Inquiry - Improving Queensland's Container Refund Scheme

Submission No:	103
Submitted by:	GS1 Australia
Publication:	Making the submission and your name public
Attachments:	See attachment
Submitter Comments:	

The Global Language of Business

GS1 Australia Submission – Queensland Health, Environment and Innovation Committee: Improving Queensland's Container Refund Scheme

GS1 Australia welcomes the opportunity to provide feedback to the Health, Environment and Innovation Committee on improving Queensland's container refund scheme (CRS). As an organisation dedicated to enabling supply chain transparency and interoperability, we recognise that effective deposit return schemes rely on robust data management, traceability, and standardised reporting to maximise recovery rates and support circular economy objectives.

Container deposit schemes play a crucial role in reducing waste, increasing resource recovery, and improving environmental outcomes. Ensuring that Queensland's CRS is efficient, accessible, and aligned with best practices in traceability and data exchange is essential for achieving the scheme's targets and maintaining public trust.

Our submission highlights key areas where GS1 standards can enhance the efficiency and effectiveness of Queensland's CRS, particularly in:

- ***Tracking and verification of returned containers*** – Unique product identification using GS1 identifiers enables accurate tracking of beverage containers throughout the return and recycling process, ensuring transparency and preventing fraud.
- ***Enhancing data accuracy and interoperability*** – The Global Data Synchronisation Network (GDSN), and the local National Product Catalogue (NPC) facilitate seamless and standardised data sharing between manufacturers, retailers, recyclers, and government agencies, improving oversight and reporting.
- ***Digital solutions for consumer engagement*** – QR codes powered by GS1 and other data carriers allow consumers to access useful information (in languages and ways that ensure access, inclusion and participation) on deposit eligibility, return locations, and the environmental impact of their participation in the scheme.
- ***Supporting circularity through product lifecycle traceability*** – Persistent identification of materials enables better end-of-life tracking, helping to ensure that recovered materials are effectively reintegrated into new products and avoiding downcycling or disposal.

Given Queensland's goal of achieving a container recovery rate of at least 85%, GS1 Australia advocates for:

- ***Clear and consistent product identification (barcodes) requirements aligned with global and Australian standards*** – Strengthening Queensland's CRS legislation to explicitly reference globally recognised barcode standards will prevent industry confusion, reduce the risk of non-compliant identifiers, and ensure compatibility with retail and recycling systems. Aligning with other states that require GS1-compliant identifiers will support harmonisation and trade.
- ***Support for the transition from 1D barcodes to 2D (next generation) codes*** – As brands shift to 2D codes, such as GS1 Powered QR codes over the next decade, scheme coordinators must provide clear guidance to ensure Reverse Vending Machines (RVMs) can process these codes. A proactive approach will prevent operational disruptions and enable industry-wide adoption of more advanced, consumer-friendly packaging technologies.

Head Office
[redacted]

Sydney Office
[redacted]

National Number
1300 BARCODE (1300 227 263)
[redacted]
www.gs1au.org
ABN: 67 005 529 920

- ***Streamlined data collection for regulatory reporting*** – Integrating CRS registration requirements into existing industry registries like the National Product Catalogue (NPC) would reduce administrative burdens for beverage manufacturers, improve data accuracy, and create consistency across jurisdictions. Leveraging existing industry systems can enhance compliance while minimising complexity. Collaboration between industry and government – encouraging a coordinated approach to governance, compliance, and technological adoption to improve the scheme's overall effectiveness.

GS1 Australia is pleased to provide this response. Our response primarily focuses on the use of globally unique product identification and capture governed by a common data model (open data standards) or creating an efficient and effective CRS.

Our submission included 2 parts. Part A responds to selected questions and Part B provides further background and details on GS1 Australian and the GS1 Standards.

As Queensland seeks to refine and enhance its CRS, GS1 Australia offers expertise in supply chain standards and digital traceability to support more efficient operations, greater transparency, and improved sustainability outcomes. We welcome the opportunity to engage further with government and industry stakeholders to ensure the success of the scheme in meeting its environmental and economic objectives.

If you have further queries, please do not hesitate to contact GS1 Australia's Sustainability and Circularity Manager, Dharshi Hasthanayake via [redacted] or Peter Carter, General Manager Public Policy and Government Engagement via [redacted]

Thank you for considering our feedback.

Sincerely,

[redacted]

Peter Carter

General Manager Public Policy and Government Engagement
GS1 Australia

E: [redacted]
M: [redacted]

Part B – GS1 Australia Submission to Inquiry

Removing ambiguity about barcode requirements in legislation and ensuring alignment with global and national standards

GS1 Australia has seen a growing number of enquiries from members of the liquor sector seeking advice on obtaining barcodes. This highlights an opportunity to strengthen Queensland's CRS legislation by explicitly referencing global standards when defining barcode requirements for the industry. Leaving the terminology open-ended and without clear parameters creates confusion and increases the risk of non-compliant identifiers being used.The current reference to barcode requirements is open-ended and limited to referring to 'barcodes' and no standards that should be adhered to, as shown in Figure 1.

As it stands, brands can obtain "barcodes" from a variety of sources, including unauthorised resellers, which can undermine consistency within established global numbering systems. This may lead to beverage container identifiers that are not unique (misidentified) or unable to be scanned at retail points of sale, creating operational challenges for both brands and retailers. The issue is particularly relevant for brands aiming to engage with major retailers or expand into international markets. GS1 Australia has consulted with COEX for clarification, recognising that their ability to guide industry is limited by the scope of the current legislation.

To prevent such issues, Queensland should ensure that COEX and scheme coordinators require brands to obtain GS1 and AS ISO 15459.4 (Australian Standard) compliant identifiers, as already adopted in Victoria, New South Wales, Western Australia, and Tasmania. Examples of legislation setting out the barcode requirement in these states is provided in Figure 2. To ensure a harmonised approach with other states to labelling, it would be worthwhile to consider replicating the reference to the Global Trade Item Number (GTIN) in the regulations to avoid confusion. GS1 Standards do not necessarily need to be referenced in the regulations directly. GS1 Australia is available to advise on this and the appropriate wording that will work best with current industry practices and norms.

Division 2 Sale of beverages in containers

99P Restriction on manufacturer selling beverage product

(1) A manufacturer of a beverage product must not sell the beverage product to another person to use or consume in Queensland, or to sell for use, consumption or further sale in Queensland, unless—

(a) a container recovery agreement is in force for the type of container used for the beverage product; and

(b) the container is registered; and

(c) the container displays—

(i) the refund marking; and

(ii) a barcode for the beverage product.

Maximum penalty—500 penalty units.

(2) For this section, it does not matter whether the beverage manufacturer sells the beverage product in Queensland, in another State or somewhere else.

Figure 1: Current reference to 'barcodes' in QLD's Waste Reduction and Recycling Act 2011

Part 3 Supply and collection of containers

Division 1 Supply of beverages in containers

22A Barcode requirement

(1) For the purposes of this Part, a container that belongs to a class of containers complies with the ***barcode requirement*** if the container is marked or labelled with either of the following—

(a) a GTIN barcode unique to that class of containers,

(b) a product barcode unique to that class of containers that—

(i) complies with the EAN/UPC symbology specifications for EAN–13, EAN–8, UPC–A or UPC–E barcodes, set out in the GS1 Standard, and

(ii) complies with the dimensional specifications and symbol placement guidelines that apply to the class of data carriers to which the barcode belongs, set out in the GS1 Standard, and

(iii) does not duplicate any GTIN barcode or other product barcode, and

(iv) is not less than 8, and not more than 13, digits.

(2) In this clause—

GS1 Standard means the *GS1 General Specifications* standard published by GS1 AISBL.

GTIN barcode is a product barcode that contains a Global Trade Item Number (GTIN) encoding and complies with the GS1 Standard.

Figure 2: Reference to barcode requirements and global standards in other state legislation - NSW, VIC, WA, TAS

Recommendation 1:

To remove ambiguity around barcode requirements and ensure consistency with international best practices, **it is recommended that the Queensland Government work collaboratively with other states and territories to establish a harmonised national model.** This should include leveraging the expertise of GS1 Australia and Standards Australia to align legislative references with globally recognised and industry-adopted product identification standards. By doing so, Queensland can help reduce industry confusion and cost, improve barcode compliance, and support national consistency in the Container Refund Scheme (CRS), in line with jurisdictions such as Victoria, New South Wales, Western Australia, and Tasmania.

Facilitating the transition from 1D barcodes to 2D QR codes

Over the next 5 to 10 years, brands—particularly in the fast-moving consumer goods (FMCG) sector—will progressively transition from traditional 1D barcodes, currently used by many Reverse Vending Machines (RVMs), to 2D QR codes. Globally and in Australia, GS1 has been working closely with key technology providers such as Tomra and leading manufacturers of point-of-sale and scanning systems to ensure readiness for this shift. These RVMs are either already capable or will soon be capable of reading and decoding 2D barcodes that comply with the GS1 Digital Link standard, which is expected to underpin most of the QR codes that will replace legacy 1D formats.

Through GS1's global network of solution providers and technical partners, RVM operators such as Tomra will be guided by the requirements set by Scheme Coordinators, ensuring their systems evolve in line with emerging standards.

However, a lack of legislative clarity and consistent government guidance is currently hampering the ability of Scheme Coordinators, such as COEX, to prepare their networks and provide the necessary specifications to the RVM community.

Recommendation:

To ensure a smooth and coordinated transition, **it is recommended that the Queensland Government actively engage with Scheme Coordinators, industry working groups and GS1 Australia to align infrastructure updates with industry developments.** Early collaboration will help ensure that the future use of next-generation barcodes can be fully leveraged without disrupting container collection or refund operations.

GS1 Australia is well-positioned to support this transition and stands ready to provide expert guidance, education, and technical input to all stakeholders involved.

Streamlining data collection and leveraging national registers for beverage brand reporting

Businesses are increasingly required to collect and report data across a range of sustainability requirements. Complex supply chains often operate across both domestic and international borders, and differing state-based regulations add unnecessary complexity, cost, and administrative burden. This is particularly evident in the industry feedback received, reflecting confusion caused by having to manage data for compliance across multiple jurisdictions.

A consistent, national approach based on the recommendations above reduces complexity. For over 20 years, the National Product Catalogue (NPC), based on global standards and maintained by GS1 Australia and GS1 New Zealand, has facilitated efficient trade by enabling the sharing of standardised product master data across industries such as food, grocery, healthcare, and rail.

The NPC currently contains data for over 2 million products, serving over 2,500 suppliers. Its success relies on industry-wide consensus on the types of data that need to be shared, both nationally and globally. GS1 global registries (relevant for imported products) include more than 550 million uniquely verifiable products.

Much of the attributes for container registration are already collected in NPC (+ more specific CDS attributes that retailers require). In fact, this asset has been prepared to support suppliers on specific CDS attributes that retailers require.

Many beverage companies already use the National Product Catalogue (NPC) for product data management, presenting an opportunity for streamlined reporting under the CRS. There is an opportunity for integrating CRS registration requirements into the NPC, providing manufacturers with one national register of their product and packaging information to meet both regulatory and voluntary (trade) requirements. This approach has been used by FSANZ with the GS1 Branded Food Database. By integrating NPC data with CRS requirements, Queensland can reduce administrative burdens, reduce costs, while improving data accuracy and consistency across jurisdictions. This would enhance compliance while reducing redundant data submissions.

Recommendation:

To support streamlined data collection and reduce administrative burden for beverage brands, it is recommended that the **Queensland Government consult with existing users of the National Product Catalogue (NPC) and related registers —**including major retailers, suppliers, and federal and state government agencies that already leverage product registries for public policy purposes, such as food recall and safety.

Summary

GS1 Australia supports Queensland's efforts to enhance the Container Refund Scheme (CRS) as a key enabler of circular economy outcomes. To improve efficiency and reduce complexity, we recommend

1. clearer legislative alignment with global and Australian barcode standards,
2. forward planning for work with existing industry-adopted identifiers and prepare for the transition to 2D data carriers, and
3. integration of product data requirements into established industry registries like the National Product Catalogue (NPC).

GS1 Australia stands ready to work with all Governments and our national member base—including manufacturers, retailers, and technology providers—to deliver practical, future-ready solutions that support a more effective and interoperable CRS.

Part B - About GS1 Australia and GS1 Standards

The GS1 system of standards is:

- Voluntary
- Multi-sector
- Globally adopted
- Technology agnostic
- ISO/IEC compliant
- Industry governed and led
- Australian Standard
- Not for Profit

Global membership is now close to three million organisations, spanning all segments of industry supply chains across diverse sectors.

At a national level, the GS1 system of ISO/IEC-compliant standards is increasingly adopted by governments to simplify regulatory systems. To illustrate, in New Zealand the local business identifier, or NZBN, is based on a GS1 identifier (the Global Location Number). An increasing number of economies are introducing GS1 standards in single window and trade processes, including the USA, Canada, Vietnam, New Zealand and China. China now uses GS1 keys to enhance the harmonised system (HS) of tariff codes to classify traded products. GS1 and WCO trade code nomenclature is well aligned and increasingly integrated.

Australian government examples include the Australian National Freight Data Hub and the Therapeutic Goods Administration medicines labelling orders both of which are based on GS1 standards. Over 20,000 companies use GS1 Standards in Australia.

From a founding member base of 12 countries, the GS1 federation of not-for-profit member organisations has grown to 118 national offices, supporting 150 nation-states to maintain the currency of data and provide open registers and related services to address economic and public policy priorities. In Australia, this includes national product registries, national product recall and national location registries. As not-for-profit entities, GS1 member organisations cover their operating costs through membership fees and the licencing of identification keys. All GS1 standards are available royalty-free and freely available for members and non-members to use.

GS1 also supports industry and governments in their implementation of standards through a range of tools and services including:

1. Education and training services to build skills and knowledge in the standards
2. Development of industry guidelines and implementation tools
3. Development and management of national and global registries supporting accurate master data related to products and locations
4. Engagement with technology vendors to develop an ecosystem of interoperable solutions, based on GS1 standards, that is available to industry.

GS1 standards are technology-agnostic and allow the implementation of data sharing across value chains in an interoperable manner. They enable each participant in the supply chain to make their own, independent commercial decisions in choosing technology and solution partners.