Next-Generation Barcodes for a Sustainable Tomorrow

GS1 INTERACT

HYBRID EVENT, VIENNA, AUSTRIA
17 OCT 2024, 10 - 16h CEST

GS1 in Europe

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Camille Dreyfuss
GS1 in Europe
Secretary General

Agenda for the day

01 Next-generation barcodes: one barcode fits all!

02 Industry use cases
- Jake's Beverages
- Metro
- Lactalis
- Glowkitchen
- SWAPP!
- Argiano

03 Let's talk with European Associations: AIM and EuroCommerce

04 GS1 Sync Star Awards

05 Industry use cases
- Berto
- Procter and Gamble
- Ocado Retail
- Jamael

05 Call-to-action and wrap-up

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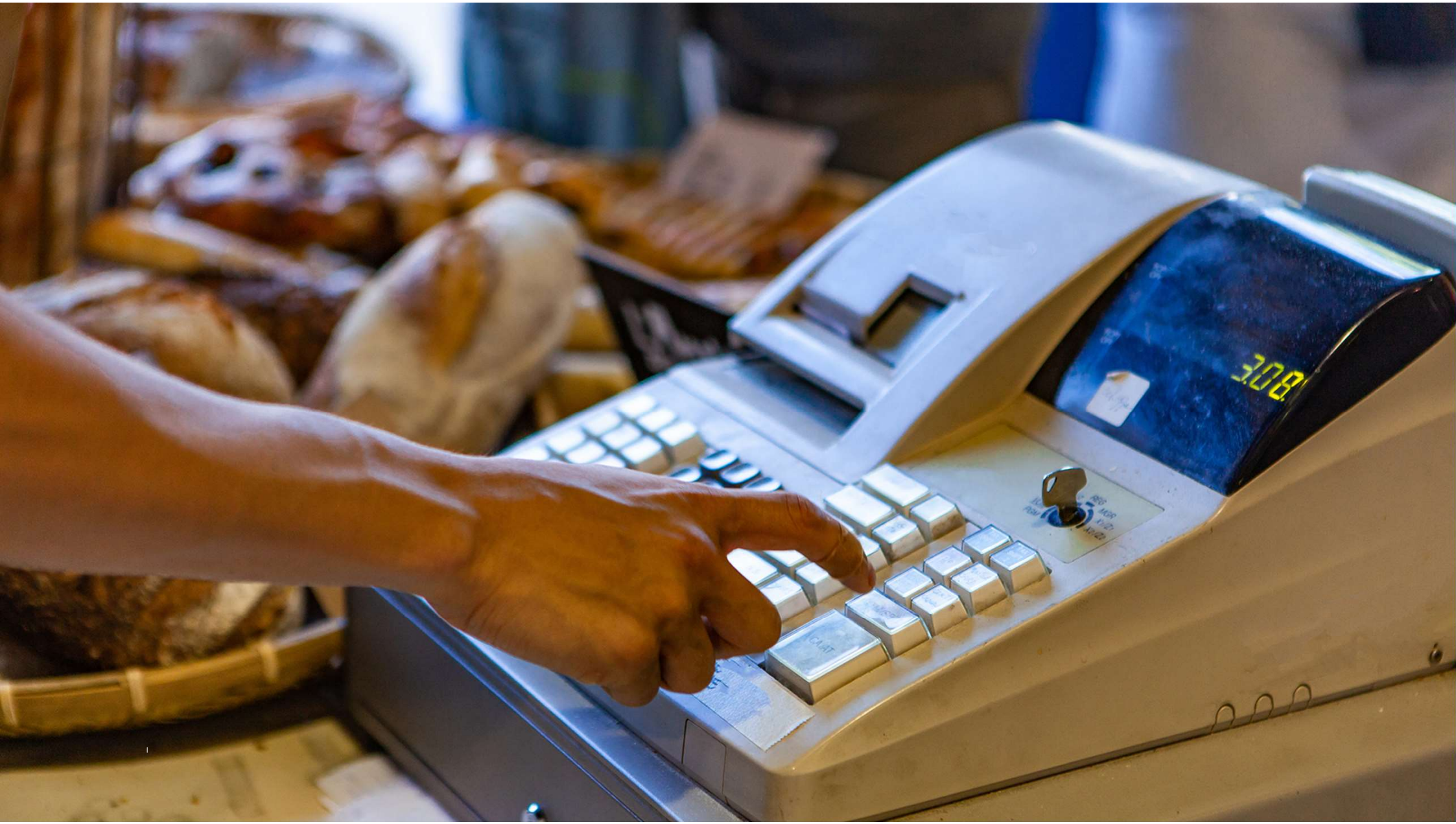
Jan Somers
GS1 in Europe Chair
CEO GS1 Belgilux

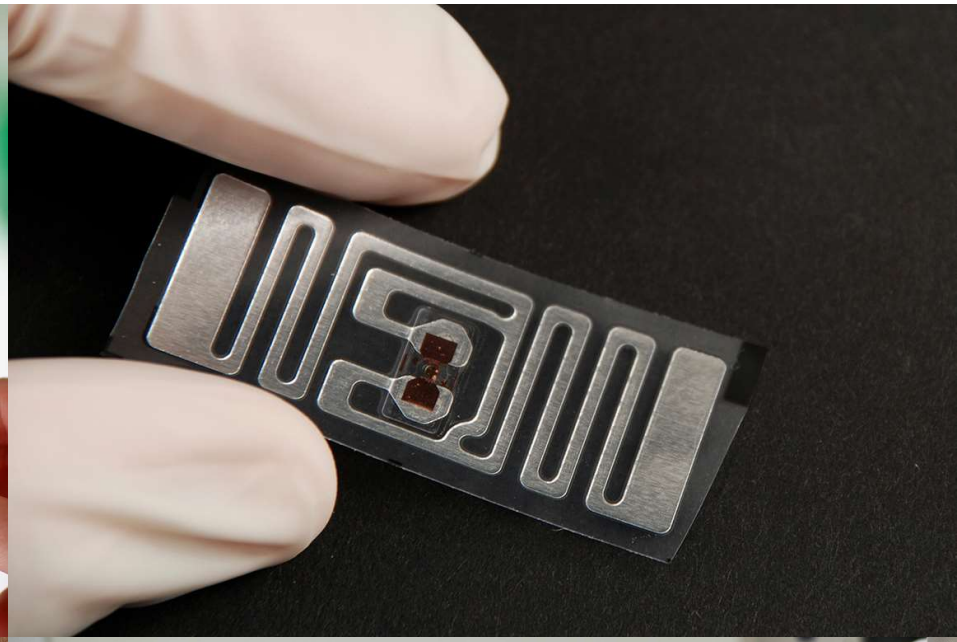
Next generation
of barcodes.
One barcode fits all.
FSC



WRIGLEY'S
JUICY FRUIT
CHEWING GUM
5 STICKS
ONLY
25¢
Individual packages not labeled for retail sale.

Pétillante
et fruitée*
SANS CALORIES
SANS SUCRE
GOÛT
FRAMBOISE
CITRON VERT
CHAUDFONTAINE
GRATUIT
1 Bouteille PET 50cl
CHAUDFONTAINE.
Eau pétillante aromatisée
au choix : citron
ou framboise citron vert
ou citron vert menthe
ou pamplemousse cranberry
VALABLE DU 01/07/2022 AU 30/09/2022 INCLUS

Rafsec



BRASSERIE FISCHER 1000023004
DESPERADOS PK 6/33 BKT 2 D/P(2X7
BEST BEFORE END (DLUO) 11/2005 *
GTIN (N°EAN) :03155932005405 LOT:4500095022
SSCC: 336016300000917645 N°PAL : 0091764
(01)03155932005405(10)4500095022
(00)336016300000917645(15)051100

A – 32 – 35D
(8003) 09506000117812543789

STATUS
Online
NO
REG
14-6
413-7
256-1
EFFICIENCY
83%
75%
100%
81
46
percent
Online
510-3

10 billion

The Global Trade Item Number

A linear barcode for a linear economy
… doesn’t fit your challenges anymore

THE SHIFT

LINEAR ECONOMY

TAKE MAKE DISPOSE

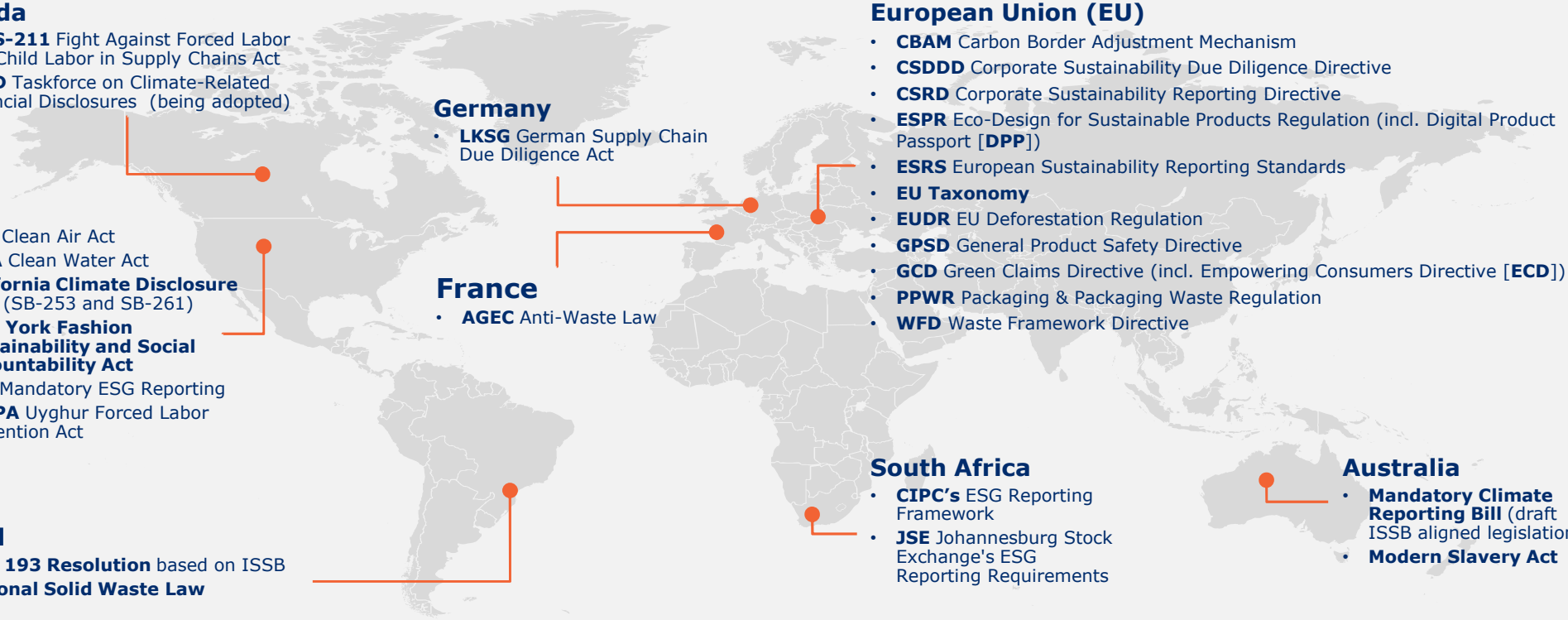
CIRCULAR ECONOMY

Your challenge is MUCH BIGGER

To give some examples

And this list is not even complete...

Non-Exhaustive



Canada
- **Bill S-211** Fight Against Forced Labor and Child Labor in Supply Chains Act
- **TCFD** Taskforce on Climate-Related Financial Disclosures (being adopted)

USA
- **CAA** Clean Air Act
- **CWA** Clean Water Act
- **California Climate Disclosure Bills** (SB-253 and SB-261)
- **New York Fashion Sustainability and Social Accountability Act**
- **SEC** Mandatory ESG Reporting
- **ULFPA** Uyghur Forced Labor Prevention Act

Brazil
- **CVM 193 Resolution** based on ISSB
- **National Solid Waste Law**

Germany
- **LKSG** German Supply Chain Due Diligence Act

France
- **AGEC** Anti-Waste Law

European Union (EU)
- **CBAM** Carbon Border Adjustment Mechanism
- **CSDDD** Corporate Sustainability Due Diligence Directive
- **CSRD** Corporate Sustainability Reporting Directive
- **ESPR** Eco-Design for Sustainable Products Regulation (incl. Digital Product Passport [**DPP**])
- **ESRS** European Sustainability Reporting Standards
- **EU Taxonomy**
- **EUDR** EU Deforestation Regulation
- **GPSD** General Product Safety Directive
- **GCD** Green Claims Directive (incl. Empowering Consumers Directive [**ECD**])
- **PPWR** Packaging & Packaging Waste Regulation
- **WFD** Waste Framework Directive

South Africa
- **CIPC's** ESG Reporting Framework
- **JSE** Johannesburg Stock Exchange's ESG Reporting Requirements

Australia
- **Mandatory Climate Reporting Bill** (draft ISSB aligned legislation)
- **Modern Slavery Act**

*some of the regulations have not yet been adopted

You’re facing many challenges!

- Sustainability and a circular economy
- Transparency, efficiency and traceability in the value chain
- Due diligence and accountability at corporate level
- E-commerce, personalisation and consumer engagement
- The transition to next gen barcodes

weeeforum
EBRA
European Battery Recycling Association
PRO Europe
Packaging Recovery Organisation Europe

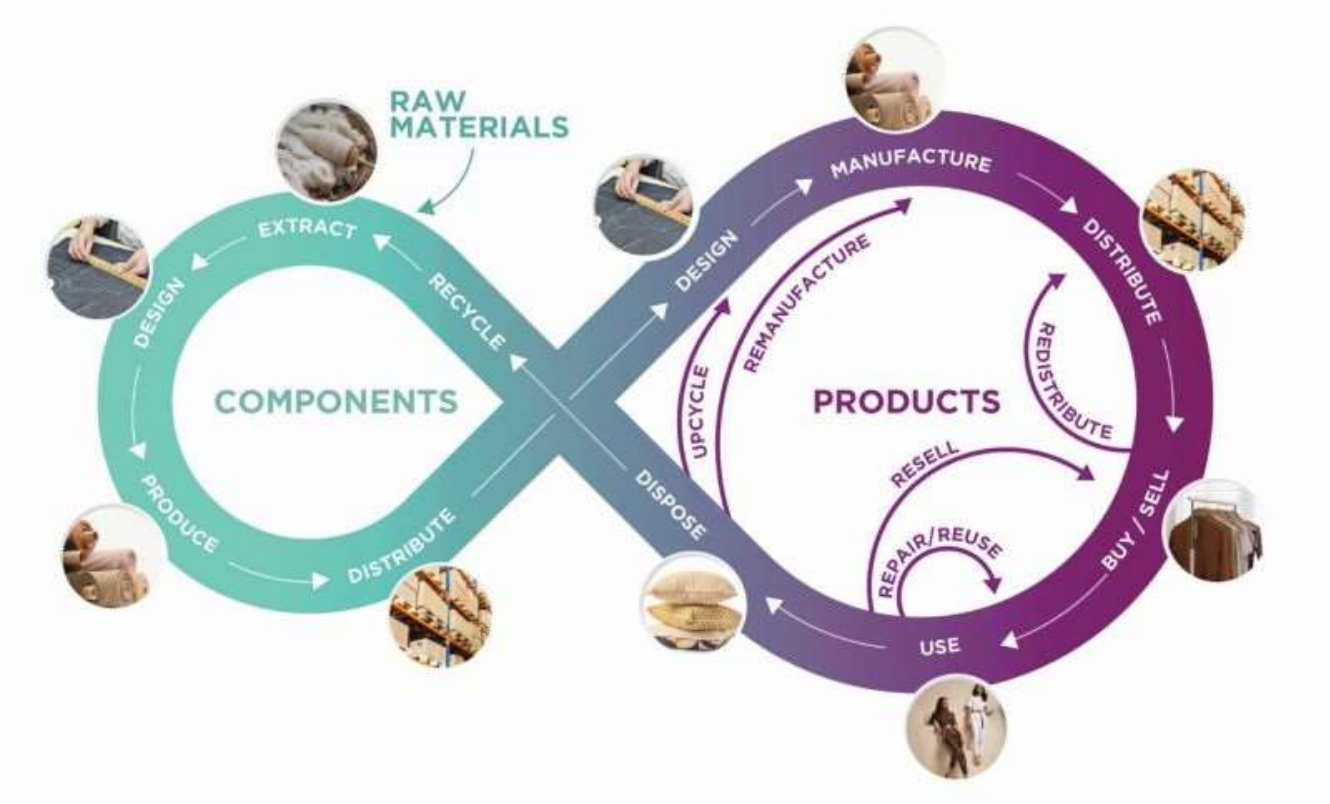
Who?

What?

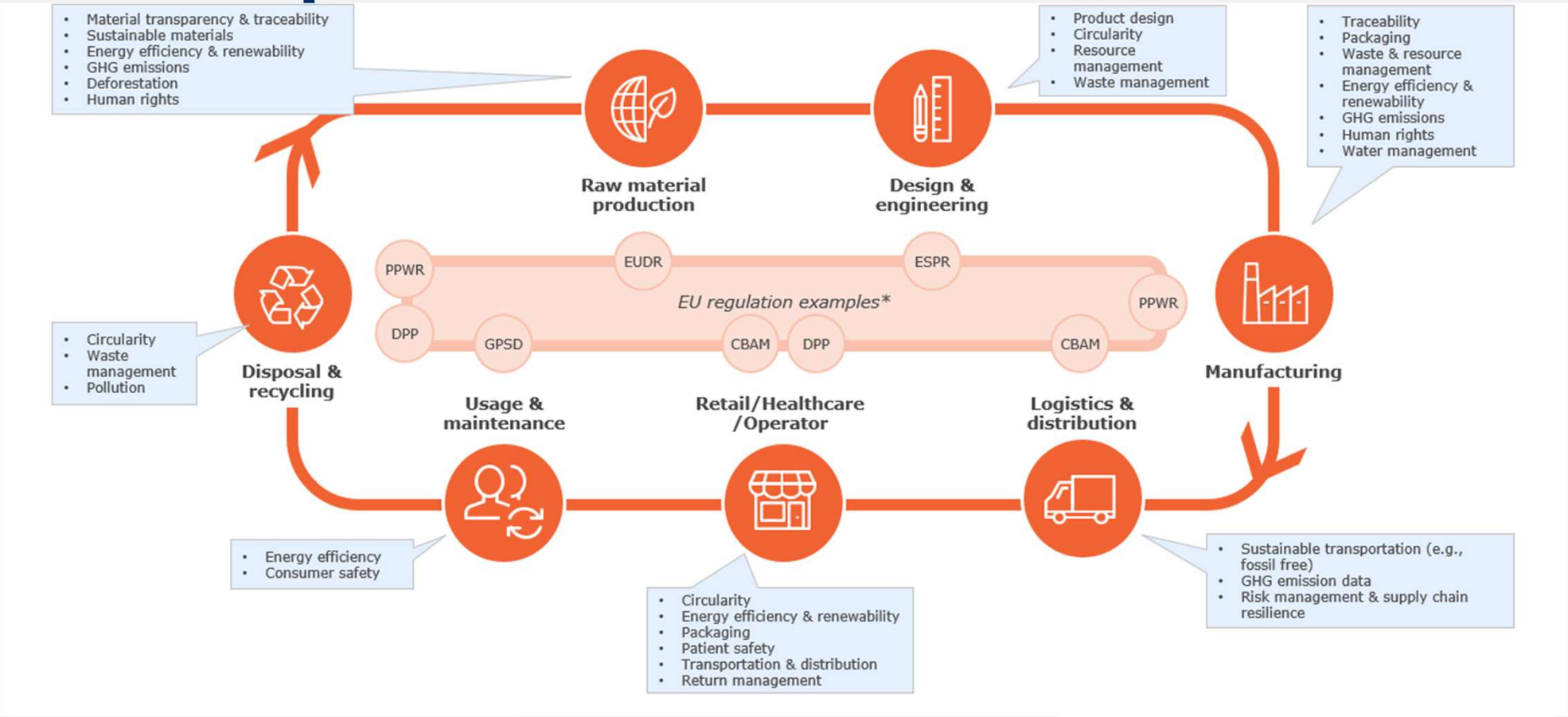
Where?

How?

An unprecedented amount of data is needed



for an unprecedented number of use cases



We need to shift to a new ecosystem to serve B2B B2C B2G existing and new needs

1. To guarantee universal listing and sales
2. To facilitate operational efficiency
3. To ensure consumer and patient safety
4. To ensure consumer engagement
5. To facilitate end-to-end traceability & circularity
6. To enable trade digitalisation and verification

Ambition 2027

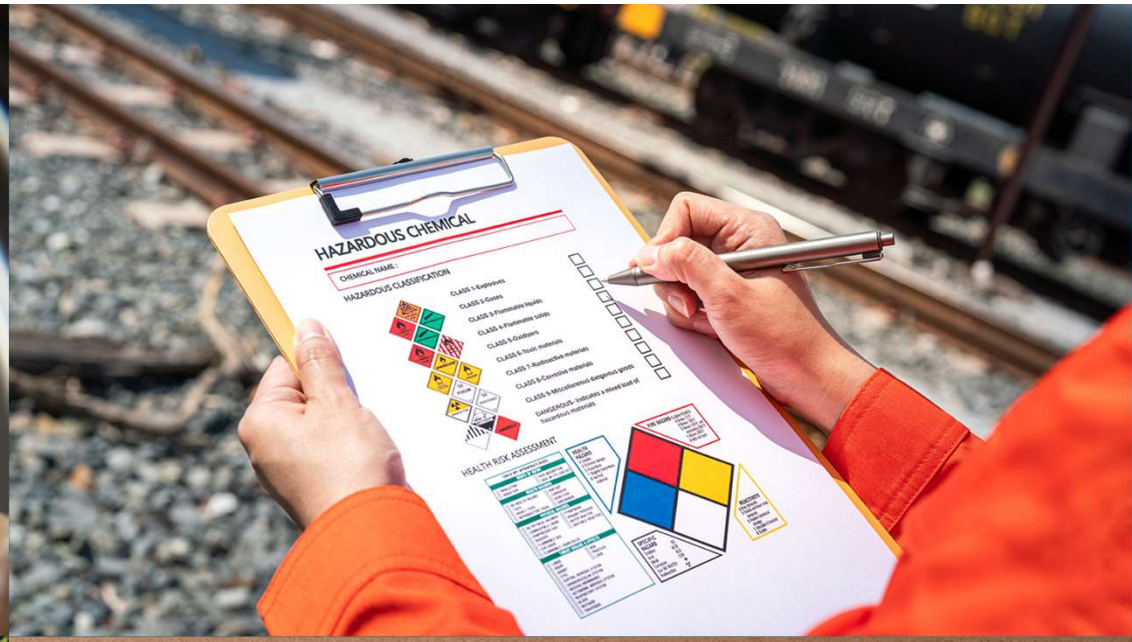
Online Store
Women
Men
Kids
Special Offer
Lookbook
Magazine

Allergens

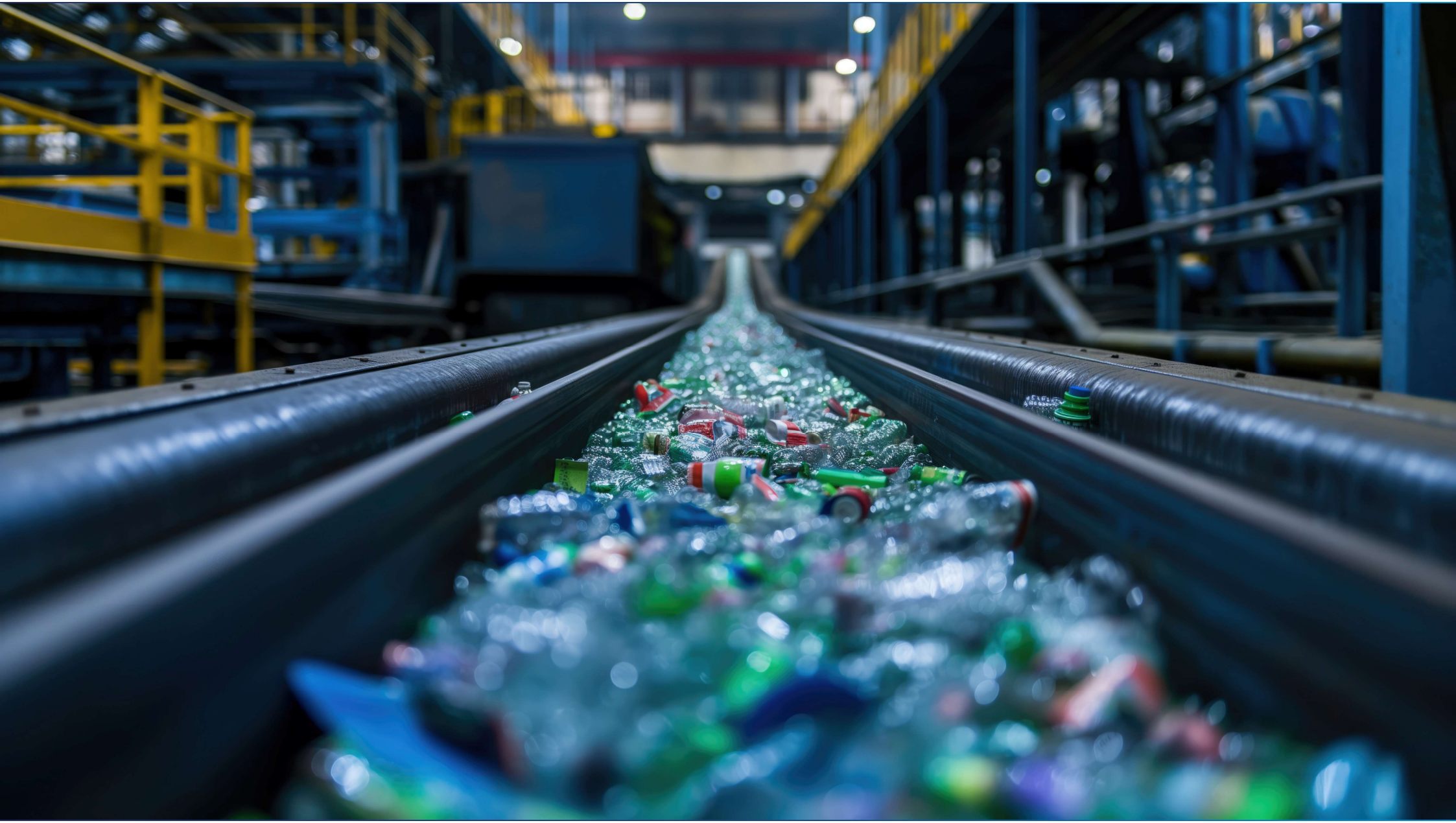
HOW
TO

Digital
Product
Passport
5410000123459
TYPE
COUNTRY CODE
PASSPORT NO.
COMPANY NAME
PRODUCT TYPE
COUNTRY OF PRODUCTION
DATE OF PRODUCTION
VERSION
DATE OF ISSUE
AUTHORITY
DATE OF EXPIRY
SIGNATURE
<<<P>>><<GS1<<BELGILUX>>>

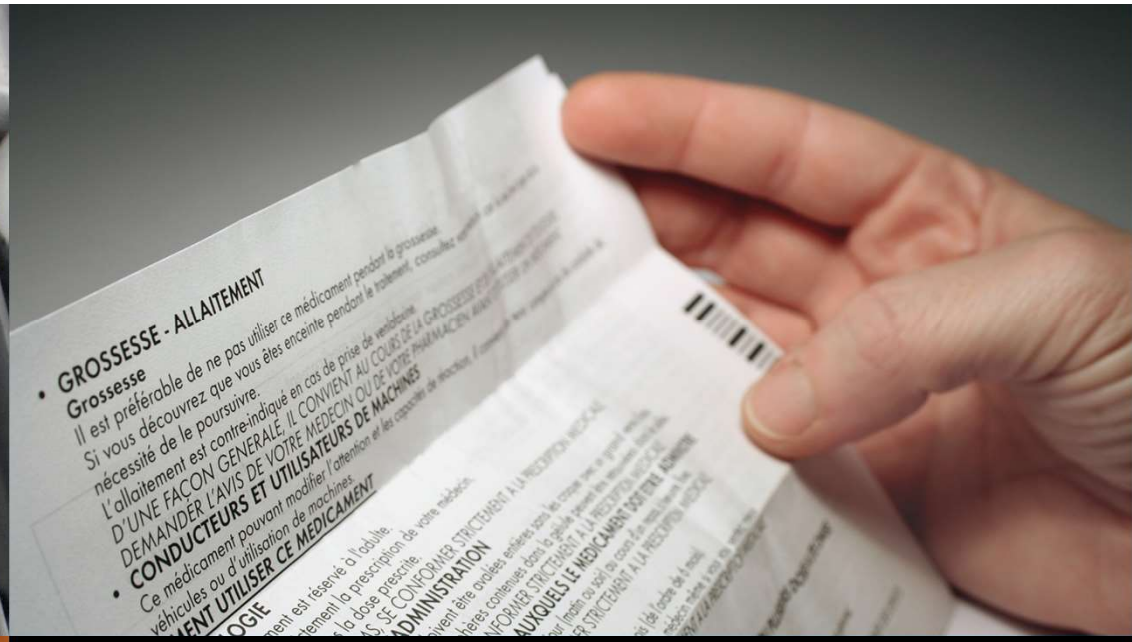
EXPIRY DATE 23/09/


HAZARDOUS CHEMICAL
CHEMICAL NAME :
HAZARDOUS CLASSIFICATION
HEALTH RISK ASSESSMENT

SKU
10-00465
C/NO: DL17-06
DATE: 18-SEP
QTY
LZ
DESC: BLACK-K
10
009785511925
SN
038LZD0TDG



Use by
R000757
10NOV2020
200 mg
GTIN: 19338475003119
B.No.: 2903887
Exp.: 08/2019
S.N.: DB048606915735
GTIN: 19338475003119
B.No.: 2903887
Exp.: 08/2019
S.N.: DB048221247532
GTIN: 19338475003119
B.No.: 2903887
Exp.: 08/2019
S.N.: DB052042805574


GROSSESSE - ALLAITEMENT
Grossesse
Il est préférable de ne pas utiliser ce médicament pendant la grossesse.
Si vous découvrez que vous êtes enceinte pendant le traitement, consultez votre médecin
nécessité de le poursuivre.
L'allaitement est contre-indiqué en cas de prise de ventoline.
D'UNE FAÇON GÉNÉRALE, IL CONVIENT AU COURS DE LA GROSSESSE
DEMANDER L'AVIS DE VOTRE MÉDECIN OU DE VOTRE PHARMACIEN AVANT
CONDUCTEURS ET UTILISATEURS DE MACHINES
Ce médicament pouvant modifier l'attention et les capacités de réaction, il convient
véhicules ou d'utilisation de machines.
ENT UTILISER CE MÉDICAMENT
OGIE
ment est réservé à l'adulte.
ement la prescription de votre médecin.
la dose prescrite.
ADMINISTRATION
S; SE CONFORMER STRICTEMENT À LA PRESCRIPTION MÉDICALE.
ivent être avalées entières avec les crises (ne pas croquer, ni écraser, ni couper).
ières contenues dans le petit pilulier doivent être avalées entières avec les crises (ne pas croquer, ni écraser, ni couper).
CONFORMER STRICTEMENT À LA PRESCRIPTION MÉDICALE.
AUXQUELS LE MÉDICAMENT EST DESTINÉ : ENFANTS
our l'enfant ou soit au cours d'un repas (dès le début du 4e mois).
EF STRICTEMENT À LA PRESCRIPTION MÉDICALE.

Lot/EXP:
A21FB703A
08-2025
EXP
11-2025
084
935061

E107152
NOV 2025

Will this be the future?

For each use case an…

- additional identification number?
- additional barcode?
- additional license fee?
- additional data upload?
- additional API?

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Robert Beideman
Chief Product Officer
GS1 Global Office

The Identification of Everything Makes Anything Possible

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Everything will have a high-fidelity digital twin…

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GS1 helps you to:

1. Give things unique identity.
2. Connect that identity to trusted data.
3. Use that trusted data to power your business.
4. Connect that trusted data to the world.

So that you can…

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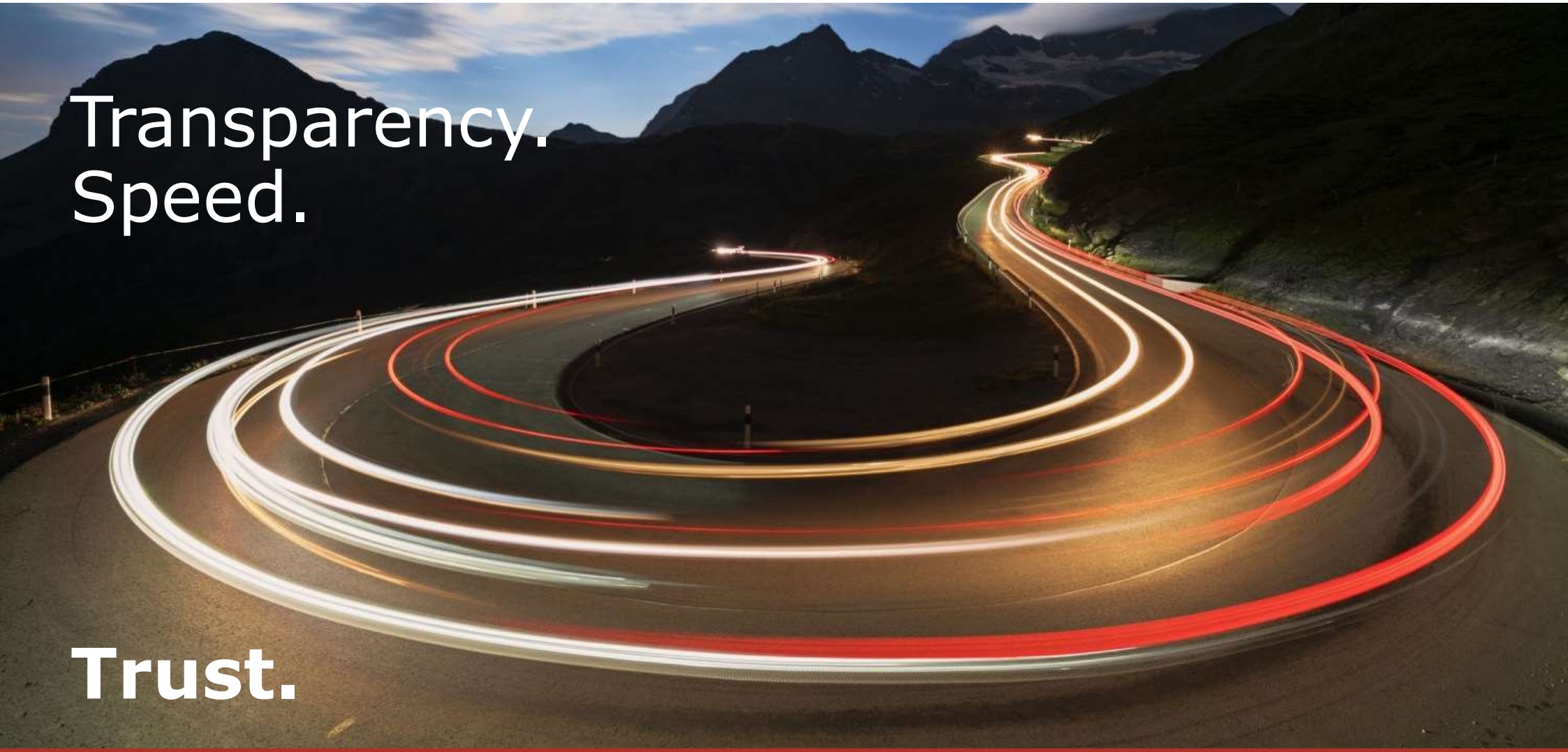

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3 layers of GS1's toolbox:

1. Foundational Identification (using the GS1 Digital Link standard)…to increase **trust**.
2. A standardised vocabulary for sharing data with Regulators and on the Web…to **speed** up compliance with requirements for sustainability reporting.
3. Links to additional, authoritative data sources via Verified by GS1…to increase **transparency**.

A platform of connection and discovery.

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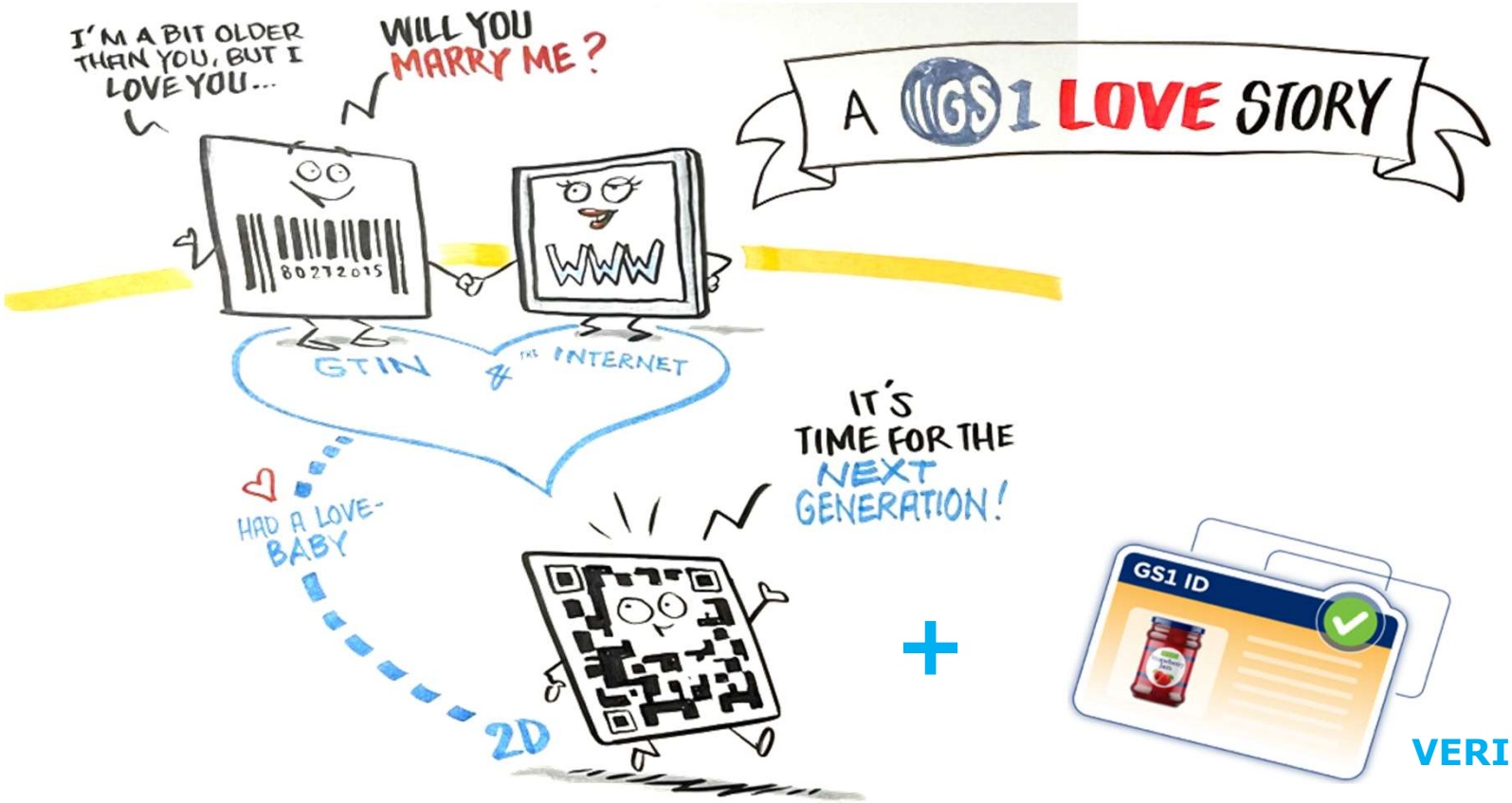
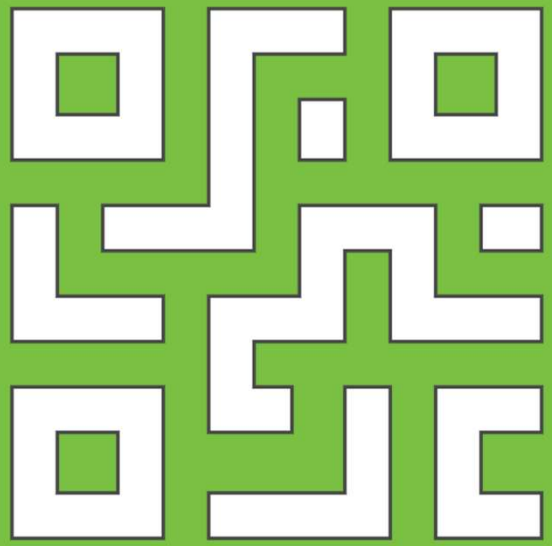
The beginning of a new revolution…



2D barcodes powered by GS1



A platform of connection and discovery.

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17 OCT 2024, 10 - 16h CEST

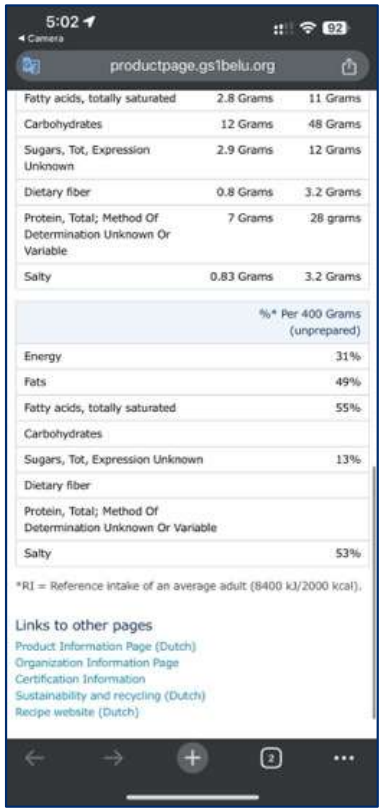
GS1 in Europe

2D barcodes powered by GS1 are a platform for connection and discovery.

0950600014930 1

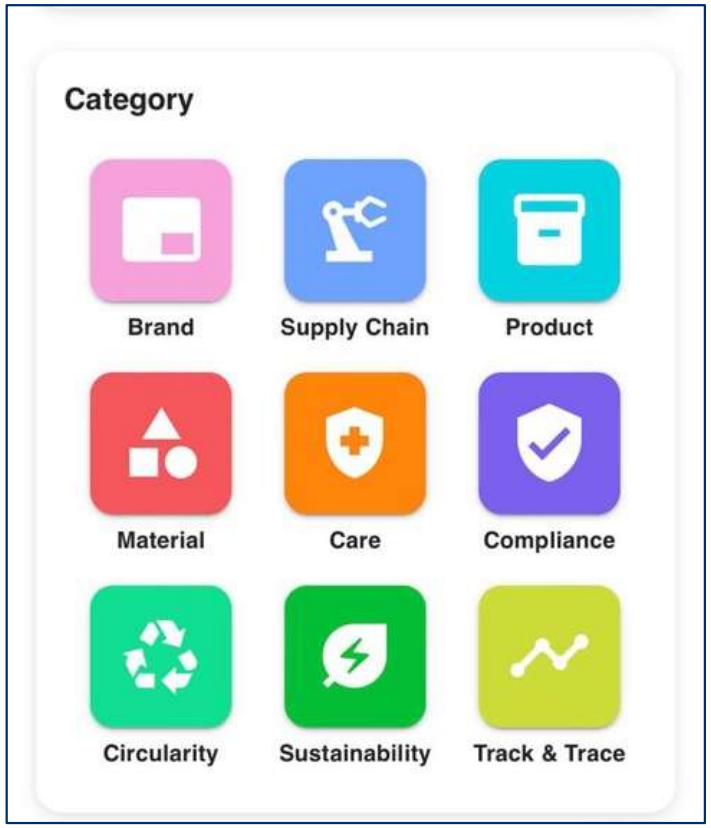
https://id.gs1.org/01/09506000149301/10/AB-27?17=271231

A Platform for Sharing Data on the Web and with Regulators



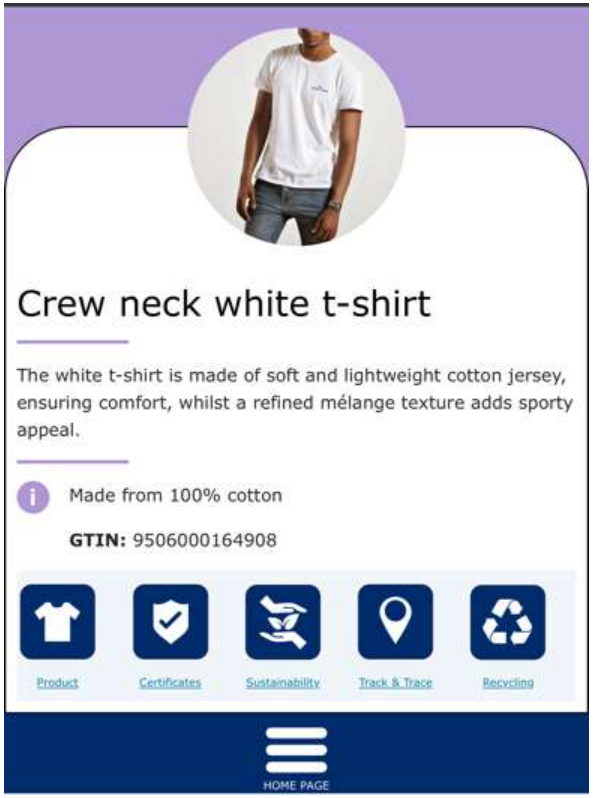
(01) 05413848131907

A Platform for Claims and Sustainability Reporting



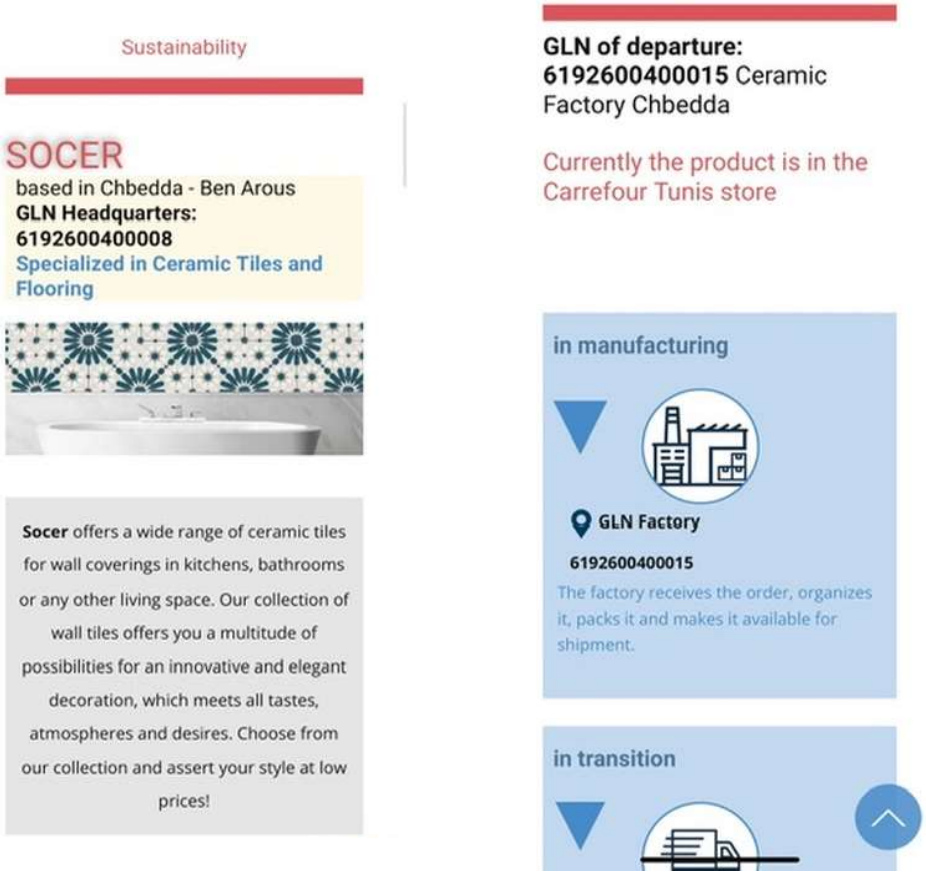
(01) 04891668001173

A Platform for Certifications and Trust



(01) 09506000164908

A Platform for Digital Product Passports



(01) 06192600405591

A global ambition
with a 1st milestone by the end of 2027

There is **a rapidly increasing demand for more information** about the products we use and consume. To meet this demand, **industry has set a goal** that, **by the end of 2027, all retail POS systems should be capable of reading and processing a defined set of 2D barcodes** with GS1 standards, **in addition to existing linear barcodes**.

As the transition to scanning of 2D barcodes with GS1 standards at POS unfolds progressively on different timelines across the globe, **brand owners should already be exploring and implementing the most appropriate 2D barcode to address priority use cases** for their products and meet critical consumer and business needs.

(01)09521101530001

QR code powered by GS1

(01)09521101530001

GS1 DataMatrix

(01)09521101530001

Data Matrix

Most common barcodes used for Ambition 2027

(01)09521101530001

QR Code powered by GS1

- Used for **consumer engagement** as it connects to the web **without needing an app or specialised solution**
- Scans at **point-of-sale**
- **Encodes additional data** e.g., for traceability and safety

(01)09521101530001

GS1 DataMatrix

- **Encodes additional data** e.g., for traceability and safety
- Essential for **regulated healthcare products,** including those sold directly to the consumer
- Scans at **point-of-sale** and **point-of-care**
- Provides opportunities to connect to the web **using apps and specialised solutions**
- Offers a **very compact** way to encode data

A challenge we have in common:

to succeed at scale the migration from the traditional barcode to next gen barcodes powered by GS1

A global ambition

In partnership with The Consumer Goods Forum

The retail and consumer goods industries support the transition to QR Codes with GS1 standards

Placing QR Codes with GS1 standards on product packages worldwide will enable manufacturers and retailers to provide new powerful digital experiences, engaging consumers and shoppers as they interact with products—whether in store, at home or out in the world.

From GS1 barcodes to QR Codes with GS1 standards

This year marks the 50th anniversary of the first product barcode to be scanned in a grocery store. In the early 1970s, retailers and manufacturers worked together with GS1—the global organization for data standards—to adopt the barcode as the universal way to identify products. The GS1 barcode is used today on billions of products worldwide and is great for enabling many processes like scanning at checkout, category management, fulfillment in distribution centers, and much more.

Today, more than ever, consumers and regulatory bodies are demanding more product information, such as usage instructions, safety, ingredients, nutrition, certifications, recycling, etc.—and there is an ongoing need for enhanced product traceability through the supply chain to mitigate risks and improve customer service. However, the traditional barcode that has served us so well doesn't have the capacity to support these future needs.

To meet these new demands, the consumer goods industry will be best served by transitioning to QR Codes with GS1 standards, as they can store extensive amounts of product information and are easily accessible via smartphones. This would open a range of new possibilities, providing all the information consumers need and desire, improving traceability and driving efficiencies through the supply chain, while still enabling scanning at check out.

Sunrise 2027 initiative

The signatories of this letter join the members of the GS1 Management Board in declaring their support for the transition to QR Codes with GS1 standards.

The companies of the GS1 Management Board aligned it would be essential for the overall success of the industry to transition to QR Codes with GS1 standards as an innovative and forward-looking response to today's business and consumer needs. The aim of this initiative is that, by the end of 2027, QR Codes with GS1 standards should be widely adopted: used by manufacturers on their product packaging and retailers around the world having the ability to scan these barcodes at Point of Sale (POS).

For Sunrise 2027 to succeed, industry must once again come together to adopt a unified approach, requiring changes from both retailers and manufacturers. We expect that this transition would happen gradually and believe that those that lead this transformation will be best positioned to unlock valuable new capabilities and provide more benefits to their customers, shoppers, and consumers.

Together, let's start the transition to QR Codes with GS1 standards now!

This major industry shift has already begun, with pilots in 48 countries across all regions and representing 88% of the world's GDP. This is a strong foundation, and a collective effort is now needed from the entire industry to make Sunrise 2027 happen:

- **Manufacturers** should start implementing QR Codes on product packages with GS1 data standards inside.
- **Retailers** should ensure POS scanners are equipped to read QR Codes with GS1 standards.

To learn more about QR Codes with GS1 standards and get involved, go to:
www.gs1.org/2D-barcodes

[1] Read GS1 Competition Law Caution here

Gang Yu (Ruohai)
Chief Technology Officer,
Taobao & Tmall Group (Alibaba Group)

Malina Ngai
Group CEO, AS Watson Group

Francesco Del Porto
Global Chief Customer Officer &
President Region Italy, Barilla Group

Alexandre Bompard
Chairman and CEO, Carrefour

Prasit Mongkolkulsat
Vice President, Purchasing,
CP ALL Thailand

Dr. Simon Papies
Head of Logistics Division, Dr. Oetker

John Ross, President & CEO, IGA
Mark Batenic, Chairman, IGA

Simon Han
Vice President, JD.com; President,
Department of Ecosystem Service, JD Retail

Peter Fischer
Member of the Board,
Lidl International

Nicolas Hieronimus
CEO, L'Oréal

Flint Cheng
CIO, Tingyi (Cayman Islands)
Holding Corp. (Master Kong)

Pengcheng Li
Executive President, Mengniu Group

Bertrand Mothe
CPO, Metro

O. Ozgur Tort
CEO, Migros Ticaret A.S.

Silvia Bagliani
Vice President & Managing Director Italy,
Mondelēz International

Béatrice Guillaume-Grabisch
Executive Vice President, Group Human
Resources & Business Services, Nestlé

Jon R. Moeller
Chairman of the Board, President & CEO,
The Procter & Gamble Company

Olivier Delamée
CEO, Savencia Fromage & Dairy

Mark Smucker
President, CEO & Chair of the Board,
The J.M. Smucker Co.

Shuiyuan Yun
Vice President, Tsingtao Beer Group;
President, Supply Chain, Tsingtao Beer

Shaohua Meng
Vice President, Henan Shuanghui
Development Co. (WH Group)

Zhanyou Yun
Vice President, Yili Group

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So we can go from this...

Barcode/ID for POS

Barcode/ID for sorting

Barcode/ID for Digital Product Passport

Certification label 1,
Certification label 2,
Certification label 3,

Barcode for consumer engagement

Barcode/ID for traceability

… to this (from 2028 onward)

Don’t worry,
the QR code can be much smaller than this

So…what happens between now and 2028?

Before: traditional barcode

Now – 2027: old + new barcode

Once 2D barcodes are scanned everywhere: only one barcode

In conclusion: 2D barcodes powered by GS1 are the new symbol of global trade

(01)09506000164960

Our message:

Enjoy this day and benchmark with the use cases

Get started today!

00:30:00
MIN
SEC
MS

THANK YOU !!!

THE SLIDE DECK AND THE RECORDING OF THE SESSION WILL BE SHARED AFTERWARDS