



The Global Language of Business

Innovative Standards and Technologies

Improving the Apparel Supply Chain and leveraging Export Opportunities

Markus Mueller, Director Industry Engagement Apparel & GM, GS1
GS1 Macedonia Textile Event, October 25th, 2016



Overview



- Wrap-up GS1 Standards in Apparel
- Consumer driven Innovations at the Point of Sale
- Source tagging on item level with EPC/RFID
 - EPC/RFID – What’s in it for Apparel?
 - How EPC/RFID impacts textile manufacturers!
- Upstream EDI (Electronic Data Interchange)
- Traceability – the next big thing in Apparel
- Best in class – industry examples
- How GS1 can help
- Summary & Questions

GS1 standards



GS1 standards are the global language of business—a language for **identifying, capturing** and **sharing** information automatically and accurately, so that anyone who receives that information can understand it, no matter who or where they are.

The global language of business



GS1 standards



Identify

GS1 Identification Numbers

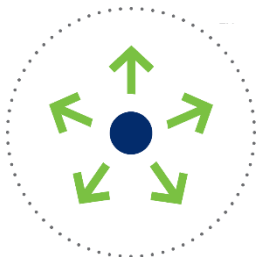
Companies, Products, Locations, Logistics, Assets and Services



Capture

GS1 Data Carriers

Barcodes and EPC-enabled RFID



Share

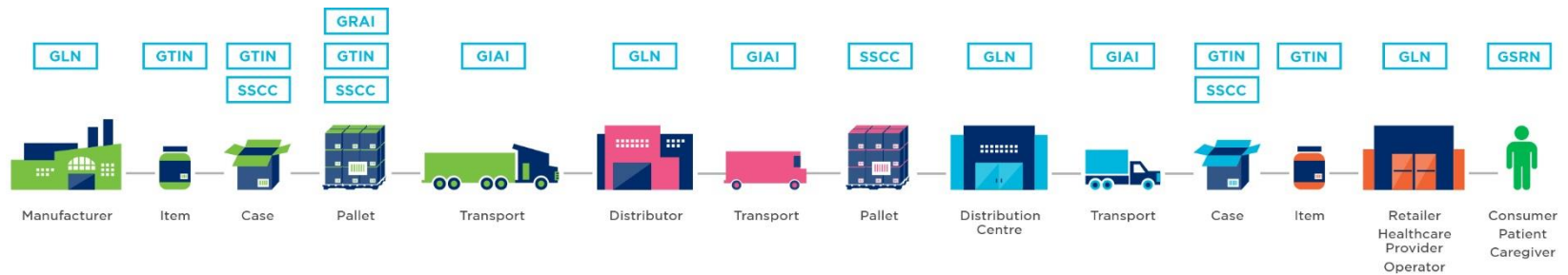
GS1 Data Exchange

Master Data, Transactional Data and Physical Event Data

GS1 Standards and the Apparel Supply Chain



The essential Identifiers for Textile Manufacturers



Company & Location

- Global Location Number (GLN)

Product

- Global Trade Item Number (GTIN)
- Serialised Global Trade Item Number (SGTIN)

Logistics & Shipping

- Serial Shipping Container Code (SSCC)
- Global Shipment Identification Number (GSIN)
- Global Identification Number for Consignment (GINC)

Assets

- Global Individual Asset Identifier (GIAI)
- Global Returnable Asset Identifier (GRAI)

Services & More

- Global Service Relation Number (GSRN)
- Global Document Type Identifier (GDTI)
- Global Coupon Number (GCN)

GS1 Standards and the Apparel Supply Chain





Important Data carriers used in the Apparel sector

GS1 Barcodes

<p>EAN/UPC</p>  <p>9 501101 021037</p>	<p>GS1-128</p>  <p>(00) 3 9501100 000001001 9</p>	<p>ITF-14</p>  <p>09501101021037</p>	<p>GS1 DataBar</p>  <p>(01) 0 9501101 02103 7</p>	<p>GS1 DataMatrix</p> 	<p>GS1 QR Code</p> 	<p>GS1 Composite Barcode</p>  <p>9 501101 021037</p>
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GS1 EPC/RFID

<p>EPC HF Gen 2</p> 	<p>EPC UHF Gen 2</p> 
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But what about communication?



It is important to speak one language



GS1 Communication standard EDI/EANCOM

- Accurate
- Efficient
- Fast
- Transparent

Low hanging fruits:

- ORDERS for purchase orders
- DESADV for shipments
- INVOIC for invoices

Transactional Data

eCom

Electronic Communication

GS1 eCom standards provide clear guidelines for Electronic Data Interchange (EDI), enabling electronic sharing of accurate business transaction information between trading partners.

What Goes Into It

- GTIN, GLN, SSCC, GSIN, GINC, GDTI, GRAI, GIAI
- Purchase Order
- Despatch Advice
- Transport Instruction
- Invoice
- Payment

Consumer driven Innovations at the Point of Sale

What's hot and what's not!



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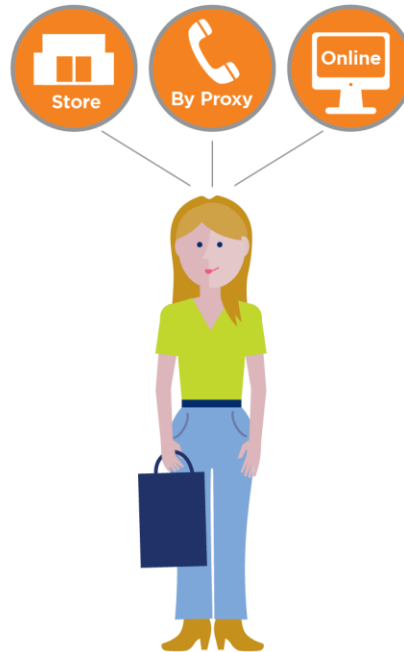
Retail from a consumer perspective: standards make it possible



Single-Channel



Multi-Channel

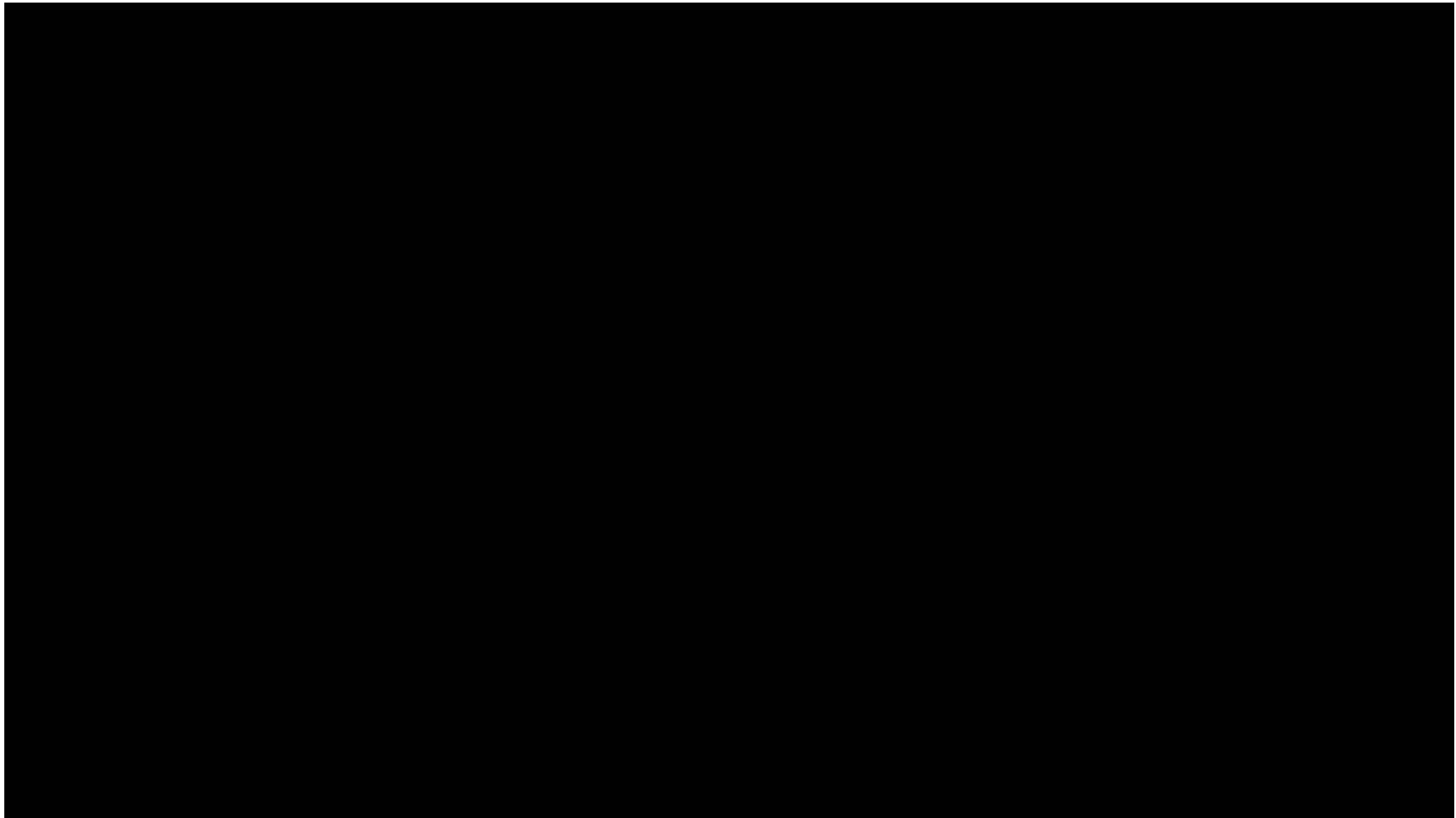


Omni-Channel



Providing a **seamless consumer experience** across **physical** and **digital** channels

Fast fashion!



Tablets to support Sales @ Nordstrom



Interactive screens @ Uniqlo



Click&Collect @ C&A



Availability check @ ESPRIT



49,95 €

schlicht und figurnah in verkürztem Schnitt aus leichtem Streich-Denim ... mehr info >

Farbe: hotlist peach

Größen-Auswahl

Größen-/ Model-Info >

IN DEN WARENKORB

Verfügbarkeit im nächsten Store >

AUF DIE WUNSCHLISTE

SCHLIESSEN | X

Artikel im Store in meiner Nähe verfügbar?

PLZ suchen: oder Stadt wählen: Store wählen (optional):

WIR HABEN 47 ESPRIT STORES FÜR SIE GEFUNDEN:

Store	26	27	28	29	30	31	32	33
Esprit Flingerstr. 34 40213 Düsseldorf Telefon: +49 211 828 93 10 Fax: +49 211 828 931 10	●	●	●	●	●	●	●	●
Esprit Concept Store Schadowstr. 17-21 Schadow Arkaden 40212 Düsseldorf Telefon: 0211 - 159 79 70 Fax: 0211 - 159 797 10	●	●	●	●	●	●	●	●

● verfügbar ● geringer Bestand ● ausverkauft

Digital shelf @ German retailer



POS Innovations impact Supply Chain



The speed and dynamics with which retail is changing and consumers adopting new technologies is enormous!

- **Product information** → consumers adopt new ways to collect product information before purchase
- **Stock Availability** → right product at the right shelf at the right time, 24/7 online
- **New collaboration models** → Digital shelf and “longtail”
- **Fashion Trends** → retailers need to create new looks every month
- **Decreasing profit margins** → efficiencies along the supply chain
- **Omni-channel** → Consumers shop across channels

Source tagging on Item Level with EPC/RFID

What's in it for Apparel?

How does EPC/RFID impact manufacturers?





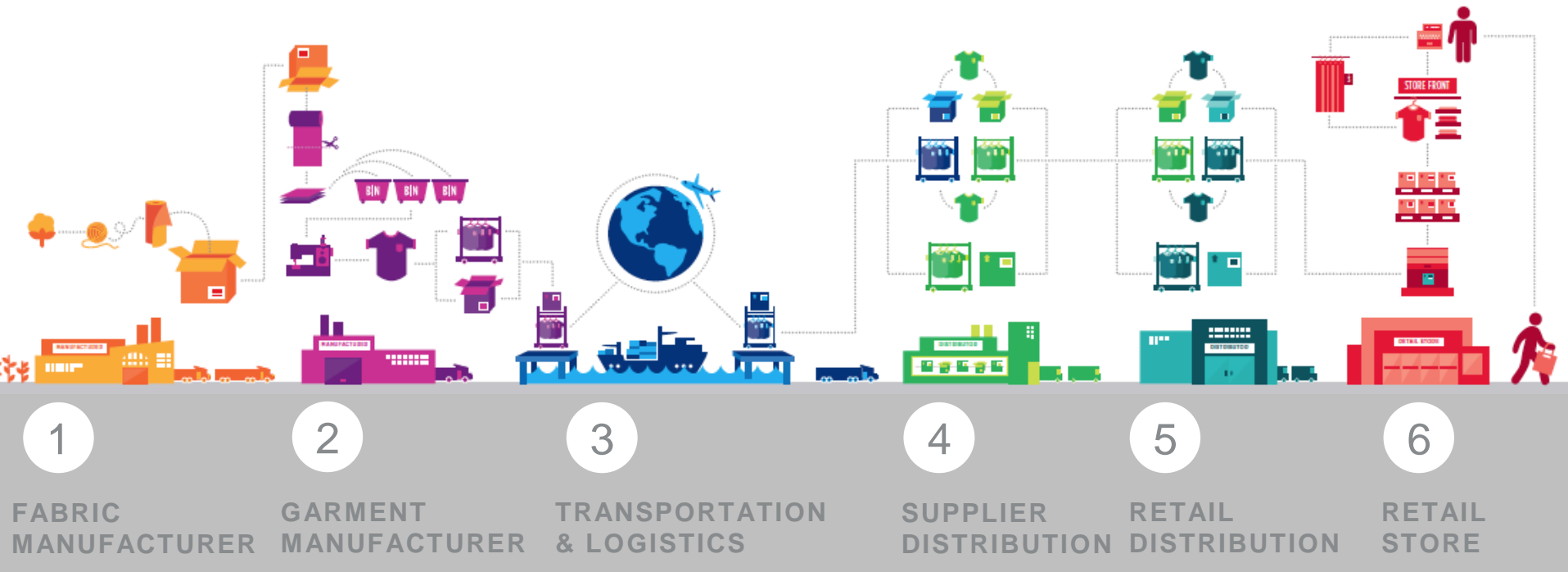
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Supporting a true end-to-end apparel supply chain

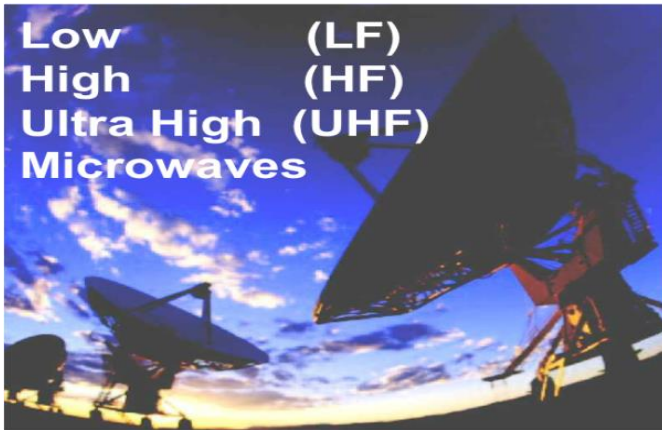


The Source-to-Store Concept





What is RFID?



Radio Frequency



Wireless Communication



Identification



Object (GTIN + Serial number)

RFID in every day life



Transport Pass



Sportsevents



Tickets



Libraries



Car keys

RFID in every day life ... and in a number of industries



Logistics



Textile



Automobile

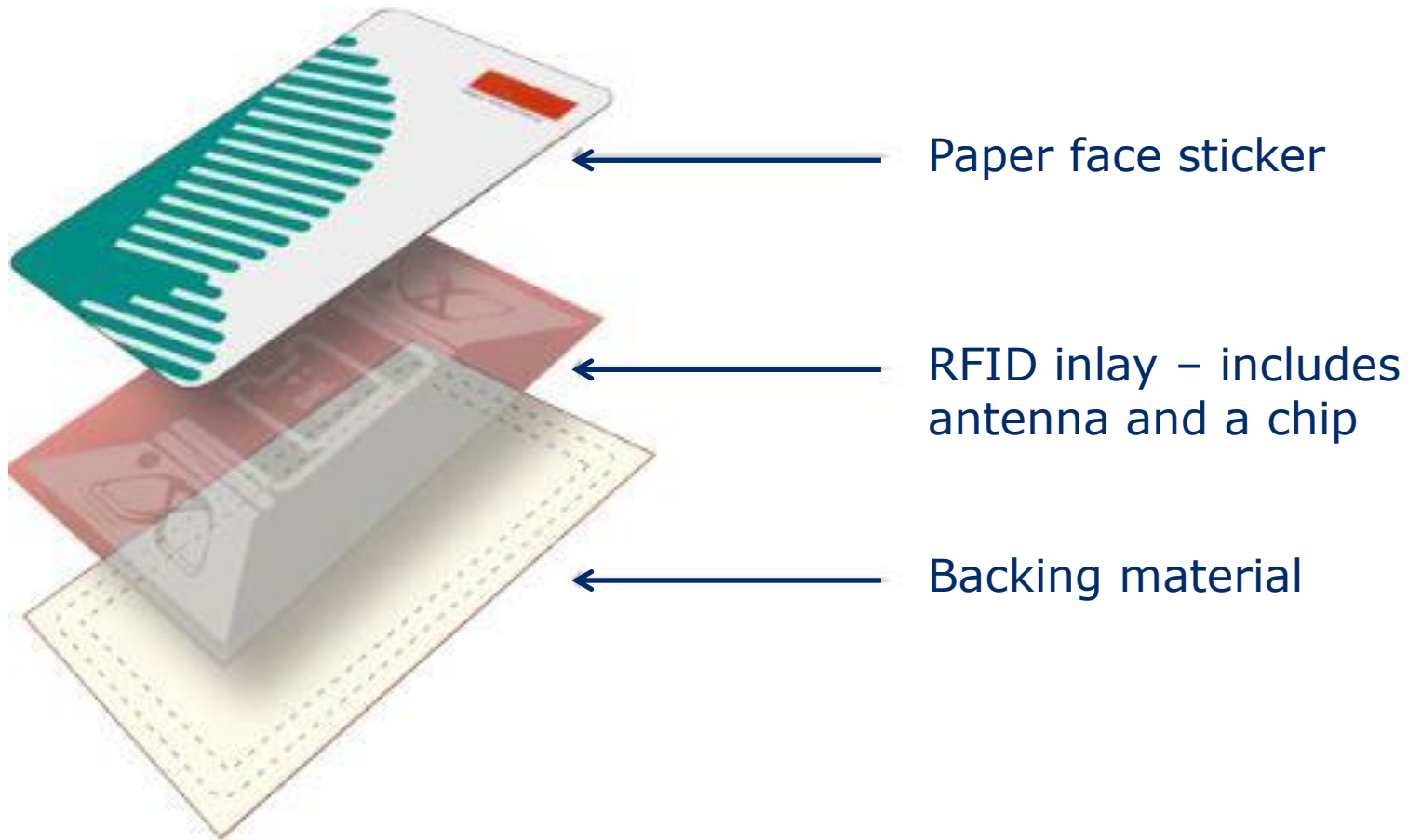


Pharmacy

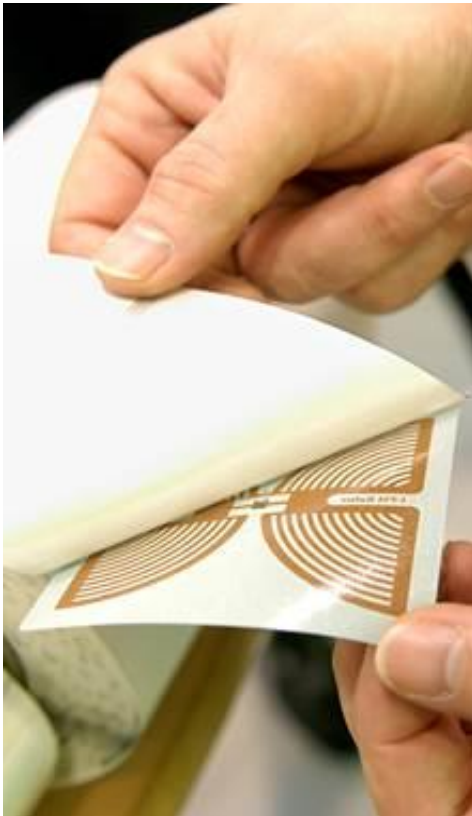


Retail

RFID tag construction



Advantages of RFID



- **Read range of up to a few metres**
- **No need of visible line of sight**
- Resistant to dirt and stains
- RFID Tags **can easily be read on the move** ...and in quantity (up to 200/sec)
- Every item / piece of garment can be **identified individually with a serial number**



What's in it for Apparel ?



Item-level tagging starting point...



Process	Manufacturing	Logistics	Store	Time Saving
Goods In & Out Quantity Check	X	X	X	up to 100%
Applying EAS hard-tag		X	X	100 %
Picking control	X	X		up to 100%
Stock Take, Cycle Count		X	X	80-95%
In-store Replenishment			X	50%
Cutting out-of-stocks (OOS)		X	X	50%
Product Location		X	X	20%
Check-Out process			X	60%
Sales uplift	X			2-20%



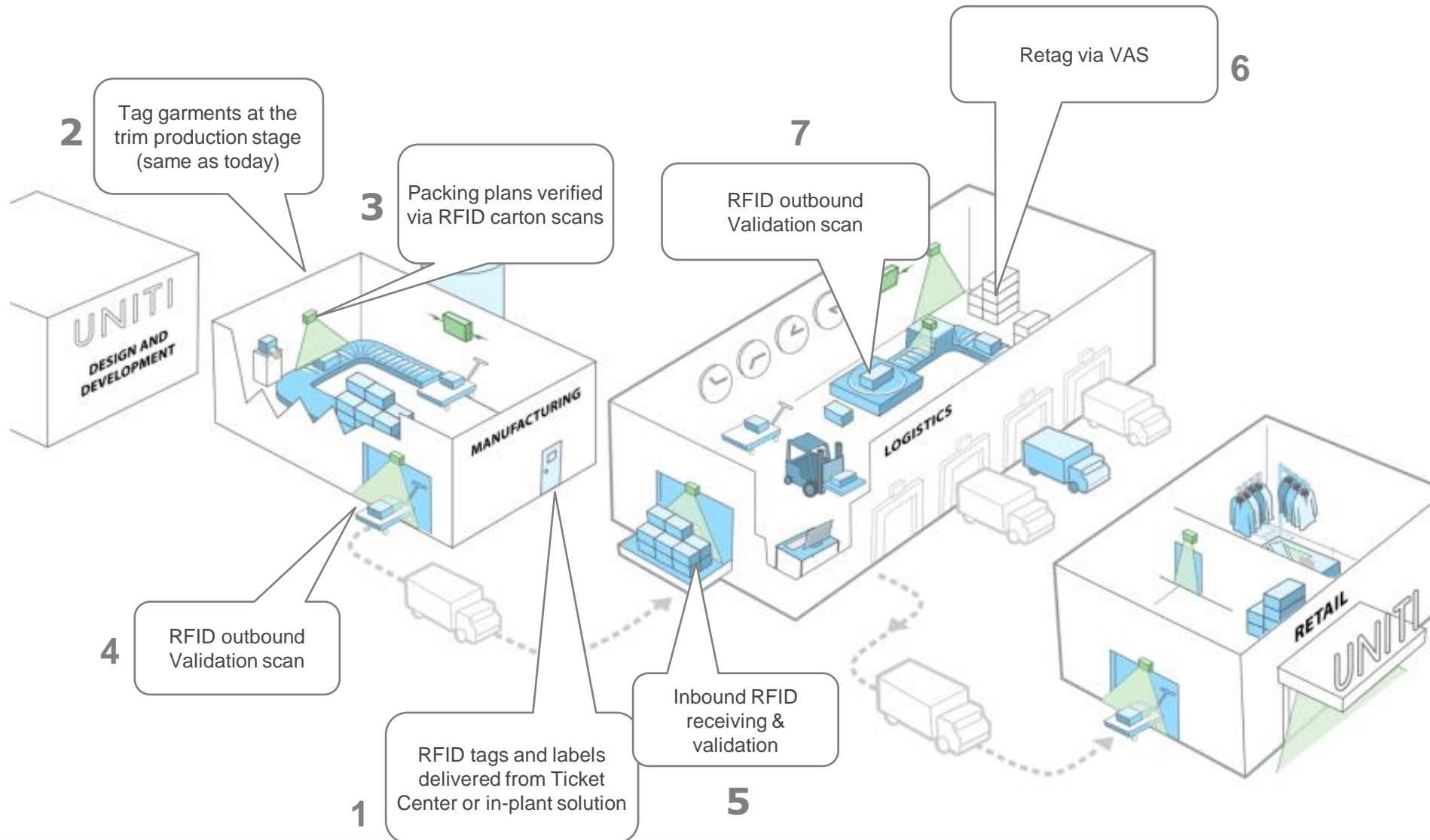
...leading to key business benefits

- **For retailers** — Inventory accuracy and productivity, sales lift, streamlined returns, reduce NOSBOS
- **For consumers** — In-stock availability, authentic product assurance
- **For manufacturers** — Inventory tracking/accuracy, efficiency, lower return costs, better information flow



For all: **Right product** in the **right place** at the **right time**

The RFID-enabled supply chain



Upstream EDI and EPCIS

Sharing data the GS1 way!





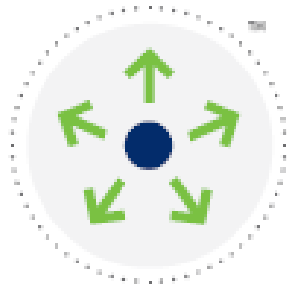
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What part of the Supply Chain is Upstream?



Our standards - Share



SHARE
GS1 DATA EXCHANGE

GS1 standards provide the structure to automate data communication between trading partners

TRANSACTIONAL DATA

EDI

Electronic Data Interchange

EDI enables the computer-to-computer exchange of business documents between companies using a standardized format.

MASTER DATA

GDSN

Global Data Synchronization Network

The GDSN connects trading partners to the GS1 Global Registry® via GS1-certified data pools, enabling the immediate electronic sharing of standardized, up-to-date, accurate information.

PHYSICAL EVENT DATA

EPCIS

Electronic Product Code Information Services

EPCIS is the standard for sharing information about the movement and status of goods in the physical world.

EANCOM[®] implementation



- EANCOM[®] has been implemented in 43 countries
- The most widely implemented EANCOM[®] messages:
 - ORDERS (Order)
 - INVOIC (Invoice)
 - DESADV (Despatch Advice)
 - ORDRSP (Order Response)
 - PRICAT (Price/Sales Catalogue)
 - INVRPT (Inventory Report)
 - RECADV (Receiving Advice)



How to order via EDI?



Purchase order (ORDERS)



Why?

- An ORDERS transfers details of the products ordered (i.e. quantities etc.)
- It is based on the agreed terms
- Can be generated automatically through the customer's ERP system
- Can be read and processed automatically through the seller's ERP system

Time & cost savings, less mistakes; therefore speed to market and efficiencies!

Why send an electronic ASN?



Despatch Advise (DESADV)

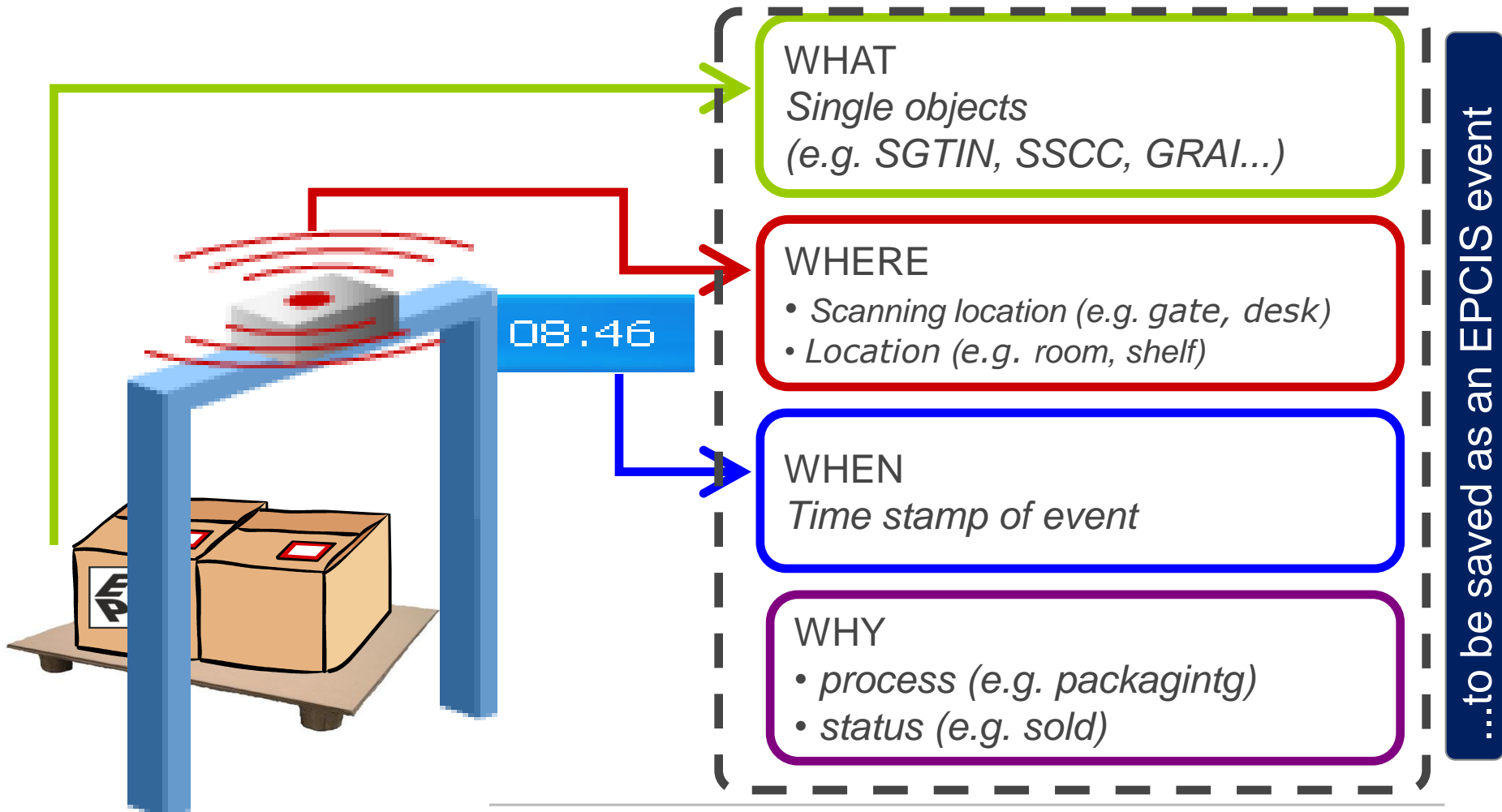


Why?

- Electronic equivalent of a delivery note
- As information preceding the delivery of goods itself
- Sharing of details (e.g. Quantities etc.) of goods shipped
- Essential part of a track&trace solution
- Automated matching of order and delivery

Faster goods inbound reception, improved traceability along the supply chain!

EPCIS (EPC Information Service): tracking business events



Traceability

The next big thing in Apparel





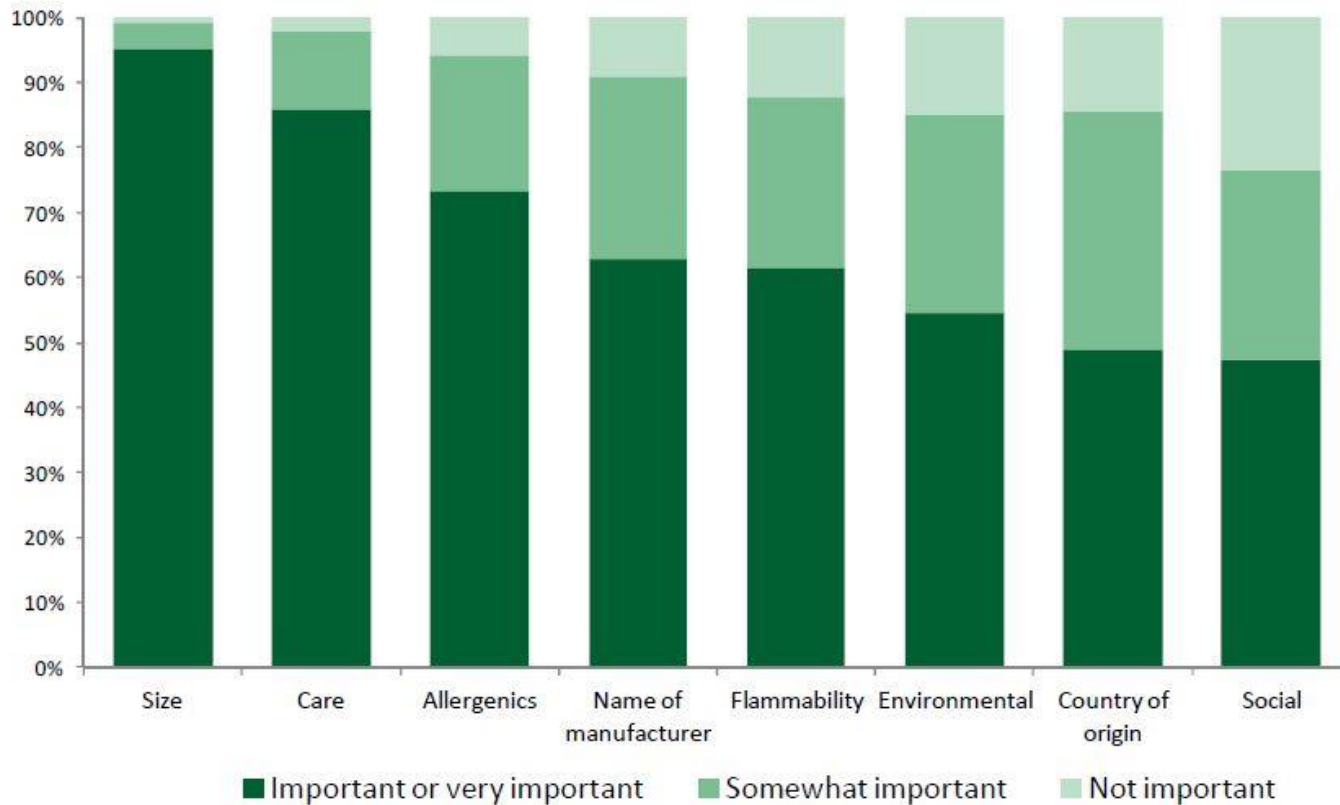
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Traceability from a consumer perspective



Figure 2: Most important information on a label according to consumers surveyed



Rapid Alert System for dangerous non-food products



GS1 Standards enable global tracking & tracing solutions



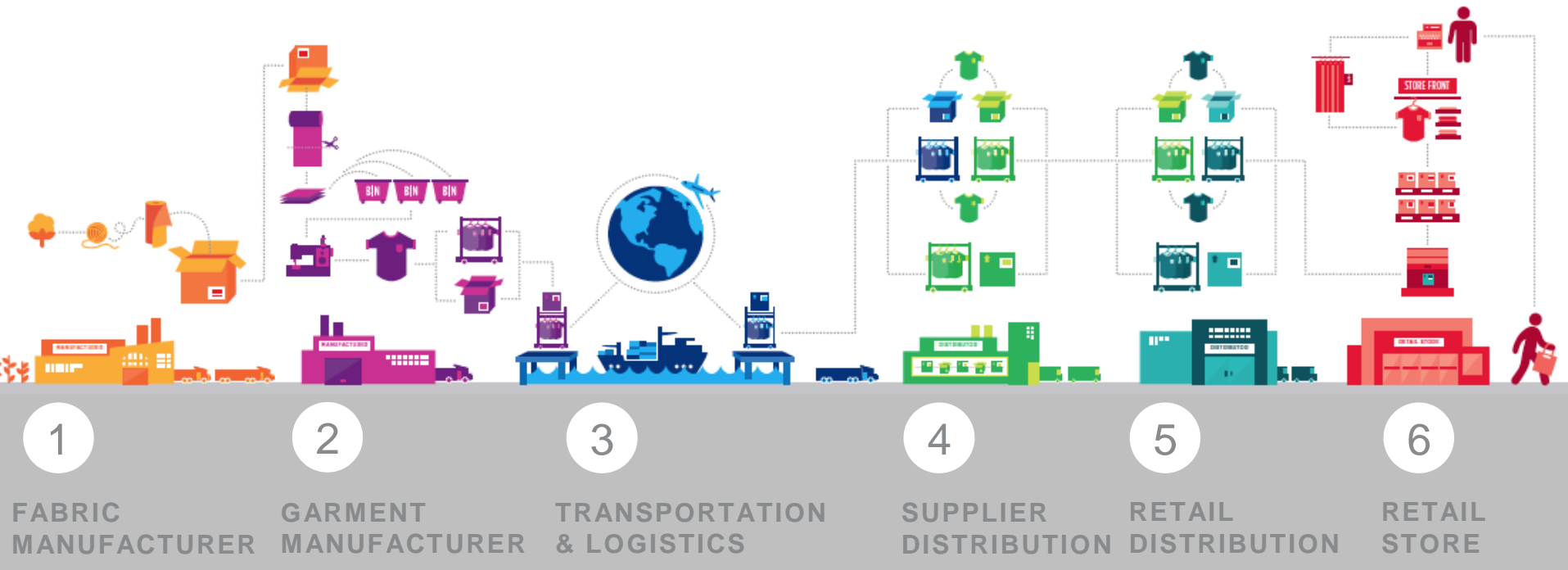
GLN for locations

SGTIN for single items

SSCC for deliveries

EDI for business documents

EPCIS for physical events



How GS1 can help

Your local GS1 Member Organisation is part of a truly global community!



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A world map composed of a grid of small dots. The dots are primarily light blue, but a significant number of dots, particularly in Europe, Asia, and parts of Africa and South America, are highlighted in orange. The text is overlaid on the map.

110+ Member Organisations Serving Business Around the World

Solving industry needs



How GS1 helps



GS1 provides Standards that are accepted globally

GS1 offers trainings and educates users in their local language

GS1 connects companies around the world

GS1 drives adoption of standards and supports deployment

Grow the Business

Reduce Costs

Leverage Consumer Insights

Manage Risk



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Contact Information



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Thank you very much!

