How serialisation will change our supply chains?

GS 1 Conference
Addis Ababa
May 9, 2018
Patient safety through Serialisation and Authentication

Imperial Logistics move approximately **400 million patient-packs** of medicine annually, 90% of these throughout Africa

Fake, counterfeit and substandard medicines:

- **One in ten** medical products circulating in lower & middle income countries is either substandard or falsified
- Estimated **72 000 to 169 000 children die** each year worldwide from pneumonia due to substandard and falsified antibiotics
- Of the majority of substandard and falsified medicines, **42% stem from sub-Saharan Africa**, 21% from the Americas and 21% from the European region
- **100,000 deaths** annually in Africa
- Call to action – heavily rely on the **leadership of the “Big 3”**

Footprint spanning 30 African and 20 European countries

Focused on specific industry verticals

- Agriculture
- Automotive
- Consumer Packaged Goods
- Healthcare
- Machinery & Equipment
- Chemicals & Energy
- Manufacturing & Mining

Working in 4 time zones

Capabilities
- Transportation management
- Distribution management
- Synchronisation management
- Warehousing management
- International freight management

Solutions
- Value-add logistics solutions
- Route-to-Market solutions
- Supply chain management solutions

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Key African Healthcare and International clients
Supply Chain: Legacy vs. Networks/Blockchains

LEGACY APPROACH

POINT-TO-POINT MESSAGING
(Inconsistent State, Not Real Time)

NETWORKS, BLOCKCHAINS

MULTI-PARTY, COORDINATED SHARED-STATE
(Single Version of the Truth, Real-time, New Business Models)
Managing the chain of custody

Patient Safety: Eliminate substandard and falsified medicines

Product Serialization: Central Database

Master Data and EDI alignment across multiple MRP's and ERPs

GS1 Standards

Driving Policy

Manufacturer ➔ Distribution Centre ➔ Wholesale Distributor ➔ Pharmacist ➔ Patient

ERP System changes and Business Process Changes

Technology Enabled - Product Authentication

Imperial Logistics
Visibility and Analytics Network (VAN)

- **PEOPLE**
  - expertise, experience and capabilities

- **PROCESSES**
  - operational integration and orchestrated activities

- **(Cloud) TECHNOLOGY**
  - rapid decision making and continuous improvement

**POLICY / Enabling Environment**

Collaboration across stakeholders to achieve common goals
Control Tower manages Complexity and Quantity
Authentication: a response to Patient Safety

It’s important to focus on all the elements of a healthy market; ours is a healthy supply chain

• Raman handheld can measure through blisters and bottles

• Identify non-authentic pharmaceuticals before they can enter the market

• Protect brand and patient confidence in healthcare products

• Reduce risk of liabilities

• Report to authorities – regulators, law enforcement
# Transforming the Chain of Custody

Preventing entry of fake, counterfeit, and substandard products into the supply chain through:

## Serialisation
- **GS1 Compliant** - fundamental of roll-out and synchronisation
- Coding system for **tracking and tracing** commodities
- Each component barcoded - 2D
- Product **recalls** from anywhere in the supply chain

## Authentication
- Inspect a product **anywhere in the supply chain**
- Confirm **chemical identity**
- Spectrum scanning across dosage forms
- **Rapid, non-intrusive and non-destructive** process

## Blockchain
- Secure records on the **distributed ledger**
- **Partitioning + Permissibility**
- Synchronized databases of relevant data to all stakeholders
- Only effective if adopted **industry-wide**, across all players

**Imperial Logistics**

*Customise, collaborate, compete*
Imperial Logistics projects

Imperial Logistics – One Network – Blockchain

Operational Visibility

• Ability of operating sites to receive, manage and dispatch serialized goods.
• Will launch in our South African healthcare business
• Future-proofed for rapid roll out to our operations serving the Rest of Africa

Serialisation-as-a-Service

• Provide patient-pack serialisation to product in our custody as a service to our clients
• Install printing line within our South African healthcare business initially (in 2018)
• Roll out across our African businesses in due course

Above-market Visibility

Due to the sophistication and scale of implementation, the ability to manage serialisation data is critical. Factors such as:
• Machine-learning / artificial intelligence
• Analyzing data for rapid identify and mitigate issues
In Conclusion....

Imperial Logistics – One Network – Blockchain

• Key goal - **Patient Safety**

• Managing **Complexity and Quantity** through our digital platform

• **Partition and Permissibility** of relevant stakeholder data through synchronized database

• **Urgency** – let’s not wait for legal compliance! Rely on **unity of “Big 3”**

• Three strategies:
  • **Operational visibility**
  • **Serialisation-as-a-service**
  • **Above-market visibility**
Thank you

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