

FOOD TRANSPARENCY

TRACING | TRACKING | PROVENANCE

EDITION 2 - SEPTEMBER 2020

Exploring the tools and resources available
to help tell the story of your products



TASMANIAN
FRUIT & VEGETABLE
Export Facilitation Group

TERMS AND DEFINITIONS

TRACKING

Systems monitoring when a good or bundle of goods leaves or arrives at a destination. It relies on interaction with the good or bundle of goods such as scanning a label or registering a container's location. These processes aid tracing.

REAL-TIME TRACKING

A system offering constant updates about the location of goods or bundles of goods as they travel from point of origin to final customer. Using GPS enabled technology the solutions generally rely on data transmitters being packaged with the goods and information being sent by the transmitter at regular intervals. These products aid tracing as verified routes ensure that the goods are authentic.

TRACING

This refers to a system or method enabling goods to be tracked from their point of origin to point of consumption. It may exist in a range of ways including Property Identification Codes (PICs), National Livestock Identification System tags, batch codes on products or similar items.

In food production systems tracing is extremely important to enable product recalls or removal of contaminated goods from the market place.

PROVENANCE

Telling the story of where the product comes from, provenance in this sense includes the use of systems and processes to communicate information to the final customer. The information is used to verify the authenticity of the product. Provenance systems may include interactive elements such as labels, QR codes or other tools that enable customers to learn more. Digitalisation of Provenance provides the opportunity to interact with other platforms such as supply chain traceability and Biosecurity.

THANK YOU

to Ms Rebecca McLellan from Port of Melbourne for compiling this document.





WHY IS PROVENANCE IMPORTANT?

Provenance is gaining importance as consumers seek assurances that their food is safe and coming from a trustworthy source. Transparency in the food system, being open with customers about the story behind your products and the supply chain that ships them, creates trust and a willingness to invest in premium products. It helps build your brand.

AgriFutures recognise the value of provenance in improving customer connectivity and have a suite of resources available at:

<https://www.agrifutures.com.au/rural-industries/provenance-and-story-telling/>

THE TASMANIAN STORY AND YOU



Linking your products or services to the Tasmanian story is a way to both expand your story and help let the world know about the opportunities in Tasmania. Through having your provenance linked to the broader Tasmanian story you could help transition your business's overseas or interstate customers to being visitors to Tasmania or understand the education opportunities or the jobs that are available.

The Tasmanian story is your story. Brand Tasmania is developing solutions to integrate the Tasmanian story into other platforms.

For more on Brand Tasmania go to <https://www.brandtasmania.com/>

THINGS TO THINK ABOUT

Investing in a provenance platform needs to make economic sense for your business, customers and circumstances. When considering the potential costs of a platform or offering, the following items may be relevant:

WHAT DO YOU WANT THE SYSTEM TO DO?

Think about the features you would like, the ones you need and the time you have to dedicate to its management and maintenance. If you only want the system to provide a portal for customers to learn more about your business then a simpler system may be ideal. If you want to prove that the product you're selling came from your place then a more detailed system may be useful.



HOW WILL THE SYSTEM FIT WITH YOUR EXISTING SUPPLY CHAIN?

**ASK HOW
PLATFORMS
CAN BE
TAILORED
TO MEET
YOUR NEEDS**

In asking this question you're looking at whether there will be additional investments to be made downstream. Does the system utilise existing technology or will you need your service providers to invest in new equipment or systems? Engaging with the members of your supply chain early in the process could help you identify systems that they already use for other customers or areas where they can assist you.

A number of the platforms offer a variety of features. Not all may be relevant for your business. This may affect the price charged for your use of the system.

Think about how your needs may change if you grow your business. Ask how pricing may vary with more products or customers in other regions.

WILL THE SYSTEM BE EASY FOR YOUR CUSTOMERS TO USE?

Test the system out and see how easy it is for you to use but also think about how easy it will be for your customers to use. Is the enabling tech available in their region? Does the tech offer multiple languages? How could customers who don't read/speak English have information translated?



COST COMPARISON

Unfortunately there isn't a standard charging system for these systems. The charge may have some or all of the following elements:

- An up-front cost
- Monthly licence fees
- Per label fees
- User fees
- Product line fees
- Reporting fees

To ensure that you can get a true indication of the costs of each package to your business, be clear about how you will use the system.

Consider creating a standard work package and asking each provider to quote based on that package.

WHAT ELEMENTS MAKE UP A GOOD SYSTEM?

Knowing what to look for in a good provenance or traceability system may be difficult if you've not used one before. Barry McGookin, of Food Innovation Australia Limited, has put together a resource summarising the elements of a good system. Specifically examining traceability and provenance, Barry has identified 4 key supports to both being:

1. A physical barrier or deterrent that is uniquely identifiable;
2. A platform to capture and trace data;
3. A stable regulatory and scientific framework; and
4. Training and investment in human capital.

A fifth element, the ability to authenticate the product, is added for provenance systems. The full details of Barry's guidance is available at <https://trust.foodmatrix.com.au/case-studies>.



Standards are everywhere, however, they are often invisible and not the first thing that comes to mind when you have to find a solution for a business problem. Standards provide fundamental (but not mandatory) building blocks for product or solution development by establishing consistent methods that can be universally understood and adopted. This helps ensure compatibility and interoperability, reduce cost and complexity for users. Standards support industry to be globally competitive and profitable. They also help solution providers access larger markets faster.

GS1 Australia is not for profit. It works with producers, processors and retailers, as well as their solution providers, to understand and use standards that are essential for market access and competitive international trade. In a recent survey, by GS1, of 30 traceability solution providers, 100% of respondents noted standards as either 'critical' or 'important' for their solutions. For further information on traceability solution providers or to review the GS1 Traceability Standard, implementation guidelines and resources for fresh produce visit: <https://www.gs1au.org/what-we-do/standards/traceability>

When you are looking at potential traceability solutions not all of them will comply with a set of standards GS1 provides. This becomes another item for you to consider when looking at how the solution will fit with your business goals. Ask your retailers about the standards they require you to adhere to.



PROVIDERS

NAME & DETAILS	PRODUCT DETAILS	ELEMENTS
<p>LAAVA https://www.laava.id/ info@laava.id Mr Gavin Ger: 0402 023 703 Suite 7 First Level, 18-20 Cooper St, Surry Hills NSW 2010 RSA Unplugged 2019 - winner</p>	<p>A unique fingerprint on each product enables producers to authenticate every product, integrate with their existing systems and communicate with customers.</p>	<p>PROVENANCE TRACING TRACKING</p>
<p>IBM FOOD TRUST https://www.ibm.com/au-en/blockchain/solutions/food-trust Online contact form 132 426 Level 13, IBM Centre 601 Pacific Highway St Leonards NSW 2065</p>	<p>Highly scaleable and customisable solution to be implemented across the supply chain via blockchain. It can include digitised content and enables the companies in the chain to track where the product is at any point in time.</p>	<p>PROVENANCE TRACING TRACKING</p>
<p>SIG PAC.TRUST https://sig.biz/en/solutions/connected-pack/pactrust Adam Lipscomb: (03) 9301 0219 adam.lipscomb@sig.biz 9-31 Riggall Street Broadmeadows VIC 3047</p>	<p>100% traceability for every single package using unique pack serialisation and robust back end technologies. Can be utilised by customers with smartphones to trace their item from paddock</p>	<p>PROVENANCE TRACING</p>
<p>TRUST CODES https://www.trust.codes/#/ info@trust.codes (07) 3067 4814 11 Dockside Lane Auckland, Central NZ 1010</p>	<p>A cloud-based platform creates a unique digital identity for every product/item to make it traceable. Trust Codes goes beyond 'mass-serialisation' because each and every cryptographic identity is web addressable to create a persistent and traceable item level digital fingerprint.</p>	<p>PROVENANCE TRACING</p>
<p>PWC FOOD TRUST https://www.pwc.com.au/agendas/food-trust.html Email via online form (02) 8266 1458 Craig Heraghty</p>	<p>A fully integrated and trusted exports platform enabling Australian produces to prove to customers their products are genuine at point of sale. It improves the customer experience by providing an augmented reality experience giving more information about the food than they've ever had before.</p>	<p>PROVENANCE TRACING</p>
<p>TRACETECH https://itrazotracetech.com/ ree.ram@blockbitsolutions.com 0418 132 133 Level 24, HWT Tower 40 City Road, Southbank, VIC, 3006</p>	<p>A modular offering enabling businesses to customise the platform to meet their needs. From real-time tracing to communicating with customers, the platform can offer benefits across processes, customer engagement and asset control.</p>	<p>PROVENANCE TRACING TRACKING RT TRACKING</p>

NAME & DETAILS	PRODUCT DETAILS	ELEMENTS
<p>EMYDEX TRACEABILITY REPORTING https://www.emydex.com Ian Carson: 0456 631 662 sales@emydex.com 1/12 Browning St, South Brisbane QLD 4101</p>	<p>Emydex generates unique ID numbers for units that are then maintained through the system and can be used for batch manufacturing, full ingredient traceability and carcass tracing.</p>	<p>MEAT INDUSTRY PROVENANCE TRACING TRACKING</p>
<p>T-PROVENANCE Trust Provenance www.trustprovenance.com Andrew Grant Andrew@trustprovenance.com Australia</p>	<p>Food Traceability software allowing produce to be traced from the farm to the final consumer. Using blockchain technology the system integrates all software along the supply chain to monitor where goods are and enable system improvements. Created in conjunction with the CSIRO.</p>	<p>PROVENANCE TRACING TRACKING</p>
<p>AGLIVE www.aglive.com sales@aglive.com 1300 893 531 PO Box 196 Geelong Victoria 3220</p>	<p>Linking farm data to the supply chain, the system enables you to track animals throughout their entire life and then the product movement through the supply chain. Monitoring the condition of the products throughout the chain, temperature, location, etc, it gives the buyer and the seller confidence.</p>	<p>PROVENANCE TRACING TRACKING</p>
<p>IDLOCATE CCL Australia & the Result Group https://idlocate.co.nz John O'Brien: (08) 8568 8800 jobrien@cclind.com or Michael Dossor: 0401 266 118 Michael.dossor@resultgroup.com.au</p>	<p>Unique QR codes integrated into product packaging that automatically check the legitimacy of the product each time its scanned. Alerts are created if there is an inconsistency. Customers can use their smartphone to interact with brand content including individual product promotions and educational content.</p>	<p>PROVENANCE TRACKING</p>
<p>SAFETRACES MINIDART https://www.safetraces.com/solutions/minidart info@safetraces.com +1.925.326.1200 4473 Willow Road, Suite 260, Pleasanton, CA 94588</p>	<p>Edible, invisible DNA based barcodes approved by the FDA that are applied directly to the product and can be read by a downstream purchaser with a rapid, inexpensive, on-site test to verify product source and authenticity in 25 minutes. Requires investment by downstream participants to enable them to test.</p>	<p>TRACING TRACKING AUTHENTICITY</p>
<p>SOURCE CERTAIN https://sourcecertain.com info@sourcecertain.com 1300 TRACED Suite 5, Level 2 Shenton House 57 Shenton Ave JOONDALUP WA</p>	<p>Utilising chemical based profiling methods to determine that the goods were derived from the stated source, the system provides confirmation of product authenticity. Optional certification provides consumer confidence.</p>	<p>TRACING</p>
<p>KPMG AGRI 4.0 CONNECTIVITY https://assets.kpmg/content/dam/kpmg/au/pdf/2019/agri-4-0-connectivity-digital-innovation-australian-farming.pdf Ben van Delden Head of AgriFood Tech – KPMG buandelden@kpmg.com.au</p>	<p>KPMG is actively involved in AgriFood Tech and IoT through formal partnering, investing and advising organisations from start-ups through to multi-national agri-corporate and research institutions. Its dedicated IoT, AgriFood Tech and Agribusiness teams have a deep and practical understanding of the local and global marketplace and the key trends which are driving the industry.</p>	<p>PROVENANCE TRACING TRACKING BIOSECURITY</p>
<p>4 TECHNOLOGY https://4technology.net (02) 9922 7333 rogerm@4technology.net Roger Meikle Level 1, 50 Yeo St Neutral Bay NSW 2089</p>	<p>Enabling traceability throughout the entire supply chain, the 4Technology solution can connect factory flows to outbound markets and the final consumer. Offering a variety of modules, the solution can be tailored to meet your requirements</p>	<p>TRACKING TRACKING</p>

NAME & DETAILS	PRODUCT DETAILS	ELEMENTS
<p>ESCAVOX http://www.escavox.com 0459 393 515 lwood@escavox.com Luke Wood 45 Duncan's Lane Digger's Rest VIC 3427</p>	<p>Tracking fresh produce through the cold chain, using a Blue Box that looks at temperature and dwell time issues, Escavox enables corrective action to be taken to maintain quality and reduce waste.</p>	<p>TRACKING</p>
<p>FRESH SUPPLY CO https://freshsupplyco.com 0498 357 016 david@freshsupplyco.com David Inderias Level 6 200 Adelaide St Brisbane CBD QLD 4000</p>	<p>A supply chain digitalisation company, Fresh Supply Co provides brand protection, increased consumer confidence and an integrated solution for customers. Consumer engagement is localised, dependent upon the content the region best responds to, on a patented platform.</p>	<p>TRACING TRACKING PROVENANCE</p>
<p>FRESHCHAIN SYSTEMS https://freshchain.com.au (02) 8415 9885 gcalvert@freshchain.com.au Greg Calvert Level 17, 40 Mount St North Sydney NSW 2060</p>	<p>A fully integrated, blockchain enabled, paddock to plate assurance system to verify the food that you eat. FreshChain provides traceability throughout the supply chain and real-time insights during a product's life-cycle. Optional modules include consumer communication and advanced analytics.</p>	<p>TRACING TRACKING</p>
<p>FRESHTRACK SYSTEMS https://www.freshtrack.com.au 0458 234 506 ivan@freshtrack.com.au Ivan Davidson 14 Mary St Boonah QLD 4310</p>	<p>Committed to improving efficiencies, processes and information flows in the fresh produce industry, FreshTrack developed its own software. Fully integrated, the solutions offer the ability to trace goods through the chain whilst also offering process management and inventory control functionality.</p>	<p>TRACING TRACKING</p>
<p>BEEFLEDGER http://beefledger.io 0424 606 500 cm@beefledger.io Charles Turner-Morris Brisbane QLD</p>	<p>An integrated provenance, blockchain security and payments platform. With BEEF Tokens, a new digital cryptocurrency, BeefLedger and QUT worked together to develop the world's first application of distributed ledger to the entire beef supply chain.</p>	<p>PROVENANCE</p>
<p>OPENSC http://www.opensc.org Online contact form Sydney NSW</p>	<p>Created to drive responsible production and consumption with supply chain traceability and transparency technologies, OpenSC provides information for businesses and consumers. It allows you to communicate with consumers whilst also tracing goods and meeting regulations.</p>	<p>TRACING TRACKING PROVENANCE</p>
<p>GS1 AUSTRALIA https://www.gs1au.org/ 1300 227 263 Peter Carter Director of Business Development and Innovation Peter.carter@gs1au.org 8 Nexus Court, Mulgrave, VIC 3170</p>	<p>Utilising the next generation in barcodes this system provides verification and traceability throughout the supply chain. The platform integrates with legacy systems and provides recall functionality.</p>	<p>STANDARDS</p>
<p>FOOD TRACEABILITY IMPLEMENTATION FRAMEWORK GSI Australia & Deakin University https://www.agriculture.gov.au/market-access-trade/traceability-project Marcel Sieira: 0423 566 843 Marcel.sieira@gs1au.org</p>	<p>A framework to guide Australian agricultural industries and food producers, governments and related businesses in enhancing our traceability systems and promoting 'brand Australia' in our international markets.</p>	<p>FRAMEWORK TEMPLATES</p>

FURTHER INFORMATION

BLOCKCHAIN'S MOVABLE FEAST: HOW THE TECH IS CHANGING FOOD SUPPLY CHAINS

This article helps explain how blockchain works in food systems, its benefits and costs. Note the article is American. This means that they don't consider our NLIS or PIC requirements.

CONSUMER TRENDS AND STORYTELLING TECHNOLOGIES

An AgriFutures publication detailing consumer interest in the area.

GROWING FOOD AND FIBRE MARKETS

An \$8 million Victorian Government project to enhance the paddock to port supply chain. Includes a video explaining traceability in horticulture.

FOOD TRACEABILITY, TRANSPARENCY AND TRUST

A KPMG Insight detailing how consumer needs are dictating food supply chain innovation.

IBM BLOCKCHAIN DEMONSTRATION

Follow a blueberry and nut bar through the supply chain to get a feel for the technology. Note it does require a free sign-up to the IBM system.

HOW TO TAMPER PROOF AUSTRALIA'S \$44 BILLION FOOD EXPORT TRADE

Australian Financial Review article exploring the value of tracing and a product's story.

ELEVATING CUSTOMER EXPERIENCE EXCELLENCE IN THE NEXT NORMAL

McKinsey & Company Insight into the expectations of customers and highlighting the importance of digital platforms.

FOOD PROVENANCE AND SCIENCE

A 13 minute New Zealand interview explaining how a product's composition can determine its origin and authenticity.

SMART LABELS IN THE FOOD CHAIN

A Clearmark Solutions document about smart labels and the ways they can be used throughout the supply chain.

IOT TRACKING - SCT AND TELSTRA

A case study analysing the benefits of track and trace technology for all supply chain participants.

AUSTRALIAN MANGO GROWER INPUTS 'WHOLE OF CHAIN' TRACKING SOLUTION

Manbulloo wanted to improve the process of information flow in their supply chain, particularly the effectiveness and efficiency of communications and business operations with their customers.

UNDERSTANDING THE NEW APPETITE FOR PROVENANCE

A report commissioned by McCain Food Services to understand what consumers, at home and eating out, want to know about their food.

AUSTRALIAN COMPANIES PIN SURVIVAL ON DISRUPTIVE TECHNOLOGY

A KPMG Insight into Australian companies and the adoption of new technology.

THE RECOVERY WILL BE DIGITAL

McKinsey's edited collection focusing on the digital future. It includes a range of articles from cybersecurity to the role of blockchain.

THE FUTURE OF PACKAGING - SMART BOTTLES, EDIBLE BOXES

McKinsey's series on the next normal continues with an in-depth look at how packaging may change to provide more information about the product and increase sustainability.

A NEW LASER ETCHING TECHNOLOGY FOR AUTHENTICATION

A project enabled by the [Advanced Manufacturing Growth Centre](#) using CO2 laser etching to track and identify oysters.

HONEY LIBRARY TO PROVE AUTHENTICITY

Creating a record of honey samples, including their individual chemistry, to establish a central database and increase supply chain transparency for consumers.

GRAPE EXPECTATIONS

A [Traceability Grants Program](#) project to trial data logging technology to trace table grape shipments for AND Fresh Pty Ltd.

THE PROVENANCE CONNECTION

A Source Certain article highlighting how traceability gaps for loose produce can be overcome through provenance verification technology being used.



TASMANIAN FRUIT & VEGETABLE EXPORT FACILITATION GROUP

produced this resource as an outcome of their THE OTHER SIDE Project. It is the first in a series of reference material; including the Tasmanian Politicians and Councils Directory booklet.

This resource is a living document and will be updated on a regular basis. Businesses that would like to be involved should contact Ian Locke on ian.locke@tasfruitveggroup.com.au with details.

The project was part funded through the Australian Government's "Package Assisting Small Exporters"(PASE) administered by the federal Department of Agriculture, Water, and the Environment, the Hort Innovation Project #VG16085 "Vegetable Export Facilitators" and by the Group.



DISCLAIMER:-This Document is supplied without prejudice and uses reports, comments and survey results received and made in good faith. Readers are advised to confirm validity of all data prior to making any personal, community or commercial decisions and/or actions.



Tasmanian Fruit & Vegetable Export Facilitation Group acknowledges the Aboriginal Traditional Owners of Country throughout Tasmania and pays respect to their cultures and Elders past, present and emerging.



Tasmanian Fruit & Vegetable Export Facilitation Group
Level 2, Launceston Airport Passenger Terminal Building
201 Evandale Road Western Junction 7212
PO Box 84 Evandale Tas 7212
P (03) 6398 8433 F (03) 6398 8441
E ian.locke@tasfruitveggroup.com.au
www.tasfruitveggroup.com.au

