Australian Agricultural Sustainability Framework.

Toolkit

Designing Complex Data Ecosystems

National Farmers Federation | Australian Agricultural Sustainability Framework

Australian Government
Department of Agriculture, Fisheries and Forestry

Acknowledgements

This project has benefitted immeasurably from the contributions of many people involved in research interviews, co-design workshop activities and working group sessions. The project team are grateful for the time, knowledge, and insights they provided as we collaboratively explored and tested the proposed data ecosystem governance structures and processes. We acknowledge their participation and thank them for their contributions.

The Australian Agricultural Sustainability Framework (AASF) is a joint initiative led by the National Farmer's Federation (NFF) and supported by the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) through the Agriculture Traceability Grants Program.

Australian Government
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CSIRO

About this document

Purpose

This document serves as an instructional and reflective guide for understanding and applying strategic design principles in the development of data ecosystems, using the AASF Data Ecosystem project as a case study. It aims to:

- Define the processes, methods and tools which were considered and used/not used for the project
- Describe the specific methods and tools which were selected for application
- Identify what worked well and why; describe what could be done differently next time and why
- Detail the activities required to design and implement the methods and tools
- Provide templates of the methods and tools for others to utilise in their own practices

Audiences

The document is designed for a professional audience working at the intersection of research, government policy, and complex data ecosystems, including:

AASF Team Members

- Understand the processes, methods and tools utilised by CSIRO
- Gain insight into the information generated in various stages of the Data Ecosystem project
- Build their capability in co-design of complex data ecosystems
- A new product to provide to AASF stakeholders to explain value of design approaches

AASF Stakeholders

- Understand what is required to explore and design solutions for complex data ecosystems
- Learn from CSIRO methods and inform their own future co-design approaches
- Identify how to improve the success of their data ecosystem structures, and what to consider

The structure and content are tailored to support informed decision-making, encourage reflective practice, and enable practical application in other complex data ecosystem projects.

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0.1 What is a data ecosystem?

0.1 What is a data ecosystem?

A data ecosystem refers to an interconnected and dynamic system composed of both social and technical components that collectively support the production, management, exchange, and use of data. It encompasses a diverse array of actors, entities, systems, and structures — both human and technological — that engage in data-related interactions. In this context, “data” refers to any form of digital information relevant to the ecosystem’s purpose, without restriction to type, format, or quality.

Although this toolkit focuses on the AASF Data Ecosystem and its associated datasets, the concepts, methods, and insights presented are broadly applicable to any data ecosystem.

Data ecosystems operate through continuous interactions between their social and technical elements. Social actors — such as data owners, producers, and users — engage with technical frameworks and systems that facilitate data availability, reliability, and integrity. A data ecosystem exists whenever data is exchanged between actors. Crucially, because data ecosystems involve an interaction of social and technical systems, they cannot be reduced to a single technical component such as a database, software platform, or standard. Instead, they are defined by the interplay between people, institutions, and technologies as data flows through the system. An effective data ecosystem promotes collaboration, sharing, and governance, enabling data to move efficiently across entities to generate mutual value.

What are common components of a data ecosystem?

No two data ecosystems are identical. Their composition is shaped by specific situational and contextual factors, and they will include only those components necessary to achieve a defined vision or goal. Accordingly, a foundational activity in developing a data ecosystem is to determine:

- What is the vision or goal of the data ecosystem?
- Which socio-technical components and actors are required to achieve this vision or goal?
- How will these components be engaged — both now and in the future — to support the ecosystem’s success?

By addressing these questions, stakeholders can design and implement data ecosystems that are fit-for-purpose, resilient, and responsive to evolving needs.

The AASF Data Ecosystem project defined a data ecosystem as an interconnected, dynamic system comprising technical components and actors that collectively engage in the production, management, exchange, and consumption of data (in this case, sustainability-related data). They function through the interaction between data owners, users, and producers within a framework designed to facilitate data availability, reliability, and integrity for specific or broad purposes. An effective data ecosystem for AASF emphasises collaboration, sharing, and governance, enabling data to flow efficiently between different entities for mutual benefit.

What are some examples of data ecosystem components?

While there is no formula for what a data ecosystem should have, some high-level examples of components include:

- Data infrastructure — *This includes physical and virtual data storage, databases, registries, cloud services, and networking facilities that enable the storage, discovery, retrieval, and processing of data.*
- Data management tools — *Software applications and platforms that support the organisation, quality control, analysis, and visualisation of data.*
- Data security management — *Technologies and protocols that ensure data privacy, permissioning, access, security and sovereignty.*
- Integration and interoperability mechanisms — *Technologies, standards, and protocols that ensure data can be shared and used across different systems, platforms, and organisations.*
- Data owners, producers and custodians — *People and organisations that own, create or steward datasets whether it be for themselves or others.*
- Data users, scientists, and analysts — *People and organisations with a need for data as evidence or to support analysis.*
- Technology providers and data brokers — *Organisations providing digital tools and services to support the ecosystem.*
- Policy makers and regulators, standards bodies and consortium — *Organisations with an interest and/or responsibility for developing and implementing rules, policies and guidelines around data sharing.*

The composition of a data ecosystem is inherently situational and context-dependent. It is unlikely that any single ecosystem will encompass all possible components and actors. Instead, each ecosystem will include only those elements necessary to achieve its specific vision and objectives.

A critical step in developing an effective data ecosystem is identifying which components and actors are essential and determining appropriate strategies for their engagement. Importantly, the absence of a particular entity, organisation, system, or structure from a predefined list does not imply its exclusion from a given ecosystem. Practitioners must maintain an open yet critical perspective to identify and incorporate relevant socio-technical actors and components that contribute to the ecosystem's success.

While some components may appear predominantly social and others primarily technical, all elements within a data ecosystem are fundamentally socio-technical. For example, a technically oriented system — such as a data security management framework — must comply with privacy legislation and regulatory standards. These legal structures reflect societal expectations, concerns, and decision-making processes, including judicial and political institutions. Conversely, a socially oriented system — such as a data user community — derives value from its interaction with digital tools and infrastructures, which are inherently technical.

Therefore, it is essential not to categorise components as solely "social" or "technical." Effective data ecosystems are socio-technical systems by nature. Recognising and actively engaging with this duality is a prerequisite for success. It is important to remember: a data ecosystem is never merely a database — it is a dynamic, interconnected system of people, technologies, institutions, and practices.

'A successful ecosystem balances two priorities: — Building economies of scale ... — Cultivating a collaboration network ...' [1]

'the complex environment of co-dependent networks and actors that contribute to data collection, transfer and use' [2]

1. Oliveira, Marcelo Iury S.; Lóscio, Bernadette Farias (2018-05-30). "What is a data ecosystem?". *Proceedings of the 19th Annual International Conference on Digital Government Research: Governance in the Data Age*. New York, NY, USA: Association for Computing Machinery. pp. 19. doi:10.1145/3209281.3209335

2. Abdulla, Ahmed (March 8, 2021). "Data ecosystems made simple". *McKinsey Digital*

0.2 What is strategic design?

0.2 What is a strategic design?

At its broadest level, strategic design is about the application of design tools, approaches, frameworks, and perspectives to influence or achieve strategic outcomes (Dorst and Watson, 2023).

Both “strategic” and “design” contribute important aspects to this definition.

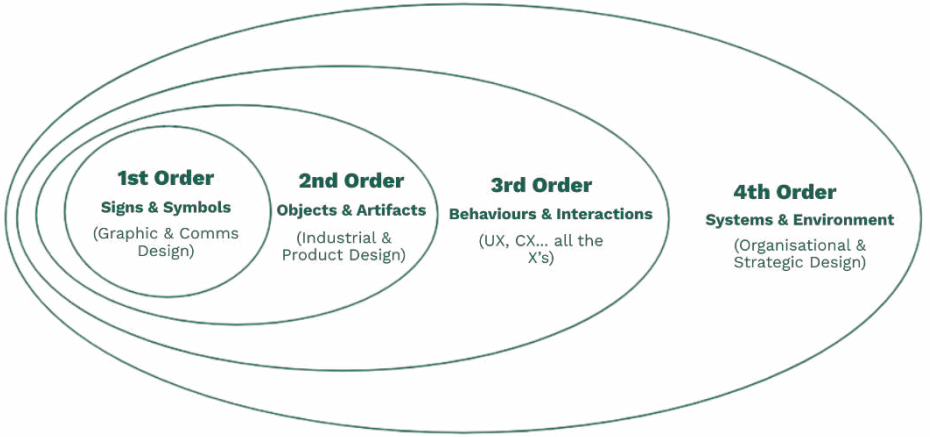
What does “design” mean in strategic design?

Design refers to practices, interactions, and interventions that improve environments for people (Buchanan, 2019). These environments can be thought of in terms of different “orders”, or the specific thing that is being designed. These orders are:

1. The first order — *concerning signs and symbols (e.g. a graphic design with text)*
2. The second order — *concerning objects and artefacts (e.g. industrial design and product design)*
3. The third order — *concerning behaviours and interactions (e.g. user experience and service design for physical and digital products)*
4. The fourth order — *concerning systems and environments (e.g. strategic and systems design)*

Strategic design exists in the fourth order of design; it is about designing improvements to interactions between humans, institutions, and other structures within complex systems. This includes (but is not limited to): governance systems; socio-technical technical systems; human and digital systems; and organisational environments.

Richard Buchanan
Four Orders of Design



Adapted from Buchanan 2019 by Laura Kostanski

What does “strategic” mean in strategic design?

Strategic design refers to the application of design methods, tactics, and techniques — often drawn from Huma-Centred Design (HCD), User-Centred Design (UCD), and Design Thinking (DT) — to achieve broader, long-term strategic outcomes. These approaches emphasise meaningful stakeholder engagement through iterative, collaborative processes of exploration, co-creation, and testing (see resources such as The Interaction Design Foundation for further reading).

While strategic design incorporates these established design practices, it does so with a focus on achieving overarching objectives that align with stakeholder needs and priorities. It considers how design activities can be purposefully directed to generate long-term impact, balancing available resources, constraints, and implementation pathways (inspired by Freedman, 2013). Strategic design is therefore outcome and impact-oriented, aiming for long-term change rather than the creation of short-term isolated outputs or artefacts.

What does doing “strategic design” look like?

Strategic design is about achieving meaningful, persistent, and beneficial change and impact, through thoughtful applications of design tactics, methods and techniques.

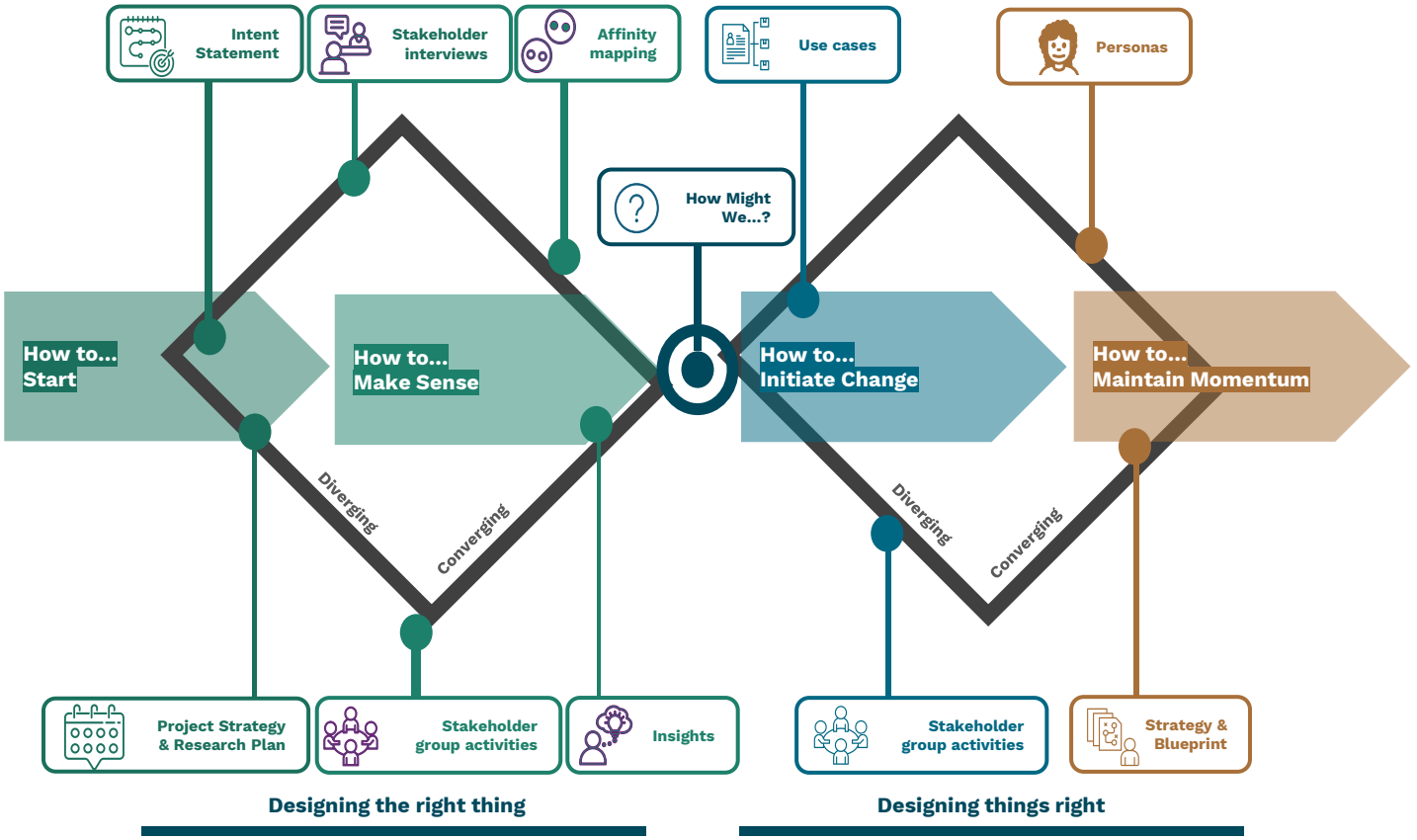
While these are the general principles of our strategic design approach, there is ultimately no universal definition of strategic design. Nor is there any rigid or prescriptive formula for how one “does” strategic design to achieve impact. Instead, the power and opportunity of strategic design is to create bespoke and flexible approaches that utilise design methods to achieve outcomes and impacts that stakeholders desire, as part of a flexible, responsive, yet structure approach.

Our process, and the tools, techniques, and tactics embedded within this toolkit, provide an example of such a responsive yet structured approach. While it is not intended as a universal or one-size-fits-all solution, it offers a practical model for implementing strategic design. This process can be adopted directly as a “how-to” guide in other contexts. More powerfully, it can serve as a catalyst for co-designing a customised strategic design process with stakeholders — one that is aligned with their unique aspirations for positive and impactful change within their data ecosystems.

0.3 What was our end-to-end process?

Our design-lead approach to collaboration

Although referenced to specific project milestones in the double diamond, design tools and methods are cumulatively developed and continually referenced throughout the lifecycle of a data ecosystem project.



The AASF Data Ecosystem project utilised the design-informed methods outlined in this diagram. This structured yet adaptable process, along with the tools and techniques embedded in this toolkit, provides a practical example of strategic design in action. While it can be replicated in other contexts as a “how-to” guide, its greater value lies in its potential to catalyse the co-design of tailored strategic design processes that align with stakeholder goals and drive meaningful, lasting change in complex data ecosystems.

0.3 What was our end-to-end process?

The collaborative design of the AASF Data Ecosystem was guided by principles of strategic design, specifically through an adapted version of the UK Design Council's UK Design Council's "Double Diamond" framework. This framework offers a structured yet flexible approach to design, organised around iterative cycles of divergence and convergence across four key stages: Discover, Define, Develop, and Deliver.

- Divergence *involves broad exploration, engagement, and understanding of a problem space.*
- Convergence *focuses on refining insights, making decisions, and progressing toward actionable outcomes.*

Design methods, techniques, and tactics are applied differently across these stages depending on whether they support divergent or convergent thinking. Importantly, movement through the design process is non-linear and iterative, allowing for adaptation based on emerging insights. For the AASF Data Ecosystem, these four stages were reframed to better reflect the specific needs and context of the project.

Our Strategic Design-Led Approach to Collaboration

The process we utilised in the AASF Data Ecosystem project was structured around two design "diamonds," each representing a distinct phase of strategic design:

Diamond One — Designing the Right Thing

- How to Start (Divergent Phase) — Initiating the design process with stakeholders by developing foundational documents and exploring underlying needs, issues, and requirements that the ecosystem must address.
- How to Make Sense (Convergent Phase) — Synthesising insights from the initial exploration to generate actionable knowledge that informs subsequent design activities.

Reflection Point — How Might We

Between the two diamonds lies a critical reflection point: "How Might We..."
This phase enables the design team and stakeholders to pause, reflect, and prioritise key design challenges. It serves as a strategic pivot to inspire and guide the creation of solutions that are both relevant and impactful.

Diamond Two — Designing Things Right

- How to Initiate Change (Divergent Phase) — Building momentum among stakeholders and socio-technical systems to begin implementing change.
- How to Maintain Momentum (Convergent Phase) — Establishing mechanisms to sustain activities and ensure the desired outcomes and impacts of the project are realised over time.

Stakeholders and ethics

Research activities were conducted in line with CSIRO's *Human Ethics Research Procedures* and complied with requirements of the *National Statement on Ethical Conduct in Human Research* (2023), *The Australian Code for the Responsible Conduct of Research*, and the *Privacy Act* (1988).

Throughout the course of the project, multiple participants were engaged in a range of research activities designed and facilitated by the CSIRO team. All information provided by participants in these activities was de-identified and all reports from the project contain anonymised quotes.

In all, over 150 individuals have participated in one or more of the project activities, including:

- 58 people in 33 interview sessions held between October 2023 and February 2024.
- More than 80 people involved in the two-day face to face workshop session held in March 2024.
- 38 people involved in 4 working groups, who completed homework and met at face-to-face sessions in September and November 2024.

Further to this, the research team presented at and participated in numerous AASF Community of Practice events throughout 2023 and 2024, interacting with 120—150 people in each of these activities.

1.0 How to.. Start

1.1 Intent Statement

1.2 Project Strategy & Research Plan

1.1 Intent Statement

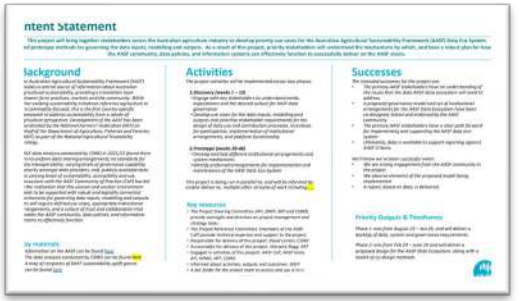
An Intent Statement is a foundational, one—page document created collaboratively with key stakeholders at the outset of a project to establish a shared understanding of its purpose, scope, and direction. As a living document, it supports ongoing alignment, communication, and evaluation throughout the project lifecycle, ensuring that activities remain purposeful and responsive to evolving needs.

What is this?

Setting of intent requires critical stakeholders (those with accountabilities and responsibilities for delivering the project and/or actioning the results in both the design team, the client team, and the client stakeholder networks) to meet and achieve consensus agreement on:

- Why the project is needed and the opportunity and problem contexts the project team will be operating in
- What systems-level changes the project is aiming to achieve, and for whom
- How existing information can be built upon, and the activities which will be undertaken to develop new ideas, information, knowledge and solutions
- Where accountabilities and responsibilities sit, and what timeframes will bound the project outputs

The results of these discussions are written up into a one-page Intent Statement. This becomes a living document to guide the project team and critical stakeholders in their design collaborations throughout the project lifecycle. Having the details synthesised into a singular enables the project team to easily communicate the project purpose to all stakeholders and regularly identify if project activities are diverging from the original plans. This ensures the project team can critically evaluate whether the project intent needs to be updated, or whether the planned activities need to be adjusted (perhaps even both).



Example of the original intent statement developed for the AASF Data Ecosystem project in August 2023.

What is involved?

Setting and maintenance of intent is achieved through facilitation of a meeting with critical stakeholders, documentation of agreed intent items, and regular review discussions with the project team.

There are four elements to the intent statement itself:

- Past — This section explains the background of the project, including why it's being undertaken, what has influenced it (such as previous projects, policies, or frameworks), and what context needs to be considered. It helps everyone understand the project's starting point and sets the boundaries for what will be included. As the project progresses, this background also helps track how thinking and knowledge have evolved.
- Present — This outlines what the project will do, who will be involved, and why these activities are important. It helps identify any gaps, overlaps, or dependencies in the work. Over time, it also serves as a reference to adjust roles or timelines if needed.
- Future — This describes what success will look like for different people and groups who will benefit from the project. It also explains how success will be measured. Early on, this helps clarify the various expectations of stakeholders. Later, it can help define Lines of Enquiry and Insights, while also guiding evaluation and learning activities.
- Shared Intent — This is a simple, clear summary of what the project team aims to achieve and who will benefit from the work.

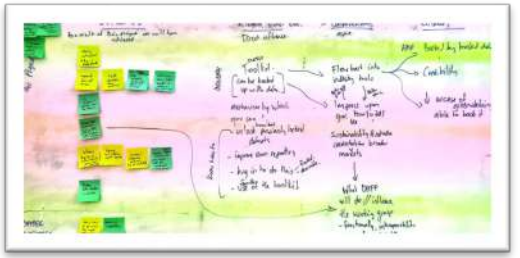


Image of whiteboard notes from intent session held in August 2023.

Steps to use this method

1. Find a time for all critical stakeholders (those with accountabilities and responsibilities for delivering the project and/or actioning the results — from across the project team, the client team, and the client stakeholder networks) to participate in an intent session.

2. Provide critical stakeholders with the following list of questions to consider prior to the meeting:

- *What are the intended outcomes for the project?*
- *What are the preferred outputs to be delivered?*
- *What activities will be pursued, and by what dates?*
- *What broader areas of impact might this project deliver to?*

3. Structure the meeting with four focusing sessions (see agenda template):

1. *Introductions*
2. *Project Intent & Impact Strategy*
3. *Setting Scope & Defining Stakeholder Landscape*
4. *Confirming Roles & Responsibilities*

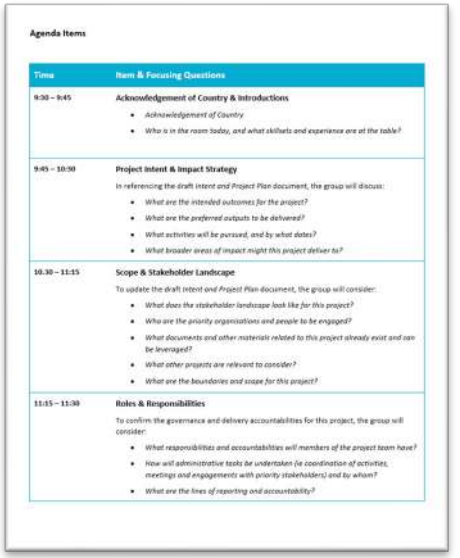
4. Prior to the meeting, prepare a blank Intent Statement with the components relevant to your project.

a) Past — *can include background, context, stakeholder observations of the current state, drivers of the project, available assets to build upon.*
b) Present — *can include a list of key activities to be performed, RACI identification of stakeholders to be engaged, shifts to be achieved, critical dependencies.*
c) Future — *can include statements of success from different stakeholder perspectives, details of outcomes to be achieved, descriptions of OKRs, lists of outputs to be delivered and the timeframes.*
d) Shared Intent — *can be one or two sentences which encapsulate WHY the project is being undertaken, WHAT will be achieved and HOW this will be approached.*

5. Facilitate the meeting with the critical stakeholders, gathering their thoughts and feedback on the questions stated in the agenda. Use a large A3 version of the Intent Statement template to take notes and also write notes on a whiteboard (digital or ink) so that participants can see and discuss what is being agreed to.

6. Following the meeting, edit the draft intent statement with the content as agreed by participants. Send the document to participants for review and editing, to ensure everyone is in agreement before the details are finalised.

7. Develop project strategy and research plan (see Section 1.2). And regularly review and keep the intent statement updated throughout the project lifecycle.


Agenda Items

Time	Item & Focusing Questions
9:30 – 9:45	Acknowledgement of Country & Introductions • Acknowledgement of Country • Who is in the room today, and what skillsets and experience are at the table?
9:45 – 10:50	Project Intent & Impact Strategy In referencing the draft Intent and Project Plan document, the group will discuss: • What are the intended outcomes for the project? • What are the preferred outputs to be delivered? • What activities will be pursued, and by what dates? • What broader areas of impact might this project deliver to?
10:30 – 11:15	Scope & Stakeholder Landscape To update the draft Intent and Project Plan document, the group will consider: • What does the stakeholder landscape look like for this project? • Who are the priority organisations and people to be engaged? • What documents and other materials related to this project already exist and can be leveraged? • What other projects are relevant to consider? • What are the boundaries and scope for this project?
11:15 – 11:30	Roles & Responsibilities To confirm the governance and delivery accountabilities for this project, the group will consider: • What responsibilities and accountabilities will members of the project team have? • How will administrative tasks be undertaken (ie coordination of activities, meetings and engagements with priority stakeholders) and by whom? • What are the lines of reporting and accountability?

Agenda template example is available in the appendices.

Intent Statement template is available in the appendices.

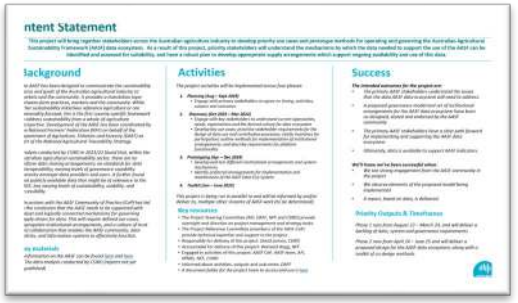
How we used this tool and what we achieved

In the AASF Data Ecosystem project we used this tool to:

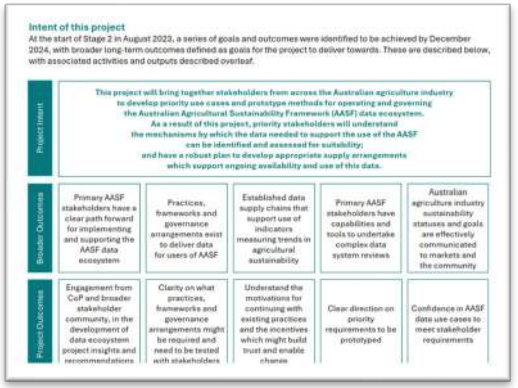
- set our intent continually
- review our progress
- rapidly identify where our plans might need to be adapted
- communicate project plans to stakeholders
- develop our lines of enquiry for the research activities

The original intent statement was developed in August 2023. The CSIRO project team convened a half-day session with AASF program leaders, where key concepts regarding the project intent, scope, stakeholder landscape and roles were discussed. Following the meeting, the CSIRO team drafted the intent statement and project strategy and circulated to the AASF program leaders for their review.

The intent statement content was then utilised to develop the lines of enquiry which informed the interviews and group activities and helped inform the development of insights and How Might We.. ? (HMW) questions. The content was also utilised in various presentations to AASF stakeholders to explain the purpose and direction of the project. The intent statement was regularly reviewed and updated at key project junctures. Notably, when timeframes were adjusted and it was agreed that it would be more beneficial in later stages to facilitate focus groups rather than develop and test prototypes.



Example of version 4 of the project intent statement — updated in August 2024 to reflect and communicate changes to various stakeholder requirements, planned project activities and timeframes



Example of how the intent statement content was utilised and repurposed for different communication requirements. In this case, the intent statement details are reflected in the background details section of the AASF Data Ecosystem Stage 2 Final Report (2025, page 8) to describe the purpose and goals of the project.

Lessons learnt and advice

In developing and maintaining an intent statement keep in mind:

- Initial meeting — This is a crucial opportunity for the project team and the client to come together and openly discuss their assumptions. It is a chance to clarify the project's purpose, scope, activities, stakeholders, expected benefits, and responsibilities. Often, there are differences between what was written in the original proposal and what appears in the final contract. It's important to identify and resolve these differences early, before moving forward with any project work.
- Regular review — ensure that the intent statement is reviewed at regular points in the project activities, particularly when timeframes change, or new information has come to light which might require the project team to adapt the project activities. In this project, we reviewed the intent statement content as each activity was being designed and each output was being developed. This enabled us to account for learnings which had been made and adjust project plans accordingly.
- Remember, setting the project's intent is different from simply following the original proposal or plan. It involves constructive conversations among stakeholders to explore their different perspectives on why the project matters, how it should be delivered, and what it aims to achieve. These discussions help surface any differences in expectations and allow the team to reach a shared understanding from the outset.

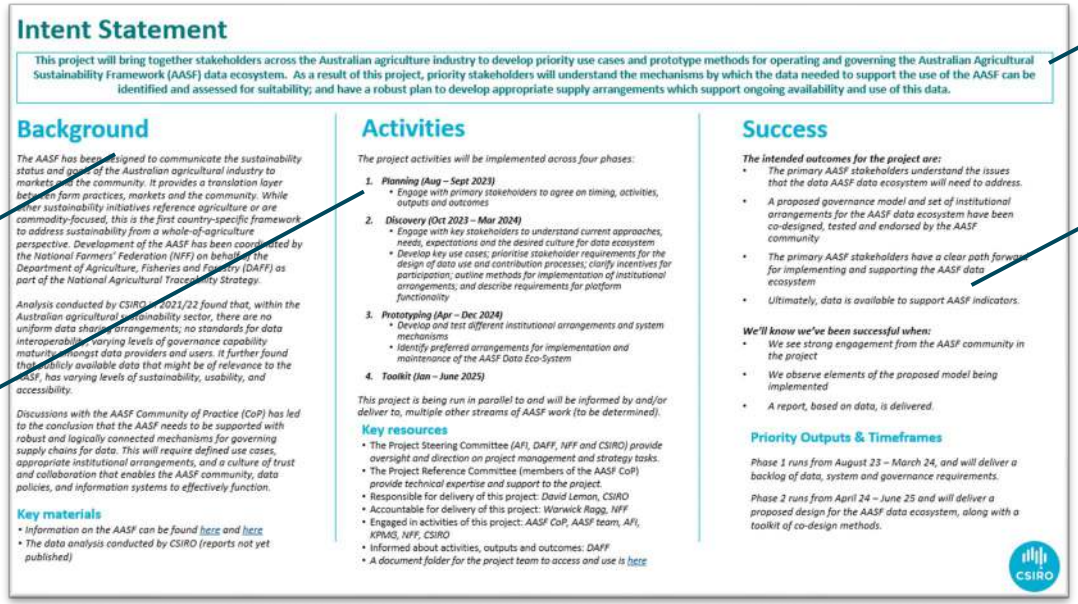
Templates
(a usable template is available in the appendices)

This is the shared intent section — *a simple, clear summary of what the project team aims to achieve and who will benefit from the work.*

This is the background section — a description of the context in which the project is being undertaken. It also contains a list of key materials to be referenced/used in the project.

This is the activities section — a description of what will be undertaken in the project and when. It also includes a list of key roles and responsibilities for project delivery and engagement.

This is the outcomes section — a description of what success looks like for different project stakeholders (direct and indirect beneficiaries). It also includes a list of critical project outputs and associated deadlines.



Intent Statement

This project will bring together stakeholders across the Australian agriculture industry to develop priority use cases and prototype methods for operating and governing the Australian Agricultural Sustainability Framework (AASF) data ecosystem. As a result of this project, priority stakeholders will understand the mechanisms by which the data needed to support the use of the AASF can be identified and assessed for suitability; and have a robust plan to develop appropriate supply arrangements which support ongoing availability and use of this data.

Background

The AASF has been designed to communicate the sustainability status and goals of the Australian agricultural industry to markets and the community. It provides a translation layer between farm practices, markets and the community. While other sustainability initiatives reference agriculture or are commodity-focused, this is the first country-specific framework to address sustainability from a whole-of-agriculture perspective. Development of the AASF has been coordinated by the National Farmers' Federation (NFF) on behalf of the Department of Agriculture, Fisheries and Forestry (DAFF) as part of the National Agricultural Traceability Strategy.

Analysis conducted by CSIRO in 2021/22 found that, within the Australian agricultural sustainability sector, there are no uniform data sharing arrangements; no standards for data interoperability; varying levels of governance capability maturity amongst data providers and users. It further found that publicly available data that might be of relevance to the AASF, has varying levels of sustainability, usability, and accessibility.

Discussions with the AASF Community of Practice (CoP) has led to the conclusion that the AASF needs to be supported with robust and logically connected mechanisms for governing supply chains for data. This will require defined use cases, appropriate institutional arrangements, and a culture of trust and collaboration that enables the AASF community, data policies, and information systems to effectively function.

Key materials

- *Information on the AASF can be found here and here*
- *The data analysis conducted by CSIRO (reports not yet published)*

Activities

The project activities will be implemented across four phases:

1. ***Planning (Aug – Sept 2023)***
   - *Engage with primary stakeholders to agree on timing, activities, outputs and outcomes*
2. ***Discovery (Oct 2023 – Mar 2024)***
   - *Engage with key stakeholders to understand current approaches, needs, expectations and the desired culture for data ecosystem*
   - *Develop key use cases; prioritise stakeholder requirements for the design of data use and contribution processes; clarify incentives for participation; outline methods for implementation of institutional arrangements; and describe requirements for platform functionality*
3. ***Prototyping (Apr – Dec 2024)***
   - *Develop and test different institutional arrangements and system mechanisms*
   - *Identify preferred arrangements for implementation and maintenance of the AASF Data Eco-System*
4. ***Toolkit (Jan – June 2025)***

This project is being run in parallel to and will be informed by and/or deliver to, multiple other streams of AASF work (to be determined).

Key resources

- The Project Steering Committee (AFI, DAFF, NFF and CSIRO) provide oversight and direction on project management and strategy tasks.
- The Project Reference Committee (members of the AASF CoP) provide technical expertise and support to the project.
- Responsible for delivery of this project: *David Leman, CSIRO*
- Accountable for delivery of this project: *Warwick Ragg, NFF*
- Engaged in activities of this project: *AASF CoP, AASF team, AFI, KPMG, NFF, CSIRO*
- Informed about activities, outputs and outcomes: *DAFF*
- *A document folder for the project team to access and use is here*

Success

The intended outcomes for the project are:

- *The primary AASF stakeholders understand the issues that the data AASF data ecosystem will need to address.*
- *A proposed governance model and set of institutional arrangements for the AASF data ecosystem have been co-designed, tested and endorsed by the AASF community*
- *The primary AASF stakeholders have a clear path forward for implementing and supporting the AASF data ecosystem*
- *Ultimately, data is available to support AASF indicators.*

We'll know we've been successful when:

- *We see strong engagement from the AASF community in the project*
- *We observe elements of the proposed model being implemented*
- *A report, based on data, is delivered.*

Priority Outputs & Timeframes

Phase 1 runs from August 23 – March 24, and will deliver a backlog of data, system and governance requirements.

Phase 2 runs from April 24 – June 25 and will deliver a proposed design for the AASF data ecosystem, along with a toolkit of co-design methods.

CSIRO

This Intent Statement template contains four main sections — the background column (on the left), the activities column (in the middle), the successes column (on the right), and the shared intent description (at the top). A usable copy of this template is available in the appendices, along with an example agenda template for the intent meeting.

1.2 Project Strategy & Research Plan

A Project Strategy and Research Plan is a foundational planning tool that guides the effective implementation of strategic design activities within complex data ecosystems. The strategy outlines key resources, activities, outputs, outcomes, and intended impacts, while the research plan translates these outcomes into specific questions and information needs, ensuring that all research efforts are purposefully aligned with the project's goals and stakeholder expectations throughout its lifecycle.

National Farmers Federation
Australian Agricultural Sustainability Framework
Australian Government
Department of Agriculture, Fisheries and Forestry

What is this?

Project planning is important to ensure strategic design activities are developed and implemented effectively when navigating complex data ecosystems. For the AASF Data Ecosystem project we harnessed the principles of agile project delivery and utilised an adaptation of a “theory of change” framework to design a one-page project strategy which was then used to inform all research activities throughout the lifecycle of the project.

The project strategy summarises at a high-level:
- Resources which can and will be used or referenced during the project
- Activities which will be co-designed and implemented
- Outputs which will be co-designed and delivered
- Outcomes which will be achieved for both the project and the broader contexts in which it operates
- Impacts which can be contributed towards through successful delivery of project activities, outputs and outcomes

The project strategy is supported by a research plan which describes a set of information which needs to be understood, and questions which need to be answered, for the project to demonstrate achievement of each listed outcome.

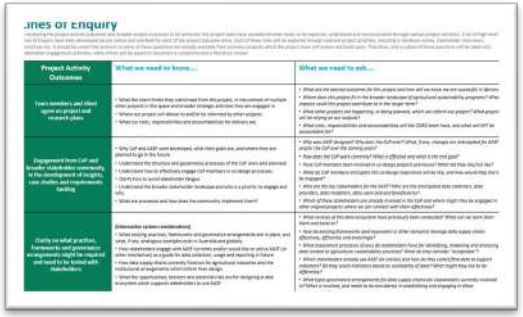
Example of the AASF Data Ecosystem project strategy, containing all inputs, activities and outputs to be delivered to achieve the project and broader outcomes and contribute to potential impact domains. Each item listed has a many-to-many relationship with other items (ie there is no linear relationship or pathway defined in this strategy)

What is involved?

The project team need to utilise the content of the Intent Statement to develop the first draft of the project strategy. Once the project strategy content is agreed by the project team and the client, then the research plan can be developed. There are five elements to the project strategy, each of which has a many-to-many relationship with each other element, and they are approached in the following order:

- Outcomes & Broader Outcomes — these should reflect the definitions of success in the intent statement, and be defined as clearly achievable goals or objectives for the project and/or the broader context in which the project is operating
- Impacts — these should describe the long-term changes which can or will be observed across the broader system in which the project is operating
- Outputs and Activities — these should define what specific deliverables and activities will be developed by the project team throughout the course of the project
- Inputs — these should list all resources which can be accessed and contribute to the project

The research plan is developed by listing the outcomes, and for each one then describing:
- What information and questions the project team will need to document and pose
- Which stakeholders/other resources can assist with answering these questions through various project activities



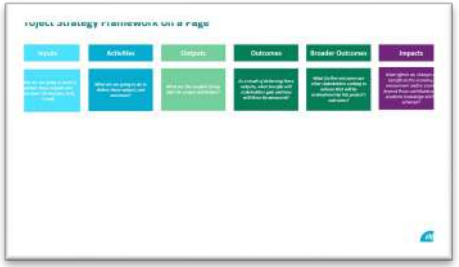
Example of Lines of Enquiry developed for three of the AASF Data Ecosystem project outcomes. These formed part of the Research Plan.

Steps to use this method

1. Using the template provided, and the content developed in the Intent Statement, develop the Project Strategy.

2. There are five elements to the project strategy itself, which need to be approached in the following order:

- Outcomes & Broader Outcomes — *using the definitions of success described in the intent statement, redefine these as clearly achievable goals or objectives for the project and/or the broader context in which the project is operating. Distinguish between outcomes to be achieved in the immediate project, and those that will be achieved beyond immediate project scope and plans.*
- Impacts — *these should describe the long-term changes which can or will be observed across the broader system in which the project is operating.*
- Outputs — *these should define what specific deliverables will be co-developed throughout the course of the project.*
- Activities — *these should define at a high-level which activities will be co-designed and implemented by the project team from day one through to completion.*
- Inputs — *these should reference the different types of resources which are available to the project, including personnel, advisory groups, governance committees, external stakeholder networks and existing literature to be reviewed.*

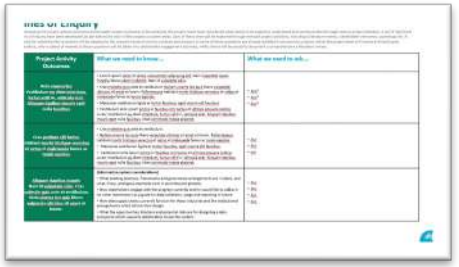


Project Strategy template is available in the appendices.

3. Once the project strategy is drafted it needs to be sent to the project sponsor for review and editing, to ensure everyone is in agreement before details are finalised.

4. As soon as the project strategy content is agreed, the Research Plan can be developed. This is done by listing the outcomes, and for each one then describing:

- What information will need to be documented to demonstrate achievement of this outcome
- What questions will need to be posed during project activities to develop the requisite information
- Which stakeholders/other resources can assist with answering these questions through various project activities
- Which project activities will focus on posing and answering which questions



Research Plan templates are available in the appendices. Shown here is the "Lines of Enquiry" template.

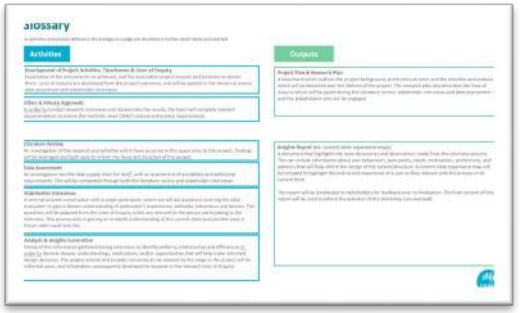
5. The research plan information can be developed first in an excel spreadsheet, and then the content placed into various templates including the "Lines of Enquiry" tables for each project outcome, and also for specific project activities.

How we used this tool and what we achieved

The CSIRO project team iteratively developed the project strategy and research plan materials once the intent statement was completed.

The project strategy was used to quickly identify what tasks the team needed to be focused on at any one point in the project. It gave all team members a handy reference guide to what was underway and what needed to be planned for. The outcomes in particular helped the team keep focused on the purpose behind the activities they were designing and the deliverables they were developing.

The research plan enabled the project team to ensure that each research and co-design activity was purposefully developed and would deliver the required information to achieve the intended outcomes. The lines of enquiry guided the team In their research activities and kept the focus of participants targeted on clearly defined goals and within well defined boundaries. This ensured scope creep was minimised. It also provided an easy reference tool to give to research participants to explain why particular questions were being asked by the project team.



In addition to the high-level information contained in the project strategy on a page, the team developed a supplementary glossary which detailed the purpose for each activity and output.

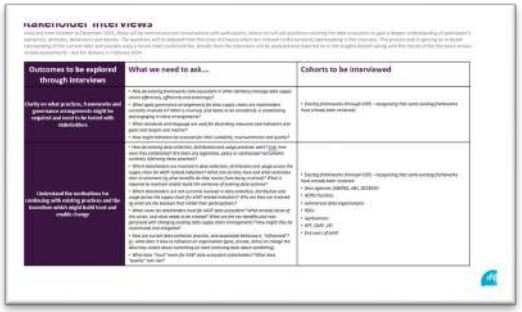
Lessons learnt and advice

In developing elements of the project strategy, consider the following:

Outcomes & Broader Outcomes — *for this project the "outcomes" were descriptions relevant to the project itself, the "broader outcomes" were descriptions of what would also be achieved for the AASF program as a whole. For example, one project outcome was defined as "Understand the motivations for continuing with existing practices and the incentives which might build trust and enable change". A broader outcome was defined as "practices, frameworks and governance arrangements exist to deliver data for users of AASF"*

Impacts — *for this project, the "impacts" referenced the vision for AASF, the goals of NFF and DAFF, and the SDGs to which the project could contribute. You might want to reference larger programs of work within which your project is situated or point to national or international programs to which your project can contribute (perhaps one or many SDGs).*

The elements represented in your project strategy need to have a many-to-many relationship. That means that there should be no singular link between any one input, activity, output and outcome. The reason for this is that in a strategic design project for complex data ecosystems many of the outcomes should be achieved through the collective sum of activities and outputs — rather than through pursuit of individual activities and outputs for only one outcome. If there are singular lines of connection between elements, further consideration and refinement is needed to ensure the outcomes are holistic and representative of the nuanced totality of desired project achievements from all activities and outputs.



The project team developed an individualised plan for each research and co-design activity. The plan outlined which of the project outcomes would be contributed towards, what questions needed to be posed in the course of implementing that activity, and who could be engaged in the activity. Above is an example of the plan for stakeholder interviews.

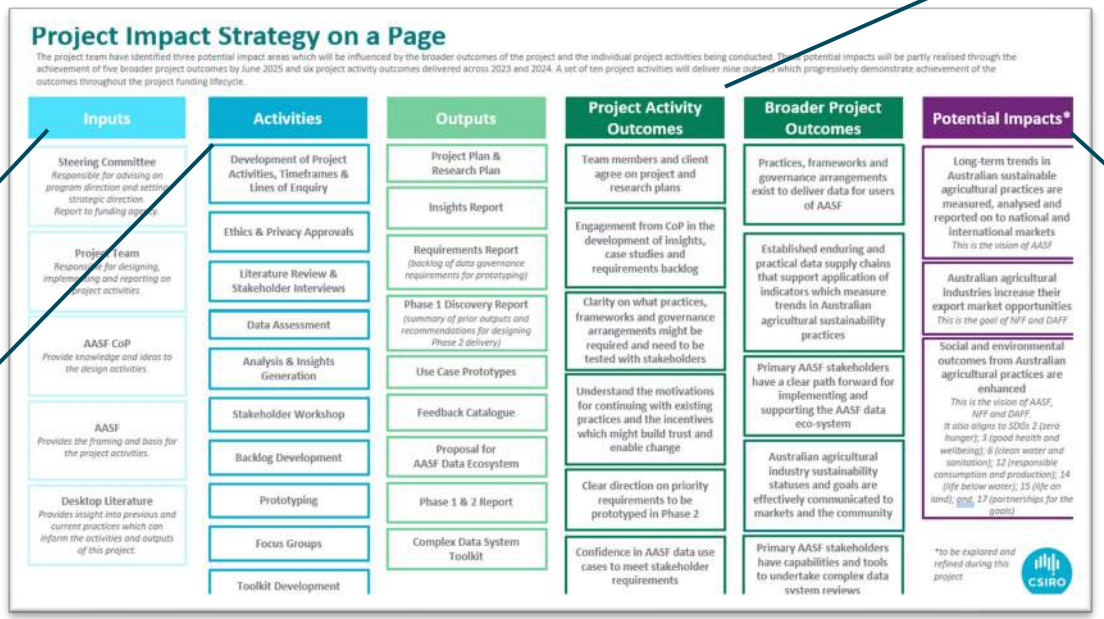
Templates
(a usable template is available in the appendices)

Start with defining the project and broader outcomes to be achieved. Use the “successes” defined in the intent statement to develop these statements.

Inputs should describe what is needed to deliver the outputs and outcomes (ie humans, stakeholders, literature)

Activities should describe at a high-level what the project team are going to do to deliver the outputs and outcomes

Potential Impacts should define what effects on, changes or benefits to the economy, environment and/or society can be contributed to



The project strategy defines the inputs, activities, outputs, outcomes and potential impacts for the initiative. The content is non-linear and non-hierarchical — there should be many-to-many relationships between all elements (ie one activity might contribute to multiple outputs and outcomes, and one outcome might be achieved through delivery of multiple activities and outputs).

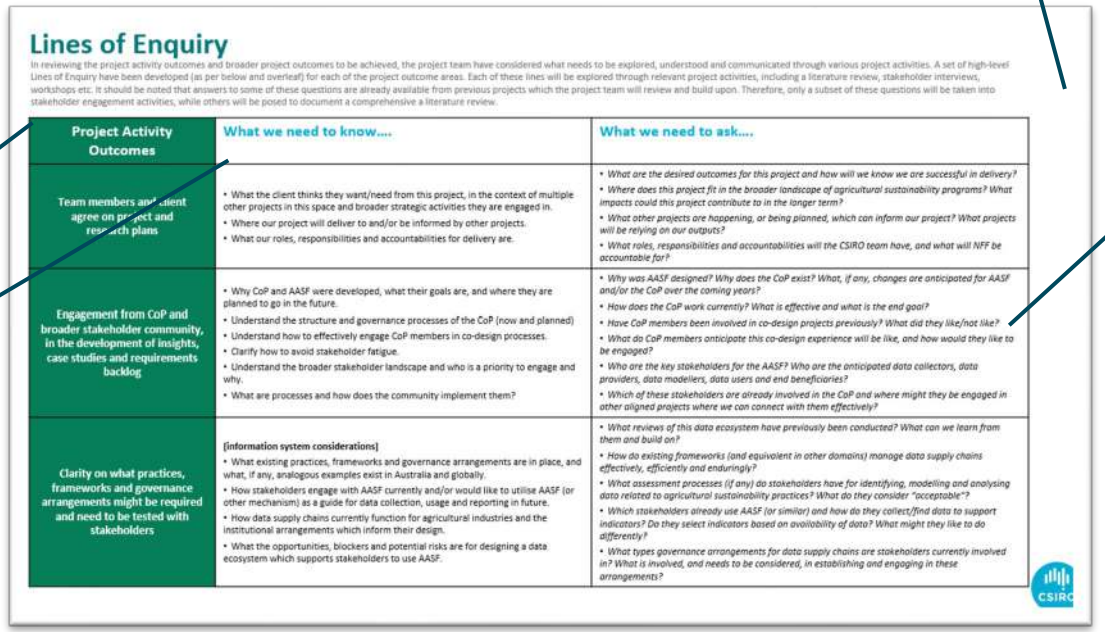
Templates
(a usable template is available in the appendices)

When developing this information, you might like to include additional columns stating which project activities the lines of enquiry will be used in, and which stakeholders might have relevant information to provide.

The project outcomes (or broader outcomes) are listed in the first column

In the second column, the project team needs to write statements about what information is required to be documented to demonstrate achievement of the project/broader outcome

The final column details all of the questions which need to be pursued to develop the information stated in the previous column. These are the “lines of enquiry” that will guide the project activities



Lines of Enquiry

In reviewing the project activity outcomes and broader project outcomes to be achieved, the project team have considered what needs to be explored, understood and communicated through various project activities. A set of high-level Lines of Enquiry have been developed (as per below and overleaf) for each of the project outcome areas. Each of these lines will be explored through relevant project activities, including a literature review, stakeholder interviews, workshops etc. It should be noted that answers to some of these questions are already available from previous projects which the project team will review and build upon. Therefore, only a subset of these questions will be taken into stakeholder engagement activities, while others will be posed to document a comprehensive a literature review.

Project Activity Outcomes	What we need to know....	What we need to ask....
Team members and client agree on project and research plans	• What the client thinks they want/need from this project, in the context of multiple other projects in this space and broader strategic activities they are engaged in. • Where our project will deliver to and/or be informed by other projects. • What our roles, responsibilities and accountabilities for delivery are.	• *What are the desired outcomes for this project and how will we know we are successful in delivery?* • *Where does this project fit in the broader landscape of agricultural sustainability programs? What impacts could this project contribute to in the longer term?* • *What other projects are happening, or being planned, which can inform our project? What projects will be relying on our outputs?* • *What roles, responsibilities and accountabilities will the CSIRO team have, and what will NFF be accountable for?*
Engagement from CoP and broader stakeholder community, in the development of insights, case studies and requirements backlog	• Why CoP and AASF were developed, what their goals are, and where they are planned to go in the future. • Understand the structure and governance processes of the CoP (now and planned) • Understand how to effectively engage CoP members in co-design processes. • Clarify how to avoid stakeholder fatigue. • Understand the broader stakeholder landscape and who is a priority to engage and why. • What are processes and how does the community implement them?	• *Why was AASF designed? Why does the CoP exist? What, if any, changes are anticipated for AASF and/or the CoP over the coming years?* • *How does the CoP work currently? What is effective and what is the end goal?* • *Have CoP members been involved in co-design projects previously? What did they like/not like?* • *What do CoP members anticipate this co-design experience will be like, and how would they like to be engaged?* • *Who are the key stakeholders for the AASF? Who are the anticipated data collectors, data providers, data modellers, data users and end beneficiaries?* • *Which of these stakeholders are already involved in the CoP and where might they be engaged in other aligned projects where we can connect with them effectively?*
Clarity on what practices, frameworks and governance arrangements might be required and need to be tested with stakeholders	[information system considerations] • What existing practices, frameworks and governance arrangements are in place, and what, if any, analogous examples exist in Australia and globally. • How stakeholders engage with AASF currently and/or would like to utilise AASF (or other mechanism) as a guide for data collection, usage and reporting in future. • How data supply chains currently function for agricultural industries and the institutional arrangements which inform their design. • What the opportunities, blockers and potential risks are for designing a data ecosystem which supports stakeholders to use AASF.	• *What reviews of this data ecosystem have previously been conducted? What can we learn from them and build on?* • *How do existing frameworks (and equivalent in other domains) manage data supply chains effectively, efficiently and enduringly?* • *What assessment processes (if any) do stakeholders have for identifying, modelling and analysing data related to agricultural sustainability practices? What do they consider “acceptable”?* • *Which stakeholders already use AASF (or similar) and how do they collect/find data to support indicators? Do they select indicators based on availability of data? What might they like to do differently?* • *What types governance arrangements for data supply chains are stakeholders currently involved in? What is involved, and needs to be considered, in establishing and engaging in these arrangements?*

Lines of enquiry are developed by identifying key themes and knowledge gaps that directly relate to the project’s intended outcomes, ensuring that research efforts remain focused and purposeful. These lines then serve as high-level guiding questions for strategic design research activities, helping to frame stakeholder engagement, data collection, and insight generation in alignment with the project's goals.

Templates
(a usable template is available in the appendices)

For individual activity plans, start with listing the project outcomes that will be achieved (or contributed to) through delivery of this activity

Then, copy the lines of enquiry developed earlier for each of the relevant outcomes

Stakeholder Interviews

Conducted from October to December 2023, these will be semi-structured conversations with participants, where we will ask questions covering the data ecosystem to gain a deeper understanding of participant's experiences, attitudes, behaviours and desires. The questions will be adapted from the Lines of Enquiry which are relevant to the person(s) participating in the interview. This process aids in gaining an in-depth understanding of the current state and possible ways a future state could look like. Results from the interviews will be analysed and reported on in the Insights Report (along with the results of the literature review and data assessment) – due for delivery in February 2024.

Outcomes to be explored through interviews	What we need to ask....	Cohorts to be interviewed
Clarity on what practices, frameworks and governance arrangements might be required and need to be tested with stakeholders	• How do existing frameworks (and equivalent in other domains) manage data supply chains effectively, efficiently and enduringly? • What types governance arrangements for data supply chains are stakeholders currently involved in? What is involved, and needs to be considered, in establishing and engaging in these arrangements? • What standards and language are used for describing measures and indicators and goals and targets and metrics? • How might indicators be assessed for their suitability, trustworthiness and quality?	• Existing frameworks (through COP) – recognising that some existing frameworks have already been reviewed)
Understand the motivations for continuing with existing practices and the incentives which might build trust and enable change	• How do existing data collection, distribution and usage practices work? And, how were they established? Are there any legislative, policy or contractual instruments currently informing these practices? • Which stakeholders are involved in data collection, distribution and usage across the supply chain for AASF related indicators? What role do they have and what motivates their involvement (ie what benefits do they realise from being involved)? What is required to maintain and/or build the resilience of existing data systems? • Which stakeholders are not currently involved in data collection, distribution and usage across the supply chain for AASF related indicators? Why are they not involved (ie what are the blockers that inhibit their participation)? • What vision do stakeholders have for AASF data ecosystem? What already exists of this vision, and what needs to be created? What are the key benefits and risks perceived with changing existing data supply chain arrangements? How might they be incentivised and mitigated? • How are current data collection practice, and associated behaviours, "influenced"? ie– what does it take to influence an organisation (govt, private, other) to change the data they collect about something (or start collecting data about something) • What does "trust" mean for AASF data ecosystem stakeholders? What does "quality" look like?	• Existing frameworks (through COP) – recognising that some existing frameworks have already been reviewed • Govt agencies (ABARES, ABS, DCCEEW) • NCRIS Facilities • commercial data organisations • RDCs • Agribusiness • NFF, DAFF, AFI • End users of AASF

Then consider which stakeholders might have information or knowledge which can help answer these questions. This list of stakeholders will help inform your initial interview or other activity plan invitations.

Individual strategic design activity plans can outline specific project outcomes, align them with relevant lines of enquiry, and identify stakeholder cohorts to be engaged, ensuring each activity is purposefully targeted. This structure helps guide research design, ensuring that interviews and engagements generate insights directly linked to the project's strategic goals.

2.0 How to.. Make Sense

2.1 Discovery Interviews

2.2 Discovery Group Activities

2.3 Affinity Mapping

2.4 Insights & How Might We .. ? (HMWs)

National Farmers Federation
Australian Agricultural Sustainability Framework
Australian Government
Department of Agriculture, Fisheries and Forestry

2.1 Discovery Interviews

Discovery interviews are structured, purposeful conversations with key stakeholders designed to uncover insights that inform strategic design decisions and align with project outcomes. Guided by an interview plan and tailored lines of enquiry, these interviews help surface stakeholder needs, expectations, and opportunities for change, forming a critical evidence base for subsequent design activities.

What is this method?

Interviews are guided, purposeful meetings held with key informants or stakeholders to gain an understanding of key project or design issues. An interview is not a freeform conversation. Instead, an interview relies on a carefully crafted interview guide that establishes the parameters of the interview and helps guide conversation towards a specific objective. There are multiple types of interview formats. The most common three are:

- Unstructured interviews: An interviewer comes with little or no formal structure outside of a clear desire and purpose for the discussion, and explores the areas of interest with open-ended questions
- Semi-structured interviews: Interviews that utilise a set of questions/ sub-questions in a flexible manner, with the interviewer dynamically guiding the interview in response to a participant's disclosures and the desired goals of the interview
- Structured interviews: The interviewer comes with a list of fixed questions that all participants receive uniformly, with little variation or dynamic exploration.

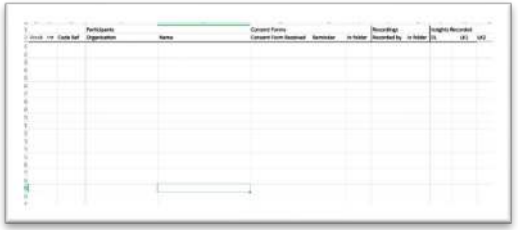
Interviews can be conducted in person or online using an appropriate service (e.g. Microsoft Teams). Regardless of how they are conducted, interviews do require prior preparation, good record keeping, detailed note taking, and appropriate ethical approvals to progress. Recording the interviews for accuracy can also be highly beneficial if participants are comfortable and consent to this. There is no “best” kind of interview. Instead, interviews should be aligned with project and research needs. This guide focuses on semi-structured interviews, as the middle ground between these positions.

As a research organisation, CSIRO applies and adheres to strict ethics guidelines for all research activities. All interview participants were provided with, and signed, Participant Recruitment Information Application Forms before engaging in any research activities with the project team.

How is this method used?

Interviews can be used at any stage of the design and research process thanks to their flexibility. Based on the different stages of the project, project needs, and the relationship to the participant, an interviewer can respond dynamically to a participant's responses to guide the meeting towards a desired goal. This might include discovering stakeholder needs during the “Making Sense” phase or confirming design requirements with a stakeholder during “Initiate change”.

Interviews require an interview guide to succeed. The interview guide provides a script of key information directing the interview, such as key questions, any briefing or instruction required (e.g. ethics disclosures), probes (follow up questions for a participant). The guide should be paired with a note taking template for use by a notetaker during an interview, and after an interview where both an interviewer and notetaker can capture and reflect on key insights. Recordings may also contribute to deeper qualitative analysis. During interviews, it is essential for interviewers to establish and maintain rapport with participants, as trust is a key determinant of the interview’s success. This can be fostered through active listening techniques that convey empathetic, respectful, and non-judgemental engagement. If other tools (such as personas or use cases) are planned, then the interview guide can be prepared to support these later methods through including specific questions and probes to draw out necessary information.



Record keeping for interviews is essential. This not only includes what data is collected during an interview, but maintaining appropriate records on contacting participants, gaining consent, and how interviews are progressing towards project goals. In this example, we used an excel spreadsheet to keep track of interviewees who were approached during the AASF Data Ecosystem project and noted various details about their interview time and focusing questions.

Steps to use this method

1. Hold a planning session with the project team and relevant stakeholders to determine whether interviews are the appropriate method for addressing the project's goals. During this session, clarify the purpose of the interviews, identify the types of insights needed, and refer to the Research Plan for key methodological questions that will inform the development of the interview guide (e.g., format, length, participant type, and data use).

2. Develop the interview guide to align with the project's strategic outcomes and lines of enquiry. Ensure the guide includes clear, open-ended questions that support meaningful dialogue. Concurrently, prepare all necessary documentation — such as ethics approvals, privacy statements, and consent forms — in accordance with institutional and legal requirements. These must be reviewed and approved before any recruitment or data collection begins.

3. Identify and invite participants whose perspectives are relevant to the project's goals. Recruitment should be guided by the project's stakeholder map or cohort definitions, ensuring diversity and relevance. Use clear communication to explain the purpose of the project, what participation involves, and how data will be used.

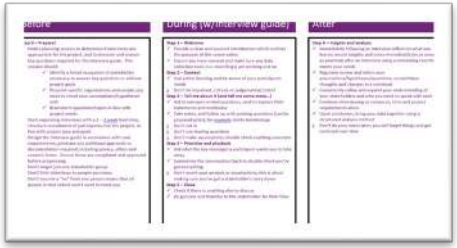
4. Coordinate interview times that are convenient for participants and interviewers. Consider accessibility, time zones, and preferred formats (e.g., in-person, phone, or video conferencing). Confirm logistics and provide participants with any necessary pre-interview materials (providing participants with the relevant lines of enquiry can assist with their preparation for the interview).

5. Facilitate interviews using the approved guide, ensuring the format and tone are appropriate to the project context. Interviewers should use active listening and empathetic engagement to build rapport and encourage open, honest responses. The interviewer(s) should remain impartial, putting aside their own views and any desire to challenge or debate, in favour of focusing on eliciting the stakeholder's views. The guide should support consistency while allowing flexibility to follow relevant tangents.

6. Immediately following interviews, capture notes and insights generated from the discussion in a systematic way. Document key insights, quotes, and observations in a systematic format (e.g., structured notes template or digital tool). Doing this immediately after each interview ensures that reflections are fresh and accurate and support later analysis.

7. Conduct additional interviews based on the project's scope, available resources, and emerging needs. Iteration may be necessary to deepen understanding, fill gaps, or validate findings.

8. Once interviews are complete, apply a structured analysis method to synthesise findings across the dataset. Techniques such as Affinity Mapping can help identify patterns, themes, and insights that respond to the original lines of enquiry and project outcomes defined in Step 1.



Utilise the interview template to ensure each session is focused and purposeful

Make sure to use Lines of Enquiry to guide your interview questions and ensure the discussions are relevant to the project purpose and intent

How we used this tool and what we achieved

Interviews were a core method for engaging stakeholders during the strategic design of the AASF Data Ecosystem. Grounded in the project's intended outcomes and lines of enquiry, the interview process was carefully planned and executed to generate insights that would inform subsequent design activities

A total of 58 individuals participated across 33 interviews between October 2023 and February 2024. In some cases, multiple participants joined a single session. The interviews were designed using a structured guide aligned with the project's goals and approved documentation, including consent and privacy protocols. Participants were recruited based on their relevance to the ecosystem's current and future state, and interviews were scheduled and conducted in formats appropriate to their context.

The insights gathered helped surface stakeholder expectations, concerns, and aspirations for change within the existing AASF Data Ecosystem. Key outcomes included the identification of priority use cases, clarification of stakeholder requirements, and the co-development of a draft vision, objectives, and guiding principles for the ecosystem. These findings formed a critical evidence base for the next stages of strategic design activities.

58

Interview Participants

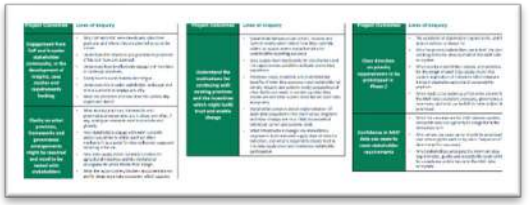
In addition to the high-level information contained in the project strategy on a page, the team developed a supplementary glossary which detailed the purpose for each activity and output.

Lessons learnt and advice

While powerful and flexible, interviews can be deceptively difficult to implement. There are numerous ways in which interviews can be an unproductive use of time. This includes (but are not limited to):

- A lack of prior preparation of interview guides, data collection and capture tools, and other materials that are required to steer the interview towards the desired outcome
- Inadequate record keeping, meaning interviews are not organised in a timely and efficient manner, hampering project progress
- A lack of experience in conducting interviews, leading to conversations that fail to provide meaningful insights (at best) or go "off-the-rails" (at worst) and cover irrelevant material
- Not budgeting appropriate time and effort for administering and analysing interviews
- Finally, and perhaps most critically, a break down of rapport between the interviewers and the participating stakeholder. The success of an interview ultimately rests with the willingness of participants to share, which is a function of the rapport in the interview itself. Techniques such as active listening are vital to support this, but this is also something that comes with experience.

As a whole, the AASF project team possessed significant prior experience in interviewing. This allowed us to mitigate many of these challenges. For challenges that were identified (for example, varying levels of experience with interviews amongst the team), team members collaborated to run interviews, ensuring an appropriate level of experience and guidance.

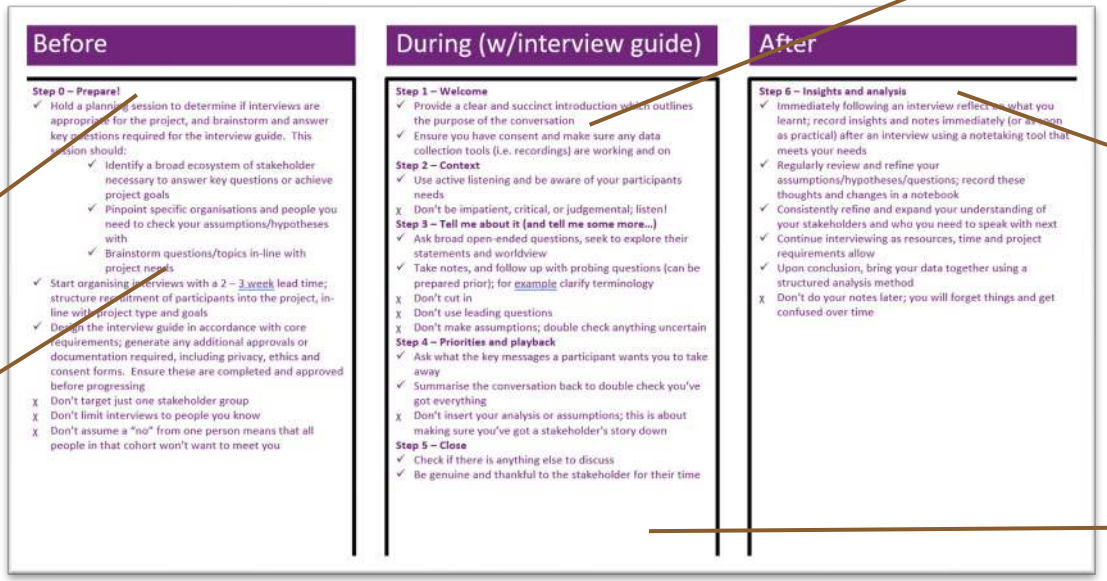


Having a clear understanding of what research questions or topics need to be asked/answered is essential for the creation of lines of enquiry. The above is a list of the project outcomes to be achieved and the lines of enquiry pursued by the AASF Data Ecosystem project team — and can be found on page 10 of the AASF Data Ecosystem Stage 2 Final Report.

Templates
(a usable template is available in the appendices)

References other techniques that can be researched to improve the interview experience (e.g. active listening)

Pair this template with a list of context specific questions to meet project goals



Before

Step 0 – Prepare!
- ✓ Hold a planning session to determine if interviews are appropriate for the project, and brainstorm and answer key questions required for the interview guide. This session should:
  - ✓ Identify a broad ecosystem of stakeholder necessary to answer key questions or achieve project goals
  - ✓ Pinpoint specific organisations and people you need to check your assumptions/hypotheses with
  - ✓ Brainstorm questions/topics in-line with project needs
- ✓ Start organising interviews with a 2 – 3 week lead time; structure recruitment of participants into the project, in-line with project type and goals
- ✓ Design the interview guide in accordance with core requirements; generate any additional approvals or documentation required, including privacy, ethics and consent forms. Ensure these are completed and approved before progressing
- x Don't target just one stakeholder group
- x Don't limit interviews to people you know
- x Don't assume a "no" from one person means that all people in that cohort won't want to meet you

During (w/interview guide)

Step 1 – Welcome
- ✓ Provide a clear and succinct introduction which outlines the purpose of the conversation
- ✓ Ensure you have consent and make sure any data collection tools (i.e. recordings) are working and on

Step 2 – Context
- ✓ Use active listening and be aware of your participants needs
- x Don't be impatient, critical, or judgemental; listen!

Step 3 – Tell me about it (and tell me some more...)
- ✓ Ask broad open-ended questions, seek to explore their statements and worldview
- ✓ Take notes, and follow up with probing questions (can be prepared prior); for example clarify terminology
- x Don't cut in
- x Don't use leading questions
- x Don't make assumptions; double check anything uncertain

Step 4 – Priorities and playback
- ✓ Ask what the key messages a participant wants you to take away
- ✓ Summarise the conversation back to double check you've got everything
- x Don't insert your analysis or assumptions; this is about making sure you've got a stakeholder's story down

Step 5 – Close
- ✓ Check if there is anything else to discuss
- ✓ Be genuine and thankful to the stakeholder for their time

After

Step 6 – Insights and analysis
- ✓ Immediately following an interview reflect on what you learnt; record insights and notes immediately (or as soon as practical) after an interview using a notetaking tool that meets your needs
- ✓ Regularly review and refine your assumptions/hypotheses/questions; record these thoughts and changes in a notebook
- ✓ Consistently refine and expand your understanding of your stakeholders and who you need to speak with next
- ✓ Continue interviewing as resources, time and project requirements allow
- ✓ Upon conclusion, bring your data together using a structured analysis method
- x Don't do your notes later; you will forget things and get confused over time

Contains prompts to drive future successful interviews

Includes key questions and work required to kickstart successful interviews

Each section contains practical "do's" and "don'ts" based on real interview experience

This generic interview template offers guidance on both how to effectively conduct an interview and what content to include in the interview guide to ensure it aligns with project goals and supports meaningful stakeholder engagement. This template is available in the appendices — use with specific research questions to create the interview guide

2.2 Discovery Group Activities

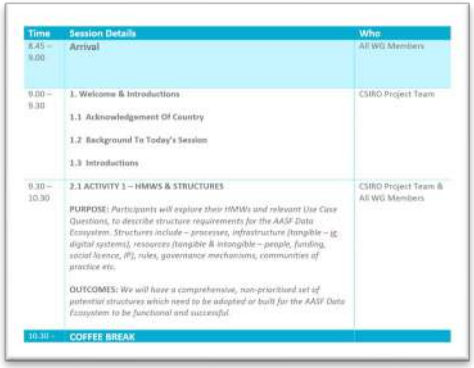
Discovery group activities are structured co—design sessions that bring together diverse stakeholders to validate emerging insights, share perspectives, and collaboratively prioritise key challenges and opportunities within a data ecosystem. These activities build on earlier research — such as interviews — and are designed to generate shared understanding, deepen knowledge, and co—create actionable outcomes that guide the next stages of strategic design.

What is this method?

Once individual interviews and one-on-one discussions have been completed — and the project team has begun to build a picture of the current and potential future state of the data ecosystem — it becomes important to convene stakeholders to collectively explore the problem and opportunity space. This is the role of discovery group activities: structured co-design events that bring together representatives from across the stakeholder network to validate emerging insights, share diverse perspectives, and collaboratively prioritise key requirements.

Discovery group activities typically involve members of the project team, the client team, and representatives from stakeholder cohorts within the data ecosystem. These sessions are designed to present early research findings — such as themes emerging from interviews or desktop reviews — and to create space for participants to reflect on, challenge, and build upon this knowledge. Through facilitated dialogue, participants contribute additional insights and help identify shared priorities for action.
Two common formats for discovery group activities include:

- Focus Groups: Small, targeted sessions (typically 6—10 participants) that allow for in-depth discussion and prioritisation of issues among representatives from either one cohort group or each stakeholder cohort. The former allows for focus on issues unique to the cohort, the latter enables in-depth discussion across a broad range of perspectives.
- Workshops: Larger, more diverse gatherings (20+ participants) that enable broad knowledge exchange and collaborative generation of new ideas, insights, or artefacts.



Time	Session Details	Who
8.45 – 9.00	Arrival	All WG Members
9.00 – 9.30	1. Welcome & Introductions 1.1 Acknowledgement Of Country 1.2 Background To Today's Session 1.3 Introductions	CSIRO Project Team
9.30 – 10.30	2.1 ACTIVITY 1 – HMWS & STRUCTURES PURPOSE: Participants will explore their HMWs and relevant Use Case Questions, to describe structure requirements for the AASF Data Ecosystem. Structures include – processes, infrastructure (tangible – ie digital systems), resources (tangible & intangible – people, funding, social licence, IP), rules, governance mechanisms, communities of practice etc. OUTCOMES: We will have a comprehensive, non-prioritised set of potential structures which need to be adopted or built for the AASF Data Ecosystem to be functional and successful.	CSIRO Project Team & All WG Members
10.30 –	COFFEE BREAK	

Well formed and described Agendas are critical to the design and implementation of successful discovery group activities. Here we show the outline of an agenda for the first working group sessions held in September 2024.

How is this method used?

The purpose of discovery group activities is to:
- Facilitate shared learning by bringing stakeholders together to exchange knowledge and perspectives across domains and roles.
- Critically evaluate emerging insights by adding nuance and depth through lived experience, professional expertise, and cross-sector dialogue.
- Co-create value by generating ideas, knowledge, prototypes, or relationships that support the project's strategic goals. In workshops especially, participants are expected to actively contribute to the creation of tangible outputs — true to the spirit of a "workshop."

To ensure discovery group activities are purposeful and effective, the project team should:
- Develop an agenda that clearly articulates the overall purpose, intended outcomes, and expected outputs of the session.
- Create a detailed runsheet outlining session structure, facilitator roles, materials required, and timing.
- Define session-level objectives by specifying the purpose, outcomes, and outputs for each segment of the activity, and preparing a set of focused questions to guide discussion and capture insights.

Detailed runsheets enable the project team and client group to confirm all of the activities, materials and roles required to deliver the discovery group activity. Here we show the outline of a runsheet for the first working group sessions held in September 2024.

Steps to use this method

1. The project team need to first decide what type of event is required — a workshop or a focus group. A workshop should be selected if the purpose is to generate new insights and understand a diversity of objectives and goals from a broad range of stakeholders. A focus group should be selected if the purpose is to gain nuanced insights into specific areas of interest to a select group of stakeholders.

2. An agenda for the activity needs to be developed. This agenda needs to outline at a minimum:

- Purpose of the event
- Intended outcomes to be achieved from the event
- Outputs which will be delivered from the event
- Focusing questions which will guide the event activities
- Session times (keep in mind that the maximum time for any one session should be 90mins, so ensure that you schedule a lot of breaks throughout the event)

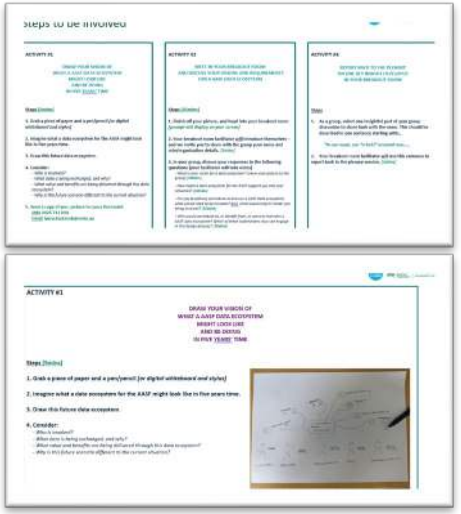
3. The agenda should be reviewed between the project team and client to ensure the purpose, outcomes and outputs are agreed. Then, the agenda needs to be turned into a detailed runsheet. The runsheet describes everything from the agenda, plus:

- The purpose, outcomes, outputs for each individual session in the event
- Activities to be implemented in each session
- Materials required to run each session (ie .ppt slides, templates, whiteboards, paper etc)
- Roles and responsibilities for facilitation, presentation and note taking.

4. In designing the activities for each event session, consider:

- Is this something which can be done at an individual, paired, table or whole-of-room level? Make sure your event includes a range of activities across these different engagement and co-design scale
- Is this something which is achievable within the time available? Avoid creating activities which require immense concentration and detailed negotiations if you only have 20mins available in the schedule.
- Is this something which will require participants to be familiar with new or different information? If so, make sure you provide participants with pre-reading materials or “homework” so they can fully participate at the event. And keep in mind, not everyone will do the pre-reading or homework, so you’ll need to account for that in the activity design.

5. Once the runsheet has been drafted, the project team will need to create the activity and presentation materials. It is always a good idea to test the materials within the team, or with a friendly colleague, prior to finalising and running the event.

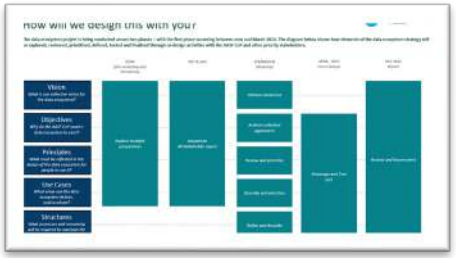


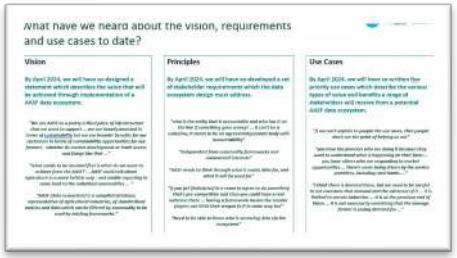
Example of a discovery group activity facilitated at the AASF CoP meeting in November 2023. Participants were asked to draw their visions for the future of the AAASF Data Ecosystem. Below are some of the images drawn by participants at this event.

How we used this tool and what we achieved

In this project, the team designed and ran many discovery group activities. The earliest event was designed as a session within a larger AASF Community of Practice day-long online workshop in November 2023. As it was early days of the AASF Data Ecosystem project, the team took the opportunity to design the session as a way to both share information about the project intent, and gather ideas and inspirations from participants about what project success might look like in both the short and long term. To run this activity, the project team developed:

- Pre-reading materials for participants — these included the project intent statement content, an overview of what was being planned, and a series of questions for the participants to consider about the vision, objectives, principles and stakeholders
- Presentation materials for the session — this included an overview of the project intent, the series of questions to be considered in the session activity, and information to date
- Briefing information for breakout room facilitators — as there were 100+ participants in the online workshop, the project team put them in groups of 6—8 people in breakout rooms
- Activity plan — this included a set of provocation questions for participants to respond to in their breakout rooms, and an activity for participants to draw their visions of the future
- From this activity, the project team had a set of information to draft the initial data ecosystem strategy with an initial vision, emergent principles and priority use cases and stakeholder information.





Example of presentation materials provided during the AASF CoP workshop in November 2023.

The project team outlined what the project was proposing to develop, how participants could be involved, and what information had been generated to date (draft vision, principles and use cases).

Lessons learnt and advice

Discovery group activities are an ideal strategic design method to use when you need to bring stakeholders up to speed, tap into collective knowledge, build relationships across system silos, enable creativity in places where functional fixedness resides, generate new ideas and sense check emergent information.

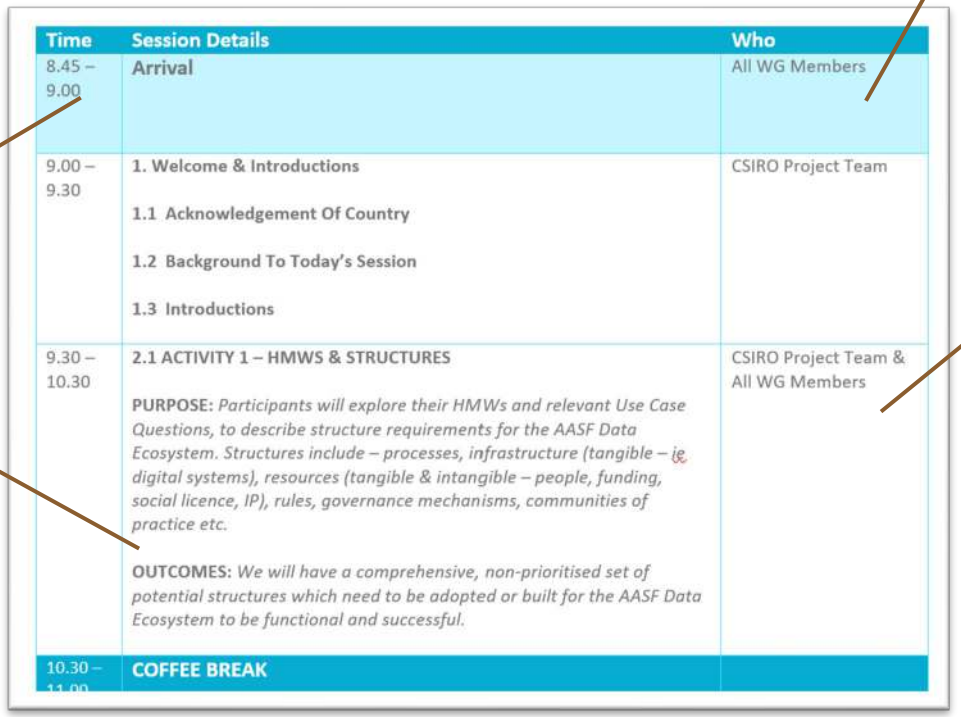
Avoid designing workshops if you need a final review of a solution or agreement on a strategy before deployment. Workshops are good for generating new ideas and knowledge, developing new connections across cohorts, gaining generalised group insights, but collective agreement is difficult to achieve (especially online). Whereas focus groups are helpful for generating deep critique and precise feedback with laser-focused responses unique to individual stakeholder cohorts or to specific group issues.

Both workshops and focus groups need to be designed with a clear purpose and set of achievable outcomes in mind. This is the necessary starting point for implementing an effective discovery group activity. Remember to define purpose, outcomes and outputs for the activity as a whole, and then also for each individual session within the activity too. If the facilitator(s) have a clear activity goal in mind, then they will be able to adapt the session activities on the fly as and when any new information comes to light from participants.

Templates
(a usable template is available in the appendices)

Roles of the project team and participants are defined in the agenda

Outline the time allowed for sessions overall — this can be a direct reference to the actual hour(s) when the session will commence and end — or an indication of how long it will take.



Time	Session Details	Who
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10.30 – 11.00	COFFEE BREAK	

Always ensure that each session within the event has a purpose and outcome defined in the agenda

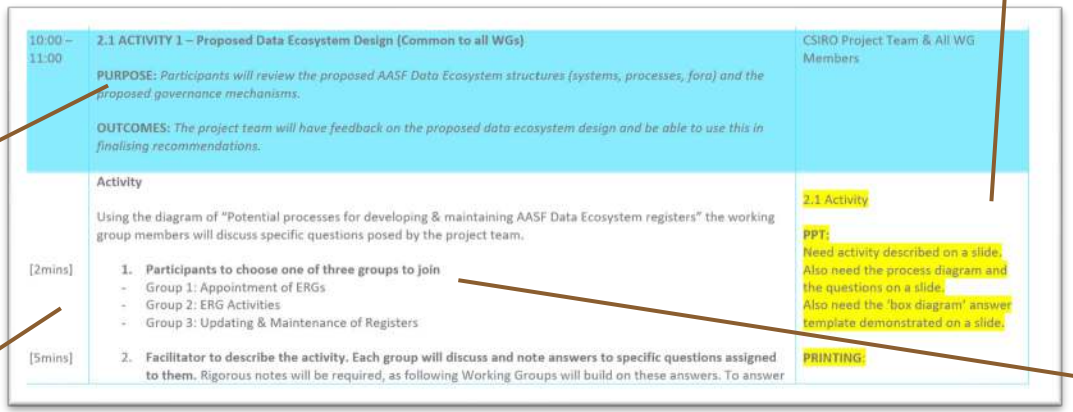
The facilitator needs to ensure there are regular rest breaks scheduled in. The maximum time for any one session should be 90mins. The facilitator needs to keep an eye on time and ensure that participant contributions are relevant to the purpose and will enable achievement of the outcomes. Where discussions diverge, they should be noted for exploration at another time.

An agenda is a structured planning tool that outlines the purpose, timing, session flow, and responsibilities for a co-design activity or meeting, ensuring all participants are aligned and the session achieves its intended outcomes. A template based on this example structure is available in the appendices.

Templates
(a usable template is available in the appendices)

Taken from the agenda, the runsheet should list for each session the purpose and outcomes. This means the facilitator can ensure that as and when the participants diverge from the activity plans, the overall session focus can be brought back on track at anytime

The runsheet needs to list all of the materials required for each session — including powerpoint slides and templates



10:00 – 11:00	**2.1 ACTIVITY 1 – Proposed Data Ecosystem Design (Common to all WGs)** **PURPOSE:** *Participants will review the proposed AASF Data Ecosystem structures (systems, processes, fora) and the proposed governance mechanisms.* **OUTCOMES:** *The project team will have feedback on the proposed data ecosystem design and be able to use this in finalising recommendations.*	CSIRO Project Team & All WG Members
	Activity Using the diagram of "Potential processes for developing & maintaining AASF Data Ecosystem registers" the working group members will discuss specific questions posed by the project team.	2.1 Activity **PPT:** Need activity described on a slide. Also need the process diagram and the questions on a slide. Also need the 'box diagram' answer template demonstrated on a slide.
[2mins]	1. **Participants to choose one of three groups to join** - Group 1: Appointment of ERGs - Group 2: ERG Activities - Group 3: Updating & Maintenance of Registers	
[5mins]	2. **Facilitator to describe the activity. Each group will discuss and note answers to specific questions assigned to them.** Rigorous notes will be required, as following Working Groups will build on these answers. To answer	**PRINTING:**

In addition to the time defined for the overall event session, include specific timing details for each part of the activity plan

Activity plans should provide step-by-step instructions on what the facilitator will say and what participants will be asked to do

A runsheet is a detailed operational guide that outlines the step-by-step flow of a co-design event. It builds on the original agenda and details timing, facilitator roles, materials, and instructions, to ensure smooth and coordinated delivery. A template is available in the appendices.

2.3 Affinity Mapping

Affinity mapping is a visual, collaborative technique used to analyse qualitative data by grouping similar observations into thematic clusters, or affinities. This method helps uncover patterns and deeper insights across a dataset, supporting the synthesis of research findings into actionable knowledge that informs strategic design decisions.

National Farmers Federation | Australian Agricultural Sustainability Framework
Australian Government
Department of Agriculture, Fisheries and Forestry

What is this method?

Affinity mapping — also known as clustering — is a visual, collaborative technique used to analyse qualitative research data. It is most commonly applied to interview notes but can also be used with other data sources such as transcripts, documents, or images. The method involves sorting data into thematic groupings, or “affinities,” to identify patterns and generate insights that support strategic design decisions. These affinities go beyond surface-level descriptions (e.g. “participants said X”) to uncover the underlying drivers, meanings, or issues that inform stakeholder perspectives and project direction.

Affinity mapping is a flexible, cost-effective method that can be conducted individually or in groups, and is particularly valuable for making sense of complex datasets. It supports the synthesis of research findings into actionable insights and can inform the development of tools such as “How Might We…” questions.

Affinity mapping does assume and rely upon appropriately conducted qualitative data collection and is paired with interviews (and correctly detailed notes), focus groups, transcripts, documents, or other material relevant to the research question/ research need of the project.

How is this method used?

The process of affinity mapping can be conducted either in person (using physical materials such as post-it notes, pens, and whiteboards) or online (using digital whiteboarding tools like Miro). In both formats, the process begins by placing individual data points — such as quotes, observations, or notes — into a shared workspace. These are then grouped into clusters based on thematic similarity.

Once all data has been sorted, the project team reflects on each cluster to interpret its meaning and significance in relation to the project’s goals. This step is critical for moving from raw data to deeper insights that can inform design decisions. The goal is to understand the dataset as a whole, rather than focusing on isolated or convenient parts.

Affinity mapping is intentionally accessible and does not require prior theoretical knowledge, making it suitable for a wide range of participants. While it can be done individually, it often benefits from group participation, where diverse perspectives help surface richer patterns and interpretations. It also supports knowledge sharing across the project team and can be used to involve stakeholders in the analysis process — either as contributors or as part of validating and communicating findings.

Well formed and described agendas are critical to the design and implementation of successful discovery group activities. Here we show the outline of an agenda for the first working group sessions held in September 2024.

Steps to use this method

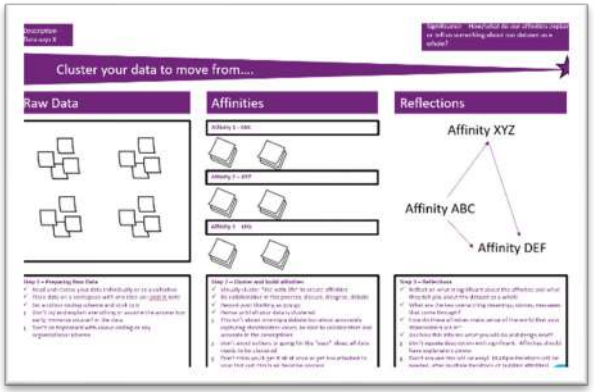
1. Begin by reading and familiarising yourself with the qualitative data to be analysed — this may include interview notes, transcripts, documents, or other materials. In group settings, participants can either divide the dataset for individual review or collaboratively examine the same sections to build shared understanding. The goal at this stage is to ensure all relevant content is understood before translation into visual form.

2. Convert the reviewed data into individual, summarised observations — each capturing a single idea, quote, or insight. These should be recorded on post-it notes (for in-person sessions) or digital equivalents (for online platforms such as Miro). Use a consistent colour for these notes to maintain visual clarity, unless a deliberate colour-coding scheme is employed. Avoid analysis at this stage; focus solely on capturing the full breadth of data in a clear, digestible format.

3. Sort the notes into thematic groupings by clustering “like with like.” These clusters — known as affinities — represent patterns or shared meanings across the dataset. Use a different coloured note to label each affinity with a descriptive title that reflects its core theme. It can be helpful for participants to document their reasoning behind each cluster to support shared understanding and transparency in the analysis.

4. Continue reviewing and refining the clusters until all data is sorted. At this stage, shift from descriptive grouping to interpretive analysis: explore how the affinities relate to one another and what overarching narratives, meanings, or insights they reveal about the dataset as a whole. This synthesis is critical for generating actionable knowledge that supports strategic design.

5. Summarise the final affinity map in relation to the project’s research questions and lines of enquiry. Consider what new insights have emerged, how they align with or challenge existing assumptions, and what implications they hold for the next phase of design. Affinity mapping often reveals unexpected findings that can reshape priorities or inspire new directions in the project.



A template to guide you through this process is available in the appendices.

How we used this tool and what we achieved

Affinity mapping was used to analyse all the data collected during stakeholder interviews and was the primary means by which later design outputs — particularly Insights and "How Might We..." questions — were developed. The design team worked collaboratively online using Miro to conduct the affinity mapping process, holding meetings online using Microsoft Teams while concurrently working on the Miro board to simulate working co-presently and harness a group work dynamic.

The team had different levels of experiencing in qualitative data analysis, and this successful use of affinity mapping demonstrate how those with different levels of experience can successfully utilise this method to "make sense" during the design process.

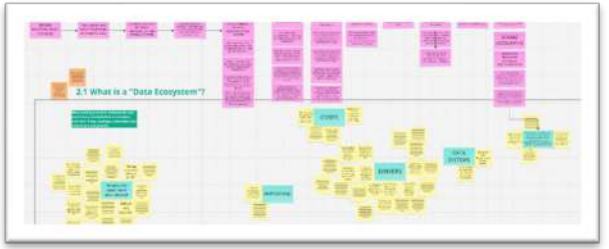
An example of two data points from an affinity map. Each features one idea. The left is a paraphrase or note, while the right is a verbatim quote (de-identified for privacy purposes).

Lessons learnt and advice

Affinity mapping works best as a collaborative form of data analysis, harnessing the collective wisdom of the team to build a shared understanding of a dataset, in a visual and easy to complete manner.

While it certainly can be robust and insightful, alternative approaches (like thematic analysis) and tools (like dedicated qualitative analysis software) provide more guidance and options to deeply explore qualitative datasets. However, these require expert knowledge, time, and sometimes expensive tools amongst all collaborators. Projects with scientific or medical research requirements may wish to consider these tools over affinity mapping. Affinity mapping can be made more qualitatively rich through employing a rudimentary coding scheme to add more nuance to the dataset being created. This includes adding anonymised participant identifiers, cohort information, or dates, so that these variables can be considered amongst the affinities (for example, is a specific cohort describing one affinity strongly versus other cohorts?). Colour coding, using symbols/stickers/or identifiers, or preconfiguring the workboard can assist with this.

One of the biggest challenges of analysing qualitative data is the transition from description to significance, from moving beyond just describing what is found, to being analytical and insightful about what these descriptions mean as a whole. To support this process, the project team should consider creating project appropriate questions to help them ask the question "What is significant about these affinities to the project?". These questions should be tailored against project goals and desired outcomes. This will also help in finding the right level of granularity and structure to the data, which can be challenging given the breadth of a dataset. Further reflecting on the overall project purpose and significance can also help determine what "needs to be known", compared to what is "nice to know" or "not necessary to know".

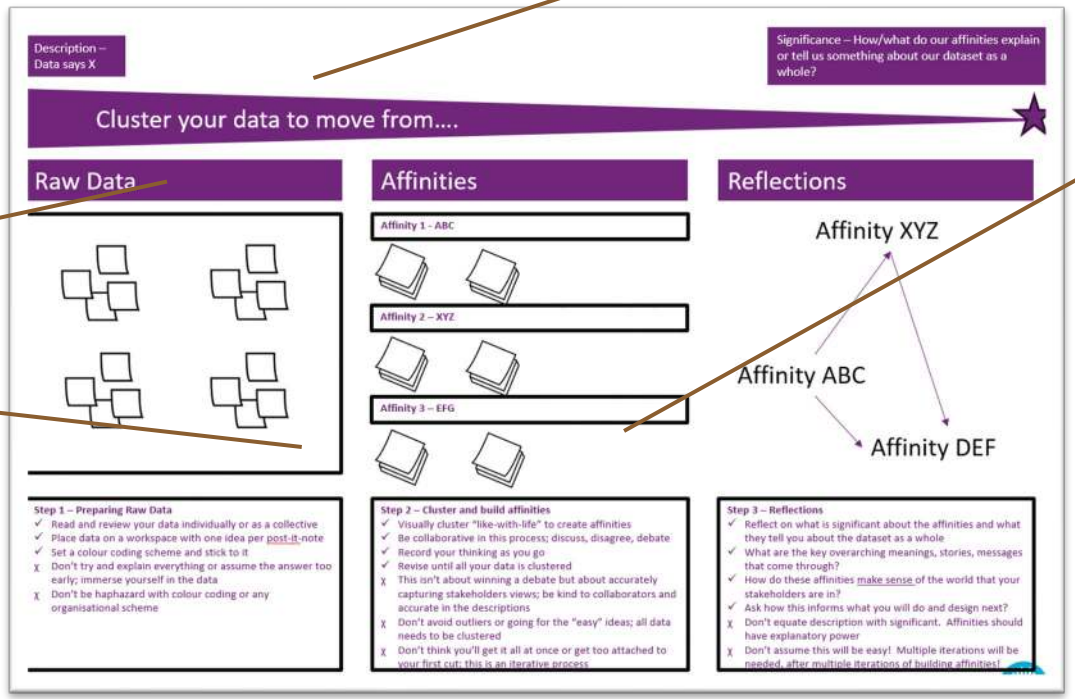


An overview of some of the affinity mapping performed during the AASF design process. Note the different colours for raw data (yellow), affinities (cyan), and further analysis drawing out the significance and meaning of the dataset based on these affinities (magenta).

Templates
(a usable template is available in the appendices)

Each step in the affinity mapping process should move from description to significance and finding meaning in the dataset Significance of affinities can be represented visually like here, or in a written summary form

Populate the template with real data as required; images here for illustrative purposes only.



It is not necessary to stack post-it-notes, merely place them in an orderly fashion around an affinity

The three vertical sections can be replicated online or on a whiteboard to structure the activity

This generic affinity mapping template guides how to both conduct the analysis, and also how a workspace might be structured around three sections, each moving towards highlighting the significance of the data through building affinities.

2.4 Insights & HMWs

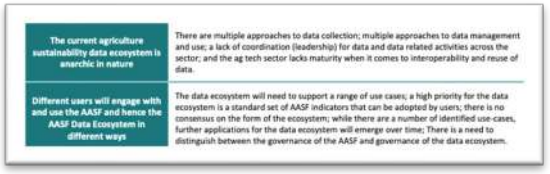
Insights and How Might We ...? questions (HMWs) are complementary tools used to synthesise research findings and frame opportunities for design. Insights distil key learnings from discovery research into clear, communicable themes, while HMWs translate these into generative prompts that guide co—design, concept development, and alignment across project outputs.

What is this method?

Insights are a way to translate raw user research data into useful explanations and actionable design opportunities. Insights can be framed in a variety of ways, but a typical framing is a “so what?” statement, to ensure the implications of the insight are clearly articulated for the project team to resolve through design. Insights can be considered a highly refined output of research data. A typical process of data transformation moves from raw data to findings to insights:

- Raw data is a collection of single observation data points; anything qualitative or quantitative data that gets captured through user research.
- Simple analysis of this raw data transforms it to findings, which typically function as summary information about observed patterns of specific data points (aka the ‘what’). Findings lack context or actions and can only look for patterns across comparable things (Mikkelsen, 2020). These are “affinities”.
- The final level of analysis is a form of synthesis to generate Insights which should explain the observed patterns with additional context (aka the ‘why’) and identify actionable opportunities for the project (Paul, 2023).

How Might We’s accompany Insights to frame the design challenges for the project. They are question — formatted prompts that form a foundation for ideation activities undertaken by the project team by focusing on opportunities rather than constraints and remain solution agnostic. An Insight may generate multiple HMW’s (IDEO, 2025).



An example of 2 of the final 7 Insights derived from research activities during the AASF Data Ecosystem project. The full list of insights is available on pages 14—15 of the AASF Data Ecosystem Stage 2 Final Report.

This diagram shows how HMW’s were used as a key component of the iterative design process, translating preliminary information elements into workshop iterated elements.

How is this method used?

Insights are used to connect research directly to recommendations and opportunities. They are used by project teams to both understand and communicate the learnings from research. Generating Insights can be the most time-consuming aspect of user research and is best undertaken by a team to minimise bias. It is recommended an experienced design practitioner is involved in this step. Insights should be validated by the users or project stakeholders to ensure the user needs are accurately represented.

How Might We’s are used in pre-ideation and solution design as triggers to encourage creative thinking and ensure key user needs are being considered at the forefront. HMW’s can be used in rapid generative ideation workshops (i.e. design sprints) or deeper dive design sessions that may last many hours or even days (Stickdown et al, 2018). Many HMW’s can be typically generated from a single Insight. The project team can use their expertise and domain knowledge to select the most useful prompts to progress the project. Generating HMW’s is a lightweight exercise provided a robust basis of Insights and other artefacts such as Personas and Use Cases are created.

Steps to use this method

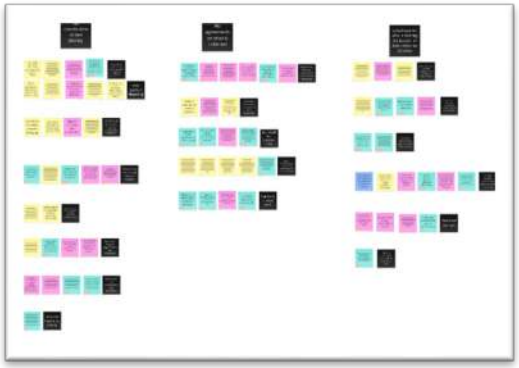
1. Begin by clarifying your initial research assumptions and hypotheses. Conduct user research — qualitative, quantitative, or both — and collate the raw data. Throughout this process, critically reflect on your assumptions to remain open to unexpected findings.

2. Analyse the raw data to identify patterns and recurring themes. For qualitative data, use techniques such as affinity mapping or thematic coding to group similar observations. For quantitative data, apply appropriate statistical methods. The result of this step is a set of research findings — summarised patterns that describe what is happening in the data, without yet interpreting why.

3. Transform findings into Insights by adding context and interpretation. Insights should explain why the observed patterns matter, what they reveal about user needs or system behaviours, and how they point to opportunities for change. A helpful framing is the “So what?” question, which ensures each insight is actionable and relevant to the project’s goals.

4. For each Insight, develop one or more How Might We questions. These are open-ended, solution-agnostic prompts that reframe the insight as a design opportunity. HMWs should encourage creative thinking and guide ideation without prescribing specific solutions. It can be helpful to include brief context or rationale alongside each HMW to support understanding during workshops or design sessions.

5. Share the developed Insights and HMWs with users and key stakeholders to ensure they accurately reflect lived experiences and project needs. Validation helps confirm that the research has been interpreted appropriately and builds confidence in the direction of subsequent design activities.



In the AASF Data Ecosystem project insight generation utilised a significant amount of thematic analysis via various tools, including digital whiteboarding via Miro shown

How Might We’s were documented with associated detail and context, then provided to Working Groups for review.

How we used this tool and what we achieved

Insights were central to the communication and framing of learnings from the comprehensive discovery user research. They were embedded across all project reports and used consistently to guide conversations with users, stakeholders, and broader ecosystem participants. By playing back key findings through Insights, the project team ensured that stakeholder perspectives were accurately represented and validated throughout the process.

How Might We (HMW) statements were initially developed to explore challenges and opportunities within the AASF Data Ecosystem. These statements served as a generative tool, helping to shape the direction of co-design activities and concept development. They were presented and refined through multiple Working Group sessions, evolving in response to stakeholder feedback and deepening understanding of the domain.

HMWs were also systematically mapped against other project outputs — including Use Cases, Personas, and Concept Group Activities — to ensure alignment and traceability of stakeholder input. The final report explicitly addresses each refined HMW, demonstrating how the project's outcomes respond to the core questions raised during discovery.

In AASF Data Ecosystem reporting, Insights (above) were usually coupled with direct quotes from the user research (below), as supporting evidence and to increase impact.

Lessons learnt and advice

How Might We's should be seen as fluid, as it is likely they will undertake many iterations through the life of the project. This is important as the design challenge and focus is refined through user feedback and co-design.

Resources:

IDEO.org (2025), 'How Might We', *Design Kit*, https://www.designkit.org/methods/how-might-we.html

Mikkelsen, Stine (2020), *The difference between insights and findings, and why it matters'*, Everything That's Next, https://medium.com/everything-thats-next/the-difference-between-insights-and-findings-and-why-it-matters-689d7787d7df

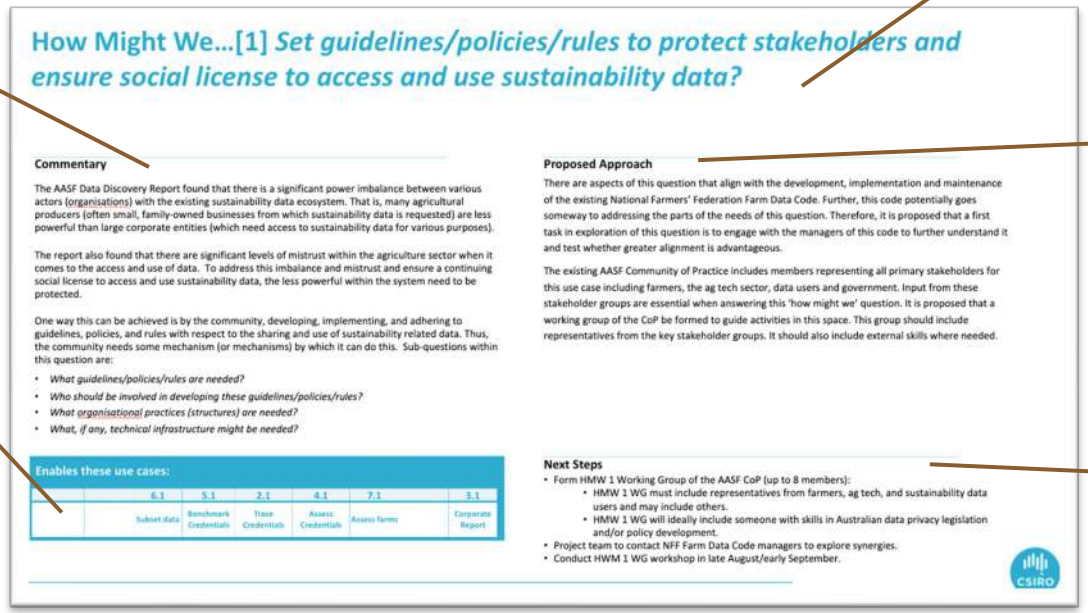
Paul, Sara (2023), *Data vs. Findings vs. Insights: The Differences Explained*, Neilsen Norman Group, https://www.nngroup.com/articles/data-findings-insights-differences/

Stickdown et al (2018), 'Chapter 6: Ideation', *This is Service Design Doing*', https://www.thisisservicedesigndoing.com/methods/how-might-we-questions-from-insights-and-user-stories

Templates
(a usable template is available in the appendices)

HMW's are always framed as a trigger question to inspire creative thinking

Commentary can provide context around the relevant Insight and any sub—questions that may need addressing



How Might We...[1] *Set guidelines/policies/rules to protect stakeholders and ensure social license to access and use sustainability data?*

Commentary

The AASF Data Discovery Report found that there is a significant power imbalance between various actors (organisations) with the existing sustainability data ecosystem. That is, many agricultural producers (often small, family-owned businesses from which sustainability data is requested) are less powerful than large corporate entities (which need access to sustainability data for various purposes).

The report also found that there are significant levels of mistrust within the agriculture sector when it comes to the access and use of data. To address this imbalance and mistrust and ensure a continuing social license to access and use sustainability data, the less powerful within the system need to be protected.

One way this can be achieved is by the community, developing, implementing, and adhering to guidelines, policies, and rules with respect to the sharing and use of sustainability related data. Thus, the community needs some mechanism (or mechanisms) by which it can do this. Sub-questions within this question are:

- *What guidelines/policies/rules are needed?*
- *Who should be involved in developing these guidelines/policies/rules?*
- *What organisational practices (structures) are needed?*
- *What, if any, technical infrastructure might be needed?*

Enables these use cases:

	6.1	5.1	2.1	4.1	7.1	3.1
	Subset data	Benchmark Credentials	Trace Credentials	Assess Credentials	Assess farms	Corporate Report

Proposed Approach

There are aspects of this question that align with the development, implementation and maintenance of the existing National Farmers' Federation Farm Data Code. Further, this code potentially goes someway to addressing the parts of the needs of this question. Therefore, it is proposed that a first task in exploration of this question is to engage with the managers of this code to further understand it and test whether greater alignment is advantageous.

The existing AASF Community of Practice includes members representing all primary stakeholders for this use case including farmers, the ag tech sector, data users and government. Input from these stakeholder groups are essential when answering this 'how might we' question. It is proposed that a working group of the CoP be formed to guide activities in this space. This group should include representatives from the key stakeholder groups. It should also include external skills where needed.

Next Steps

- Form HMW 1 Working Group of the AASF CoP (up to 8 members):
  - HMW 1 WG must include representatives from farmers, ag tech, and sustainability data users and may include others.
  - HMW 1 WG will ideally include someone with skills in Australian data privacy legislation and/or policy development.
- Project team to contact NFF Farm Data Code managers to explore synergies.
- Conduct HWM 1 WG workshop in late August/early September.

CSIRO

Our HMW documentation included our very draft concept ideas, as this was sent to our Working Groups for review

Referencing the associating use cases can provide additional context for ideation

Different HMWs will have different next steps, so it can be useful to capture these

This How Might We template was used in our Stage 2 Final Report, ahead of our Working Groups, and provided a detailed overview of the HMW and how it related back to the key project learnings.

3.0 How to.. Initiate Change

3.1 Use Cases

3.2 Personas

3.3 Concept Group Activities

3.1 Use Cases

Use cases are structured narratives that describe how users interact with a system to achieve specific goals, helping to translate research insights into actionable design requirements. They support outcome—driven design by articulating user needs, validating proposed solutions, and guiding development through a clear understanding of context, objectives, and constraints.

What is this method?

Use cases (sometimes called user stories or user scenarios) are tools used in many design projects that articulate how the users, typically the primary user audience, interact with a system to achieve their own specific goals. Use cases should contextualise the humans involved and their respective objectives, rather than focusing only on the technology or enabling functionality (Cooper et al., 2014).

Use cases are a key component to guide the application of learnings from discovery research activities, such as interviews, and work to translate these insights directly into possible solutions, both technical and non-technical. They initially function as both a user requirements log, and an ideation tool by providing project teams with a framework upon which they can brainstorm.

Use cases should be used to validate solutions as they are developed; if the end desired goal (or state) is not achieved, the design is likely to be ineffective, and the ideal outcome is unlikely to be enabled. Use cases will complement project Personas, can incorporate aspects of the “Jobs to be done” framework (Stickdorn et al., 2018), and when used in a project, use cases will help enact outcome — driven design principles (Loranger, 2016).

The final 9 distinct use cases became foundational aspects of the project, and were used to test and validate solution designs

How is this method used?

Writing use cases is a lightweight technique that can be done individually, however best results are typically created in a team. A key requirement is a reasonable understanding of the different users / stakeholders, so timing is typically towards the end of any initial ‘discovery’ phase, when any research data has been collected. Use cases can also be co-created with key project stakeholders themselves.
Use cases can vary in format, but should typically cover the following aspects:

- Primary user(s)
- Goals/ objectives/ outcome to be enabled
- Context and trigger
- Success path or key considerations
- Dependencies or constraints

Use cases should remain high level and avoid specifics or solutions to avoid influencing the result. They can then be applied in multiple settings, including report documentation, presentations and integrated into co-design sessions.

Use cases should also be validated and refined with either the users themselves, or key project stakeholders to ensure they are an accurate representation of the highest priority user needs.

This diagram shows how HMW’s were used as a key component of the iterative design process, translating preliminary information elements into workshop iterated elements.

Steps to use this method

1. Conduct and analyse user research (e.g. interviews, workshops) to identify key insights about user needs, goals, behaviours, and pain points. Synthesise this data into clear, actionable findings that reflect the current state of the system and its users.

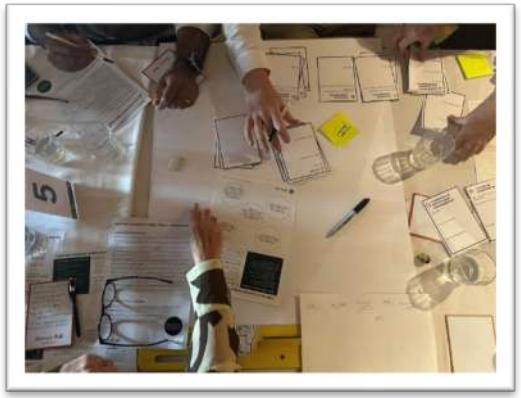
2. Define the key user groups (or “actors”) who interact with the system. For each group, articulate the specific goals or outcomes they are trying to achieve — focusing on what success looks like from their perspective, not just system functionality.

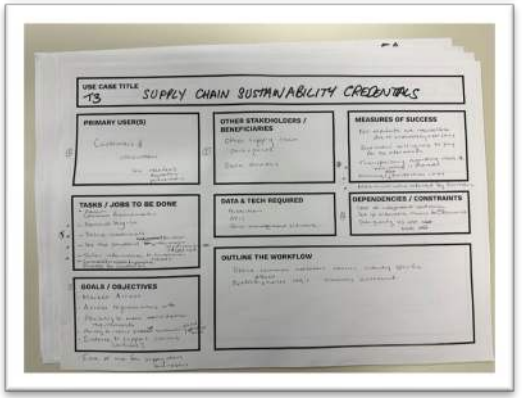
3. Group similar or related user outcomes together to form initial use case themes. Review and refine these clusters to ensure each use case is distinct (mutually exclusive) and collectively comprehensive (covering all relevant needs).

4. For each use case, document the following elements:

- Primary user(s): Who is the main actor?
- Goal or objective: What outcome is the user trying to achieve?
- Context and trigger: What situation or need initiates the interaction?
- Success path or key considerations: What needs to happen for the user to succeed?
- Dependencies or constraints: What factors may enable or hinder success?
- Keep descriptions high-level and free from specific solutions to maintain focus on user intent and avoid prematurely narrowing design options.

5. Share draft use cases with users or key stakeholders to test their accuracy and relevance. Use feedback to refine the content, fill gaps, and ensure alignment with real-world needs and expectations. During use case development, note any missing information or unclear areas that may require additional research. Addressing these gaps ensures the use cases remain grounded in evidence and accurately reflect user priorities.



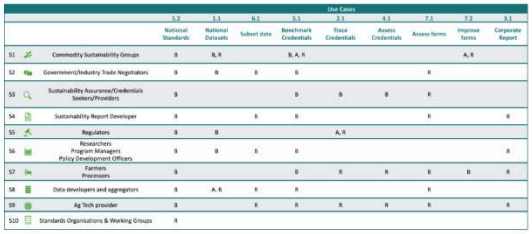


Use case content was co-created with stakeholders in the March 2024 AASF CoP workshop

How we used this tool in the AASF Data Ecosystem project, and what we achieved

This was a foundational element to enable the Design phase of our project. Use case detail was generated in initial user interviews and CoP Co-Design Workshop in May 2024, and the following nine use cases generated by the project team were heavily used for ideation and validation of solutions (i.e. future state, structures, governance).

Each Working Group in September and November 2024 utilised various use cases to inform the co-design of the AASF Data Ecosystem structures. The use cases were also heavily used by the project team as success criteria to test solutions generated through Working Group workshops and subsequent project work.



AASF Data Ecosystem use cases were mapped against user segments to understand the relevance and context across the ecosystem.

Lessons learnt and advice

Use cases should be allocated enough time to be developed, as they become the mechanism by which concept designs can be tested. This means their accuracy is critical to the success of the project.

Resources:

Cooper et al. (2014), About Face: The Essentials of Interaction Design, Wiley

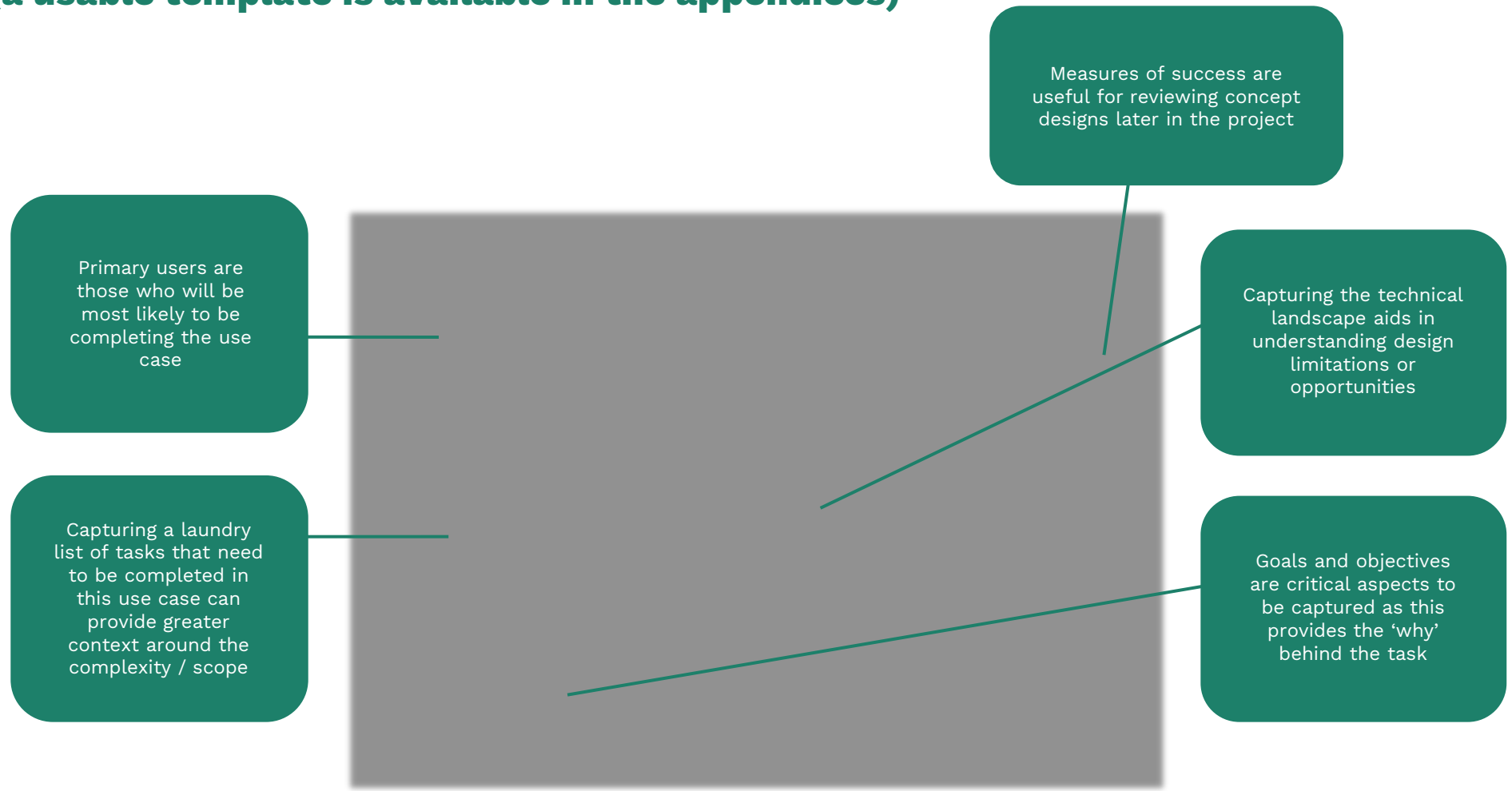
Loranger, Hoa (2016), “Minimize Design Risk by Focusing on Outcomes Not Features”, https://www.nngroup.com/articles/outcomes-vs-features/

Stickdown et al (2018), ‘Chapter 5: Writing User Stories’, This is Service Design Doing’, https://www.thisisservicedesigndoing.com/methods/writing-user-stories

https://www.nngroup.com/articles/scenario-mapping-personas/

AASF Data Ecosystem use cases were also utilised in co-design workshops to provide focus for the participants around the specific tasks the ecosystem needed to support.

Templates
(a usable template is available in the appendices)

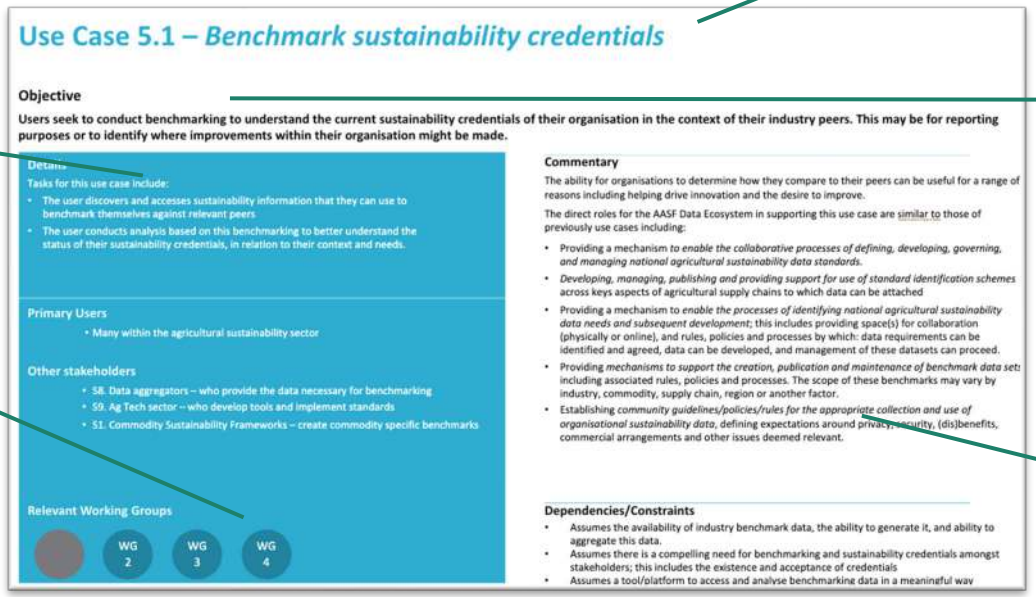


This is a template for co-designing the content of a Use Case in a workshop or group setting and captures the majority of data needed for this method. This was used in the March 2024 CoP workshop and a template is provided in the appendices.

Templates
(a usable template is available in the appendices)

It can be useful to provide Use Cases with a clear name or number to allow for easy reference in future activities

Key tasks will contextualise the scope of the Use Case and possible complexity



Use Case 5.1 – *Benchmark sustainability credentials*

Objective

Users seek to conduct benchmarking to understand the current sustainability credentials of their organisation in the context of their industry peers. This may be for reporting purposes or to identify where improvements within their organisation might be made.

Details

Tasks for this use case include:

- The user discovers and accesses sustainability information that they can use to benchmark themselves against relevant peers
- The user conducts analysis based on this benchmarking to better understand the status of their sustainability credentials, in relation to their context and needs.

Primary Users

- Many within the agricultural sustainability sector

Other stakeholders

- S8. Data aggregators – who provide the data necessary for benchmarking
- S9. Ag Tech sector – who develop tools and implement standards
- S1. Commodity Sustainability Frameworks – create commodity specific benchmarks

Relevant Working Groups

WG 2 WG 3 WG 4

Commentary

The ability for organisations to determine how they compare to their peers can be useful for a range of reasons including helping drive innovation and the desire to improve.

The direct roles for the AASF Data Ecosystem in supporting this use case are similar to those of previously use cases including:

- Providing a mechanism to *enable the collaborative processes of defining, developing, governing, and managing national agricultural sustainability data standards.*
- *Developing, managing, publishing and providing support for use of standard identification schemes* across keys aspects of agricultural supply chains to which data can be attached
- Providing a mechanism to *enable the processes of identifying national agricultural sustainability data needs and subsequent development*; this includes providing space(s) for collaboration (physically or online), and rules, policies and processes by which: data requirements can be identified and agreed, data can be developed, and management of these datasets can proceed.
- Providing *mechanisms to support the creation, publication and maintenance of benchmark data sets* including associated rules, policies and processes. The scope of these benchmarks may vary by industry, commodity, supply chain, region or another factor.
- Establishing *community guidelines/policies/rules for the appropriate collection and use of organisational sustainability data*, defining expectations around privacy, security, (dis)benefits, commercial arrangements and other issues deemed relevant.

Dependencies/Constraints

- Assumes the availability of industry benchmark data, the ability to generate it, and ability to aggregate this data.
- Assumes there is a compelling need for benchmarking and sustainability credentials amongst stakeholders; this includes the existence and acceptance of credentials
- Assumes a tool/platform to access and analyse benchmarking data in a meaningful way

An objective can provide additional context that the name alone cannot provide

We captured which Working Group would be tasked with addressing a particular Use Case

Commentary can provide references to key Insights, Personas or other project collateral that should be referenced in tandem

This is a template for reporting on the finalised content of a Use Case, summarising content gathered across various workshops

3.2 Personas

Personas are a generalised representation of a target user, to communicate their needs, behaviours and motivations. They help teams empathise with their users and make informed design decisions.

What is this method?

Personas function as archetypal representations of target users to express the needs, goals, behaviours and challenges of a specific user segment. They enable the practical implementation of user research and insights for a particular cohort in a specific and memorable way. To be most effective, Personas should be based on primary user research data collected during your project. Assumptions-based Personas can be unreliable and lack accurate information regarding user drivers and behaviours, creating an unstable foundation for design (Cooper, 1999).

Some Personas (especially examples found publicly online) can contain large amounts of personal narratives or fictional demographic information. This is typically not necessary to progress the design of a solution.

A key criteria of a useful Persona is the balance of authentic and specific user insights, whilst remaining representative of the variety of users that fall within that user segment.

How is this method used?

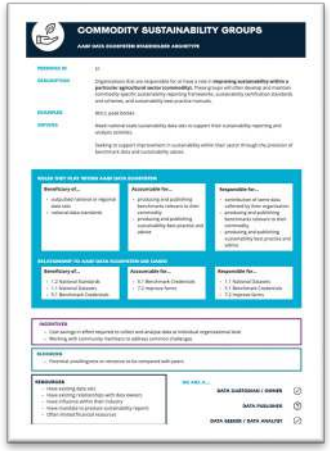
Similar to Use Cases, Personas are a technique that can be done individually, however best results occur when they are typically created in a team, towards the end of any initial 'discovery' phase when all primary user research data has been collected.

Personas typically outline some of the following user content, per distinct user segment:

- Goals and motivations, including both functional tasks and emotional goals
- Relevant behavioural patterns, such as interaction or decision-making patterns
- Current pain points and frustrations
- Contextual information, such as typical job role or responsibilities, physical location constraints, social context or any other factors that may influence their behaviour
- For digital tools, a measure of technology literacy / adoption can be useful

Similar to Use Cases, the accuracy of Personas should also be validated and refined with either the users themselves, or key project stakeholders to ensure they are an accurate reflection of the users and are mutually exclusive.

Personas can help to focus and contextualise the design of tools and and can be used for both ideation (ie. how might Laura benefit from the AASF Data Ecosystem?) as well as solution validation (ie. could Laura successfully interact with the Expert Working Group process?). They complement Use Cases by providing more granular detail into the specific needs and details for each target user.



Example of an early archetype generated for review in the Working Groups

Example of a refined persona focused on describing future state experiences of the data ecosystem

Steps to use this method

1. Identify strawperson Cohort or Persona groupings to validate with primary research; this can serve as a guide for recruitment of research participants. Stakeholder archetypes or Proto—personas can be formed to document assumptions and existing knowledge.

2. Conduct foundational user research through deep-dive qualitative methodology such as interviews, behavioural analytics or observational studies. Ensure research is conducted in a way to identify patterns in user goals, behaviours, pain points and contexts of use.

3. Cluster research data as per distinct user segments that may form. The basis of this synthesis should be focused on patterns regarding their underlying needs, behaviours and drivers, as opposed to demographic characteristics. Review as needed to ensure clusters are mutually exclusive and remain representative of their target segment.

4. Construct the Personas by translating the insights into your final format; typically user goals, behaviours, pain points or challenges, contextual environments and opportunities are included. An image or name can help make your Persona more memorable.

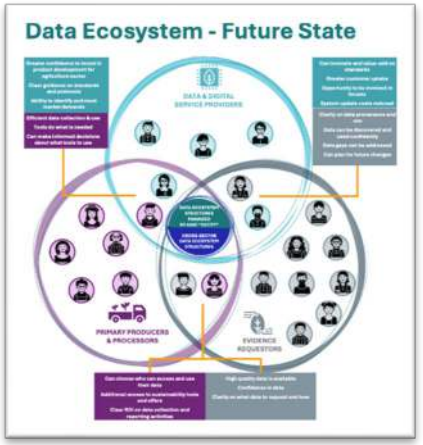
5. Review and refine the Personas with the users themselves, or key project stakeholders, to ensure the content and user representation remains authentic.

The final AASF Data Ecosystem Personas outline their role, current experience and value they will derive from the future state

How we used this tool in the AASF Data Ecosystem project, and what we achieved

Personas were used extensively throughout the solution design of the AASF Data Ecosystem. As an output of the user discovery, March 2024 CoP workshop and subsequent synthesis in early 2024, the draft archetypal representations were both referenced and validated through the Working Groups in September and November 2024. Their final output is a comprehensive overview of the entire Australian Agricultural sector as it pertains to sustainability.

Personas were a particularly critical tool for this project due to the complexity of the data ecosystem, and variety of actors with requirements within. As functional memory aids, they ensured no group was left behind, and the specificity of each user segment was considered in the future state design and final reporting. In particular, the key pain points and opportunities for each Persona were outlined, to highlight the requirements and value across the diverse and complex Australian agricultural ecosystem. Personas were also heavily referenced in future state documentation, to show the complex relationships, process and structures in a human-centered way.



Personas were referenced in the conceptualisation of the future state of the AASF Data Ecosystem

Lessons learnt and advice

As part of the project, we began building our Personas through development of stakeholder archetypes who were broader representations of ten general cohorts (commodity sustainability groups, government/industry trade negotiators, sustainability report developers, etc). Ultimately, these initial groupings were not helpful for understanding or communicating general patterns of behaviours and experiences of stakeholders across the AASF Data Ecosystem. With more review, the CSIRO project team were able to identify three major cohorts into which all of these stakeholder groups could be aggregated — Primary Producers and Processors; Data and Digital Service Providers; and, Evidence Requestors. These are common cohorts in data ecosystem (ie people who make/ have data; people who make/manage the systems that hold the data; and, people who want to use the data) Through the Working Groups we were able to refine the content into a set of Personas for each of the three cohorts, who are more granular representations of users and their experiences in the AASF Data Ecosystem. In developing the content for the personas, beyond reference to the original research evidence, the Project team members would ask questions of the material and/or working group members and other experts such as “How would that particular tool or system help someone like Mary?” or “How would Mary use a tool like that on her farm?” or “How do we know this is Mary’s experience and what impact it has on her day to day life?” to contextualise outputs and ensure the Personas were reflective of lived experiences. We heavily referenced back to Personas through the ideation and design part of the project to keep recommendations and solutions connected with those who they were designed for.

Opportunities and benefits could be articulated at both a cohort or persona level

Resources:

Cooper, Alan (1999), The Inmates Are Running the Asylum, Macmillan Publishing
Neilsen, Prof. Lene (2013), Personas — User Focused Design, Springer

Templates
(a usable template is available in the appendices)

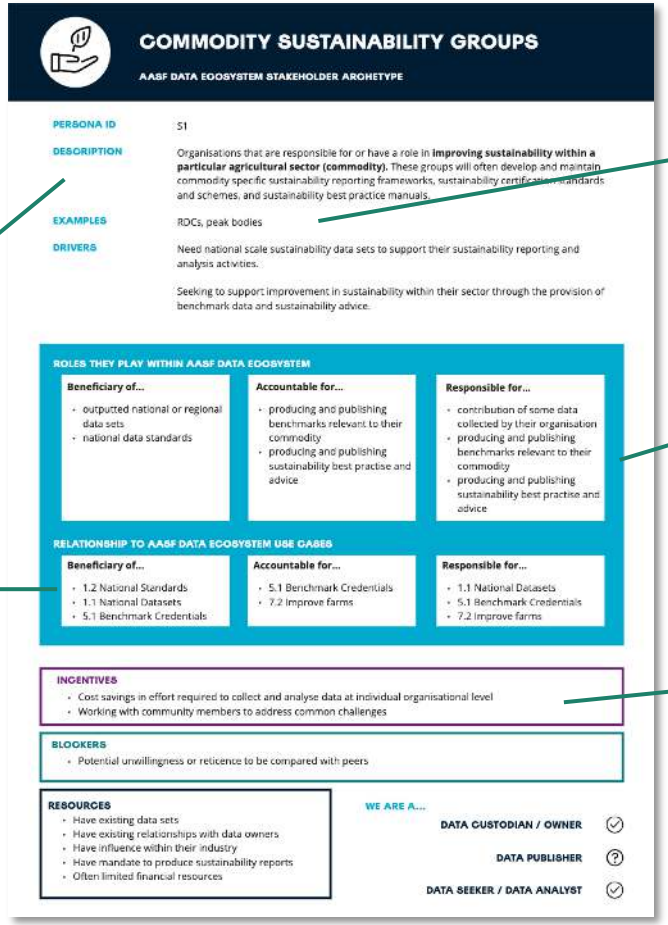
Outlining the function, responsibilities and drivers of a persona are critical elements

Clearly referencing Use Cases can highlight how the Persona will interact with the system

Providing examples can be useful if your Personas represent broader cohorts or multiple parties

Using a role framework such as Beneficiary, Accountability and Responsibility can help to understand their relationship with other personas and the broader landscape

Incentives and blockers can be a simple way to capture behavioural motivations and constraints



COMMODITY SUSTAINABILITY GROUPS

AASF DATA ECOSYSTEM STAKEHOLDER ARCHETYPE

PERSONA ID: 51

DESCRIPTION: Organisations that are responsible for or have a role in **improving sustainability within a particular agricultural sector (commodity)**. These groups will often develop and maintain commodity specific sustainability reporting frameworks, sustainability certification standards and schemes, and sustainability best practice manuals.

EXAMPLES: RDCs, peak bodies

DRIVERS: Need national scale sustainability data sets to support their sustainability reporting and analysis activities.

Seeking to support improvement in sustainability within their sector through the provision of benchmark data and sustainability advice.

ROLES THEY PLAY WITHIN AASF DATA ECOSYSTEM

Beneficiary of...	Accountable for...	Responsible for...
• outputted national or regional data sets • national data standards	• producing and publishing benchmarks relevant to their commodity • producing and publishing sustainability best practise and advice	• contribution of some data collected by their organisation • producing and publishing benchmarks relevant to their commodity • producing and publishing sustainability best practise and advice

RELATIONSHIP TO AASF DATA ECOSYSTEM USE CASES

Beneficiary of...	Accountable for...	Responsible for...
• 1.2 National Standards • 1.1 National Datasets • 5.1 Benchmark Credentials	• 5.1 Benchmark Credentials • 7.2 Improve farms	• 1.1 National Datasets • 5.1 Benchmark Credentials • 7.2 Improve farms

INCENTIVES
- Cost savings in effort required to collect and analyse data at individual organisational level
- Working with community members to address common challenges

BLOCKERS
- Potential unwillingness or reticence to be compared with peers

RESOURCES
- Have existing data sets
- Have existing relationships with data owners
- Have influence within their industry
- Have mandate to produce sustainability reports
- Often limited financial resources

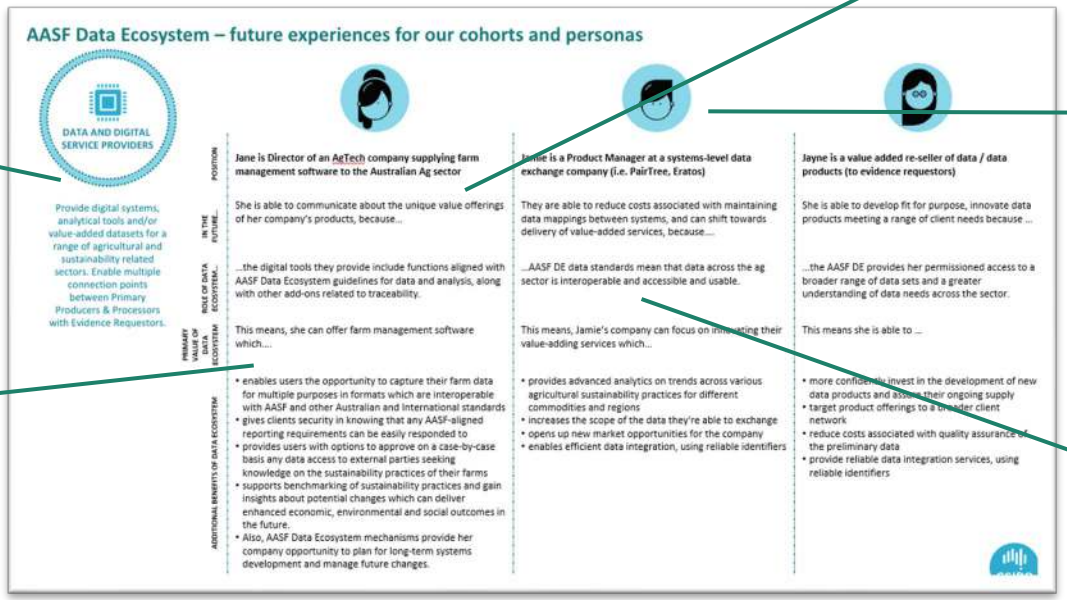
WE ARE A...
- DATA CUSTODIAN / OWNER ✓
- DATA PUBLISHER ?
- DATA SEEKER / DATA ANALYST ✓

This was a proto-Persona / Archetype utilised to bridge the gap between high level stakeholder cohorts and specific Personas

Templates
(a usable template is available in the appendices)

The ‘what’ the future state will enable for each Persona

As we had multiple Personas per cohort type, we had to provide an overview of the cohort level for context



The position acts to define their function and context

The ‘why’ or the value the future state will unlock for each Persona

The ‘how’ the future state will operate in relation to each Persona

AASF Data Ecosystem personas were taken down to a granular level to represent the nuance and variability within the system and the desired experience we envisage will be enabled. This was the final documentation format used for Personas when representing the future state.

3.3 Concept Group Activities

Concept group activities are structured co-design sessions that bring stakeholders together to collaboratively generate, refine, and develop solution concepts in response to established insights, use cases, and How Might We questions. These sessions support creative exploration, build shared ownership, and help translate strategic opportunities into feasible and contextually grounded complex data ecosystem design change and solution proposals.

What is this method?

Concept group activities are structured co-design sessions used to generate, refine, and develop solution concepts in response to established Insights, Use Cases, and How Might We (HMW) questions. These sessions typically occur once the project has reached a saturation point in its discovery phase — when sufficient data has been gathered and synthesised, and the focus shifts from understanding the problem space to exploring opportunities for change.

HMW questions serve as creative prompts, encouraging participants to draw on diverse experiences and knowledge to ideate and problem-solve collaboratively. The aim is to bring together trusted stakeholders — including problem owners and end beneficiaries — to co-create initial ideas, shape them into concepts, and evolve these into feasible and viable solution offerings.

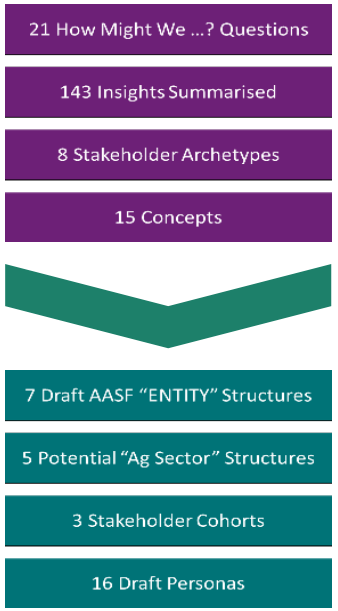
Concept group activities are most effective when conducted over multiple sessions, allowing time between workshops for reflection, inspiration, and iterative development. A variety of facilitation approaches can be used, drawing on established design methods such as those from Stanford d.school, or using templates and processes outlined in this toolkit.

How is this method used?

The project team need to have developed Insights, Use Cases and a series of HMW questions prior to designing and implementing these concept group activities.

The first step is to consider who the ideal cohort would be to bring together for a few sessions of idea, concept and solution development activities. The project team should identify stakeholders who have previously been involved in the project co-design activities and also consider who might not yet have been represented from the stakeholder network (particularly the problem owners and end beneficiaries). The purpose of facilitating concept group activities is to:

- Stimulate creative thinking and enable stakeholders to build new ideas together
- Identify areas of collective interest and transform ideas into concepts for further exploration
- Utilise new knowledge and willing participants to design and test prototypes
- Make something together — whether it be ideas, knowledge, prototypes, relationships — any event calling itself a “workshop” needs to engage all participants in the act of creating something (see Discovery Group Activities for more information on how to choose between a focus group or a workshop event).



The AASF Data Ecosystem project team thoroughly reviewed the information generated in the project to date and discussed various complementary or aligned programs with various stakeholders. A future “AASF Data Ecosystem” concept was drafted, which contained reference to 12 potential structures for 3 stakeholder cohorts, comprising 16 draft personas. The working groups reviewed these in a set of concept group activities — the first of which was facilitated in September, the second in November 2024.

Steps to use this method

1. The project team needs to decide the most appropriate group mechanism to foster ideation and collaboration. This can include ideal group size (small groups of 2—4 are best for complex projects, larger groups up to 10—12 can work well for more widespread problem spaces); and style (i.e. a rapid hour-long Design Sprint versus an all-day concept design workshop).

2. An agenda for the activity needs to be developed. This agenda needs to outline at a minimum:

- Purpose of the event
- Intended outcomes to be achieved from the event
- Outputs which will be delivered from the event
- Focusing questions which will guide the event activities
- Session times (keep in mind that the maximum time for any one session should be 90mins, so ensure that you schedule a lot of breaks throughout the event).

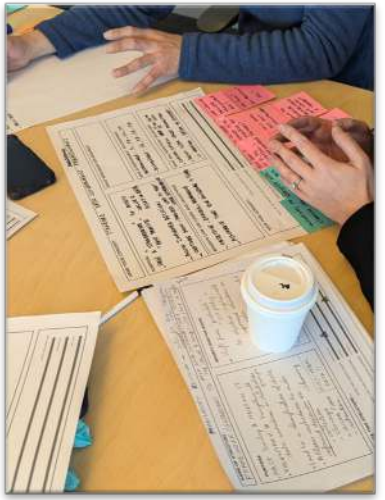
3. The agenda should be reviewed between the project team and client to ensure the purpose, outcomes and outputs are agreed. Then, the agenda needs to be turned into a detailed runsheet. The runsheet describes everything from the agenda, plus:

- The purpose, outcomes, outputs for each individual session in the event
- Activities to be implemented in each session
- Materials required to run each session (ie .ppt slides, templates, whiteboards, paper, sharpies, post-its etc)
- Roles and responsibilities for facilitation, presentation and note taking.

4. In designing the activities for each event session, consider:

- Building confidence in open—ended creative thinking. Consider using some ice breaker creative games to encourage participants to feel comfortable in the setting.
- How you can best create and leverage the synergy in the room. Moving through a process of individual ideation, to partnered refinement, and then overall group consensus building is a classic facilitation structure.
- How to effectively incorporate critique. These activities require a delicate balance of open-mindedness with feasibility / viability elements. Structured critique techniques are useful to employ, such as the "sandwich" or the "rose, bud, thorn"
- Pre-reading and important contextual requirements. If required, make sure you provide participants with pre-reading materials or "homework" so they can fully participate at the event. And keep in mind, not everyone will do the pre-reading or homework, so you'll need to account for that in the activity design.
- How to keep the energy in the room high. Creative thinking has a high cognitive load. Keep energy high through active breaks, chocolate bribes, plenty of food, and coffee.

5. Once the runsheet has been drafted, the project team will need to create the activity and presentation materials. It is always a good idea to test the materials within the team, or with a friendly colleague, prior to finalising and running at the event.



Structured concept design templates can be useful to guide ideation and get participants started. Coffee is a requirement.

How we used this tool and what we achieved

We primarily used this activity to convene a set of Working Groups (four in total, with 8—10 people in each) who met twice over a period of three months and completed pre and post homework activities when not meeting. The structure of our activities was:

1. Project team developed archetypes, use cases and HMWs and put these on a miro board for all working group members to access and critique. The information they generated in this homework activity was then utilised in the first working group sessions.
2. The first working group sessions involved participants responding to a refined set of HMW questions which were generated from the homework activities. First, participants were asked to individually generate as many “ideas” as possible in response to the HMW questions they were provided. Then, those “ideas” were aggregated into themes, and pairs selected a theme of ideas that they wanted to develop into “concepts”. These concepts were then reviewed by the group as part of their homework activities.
3. Between sessions, they did homework. The project team developed prototype personas and solutions.
4. Second session, they reviewed the prototype solutions, developed personas and considered risks to mitigate.

The AASF Data Ecosystem project team used “meetup” templates to get working group participants into a creative mindset during the concept group activities

Lessons learnt and advice

Effective concept group activities require careful curation of participants and deliberate facilitation strategies to balance creativity with feasibility. One key learning was the importance of involving stakeholders who not only bring fresh ideas but also possess the practical knowledge and authority to support implementation. Their presence helped ground discussions in operational realities and ensured that concepts remained viable within the broader system context.

Creating a psychologically safe and creatively open environment is essential to unlocking innovative thinking. Participants often self-censor during early ideation, so it is important to incorporate warm-up activities that encourage imaginative exploration. In our case, the use of “meet-up profiles” helped ease participants into a creative mindset, fostering a sense of play and openness. The structured use of How Might We (HMW) questions was critical in guiding idea development while maintaining focus. However, facilitators must be mindful of the boundaries these questions create — too narrow, and they constrain thinking; too broad, and they dilute focus. Striking the right balance requires thoughtful framing and iteration.

Finally, it is important to recognise and manage the implicit assumptions, organisational histories, and personal experiences that participants bring into the room. These can influence how ideas are generated, interpreted, and prioritised. Facilitators should be prepared to navigate these dynamics with sensitivity, ensuring that all voices are heard and that the process remains inclusive and constructive.

Concept templates help participants group early ideas into broader descriptions of potential solutions

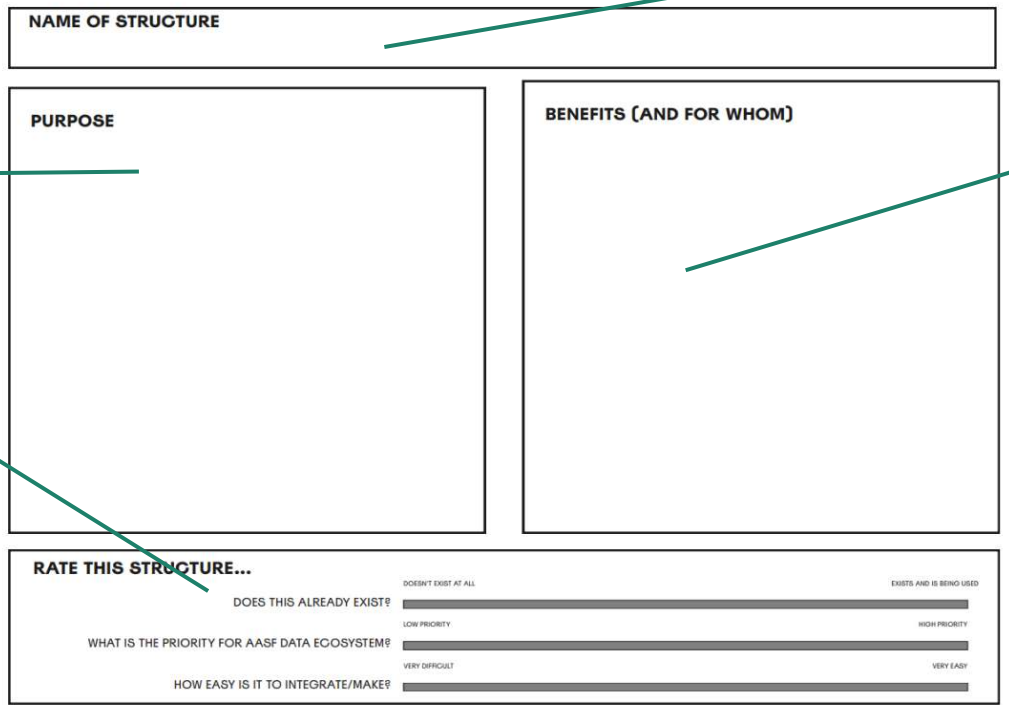
Templates
(a usable template is available in the appendices)

Participants need to start by naming their structure idea

The idea purpose should respond to a HMW, Insight or Use Case

The benefits should be defined for all of the archetypes/personas developed by the project to date

The idea should be rated according to whether it already exists, how much of a priority it is, and how easy it will be to develop and implement



A structures template is a tool used to guide individuals or groups through the process of generating, capturing, and organising ideas in response to a specific prompt. It helps ensure that creative thinking remains focused, collaborative, and aligned with project objectives. This template is provided in the appendices.

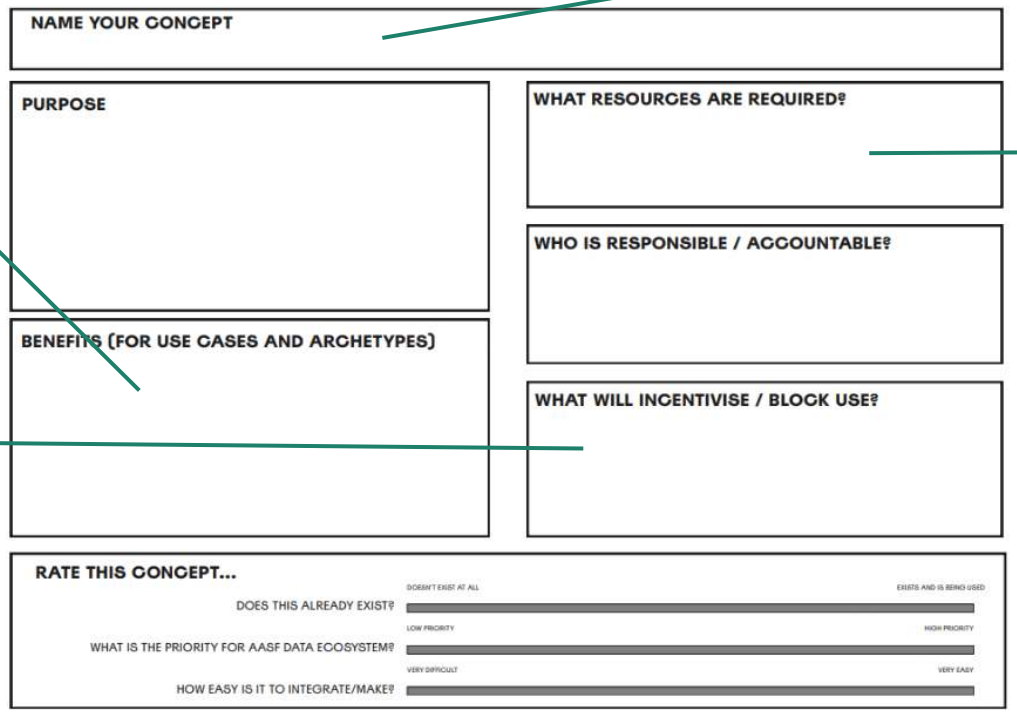
Templates
(a usable template is available in the appendices)

The concept name should be derived from the structure templates which were grouped together — and respond to an insight or HMW or Use Case

The purpose and benefits should be an amalgam of those described for the original structures

Participants will need to describe the resourcing required to turn this concept into a prototype or fully-fledged design solution

Consideration needs to be given to the blockers which might inhibit the use or implementation of this concept in the data ecosystem



A concept template is a structured framework used to group together early-stage solution ideas by capturing key elements such as the intended user, problem being addressed, proposed approach, and potential impact. It helps teams organise and refine concepts systematically, ensuring clarity, feasibility, and alignment with strategic design objectives.

4.0 How to.. Maintain Momentum

4.1 Setting a Strategy

4.2 Blueprint

National Farmers Federation
Australian Agricultural Sustainability Framework
Australian Government
Department of Agriculture, Fisheries and Forestry

4.1 Setting a Strategy

An implementation strategy outlines the vision, goals, principles, and structural requirements needed to realise change within a complex data ecosystem. Developed iteratively through co-design, it ensures alignment across stakeholders and provides a clear framework to guide practical execution and long-term system transformation.

What is this method?

Once initial ideas have evolved into feasible and viable solutions, it becomes essential to define a strategy for implementation. This is particularly critical in data ecosystem projects, where complexity arises from the interplay of multiple components and stakeholders. A well-articulated strategy ensures that all actors understand what needs to be done, why it matters, and how their roles contribute to the broader system transformation.

Developing a strategy for change in a complex data ecosystem involves defining four interconnected levels of information:

- Level 1 — Vision/Mission — *Describes the desired future state of the data ecosystem within a defined timeframe (typically 3—5 years), acknowledging that technological advancements beyond this horizon may shift current ambitions.*
- Level 2 — Objectives/Goals/KPIs — *Specifies the measurable outcomes to be achieved for stakeholders within the strategy period, providing a clear basis for tracking progress and impact.*
- Level 3 — Principles/Values — *Articulates the foundational attributes that must underpin the design, governance, and operation of the data ecosystem — these are non-negotiable and guide decision-making.*
- Level 4 — Structures — *Outlines the tangible elements — such as resources, processes, and governance mechanisms — required to realise the vision and support ecosystem functionality.*

In the initial phases of the AASF Data Ecosystem project the team developed an outline of the final strategy components and socialised these with stakeholders at various events.

How is this method used?

Strategy development should be an iterative, co-designed process that begins early in the strategic design journey. It is not a final step, but rather a guiding framework that evolves alongside project insights and stakeholder engagement. Early articulation of Levels 1 and 2 helps shape co-design activities and ensures alignment across project phases. It is suggested that generally the following stages should inform the development of an implementation strategy for change in complex data ecosystems:

1. In Discovery Group Activities stakeholders should be invited to describe their visions of the future for the data ecosystem
2. In Insights and HMW activities, the project team and stakeholders should explore how the future could differ from the present, and identify what changes are needed to enable that transformation.
3. In development of Personas, consider what systemic shifts are required to support stakeholders in overcoming current challenges and leveraging opportunities.
4. In Use Case development, identify where and how change can be implemented to deliver meaningful benefits across the ecosystem
5. In Concept Group Activities engage stakeholders in defining principles, use cases, and structural elements that will shape the future data ecosystem.

At the AASF CoP workshop in November 2023, the project team asked participants to respond to various questions associated with four of the five proposed strategy components.

Steps to use this method

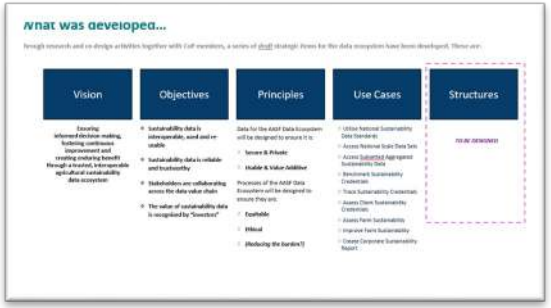
1. At the outset of the project, the team should work with the project sponsor to decide what form the implementation strategy will take. This includes selecting the appropriate type of content for each of the four strategy levels (e.g. Vision vs. Mission at Level 1; Objectives vs. Goals at Level 2). These decisions should be informed by the strategic conventions of the implementing organisation to ensure alignment and usability within their existing frameworks.

2. To develop content for level 1 — the future state of the data ecosystem, engage a broad range of stakeholders in articulating what that future could look like, who it will benefit, and why it matters. One effective approach is to include a “vision drawing” activity during Discovery Group sessions. The project team should synthesise these inputs into a draft Level 1 statement, which can then be shared and refined through subsequent co-design activities to both guide design and gather ongoing feedback.

3. Content for Levels 2 (Objectives/Goals/KPIs) and 3 (Principles/Values) should be grounded in what stakeholders express about their motivations for change and the conditions required for trust and usability in the future data ecosystem. These insights typically emerge during Discovery Interviews and Discovery Group Activities and can be further tested and refined during Concept Group sessions. The project team should continuously document stakeholder aspirations and concerns to inform these levels.

4. Level 4 (Structures) is developed through Concept Group Activities, where stakeholders co-create and refine solution concepts. These sessions help translate ideas into tangible system components, processes, and governance mechanisms. Proposed solutions should be assessed for feasibility and viability before being incorporated into the final data ecosystem strategy.

5. As the strategy is developed iteratively through co-design, its content will evolve over the course of the project. The final version should be refined in parallel with the development of the implementation blueprint, ensuring consistency between strategic intent and practical execution.



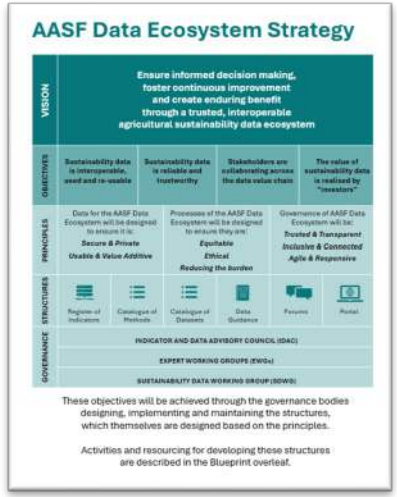
Early draft components of the AASF Data Ecosystem strategy were documented and reviewed at stakeholder co-design events. The example above outlines the vision, objectives, principles and use cases which had been developed up to September 2024. The Working Groups were asked to utilise these components to develop ideas and concept solutions.

How we used this tool and what we achieved

The implementation strategy was developed iteratively over the course of the project, with each level refined through structured stakeholder engagement and co-design activities. Initial content for Levels 1 and 2 — describing the future vision and strategic objectives — was drafted and presented for feedback at the November 2023 workshop. This early framing helped guide subsequent design activities and provided a foundation for stakeholder alignment.

Following the March 2024 workshop, Levels 1 through 3 were reviewed and expanded to incorporate stakeholder reflections on desired outcomes and guiding principles. These inputs were drawn from both explicit feedback and implicit themes emerging during co-design sessions. Throughout the Working Group meetings, all four levels of the strategy were progressively refined: Level 4 (Structures) was ideated during the first session and further developed and tested in the second, ensuring feasibility and relevance.

The final version of the strategy was completed in conjunction with the development of the implementation blueprint. This alignment ensured that strategic intent was translated into actionable system components, providing a clear and coherent framework to guide future implementation across the AASF Data Ecosystem.



The AASF Data Ecosystem strategy was described in a singular page of the Stage 2 Final Report (page 46) with details of each component outlined overleaf (pages 47— 48).

Lessons learnt and advice

Developing an implementation strategy for a complex data ecosystem is not a linear or final-stage activity — it is an iterative process that should begin early and evolve throughout the project. Early drafts of strategic content can help guide co-design activities, while ongoing stakeholder engagement provides opportunities to refine and validate the strategy over time.

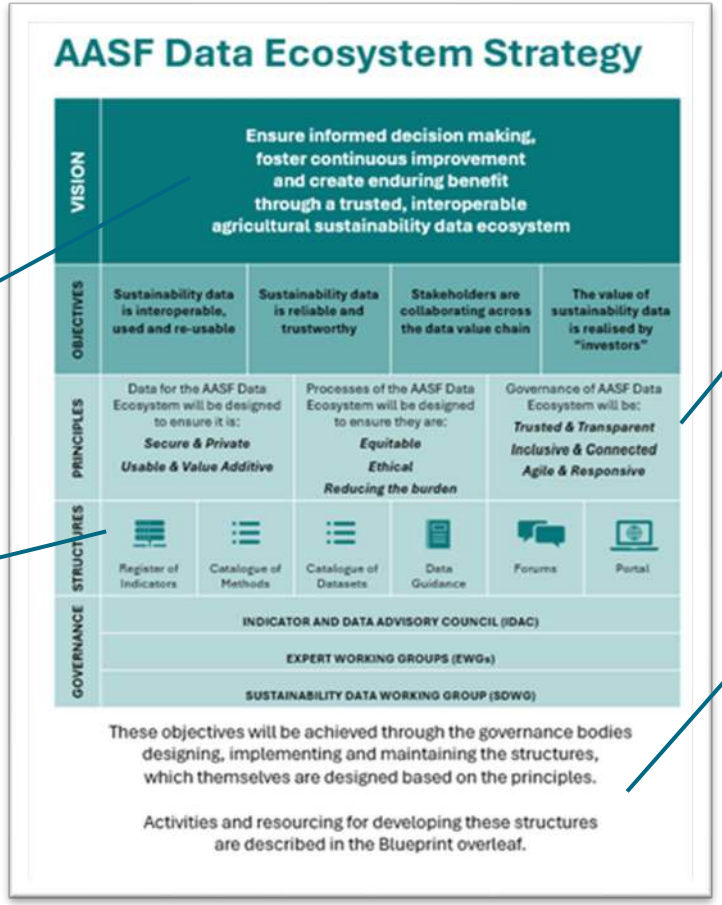
Much of the information that informs strategic direction emerges implicitly through conversations, workshops, and collaborative design activities. Project teams must be proactive in capturing and documenting these insights as they arise, even if they are not formally presented as strategic input. This requires attentive facilitation and disciplined synthesis practices to ensure that valuable contributions are not lost.

It is also important to distinguish between what is desirable and what is feasible or viable. While stakeholders may express aspirational goals, these must be tested through co-design and critically reviewed by the project team and client to assess their practicality within the system's constraints. Balancing ambition with realism is essential to ensure the strategy remains actionable and grounded. Finally, aligning the strategy with the implementation blueprint ensures coherence between vision and execution. This alignment supports stakeholder confidence and provides a clear pathway for translating strategic intent into tangible outcomes.

Templates
(a usable template is available in the appendices)

Level 1 of the strategy is the headline statement

Level 4 components are included as indications of what needs to be created and governed in the future



Level 2 and 3 components are listed in a non-hierarchical order

Governance methods need to be referenced

An implementation strategy template is a structured tool used to capture and organise the vision, goals, principles, and enabling structures required to guide and coordinate the delivery of change within a complex system. It is complemented by a Blueprint template. Both are available in the appendices.

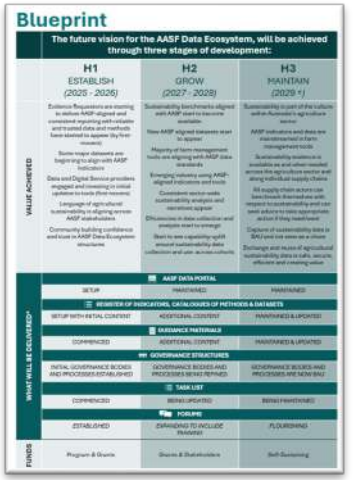
4.2 Blueprint

A blueprint is used to translate strategic intent into a structured, actionable framework that guides the implementation of change across a complex data ecosystem. It helps coordinate stakeholders by mapping out roles, activities, resources, and governance mechanisms across phased horizons, ensuring alignment and adaptability throughout the implementation process.

What is this method?

While the implementation strategy defines *what* needs to happen within the data ecosystem and *why* it matters, the strategy blueprint focuses on *how* those changes will be realised in practice. It translates strategic intent into a structured, actionable framework that supports coordinated implementation across diverse stakeholders and system components. In the context of complex data ecosystems, a blueprint helps align stakeholders by clearly articulating how different parts of the system — people, processes, technologies, and governance structures — must interact to achieve the shared future vision. It outlines the enabling conditions required for change, serving as a reference point for prioritising actions, allocating resources, and identifying dependencies, risks, and opportunities over a defined time horizon.

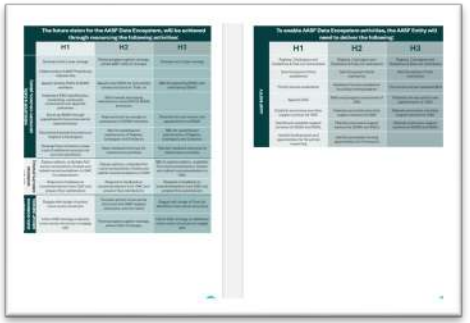
A strategy blueprint connects high-level elements such as vision, objectives, and principles with practical implementation components including roles, activities, infrastructure, and governance mechanisms. Typically structured across three horizons (short, medium, and long-term), it provides a phased view of how change will unfold, allowing for flexibility and adaptation as new insights emerge and conditions evolve. Importantly, the blueprint is not a static plan — it is a living artefact that should be revisited and refined throughout the lifecycle of the project. Its value lies in its ability to support shared understanding, guide decision-making and maintain momentum toward systemic transformation.



The AASF Data Ecosystem blueprint was described across three pages of the Stage 2 Final Report (pages 49 — 51).

How is this method used?

The strategy blueprint builds directly on the implementation strategy, using the defined vision, objectives, principles, and structures as its foundation. These strategic elements provide the direction and intent, while the blueprint translates them into practical, actionable components that guide implementation. To develop the blueprint, project teams should engage stakeholders through structured co-design activities — particularly Concept Group Activities — to collaboratively identify the operational elements required to realise the strategy. This includes defining roles and responsibilities, outlining key activities, identifying necessary resources, and defining the roles of governance mechanisms. Co-development ensures that the blueprint reflects diverse perspectives and is grounded in the realities of the data ecosystem contexts.



The blueprint should be organised across three implementation horizons, short, medium, and long-term, to support phased development and allow for adaptation over time. Each horizon represents a logical grouping of activities and outcomes that must be achieved before progressing to the next phase. While horizons are typically not strictly time-bound, they can include indicative timing to help stakeholders understand when certain components may be initiated or delivered. In the case of the AASF Data Ecosystem project, timing information was included to provide a rough guide for when specific elements could be expected to be created. This helps stakeholders plan and coordinate efforts, while maintaining flexibility to respond to emerging insights and changing conditions.

Steps to use this method

1. Begin by reviewing the implementation strategy, which outlines the vision, objectives, principles, and structural requirements for the future data ecosystem. These elements form the backbone of the blueprint and ensure that all implementation planning is anchored in the agreed strategic direction. This step may involve synthesising content from earlier co-design activities and validating it with stakeholders to confirm alignment.

2. Facilitate Concept Group Activities to collaboratively identify the operational elements needed to realise the strategy. This includes defining who will be involved (roles and responsibilities), what actions need to be taken (activities), what resources are required (funding, infrastructure, data), and how decisions will be made (governance mechanisms). These sessions should be designed to encourage shared ownership for future activities and ensure that the blueprint reflects both feasibility and viability.

3. Organise the blueprint into three horizons — short, medium, and long-term — to reflect the phased nature of implementation. Each horizon should include a set of outcomes (value achieved) and activities that must be achieved before progressing to the next. This structure supports strategic pacing of activities across the data ecosystem, helps manage complexity, and allows for iterative development as the data ecosystem structures evolve.

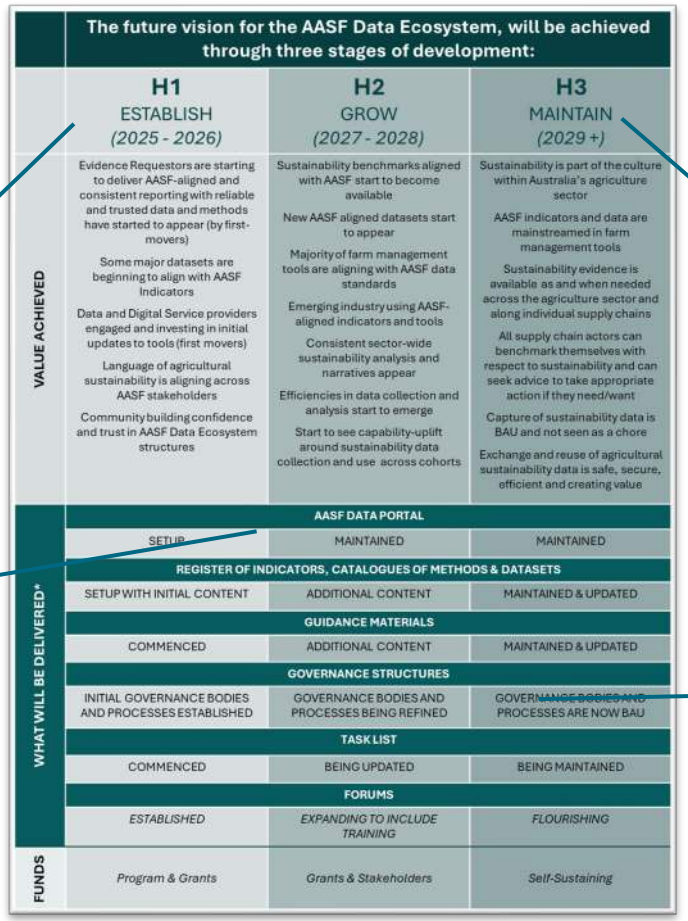
4. While horizons are typically defined by logical progression rather than strict timelines, including indicative timing can help stakeholders understand when specific components may be initiated or delivered. This is particularly useful in multi-stakeholder environments where coordination and resource planning are critical. Timing should remain flexible and be treated as guidance rather than fixed deadlines.

5. Finalisation of the blueprint should occur in parallel with the refinement of the implementation strategy to ensure coherence between strategic intent and practical execution. The blueprint should be treated as a living document that evolves alongside the project. As new insights emerge through ongoing engagement and testing, the blueprint should be updated to reflect refined priorities, emerging risks, and changing conditions.

Templates
(a usable template is available in the appendices)

Blueprint is split into three horizons, each of which has a unique title and an indicative timeframe

Level 4 components of the strategy are included as indications of what needs to be created and governed at each horizon



The future vision for the AASF Data Ecosystem, will be achieved through three stages of development:			
	H1 ESTABLISH *(2025 - 2026)*	**H2** GROW *(2027 - 2028)*	**H3** MAINTAIN *(2029 +)*
VALUE ACHIEVED	Evidence Requestors are starting to deliver AASF-aligned and consistent reporting with reliable and trusted data and methods have started to appear (by first-movers) Some major datasets are beginning to align with AASF Indicators Data and Digital Service providers engaged and investing in initial updates to tools (first movers) Language of agricultural sustainability is aligning across AASF stakeholders Community building confidence and trust in AASF Data Ecosystem structures	Sustainability benchmarks aligned with AASF start to become available New AASF aligned datasets start to appear Majority of farm management tools are aligning with AASF data standards Emerging industry using AASF-aligned indicators and tools Consistent sector-wide sustainability analysis and narratives appear Efficiencies in data collection and analysis start to emerge Start to see capability-uplift around sustainability data collection and use across cohorts	Sustainability is part of the culture within Australia's agriculture sector AASF indicators and data are mainstreamed in farm management tools Sustainability evidence is available as and when needed across the agriculture sector and along individual supply chains All supply chain actors can benchmark themselves with respect to sustainability and can seek advice to take appropriate action if they need/want Capture of sustainability data is BAU and not seen as a chore Exchange and reuse of agricultural sustainability data is safe, secure, efficient and creating value
WHAT WILL BE DELIVERED*	**AASF DATA PORTAL**		
	SETUP	MAINTAINED	MAINTAINED
	REGISTER OF INDICATORS, CATALOGUES OF METHODS & DATASETS		
	SETUP WITH INITIAL CONTENT	ADDITIONAL CONTENT	MAINTAINED & UPDATED
	GUIDANCE MATERIALS		
	COMMENCED	ADDITIONAL CONTENT	MAINTAINED & UPDATED
	GOVERNANCE STRUCTURES		
	INITIAL GOVERNANCE BODIES AND PROCESSES ESTABLISHED	GOVERNANCE BODIES AND PROCESSES BEING REFINED	GOVERNANCE BODIES AND PROCESSES ARE NOW BAU
	TASK LIST		
	COMMENCED	BEING UPDATED	BEING MAINTAINED
	FORUMS		
	ESTABLISHED	*EXPANDING TO INCLUDE TRAINING*	*FLOURISHING*
FUNDS	*Program & Grants*	*Grants & Stakeholders*	*Self-Sustaining*

"Value achieved" describes the outcomes which will be achieved in this horizon, as specific to different stakeholder cohorts who will benefit from changes implemented in the data ecosystem

Consideration needs to be given to what type of funding will enable these level 4 components to be developed and for the outcomes to be achieved in each horizon

A blueprint template is a structured tool used to organise and communicate the key components — such as roles, activities, resources, and governance — required to implement a strategy across defined phases or horizons in a complex system. It is complemented by a Strategy template. Both are available in the appendices.

5.0 Appendices

1.1 Intent Statement – Template with Guiding Questions

Description of what change(s) will be realised as a result of us undertaking this project. Outline the benefits of delivering this project, and who the beneficiaries will be.

Background

Why the project was initiated.

Description of the context in which the project is being undertaken. Might include precedent projects, policies, frameworks, regulatory actions etc which will be built on, considered and/ or leveraged for the project.

Activities

Describe the activities which will be undertaken in this project.

Define the rationale for using these activities. Describe who will lead, contribute to and be engaged by these activities. Describe any other programs of work which are running in parallel to this project. List any key design and/or research questions which will be explored and answered in this project.

Successes

What are the initial intended outcomes from the project as defined by the primary stakeholders (client) and any other stakeholder groups?

Describe how these successes will be measured at the end of (and/or throughout) the project.

Key materials

Include links to online resources (reports) and other materials (within this document) which can be used for background information purposes.

Key resources

Define the cohorts according to RACI model. Describe and provide links to shared project folders for the team to access and use.

Priority Outputs & Timeframes

List of contracted deliverables and their associated timeframes.

1.1 Intent Statement – Example Agenda for Intent Session

Agenda Items

Time	Item & Focusing Questions
9:30 – 9:45	**Acknowledgement of Country & Introductions** • *Acknowledgement of Country* • *Who is in the room today, and what skillsets and experience are at the table?*
9:45 – 10:30	**Project Intent & Impact Strategy** In referencing the draft *Intent and Project Plan* document, the group will discuss: • *What are the intended outcomes for the project?* • *What are the preferred outputs to be delivered?* • *What activities will be pursued, and by what dates?* • *What broader areas of impact might this project deliver to?*
10.30 – 11:15	**Scope & Stakeholder Landscape** To update the draft *Intent and Project Plan* document, the group will consider: • *What does the stakeholder landscape look like for this project?* • *Who are the priority organisations and people to be engaged?* • *What documents and other materials related to this project already exist and can be leveraged?* • *What other projects are relevant to consider?* • *What are the boundaries and scope for this project?*
11:15 – 11:30	**Roles & Responsibilities** To confirm the governance and delivery accountabilities for this project, the group will consider: • *What responsibilities and accountabilities will members of the project team have?* • *How will administrative tasks be undertaken (ie coordination of activities, meetings and engagements with priority stakeholders) and by whom?* • *What are the lines of reporting and accountability?*

1.2 Project Strategy – Template with Guiding Questions

Framework on a page

Inputs	Activities	Outputs	Outcomes	Broader outcomes	Impacts
What are we going to need to deliver these outputs and outcomes? (ie humans, tech, travel).	What are we going to do to deliver these outputs and outcomes?	What are the tangible things that the project will deliver?	As a result of delivering these outputs, what benefits will stakeholders gain and how will these be measured?	What further outcomes are other stakeholders seeking to achieve that will be underpinned by this project's outcomes?	What effects on, changes or benefits to the economy environment and/or society beyond those contributions to academic knowledge will be achieved?

2.1 How to Run an Interview

Before

Step 0 - Prepare!

Hold a planning session to determine if interviews are appropriate for the project, and brainstorm and answer key questions required for the interview guide. This session should:

- ✓ Identify a broad ecosystem of stakeholder necessary to answer key questions or achieve project goals
- ✓ Pinpoint specific organisations and people you need to check your assumptions/ hypotheses with
- ✓ Brainstorm questions/ topics in-line with project needs
- ✓ Start organising interviews with a 2 - 3 week lead time; structure recruitment of participants into the project, in-line with project type and goals
- ✓ Design the interview guide in accordance with core requirements; generate any additional approvals or documentation required, including privacy, ethics and consent forms. Ensure these are completed and approved before progressing

- x Don't target just one stakeholder group
- x Don't limit interviews to people you know
- x Don't assume a "no" from one person means that all people in that cohort won't want to meet you

During (with interview guide)

Step 1 - Welcome

Provide a clear and succinct introduction which outlines the purpose of the conversation. Ensure you have consent and make sure any data collection tools (i.e recordings) are working and on.

Step 2 – Context

- ✓ Use active listening and be aware of your participants needs
- x Don't be impatient, critical, or judgemental; listen!

Step 3 - Tell me about it (and tell me some more)

- ✓ Ask broad open-ended questions, seek to explore the statements and world view
- ✓ Take notes, and follow up with probing questions (can be prepared prior); for example, clarify terminology
- x Don't cut in
- x Don't use leading questions
- x Don't make assumptions; double check anything uncertain

Step 4 - Priorities and playback

- ✓ Ask what the key messages a participant wants you to takeaway
- ✓ Summarise the conversation back to double check you've got everything
- x Don't insert your analysis or assumptions; this is about making sure you've got a stakeholder's story down

Step 5 – Close

Check if there is anything else to discuss. Be genuine and thankful to the stakeholder for their time.

After

Step 6 - Insights and analysis

- ✓ Immediately following an interview reflect on what you learnt; record insights and notes immediately (or as soon as practical) after an interview using a notetaking tool that meets your needs
- ✓ Regularly review and refine your assumptions/ hypotheses/ questions; record these thoughts and changes in a notebook
- ✓ Consistently refine and expand your understanding of your stakeholders and who you need to speak with next
- ✓ Continue interviewing as resources, time and project requirements allow

Upon conclusion, bring your data together using a structured analysis method

- x Don't do your notes later; you will forget things and get confused over time

1.2 Research Plan – Template with Guiding Questions

Lines of enquiry

In reviewing the project activity outcomes and broader project outcomes to be achieved, the project team have considered what needs to be explored, understood and communicated through various project activities. A set of high-level Lines of Enquiry have been developed (as per below) for each of the project outcome areas. Each of these lines will be explored through relevant project activities, including a literature review, stakeholder interviews, workshops etc. It should be noted that the questions will be adapted to the relevant research activity contexts and answers to some of these questions are already available from previous projects which the project team will review and build upon. Therefore, only a subset of variants to these questions will be taken into stakeholder engagement activities, while others will be posed to document a comprehensive a literature review.

Project activity outcomes	What we need to know	What we need to ask

2.2 Discovery Group Activities – Agenda Template

Title of Event

Purpose
Describe the purpose of this event here.

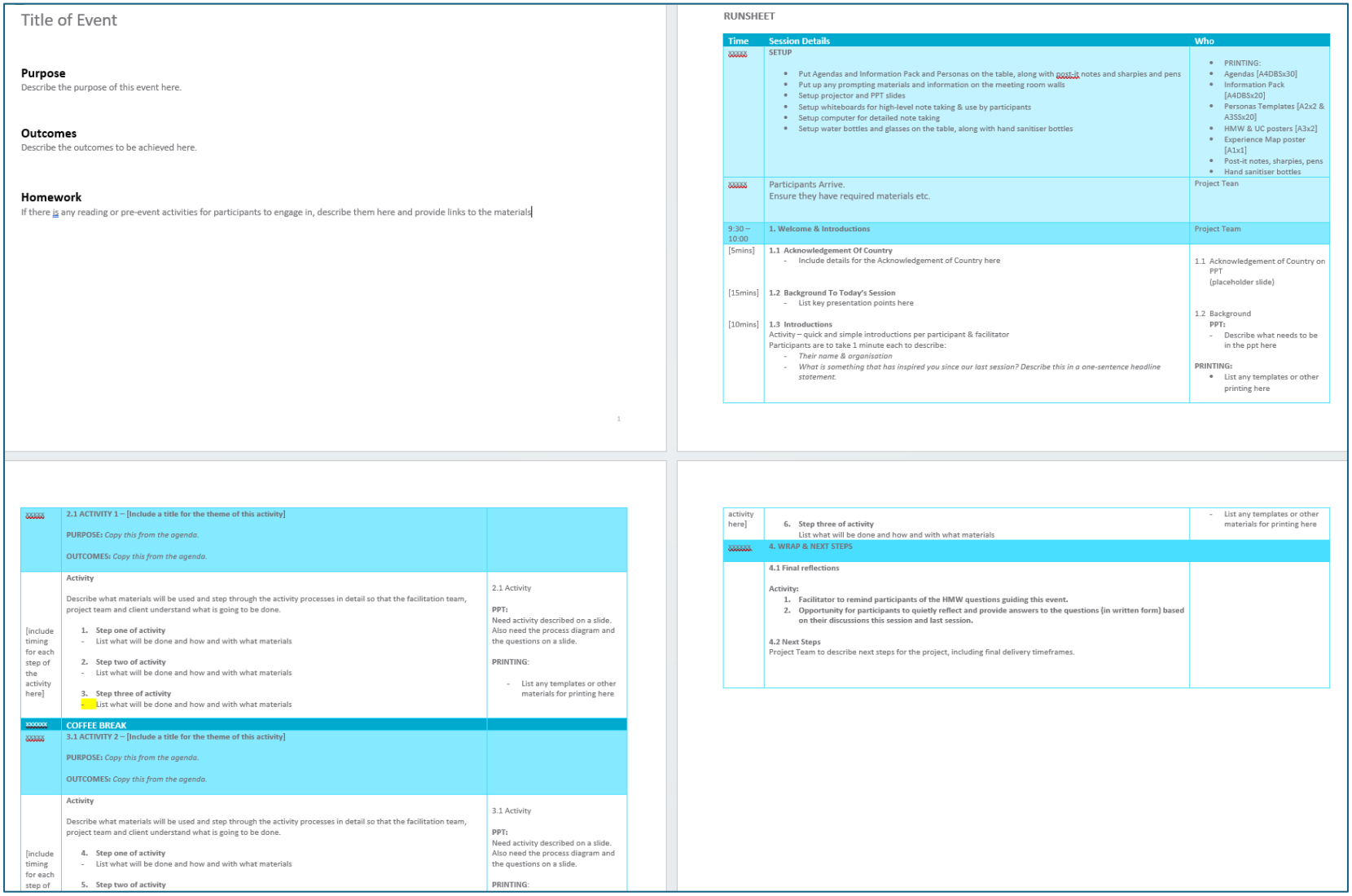
Outcomes
Describe the outcomes to be achieved here.

Homework
If there is any reading or pre-event activities for participants to engage in, describe them here and provide links to the materials

AGENDA

Time	Session Details	Who
xxxxx	Arrival	xxxxx
xxxxx	**1. Welcome & Introductions** **1.1 Acknowledgement Of Country** **1.2 Background To Today's Session** **1.3 Introductions**	Project Team
xxxxx	**2.1 ACTIVITY 1 [Include a title for the theme of this activity]** **PURPOSE:** *describe why participants are going to be doing this activity* **OUTCOMES:** *describe what the group will have achieved together by undertaking this activity*	Participants
xxxxx	**COFFEE BREAK**	
xxxxx	**3.1 ACTIVITY 2 – [Include a title for the theme of this activity]** **PURPOSE:** *describe why participants are going to be doing this activity* **OUTCOMES:** *describe what the group will have achieved together by undertaking this activity*	Participants
xxxxx	**4. WRAP & NEXT STEPS**	Project Team

2.2 Discovery Group Activities – Runsheet Template



Title of Event

Purpose
Describe the purpose of this event here.

Outcomes
Describe the outcomes to be achieved here.

Homework
If there is any reading or pre-event activities for participants to engage in, describe them here and provide links to the materials

1

RUNSHEET

Time	Session Details	Who
xxxxxx	**SETUP** • Put Agendas and Information Pack and Personas on the table, along with post-it notes and sharpies and pens • Put up any prompting materials and information on the meeting room walls • Setup projector and PPT slides • Setup whiteboards for high-level note taking & use by participants • Setup computer for detailed note taking • Setup water bottles and glasses on the table, along with hand sanitiser bottles	• PRINTING: • Agendas [A4DBSx30] • Information Pack [A4DBSx20] • Personas Templates [A2x2 & A3SSx20] • HMW & UC posters [A3x2] • Experience Map poster [A1x1] • Post-it notes, sharpies, pens • Hand sanitiser bottles
xxxxxx	Participants Arrive. Ensure they have required materials etc.	Project Tean
9:30 – 10:00	**1. Welcome & Introductions**	Project Team
[5mins]	**1.1 Acknowledgement Of Country** - Include details for the Acknowledgement of Country here	1.1 Acknowledgement of Country on PPT (placeholder slide)
[15mins]	**1.2 Background To Today's Session** - List key presentation points here	1.2 Background **PPT:** - Describe what needs to be in the ppt here
[10mins]	**1.3 Introductions** Activity – quick and simple introductions per participant & facilitator Participants are to take 1 minute each to describe: - *Their name & organisation* - *What is something that has inspired you since our last session? Describe this in a one-sentence headline statement.*	**PRINTING:** • List any templates or other printing here
xxxxxx	**2.1 ACTIVITY 1 – [Include a title for the theme of this activity]** **PURPOSE:** *Copy this from the agenda.* **OUTCOMES:** *Copy this from the agenda.*	
[include timing for each step of the activity here]	**Activity** Describe what materials will be used and step through the activity processes in detail so that the facilitation team, project team and client understand what is going to be done. 1. **Step one of activity** - List what will be done and how and with what materials 2. **Step two of activity** - List what will be done and how and with what materials 3. **Step three of activity** - List what will be done and how and with what materials	2.1 Activity **PPT:** Need activity described on a slide. Also need the process diagram and the questions on a slide. **PRINTING:** - List any templates or other materials for printing here
xxxxxx	**COFFEE BREAK**	
xxxxxx	**3.1 ACTIVITY 2 – [Include a title for the theme of this activity]** **PURPOSE:** *Copy this from the agenda.* **OUTCOMES:** *Copy this from the agenda.*	
[include timing for each step of	**Activity** Describe what materials will be used and step through the activity processes in detail so that the facilitation team, project team and client understand what is going to be done. 4. **Step one of activity** - List what will be done and how and with what materials 5. **Step two of activity**	3.1 Activity **PPT:** Need activity described on a slide. Also need the process diagram and the questions on a slide. **PRINTING:**
activity here]	6. **Step three of activity** List what will be done and how and with what materials	- List any templates or other materials for printing here
xxxxxx	**4. WRAP & NEXT STEPS**	
	4.1 Final reflections **Activity:** 1. **Facilitator to remind participants of the HMW questions guiding this event.** 2. **Opportunity for participants to quietly reflect and provide answers to the questions (in written form) based on their discussions this session and last session.** **4.2 Next Steps** Project Team to describe next steps for the project, including final delivery timeframes.	

2.2 Discovery Group Activities – Vision Activity Template

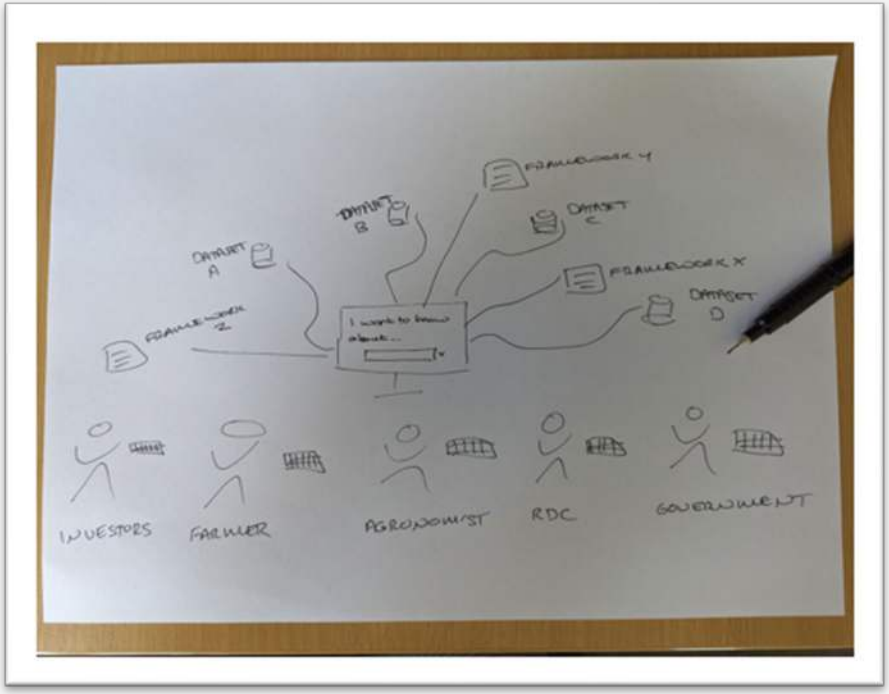
Activity 1.

Draw your vision of what a AASF data ecosystem might look like and be doing in five years time

Steps (5mins)

1. Grab a piece of paper and a pen/ pencil (or digital whiteboard and stylus)
2. Imagine what a data ecosystem for the AASF might look like in five years time.
3. Draw this future data ecosystem.
4. Consider:

- Who is involved?
- What data is being exchanged, and why?
- What value and benefits are being delivered through this data ecosystem?
- Why is this future scenario different to the current situation?



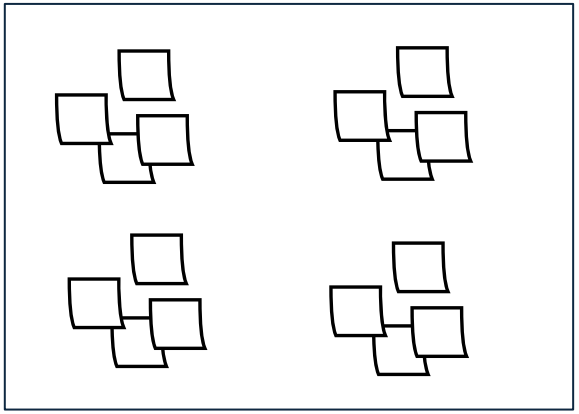
2.3 Affinity Mapping Template (prepopulated for illustrative purposes)

Description – Data says X

Significance – How/ what do our affinities explain or tell us something about our dataset as a whole?

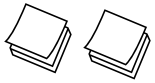
Cluster your data to move from ..

Raw Data

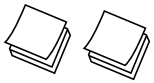


Affinities

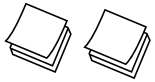
Affinity 1 - ABC



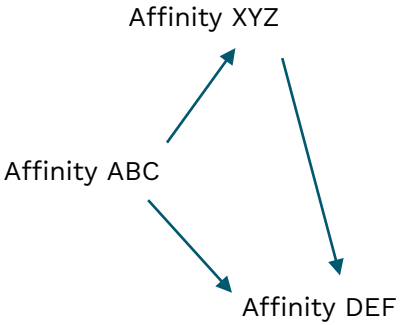
Affinity 2 – XYZ



Affinity 3 – EFG



Reflections



Step 1 – Preparing Raw Data

- ✓ Read and review your data individually or as a collective
- ✓ Place data on a workspace with one idea per post-it-note
- ✓ Set a colour coding scheme and stick to it
- x Don't try and explain everything or assume the answer too early; immerse yourself in the data
- x Don't be haphazard with colour coding or any organisational scheme

Step 2 – Cluster and build affinities

- ✓ Visually cluster "like-with-life" to create affinities
- ✓ Be collaborative in this process; discuss, disagree, debate
- ✓ Record your thinking as you go
- ✓ Revise until all your data is clustered
- x This isn't about winning a debate but about accurately capturing stakeholder's views; be kind to collaborators and accurate in the descriptions
- x Don't avoid outliers or going for the "easy" ideas; all data needs to be clustered
- x Don't think you'll get it all at once or get too attached to your first cut; this is an iterative process

Step 3 – Reflections

- ✓ Reflect on what is significant about the affinities and what they tell you about the dataset as a whole
- ✓ What are the key overarching meanings, stories, messages that come through?
- ✓ How do these affinities make sense of the world that your stakeholders are in?
- ✓ Ask how this informs what you will do and design next?
- x Don't equate description with significant. Affinities should have explanatory power
- x Don't assume this will be easy! Multiple iterations will be needed, after multiple iterations of building affinities!

2.3 Affinity Mapping Template

Description –
Data says X

Significance – How/ what do our affinities explain or tell us something about our dataset as a whole?

Cluster your data to move from ..

Raw Data

Affinities

Affinity 1 - ABC

Affinity 2 – XYZ

Affinity 3 – EFG

Reflections

Step 1 – Preparing Raw Data

- ✓ Read and review your data individually or as a collective
- ✓ Place data on a workspace with one idea per post-it-note
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2.4 Insights and How Might We's

Set guidelines/policies/rules to protect stakeholders and ensure social license to access and use sustainability data?

Commentary

The AASF Data Discovery Report found that there is a significant power imbalance between various actors (organisations) with the existing sustainability data ecosystem. That is, many agricultural producers (often small, family-owned businesses from which sustainability data is requested) are less powerful than large corporate entities (which need access to sustainability data for various purposes).

The report also found that there are significant levels of mistrust within the agriculture sector when it comes to the access and use of data. To address this imbalance and mistrust and ensure a continuing social license to access and use sustainability data, the less powerful within the system need to be protected.

One way this can be achieved is by the community, developing, implementing, and adhering to guidelines, policies, and rules with respect to the sharing and use of sustainability related data. Thus, the community needs some mechanism (or mechanisms) by which it can do this. Sub-questions within this question are:

- *What guidelines/policies/rules are needed?*
- *Who should be involved in developing these guidelines/policies/rules?*
- *What organisational practices (structures) are needed?*
- *What, if any, technical infrastructure might be needed?*

Enables these use cases:

		6.1	5.1	2.1	4.1	7.1	3.1
		Subset data	Benchmark Credentials	Trace Credentials	Assess Credentials	Assess farms	Corporate Report

Proposed Approach

There are aspects of this question that align with the development, implementation and maintenance of the existing National Farmers' Federation Farm Data Code. Further, this code potentially goes someway to addressing the parts of the needs of this question. Therefore, it is proposed that a first task in exploration of this question is to engage with the managers of this code to further understand it and test whether greater alignment is advantageous.

The existing AASF Community of Practice includes members representing all primary stakeholders for this use case including farmers, the ag tech sector, data users and government. Input from these stakeholder groups are essential when answering this 'how might we' question. It is proposed that a working group of the CoP be formed to guide activities in this space. This group should include representatives from the key stakeholder groups. It should also include external skills where needed.

Next Steps

- Form HMW 1 Working Group of the AASF CoP (up to 8 members):
  - HMW 1 WG must include representatives from farmers, ag tech, and sustainability data users and may include others.
  - HMW 1 WG will ideally include someone with skills in Australian data privacy legislation and/or policy development.
- Project team to contact NFF Farm Data Code managers to explore synergies.
- Conduct HWM 1 WG workshop in late August/early September.

3.1 Use Case Development Template

3.1 Use Case Documentation Template

Use Case – Benchmark Sustainability Credentials

Objective

Users seek to conduct benchmarking to understand the current sustainability credentials of their organisation in the context of their industry peers. This may be for reporting purposes or to identify where improvements within their organisation might be made.

Details

Tasks for this use case include:

- The user discovers and accesses sustainability information that they can use to benchmark themselves against relevant peers
- The user conducts analysis based on this benchmarking to better understand the status of their sustainability credentials, in relation to their context and needs.

Primary Users

- Many within the agricultural sustainability sector

Other stakeholders

- S8. Data aggregators – who provide the data necessary for benchmarking
- S9. Ag Tech sector – who develop tools and implement standards
- S1. Commodity Sustainability Frameworks – create commodity specific benchmarks

Relevant Working Groups

Commentary

The ability for organisations to determine how they compare to their peers can be useful for a range of reasons including helping drive innovation and the desire to improve.

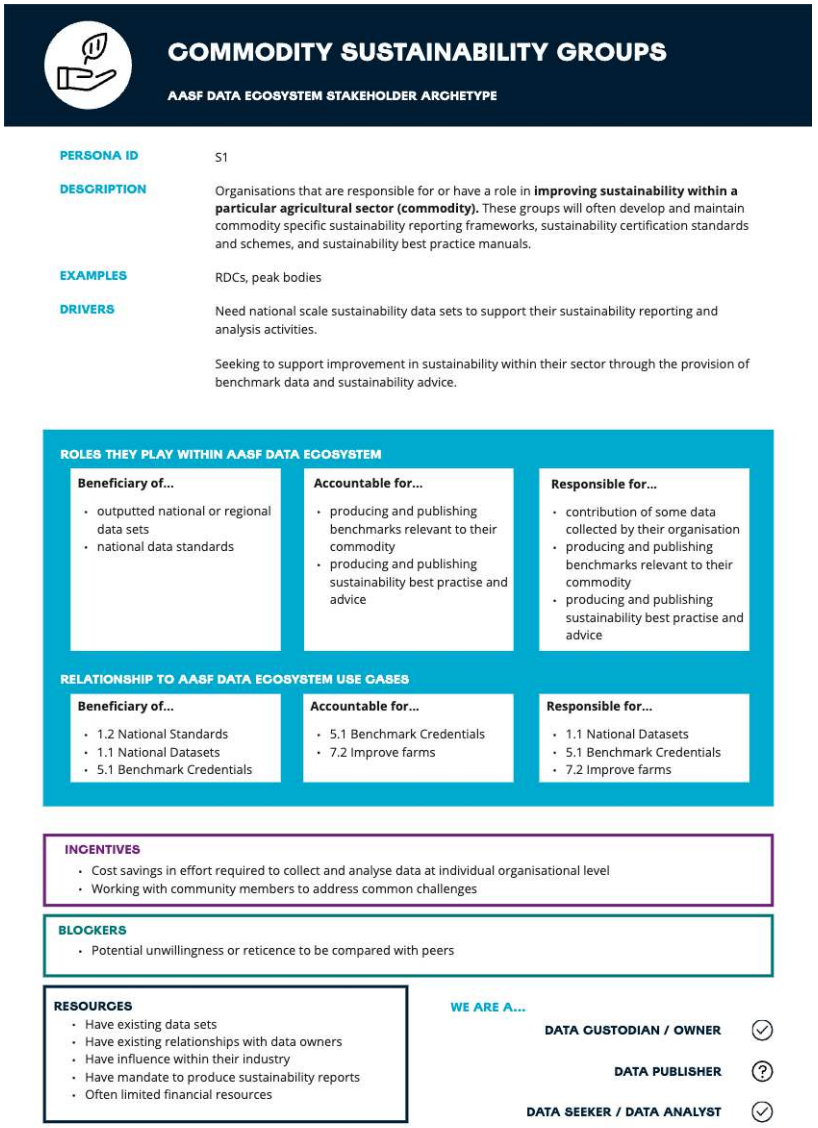
The direct roles for the AASF Data Ecosystem in supporting this use case are similar to those of previously use cases including:

- Providing a mechanism *to enable the collaborative processes of defining, developing, governing, and managing national agricultural sustainability data standards.*
- *Developing, managing, publishing and providing support for use of standard identification schemes* across keys aspects of agricultural supply chains to which data can be attached
- Providing a mechanism to *enable the processes of identifying national agricultural sustainability data needs and subsequent development*; this includes providing space(s) for collaboration (physically or online), and rules, policies and processes by which: data requirements can be identified and agreed, data can be developed, and management of these datasets can proceed.
- Providing *mechanisms to support the creation, publication and maintenance of benchmark data sets* including associated rules, policies and processes. The scope of these benchmarks may vary by industry, commodity, supply chain, region or another factor.
- Establishing *community guidelines/policies/rules for the appropriate collection and use of organisational sustainability data*, defining expectations around privacy, security, (dis)benefits, commercial arrangements and other issues deemed relevant.

Dependencies/Constraints

- Assumes the availability of industry benchmark data, the ability to generate it, and ability to aggregate this data.
- Assumes there is a compelling need for benchmarking and sustainability credentials amongst stakeholders; this includes the existence and acceptance of credentials
- Assumes a tool/platform to access and analyse benchmarking data in a meaningful way

3.2 Proto-Persona / Archetype Template



COMMODITY SUSTAINABILITY GROUPS

AASF DATA ECOSYSTEM STAKEHOLDER ARCHETYPE

PERSONA ID

S1

DESCRIPTION

Organisations that are responsible for or have a role in **improving sustainability within a particular agricultural sector (commodity).** These groups will often develop and maintain commodity specific sustainability reporting frameworks, sustainability certification standards and schemes, and sustainability best practice manuals.

EXAMPLES

RDCs, peak bodies

DRIVERS

Need national scale sustainability data sets to support their sustainability reporting and analysis activities.

Seeking to support improvement in sustainability within their sector through the provision of benchmark data and sustainability advice.

ROLES THEY PLAY WITHIN AASF DATA ECOSYSTEM

Beneficiary of...

- outputted national or regional data sets
- national data standards

Accountable for...

- producing and publishing benchmarks relevant to their commodity
- producing and publishing sustainability best practise and advice

Responsible for...

- contribution of some data collected by their organisation
- producing and publishing benchmarks relevant to their commodity
- producing and publishing sustainability best practise and advice

RELATIONSHIP TO AASF DATA ECOSYSTEM USE CASES

Beneficiary of...

- 1.2 National Standards
- 1.1 National Datasets
- 5.1 Benchmark Credentials

Accountable for...

- 5.1 Benchmark Credentials
- 7.2 Improve farms

Responsible for...

- 1.1 National Datasets
- 5.1 Benchmark Credentials
- 7.2 Improve farms

INCENTIVES

- Cost savings in effort required to collect and analyse data at individual organisational level
- Working with community members to address common challenges

BLOCKERS

- Potential unwillingness or reticence to be compared with peers

RESOURCES

- Have existing data sets
- Have existing relationships with data owners
- Have influence within their industry
- Have mandate to produce sustainability reports
- Often limited financial resources

WE ARE A...

DATA CUSTODIAN / OWNER ✓

DATA PUBLISHER ?

DATA SEEKER / DATA ANALYST ✓

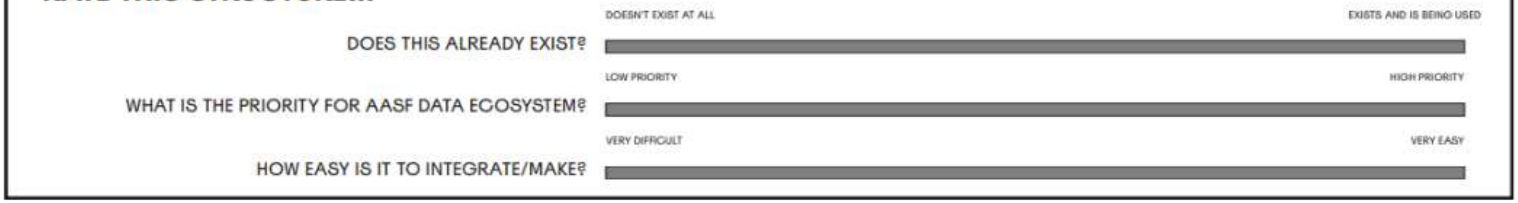
3.3 Structure Ideas Template

NAME OF STRUCTURE

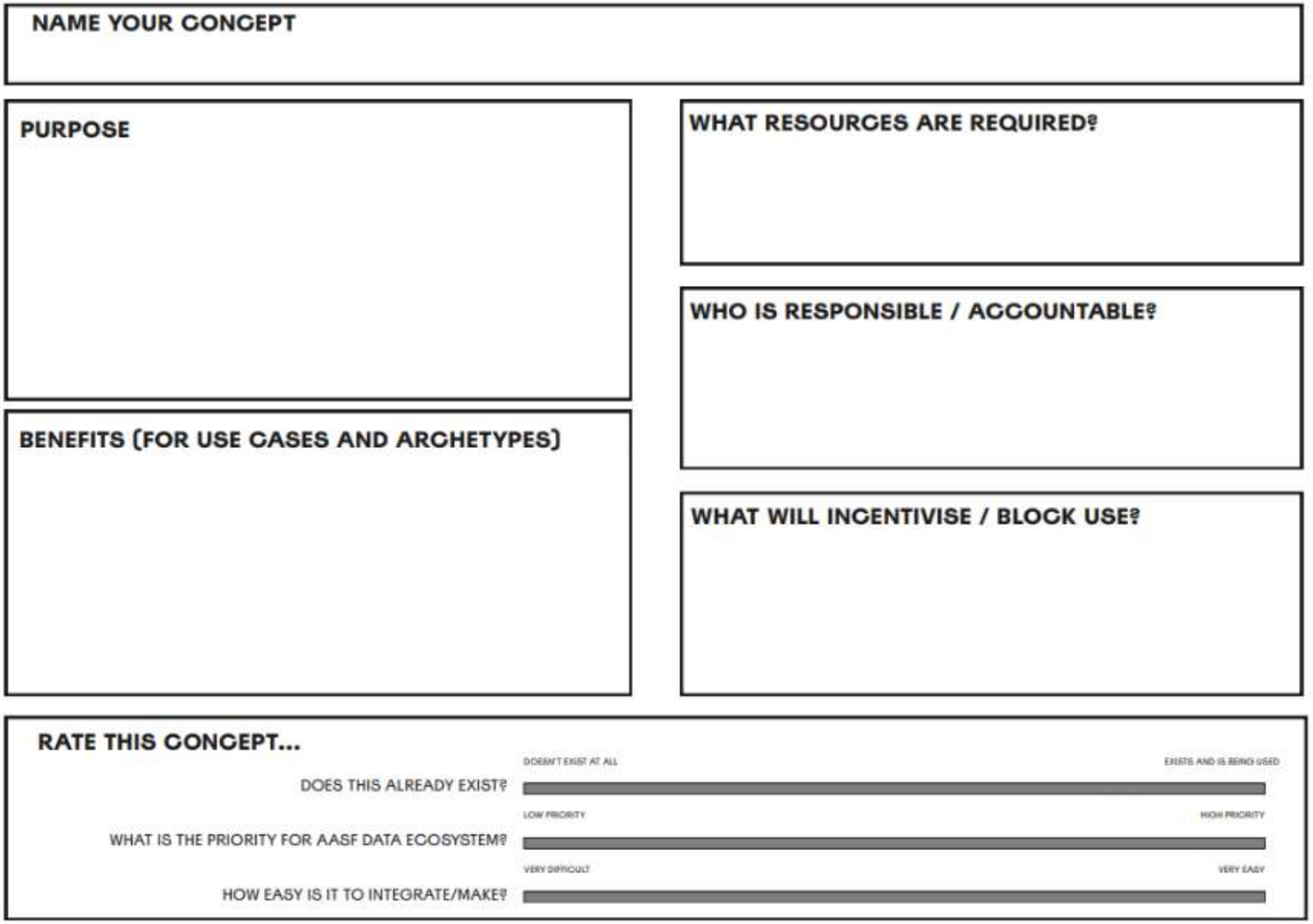
PURPOSE

BENEFITS (AND FOR WHOM)

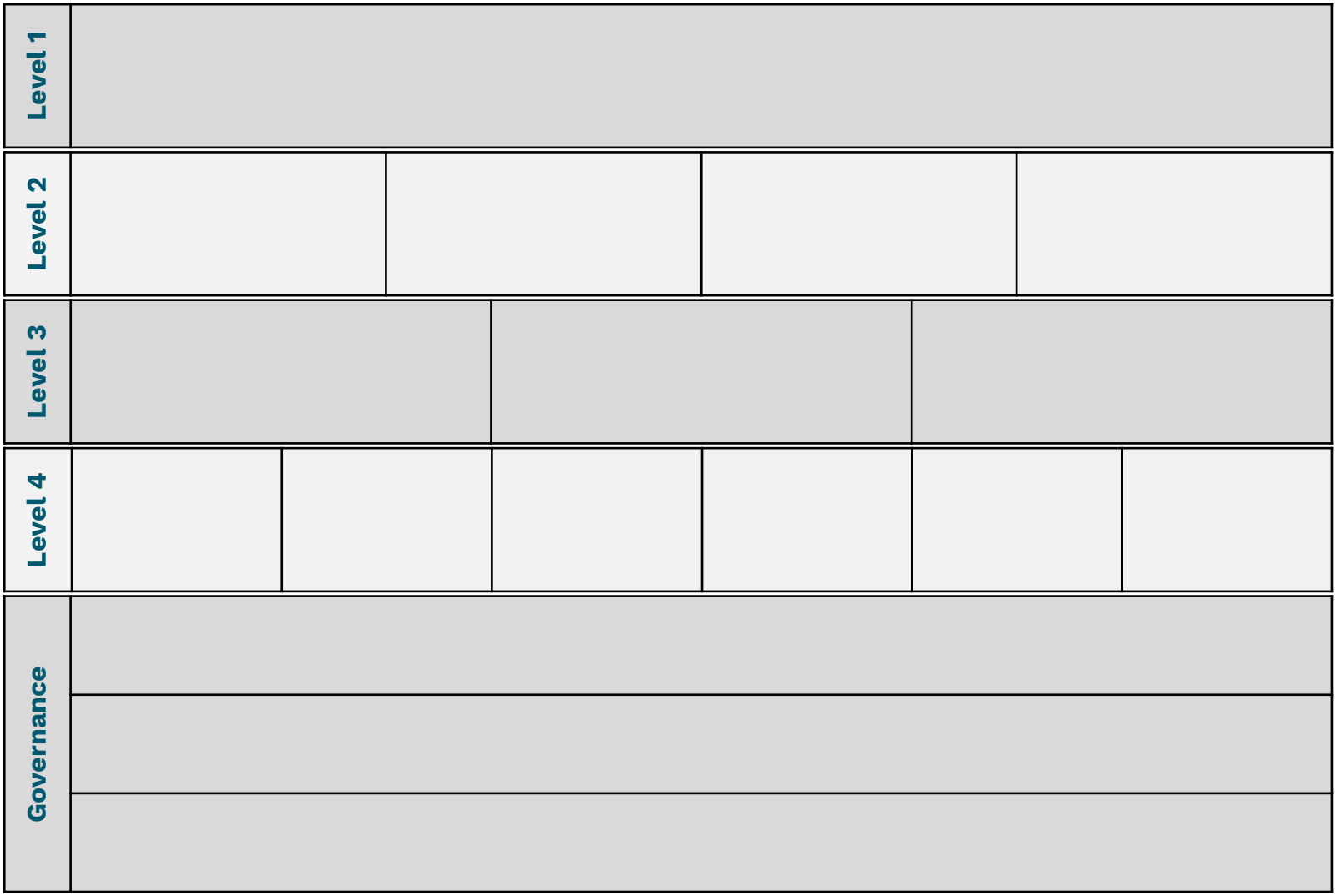
RATE THIS STRUCTURE...



3.3 Concepts Template



4.1 Strategy Template



4.2 Blueprint Template

	The future vision for x, will be achieved through three stages of development:		
	H1 .	**H2** .	**H3** .
Value achieved			
What will be delivered			
Funds			

4.2 Blueprint Template

	The future vision for the x, will be achieved through resourcing the following activities:		
	H1	**H2**	**H3**
Governance group			
Resource group			

For further information

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Australian Agricultural Sustainability Framework

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National Farmers Federation | Australian Agricultural Sustainability Framework

Australian Government
Department of Agriculture, Fisheries and Forestry