HUG Primer
BarCodes & eCom

Berlin, 30 January 2007

David Buckley

The global language of business

www.gs1.org

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GS1 FUNdamentals

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What I will cover today

1) GS1 Identification Keys
   - GTIN & Attribute Data
2) GS1 Bar Codes
   - EAN/UPC, GS1-128, RSS & Composite, Data Matrix, …
3) GS1 eCom
4) *Where to get more info*

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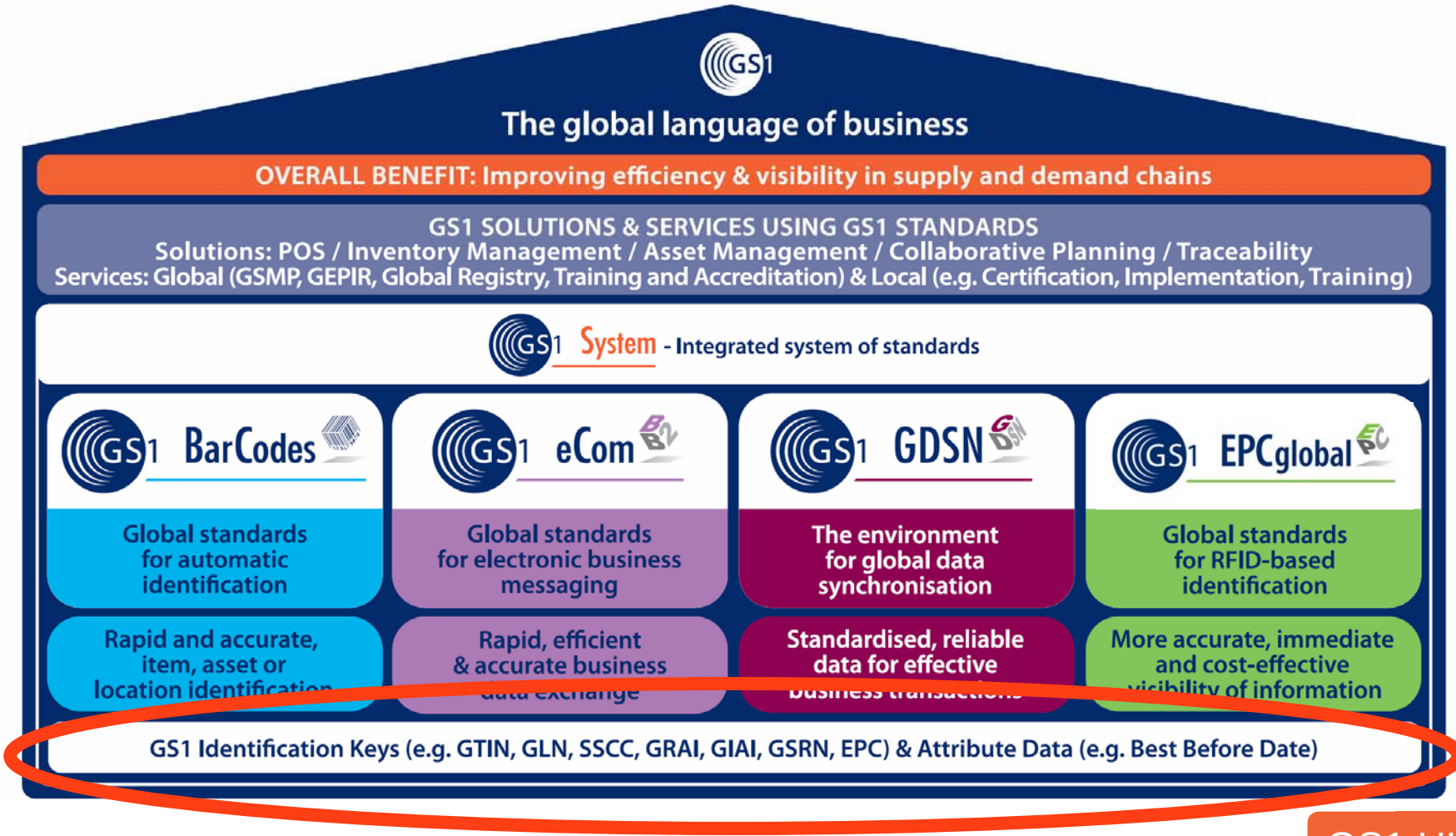
1) GS1's Brand Architecture



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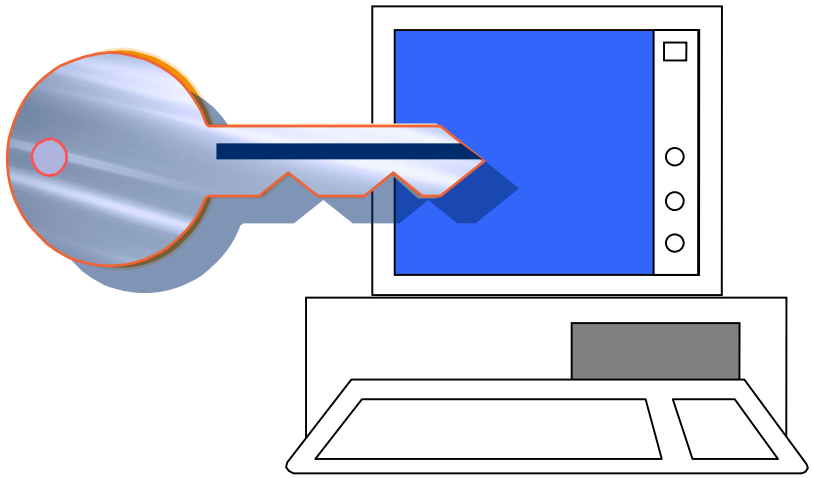
GS1 Identification Keys



GS1 Identification Keys *provide* ***access computer files***

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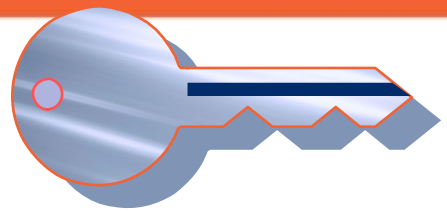
GS1 Identification Keys are:



- **Unique:** every variant of an item is allocated a separate unique number
- **Non-significant:** they identify an item but contain no information about it
- **International:** GS1 identification keys are unique across all countries and all sectors
- **Secure:** GS1 identification keys are fixed length, numeric and include a standard check digit

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Global Trade Item Number

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 any supply chain.

GTIN is umbrella term for all GS1 trade item identification numbers A Global Trade Item Number™ may use the GTIN-8, GTIN-12, GTIN-13, or GTIN-14 numbering structure.

Data Structures	GTIN													
	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

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GTIN FUNdemental: 1 product = 1 GTIN

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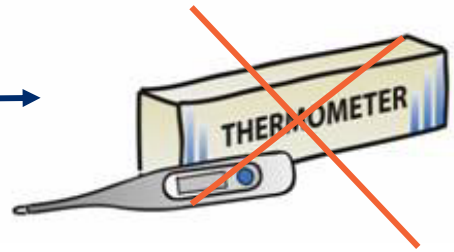
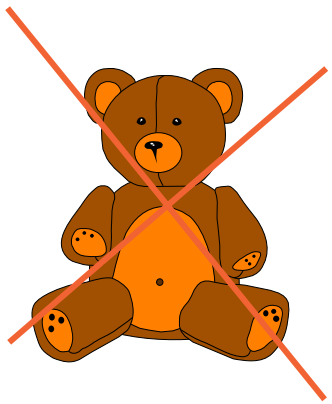
GTIN FUNdemental 1 GTIN = 1 product





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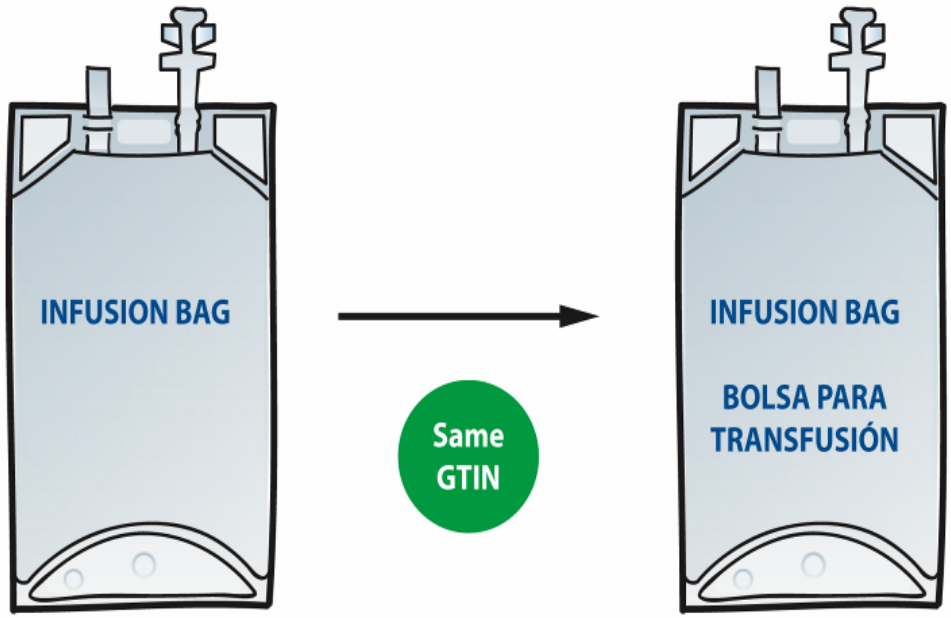
Example of Healthcare Deliverable

GTIN Allocation Rules for Healthcare (*Draft* submitted to GSMP by HUG leadership team)

Type of Change to Trade Item

Add an additional language on the packaging



From this …

… to this

Thanks to:

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GTIN Allocation Rules for Healthcare

- Provides
  - A Simple and easy to use worldwide guideline

- GTIN also enables the addition of Attribute Data like:
  - Batch Number
  - Expiration Date
  - Serial Number

How ?

Using GS1 Application Identifiers

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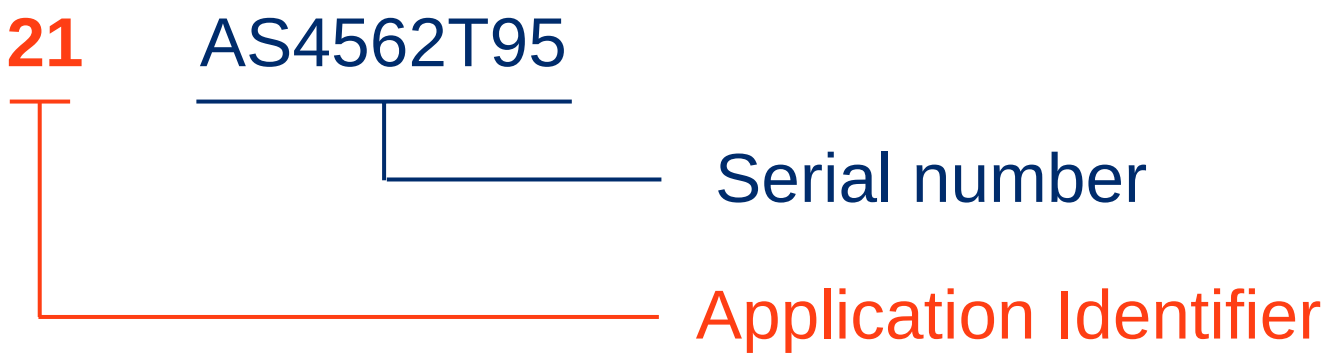
What is a GS1 Application Identifier (AI)?

- AIs are prefixes defining data field(s) that follow and indicate their format
- Example: AI (21) means "serial number" with a alphanumeric format, variable length up to twenty characters *an..20*



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More information on GTIN?

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~ for your local MO ~

GTIN分配规则主页 >

GTIN分配规则主页
- GTIN分配原则概览
- 最佳应用
- 搜索GTIN 规则
- 免责声明
- 相关链接

中文 Change language

GTIN 分配规则

全球贸易项目代码，GTIN (Global Trade Item Number) 为任一交易产品（如在产品定价、定购、开发票等业务过程中）提供全球供应链标识代码解决方案。

GTIN 是许多公司关键性业务（如POS扫描系统以及GDSN）的基础。 采用 相同的分配规则 ，会降低整个供应链成本。

本站点列出了涉及GTIN代码变化的常见的产品变更。

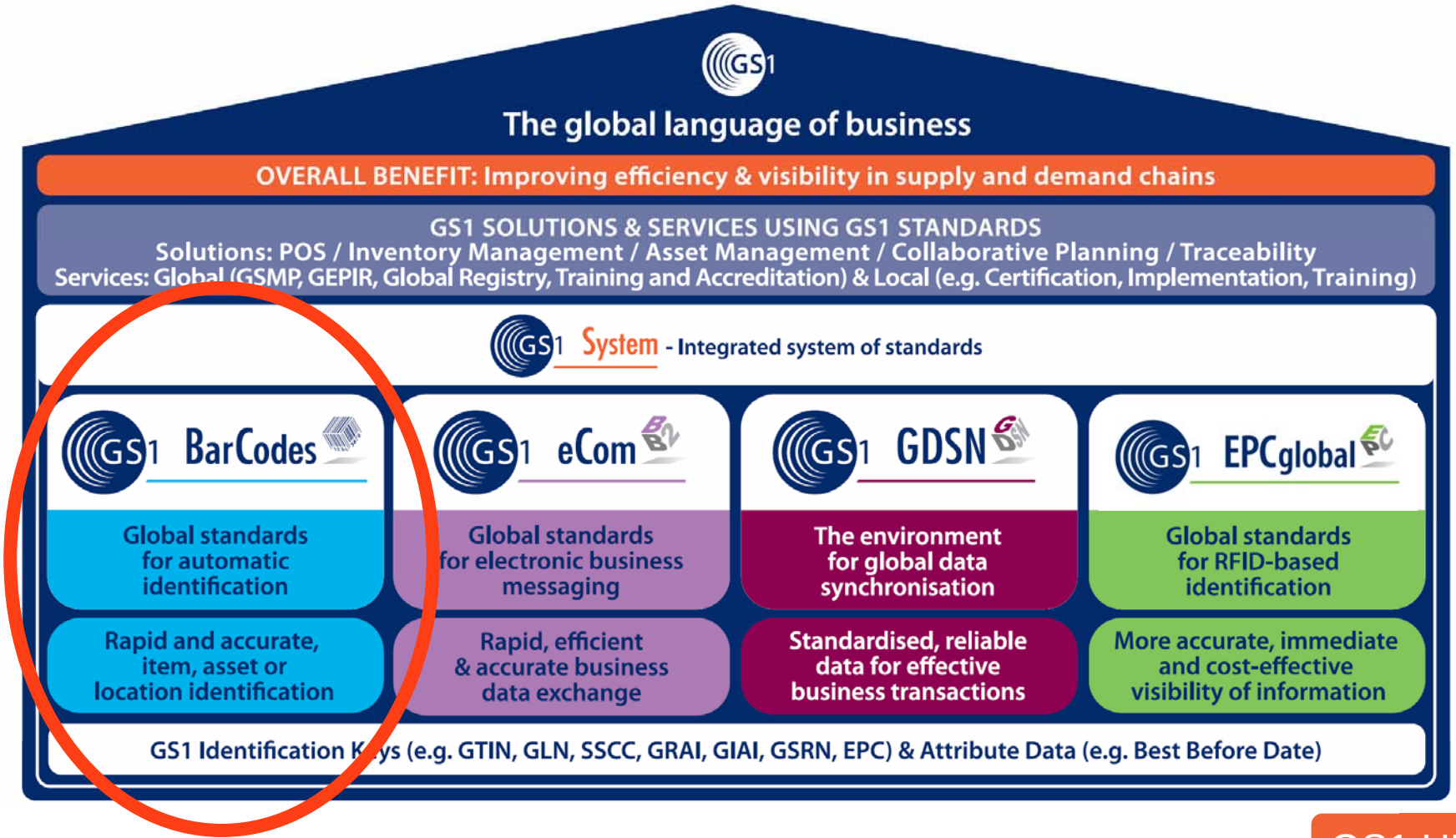
如需更多信息，请与 中国物品编码中心（GS1 China）联系。

View the GTIN Allocation Rules Overview

下载 GTIN 简易手册

注: 所述目的是为了全球通用。仅当地方法律法规有其他强制要求时例外。

2) GS1's Brand Architecture



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The only GS1 Bar Code your boss needs to know

- GS1 Bar Codes change lives for the better
  - Contribute to improved Patient Safety
  - Help Deliver Logistics Efficiency
  - Enable Traceability & Authentication systems

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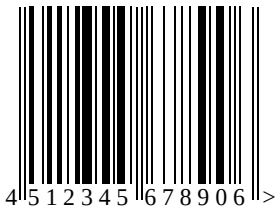
GS1 Bar Codes

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



EAN / UPC – GTIN only *(main usage Retail Items)*

ITF-14 – GTIN only *(main usage Outer Cases)*

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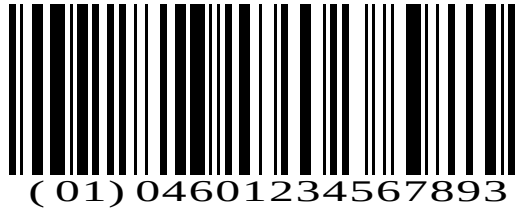
GS1 Bar Codes *cont.*

GS1-128 – GTIN and all GS1 Application Identifiers



RSS & Composite – GTIN and all GS1 Application Identifiers

Data Matrix – GTIN and all GS1 Application Identifiers

In Healthcare which Bar Code Symbol, with what data, where and why?

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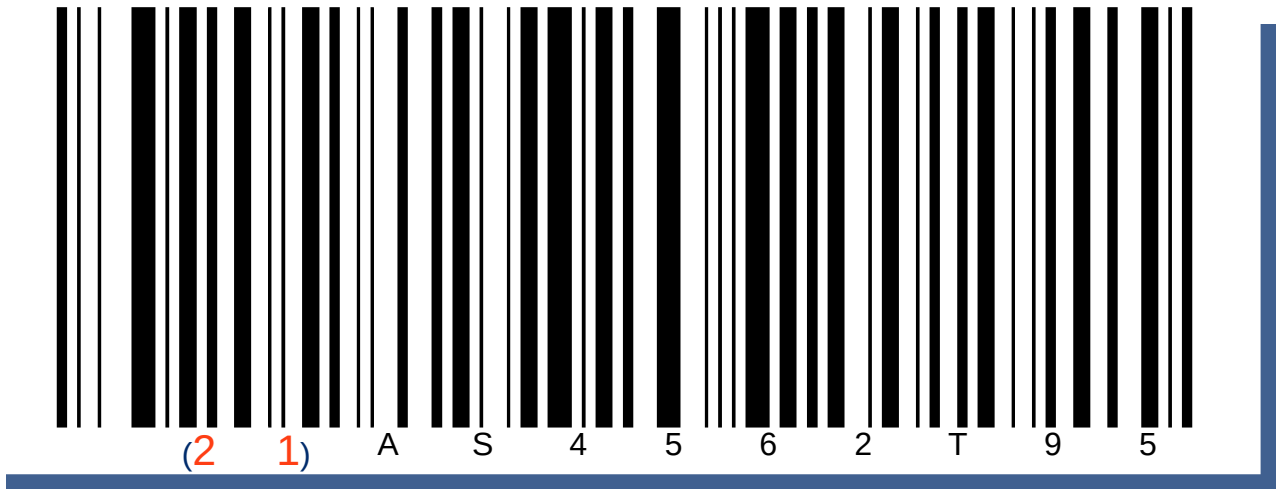
GS1 BarCodes

Global standards for automatic identification
Rapid and accurate item identification

Example GS1-128 Bar Code:



AI Serial Number

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More information on GS1 Bar Codes?

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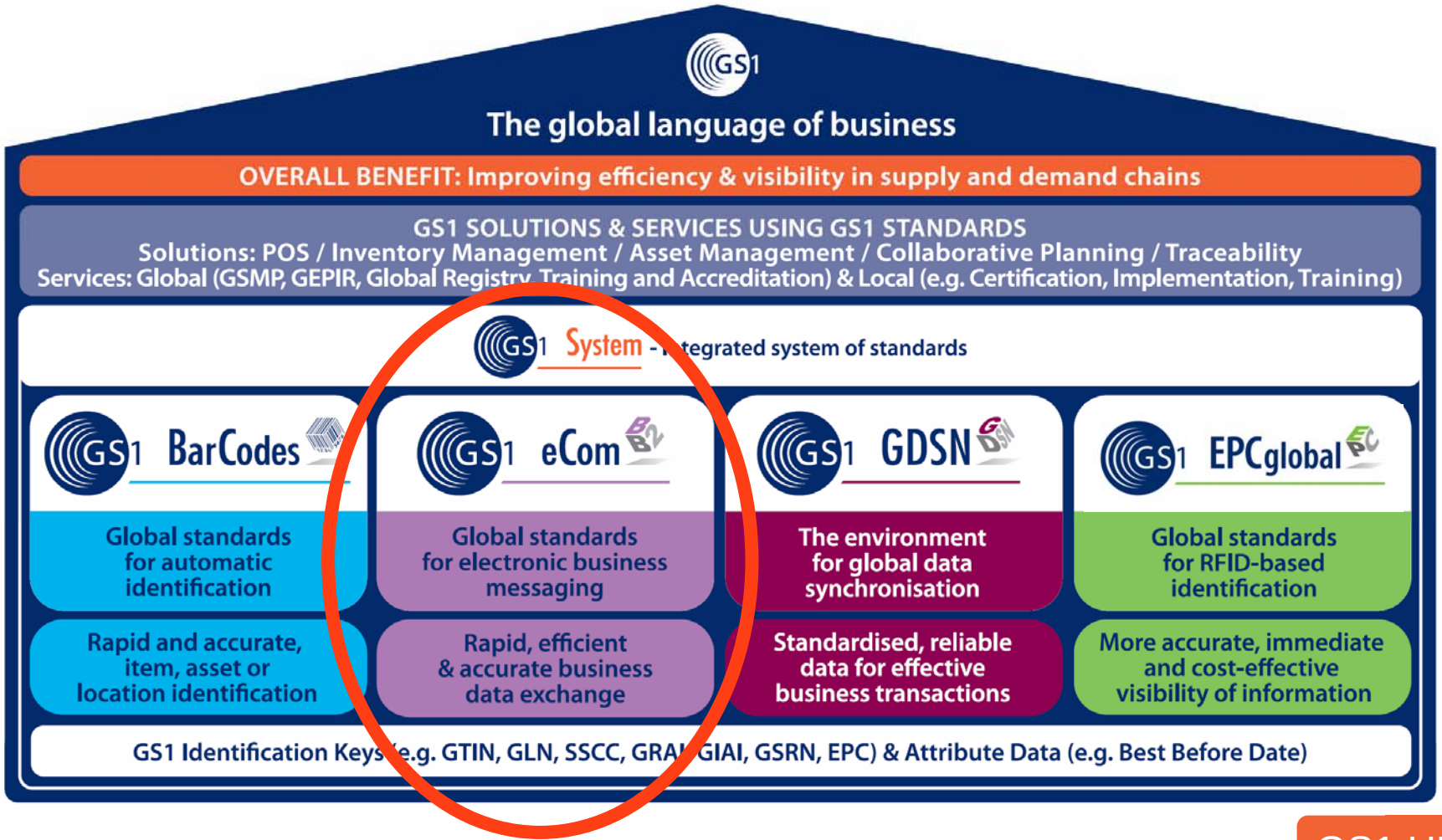
3) GS1's Brand Architecture



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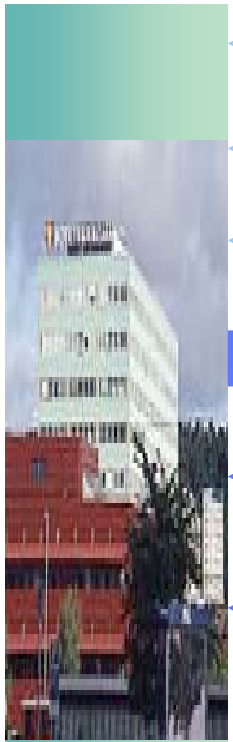
eCom – Automating the Information Flow



Party information

Contract information

Article- and price information

Call-off

Order response

Despatch advice

Shipment (transport label)

Invoice

Contract

Supplier reg

Article reg

Call offs

Goods received

Accounts payable ledger

Contract

Customer reg

Article reg

Order system

Delivery control system

Accounts receiveable ledger

Purchaser

Supplier/Retailer

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The World of GS1 eCom

+ 20 %

	Total	EANCOM	GS1 XML	WEB EDI
Countries	54	42	33	21
Users	100.000	70.000	15.000	18.000
Message implemented (not implemented)		43 (4)	54 (15)	
Growth		10% per Year	GDSN + Regionally B2B + UIM	20% per Year

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Value of eCom Transaction by Industry*

Industry	Billions of Dollars
Chemicals	$63
Consumer Goods	$302
Electronics	$90
Food & Beverage	$396
Healthcare	$432
Manufacturing	$690
Metals & Natural Resources	$433
Pharmaceuticals	$179
Retail & Distribution	$376
Transportation	$312
Utilities	$168
Total	$3,443

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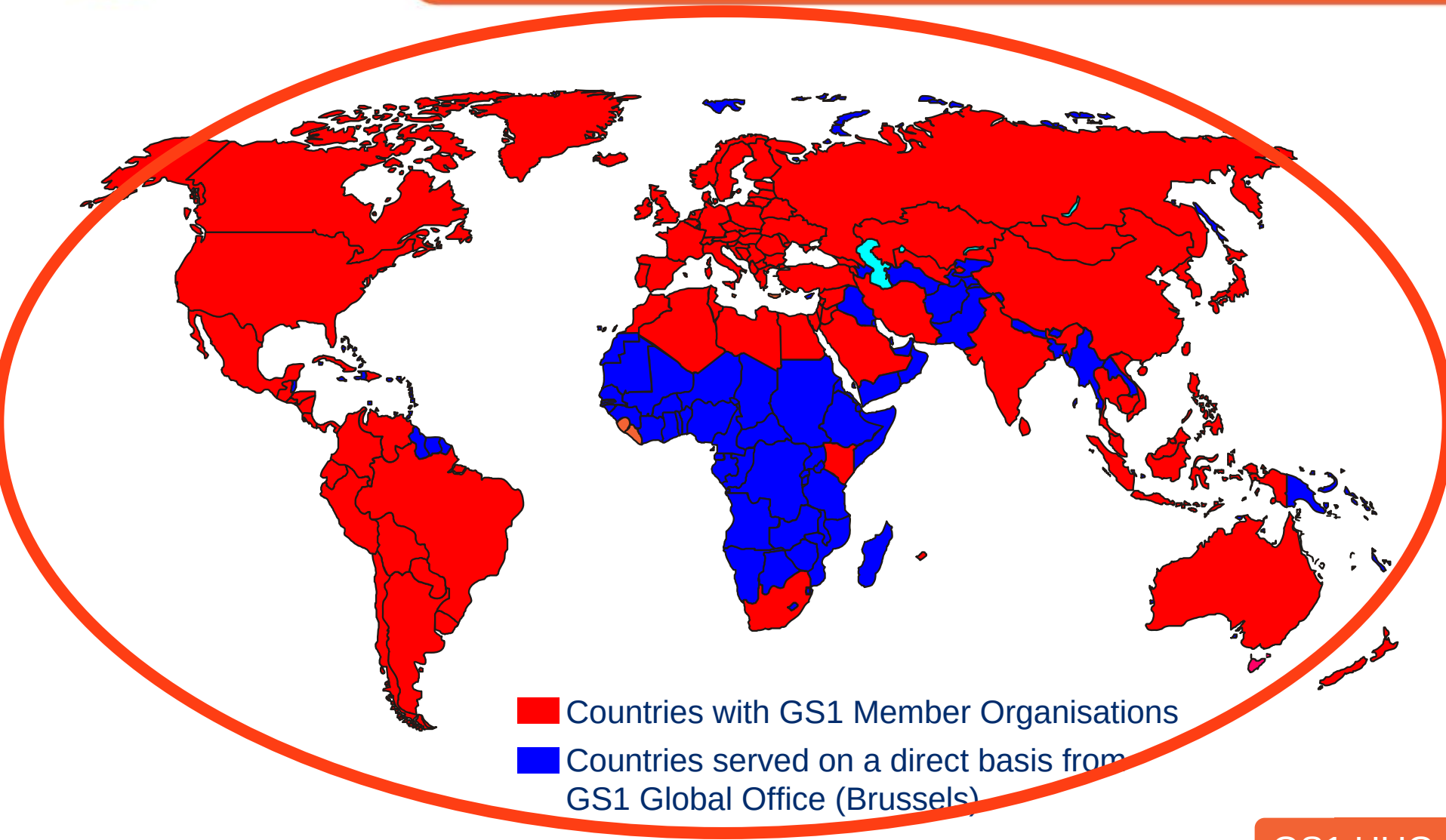
* Source: Forrester 2001

4) Where to get more information



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GS1 Values & Vision

Together we:

- See one vision
- Speak with one voice
- Act as one organisation

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If you only remember one thing from today?

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GS1 is a leading global organisation dedicated to the design and implementation of global standards and solutions to improve efficiency and visibility in supply and demand chains globally and across sectors.

GTIN & GLN Allocation Rules in French and Italian

7 September 2006: Created in response to user demand, these new language versions of the GTIN and GLN Allocation Rules make the GS1 standards directly accessible to a wider audience. The web platform ensures consistency in global support and now includes links to the recently updated Global Electronic Party Information Registry (GEPIR) service.

- View the GTIN Allocation Rules website in French
- View the GTIN Allocation Rules website in Italian

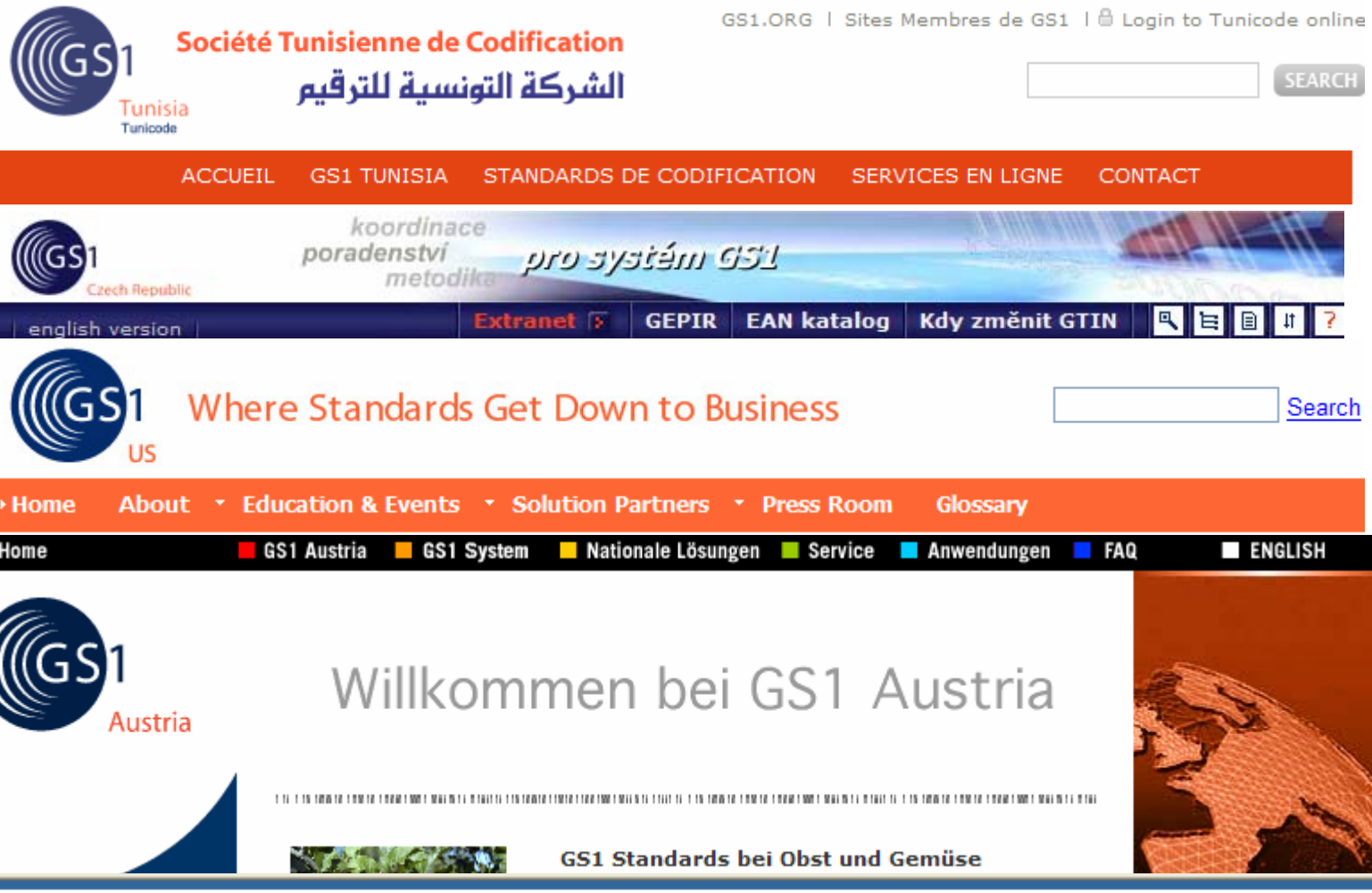
QUICK LINKS

Use the following links to find out more about GS1's products and services:

- GS1 BarCodes
- Check Digit Calculator
- GTIN Rules
- GLN Rules

- Support
- Training & Education

GS1 Member Organisation are there for you



GS1 Japan

EPCglobal Japan

Other GS1 Identification Keys

Serial Shipping Container Codes (SSCC)
Individual Logistics Units

Global Location Numbers (GLNs) for
Legal or Physical Locations

Global Returnable Asset Identifier (GRAI)
Returnable Assets

Global Individual Asset Identifier (GIAI)
Returnable Assets

Global Service Relation Number (GSRN)
Recipient of services

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