



National Agricultural Traceability Grants Program – Regulatory Technology Research and Insights Grant Round: FreshChain Systems Pty Ltd grantee summary

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Project goals

The primary goal of the project was to enhance the FreshChain platform, a digital track-and-trace system, by integrating advanced RegTech features and improving end-to-end traceability for perishable food products in partnership with industry and regulators.

FreshChain platform

One of the most significant achievements of the project was the development and implementation of a regulators portal, a secure, digital interface designed specifically for industry and government agencies involved in food safety, biosecurity and market access. This portal gives regulators real-time, permission-based access to data, allowing them to conduct early investigations and rapid responses to potential food safety incidents or trade compliance issues. This represents a major step forward from traditional paper-based or delayed reporting methods and provides a powerful tool for oversight and enforcement.

A central focus of the project was the digitisation of critical trade documentation, such as phytosanitary certificates, import/export certificates and food safety certifications. These documents, which have historically relied on manual and paper-based processes, are essential for verifying that food products meet health and safety standards and are fit for domestic and international trade.

The enhanced FreshChain platform now supports secure, role-based digital workflows, allowing trusted data sharing among supply chain partners, including producers, exporters, regulators and retailers. This ensures that the right stakeholders have access to the right information at the right time, improving efficiency, reducing errors and cutting down on processing time and costs.

FreshChain pilot trial

To validate this system, a pilot trial was successfully conducted on the shipment of raspberries from New South Wales to Western Australia. This shipment required:

- phytosanitary treatment (fumigation with methyl bromide)
- interstate certification (Plant Health Certificate under the Interstate Certification Assurance scheme)
- quarantine inspections upon arrival.

The pilot demonstrated how real-time data exchange using globally recognised data standards like GS1 for systems interoperability allows for the sharing of data between regulators, logistics providers and supply chain partners. This can simplify and accelerate compliance with biosecurity and market access requirements.

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Another major innovation delivered through the project was the integration of advanced analytics and alert systems within the platform. These tools enable regulators and industry partners to monitor trends, identify potential risks proactively and make data-driven decisions in real time. For example, unusual temperature patterns during transport or gaps in certification data can trigger alerts, enabling early interventions before products reach consumers.

Summary

The RegTech traceability project marked a major milestone in modernising Australia’s agri-food supply chains through digital innovation and the use of globally recognised data standards for seamless data capture and exchange. By enhancing the FreshChain platform with real-time regulatory access, digitised trade documents, predictive analytics and consumer-facing transparency tools, the project has created a powerful ecosystem for trusted, compliant and efficient food supply management. This not only benefits Australian producers and exporters but also strengthens public trust, improves biosecurity resilience and meets the growing global demand for safe and traceable food.

Acknowledgement of Country

We acknowledge the continuous connection of First Nations Traditional Owners and Custodians to the lands, seas and waters of Australia. We recognise their care for and cultivation of Country. We pay respect to Elders past and present, and recognise their knowledge and contribution to the productivity, innovation and sustainability of Australia’s agriculture, fisheries and forestry industries.

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