to a store near you

16 EXPERT COMMENTS

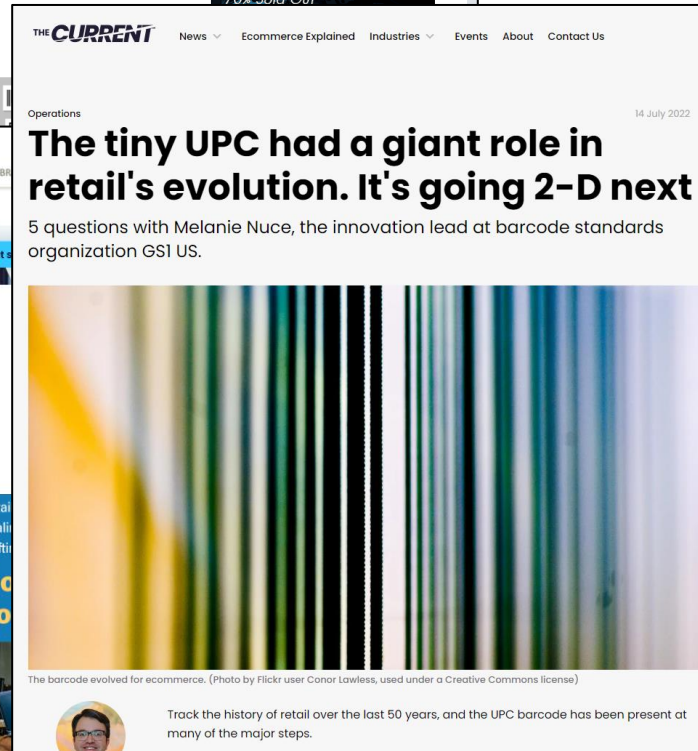
DISCUSSION

"This is an opportunity with ample potential for everyone involved - retailers, suppliers, distributors, consumers."

Melissa Minkow Director, Retail Business C&T

Ken Morris Managing Partner Cambridge Retail Advisors

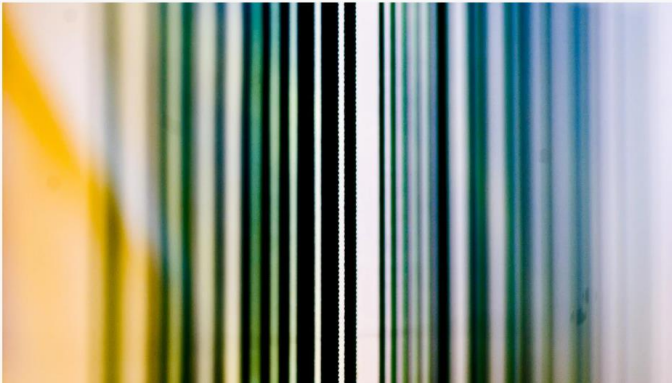
Feb 11, 2022 by Ron Margulis



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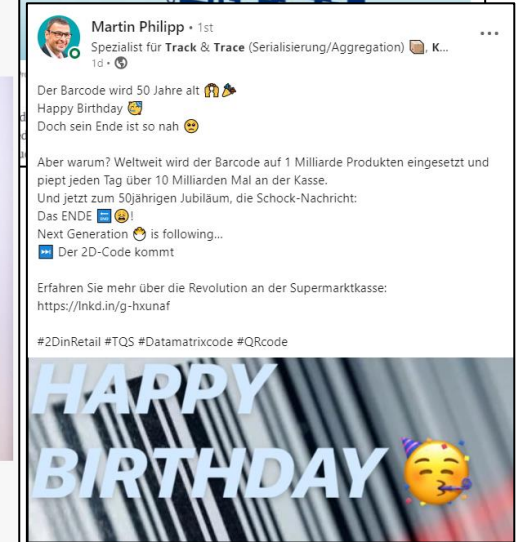
The tiny UPC had a giant role in retail's evolution. It's going 2-D next

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




The barcode evolved for ecommerce. (Photo by Flickr user Conor Lawless, used under a Creative Commons license)

Track the history of retail over the last 50 years, and the UPC barcode has been present at many of the major steps.



Martin Philipp • 1st

Spezialist für Track & Trace (Serialisierung/Aggregation)  K...

Der Barcode wird 50 Jahre alt 🎉
Happy Birthday 🎂
Doch sein Ende ist so nah 😞

Aber warum? Weltweit wird der Barcode auf 1 Milliarde Produkten eingesetzt und piepelt jeden Tag über 10 Milliarden Mal an der Kasse. Und jetzt zum 50jährigen Jubiläum, die Schock-Nachricht: Das ENDE 🤖!
Next Generation 🤖 is following...
Der 2D-Code kommt

Erfahren Sie mehr über die Revolution an der Supermarktkasse: <https://lnkd.in/g-hxunaf>

#2DinRetail #TQS #Datamatrixcode #QRcode

HAPPY BIRTHDAY 🎉

- A new code - new challenges & new chances
- Transition until 2027
- No legal regulations (yet)
 - Manufacturer & Retailer driven
- Change will be worldwide !



- What is an EAN code?

EAN = European Article Number

EAN-13 Term for this type of barcode

EAN-8 Shortened EAN

UPC Universal Product Code (USA)

Term for this type of barcode

UPC-A corresponds to EAN-13 for USA

UPC-E corresponds to EAN-8 for USA



Unique identification
of a product:



10 T-Shirts



9 colors



4 sizes



360 T-Shirts
= 360 EANs

- EAN = GTIN (since 2009)

GTIN = Global Trade Item Number

GTIN in Retail has 13 digits (USA 12 digits) | GTIN in Healthcare has 14 digits

Expert group 2D migration:

E.g. Germany with over 30 members (GS1 Germany, manufacturers, retailers & solution providers) are preparing the development, recommendations and pilot projects for the introduction of 2D codes in retail by 2027. The same is happening all over the world coordinated by GS1 member offices.

Advantages:

	EAN/UPC Barcode	GS1 DataMatrix	GS1 Digital Link in QR code or DataMatrix
			
Encodes GTIN	✓	✓	✓
Low space requirement		✓	✓
Add. data can be encoded		✓	✓
Best before date check at Point of Sale		✓	✓
Allows use of GTIN for variable measure trade items		✓	✓
Supplementary information reg. allergens, ingredients, product videos etc.			✓

Producers & retailers
join forces to implement
2D codes until 2027

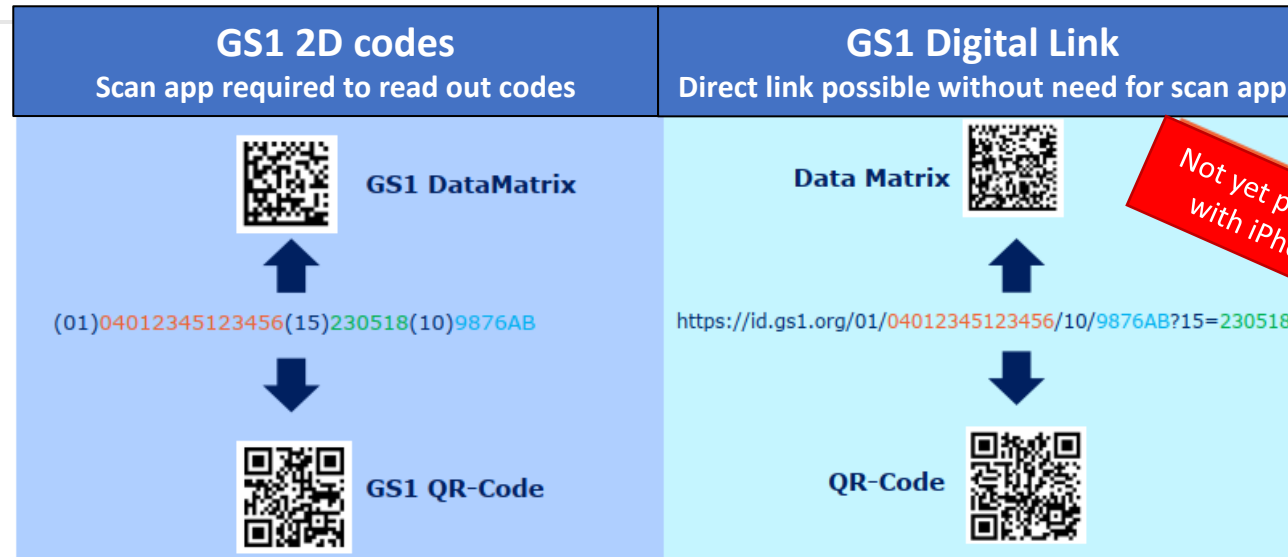
Now



2027



- DataMatrix vs. QR code



	GS1 DataMatrix	QR code with GS1 Digital Link
Encoded data	(01)04012345123456(15)230518(10)9876AB GTIN, LOT, BEST BEFORE	https://id.gs1.org/01/04012345123456/10/9876AB?15=230518 GTIN, LOT, BEST BEFORE
Data carrier	GS1 data carrier	No GS1 data carrier, but GS1 syntax!
Capacity	Up to 3,116 numerical / 2,335 alphanumerical characters	Up to 7,089 numerical / 4,296 alphanumerical characters
Size	Dependent on encoded data; smaller than GS1 QR code with same data volume	Dependent on encoded data; bigger than GS1 DataMatrix with same data volume
Reading devices	Camera-based scanners, reading out codes not possible with smartphones without scan app	Camera-based scanners, reading out codes possible with current smartphones without scan app
Processing	FNC1 character and Application Identifier concept integrated in reading devices	Extracting of data acc. to AI concept needs to be programmed in reading devices
Use cases today	B2B	B2B & B2C

- How the GS1 Digital Link works:







- GS1 Digital Link



<https://id.gs1.org/01/04012345123456/10/9876AB?15=230518>
GTIN, Chargennummer, MHD



- Advantages:

			
<p>New customer experiences & stronger customer retention</p>	<p>Optimization of Business to Business processes</p>	<p>More space on packaging and labels</p>	<p>Digital profile for physical product</p>
<p>Consumers reach their desired information with a single scan. Brands can use their product as a new communication channel.</p>	<p>With the GS1 Digital Link, data and processes between production, logistics and retail will be dynamically linked, also allowing innovative digital solutions.</p>	<p>Fewer labels and data carriers on product or packaging, as almost all information can be reached via just one code.</p>	<p>Every product can be linked to their digital twin via a single ID on packaging or label. Over the entire product lifecycle.</p>

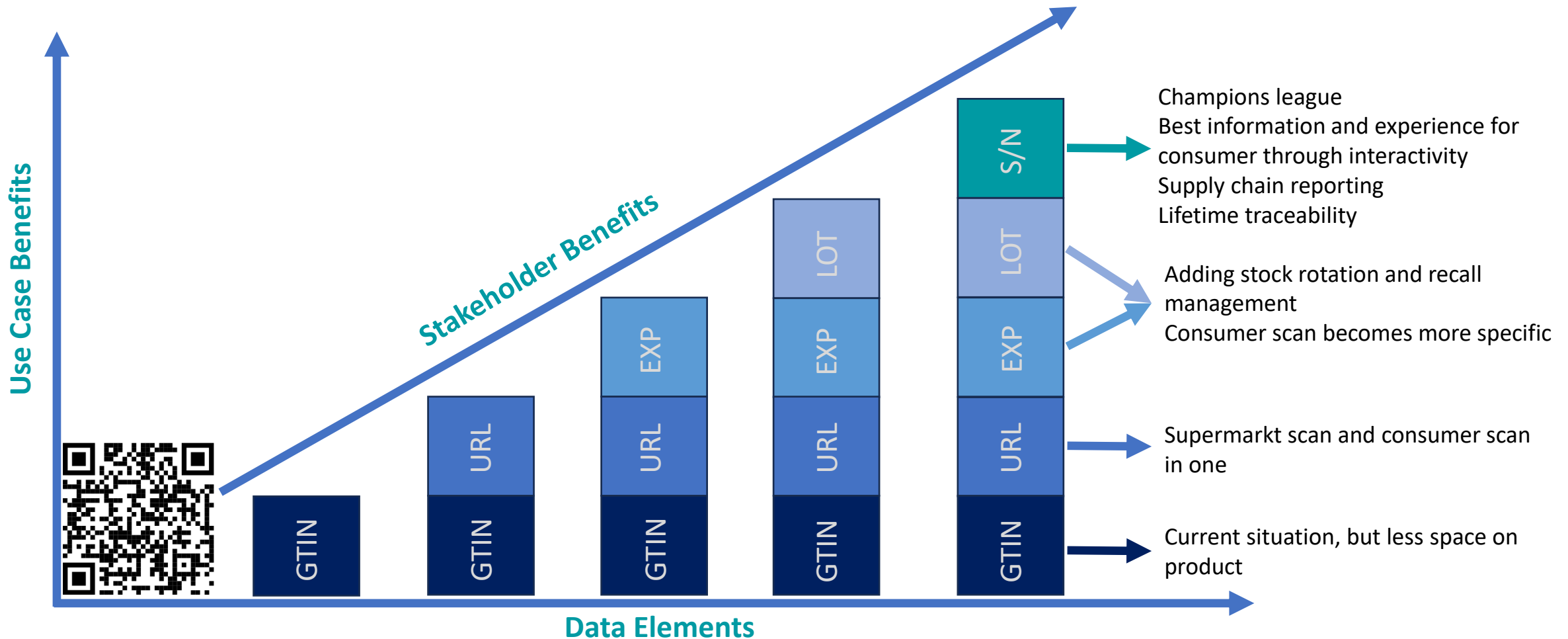
2D codes contain a lot more data than 1D barcode

- Expiry date
- Batch number
- URL

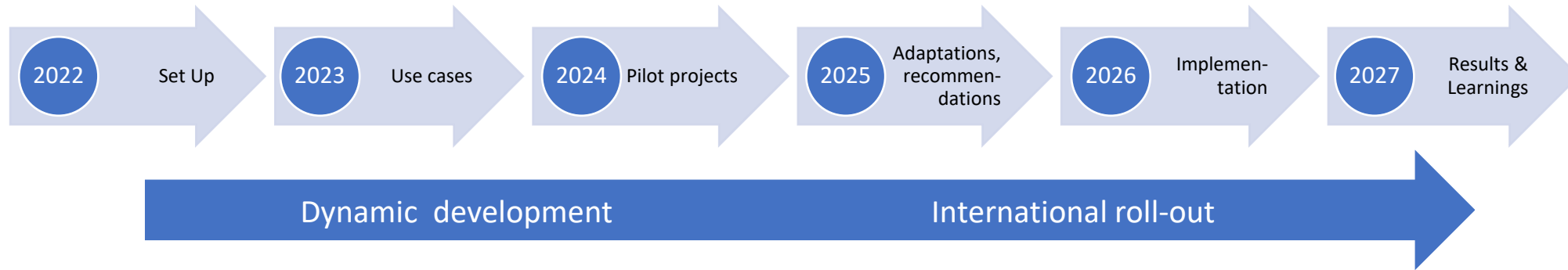
Benefits for all market participants

Producer	Retail	Consumer
<ul style="list-style-type: none">✓ Counterfeit protection✓ Smaller code✓ Improved recall management✓ Consumer trust✓ Promotional campaigns✓ Transparent supply chain	<ul style="list-style-type: none">✓ Inventory accuracy✓ Visible availability✓ Ensure shelf life✓ Reduce waste✓ Promotional campaigns✓ Transparent supply chain	<ul style="list-style-type: none">✓ Access to information✓ Product authentication✓ Interaction with producers✓ Traceability✓ Promotional campaigns✓ Transparent supply chain

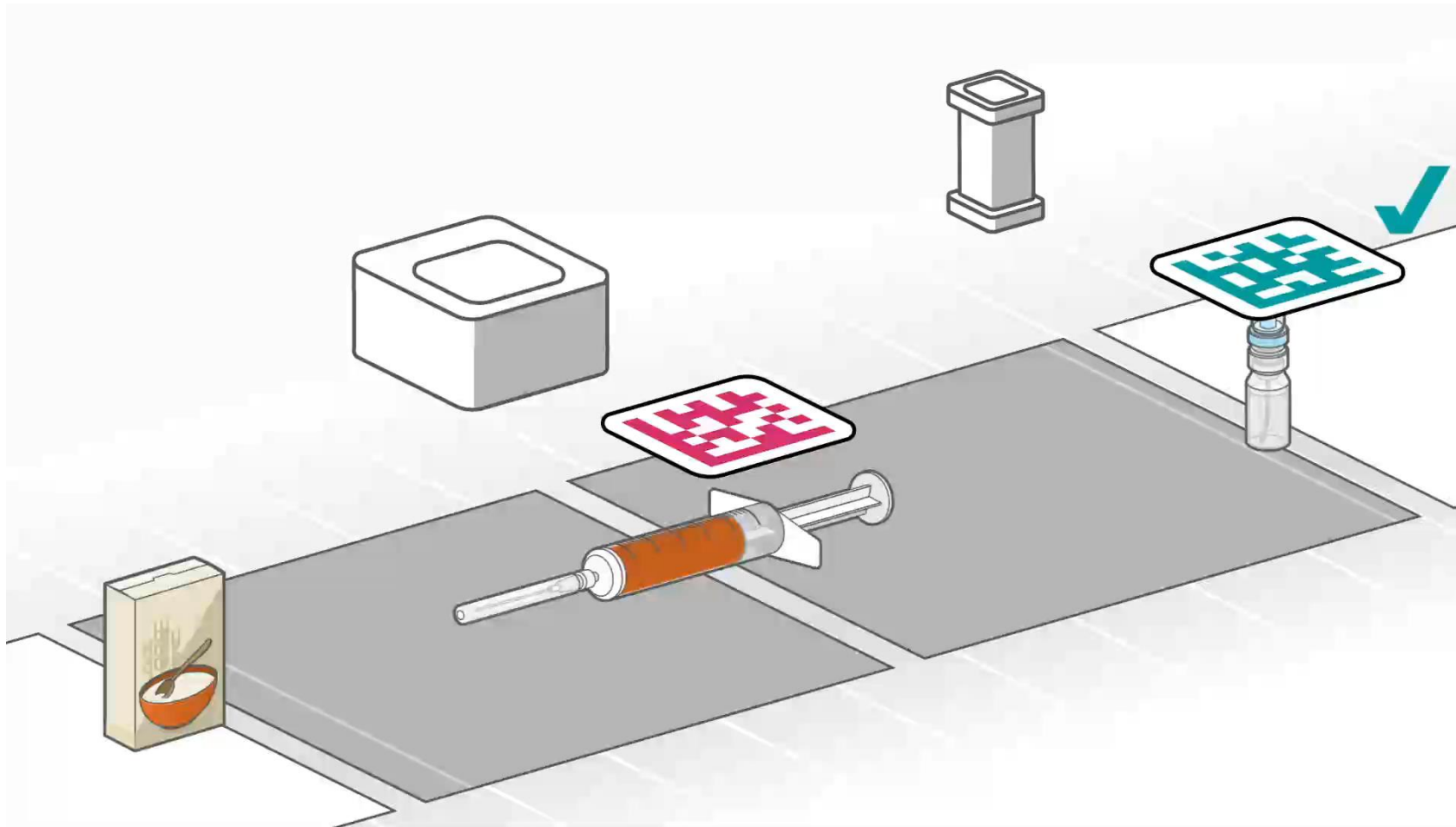
Benefits of a 2D code



• Realization of the project:



Transition phase	Goal for 2027
<p>Dual identification during the transitional phase with EAN/UPC and a 2D code</p>	<p>Identification via EAN/UPC or a 2D code</p>



- ... but producers already have printers in their lines to apply BBD and LOT!

Yes, BUT

- 2D codes are small
- 2D codes contain a lot of information
- 2D codes require a high resolution in order to be reliably readable at PoS (Point of Sale) and by smartphones

Most common printing technologies in the field (CIJ) are not suitable

- So it will be enough to buy a new printer?

No, because the high requirement in print quality leads to the need to check/verify the print

- Can producers simply add a camera to the process?

In theory yes, in practice this bears a high potential for technical difficulties

- Individual components do not communicate with each other
- Installation and article changeovers require a lot of time and effort

Marking and labeling
Modular solutions in very confined spaces

WIPOTEC

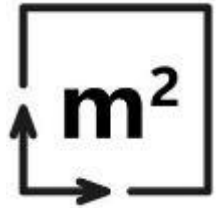
INNOVATION. PASSION. FIRST.

WIPOTEC OCS WEIGHING AND INSPECTION SOLUTIONS



WIPOTEC WEIGHING TECHNOLOGY





48,000 m²
production space

36,000 m² existing plus
12,000 m² new construction



> 1200
employees

900 in Kaiserslautern



> 100
sales and service
partners

On all continents of the world
in more than 100 countries



€175 m.

2022 sales

Local partner in South Africa

WIPOTEC 



The Perfect Package

USS Pactech (Pty) Ltd is a specialized supplier of value added solutions for packaging automation and has been in operation since 2000.

The company's head office is situated in Bryanston, Johannesburg with branch offices in Durban, Port Elizabeth and Cape Town. Our solutions cover primary and secondary packaging equipment as well as turn-key line automation.

We represent reputable suppliers covering the following market segments in Southern and Eastern Africa:

- Food Industry
- Beverage Industry
- Pharmaceutical and Healthcare Industry
- Personal and Home Care Industry
- Chemical industry
- Non-Food Industry

Our success is based on a formidable track record of successful installations with almost every large and multinational company in South Africa.

USS PACTECH (PTY) LTD



YOUR PARTNER FOR PACKING SOLUTIONS



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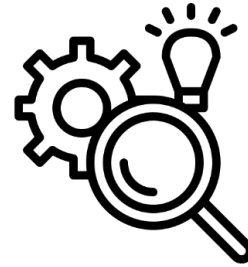
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- Pharmaceutical and Healthcare Industry
- Personal and Home Care Industry
- Chemical industry
- Non-Food Industry

Our success is based on a formidable track record of successful installations with almost every large and multinational company in South Africa.



> 85 %
vertical integration

- > It is the guarantee for our long-term and comprehensive delivery reliability



Research and development

- > Basic research
- > Mechanical design
- > Printed circuit board design
- > Software development



Production and testing facilities

- > CNC production – precision turning and milling center
- > SMD assembly production and printed circuit board assembly
- > Own test laboratories and quality management

Wipotec Headquarters
Kaiserslautern, Germany

WIPOTEC 

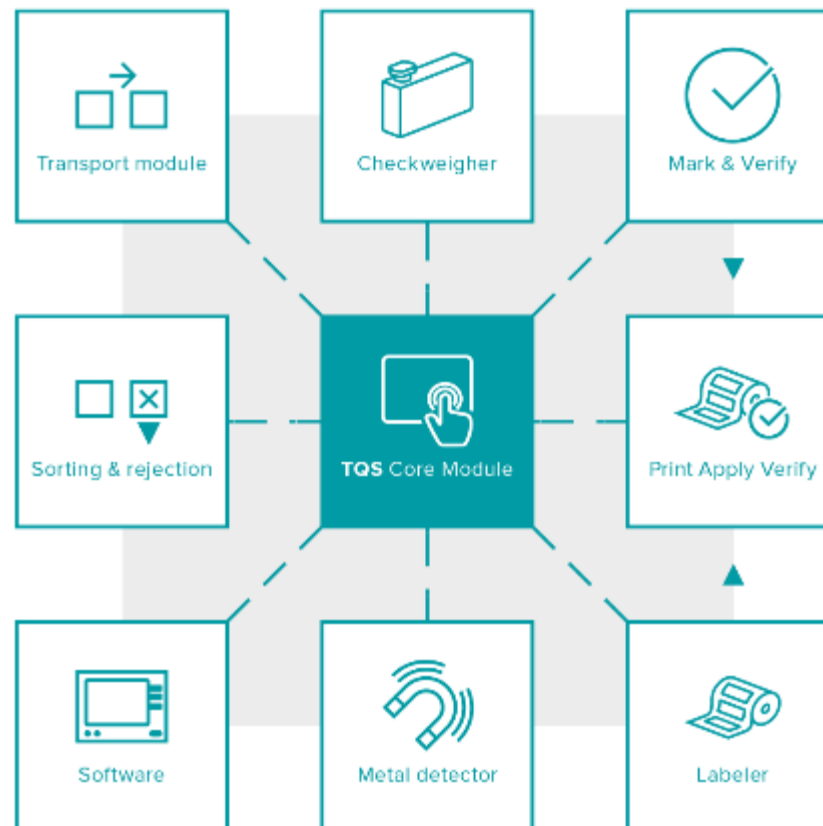


• Functions and applications

- › Marking
- › Verification
- › Weighing
- › Metal detection
- › Labeling
- › Verification
- › Complete serialization and aggregation

• Your benefits

- › One system
- › One user interface
- › One contact
- › One service partner
- › Endless possibilities



- Coca-Cola Brasil
- Marking of ref-PET bottles with 2D codes (GRAI)
- Award winning application



- Lasers used for permanent marking
- Checking the lifespan of the bottle
- Tracing of transport route
- Creating a digital twin of each bottle



Marvin Mies

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