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Stimulating private sector extension in Australian agriculture to increase returns from R&D

Engaging the private advisory sector in agricultural RD&E:

Practical guidelines for government, Rural Research and Development Corporations

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Introduction

This document compiles practical guidelines for engaging with the private advisory sector for collaboration and co-innovation activities in agricultural research, development and extension. These guidelines result from the experience of running four engagement trials with a range of private sector agricultural advisers, conducted as part of the R&D for Profit project 'Stimulating private sector extension in Australian agriculture to increase returns from R&D' (2015-2018).

The trials were action research interventions designed to co-develop responses to agricultural innovation challenges and a 'route to change'. Following key principles of co-innovation, each trial was a partnership between a R&D corporation or state government, a private advisory organisation, a social researcher from the University of Melbourne, and participants representing the diversity of adviser typologies in Australia, including: small to medium businesses/ sole traders, retailers/input suppliers, larger consulting firms and agribusiness firms, and producers. The engagement of the private advisory sector as key contributors to the trials was a central design element to ensure a good fit with the diversity of needs and aspirations in this sector.

Each trial engaged a different group of private sector advisers around an individual co-innovation challenge and this document outlines practical tips and guidelines resulting from these specific engagement activities. It should be noted that some insights from the individual trial collaborations are transferrable to other engagement situations. The agricultural RD&E system as a whole remains dynamic and with changing drivers, needs and demands, each engagement situation remains unique. The following provides guidelines for successfully implementing collaborations in this changing environment.

The four trials were:

Trial 1 - the Processor Trial: Extending R&D within supply chains (dairy and meat processors) involving stakeholders that do not routinely collaborate in the RD&E area.

Trial 2 - the Precision Agriculture Trial: Increasing the capacity of farm advisers to engage with digital technologies to benefit producers.

Trial 3 - the Advisory Pathways Trial: Creating career development pathways for new entrants and professionals in the agricultural advisory and extension sector.

Trial 4 - the Knowledge Trial: Developing collaborative processes for improving knowledge flows between researchers, advisers and producers to ensure relevance of R&D to end-user needs.

The four trials, their key results and outcomes are discussed in four companion reports (reports G-J) on the project website: https://rirg.fvas.unimelb.edu.au/ag-extension#publications.

For further guidance on the **principles of co-innovation** underlying the design of the collaborations as well as set of **'considerations for co-innovation practice'** resulting from across the four trials, please refer to report K (Cross-trial results) on the project website.

This document also provides some brief insights on the role and importance of social research contributions for collaboration/co-innovation in practice.

Practical tips for engaging with a specific private sector adviser type

Each of the four trials presented an engagement with a different group or type of private sector agricultural adviser.

Trial 1 engaged the field staff and livestock buyers connected to two processing companies (dairy and red meat) around market specifications.

Trial 2 engaged a range of agricultural small to medium enterprises (SMEs) around the value of digital and precision agriculture.

Trial 3 engaged a number of agribusiness representatives around creating and improving advisory career pathways.

Trial 4 engaged a diversity of stakeholders (public and private advisers (farm management consultants, retailers), farmers, and natural resource management groups) around improving the agricultural knowledge system.

This section presents practical tips and guidelines for engaging with these specific groups based on the experience of each of the four private sector engagement trials. It should be noted that, while each trial addressed a particular co-innovation challenge and engaged specific groups of advisers, many insights from the individual trials are transferrable to other engagement situations. Simultaneously, each engagement situation has an element of uniqueness.

Trial 1 - the Processor Trial: Extending R&D within supply chains (dairy and meat processors) involving stakeholders that do not routinely collaborate in the advisory space.

Guidelines and tips for engaging the processing sector in RD&E as a co-innovation opportunity:

- ☐ Set up the co-innovation opportunity as a co-investment arrangement so that everyone has got 'skin in the game' – this provides a strong incentive for all involved to be engaged and commit to taking action.

> **TIP** Frame the co-innovation opportunity in a value chain context – innovating together as a means for the continuous improvement in value chain performance; processors are motivated to add value across the supply chain (suppliers, processing staff, company operations, marketing, transport, consumers) and consider it their role to achieve sustainable value chains in response to market signals (low environmental footprint, operate within animal welfare regulations and uphold food safety standards).

> **TIP** Consider the co-innovation space for the strategic planning in professional development for their front-line staff – processors are keen to build their staff's capability and capacity in RD&E and in the case of the Processor Trial, actively foster a culture of organisational learning.

- ☐ Build a joint RD&E agenda with the processing company at the mid-management level, clearly articulating the value proposition for each party (mid-management is high enough for decision-making and low enough to understand the daily operating conditions and RD&E context).

- ☐ Model and establish the practice of direct, flexible and open communication to build trust, achieve time efficiency and avoid confusion across email, telephone calls and texts, video conferencing and face to face meetings.

> **TIP** Spend the time to design detailed session plans when engaging processing companies as a meeting/workshop activity so that the processor can easily see the value of using commercial time for co-innovating; it also helps with managing everyone's expectations of the process.

> **TIP** Be prepared to integrate co-innovation activities into the processor's operational routines to reduce the time burden on management and staff, this includes delaying activities because of changing priorities of the processor and responding to crises (e.g. natural disasters affecting their suppliers, industry restructuring, volatility of global markets affecting commercial conditions).

> **TIP** Be mindful of the competitive environment that processing companies operate in i.e. the nature of competition for processors is gaining the loyalty of their suppliers (producers) by offering competitive prices and quality farm services, as well as winning supply contracts in global markets for high premium product lines – the implication of this competitive environment is that co-innovation practice is likely to mean working with individual processing companies to protect their commercial interests/competitive advantage. However this is not inevitable: non-competitive spaces can be defined through partnership approaches and through identifying a shared interest in increasing on-farm productivity. For example, DA engages with multiple dairy processing companies and the Red Meat Profit Partnership (NZ program) has engaged multiple red meat processing companies as working partners.

Trial 2 - the Precision Agriculture Trial: Increasing the capacity of farm advisers to engage with digital technologies to benefit producers.

Guidelines and tips for Engaging Advisory Small to Medium Enterprises (SMEs) in Digital Agriculture:

- ☐ Undertake visioning for mutual commitment to address the innovation challenge of digital agriculture: Invest time and effort in identifying and then prioritising digital agriculture innovation challenges from the perspective and experiences of diverse agricultural advisory SMEs.
- ☐ Apply structured decision-making methods (such as the ORID process) to co-design interventions that support collective visioning and action planning. Key to this is careful and considered facilitation and planning for engagement.

> **TIP** Recognise the diversity within and between agricultural advisory SMEs as a source of social capital to strengthen ideation and practical responses to the innovation challenges of digital agriculture.

> **TIP** Recognise that while SMEs have a profit motive, this is not necessarily a constraint to collaboration where mutual interest and commitment to complex and uncertain problems such as digital innovation exist.

- ☐ Build and strengthen social networks for innovation in digital agriculture service provision:

> **TIP** Collaboration amongst agricultural advisory SMEs for addressing complex innovation challenges such as digital agriculture can be supported through:
> - Bringing together people with a shared interest and commitment to digital agriculture from across different agricultural industries and types of SMEs (e.g. sole provider, small fee-for-service businesses).
> - Investing in and supporting the role/s of innovation broker/facilitators (see below) with particular expertise in digital agriculture to support collaboration.

- ☐ Enable learning at multiple levels for innovation in digital agriculture service provision:

> **TIP** Agricultural advisory SME employees and owners have incentives to be involved in interventions to support innovation in digital agriculture if:
> - They are reimbursed for their time and intellectual input.
> - Their intellectual property is acknowledged and protected in any products or processes that emerge from collaborative efforts.
> - They have the opportunity to interact with experts outside of their own industry domain and expertise (e.g. researchers, industry R&D personnel, other private agricultural advisory business types).

- ☐ Co-design interventions that support the engagement of agricultural advisory SMEs in digital agriculture: The complexity and uncertainty of digital agricultural innovation futures can be met by engaging diverse agricultural advisory SMEs in collaborative interventions with researchers, government and industry representatives.

> **TIP** Recognise that different roles for innovation brokering are required to support effective collaboration for digital agriculture including action research practitioners, facilitators and experts in collaborative design processes.
> The role of social science is critical to supporting social network formation and functioning and learning at multiple levels for agricultural advisory SMEs to meet the challenges of digital innovation in agriculture together.
> Investment of time, intellectual and monetary resources by R & D institutions and others must underpin effective engagement of agricultural advisory SMEs in future digital service delivery.

Trial 3 - the Advisory Pathways Trial: Creating career development pathways for new entrants and professionals in the agricultural advisory and extension sector.

Guidelines and tips for engaging with private sector agribusiness from Trial 3.

☐ Involve all partners early on in the development process:

TIP Create legitimacy of the collaboration and its goals by establishing a shared interest and shared understanding of the problem that is to be addressed. For example, Trial 3 was based on recognition by private sector participants in the national forums that early career advisers face significant training and development challenges in the private sector.

☐ Maintain commitment of key participants:

TIP Ensuring continuity of support, and appropriate levels of commitment of all when embarking on joint processes of collaboration, consultation and planning, is extremely important. Reduced levels of engagement of participating stakeholders can jeopardise the momentum of the partnership.

☐ Hold regular meetings for communication, updates and feedback:

TIP Phone and face to face meetings are critical for ensuring the collaboration is based on a shared vision.

☐ Maintain personal contact through face to face meetings and events:

TIP In the early stages of collaboration processes face to face meetings are vital to establish rapport and trust between the participants. In Trial 3 for example, it was also evident that participants developed confidence in each other and some developed strong bonds with each other through their face to face meeting at workshops.

☐ Take advantage of and build out of existing networking structures, experiences and practices:

TIP Opportunities to foster cross sectoral collaboration favours strategic communication over communication that is based more on exchange of technical information and knowledge. It also reduces the perception that advisers may risk losing competitive advantage if they share information and knowledge with peers within their sectors. In Trial 3 for example, the participants were able to create and build new networks with peers from different sectors and this enabled them to recognise that many of their extension challenges are generic across sectors. Cross sector advisory networks reduce the sense of isolation for some advisers and create opportunities for developing social connections and access networks of other advisers.

☐ Accommodate different views about the co-innovation initiative and emphasise the importance of reaching a compromise:

TIP A diverse range of approaches provide opportunities for understanding how to achieve coinnovation in practice. Open conversations and compromise are needed when different stakeholders come together to determine what approach(es) may foster their co-innovation objectives, not least because of practical constraints of time and resources.

☒ Support peer to peer collaboration across agribusiness sectors:

> **TIP** Peer to peer collaboration and mentoring are valuable processes for advisers working in privatised agriculture extension. In Trial 3 for example the early career advisers voluntarily set up a Facebook page to enable them to stay connected and access each other's skills and strengths in the future.

☐ Create opportunities for collaboration while minimising competitive disadvantage:

> **TIP** Collaborating with professionals and mentors from outside their own sector is appropriate if advisers are concerned about conflicts of interest that may arise when working closely with those from the same sector. Collaborators and mentors may also be drawn from outside the advisory profession and include researchers, business professionals and marketing experts that support development of specialist skills and comparative advantage.

Trial 4 - the Knowledge Trial: Developing collaborative processes for improving knowledge flows between researchers, advisers and producers to ensure relevance of R&D to end-user needs.

Guidelines and tips for engaging diverse stakeholders from different areas of interest in a co-innovation initiative:

☐ Establish shared interest and goals of the collaboration, involving all participants from the start of the process through to the development of a shared 'solution':

TIP Involving all stakeholders and their respective viewpoints in the definition of what they see as the nature of the problem is an important element of establishing the collaboration and engendering commitment to and collective ownership of the process and its goals. In Trial 4, the participants were empowered to co-create the 'solution' for an improved knowledge system, assisted by the summaries and syntheses of discussions provided by the trial team.

☐ Create opportunities for communication to break down barriers and improve understanding of different perspectives, drivers and constraints:

TIP Trial 4 brought together diverse stakeholders (public and private advisers (farm management consultants, retailers), farmers and natural resource management groups) with sometimes conflicting interests and who were operating in the context of historical interorganisational tensions. Regular meetings provide collaborators with the opportunity to better understand different professional and organisational perspectives, drivers and constraints, and can therefore help to break down barriers and suspicion of vested interests and agendas.

☐ Facilitate discussions from a 'neutral' position, remaining goal oriented:

TIP The well-planned and strategic facilitation of discussions is a vital instrument in making sure that expressions of conflicting interests and frustrations are contained in order to keep discussions on track towards the shared goal of the collaboration. However, it is equally important to provide space for expressions of different perspectives and feelings of discontent. Trial 4 team facilitated the discussions using the ORID discussion structure (providing structure through objective, reflective, interpretational and decisional questions).

☐ Maintain commitment through regular face to face meetings and events:

TIP Having established understanding of sometimes conflicting agendas and a shared goal of the collaboration, regular exchange and face to face meetings assist in maintaining momentum and participant commitment. In Trial 4, updating participants regularly on workshop results and next steps were an important part of the trial's engagement strategy.

☐ Maintain trust through active listening, acknowledging different viewpoints even if these reveal inconvenient truths:

TIP It is important to be respectful of differing perspectives and actively consider these as they may hold the key to addressing misunderstandings and other barriers to collaboration. Keeping the lines of communication open like this is central to the ongoing building of relationships of trust. This requires an ongoing effort and a willingness to suspend individual/organisational risk management strategies

☐ Acknowledge all participants' commercial and political/ ideological drivers, and minimise competitive disadvantage:

TIP Not everyone is equally able and willing to collaborate. Contextual knowledge is the private advisers' commercial asset. In the case of the Knowledge Trial, this was addressed by, first, making efforts to find non-polarising topics for discussion and second, looking for structural improvements in the knowledge system that aimed for collective benefit (i.e. designing provisions for advisers to become more active in research priority setting). Third, and most importantly, private sector advisers were paid for the time they dedicated to meetings and workshops.

☐ Build on existing networks but encourage diversity:

TIP While it is easier to communicate with an 'in-group' of people that are already networked and share similar goals, co-innovation activities are enriched by diverse viewpoints as these maximise learning opportunities – sometimes from the 'other camp' (i.e. sugar cane growers in Trial 4 acknowledged that they can learn from natural resource management groups and vice versa).

Insights on the role and importance of social research contributions for collaboration/co-innovation in practice

Based on the experience within the four engagement trials, the role of social science and social science researchers was critical for the following reasons:

- The social research was based on a deliberate research strategy – action research which underpinned ways that each social researcher guided the process and enabled engagement of all Trial participants.
- The action research strategy included opportunities for reflexivity that allowed Trial participants, particularly the PO's, Research Leads and RDC partners to learn by doing, develop mutual trust and shared focus.
- Due to their location 'outside' the professional/ technical RD&E contexts shared by the participants, the social researchers were able to maintain a position of neutrality that was of central importance to the tasks of upholding the principles of collaboration/co-innovation underlying the action research and of supporting reflexivity.
- Ultimately, the social researchers were the 'bottom line' due to the accountability processes and guidelines for which we were directly responsible. If Project Officers were the sole providers of Trial administration and delivery their accountability to funders would need to be very clear. In the Trials they were 'shielded' from this responsibility due to the role of the social researchers.

The experience of conducting the four trials has demonstrated the importance of embedding the principles of action research, reflexivity, neutrality and 'front line' accountability in the processes of collaboration. As contexts and interactions are dynamic with changing drivers, needs and technical topic areas, any future work based on the RnD4 Profit Trials will likely be disadvantaged if it is undertaken without social research input and monitoring. Potential project leaders from the private sector should be offered training that would enable them to incorporate not only technical and facilitation expertise but also processes based on robust social science concepts and frameworks.