GS1 Australia – Industry Discussion Paper

Critical digital infrastructure for Australia's biosecurity reform

A short discussion paper for GS1 Australia members and peak industry partners· June 2026

Why we are sharing this

The National Biosecurity Committee has released a National biosecurity reform agenda discussion paper, seeking views on the reforms that should shape Australia's biosecurity system from 2027 to 2032. Submissions close 5 pm AEST, 12 June 2026.

GS1 Australia intends to make a short, constructive submission. This paper sets out the thinking behind it and invites your input and advice. You are welcome to use any of this content - including the draft question responses in our submission - in your own response if you find it helpful.

Our focus is narrow and deliberate. We describe the enabling infrastructure - shared ways to identify properties, locations and products, and to exchange data about them - that many of the reforms quietly depend on. We do not take positions on how reforms should be funded, who should lead them, or what any sector should decide. Those are matters for industry and government.

The core idea

Most of the reforms in the discussion paper describe outcomes: faster response, proof that an area is free of a pest, national surveillance and data sharing, plant-product traceability, harmonised rules that don't impede domestic trade, and continued confidence among our trading partners.

None of these happens on its own. Each depends on a more basic capability - being able to identify, consistently and without ambiguity, who, what and where: the parties, the locations, and increasingly the individual items moving through the system - and to share data about them across systems that were never designed to connect.

> **Our key message** Shared identification and data-exchange standards are critical infrastructure for biosecurity. Get this foundation right once, and many reforms become achievable together. Leave it implicit, and each reform risks rebuilding its own partial version - reproducing the very fragmentation the agenda is trying to remove.

We would put it more strongly still. This layer is too often treated as part of a "technology and data" bucket - as though it were a tool each reform can buy for itself. It is better understood as **critical digital infrastructure**: as foundational to a modern biosecurity system as laboratories, diagnostics or the border, and deserving the same deliberate national conversation about investment, governance and resilience. Australia already treats comparable capability this way - data systems and the food and grocery sector both sit within the national critical-infrastructure regime under the Security of Critical Infrastructure Act 2018.

In practical terms it has three parts: harmonised, federated registries (public and private records of properties, locations and products, each kept by its owner - not pooled into one database); discoverability (finding and resolving information across them); and verification (trusting that an identifier or credential is valid). All three rest on the same global standards our trading partners use.

Importantly, this is not a call for new or proprietary technology, nor for a single national database. The relevant standards are open, international, and already used in Australian agriculture and logistics, and the design is federated - existing registries stay where they are, under their existing owners.

Why it matters - the evidence

We have grounded our case in the Australian Government's and CSIRO's own published figures:

- A fit-for-purpose biosecurity system is estimated to deliver around **$314 billion in benefit over 50 years** (CEBRA, cited by DAFF). [4][5]
- Invasive species already cost Australia roughly **$25 billion a year and rising** (CSIRO and the Centre for Invasive Species Solutions). [6]
- Established pests and weeds alone cost producers about **$3.8 billion a year in control and $1.5 billion in lost production** (ABARES). [7]
- The standards layer itself is valuable: GS1 supply chain standards contribute **$19–27 billion a year to GDP**, rising to $36–50 billion with broader adoption (CIE 2025). [12]

The Government's own roadmap makes the decisive point: response and recovery cost far more than prevention. [3] Enabling infrastructure is a prevention-and-early-detection investment - the difference between an incursion found early and contained tightly, and one that spreads slowly and expensively. The same is true of food recall and safety: precise identification lets a recall be fast and tightly targeted, limiting what is withdrawn, protecting unaffected producers, and preserving consumer and trading-partner confidence. [13] Biosecurity, food safety and recall are, at the infrastructure level, the same problem.

DAFF's own experience illustrates the point. To manage hitchhiker pests on sea containers - around 73% of recent khapra beetle interceptions - the department first had to build "a single and reliable source of data on container arrivals," because it did not have one. [8] The ability to identify and connect what was moving was the precondition for acting. The same logic applies, nationally, across these reforms.

A concrete example: property and location identification

A single farm may carry a state Property Identification Code (PIC) for biosecurity and livestock traceability, a member number in an industry registry, and other identifiers besides. The PIC itself is issued and governed differently in each jurisdiction - in South Australia under the Livestock Act 1997, in Queensland only after separate registration as a biosecurity entity, and in Victoria extended to a separate "plant PIC" for prescribed crops under the Plant Biosecurity Regulations. [16][17][18] Each works inside its own system. None is designed to be recognised outside it - by an exporter, a freight company, or another jurisdiction's biosecurity agency.

A globally recognised location identifier (in the GS1 system, a Global Location Number) is the one that works across systems and borders. It sits alongside existing identifiers - the PIC stays the system of record for domestic biosecurity and the NLIS; the global identifier extends recognition of the same property into national and international supply chains. Both point to one property record, kept aligned automatically.

> **The pattern, in plain terms**
> Registries identify who and where, each owned by its issuing authority. A shared identifier resolves between them. Geospatial platforms show the picture. The shared identifier is the connective tissue - it lets a property recorded in a state register, an industry system and a national biosecurity console refer to the same place, unambiguously. Existing investment is preserved and made interoperable.

Data stays under the data owner's control: only the minimum needed to register a location is shared, and GS1 Australia's National Location Registry is subscriber-only and was certified against the National Farmers' Federation Australian Farm Data Code in 2024, with authorised access for biosecurity and emergency response. [10]

A live test - sheep and goat eID

Mandatory electronic identification (eID) for sheep and goats - commenced nationally on 1 January 2025 and moving to full national implementation by 1 January 2027 under the National Biosecurity Committee's Sheep and Goat Traceability Task Force - is exactly the kind of reform the paper proposes, already underway. [11][19] It shows both the value and the fragmentation risk: the national commencement date is common, but the supporting instruments are not - SA amended its Livestock Regulations 2013, the NT is amending its Livestock Act 2008, and rebate schemes and scanning deadlines for saleyards and processors differ by jurisdiction. For producers and agents who operate across state lines, that is precisely the duplication a shared identification layer is meant to reduce.

Extending the idea: trade items, conformity and market access

Location identification is one rung on a capability gradient. The same standards identify consignments, products and batches. How far a sector goes - and how it pays for and governs that - is its own decision. What we can describe neutrally is what each level makes possible:

- **Granular item identification** lets a detection, treatment or recall attach to a specific consignment or batch - enabling a tightly drawn response zone or targeted recall rather than a broad, costly one.
- **Conformity and mutual recognition:** once items and locations carry recognised identifiers, attestations - treated at an accredited facility, originating from an area of freedom, meeting an importing country's requirement - can be exchanged and trusted across borders. This underpins mutual recognition arrangements and the trade-facilitation side of biosecurity that protects market access and premium prices.

What we would value from you

As we finalise our submission, your advice would help on:

- **Does the "enabling infrastructure" framing ring true** against your day-to-day experience of biosecurity and trade?
- **Where have inconsistent identification or data requirements** across states and sectors created real cost, duplication or delay for you?
- **Which reforms in the discussion paper** do you see as most dependent on this shared foundation?
- **Are there examples or evidence** - yours or published - that would strengthen the case, particularly on the value of shared identification and data sharing?
- **Anything you think we have missed,** or where we should be more careful.

Why this matters to you - industry, producers and traders

If you represent producers, supply-chain agents or traders, the reforms in this paper are not an abstract government exercise. They will shape the day-to-day cost of compliance, the speed of response when something goes wrong, and - increasingly - whether your members can sell into the markets that matter. The practical question for industry is simple: will the reforms make us more competitive, or add cost without benefit?

What a good outcome - and a bad outcome - looks like

A good outcome	A bad outcome
• A producer is identified the same way everywhere - enter property and product details once, recognised across states, agencies, buyers and export systems. Less duplication, lower compliance cost. • When an incident occurs, the response is precise - a detection or recall is drawn tightly around the affected properties and batches, so unaffected producers keep trading. • Market-access requirements are met from data you already hold - proof of origin, treatment and freedom generated as a by-product of normal operations, not a separate burden each time.	• Every jurisdiction and scheme invents its own identifiers and data demands - members fill in the same information many times, in many formats, and bear the cost of reconciling it. • A single detection triggers a broad, blunt response - because the system cannot tell precisely what is affected, the safe option is to cast the net wide, catching compliant producers in shutdowns better data would have avoided. • Australia falls behind on the data that markets now demand - and exporters scramble, late and at high cost, to meet requirements competitors prepared for years earlier.

The international reality: market access is becoming a data question

Around the world, market access is shifting from tariffs to information requirements - non-tariff measures that ask, in effect, "prove what this product is, where it came from, and how it was handled." A clear signal of direction is the European Union's Ecodesign for Sustainable Products Regulation (Regulation (EU) 2024/1781), in force since July 2024, which introduces the Digital Product Passport and phases in structured, product-level data obligations through delegated acts from 2026 - applying to goods placed on the EU market, including those made outside the EU. [14] Agri-food is not in the first wave (batteries, textiles and electronics lead), so this is a direction-of-travel signal rather than an imminent agri-food obligation. But the mechanism behind it is exactly the foundation this paper is about: the ability to identify a product and its origin precisely, and to share trusted data about it.

The practical bottom line for industry

The reforms succeed for industry only if they reduce duplication, enable precise rather than blunt responses, and position Australian producers to meet rising international data requirements. The test for every proposed reform is whether it makes a concrete difference to producers' cost and competitiveness - not whether it adds another layer of reporting.

*Please share your comments **by COB Wed 10 June 2026** to Peter Carter of Neil McSkimming (details below). You are welcome to share and draw on this content - and on the draft question responses in our submission - in your own submission.*

For more information

For more information on this submission, please contact

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Sources

All sources below were publicly resolvable at the time of writing. Reference numbers match GS1 Australia's submission.

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