Global Standards for Smart Agriculture and Food Safety Systems: Opportunities for Developing Countries

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Bangkok 26 September 2014

WHAT ARE GS1 STANDARDS?

GS1 standards is a widely used and trusted supply chain standards system for the effective management of global supply chains

- Globally unique identification for **products**
- Same numbering system used worldwide by all manufacturers, all retailers

Electronic
Purchase Order or Invoice

Seller: 0614141123452
Buyer: 5012345678900
Contents:
10 units GTIN 5012345678900

- Globally unique identification for **legal entities and locations**

Capturing the identification key … and beyond

Some data carriers can carry more detailed information about a specific unit

(01) 10222222333334 (17) 091231 (10) A1345B (21) 1234

Item identifier

Expiry date

Batch number

Serial number

(01)07612345678900 (17)100503
(10)AC3453G3 (21)123

Overview of all GS1 Standards for Traceability

TRACEABILITY PROCESS : GS1 Standards for Full Chain Traceability

GTS Global Traceability Standard   **CHECKLIST** Control points and compliance criteria

IDENTIFY: GS1 Standards for Identification

GLN Global Location Number   **GTIN** Global Trade Item Number   **SSCC** Serial Shipping Container Code   **GRAI** Global Returnable Asset Identifier   **GIAI** Global Individual Asset Identifier   **GSRN** Global Service Relation Number

GLN	GTIN	GTIN	GRAI / GTIN / SSCC	GIAI	GLN	GIAI	SSCC	GLN	GIAI	GTIN / SSCC	GTIN	GLN	GSRN
		SSCC											

| MANUFACTURER | ITEM | CASE | PALLET | TRANSPORT | DISTRIBUTOR | TRANSPORT | PALLET | DISTRIBUTION CENTRE | TRANSPORT | CASE | ITEM | RETAILER HEALTHCARE PROVIDER OPERATOR | CONSUMER PATIENT CAREGIVER |
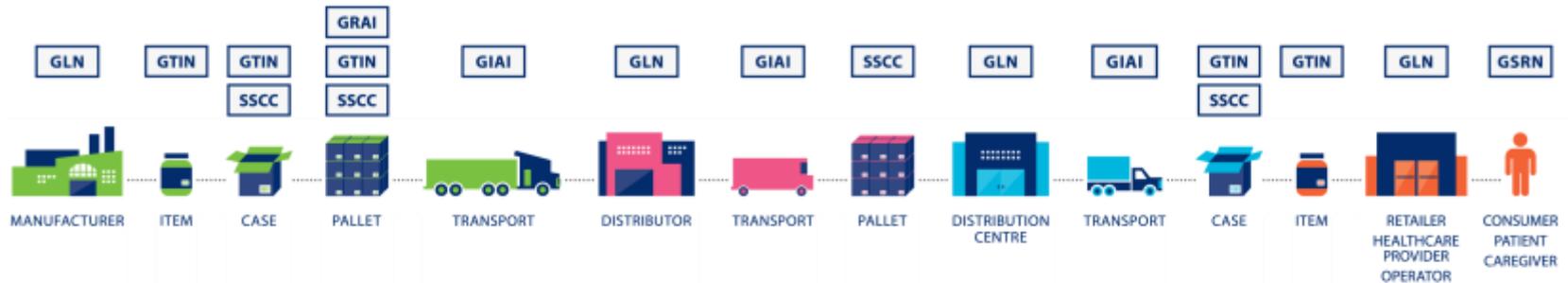
CAPTURE: GS1 Standards for Barcodes & EPC/RFID

GS1 BARCODES   **GS1 EPC/RFID**

EAN/UPC	GS1-128	ITF-14	GS1 DataBar	GS1 DataMatrix	GS1 QR Code	GS1 Composite Barcode	EPC HF Gen 2	EPC UHF Gen 2

9 501101 021037

(00) 3 9501100 000001001 9

(01) 0 9501381 82103 7

SHARE: GS1 Standards for Data Exchange

MASTER DATA Global Data Synchronisation Network (GDSN)   **TRANSACTIONAL DATA** eCom (EDI)   **Event Data** EPC Information Services (EPCIS)

incl. Despatch advice & Recall notification

GS1 is the most widely used supply chain standards in the world

150 countries
15 million products
2 million member companies
6 billion daily transactions

International Food Safety Requirements and the Traceability Challenge

What is the issue ?

EC178/2002 art.18,
FSMA sec.204,
HACCP,
ISO 22000/22005
IFS, BRC, SQF,
GLOBALG.A.P
etc.

Companies are facing multiple regulatory and business traceability requirements.
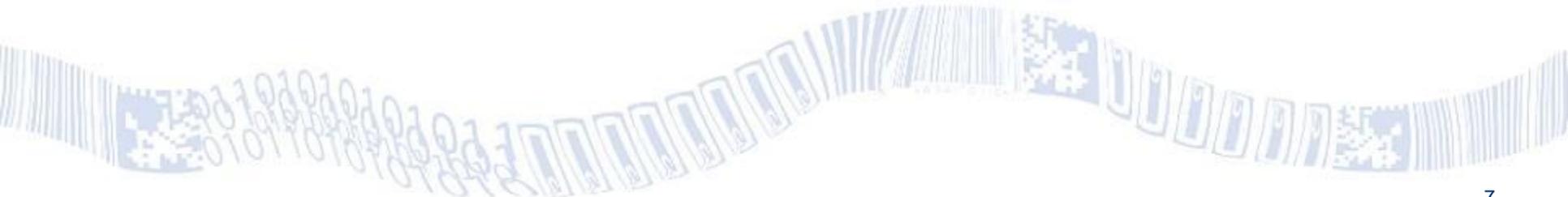
GS1's role in Traceability

What ?

Regulations, HACCP, ISO 22005

IFS, BRC, SQF, GLOBALG.A.P…

How ?