Digital Labelling for Government and Regulators
Draft Position Paper

As consumer expectations, business needs, and global trade requirements evolve, how can Australian regulations keep pace? Digital labelling, based on International and Australian Standards and the use of QR and other codes offers a practical way to enhance consumer protection and improve access to verified product information—including for multilingual communities— simplifying trade and compliance, reducing costs for businesses while improving transparency, productivity and industry competitiveness.

Executive Summary

Purpose: To provide government agencies and regulators with an overview of digital labelling and its role in enhancing public access and accessibility to important product information, reducing business costs, and improving regulatory transparency.

Why It Matters: As governments seek cost-effective, scalable, and consumer-friendly regulatory solutions, digital labelling offers a future-ready mechanism to support public engagement, compliance, and global trade alignment.

Key Messages:

1. *Public Accessibility and Citizen Engagement* – Digital labels provide flexible, multilingual, and interactive access to essential product information.

2. *Reducing Cost and Complexity for Businesses* – Digital labelling reduces the burden of reprinting, re-labelling, and navigating evolving disclosure rules across jurisdictions.

3. *Enhancing Compliance, Transparency and Trust* – Linked, verifiable product information strengthens consumer protection, market surveillance, and supply chain integrity.

Digital labelling is more than a compliance tool. It is **a cornerstone of industry digital transformation**, enabling businesses and regulators to harness real-time data for efficiency, transparency, and growth.

See the Annexed information for further information on how digital labelling is helping drive productivity through digitalisation.

Annex A - Digital labelling as a catalyst for industry digital transformation

Annex B - Australian federal regulations and laws governing product labelling

Annex C - Economic value and benefit of using data standards for labelling

Annex D – Common questions and takeaways for Government

Important: Note regarding references to Quick Response (QR) codes below.

This brief is **not intended to be a technical guide**. It focuses on the '*what and why*' of digital labelling for government and public policy specialists rather than '*how to*' guidance. With a view to technical neutrality, reference to QR codes should be read as any 'industry-accepted machine-readable (scannable) data carrier' as formally adopted by relevant international standards bodies. There are many types of data carriers including barcodes to identify 'things' such as products. QR code is a convenient proxy given usage and common understanding – attributed to their native integration with popular devices not limited to mobile phones.

Readers wanting a more detailed understanding of various techniques and methods used for digital labelling are encouraged to read relevant standards as noted in the brief that follows and discoverable online resources such as Wikipedia, ISO, Standards Australia and GS1.

Context and Policy Relevance

Current Regulatory Challenges:

- Australian federal and state regulations require clear, truthful, and up-to-date product information across sectors (e.g., food safety, pharmaceuticals, consumer goods).

- Traditional physical labelling methods are limited by space, static information, and update constraints.

- Businesses struggle to comply with evolving domestic and international requirements without incurring additional costs.

- Consumers demand greater transparency, particularly in safety, sustainability, and provenance.

Alignment with Government Priorities:

- *Cost of Living and Consumer Protections:* Digital labels ensure consumers receive real-time, accessible information, preventing misleading claims and supporting informed purchasing.

- *Productivity and Business Efficiency:* Reducing re-labelling costs, compliance burdens, and administrative overheads aligns with Australia's regulatory simplification and business digitalisation goals.

- *Global Market Access and Trade Compliance:* QR-enabled labelling enhances alignment with international trade partners (e.g., EU, US, ASEAN) that are increasingly mandating digital product disclosures.

- *Transition to a Circular Economy* - Providing consumers more accurate and location-based information on recycling, minimising waste and materials recovery.

> **Food for Thought - Australian Government Recommendation on Food Labelling**
>
> The [House Standing Committee on Industry, Science and Resources has recommended](#) that the Australian Government support digitisation and innovation in food labelling, specifically through (recommendation 15) the implementation of QR codes-enabled digital labelling.
>
> The key objective of this recommendation is to enhance consumer access to product information by providing a dynamic and interactive alternative to traditional labelling. By scanning a QR code, consumers can instantly access:
>
> - Detailed product information, including ingredients, allergens, and nutritional content
>
> - Traceability data, such as country of origin and supply chain transparency
>
> - Regulatory compliance details, including food safety certifications and recall alerts
>
> The recommendation aligns with the Committee's broader goals of modernising Australia's food and beverage manufacturing sector by leveraging technology to improve consumer protection, regulatory efficiency, and industry competitiveness.
>
> This initiative also harmonises with international best practices, including the EU Digital Product Passport and ASEAN digital labelling frameworks, ensuring Australian food exports remain competitive in global markets.

The Role of Digital Labelling and QR Codes

What is Digital Labelling?

- Digital labelling refers to the use of Next-Generation Barcodes – data carriers such as industry standard QR codes, to digitally link consumers to dynamic and structured product information available on company websites or purpose-built applications.

- Australian Standards (AS ISO/IEC 15459-4:2023) focus on the unique identification of products and shipments and linking information to those products via their physical identifier i.e. Link Data Standards (AS ISO/IEC 18975 – Encoding and Resolving Identifiers over HTTP).

- Digital labelling enables real-time updates, multilingual content, accessibility features (e.g., voice-to-text), and direct links to verified regulatory data.

GS1-Powered QR Codes – A Global Standard for Compliance and Trade

- ISO and Australian Standard -aligned and globally interoperable, ensuring compatibility with supply chain, regulatory, and consumer systems.

- Already adopted across retail, food safety, healthcare, and international trade frameworks (e.g. EU Digital Product Passports, EU Wine Energy Labelling, etc)

- Supports government initiatives such as [Australia's Digital Trade Strategy](#), regulatory reform, traceability, and consumer protection frameworks.

Hereafter we will refer to GS1-Powered QR Codes as 'next generation barcodes' or internationally accepted digital labelling standards.

Key Benefits of Digital Labelling for Government and Regulators

1. Public Accessibility, Inclusion and Citizen Engagement

Consumer-Centric Information Delivery

- Digital labels allow tailored access to product details based on multi-cultural user preferences (e.g., language, format, accessibility needs).

- Real-time updates ensure that citizens always access the latest safety alerts, recalls, sustainability credentials, and regulatory compliance data.

Addressing Key Government Concerns:

- *Cost of Living and Consumer Protection:* Consumers can scan a QR code to compare verified data on sourcing, safety, and pricing, avoiding misleading claims.

- *Health and Safety:* Digital labelling enhances access to nutritional, allergen, and pharmaceutical safety information, supporting public health initiatives.

- *Digital Inclusion and Multilingual Support:* Assists non-English speakers, vision-impaired individuals, and disadvantaged communities by offering customizable digital access.

Young Mother Seeking Reliable Infant Formula Information

"I just want to be sure I'm making the right choice for my baby."

For Nguyen, a young mother who recently moved to Australia, English is not her first language. When shopping for infant formula, she struggles to understand complex nutritional information on product packaging. She wants to know:

- Is this product suitable for my baby's age?

- Does it contain any allergens?

- Where was it made, and is it safe?

Without digital labelling: She must rely on Google (or other) searches or ask store employees, who may not always have accurate answers.

Via a digital label, Nguyen scans the label, and within seconds, a translated webpage displays:

- Nutritional breakdown in a language of her choice

- Allergen warnings in clear, simple terms

- Regulatory compliance details and recall alerts

"It's a relief knowing I can scan a product and immediately see the information in Vietnamese. It gives me confidence that I'm choosing the right formula for my baby."

Why this matters: Digital labelling provides real-time, multilingual access to trusted product information, ensuring health, safety, and informed decision-making—particularly for non-English-speaking consumers.

2. Reducing Cost and Complexity for Business

Lowering Compliance Costs and Trade Barriers

- A digital-first approach prevents costly re-labelling when regulations change, ensuring businesses remain compliant across multiple jurisdictions.

- Aligns with Australia's Simplified Trade System (STS) and international regulatory harmonisation efforts.

Helping Businesses Navigate Evolving Regulatory Requirements

- Supports small and medium enterprises (SMEs) in adopting cost-effective compliance solutions.

- Reduces complexity for exporters facing different disclosure requirements in key markets (e.g., EU Digital Product Passport, US FDA traceability laws).

Government Policy Alignment:

- Productivity and Red Tape Reduction: Directly supports Deregulation Taskforce goals to simplify labelling requirements and supply chain documentation.

- Industry Digitalization and Australian Tech Roadmap: Encourages businesses to integrate digital tools for efficiency and growth.

A Growing Regional Wine Brand Struggling with Labelling Costs

"Every time a regulation changes, we pay thousands just to reprint labels."

McLaren Estate Wines is a boutique winery in regional South Australia, expanding into Asia and Europe. However, each country has different labelling requirements, from alcohol warnings to country-of-origin disclosures.

The challenge:

- It costs up to $5,000 per label change when product labelling regulations change.

- Unused stock with outdated labels must be discarded, leading to waste and financial loss.

- Compliance delays slow market entry, affecting revenue.

Using internationally accepted digital labelling based on internationally accepted standards:

- A single digital label dynamically updates country-specific regulations, removing the need for costly reprints.

- Regulators and customs officials can instantly verify compliance.

- Exporters seamlessly meet international requirements, improving competitiveness.

"For a small business, every dollar matters. If we can meet global compliance rules without constantly reprinting labels, it helps us grow without unnecessary costs."

Why this matters: Digital labelling reduces the financial and administrative burden of re-labelling while ensuring smooth global market access for Australian exporters.

3. Improved Compliance, Transparency and Trust

Linking Product Safety and Quality Information to Verifiable Sources

- Digital labels provide instant access to verified certifications, supply chain data, and real-time regulatory updates.

- Enhances market surveillance, customs enforcement, and anti-counterfeiting measures.

Supporting Consumer and Environmental Protections

- Enables real-time tracking of sustainability claims, country of origin disclosures, and ethical sourcing certifications.

- Reduces regulatory burden for government agencies conducting audits, recalls, and compliance checks.

Government Policy Alignment:

- Strengthening Trust and Transparency: Enhances Australia's product safety regime and strengthens consumer confidence.

- Trade and Border Efficiency: Supports customs modernisation efforts by linking products via the digital labels and with trade declarations.

Strengthening Trust in Australian Exports with Digital Country of Origin Certificates

"Our buyers want proof that our products are genuinely Australian-made."

HarvestPro Grains, an Australian agribusiness exporting wheat and barley to Southeast Asia and the Middle East, faces increasing pressure from international buyers to prove the authenticity of its products. Many markets require validated Country of Origin Certificates (CoO) and supporting trade documents to qualify for tariff reductions and preferential trade agreements.

The challenge:

- Traditional paper-based CoO documentation is slow, costly, and prone to fraud.

- Errors or missing paperwork cause shipment delays and increased costs.

- Buyers require trusted verification mechanisms to reduce trade disputes and ensure compliance with biosecurity and food safety regulations.

With digital labels linked to digital trade documents:

- A secure digital CoO is embedded in the product's QR code, allowing customs officials, buyers, and regulators to instantly verify its authenticity.

- Seamless validation of related trade documents, such as phytosanitary certificates and export permits, reducing border clearance delays.

- Lower trade risks and compliance costs, as documentation is digitally traceable and tamper-proof.

"Previously, we relied on physical certificates that could be lost or delayed, costing us time and money. Now, our buyers can scan the QR code and instantly validate the trade documents—they know our product is 100% Australian."

Why this matters:

- Reduces regulatory complexity for exporters by automating compliance and document validation.

- Builds trust in Australian products, reinforcing Australia's brand reputation for high-quality, safe, and authentic goods.

- Aligns with global digital trade initiatives, such as ASEAN Single Window and the WTO's Trade Facilitation Agreement, ensuring Australian businesses remain competitive in international markets.

Policy Considerations and Recommendations

To maximise the benefits of digital labelling, the Australian government should:

1. Encourage Regulatory Adoption of Digital Labelling

   - Update labelling guidelines to include Australian AIDC Standards incl. GS1-powered QR codes as an approved extension to static labels.

   - Prioritize pilot programs within high-impact sectors (e.g., food, pharmaceuticals, hazardous goods).

2. Enable Interoperability and Cross-Sector Coordination

   - Align with international digital trade and labelling initiatives (e.g., EU Digital Product Passport, ASEAN e-labelling standards).

   - Work with state regulators to harmonise digital disclosure frameworks, reducing inconsistencies across jurisdictions.

3. Support Business Transition and Consumer Awareness

- Provide financial incentives or regulatory support for SMEs adopting digital labelling solutions.

- Launch public education campaigns to help consumers and businesses understand the benefits and usage of digital labels.

Moving Forward

- Digital labelling is a practical, scalable solution to address government priorities in consumer protection, business efficiency, and trade competitiveness.

- Digital labels based on GS1-powered QR codes provide a globally recognised, regulator-friendly standard to support Australia's digital transformation and market integrity.

- By adopting digital labelling, the Australian government can reduce compliance burdens, empower consumers, and enhance global trade competitiveness.

Further questions and key takeaways for government and public policy specialists is provided in annexures including suggested next steps.

1. Identify which regulatory requirements could be enhanced by digital labelling.

2. Engage with industry and international standards bodies to ensure alignment.

3. Explore cross-agency cooperation to create a cohesive, nationwide framework.

Annex A

Examples of Government-Driven Digital Labelling in Action

United States – SmartLabel - https://smartlabel.org/

SmartLabel is a digital platform launched in 2015 by the Consumer Brands Association (formerly the Grocery Manufacturers Association) in collaboration with the Food Marketing Institute. Its primary goal is to provide consumers with detailed product information that extends beyond what is available on physical packaging. This initiative was developed in response to increasing consumer demand for transparency regarding product ingredients, sourcing, and manufacturing processes.

Implementation and Functionality

SmartLabel allows consumers to access extensive product details through various means, including scanning QR codes on packaging, conducting online searches, or visiting brand websites. Each product has a dedicated landing page containing information on ingredients, allergens, usage instructions, certifications, and more. The platform's consistent format across different brands and product categories ensures a user-friendly experience.

Regulatory Compliance and Industry Adoption

While SmartLabel was initiated by industry associations rather than a government mandate, it aligns with regulatory requirements for digital disclosure. For instance, the platform complies with the National Bioengineered Food Disclosure Standard (NBFDS) and the California Cleaning Product Right to Know Act (SB 258), allowing brands to meet state and federal digital labelling requirements effectively.

By 2016, several manufacturers had begun using SmartLabel to disclose information about genetically modified organisms (GMOs) and other product attributes, demonstrating the platform's role in promoting transparency within the food industry. The initiative has seen widespread adoption, with thousands of products across various categories utilizing SmartLabel to provide consumers with accessible and detailed information.

GS1 Australia and the AFGC have been working with industry for around 1.5 years to introduce an industry-driven program in Australia along the lines of SmartLabel with plans to launch pilots in 2025.

Korea – Ministry of Food

Describe ..

(https://www.mfds.go.kr/eng/brd/m_61/down.do?brd_id=engnews01&seq=144&data_tp=A&file_seq=1)

Annex B

Digital Labelling as a Catalyst for Industry Digital Transformation

Unlocking Value Through Data and Connectivity

Digital labelling is more than a compliance tool—it is a cornerstone of industry digital transformation, enabling businesses and regulators to harness real-time data for efficiency, transparency, and growth. By embedding digital labelling based on AIDC standards into regulatory frameworks, Australia can accelerate its transition to a more connected, data-driven economy.

How Digital Labelling Drives Digital Transformation

Data-Driven Compliance and Traceability:

- Digital labelling automates product information management, reducing manual processes, errors, and administrative overhead.

- Can enable instant verification of compliance, recalls, and certifications across supply chains and regulatory bodies.

Smart Supply Chains and Interoperability:

- Digital labelling integrates with enterprise systems (ERP, inventory, and logistics platforms), improving inventory accuracy and supply chain visibility.

- Supports government digitisation initiatives, such as the Simplified Trade System and Digital Trade Strategy.

Real-Time Consumer and Market Insights:

- Provides businesses with consumer interaction data, helping brands tailor products, marketing, and sustainability messaging.

- Encourages consumer-driven innovation, where feedback loops improve product safety, sustainability, and regulatory compliance.

Lower Costs and Frictionless Trade:

- Reduces the need for physical re-labelling, saving millions in packaging and compliance costs. This supports productivity, competitiveness and cost of living pressures.

- Supports automated product authentication, preventing fraud, counterfeiting, and parallel imports.

A Strategic Investment in Australia's Digital Future

Digital labelling is a practical, scalable, and immediate enabler of digital transformation across multiple sectors—retail, healthcare, agribusiness, and manufacturing. It aligns with Australia's long-term goals for productivity, competitiveness, and global trade leadership by embedding data-driven decision-making into industry regulation.

Annex C.

Australian federal regulations and laws governing product labelling

Below is a non-exhaustive list of key agencies, along with the specific regulations or laws they administer, where digital labelling can play a pivotal role.

1. Food Standards Australia New Zealand (FSANZ)

Regulation: Australia New Zealand Food Standards Code

Labelling Requirements: Chapter 1 outlines general labelling and information requirements applicable to all foods, including mandatory declarations, ingredient lists, and nutrition information panels.

Impact: Over 22,147 packaged food products are subject to these labelling requirements.[1]

2. Australian Competition and Consumer Commission (ACCC)

Regulation: Australian Consumer Law (ACL)

Labelling Requirements: Provisions under the ACL mandate that product labels must not be false or misleading, covering aspects such as country of origin claims and product safety information.

Impact: The ACL applies broadly across all businesses making product claims, affecting a vast number of products and industries.

International perspectives: in response to high levels of greenwash and unsubstantiated product claims, the UN has developed Advice to Nations for the exchange of digital product conformity credentials linked to internationally accepted product identifiers in digital labels.

3. Therapeutic Goods Administration (TGA)

Regulation: Therapeutic Goods Act 1989

Labelling Requirements: Part 3-1 specifies labelling standards for therapeutic goods, including medicines and medical devices, ensuring labels provide necessary information for safe usage.

Impact: Thousands of therapeutic products, including all registered medicines and medical devices, are regulated under this act.

4. National Measurement Institute (NMI)

Regulation: National Measurement Act 1960

Labelling Requirements: Sections pertaining to trade measurement require accurate declaration of quantity (weight, volume, or number) on product labels to ensure fair trading.

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[1] https://cdn.who.int/media/docs/default-source/bulletin/online-first/blt.24.291629.pdf?sfvrsn=db149843_3

Impact: All businesses involved in selling products by weight, volume, or number are subject to these requirements, encompassing a wide range of industries.

5. *Department of Health and Aged Care*

Regulation: [Health Star Rating System](#) [2]

Labelling Requirements: Voluntary front-of-pack labelling system that rates the overall nutritional profile of packaged food, aiding consumers in making healthier choices.

Impact: As of 2023, approximately 39% of eligible packaged food products display the Health Star Rating.[3]

6. *Australian Industrial Chemicals Introduction Scheme (AICIS)*

Regulation: [Industrial Chemicals Act 2019](#)

Labelling Requirements: Mandates that industrial chemical products are labelled with safety directions and hazard information to communicate risks to users.

Impact: All businesses importing or manufacturing industrial chemicals must comply, affecting thousands of chemical products.

7. *Australian Pesticides and Veterinary Medicines Authority (APVMA)*

Regulation: [Agricultural and Veterinary Chemicals Code Act 1994](#)

Labelling Requirements: Sections detailing labelling requirements for agricultural and veterinary chemical products to ensure safe and effective use.

Impact: All registered agricultural and veterinary chemical products are subject to these labelling requirements, impacting numerous products in the sector. These regulations impact more than 1200 firms and approximately 20,000 products.

8. *Department of Infrastructure, Transport, Regional Development, Communications and the Arts*

Regulation: [Motor Vehicle Standards Act 1989](#)

Labelling Requirements: Sections requiring vehicle identification numbers (VINs) and compliance plates on motor vehicles to certify adherence to Australian design rules.

Impact: All motor vehicles manufactured in or imported into Australia must comply, affecting thousands of vehicles annually.

9. *Australian Communications and Media Authority (ACMA)*

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[2] https://pmc.ncbi.nlm.nih.gov/articles/PMC10521447/

[3] https://cdn.who.int/media/docs/default-source/bulletin/online-first/blt.24.291629.pdf?sfvrsn=db149843_3

Regulation: Radiocommunications Act 1992

Labelling Requirements: Provisions requiring devices emitting radiofrequency to carry labels indicating compliance with electromagnetic compatibility standards.

Impact: All manufacturers and importers of radiofrequency devices must comply, affecting a wide range of electronic products.

It is relevant to note that internationally recognised certifiers of ICT equipment including TCO (Generation 10 guidelines) and Responsible Business Alliance are mandating the use of internationally recognised GS1 product identifiers to access linked data.

10. Department of Climate Change, Energy, the Environment and Water

Regulation: Greenhouse and Energy Minimum (GEM) Standards Act 2012

Labelling Requirements: Sections mandating energy rating labels on appliances to inform consumers about energy efficiency and consumption. –

Impact: All manufacturers and importers of regulated appliances must comply, affecting numerous products in the market.

The GEMS Act currently regulates 22 product classes, each subject to specific energy efficiency and labelling requirements. These classes include, but are not limited to:

- Household Appliances: Refrigerators, freezers, dishwashers, clothes washers, and dryers.
- Heating and Cooling Equipment: Air conditioners and heat pumps.
- Lighting Products: Various types of lamps and lighting equipment.
- Commercial Equipment: Products like refrigerated display cabinets and electric motors.

Annex D

Economic Value and Benefit of Using Standards for Labelling

Analysis of the Impact of Standards Use on Australian Economy and Society

In early 2025, the Centre for International Economics (CIE) conducted a comprehensive quantitative analysis to evaluate the current and future impacts of GS1 standards and services on the Australian economy. The study highlights the significant contributions of supply chain data standards to various sectors, including retail, healthcare, food production, transport, and construction.

The analysis found:

- *Economic Contribution:* GS1 standards and services currently contribute approximately $18.9 billion to $27.2 billion to Australia's GDP annually, equivalent to around $695-$1,000 per person per year.

- *Consumer Prices:* The use of GS1 standards results in consumer prices being permanently 0.4-0.6% lower than they otherwise would have been.

- *Future Potential:* Expanding the use of GS1 standards could increase their economic contribution to around $29.3 billion to $44.2 billion annually, equivalent to $1,077-$1,625 per person per year, and keep prices 0.6-0.9% lower.

National Productivity Growth and Prosperity

Productivity growth is the key to Australia's long-term prosperity. Productivity growth has underpinned our long-term increase in living standards, including higher consumption and fewer hours of work. However, productivity growth has slowed in recent years, putting at risk the future prosperity of Australians. Slow productivity growth has been linked to many key challenges facing the nation, including the 'cost of living' and housing affordability.

CIE research has found that GS1 data standards and services have made important contributions to Australia's prosperity by enabling productivity improvements across various sectors of the economy.

What does Australian Government Policy Say about Standards Use?

Federal Government policy regarding the use of international and national standards is very clear. Standards used in public policies and regulations provide benefits to the public and private sectors and citizens through:

- better-designed policies and regulations based on agreed requirements and norms.
- reduced costs and administrative burdens of associated regulatory requirements.
- increased trust and involvement of the private sector and consumers in regulatory processes.
- enhanced confidence of trading partners and investors.

Australia's Digital Trade Strategy (DFAT April 2022) says "incorporation of international standards into domestic frameworks can foster the necessary compatibility to accelerate the

adoption of digital technologies and processes, thereby growing industries, growing markets and growing the economy."

[Best Practice Guide to Using Standards and Risk Assessment in Policy and Regulation](DISR, 2016) notes "'if a system, service or product has been approved under a trusted International Standard or risk assessment, Australian regulators should not impose any additional requirements unless it can be demonstrated that there is a good reason to do so .'

These principles are consistent with Australia's obligations under the World Trade Organisation's Technical Barriers to Trade Agreement [4]

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[4] https://www.dfat.gov.au/trade/organisations/wto/technical-barriers-to-trade-tbt

Annex E – Questions and Key Takeaways for Government and Public Policy

For readability – the following section is provided in question-and-answer format.

What is digital labelling, and why does it matter?

Digital labelling refers to the use of QR codes and other digital identifiers on products to provide consumers, businesses, and regulators with additional (i.e.. in addition to physical labelling) instant access to (ideally verifiable) product information. Unlike traditional labels, which are static and limited by space, digital labels are dynamic and can be updated, including multilingual, accessibility-friendly, and compliance-focused content without requiring costly reprints.

For government agencies, digital labelling offers a way to:

- Improve compliance transparency by linking directly to certifications, regulations, and safety alerts.
- Reduce regulatory burden on businesses by eliminating duplicative labelling requirements.
- Enhance consumer protection by providing trusted, verifiable, and up-to-date information on demand.

How does this impact my agency's regulatory responsibilities?

Each agency has specific mandates and legal obligations governing product labelling—whether it's for food safety, consumer protection, environmental claims, or trade compliance. Digital labelling does not replace existing legal requirements but offers a more efficient and scalable way to meet them.

Example: Instead of requiring businesses to fit all mandatory disclosures onto a physical label, agencies can allow a QR code to link to an official government-verified source, ensuring compliance without excessive packaging changes.

For regulators, this means:

- More effective oversight, with real-time tracking of compliance data.
- Easier enforcement, as digital records can be instantly accessed and verified.
- Fewer disputes, as all parties (businesses, consumers, and regulators) have access to the same trusted source of information.

What are the risks and challenges for regulators?

1. Singular Focus and Regulatory Silos

Each agency naturally focuses on its own mandates and has limited visibility into how other agencies regulate labelling. This can result in:

- Overlapping or conflicting requirements (e.g., multiple agencies requiring separate labels, symbols, or QR codes for similar compliance needs).
- Inconsistent enforcement across states, leading to regulatory fragmentation.

- Increased costs for industry, as businesses must comply with multiple labelling demands for different agencies and jurisdictions.

Solution: A coordinated, whole-of-government approach to digital labelling can prevent unnecessary duplication, ensuring businesses only need one trusted, verifiable source for regulatory compliance.

2. Optics and Government Visibility

Regulators are often under pressure to demonstrate action and make programs visible to the public. This can lead to:

- Excessive logos, labels, or QR codes on packaging—each agency wanting its own compliance symbol.
- Consumer confusion, as multiple labels may dilute trust rather than build it.
- Cross-border incompatibility, making it harder for Australian businesses to comply with international labelling requirements.

Solution: Rather than requiring separate compliance marks, agencies can embed their programs into a single, interoperable digital label—ensuring that government action remains visible but not burdensome.

3. Regulatory Neutrality and Avoiding Over-Prescription

Agencies need to focus on outcomes, not specific technologies or branding requirements that could create unnecessary cost burdens.

Potential Pitfall: Governments do need to provide direction and, aligned with it's commitment to open and fair trade, avoid unnecessary barriers to trade or impediments to competition. In this regard, governments need to be mindful of policy that:

- Regulations that may prevent businesses from using globally recognized standards.
- Impose unnecessary costs, particularly for small and medium-sized enterprises (SMEs).
- Conflict with international trade agreements, where Australia must align with global best practices.

Solution: Agencies should establish clear compliance objectives (e.g., "consumers must have access to up-to-date allergen information") but allow flexibility in how businesses achieve this.

Common Questions and Concerns from Regulators

1. "How can I be sure digital labels meet my agency's requirements?"

Digital labels do not replace existing legal mandates—they provide a more efficient way to meet them. Agencies can require that digital labels:

- Link to official, verified sources (e.g., government websites, approved databases).
- Be tamper-proof and secure, ensuring authenticity.
- Display required information in an accessible, consumer-friendly format.

Example: A QR code on a nutrition label could link to an official government-backed database, ensuring compliance with food safety laws while allowing for real-time updates.

2. "What are the costs for businesses transitioning to digital labels"

While there are cost savings from not making ongoing labelling changes, the initial move to a digital label may incur some small business costs, or at least in stages. For example, the first stage may involve simply embedding the GTIN into a Next Generation Barcode - with minimal to no costs. The second stage may be more advanced, involving serialisation and batch level traceability, where there may be additional costs associated with changes to printing runs of labels and production processes.

2. "What about verification and cost of compliance?"

Traditional labelling: Requires physical audits and costly reprints when regulations change.

Digital labelling: Allows regulators to track compliance remotely, reducing enforcement costs.

Agencies can require:

- Third-party verification of product identification (e.g., using national and international registries like Verified by GS1) to prevent fraudulent product claims.
- Periodic audits, ensuring that digital labels remain up to date.

For more information about how this can be achieved refer to UN Advice to Nations regarding the use of digitally verifiable product conformity and related credentials

3. "Won't this create more work for my agency?"

Actually, digital labelling reduces long-term workload by:

- Minimising redundant compliance checks (agencies can access real-time data instead of manual inspections).
- Automating regulatory updates (agencies update central databases instead of mandating new label print runs).
- Improving inter-agency coordination, ensuring consistent enforcement across states and regulatory bodies.

Example: Instead of requiring each state to enforce separate allergen labelling rules, a single national QR code framework could provide state-specific updates without needing different labels for each jurisdiction.

4. "Accessibility of information is important in an equitable manner. Government cannot assume that everyone will have phones to scan labels. Doesn't digital labelling exclude those without smartphones?"

Not at all—digital labelling enhances accessibility rather than replacing traditional methods. Key points:

- Complementary Approach: Digital labels supplement, not replace, on-pack information, ensuring critical details remain available for all.

- Multiple Access Points: Information can also be accessed via customer service hotlines, printed materials, or retail kiosks.
- Improved Inclusivity: Digital formats allow for text-to-speech, larger fonts, and multilingual content, making information more accessible to those with disabilities or language barriers.

Example: Retailers can set-up in-store kiosks where consumers can scan or enter a product code to retrieve digital label information without needing a smartphone.

Key Takeaways for Government Officers and Policy Specialists

1. Digital labelling is already being adopted globally (e.g., EU Digital Product Passport, ASEAN e-labelling).
2. Agencies should focus on regulatory outcomes, not specific technology mandates.
3. Cross-agency collaboration is critical to avoiding duplication and excessive compliance burdens.
4. Interoperability with international trade partners is essential, ensuring Australian businesses remain competitive.
5. A centralised, government-backed approach to digital labelling can streamline compliance, reduce costs, and improve transparency.

Government agencies can:

a) Identify which regulatory requirements could be enhanced by digital labelling.
b) Engage with industry and international standards bodies to ensure alignment.
c) Explore cross-agency cooperation to create a cohesive, nationwide framework.