Securing the
Future: Integrated

Supply Chain Solutions
by Sepio Australia

SEPIO
AUSTRALIA

Sepio Australia: Integrated Supply Chain Security Solutions

Sepio Australia is an integrated end-to-end security solution provider, leveraging state-of-the-art supply chain capabilities to design and deliver innovative solutions tailored to the unique needs of the e-commerce industry. Sepio Australia helps companies enhance their security measures by:

» Preventing theft and tampering in the supply chain
» Reducing adulteration of products during transit
» Minimizing counterfeiting risks
» Enabling product traceability through serialization
» Engaging effectively with patients

Sepio Australia's Suite of
Supply Chain Security Solutions

Physical:

Tamper-Evident plastic and metal seals to prevent tampering in the supply chain.

Digital:

SaaS platform for product authentication and supply chain traceability.

Phygital:

A combination of physical and digital solutions to further improve supply chain security.

Strap Seals

Twist Seal

Bolt Seal

Padlock

RFID Seal

Cattle Tag

RFID Strap

I. Physical Security Solutions

Sepio Australia is a global leader in the production and supply of high-quality tamper-evident seals including strap seals, metal seals, bolt seals, padlock seals, and RFID/Non-RFID cattle tags. These products are essential for securing sealing and tagging requirements across various industries.
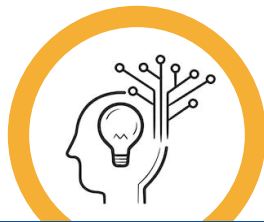
Applications

Tamper-evident seals from Sepio Australia are extensively used to prevent theft and tampering of assets in transit, applicable to vehicles, bags, totes, and more.

II. Solution: Digital
(Algorithm + Digital Mark to Detect Fakes)

Digitize and track every product item throughout its life cycle to minimize sales loss and mitigate impacts on public health.

Algorithmic detection
Utilizes a patented multi-variate algorithm to analyze product usage and **scan patterns**, helping to detect if the original packaging is being re-used.

Non-cloneable SeQR Code
Features a non-cloneable, unique digital ID with a **digital mark** for every product, making it extremely difficult to duplicate.
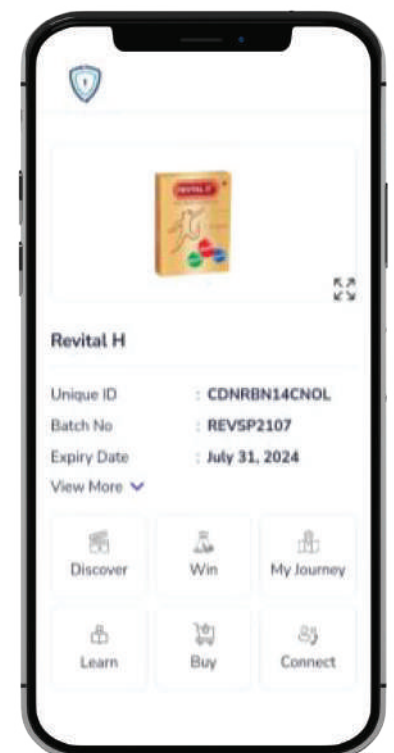
⬇ Sales Loss

⬆ Impact on public health

Digital Mark in the QR Code:

Makes it impossible to duplicate, enhancing security and authenticity.

Patented Algorithm to CaptureData on Counterfeiting:

» Unique Devices: Tracks which devices are used for scans.

» Location Changes: Monitors the locations of scans to detect unusual patterns.

» Time Between Scans: Analyzes the time intervals between scans.

» Frequency of Scans: Measures how frequently the product is scanned.

» Application: Drives personalized, direct-to-consumer marketing programs to boost sales and gather critical data.

Revital H

Unique ID	: CDNRBN14CNOL
Batch No	: REVSP2107
Expiry Date	: July 31, 2024

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SeQR Code with Hidden Digital Signature:

Hidden Digital Signature: Prevents the digital copying or regeneration of original QR codes.
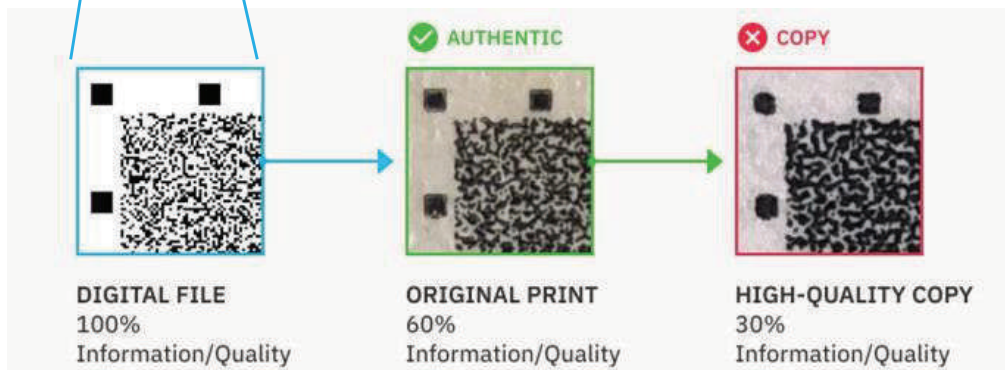

Spot the Fake!

Only one out of two displayed codes contains a hidden digital signature, challenging users to identify the authentic item.

SeQR Code with Copy-Proof Images:

Copy-Proof Image: Integrated within QR codes to prevent the physical copying of original QR codes, ensuring each code remains unique and secure.

✅ AUTHENTIC   ❌ COPY

DIGITAL FILE
100%
Information/Quality

ORIGINAL PRINT
60%
Information/Quality

HIGH-QUALITY COPY
30%
Information/Quality

Digital: Case Study in the Pharmaceutical Industry

Challenge

» Counterfeiting of Best-Selling Products: This led to a loss of brand trust.
» No Way for Consumers to Check Product Authenticity: Consumers lacked a method to verify the authenticity of products.

Solution

» Sepio's TruSale Solution: Allowed the company to serialize every product using smart digital IDs, enabling patients to scan the product to obtain authenticity information.
» SaaS Platform: Supported adherence to government mandates.
» End-to-End Automation of the Packaging Line: Implemented digital IDs on products without impacting production throughput.

Impact

» Number of Products Authenticated: Approximately 14,000.
» Unique Patients Engaged: Over 5,000.
» Repeat Engagement: Over 8,000 (more than 50%).
» Maximum Engagement (Time): 12 PM to 6 PM (accounting for 40% of total scans).
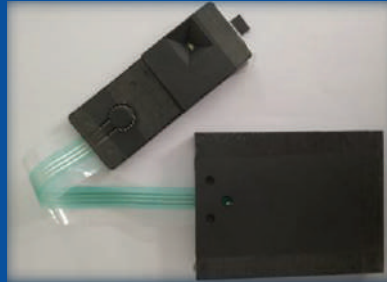» Maximum Engagement (City): Sydney, Melbourne, Brisbane.

III. Solution: Phygital (Physical + Digital)

Smart Electronic Reusable Locks for Preventing Theft from Milk Tankers:

Features:

» Electronic lock connected to the cloud.
» Real-time vehicle tracking.
» Real-time alerts for tampering.
» Notifications on mobile app for key events such as lock open, close, and cable cut.

NFC + RFID Smart Container Seals

Features:

Cutting-edge electronic seal with multiple sensors (light and pressure) to detect if the container is opened by unauthorized individuals.

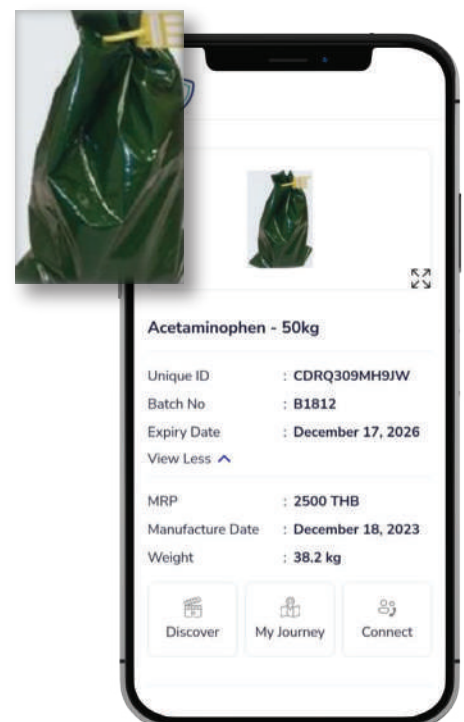**RFID and/or SeQR enable physical strap seals**

Features:

» Dual security against theft, physical tampering, and counterfeiting.
» Digital verification of product authenticity.
» Ease of tracking product movement.

Phygital: Case Study in Pharmaceutical Industry

Challenge

» Annual Loss: More than 2 million annually due to theft and inefficient use of raw materials.
» Lack of Traceability: Difficulty in tracking raw materials through manufacturing stages, leading to increased pilferage.
» Lack of Accountability: Identifying individuals involved in pilferage is challenging.

Acetaminophen - 50kg

Unique ID	: CDRQ309MH9JW
Batch No	: B1812
Expiry Date	: December 17, 2026

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MRP	: 2500 THB
Manufacture Date	: December 18, 2023
Weight	: 38.2 kg

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Solution

» Sepio's TraceCheck Solution: Implements a unique digital ID on plastic security strap seals for enhanced traceability and accountability.

» Sealing Process: Utilizes plastic security strap seals to seal bags, preventing tampering and unauthorized use of raw materials in the supply chain.

» Weight Tracking: Tracks the weight of bags and the quantity of raw materials used at every manufacturing stage through the unique digital ID on the seal.

» Traceability Enhancement: Maps the weight of bags after each manufacturing stage to the digital ID on the strap seal, improving traceability and accountability.

Impact

» **Reduction in Raw Material Theft**

» **Improved Traceability: Leads to significant cost savings by:**

- Preventing incorrect ordering of raw materials.
- Reducing product wastage.
- Enhancing accountability in supply chain stages.

Why Sepio

» State-of-the-Art Manufacturing Setup: Operates an advanced manufacturing facility spanning 1.7 acres of land.

» Extensive Product Supply: Supplied over 700 million security seals across 35+ SKUs.

» Patent Portfolio: Holds 15+ patents covering both physical and digital products.

» Certifications: Holds ISO 9001:2013, ISO 27001:2022, ISO 27001:2013, and SOC 2 Type II certifications, ensuring adherence to rigorous quality and security standards.

» In-House Tooling Design: Possesses in-house capabilities for tooling design, ensuring efficient and customized solutions.

» Industry Recognition: Recognized as the winner of the Best Innovation in Digital Product Authentication award among 69+ global authentication solution providers at the 5th Traceability and Authentication Forum 2023 conducted by ASPA.

» Extensive Customer Base: Serves over 5500 customers across all business verticals and industries, including the Dairy sector.

» Dairy Industry Expertise: Holds experience in the Dairy industry, serving over 10 Dairy customers across various business verticals.