

# A TRACE OF COMMON SENSE

In the middle of a pandemic, product traceability is arguably more important than ever.

By Peter Howard.



## Fish out of water

I've never been a fan of jigsaws. As a keen wildlife photographer, I avoid them by claiming a preference for intact images, but the truth is they frustrate me more than anything I've ever known.

On my 21st birthday, a friend gave me a 3,000-piece puzzle and challenged me to complete it within seven days. Success meant he would buy my ticket to a forthcoming Pink Floyd concert, and failure meant I'd buy his.

I should have known better, but the puzzle's image of an eagle snatching a confused looking salmon from a lake, was enough to lure me in. The deal was on.

That evening, when I opened the box and read the manufacturer's note, I knew I was in trouble. "This jigsaw is designed to be challenging," it said. "There are no straight-edged border pieces, and to make things fun we've included 50 pieces that don't belong." After then reading that every piece was double sided but only one side related to the image, I realised how that salmon must have felt.

I closed the box and called my friend, but his delighted laughter told me everything I needed to know. I'd been completely set up – and the tickets were far from cheap.

## An emerging puzzle

Tracking the journey of products in a supply chain is the commercial world's version of a jigsaw. There are thousands of pieces of information, all meaningless in isolation, but when linked to related pieces of information, they begin to form a picture.

Like my jigsaw, supply chains contain incompatible pieces of information, but with no picture on a box to guide the process, making sense of those pieces can be impossible. It's as though somebody took multiple jigsaws, each build using a different format, then mixed them in a single box from

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which we're expected to produce a meaningful picture.

Twenty years ago, people wouldn't have worried about having incomplete or confusing pieces of information. Supply chain partners were kept in the dark about things that didn't require their involvement, and nobody asked for real-time supply chain snapshots.

Today, companies running supply chains, particularly those with multi-tier supply chains, such as supermarkets, consider supply chain transparency a high priority. For some, it's part of a strategy to build customer loyalty and competitive advantage, while others are pursuing different goals. Whatever their purpose, *all* companies understand supply chain transparency is an enabler for improved visibility, more effective traceability and greater agility in volatile times – such as a pandemic.

This radical change in thinking is the result of various factors. There have been technological advances, increased pressure from governments,

consumers and other stakeholders wanting to know more about their own particular area of interest, and Covid-19 has put supply chains firmly under the microscope with the very real threat of essential-supply shortages.

For example:

- Changes in regulations have raised awareness, triggered increased due diligence and revealed a need for improved supply chain reporting.
- The rise in counterfeit products has driven a need for improved visibility throughout the supply chain to ensure authentic product provenance.
- The drive for efficiency and cost saving created a need for more sharing of information among partner organisations and stakeholders.
- Consumers are demanding transparency regarding food origins, methods of cultivation and production, sustainability and slave labour.
- The appearance of a pandemic brought about unusual supply chain patterns, including the ACCC approval of cross-company collaboration.
- Globalisation of supply chains has increased the threat of disease

transmission and bio-contamination, with regulation and effective traceability key elements in the response mechanism.

In the middle of a pandemic, product traceability is arguably more important than ever. Companies are facing pressure to improve visibility in complex multi-tier supply chains, and the recent increased demand for supply chain traceability has prompted both industry and governments to initiate projects and pilots across many sectors.

In response to industry concern that some of these initiatives may lead to duplication and the creation of multiple frameworks, GS1 Australia, the leading provider of standards and solutions for more than 20 industry sectors, has launched an advisory group dedicated to the issue of supply chain traceability.

With GS1 barcodes being scanned more than six billion times every day and a specific set of GS1 standards already used by the foodservice industry for traceability, the company is certainly well-placed to lead that discussion.

**Encouraging cross talk**

The National GS1 Traceability Advisory Group (NGTAG) consists of GS1 members, relevant federal and state government representatives, and industry peak bodies who will be making recommendations regarding the need for supply chain traceability standards and priorities.

The group's stated objectives include informing GS1 Australia on the requirements of industry and government relating to traceability standards, and communicating with industry and government on supply chain traceability priorities in this country.

At the inaugural meeting on 10 September, chaired by GS1 Australia CEO Maria Palazzolo, more than 60 senior executives from government and industry discussed the way forward for enhanced traceability in Australia.

"This meeting is not only very timely, but very, very important," Ms Palazzolo said in her opening address. "Our world is continuing to evolve in many strange ways, but one thing is certain: consumers are becoming much more curious, and much more demanding

around transparency and the safety of the goods they purchase and consume.

"Today, full traceability across the supply chain is no longer a 'nice to have'. It's actually a must-have," she said.

Outlining the group's purpose, Woolworths business partner (technology), and NGTAG Co-chair Ram Akella said: "It's a matter of understanding what's missing and how we can bring the different pieces of the puzzle together. It's about exploring how we can make things work together and how to work with other entities in the same supply chain.

"We'll be discussing what's important from a customer point of view, what's important from a regulation and government point of view, and how changes can be made cost-effectively at the same time."

Following the inaugural meeting, the group identified key use cases confirming the need for enhanced supply chain traceability. These include:

- Improved food and consumer safety through the availability of more robust, accurate and complete product data.
- Product authentication through

accurate and rapid detection of counterfeit products and instances of unauthorised distribution.

- The need for improved end-to-end product visibility across the supply chain, to deliver greater transparency between trading partners and consumers.
- More efficient and accurate regulatory compliance, including provenance, country of origin and modern slavery.
- Greater supply chain efficiency through cost savings resulting from simplified and automated business processes such as order to cash, inventory management, order fulfilment and returns management.
- Improved cross-border/market access and biosecurity.
- Over the next 12 months, NGTAG plans to lead the future of transformation and innovation for Australian traceability, including communicating, educating and co-defining a strategic master plan for implementing end-to-end supply chain visibility for Australian trade.

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### Share and share alike

Clearly, traceability has become a vital supply chain function. It minimises supply chain disruption, avoids the cost of removing and disposing of unaffected stock, and protects the reputations of businesses and brands.

When food safety issues are identified, an effective traceability system enables the rapid identification of affected products so corrective action can be taken. This not only avoids the risk of damaged or contaminated products continuing downstream to consumers, but, if necessary, enables accurately targeted product recalls.

However, traceability is complex, requiring a business to track every event impacting every product moving through its supply chain. Starting with the initial source and continuing through processing, manufacture, storage and distribution to the retailer, events are recorded based on the following:

- Who is actioning the event?
- What products are impacted?

- When did this time-stamped event occur?
- Where was the product and where is it now?
- Why was this observed and at which step?

When traceability is effective, all movements can be traced one step backwards and one step forward from any given point in the supply chain. According to Food Standards Australia New Zealand, this “enables corrective actions (such as a product recall) to be implemented quickly and effectively when something goes wrong. When a potential food safety problem is identified, whether by a food business or a government agency, an effective traceability system can help isolate and prevent contaminated products from reaching consumers”.

While traceability is undoubtedly important, there are challenges to overcome before optimum supply chain traceability becomes a reality. To learn more about those challenges, *Retail World* spoke to GS1 Chief Customer Officer Marcel Sieira.

“From my perspective, the biggest issue with traceability isn’t the technology, or the systems, or what happens in the supply chain,” he said. “The issue is a lack of interoperability, and it’s one of the primary reasons for forming this group.

“At the moment, a lot of industry sectors and organisations are looking to put in place traceability systems. However, the conversation around the foundational data standards those systems should be using isn’t being given the attention it deserves.

“If you’re looking at implementing end-to-end traceability in a supply chain, and not just traceability within your own business, you’ll invariably need to capture, store and share traceability data across different participants in that supply chain.

“That sharing needs to include different customers, suppliers and service providers, both domestically and overseas, irrespective of the technology used to capture the information. This level of interoperability can’t be contained within a single industry. If it’s going to be effective, it must span different sectors.

“For example, a farm in the agricultural sector will develop a traceability system for the food supply chain, but they also supply products into pharmaceutical manufacturing. Ultimately, the farm’s freight data needs to integrate with the transport and logistics providers, so interoperability is required between the traceability systems in agriculture, healthcare, and transport and logistics.”

### About interoperability

To establish an effective traceability system requires every action taken by supply chain partners to be recorded, linking the event to both the input (received from) and the output (going to). If those linkages aren’t made or the data can’t be interpreted by others, there is no interoperability, and traceability is threatened.

The importance of interoperability becomes clear when we understand that throughout the supply chain journey, products can be aggregated into larger units and de-aggregated into smaller units. While this is typically done for freight purposes, it’s vital the individual units can be tracked through each event.

Consider the example of a grower harvesting tomatoes. They start



the journey packed in 200 cartons labelled with a barcode containing the required information. Next, an independent transport company collects the tomatoes, aggregating the 200 cartons into a single pallet it delivers to a wholesaler. On receipt, the wholesaler stores the pallet, but later it's divided into four shipments of different sizes, ready to be collected by a subcontractor and delivered to separate retailers.

"Whatever traceability events physically take place in the supply chain, you have to be able to identify what it is that you're tracking in that event," Mr Sieira said.

"Take that pallet of tomatoes: it needs to have a unique ID that identifies that shipping unit for its entire life, and against which data can be recorded.

"That ID needs to be unique and understood by everybody in the supply chain, so you need to have a standard to be able to identify it.

"You need to identify that the supply chain event is taking place in a specific location, because location is very important in traceability. You also need to understand which parties are participating in the event, and why it's happening."

### We can speak the same language

In a grocery supply chain, the parties include growers, importers, transport companies (and the subcontractors they use), processing and manufacturing companies, packers, warehouse operators, wholesalers, distributors and the supermarkets retailing the products. When local delivery to the door takes place, the likes of Uber Eats, Menulog and Deliveroo also become part of the chain.

While this may seem simple, the sharing of those records with other supply chain partners is causing difficulties, particularly as the standards being used by supply chain partners are frequently incompatible.

"With so much information being captured, if the consideration of standards is a secondary thought, these systems will inevitably create islands of information," Mr Sieira said. "When that happens, the users of these traceability systems will have difficulty sharing data with other parties in the supply chain.

"There are certain points in the supply chain where all of these industries come together. If you look at it from the



perspective of transport and logistics, whether you're talking about a carcass of beef, a punnet of strawberries, or a pallet of Nestlé Milo, all these different types of commodities eventually become freight."

While freight is where everything comes together, when products reach a store, terms such as 'pallet' and 'container' disappear, and the individual units re-emerge to become stock on shelves.

Therefore, retailers must not only track products through their supply chain as aggregated freight units, but also track the individual events. Products may be combined, separated, redirected, or perhaps used to make other products. This means for every event, there needs to be a meaningful record enabling the ability to trace back.

For example, what sets out as a carcass of beef will go through various supply chain events before arriving as different products in multiple supermarkets. By then, it may be packaged as steak, sausages or chops, perhaps also appearing in any number

of different products, such as the flavouring in packets of chips and tins of gravy powder.

While the retailer needs traceability all the way back to the source, their supply chain partners will also benefit from shared data. For this, the data standard being used needs to be consistent throughout the supply chain.

"Looking at it from a retailer's perspective, they need to be tracking and tracing all those different types of commodities," Mr Sieira said. "If the different systems and solutions are going to offer the capacity to integrate and share that data, they need to consider data standards.

"GS1 standards are the foundation for this interoperability because they're technology and supplier neutral, offering a common platform where trading partners across the globe can work collaboratively to deliver safe, legal products."

While we're unable to help jigsaw fans, those wanting to learn more about effective traceability can visit the NGTAG webpage [gs1au.org/ngtag](https://gs1au.org/ngtag)