Final Report

Farmers2Founders – TEKFARM SA

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Executive Summary

In South Australia, the primary industry and agribusiness sectors are critical drivers of the State's economic prosperity and sustainability. In 2018 / 19, revenue from the state's primary industries and related agribusinesses totalled $15.2 billion and supported over 76,000 jobs directly. Subsequently, there is an ever-increasing focus on ensuring the ongoing stimulation of the sector to become more productive and more profitable, with increasing investment into initiatives which aim to innovate, grow and implement more efficient production practices across South Australia.

The priority to enhance farming production capabilities across all sectors has complemented an increasing discourse around the array of new technologies being built for the agricultural sector. Agtech,including on-farm sensors, farm management software, imagery technologies and smart farm equipment, has become a topic of significant interest in recent years as farmers and industry alike look to reduce farming inputs, optimise yields and improve operational and supply chain efficiencies. However, despite the hype around agtech as a way to solve long-held industry problems with innovation, there is an evident lack of adoption of new technologies on farms around South Australia and, indeed, Australia more generally.

In light of this, the South Australia AgTech Strategic Plan (the **Strategic Plan**) released in 2020 identified an additional $2.6 billion per year uplift opportunity to the GVP of the South Australian agricultural sector if there was an increase in the adoption of agtech solutions. To achieve this, the Strategic Plan proposed seven priority areas to be addressed in order to accelerate the adoption of agtech by SA producers as follows:

1. Facilitate networking and collaboration across the agtech ecosystem

2. Increase producer understanding of agtech and demonstrate benefits in real-life settings

3. Build the entrepreneurial and commercialisation capabilities of agtech providers

4. Increase producer digital and technology adoption skills

To date, many existing methods of extension and outreach to address these priority areas have largely been unsuccessful. Accordingly, the TEKFARM SA pilot project (**Project**) was designed to be a new and unique approach to resolving agtech adoption challenges and has developed and tested a new Red Meat Accelerated Agtech Adoption Framework to achieve this.

This Report will detail the work which has been conducted as part of the Project in conjunction with producers, trusted intermediaries and agtech solution providers in South Australia to develop the Framework, and the number of learnings obtained as a result. Additionally, the Report will make a series of recommendations for how the scope of application of this Framework can be expanded and the Project scaled.

Project Purpose and Structure

The purpose of the Project is to develop and test a new Red Meat Accelerated AgTech Adoption Framework with selected South Australian red meat producers and agtech solution providers. The objective is to address key challenges that have been identified as inhibiting agtech adoption including:

1. Value proposition is not always clear to producers

2. Relative immaturity of the agtech sector

3. Inadequate knowledge base preventing producers from making informed decisions to accept or reject new technologies

4. Significant barriers to the deployment of new technology related to connectivity, reliability and digital capability

The methodology will apply a design-led approach which places producers at the centre of the technology development and innovation process. The approach is unique in terms of the matching of producer problems with tech solutions to determine problem-solution fit prior to the development of adoption trials. In addition, the adoption framework is based on addressing capability gaps on both sides

of the adoption cycle, including both producers and tech developers. Finally, the project methodology includes exploration of an emerging role for third party trusted intermediaries.

Outcomes

The key outcomes from this pilot Project include:

- At least 6 livestock producers are to develop Technology Adoption Plans
- At least 12 red meat producers are to undertake digital capability assessment and have access to capability tools
- Value proposition and ROI/cost-benefit analyses documented for up to 6 agtech solutions of relevance to red meat producers
- Up to 6 agtech solution providers will have commercialisation plans documented to accelerate adoption by red meat producers
- At least 6 adoption case studies, videos and other dissemination materials developed
- Outcomes of project communicated to other red meat producers via at least 2 industry events and via F2F and MLA publications
- Final report detailing Red Meat Accelerated AgTech Adoption Framework and recommendations for scaling the initiative nationally

Structure

TEKFARM SA is a four-stage project which intends to connect key stakeholders in the agtech sector to drive and accelerate agtech adoption by producers in South Australia. The key stages are designed to assess, isolate and address issues in adoption from red meat producers and agtech solution providers, aided by the networks and support of trusted intermediaries. The four stages include:

1. **Recruitment & Onboarding:** Performing identification, qualification and onboarding of suitable agtech solution providers, primary producers and trusted intermediaries across a variety of sectors and problem sets.

2. **Producer / Solution Matching:** Performing capability assessments for primary producers and value proposition analyses for the solution providers to inform the appropriate matching of agtech solution providers with suitable primary producers.

3. **Adoption Trial Plans:** Planning and developing roadmaps for the engagement of facilitated adoption for matched participants.

4. **Evaluation & Communication:** Communication of findings, preparation of case studies and ongoing support for potential adoption trials.

Project Team

The following F2F team are delivering the TEKFARM SA Project, all of whom are experienced facilitators and who have expertise in agrifood tech, innovation, commercialisation and investment.

Dr Christine Pitt

Farmers2Founders Managing Director and founder Christine Pitt is a globally recognised thought leader, investor and entrepreneur in the ag+food tech ecosystem. She has a particular interest in building globally networked agrifood ecosystems and creating new business models for raising funds to invest in disruptive innovation across the agrifood value chain. For the past 20 years, she has worked extensively in the agrifood sector and most recently was the CEO of MLA Donor Company, where she was instrumental in the development and commercialisation of a +$200M ag+food tech investment portfolio. Christine holds a Bachelor of Science, a Master of Health Administration, and a Doctor of Business Administration in Agrifood Innovation & Entrepreneurship.

Darryl Lyons

Darryl is an experienced leader, operational specialist, and Indigenous entrepreneur with more than 20 years of experience in business development, Australian agriculture, start-ups, IoT and commercial construction. He has a strong background in prototyping and designing and optimising technology for use in real world settings with an excellent understanding of commercial requirements in the design and deployment of new and emerging technology. Darryl is an experienced entrepreneur and founder of Escavox, a supply chain data company.

Matthew Anderson

Matthew is uniquely qualified and experienced to work with large corporate entities and smaller farming enterprises alike. Having grown up on his family's cattle property in Northwest NSW, Matthew is passionate about agriculture and has an in-depth knowledge of farming systems and agribusiness. In addition, his early career as a commercial lawyer in Sydney ensures he is equipped with practical capabilities in commercial acumen and project management. He has an entrepreneurial mindset and fascination for how technology can bring real benefit for producers on-farm.

Michael Macolino

Michael is based in Adelaide, SA where he leads the development of the Agrifood Tech practice for BDO with a focus on commercialising new technology and supporting the growth of the agrifood tech ecosystem. He is co-organiser of the Adelaide AgTech meetup events and an assessment panel member of the South Australian Research, Commercialisation and Startup Fund. Michael has a strong track record as an entrepreneur and has launched five of his own ventures across a range of industries. He is an agtech coach and program facilitator with Farmers2Founders.

Outcomes Achieved

1. Report Findings

The TEKFARM SA project set out to identify and qualify a series of barriers to the adoption of agtech and develop a Red Meat Accelerated Agtech Adoption Framework to support increased adoption of agtech relevant to red meat producers in South Australia. As will be dictated in this Report, that overriding objective has been achieved.

A commonly held understanding surrounding the barriers to agtech adoption is that the burden of responsibility for adoption lies with the producer. It is often, mistakenly, believed that technologies which are in the market and which have evidence of existing traction must be valuable solutions that areuseful to farming customers. In that line of thinking, any failings in the adoption process must lie with the producer who succumbs to challenges in the adoption cycle. This perspective views the adoption cycle from the lens of the technology developer and makes a false assumption that producers are simplythe customers of agtech producers and the bottlenecks for adoption.

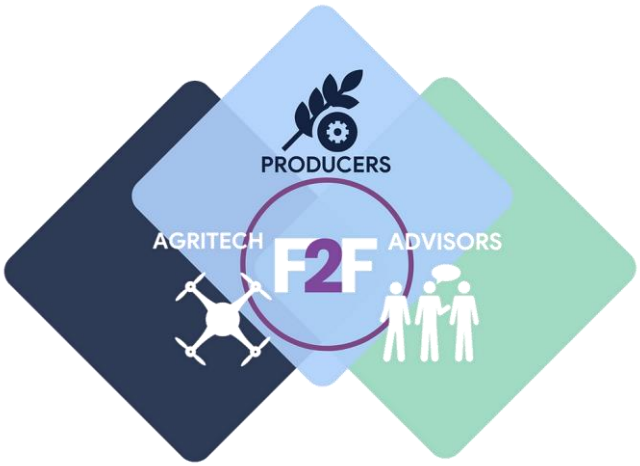
The TEKFARM SA project approached the same considerations from the alternative perspective, believing that barriers to adoption exist across all participants in the adoption cycle, and that there is a shared responsibility to address these. The Project was designed to address adoption challenges that exist for participants across the entire adoption cycle, incorporating producers, agtech solution providers and trusted intermediaries. The requirements for each participant group included:

Producers - Across sectors, including red meat and wool, grains and broadacre cropping, poultry and eggs, viticulture and horticulture.

Agtech solution providers - Collective term for the tools and technologies (e.g. sensors, farm management software, imagery, smart farm equipment and genomics) that enable best practice agriculture. It also describes the connected systems that collect, collate, store and analyse large quantities of spatial and non-spatial data to support and action decisions.

Trusted intermediaries - Organisations, groups or individuals who are closely integrated within the knowledge and advisory networks of producers, including industry bodies, trusted advisors, consultants, grower groups and farming systems groups.

While each of these participant groups are important because of their individualised role in the adoption process, it is the interlinkages between which are where the challenges for adoption lie. In the TEKFARM SA project, the ambition was to leverage those relationships in order to improve the conditions for adoption, as represented in the below graphic:



It was anticipated that by engaging with participants in larger numbers from the outset would allow those participants who are more responsive and engaged to progress through the four phases of the Project, while those who were less inclined to remain engaged were filtered out at various points. This left a small sample size of commitment participants, from a variety of sectors, who would have progressed through the entire program.

The four stages of the Project were designed to allow a stepped progression for the agtech solution providers and producers participants to improve their capability. The Project's early stages focussed on assessing the participants on their baseline of capability and determining their individual circumstances or business state. As the program progressed, so too did the adoption process so that producers, primarily, could reach a point of ascertaining their adoption objectives through an organic progression.

Engagement

In order to satisfy Milestone 1 objectives as well as establish an appropriate cohort of participants to provide the best chances of success of the Project, we conducted a range of engagement and outreach activities to support a broad basis of applicants. These engagement practices focussed on ensuring coverage provided by direct outreach activities, promotional activities and leverage the networks of Project partners to encourage a wider pool of potential applicants into the Project.

Promotional & Outreach Initiatives

Our engagement and promotional initiatives were aimed at connecting with a target group of potential participants. To do this, we were required to design and deliver an extensive outreach strategy, leveraging our existing networks, contacts and relationships, as well as establishing new connections to expand our footprint in the South Australian agricultural communities. An selection of the outreach strategies we conducted are outlined below:

- Leveraging third party collaborators such as Michael Macolino, Penny Shultz and Robyn Terry
- Conducting direct outreach to producers and agtech solution providers
- Contacting the F2F alumni and partner database via direct electronic marketing
- Encouraging early trusted intermediary participants to share the Project amongst their own client networks
- Promotion across PIRSA and MLA media channels
- Social media promotion across LinkedIn, Twitter and Instagram.

The trusted intermediaries also supported our engagement activities with producers, including those as shown in the following examples:

- **Livestock SA** – Directly contacted known members in their network who had an interest in opportunities for agtech adoption and shared Project details via social media outlets.

- **Agricultural Bureau of South Australia** – Contacted +60 regional branches to share the Project directly with producers on a familiar basis and promoted social media posts advertising TEKFARM SA on Wednesday 26th April.

- **McKillop Farming Systems Group (MFSG)** – Included a curated advertorial for the TEKFARM Project in a monthly member newsletter direct to MFSG producers on Monday, 25 April 2022.

- **Ag Innovation & Research Eyre Peninsula (AIR EP)** – A farmer-owned research organisation who advertised the TEKFARM Project in a monthly member newsletter direct to producers in the Eyre Peninsula region on Monday, 25 April 2022.

- **Australian Woman in Agriculture SA –** Agreed to promote the Project through AwiA SA's network of producers which includes red meat producers.

Direct Contact Activities

In Milestone 1, we also conducted an extensive process of identifying, assessing and directly reaching out to potential participants across the agtech solution providers, producers and trusted intermediary targeted groups. We found these processes to have mixed results - many agtech solution providers were drawn to the Project because of seeing promotions online or by warm contacts already a part of the F2F network. Equally, the trusted intermediaries were more hesitant to be engaged by direct means of contact when they were not already familiar with our activities. However, the producers responded bestto direct contact, particularly via a phone call, as they were able to be spoken to at a time most suitable to them and ask necessary questions. This speaks to the need for producers to have authentic, personal conversations and outreach in order to feel engaged and trust the basis of the Project.

Included at **Appendix A** are the complete outreach lists for each participant group we made direct contact with.

Expression of Interest Online Portal

To capture the interest of those who wished to participate in the Project, we had an Expression of Interest portal available on the Farmers2Founders website. This was a focus point for any participant to engage in the Project, regardless of how they were initially contacted or notified of the Project.

Across the three participant groups, there was highly variable interest in the Project. It was hard to define the reasons for this, however some notable challenges we faced included:

- Producers are time-poor and although many were interested in a Project of this kind, they simply couldn't commit. This was evident for those we contacted from the outset of the Project, as well as for producers who initially engaged in the Project and later dropped out.

- Producers who self-identify as innovators and early adopters have been bombarded by many different initiatives across the industry and sectors which has been sustained for some time. There is a growing sense of fatigue from these early adopters in engaging in more programs withunclear benefit.

- Many agtech solution providers were interested in the Project as they assumed it would lead to more sales, and were less inclined to be taken through a program to address their own failings in the adoption cycle.

- Most trusted intermediary organisations were comfortable to share the Project to their broad networks and endorse it for their members, however were less inclined to participate themselves.

- Almost all participant groups needed a level of clarification on how the Project would specifically support them and lead to beneficial objectives. Whilst the benefits of increased adoption seem obvious from a theoretical perspective, this reaction indicated that many in the industry do not actually understand what the process of adoption is about and how they contribute to it. This required us to change our approach to frontend any conversations with clear objectives that would be achieved through the Project and how they related to that participants standpoint.

We received a high-degree of interest from agtech solutions providers in participating in the Project, with a total of **27** applications received during the engagement period. The total list of EOIs received for agtech solution providers are shown in **Appendix B**.

Equally, trusted intermediary organisations showed a proactive willingness to participate. We received a total of **16** expressions of interest from trusted intermediary organisations which included a range of service providers and groups who play an integral role in the farming businesses of their clients and neworks. **Appendix C** shows the trusted intermediaries we engaged for this Project, with those highlighted green having specific relevance to red meat and livestock producers.

However, engagement with producers proved a challenging aspect of the initial stages of the Project. Of all the engagement methods used in Stage 1, the direct phone calls to producers were the most effective. It was suggested by many we spoke to that there was a degree of fatigue from producers who were looking to engage in innovative programs such as TEKFARM SA, as there are numerous workshops, promotions and outreach activities currently being undertaken in the industry. Once we were able to explain the benefit and approach of this Project, producers were more inclined to want to participate, hence the effectiveness of the direct phone call strategy. This also highlights a more fundamental challenge at play in the adoption sphere where producers, in considering any new approach or innovation, need to be able to clearly identify a benefit of their involvement before being willing to take part.

In the end, we received **22** expressions of interest from producers, with **16** identified as red meat and livestock producers, highlighted in green in **Appendix D**.

Project Participants

Across the Project, we looked to identify and attract Project participants from a range of different sectors across South Australia's agricultural industry. However, pursuant to the sector-specific focus of the MDC, we had a Project pool of participants which was more heavily swayed towards the service providers, agtech solutions and producers in the red meat sector.

a. Producer Participants

In expressing interest to join the Project, producers were required to fill out a simple online form which captured an early scope on the type of producer they were, their adoption challenges, interests and adoption personas. To meet the obligations of the MDC contract, F2F were required to:

- engage at least 12 red meat producers to undertake digital capability assessments; and

- engage up to 6 agtech solution providers to be 'matched' to the producer participants.

Included at **Annexure E** is a list with links to all of the expression of interest responses received from the 22 producers engaged in the Project, including those in the red meat sector. These early indications were a useful data-set in their own right, providing common responses that producers faced in dealing with technology adoption for their farming businesses. **Annexure F** provides a series of charts and graphs which visually represent the demographics and qualities of the producer participants engaged in the Project, with the following core insights extracted from the data:

- As shown in *Figures 1.1 and 1.2*, we had 15 producers who self-categorised as being livestock and red meat producers. The other prominent sectors were Grains producers with 6 engaged in the Project, many of whom were a part of mixed farming enterprises with livestock.

- As shown in *Figures 2.1 and 2.2*, the most commonly reported adoption barriers included Cost (60% of participants), Connectivity (55% of participants) and technology solutions having an unclear Value Proposition (50% of participants). While most producers reported having suffered from several of the adoption challenges identified, there was a consensus across the participants that these three areas were the most impactful on their decision-making regarding agtech adoption.

- As shown in *Figures 3.1 and 3.2*, the producer participants had a varied interest in technology solutions already in the market, most of which was dictated by the type of farming operation they were engaged in. With that said, across most of the sectors, the in-field sensing and monitoring technologies were highly sought after by 73% of producer participants, and farm management software by 67% of producer participants (particularly by red meat producers).

- As shown in *Figures 4.1 and 4.2*, and interestingly in conjunction with the statistics of *Figures 3.1 and 3.2* noted above, the in-field sensing and monitoring technologies were also the types of technologies that had the highest rate of successful implementation for the producers. It is common-place in the industry to refer to these types of technologies as 'low-hanging fruit' or

'gateway' technologies for adoption, and this appears represented by the participants in the Project. Some technologies, such as weed management and automated harvesting or robotics, had not been adopted by any producers in this Project, although were sought after by some.

These figures highlighted an evenly-balanced group of participants - from those who are more advanced with their adoption mindset and currency technology implementation, to those who are yet to take on technological innovations on their farm but are actively looking for opportunities.

b. Agtech Solution Provider Participants

Unsurprisingly, there did not appear to be much difficulty obtaining interest from agtech solution providers to be a part of the Project. We received a high degree of interest from a range of different agtech providers early in the engagement process, many of whom also attended the initial information session to ask questions of the panel.

It is fair to assume that this level of interest results from agtech companies feeling the pressures created by a lack of adoption more acutely than producers. While the overriding ambition of this Project is to stimulate adoption of relevant agtech on-farms to increase the productive capacity of the agriculture sector in South Australia, there is a subsidiary opportunity to support agtech companies to increase sales and improve their customer acquisition processes. For many agtech companies we spoke to, adoption is one of the single biggest priorities as the agtech industry is still in a very juvenile state with most agtech providers not yet in a position of stability in their company development. As such, attempts to scale a company and increase the sales funnel to allow for continual growth is hampered by slow rates of adoption.

There was a broad variety of agtech solution providers who expressed interest to be in the Project. Many of those were mobile-based applications or on-farm sensor applications which were applicable across a variety of sectors.

One of the most striking commonalities between the agtech participants was just how early stage many of them were. While all participants were required to be commercial-ready solutions with evidence of traction, many of those participants had only been in the market for a short period of time and their

traction amounted to a few hundred users. We believe this to be indicative of the state of the agtech industry within Australia currently, and goes to the point raised above regarding the eagerness for many solution providers to address adoption challenges to improve their scalability. This also showed in the number of agtech companies who had engaged in a range of trial initiatives and other adoption-related projects, including the Read Meat & Wool Growth Program or participating in the PIRSA Demonstration Farms. All of the agtech companies we spoke to had experienced the adoption 'chasm' where they had received a high level of traction early in their launch from early adopters, but then reached the slower, more cautious mainstream market where the adoption rates dropped significantly. These agtech companies were striving towards trying to get past a certain threshold where mass adoption is achievable because of the degree of groundswell generated once you appeal to the early majority. The diagram below represents this phenomenon in generic terms:

While this is a commonplace challenge for any new technologies and industries, it can be said that these are more pronounced in the agriculture industry simply because of the bulk of pragmatist and conservative mindsets within the sector. It is also, again, demonstrative of the stage of the agtech sector in Australia, where many agtech solution providers with a reasonable degree of traction in the market are approaching, or within, the adoption chasm phase as the industry is still so young.

Interestingly, there were some agtech solution providers who felt this was actually a positive indicator for their business, such as for Jock Lawrence who is the founder of livestock management app, Mobble (please see **Appendix J** for his case study and analysis). Jock's approach to growing their customer base and scaling his business was entirely focused on organic growth. They rarely engaged in any targeted marketing or sales approaches and relied heavily on word-of mouth. While many new tech businesses would find this a concern, Jock was comfortable with this as he was intently focused on building a product that was responsive to customer needs. Mobble takes a very iterative approach to bringing on customers where they establish personal relationships with their farming customers so they can developa better understanding of their needs. Jock believed that organic growth meant that most of the customers came to them, rather than Mobble reaching outwardly, and these customers were already interested and engaged with what they were trying to do. It is necessary to note this approach, which was also shared by some other agtech companies in the Project such as Farmo, as there is an argument to suggest that slow adoption rates of some agtech solutions may actually be a part of an intentional strategy to ensure they can establish personal feedback loops with their customers an continue to build and iterate a solution which have been groundtested by many early users.

Unfortunately, due to the change in the methodology (explained below at Section 2) the role of the agtech solution providers became less of a focus. Initially, the Project looked to work with agtech solution providers to address their capability and refine their value proposition. While we obtained a significant amount of data from agtech companies on this basis and continued to engage with them to improve this aspect of their approach, the methodology shifted to focus more intently on the adoption cycle from the perspective of the producers. This meant that many of the agtech solution providers who expressed interest in the Project were not actually the kind of solutions which many producers sought and they, ultimately, did not continue into the 'match-ups' process.

c. Trusted Intermediary Participants

The trusted intermediary participants were equally diverse in their roles within the industry and sat at various positions along the agrifood supply chain. The most commonly represented type of intermediary were industry associations (such as grower groups, farming systems groups and sector-specific organisations) and included groups such as MacKillop Farm Management Group and AgEx Alliance. There was also representation from more regionalised food and agricultural groups, such as the Northern

Adelaide Plains Food Cluster, as well as several State-based associations and development groups. Finally, many of the trusted intermediary organisations represented in the Project were at different endsof the supply chain, such as Cousins Merino Services which is a producer facing consultancy business, and the Wine Industry Suppliers Association for industry suppliers and advocates.

Despite the diversity across the trusted intermediary participants, all expressed the same difficulties and challenges in supporting their growers, producers, clients, customers and networks with the adoption of technology. In a virtual roundtable discussion conducted with the trusted intermediaries, all indicated that their reason for participating in the Project was due to growing pressure from their producers and clients to be able to advise on specific queries around the adoption of technology. There was a general perception from trusted intermediaries that the conversation around technology application for the agricultural industry and the adoption of such technologies was only getting louder, and these organisations needed to be prepared with appropriate knowledge, advice and suggestions to support it and avoid being left behind.

Similarly, in that same workshop, the trusted intermediary representatives validated, from their own standpoint, many of the assumptions we made in commencing this Project. Overall, the group identified the following key barriers to agtech adoption from their own involvement in the sector:

1. Lack of demonstration of the value that agtech solutions can provide to farmers. The absence of a clear return on investment prospect for farmers means that they are unable to confidently adopt technology knowing that it suits their business needs.

2. High cost of technology is a barrier to smaller providers who, in the absence of a proven return on investment, can’t justify the cost.

3. Solution providers have built technologies without a clear understanding of the problems being faced on-farm, leading to poor communication of the value proposition and benefit for farmers in implementing the technology.

4. A sense of distrust exists from the farmers as to who owns the data which is being monitored and collected on farm by new technological solutions.

5. Producers are facing a lack of support in adopting technology which is being mandated in the livestock industry (such as EID tags) and making appropriate decisions on the appropriate technology for the business.

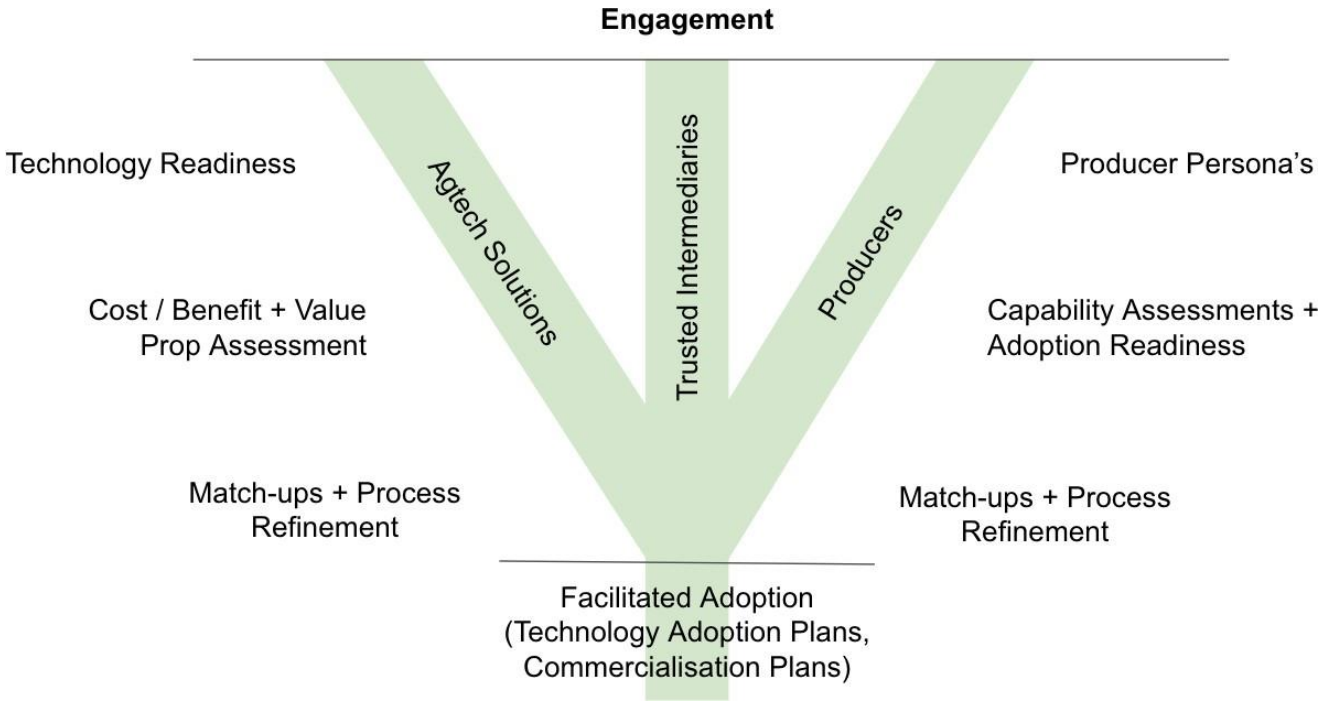
6. Lack of digital literacy from producers in utilising technology to its fullest potential and being confident to adopt technologies to support their business processes.

Additionally, the workshop discussion brought out several different perspectives from the trusted intermediaries in how their businesses and customers engage with agtech and the challenges they have faced in doing so. For example, Michelle Cousins works for Cousins Merino Services who assist merino stud operators and farmers to collect and utilise a range of data inputs obtained on-farm, including the use of EIDs for individual livestock and on-farm readers which collect and analyse that animal-specific data. She believes the key role that their business can play is in the targeted capture of data on-farm, using that data to help the producer make the most effective decisions, and working with producers to ensure they are using that technology appropriately. Michelle was concerned that many farmers are not getting the most out of the technology which is available to them and do not always understand how to implement it appropriately in their operations.

This sentiment was shared by Meg Bell who is the CEO of the MacKillop Farm Management Group who have over 350 members from predominantly mixed-farming enterprises in South Australia, and is also the Principal Consultant at Coleraine Livestock Consulting. She works closely with farmers to conduct extension activities and perform on-farm trials, and believes her role is to act as the "*filter between the tech companies and the producers*". Meg has seen that farmers are struggling with adoption as there are so many agtech products currently on the market and they are unable to ascertain which solutions are best suited to their needs, and they are unwilling to adopt the technology until they can trial it. MacKillop Farm Management Group hopes to work with producers to provide independent advice on the technology options to their members so they can find the best solution to fit their needs.

2. Designing and Iterating the Methodology

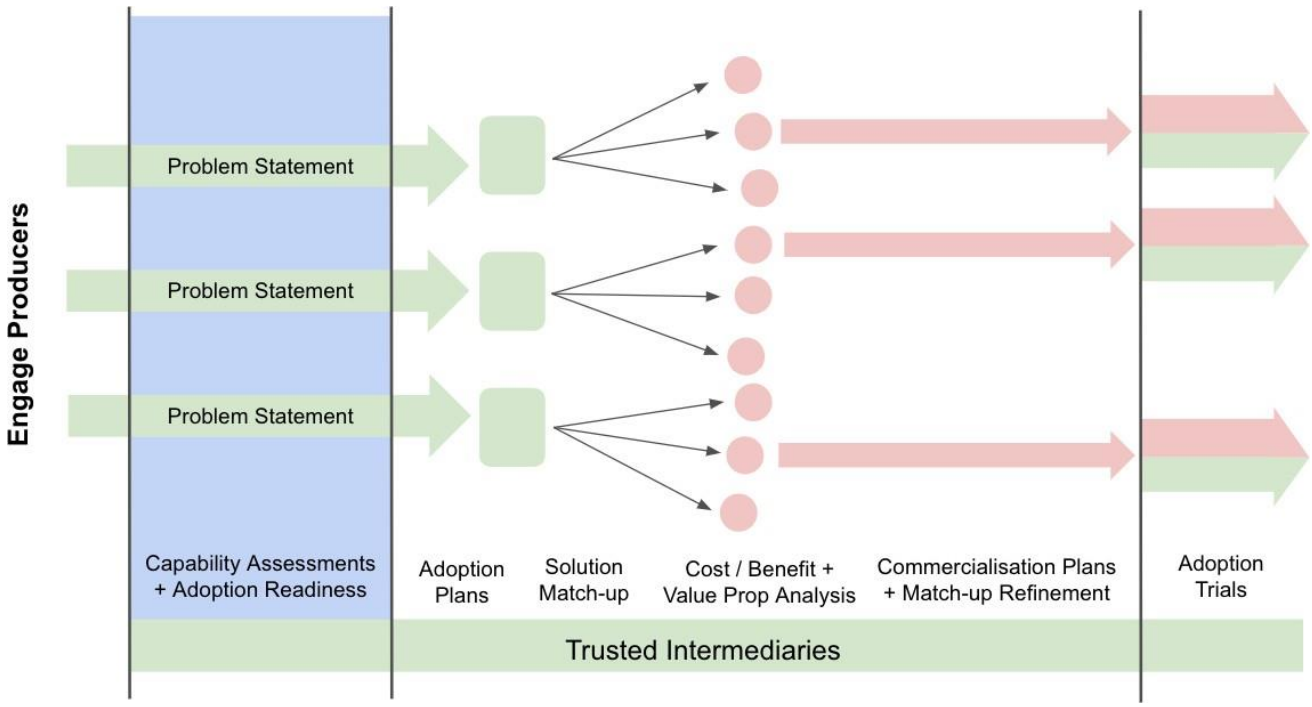
The initial intention of the Project was to, once participants were identified and qualified, match producers with agtech solution providers which can solve their problems. To achieve this, it was anticipated that the two participant groups would be worked with in isolation, addressing producer capability and understanding agtech companies value proposition, before clear connections between the producer problem and the agtech solutions would emerge allowing for a natural 'match up'. Throughout this whole process, trusted intermediaries were to learn from the conversations, understand how they can play a role in the process and be able to assist in any similar circumstances following the completion of the pilot. A visualisation of that model may look like this:



This model highlights that as producers and agtech companies progress through the Project, clear synergies arise between the producer needs and agtech solutions, allowing for an aligned adoption process facilitated by F2F and the trusted intermediaries to overcome any evident adoption barriers. Our preliminary findings from the work performed in early Milestones highlighted challenges with this model and, as such, we reflected on the most appropriate delivery of this Project and have sought to validate alternative aspects of an Adoption Framework.

Primarily, our early findings have indicated that the Project would be more successful if the entire adoption process began with the producer defining key problem statements which exist in their own farming enterprises first. If it can be understood from the outset what objective the individual producers are aiming for in the adoption journey (i.e. what specific problem they wish to overcome with technology), it provides scope for more tailored assistance in building their capability to solve that problem with technology, to address any deficiencies in connectivity or technical specifications, and to better articulate a clear set of requirements for tech solution providers to meet to satisfy their needs. It also allows a necessary touch point for Farmers2Founders or other trusted intermediaries to work with producers in actually defining what a problem statement is, specific to their farming enterprise. We haveseen ample evidence to suggest that many producers find it difficult to clearly ascertain the cause and nature of the problem they wish to solve with technology.

This model starts by viewing the entire context of the adoption process through the lens of the producer, without any consideration as to whether a solution currently exists in the market or whether those which may be commercial-ready are appropriately solving that producers' specific problem. In this approach, the agtech solution providers assessment of value proposition, cost benefit and return on investment would be assessed only once they have been approached with the problems to be solved. A visualisation of this redesigned methodology is shown below:



It is worth noting that this methodology differs slightly to that which was presented in the Milestone 3 Report for this Project. The primary difference is that rather than engaging producers in a mass cohort and slowly refining the numbers to reach a point where only those who are more deeply engaged remain, this updated methodology works individually with producers from the start (shown in light blue).

This change has been made in recognition of the challenges we faced in this Project keeping producers engaged over the course of several months. In future iterations and expansions of this model, we will be able to deliver the Framework in a much quicker and more concise fashion, meaning we can work with producers individually, from the outset and in a more bespoke manner. At any point along this methodology continuum, participants are able to drop away, however we have found that when the producers feel as if the Project is specifically tailored to their needs, they are more likely to remain and see where it leads. It also serves to resolve the complications we had in the initial outreach process as we can clearly communicate the direct outcomes for individual producers engaging in a TEKFARM project in the future.

3. Project Outcomes

3.1 The Adoption Self-Assessments

In order to better understand the level of capability of individual producers to adopt agtech, we also developed an Adoption Self-Assessment which required producers to rank their perceived adoption capability for a series of questions. A copy of the Adoption Self-Assessment framework is shown at **Appendix G**.

While this is not necessarily a reliable data source to draw out critical observations, it provided useful insight into how producers viewed themselves and their own mindset in adopting technology. Interestingly, many producers willingly offered up problem statements within the Adoption Self-Assessments which they were searching for solutions to address and adopt. These Self-Assessments proved a very useful tool in better understanding the producers personal perspectives and building their adoption profile which later became the foundations for the case studies.

A copy of the Adoption Self-Assessment responses received from producers can be found at **Appendix H**.

3.2 Technology Adoption Plans

3.2.1 Overview

For the purposes of this Milestone, the Technology Adoption Plans serve as a mechanism to support the producers in understanding how technology can be implemented within their farming business to improve their practices or resolve key challenges. Under this approach, it is necessary that producers have a clear understanding of what they are trying to resolve, and their own capability shortcomings in resolving that issue themselves.

Accordingly, we designed a producer adoption plan framework which required the producers, and trusted intermediaries as a means of considering adoption from the perspective of their networks, to step through critical considerations before reaching the point of seeking suitable solutions. These steps included:

1. Conducting a self-assessment of their adoption persona;

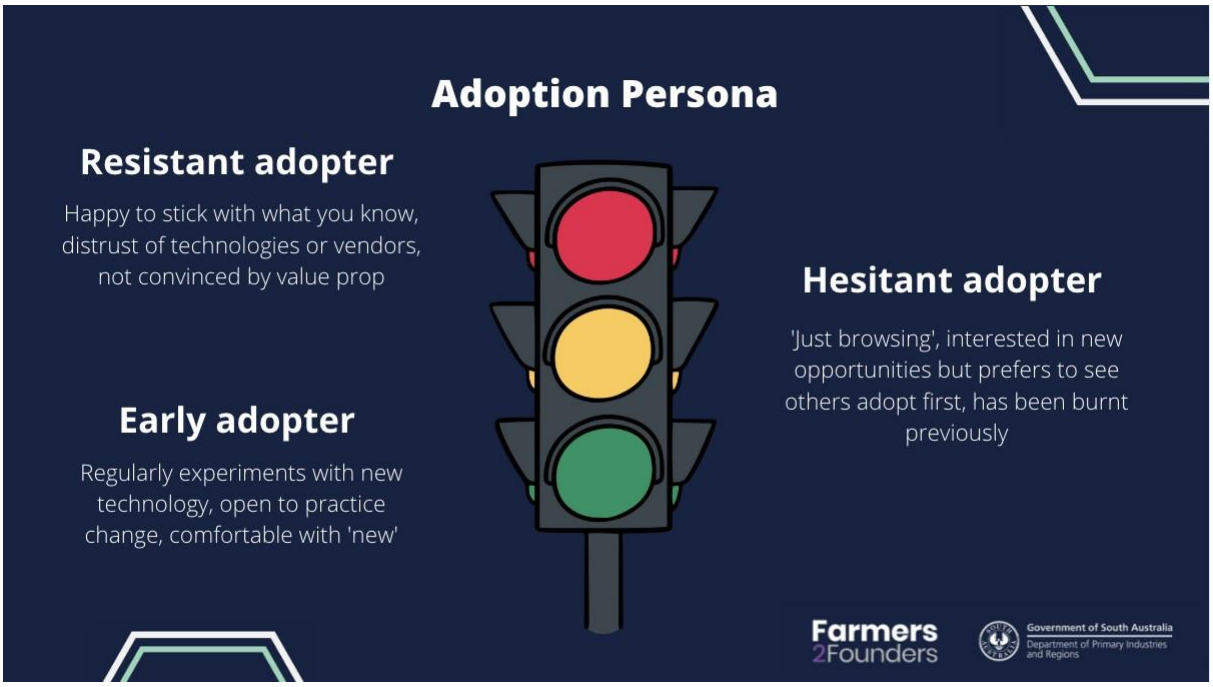
2. Defining an adoption objective (also termed a problem statement) which relates to specific needs or challenges in their farming enterprise; and

3. Scoping the functional requirements for solutions which address their adoption objective and prioritise the requirements.

A copy of the Technology Adoption Plan is included at **Appendix I**.

3.2.2 Adoption Persona

The initial consideration of the Producer Adoption Plan is to make a self-determination of their adoption persona. In Milestones 1 and 2, we have worked closely with the producers to help them qualify their adoption capabilities, mindset and willingness to adopt agtech. Using that background work, producers were asked to simply select which of the following adoption personas were most accurate to themselves:



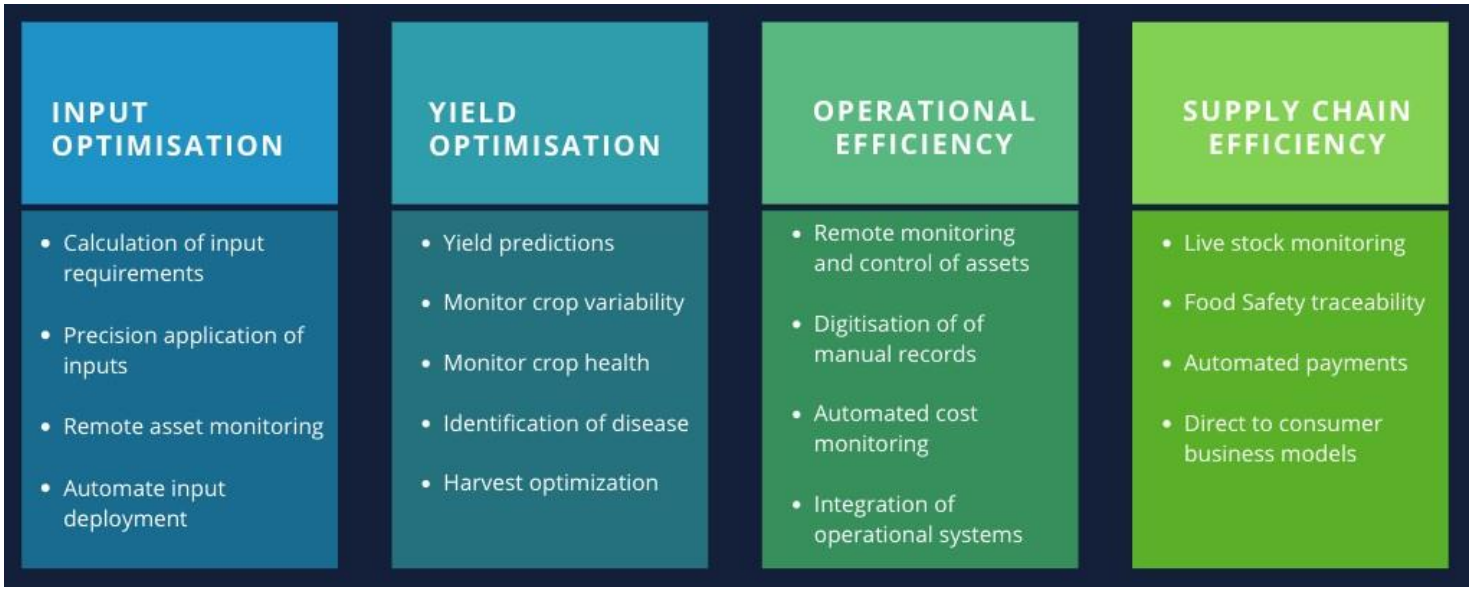
These personas are not intended to be prescriptive or definitive; they simply set the scene for the process as well as instigating the participant to consider themselves as at the centre of the adoption framework.

3.2.3 Adoption Objective

Participants are then asked to specify and scope an objective they are hoping to achieve in adopting technology. This is a crucial step in the process, as it incorporates both an acknowledgement of a distinct challenge they face within their own farming business, but also requires them to consider the true desired outcome of adoption and clarify what is suitable 'value' for a potential solution.

For example, Julian Maul, an Angus seedstock producer, was looking to improve operational efficiency in his business by adopting a herd management solution. However, in working through the 'objective' he sought, it was primarily focussed on the provision of real-time data from his livestock in a format suitable to integrate with BREEDPLAN for his seedstock business.

Examples of other adoption objectives we unpacked in the Nuriootpa workshops are shown below:



3.2.4 Functional & Non-Functional Requirements

Once it can be understood what the primary objective is for undertaking the adoption process, the participants can then define the specific requirements of that technology to be suitable to their needs. This process attempts to address the concerns with technology not being 'fit for purpose' as the producer is stipulating the very requirements they have for the solution to address their particular purpose.

These requirements are split into those which are 'functional' and those which are 'non-functional'. Functional requirements refer to those requirements which dictate how a system interacts with the user, such as the physical aspects of a device or its technical functions. Non-functional requirements are those more often associated with back-end processes or factors of influence on the individual's decision-making, such as budgets, warranties or service availability.

Once these requirements are identified, the participants are then asked to classify them based on their importance in desirability. The requirements are classified as:

- **Must** - the solution must be able to satisfy this requirement to make it fit for purpose.

- **Should** - the solution should be able to satisfy this requirement to make it a more compelling and valuable adoption prospect.

- **Could** - the solution could satisfy this requirement, perhaps not immediately but in the near term to add value to the product or service. This may not be necessary at the initial point of adoption, but the producer would like this to be considered as a future feature.

- **Won't** - the solution won't conduct a certain activity or wishes to impose certain limitations, such as limiting the sharing of private data to third parties.

An example of this process is displayed below for another red meat producer in the Project, Sam Clothier, who is part of a family-run livestock and poultry / egg operation in the Limestone Coast region. His key adoption objective was to improve operational efficiencies in the handling of his sheep flock by finding a device which could scan EID tags from a distance. A selection of his functional requirements forthis agtech device are shown below:

Requirement	Must	Should	Could	Won't	Category
1 To be a battery-powered, handheld device for use in the paddock	X				Technological
2 To scan EID tags on sheep from a distance without having to yard up flock	X				Technological
3 To share data with a third-party				X	Privacy
4 To integrate with a dashboard system to collate and display individual animal data		X			Integration

3.2.5 Outcomes

For producers who have gone through the process identified above to establish an Adoption Plan, they have personally articulated and prioritised problem statements in their farming operations, understood the functional nature of those problems, and then stipulated a range of requirements which a solution would need to be able to address or be considerate of to be suitable for adoption. These producers have also developed their own capabilities to understand problem sets and undertake solution architecture in

the adoption process, but also now have a clearly demonstrated framework for adoption of any solution which addresses their needs. This enhances their confidence to scout for potential solutions or engage in a purchase of a suitable piece of technology and ensures that any agtech product is fit for purpose. We perceive this framework to address the following key challenges in the adoption cycle:

- Understanding of problem statements by producers and the adoption objective.
- Developing capability in scouting for solutions and specifics around their implementation in their operation.
- Determining the value proposition of potential solutions relevant to the objective and requirements they have set.
- Establishing clear parameters and budgets for agtech solution providers to meet in order to be fit for purpose.
- Allowing producers to approach the adoption process from their own degree of comfort, capability and adoption readiness.

We have taken steps to validate this process with an in-person workshop run on 9th August 2022 at the PIRSA Demonstration Farm near Nuriootpa. We ran these sessions in collaboration with Michael Macolino and the PIRSA team, notably Dom Coscia from the Nuriootpa Demonstration Farm.

The workshop attracted several participants, including red meat producers, horticulture producers, representatives from the RDA Barossa, Accolade Wines and the Northern Adelaide Plains Food Cluster. This mix of producers and trusted intermediaries provided a beneficial dynamic as the workshop participants were able to share their own unique experiences with adoption and areas where there needs to be greater support offered. Each attendee completed an Adoption Plan and shared their findings across the group. The workshop received highly favorable feedback, with producers expressing

that the process was tailored to their personal needs and gave them an opportunity to think in a different manner about how they can integrate technology into their farming operations. Additionally, all trusted intermediary groups approached us at the conclusion of the workshop to express a desire to run these workshops for a collection of their own producers and networks, such was the value they believedthe Framework offered producers. We believe these responses highlight the success of the process outlined above, but also a distinct opportunity to provide these workshops for certain groups, sectors and producers beyond the conclusion of this pilot. We see this as a key opportunity for scaling the TEKFARM model.

For the producers and trusted intermediaries in the Project who were unable to attend the workshop, we have also held individual, virtual sessions with them to run through the Technology Adoption Plan process and ensure they are equipped with the same outcomes as workshop attendees.

3.3 The Match-Ups

The match-up process has, as explained, shifted from being an initial priority to being one of the last stages of this Project, and one which is ongoing, due to the adjusted methodology. Due to the inability to facilitate physical, on-farm trials of technologies relevant to the Technology Adoption Plans developed by producers, it has also been that much of the 'match-up' process today has been about ascertaining problem-solution fit and making relevant introductions. Nonetheless, based on the Technology AdoptionPlans developed by a few of the producer participants, we have facilitated the following 'match-ups' which are also assisting the agtech solution providers in developing Commercialisation Plans. These facilitations are identified in greater detail in the Case Studies of **Appendix J**.

Julian Maul x Pairtree Intelligence & Hectare

Julian Maul is a seedstock Angus producer near Lyndoch in South Australia. Our initial capability assessments and discussions with Julian showed him to be an active adopter of agtech who has implemented a range of systems within his farming enterprise. His primary focus in adopting agtech has been to collect, analyse and report on necessary genetic and live animal data for his seedstock business. However, a key barrier for him in adopting further technology for his livestock operation is that he has

specific needs in collecting data and integrating those within existing reporting systems for the Angus society's BREEDPLAN platform.

As a result of the Technology Adoption Plan developed by Julian which outlined these functional requirements for a solution provider, we have been able to clearly identify solutions which are clearly suitable and those which are not applicable. On first review of Julian's problem statements, it appears that a likely solution would be to match him with one of the many farm management software providers in the industry to digitise his records. However, the critical adoption challenge related to the integration of that software to his existing practices and Angus Society requirements. Accordingly, we are matching Julian with software integration providers who may be appropriate to develop ongoing trials with.

- **Pairtree Intelligence** is an Australian based agtech company developed by livestock producer, Hamish Munro, from Molong in NSW. The Pairtree platform markets itself as 'Integration as a Service', offering tailor-made data ingestion and visualization solutions for businesses. The Pairtree products are 'white-labeled' and custom built to integrate a range of Agtech and IOT device supplies as well as corporate agribusinesses, government agencies and other services providers. We are currently in discussions with Pairtree about developing a bespoke interface which allows a range of data collection methods and agtech solutions to feed the information into a unified system which can make it then appropriate for various reporting requirements, such as the Angus society. We are also exploring the opportunity to trial bringing together a broader network of Angus seedstock producers who face the same difficulties as Julian and trial the development of a platform for all their uses. These collaborations and trial initiatives are crucial opportunities for the expansion of this TEKFARM process.

- **Hectare** is a digital platform based in the UK which provides supply chain solutions including agricultural logistics, inventory management and trading and insights for agribusiness entities and companies around the world. The Hectare platform, like Pairtree Intelligence, provides bespoke solutions for data integrations across supply chains both on and off-farm. The key advantage of the Hectare solution is that it already has integrations with BreedPlan and other like reporting functions which mean the development of a solution would not require complete adaptation of their solution to a new market, just a tailoring of their existing solution. Again, there is a great opportunity to collate a range of Angus seedstock producers who face this challenge to develop a trial group for building a platform of this kind.

Scott Finlay x FarmSimple & SprayDiaries

Scott Finlay is an Angus stud producer from the Northern Adelaide Plains region of South Australia. Over the course of the Project, Scott identified a key problem in his operation was the capturing and recording of his chemical spray uses on-farm. As Scott has an intensive livestock and grazing operation, he is attentive to staying on top of weeds and spray activities to ensure the pasture quality is at its best. However, Scott finds it difficult to stay on top of his spray activities and record the spray actions he conducts while in the field. Scott is looking for an agtech solution which is a simple mobile app which allows him to record relevant data on spray uses while in the field, and potentially scan a barcode of a chemical drum to capture its product information to associate with the specific spray activity being conducted. We have not yet been able to identify specifically an application which allows the scanning of barcodes, however we are matching Scott with two existing agtech solutions which allow for the simple capture and management of spray records, as below:

- **FarmSimple** is an expansive farm management app with a particular focus on broadacre farming enterprises. However, their mobile application has a range of different features, including the provision of simple spray logs and the ability to capture and calculate spray requirements. Through the development of Scott's Technology Adoption Plan, there is a potential risk that FarmSimple does not quite address the functional requirements that Scott needs as the app appears to focus more on broadacre spraying calculations and recordings and not more generic farm spot-spraying. The pricing of the platform is also reflective of this, with the basic plan being free although offering limited functionality, whereas the standard plan is a reasonable expense - likely to be suitable for larger spraying operations. We are hoping that through the match-up process FarmSimple may be able to offer a solution which addresses Scott's specific requirements which requires a minor adaptation of their existing platform.

- **Spray Diaries** is a cloud-based app to manage your agrochemical spray records during the growing season. The platform has a high degree of functionality for maintaining spraying activities and record keeping, including to record products sprayed, application rates, withholding periods, diseases, operators, weather conditions, equipment used and specific blocks/locations. The interface appears easy to use and costs only a small fraction of that which FarmSimple advertises. However, much like FarmSimple, the Spray Diaries app appears more

targeted towards horticulture, viticulture and market gardeners than general farming spraying applications. The match-up process will help inform whether this solution is suitable to progress to more specific farm trails following the conclusion of this Report.

There are a series of other connections which appear suitable for other producer participants, and we are continuing to explore how these connections can be facilitated and trialed in an expanded Project.

3.4 The Role of Trusted Intermediaries

A key assumption which was brought into this Project was that 'trusted intermediaries' are critical to the adoption cycle as they represent organisations, industry bodies, consultants, advisors and agronomists who play a vital role in the decision making of producers with regard to new innovations and practices. It has often been said that trusted intermediaries are the 'gatekeepers' to the producers, such is the nature of their influence. Accordingly, to support the acceleration of adoption by producers in a manner which is relevant and suitable to their individual farming businesses, the trusted intermediaries represent a necessary facilitator.

This assumption has continuously been proved to be true throughout the duration of the Project. Trusted intermediaries are deeply familiar with their farming partners and understand the individual mindset and willingness to take on new initiatives or innovations. They are best placed to support producers to engage in an adoption process but also to be a point of continued support beyond the adoption decision or completion of a Project of this kind. They have an enduring presence within the farming businesses they support and offer an authentication of the opportunities and needs to seek agtech solutions in the market.

As such, the role of the trusted intermediaries has been defined by two key realities. The first of those is that the intermediaries themselves are wanting to enhance their own capabilities with regard to agtech products and the adoption process so they can best support and advise their farming connections. The second reality is that those organisations represent a logical vehicle to which the TEKFARM methodology can be scaled and continue to offer impact for the red meat sector.

"*From a livestock consulting perspective, the more knowledge I can have to then advise a client or other group members on specific bits of tech that will be really useful to them in their enterprises, the better off we will be of help to people.*"

Meg Bell, Coleraine Livestock Consulting

Through this Project, we have identified the opportunity for the TEKFARM model to become a tool to which trusted intermediaries can be upskilled in the process of supporting producers to adopt technology and then to deliver that value onto their producer networks. The role of the trusted intermediary, therefore, becomes one of a conduit which sits as a key advisor and supporter for the producer, yet one which can also actively assess and participate in the agtech market and continue to identify new opportunities which benefit their producers.

4. Case Studies

As shown at **Appendix J**, we have developed a series of case studies, primarily of producers, which map both their progressions through the TEKFARM SA process as well as the effectiveness of the Red Meat Accelerated Adoption Framework.

Project Reflections

The TEKFARM SA project has been a highly informative process, which has evolved significantly over the duration of the project and improved by rapid iteration.

<u>The Challenges & Learnings</u>

As has been acknowledged, there were several challenges in the early stages of the Project with the engagement of producers and ensuring there was a clear understanding of the potential outcomes of the Project. The Project Milestone dates were extended to allow more time to perform outreach and obtain the required number of participants so the Project was worthwhile. It seems unusual that it would be difficult to engage participants in a Project of this kind where there is much conversation and interest in

new and emerging technologies and their application on-farm within the industry. On reflection, there are some evident factors which played into why this process might have been difficult and some key learnings for any future projects:

1. As aforementioned, the Project was open to all applicants, however had a clear appeal to the more innovative producers and early adopters. Ultimately, due to the oversaturation of agtech related opportunities and workshops held across the industry, many producers who were interested in the Project were simply fatigued by having participated many times before or did not have any additional spare time because they were already engaged in other similar projects.

2. The Project ended up morphing into a Framework which delivers a tailored set of outcomes for an individual producer in identifying technology solutions relevant to the producer's needs. However, this outcome was not clearly articulated at the outset, leading many producers to feel unsure of what they would get out of participating in the Project.

3. Many producers who initially appeared interested and, in some circumstances, lodged EOI applications, didn't actually know what they were wanting to achieve. Many producers struggled with the concept of articulating a 'problem statement' and working towards building their capability. Many responses we received to direct outreach conversations were that the producers were interested in technology but were simply just wanting to be told what would be good for them and move on. There was a suggestion from some of these conversations that some producers aren't willing to 'work' to adopt, just need something off the shelf.

4. For the face-to-face workshop sessions, we found it difficult to lock down numbers for producers and trusted intermediaries in advance. As is well known, many producers are short on time and find it difficult to commit to a session or workshop that is more than a week away. This made it hard to sure up attendance numbers for the workshops and we found that some who said they couldn't make it were able to attend, and those who promised to be there were absent. In future, workshop participation would be benefited from having either a more targeted approachwhere the participants are pooled together through trusted intermediaries (such as the Northern Adelaide Plains Food Cluster) or are conducted on a one-on-one basis either via Zoom

or in-person.

5. In general, delivering a 'program-style' pilot where participants are required to remain engaged over several months is very challenging. One of the key learnings from this Project is that the Agtech Adoption Framework needs to be worked with participants and delivered in a series of personal, more targeted sessions with faster turnaround times. For example, a select group of red meat producers from a certain region who build their capability and develop technology adoption plans across three workshops within as many weeks. This is a shorter period of engagement with the repeated sessions requiring a higher degree of accountability. Naturally, the more drawn out timeframes for this pilot has been beneficial in allowing us to experiment with the best delivery methods for the Framework, however it's a key learning for future expansion of the Project.

<u>The Successes & Learnings</u>

Despite the challenges, there have been some very significant successes of this pilot Project and has well achieved the overriding objective of developing and refining a Red Meat Accelerated Adoption Framework. As the Project has progressed through the various stages, the design process has been flexible enough to shift and respond to responses and feedback of participants and identify the areas with greater opportunity. Accordingly, many of the challenges articulated above were limited to the early stages of the Project as we were able to respond to these difficulties and reassess as we went. Some of the critical successes include:

1. The overriding assumption of this Pilot was that barriers to adoption existed <u>both</u> for producers by lacking the appropriate knowledge and skills to identify and adopt tech solutions, but also agtech solution providers in struggling to clearly articulate the value position and benefit of their technologies to producers. This assumption was proved undeniably true and the driving factor behind adjusting the Project methodology and nature of the Framework was responding to this reality so that the adoption process was viewed entirely through a producer lens.

2. All of the barriers and challenges with agtech adoption identified in the SA Agtech Strategic Plan were validated by producers and trusted intermediaries. While some of these barriers were more pronounced than others, it is apparent that there are commonalities in the experiences of

all three target groups in approaching adoption which highlighted these barriers in practice.

3. The workshop held in Nuriootpa was a resounding success where attendee's responded with a high degree of satisfaction and interest in ongoing opportunities. While this was only a small scale pilot, the level of interest from participants justifies the need to deliver more of these workshops and continue to scale the Project.

4. There is a general feeling from producers that they are not adequately supported in the growing agtech space and feeling somewhat overlooked. Beef producer Tom Hampton ended up building his own IOT and LoRAWAN network of sensors on his farm because he was so frustrated with existing agtech solutions on the market and felt as if they weren't addressing his needs. All of the trusted intermediaries reported that they were getting increasing pressure from producers to offer advice and suggestions with regard to agtech adoption. This is indicative of the growing need for trusted intermediaries to be able to upskill themselves in this area, but also an acknowledgement that the approach taken in this Project is addressing a genuine need in the industry and supporting producers in doing so.

5. There have also been some unexpected successes which have come as a result of the refined approach taken to address adoption challenges. Most notably, by giving the producers the opportunity to define their own adoption objectives and unpack problem statements in their farming business, many producers had identified areas where no current solution yet exists. This becomes an opportunity for open innovation to solve those problems, and we are currently collating problem statements from producers in order to expose opportunities for new technology solutions to be built.

Ultimately, the Project has successfully developed a model framework for accelerating the adoption of agtech solutions for red meat producers and presents a fantastic foundation for which to scale and expand the Project.

Project Scaling and Future Scope

As has been described in this Final Report, many of the outcomes and findings throughout the Project are yet to be validated on a broader scale. This pilot only provided enough scope to allow for the testing and development of a preliminary model and, as has been relayed in previous Milestone reports, there was not the time or funding available in the current Project to complete the adoption cycle with on-farmtrials. With that said, the outcomes achieved within the bounds of the Project deliverables justifies the need to continue to expand this Project and to test the Red Meat Accelerated Adoption Framework on abroader scale. Given the findings in this Report, we have considered the following opportunities are available in the short-term to scale this Project and expand its current scope.

a. <u>On-Farm Trials</u>

This Project has demonstrated the need to view agtech adoption through the lens of the producer and work with producers in an individualised manner which allows agtech to be adopted to address a stated outcome. The Project has shown that by working with producers to define a series of problem statements, they can also be assisted to address any evident capability gaps and to better understand the requirements for adopting technology. However, we are yet to see that this early, personal work with producers results in the desired outcome of the adoption of a solution on their farm which is fit for purpose and which addresses the very problem statement they have sought to solve.

It is a necessary final step that is required to validate the Frameworks' effectiveness and to showcase to other stakeholders how adoption barriers can be overcome. It is our belief that in order to justify the actions taken under this pilot, there must be an opportunity for the producer to actually trial that technology and for there to be a legitmised relationship established between the producer problem-holder and the agtech solution-provider. There appears an evident risk that if there was to be no follow-on trials, that those engaged in this Project would not heed the lessons learnt or the capabilities improved as they would see no result.

Accordingly, our recommendation is to continue to expand the scope of this Project and validate the Red Meat Accelerated Adoption Framework by establishing on-farm trials. These trials would take place with select participants from the current pilot who have been deeply engaged throughout and appear most

receptive to trialing technology. By expanding the scope in this manner, it would also offer more incentive for existing participants to remain within the program and seek solutions in the market which they wish to trial. Additionally, the practical trialing of solutions offers a key benefit for the agtech companies who receive direct testing in the field with a feedback loop from the customer. This trialing process allows the producer and the agtech companies to collaborate in ensuring any potential solution is appropriate and functional for the individual needs. We see this as a highly beneficial opportunity for MDC to assist and participate in outcome-driven trials and play a role in the development of a process which resolves adoption challenges where many have been unsuccessful before.

b. Trusted Intermediaries

As evidenced above, the Project revealed a critical opportunity within the agtech adoption process to support trusted intermediaries to become delivery agents of the Red Meat Accelerated Adoption Framework. Many trusted intermediaries expressed a sense of concern that they were not able to appropriately service or support their customers, growers or networks with agtech related advice. The most common reason for participating in this Project from these organisations was to build their own knowledge and skills of the agtech adoption process so they can better advise their farming partners.

Additionally, the role which trusted intermediaries wish to play is as the conduit between agtech solutions in the market and farmers looking to understand what technology is most suitable for their needs. This more defined role for trusted intermediaries in the growing agritech sector requires a degree of upskilling to ensure these organisations are equipped with capability to respond to the needs of the farmers.

Accordingly, there appears to be an opportunity for the Project to be scaled by establishing partnerships with trusted intermediaries to deliver the TEKFARM model on a bespoke basis to the clients, customers, farmers and networks of the trusted intermediaries themselves. This allows for both the trusted intermediaries and their producers to build capability in the adoption process. As has been mentioned, F2F were already approached by two trusted intermediaries in the Nuriootpa workshop to run a process of this kind. However, additional funding would be required to ensure that these workshops could be delivered in a customised manner relevant to the trusted intermediaries, their farmers and the needs of the red meat sector.

c. State Expansion

Finally, given this Project has been limited, to date, to South Australia there is a natural opportunity to scale the TEKFARM model to other States and red meat producing regions. While it has been acknowledged the challenges this process has entailed, the learnings gained from this pilot would ensure any expansion of this Project would be delivered in a more efficient, targeted and effective manner leveraging the lessons from TEKFARM SA. This provides an opportunity to expand the Project by identifying key regions or priority areas where a more rapid iteration of this model could be developed, such as for red meat producers in New South Wales or, on a broader scale, for Northern Australia. However, for any expansion of this kind, it would need to be considered whether there is scope and funding to incorporate the on-farm adoption trials within that pathway to complete the adoption process mentioned above.

Appendices

- **Appendix A** = Outreach Lists (all participants)
- **Appendix B** = Agtech EOI Lists
- **Appendix C** = Trusted Intermediary Lists
- **Appendix D** = Producer EOI Lists
- **Appendix E** = *CONFIDENTIAL*
- **Appendix F** = Producer Statistics and Graphics
- **Appendix G** = Adoption Self-Assessment Framework
- **Appendix H** = *CONFIDENTIAL*
- **Appendix I** = Technology Adoption Plans
- **Appendix J** - Case Studies

Appendix A - Outreach Lists

Agtech Solution Providers

	Company	Technology	Location	Sector
1	N-Drip	Micro drip irrigation	QLD	Cross-sector
2	Rapid Aim	Fruit Fly detection	QLD	Horticulture
3	4 Zero Technologies	AI powered supply chain optimisation	VIC	Cross-sector
4	ADF Milking	Fight mastitis and watch the health of yourherd improve with ADF Milking	QLD	Dairy
5	Agtuary	Farm data and mapping	VIC	Cross-sector
6	Cibo Labs	Pasture Mapping	QLD	Livestock
7	Data Farming	Low cost precision agriculture software	QLD	Broadacre
8	Digital Content Analysis Technology (DCAT)	Remote monitoring combining multispectral satellite imagery and agronomic expertise	SA	Cross Sector
9	eLynx Stockmate	Livestock management app	QLD	Livestock
10	FarmDeck	Farm management software	NSW	Cross-sector/Livestock
11	Farmo	Water and property monitoring sensors	VIC	Cross-sector/Livestock
12	FieldIn	Farm management software	VIC	Cross Sector
13	Goanna Ag	IOT and monitoring sensors	NSW	Cross-sector
14	GroWave	Herbicide-free weed management	NSW	Horticulture
15	Hone	Soil carbon and grain testing devices	NSW	Grains

16	Liquid Systems	Precise liquid delivery for seeders and sprayers	SA	Broadacre
17	LX	Water and property monitoring sensors	NSW	Cross-sector/Livestock
18	Mobble	Livestock management platform	NSW	Livestock
19	MobiShear Australia	Cordless shears & hoof trimmers	SA	Livestock
20	Ripe Robotics	Orchard robots	VIC	Horticulture
21	Swarm Farm Robotics	Autonomous tractors and machinery	QLD	Broadacre
22	Taglog Australia	Workforce management for horticulture		Viticulture andHorticulture
23	Tele Sense	Grain monitoring and storage management		Grain
24	Tie Up Farming	End-to-end operations platform for the horticulture industry	VIC	Horticulture
25	Vence	Virtual fencing for cattle	QLD	Livestock
26	Yabby Sensors	Remote monitoring	QLD	Cross-sector
27	Zoom Agri	Quality assessment of agricultural commodities via AI, Computer Vision andIoT	WA	Grains
28	Farmbot Australia	Remote monitoring	NSW	Livestock
29	ZetiFi	Rural connectivity solutions	NSW	Cross sector
30	Catchlog	E-reporting, analysis and management of commercial fishing vessels	QLD	Aquaculture

31	Deckhand	Electronic logbook for fishermen		Aquaculture
32	Tacklebox	Reporting and information tool for datacollection and angler-science		Aquaculture
33	Smart Oysters	Aquaculture farm management platform		Aquaculture
34	PADARDIS	Algorithm crop model for water saving	VIC	Viticulture
35	Smart Paddock	Farm management tool	QLD	Livestock
36	Agriwebb	Livestock management software	NSW	Livestock
37	Agworld	Farm management software	WA	Cross-Sector
38	Airborne Logic	Drone Imagery and data processing	SA	Cross Sector
39	Animal EyeQ	Livestock monitoring	QLD	Livestock
40	Athena Irrigation	Irrigation scheduling	SA	Cross Sector
41	Bit Wise Agronomy	Precise analytics for berries and grapes	TAS	Viticulture
42	CERES	Fixed-wing based imagery incl. NDVI		Cross Sector
43	CropX	Soil moisture probe		Viticulture andHorticulture
44	D3Ag	In-crop and weather data	SA	Viticulture andHorticulture
45	Deep Planet	AI and satellite data powered precision viticulture	SA	Viticulture
46	Delta Drone	Drones as-a-service for enterprises	SA	Cross Sector

47	DIT AgTech	Animal supplements and monitoring	QLD	Livestock
48	Farm Map 4D	Farm mapping solution	SA	Cross-sector
49	FarmLab	Soil Carbon monitoring		Cross Sector
50	Green Brain	Irrigation and water management for vineyards	SA	Viticulture andHorticulture
51	MEQ Probe	Meat quality control	SA	Livestock
52	OnSide	Farm management / contractor check in	SA	Viticulture andHorticulture
53	Safe Ag Systems	Workplace health and safety platform		Cross Sector
54	Seed Terminator	Mechanical Weed seed management	SA	Broadacre
55	Sentek	Soil moisture probe, capacitance type		Cross Sector
56	SWAN Systems	Smart irrigation management software	SA	Horticulture
57	Viti Visor	Open-source information, prediction and advisory platform for viticulture	SA	Viticulture
58	Ziltek	Hand-held device for rapid measurement ofsoils		Cross Sector
59	Rapid Aim		QLD	Horticulture
60	Pair Tree	Farm data management		Cross Sector

Trusted Intermediaries

	Organisation	Type	Sector
1	Ag Bureau of South Australia	Industry Association	Cross Sector
2	Ag Consulting Co	Ag Services	Cross Sector
3	Ag Ex Alliance	Industry Association	Broadacre
4	Agreed Decision Ag	Ag Services	Agronomy
5	Agri KnowHow	Ag Services	Broadacre
6	AgriBusiness Australia (SA)	Industry association	Cross Sector
7	Alpha Group Consulting	Ag Services	Cross Sector
8	AME Group	Ag Services	Horticulture /Viticulture
9	Aus Agribusiness	AgServices	Grains
10	Australian Wine Research Institute (AWRI)	Research Institute	Viticulture
11	Australian Women in Agriculture SA	Advocacy group	Industry association
12	AusVeg SA	Industry association	Horticulture
13	Barossa Grape & Wine Association	Industry Association	Viticulture
14	Barossa Improved Grazing Group		
15	Brentnalls Agribusiness	Finance & Accountancy	Cross Sector
16	Citrus SA	Industry Association	Horticulture
17	Concierge Genetics	Ag Services	Livestock / Broadacre
18	Cousins Merino Services	SME Producer	Red Meat - Sheep

19	Elders	Industry association	Cross sector
20	Elders / Thomas Elders Consulting	Ag Services	Broadacre
21	Grain Central	Industry association	Grains
22	Grain Producers SA	Industry association	Grain
23	Grain Producers SA	Industry association	Grains
24	Livestock SA	Industry Association	Livestock
25	Livestock SA - Northern Region	Industry Association	Livestock
26	Livestock SA - South Region	Industry Association	Livestock
27	MacKillop Farm Management Group	Industry Association	Broadacre / Livestock
28	Northern Adelaide Food Cluster	Industry Association	Cross Sector
29	Nutrien Ag Solutions SA	Ag Services	Cross Sector
30	Platinum Ag Services	Ag Services	Broadacre / Livestock
31	Primary Producers SA	Industry association	Livestock
32	RDA - Adelaide Metro	Regional Development Group	Cross Sector
33	RDA - Adelaide Metro	Regional Development Group	Cross Sector
34	RDA - Barossa	Regional Development Group	Industry association
35	RDA - Far North	Regional Development Group	Cross Sector
36	RDA - Limestone Coast	Regional Development Group	Cross Sector
37	RDA - Murraylands & Riverland	Regional Development Group	

38	RDA - Yorke & Mid-North	Regional Development Group	Cross Sector
39	RDA Whyalla & Eyre Peninsula	Regional Development Group	Cross Sector
40	Riverland Wine	Corporate	Viticulture
41	SA Young Guns	Industry association	Viticulture
42	Sheep Connect	Industry Association	Livestock
43	South Australian Dairy Farmers Association	Industry Association	Dairy
44	University of South Australia Innovation and Collaboration Centre Eyre Peninsula Agricultural Research Foundation	Research Institute	Cross Sector
45	University of South Australia Innovation and Collaboration Centre Eyre Peninsula Agricultural Research Foundation	Research Institute	Cross Sector
46	Vickery Brothers	Ag Services	Agronomy
47	Wine Australia	Industry Association	Viticulture
48	Wine Grape Council SA	Industry Association	Viticulture
49	Wine Industry Suppliers Association (WISA)	Industry association	Viticulture

Producers

	Organisation	Type	Sector
1	Accolade Wines	SME Producer	Viticulture
2	Anna Creek Station	SME Producer	Livestock
3	Ardene Australian Whites	SME Producer	Red Meat
4	Ashmore White Suffolk Stud	SME Producer	Livestock - Red Meat
5	Ashton Valley Fresh	SME Producer	Horticulture
6	Avonlea	SME Producer	Livestock - Red Meat
7	Barooka	SME Producer	Red Meat - Sheep
8	Barossa Angus	SME Producer	Red Meat / Stud
9	Barossa Improved Grazing Group	SME Producer	Red Meat - Sheep
10	Beston foods	Corporate	Livestock / Dairy
11	Black Sheep Produce	SME Producer	Horticulture
12	Bon Chevon	SME Produce	Red Meat - Goat
13	BoonARKM	SME Producer	Red Meat / Stud
14	Bottlesford Murray Greys & Angus	SME Producer	Red Meat / Stud
15	Bremco Pastoral	SME Producer	Livestock
16	Bungaree Station	SME Producer	Red Meat / Stud
17	Cadgee Downs Belted Galloways	SME Producer	Red Meat / Stud
18	Carnevore	SME Producer	Red Meat - Beef
19	Carrsview Murray Grey	SME Producer	Red Meat / Stud
20	Chamel Field	SME Producer	Livestock - Red Meat

21	Collinsville	SME Producer	Livestock
22	Costa Brothers	SME Producer	Horticulture(Almonds)
23	Cousins Merino Services	SME Producer	Red Meat - Sheep
24	Curlew Valley Suffolks	SME Producer	Red Meat / Stud
25	Duxton Farms	Corporate	Broadacre / Wine
26	Dyson Wines	SME Producer	Viticulture
27	Granite Ridge Angus Stud	SME Producer	Red Meat - Stud
28	Heisker Wagyu	SME Producer	Livestock
29	Holy Grayl Stud	SME Producer	Livestock - Red Meat
30	Hyther & Yon	SME Producer	Viticulture
31	Illoura Rams	SME Producer	Red Meat / Stud
32	Inverbrackie Border Leicester Stud	SME Producer	Red Meat / Stud
33	Jolley Farms	SME Producer	Broadacre
34	Kamama Creek Stud	SME Producer	Livestock - Red Meat
35	Kingston Estate Wines	SME Producer	Viticulture
36	Korinya Farm Gate	SME Producer	Red Meat - Beef
37	LaRaJaKa	SME Producer	Livestock - Red Meat
38	LeFleurieu Wines	SME Producer	Viticulture
39	Lowan Park Produce	SME Producer	Chicken
40	Lyndcroft Stud	SME Producer	Livestock - Red Meat
41	Malleetech Poll Merino	SME Producer	Livestock - Red Meat
42	Marrone Fresh	SME Producer	Horticulture (Veg)
43	Mayura Station	SME Producer	Livestock

44	Merrett Contracting	SME Producer	Broadacre
45	Moolyella	SME Producer	Livestock - Red Meat
46	Mutooroo Pastoral Company	Cooperative	Livestock
47	Nalpa Pastoral Co.	SME Producer	Livestock
48	Nomad Farms	SME Producer	Red Meat - Beef
49	Pangkarra	SME Producer	Livestock / Broadacre
50	Paris Creek Beef	SME Producer	Red Meat - Beef
51	Paroo Pastoral	Cooperative	Livestock - Red Meat
52	Pinnaroo Farms	SME Producer	Grains
53	Pirramimma Wines	SME Producer	Viticulture
54	Pitchford Farms	SME Producer	Red Meat
55	Princess Royal Stations	SME Producer	Livestock
56	Pundi Produce	SME Producer	Native foods
57	Rosleigh Angus	SME Producer	Red Meat - Stud
58	Saltbush Livestock	SME Producer	Livestock - Red Meat
59	Savannah Farm	SME Producer	Livestock
60	Scholz Estate	SME Producer	Viticulture
61	Schultz Livestock	SME Producer	Livestock
62	Skara Brae Stud	SME Producer	Livestock - Red Meat
63	Spring Creek Wiltipoll Stud	SME Producer	Red Meat / Stud
64	St Vincent	SME Producer	Livestock
65	Taralee Orchards	SME Producer	Horticulture
66	Thornby	SME Producer	Livestock
67	Todmorden Cattle Co	Cooperative	Livestock - Red Meat

68	Top Note Wines	SME Producer	Viticulture
69	Whispering Waters Stud	SME Producer	Livestock - Red Meat
70	Woolenook Fruits	SME Producer	Horticulture
71	Wunderbar Lamb	SME Producer	Livestock / Hay
72	Yarralinka Livestock Co	SME Producer	Red Meat - Beef
73	Zerella Fresh	SME Producer	Horticulture (Veg)
74		SME Producer	Horticulture
75		SME Producer	Horticulture
76		SME Producer	Red Meat - Sheep
77		SME Producer	Red Meat - Sheep
78		SME Producer	Red Meat - Sheep
79		SME Producer	Red Meat - Sheep

Appendix B - Agtech EOI Lists

	Company	Description
1	AirBorne Logic	Cutting edge analysis from airborne surveys, providing detailed analysis of crops and surface, and vegetation conditions.
2	AgriWebb	Empowers producers and supply chain innovators to visualise, connect, and leverage unique business insights to inform a more profitable, efficient, and sustainable future.
3	Athena Irrigation	A field-based sensor and a cloud-based dashboard which provide a recommendation to the grower on irrigation
4	Agworld	Digital platform which allows users to collect data at every level of their operation and share this data with anyone that matters to them (agronomists, fertiliser supplies etc).
5	Beston Technologies	OZIRIS platform delivers track, trace, verification solutions for food and beverage products, across their domestic and global supply chains.
6	Concierge Genetics	Accelerating genetic gain for breeding within primary industries.
7	Grower Support	Compliance management dashboard and farm worker app to create and manage records digitally.
8	Onside	A digital check-in solution that simplifies and strengthens operations, safety and biosecurity for farms and people visiting farms.

9	D3Ag	Field data with one simple and accurate weather station, synthesising weather and crop information all in one place.
10	Databaum	Disease management tools for grapevines using field sensors (air sensor, soil sensor, rain sensor and leaf sensor).
11	Deep Planet	Digital monitoring of vine health
12	DIT AgTech	A remote technology platform that delivers nutrition to livestock via their water system.
13	Pardardis	Real-time vine sensing technology plus precision crop model that reduces net water use and increases wine quality.
14	FarmLab	Environmental Measurement Infrastructure to help consultants measure, manage and analyse their plant, soil and water data.
15	Farmo	Remote monitoring of water, soil, weather, gates etc
16	IntrepreData	Analytics database allowing digital traceability and giving participating organisations a unique elemental 'fingerprint' for each of their sites
17	Metos ANZ Pty Ltd	Weather stations and associated sensing, weather forecasting, disease modelling, insect cameras, crop cameras, active trackers, object trackers, animal health sensors.
18	Mobble	Livestock farm management software.
19	Optomni	A multi-vendor trading & supply chain platform
20	FarmDeck	Using IOT technologies to bring together information in one screen.
21	Pairtree Intelligence	Integration as a Service (IaaS) allowing agtech and advisors to scale their businesses through easier and consistent integrations of various agtech solutions.

22	Ripe Robotics	Autonomous robotic systems to harvest fruit, particularly apples, oranges and stone fruit.
23	Rural Network	IoT technology from network installations and management to sensor selection, design, manufacture and analytics.
24	Seed Terminator	A simple attachment to the combine harvester that terminates weed seeds before they become weeds.
25	Tie Up Farming	Cloud-based, end-to-end farm management platform for labour intensive, horticultural operations.
26	Vomax Instrumentation	Measuring moisture to prevent spoilage in export hay and spontaneous combustion in haystacks.
27	Yabby Sensors	Water monitoring and control solutions for tank levels sensors, rainfall, flow, remote pump controls, weather stations, soil moisture probes, trackers and cameras.

Appendix C - Trusted Intermediaries EOI List

	Organisation	Type of Service	Sector
1	Northern Adelaide Food Cluster	Regional Development Group	Cross Sector
2	Grain Producers SA	Industry Association	Grains
3	Australian Women in Agriculture SA	Advocacy Group	Cross Sector
4	RDA - Barossa	Regional Development Group	Cross Sector
5	Sheep Connect	Industry Association	Livestock
6	Primary Producers SA	Industry Association	Cross Sector
7	Wine Industry Suppliers Association (WISA)	Industry Association	Viticulture
8	Ag Bureau of South Australia	Industry Association	Cross Sector
9	Australian Wine Research Institute	Research Institute	Viticulture
10	MacKillop Farm Management Group	Ag Services	Cross Sector
11	AgEx Alliance	Industry Association	Broadacre
12	LivestockSA	Industry Association	Livestock
13	Barossa Improved Grazing Group	Research Institute	Livestock
14	Cousins Merino Services	Ag Services	Livestock
15	Accolade Wines	Industry Association	Viticulture

Appendix D - Producer EOI Lists

	Region	Sector	Size / scale
1	Fleurieu Peninsula	Livestock	1500 ha sheep and cattle property
2	Barossa and Claire Valley	Viticulture; Grains; Wool; Livestock	Join 3500 ewes per year. 2200 hectares cropping, 30 hectares of vineyard
3	Barossa and Claire Valley	Viticulture; Horticulture	N/A
4	Limestone Coast	Livestock	400 cow / calf units
5	Mount Torrens	Livestock	700 stud ewes Australian Whites
6	Riverland	Horticulture	33 acre property with high-density plantings
7	Lakes & Coorong	Grains; Livestock; Wool	546 hectares
8	Lakes and Coorong	Livestock	400 breeders down at Meningie - direct to consumer beef product.
9	Booleroo Centre	Grains; Livestock	1200 Hectares - Wheat, barley, vetch, peas, sheep, wool, lambs
10	Port Augusta	Livestock	400 stud ewes and 8000 commercial ewes. Dorpers
11	Adelaide Hills	Horticulture; Other	7 farming properties across the Adelaide hills, packing 20,000 bins apples a year. Producing 4.2m litres of bulk fruit juice a year

12	Barossa and Claire Valley	Livestock	35 Angus breeders - bull production
13	Eyre Peninsula	Livestock, Grains	2000ha cropping, 3200 hectares altogether. 2 / 3 cropping, 1 / 3 stock. Poll merino stud and commercial flock of white suffolk lambs.
14	Limestone Coast	Grains; Livestock; Wool	2000 breeding ewes and around 2000 acres of grain harvest
15	Lakes and Coorong	Livestock, Grains	Mixed farming operation - running 150 stud cows and crop 2000 hectares.
16	Northern Adelaide Plains	Horticulture	2 hectares
17	Limestone Coast	Poultry and eggs; Livestock	3,500 breeding ewes, 8,500 hens and cattle
18	Northern Adelaide Plains, Barossa and Claire Valley	Livestock	Stud of 500 / 600 breeders
19	Adelaide Hills	Livestock	30 breeders, producing 30 weaners a year, shipped to a few lease properties to grow out and sell as heifers or steers for butcher.
20	Adelaide Hills, Barossa and Claire Valley, Riverland, Lakes and Coorong, Limestone Coast	Viticulture	Manages 300ha of wine grapes for 8 different customers
21	Northern Adelaide Plains	Horticulture	6 Ha site. 4 Ha undercover cropping - capsicum grower, in soil cropping

Appendix F - Producer Statistics

Sector	Participants
Horticulture	5
Red Meat & Livestock	15
Wool	3
Grains	6
Poultry and Chicken	1
Viticulture	3

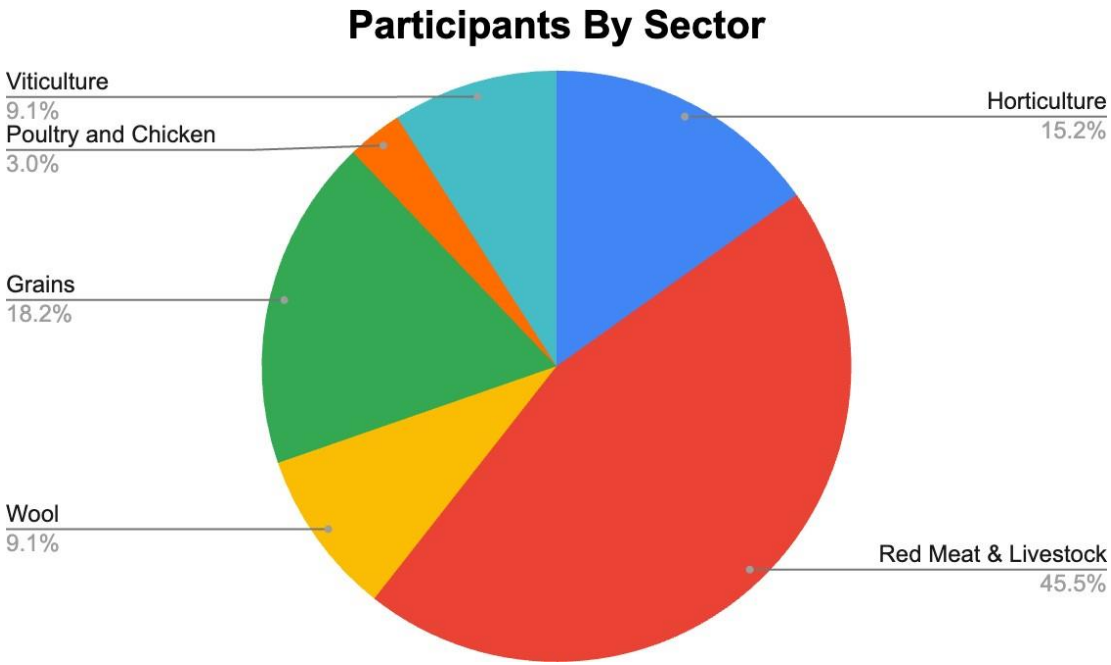


Figure 1.1 and 1.2 - Producer Participants by Sector

Adoption Problems	Participants	Percentage
Connectivity	12	55%
Cost	13	60%
Durability	3	14%
Integration of Solutions	10	45%
Sourcing Solutions	10	45%
Support & Training	5	23%
Unclear Value Proposition	11	50%

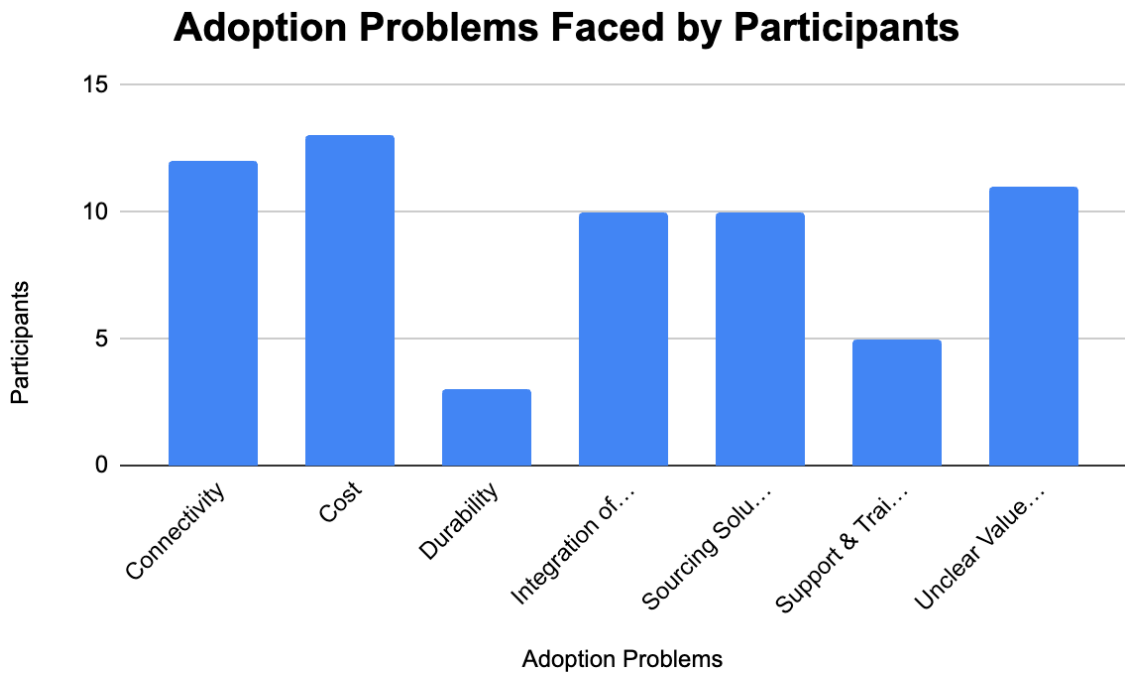


Figure 2.1 and 2.2 - Adoption Problems Previously Faced by Producer Participants

Tech Interest	Participants	Percentage
Animal Monitoring	12	55%
Animal Nutrition & Health	11	50%
Automated Harvesting / Robotics	6	27%
Connectivity	8	36%
Data Processing & Visualisation	11	50%
Farm Management Software	14	67%
In-field Sensing & Monitoring	16	73%
Irrigation Management	7	32%
Marketplace / E-Commerce	3	14%
Pest & Disease Management	8	36%
Precision Input Application	8	36%
Supply Chain & Logistics	7	32%
Weed Management	8	36%

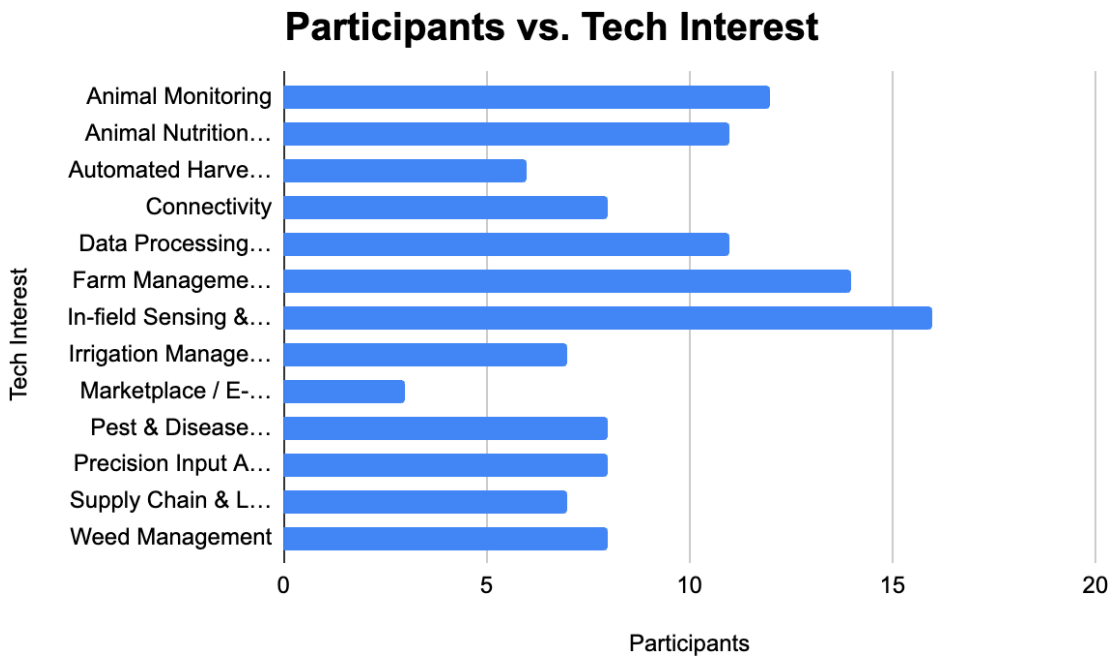


Figure 3.1 and 3.2 - Types of Technologies Sought by Producers

Successful tech	Participants
Animal Monitoring	4
Animal Nutrition & Health	2
Automated Harvesting / Robotics	-
Connectivity	2
Data Processing & Visualisation	2
Farm Management Software	8
In-field Sensing & Monitoring	10
Irrigation Management	9
Marketplace / E-Commerce	3
Pest & Disease Management	1
Precision Input Application	4
Supply Chain & Logistics	1
Weed Management	-

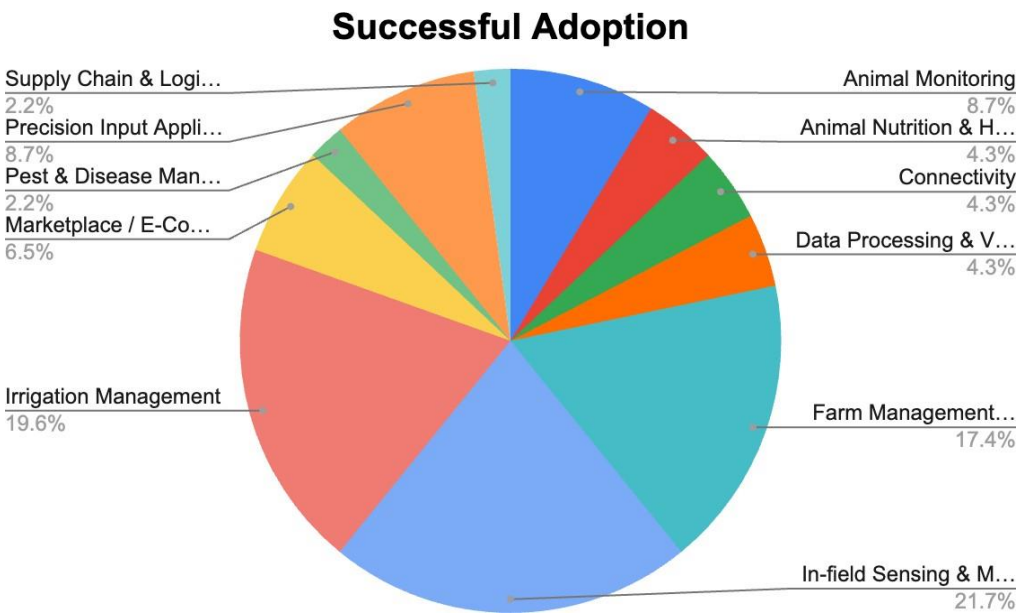


Figure 4.1 and 4.2 - Successfully Adopted Technologies By Producer Participants

Appendix G - Producer Self-Assessment Adoption Questionnaire

Instructions

1. **Read question**
2. **Select the number(s) which best suit your position**
3. **Record the number(s) in the 'response' column**
4. **Provide any further comments or reasoning for the response in the last column**

Question	Response	Reasoning / further comments
Producer Name		
Location		
Sector		
Farming Size / Scale		
Which of the following would best describe your approach to the adoption of technology on-farm? 1. *Not looking to adopt* 2. *Interested but unsure of where to begin* 3. *Cautious adopter – rely on peers and others adopting first* 4. *Keen adopter but only once I have had the chance to trial* 5. *Active adopter and regularly seek new innovations*		

What kinds of agtech have you adopted on-farm to date? 1. *No 'agtech' used on-farm* 2. *Use common technology (such as 'notes' app in mobile phone)* 3. *Has adopted simple technology (such as basic apps or sensors)* 4. *Has adopted complex devices and connected tech services (such as drones)* 5. *Has a high agtech reliance and utilises precision monitoring on many farming assets*		
Which of the following adoption challenges do you believe apply to yourself / farming business (Select all the numbers which apply)? 1. *Connectivity* 2. *Value for the business is unclear* 3. *Cost of technology* 4. *Durability of technology* 5. *Integration of technology with existing practices*		
How willing are you to undergo training or education to improve your understanding of tech solutions and their applicability on-farm? 1. *Not interested in training* 2. *Initial product training on purchase would be useful* 3. *Looking for resources to do my own research*		

4. *Actively seeking learning opportunities and attends relevant events (e.g. field days, online workshops, virtual events)* 5. *Eager to engage in targeted courses or training opportunities*		

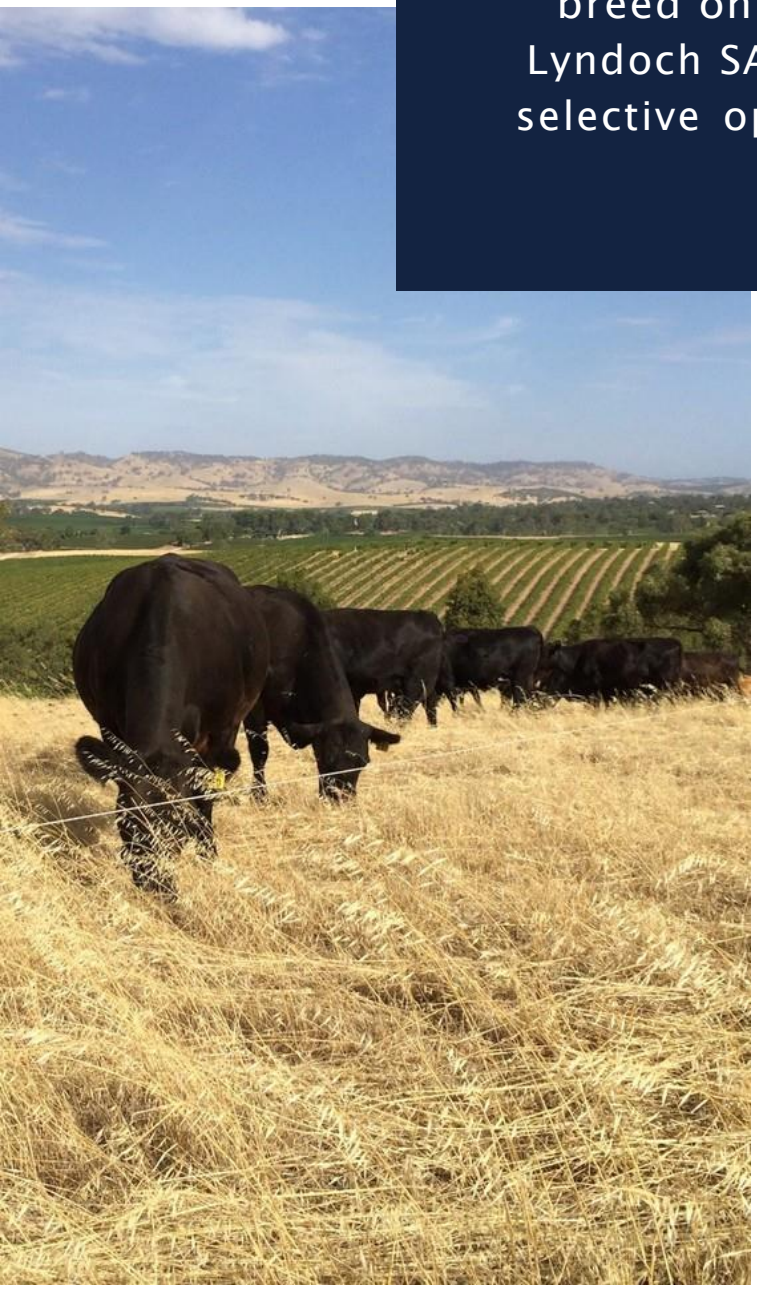
Appendix I - Technology Adoption Plans

Agtech Adoption Requirements Framework							
Name:					**Date:**		
Property Address:							
Producer Type:							
Adoption Persona:							
Adoption Objective: *What are you trying to achieve? What is your driver for adoption? What task are you currently doing that you want to improve?*							
Adoption Requirements:							
	Requirement	**Must**	**Should**	**Could**	**Won't**	**Category**	**Notes**
Functional + Non-Functional Requirements	1						
	2						
	3						
	4						
	5						
	6						
	7						
	8						

Julian Maul

'Abbotsford' Lyndoch SA

Julian is a seedstock producer for the Angus breed on his property 'Abbotsford' near Lyndoch SA. They operate a small, yet highly selective operation consisting of roughly 35 Angus breeder bulls.



They offer direct sales of their bulls under the brand 'Barossa Angus' which are available for sale online.

Julian's primary operation is seedstock production to be registered with the Angus society, so he has a specific focus on ensuring the accuracy of his record-keeping practices and converting that information to reports which suit the requirements of the Society.

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ADOPTION EXPERIENCES

PRODUCER PERSONA - EARLY ADOPTER

Julian considers himself an early adopter as he is regularly looking for technology integrations into his production system to improve value and contribute to a long-term process of driving profit. Julian perceives technology as a way to improve efficiencies and accuracies in his business to keep it profitable and has always looked to technology as ameans to resolve many of the problemshe faces on-farm.

Julian has adopted several different types of technology across his business, and has a particular desire to uncover solutions which assist with genomics testing and artificial insemination processes. As an avid user of fixed time artificial insemination practices, Julian has been. Additionally, Julian uses CiboLabs for his pasture monitoring and to receive regular estimates of this ground cover and pasture biomass.

However, Julian is critical of some agtech companies whose business models and intentions appear to be focussed on continually drawing fees from the producer rather than providing ongoing value. His two key barriers to adoption have been the integration of new solutions into his existing farming systems and the cost of certain solutions. As Julian produces seedstock for the Angus Society, new technologies which could be implemented in his operation need tobe able to integrate with the recording and reporting requirements of the Society to avoid having to double enter the data collected. On cost,Julian finds ongoing subscription fees and a lack of transparency around the cost versus benefit analysis of certain technology as critical barriers to his implementation of those solutions.

In exploring potential avenues for technology adoption, Julian identified a UK company called Agricision which he believes represents a compelling value proposition. Their product 'Ontrak' is able to be retrofitted to any existing machinery, is an example of 'plug-and-play' technology, low-cost and does not require additional costs for subscriptions or connection.

PRODUCER ADOPTION READINESS ASSESSMENT

Using the self-assessment tool, Julian scored his capability in adopting agtech focussing on his adoption mindset, utilization of existing solutions, digital capabilities and barriers to adoption.

The chart shown in Figure 1.2 provides a visual representation of Julian's self-assessment using the subjective rubric. What is evident from this analysis is that Julian perceives himself to have a high level of digital capability as a frequent adopter of technology, however the barriers which sit outside his own control (relating to cost and interoperability of solutions) are the primary determinants of whether he adopts technology or not.

This data serves two purposes – firstly, it recognises that there are adoption barriers which disrupt the adoption process for even early adopters with a high level ofadoption capability. Secondly, this feedback is critical information for potential agtech solution providers to address in seeking to deliver a product for his adoption in his farming enterprise.

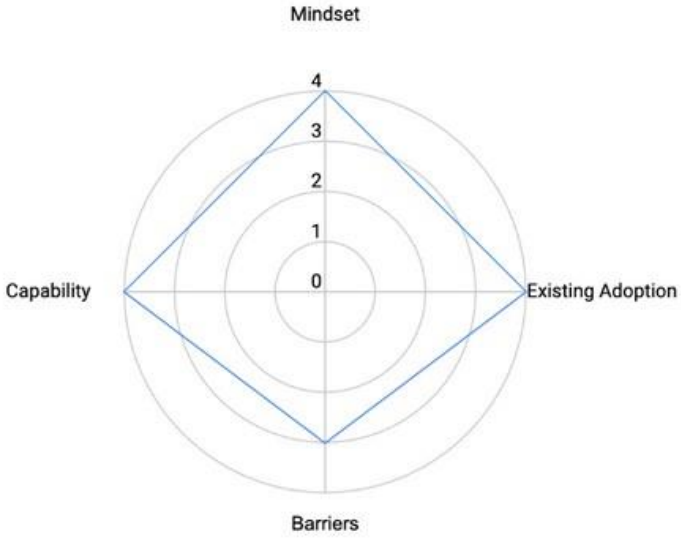

Figure 1.2 - Participant Responses to Capability Self-Assessment

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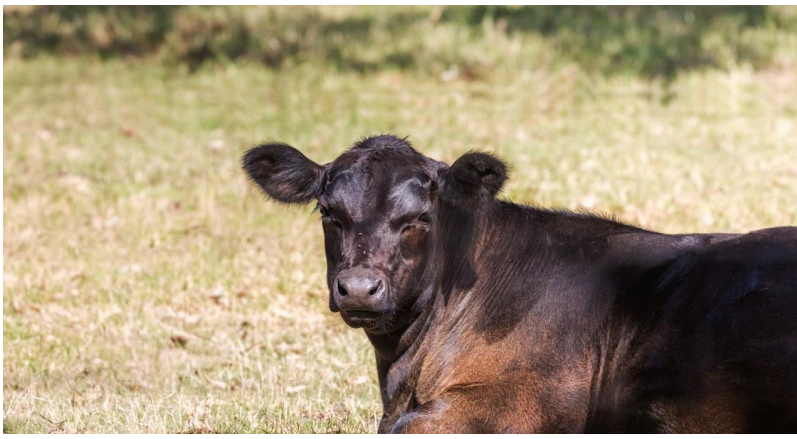
TECHNOLOGY ADOPTION TRIAL PLAN

Julian attended our workshop titled 'Improve your Farming Business with Technology' hosted at the PIRSA Demonstration Farm inNuriootpa, SA on 9 August 2022. The workshop's aim was to recalibrate the conversation around agtech adoption so that it was observed through a producer's lens.

Using the Agtech Adoption Requirements Framework, attendees started the agtech decision-making process by articulating their desired outcome on-farm, before specifying the functional requirements of a solution that would be used to meet that objective. This allowed the attendees to develop an Adoption Plan for a piece of technology which specifically addresses the needs and requirements of their own farming business.



By working through the Framework, Julian identified a key need in his farming enterprise, and therefore an objective for adopting technology, was the provision of real-time data to BreedPlan as part of a broader management solution.

Julian scoped the following requirements for any agtech solution providor on the next page.

About Farmers2Founders

Farmers2Founders is a private national organisation that exists to help producers to fast-track the development, implementation and commercialisation of agtech and innovative value-adding solutions that deliver benefit at both the individual business level and broader industry.

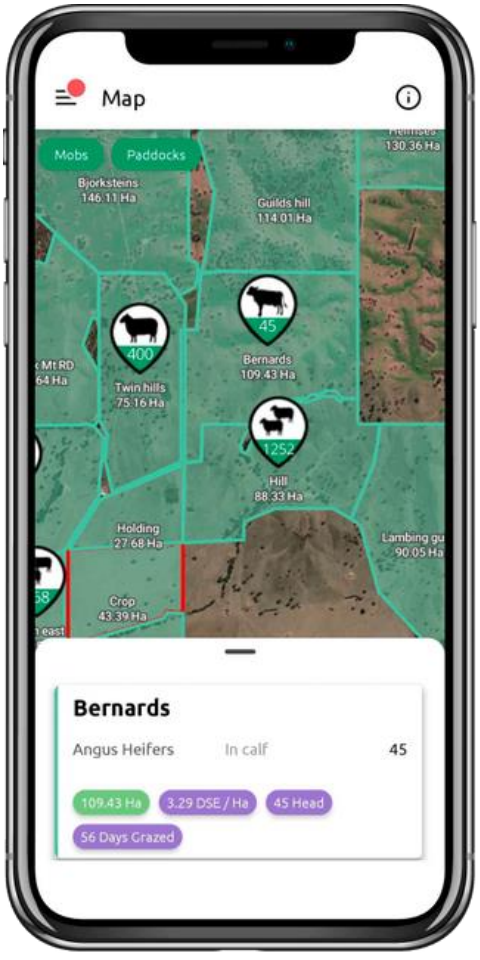
AGTECH ADOPTION REQUIREMENTS FRAMEWORK

ADOPTION REQUIREMENTS

Mobble

Simple farm and livestock record keeping

Mobble is a livestock management platform which digitises farm and livestock records. The solution is designed to be simple, practical and which can integrate across a variety of other management systems and platforms.



The idea for Mobble first came aboutwhen founder, Jock Lawrence, returned to the family farm in Victoria and was frustrated by their paper record keeping and livestock management process. Jock and his father began to digitise their own records and found existing software solutions either too clunky, over-complicated or focussed towards intensive farming.

Jock developed his own cloud-based application to address their specific needs, and saw an opportunity to extend the software for broader industry benefit.

Mobble was launched in January, 2019.

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ADOPTION CAPABILITY

TECHNOLOGY READINESS SCORE

Mobble has a current commercial product which has been trialled and tested on a relatively wide scale. It has been used in several agtech test and demonstration sites and they appear open to making interactive changes to the product based on customer feedback.

They currently have over 1,200 users of their product Australia wide. However, through our discussions with Jock, there is a clear acknowledgement that the Mobble product is at its early phases, and they are yet to capture the full suite of offerings which Mobble could provide for its customers.

On their website, Mobble provides a 'product tree' which openly identifies several features which their product currently includes of which they intend to build into the platform. For that reason, we scored the Technology Readiness of Mobble at 8 as the product has been trialed and tested on a broad scale.

MARKET READINESS SCORE

Mobble is in its early stage of growth and development and hasa self-imposed mandate to work closely with customers to learn from and iterate on their product.

In 2021, Mobble developed several case studies of the use of their platform by farmers and producers across Australia and New Zealand.As such, Jock believes that Mobble has not yet settled on a finalisedpricing strategy, and is constantly reevaluating its pricing method to best meet the needs of its customers.

SOLUTION PROVIDER CAPABILITY ASSESSMENT

A critical question to be asked when determining the cost / benefit balance of a product is to ask "*What would the cost be if we took it away?*" – Jock Lawrence, Founder

Jock also mentioned the challenges involved in appropriately pricing their product for larger producers who utilise the platform on a much broader scale, and producers who desire a lower price threshold for their smaller operations.

We scored the Market Readiness of Mobble at a 7 as cost-benefit assessments have been conducted, but a settled, justifiable price point has not yet been reached.

VALUE PROPOSITION

Mobble's value proposition is based around collecting farm data and making it accessible for anyone associated with the farming business.

Jock explained that when he returned home to work on the farm with his father, all of the management decisions and farming information were '*stuck in his [Dad's] head*'. As such, Mobble has a keen focus on simplicity and ease of use, with practical solutions such as allowing the platform to be accessible 'offline' when mobile reception is not available in the paddock.

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SOLUTION PROVIDER CAPABILITY ASSESSMENT

We scored the Value Proposition of Mobble a 9 as there is a clear articulation of the problem faced by producers which the product is solving with deep customer engagement.

TRACTION

By Jock's own admission, the product is being "grown by its own means".

Mobble's customer acquisition strategy is focussed on inbound sales, using word of mouth and warm outreach for farmers and potential customers come to them. While Jock acknowledges this is a slower growth strategy, it provides them the opportunity to build deeper relationships with customers and better understand their needs.

Jock has seen an increase in their customer growth which has accelerated organically from customer referrals.

Mobble currently has over 1,100 customers nationally, and 35 in South Australia. We scored the Traction of Mobble a 6 as although there are over 200 customers nationally, there is a lack of a clearly defined acquisition process and conversion assessment.

About Farmers2Founders

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SOLUTION PROVIDER CAPABILITY ASSESSMENT

INTEROPERABILITY

Mobble is supportive of the opportunity for their platform and technology to integrate with other providers. Mobble recentlypartnered with AgWorld, which is an information management system typically focussed on grain growers.

Jock saw this as an opportunity for Mobble users to push their farming information into crop management platforms or for stock agents. Jock believes that there is an opportunity for a 'farm data centrepiece' where platforms like Mobble can connect into, along with other providers, to share various data inputs specific to that farmer's needs.

Jock believes Mobble is one part of a larger data sharing ecosystem. Due to Mobbles proactiveness towards integrating their platform with others on the market, we scored Mobble an 8 in Interoperability.

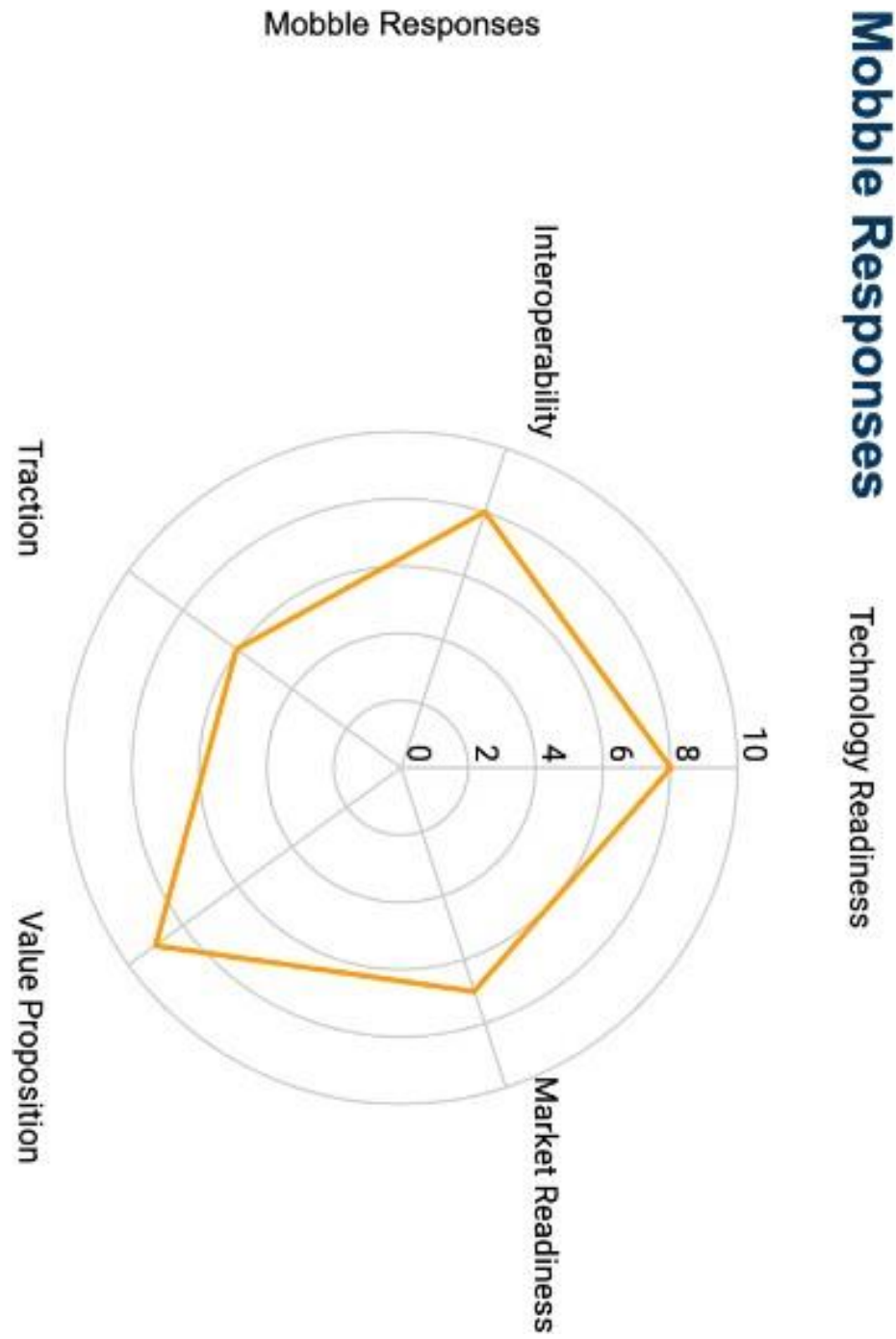
RESULTS

As the chart below shows, Mobble is clearly a commercial-ready product with a resolute understanding of their customers needs and a robust technological solution which addresses such challenges.

However, the company appears to be lacking in expansion of their networks to access a broader customer base and establish traction, which is accompanied by a hesitant pricing strategy. This, perhaps, suggests that Mobble's adoption rate may be enhancedby implementing a better customer acquisition strategy witha settled price point that is supported by market evidence.

Farmers 2Founders

SOLUTION PROVIDER CAPABILITY RESULTS



Scott Finlay

'Granite Ridge Angus'
Avenue Range SA

Scott Finlay is an Angus stud producer from the Northern Adelaide Plains region of South Australia. Their stud, 'Granite Ridge Angus', is run as an intensive operation on 2800 acres in the lower South East of South Australia.

Their operation totals approximately 600 breeders, with 350 autumn breeders, progeny and bulls at Reedy Creek and the remaining 250 breeders in their spring program that operates from another farm in Murray Bridge.

Farmers 2Founders

ADOPTION EXPERIENCES

PRODUCER PERSONA

CAUTIOUS ADOPTER

Scott believes himself to be an active adopter who is regularly looking for new innovations. He has a good grasp on the type of technology in the market which may be relevant to his farming enterprise, but he admits he needs to make sure that any technology which they are going to adopt has a clear business case for their operations.

If Scott can see a relevance and purpose of the technology to what they are trying to achieve on-farm, they will be willing to move fast to adopt. He believes he has adequate capabilities and skills to understand new technologies in the market and strategies for ways to implement them on-farm.

However, technologies with an unclear value proposition or where the return on investment is not attractive or an appropriate incentive, they will be reluctant to consider it further.

Scott displays an innovative mindset to their farming operations, identifying key areas where they could implement technology to improve operational efficiencies as well as new innovations he would like to see developed. He is currently looking at options for adopting remote water monitoring technologies for a range of water points across their property.

Much of the technology they have adopted on their property to date are those which have been in the market for some time with a recognisable applicability to their needs.

Examples of these types of products include Tru-Test weighing systems and record keeping for their cattle business which allows them tomarry weight and treatments across multiple farm locations

While Scott is keen to understand and identify technology solutions, he needs to be able to clearly identify the value proposition of much of the technology before he is willing to adopt.

PRODUCER ADOPTION READINESS ASSESSMENT

Scott has taken active steps to improve their technology capability, recently made substantial investments in mobile boosters to address his connectivity issues. He scored highly on the producer adoption readiness assessment as a result.

Like many producers, Scott takes avery pragmatic approach to the adoption of technology which he views from a business perspective. He is open to new innovations andconsiders himself an eager adopter of new technologies, however the driving factor behind a purchase decision of technology is the business case for their farm.

Interestingly, typical adoption barriers such as connectivity, durability or cost are not expressed as great challenges for Scott. He is willing to make investments in technology and has proven his willingness to take steps to improve their own capability to adopt technology.

Scott suggests that the cost of technology only becomes a factor when balancing the job it's required to do and the return on investment. For Scott and Granite Ridge Angus, every adoption decision comes back to the value for the business.

Scott is actively seeking learning opportunities to understand technology application to their farm and attends relevant events, such as workshops and field days, to see what's out there.

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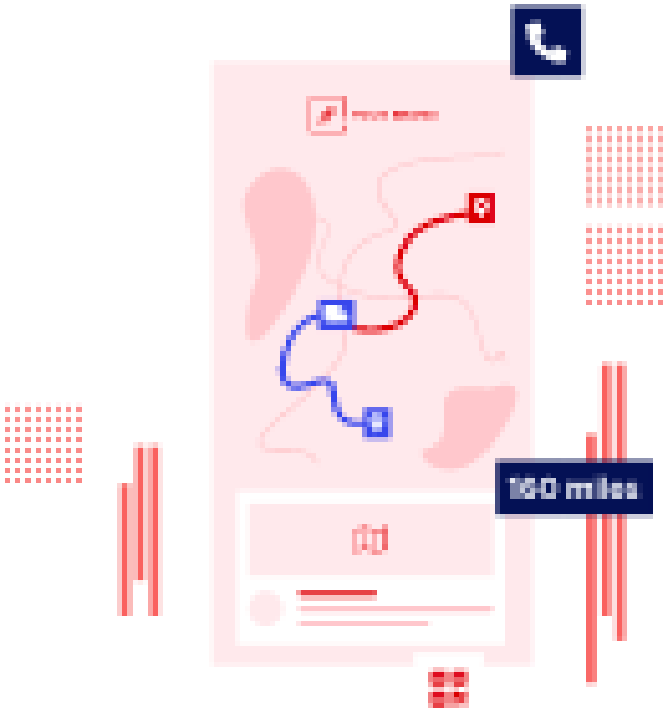
TECHNOLOGY ADOPTION TRIAL PLAN

ADOPTION REQUIREMENTS

Hectare

'Farmto' Platform

The 'Farmto' platform is a white-labelled, configurable trading, inventory management and logistics software to enable data-driven, sustainable supply chains supplied by Hectare.



Hectare is a supply chain enabler platform which provides data-led innovations for post-production global supply chains.

Their 'FarmTo' platform is a bespoke solution which creates digital supply chains across inventory, trading and logistics functions.

Farmers 2Founders

ADOPTION CAPABILITY

TECHNOLOGY READINESS SCORE

Hectare is an existing agtech solution provider based predominately in the UK yet with global solution offerings, including in the US. Hectare has been in the market since 2015 and has scaled significantly

Hectare have an extensive suite of products which are being utilised in a variety of large agricultural businesses globally, including extensive beef finishing and feed-lotting operations in the US. However, their more recent product, 'FarmTo' launched only earlier in 2022 and has yet to be trialled in Australia. Despite this, given the depth of traction and years int he market, we scored the Technology Readiness of Hectare at 8 as the product shows a high level of sophistication and has developed into a sophisticated technological solution, yet still requiring further testing in Australia.

MARKET READINESS SCORE

Hectare is a rapidly scaling company with a high degree of existing market traction developed off the back its two key commodity marketplaces, SellMyLivestock and Graindex, which serve over 120,000 UK farmers

Earlier this year, Hectare raised a Series A round of over 13 million pounds. This significant investment, has greatly aided their ability to scale and build new products such as Farmto.

SOLUTION PROVIDER CAPABILITY ASSESSMENT

"*We aim to advance the conventional global post-production agricultural supply chains, replacing traditional processes with precise, connected and efficient solutions.*" – Hectare

However, Bertie Steggles who is the Commercial Director for Hectare noted that their most successful customer acquisition has beenseen with more "middle" sized operators. Typically, they don't work with smaller scale producers orindividuals and prefer to work with large agribusiness or supply chain companies. As a result we scoredthe Market Readiness of Hectare ata 6 as their cost is a prohibitive factor in adoption.

VALUE PROPOSITION

Hectare's value proposition is to present a suite of solutions which can be tailored and manipulated for bespoke challenges in agricultural supply chains.

The Hectare value is to focus on three key areas of the supply chain where they can offer improved efficiencies, being to trace, transact and transport. These three areas allow Hectare to design and develop systems which pull data through from a range of inputs and touch points with the supply chain. Through their platform they can then offer a series of insights to the end user.

Farmers 2Founders

SOLUTION PROVIDER CAPABILITY ASSESSMENT

While the Hectare system is highly developed, we scored the Value Proposition of Hectare as an 8 as the various products of theirplatform are hard to ascertain through the overuse of jargon and industry terminology.

TRACTION

Hectare has faced a strong degree of traction which they have leveraged off their existing systems, however remain largely untested in Australia.

Hectare as an entire system has increasing traction as they look for offshore opportunities to expand, such as Australia and the US. However, the diversity in theirproduct offerings somewhat dilutes their traction for their products which are often quite disparate and hard to identify.

Overall, we scored Hectare's traction at a 9 given their expansive operations in the UK which is aiding their international expansion activities.

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SOLUTION PROVIDER CAPABILITY ASSESSMENT

INTEROPERABILITY

Hectares core function is to offer interoperability of systems and data collection points for ease of presentation and the collection of insights for users.

hectare's unique value proportion is its ability to integrate with many existing technology providers and data management services to improve supply chain efficiencies.

For example, in the case of Julian Maul, the Hectare platform isalready linked to many livestock management platforms like AgriWebb, as well as having existing integrations with BreedPlan.

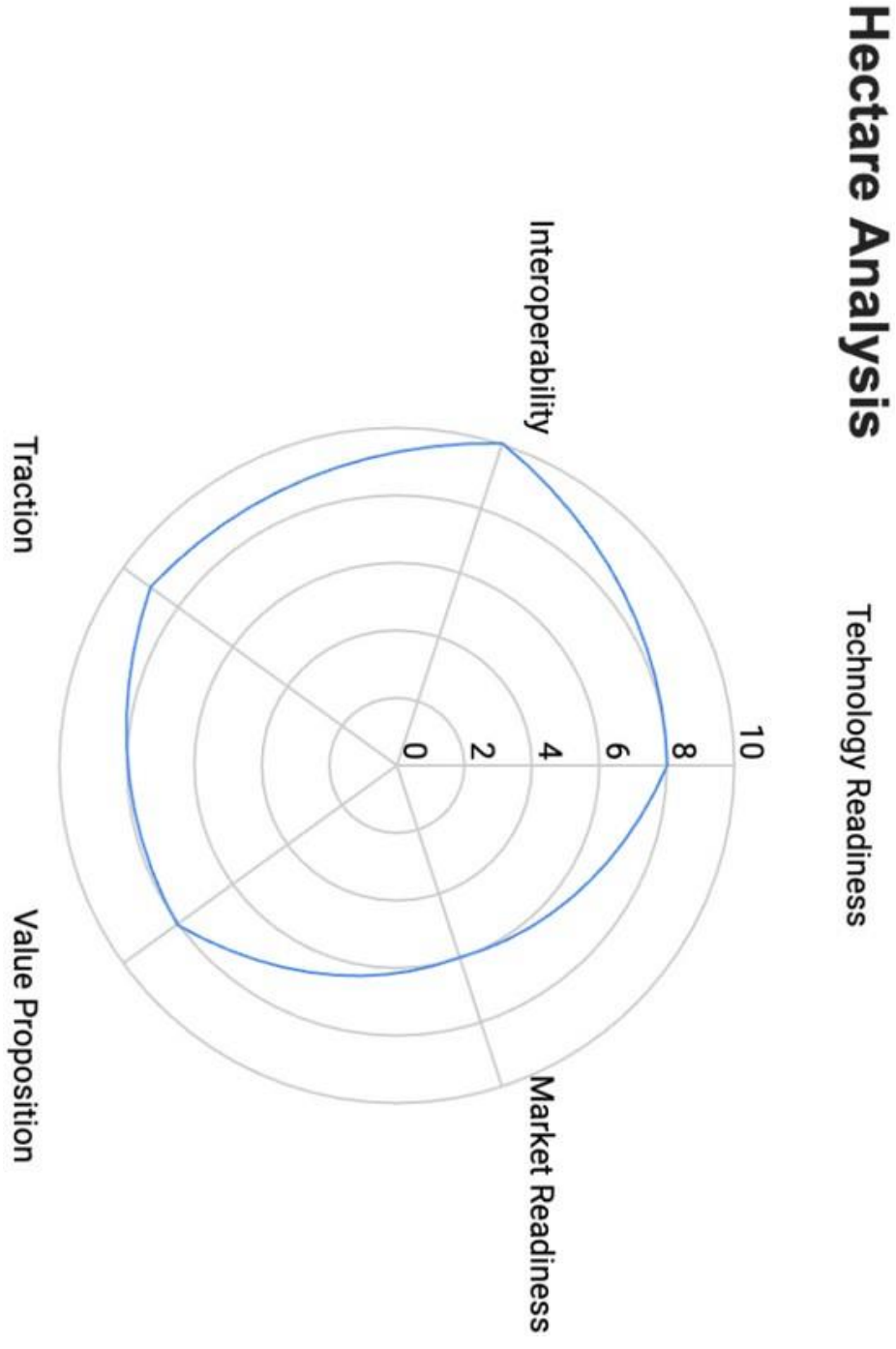
Additionally, Hectare proudly provides many of its platforms, such as 'Farmto' as a white-labelled service which allows agribusinesses and agricultural entitys to place their own brand on the service. This is a highly attractive feature which allows users to develop a bespoke solution which addresses their unique, in-house needs but the market that platform externally under their own brand. This means the customer can integrate the services they see fit, including their own, into a Hectare system. On this basis, we scored theinteroperability functions of Hectare as a 10.

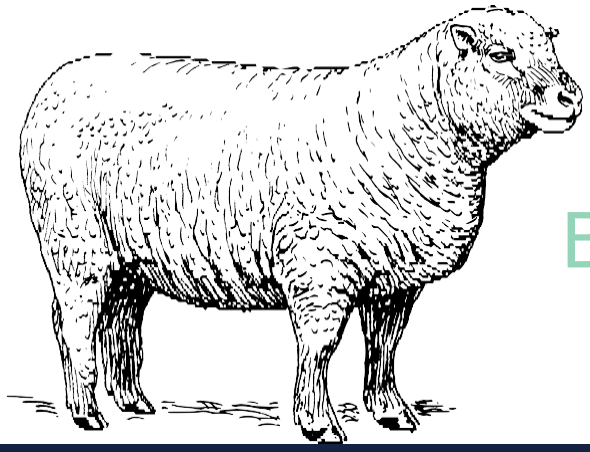
RESULTS

Hectare is quite evidently a highly sophisticated agtech solution provider, despite being still early in its development. It has a high level of technical capability, existing traction in the market and unique value propositions aided by its interoperability. However, it is yet to truly be tested in Australian conditions and is restrictive, at this stage, to larger producers or a series of producers in a co-op.

Farmers 2Founders

SOLUTION PROVIDER CAPABILITY RESULTS





Jamie Koch

Booleroo Centre, SA

Jamie Koch is a mixed farming producer from Booleroo Centre. Their property was sharefarmed for over 20 years before Jamie and his family took back the farm around three years ago.

Their operation is around 1,200 hectares which they split across a sheep breeder and wool operation as well as growing a range of broadacre crops such as wheat, barley, vetch and peas.

Given their recent return to run the farming business, Jamie also balances his time working for the Northern Adelaide Plains Food Cluster which has exposed him to several innovative producers and opportunities to learn from others in the industry.

ADOPTION EXPERIENCES

PRODUCER PERSONA

HESITANT ADOPTER

Jamie is deeply interested in learning about best practice for the industry and is constantly looking at ways to improve their operation. As he considers himself still relatively new to the farming business, Jamie is very open to exploring new technologies and exposes himself to new ways of thinking and approaches form his peers regularly.

Despite this, he admits that he is more hesitant to adopt technology given that he has limited experience with how that technology can integrate into their business.

He considers himself a cautious adopter who is currently scoping a range of different initiatives but content to see them applied more broadly across the sector before he adopts himself.

Jamie's experience with adopting technology to date has been somewhat limited, however he takes inspiration from those who farmed the land previously. The share farming arrangement of the past brought on a whole range of new technologies into how they managed the land, particularly inthe broadacre side of their operation. These technologies included auto-steer machinery and yield mapping activities.

While Jamie is not yet set-up in the same way to reintegrate these practices in their operation currently, he has focussed more so on the adoption of technology for their livestock business.

They are using sensors on their water tanks to monitor water levels for stock, and are currently starting to map their paddocks to establish the soil profiles and variances among the soils. Jamie has also expressed an interest in implementing systems to measure and assess the genetic qualities of his sheep flock and establishing benchmarking practices.

PRODUCER ADOPTION READINESS ASSESSMENT

Jamie is an active learner who regularly participates in new workshops, courses and industry discussions to understand how they can improve their farming practices.

With that said, he is cautious about the adoption process and tends to find himself sitting back to watch how others go about it before he engages. This is partly because of a feeling of inexperience which makes him hesitant to rush out and purchase something which is not suited to his business, and partly because of common barriers experienced by producers regarding the entry costs of new technology and the ability for it to integrate into existing farming systems. Jamie is happy to move at his own pace with adoption, displaying an openness to new ideas but a reticence to adopt in the first instance.

As Jamie is also working in another part-time role, the main focus of the types of technology he is interested in relate to those which can provide better operation efficiencies and peace of mind, such as monitoring and metering technologies.

Jamie's adoption priorities at this stage focussed on technologies which allow for greater precision in his operations, such as in the application of inputs, animal monitoring and health assessments and farm management software.

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TECHNOLOGY ADOPTION TRIAL PLAN

ADOPTION REQUIREMENTS

The Clothier Family

'Greenvale', Woolumbool SA

The Clothier Family, consisting of parents Graham and Karen, and sons Sam and Oli, run a prime lamb operation on their 650 hectare property on the Limestone Coast.

Their lamb enterprise consists of around 3,500 breeding ewes and they purchase lambs from thebroader family's stud at Lucindale.

However, they also run an egg laying operation consisting of around 8,500 hens which are sold under their 'Greenvale Golden Yolks' brand. The Clothier family are a mainstay in the Woolumbool region, with their family having run the Greenvale property for nearly 60 years.

ADOPTION EXPERIENCES

PRODUCER PERSONA - KEEN ADOPTER

Sam is a keen adopter, but would not consider himself the first to uptake new technology. He is keen to see new technologies in action and is interested in learning more about what technologies are in the market currently relevant to their business. However, he prefers to see technology trialed first before he feels the level of confidence to adopt it within their own enterprise.

Sam and his family are also regarded as innovative producers who are often engaged in pilot projects and agtech initiatives. They have partnered with groups such as the MacKillop Farm Management Group to trial soil monitoring probes and have participated in the Agritech Meet-up initiatives in South Australia.

Despite the apparent degree of hesitancy in adoption technology, the Clothier family do utilise a range of more simplistic and management technologies within their business, such as using AgriWebb for the livestock side of their operation.

However, it is in their poultry and egg operation where they are more eagerly adopting technology. The chicken trailers are rigged with several battery monitors and sensor-type devices which can connect to a Smartphone to check voltage and other operational aspects of the trailer. They have also developed their own egg management app in-house called Egg Collector. The app was developed by one of their egg collecting staff members who needed to ensure that the data collection and capture can occur while the user is offline, and then be uploaded when returning to service. This was a criticalrequirement as a lack of connectivity was identified by Sam as a key barrierto adoption of many existing agtech solutions in their area.

PRODUCER ADOPTION READINESS ASSESSMENT

The Clothier's adoption readiness assessment provided some interesting insights into their adoption process. While they clearly were eager to engage in conversations around agtech adoption and explore suitable options available, they had still only ventured into quite simple forms of agtech solutions.

Despite the Clothier's apparent interest and keenness to explore technology options for their farm, they are yet to really engage deeply in the agtech options which are available, and perhaps cost is the primary factor behind this.

One of the key adoption barriers identified by Graham Clothier was the cost of many agtech solutions. Graham is personally frustrated by the amount of solution providers who require ongoing subscription costs which are often incurred on a per unit basis. He is willing to pay technology adoption costs upfront, but believes subscription models where there are multiple units deployed are limiting.

Additionally, they are willing to undertake courses, training and initiatives to explore more avenues for agtech adoption and understanding what is available for their business. However, it is preferred that these kinds of learning opportunities are delivered face-to-face as much of the virtual or phone meetings are hard to obtain real value out of.

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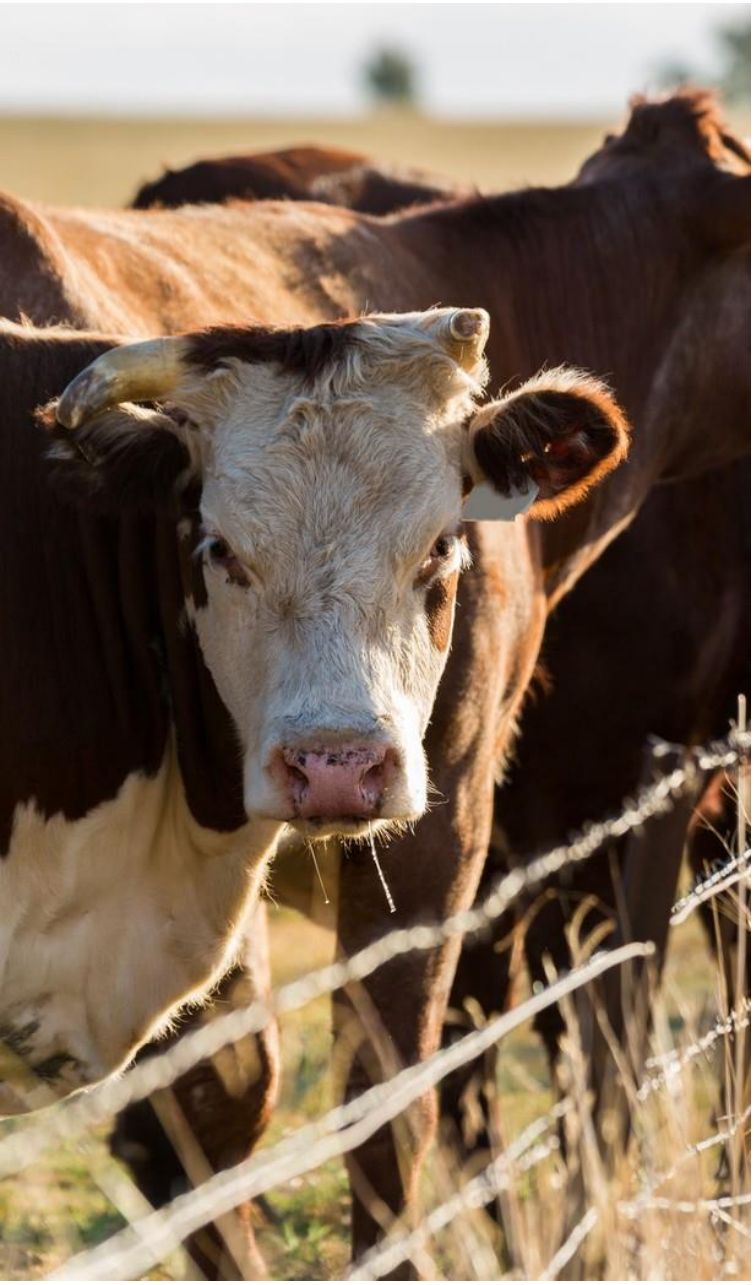
AGTECH ADOPTION REQUIREMENTS FRAMEWORK

ADOPTION REQUIREMENTS

Tom Hampton

Adelaide Hills PastureFed Beef Harrogate, SA



Tom Hampton is a highly innovative beef producer from the Adelaide Hills region of South Australia. While he classifies himself as a 'part-time' farmer due to his other work on railway projects, he and his wife run roughly 70 head of beef cattle from freehold and leased properties totalling around 200 acres. They produce a 100% pasture fed and finished beef product which they sell directly to consumers via an online website. Their brand, 'Adelaide Hills Pasturefed Beef' is a realisation of a lifelong dream, to operate a small scale, sustainable and ethical farm within the Adelaide Hills and produce and sell quality pasture fed beef.

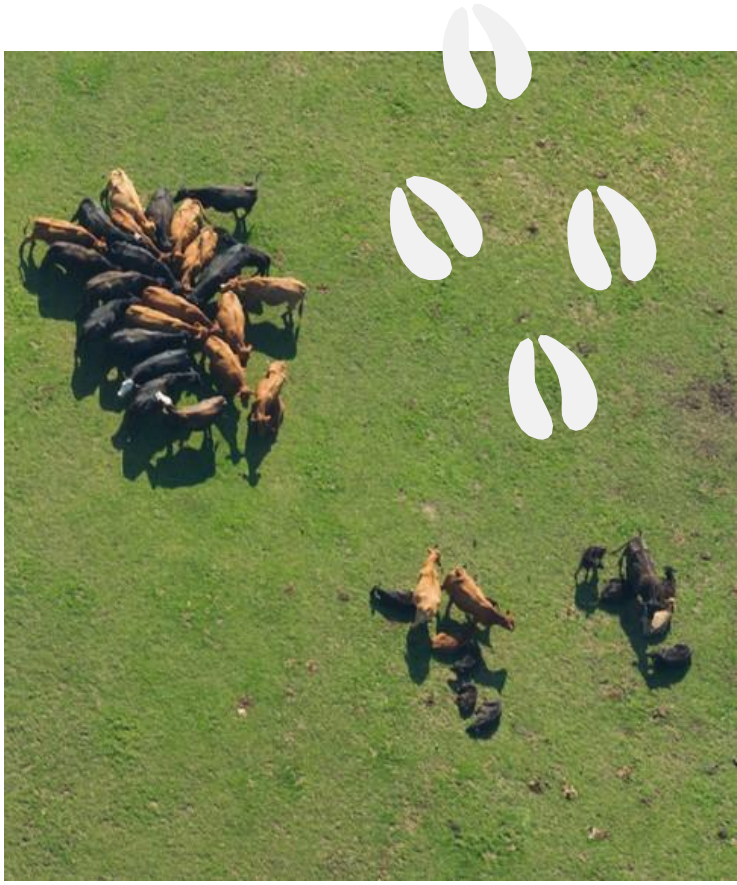
ADOPTION EXPERIENCES

PRODUCER PERSONA - ACTIVE ADOPTER

Tom considers himself an active adopter and one who regularly seeks to engage new innovations on his farm. Being a smaller livestock operation and with Tom juggling another job, technology is an opportunity for Tom to streamline a lot of his one-farm practices. Tom's skills also come from a background as a professional engineer, so he is constantly looking at ways to implement technology to solve inefficiencies and challenges on the farm.

Tom was a participant in PIRSA's agtech grant initiative and received close tohalf of the funding required to purchasean EID wand reader together with scales which can connect using Bluetooth. He is regularly engaged with innovationand agtech initiatives, such as TEKFARM, which he believes are great learning opportunities for continually advancing his operation. Tom is currently setting up his own LoRAWan network on his farm allowing him to connect to a range of sensors and powered by solarenergy. He is also keeping a close eye on the progression of virtual fencing technologies which are being trialed on a nearby property.

Being a self-confessed 'progressive' farmer in both his mindset and practice, Tom has had several adoption experiences. Most prominent, however, is how his innate curiosity and capability with technology has led him away from the adoption of commercial agtech startup products. Tom's endeavor to set up a LoRAWan network on his property stemmed from a desire to connect up many data points and sensors across his farm in a way which was prescribed for his needs. Tom found that, when approaching the market to try to find 'off-the-shelf' solutions of this kind, they were often too costly or too limiting in their opportunity to scale across his farm.



ADOPTION EXPERIENCES

While many farmers would have turned away from technology altogether in similar circumstances where marketed producers were not fit-for-purpose, Tom saw this as an opportunity to take the challenge on himself. His LoRAWan system can plug directly into his existing wireless internet system, creating a gateway and network which can cover a large portion of his farm. From here, the sensor opportunities are limited only by his ambition as he can purchase individual white-labeled sensors which can be programmed into his network.

While Tom confesses therehave been several challenges with building the network himself, it is important to note that agtech solution providers who are not able to meet the needs of their producers and integrate with their farming practices risk customers finding or building their own bespoke solutions.

PRODUCER ADOPTION READINESS ASSESSMENT

Naturally, given Tom's proactive approach to innovation on his farm, Tom's Adoption Readiness Assessment showed a very high degree of preparedness to adopt. Tom has a very high degree of capability in understanding how technology can be implemented within his farmingbusiness and is confident to take the necessary steps to adopt technology. Tom also displays a willingness to teach himself and seek training for overcoming any lack of knowledge or capability in using certain technologies.

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AGTECH ADOPTION REQUIREMENTS FRAMEWORK

Tom attended our workshop titled ‘Improve your Farming Business with Technology’ hosted at the PIRSA Demonstration Farm in Nuriootpa, SA on 9 August 2022. The workshop’s aim was to recalibrate the conversation around agtech adoption so that it was observed through a producer's lens.

Glenn Pitchford

'Pitchford Farms' Adelaide Hills SA

Glenn is a beef cattle producer from the Adelaide Hills area of South Australia. He works with his son and family on their property called 'Pitchford Farms'; an operation involving around 500 breeder cattle.

The Pitchford's produce a direct-to-consumer grass-fed beef product, working alongside their local butcher, and which they sell via their online store.

Glenn believes that there are several factors which could be considered barriers to adoption of agtech on their farm. He believes the primary barrier is a lack of knowledge on his own behalf of the technological solutions which can suit his farming and personal needs, and he needs to see a benefit of that technology before he makes a decision to purchase.

ADOPTION EXPERIENCES

PRODUCER PERSONA - KEEN ADOPTER

Glenn has not really adopted anyagtech on their property to date, however considers himself a keenadopter. The primary reason for their lack of adoption is that he is hesitant about purchasing technology that does not suit their needs or operation. As such, he prefers to wait and see resultsof tests and trials before adopting. He isactively looking for appropriate agtech which can assist with their beef cattle operation, and is particularly interested in the use of mobile apps for livestock and farm management.

Glenn also believes that being unable to clearly ascertain the value proposition of many agtech solutions, combined with the cost of the technology which does not appear to confer with its stated benefit, has contributed to his hesitancy to purchase a suitable solution. He also acknowledges that a lack of phoneand internet signal is an added adoption challenge, however he believes there are new towers being installed to address the phone signal shortcomings.

Glenn is eager to continue to improve his understanding of tech solutions and their applicability on-farm. He is open to the prospect of engaging in targeted courses and training opportunities to address his capability gaps. Glenn has become more interested in the application of technology on-farm since starting working with his son and seeing how his son is always looking for better technology and ways of doing things.

PRODUCER ADOPTION READINESS ASSESSMENT

It is clear that Glenn, by his own admission, lacks a depth of knowledge of the technological solutions currently in the market which could be of benefit to him and his farming operation.

He acknowledges that it is his own lack of awareness and understanding of the types of solutions and opportunities which could be applicable in his business which has been a barrier for adoption. However, he also believes that in his attempts to engage with the agtech industry and learn more about those solutions, he has struggled to ascertain the value of many agtech solutions for use on his farm.

He recognises that many agtech solutions poorly articulate their value proposition which makes it difficult for him to justify the purchase at the price point of many of the solutions. Glenn has expressed an interest in mobile-based applications which can cheaply and easily assist him with his livestock and farm management.

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AGTECH ADOPTION REQUIREMENTS FRAMEWORK

ADOPTION REQUIREMENTS