Australian AgriFood Data Exchange

A collaborative initiative involving Government, industry and research bodies

8

September 2021

Disclaimer and Limitations

The information contained herein relating to the Australian AgriFood Data Exchange is of a general nature and is not intended to address the circumstances of any particular individual or entity. It is provided for information purposes only and does not constitute, nor should it be regarded in any manner whatsoever, as advice and is not intended to influence a person in making a decision, including, if applicable, in relation to any financial product or an interest in a financial product. Although we endeavour to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

No warranty of completeness, accuracy or reliability is given in relation to the statements and representations made by, and the information and documentation provided by the Australian AgriFood Data Exchange stakeholders.

Contents

	Page
Value proposition	4
Approach	8
Governance	12
Prioritised Use Cases	16
Governance	12
Contacts	18





The challenge the Australian AgriFood Data Exchange seeks to address

Why now

- No single, easy to use platform in Australia which allows primary producers from across all agricultural industries and other value chain participants to exchange their data efficiently on agreed terms with trusted service providers, or other interested parties such as government and researchers
- Australia's agrifood sector participants are unable to access and take full advantage of the huge amounts of data they are generating and efficiently transfer their data across the value chain
- Disparate, siloed, and proprietary data systems that do not enable data owners to easily access and direct the exchange of their data is leading to costly inefficiencies, poor collaboration, wasteful use of critical managerial time and loss of opportunities for the sector to deliver superior outcomes for all supply chain stakeholders

Opportunity

- An Australian Agrifood Data Exchange designed, owned and overseen by the Agrifood industry would enable participants to share, reuse and merge data from disparate systems in a secure environment.
- In doing so enable the generation of insights previously not available while stimulating sustainable entrepreneurship, consumer assurance and innovation.
- Deliver value for industry, government and the research community by enabling simple controlled access to external data and reference data sets.
- It would enable Australia's agrifood industry to access data infrastructure that leading agrifood exporting nations are already using to support their industry participants thrive in today's digital economies.

Potential Benefits

- ✓ Unlock more management capacity
- Enable consistency and centralisation of traceability data systems
- ✓ Verification assurance to consumers and regulators to support market access
- Improve access to natural capital and risk adjusted financing and insurance opportunities
- Digitised compliance outcomes with "RegTech" efficiencies
- ✓ Enable data owners to share access to data with RDCs, researchers and entrepreneurs
- Make it easy for data owners to share useful data with biosecurity agencies to improve national, state and shire predictive biosecurity capabilities

Value proposition

VISION

"An interconnected data highway for Australia's AgriFood value chain"



The Australian AgriFood Data Exchange seeks to provide:

A digital platform that enables

- The permissioned exchange of data between AgriFood industry participants
- Timely access to information that supports decision making for the AgriFood value chain
- Release management capacity
- Standardisation and consistency of industry data assets
- The capacity to adapt, incorporating new use cases for data exchange that deliver value and support resilience of AgriFood value chain participants
- Increased transparency of AgriFood industry data to support multiple use cases (e.g. regulatory compliance, collaboration between public & private data sets)
- A mechanism to connect disparate data sources

Value proposition for key stakeholder groups

Producers	Enable producers to provide permissioned access of their data to a variety of value chain participants (customers, supply chain, regulators, agrifood and export agencies of government etc.) and for a variety of purposes (compliance, benchmarking, traceability). Participation in the Australian AgriFood Data Exchange will unlock latent management capacity. Specific user sub-sets (e.g. farming systems groups) could also leverage the exchange in isolation of other users if they choose to do so, strengthening trust as it relates to permissioned sharing of data through the data exchange.
⊘ Re-sellers & └── O Supply chain	It will enhance the capacity of AgriFood input and service providers to efficiently engage with producers and other supply chain participants. Timely two way access to data exchange with a broad range of supply chain participants (re-sellers, service providers, logistics, manufacturers etc) can increase participation in the data economy and inform supply chain optimisation and benchmarking, anticipation & management of biosecurity risks, compliance & traceability requirements. The data exchange will also serve to underpin market access, enabling better measurement of product environmental footprint and provenance claims.
Research	It will help in making both public and private data available, enabling advanced regulatory technology (RegTech) to support AgriFood value chain participants to focus on productivity and profitability. The Data Exchange also provides the digital infrastructure to support collaboration in research and development activities through the standardisation of data sharing.
Government	It will simplify the process of making public and private data available, enabling advanced regulatory technology (RegTech) to support AgriFood value chain participants to focus on productivity and profitability. The Data Exchange also provides the digital infrastructure to support collaboration in research and development activities through the standardisation of data sharing principles.
Retailers	Enhance retailers quality of engagement with producers, supply chains and the customers that they ultimately serve. Through the sharing of data to streamline compliance and support traceability of production and supply chain practices, the Data Exchange will enable these businesses to demonstrate the supply chain's compliance with quality assurance, regulation and sustainability credentials that are critical to market access and product differentiation.
i Finance آن providers	It will improve existing capacity of the finance sector to support the growth of the AgriFood industry. The Data Exchange will provide the means for transparent data exchange to support the assessment of credit risk and the development of new products (sustainability linked finance, insurance products etc.). A detailed understanding of sustainability credentials is of increasing importance to the AgriFood industry and the Data Exchange provides the digital infrastructure to support this requirement, and allow producers to efficiently elect to share operational data with their funding partners.
Consumers	Whilst consumers are unlikely to directly use the Data Exchange, it will provide them with confidence and the knowledge that supply chain partners have a trusted and efficient mechanism for exchanging trust points of a products journey to the consumer and the impact it has along the way.



Project scope

- Delivering a collaborative project with shared outputs requires collaborative input.
- Investment commitments of cash and in-kind support are critical to enabling the refinement of use requirements, standing up experiments and building out a business case founded on open experimentation technical due diligence.
- The Phase 2 and Phase 3 pathway creates maximum opportunity for participation and innovative solution development and refinement through practical testing.
- We aim to encourage exchange vendor interest in the project through Phase 2, which will inform our insights on the technical capabilities of different vendors, as well as trialling data quality, security (encryption and permissioning methods), allow us to test and enhance use of reference data sets.
- Phase 2 will attract higher TRL solutions and vendors to engage with Australian agriculture sector, which will benefit the sector through access to more mature digital solutions.

- Contributions of funds for Phase 2 & 3 will be managed through an RDC co-investment mechanism administered by MLA
- For Phase 4 onwards, but subject to the findings in Phase 3, we envisage the establishment of a specific not for profit vehicle enabling an industry ownership model for the Australian Agrifood Data Exchange.
- The funding pathway for post Phase 3, for the build and release of the MVP and establishment of the operating entity, will be defined in the business case produced in Phase 3. The cost of developing the MVP and launching the Australian Agrifood Data Exchange service will very much depend on whether the solution is design and build or contracted PAAS and the preferred operating model.
- The level of capital expenditure needed for Phase 4 will depend on the insights and decisions taken in Phase 3 of the project.

Phase 2

Will incorporate four key work packages with the following activity breakdowns:

- 1. Functional requirements
- Draft complete functional requirements for four use cases
- Draft high level technical requirements (source system, privacy, security requirements)
- 2. Market scan and expression of interest (EOI) audience identification
- Scan of potential vendors to perform for EOI
- Sourcing Strategy
- 3. Experiment EOI
- Draft EOI documentation

- Develop the success criteria
- Manage the EOI process
- Evaluate EOI response
- Finalise commercials
- 4. Experiments
- Manage engagement
- with delivery partners
- Develop success criteria for experiments
- Evaluate experiment build

Key output: Detailed understanding of the use case requirements and the delivery of up to 4 POC's through experiments.

Phase 3

Will incorporate five key work packages with the following activity breakdowns:

- 1. Request for Proposal (RFP) process
- Draft the RFP documents for MVP into Phase 4
- Manage the RFP process
- Develop selection criteria
- Evaluate responses
- Finalise implementation partner
- Finalise commercial agreement
- 2. Development of detailed requirements for selected use cases
 - Draft additional technical detailed requirements

- Validate and send documents for review
- Update and finalise technical requirements
- 3. Business case development
- Development of financial business case (FBC) Inc. cost/benefit analysis for future phase funding
- 4. Data governance
 - Document roles and responsibilities, standar ds, naming conventions and processes

- 5. Operating model refined for implementation
- Draft type of operating model for implementation (centralised, decentralised, federated)

Key output: Fully costed business case (P90) and operating and governance model

Timeline

Project outline and approach

This is an ambitious, complex, multi-year multi-phased program.

A pool of appropriate resources needs to be established from the outset of the project, with access to genuine expertise and influence. The sources of project support is also important to reinforce the collaborative and whole of industry interest in catalysing the Australian AgriFood Data Exchange.

To build confidence for investors in the subsequent phases of the project an independent project assurance program across value realisation, program processes and technical implementation.

Throughout the following phases of work, a communications and stakeholder engagement work stream will be fundamental to the success of executing this project. The PMO will establish the following critical workstreams, and appoint leads with the necessary skills and influence.

The workstreams would include:

- Architecture and technology;
- Data privacy, standards and security;
- Communication and stakeholder management;
- Customer experience;
- Governance and policy;

- Innovation and solutions;
- Legal and regulatory;
- Operating model; and
- Process and business analysis.



Timeline overview

January

2021



For information



Supporters

The Australian AgriFood Data Exchange is a collaborative project supported by a number of leading Australian agrifood leaders



The door remains open to additional participants – expressions of interest should be sent to the PMO at au-fmozagdx@kpmg.com.au

Governance structure





Prioritised Use Cases

Following industry consultation, the following use cases have been prioritised:

1. Centralised Data for Compliance and Certification

Description of Use Case

The ability through the data exchange to have centralised compliance data that allows rapid response to evolving compliance requirements and get/give access to relevant compliance artefacts to any parties along the supply chain (i.e. certifications, customs requirements).

Benefits

- Efficiently and easily share my data with relevant parties in a single place
- Inclusive of organic status, biosecurity, NVDs, animal health certificates, weighbridge data, trucking times/routes, through trade NTMs, animal welfare attributes
- Have a central source of truth for compliance and certification data
- Accessible data at any time for consumers to report on compliance with minimal manual interventions

3. Voluntary benchmarking for comparisons and decisions

The ability to share benchmarking data with any required parties quickly and easily, whilst ensuring data remains

• Standardised data for reporting which minimise any regulation implications from discrepant data

Challenges and risks

- Availability of stakeholders to validate requirements and business rules
- Supporting architecture and tooling for central data
- Data being ingested isn't at acceptable quality threshold

2. Biosecurity and contamination information

Description of Use Case

The ability to have a single view of disparate data sources to identify any contamination source or presence of pests (i.e. trucking day/load, field/block/paddock stock/harvest came from, fertiliser and agrichem in that paddock, hormone or animal health treatments, any biosecurity issues on farm in recent years, identify and link existing surveillance database and systems).

Benefits

- Quickly and easily identify any contamination source or pest status
- Provide a consistently safe product to consumers
- Proactively predict biosecurity risks before they become issues
 Trust in the product which can alleviate any concerns around
- purchasing and procurement
- Generate greater financial returns industry wide due to integrity and standard of product

Challenges and risks

- Different levels of data quality to be able to identify biosecurity issues
- Data sensitivity and sharing across key factors in relation to biosecurity

4. Supply and origin traceability

Description of Use Case

The ability to build the full story about produce on its journey through to the consumer, with details from each aspect of the supply chain (i.e. property, quality, weight, journey, certifications, origin, welfare, exposure to fertiliser/chemicals etc.) and be able to receive feedback from others in the supply chain.

Benefits

- End to end visibility of products movement across the supply chain
- Higher level of confidence in the product supply due to understanding full lifecycle
- Equitable return for product and reputational brand enhancement
- Early indication of "where" to optimise value of product due to relevant implicating data points

Challenges and risks

- Being able to identify key sources which are able to provide accurate and reliable traceability data
- Ability to tie up key traceability data assets across other systems within the supply chain

Benefits

Description of Use Case

- Data comparison against industry average to determine market position
 Generation of industry wide KPI's which enables standardisation and consistency
- Production system improvement

confidential, consistent and validated.

- Ability to make decisions using the market as a guideline and have objective comparison points
- Fluid sharing of data with required parties i.e. sharing of data with Banks when applying for loan
- Minimisation of manual analysis to compile external data

Challenges and risks

- Availability of stakeholders to validate requirements and business
- rules

 Supporting architecture and tooling
- to aggregate data
 Data being used currently isn't at acceptable quality threshold to provide accurate benchmarking

Collectively, the 4 prioritised uses case experiments cover a range of supply chain, commodity and geographic components



For further information

Visit: www.ozagdx.com.au

Or contact the Project Management Office on: au-fmozagdx@kpmg.com.au