



Background to Work Team this afternoon: GTIN ALLOCATION RULES

David Buckley

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Fifteen minutes on :

1. [Brief] Introduction on GS1 Bar Code
2. GTIN Allocation Rules for Pharmaceuticals & Medical Devices
3. Bar Code Decision Tree – *an idea?*
4. Radical Thought for the Day



GS1's Brand Architecture



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OVERALL BENEFIT: Improving efficiency & visibility in supply and demand chains

GS1 SOLUTIONS & SERVICES USING GS1 STANDARDS
Solutions: POS / Inventory Management / Asset Management / Collaborative Planning / Traceability
Services: Global (GSMP, GEPIR, Global Registry, Training and Accreditation) & Local (e.g. Certification, Implementation, Training)

 **System** - Integrated system of standards

 **BarCodes** 

Global standards for automatic identification

Rapid and accurate, item, asset or location identification

 **eCom** 

Global standards for electronic business messaging

Rapid, efficient & accurate business data exchange

 **GDSN** 

The environment for global data synchronisation

Standardised, reliable data for effective business transactions

EPCglobal 
Powered by GS1

Global standards for RFID-based identification

More accurate, immediate and cost-effective visibility of information

GS1 Identification Keys (e.g. GTIN, GLN, SSCC, GRAI, GIAI, GSRN, EPC) & Attribute Data (e.g. Best Before Date)



GS1: A Broad Portfolio



Global standards for automatic identification
Rapid and accurate item, asset or location identification



Global standards for electronic business messaging
Rapid, efficient & accurate business data exchange



The environment for global data synchronisation
Standardised, reliable data for effective business transactions



Global standards for RFID-based identification
More accurate, immediate and cost efficient visibility of information



GS1 BarCodes



Global standards for automatic identification

Rapid and accurate item, asset or location identification



- Global data and application standards for bar codes that use the **globally recognised GS1 Identification Keys** to automatically identify things such as trade items, locations, logistic units, and assets.
- Enables rapid and accurate electronic reading at any point in the supply chain process.
- Improved efficiency and visibility in the supply and demand chains.



GS1 BarCodes



Global standards for automatic identification

Rapid and accurate item, asset or location identification



- A **unique item identifying number**
- The **system logic guarantees that captured data produces unambiguous messages** whose processing can be fully pre-programmed
- All symbologies and application identifiers are **ISO-endorsed**



GS1 BarCodes



Global standards for automatic identification

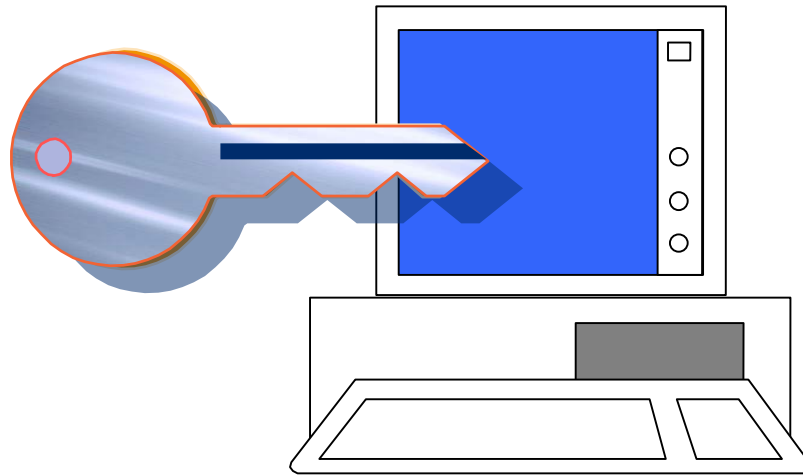
Rapid and accurate item, asset or location identification



- The most widely used physical identification standard in the world
- Supported by all open trade retailers globally
- Implemented by over 1,000,000 user companies in more than 140 countries
- The same code can be recognised and scanned anywhere in the world



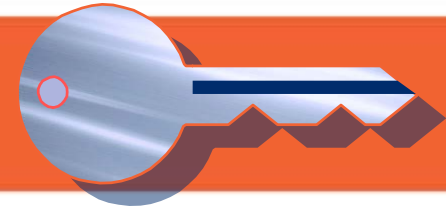
GS1 Global Trade Item Number (GTIN)



GTIN provides access computer files



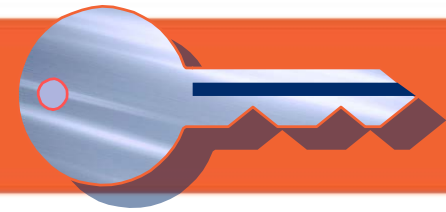
Benefits of GTIN:



- **Uniqueness:** A GTIN identifies an item uniquely. The rules for assigning GTINs ensure that every variant of an item is allocated unique reference number.
- **Non-significance:** The GTIN does not contain any meaningful information in itself.
- **Multi-sectoral:** GTINs are unique across all business sectors. This means that a healthcare product, a PC sound card or grocery item are all identified in a compatible way.
- **International:** GTINs are unique worldwide. This means that a GTIN assigned anywhere in the world can be used anywhere in the world.
- **Security:** Security of GTINs is provided through a combination of database look-up and the fixed length, numeric format that includes a standard check digit.



Benefits of GTIN (*cont.*):



- **Data Integrity:** The check digit ensures the integrity of data passing into the system
- **Source Numbering:** The GTIN is assigned by the brand owner of the product. Once assigned, all trading partners can use the GTIN.
- **Automatic capture:** A GTIN can be encoded in bar code (and/or RFID tags). Scanning allows the information flow to be linked to the physical flow of items through the supply chain and attribute data (Batch, Expiry Date, etc.) to included
- **Access to Other Applications:** The GTIN is the foundation stone for EDI, Global Data Sync, EPC, etc.



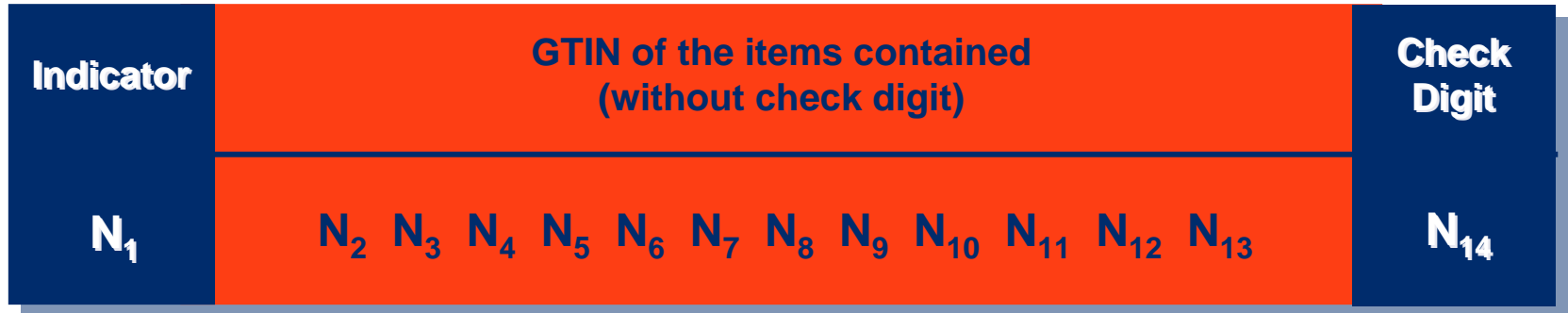
What do GTINs identify?

- **Trade items:** Any item (product or service) upon which there is a need to retrieve pre-defined information and that may be **priced or ordered or invoiced** at any point in the supply chain

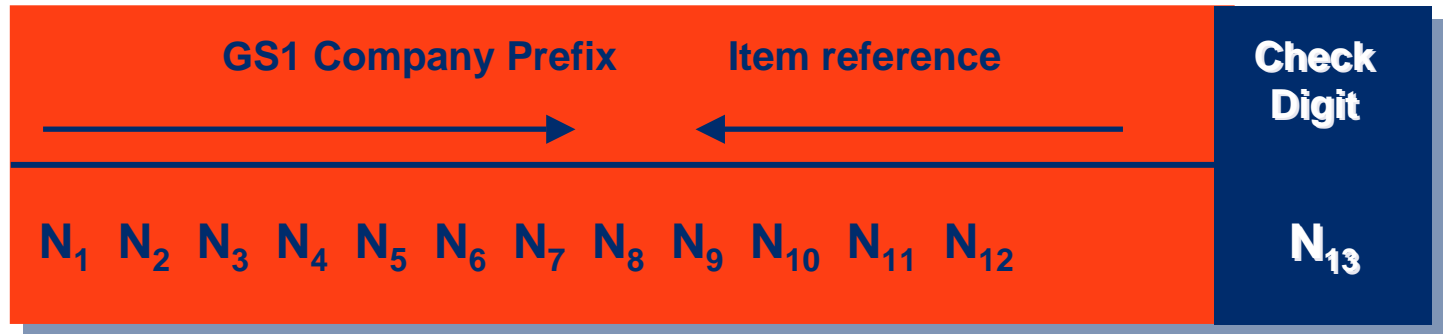


Global Trade Item Numbers (GTIN)

■ GTIN-14 data structure



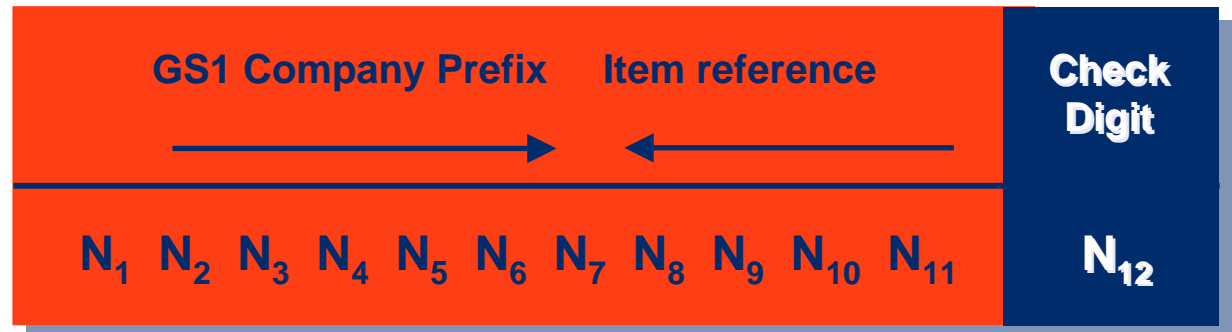
■ GTIN-13 data structure



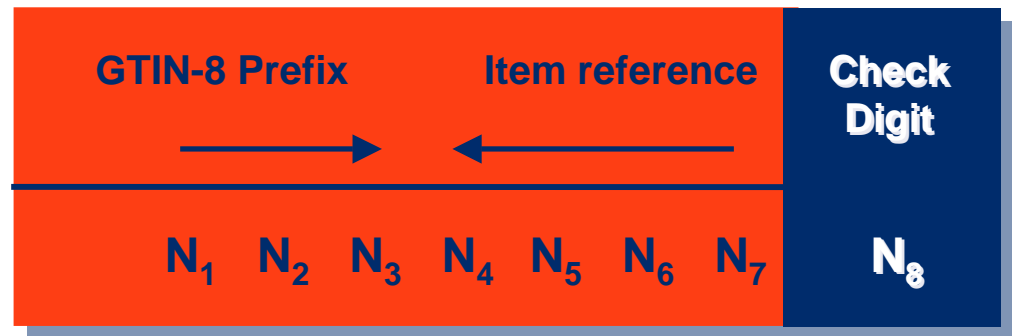


Global Trade Item Numbers (GTIN)

■ GTIN-12 data structure



■ GTIN-8 data structure





Global Trade Item Numbers (GTIN)

Data Structures	GTIN Format													
	T ₁	T ₂	T ₃	T ₄	T ₅	T ₆	T ₇	T ₈	T ₉	T ₁₀	T ₁₁	T ₁₂	T ₁₃	T ₁₄
GTIN-14	N ₁	N ₂	N ₃	N ₄	N ₅	N ₆	N ₇	N ₈	N ₉	N ₁₀	N ₁₁	N ₁₂	N ₁₃	N ₁₄
GTIN-13	0	N ₁	N ₂	N ₃	N ₄	N ₅	N ₆	N ₇	N ₈	N ₉	N ₁₀	N ₁₁	N ₁₂	N ₁₃
GTIN-12	0	0	N ₁	N ₂	N ₃	N ₄	N ₅	N ₆	N ₇	N ₈	N ₉	N ₁₀	N ₁₁	N ₁₂
GTIN-8	0	0	0	0	0	0	N ₁	N ₂	N ₃	N ₄	N ₅	N ₆	N ₇	N ₈



Allocating the Numbers



It is the responsibility of GS1 Member Organisations to administer number allocation and set the rules in their territory.

**THESE RULES MUST COMPLY WITH THE
GLOBAL GS1 GENERAL SPECIFICATIONS**



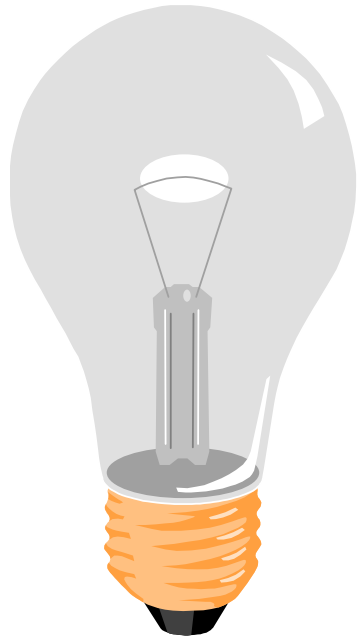
2) GTIN Allocating Rules

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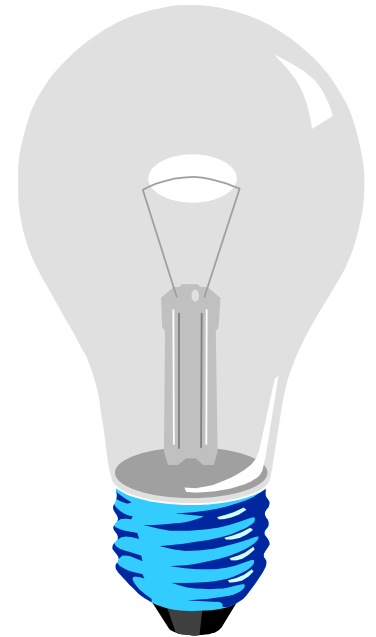
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Allocating GTINs



Same or different?





General Rule

- Each different **series of identical trade items** must be identified by a different GTIN.

This general rule needs interpretation!

Objective of this afternoon - What does 'different' mean for pharmaceuticals and medical devices



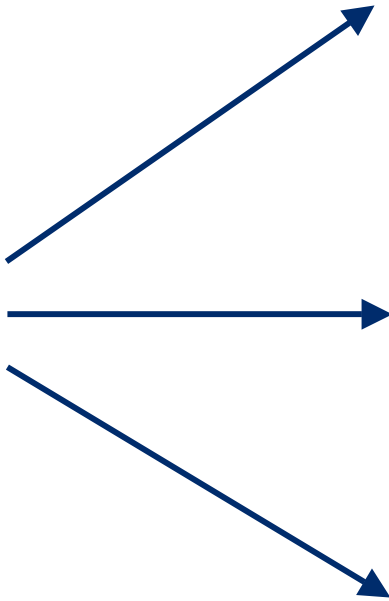
GTIN Allocation Principles

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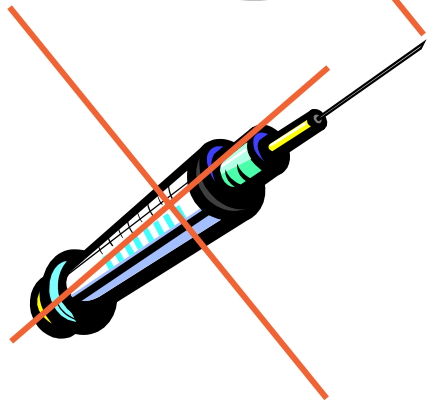
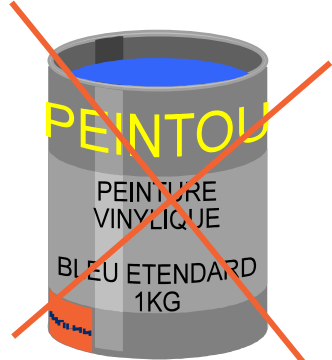
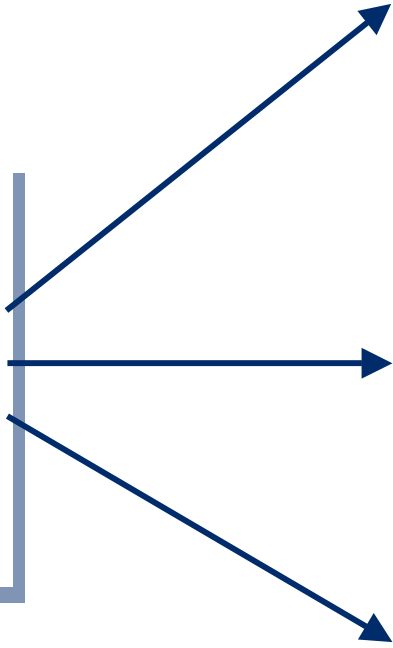


1 product = 1 GTIN





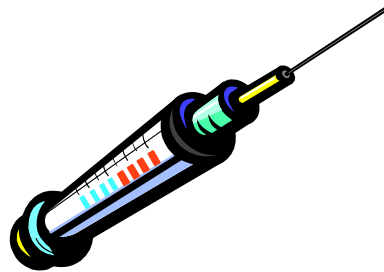
1 GTIN = 1 product





Examples

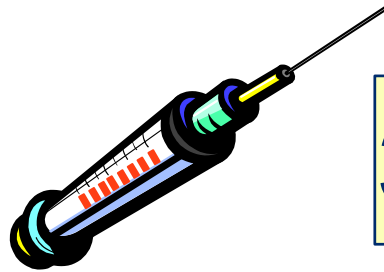
Vaccine X
(5ml child)



Company Prefix + Item Ref. CD

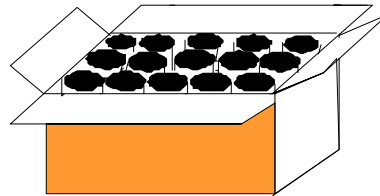
3	0	8	3	6	8	0	0	2	6	3	0	7
---	---	---	---	---	---	---	---	---	---	---	---	---

Vaccine X
(10ml adult)



3	0	8	3	6	8	0	0	2	6	3	2	1
---	---	---	---	---	---	---	---	---	---	---	---	---

Vaccine X
(child box of 15)



3	0	8	3	6	8	0	0	0	0	7	1	0
---	---	---	---	---	---	---	---	---	---	---	---	---



Product identification

The GTIN identifies to the the lowest level

~~CLASSIFICATION~~



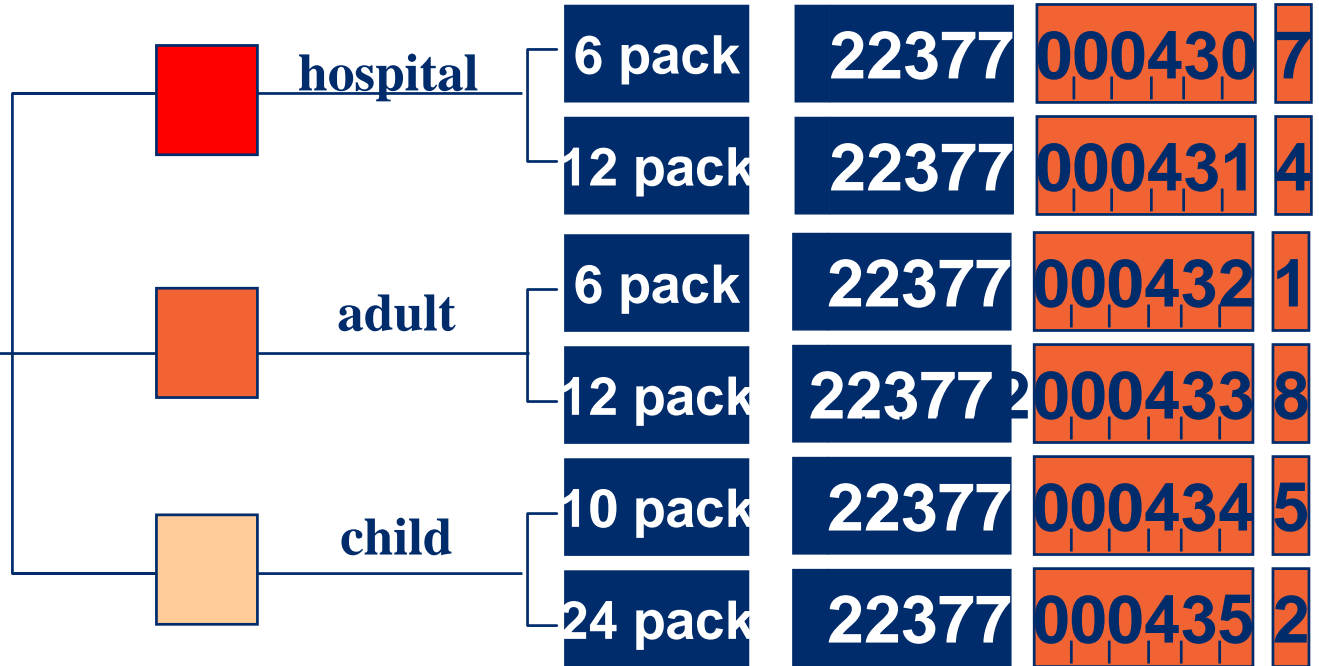
PHARAM

Pills

STRENGTH

PACK

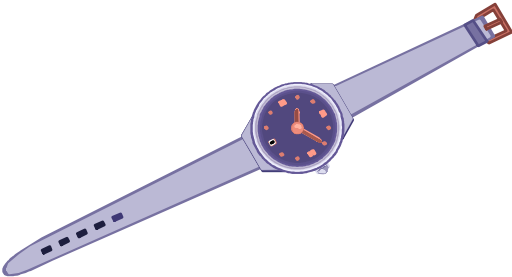
IDENTIFICATION



Significant numbering

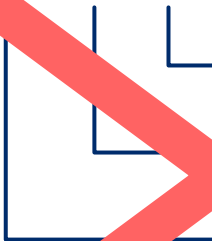
Strongly not advisable

Product ID



Accessories department

Product ID



Article Number

Colour number

Fabric number



Leather-goods department

Fabric number

- 1 = leather
- 2 = vinyl
- 3 = fabric

Color number

- 01 = black
- 02 = burgundy
- 03 = blue
- 04 = white



Re-use of a GTIN

3453120236458



**End of
commercialisation**



4 year minimum

3453120236458



**Re-use
of the number**



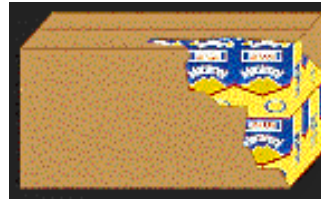
Uniform groupings

Lowest level



3 07319 010206 6
EAN/UCC-13

Box of 20 products



1 3 07319 010206 3
EAN/UCC-14

Box of 40 products



2 3 07319 010206 0
EAN/UCC-14

Mixed grouping



Black "oriental"
3 21566 500005 1

Yellow "canaille"
3 21566 500011 2

Metallic "ambrée"
3 21566 500004 4

Number of the mixed grouping
3 21566 901099 5



- 12 black "oriental"
- 8 blue "diabliesse"
- 6 yellow "canaille"
- 6 metallic "ambré"
- 6 pink "étreinte"
- 10 green "jardin tropical"

Blue "diabliesse"
3 21566 500012 9

Pink "étreinte"
3 21566 500010 5

Green "jardin tropical"
3 21566 500009 9



*Made even easier
thanks too:*



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GTIN Allocation Rules

- Endorsed by the GCI Board
- Frequently visited area on GS1 web-site
- Excellent user feedback
- Approved under GSMP

A picture tells a thousand words



GTIN Rules – User Feedback

- Don Weston [Pfizer] *It is just the type of practical tool that we all so badly need in the daily operations of the business.*
- Paul Nutter [Tesco] *endorsing this new global tool Tesco aims to help its suppliers worldwide reduce costs by meeting Tesco product numbering requirement with truly global solutions*
- Patrice Ronsin [L'Oréal] *We would like to take this opportunity to thank [PTRG Chair] and all the members ... For the incredible task they have accomplished on this critical topic.*
- Brian Smith [GS1] *The GTIN Allocation Rule pages of our website will be a very useful tool for all users throughout the world.*
- John Wolfson [Kraft Foods] *I found the site to be very easy to understand and migrate*



GTIN ALLOCATION RULES

EAN•UCC
GTIN Allocation Rules
made even asier

VISION

13 777 596 110 23 600 763 7 00

3.6

Type of Change to Trade item

New / additional pallet layout to co-exist permanently with the original layout



Note: The pallet pattern / layout does not impact the quantity of retail consumer trade items or cases contained. If the pallet is an ordering unit a different GTIN is required for each pallet configuration.

GTIN for Standard Trade Item Grouping





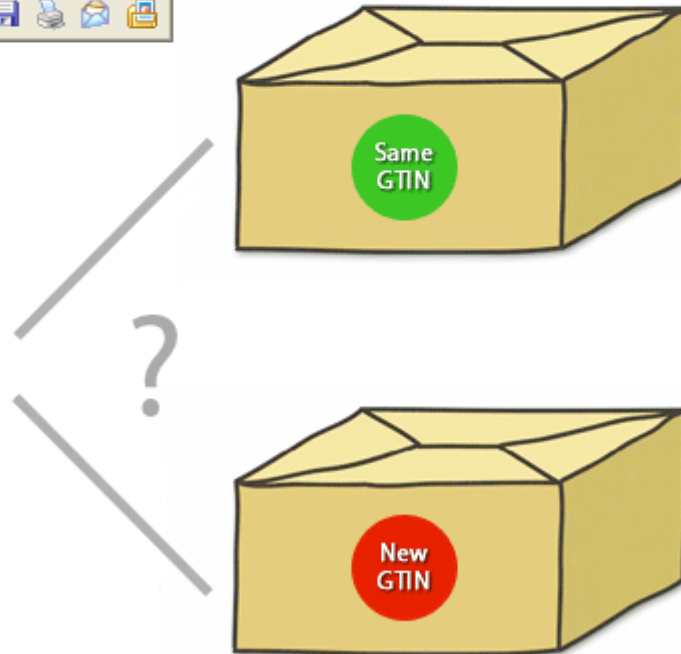
GTIN Allocation Rules

The [GS1 GTIN Allocation Rules](#) are endorsed by the Global Commerce Initiative and have been developed to ensure unique and consistent identification of products world-wide.

The GTIN (Global Trade Item Number) provides a supply chain solution for the identification of any item that is traded (priced or invoiced or ordered). Overall supply chain costs are minimised by all partners in the supply chain adhering to [identical allocation rules](#). GTINs form the foundation for [global data synchronisation](#).

From the starting point of [correctly assigned GTIN](#), this tool gives examples of product changes which may (or may not) result in a new GTIN being assigned to the product.

NOTE: These rules are focused on whether a new GTIN be assigned. However, the Brand Owner must communicate any change to a product, ideally using GDSN, even if the change does not trigger a new GTIN.



GTIN Allocation Rules available in:

- Spanish, German, Chinese, **Slovakian**, Norwegian, Slovenian, Polish, French, ...
- *Improving Implementation at [non-English language] User Companies*



3) [Maybe] Bar Code Decision Tree?

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Which Bar Code / What Number?

MEDICAL DEVICES - For the PALLET package level, which bar code symbol(s) are used?

- GS1 Datamatrix
- RSS (Reduce Space Symbology)
- RSS with Composite
- EAN/UPC (covers EAN-8, EAN-13, UPC-A & UPC-E)
- GS1-128 (previously known as UCC/EAN-128)
- ITF-14
- Datamatrix
- Code 39
- Code 128
- Other

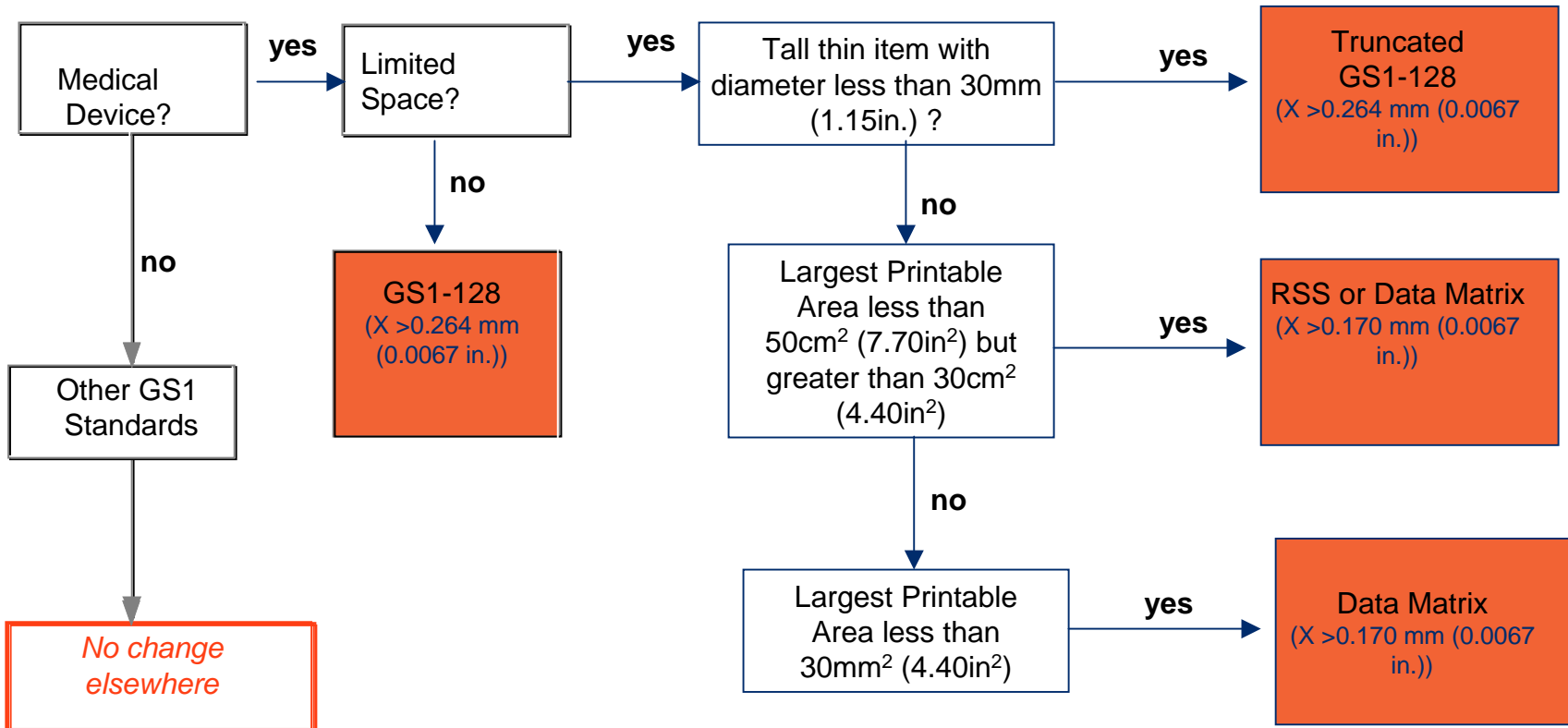
MEDICAL DEVICES - For the PALLET package level, what DATA do you encode in the bar code?

- GTIN (e.g., AI 01)
- Expiration Date (e.g., AI 17)
- Lot or Batch Number (e.g., AI 10)
- Serial Number (e.g., AI 21)
- SSCC (e.g., AI 00)
- HIBCC primary UPN
- HIBCC secondary
- National Registration Number (e.g., PZN in Germany)
- Other

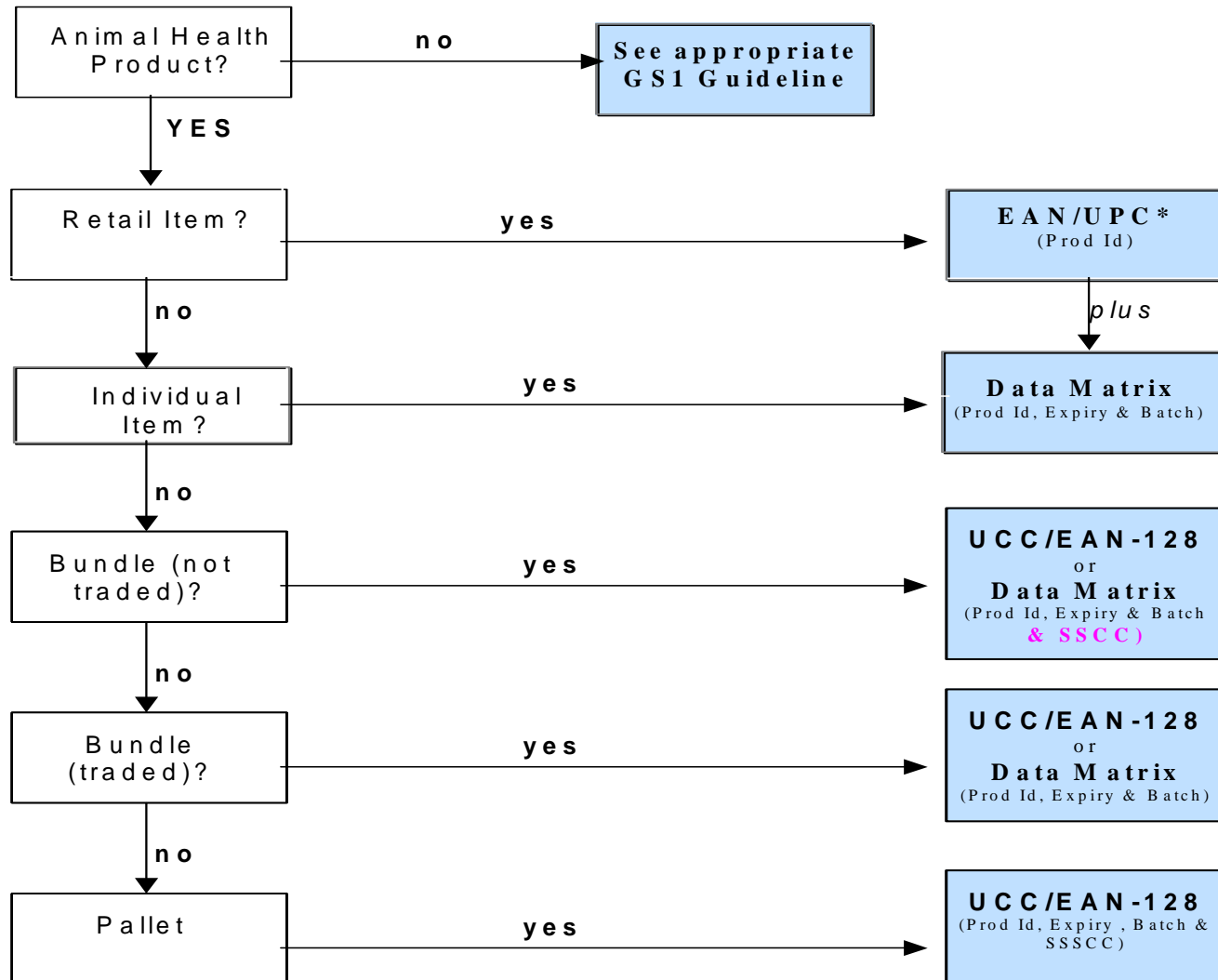


DRAFT Concept: Bar Code Decision Tree

Medical Device Data: GTIN and Serial Number (and date??)



Animal Health: GTIN, Expiry Data and Batch Number





RADICAL THOUGHT TO CLOSE

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We now have Benchmark Data to Establish Goals, Timelines and Measure Real Progress

Implementation Measures	2004 Benchmark	Goal	Timeframe
% of consumer units allocated to GTIN			80
% of cases/cartons/innings allocated to GTIN			80
% of pallets/unit loads labeled with GTIN			80
% of item exceptions to GTIN			80
% of shipping or receiving locations that have been allocated a GLN	%	64.4	80
% of orders transacted via EDI or XMI	%	67.1	85
% of invoices transacted via EDI or XMI	%	67.1	85
% of sales with synchronized master data between trading partners via standards compliant data pools	%	12.3	50
% of GTINs that are catalogued consistently with Global Product Classification Standards	%	8.6	80
% of checkouts that can scan a 13 digit barcode	%	99.9	99
% of checkouts that can scan Reduced Space Symbology (RSS)	%	0.4	99

**SSCC & LOGISTIC LABEL
GTIN ALLOCATION RULES
GLN ALLOCATION RULES**

GTIN ALLOCATION RULES



Benchmark Data & Goals - 2007-2008

[Do?] We now have Benchmark Data to establish Goals, Timelines and Measure Real Progress

Benchmark	2005	GOAL	Timeframe / barrier
GTIN for Unit-of-use	60%	90%	Needs Global GTIN Rule endorsement
Batch/Expiry for Case	80%	95%	GS1-128 roll-out
Medical Device Serialisation	25%	50%	EPC endorsement
Regulators endorsing GTIN	20	60	??????

Questions ...





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