



National Agricultural Traceability Grants Program – Regulatory Technology Research and Insights Grant Round: Commonwealth Scientific and Industrial Research Organisation (CSIRO) grantee summary

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Supply chain participants aim to produce, process, and distribute products in ways that satisfy compliance requirements and enables traceability for biosecurity and food safety responses. Participant business processes are designed to ensure compliance with regulators, customers, and the participant businesses seeking assurances that such compliance requirements are being met. Generating a combined, coherent set of compliance outcomes is technically challenging, time consuming, and costly in human effort, providing barriers to improving operational efficiencies or performing traceability analysis.

A new approach, Continuous Assurance, showcases an alternate approach to confirming compliance outcomes by specifying a common set of events across all plants and a common and consistent approach to defining and evaluating compliance, which significantly standardises compliance reporting across the entire industry, offering plant operators significantly improved capabilities for continuous compliance monitoring and reporting, process monitoring and improvement, and traceability analysis, and regulators a common method for consistently, continually, and cheaply evaluating and monitoring plant compliance industry-wide.

In conjunction with delivery partner Eratos and utilising CSIRO's DAMOCLES™ technology, this project has developed a functioning prototype of the Continuous Assurance application for use in red meat supply chains. The initial Continuous Assurance prototype has been designed to 'light up' the existing compliance system, utilising data streams that presently exist and which are typically digitised. This approach has enabled the utility and potential of Continuous Assurance to be demonstrated across red meat processing plant staff and with state and federal regulators.

Feedback from red meat processing plant staff and regulators confirmed the potential and likely benefits to all potential users of the Continuous Assurance application. Plant staff and regulators were able to articulate the value proposition from their own perspective and provided strong encouragement for the ongoing development of Continuous Assurance prototype including proposed additional phases.

Additional phases of Continuous Assurance would focus on expanding the application via shifts in digitalisation and sensorisation of red meat supply chains as well as the incorporation of machine learning and artificial intelligence approaches to further enable system learning. The modular nature of Continuous Assurance permits users to incorporate the application into their processes immediately and bring new components online as they make investments in digitisation of the red meat supply chain.

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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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