Acknowledgement of Country

We acknowledge the Traditional Custodians of the various lands on which we meet and work today and any First Nations’ people that may be participating in this meeting.

Specifically, we acknowledge the people of the Kulin and Eora nations, where GS1 offices are located, and pay our respects to elders past, present and emerging.

We recognise and celebrate the diversity of First Nations’ people, and their ongoing cultures and connections to the lands and waters across Australia.
### Meeting Etiquette

<table>
<thead>
<tr>
<th>Introduce Yourself</th>
<th>Be Considerate</th>
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<tbody>
<tr>
<td>When asking a question</td>
<td>Silence phones</td>
</tr>
<tr>
<td></td>
<td>Keep comments concise</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Be Collaborative</th>
<th>Be Professional</th>
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</thead>
<tbody>
<tr>
<td>Ask questions</td>
<td>Speak on company’s behalf</td>
</tr>
<tr>
<td>Be open to other views</td>
<td></td>
</tr>
</tbody>
</table>

### Identify Yourself: Name & Company

- **How to change your screen name:**

1. After launching the Zoom meeting, click on the “Participants” icon at the bottom of the window.
2. In the “Participants” list on the right side of the Zoom window, hover over your name and click on the “Rename” button.
3. Type in the display name you’d like to appear in the meeting and click on “OK.”
Use the Q&A

- Click the bar at the bottom of your screen
- Click Q&A to pose questions

GS1 Australia

Competition Law Caution

Participants on GS1 Boards, committees, task forces, work groups, or other similar bodies, must always remember the purpose of the Board, committee, task force, or work group is to enhance the ability of all industry members to compete more efficiently and effectively to provide better value to the consumer or end user.

GS1 activity almost always involves the cooperation of competitors; therefore, great care must be taken to assure compliance with competition laws in Australia and in other jurisdictions (including the Australian Consumer Law (ACL), the Competition and Consumer Act (CCA) and state based Fair Trading Legislation).

This means:

- Participation must be voluntary, and failure to participate shall not be used to penalise any company.
- There shall be no discussion of prices, allocation of customers or products, boycotts, refusals to deal, or market share. (For the avoidance of doubt, this does not preclude discussion of GS1 Australia’s prices, customers or products.)
- If any participant believes the group is drifting toward impermissible discussion, the topic shall be tabled until the opinion of lawyer(s) with experience in competition law can be obtained.
- Where appropriate, meetings shall be governed by an agenda prepared in advance and recorded by minutes prepared promptly after the meeting.
- Where appropriate, tests or data collection shall be governed by protocols developed by GS1 in consultation with, and/or monitored, by legal counsel.
- The recommendations coming out of a GS1 Board, committee, task force, work group, are just that. Individual companies remain free to make independent, competitive decisions.
- Any standards developed must be voluntary standards.
Agenda

• Welcome from Peter Carter
• Setting the scene by Robert Beideman - via video
• Keynote Speaker – John G Keogh
• Have your say - Poll
• Case Study Presentation
  - Paul Ryan – Trust Codes
  - Max Soyref - KPMG
  - Rose Elphick Darling – Deakin University
• Panel Discussion including Ian Watt and John Keogh
• General Business

Setting the Scene - Robert Beideman

Interoperability and supply chain data exchange
An interview with Robert Beideman
GS1 Chief Product Officer
Today’s food supply comprise complex ecosystems across multiple stakeholders, countries and languages, disparate technologies and tools, essential services and regulations that aim to produce and distribute safe and nutritious foods.

An ecosystem is defined as: “A biological system composed of all the organisms found in a particular physical environment, interacting with it and each other.”

System shocks can enter from many areas.

Covid highlighted a lack of interoperability and visibility into supply ecosystems.
Food ecosystems are very complex and comprise products and services.

Data Trust Platforms in the Agri-Food Sector

**AUS: AGRIFOOD**
- **VISION** To create an interconnected data highway for Australia's Agri-Food value chain.
- **MISSION** Permissioned exchange of data, timely access to information, release management capacity.
- **FUNDING/TIMELINE** Initial $4 million AUD, final demonstration: March 30, 2022, $100 billion AUD farmgate value target by 2030.
- **KEY TECHNOLOGY** Experimenting with methods of data exchange as well as technology vendors: AxisTech, Eriston, Reasor, Telstra/IBM consortium.

**UK: TRUSTED BYTES PROJECT**
- **VISION** Facilitate flow of goods across international borders and drive productivity within the UK food economy.
- **MISSION** Integrate across multiple ERP systems, connect the supply chain with central government and other partners.
- **FUNDING/TIMELINE** 2.8 million pounds funded by Innovate UK, expected 2-year project (started early 2021).
- **KEY TECHNOLOGY** BlueRing software to integrate with HMRC, extended by an API and connectivity to telecommunications infrastructure.

**TANZ: TRUST ALLIANCE NZ.**
- **VISION** A trusted digital platform for New Zealand producers, growers, exporters, retailers & consumers to easily share trusted data.
- **MISSION** Preserve and enhance the global and domestic competitiveness.
- **TIMELINE** Established late 2019, non-profit, member-based, currently consisting of at least 23 members.
- **KEY TECHNOLOGY** TrackBack: a decentralized technology platform with easy-to-integrate blockchain toolkit underscoring the data-sharing and interoperability.

**EU: AGRIFOOD MARKET**
- **VISION** Supporting a modern, market-oriented farming sector, supporting investment in the broader rural economy.
- **MISSION** Data portal of information and visualizations on imports, exports, prices, production and aid schemes, organized by theme in each agricultural sector.
- **FUNDING/TIMELINE** Funded by EU (member countries), completed around 2020.
- **KEY TECHNOLOGY** Manual export of data or automatic connection with M2M interface, data submitted and sourced through ISAMM, NewCRONOS, COMEXT.
The essential significance of the ecosystem concept is generated from the analysis of organic networks, based not only on a positive view of their functioning, but also the negative and competitive aspects: ecosystem-level competition, predation, parasitism, and destruction of the whole system. Each actor in the ecosystem has different attributes, decision-making principles, and purposes. These differences cause unintended results at the ecosystem level, although each actor’s decisions and behavior may be rational at any specific point. The analytical border of the ecosystem is the product/service system, and is not limited to national borders, regional clusters, contractual relations, and complementary providers. Within the border, not only business actors, but also non-business actors are included. Naturally, the ecosystem analysis requires the longitudinal observation of the product/service system’s dynamic evolution or extinction.


Conclusions

- We don’t have food supply chains anymore – we have complex food supply ecosystems
- Interoperability between ecosystems is an essential consideration to build resilience
- Systems thinking is a lost skill.....organizations MUST consider the potential cascading consequences of adjacent systems failures
- Foundational standards like GS1/ISO and others are essential considerations to enable interoperability – one platform or one ecosystem with multiple platforms will not be sufficient
- Think about the ATM model of interoperability with embedded trust and transparency
Have Your Say

Poll

- **Q1. Market awareness** - Out of 5, how would you rate the market’s (or your customers’) knowledge of data standards use in supply chain traceability systems eg. understanding the value of traceability system interoperability? [0 = less/no knowledge to 5 highly knowledgeable]

- **Q2. Role of industry organisations** - Should peak industry organisations play a more or less active role promoting awareness of and a standards-based approach to supply chain interoperability to realising the benefits of enhanced traceability [0 = less/no to 5 more/large]

- **Q3. Role of government** – to what extent (if at all) do you agree that governments should play a more proactive role in promoting awareness and use of data standards for supply chain traceability to realise public benefit [0 = less/no to 5 more/large]

- **Q4. GS1 standards awareness** - Would you be interested in a solution providers deep dive or review of the GS1 traceability standard guideline? Example: For the Australian dairy industry.
  - Yes or No

Interoperability Case Study Review

Paul Ryan  
Trust Codes  
Chief Executive Officer  
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Max Soyref  
KPMG  
Director, Ventures  
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Rose Elphick –Darling  
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The Global Language of Business
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OVERVIEW OF THE INFANT NUTRITION E2E TRACEABILITY

Data interoperability | Connected Products | Product Cloud
Digital Brand Protection | Anti-counterfeit | End-to-end Traceability

TRUST CODES

Confidential – Commercially Sensitive.

Trust Codes product cloud and unique digital licence plate

- Trust Codes product cloud is based on a unique digital identity/licence plate for everything- a digital twin of the physical item- 100s of millions of infant formula cans and milk powder bags have a digital identity from birth.
- The digital twin is tracked throughout the manufacturing and supply chain. The digital twin connects product data across the value chain for traceability, visibility, validation, real time intelligence and connection with people.
- Machine learning intelligence and business logic – both programmed and predictive – applied to that digital twin.
- All based on interoperability and data coherency delivered by GS1 standardised data and syntax.
Infant nutrition market **context**

- Many routes for supply to the consumer create supply chain opacity.
- Regulatory impact for marketing of products in many markets.
- Multiple layers of product distribution—aggregation and disaggregation make accurate end to end traceability difficult.
- Traceability is a competitive edge and helps engage with consumers transparently.
- Often products have been distributed by “informal channels”

**Trust Codes interoperability**

- Interoperability is not merely applying a GS1 standard data set or barcode.
- It includes methods to exchange standards based, coherent data between many disconnected participants in the value chain.
- Use of data aggregation, standards, security and obfuscation are all part of interoperability, and platform providers exist to simplify the data management and governance processes, and to develop and support data interoperability.
KPMG ORIGINS
A track-and-trace solution helping trading partners codify trust, enabling more streamlined interactions between organisations

Events
- Trusted immutable data capture via GS1 compliant EPCIS Events

Products
- Track and trace digital twins of your products from end-to-end

Certificates
- Capture, digitise and connect certifications for digital twins

Recalls
- Rapidly identify affected products and enhance your recall processes

KPMG Origins
Enabling ecosystems to thrive
**CASE STUDY: AUSTRALIAN BEEF**

In the 21st century commerce, products rely on complex value chains to assemble together credentials such as provenance, asset traceability, financing and insurance.

**STANDARDISING DATA**

Seamlessly connected, standardised and validated data to enable a common digital twin asset taxonomy to empower the data interchange between organisations.

- **Physical Product**
- **Digital Twin**

Linking physical products to their digital twins.

- **Specifiations**
  - Category Classification
  - Grade Classification
  - Certification
  - Carbon composition
- **Quality**
  - Temperature
  - Marble Score
- **Market Information**
  - Valuation
  - Market Eligibility
- **ESG Impact**
  - Stage emissions
  - Accumulated emissions
  - Business practices
- **Auditable History**
  - Events
  - Origin
  - Inputs/Outputs
  - Ownership Changes
- **Current Status**
  - Ownership
  - Location
  - Custodian
  - Logistics Unit
- **3rd Party Stakes**
  - Financed Y/N
  - Insured Y/N
  - Forward Sold Y/N
- **Integrity**
  - Data Providers
  - Data Sources
  - Data Qualifiers
INTEROPERABILITY

Interoperability across supply chains enables greater collaboration and extends traceability solution use-cases.

- **COMMON TAXONOMIES**: Industries need common language and data requirements to describe their products and features of the products – this needs to go beyond Logistics and Retail but include financiers, insurers and regulators.

- **DATA STANDARDISATION**: Organisations using same data taxonomies should be able to share data in a standardised format.

- **INTEROPERABLE IDENTIFIERS**: Ability to use identifiers that are relevant to the part of the supply chain is key – supporting multi-ID formats helps make players interoperable.

---

Thank you

Max Soyref
Director, Ventures
msoyref@kpmg.com.au
Why implement industry demonstrations?

To **test the E2E data model in real world settings** ... using data formats that allow agreed SC level information to flow between partners with a range of applications, processes and technologies.

To **better understand the challenges** ... identifying (and remedying) gaps in coverage, or challenges in implementation.

To **better understand the broader costs and benefits** ... in terms of efficiencies, cost-savings, visibility, technology uptake and compliance support in compliance.
How does it work ... who does what?

Deakin
Project management
Evaluation Reporting

R&R Smith
Supply information on processes and IT systems
Determine CTEs/KDEs (especially those underpinning organic status)
Determine metrics to measure impact
Product recall test

iTrazo
Assess system gaps
Selection of input technology
Complete Supply chain eco-system process mapping
End-to-end traceability
Solution for Key data elements and critical trace events
Product recall test

Woolworths
SC mapping through Primary Connect and WOW inbound and distribution
Determine metrics to measure impact
End-to-end traceability testing
Product recall

GS1 Australia
Review of data standards
Advisory for implementation solution providers

SRT Logistics
CTE data from TMS on specific shipments

Complete Eco-System Supply chain process
Business benefits

**Efficiency**
Clarity on CTE/KDE suite, verification of data, saving integration costs, the potential to automate

**Security**
Cybersecurity management of data

**Visibility**
Platform access, product data flow across enterprise systems

Next steps

Source: MIT 2020
Panel Session

John G. Keogh  
Veteran, Strategist, China Observer  
Advising & Researching Digital Supply Ecosystems & Transparency & Trust

Rose Elphick-Darling  
Deakin University

Ian Watt  
Vice-Chair  
UN/CEFACT Bureau - Program Development Area

Max Soyref  
KPMG

Paul Ryan  
Trust Codes

General Business

• Traceability Solution Provider - Special Interest Group

Open to all industries and solution providers interested in supporting enhanced product traceability for Australian industry and governments. Traceability requirements are continually evolving. No single solution is likely to meet all industry needs, now or into the future.

You are welcome to play an active or passive role in the group with the intention of networking, sharing insights and hearing from industry and government representatives to discuss projects, issues, trends and, where possible, align needs.

There is no cost to participate in this group other than the contribution of your time.
General Business

- DAWE update
- Next NGTAG open event, 2DBarcodes