IMPLEMENTATION OF GS1 GLOBAL STANDARDS FOR PRODUCT IDENTIFICATION
AGENDA

• Introduction and Overview
• Panel Discussion
• Mandate and Implementation Strategy
• Ongoing Activities
• Recommendations and Resources
• Q&A
INTRODUCTION
THE CHALLENGE

- Poor data visibility because items and products are identified in non-standard ways
  - Proprietary identification numbers that are reassigned at various points in the supply chain
  - Identification inconsistent across procurement agencies and supply chain stakeholders through to the end user
- Lack of standardization in processes and operations because of inconsistent packaging labels
  - Multiple barcodes
  - Different types of barcodes
  - No barcodes

...WHICH RESULTS IN RISK TO SUPPLY CHAIN SECURITY
WHAT IS GHSC TRYING TO ACHIEVE?

Vision
To enable identification of every item procured at every point in the supply chain, through administration to the patient

Goal
To enable a secure and efficient supply chain from source through to service delivery

Objectives
• To enable end-to-end data visibility
• To identify and implement supply chain efficiencies
• To ensure supply chain security
• To increase patient safety
## USAID Global Health Supply Chain Program

**GHSC-Procurement and Supply Management (GHSC-PSM)**
- Single-award IDIQ
  - Chemonics

**GHSC-Rapid Test Kits (GHSC-RTK)**
- Single-award IDIQ
  - Remote Medical International

**GHSC-Technical Assistance (GHSC-TA)**
- Multiple-award IDIQ
  - Axios
  - Chemonics
  - LMI
  - PriceWaterhouse Coopers

**Systems for Improved Access to Pharmaceuticals and Services (SIAPS)**
- Cooperative Agreement
  - MSH
  - USP

**Promoting the Quality of Medicines (PQM)**
- Cooperative Agreement

**GHSC-Quality Assurance (GHSC-QA)**
- Contract
  - FHI360

**GHSC-Business Intelligence and Analytics (GHSC-BIA)**
- GSA Contract
  - Intelicog

**The Coca-Cola Last Mile Project**
- Global Development Alliance (GDA)
GS1: GLOBAL SYSTEM OF STANDARDS TO ENSURE VISIBILITY

Identify: GS1 Standards for Identification

Capture: GS1 Standards for Barcodes & EPC/RIDF

Share: GS1 Standards for Data Exchange

Master Data  Global Data Synchronisation Network (GDSN)  Transactional Data  eCom (EDI)  Event Data  EPC Information Services (EPCIS)

Interoperability

Item Master Data  Location Data  Item/ Shipment Tracking  Traceability  Product Recall/ Withdrawal  Pedigree  Purchase Order/ Despatch  Advice/ Invoice

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FOR A SECURE HEALTHCARE SUPPLY CHAIN

Gradually expand management of supply chain data and improve patient safety

Interdependence

Increased patient safety

Complexity

Primary
Secondary
Case
Pallet

Automatic Identification & Data Capture
Electronic Product Catalogue
Electronic Data Interchange
Traceability
Point of Care Applications

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GS1 IS BOTH GLOBAL AND LOCAL

GS1 Global Office
Identification, creation, development and maintenance of standards and our foundational architecture, coordination with other international bodies, development of training programmes...

GS1 Member Organisations
Local offices in 112 countries around the globe. Implementation of standards, local regulatory adjustments, community management and relationship management with local governments and regulatory agencies...
Not-for-profit
112 Member Organisations
Over one million user companies
(from SME to global companies)
Member driven
150 countries served; in more than 25 sectors
2,500 people helping us
Over 6 billion transactions a day
Dear NGO Representative,

I am pleased to inform you that the Economic and Social Council (ECOSOC) at its Substantive Session of July 2011 adopted the recommendation of the Committee on Non-Governmental Organizations (NGOs) to grant Special consultative status to your organization “GS1”. On behalf of all staff of the Non-Governmental Organizations Branch, please accept our heartfelt congratulations.
To lead the healthcare sector to the successful development and implementation of **global standards** by bringing together **experts** in healthcare to enhance **patient safety** and **supply chain efficiencies**.
OUR VISION 2005

The vision of GS1 Healthcare is to be the recognised, open and neutral source for regulatory agencies, trade organisations and other similar stakeholders seeking input and direction for global standards in healthcare for

- patient safety
- supply chain security & efficiency
- traceability
- product data
GS1 HEALTHCARE: AN EXPANDING, COMMITTED COMMUNITY OF GLOBALLY ENGAGED STAKEHOLDERS...

...and there are many more companies working with GS1 at a local level
WORKING WITH GLOBAL ORGANISATIONS...

International Organisation for Standardisation
European Committee for Standardization
Health Level 7 International
International Terminology SDO
Clinical Data Interchange Standards Consortium
Integrating the Healthcare Enterprise
Digital Imaging and Communications in Medicine

World Health Organization
World Customs Organization
International Hospital Federation
International Council for Commonality in Blood Banking Automation
International Society for Quality in Healthcare
European Association of Hospital Pharmacists
European Federation of Pharmaceutical Industries and Associations
European Medical Devices Industry Association

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...AS WELL AS WITH LEADING HEALTHCARE PROVIDERS TO IMPLEMENT...
GS1 HEALTHCARE AROUND THE WORLD

Members global user group

Manufacturers
- 3M
- Abbott Laboratories/Abbvie
- Actavis Pharma, Inc
- Actelion Pharmaceuticals Ltd
- Alcon Labs
- AMAG Pharmaceuticals, Inc
- Astra Zeneca
- B. Braun
- Baxter
- Bayer
- Becton Dickenson
- Bristol-Myers Squibb
- Cook Medical
- Coviden
- Edwards Lifescience
- Eli Lilly and Company
- F. Hoffmann-La Roche Ltd
- Fresenius
- GE Healthcare
- Genzyme
- Gilead
- GlaxoSmithKline
- Johnson & Johnson
- Medtronic
- Merck & Co.
- Novartis
- Pall Medical
- Pfizer
- Purdue Pharma
- Smiths Medical
- Takeda
- Telex
- TEVA
- Zimmer

Solution provider
- 1WorldSync, Inc.
- Advanco
- Axway
- Blue Sphere Health Ltd.
- Dirk Rodgers Consulting, LLC
- Excellis Health
- GHX
- Marsh Consulting Ltd.
- OCS Checkweighers GmbH
- Oracle
- Seidenader
- Tracelink
- USDM Life Sciences

Distributors/Healthcare providers/GPOs/T&L
- AmerisourceBergen (US)
- Bernhoven Hospital (Netherlands)
- Cardinal Health (US)
- CH Aulnay sous Bois (France)
- Comparatior Health (Germany)
- DHL Exel Supply Chain (UK)
- Erasmus MC Rotterdam (NL)
- Filip Vtori (Macedonia)
- Hong Kong Hospital Authority
- HUG Geneva (Switzerland)
- King FAISAL Specialist Hospital & Research Center (Saudi Arabia)
- Iberia Rehab Hospital (US)
- McKesson
- Novation (US)
- Premier (US)
- St. James Hospital (Ireland)
- UMC Groningen (NL)
- UNI.H.A (representing 17 French university hospitals)
- UPS
- Wiener Krankenanstaltenverbund (Austria)

Non-voting members
- AHRMM
- Cladimed
- EDQM – Council of Europe
- FDA USA
- Instituto Brasileiro de Ética Concorrencial – ETCO
- Public Health Agency of Canada
- US DoD
- Healthcare Distribution Management Association (HDMA)

Local participation

Manufacturers
- 3M
- Bayer
- Becton Dickenson
- Boehringer Ingelheim
- Coloplast
- Draeger Medical
- Genzyme
- Hospira
- Kimberly-Clark
- Novo Nordisk
- Pierre Fabre
- Purdue Pharma
- Sanofi Aventis
- Smith and Nephew
- St. Jude Medical
- Stryker
- Terumo
- Teva Pharmaceuticals
- UCB
- Upsher-Smith

Distributors/Wholesalers
- Aexxidis
- Alliance Unichem (Netherlands)
- Amerinet
- AmerisourceBergen
- Brocacef (Netherlands)
- CH2
- Depolabo
- Galexis
- GAMMA Wholesale
- Geodis
- McMahoon
- MediQ (Netherlands)
- Owens & Minor

Healthcare providers/Retailers
- AMC Amsterdam (Netherlands)
- Becton Ziekenhuis Nieuwegein (Netherlands)
- Ascension Health (US)
- Bernhoven Ziekenhuis Uden (Netherlands)
- Capital District Health (Canada)
- CH René Dubos Pontoise (France)
- CHI Robert Ballanger (France)
- CHRU Strasbourg (France)
- CHU de Québec (Canada)
- CHU DJIUN (France)
- Deventer Ziekenhuis (Netherlands)
- Erasmus Medical Center (Netherlands)
- HealthShare NSW Health
- HUG Geneva (Switzerland)
- London Drugs (UK)
- Maxima Medisch Centrum (Netherlands)
- Mayo Clinic (US)
- Sisters of Mercy (US)
- Sobey’s Pharmacy (UK)
- UHBS (Switzerland)
- UMCS Augusta VA (US)
- UMC Nijmegen (Netherlands)
- UMC Utrecht (Netherlands)
- VU medical center (Netherlands)
- Walgreens (US)
- Walmart (US)

Associations
- AHA (US)
- CHeS (US)
- CNOP (France)
- EFPIA (Europe)
- Eucomed (Europe)
- FENIN (Spain)
- GIRP (Europe)
- HDMA (US)
- International Hospital Federation
- JFMDA (Japan)
- LEEM (France)
- NACDS (US)
- Patient Safety Foundation (US)
- SNITEM (France)

Others
- GCS UNI H A (France)
- NEHTA (Australia)
- RESA IDF (France)

... And many more ...

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GS1 HEALTHCARE - DIRECTED BY USERS
LEADERSHIP TEAM 2016/2017

**Tri-Chairs:**
• Scott Mooney, McKesson
• Steve Capel, Medtronic
• Feargal Mc Groarty, St. James’s Hospital

**LT Members:**
• Nick Manzo, 1WS
• Monica Kryzer, 3M
• Cyndi Poetker, Abbott
• Jeff Denton, Amerisourcebergen
• Volker Zeinar, B. Braun
• Nathan Habeck, Baxter
• Stefan Artlich, Bayer
• Dennis Black, BD
• Justin Bitter, Bernhoven Hospital
• Mike Meakin, DHL
• Sébastien Langlois-Berthelot, F. Hoffmann-La Roche
• Karen Conway, GHX
• Grant Courtney, GSK
• Jean-Michel Descoutures, IHF
• Tom Werthwine, J&J
• Peggy Staver, Pfizer
• Andrew Potter, Ramsay Health Care
• Grant Hodgkins, USD
• Catherine Koetz, GS1 Australia
• Ana Paula Maniero, GS1 Brazil
• Valérie Marchand, GS1 France
• Michio Hamano, GS1 Japan
• Hans Lunenborg, GS1 Netherlands
• Beatriz Jorge, GS1 Portugal
• Glen Hodgson, GS1 UK
• Greg Bylo, GS1 US
WHAT PROBLEMS DO GLOBAL IDENTIFICATION AND DATA STANDARDS SOLVE?
Lack of standards in daily life is inefficient and annoying...
NO STANDARDISED PRODUCT ID

Same Product – Different Numbers

For example:
3M product with reference # 8630*
Same product in different databases of distributors:

• Allegiance       M8630
• Owens & Minor    4509008630
• BBMC-Colonial    045098630
• BBMC-Durr        081048
• Kreisers         MINN8630
• Midwest          TM-8630
• Pacific          3/M8630
• UnitedUMS        001880

*Note: 3M had actually assigned a GTIN to this product but the supply chain partners were not using it.
Different Products – Same Number

For example:
Part Number 10313 in Premier Inc. Product Item Master refers to:

- Medtronic's - "NEEDLE CARDIOPLEGIA ADULT 16GA 5/8IN TIP 10IN"
- Hantover's - "CARTRIDGE REPLACEMENT STUNNER YELLOW F/CALVES/HEAVY HOGS"
- Chattanooga Group's - "ACCESSORY TRACTION REPLACEMENT STRAP XL FOR HALTER THORACIC RESTRAINT"
- HF Scientific's - "TEST KIT WATER FREE CHLORINE DPD 25ML SAMPLE PHOTOMETRIC 1000/PK"
Inconsistent Packaging Data

- Order 20 cases, receive 20 boxes
- No uniform ‘Unit of Measure’ standard

<table>
<thead>
<tr>
<th>Unit of Measure</th>
<th>Description</th>
<th>Unit of Measure</th>
<th>Description</th>
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<td>BOARD FOOT</td>
<td>LOT</td>
<td>LOT</td>
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<tr>
<td>BDFT</td>
<td>BOARD FOOT</td>
<td>LOTS</td>
<td>LOT (MULTI)</td>
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<tr>
<td>BN</td>
<td>BUNDLE</td>
<td>LY</td>
<td>LINEAR YARD</td>
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<td>BO</td>
<td>BOLT</td>
<td>LYRS</td>
<td>LINEAR YARD</td>
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<td>BOLT</td>
<td>BOLT</td>
<td>NU</td>
<td>NUT</td>
</tr>
<tr>
<td>BR</td>
<td>BARREL</td>
<td>NUTS</td>
<td>NUT</td>
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<tr>
<td>BRRL</td>
<td>BOXES</td>
<td>OZ</td>
<td>OUNCE</td>
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<td>BOXES</td>
<td>OZS</td>
<td>OUNCES</td>
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<td>BOXES</td>
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<td>COIL</td>
<td>PADS</td>
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<td>COIL</td>
<td>COIL</td>
<td>PI</td>
<td>PINT</td>
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<tr>
<td>CR</td>
<td>CARBOY</td>
<td>PINT</td>
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<tr>
<td>CRBY</td>
<td>CARBOY</td>
<td>PACKAGE</td>
<td>PACKAGE</td>
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<td>CASE</td>
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<td>CASE</td>
<td>PL</td>
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</tr>
<tr>
<td>FE</td>
<td>FEET</td>
<td>RE</td>
<td>REAM</td>
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</table>
### NO STANDARDISED LOCATION ID

#### Multiple Names for the Same Manufacturer

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Manufacturer</th>
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<tbody>
<tr>
<td>SOUTHLAND TECHNOLOGY 3M</td>
<td>3M 800-327-5380</td>
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<tr>
<td>3M CO PHOTO PRODUCTS DIV</td>
<td>3M CO</td>
</tr>
<tr>
<td>3M DIAGNOSTIC SYSTEMS INC</td>
<td>3M DENTAL 800-237-1650</td>
</tr>
<tr>
<td>3M ELECTRICAL SPECIALTIES DIV</td>
<td>3M ESPE DENTAL DIVISION 800-364-3577</td>
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<tr>
<td>3M HEALTH</td>
<td>3M ESPE UNITED STATES</td>
</tr>
<tr>
<td>3M HEALTH CARE CDI</td>
<td>3M ESPE</td>
</tr>
<tr>
<td>3M HEARING COMPONENTS</td>
<td>3M HEALTH CARE 800-521-2818</td>
</tr>
<tr>
<td>3M INDUSTRIAL TAPES LTD</td>
<td>3M HEALTHCARE PRODUCT</td>
</tr>
<tr>
<td>3M MEDICAL DEVICE DIV</td>
<td>3M HEALTHCARE</td>
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<td>3M MEDICAL IMAGING SYSTEMS DIV</td>
<td>3M MEDSURGE</td>
</tr>
<tr>
<td>3M MEDICAL PRODUCTS DIV</td>
<td>3M MINNESOTA MINING MFG OFFICE</td>
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<tr>
<td>3M MEDICAL-SURGICAL DIV</td>
<td>3M MINNESOTA MINNING &amp; MFG CO.</td>
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<td>3M MEDICAL/SURG</td>
<td>3M OCC. HEALTH AND ENV. SAFETY DIV.</td>
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<tr>
<td>3M PHARMACEUTICS AND MEDICAL S</td>
<td>3M OCC. HEALTH AND ENV. SAFETY DIV.</td>
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<tr>
<td>3M-MEDICAL/SURGICAL</td>
<td>3M SARNs/CDA</td>
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<tr>
<td>3M OCCUPATIONAL AND SAFETY DIV</td>
<td>3M SURGICAL</td>
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<tr>
<td>3M - MINNESOTA MINING &amp; CO</td>
<td>3M UNITek 800-423-4588</td>
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<tr>
<td>3M FEDERAL GOVERNMENT</td>
<td>3M UNITek</td>
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<tr>
<td>3M FEDERAL SYSTEMS DEPARTMENT</td>
<td>THREE W/ ESPE</td>
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<td>3M HEALTH CARE SYSTEMS</td>
<td>3M COMPANY/CO WAHL CORP.</td>
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<tr>
<td>3M HEALTHCARE $250 MINIMUM ORDER</td>
<td>MINNESOTA SCIENTIF</td>
</tr>
<tr>
<td>3M HEALTHCARE(MINNESOTA MINNING)</td>
<td>3M HEALTHCARE</td>
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<tr>
<td>3M MEDICAL - CREDIT CARD</td>
<td>3M MEDICAL - CREDIT CARD</td>
</tr>
<tr>
<td>3M MEDICAL PRODUCTS</td>
<td>3-M</td>
</tr>
<tr>
<td>3M OCC. HEALTH AND ENV. SAFETY DIVISION</td>
<td>3-M COMPANY</td>
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<td>3-M COMPANY-CIO O</td>
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<td>3M SAFETY DIVISION</td>
<td>3-M COMPANY-C/O OEM PRODUCTS</td>
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<tr>
<td>3M UNITEK CORPORATION</td>
<td>3M PUERTO RICO</td>
</tr>
</tbody>
</table>
The need for global standards in healthcare

Diverging country requirements
Manufacturing headache

“CUSTOMIZED ACTIONS MEAN COSTS!!
Harmonisation of regulatory requirements and data standards will enable efficiency of a global product offering – otherwise complexity and cost will continue to raise”

Senior Executive, MD company
GS1 Identification Keys

Item identifier = **GTIN**
Global Trade Item Number

Logistics unit identifier = **SSCC**
Serial Shipping Container Code

Location identifier = **GLN**
Global Location Number

- Unique
- Non-significant
- Global
- Secure
- Foundational

And there are more …
Ideally - identifiers and data carriers at all packaging levels

NOTE: Data carriers shown are for illustration purposes only!

Note: Images shown are for illustration example only, refer to local regulations and/or the latest version of the GS1 General Specification for more detail.
The master data problem

Every company has a database filled with master data about the products they make, sell, or buy.

But when one company changes any bit of information in their database or adds a new item, another database becomes outdated!
The GS1 Global Data Synchronisation Network® (GDSN®) is a network of interoperable data pools enabling collaborating users to securely synchronise master data based on GS1 standards. GDSN supports accurate, real-time data sharing and trade item updates among subscribed trading partners.
IDENTIFICATION OF PHARMACEUTICALS...AFTER 2019

- Green: country requires global standards
- Red: country requires national ID #
- Orange: no input available

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ULTIMATELY, IT’S ALL ABOUT...
PATIENT SAFETY!
In Every Country
PANEL DISCUSSION

The future of global standards and product identification in the donor community
PANELISTS

Peter Alvarez (Moderator)
Senior Director, Identification and Data Strategy Healthcare
GS1 Global

Hitesh Hurkchand
RMNCH Trust Fund (ISG)
United Nations Children’s Fund (UNICEF)

Roberto Mena
Procurement Specialist
United Nations Population Fund (UNFPA)

Hayley Traeger
Program Advisor for Strategic Engagement
United States Agency for International Development (USAID)
USAID & UNFPA to collaborate to address interoperability and data visibility challenges for RH

Collaboration for standards adoption introduced at ISG and led by USAID, UNFPA, GAVI

GS1 Workshop at USAID

Ethiopia & Pakistan pilots started jointly between USAID and UNFPA

USAID joins VPPAG

USAID joins RH GTAG

2015

GHSC-PSM is launched

Join RH GTAG

Attend GS1 Global Healthcare Conference – Dubai

USAIID & Pakistan DRAP present at GS1 Global Healthcare Conference - Dubai

USAID & UNFPA sponsor 10 delegates from Ethiopia FMHACA and PFSA to attend

Participate in Ethiopia National Consultative Workshop

Attend GS1 Global Healthcare Conference - Berlin

Develop requirements and implementation road maps

2016

GHSC-PSM

Attend GS1 Global Healthcare Conference - Beijing

Launch GDSN RFP

Attend GS1 Global Healthcare Conference - Beijing

2017

Hire consultants for readiness assessments and recommendations

USAID Global Health Supply Chain Program Supplier Summit
GENERAL PRINCIPLES

• Adopt global standards to promote efficiency, reliability, and effectiveness
• Clearly identify vision, goals, and objectives to motivate requirements
• Requirements should capture what is necessary to secure the supply chain
• Requirements should be phased in over time to allow for transition
• Leverage successful practices and systems from other markets
• Harmonize with other key stakeholders in the community to:
  ✓ Minimize the risk and investment required by suppliers
  ✓ Maximize benefits to country supply chains and patients
• Establish benchmark metrics and KPIs to ensure accountability and measure progress
There are four elements to our strategy:

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
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<tbody>
<tr>
<td>Identify</td>
<td>Assignment of numbers to items and locations</td>
</tr>
<tr>
<td>Capture</td>
<td>Marking of application identifiers on packaging and labeling</td>
</tr>
<tr>
<td>Share</td>
<td>Exchange of master and transactional data</td>
</tr>
<tr>
<td>Use</td>
<td>Data management; streamline processes; track and trace</td>
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WHAT DOES THE STRATEGY APPLY TO?
IMPLEMENTATION WILL ROLL OUT IN FOUR PHASES

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
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<td>Within 6 months*</td>
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<td>Phase 1</td>
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<td>Phase 3</td>
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</table>

*Within 6 months of initial contract being signed
To identify, organizations need to register with GS1 to obtain a GS1 Company Prefix and assign numbers to items and locations.

<table>
<thead>
<tr>
<th></th>
<th>Within 6 months</th>
<th>Phase 1</th>
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<tr>
<td><strong>Secondary Packaging</strong></td>
<td>✓ (01) Global Trade Item Number (GTIN)</td>
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<tr>
<td>Multipack and/or Single</td>
<td>✓ Other attributes as requested</td>
<td></td>
</tr>
<tr>
<td>Pack Carton (Trade Item)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tertiary Packaging</strong></td>
<td>✓ (01) GTIN</td>
<td></td>
</tr>
<tr>
<td>Case/Carton (Trade Item)</td>
<td>✓ Other attributes as requested</td>
<td></td>
</tr>
<tr>
<td><strong>Tertiary Packaging</strong></td>
<td>✓ (01) GTIN</td>
<td></td>
</tr>
<tr>
<td>Pallet (Trade Item)</td>
<td>✓ Other attributes as requested</td>
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<tr>
<td><strong>Location</strong></td>
<td></td>
<td>✓ Global Location Number (GLN) Sold-from</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ GLN Ship-from</td>
</tr>
</tbody>
</table>
To capture, organizations need to apply relevant automatic identifier and data capture (AIDC) technology to packaging that includes required application identifiers and human readable interpretation (HRI).

<table>
<thead>
<tr>
<th>AIDC</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Secondary Packaging</strong>&lt;br&gt;Multipack/Single Pack Carton&lt;br&gt;(Trade Item)</td>
<td>✓ (01) GTIN&lt;br&gt;✓ (10) Batch / Lot&lt;br&gt;✓ (17) Expiry</td>
<td>✓ (01) GTIN&lt;br&gt;✓ (10) Batch / Lot&lt;br&gt;✓ (17) Expiry</td>
<td>✓ +(21) Serial Number</td>
</tr>
<tr>
<td><strong>Tertiary Packaging</strong>&lt;br&gt;Case/Carton (Trade Item)</td>
<td>✓ (01) GTIN&lt;br&gt;✓ (10) Batch / Lot&lt;br&gt;✓ (17) Expiry</td>
<td>✓ (01) GTIN&lt;br&gt;✓ (10) Batch / Lot&lt;br&gt;✓ (17) Expiry</td>
<td>✓ +(21) Serial Number</td>
</tr>
<tr>
<td><strong>Tertiary Packaging</strong>&lt;br&gt;Pallet (Trade Item)</td>
<td>✓ (01) GTIN&lt;br&gt;✓ (10) Batch / Lot&lt;br&gt;✓ (17) Expiry</td>
<td>✓ (01) GTIN&lt;br&gt;✓ (10) Batch / Lot&lt;br&gt;✓ (17) Expiry</td>
<td>✓ +(21) Serial Number</td>
</tr>
<tr>
<td><strong>Tertiary Packaging</strong>&lt;br&gt;Case/Carton (Logistics Item)</td>
<td>✓ (00) Serial Shipping Container Code (SSCC)</td>
<td>✓ (00) Serial Shipping Container Code (SSCC)</td>
<td>✓ (00) SSCC</td>
</tr>
<tr>
<td><strong>Tertiary Packaging</strong>&lt;br&gt;Pallet (Logistics Item)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GTIN:** (01) 07046261398572  
**Batch:** (10) TEST5632  
**Expiry:** (17) 130331  
**S/N:** (21) 19067811811
To learn more about data exchange mechanisms, please attend “You Say Data, I Say Data: Data Exchange with GHSC-PSM” immediately following this session.

To share, organizations need to register with GHSC-PSM’s Supplier Portal for transactional data and the Global Data Synchronization Network (GSDN) for master data.

<table>
<thead>
<tr>
<th></th>
<th>Within 6 months</th>
<th>Phase 1</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Master Data</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Products</td>
<td>✓ (01) GTIN</td>
<td>✓ GLN Sold-From</td>
<td>✓ GLN Ship-to</td>
</tr>
<tr>
<td></td>
<td>✓ Additional attributes</td>
<td>✓ GLN Ship-From</td>
<td></td>
</tr>
<tr>
<td><strong>Master Data</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location</td>
<td></td>
<td>✓ +GLN Sold-from</td>
<td>✓ +GLN Ship-to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ +GLN Ship-from</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ +GLN Bill-to / Sold-to</td>
<td></td>
</tr>
<tr>
<td><strong>Transactional Data</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase Order (PO)</td>
<td>✓ (01) GTIN</td>
<td>✓ +GLN Sold-from</td>
<td>✓ +GLN Ship-to</td>
</tr>
<tr>
<td></td>
<td>✓ (37) Quantity</td>
<td>✓ +GLN Ship-from</td>
<td></td>
</tr>
<tr>
<td>Advanced Shipping Notice (ASN)</td>
<td>✓ (01) GTIN</td>
<td>✓ +GLN Sold-from</td>
<td></td>
</tr>
<tr>
<td></td>
<td>✓ (10) Batch / Lot</td>
<td>✓ +GLN Ship-from</td>
<td></td>
</tr>
<tr>
<td></td>
<td>✓ (17) Expiry</td>
<td>✓ +GLN Bill-to / Sold-to</td>
<td></td>
</tr>
<tr>
<td></td>
<td>✓ (37) Quantity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packing Slip</td>
<td>✓ (01) GTIN</td>
<td>✓ +GLN Sold-from</td>
<td>✓ +GLN Ship-to</td>
</tr>
<tr>
<td></td>
<td>✓ (37) Quantity</td>
<td>✓ +GLN Ship-from</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ +GLN Bill-to / Sold-to</td>
<td></td>
</tr>
<tr>
<td>Invoice</td>
<td>✓ (01) GTIN</td>
<td>✓ +GLN Sold-from</td>
<td>✓ +GLN Ship-to</td>
</tr>
<tr>
<td></td>
<td>✓ (37) Quantity</td>
<td>✓ +GLN Ship-from</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ +GLN Bill-to / Sold-to</td>
<td></td>
</tr>
</tbody>
</table>
EVALUATION CRITERIA (AQSCIR-P)

Assurance of Supply
- Production capacity
- Quantity in stock (when required)
- Past performance

Regulatory
- Administrative requirements
- Registration in country

Quality
- QA requirements (USFDA, WHO, GHSC-QA)
- Shelf life
- Stability studies / climatic zone standards

Service
- Lead time (stock, fresh production)
- Customer service
- Product Identification

Cost
- Specific / Unique label language
- Unique distribution requirements

Innovation
- Serialization
- Packaging optimization
- New /improved products

Price
- FCA unit price

Criteria and % Weights Are Tailored to the Commodity and/or Product and Specific Sourcing Strategy

BEST VALUE AWARD STRATEGY TO ACHIEVE DESIRED MARKET OUTCOME
IMPLEMENTATION AND USE

WALLY, I NEED YOU TO DO AN INVENTORY IN OUR WAREHOUSES. IT SHOULD TAKE ABOUT A MONTH.

HYPOTHETICALLY, WOULD ANYONE KNOW THE DIFFERENCE IF I JUST MADE UP THE NUMBERS?

WELL, NO...

DREAM JOB!
STRATEGIC ENGAGEMENT WITH PARTNERS

• Reproductive Health Global Traceability and Advisory Group (RH GTAG)

• GFATM’s Global Steering Committee Private Sector Advisory Council – Traceability Sub-Working Group

• GS1 Global Healthcare Conferences
## GLOBAL SUPPLY CHAIN IMPLEMENTATION

<table>
<thead>
<tr>
<th>Completed</th>
<th>Up Next</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Assessment of ARTMIS’s ability to support standards implementation</td>
<td>• Implement recommendations</td>
</tr>
<tr>
<td>✓ Identified opportunities for process improvements</td>
<td>• Implement operational processes to leverage standards in GHSC-PSM’s logistics management function and regional distribution centers</td>
</tr>
<tr>
<td>✓ Product catalog structured around standard data identifiers and common industry attributes</td>
<td>• Award GDSN contract</td>
</tr>
<tr>
<td></td>
<td>• Integrate master data</td>
</tr>
<tr>
<td>✓ Developed preliminary requirements</td>
<td>• Issue supplier benchmark survey</td>
</tr>
<tr>
<td></td>
<td>• Complete implementation guideline</td>
</tr>
</tbody>
</table>
GHSC is supporting standards implementation in several USAID-supported countries:

- **Haiti**: Standards education and awareness building
- **Burma**: Standards education and awareness building
- **Pakistan**: Architecture assessment for GS1 implementation
- **Ghana**: Implement GS1 standards in eLMIS system
- **Lesotho**: GS1 requirement for WMS/ERP
- **Uganda**: GS1 requirement for WMS/ERP
- **Ethiopia**: Architecture assessment for GS1 implementation
- **Tanzania**: Implement GS1 standards in eLMIS system
- **Malawi**: Implement GS1 standards in eLMIS system
- **Uganda**: GS1 requirement for WMS/ERP
ETHIOPIA NATIONAL CONSULTATIVE WORKSHOP ON GLOBAL HEALTHCARE STANDARDS FOR TRACK AND TRACE

July 14-15, 2016
Addis Ababa, Ethiopia
IMPROVING ETHIOPIA’S HEALTHCARE SUPPLY CHAIN INTEGRITY THROUGH END-TO-END VISIBILITY

• Five-year strategy for implementation of standards and technologies to improve mechanisms to control counterfeit products and improve supply chain visibility.

• Improve patient safety, supply chain security, and supply chain efficiency through product traceability.
LESSONS BEING LEARNED IN ETHIOPIA

• Invest upfront to gain government support
  – Create opportunities for education and information sharing with regulatory and procurement agencies
  – Select the right project champion

• Enable suppliers, government, and donors to share information about the movements of products and assets through the supply chain
  – Develop a culture of data for decision-making and visibility
  – Select a sustainable and interoperable system
GS1 STANDARDS PILOT IN PAKISTAN

- GS1 standards were first piloted by Pakistan with USAID and UNFPA support on vaccine and contraceptives products in 2015
- The following recommendations were made to the Drug Regulatory Authority Pakistan (DRAP) and Vaccine Presentation and Packaging Advisory Group (VPPAG)
  - Need to apply standards to the local context
  - Legislation is required around packaging labeling
  - Serialization is key to enable track and trace
    - inventory accuracy
    - batch-level tracing
WHAT BENEFITS ARE BEING SOUGHT IN PAKISTAN?

- One standard to use with all pharmaceutical partners
- Authentication of products provided to patients
- Fast and accurate data capture at every point in the supply chain
- Enables efficient, accurate, and targeted recalls
- Improved party-to-party communications throughout the supply chain
- Warehouse automation and improved inventory accuracy
- Time and cost saving for healthcare providers at service delivery points
THE WAY FORWARD

• Drug Regulatory Authority of Pakistan and Ministry of NHSR&C developed GS1 standards legislation in Pakistan
  – Summary recommendation approved by the Prime Minister; awaiting endorsement of Cabinet Division,

• Continue leveraging GS1-compliant products where available
  – Pakistan has started receiving GS1-compliant BCG and pentavalent vaccine products

• USAID assistance through GHSC-PSM and USP
  – Collaboration among DRAP, pharma industry, GS1 Pakistan, and other relevant partners to carve out a three- to five-year roadmap for implementation
RESOURCES FOR SUPPORT
RECOMMENDATIONS

• Engage the technical leads on packaging, product identification, and/or serialization in your organization to inform them of GHSC’s emerging product identification mandate

• Register with your local GS1 member organization and request a company prefix

• Participate in the industry events to learn from peers on best practices for implementation
  – GS1 Global Healthcare Conference, 4-6 April 2017, Berlin, Germany
  – GS1 Global Healthcare Conference, 17-19 October 2017, Chicago, United States
RESOURCES

• GS1 General Specification
• GS1 Logistics Label Guidelines
• GS1 EPCIS Standards Specification
• GS1 Member Organizations Contact Information
• RH GTAG Identification Guidelines for Reproductive Health Products
• VPPAG Generic Preferred Product Profile for Vaccines
• The Alliance for Global Pharmaceutical Serialization (RxGPS)
• “Strength in unity: The promise of global standards in healthcare”
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI</td>
<td>GS1 application identifier</td>
<td>ISG</td>
<td>Interagency Supply Chain Group</td>
</tr>
<tr>
<td>AIDC</td>
<td>automatic identification and data capture</td>
<td>MDM</td>
<td>master data management</td>
</tr>
<tr>
<td>ARTMIS</td>
<td>GHSC-PSM automated requisition tracking management information system</td>
<td>MOH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>ASN</td>
<td>advanced shipping notice</td>
<td>PSM</td>
<td>Procurement and Supply Management Project</td>
</tr>
<tr>
<td>DRAP</td>
<td>Drug Regulatory Authority Pakistan</td>
<td>RMNCH</td>
<td>Reproductive, maternal, newborn and child health</td>
</tr>
<tr>
<td>EDI</td>
<td>electronic data interchange</td>
<td>RH GTAG</td>
<td>Reproductive Health Global Traceability Advisory Group</td>
</tr>
<tr>
<td>eLMIS</td>
<td>electronic logistics management information system</td>
<td>SSCC</td>
<td>serial shipping container code</td>
</tr>
<tr>
<td>EPCIS</td>
<td>electronic product code information services</td>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
</tr>
<tr>
<td>GDSN</td>
<td>global data synchronization network</td>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
</tr>
<tr>
<td>GFATM</td>
<td>Global Fund to Fight AIDS, Tuberculosis, and Malaria</td>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>GHSC</td>
<td>Global Health Supply Chain Program</td>
<td>VPPAG</td>
<td>Vaccine Presentation &amp; Packaging Advisory Group</td>
</tr>
<tr>
<td>GLN</td>
<td>global location number</td>
<td>WMS</td>
<td>warehouse management system</td>
</tr>
<tr>
<td>GTIN</td>
<td>global trade item number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRI</td>
<td>human readable interpretation</td>
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</tbody>
</table>
Kaitlyn Roche  
Market Dynamics Specialist  
GHSC-PSM  
kroche@ghsc-psm.org

Pete Alvarez  
Senior Director, Identification and Data Strategy  Healthcare  
GS1 Global  
peter.alvarez@gs1.org
APPENDIX
What if standards in grocery stores worked like they do in the healthcare supply chain?